

Prepared on behalf of

P&C James Properties

**Proposed Industrial Units
Swansea Valley Business Park, Glanyrafon,
Ystalyfera, Swansea**

Transport Statement

Acknowledgements:

The TRICS database has been used in this report to calculate traffic generations.

National Geographic Society MapMaker has been utilised to generate figures used in the report

The Crashmap database has been utilised to obtain collision records for the local highway network

Neath Port Talbot Cycle Map 7 Swansea Bay Cycle Network Map

FirstBus X6 Route Plan

An extract of a W Griffiths Architects drawing of the proposed site layout has been included for reference purposes.

Disclaimer

The methodology adopted and the sources of information used by Sanderson Associates (Consulting Engineers) Ltd in providing its services are outlined within this Report.

Any information provided by third parties and referred to herein has not been checked or verified by Sanderson Associates (Consulting Engineers) Ltd, unless otherwise expressly stated within this report.

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1 Introduction

- 1.1 Sanderson Associates (Consulting Engineers) Ltd has been appointed by P&C James Properties to advise on the traffic and transportation issues relating to the proposed development of industrial units at Swansea Valley Business Park, Glanyrafon, Ystalyfera.
- 1.2 The proposed development involves the erection of two industrial buildings comprising seven self-contained units with associated car parking. The total floor area to be provided is 2,638m².
- 1.3 The Local Highway Authority, Neath Port Talbot Council, have requested that a Transport Statement be submitted as part of the planning application for this site. It has been requested that as part of the Transport Statement, the roundabout junctions of A4067 / Glan Yr Avon / Asda Supermarket and Asda Supermarket / Swansea Valley Business Park need to be assessed.
- 1.4 As part of this Transport Statement, the requested operational assessments of the two roundabout junctions have not been undertaken. It is deemed that given the predicted trip generation of the site, set out in further detail in Section 5.0, the development will not have a material impact on the operation of the local highway network.
- 1.5 Furthermore, given the ongoing Covid-19 situation, it would not have been possible to undertake up-to-date traffic surveys of the roundabout in question in order to represent a 'normal scenario'.

National and Local Policy

- 1.6 National policy for Wales is contained in the document Planning Policy Wales (PPW) (Edition 10, December 2018).

1.7 National planning policy on highway and transport matters is provided throughout PPW as well as in Technical Advice Note (TAN) 18: Transport (2007). The latter provides guidance to Local Authorities about integrating land use and transport planning and explains how transport impacts should be assessed and mitigated. It provides advice on:-

- Integration between land use planning and transport
- Location of development
- Parking
- Design of development
- Walking and cycling
- Public transport
- Planning for transport infrastructure
- Assessing impacts and managing implementation

1.8 *Local Planning Policy*

1.9 Neath Port Talbot County Borough Council Local Development Plan (2011-2026) was adopted in January 2016. Policy SP 20 Transport Network, sets out how the transport system and associated infrastructure will be developed in a safe, efficient and sustainable manner. The policy sets out the following measures that are relevant to this document and the development proposals:

- Restricting development which would have an unacceptable impact on highway safety;
- Requiring development proposals to be designed to provide safe and efficient access and promote sustainable transport; and
- Requiring appropriate parking provision.

1.10 Policy TR 2 goes on to state that development proposals will only be permitted where all of the following criteria, where relevant, are satisfied;

- The development does not compromise the safe, effective and efficient use of the highway network and does not have an adverse impact on highway safety or create unacceptable levels of traffic generation;
- Appropriate levels of parking and cycling facilities are provided and the access arrangements for the site allow for the safe manoeuvring of any service vehicles associated with the planned use;
- The development is accessible by a range of travel means, including public transport and safe cycle and pedestrian routes; and
- Transport Assessments and Travel Plans are provided for developments that are likely to create significant traffic generation.

1.11 In line with the above, this Transport Statement addresses the key transport issues including:

- The local highway network and its highway safety record;
- The proposed development and its operational facilities;
- The impact of the development on the local highway network in terms of highway safety and capacity;
- Accessibility of the site in relation to sustainable transport and local facilities; and
- The predicted multi modal trip generation of the site.

1.12 This Transport Statement demonstrates that there would not be an unacceptable impact on highway safety associated with the development and that the residual cumulative impacts of the development are not severe. As such, there are no transport reasons why planning should not be granted.

2 Existing Situation

2.1 *The Site and the Surrounding Area*

- 2.1.1 The site is located adjacent to the A4067 Glan Yr Avon at the southern extent of Ystalyfera, approximately 18.5km northeast of Swansea. The location of the site is shown in **Figure 1**, below.



Figure 1 – Site location

[NatGeo]

- 2.1.2 The site is bound by the A4067 Glan Yr Avon to the east, four residential properties to the north, a multi-occupancy industrial site to the west and undeveloped land to the south. Access to the site is taken from a roundabout which serves the adjacent Asda Supermarket as well as the aforementioned industrial site and residential properties.

2.2 *The Local Highway Network*

- 2.2.1 The roundabout and road, from which the site will be accessed, are designed to accommodate HGVs associated with the supermarket and industrial site. The carriageway widths on approach to the roundabout vary between 7.0m and 9.0m.
- 2.2.2 All arms of the roundabout have dropped kerbs and tactile paving to aid pedestrian movements. This roundabout links to the wider highway network via a five-arm roundabout with the A4067 Glan Yr Avon, B4599 Heol Ynysydarren and Glan Yr Avon.
- 2.2.3 The A4067 Glan Yr Avon runs approximately northeast-southwest between Swansea and the A40 at Sennybridge. In the vicinity of the site it is a street-lit single carriageway road and has a footway on the western flank. On the site frontage, to the eastern boundary of the site, the speed limit changes from 40mph to 30mph on approach to the roundabout. To the north of the roundabout, the A4067 is subject to the national speed limit of 60mph for a single carriageway road.
- 2.2.4 On the opposite side of the road to the site, on the southern approach to the roundabout, a layby is present which provides access to a farm via a bridge over the River Tawe. In addition, a shared cycle/footway links Heol Ynysydarren to Godre'r Graig Cycle Path which runs along the east on the River Tawe to Pontardawe and forms part of National Cycle Network 43.
- 2.2.5 On the northern arm of the roundabout a signal controlled pedestrian crossing is present to aid pedestrian movement between the residential dwellings to the east and the Asda Supermarket, existing industrial development and proposed development site.

2.3 *Road Traffic Collision Data*

- 2.3.1 Road Traffic Collision Data has been obtained from the Crashmap database for the most recent five year period available (2015-2019). The study area considers

the local highway network in the immediate vicinity of the site, as indicated in **Figure 2**.

- 2.3.2 As can be seen in Figure 2 there have been just two recorded incidents in the vicinity of the site in the most recent five year period and neither of these involved a vulnerable road user.



Figure 2 – Road Traffic Collision Data

[Crashmap]

- 2.3.3 Given that there have only been two collisions in the most recent five year period, it is clear to see that there are no personal injury collision trends that would give rise to any specific highway safety problems. It is not expected that the proposed development would result in a material impact to the collision record.

3 Accessibility by Sustainable Travel Modes

3.1 Introduction

- 3.1.1 This section includes an assessment of the accessibility of the site by non-car modes, to review the opportunities that exist for employees and visitors to travel by sustainable modes, which is a core objective of local and national policy.

3.2 Accessibility on Foot

- 3.2.1 Walking is the most important mode of transport at the local level and can replace short car trips for journeys under 2km, which contribute to congestion and pollution, and the need for car parking. Walking is the most sustainable form of transport and provides one way of reducing pressure on the environment. People walking are also travelling at a pace that gives them greater connection with their surroundings and can have positive benefits in relation to a community's security through increased surveillance. Walking stimulates both personal health and the health of communities and local economies. Government health improvement advice states that just 30 minutes brisk walking 5 times a week can bring about significant reductions in the risk of coronary heart disease, high blood pressure and diabetes.
- 3.2.2 In relation to acceptable walking distances, Manual for Streets (MfS) offers the following guidance in Section 4.4 "The Walkable Neighbourhood".
- "Walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes (up to 800m) walking distance of residential areas which residents may access comfortably on foot. However, this is not an upper limit and PPG13 states that walking offers the greatest potential to replace short car trips. Particularly those under 2 km. MfS encourages a reduction in the need to travel by car through the creation of mixed-use neighbourhoods with interconnected street patterns, where daily needs are within walking distance of most residents."*
- 3.2.3 **Figure 3**, indicates destinations that lie within an 800m and 2000m radius of the application site. It is noted that walking routes will not follow simple radii as shown

on this plan, which is provided as an indication of where destinations lie and the general extent to which the local area can be accessed on foot.

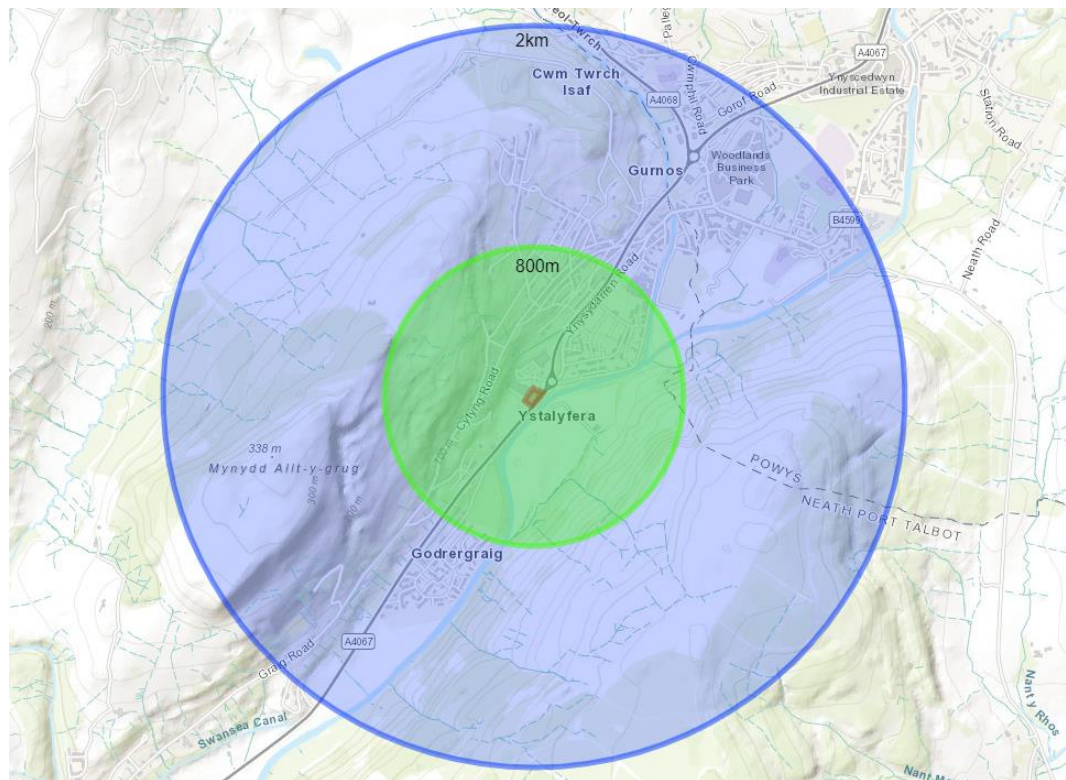


Figure 3 - Indicative Walking Radii

[NatGeo]

3.2.4 As can be seen from Figure 3, there are residential areas within a 2km walking distance of the site. It is therefore expected that some employees who live within a reasonable walking distance of the site, may choose to walk to work.

3.2.5 In addition, there are a number of amenities including the Asda supermarket, Junction café and Ynys Y Darren Post Office within walking distance of the site that employees could access during the day, reducing the need to travel off site by car.

3.3 Accessibility by Cycle

3.3.1 Like walking, cycling has an important part to play in reducing congestion, improving accessibility and reducing pollution. Cycling is also linked to increased

general health and fitness which has personal benefits as well as economic benefits in terms of health service costs. The bicycle is generally more affordable than the car and hence there are financial benefits to the promotion of cycling. Cycling may also allow people without cars to reach destinations that they may otherwise be unable to reach. Cycling has the potential to substitute for short car trips, particularly those under 5km and to form part of a longer public transport trip.

3.3.2 **Figure 4** below, indicates destinations that lie within 5km and 7.5km of the application site. Again, it is noted that cycling will not follow the simple radius shown on this plan and is provided to give an indication of where destinations lie and the general extent to which the site is accessible by cycle.

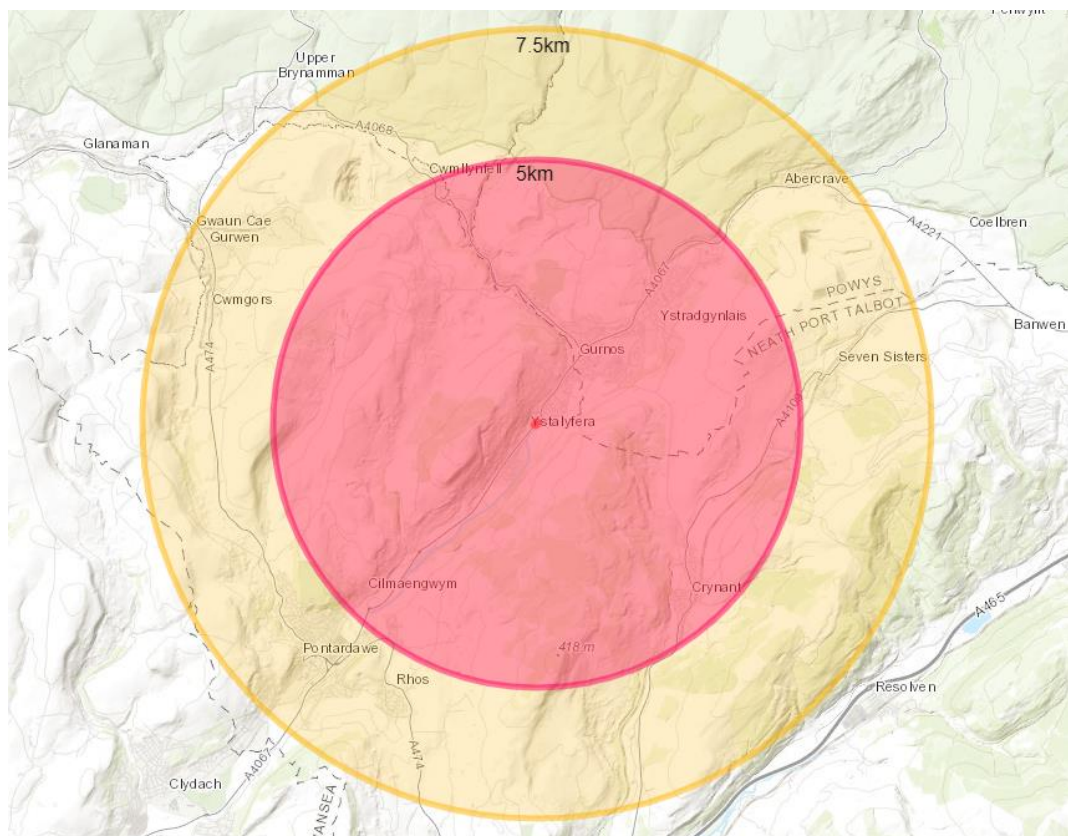


Figure 4 - Indicative Cycling Radii

[NatGeo]

3.3.3 Figure 4 indicates that there is a residential catchment located within cycling distance of the site, including Ystalyfera, Ystradgynlais and Pontardawe. Given

this, it is reasonable to expect that employees living within these areas could cycle to work.

3.3.4 **Figure 5** below, is an extract taken from the Neath Port Talbot Cycle Map. This shows that Cycle Network Route 43 runs within approximately 220m of the site. This is an off-road to the south of the site and forms the yellow route of the Swansea Bay Cycle Network, between Swansea City Centre and Ammanford, as shown in **Figure 6**, overleaf.

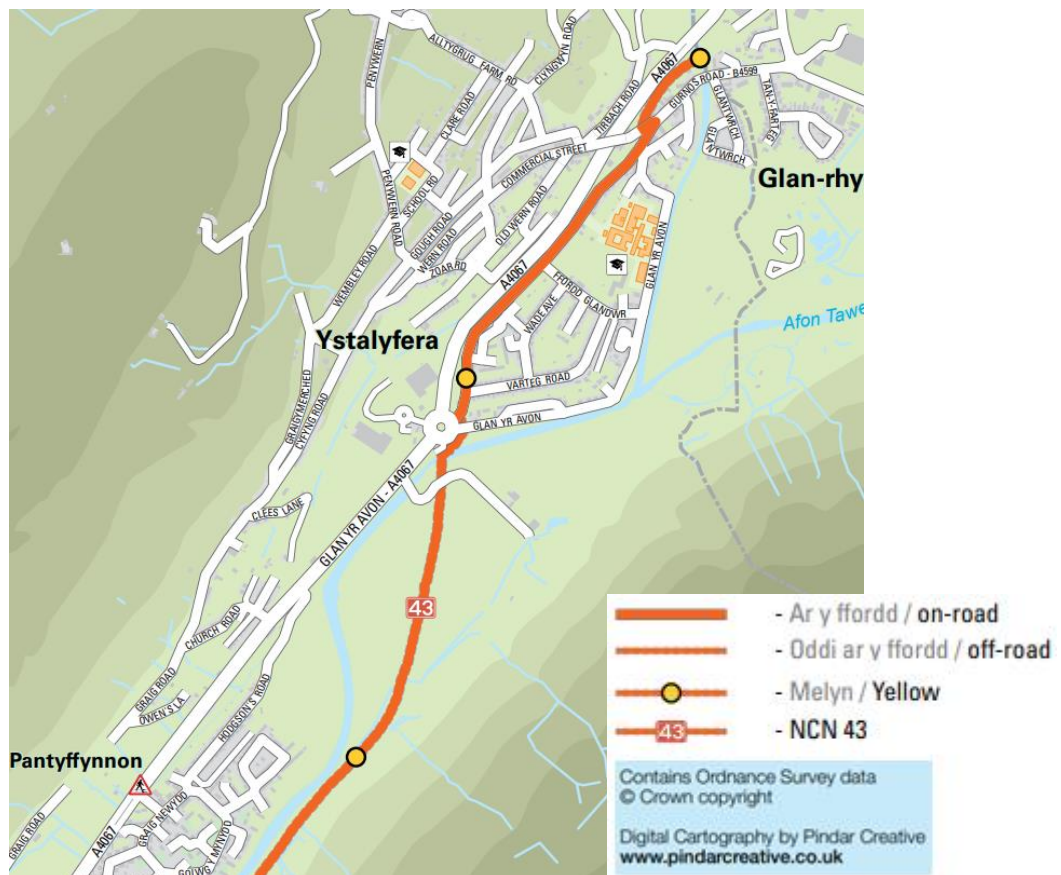


Figure 5 – Extract from Neath Port Talbot Cycle Map



3.4.1 The nearest bus stops to the site are located on Varteg Road at a distance of approximately 350 and 630m from the site. The location of the stops is shown on **Figure 7**, overleaf.



Figure 7 – Location of bus stops

[NatGeo]

- 3.4.2 The bus stop near to the junction of Varteg Road / Ynysdarren Road has a shelter, raised kerbs, tactile paving and bus cage whereas the stop on the south side of Varteg Road further east is unmarked. The bus stops are served by the X6 bus service which follows the route shown in **Figure 8**, below.

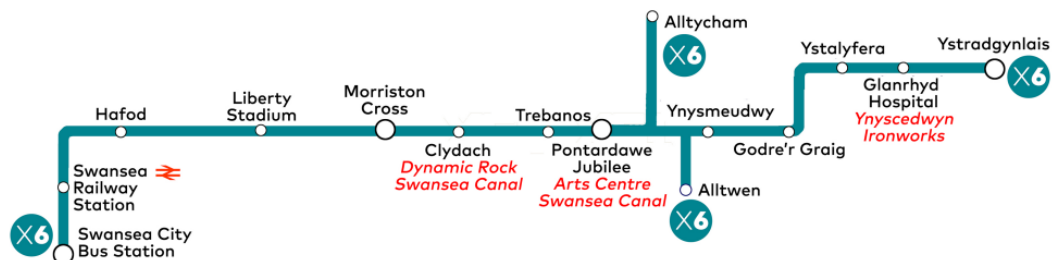


Figure 8 – Route of X6 bus service

[FirstBus]

- 3.4.3 Monday to Friday, the X6 provides an hourly service to Ystradgynlais Cross between 07:00 and 23:30 and an hourly service to Swansea between approximately 06:20 and 22:10. This service also operates on Saturdays. There is therefore opportunity for staff and visitors to travel to the site by bus given that

there is an hourly bus service which operates close to the site, which it is expected could be utilised by those commuting to the site from further afield as an alternative to the private car.

3.4.4 In addition to the X6 service, there is a local service, the 121 between Ystradgynlais and Ystalyfera which operates Mondays, Wednesdays and Fridays on an hourly basis between 09:30 and 15:15. Given the times of the 121 bus service, it is expected that this could only be utilised by visitors to the site and is unlikely to be beneficial for those commuting to the development.

3.4.5 The closest train station to the site is Llansamlet Rail Station at a distance of approximately 14.4km. The station is located on the line between Manchester Piccadilly and Carmarthen. Given the distance between the site and this station, it is not expected that daily trips to the site will be undertaken by rail or even using rail as part of the journey.

3.5 *Accessibility Summary*

3.5.1 Given the availability of an hourly bus service in proximity to the site, it could be expected that some trips to the site could be undertaken by bus, particularly by those commuting from further afield. The site also lends itself to encourage trips by cycling given the cycle route in the vicinity of the site and the residential catchments within an acceptable cycle distance of the site. In addition to this, cycle parking will be provided as part of the development proposals, which should actively encourage those who are able to cycle to the site.

4 Development Proposals

4.1 Overview

- 4.1.1 The proposed development involves the erection of two industrial buildings comprising seven self-contained units. The Developer previously refurbished the adjacent industrial site and is now looking to provide additional employment space for which there is a local demand.

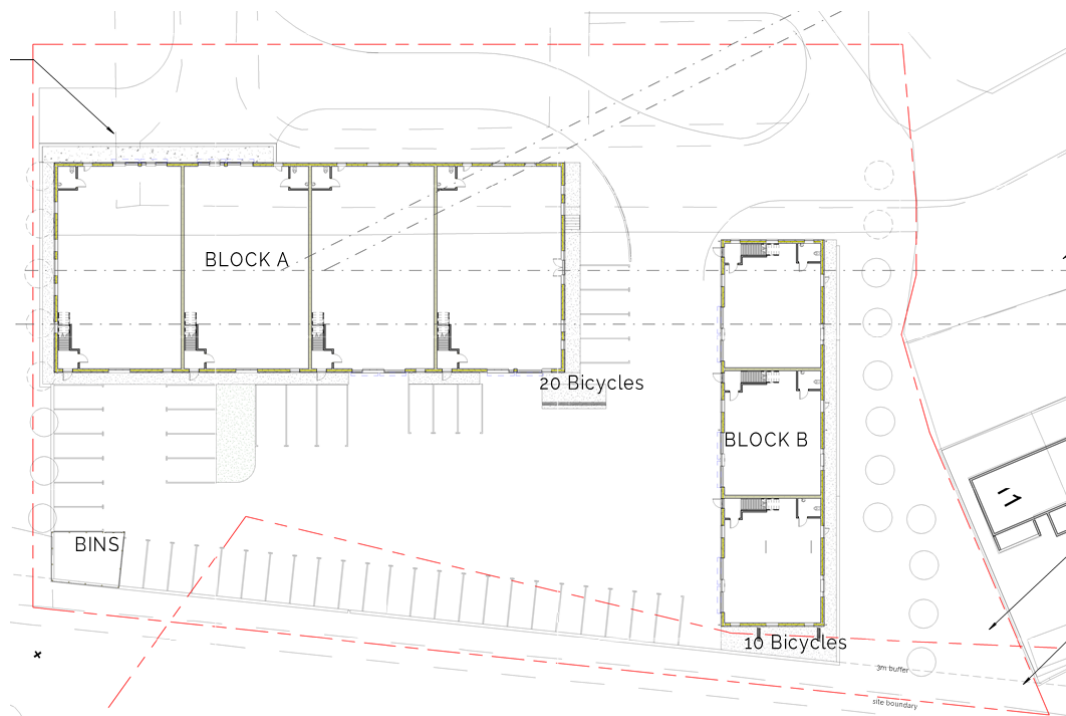


Figure 9 – Extract of proposed site layout

[W Griffiths Architects]

- 4.1.2 Block A comprises four units each totalling 484m², over ground and first floors, and Block B comprises three units each totalling 234m², over ground and first floors. Therefore, the total floor area to be provided is 2638m². A full copy of the proposed site layout is included at **Appendix A**.
- 4.1.3 The units are likely to be occupied by industrial uses (Land use classification B1C, B2 or B8), with some ancillary office accommodation. The split in each unit is expected to be an 80/20 split, industrial/offices.

4.2 Access

4.2.1 The proposals are to amend the access road to the adjacent industrial site to the rear of the proposed Block A. It is also proposed to provide loading bays to the rear of two of the units in Block A from the access road. Access to a shared car park is to be taken from the access road in between Block A and Block B.

4.2.2 This access stub will provide access into a central area, from which all of the units can be accessed. Within the site, parking is provided with at least 6m manoeuvring space to the rear of all spaces. There is also an area for HGV turning, which will be kept free of all vehicle parking.

4.3 Vehicle Parking

4.3.1 As part of the development, it is proposed to provide 43 parking spaces including three larger spaces suitable for delivery vehicles.

4.3.2 Neath Port Talbot County Borough Council Parking Standards SPD, dated October 2016, sets out the maximum car parking guidelines for new developments. The site is located in Parking Zone 4 which requires the following non-operational parking provision:

- Industry – 1 space per 120m²

4.3.3 Working on the assumption that each unit is for industrial use with only ancillary office accommodation, which will not generate trips in its own right, there should be a maximum of 22 non-operational parking spaces.

4.3.4 In addition, the industrial element requires operational parking in line with Note 5 of the parking SPD, which can be seen overleaf.

Gross Floor Area m ²	100	250	500	1000	1001	2000
Minimum Operational Requirements m ²	70	85	100	150	150	200

Above 2,000m² GFA, the required minimum operational area should be taken as 10% of GFA.

Figure 10 –Parking SPD - Operational Requirements

4.3.5 Based on this, the parking standard states that for industrial premises, there should be 1 space per 200m², given that the overall size of the development is 2,638m². Based on this, there should be 13 spaces provided for operational requirements. When the operational parking requirement and non-operational parking requirements are combined, this totals 35 parking spaces.

4.3.6 Furthermore, the parking SPD goes on to state that disabled parking in new developments should be provided as 5% of the total car park capacity. For convenience, given that there are 8 units proposed, a disabled parking will be provided for each unit in addition to the operational and non-operational parking, which gives a total of 43 parking spaces.

4.3.7 It is deemed that the parking set out above meets the operational requirements of the site and is broadly in line with the parking standards set out by Neath Port Talbot Council. Given the level of parking proposed, it is not expected that there be over spill of parking on the adjacent highway network.

4.4 Cycle Parking

4.4.1 Neath Port Talbot County Borough Council Parking Standards SPD also sets out the cycle parking guidelines for new developments.

Industry Offices	Long Stay	Short Stay
	1 stand per 500m ² 1 stand per 200m ²	1 stand per 1000m ² 1 stand per 1000m ²

Table 4/1 – Cycle Parking Standards

4.4.2 In excess of the standards, the proposed development will provide 30 cycle spaces. These are likely to be provided in the form of Sheffield Stands. The location of the proposed cycle parking is shown on the proposed site layout plan at **Appendix A.**

4.5 *Motorcycle Parking*

4.5.1 Neath Port Talbot County Borough Council Parking Standards SPD states that all developments are required to provide motorcycle parking at a rate of 5% of the car parking provision. Motor Cycle parking for the development will be provided should demand dictate.

4.6 *Servicing and Deliveries*

4.6.1 It is expected that the site will be serviced by a refuse vehicle at least once per week. Swept path analysis has been undertaken (by others) and submitted as part of the planning application which demonstrates that the refuse vehicle can enter the site in forward gear, manoeuvre within the site and exit in forward gear.

4.6.2 It is expected that the largest vehicle that could need access to the site would be a max legal articulated HGV. Again, swept path analysis has been undertaken (by others) and submitted as part of the planning application which demonstrates that the vehicle can exit the site in forward gear, turn within the site and exit in forward gear.

4.6.3 Given that the mini roundabout which will serve the site also serves the existing units as part of Swansea Valley Business Park and the service yard for the Asda Supermarket, it can be concluded that the local highway network can accommodate the expected heavy goods vehicles associated with the proposed development.

5 Trip Generation and Impact

5.1 In order to estimate the multimodal trip generation potential of the proposed development, trip rates have been derived using the TRICS database. To ensure that the forecast generations are representative of the development proposals, the search requirements have been refined to include sites with similar characteristics to the proposed development. Full copies of the TRICS outputs are contained at **Appendix B.**

5.2 The predicted trip generation of the industrial units has been based on the development being brought forward as Light Industry/General Industrial Land Use. Sites in the TRICS database have been selected for the Land Use 'Employment – Industrial Estate' as this has a higher trip generating potential than 'Employment – Industrial Unit'. Table 5/1 provides an estimation of the trip generation of the proposed industrial units.

	Mode of Travel	Trip Rate	Modal Split %	Generations
AM Peak Period	Pedestrians	0.036	2.4%	1
	Cyclists	0	0.0%	0
	Public Transport Users	0.012	0.8%	0
	Vehicle Occupants	1.457	96.9%	38
	Total People Trips	1.504	100.0%	39
PM Peak Period	Pedestrians	0.018	1.2%	0
	Cyclists	0.03	2.0%	1
	Public Transport Users	0.012	0.8%	0
	Vehicle Occupants	1.428	96.1%	38
	Total People Trips	1.486	100.0%	39
Daily	Pedestrians	0.452	2.2%	12
	Cyclists	0.09	0.4%	2
	Public Transport Users	0.138	0.7%	4
	Vehicle Occupants	20	96.8%	528
	Total People Trips	20.667	100.0%	546

Table 5/1 – Predicted Multimodal Trip Generations – (TRICS)

5.3 The information set out in Table 5/1 demonstrates that the proposed development is expected to generate approximately 39 two-way multimodal vehicle trips in the

morning and evening peaks respectively. It is deemed that the trip generation data in Table 5/1 provides a good comparison to the proposed site. However it might be expected that given the proximity of the bus stops served by the X6 bus service, there could be a higher modal share for public transport users. Therefore the predicted trip generation represents a worst case scenario.

- 5.4 The vehicle occupant data set out in Table 5/1 also includes for trips undertaken as a passenger, either car sharing or being dropped off. In real terms, the number of vehicles expected to travel to/from the site in the morning and evening peak hours will be lower. Table 5/2 below sets out the predicted vehicular trip generation of the site in the morning and evening peak hours and across the day.

	Trip Rates		Trip Generations		
	Arrivals	Departures	Arrivals	Departures	Total
AM	0.746	0.546	20	14	34
PM	0.329	0.764	9	20	29
Daily	7.838	7.802	207	206	413

Table 5/2 – Predicted Vehicular Trip Generations – Industrial Element (TRICS)

- 5.5 The information set out in Table 5/2 demonstrates that in the morning and evening peak hours, the site will generate approximately 34 and 29 two-way vehicle trips. This equates to approximately one additional vehicle every two minutes on the adjacent highway network during the expected morning and evening peak period.
- 5.6 Further to the above, it is expected that vehicles will arrive/depart via all three arms of the A4067 / Glan Yr Avon roundabout and therefore, it is expected that that the predicted trip generation will be diluted further. It is estimated that there could be approximately one vehicle every 5-6 minutes arriving to the site from each arm in the morning evening peak hour. In the evening peak hour, there will be a corresponding distribution of departure trips. This level of trip generation on each arm would not be noticeable and therefore the impact of the development will be negligible.

- 5.7 Further, given the design of the roads and junctions in the vicinity of the site it is not expected that this level of trip generation would have a demonstrable impact on the local highway network in capacity terms.

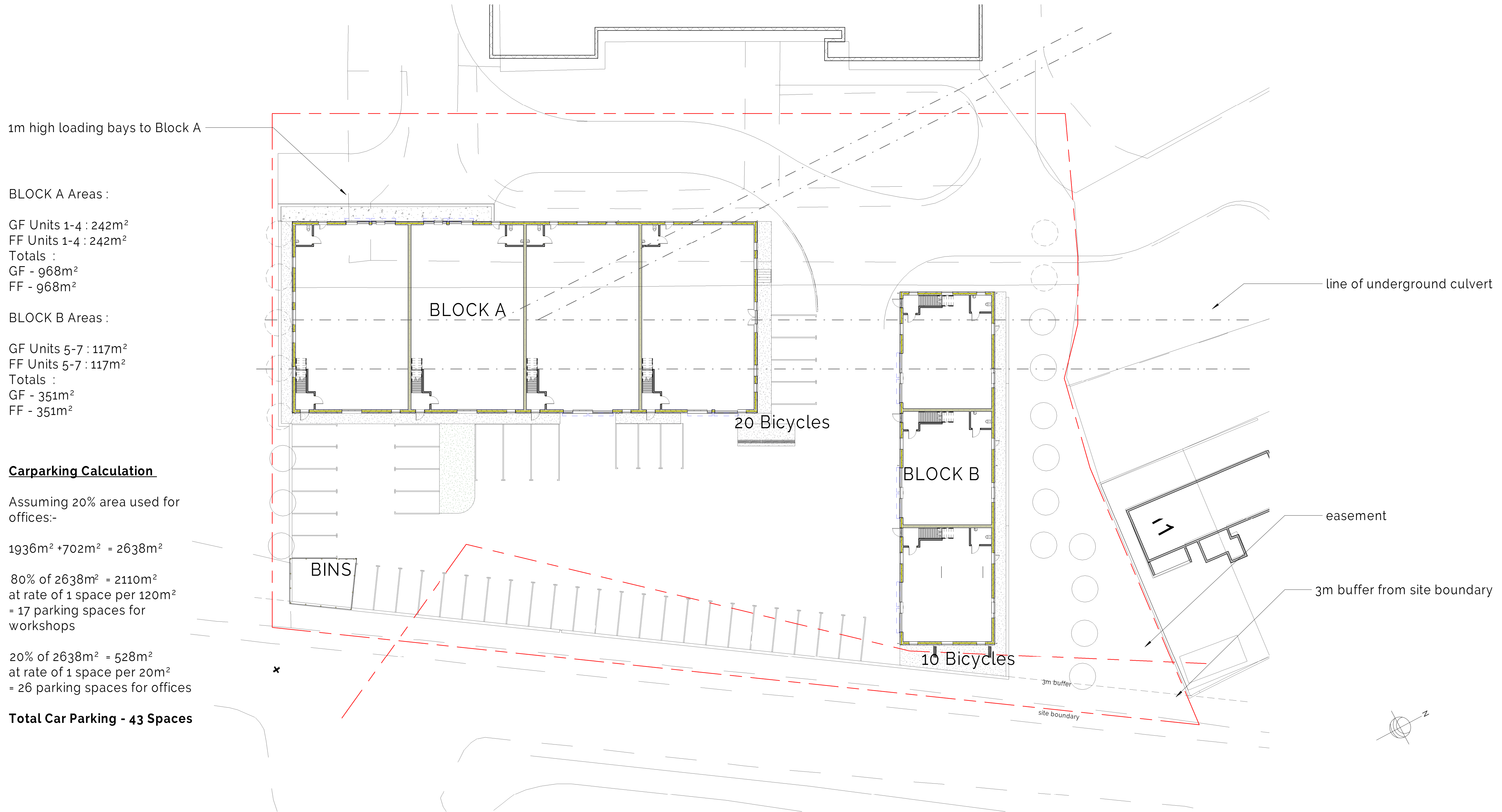
6 Summary and Conclusions

- 6.1 Sanderson Associates (Consulting Engineers) Ltd has been appointed by P&C James Properties to advise on the traffic and transportation issues relating to the proposed development of industrial units at Swansea Valley Business Park, Glanyrafon, Ystalyfera.
- 6.2 The proposed development involves the erection of two industrial buildings comprising seven self-contained units with associated car parking. The total floor area to be provided is 2638m².
- 6.3 It has been demonstrated that there are no highway safety concerns on the local highway network in the vicinity of the site that would give rise to any highway safety concerns. It is not expected that the existing level of collisions in the vicinity of the site are to be exacerbated by the proposed development.
- 6.4 The local highway network in the vicinity of the site has been designed to accommodate Heavy Goods Vehicle movements and therefore the predicted HGV movements associated with the development can be accommodated by the existing highway network.
- 6.5 Given the availability of an hourly bus service in proximity to the site, it could be expected that some trips to the site could be undertaken by bus, particularly by those commuting from further afield. The site also lends itself to encourage trips by cycling given the cycle route in the vicinity of the site and the residential catchment within an acceptable cycle distance of the site. In addition to this, cycle parking will be provided as part of the development proposals, which should actively encourage those who are able to cycle to the site.
- 6.6 It has been demonstrated through an assessment of parking standards that the parking to be provided as part of the development is sufficient to meet the operational requirements of the site and is sufficient so that an overspill of parking onto the adjacent highway network would be avoided.

- 6.7 A trip generation exercise has been undertaken which demonstrates that the development is expected to generate 34 and 29 two-way trips in the morning and evening peak hours respectively.
- 6.8 It is recognised that operational assessments of the two junctions adjacent the site have been requested. However, given the trip generating potential of the development, combined with the design of the adjacent junctions, it is not expected that the proposed development would have a material impact on the operation of the local highway network and therefore further operational assessments are not required.
- 6.9 It is concluded that there are no highway safety or capacity reasons why this development should not be acceptable in transport terms.

APPENDIX A
Proposed Site Layout Plan

Rev.	Desc.	Date
F	Bicycles added, car parking calculation amended	10-07-20
E	PAC Submission	20-05-20
D	3m buffer added to boundary, crpark layout amended to suit	0-05-20
C	Block B moved, parking amended	29-04-20
B	General Revisions FOR DISCUSSION	27-04-20
A	Pre app final	25-03-20



SITE LAYOUT

APPENDIX B

TRICS Data

Calculation Reference: AUDIT-109307-200907-0916

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : D - INDUSTRIAL ESTATE
MULTI-MODAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	EX ESSEX	1 days
03	SOUTH WEST	
	DV DEVON	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	3 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Gross floor area
Actual Range: 1776 to 4328 (units: sqm)
Range Selected by User: 552 to 5000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/12 to 25/09/19

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	3 days
Tuesday	1 days
Friday	1 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Edge of Town	5
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This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone	3
Development Zone	1
No Sub Category	1

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

Not Known	1 days
B1	1 days
B2	2 days
B8	1 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	1 days
10,001 to 15,000	1 days
15,001 to 20,000	1 days
25,001 to 50,000	2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

125,001 to 250,000	5 days
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This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No	5 days
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This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	5 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	DV-02-D-07	INDUSTRIAL ESTATE	DEVON
	BITTERN ROAD		
	EXETER		
	SOWTON IND. ESTATE		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	3600 sqm	
	Survey date: MONDAY	03/07/17	Survey Type: MANUAL
2	EX-02-D-03	INDUSTRIAL ESTATE	ESSEX
	WYNCOLLS ROAD		
	COLCHESTER		
	SEVERALLS INDUSTRIAL PK		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	4876 sqm	
	Survey date: FRIDAY	18/05/18	Survey Type: MANUAL
3	WY-02-D-05	INDUSTRIAL ESTATE	WEST YORKSHIRE
	CARR WOOD ROAD		
	CASTLEFORD		
	Edge of Town		
	Development Zone		
	Total Gross floor area:	1776 sqm	
	Survey date: MONDAY	22/05/17	Survey Type: MANUAL
4	WY-02-D-06	INDUSTRIAL ESTATE (PART)	WEST YORKSHIRE
	PIONEER WAY		
	CASTLEFORD		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	4328 sqm	
	Survey date: TUESDAY	23/05/17	Survey Type: MANUAL
5	WY-02-D-07	INDUSTRIAL ESTATE	WEST YORKSHIRE
	THUNDERHEAD RIDGE RD		
	CASTLEFORD		
	GLASSHOUGHTON		
	Edge of Town		
	No Sub Category		
	Total Gross floor area:	3191 sqm	
	Survey date: MONDAY	15/05/17	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
 MULTI-MODAL VEHICLES
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	3404	0.499	5	3404	0.194	5	3404	0.693
08:00 - 09:00	5	3404	0.746	5	3404	0.546	5	3404	1.292
09:00 - 10:00	5	3404	0.699	5	3404	0.552	5	3404	1.251
10:00 - 11:00	5	3404	0.893	5	3404	0.746	5	3404	1.639
11:00 - 12:00	5	3404	0.911	5	3404	0.993	5	3404	1.904
12:00 - 13:00	5	3404	0.852	5	3404	0.899	5	3404	1.751
13:00 - 14:00	5	3404	0.764	5	3404	0.752	5	3404	1.516
14:00 - 15:00	5	3404	0.705	5	3404	0.805	5	3404	1.510
15:00 - 16:00	5	3404	0.717	5	3404	0.605	5	3404	1.322
16:00 - 17:00	5	3404	0.635	5	3404	0.781	5	3404	1.416
17:00 - 18:00	5	3404	0.329	5	3404	0.764	5	3404	1.093
18:00 - 19:00	5	3404	0.088	5	3404	0.165	5	3404	0.253
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			7.838			7.802			15.640

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

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Parameter summary

Trip rate parameter range selected:	1776 - 4328 (units: sqm)
Survey date range:	01/01/12 - 25/09/19
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL CYCLISTS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	3404	0.018	5	3404	0.000	5	3404	0.018
08:00 - 09:00	5	3404	0.000	5	3404	0.000	5	3404	0.000
09:00 - 10:00	5	3404	0.000	5	3404	0.000	5	3404	0.000
10:00 - 11:00	5	3404	0.000	5	3404	0.006	5	3404	0.006
11:00 - 12:00	5	3404	0.000	5	3404	0.000	5	3404	0.000
12:00 - 13:00	5	3404	0.006	5	3404	0.000	5	3404	0.006
13:00 - 14:00	5	3404	0.000	5	3404	0.000	5	3404	0.000
14:00 - 15:00	5	3404	0.000	5	3404	0.012	5	3404	0.012
15:00 - 16:00	5	3404	0.000	5	3404	0.000	5	3404	0.000
16:00 - 17:00	5	3404	0.012	5	3404	0.006	5	3404	0.018
17:00 - 18:00	5	3404	0.006	5	3404	0.024	5	3404	0.030
18:00 - 19:00	5	3404	0.000	5	3404	0.000	5	3404	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.042			0.048			0.090

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE
 MULTI-MODAL VEHICLE OCCUPANTS
 Calculation factor: 100 sqm
 BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	3404	0.576	5	3404	0.235	5	3404	0.811
08:00 - 09:00	5	3404	0.817	5	3404	0.640	5	3404	1.457
09:00 - 10:00	5	3404	0.893	5	3404	0.635	5	3404	1.528
10:00 - 11:00	5	3404	1.257	5	3404	0.952	5	3404	2.209
11:00 - 12:00	5	3404	1.234	5	3404	1.310	5	3404	2.544
12:00 - 13:00	5	3404	1.105	5	3404	1.175	5	3404	2.280
13:00 - 14:00	5	3404	0.928	5	3404	0.981	5	3404	1.909
14:00 - 15:00	5	3404	0.870	5	3404	1.110	5	3404	1.980
15:00 - 16:00	5	3404	0.934	5	3404	0.823	5	3404	1.757
16:00 - 17:00	5	3404	0.787	5	3404	1.046	5	3404	1.833
17:00 - 18:00	5	3404	0.400	5	3404	1.028	5	3404	1.428
18:00 - 19:00	5	3404	0.082	5	3404	0.182	5	3404	0.264
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			9.883			10.117			20.000

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL PEDESTRIANS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	3404	0.041	5	3404	0.000	5	3404	0.041
08:00 - 09:00	5	3404	0.024	5	3404	0.012	5	3404	0.036
09:00 - 10:00	5	3404	0.024	5	3404	0.018	5	3404	0.042
10:00 - 11:00	5	3404	0.012	5	3404	0.012	5	3404	0.024
11:00 - 12:00	5	3404	0.012	5	3404	0.012	5	3404	0.024
12:00 - 13:00	5	3404	0.024	5	3404	0.024	5	3404	0.048
13:00 - 14:00	5	3404	0.006	5	3404	0.018	5	3404	0.024
14:00 - 15:00	5	3404	0.012	5	3404	0.012	5	3404	0.024
15:00 - 16:00	5	3404	0.029	5	3404	0.053	5	3404	0.082
16:00 - 17:00	5	3404	0.024	5	3404	0.065	5	3404	0.089
17:00 - 18:00	5	3404	0.006	5	3404	0.012	5	3404	0.018
18:00 - 19:00	5	3404	0.000	5	3404	0.000	5	3404	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.214			0.238			0.452

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL PUBLIC TRANSPORT USERS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	3404	0.000	5	3404	0.000	5	3404	0.000
08:00 - 09:00	5	3404	0.006	5	3404	0.006	5	3404	0.012
09:00 - 10:00	5	3404	0.006	5	3404	0.000	5	3404	0.006
10:00 - 11:00	5	3404	0.006	5	3404	0.000	5	3404	0.006
11:00 - 12:00	5	3404	0.006	5	3404	0.000	5	3404	0.006
12:00 - 13:00	5	3404	0.018	5	3404	0.012	5	3404	0.030
13:00 - 14:00	5	3404	0.000	5	3404	0.000	5	3404	0.000
14:00 - 15:00	5	3404	0.000	5	3404	0.006	5	3404	0.006
15:00 - 16:00	5	3404	0.006	5	3404	0.024	5	3404	0.030
16:00 - 17:00	5	3404	0.012	5	3404	0.018	5	3404	0.030
17:00 - 18:00	5	3404	0.000	5	3404	0.012	5	3404	0.012
18:00 - 19:00	5	3404	0.000	5	3404	0.000	5	3404	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.060			0.078			0.138

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

TRIP RATE for Land Use 02 - EMPLOYMENT/D - INDUSTRIAL ESTATE

MULTI-MODAL TOTAL PEOPLE

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	3404	0.635	5	3404	0.235	5	3404	0.870
08:00 - 09:00	5	3404	0.846	5	3404	0.658	5	3404	1.504
09:00 - 10:00	5	3404	0.922	5	3404	0.652	5	3404	1.574
10:00 - 11:00	5	3404	1.275	5	3404	0.969	5	3404	2.244
11:00 - 12:00	5	3404	1.251	5	3404	1.322	5	3404	2.573
12:00 - 13:00	5	3404	1.152	5	3404	1.210	5	3404	2.362
13:00 - 14:00	5	3404	0.934	5	3404	0.999	5	3404	1.933
14:00 - 15:00	5	3404	0.881	5	3404	1.140	5	3404	2.021
15:00 - 16:00	5	3404	0.969	5	3404	0.899	5	3404	1.868
16:00 - 17:00	5	3404	0.834	5	3404	1.134	5	3404	1.968
17:00 - 18:00	5	3404	0.411	5	3404	1.075	5	3404	1.486
18:00 - 19:00	5	3404	0.082	5	3404	0.182	5	3404	0.264
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			10.192			10.475			20.667

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.