

HAWKLAND ESTATES LTD

PROPOSED RESIDENTIAL DEVELOPMENT

LAND TO THE NORTH OF ELBA CRESENT, SWANSEA

TRANSPORT ASSESSMENT

21-00758/TA/01/A

FEBRUARY 2022



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CONTENTS	Page
1 INTRODUCTION	1
1.1 Background	1
1.2 Scope of Assessment	1
2 EXISTING CONDITIONS	3
2.1 Site Description	3
2.2 Local Highway Network	3
2.3 Pedestrian	4
2.4 Cycle Opportunities	6
2.5 Public Transport Facilities	9
2.6 Local Highway Safety	11
3 LOCAL AND NATIONAL PLANNING GUIDANCE	14
3.1 Overview	14
3.2 Overall Policy Objective	14
3.3 Planning Policy Wales (February 2021)	14
3.4 Technical Advice Note (TAN 18)	17
3.5 Future Wales: The National Plan 2040 (February 2021)	18
3.6 Neath Port Talbot County Borough Council Local Development Plan (2011-2026)	18
3.7 Conclusion	18
4 DEVELOPMENT PROPOSALS	19
4.1 Proposal	19
4.2 Access Arrangements	19
4.3 Car Parking Provision	19
4.4 Cycle Parking Provision	19
5 TRIP GENERATION	20
5.1 Introduction	20
5.2 Proposed Development Trip Generation	20
6 CAPACITY ASSESSMENT METHODOLOGY	22
6.1 Introduction	22
6.2 Assessment Network and Existing Traffic Flows	22
6.3 Existing Traffic Flows	22
6.4 Assessment Hours	23
6.5 Forecast Years	23
6.6 Without Development Scenario	24
6.7 With Development Scenario	24
7 CAPACITY ANALYSIS	25
7.1 Junction Modelling Software	25

7.2	Assessment Junction J1 - Proposed New Site Access Priority Junction with Elba Crescent	25
7.3	Assessment Junction 2 – A483 Fabian Way / Elba Crescent / Swansea University Bay Campus Eastern Access Signalised Junction	26
7.4	Assessment Junction 3 - A483 Fabian Way / Swansea University Bay Campus Main Access signalised junction	27
7.5	Capacity Assessment Summary	29
8	SUMMARY AND CONCLUSION	30
8.1	Summary	30
8.2	Conclusion	31

FIGURES

Figure 1.1 – TA Study Network Junctions

Figure 2.1 – Site Location in Local Context

Figure 2.2 – Site in Wider Strategic Context

Figure 2.3 – Local Facilities

Figure 2.4 – Swansea Bay Cycle Map

Figure 2.5 – Swansea Bay Cycle Network ‘Tube Map’

Figure 2.6 – National Cycle Route Network Extract

Figure 2.7: 4km and 12km Cycle Isochrones

Figure 2.8: PIA Plot Extract

APPENDICES

Appendix A – Site Boundary and Concept Masterplan

Appendix B – TRICS Output

Appendix C – MCC Survey Data

Appendix D – MOVA Data

Appendix E – Network Flow Diagrams

Appendix F – PICADY Model Outputs

Appendix G – LinSig Model Outputs

1 INTRODUCTION

1.1 Background

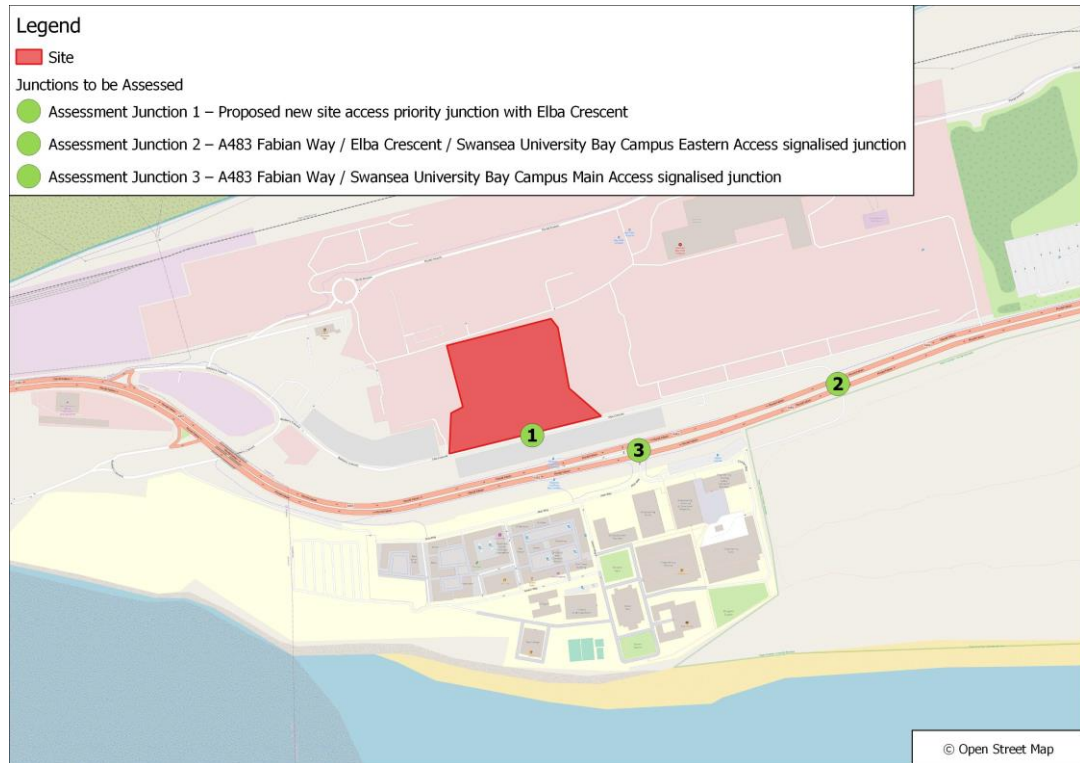
- 1.1.1 This Transport Assessment (TA) has been produced by Corun Associates ('Corun') on behalf of Hawkland Estates Ltd (the 'applicant') to examine the highway and transportation issues associated with a proposed development of circa 165 residential units (hereon referred to as the 'site') on land to the north of Elba Crescent, Swansea.
- 1.1.2 The development is currently in outline stage only. A site boundary plan and concept masterplan are provided at **Appendix A**.
- 1.1.3 The site was previously granted outline planning permission as part of a larger mixed used residential and employment site in September 2011 (Ref: P2008/0514). This consent was renewed over the years with the latest consent expiring in May 2019. The residential element of the previous application comprised approximately 100 dwellings. This TA has been developed to support a new application on the same area of land outlined for residential development in the 2011 granted proposal.
- 1.1.4 Corun's initial instruction was to consider a development of circa 150 residential units. Following completion of the initial Transport Assessment dated December 2021, which considered 150 units, the indicative masterplan has been extended to approximately 165 residential units. When the number of units on site is fixed, the capacity analysis will be re-run for the application and the TA updated. However, the initial findings of this TA (150 units) suggest that the highway network could easily accommodate the additional 15 units now sought.
- 1.1.5 The aim of this report is to demonstrate the suitability of the site to accommodate a development of this scale without detriment to highway operation or safety.

1.2 Scope of Assessment

- 1.2.1 This TA discusses the following key transport issues associated with the development of the site:
- the site location;
 - development proposals including proposed access for all modes;
 - the site's compliance with applicable transport planning policy;
 - accessibility to walking, cycling and public transport facilities;
 - trip generation predictions for the proposed development;
 - traffic impact;
 - review and assessment of highway capacity in the vicinity of the site.
- 1.2.2 With due consideration of the scale of the proposed development, the following junctions will form the study area (please also see **Figure 1.1**):

- **Assessment Junction 1** – Proposed new site access priority junction with Elba Crescent
- **Assessment Junction 2** – A483 Fabian Way / Elba Crescent / Swansea University Bay Campus Eastern Access signalised junction
- **Assessment Junction 3** – A483 Fabian Way / Swansea University Bay Campus Main Access signalised junction

Figure 1.1: TA Study Network Junctions



2 EXISTING CONDITIONS

2.1 Site Description

2.1.1 The site is located on former industrial land to the north of Elba Crescent, approximately 4km to the east of Swansea city centre. Elba Crescent itself is located directly north of both the A483 Fabian Way and the Swansea University Bay Campus.

2.1.2 The site formed a parking area for the previous industrial use and is bordered by Elba Crescent to the south, and further industrial development to the north, east and west.

2.1.3 **Figure 2.1** displays the site location in a local context

Figure 2.1: Site Location in Local Context



2.2 Local Highway Network

Elba Crescent

2.2.1 Access to the site is currently provided via a priority junction in the south east corner along Elba Crescent.

2.2.2 In the vicinity of the site, Elba Crescent is a 30mph road providing access to the residential dwellings located along its southern edge.

2.2.3 West of the site, Elba Crescent continues as Baldwins Crescent for a distance of approximately 250m, where a bus barrier is located preventing continued movements for all other vehicles.

- 2.2.4 East from the site, Elba Crescent continues for a distance of approximately 500m, where it connects to the A483 Fabian Way via a signalised junction (also including the Swansea University Bay Campus Eastern access point).

A483 Fabian Way

- 2.2.5 The A483 Fabian Way is a multiple lane dual carriageway road which in the vicinity of the site has a 50mph speed limit.
- 2.2.6 The A483 Fabian Way extends for a distance of approximately 7km, providing a key strategic route between Swansea City Centre to the west, and the junctions with the M4 J42 and A48 (providing access through the Neath and Port Talbot areas) at its eastern point.
- 2.2.7 The site is shown in a wider strategic context at **Figure 2.2**.

Figure 2.2: Site in Wider Strategic Context



2.3 Pedestrian

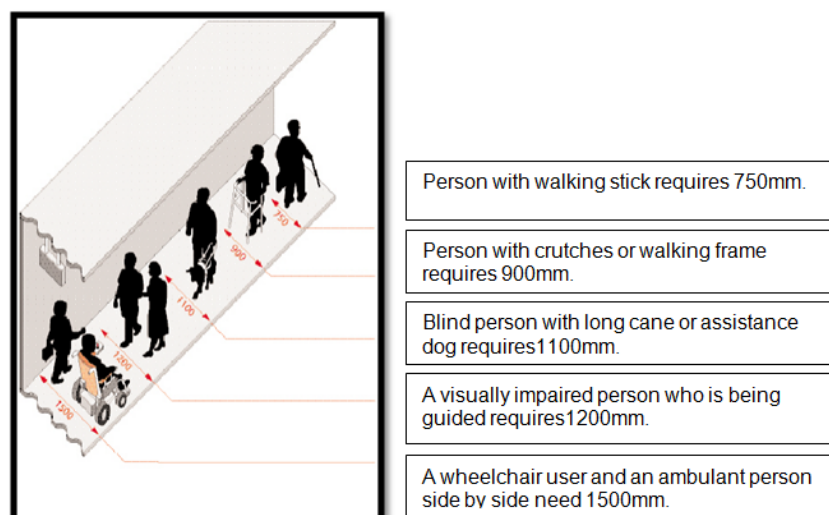
- 2.3.1 East from the site access point along Elba Crescent, footways of at least 1.5m in width are present on both sides of the carriageway, and continue for the length of the road, connecting into an onward shared use pedestrian and cyclist route along the northern edge of the A483 Fabian Way carriageway. The signalised junction at this point also provides a pedestrian crossing point into the shared use pedestrian and cyclist route also running along the southern edge of the A483 Fabian Way carriageway.
- 2.3.2 West from the site access point along Elba Crescent, a footway of at least 1.5m in width is present on the southern side of the carriageway, and continues for the length of the road, connecting into onward routes north through the Ffordd Amazon industrial area, and west

into the shared use pedestrian and cycle route running along the northern edge of the A483 Fabian Way carriageway.

- 2.3.3 South of the site, at a point between No.18 and No.19 Elba Crescent, a short off-road link also provides direct access to the shared use pedestrian and cycle route running along the northern edge of the A483 Fabian Way carriageway (connecting at a point by the Swansea University Bay Campus eastbound stop). The signalised junction into the Swansea University Bay Campus main entrance is also located approximately 100m to the east of this point, providing a signalised toucan crossing point into the university campus, and onto the shared use pedestrian and cycle route running also along the southern edge of the A483 Fabian Way carriageway.

- 2.3.4 **Extract 2.1** from DfT's 'Inclusive Mobility' document (2002), identifies that aforementioned footway widths of at least 1.5m are suitable for a variety of users, including a wheelchair user and an ambulant person side by side.

Extract 2.1: Footway widths (DfT 'Inclusive Mobility' 2002)



- 2.3.5 The Chartered Institution of Highways and Transportation document 'Providing for Journeys on Foot' provides the following suggested acceptable walking distances, as shown in **Table 2.1**.

Table 2.1: Acceptable Walking Distances (IHT)

	Town Centres (m)	Commuting / School / Sightseeing (m)	Elsewhere / Local Services (m)
Desirable	200	500	400
Acceptable	400	1,000	800
Preferred Maximum	800	2,000	1,200

- 2.3.6 **Figure 2.3** identifies that a variety of facilities, amenities and employment opportunities can be reached within a short walking distance of the site. These include significant employment opportunities from the industrial area to the north of the site along Ffordd Amazon (including the Amazon unit approximately a 1.9km walk). Swansea Bay University Campus is also located approximately just a 260m walk south of the site. Not only providing employment and education opportunities, the campus also offers facilities accessible to the public including a Tesco Express, Costa coffee shop, and gym facilities.

Legend

- ★ Site
- Swansea University Bay Campus
- Swansea Gate Business Park
- 2km Walking Catchment

Amazon Warehouse (1.9km)

Play Park (350m)

Leisure Centre (615m)

Costa Coffee (650m)

Tesco Express (550m)

Swansea University Bay Campus Beach (600m)

© Open Street Map

2.4.1 Cycling facilities within the vicinity of the site are outlined on an extract from the Swansea Bay cycle map published by Swansea Council, shown in **Figure 2.4**.

Allwedd Ffr Iwrybrau
Key to routes

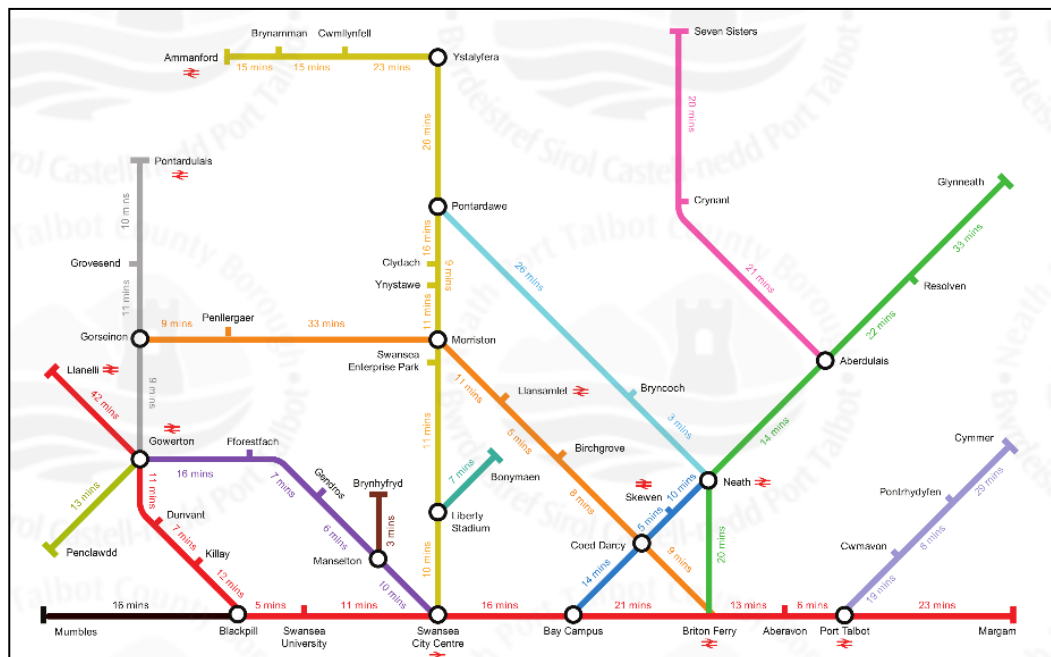
Llywyrl beiciau y cymhoriad
roadworthy (ie grade 1 or 2)
Advisory cycle route (on-road)
Llywyrl beiciau trefnir lleoli
Active Travel cycle route
• Ar y ffordd / on-road
• Oddi ar y ffordd / off-road
Llywyrl beiciau Bwrdd Abertawe
Swansea Bay Cycle Network
<http://www.cycleaware.abay.org.uk/>
• Glaswylod / Aqua
• Du / Black
• Glas / Blue
• Brown / Brown
• Gwylod / Green
• Llywyrl / Grey
• Llain / Lime
• Melyn / Yellow
• Oren / Orange
• Pinc / Pink
• Porffor / Purple
• Coch / Red
• Gwylod / Teal
• Ffyn / Violet
Rwydwaith Beiciau Cenedlaethol
National Cycle Network
<http://www.ncn.org.uk/>
• NCN 4
• NCN 43
• NCN 46
• NCN 47
• NCN 885
• NCN 887

Indicative Site Location

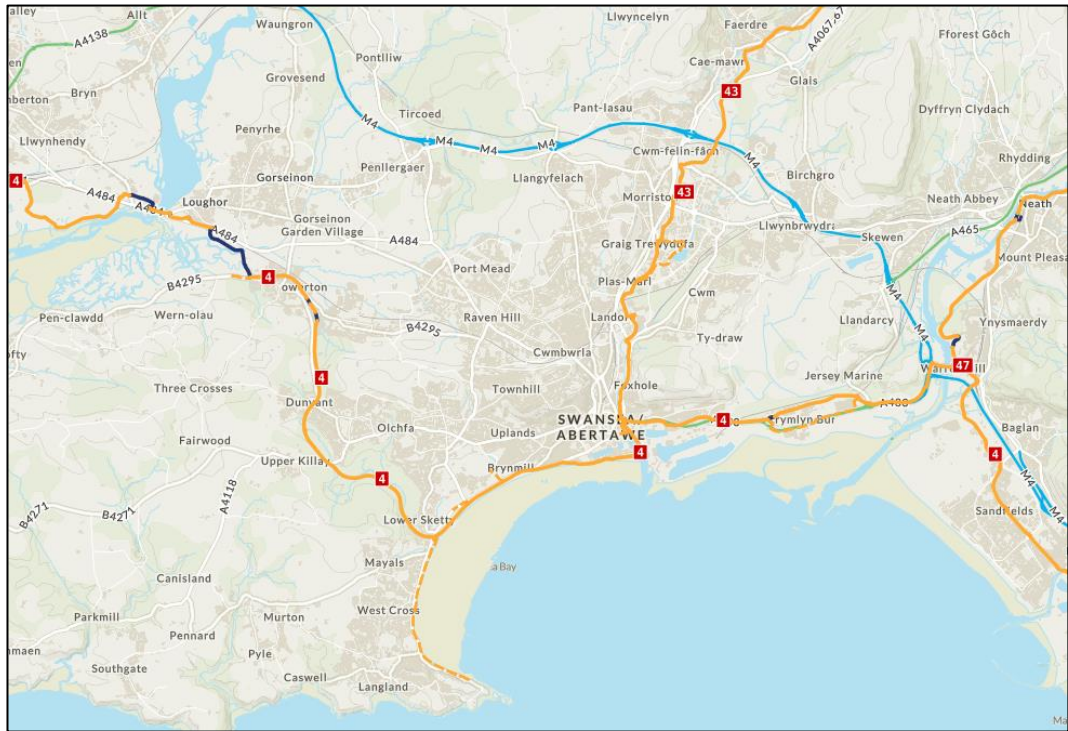
Corun Associates
6

- 2.4.2 As identified on the Swansea Bay Cycle Map extract, cycling in the immediate vicinity along Elba Crescent is accommodated on-road. As previously identified, however, a short off-road link to the south of the site between No.18 and No.19 Elba Crescent provides direct access to the shared use pedestrian and cycle route running along the northern edge of the A483 Fabian Way carriageway (connecting at a point by the Swansea University Bay Campus eastbound stop), with further signalised toucan crossings also providing direct access into the shared use pedestrian and cycle route also running along the southern edge of the A483 Fabian Way carriageway.
- 2.4.3 The shared use routes along the A483 Fabian Way carriageway form part of the Red Route of the Swansea Bay Cycle Network. The Blue Route also commences from the eastern point of Elba Crescent approximately just 500m east from the site.
- 2.4.4 The Swansea Bay Cycle Network is a scheme developed by both Swansea Council and Neath Port Talbot Council to encourage people in the area to travel by bike instead of car as part of their journey to work, school or the shops. There are fourteen different routes in the Swansea Bay Cycle Network, with each assigned a different colour. The network was developed with routes which take the most direct and flattest journey, suitable for all kinds of bike. The routes are a combination of both on-road and off-road sections, with route colours replicated on signs across the network. **Figure 2.5** shows a tube style map of the entire Swansea Bay Cycle Network, along with approximate cycle times between key points on the network.
- 2.4.5 The Red Route (also known as the Central Line) is a largely off-road and flat route that continues west into Swansea City Centre (approximately a further 16-minute cycle time), and east towards Port Talbot (approximately a 40-minute cycle time). This is a key route on the Swansea Bay Cycle Network, and also forms part of National Cycle Route 4 as shown on **Figure 2.6**.

Figure 2.5: Swansea Bay Cycle Network 'Tube Map'

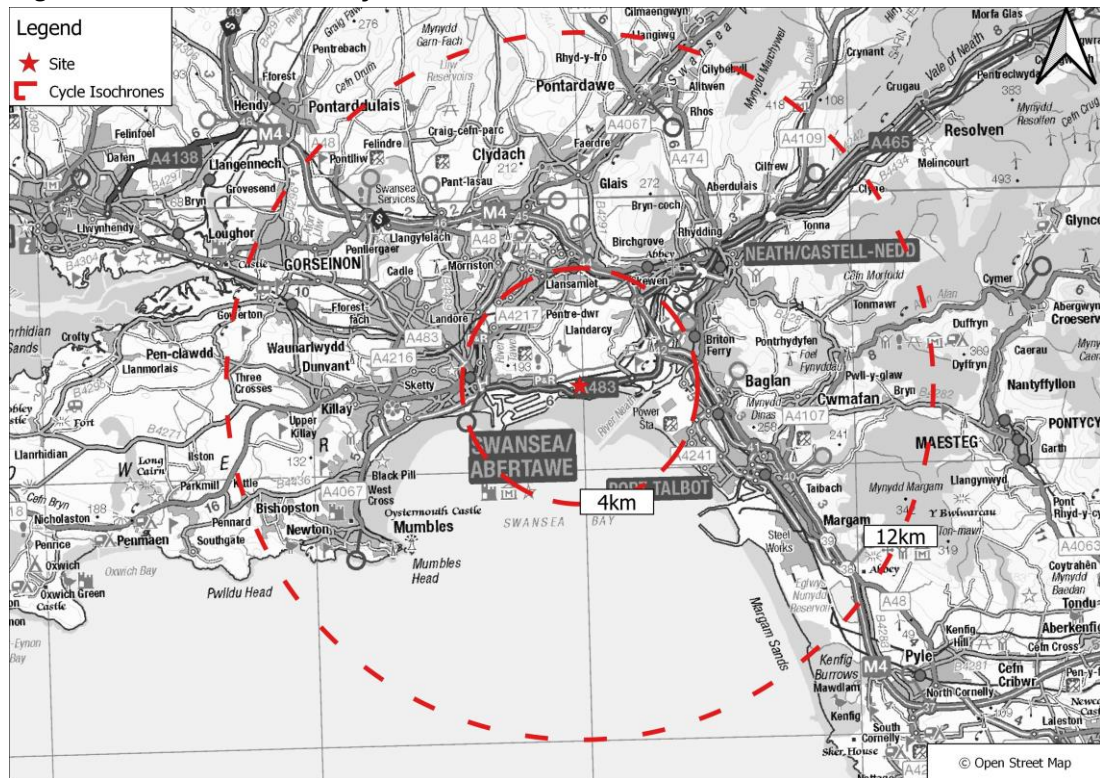


Source: www.cycleswanseabay.org.uk

Figure 2.6: National Cycle Route Network Extract

Source: www.sustrans.org.uk

- 2.4.6 The Blue Route (also known as the Skewen Link) is an approximate 3km advisory on-road route for users of all abilities, routing between the Swansea Bay University Campus at its southern point, and Neath at its northern point. As identified on the Tube Map at **Figure 2.5**, this route can be travelled in approximately 30-minutes, and acts as a link to further routes on the Swansea Bay Cycle Network (Orange, Green, Light Blue).
- 2.4.7 LTN1/04 identifies that the mean average length for cycling is 4km (2.4 miles), although journeys of up to three times this distance are not uncommon for regular commuters. As such, a 12km (7.4 miles) cycle distance normally applies. **Figure 2.7** displays the 4km and 12km indicative cycle isochrones from the site.
- 2.4.8 **Figure 2.7** identifies that Swansea City Centre is located within a 4km catchment of the site. The wider 12km catchment also covers the whole of the wider Swansea area, and also covers some of the larger neighbouring towns/villages such as Neath, Port Talbot, Gorseinon, and Pontardawe.
- 2.4.9 With its proximity to an extensive network of designated Active Travel cycle routes, the site is located in an excellent position to encourage cycle modes of travel for both local and longer distance journeys.

Figure 2.7: 4km and 12km Cycle Isochrones

2.5 Public Transport Facilities

Bus

- 2.5.1 Guidance relating to the accessibility of development proposals to public transport is provided in the Institution of Highways and Transportation (IHT) document 'Planning for Public Transport in Development' (March 1999). The IHT guidance recommends that
- “new developments should be located so that public transport trips involve a walking distance of less than 400m from the nearest bus stop ...”.*
- 2.5.2 The nearest bus stop to the site is located on Elba Crescent, to the west of the site access (approximately just a 70m walk). This stop is served by Firs Cymru service 84, which runs between Swansea and Port Talbot.
- 2.5.3 Additional Bus services are also available from the Bay Campus (eastbound) and Bay Campus (westbound) stops located to the south of the site along the A483 Fabian Way. These stops are an approximate 100m and 370m walk away respectively (including for the distance required to cross the A484 Fabian Way carriageway for the westbound stop). These stops provide access to services routing to numerous destinations including, Neath, Bridgend, and Glynneath.
- 2.5.4 A summary of the regular services accessible at all three stops identified are outlined in **Table 2.2**.

Table 2.2: Approximate frequencies of regular services accessible from nearby bus stops

Steps

Service	Route	Approximate service frequency and operating hours		
		Mon-Fri	Saturday	Sunday
Elba Crescent Bus Stop Services				
84 First Cymru	Swansea - Port Talbot	1 service every 120 minutes (06:53-16:56)	1 service every 120 minutes (06:53-16:56)	N/A
Bay Campus (Eastbound and Westbound) Bus Stop Services				
9A First Cymru	Swansea Bus Station - Swansea Bay Field Hospital	1 service every 20 minutes (07:43 – 19:03)	N/A	N/A
38 First Cymru	Swansea - Neath	1 service every 60 minutes (08:36-18:06)	1 service every 60 minutes (08:36-18:06)	N/A
T6 NAT group	Brecon - Swansea	1 service every 60 minutes (09:20-20:24)	1 service every 60 minutes (09:20-20:24)	1 service every 120 minutes (09:14-17:14)
X1 First Cymru	Swansea - Bridgend	1 service every 30 minutes (07:15-18:56)	1 service every 30 minutes (07:15-18:56)	N/A
X5 First Cymru	Swansea - Neath	1 service every 60 minutes (09:31 – 17:31)	1 service every 60 minutes (09:31 – 17:31)	N/A
X7 First Cymru	Swansea - Glynneath	1 service every 60 minutes (07:50 – 18:50)	1 service every 60 minutes (07:50 – 18:50)	N/A

2.5.5 **Table 2.2** identifies that regular bus services are available from the bus stops in proximity to the site, offering convenient bus travel options between Swansea City Centre and the surrounding areas of Neath, Bridgend and Port Talbot.

2.5.6 The site is therefore considered to be in an excellent location to offer residents of the site opportunities to travel via bus modes.

Rail

2.5.7 The nearest railway station to the proposed development is Swansea station, which is approximately 5.1km away. Although outside a reasonable walking distance to the site, the station can be accessed via a multi-modal cycle (approximately 30-minutes).

2.5.8 Swansea is a key station in Wales, providing access to Transport for Wales services running across South Wales, and onward to Manchester Piccadilly and Shrewsbury. The station also provides access to First Great Western services operating between Carmarthen and London Paddington.

2.5.9 Potential commuter stations within a short rail journey time to Swansea include Gowerton (11-minutes) and Llanelli (18-minutes) to the west, and Neath (11-minutes), Port Talbot (18-minutes) and Bridgend (31-minutes) to the east.

- 2.5.10 With the opportunity for a multi-modal cycle trip, Swansea train station is an option for residents of the site if required, especially for longer distance commuting or leisure trips.

Summary

- 2.5.11 It is evident that the site is able to offer potential residents a viable alternative to private car travel, with numerous walking, cycling and public transport options available which will significantly reduce dependency on private car travel.

2.6 Local Highway Safety

- 2.6.1 A review has been carried out on local highway network safety in order to establish whether there are any current accident clusters or safety concerns in the vicinity of the site that may be exacerbated by the development proposal.
- 2.6.2 The website www.crashmap.co.uk has been interrogated to provide a review of accidents in the surrounding area.
- 2.6.3 CrashMap uses data collected by the police about road traffic crashes occurring on British roads where someone has been injured. This data is approved by the National Statistics Authority and reported on by the Department for Transport each year. The website uses data obtained directly from official sources and compiled in an easy to use format showing each incident on a map. Incidents are plotted to within 10 metres of their location and the data includes all incidents up to the end of 2020.
- 2.6.4 An extract showing all CrashMap identified PIAs occurring in the vicinity of the site over the 5-year period between 2016 and 2020 is shown in **Figure 2.8**. This identifies that 9 PIAs were recorded in the study area over this 5-year period. This equates to an average of less than 2 PIAs per year.

Figure 2.8: PIA Plot Extract



Data source www.crashmap.co.uk - data extracted December 2021

- 2.6.5 Of the 9 PIAs recorded, 7 of these were slight in nature, with the remaining 2 identified as serious. All PIAs were observed along the A483 Fabian Way.
- 2.6.6 As identified in more detail at **Section 6** of this report, MOVA data has been provided by Swansea Council at the signalised assessment junctions J2 and J3. This data provides details of recorded traffic flows in each approach lane at the Junctions, over the continuous hourly period between Tuesday 14th September 2021 and Wednesday 13th October 2021. The MOVA data identifies a 7-day average two-way flow along the A483 Fabian Way of approximately 30,000 vehicles a day. Although all incidents are regrettable, the accident rate observed along the A483 in the vicinity of the site does not appear significantly greater than what might be expected for a major road carrying this volume of traffic.
- 2.6.7 7 of the PIAs were located in the vicinity of assessment junction J3. A detailed breakdown of these PIAs is provided in **Table 2.3** and **Table 2.4**.

Table 2.3: PIA Summary in vicinity of assessment junction J3

PIA Date	PIA Severity	No. Vehicles Involved	No. Casualties	Casualty Type				Vehicles Involved					
				Pedestrian	Pedal Cycle	Motorcycle	Other	Pedal Cycle	Motorcycle	Car	HGV	Bus	Young Driver
02/09/2019	Serious	3	1			X			X	X			X
26/12/2018	Slight	1	1							X			
04/09/2018	Serious	1	1	X						X			
12/11/2017	Slight	2	1							X			
02/02/2017	Slight	1	2							X			
01/08/2016	Slight	1	1							X			X
09/06/2016	Slight	2	3							X			

Table 2.4: Total PIAs per year in vicinity of assessment junction J3

Year	PIA Count
2020	0
2019	1
2018	2
2017	2
2016	2
Average	1.4

- 2.6.8 **Table 2.3** identifies that only 1 of the PIAs located in the vicinity of assessment junction J3 involved a pedestrian casualty, with no PIAs involving a pedal cycle casualty. This indicates no apparent issue with the toucan crossing at this junction, which would likely be regularly used by residents of the proposed development.
- 2.6.9 **Table 2.2** also identifies that an average of just 1.4 PIAs have occurred at the assessment junction J3 over the 5-year period between 2016 to 2020. This is again not considered significantly greater than what might be expected for a junction of this nature and traffic volumes. The PIA rate also steadily decreased over the 5-year period, from 2 PIAs in 2016 down to 0 PIAs in 2020.

- 2.6.10 No PIAs were identified occurring in the location of assessment junction J2 over the 5-year study period between 2016 and 2020.
- 2.6.11 The accident data does not therefore appear to identify any significant highway safety issue within the immediate area of the development site and access junction, and the minor increase in traffic generated by the proposed development (as discussed later in this report) is highly unlikely to exacerbate the existing safety record to a significant enough level to warrant concern.

3 LOCAL AND NATIONAL PLANNING GUIDANCE

3.1 Overview

3.1.1 With regard to the transportation implications of the proposed development, this assessment examines the development proposal in the context of relevant planning policy guidance at a national, regional, and local level. The following documents have been reviewed:

- Planning Policy Wales (Edition 11, February 2021);
- Technical Advice Note (Wales) (2007) 18 – Transport;
- Future Wales – The National Plan 2040 (February 2021)
- Neath Port Talbot County Borough Council Local Development Plan (2011-2026)

3.1.2 Consideration is also given to the following legislation, which has an emphasis on sustainable transport provision:

- Active Travel Wales Act 2013;
- Well-being of Future Generations (Wales) Act 2015.

3.2 Overall Policy Objective

3.2.1 The overarching desire at all tiers of planning policy guidance is to influence a modal shift from single occupancy car travel towards more sustainable modes such as walking, cycling, and public transport.

3.2.2 In order to achieve this, it is recognised that development should be located such that the need to travel by private car is reduced, in locations where there is good access to high quality public transport, walking and cycling provision.

3.3 Planning Policy Wales (February 2021)

3.3.1 Planning Policy Wales (PPW) confirms that transport plays a key role in promoting a healthier Wales, a more equal Wales, cohesive communities and a globally responsible Wales.

3.3.2 For placemaking in rural areas, PPW states that:

‘For most rural areas the opportunities for reducing car use and increasing walking, cycling and use of public transport are more limited than in urban areas. In rural areas, most new development should be located in settlements which have relatively good accessibility by non-car modes when compared to the rural area as a whole. Development in these areas should embrace the national sustainable placemaking outcomes and, where possible, offer good active travel connections to the centres of settlements to reduce the need to travel by car for local journeys.’

3.3.3 PPW identifies the following active and social linkages issues which it aims to address:

- *‘enable sustainable access to housing, employment, shopping, education, health, community, leisure and sports facilities and green infrastructure, maximising opportunities for community development and social welfare;*
- *develop sustainable transportation infrastructure to keep Wales moving and connect people with jobs, housing and leisure. Ensure that the chosen locations and resulting design of new developments reduces reliance on the private car for daily travel, supports sustainable modes of travel and assists in improving the environment, public health and community life;*
- *require developments to encourage modal shift and be easily accessible by walking, cycling and public transport, by virtue of their location, design and provision of on and off site sustainable transport infrastructure’.*

3.3.4 Under the sustainable transport category, PPW identifies that:

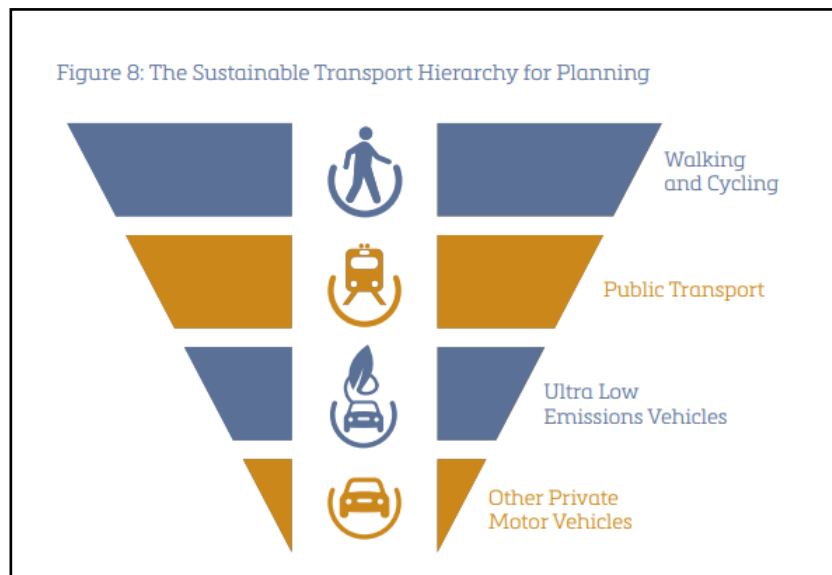
‘The Welsh Government is committed to reducing reliance on the private car and supporting a modal shift to walking, cycling and public transport. Delivering this objective will make an important contribution to decarbonisation, improving air quality, increasing physical activity, improving the health of the nation and realising the goals of the Well-being of Future Generations Act.

The planning system has a key role to play in reducing the need to travel and supporting sustainable transport, by facilitating developments which:

- *are sited in the right locations, where they can be easily accessed by sustainable modes of travel and without the need for a car;*
- *are designed in a way which integrates them with existing land uses and neighbourhoods; and*
- *make it possible for all short journeys within and beyond the development to be easily made by walking and cycling.*

Development proposals must seek to maximise accessibility by walking, cycling and public transport, by prioritising the provision of appropriate on-site infrastructure and, where necessary, mitigating transport impacts through the provision of off-site measures, such as the development of active travel routes, bus priority infrastructure and financial support for public transport services.

It is Welsh Government policy to require the use of a sustainable transport hierarchy in relation to new development, which prioritises walking, cycling and public transport ahead of the private motor vehicles. The transport hierarchy recognises that Ultra Low Emission Vehicles also have an important role to play in the decarbonisation of transport, particularly in rural areas with limited public transport services.



The sustainable transport hierarchy should be used to reduce the need to travel, prevent car-dependent developments in unsustainable locations, and support the delivery of schemes located, designed and supported by infrastructure which prioritises access and movement by active and sustainable transport.

The sustainable transport hierarchy must be a key principle in the preparation of development plans, including site allocations, and when considering and determining planning applications.

Different approaches to sustainable transport will be required in different parts of Wales, particularly in rural areas, and new development will need to reflect local circumstances.'

3.3.5 With regards to car parking, PPW confirms the widely accepted notion that:

'Car parking provision is a major influence on how people choose to travel and the pattern of development. Where and how cars are parked can in turn be a major factor in the quality of a place.'

3.3.6 It continues that:

'A design-led approach to the provision of car parking should be taken, which ensures an appropriate level of car parking is integrated in a way which does not dominate the development. Parking provision should be informed by the local context, including public transport accessibility, urban design principles and the objective of reducing reliance on the private car and supporting a modal shift to walking, cycling and public transport. Planning authorities must support schemes which keep parking levels down, especially off-street parking, when well designed. The needs of disabled people must be recognised and adequate parking provided for them.

Planning authorities must require good standards of car parking design, which do not allow vehicles to dominate the street or inconvenience

people walking and cycling. Car parking should be overlooked by surrounding properties, to provide natural surveillance.

.... Parking standards should be applied flexibly and allow for the provision of lower levels of parking and the creation of high quality places.'

- 3.3.7 PPW promotes walking and cycling for shorter trips and that cycling be encouraged for short trips and as a substitute for shorter car journeys, or as part of a longer journey when combined with public transport.

3.4 Technical Advice Note (TAN 18)

- 3.4.1 Technical Advice Note 18 (TAN 18) promotes the overall integration of transport in the following ways:

- Integration of transport and land use planning.
- Integration between different types of transport; and
- Integration of transport policy with policies for the environment, education, social justice, health, economic development and wealth creation.

- 3.4.2 The integration of land use planning and the development of transport has a key role to play in the promotion of sustainable development. TAN 18 identifies the following ways in which integration can help achieve sustainable environmental outcomes:

- promoting resource and travel efficient settlement patterns;
- ensuring new development is located where there is, or will be, good access by public transport, walking and cycling thereby minimising the need for travel and fostering social inclusion;
- managing parking provision;
- ensuring that new development and major alterations to existing developments include appropriate provision for pedestrians (including those with special access and mobility requirements), cycling, public transport, and traffic management and parking/servicing;
- encouraging the location of development near other related uses to encourage multi-purpose trips;
- promoting cycling and walking;
- supporting the provision of high quality, inclusive public transport;
- encouraging good quality design of streets that provide a safe public realm and a distinct sense of place; and
- ensuring that transport infrastructure or service improvements necessary to serve new development allow existing transport networks to continue to perform their identified functions.

3.5 Future Wales: The National Plan 2040 (February 2021)

3.5.1 'Future Wales: The National Plan 2040' is the Welsh Government national development framework, setting the direction for development in Wales to 2040.

3.5.2 With regards to transport, Future Wales draws the same conclusions to those identified in PPW and TAN 18, identifying that the Welsh Government's aim is to reduce the need to travel, particularly by private vehicles, and support a modal shift to walking, cycling and public transport, with development to be focussed in areas where these modes of travel can be supported.

3.5.3 Future Wales identifies 11 outcomes for where Wales should be within 20 years' time. Outcome 7 reflects the anticipated Outcome for transport as follows:

"Outcome 7 – A Wales where people live in place where travel is sustainable. All methods of travel will have low environmental impact and low emissions, with increased use of public transport and ultra-low emission vehicles replacing today's petrol and diesel vehicles.

Sustainable transport infrastructure will be embedded within development to enable easy and convenient access from one place to another for commuting, business, tourism and leisure purposes. Development will focus on active travel and public transport, allied with a reduced reliance on private vehicles."

3.6 Neath Port Talbot County Borough Council Local Development Plan (2011-2026)

3.6.1 The Neath Port Talbot County Borough Councils Local Development Plan (LDP) is a document that sets out the visions, objectives, strategies and policies for managing development in the county area up to 2026 and was adopted in January 2016.

3.6.2 The LDP outlines aims regarding transport as follows:

'The Strategy seeks to support and develop the transport network to safely and effectively facilitate the movement of people and freight within the County Borough, to reduce reliance on the private car and to improve connectivity to neighbouring areas.

3.6.3 Within the LDP the site is allocated for residential development under policy reference H1/LB/3, for a residential development of around 50 units, to be accessed off Elba Crescent.

3.7 Conclusion

3.7.1 As identified in **Section 2** of this report, the site is well located and highly accessible by sustainable modes of transport, and it is therefore concluded that the site complies with transport planning policy at local and national levels.

4 DEVELOPMENT PROPOSALS

4.1 Proposal

- 4.1.1 The proposals are for the development of 165 residential units on the site. At this stage, the plans are outline only, so no anticipated bedroom schedule is currently available.

4.2 Access Arrangements

- 4.2.1 Access will be taken from the existing site access point in the south east of the site along Elba Crescent. The existing priority junction is proposed to be modified to provide a more appropriate residential geometry (i.e., a 5.5m wide access road with 6.0m radii kerbs on entry and exit). Footways of 2.0m in width will be provided through the development site, which will connect directly into the existing footway provision along the northern edge of Elba Crescent.

4.3 Car Parking Provision

- 4.3.1 The Neath Port Talbot County Borough Council's parking standards are set out in the Local Development Plans SPG document. This sets out detailed parking requirements according to land use and type of development across the county. These parking standards differ across distinct zones identified within the document. The proposed development falls within 'Zone 4'.
- 4.3.2 The parking standards aim to set a maximum level of parking to be provided at developments, in line with national and regional policies to encourage a move to more sustainable modes of transport.
- 4.3.3 For residential developments (new build and conversions), The Zone 4 parking standards identify that a maximum of 1 parking space is required per bedroom (up to a maximum of 3 parking spaces per dwelling), with an additional 1 visitor parking space is required for every 5 dwellings.
- 4.3.4 Based on these standards, the proposed development would require a maximum of 528 car parking spaces on the site (495 spaces for residents, and 33 spaces for visitors). Car parking on site will be provided in line with these standards.

4.4 Cycle Parking Provision

- 4.4.1 Appendix D of the NPTCBC SPG also sets out cycle parking standards at proposed developments, and states the following at paragraph 6:
- D.6. All residential developments must be accessible by cycles and cycle storage must be a factor of dwelling design. In appropriate circumstances, convenient communal facilities may be provided.'*
- 4.4.2 Cycle parking on site will be provided in line with these standards.

5 TRIP GENERATION

5.1 Introduction

- 5.1.1 Following completion of the Transport Assessment analysis phase, which considered 150 units, the indicative masterplan was extended to 165 residential units. When the number of units on site is fixed, the analysis will be re-run for the application and the TA updated. However, the initial findings of the TA suggest that the highway network could easily accommodate the additional 15 units now sought.
- 5.1.2 Estimated traffic flows for the proposed development have been forecast using the TRICS database. TRICS is a nationally accepted database providing information relating to the total number of trips generated by various land uses based on existing traffic surveys at similar sites throughout the United Kingdom.
- 5.1.3 From the TRICS database, a trip rate is derived which provides the number of expected trips per residential unit by mode of transport.

5.2 Proposed Development Trip Generation

- 5.2.1 To represent the proposed site, the TRICS category '03 – Residential / A – Residential / Houses Privately Owned' was selected. The following filtering parameters were then applied to derive a representative trip forecast for the site:
- All sites in Greater London & Ireland excluded;
 - Excludes 'edge of town centre' and 'town centre' sites.
- 5.2.2 A full report of the TRICS site selection and trip rates generated is included in **Appendix B**.
- 5.2.3 Using the TRICS generated trip rates, **Table 5.1** shows the vehicular trip forecast for the proposed development over the typical weekday highway AM and PM peak hour periods of 08:00 to 09:00 and 17:00 to 18:00 respectively, as well as the well total weekday 12-hour period between 07:00 to 19:00.

Table 5.1: Proposed development, predicted weekday total vehicular trip generation using TRICS (based on the development of 165 dwellings)

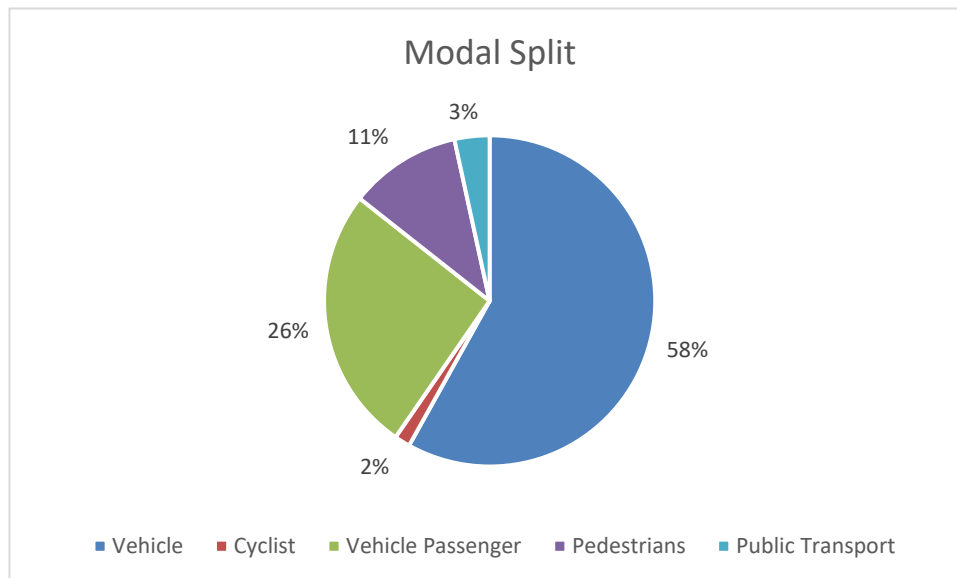
Time Period	Trip Rates (Per dwelling)			Total Trips for proposed development (165 dwellings)		
	Arr.	Dep.	Total	Arr.	Dep.	Total
AM Peak Period 08:00-09:00	0.132	0.368	0.500	22	61	83
PM Peak Period 17:00-18:00	0.332	0.150	0.482	55	25	80
12-Hour Period 07:00-19:00	2.127	2.169	4.296	351	358	709

- 5.2.4 **Table 5.1** demonstrates that the proposed residential development of circa 165 dwellings is estimated to generate approximately 83 and 80 total two-way vehicle trips over the

traditional AM and PM highway peak hours of 08:00 to 09:00, and 17:00 to 18:00 respectively. Between the weekday 12-hour period of 07:00 to 19:00, the proposed development would be anticipated to generate a total of 709 total two-way vehicle trips.

5.2.5 **Chart 5.1** shows the typical modal split for a development of this scale, based on the TRICS sites selected with multi-modal survey data.

Chart 5.1: Anticipated Development Modal Split



5.2.6 **Chart 5.1** shows that the anticipated total person trips for a development of the nature proposed would typically comprise of approximately 11% pedestrians, 3% public transport users, and 2% cyclists. The remaining trips comprise of vehicle drivers (58%) and vehicle passengers (26%).

6 CAPACITY ASSESSMENT METHODOLOGY

6.1 Introduction

- 6.1.1 An assessment has been undertaken to identify the impact that the proposed development would be anticipated to have on capacity of the surrounding highway network. This section discusses the methodology used to create the assessment scenarios.

6.2 Assessment Network and Existing Traffic Flows

- 6.2.1 With due consideration of the scale and location of the proposed development, the following junctions will form the assessment study area (as previously identified in **Figure 1.1**):

- **Assessment Junction 1** – Proposed new site access priority junction with Elba Crescent
- **Assessment Junction 2** – A483 Fabian Way / Elba Crescent / Swansea University Bay Campus Eastern Access signalised junction
- **Assessment Junction 3** – A483 Fabian Way / Swansea University Bay Campus Main Access signalised junction

6.3 Existing Traffic Flows

- 6.3.1 Traffic surveys were undertaken by 'PCC Traffic Information Consultancy' at assessment junctions J2 and J3 on Friday 19th November 2021. The surveys were undertaken over the periods between 07:00 to 10:00 (Weekday AM peak period), and 15:00 to 18:00 (Weekday PM peak period) respectively, and represent the existing flows at each junction. A copy of all MCC survey data is contained at **Appendix C**.
- 6.3.2 Additionally, MOVA Log data has been provided by Swansea Council at the signalised assessment junctions J2 and J3. This data provides details of recorded traffic flows in each approach lane at the Junctions, over the continuous hourly period between Tuesday 14th September 2021 and Wednesday 13th October 2021. The MOVA data however did not contain turning proportion data on approach lanes, nor did it contain a vehicle classification breakdown. A copy of all MOVA Log data is contained at **Appendix D**.
- 6.3.3 The MOVA data has been analysed to identify how the total flows observed through the J2 and J3 assessment junctions during the MCC surveys compared to the weekday average flows identified over the MOVA data period. This analysis identified that the surveyed MCC flows (undertaken on a Friday) were greater than the average Friday flows identified from the MOVA data across both the AM and PM survey periods. During the AM period, however, the MOVA data identified that average Wednesday flows were greater than the surveyed Friday MCC flows. During the Weekday AM period, The MCC surveyed flows were greater than all the average Weekday flows identified from the MOVA data. A summary of this analysis is contained in the network flow diagrams contained at **Appendix E (Diagram 6)**.
- 6.3.4 Based on the identified MOVA flow comparison, the growth factors identified in **Table 6.1** have been applied to the MCC surveyed flows over the Weekday AM and PM periods, to represent the '2021 Base Year' flows. These growthed flows therefore represent a robust estimate of existing traffic flows through the study network over the busiest weekday period for each modelled period.

Table 6.1: Surveyed MCC Flows Growth Factors Applied

Period	Growth Factor Applied
Weekday AM Peak	1.086
Weekday PM Peak	1.000

Note: The total observed flows through assessment junctions J2 and J3 during the MCC surveys were greater than the average flows identified from the MOVA data across all Weekdays. For robustness, no growth reduction has been applied to the MCC flows, with a growth factor of 1.000 applied.

- 6.3.5 All 2021 Base Year flows are shown on the traffic flow diagrams contained at **Appendix E (Diagrams 7 to 10)**.

Covid Impact

- 6.3.6 It is important to note that this report has been produced during the ongoing Covid-19 pandemic period, which at certain times has imposed restrictions on both travel movements and the collection of traffic survey data across the country.
- 6.3.7 Both the MCC surveys and the MOVA data was collected during periods when schools were operational and there were no local lockdowns in place. No Covid factors have therefore been deemed necessary.

6.4 Assessment Hours

- 6.4.1 From the MCC surveys, the total traffic through each assessment junction has been summarised into 60-minute periods to identify the peak hours in traffic flow across the entire study network. This is summarised in **Appendix E (Diagram 1)**.
- 6.4.2 The resulting observed peak hours in traffic flow across the entire study network are as follows:
- **Weekday AM Peak Hour:** 07:30 to 08:30
 - **Weekday PM Peak Hour:** 15:45 to 16:45
- 6.4.3 Each of these identified peak hour periods have been modelled in the impact assessment work. The 2021 Base Year flows over each model period are shown on the traffic flow diagrams contained at **Appendix E (Diagrams 2 to 4)**.

6.5 Forecast Years

- 6.5.1 Forecast scenarios have been prepared to represent anticipated traffic conditions over the expected development opening year, and for a period 5-years after. These years are expected to be 2022 and 2027 respectively.
- 6.5.2 To provide an understanding of anticipated background traffic growth in each forecast year, factors have been identified using the TEMPro V7.2 computer program.
- 6.5.3 To represent growth factors anticipated for the local highway network, the Neath Port Talbot TEMPro zone was selected, with the NTEM 7.2 datasets and RTF 2018 forecasts applied. Factors were derived for the periods between 2021 to 2022, and 2021 to 2027 to be applied to the 2021 base year flows. A summary of the calculated growth factors is provided in **Table 6.2**.

Table 6.2: TEMPro Growth Factors

Years	Growth Factor	
	Weekday AM Period	Weekday PM Period
2021-2022	1.0084	1.0083
2021-2027	1.0486	1.0486

6.5.4 It should be noted that the growth factors represent a reference case and simply indicate traffic projections if all things remain constant. There are many factors that can influence these projections, such as the saturation of a local network, significant changes to petrol/car/road use prices, the economic situation, new government legislation and/or changes to social travel habits. No allowance is made for this in this assessment.

6.5.5 It is again important to note that this report has been produced during the Covid-19 pandemic which has had a significant impact on travel patterns across the country. The long-term traffic impact of the pandemic is still not fully understood. However, until industry accepted evidence is produced to identify otherwise, the TEMPro growth factors still represent the most accurate and reliable prediction of future traffic growth for the area. On this basis, no Covid-19 adjustment factors have been deemed necessary to forecast year factors.

6.6 Without Development Scenario

6.6.1 To provide a consistent assessment, a forecast 'Without Development' scenario was developed which represents the basis from which all future 'With Development' scenarios can be compared. In this instance, the Without Development scenario is calculated by factoring all 2021 Base Year flows by TEMPro growth factors, to represent a 2022 (opening year) and 2027 (5-year after opening) forecast year respectively.

6.6.2 The Without Development flows for both the 2022 and 2027 forecast years are shown on the traffic flow diagrams contained at **Appendix E (Diagrams 11 to 18)**.

6.7 With Development Scenario

6.7.1 A forecast 'With Development' scenario has been developed to assess the impact that the proposed development will have on the local highway network.

6.7.2 The anticipated trip generation of the proposed development has previously been described in **Section 5 (Tables 5.1)**.

6.7.3 The distribution of all development generated trips through the study network has been based on the turning proportions of vehicles at each assessment junction observed during the 2021 MCC surveys. Due to the Swansea University Bay Campus being only a short walking distance away from the site, it is assumed that no development vehicle trips route to/from the university site. These proportions are shown at **Appendix E (Diagram 19)**.

6.7.4 To enable a robust assessment at assessment junction J1 during the With Development scenario, straight on Elba Crescent movement flows have been based on the relevant eastbound and westbound total Elba Crescent flows observed at assessment Junction J2.

6.7.5 The final calculated distribution of site traffic is shown at **Appendix E (Diagram 20)**, with the With Development flows for both the 2022 and 2027 forecast years shown at **Appendix E (Diagrams 21 to 28)**.

7 CAPACITY ANALYSIS

7.1 Junction Modelling Software

- 7.1.1 Capacity analysis for the J1 proposed site access junction has been undertaken using the PICADY computer modelling tool within Junctions 9. The modelling of the signalised assessment junctions J2 and J3 has been undertaken using the LinSig computer modelling software.
- 7.1.2 The output from the PICADY program provides measurements informing a junction's operation. These relate to the 'Ratio of Flow to Capacity' (RFC), maximum queue length in PCUs, and delay in minutes per vehicle. The main indication of the performance of a junction is given by the RFC for each arm of the junction. The peak capacity is realised when the demand flow at the entry is great enough to cause a continuous queue of vehicles to wait in the approach. This is reached when the RFC attains a value of 1. An RFC value of 0.85 is normally accepted as being within capacity as this reduces the risk of delays due to traffic count inaccuracies and analytical and modelling assumptions.
- 7.1.3 The output from LinSig provides a number of measurements to provide information of a junction's operation. These relate to the 'Practical Reserve Capacity' (PRC), average queue length (in PCUs), mean maximum average queue length, and delay. The 'PRC' gives the main indicator of the junction's performance, which is calculated from the maximum degree of saturation on a link and is a measure of how much additional traffic could pass through the junction while maintaining a maximum degree of saturation of 90% on all links. A value above '0' is therefore normally accepted as being within capacity as this reduces the risk of delays due to traffic count inaccuracies and analytical and modelling assumptions.
- 7.1.4 A summary of the capacity assessments at each assessment junction for both the Without Development and With Development scenarios are provided in the next sections. Models for each assessment period have been based on the flows identified in the network flow diagrams contained at **Appendix E**.
- 7.1.5 A copy of all PICADY model outputs (assessment junction J1) are provided at **Appendix F**, and a copy of all LinSig model outputs (assessment junctions J2 and J3) are provided at **Appendix G**.

7.2 Assessment Junction J1 - Proposed New Site Access Priority Junction with Elba Crescent

- 7.2.1 As the proposed development site is currently un-occupied, only a With Development scenario has been modelled for the proposed site access junction.
- 7.2.2 The development proposals are currently in outline stage only. For the PICADY model, the major arm geometry has been based on existing conditions at the junction, with minor arm geometry based on a single lane approach of 2.75m in width.
- 7.2.3 **Table 7.1** provide the results of the Junction 1 PICADY assessment for both the 2022 and 2027 forecast years.

Table 7.1: Assessment Junction J1 – 2022 and 2027 With Development PICADY Model Outputs Summary

Movement	2022 With Development			2027 With Development		
	Max Q	Delay (s)	Max RFC	Max Q	Delay (s)	Max RFC
Weekday AM Peak Hour (07:30 to 08:30)						
Stream B - AC	0.1	6.26	0.09	0.1	6.26	0.09
Stream C - AB	0.0	5.44	0.03	0.0	5.44	0.03
Weekday PM Peak Hour (15:45 to 16:45)						
Stream B - AC	0.0	5.95	0.04	0.0	5.96	0.04
Stream C - AB	0.1	5.63	0.07	0.1	5.62	0.07

Stream A = Elba Crescent (Western Arm), B = Proposed Site Access, C = Elba Crescent (Eastern Arm)

- 7.2.4 In the 2022 With Development scenario, a maximum RFC on any arm of just 0.09 is observed on the site access arm in the AM peak. In the 2027 With Development scenario, this maximum RFC remains at just 0.09.
- 7.2.5 In summary, a robust modelling assessment has identified that the proposed access junction would be expected to operate well within theoretical capacity with the proposed development in operation in both forecast years.

7.3 Assessment Junction 2 – A483 Fabian Way / Elba Crescent / Swansea University Bay Campus Eastern Access Signalised Junction

- 7.3.1 Table 7.2 and Table 7.3 provide the results of the Junction 2 LinSig assessment for both the 2022 and 2027 forecast scenarios respectively.

Table 7.2: Assessment J2 – 2022 Forecast Year LinSig Model Outputs Summary

Junction Entry Stream	Weekday AM Peak		Weekday PM Peak	
	Max Deg. of Sat (%)	Mean Max Queue (PCU)	Max Deg. of Sat (%)	Mean Max Queue (PCU)
Without Development				
A483 Westbound approach (L+S)	68.8%	18.3	57.4%	14.0
A483 Westbound approach (S + R)	70.4%	20.2	59.4%	15.4
Swansea Uni Access	3.1%	0.1	8.4%	0.4
A483 Eastbound approach (L+S)	52.4%	12.2	72.0%	20.0
A483 Eastbound approach (S + R)	54.3%	13.7	73.2%	21.9
Elba Crescent (S + L + R)	22.1%	1.1	16.4%	0.8
Overall PRC	27.9%		23.0%	
With Development				
A483 Westbound approach (L+S)	68.8%	18.3	57.6%	14.0
A483 Westbound approach (S + R)	70.9%	20.3	60.2%	15.4
Swansea Uni Access	3.1%	0.1	8.4%	0.4
A483 Eastbound approach (L+S)	52.6%	12.3	73.0%	20.5
A483 Eastbound approach (S + R)	54.5%	13.7	74.1%	22.2
Elba Crescent (S + L + R)	50.4%	2.6	25.7%	1.3
Overall PRC	26.9%		21.4%	

Table 7.3: Assessment J2 – 2027 Forecast Year LinSig Model Outputs Summary

Junction Entry Stream	Weekday AM Peak		Weekday PM Peak	
	Max Deg. of Sat (%)	Mean Max Queue (PCU)	Max Deg. of Sat (%)	Mean Max Queue (PCU)
Without Development				
A483 Westbound approach (L+S)	71.4%	19.6	59.8%	14.7
A483 Westbound approach (S + R)	73.3%	21.6	61.8%	16.4
Swansea Uni Access	3.1%	0.1	8.4%	0.4
A483 Eastbound approach (L+S)	54.6%	12.9	75.1%	21.4
A483 Eastbound approach (S + R)	56.4%	14.3	75.9%	23.4
Elba Crescent (S + L + R)	22.9%	1.1	17.1%	0.9
Overall PRC	22.9%		18.5%	
With Development				
A483 Westbound approach (L+S)	71.6%	19.8	60.0%	15.0
A483 Westbound approach (S + R)	73.7%	21.6	62.5%	16.5
Swansea Uni Access	3.1%	0.1	8.4%	0.4
A483 Eastbound approach (L+S)	54.8%	13.0	76.0%	21.9
A483 Eastbound approach (S + R)	56.6%	14.4	76.9%	23.9
Elba Crescent (S + L + R)	51.5%	2.7	26.4%	1.4
Overall PRC	22.2%		17.1%	

- 7.3.2 **Table 7.2 and Table 7.3** identify that the assessment junction J2 would be anticipated to operate within theoretical capacity during all With Development and Without Development scenarios tested,
- 7.3.3 In the 2022 forecast year, the modelling identifies junction PRC values of 27.9% and 23.0% in the AM and PM modelled periods respectively during the Without Development scenarios. With the inclusion of development traffic through the junction in the With Development scenario, these PRC values are modelled as 26.9% and 21.4% respectively, which represent a decrease in PRC of just 1.0% and 1.6% respectively.
- 7.3.4 In the 2027 forecast year, the modelling identifies junction PRC values of 22.9% and 18.5% in the AM and PM modelled periods respectively during the Without Development scenarios. With the inclusion of development traffic through the junction in the With Development scenario, these PRC values are modelled as 22.2% and 17.1% respectively, which represent a decrease in PRC of just 0.7% and 1.4% respectively.
- 7.3.5 In summary, the modelling has identified that the assessment junction J2 would be expected to operate within capacity with the proposed development in operation, for both the 2022 and 2027 forecast years.

7.4 Assessment Junction 3 - A483 Fabian Way / Swansea University Bay Campus Main Access signalised junction

- 7.4.1 **Table 7.4 and Table 7.5** provide the results of the Junction 3 LinSig assessment for both the 2022 and 2027 forecast scenarios respectively.

Table 7.4: Assessment J3 – 2022 Forecast Year LinSig Model Outputs Summary

Junction Entry Stream	Weekday AM Peak		Weekday PM Peak	
	Max Deg. of Sat (%)	Mean Max Queue (PCU)	Max Deg. of Sat (%)	Mean Max Queue (PCU)
Without Development				
A483 Westbound approach (L+S)	54.0%	12.7	51.0%	12.1
A483 Westbound approach (S)	21.9%	12.7	49.7%	12.1
Swansea Uni Access	17.9%	0.9	51.2%	4.5
A483 Eastbound approach (S)	23.3%	3.0	33.7%	5.6
A483 Eastbound approach (S + R)	54.5%	2.9	48.9%	5.5
Overall PRC	65.1%		75.7%	
With Development				
A483 Westbound approach (L+S)	54.4%	12.8	51.5%	12.2
A483 Westbound approach (S)	52.4%	12.8	50.3%	12.2
Swansea Uni Access	17.9%	0.9	51.2%	4.5
A483 Eastbound approach (S)	23.4%	3.0	33.3%	5.4
A483 Eastbound approach (S + R)	54.5%	2.9	38.7%	5.4
Overall PRC	65.1%		74.9%	

Table 7.5: Assessment J3 – 2027 Forecast Year LinSig Model Outputs Summary

Junction Entry Stream	Weekday AM Peak		Weekday PM Peak	
	Max Deg. of Sat (%)	Mean Max Queue (PCU)	Max Deg. of Sat (%)	Mean Max Queue (PCU)
Without Development				
A483 Westbound approach (L+S)	56.8%	13.9	53.0%	12.6
A483 Westbound approach (S)	54.7%	13.8	51.7%	12.8
Swansea Uni Access	18.6%	0.9	52.8%	4.7
A483 Eastbound approach (S)	24.2%	3.1	35.0%	5.9
A483 Eastbound approach (S + R)	51.4%	3.1	50.4%	5.7
Overall PRC	58.6%		69.9%	
With Development				
A483 Westbound approach (L+S)	56.6%	13.8	53.5%	12.9
A483 Westbound approach (S)	54.4%	13.5	52.2%	12.9
Swansea Uni Access	18.6%	0.9	52.8%	4.7
A483 Eastbound approach (S)	24.4%	3.1	34.6%	5.8
A483 Eastbound approach (S + R)	57.1%	3.1	40.1%	5.7
Overall PRC	57.6%		68.4%	

7.4.2 **Table 7.4 and Table 7.5** identify that the assessment junction J3 would be anticipated to operate well within theoretical capacity during all With Development and Without Development scenarios tested,

7.4.3 In the 2022 forecast year, the modelling identifies junction PRC values of 65.1% and 75.7% in the AM and PM modelled periods respectively during the Without Development scenarios. With the inclusion of development traffic through the junction in the With Development scenario, these PRC values are modelled as 65.1% and 74.9% respectively, which represent a decrease in PRC of just 0.0% and 0.8% respectively.

- 7.4.4 In the 2027 forecast year, the modelling identifies junction PRC values of 58.6% and 69.9% in the AM and PM modelled periods respectively during the Without Development scenarios. With the inclusion of development traffic through the junction in the With Development scenario, these PRC values are modelled as 57.6% and 68.4% respectively, which represent a decrease in PRC of just 1.0% and 1.5% respectively.
- 7.4.5 In summary, the modelling has identified that the assessment junction J2 would be expected to operate well within theoretical capacity with the proposed development in operation, for both the 2022 and 2027 forecast years.

7.5 Capacity Assessment Summary

- 7.5.1 The junction capacity assessments have identified that both the proposed new site access junction, and the A483 signalised junctions tested would be anticipated to operate well within capacity during all With Development modelled scenarios in both a 2022 and 2027 forecast year. The proposed development, therefore, is not anticipated to cause any significant capacity issues on the local highway network.

8 SUMMARY AND CONCLUSION

8.1 Summary

- 8.1.1 This Transport Assessment (TA) has been produced by Corun Associates ('Corun') on behalf of Richard Hawkland Estates Ltd (the 'applicant') to examine the highway and transportation issues associated with a proposed development of circa 165 residential units (hereon referred to as the 'site') on land to the north of Elba Crescent, Swansea.
- 8.1.2 The site was previously granted outline planning permission as part of a larger mixed used residential and employment site in September 2011 (Ref: P2008/0514). This consent was renewed over the years with the latest consent expiring in May 2019. The residential element of the previous application comprised of approximately 100 dwellings. This TA has been developed to support a new application on the same area of land outlined for residential development in the 2011 granted proposal. The development proposals are currently in outline stage only.
- 8.1.3 Corun's initial instruction was to consider a development of circa 150 residential units. Following completion of the initial Transport Assessment dated December 2021, which considered 150 units, the indicative masterplan has been extended to approximately 165 residential units. When the number of units on site is fixed, the capacity analysis will be re-run for the application and the TA updated. However, the initial findings of this TA (150 units) suggest that the highway network could easily accommodate the additional 15 units now sought.
- 8.1.4 The site is located in close proximity to a wide range of local facilities that will be used by potential occupants of the proposed development on a daily basis, and is highly accessible by non-car modes of transport. The site is therefore compliant with transport planning policy at both local and national level.
- 8.1.5 Access will be taken from the existing site access point, with the existing priority junction being modified to provide a more appropriate residential geometry (i.e., a 5.5m wide access road with 6.0m radii kerbs on entry and exit). Footways of 2.0m in width will be provided through the development site, which will connect directly into the existing footway provision along the northern edge of Elba Crescent.
- 8.1.6 Car and cycle parking at the site will be provided in accordance with the standards set out in Neath Port Talbot County Borough Council guidance.
- 8.1.7 The development of the site is predicted to generate approximately 83 and 80 total two-way vehicle trips over the traditional AM and PM highway peak hours of 08:00 to 09:00, and 17:00 to 18:00 respectively. Between the weekday 12-hour period of 07:00 to 19:00, the proposed development would be anticipated to generate a total of 709 total two-way vehicle trips.
- 8.1.8 The junction capacity assessments have identified that both the proposed new site access junction, and the A483 signalised junctions tested would be anticipated to operate well within capacity during all With Development modelled scenarios for both a 2022 and 2027 forecast

year. The proposed development, therefore, is not anticipated to cause any significant capacity issues on the local highway network.

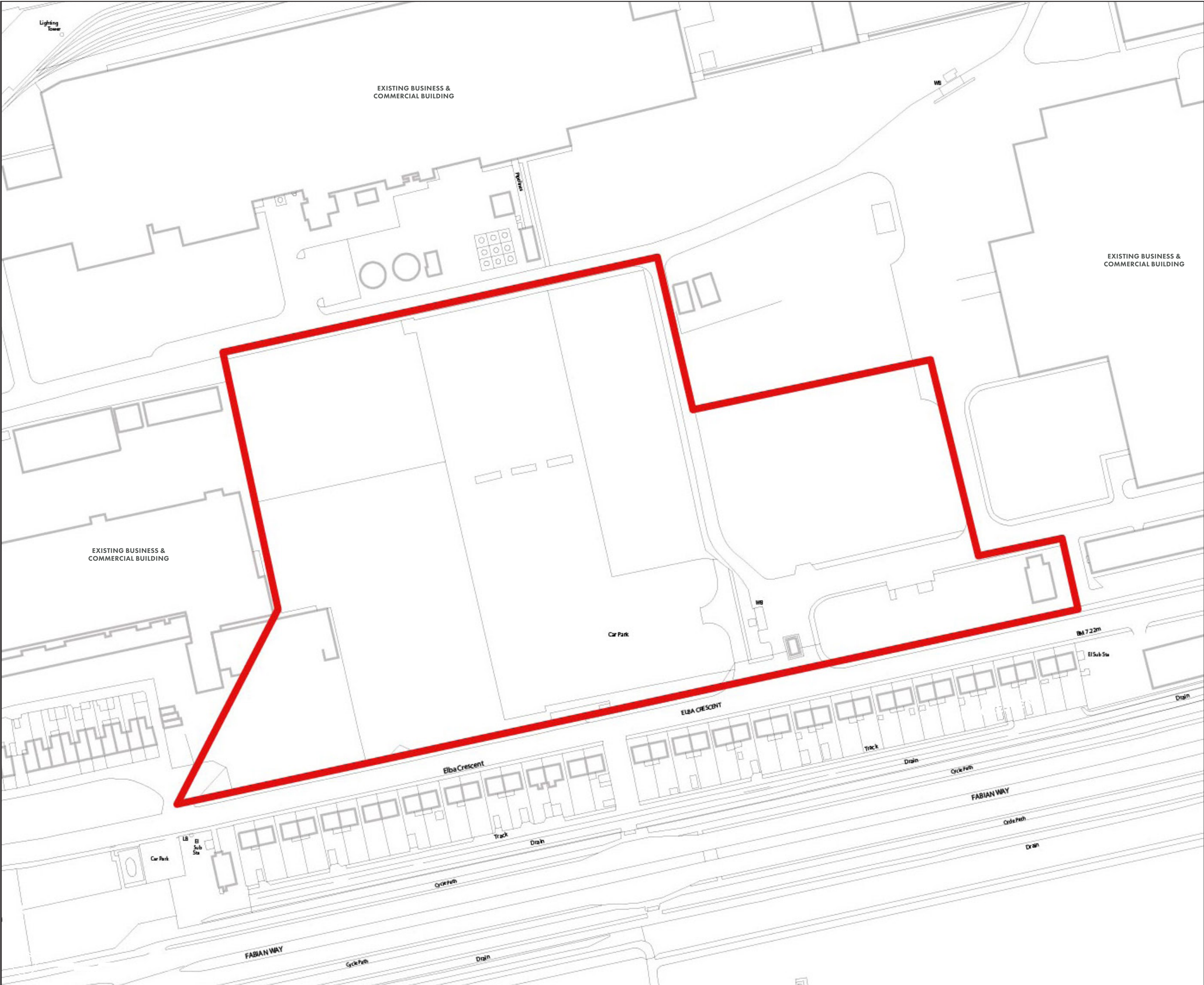
- 8.1.9 A review of the accident record has identified no apparent existing highway safety concern in the vicinity of the site. The proposed development is not expected to have an adverse impact on this existing highway safety record.

8.2 Conclusion

- 8.2.1 There are no reasons, in highway and transportation terms, why the proposed development should not receive consent.

APPENDIX A

Site Boundary and Concept Masterplan



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Notes

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LEGEND

SITE BOUNDARY

Rev	Description	Date	Initials	checked

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Client

Hawkland Estates Ltd

Project

Land at Elba Crescent,
Crymlyn Burrows

Site Location Plan

Title

Status
Preliminary

Drawn By
YT

PM/Checked by
JS

Job Ref
JSL4195

Scale @ A2
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Date Created
February
2022

Drawing Number
102

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