HighgateTransportation

# Proposed Development of 21 Employment Units Use Class E(g) (i), (ii), (iii), B2, and B8 on Land East of Woodside Drive Almondsbury, South Gloucestershire

## Transport Statement

(22108/TS/01/A)

October 2023

www.highgatetransportation.co.uk

Copyright © Highgate Transportation Limited (07500534)

The material presented in this report is the property of Highgate Transportation Limited and shall not be used by or distributed or made available to any other company or person without the knowledge and written consent of Highgate Transportation Limited.

All OS used in this report © Crown copyright and database rights 2023 OS Licence 100056454.

*Highgate Transportation Ltd, First Floor, 43-45 Park Street, Bristol BS1 5NL*

HTp@highgatetransportation.co.uk

## Contents



## Figures



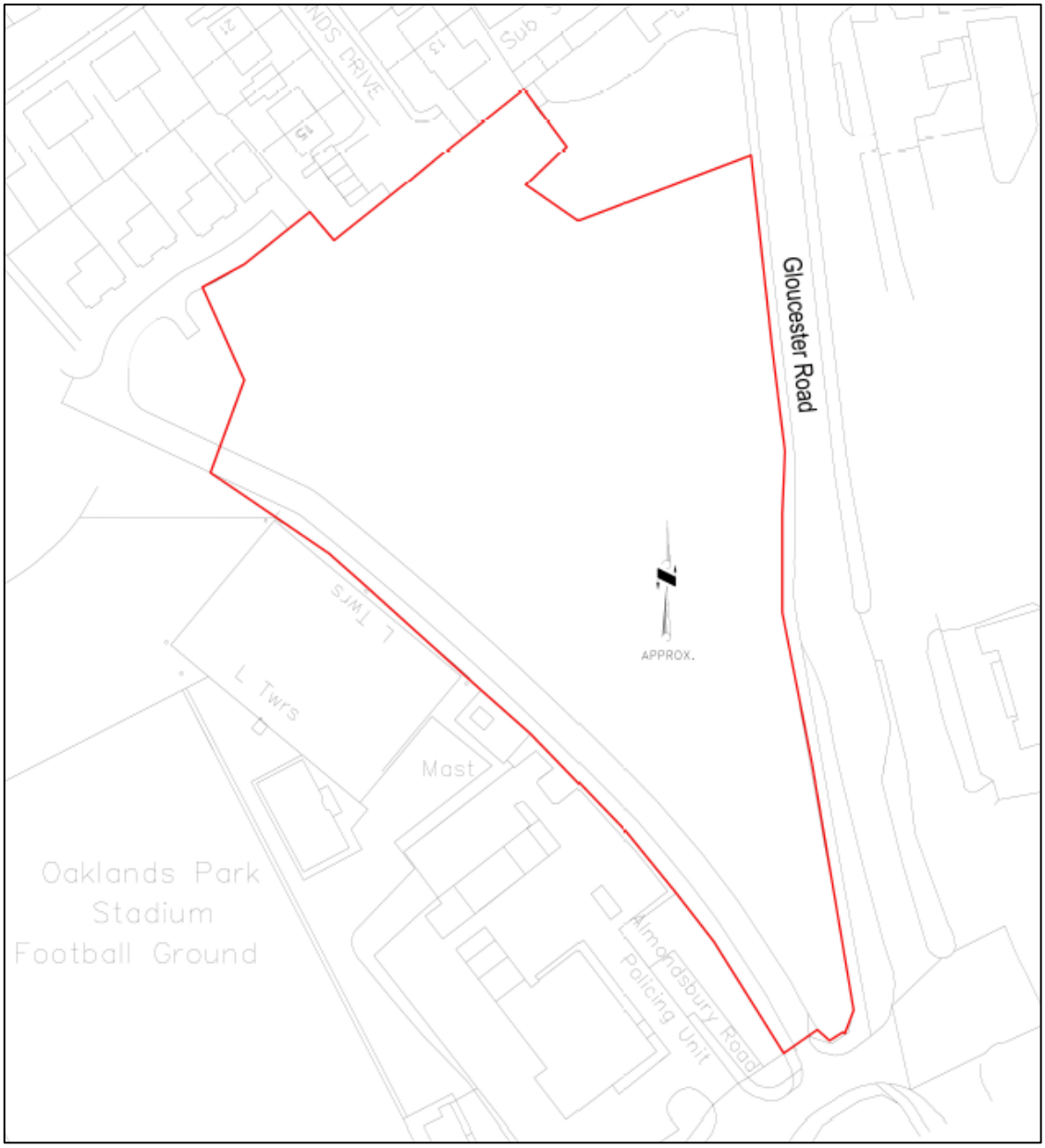
## Appendices

## 1.0 Introduction

1.1 Highgate Transportation (HTp) have been appointed to prepare this Transport Statement (reference HTp/22108/TS/01) to support the planning application to South Gloucestershire Council (SGC) for an employment development (use class E(g) (i), (ii), (iii), B2, and B8) on land to the east of Woodside Drive in Almondsbury. The application proposals are to provide 21 units with associated car and cycle parking.

1.2 **Figure 1.1** show the location of the application site.

**Figure 1.1 – Location of the application site**




1.3 The application site is vacant land previously associated with the now demolished Oaklands House, under separate ownership, which is accessed by a road constructed as part of previous planning permission reference PT17/2444/O, known as Woodside Drive, which forms a priority junction with Gloucester Road.

1.4 The application proposals are summarised as:

i. Access to the application site from Woodside Drive via Gloucester Road;
ii. The proposed 21 employment units will be accessed via three newly constructed vehicle crossovers directly from Woodside Drive; and
iii. The internal access roads will remain private and not be offered for adoption as public highway.

1.5 The issues that are addressed within this Transport Statement are:

i. Identifying the number of development trips associated with the application proposals;
ii. Ensuring that the site access junctions from Gloucester Road, and the internal access roads, are appropriate for all users;
iii. Confirming that the site is close to a range of services and facilities including public transport that are accessible on foot and by cycle;
iv. Providing swept path analysis to support the internal layout and confirm that the access is appropriate;
v. Ensuring that the refuse storage and collection area is appropriate;
vi. Providing an appropriate strategy for refuse and servicing vehicles;
vii. Confirming that the number of parking spaces proposed, and layout are appropriate;
viii. Confirming the proposals for the provision and storage of cycles are appropriate;
ix. Carrying out a review of the local road safety history to ensure there are no underlying issues; and
x. Identifying Travel Plan type measures.

1.6 **Section 2.0** of this report focuses on the existing situation, including the highway boundary ownership, local Public Rights of Way, the existing public transport network, and an evaluation of the most recently available five-year accident history within the vicinity of the site. This section will also set out the planning history of the site.

1.7 **Section 3.0** of this report details the development proposals, including parking provision and travel plan type measures. This section also details the vehicular access arrangement and includes swept path analysis of the internal layout and access, as well as details the strategy for refuse and recycling storage and collection, and access by delivery vehicles and emergency service vehicles, and improvements to the pedestrian infrastructure.

1.8 **Section 4.0** of this report details the forecast development trips associated with the employment units, and the subsequent impact on the local highway network.

1.9 **Section 5.0** provides a summary of the findings of this report and sets out the conclusions to be drawn from this information.

1.10 This report will conclude that the site access arrangements are safe and appropriate for all users and that the development traffic arising from the application proposals will not have an adverse impact on either the capacity of the safety of the local highway network.

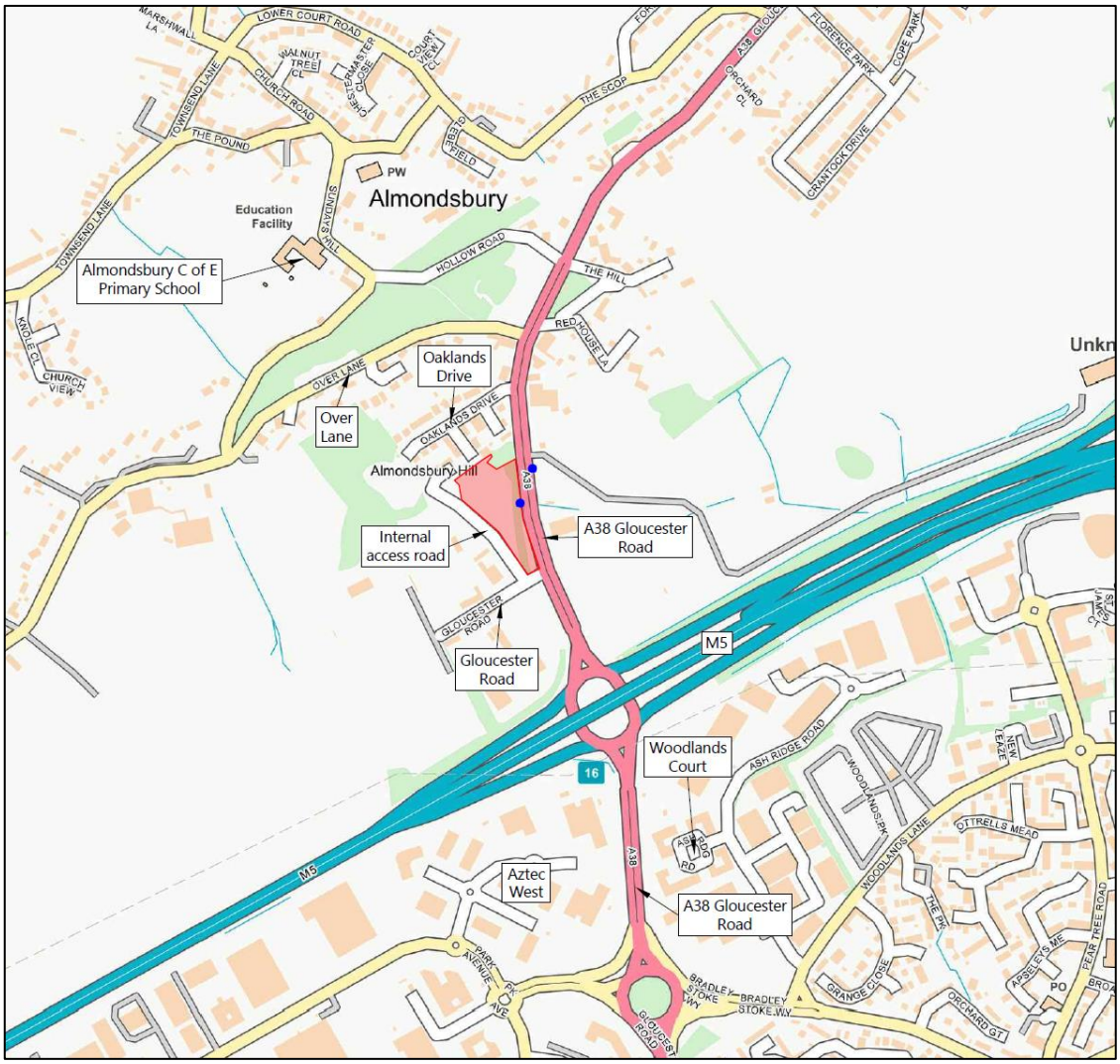
## 2.0 The Existing Situation

2.1 The application site is currently vacant land bounded to the north by Oaklands Drive, to the east by the A38 Gloucester Road, to the south by Gloucester Road and to the west by Woodside Drive.

2.2 Gloucester Road which forms the southern boundary of the application site is a cul-de-sac which provides access to National Highways Almondsbury Depot, Almondsbury Road Policing Unit, Gloucestershire Football Association headquarters, and the North Bristol Rugby Football Club.

2.3 The site location and surrounding area can be seen in **Figure 2.1**.

**Figure 2.1 – Site location and the surrounding area (nearest bus stops shown in blue)**




2.4 The following paragraphs provide a summary of the local highway network.

### A38 Gloucester Road

2.5 The A38 Gloucester Road is a dual carriageway which is lit by a system of street lighting and subject to a speed limit of 40mph. The northbound carriageway reduces to a single lane around 80 metres north of the junction with Gloucester Road.

2.6 To the south, the A38 Gloucester Road forms the northern arm of a roundabout providing access to junction 16 of the M5 motorway. The A38 Gloucester Road continues south of the M5 roundabout providing access to Aztec West in the west and Bradley Stoke in the south and east.

2.7 **Photograph 2.1** shows the A38 looking south with the junction to Gloucester Road on the right.

**Photograph 2.1 – A38 Gloucester Road looking south**

### Gloucester Road

2.8 Gloucester Road is around 7.5-metres-wide narrowing to circa 3.5-metres-wide east of the access to the Gloucestershire Football Association headquarters. A short length of footway, circa 2.4-metres-wide, exists on its north side only which terminates on the east side of the access to the Avon and Somerset Road Policing Unit. It is unlit and appears to be subject to a speed limit of 30mph.

2.9 Waiting on both sides of Gloucester Road is unrestricted, however, during a visit to the application site undertaken on Tuesday 15th August 2023, it was noted that traffic cones had been placed on the south side of which prohibited waiting at any time. Gloucester Road is shown by **Photograph 2.2**.

**Photograph 2.2 – Gloucester Road**

**Woodside Drive**

2.10 Woodside Drive is around 5.5-metres-wide and has been designed to incorporate a 2.0-metre-wide footway on its east side, which is yet to be constructed. It is unlit and appears to be subject to a speed limit of 30mph, however, it is more conducive to a design speed of 20mph. Waiting on both sides is unrestricted. A dropped kerb pedestrian crossing point, including tactile paving, has been constructed across the southern end of Woodside Drive, as shown by **Photograph 2.3**.

Photograph 2.3 – Woodside Drive

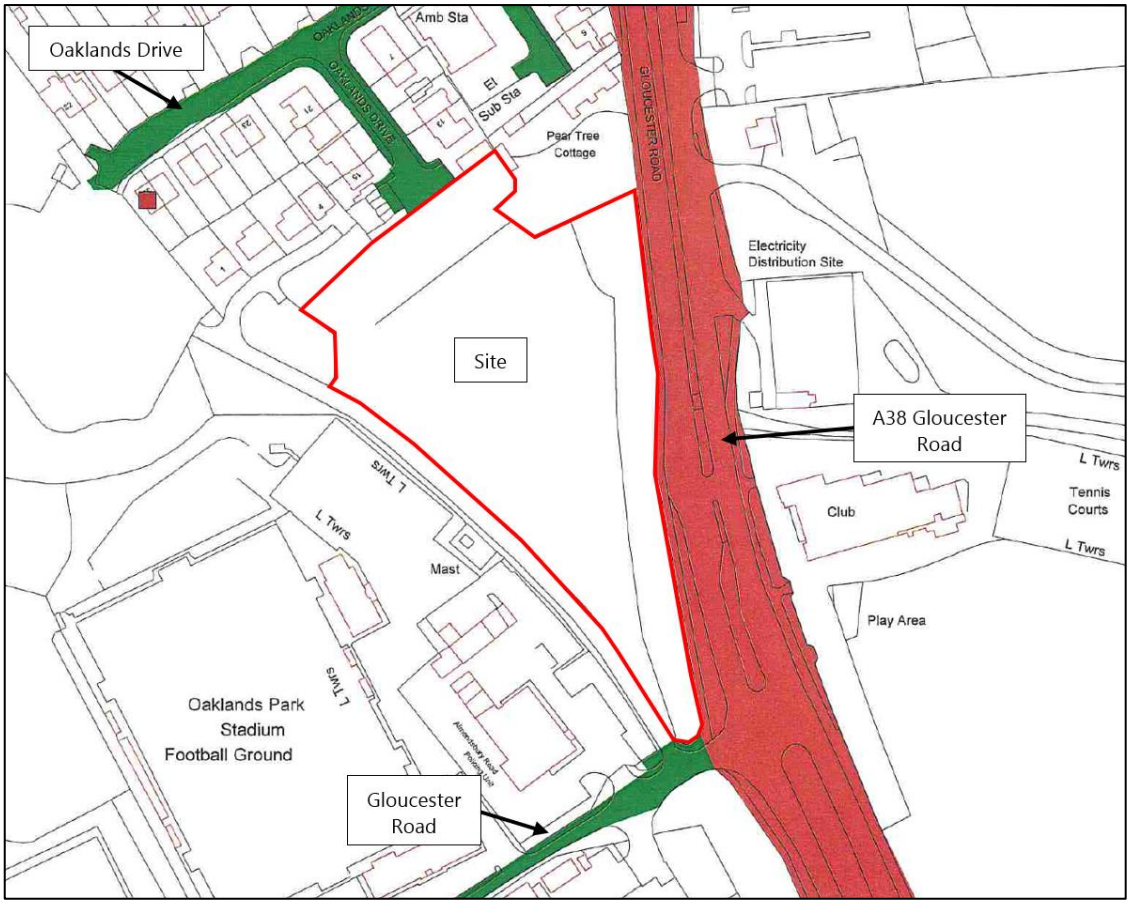
Oaklands Drive

2.11 Oaklands Drive is a residential road, typically 5.0-metres-wide, with a footway of circa 1.8-metres-wide on both sides, which provides access to the Almondsbury Ambulance Station SWAST. It is lit by a system of street lighting and is subject to a speed limit of 30mph.

2.12 Waiting for the majority of the length of Oaklands Drive is prohibited by a combination of an existing No Waiting at any Time restriction (double yellow lines) and a single yellow line which prohibits waiting between 9am and 5pm, Monday to Friday.

2.13 The highway ownership records have been obtained from SGC and are contained in **Appendix 1**, with an annotated extract provided in **Figure 2.2**.

**Figure 2.2 – Extract of the highway boundary records**




2.14 From this extract it can be seen that the A38 Gloucester Road, shown in red, Gloucester Road and Oaklands Drive, shown in green, are adopted and maintained by SGC. The plan also confirms that Woodside Drive is not currently adopted.

## Local Services and Facilities

2.15 As shown on **Figure 2.1**, the site access is around 110 metres southwest from a northbound bus stop and 190 metres from the southbound bus stop on A38 Gloucester Road, known as Almondsbury Depot.

2.16 Both bus stops are located within a layby, are defined by yellow bus stop clearway carriageway markings and both comprise a pole, a flag, timetable information and a bin.

2.17 Both stops are served by service number T1 and details of the routes and frequency of buses is summarised by **Table 2.1**.

Table 2.1 – Route and frequency of bus services

| Service Number | Route | Monday - Friday | Saturday | Sunday |
|---|---|---|---|---|
| T1 | The Centre C2 - Rock Street | 20 minutes | 30 minutes | 60 minutes |

2.18 The site is in close proximity to a range of local facilities and amenities. A selection of these facilities and their walking distance and time from the site access on Gloucester Road are contained in **Table 2.2.** These are calculated from the CIHT Guidance document, 'Providing for Journeys on Foot', 2000, assuming a walking speed of 80 metres per minute.

Table 2.2 – Services and facilities and their walking distance from the site

| Facility | Walk Distance (metres) | Walking Time (minutes) |
|---|---|---|
| Northbound A38 Gloucester Road Bus Stop | 110 | 1.4 |
| Almondsbury Creative Public House & Sports Hub | 110 | 1.4 |
| Southbound A38 Gloucester Road Bus Stop | 190 | 2.4 |
| North Bristol Rugby Football Club | 280 | 3.5 |
| The Swan Public House | 350 | 4.4 |
| Woodlands Court Employment | 650 | 8.1 |
| Ash Ridge Road Employment | 700 | 8.8 |
| Rocklands Restaurant | 700 | 8.8 |
| Almondsbury C of E Primary School | 750 | 9.4 |
| Aztec West | 800 | 10.0 |
| Almondsbury Community Shop | 950 | 11.9 |

2.19 Given the above, the site is within close proximity to an appropriate level of bus services that provide connections to the wider area and a large range of local facilities and employment that are within convenient walking and cycling distance. Therefore, it can be concluded that the site is within a highly sustainable location that will encourage sustainable modes of travel, and less dependency on the private car to the extent that the development will be attractive to those who do not wish to own a car.

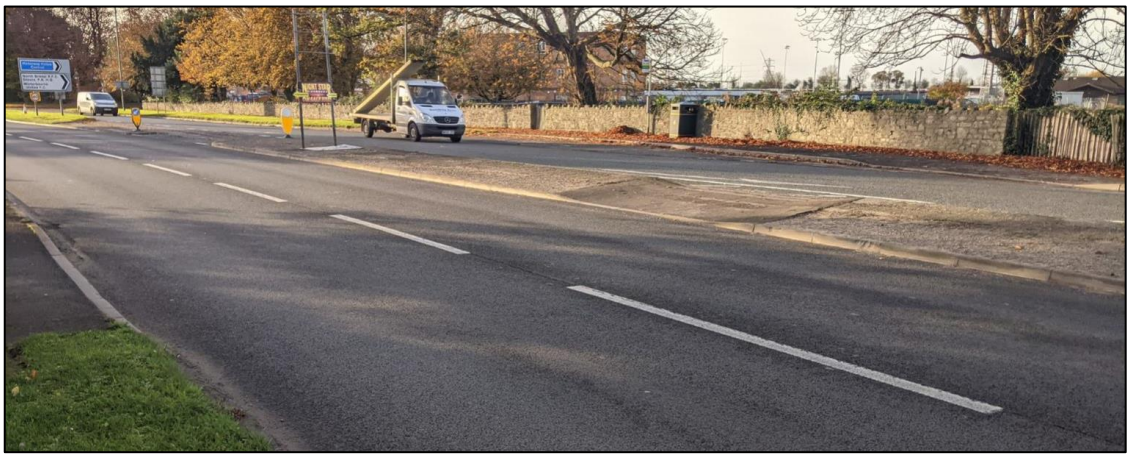
Local Pedestrian and Cycle Network

2.20 The access road is to connect to the existing footway on the northern side of the carriageway on Gloucester Road, whether there are dropped kerbs at the junction with the A38 Gloucester Road. The dropped kerb crossing at the junction of Gloucester Road and A38 Gloucester Road is shown in **Photograph 2.4**.

**Photograph 2.4 – Existing dropped kerb crossing at the junction of Gloucester Road and A38 Gloucester Road**

2.21 The A38 Gloucester Road has footways on either side of the carriageway with a regular system of street lighting. There are dropped kerbs on the A38 Gloucester Road, located at the northbound bus stop (around 110 metres north of the site access) to allow pedestrians to cross. The dropped kerb crossing on the A38 Gloucester Road is shown in **photograph 2.5**.

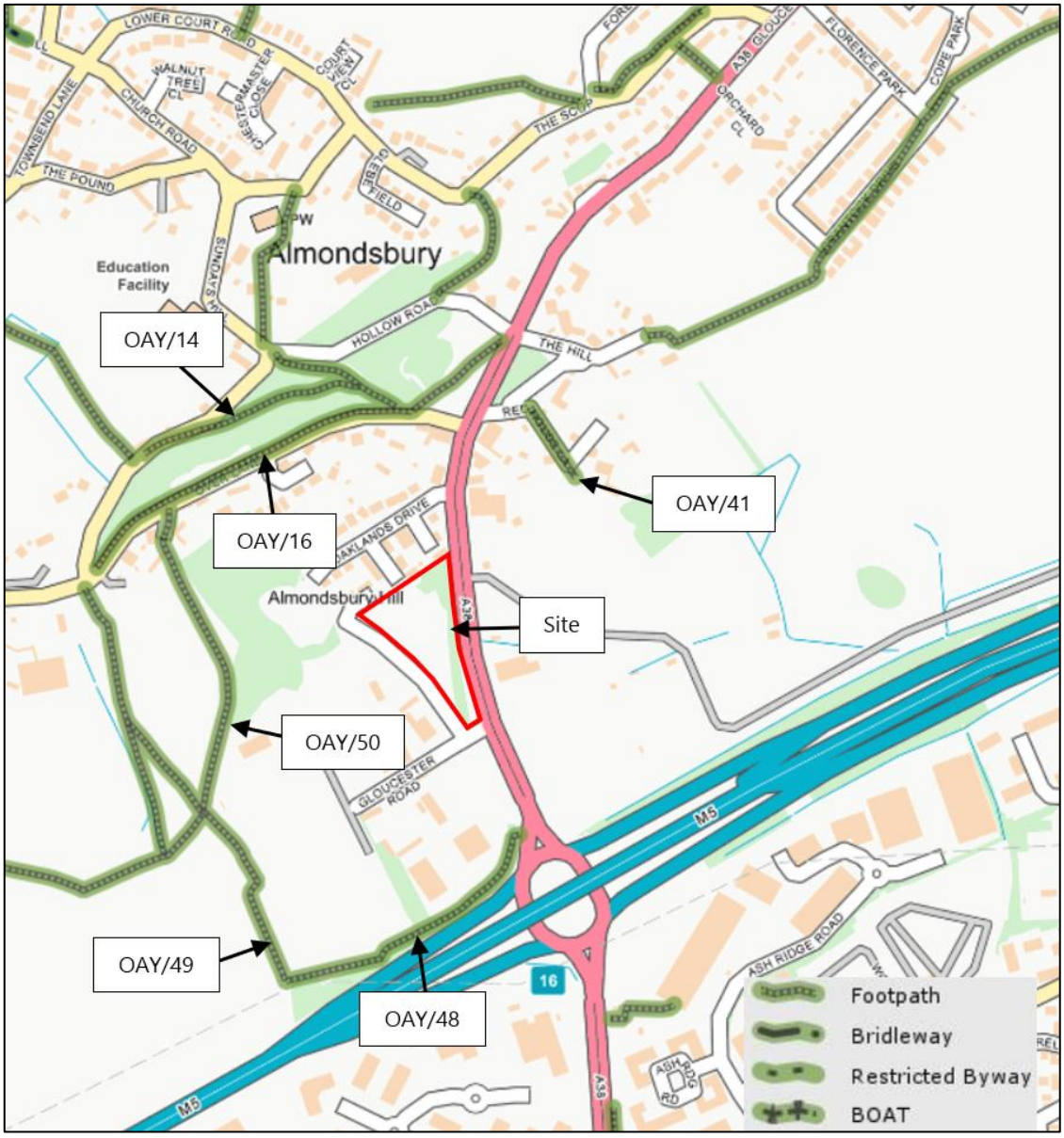
**Photograph 2.5 – Existing dropped kerb crossing on A38 Gloucester Road**



2.22 To the south of the access, at the northbound slip-road from the M5 and the southbound slip road to the M5, there are signalised Toucan crossings. On the northbound slip-roads to the M5 and the southbound slip-road from the M5, there are dropped kerb crossings for pedestrians and cyclists.

2.23 **Figure 2.3** illustrates that there are a number of PRoW footpath routes within the vicinity of the site providing pedestrian access to Almondsbury.

**Figure 2.3 – Extract of South Gloucestershire Council's Public Rights of Way map**




*Source: OutdoorsWest Map (www.outdoorswest.org.uk/map/)*

2.24 On the southbound side of the carriageway, there is a shared pedestrian and cycle path opposite the junction of Gloucester Road, which continues south in Bradley Stoke. The start of the shared pedestrian and cycleway is shown in **photograph 2.6**.

**Photograph 2.6 – A38 Gloucester Road southbound shared pedestrian and cycleway**

2.25 There is an on-carriageway cycleway on the northbound carriageway of the A38 Gloucester Road which continues north for around 470 metres. The cycleway is shown in **photograph 2.7**.

**Photograph 2.7 – A38 Gloucester Road northbound on carriageway cycle lane**

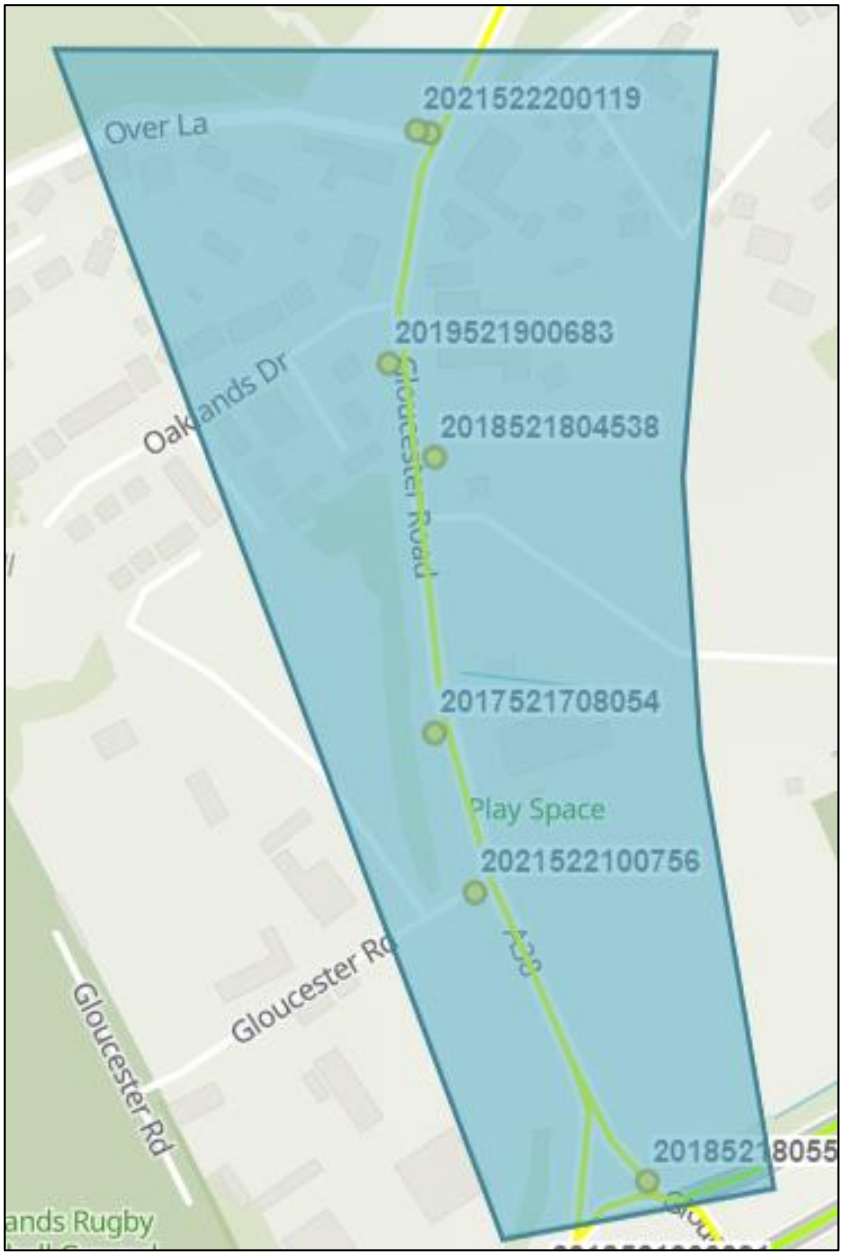
2.26 Therefore, it can be concluded that the site lies within a well-established pedestrian and cyclist network which will encourage sustainable modes of travel.

### Personal Injury Accident Review

2.27 Personal Injury Accident (PIA) data for the period January 2017 to December 2021, has been obtained from the Crashmap Pro database for a radius of 160 metres centred upon the existing access to the application site. The output report if provided as **Appendix 2**.

2.28 The PIA plot, included as **Figure 2.4**, confirms that there have been seven accidents (all classed as 'slight') on the local highway network, between January 2017 and December 2021. No serious or fatal collisions were recorded.

**Figure 2.4 – Personal Injury Accident plot**



2.29 A summary of the PIA data is provided in **Table 2.3**.

**Table 2.3 – Summary of PIA data**

| | Collision Severity | | | Casualty Severity | | |
|---|---|---|---|---|---|---|
| **Year** | **Slight** | **Serious** | **Fatal** | **Slight** | **Serious** | **Fatal** |
| 2017 | 2 | 0 | 0 | 2 | 0 | 0 |
| 2018 | 2 | 0 | 0 | 2 | 0 | 0 |
| 2019 | 1 | 0 | 0 | 1 | 0 | 0 |
| 2020 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2021 | 2 | 0 | 0 | 2 | 0 | 0 |
| **Total** | **7** | **0** | **0** | **7** | **0** | **0** |

2.30 **Table 2.3** confirms that the seven recorded accidents resulted in 'slight' injury to seven casualties, and a summary of the accidents is provided below.

i. Accident reference 2021522200119 ('slight') occurred on the A38 in the vicinity of its junction with Over Lane on 7th December 2021 at 22:45 hours. The accident involved a car (Vehicle 1) proceeding normally along the carriageway, not on a bend, colliding with a traffic sign and/or traffic signals, causing 'slight' injury to the driver;

ii. Accident reference 2021522100756 ('slight') occurred on Gloucester Road on 23rd February 2021 at 08:30 hours. The accident involved a van or goods vehicle (Vehicle 1) 3.5 tonnes mgw and under moving off and a pedal cycle (Vehicle 2) proceeding normally along the carriageway, not on a bend, colliding. The accident caused 'slight' injury to the cyclist;

iii. Accident reference 2019521900683 ('slight') occurred on the A38 on 30th January 2019 at 13:00 hours. The accident involved a pedal cycle (Vehicle 1) proceeding normally along the carriageway, not on a bend, and a car (Vehicle 2) also proceeding normally along the carriageway, not on a bend, colliding. The accident caused 'slight' injury to the cyclist;

iv. Accident reference 2018521805566 ('slight') occurred on the A38 on 12th August 2018 at 21:25 hours. The accident involved a car (Vehicle 1) waiting to proceed normally and held up and a southbound car (Vehicle 2) proceeding normally along the carriageway, not on a bend, colliding. The accident caused 'slight' injury to the driver of Vehicle 1;

v. Accident reference 2018521804538 ('slight') occurred on the A38 on 16th May 2018 at 21:55 hours. The accident involved a pedal cycle (Vehicle 1) proceeding normally northbound on the carriageway, not on a bend, and a southbound car (Vehicle 2) in the act of turning left colliding. The accident caused 'slight' injury to the cyclist;

vi. Accident reference 2017521705236 ('slight') occurred on the A38 in the vicinity of its junction with Over Lane on 17th June 2017 at 15:45 hours. The accident involved a motorcycle (Vehicle 1) proceeding normally northbound along the carriageway, not on a bend, and an eastbound car (Vehicle 2) moving off colliding. The accident caused 'slight' injury to the motorcyclist; and

vii. Accident reference 2017521708054 occurred on the A38 on 17th September 2017 at 18:00 hours. The accident involved a northbound good vehicle (Vehicle 1) 7.5 tonnes mgw and over proceeding normally along the carriageway, not on a bend, and a northbound car (Vehicle 2) also proceeding normally along the carriageway, not on a bend, colliding. The accident caused 'slight' injury to a passenger in Vehicle 2.

2.31 Based upon the analysis of the PIA data, it is concluded that there are no road safety problems on the local highway network.

## Previous Planning Applications

2.32 The following paragraphs provide a summary of recent previous planning applications.

10 Dwellings

2.33 Outline application ref PT17/2444/O for the erection of 10 dwellings, at the Almondsbury Squash Club, Oaklands Drive, was approved in June 2017, and included the existing private drive access on Gloucester Road to be widened. The works to widen the access were undertaken in November 2021, now known as Woodside Drive.

Proposed Nursing Home

2.34 Application ref PT18/4625/F for the demolition of Oaklands House, and the erection of a care home with 26 nursing bedrooms and 15 assisted apartments on land to the north of the application site was approved in July 2019. Subsequently, an application (ref: P19/11955/RVC) for a 63-bed nursing home was approved in March 2020. Both applications included a condition with regard to access to the site:

> *Condition 4: No access from Oaklands Drive*
> *There shall be no vehicle access to the site from Oaklands Drive other than for emergency vehicles.*
>
> *Reason: to reduce the impact of the proposed development on the residents of Oaklands Drive and also for highway safety in that it will also remove additional turning movements at the junction of Oaklands Drive and the A38 in accordance with Policy CS8 of the South Gloucestershire Local Plan: Cores Strategy (Adopted) 2013 and the NPPF.*

2.35 An application (P21/00954/RVC) to discharge the condition was submitted in February 2021, with a supporting Technical Note setting out that the primary vehicular access should be from Oaklands Drive, with the access road from Gloucester Road becoming an emergency only access. The condition (now condition 5) was upheld in October 2021, with the wording remaining the same, i.e., access from Woodside Drive.

2.36 An application (P21/07158/RVC) to discharge condition 5 to again allow access from Oaklands drive was submitted in November 2021. The application was supported by a Technical Note setting out that the reason for the change in condition being sought is:

> *"The route from the south, via the unnamed road, relies on land which is not in control of the applicant and over which the site does not benefit from rights of access. As such the site must necessarily be accessed from Oaklands Drive, hence this application."*

2.37 The application has received no objection from National Highways.

2.38 The application received comments from the highway officer which provided neither objection nor support. The highway officer set out that *"as the developer does not have access to Woodside Drive and the whole development has to be assessed as if it is to be accessed off Oaklands Drive. Whilst clearly undesirable, allowing this development to be accessed off Oaklands Drive would in my opinion not lead to a severe highway safety issue".*

2.39 A Non-Material Amendment (P22/01765/NMA) to planning permission P21/00954/RVC to correct the application description was approved in March 2022.

<u>This Application Site</u>

2.40 Two applications were run concurrently in 2021 on the application land and would have been accessed from the new cul-de-sac Woodside Drive; one outline application (P21/00851/O) for the erection of nine self-build houses in the central band of the vacant land was submitted in January 2021 and one outline application (P21/00852/O) for the erection of nine affordance houses in the northern section of the vacant land was submitted in February 2021. Both applications were refused in May 2021 with the following reason for refusal relating to highways and transport:

> *"There is insufficient submitted information to confirm whether or not the proposal would have a harmful effect on highway safety, and whether or not it would include safe public walking and cycling routes. It would be contrary to Policy CS8 of the adopted South Gloucestershire Local Plan: Core Strategy, and Policy PSP11 of the adopted South Gloucestershire Local Plan Policies, Sites and Places Plan, which together seek to ensure that development proposals do not compromise highway safety and provide new development with a range of travel options."*

## 3.0 The Application Proposals

3.1 The application proposals are for 21 employment units totalling 3,019sqm gross floor area (GFA):

i. 7No., Type A units – 143sqm GFA (total1,001sqm GFA);
ii. 2No., Type B units – 154sqm GFA (total 308sqm GFA);
iii. 6No., Type C units – 185sqm GFA (total 1,110sqm GFA); and
iv. 6No., Type D units – 100sqm GFA (total 600sqm GFA).

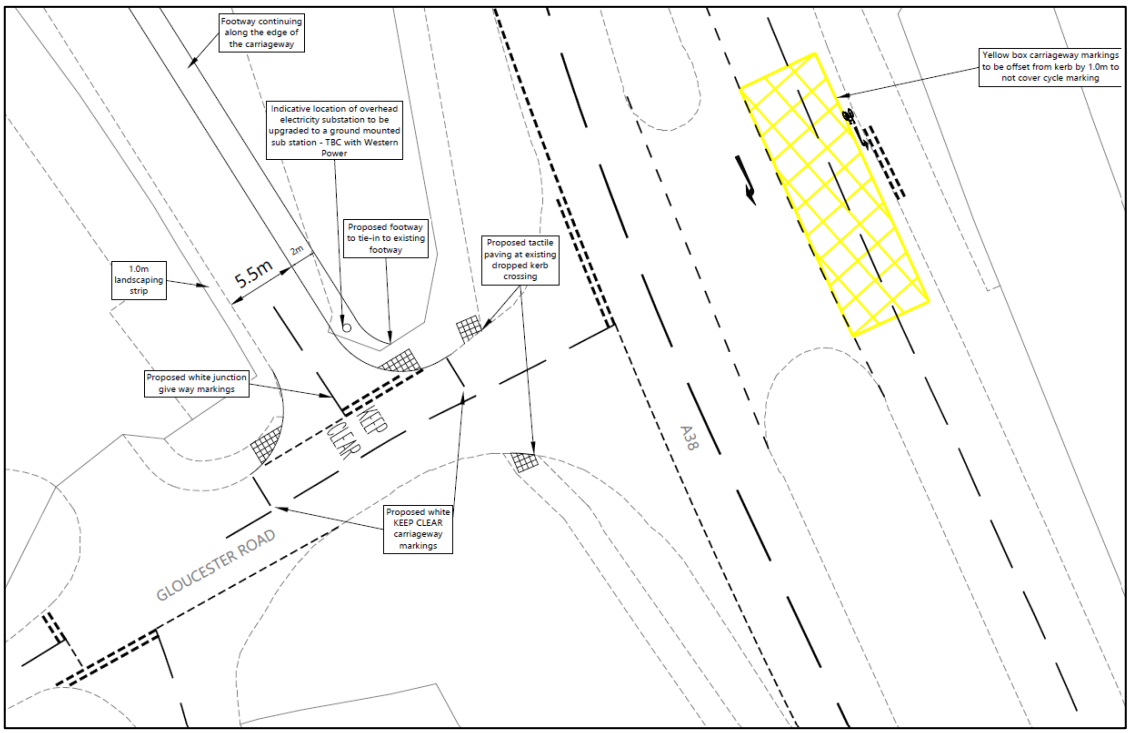
3.2 Planning permission is sought for a flexible use of the site for E(g) (i), (ii), and (iii) together with B2 and B8.

3.3 The Architect's proposed site layout plan (reference 3375/201 Revision A) is contained in **Appendix 3** (reference 3375/101 Revision C) and an extract of this can be seen in **Figure 3.1**.

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

3.4 The proposed employment units will be accessed from Woodside Drive via Gloucester Road, and plan reference HTp/22108/01 Revision A is contained in **Appendix 4** with an extract shown in **Figure 3.2** and demonstrates the access arrangements from Gloucester Road.

**Figure 3.2 – Extract of the site access arrangements from Gloucester Road**




3.5 From the Architect's site layout plan and the proposed site access arrangement plan it can be seen that:

i. Access to the application site will be via three newly constructed accesses taken directly from Woodside Drive;
ii. The application proposals will be served by 85 off-street car parking spaces, five of which (6%) will be for the dedicated use of blue badge holders;
iii. The application proposals will also be served by six Sheffield stands providing secure and covered parking for up to 12 cycles in two stores;
iv. A two-metre-wide footway will be constructed on the east side of Woodside Drive for its entire length;
v. Tactile paving will be installed on the north and south sides of Gloucester Road, on the alignment of the existing footway on the west side of the A38;
vi. White 'KEEP CLEAR' carriageway markings will be provided on Gloucester Road across its priority junction with Woodside Drive; and
vii. Yellow box carriageway markings will be provided on the A38.

### Visibility Splays at Proposed Site Accesses

3.6 The Manual for Streets highway design guide recommends junction visibility of 2.4 metres by 25 metres for a road subject to a design speed of 20mph. Visibility in both directions from Woodside Drive onto Gloucester Road has previously been accepted by SGC in their role as the Local Highway Authority.

3.7 Plan reference HTp/22108/02 which shows the visibility available in both directions from the three proposed accesses to the application site onto Woodside Drive is provided as **Appendix 5**.

3.8 From this plan it can be seen that visibility of 2.4 metres by 25 metres can be achieved in both directions from all three proposed accesses to the application site onto the access road which is commensurate with the requirements of MfS for a road subject to a design speed of 20mph and is therefore considered to be appropriate.

### Car Parking

3.9 SGC declared a climate emergency in July 2019 in which they sought to make South Gloucestershire carbon neutral by 2030. The council has prepared a Climate Emergency Strategy to enable them to meet these commitments between 2020 and 2030.

3.10 The strategy sets out that to reduce the carbon emissions across South Gloucestershire, this will involve:

i. Switching journeys under five miles to bike, public transport, and walking;
ii. Reducing mileage in all vehicles; and
iii. Making all new developments zero carbon and locating them in low impact locations.

3.11 The SGC Local Plan (adopted January 2006) provides a summary of the authority's adopted car parking standards for the following use classes:

i. B1 (offices, light industrial, research and development laboratories) – one space per 30sqm;
ii. B2 (general industry) – one space per 50sqm; and
iii. B8 (storage, distribution, and warehousing) – one space per 200sqm.

3.12 Based upon the above adopted standards and 3,019sqm GFA, the application proposals require the maximum provision of between 15 and 101 off-street car parking spaces.

3.13 The Architect's proposed site layout plan (see **Appendix 3**) confirms that the application proposals will be served by 85 off-street car parking spaces, each of which is accessible. The proposed off-street car parking provision is considered to be appropriate for the planned uses of the site and is consistent with the aims of the SGC Climate Emergency.

3.14 Swept path analysis contained in **Appendix 6** confirms that the car parking spaces is fully accessible.

### Electric Vehicle Charging Provision

3.15 SGC's Local Plan does not include details of their requirement for active and passive Electric Vehicle Charging Points (EVCP), however, it is noted that this requirement is covered by Part S Infrastructure for the Charging of electric vehicle of The Building Regulation 2010.

3.16 Section S4 considers new buildings other than residential or mixed-use buildings and confirms:

*"Where a new building which is not a residential building, or a mixed-use building has more than 10 parking spaces:*

*i. one of those parking spaces must have access to one electric vehicle charge point; and*
*ii. cable routes for electric vehicle charge points must be installed in a minimum of one fifth of the total number of remaining parking spaces."*

3.17 The Climate Emergency Strategy sets out that to reduce the county's carbon emissions will include:

*"Switching from diesel and petrol vehicles to electric vehicles for journeys that can't be made on foot, by bike or public transport."*

3.18 To accord with Part S of The Building Regulations 2010, the application proposals will include the provision of one active EVCP together with passive provision for a minimum of 17 spaces which equates to one fifth.

3.19 It is therefore considered that the proposed off-street car parking provision, including active and passive EVCP, is appropriate.

### Cycle Parking

3.20 SGC's cycle parking standards are also set out in their publication 'Policies, Sites and Places Plan' 2017 and confirm the requirement for the following uses:

i. B1 (offices, studios, laboratories);
   - Staff – one space per 8 members of staff;
ii. B2 (light industry) – one space per 100sqm;
iii. B2 (general industry) – two spaces per 1,000sqm; and
iv. Warehouses and repositories – one space per 1,000sqm.

3.21 The number of staff that will be employed in each of the units is currently unknown. For this purposes of this assessment it has been assumed that each unit will be suitable to employ up to four members of staff which totals 84 employees.

3.22 Based upon the above adopted standards and 3,019sqm GFA, the application proposals require the minimum provision of between three and 73 secure and covered cycle parking spaces.

3.23 The Architect's proposed site layout plan (see **Appendix 3**) confirms that the application proposals will be served by six covered Sheffield stands providing parking for 12 staff bicycles based upon the worst-case scenario whereby all proposed 21 units are B1 land use, which is considered to be appropriate for the planned uses of the site. This cycle parking will also be available for visitors to the site.

### Strategy for Refuse Collection and Service Vehicles

3.24 SGC's 'Waste and Recycling Collection: Guidance for New Developments' confirms that the authority does not currently offer a commercial waste collection service, therefore, a private collection of refuse and recycling will be necessary.

3.25 Based on the guidance provided by the document, it is estimated that the application proposals will generate around 14,630 litres of waste weekly. Therefore, each of the proposed 21 units will each be provided with a 660-litre capacity container.

3.26 It is expected that the private company will collect refuse and recycling using a smaller vehicle than SGC's standard 11.4-metre-long refuse collection vehicle. Therefore, swept path analysis (see **Appendix 6**) confirms that the unit numbers 3 to 21 inclusive are full accessible for a 10.0-metre-long refuse collection vehicle and that refuse and recycling for unit 1 and unit 2 can be collected from the kerbside.

3.27 Therefore, it is considered that an appropriate strategy for the storage and collection of refuse and recycling can be provided.

3.28 Delivery vehicles and fire tenders can access the site, park temporarily and then egress the site in a forward gear, as demonstrated by swept path analysis (see **Appendix 6**).

3.29 Therefore, an appropriate strategy is in place for delivery and service vehicles.

### Identifying Travel Plan Type Measures

3.30 It is not considered that a full Travel Plan is required in support of the planning application, therefore, the following travel plan type measures have been identified as being appropriate:

i. Car travel – promote car sharing and the Travelwest website – https://travelwest.info/driving/car-sharing
ii. Public transport – a noticeboard could be provided in each of the units which displays up-to-date information relating to the location of bus stops; bus routes, fares, and frequency of service; and timetable information;
iii. Cycling – provide staff and visitors with information on local cycle routes and the health benefits of cycling;
iv. Walking – provide staff and visitors with information on local pedestrian routes and the health benefits of walking; and
v. Promote national travel awareness programmes, including, and not limited to: Walk-to-work week; Car free day; and Cycle-to-work day.

3.31 The information summarised above could be afforded to all staff via a Welcome Information Pack provided to each unit on first occupation.

## 4.0 Trip Attraction

4.1 The TRICS database has been used to provide an indication of the likely number of AM and PM peak hour weekday and daily person trip movements forecast to be generated by the proposed employment use (B2).

4.1 The database provides a trip rate per 100sqm GFA, calculated from surveyed movements each hour across the day, at similar sites.

4.2 A TRICS assessment has been carried out using the "02 Employment – D Industrial Estate" dataset for multi-modal surveys up to 7,500sqm GFA. The assessment used the following parameters:

i. Multi-modal surveys;
ii. All regions in GB excluding Ireland;
iii. Weekday surveys only; and
iv. Suburban areas and edge of town.

4.3 The search returned 10 surveys and the trip rates are summarised in **Table 4.1**, with the number of multi-modal trips forecast to be generated by the 21 employment units summarised in **Table 4.2**. The TRICS output file is included as **Appendix 7**.

**Table 4.1 – Trip rates industrial estate**

| | Trip Rates (per 100sqm GFA) | | | | |
|---|---|---|---|---|---|
| | AM Peak Hour (0800-0900) | | PM Peak Hour (1700-1800) | | Daily |
| | Arrival | Departure | Arrival | Departure | |
| Total Person | 0.784 | 0.524 | 0.376 | 0.737 | 17.333 |
| Pedestrian | 0.025 | 0.016 | 0.014 | 0.060 | 0.931 |
| Cyclist | 0.008 | 0.004 | 0.008 | 0.012 | 0.119 |
| Vehicles | 0.597 | 0.431 | 0.277 | 0.501 | 12.678 |
| Public Transport | 0.023 | 0.002 | 0.010 | 0.021 | 0.341 |

**Table 4.2 – Trip attraction industrial estate**

| | Trips Generated (3,019sqm GFA) | | | | |
|---|---|---|---|---|---|
| | AM Peak Hour (0800-0900) | | PM Peak Hour (1700-1800) | | Daily |
| | Arrival | Departure | Arrival | Departure | |
| Total Person | 24 | 16 | 11 | 22 | 523 |
| Pedestrian | 1 | 0 | 0 | 2 | 28 |
| Cyclist | 0 | 0 | 0 | 0 | 4 |
| Vehicles | 18 | 13 | 8 | 15 | 383 |
| Public Transport | 1 | 0 | 0 | 1 | 10 |

4.4 **Table 4.2** confirms that the proposed employment units are forecast to attract 31, two-way vehicular trips during the AM peak hour and 23, two-way vehicular movements during the PM peak hour.

4.5 The table also confirms that the proposed employment units are forecast to attract up to around only 383, two-way vehicle trips during the 12-hour period of 07:00 to 19:00 hours, at an average of circa 32 trips per hour.

4.6 It is considered that the development traffic forecast to be generated by the application proposals is too low to have an adverse impact on either the capacity or the safety of the local highway network.

## 5.0 Summary and Conclusion

5.1 HTp have been appointed to prepare this Transport Statement to support the planning application to South Gloucestershire Council for an employment development (use class E(g) (i), (ii), (iii), B2, and B8) on land to the east of Woodside Drive in Almondsbury. The application proposals are to provide 21 units with associated car and cycle parking.

5.2 The application site is vacant land previously associated with the now demolished Oaklands House, under separate ownership, which is accessed by a road constructed as part of previous planning permission reference PT17/2444/O, known as Woodside Drive, which forms a priority junction with Gloucester Road.

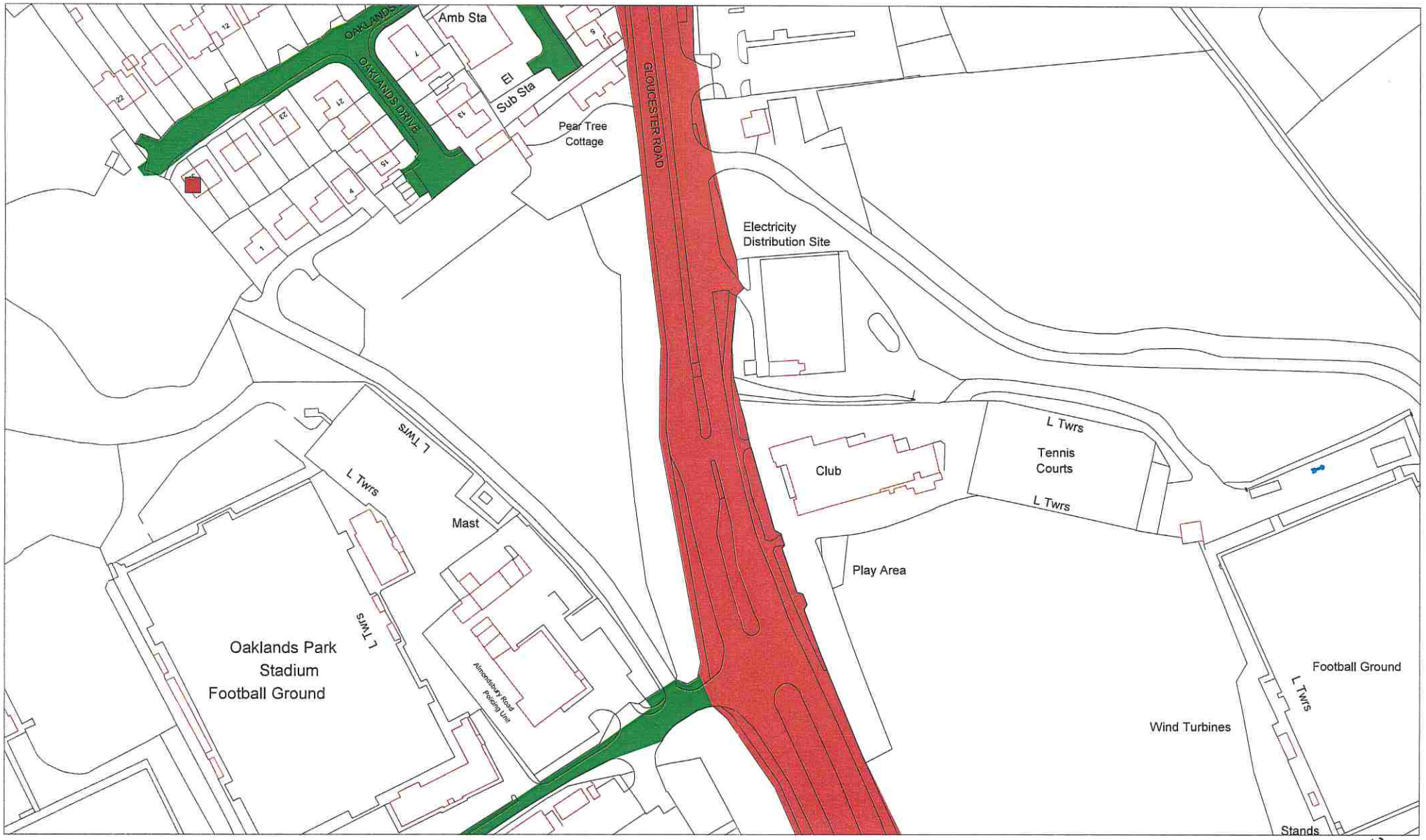
5.3 This report confirms that:

i. The number of vehicle trips forecast to be attracted by the application proposals are too low to have an adverse impact on either the capacity of the safety of the local highway network;
ii. Both the existing site access arrangement from Gloucester Road and the internal access roads are suitable for all users, including pedestrians and cyclists;
iii. The application site is close to a range of services and facilities, including public transport, that are accessible on foot and by cycle;
iv. The internal access layout of the application site, including the proposed car parking spaces, are fully accessible – as demonstrated by swept path analysis;
v. An appropriate strategy for the storage and collection of refuse and recycling has been demonstrated;
vi. The proposed car parking provision, including Electric Vehicle charging Points, is appropriate;
vii. The proposed secure and covered cycle parking provision is also appropriate;
viii. There are no underlying road safety issues on the local highway network; and
ix. Appropriate Travel Plan type measures have been identified.

5.4 It is concluded that the application proposals will not have an adverse impact on either the capacity or the safety of the local highway network and are, therefore, acceptable in highway terms.

# Appendix 1

Highway Boundary Records Plan




© South Gloucestershire Council,2021All rights reserved.
© Crown copyright and database rights 2021 Ordnance Survey 100023410.
Contains Royal Mail data © Royal Mail copyright and database right 2021.
Contains National Statistics data © Crown copyright and database right 2021.

South Gloucestershire Council

# Appendix 2

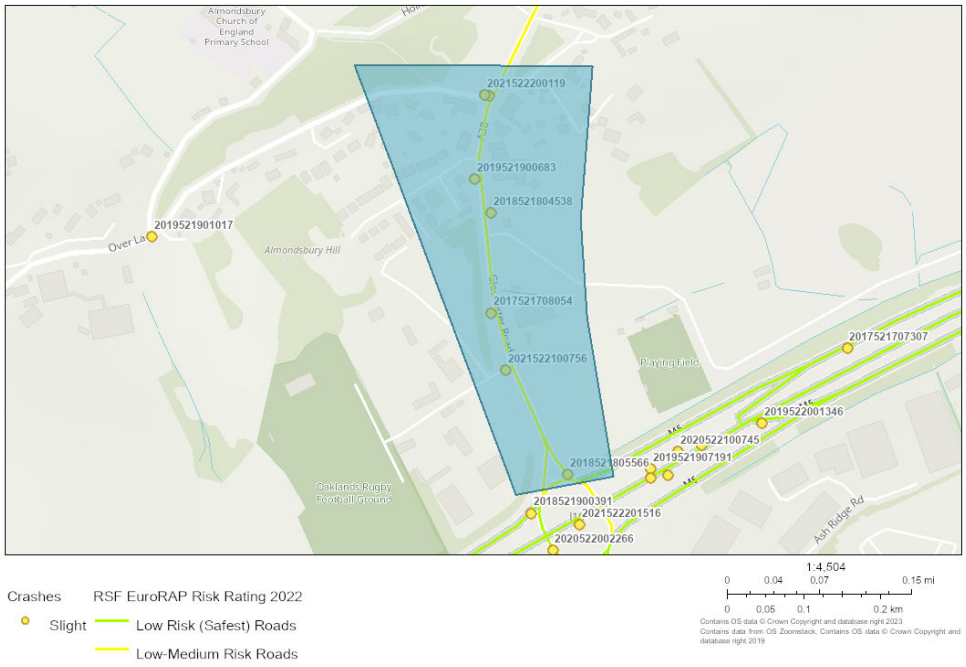
Personal Injury Accident Report

# 22108 - Personal Injury Accident Report

## Area of Interest (AOI) Information

Area : 113,204.65 m²

Aug 8 2023 9:26:23 British Summer Time




Crashes
Slight

RSF EuroRAP Risk Rating 2022
Low Risk (Safest) Roads
Low-Medium Risk Roads

## Summary

| Name | Count | Area(m²) | Length(m) |
|---|---|---|---|
| Crashes | 7 | N/A | N/A |

## Crashes

| # | Carriageway_Hazards | Severity | Officer_Attended | Accident_DateTime | Year | Number_of_vehicles | Number_of_casualties | Easting |
|---|---|---|---|---|---|---|---|---|
| 1 | None | Slight | No officer attended crash scene | January 30, 2019 | 2019 | 2 | 1 | 360560 |
| 2 | None | Slight | Police officer attended crash scene | May 16, 2018 | 2018 | 2 | 1 | 360582 |
| 3 | None | Slight | No officer attended crash scene | September 17, 2017 | 2017 | 2 | 1 | 360582 |
| 4 | None | Slight | Police officer attended crash scene | June 17, 2017 | 2017 | 2 | 1 | 360579 |
| 5 | None | Slight | Police officer attended crash scene | December 7, 2021 | 2021 | 2 | 1 | 360573 |
| 6 | None | Slight | No officer attended crash scene | August 12, 2018 | 2018 | 2 | 1 | 360682 |
| 7 | None | Slight | No officer attended crash scene | February 23, 2021 | 2021 | 2 | 1 | 360601 |

| # | Northing | Highway_Authority | Road_Number | Weather_conditions | Road_Type | Road_surface | Speed_Limit | Light_conditions |
|---|---|---|---|---|---|---|---|---|
| 1 | 183740 | South Gloucestershire | A38 | Fine with high winds | Single carriageway | Dry | 40 | Daylight: regardless of presence of streetlights |
| 2 | 183695 | South Gloucestershire | A38 | Fine without high winds | Dual carriageway | Dry | 40 | Daylight: regardless of presence of streetlights |
| 3 | 183565 | South Gloucestershire | A38 | Fine without high winds | Dual carriageway | Dry | 40 | Daylight: regardless of presence of streetlights |
| 4 | 183848 | South Gloucestershire | A38 | Fine without high winds | Dual carriageway | Dry | 40 | Daylight: regardless of presence of streetlights |
| 5 | 183849 | South Gloucestershire | A38 | Other | Single carriageway | Wet or Damp | 40 | Darkness: street lights present and lit |
| 6 | 183355 | South Gloucestershire | A38 | Fine without high winds | Dual carriageway | Dry | 40 | Daylight: regardless of presence of streetlights |
| 7 | 183490 | South Gloucestershire | U0 | Fine without high winds | Single carriageway | Dry | 40 | Daylight: regardless of presence of streetlights |

| # | Junction_detail | Pedestrian_Crossing | Involved_pedalcycle | Involved_Motorcycle | Pedestrian_casualty | Child_casualty | Pedal_cycleuser_casualty | Motorcycle_user_casualty |
|---|---|---|---|---|---|---|---|---|
| 1 | Not at or within 20 metres of junction | No physical crossing facility within 50 metres | 1 | 0 | 0 | 0 | 1 | 0 |
| 2 | Using private drive or entrance | No physical crossing facility within 50 metres | 1 | 0 | 0 | 0 | 1 | 0 |
| 3 | Not at or within 20 metres of junction | No physical crossing facility within 50 metres | 0 | 0 | 0 | 1 | 0 | 0 |
| 4 | T or staggered junction | No physical crossing facility within 50 metres | 0 | 1 | 0 | 0 | 0 | 1 |
| 5 | T or staggered junction | No physical crossing facility within 50 metres | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | Roundabout | No physical crossing facility within 50 metres | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | T or staggered junction | No physical crossing facility within 50 metres | 1 | 0 | 0 | 0 | 1 | 0 |

| # | Involved_car | Involved_goodsvehicle | Involved_Bus | Involved_young_driver | Local_Authority_District | Junction_control | Is_Provisional | Is_Amended | Web_Link | Count |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1 | 0 | 0 | 1 | South Gloucestershire | Not Applicable | No | No | https://www.crashmap.co.uk/reports/proreportservice?reportId=2019521900683 | 1 |
| 2 | 1 | 0 | 0 | 0 | South Gloucestershire | Give way or uncontrolled | No | No | https://www.crashmap.co.uk/reports/proreportservice?reportId=2018521804538 | 1 |
| 3 | 1 | 1 | 0 | 0 | South Gloucestershire | Not Applicable | No | No | https://www.crashmap.co.uk/reports/proreportservice?reportId=2017521708054 | 1 |
| 4 | 1 | 0 | 0 | 0 | South Gloucestershire | Give way or uncontrolled | No | No | https://www.crashmap.co.uk/reports/proreportservice?reportId=2017521705236 | 1 |
| 5 | 1 | 0 | 0 | 0 | South Gloucestershire | Give way or uncontrolled | No | No | https://www.crashmap.co.uk/reports/proreportservice?reportId=2021522200119 | 1 |
| 6 | 1 | 0 | 0 | 0 | South Gloucestershire | Auto traffic signal | No | No | https://www.crashmap.co.uk/reports/proreportservice?reportId=2018521805566 | 1 |
| 7 | 0 | 1 | 0 | 0 | South Gloucestershire | Give way or uncontrolled | No | No | https://www.crashmap.co.uk/reports/proreportservice?reportId=2021522100756 | 1 |

Report produced from CrashMap Pro

# Appendix 3

The Architect's Proposed Site Layout Plan

Landscaping Buffer

T25

Unit 21

Unit 20

Unit 19

Unit 18

Unit 17

Unit 16

D

P21

P21Dis

P20

P19

P18

P17

P16

P15

P15 Dis

P14

P13

P13 Dis

P12

P11

P10

P9

P8

P7

P6

P6 Dis

P5

P4

P3

P3 Dis

P2

P1

43no Parking Spaces

C

Unit 12

Unit 13

Unit 11

Unit 14

Unit 10

Unit 15

Unit 9

B

Unit 8

35no Parking Spaces

A

Unit 7

Unit 6

Unit 5

Unit 4

Unit 3

Unit 2

Unit 1

Bike Stdre

T18

T17*

Landscaping Buffer

T16

T15

T14

T13

T12

T09a

T11

T10

T09

T08

T07

T06

T05

T04*

T03

T02

T01

T33

G42

T37

T40

T36

T35

T34

Gloucester Road

Landscaping Buffer

C/L 1.8m

C/L 1.8h

NORTH

Line of disputed C/L fence

Existing 5.5m Access Road

footpath

C/L 2.4m + 9"W

V/R 2.0h

Police Station

X

X

0 5 10 15 20

Accommodation Schedule
7no Type A : 1453 sq ft
2no Type B : 1528 sq ft
6no Type C : 1890 sq ft
6no Type D : 1000 sq ft
21no Total : 30,567 sq ft
85no parking spaces (incl 5no disabled)

| Rev: | Date: | Note |
|---|---|---|
| A | Oct 2023 | general revised |

Proposed Commercial Development at
Oaklands Gloucester Road
Almondsbury Bristol

Proposed Site Plan : Ground Floor

Date: Jun 2023

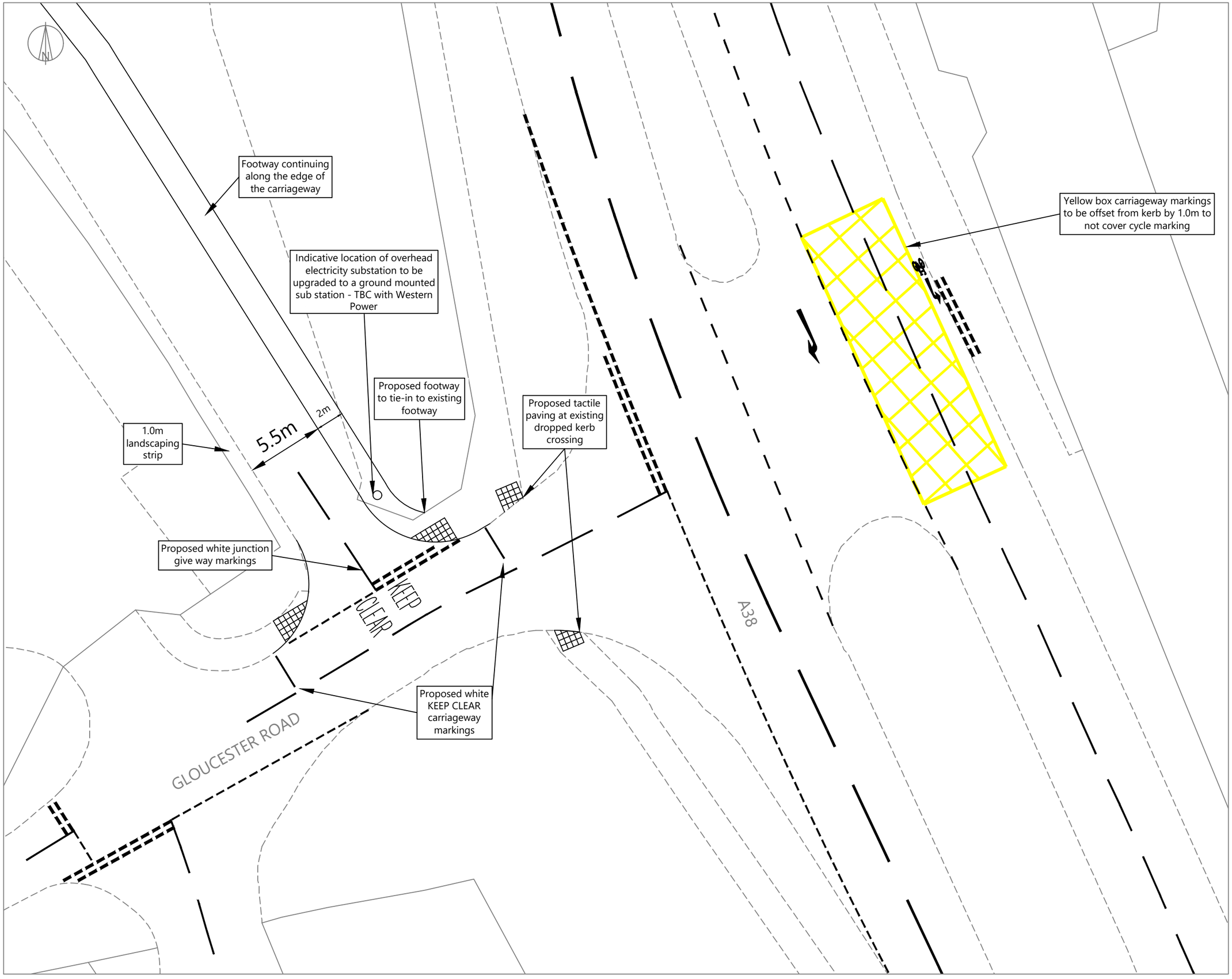
Scale: 1:250 @ A1

DWG No: 3375/201A

David Cahill
Design Consultants Ltd
Unit 2 Office 4 Tower Lane Business Park
Warmley Bristol BS30 8XT
Tel: 01179618888
Email: davidcahilldesign@btopenworld.com

# Appendix 4

Site Access Arrangements from Gloucester Road




NOTES:

© Crown copyright and database rights 2021 OS Licence 100056454.

Based on drawing 'Proposed Residential Development' ref 3375/2 by David Cahill Design Consultant, dated October 2021

| ISSUE | REASON FOR REVISION | BY | DATE |
|---|---|---|---|
| A | Minor amendments | DB | 05.09.23 |

PROJECT:
OAKLANDS DRIVE, ALMONDSBURY

CLIENT:
FREEMANTLE DEVELOPMENTS LTD

| PROJECT REF: | DRAWING NUMBER: | SCALE (AT A3): |
|---|---|---|
| 21146 | 01 | 1:250 |

SHEET NUMBER:
SHEET NUMBER 1 OF 1

SCALE BAR:
0m 5m 10m

HighgateTransportation
www.highgatetransportation.co.uk
First Floor, 43-45 Park Street
Bristol BS1 5NL
01179 349 121

© Highgate Transportation Limited

TITLE:
PROPOSED SITE ACCESS

| DATE: | DRAWN BY: | CHECKED: |
|---|---|---|
| 16/11/21 | AH | FB |

# Appendix 5

Proposed Site Access Junction Visibility Splays Plan


NOTES:

© Crown copyright and database rights 2023 OS Licence 100056454.

Based on drawing 'Proposed Site Plan' ref 3375/101 by David Cahill Design Consultant, dated August 2023.

| ISSUE | REASON FOR REVISION | BY | DATE |
|---|---|---|---|
| - | - | -- | --.--.-- |

PROJECT:

OAKLANDS DRIVE, ALMONDSBURY

CLIENT:

FREEMANTLE DEVELOPMENTS LTD

| PROJECT REF: | DRAWING NUMBER: | SCALE (AT A3): |
|---|---|---|
| 22108 | 02 | 1:500 |

SHEET NUMBER:

SHEET NUMBER 1 OF 1

SCALE BAR:

0m 5m 10m 15m 20m

HighgateTransportation

www.highgatetransportation.co.uk

First Floor, 43-45 Park Street
Bristol BS1 5NL
01179 349 121

© Highgate Transportation Limited

TITLE:

PROPOSED SITE ACCESSES JUNCTION SPLAYS

| DATE: | DRAWN BY: | CHECKED: |
|---|---|---|
| 14/08/23 | DC | FB |

# Appendix 6

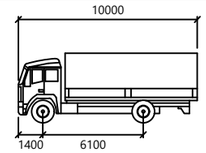
Swept Path Analysis

NOTES:

© Crown copyright and database rights 2023 OS Licence 100056454.

Drawing based on David Cahill Design Consultant Proposed Site Plan 3375/101, received 08 August 2023.

| ISSUE | REASON FOR REVISION | BY | DATE |
|---|---|---|---|
| A | Updated site layout | DB | 05.09.23 |




LRIGID

| | mm |
|---|---|
| Width | : 2500 |
| Track | : 2470 |
| Lock to Lock Time | : 6.0 |
| Steering Angle | : 37.6 |

PROJECT:

OAKLANDS DRIVE
ALMONDSBURY

CLIENT:

FREEMANTLE
DEVELOPMENTS LTD

| PROJECT REF: | DRAWING NUMBER: | SCALE (AT A3): |
|---|---|---|
| 22108 | TR01 | 1:500 |

SHEET NUMBER:

SHEET NUMBER 1 OF 2

SCALE BAR:

0m 5m 10m 15m 20m

HighgateTransportation
www.highgatetransportation.co.uk
First Floor, 43-45 Park Street
Bristol BS1 5NL
01179 349 121

© Highgate Transportation Limited

TITLE:

SWEPT PATH ANALYSIS
10m RIGID

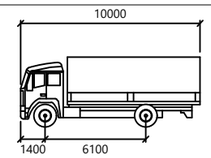
| DATE: | DRAWN BY: | CHECKED: |
|---|---|---|
| 17.08.22 | REB | FB |


NOTES:

© Crown copyright and database rights 2023 OS Licence 100056454.

Drawing based on David Cahill Design Consultant Proposed Site Plan 3375/101, received 08 August 2023.

| ISSUE | REASON FOR REVISION | BY | DATE |
|---|---|---|---|
| A | Updated site layout | DB | 05.09.23 |




LRIGID

| | mm |
|---|---|
| Width | : 2500 |
| Track | : 2470 |
| Lock to Lock Time | : 6.0 |
| Steering Angle | : 37.6 |

PROJECT:

OAKLANDS DRIVE
ALMONDSBURY

CLIENT:

FREEMANTLE
DEVELOPMENTS LTD

| PROJECT REF: | DRAWING NUMBER: | SCALE (AT A3): |
|---|---|---|
| 22108 | TR01 | 1:500 |

SHEET NUMBER:

SHEET NUMBER 2 OF 2

SCALE BAR:

0m 5m 10m 15m 20m

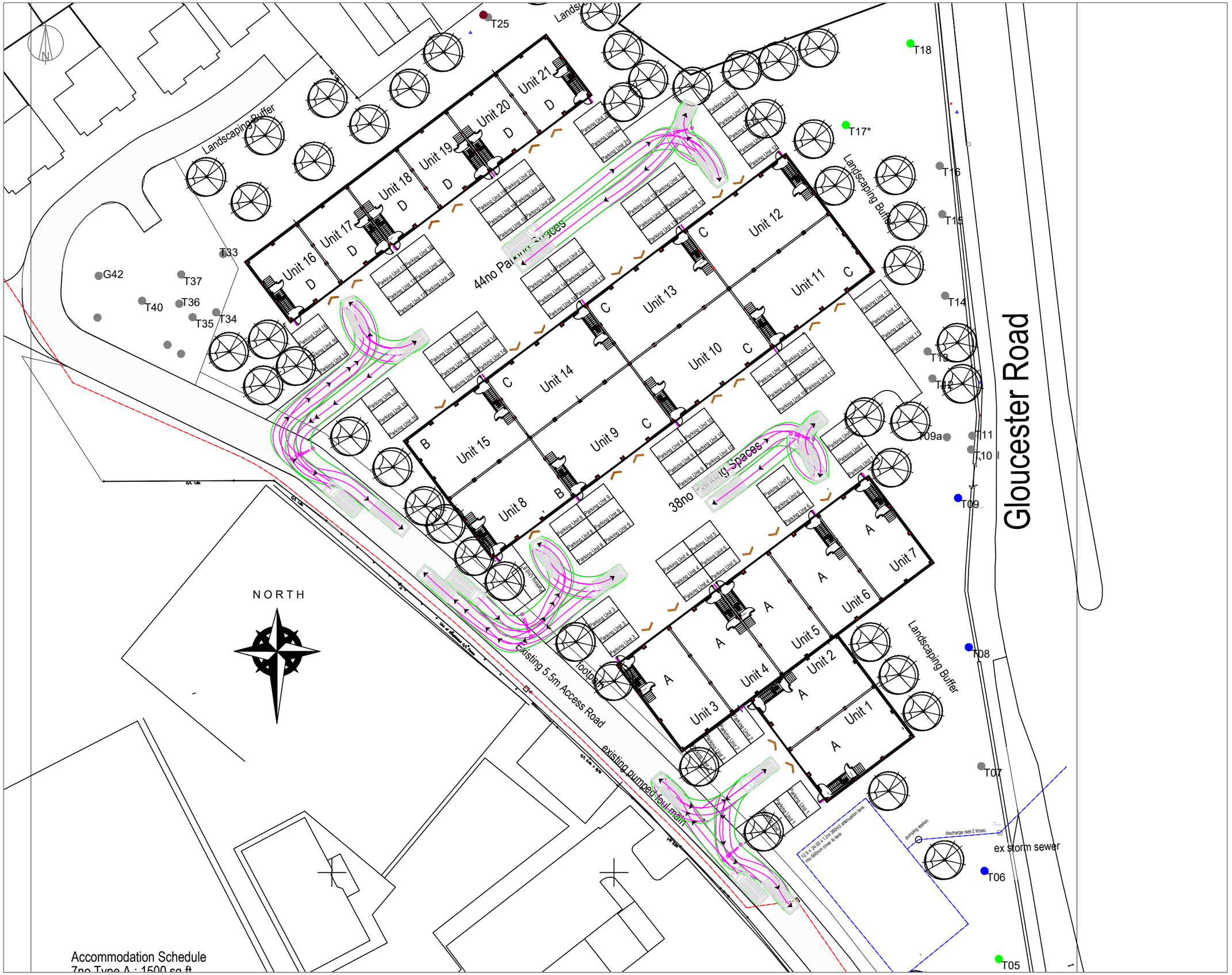
HighgateTransportation
www.highgatetransportation.co.uk
First Floor, 43-45 Park Street
Bristol BS1 5NL
01179 349 121

© Highgate Transportation Limited

TITLE:

SWEPT PATH ANALYSIS
10m RIGID

| DATE: | DRAWN BY: | CHECKED: |
|---|---|---|
| 17.08.22 | REB | FB |

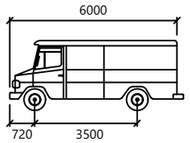



NOTES:

© Crown copyright and database rights 2023 OS Licence 100056454.

Drawing based on David Cahill Design Consultant Proposed Site Plan 3375/101, received 08 August 2023.

| ISSUE | REASON FOR REVISION | BY | DATE |
|---|---|---|---|
| A | Updated site layout | DB | 05.09.23 |




Delivery Van

| | mm |
|---|---|
| Width | : 2100 |
| Track | : 2100 |
| Lock to Lock Time | : 6.0 |
| Steering Angle | : 46.2 |

PROJECT:

OAKLANDS DRIVE
ALMONDSBURY

CLIENT:

FREEMANTLE
DEVELOPMENTS LTD

| PROJECT REF: | DRAWING NUMBER: | SCALE (AT A3): |
|---|---|---|
| 22108 | TR02 | 1:500 |

SHEET NUMBER:

SHEET NUMBER 1 OF 1

SCALE BAR:

0m 5m 10m 15m 20m

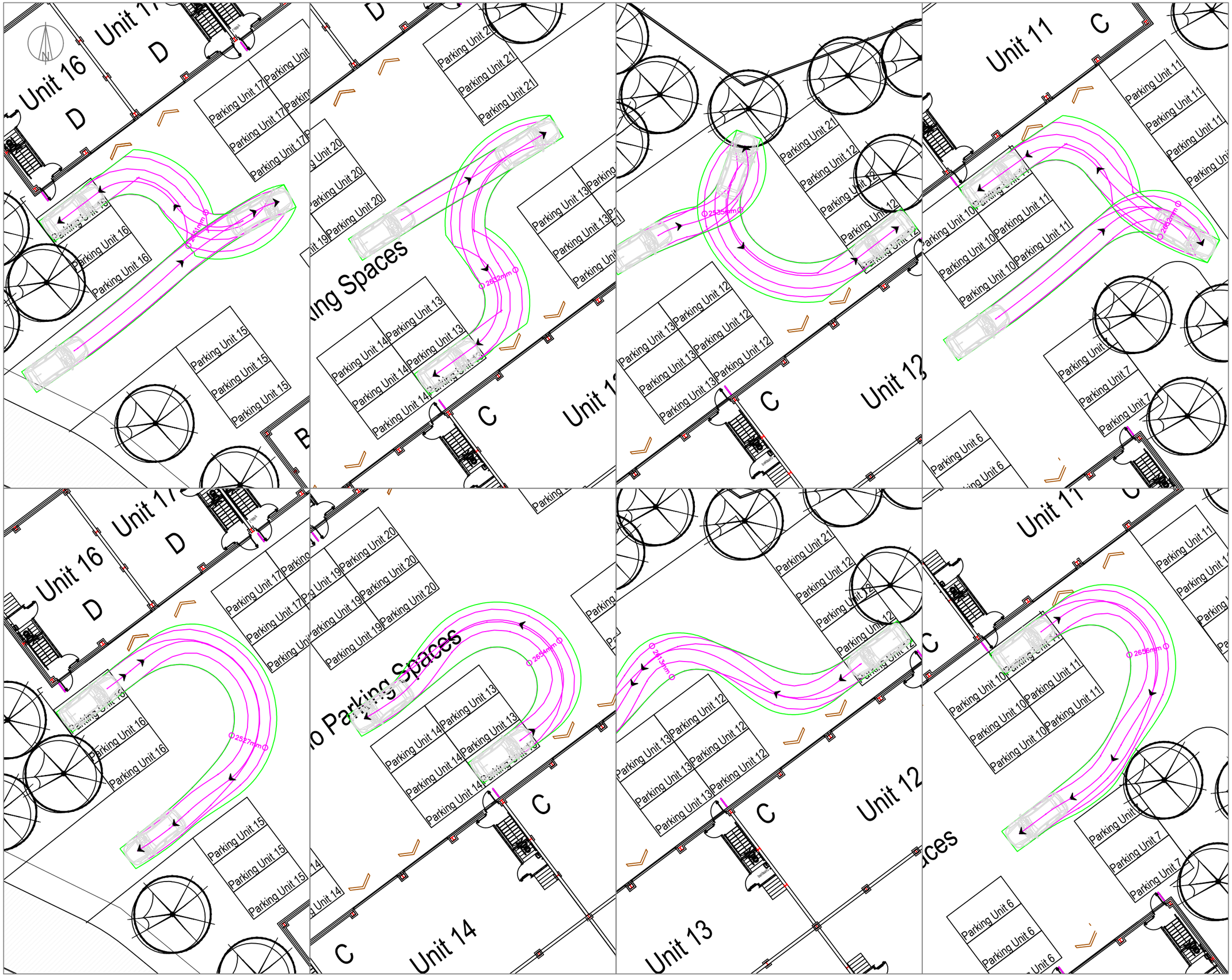
HighgateTransportation
www.highgatetransportation.co.uk
First Floor, 43-45 Park Street
Bristol BS1 5NL
01179 349 121

© Highgate Transportation Limited

TITLE:

SWEPT PATH ANALYSIS
6m DELIVERY VAN

| DATE: | DRAWN BY: | CHECKED: |
|---|---|---|
| 17.08.22 | REB | FB |

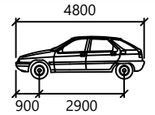



NOTES:

© Crown copyright and database rights 2023 OS Licence 100056454.

Drawing based on David Cahill Design Consultant Proposed Site Plan 3375/101, received 08 August 2023.

| ISSUE | REASON FOR REVISION | BY | DATE |
|---|---|---|---|
| A | Updated site layout | DB | 05.09.23 |




SDV

| | mm |
|---|---|
| Width | : 1800 |
| Track | : 1800 |
| Lock to Lock Time | : 6.0 |
| Steering Angle | : 37.8 |

PROJECT:

OAKLANDS DRIVE
ALMONDSBURY

CLIENT:

FREEMANTLE
DEVELOPMENTS LTD

| PROJECT REF: | DRAWING NUMBER: | SCALE (AT A3): |
|---|---|---|
| 22108 | TR01 | 1:250 |

SHEET NUMBER:

SHEET NUMBER 1 OF 2

SCALE BAR:

0m 5m 10m

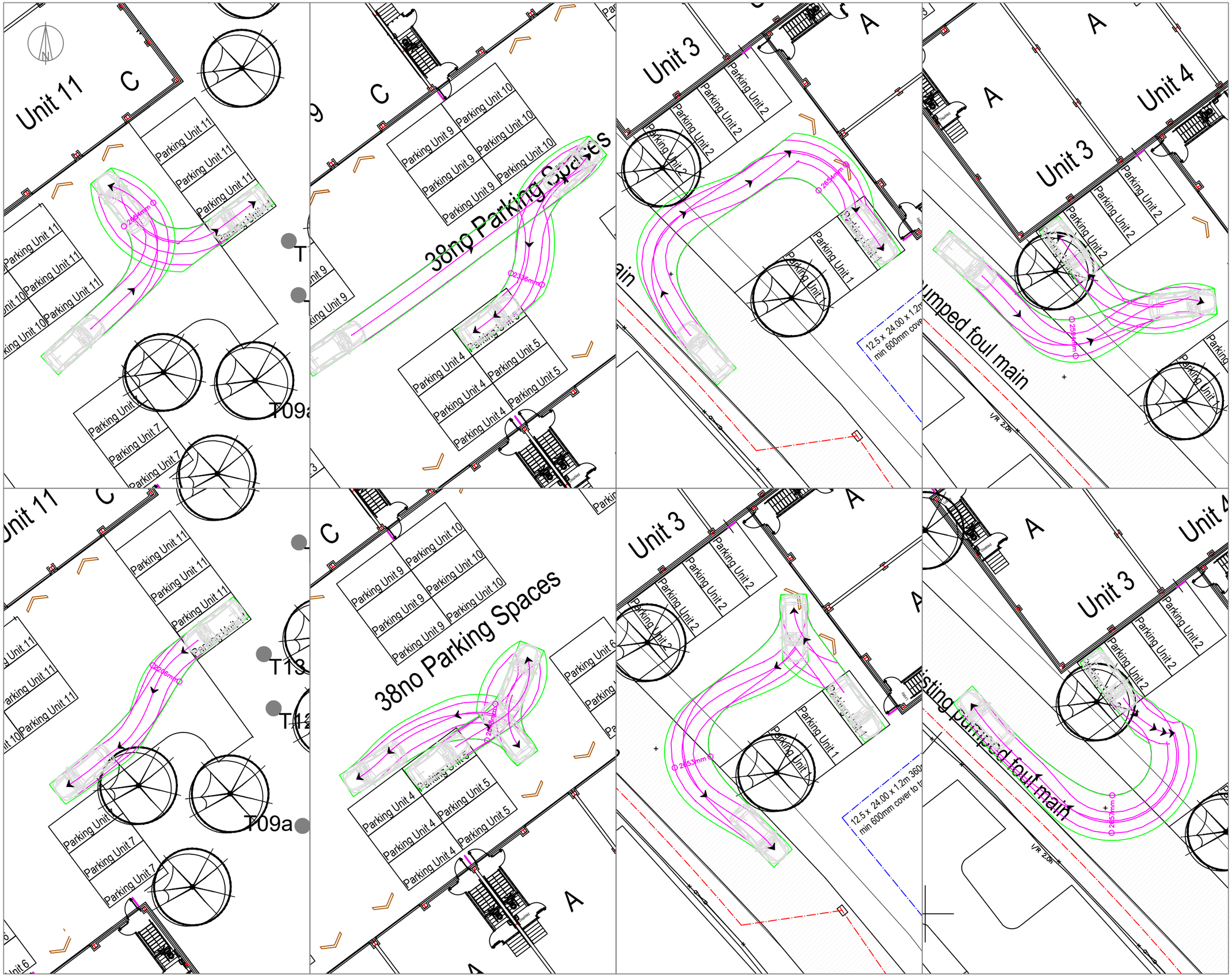
HighgateTransportation
www.highgatetransportation.co.uk
First Floor, 43-45 Park Street
Bristol BS1 5NL
01179 349 121

© Highgate Transportation Limited

TITLE:

SWEPT PATH ANALYSIS
PRIVATE CAR (SDV)

| DATE: | DRAWN BY: | CHECKED: |
|---|---|---|
| 17.08.22 | REB | FB |

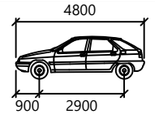



NOTES:

© Crown copyright and database rights 2023 OS Licence 100056454.

Drawing based on David Cahill Design Consultant Proposed Site Plan 3375/101, received 08 August 2023.

| ISSUE | REASON FOR REVISION | BY | DATE |
|---|---|---|---|
| A | Updated site layout | DB | 05.09.23 |




SDV

| | mm |
|---|---|
| Width | : 1800 |
| Track | : 1800 |
| Lock to Lock Time | : 6.0 |
| Steering Angle | : 37.8 |

PROJECT:

OAKLANDS DRIVE
ALMONDSBURY

CLIENT:

FREEMANTLE
DEVELOPMENTS LTD

| PROJECT REF: | DRAWING NUMBER: | SCALE (AT A3): |
|---|---|---|
| 22108 | TR01 | 1:250 |

SHEET NUMBER:

SHEET NUMBER 2 OF 2

SCALE BAR:

0m 5m 10m

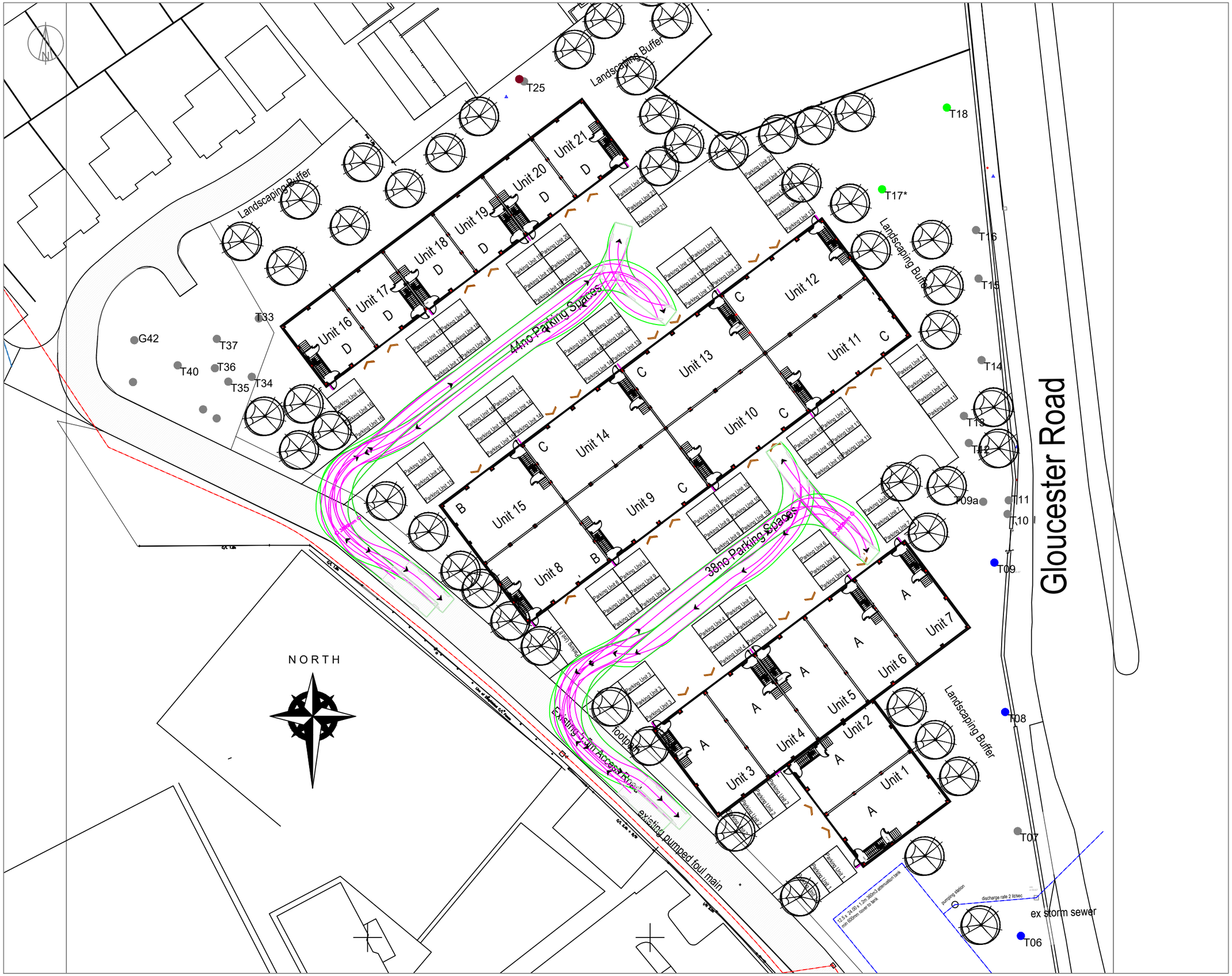
HighgateTransportation
www.highgatetransportation.co.uk
First Floor, 43-45 Park Street
Bristol BS1 5NL
01179 349 121

© Highgate Transportation Limited

TITLE:

SWEPT PATH ANALYSIS
PRIVATE CAR (SDV)

| DATE: | DRAWN BY: | CHECKED: |
|---|---|---|
| 17.08.22 | REB | FB |

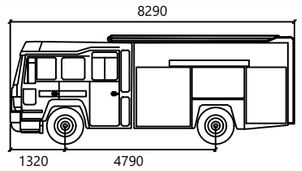



NOTES:

© Crown copyright and database rights 2023 OS Licence 100056454.

Drawing based on David Cahill Design Consultant Proposed Site Plan 3375/101, received 08 August 2023.

| ISSUE | REASON FOR REVISION | BY | DATE |
|---|---|---|---|
| A | Updated site layout | DB | 05.09.23 |




Fire Rescue Unit

mm

| | | | |
|---|---|---|---|
| Width | : 2500 | Lock to Lock Time | : 6.0 |
| Track | : 2500 | Steering Angle | : 34.3 |

PROJECT:

OAKLANDS DRIVE
ALMONDSBURY

CLIENT:

FREEMANTLE
DEVELOPMENTS LTD

| PROJECT REF: | DRAWING NUMBER: | SCALE (AT A3): |
|---|---|---|
| 22108 | TR04 | 1:500 |

SHEET NUMBER:

SHEET NUMBER 1 OF 1

SCALE BAR:

0m 5m 10m 15m 20m

HighgateTransportation

www.highgatetransportation.co.uk

First Floor, 43-45 Park Street
Bristol BS1 5NL
01179 349 121

© Highgate Transportation Limited

TITLE:

SWEPT PATH ANALYSIS
FIRE TENDER

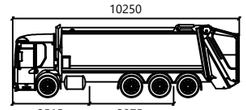
| DATE: | DRAWN BY: | CHECKED: |
|---|---|---|
| 17.08.22 | REB | FB |


NOTES:

© Crown copyright and database rights 2023 OS Licence 100056454.

Drawing based on David Cahill Design Consultant Proposed Site Plan 3375/101, received 08 August 2023.

| ISSUE | REASON FOR REVISION | BY | DATE |
|---|---|---|---|




Dennis Eagle OL 27W 2013

| | mm |
|---|---|
| Width | : 2530 |
| Track | : 2500 |
| Lock to Lock Time | : 6.0 |
| Steering Angle | : 22.7 |

PROJECT:

OAKLANDS DRIVE
ALMONDSBURY

CLIENT:

FREEMANTLE
DEVELOPMENTS LTD

| PROJECT REF: | DRAWING NUMBER: | SCALE (AT A3): |
|---|---|---|
| 22108 | TR05 | 1:500 |

SHEET NUMBER:

SHEET NUMBER 1 OF 2

SCALE BAR:

0m 5m 10m 15m 20m

HighgateTransportation
www.highgatetransportation.co.uk
First Floor, 43-45 Park Street
Bristol BS1 5NL
01179 349 121

© Highgate Transportation Limited

TITLE:

SWEPT PATH ANALYSIS
10.2m REFUSE VEHICLE

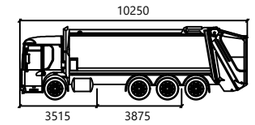
| DATE: | DRAWN BY: | CHECKED: |
|---|---|---|
| 06.09.23 | DB | FB |


NOTES:

© Crown copyright and database rights 2023 OS Licence 100056454.

Drawing based on David Cahill Design Consultant Proposed Site Plan 3375/101, received 08 August 2023.

| ISSUE | REASON FOR REVISION | BY | DATE |
|---|---|---|---|




Dennis Eagle OL 27W 2013

| | mm |
|---|---|
| Width | : 2530 |
| Track | : 2500 |
| Lock to Lock Time | : 6.0 |
| Steering Angle | : 22.7 |

PROJECT:

OAKLANDS DRIVE
ALMONDSBURY

CLIENT:

FREEMANTLE
DEVELOPMENTS LTD

| PROJECT REF: | DRAWING NUMBER: | SCALE (AT A3): |
|---|---|---|
| 22108 | TR05 | 1:500 |

SHEET NUMBER:

SHEET NUMBER 2 OF 2

SCALE BAR:

0m 5m 10m 15m 20m

HighgateTransportation
www.highgatetransportation.co.uk
First Floor, 43-45 Park Street
Bristol BS1 5NL
01179 349 121

© Highgate Transportation Limited

TITLE:

SWEPT PATH ANALYSIS
10.2m REFUSE VEHICLE

| DATE: | DRAWN BY: | CHECKED: |
|---|---|---|
| 06.09.23 | DB | FB |

# Appendix 7

TRICS Output File – Proposed Industrial Estate Land Use

Calculation Reference: AUDIT-355901-230808-0839

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

*Selected regions and areas:*

| | | | |
|---|---|---|---|
| 01 | GREATER LONDON | | |
| | HO | HOUNSLOW | 1 days |
| 02 | SOUTH EAST | | |
| | EX | ESSEX | 2 days |
| 03 | SOUTH WEST | | |
| | DV | DEVON | 1 days |
| 07 | YORKSHIRE & NORTH LINCOLNSHIRE | | |
| | AK | WAKEFIELD | 3 days |
| | DR | DONCASTER | 1 days |
| 10 | WALES | | |
| | SW | SWANSEA | 2 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 7400 (units: sqm)
Range Selected by User: 552 to 7500 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/15 to 18/11/22

*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 | 2 days |
| Wednesday | 1 days |
| Thursday | 2 days |
| Friday | 2 days |

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

*Selected survey types:*

| | |
|---|---|
| Manual count | 10 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 undertaking using machines.*

*Selected Locations:*

| | |
|---|---|
| Suburban Area (PPS6 Out of Centre) | 2 |
| Edge of Town | 8 |

*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 | 8 |
| 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.*

*Inclusion of Servicing Vehicles Counts:*

Secondary Filtering selection:

*Use Class:*

| | |
|---|---|
| Not Known | 10 days |

*This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.*

*Filter by Site Operations Breakdown:*
All Surveys Included

*Population within 500m Range:*
All Surveys Included

*Population within 1 mile:*

| | |
|---|---|
| 1,001 to 5,000 | 1 days |
| 10,001 to 15,000 | 5 days |
| 15,001 to 20,000 | 1 days |
| 25,001 to 50,000 | 3 days |

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

*Population within 5 miles:*

| | |
|---|---|
| 50,001 to 75,000 | 1 days |
| 125,001 to 250,000 | 9 days |

*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 | 6 days |
| 1.1 to 1.5 | 4 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:*

| | |
|---|---|
| Yes | 1 days |
| No | 9 days |

*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 | 9 days |
| 2 Poor | 1 days |

*This data displays the number of selected surveys with PTAL Ratings.*

*LIST OF SITES relevant to selection parameters*

1 AK-02-D-01 INDUSTRIAL ESTATE WAKEFIELD
CARR WOOD ROAD
CASTLEFORD

Edge of Town
Development Zone
Total Gross floor area: 1776 sqm
*Survey date: MONDAY 22/05/17 Survey Type: MANUAL*

2 AK-02-D-02 INDUSTRIAL ESTATE (PART) WAKEFIELD
PIONEER WAY
CASTLEFORD

Edge of Town
Industrial Zone
Total Gross floor area: 4328 sqm
*Survey date: TUESDAY 23/05/17 Survey Type: MANUAL*

3 AK-02-D-03 INDUSTRIAL ESTATE WAKEFIELD
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*

4 DR-02-D-03 INDUSTRIAL ESTATE DONCASTER
MIDDLE BANK
DONCASTER

Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 6737 sqm
*Survey date: TUESDAY 21/09/21 Survey Type: MANUAL*

5 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*

6 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*

7 EX-02-D-05 INDUSTRIAL ESTATE ESSEX
HECKWORTH CLOSE
COLCHESTER
SEVERALLS INDUSTRIAL PK
Edge of Town
Industrial Zone
Total Gross floor area: 7280 sqm
*Survey date: FRIDAY 18/05/18 Survey Type: MANUAL*

*LIST OF SITES relevant to selection parameters (Cont.)*

| | | | | |
|---|---|---|---|---|
| 8 | HO-02-D-01 | INDUSTRIAL ESTATE | | HOUNSLOW |
| | HAMPTON ROAD WEST | | | |
| | FELTHAM | | | |
| | HANWORTH | | | |
| | Suburban Area (PPS6 Out of Centre) | | | |
| | Industrial Zone | | | |
| | Total Gross floor area: | | 7400 sqm | |
| | *Survey date: THURSDAY* | | *25/06/15* | *Survey Type: MANUAL* |
| 9 | SW-02-D-01 | INDUSTRIAL ESTATE | | SWANSEA |
| | UPPER FOREST WAY | | | |
| | SWANSEA | | | |
| | SWANSEA ENTERPRISE PK | | | |
| | Edge of Town | | | |
| | Industrial Zone | | | |
| | Total Gross floor area: | | 6822 sqm | |
| | *Survey date: WEDNESDAY* | | *09/10/19* | *Survey Type: MANUAL* |
| 10 | SW-02-D-02 | INDUSTRIAL ESTATE | | SWANSEA |
| | CLARION COURT | | | |
| | SWANSEA | | | |
| | SWANSEA ENTERPRISE PK | | | |
| | Edge of Town | | | |
| | Industrial Zone | | | |
| | Total Gross floor area: | | 5280 sqm | |
| | *Survey date: THURSDAY* | | *10/10/19* | *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 TOTAL VEHICLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period
Total People to Total Vehicles ratio (all time periods and directions): 1.36

| | ARRIVALS | | | DEPARTURES | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|
| Time Range | 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 | 4 | 6560 | 0.172 | 4 | 6560 | 0.008 | 4 | 6560 | 0.180 |
| 06:00 - 07:00 | 4 | 6560 | 0.267 | 4 | 6560 | 0.084 | 4 | 6560 | 0.351 |
| 07:00 - 08:00 | 10 | 5129 | 0.398 | 10 | 5129 | 0.203 | 10 | 5129 | 0.601 |
| 08:00 - 09:00 | 10 | 5129 | 0.597 | 10 | 5129 | 0.431 | 10 | 5129 | 1.028 |
| 09:00 - 10:00 | 10 | 5129 | 0.585 | 10 | 5129 | 0.450 | 10 | 5129 | 1.035 |
| 10:00 - 11:00 | 10 | 5129 | 0.677 | 10 | 5129 | 0.542 | 10 | 5129 | 1.219 |
| 11:00 - 12:00 | 10 | 5129 | 0.610 | 10 | 5129 | 0.671 | 10 | 5129 | 1.281 |
| 12:00 - 13:00 | 10 | 5129 | 0.610 | 10 | 5129 | 0.643 | 10 | 5129 | 1.253 |
| 13:00 - 14:00 | 10 | 5129 | 0.569 | 10 | 5129 | 0.612 | 10 | 5129 | 1.181 |
| 14:00 - 15:00 | 10 | 5129 | 0.484 | 10 | 5129 | 0.585 | 10 | 5129 | 1.069 |
| 15:00 - 16:00 | 10 | 5129 | 0.476 | 10 | 5129 | 0.517 | 10 | 5129 | 0.993 |
| 16:00 - 17:00 | 10 | 5129 | 0.427 | 10 | 5129 | 0.558 | 10 | 5129 | 0.985 |
| 17:00 - 18:00 | 10 | 5129 | 0.277 | 10 | 5129 | 0.501 | 10 | 5129 | 0.778 |
| 18:00 - 19:00 | 10 | 5129 | 0.123 | 10 | 5129 | 0.242 | 10 | 5129 | 0.365 |
| 19:00 - 20:00 | 4 | 6560 | 0.057 | 4 | 6560 | 0.244 | 4 | 6560 | 0.301 |
| 20:00 - 21:00 | 3 | 6280 | 0.000 | 3 | 6280 | 0.058 | 3 | 6280 | 0.058 |
| 21:00 - 22:00 | | | | | | | | | |
| 22:00 - 23:00 | | | | | | | | | |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 6.329 | | | 6.349 | | | 12.678 |

*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.*

The survey data, graphs and all associated supporting information, contained within the TRICS Database are published by TRICS Consortium Limited ("the Company") and the Company claims copyright and database rights in this published work. The Company authorises those who possess a current TRICS licence to access the TRICS Database and copy the data contained within the TRICS Database for the licence holders' use only. Any resulting copy must retain all copyrights and other proprietary notices, and any disclaimer contained thereon.

The Company accepts no responsibility for loss which may arise from reliance on data contained in the TRICS Database. [No warranty of any kind, express or implied, is made as to the data contained in the TRICS Database.]

Parameter summary

| | |
|---|---|
| Trip rate parameter range selected: | 1776 - 7400 (units: sqm) |
| Survey date date range: | 01/01/15 - 18/11/22 |
| Number of weekdays (Monday-Friday): | 10 |
| 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 show. 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 TAXIS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

| | ARRIVALS | | | DEPARTURES | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|
| Time Range | 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 | 4 | 6560 | 0.004 | 4 | 6560 | 0.004 | 4 | 6560 | 0.008 |
| 06:00 - 07:00 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 |
| 07:00 - 08:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 08:00 - 09:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 09:00 - 10:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 10:00 - 11:00 | 10 | 5129 | 0.002 | 10 | 5129 | 0.002 | 10 | 5129 | 0.004 |
| 11:00 - 12:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 12:00 - 13:00 | 10 | 5129 | 0.002 | 10 | 5129 | 0.002 | 10 | 5129 | 0.004 |
| 13:00 - 14:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 14:00 - 15:00 | 10 | 5129 | 0.004 | 10 | 5129 | 0.004 | 10 | 5129 | 0.008 |
| 15:00 - 16:00 | 10 | 5129 | 0.002 | 10 | 5129 | 0.000 | 10 | 5129 | 0.002 |
| 16:00 - 17:00 | 10 | 5129 | 0.002 | 10 | 5129 | 0.002 | 10 | 5129 | 0.004 |
| 17:00 - 18:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 18:00 - 19:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 19:00 - 20:00 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 |
| 20:00 - 21:00 | 3 | 6280 | 0.000 | 3 | 6280 | 0.000 | 3 | 6280 | 0.000 |
| 21:00 - 22:00 | | | | | | | | | |
| 22:00 - 23:00 | | | | | | | | | |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 0.016 | | | 0.014 | | | 0.030 |

*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 OGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

| | ARRIVALS | | | DEPARTURES | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|
| Time Range | 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 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 |
| 06:00 - 07:00 | 4 | 6560 | 0.015 | 4 | 6560 | 0.008 | 4 | 6560 | 0.023 |
| 07:00 - 08:00 | 10 | 5129 | 0.018 | 10 | 5129 | 0.019 | 10 | 5129 | 0.037 |
| 08:00 - 09:00 | 10 | 5129 | 0.053 | 10 | 5129 | 0.033 | 10 | 5129 | 0.086 |
| 09:00 - 10:00 | 10 | 5129 | 0.041 | 10 | 5129 | 0.039 | 10 | 5129 | 0.080 |
| 10:00 - 11:00 | 10 | 5129 | 0.045 | 10 | 5129 | 0.039 | 10 | 5129 | 0.084 |
| 11:00 - 12:00 | 10 | 5129 | 0.055 | 10 | 5129 | 0.060 | 10 | 5129 | 0.115 |
| 12:00 - 13:00 | 10 | 5129 | 0.035 | 10 | 5129 | 0.037 | 10 | 5129 | 0.072 |
| 13:00 - 14:00 | 10 | 5129 | 0.037 | 10 | 5129 | 0.027 | 10 | 5129 | 0.064 |
| 14:00 - 15:00 | 10 | 5129 | 0.023 | 10 | 5129 | 0.029 | 10 | 5129 | 0.052 |
| 15:00 - 16:00 | 10 | 5129 | 0.035 | 10 | 5129 | 0.035 | 10 | 5129 | 0.070 |
| 16:00 - 17:00 | 10 | 5129 | 0.031 | 10 | 5129 | 0.033 | 10 | 5129 | 0.064 |
| 17:00 - 18:00 | 10 | 5129 | 0.016 | 10 | 5129 | 0.018 | 10 | 5129 | 0.034 |
| 18:00 - 19:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.004 | 10 | 5129 | 0.004 |
| 19:00 - 20:00 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 |
| 20:00 - 21:00 | 3 | 6280 | 0.000 | 3 | 6280 | 0.000 | 3 | 6280 | 0.000 |
| 21:00 - 22:00 | | | | | | | | | |
| 22:00 - 23:00 | | | | | | | | | |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 0.404 | | | 0.381 | | | 0.785 |

*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 PSVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

| | ARRIVALS | | | DEPARTURES | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|
| Time Range | 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 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 |
| 06:00 - 07:00 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 |
| 07:00 - 08:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 08:00 - 09:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 09:00 - 10:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.002 | 10 | 5129 | 0.002 |
| 10:00 - 11:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 11:00 - 12:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 12:00 - 13:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 13:00 - 14:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 14:00 - 15:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 15:00 - 16:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 16:00 - 17:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 17:00 - 18:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 18:00 - 19:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 19:00 - 20:00 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 |
| 20:00 - 21:00 | 3 | 6280 | 0.000 | 3 | 6280 | 0.000 | 3 | 6280 | 0.000 |
| 21:00 - 22:00 | | | | | | | | | |
| 22:00 - 23:00 | | | | | | | | | |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 0.000 | | | 0.002 | | | 0.002 |

*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 CYCLISTS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

| | ARRIVALS | | | DEPARTURES | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|
| Time Range | 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 | 4 | 6560 | 0.015 | 4 | 6560 | 0.000 | 4 | 6560 | 0.015 |
| 06:00 - 07:00 | 4 | 6560 | 0.004 | 4 | 6560 | 0.000 | 4 | 6560 | 0.004 |
| 07:00 - 08:00 | 10 | 5129 | 0.006 | 10 | 5129 | 0.000 | 10 | 5129 | 0.006 |
| 08:00 - 09:00 | 10 | 5129 | 0.008 | 10 | 5129 | 0.004 | 10 | 5129 | 0.012 |
| 09:00 - 10:00 | 10 | 5129 | 0.002 | 10 | 5129 | 0.000 | 10 | 5129 | 0.002 |
| 10:00 - 11:00 | 10 | 5129 | 0.002 | 10 | 5129 | 0.004 | 10 | 5129 | 0.006 |
| 11:00 - 12:00 | 10 | 5129 | 0.002 | 10 | 5129 | 0.004 | 10 | 5129 | 0.006 |
| 12:00 - 13:00 | 10 | 5129 | 0.002 | 10 | 5129 | 0.000 | 10 | 5129 | 0.002 |
| 13:00 - 14:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.002 | 10 | 5129 | 0.002 |
| 14:00 - 15:00 | 10 | 5129 | 0.004 | 10 | 5129 | 0.006 | 10 | 5129 | 0.010 |
| 15:00 - 16:00 | 10 | 5129 | 0.002 | 10 | 5129 | 0.010 | 10 | 5129 | 0.012 |
| 16:00 - 17:00 | 10 | 5129 | 0.006 | 10 | 5129 | 0.006 | 10 | 5129 | 0.012 |
| 17:00 - 18:00 | 10 | 5129 | 0.008 | 10 | 5129 | 0.012 | 10 | 5129 | 0.020 |
| 18:00 - 19:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.002 | 10 | 5129 | 0.002 |
| 19:00 - 20:00 | 4 | 6560 | 0.000 | 4 | 6560 | 0.008 | 4 | 6560 | 0.008 |
| 20:00 - 21:00 | 3 | 6280 | 0.000 | 3 | 6280 | 0.000 | 3 | 6280 | 0.000 |
| 21:00 - 22:00 | | | | | | | | | |
| 22:00 - 23:00 | | | | | | | | | |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 0.061 | | | 0.058 | | | 0.119 |

*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

| | ARRIVALS | | | DEPARTURES | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|
| Time Range | 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 | 4 | 6560 | 0.187 | 4 | 6560 | 0.008 | 4 | 6560 | 0.195 |
| 06:00 - 07:00 | 4 | 6560 | 0.328 | 4 | 6560 | 0.084 | 4 | 6560 | 0.412 |
| 07:00 - 08:00 | 10 | 5129 | 0.485 | 10 | 5129 | 0.246 | 10 | 5129 | 0.731 |
| 08:00 - 09:00 | 10 | 5129 | 0.727 | 10 | 5129 | 0.503 | 10 | 5129 | 1.230 |
| 09:00 - 10:00 | 10 | 5129 | 0.755 | 10 | 5129 | 0.532 | 10 | 5129 | 1.287 |
| 10:00 - 11:00 | 10 | 5129 | 0.899 | 10 | 5129 | 0.673 | 10 | 5129 | 1.572 |
| 11:00 - 12:00 | 10 | 5129 | 0.801 | 10 | 5129 | 0.834 | 10 | 5129 | 1.635 |
| 12:00 - 13:00 | 10 | 5129 | 0.762 | 10 | 5129 | 0.819 | 10 | 5129 | 1.581 |
| 13:00 - 14:00 | 10 | 5129 | 0.708 | 10 | 5129 | 0.790 | 10 | 5129 | 1.498 |
| 14:00 - 15:00 | 10 | 5129 | 0.602 | 10 | 5129 | 0.760 | 10 | 5129 | 1.362 |
| 15:00 - 16:00 | 10 | 5129 | 0.587 | 10 | 5129 | 0.673 | 10 | 5129 | 1.260 |
| 16:00 - 17:00 | 10 | 5129 | 0.534 | 10 | 5129 | 0.749 | 10 | 5129 | 1.283 |
| 17:00 - 18:00 | 10 | 5129 | 0.345 | 10 | 5129 | 0.643 | 10 | 5129 | 0.988 |
| 18:00 - 19:00 | 10 | 5129 | 0.146 | 10 | 5129 | 0.324 | 10 | 5129 | 0.470 |
| 19:00 - 20:00 | 4 | 6560 | 0.061 | 4 | 6560 | 0.316 | 4 | 6560 | 0.377 |
| 20:00 - 21:00 | 3 | 6280 | 0.000 | 3 | 6280 | 0.064 | 3 | 6280 | 0.064 |
| 21:00 - 22:00 | | | | | | | | | |
| 22:00 - 23:00 | | | | | | | | | |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 7.927 | | | 8.018 | | | 15.945 |

*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

| | ARRIVALS | | | DEPARTURES | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|
| Time Range | 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 | 4 | 6560 | 0.011 | 4 | 6560 | 0.000 | 4 | 6560 | 0.011 |
| 06:00 - 07:00 | 4 | 6560 | 0.088 | 4 | 6560 | 0.000 | 4 | 6560 | 0.088 |
| 07:00 - 08:00 | 10 | 5129 | 0.049 | 10 | 5129 | 0.002 | 10 | 5129 | 0.051 |
| 08:00 - 09:00 | 10 | 5129 | 0.025 | 10 | 5129 | 0.016 | 10 | 5129 | 0.041 |
| 09:00 - 10:00 | 10 | 5129 | 0.021 | 10 | 5129 | 0.018 | 10 | 5129 | 0.039 |
| 10:00 - 11:00 | 10 | 5129 | 0.029 | 10 | 5129 | 0.021 | 10 | 5129 | 0.050 |
| 11:00 - 12:00 | 10 | 5129 | 0.021 | 10 | 5129 | 0.027 | 10 | 5129 | 0.048 |
| 12:00 - 13:00 | 10 | 5129 | 0.033 | 10 | 5129 | 0.045 | 10 | 5129 | 0.078 |
| 13:00 - 14:00 | 10 | 5129 | 0.053 | 10 | 5129 | 0.045 | 10 | 5129 | 0.098 |
| 14:00 - 15:00 | 10 | 5129 | 0.051 | 10 | 5129 | 0.033 | 10 | 5129 | 0.084 |
| 15:00 - 16:00 | 10 | 5129 | 0.019 | 10 | 5129 | 0.043 | 10 | 5129 | 0.062 |
| 16:00 - 17:00 | 10 | 5129 | 0.023 | 10 | 5129 | 0.055 | 10 | 5129 | 0.078 |
| 17:00 - 18:00 | 10 | 5129 | 0.014 | 10 | 5129 | 0.060 | 10 | 5129 | 0.074 |
| 18:00 - 19:00 | 10 | 5129 | 0.008 | 10 | 5129 | 0.049 | 10 | 5129 | 0.057 |
| 19:00 - 20:00 | 4 | 6560 | 0.011 | 4 | 6560 | 0.061 | 4 | 6560 | 0.072 |
| 20:00 - 21:00 | 3 | 6280 | 0.000 | 3 | 6280 | 0.000 | 3 | 6280 | 0.000 |
| 21:00 - 22:00 | | | | | | | | | |
| 22:00 - 23:00 | | | | | | | | | |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 0.456 | | | 0.475 | | | 0.931 |

*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 BUS/TRAM PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

| | ARRIVALS | | | DEPARTURES | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|
| Time Range | 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 | 4 | 6560 | 0.004 | 4 | 6560 | 0.000 | 4 | 6560 | 0.004 |
| 06:00 - 07:00 | 4 | 6560 | 0.030 | 4 | 6560 | 0.000 | 4 | 6560 | 0.030 |
| 07:00 - 08:00 | 10 | 5129 | 0.018 | 10 | 5129 | 0.000 | 10 | 5129 | 0.018 |
| 08:00 - 09:00 | 10 | 5129 | 0.023 | 10 | 5129 | 0.002 | 10 | 5129 | 0.025 |
| 09:00 - 10:00 | 10 | 5129 | 0.018 | 10 | 5129 | 0.002 | 10 | 5129 | 0.020 |
| 10:00 - 11:00 | 10 | 5129 | 0.010 | 10 | 5129 | 0.008 | 10 | 5129 | 0.018 |
| 11:00 - 12:00 | 10 | 5129 | 0.008 | 10 | 5129 | 0.004 | 10 | 5129 | 0.012 |
| 12:00 - 13:00 | 10 | 5129 | 0.016 | 10 | 5129 | 0.019 | 10 | 5129 | 0.035 |
| 13:00 - 14:00 | 10 | 5129 | 0.016 | 10 | 5129 | 0.018 | 10 | 5129 | 0.034 |
| 14:00 - 15:00 | 10 | 5129 | 0.004 | 10 | 5129 | 0.014 | 10 | 5129 | 0.018 |
| 15:00 - 16:00 | 10 | 5129 | 0.006 | 10 | 5129 | 0.016 | 10 | 5129 | 0.022 |
| 16:00 - 17:00 | 10 | 5129 | 0.008 | 10 | 5129 | 0.016 | 10 | 5129 | 0.024 |
| 17:00 - 18:00 | 10 | 5129 | 0.010 | 10 | 5129 | 0.021 | 10 | 5129 | 0.031 |
| 18:00 - 19:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.019 | 10 | 5129 | 0.019 |
| 19:00 - 20:00 | 4 | 6560 | 0.000 | 4 | 6560 | 0.027 | 4 | 6560 | 0.027 |
| 20:00 - 21:00 | 3 | 6280 | 0.000 | 3 | 6280 | 0.000 | 3 | 6280 | 0.000 |
| 21:00 - 22:00 | | | | | | | | | |
| 22:00 - 23:00 | | | | | | | | | |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 0.171 | | | 0.166 | | | 0.337 |

*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 RAIL PASSENGERS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

| | ARRIVALS | | | DEPARTURES | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|
| Time Range | 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 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 |
| 06:00 - 07:00 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 |
| 07:00 - 08:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 08:00 - 09:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 09:00 - 10:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 10:00 - 11:00 | 10 | 5129 | 0.002 | 10 | 5129 | 0.000 | 10 | 5129 | 0.002 |
| 11:00 - 12:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 12:00 - 13:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 13:00 - 14:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 14:00 - 15:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 15:00 - 16:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.002 | 10 | 5129 | 0.002 |
| 16:00 - 17:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 17:00 - 18:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 18:00 - 19:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 19:00 - 20:00 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 |
| 20:00 - 21:00 | 3 | 6280 | 0.000 | 3 | 6280 | 0.000 | 3 | 6280 | 0.000 |
| 21:00 - 22:00 | | | | | | | | | |
| 22:00 - 23:00 | | | | | | | | | |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 0.002 | | | 0.002 | | | 0.004 |

*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

| | ARRIVALS | | | DEPARTURES | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|
| Time Range | 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 | 4 | 6560 | 0.004 | 4 | 6560 | 0.000 | 4 | 6560 | 0.004 |
| 06:00 - 07:00 | 4 | 6560 | 0.030 | 4 | 6560 | 0.000 | 4 | 6560 | 0.030 |
| 07:00 - 08:00 | 10 | 5129 | 0.018 | 10 | 5129 | 0.000 | 10 | 5129 | 0.018 |
| 08:00 - 09:00 | 10 | 5129 | 0.023 | 10 | 5129 | 0.002 | 10 | 5129 | 0.025 |
| 09:00 - 10:00 | 10 | 5129 | 0.018 | 10 | 5129 | 0.002 | 10 | 5129 | 0.020 |
| 10:00 - 11:00 | 10 | 5129 | 0.012 | 10 | 5129 | 0.008 | 10 | 5129 | 0.020 |
| 11:00 - 12:00 | 10 | 5129 | 0.008 | 10 | 5129 | 0.004 | 10 | 5129 | 0.012 |
| 12:00 - 13:00 | 10 | 5129 | 0.016 | 10 | 5129 | 0.019 | 10 | 5129 | 0.035 |
| 13:00 - 14:00 | 10 | 5129 | 0.016 | 10 | 5129 | 0.018 | 10 | 5129 | 0.034 |
| 14:00 - 15:00 | 10 | 5129 | 0.004 | 10 | 5129 | 0.014 | 10 | 5129 | 0.018 |
| 15:00 - 16:00 | 10 | 5129 | 0.006 | 10 | 5129 | 0.018 | 10 | 5129 | 0.024 |
| 16:00 - 17:00 | 10 | 5129 | 0.008 | 10 | 5129 | 0.016 | 10 | 5129 | 0.024 |
| 17:00 - 18:00 | 10 | 5129 | 0.010 | 10 | 5129 | 0.021 | 10 | 5129 | 0.031 |
| 18:00 - 19:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.019 | 10 | 5129 | 0.019 |
| 19:00 - 20:00 | 4 | 6560 | 0.000 | 4 | 6560 | 0.027 | 4 | 6560 | 0.027 |
| 20:00 - 21:00 | 3 | 6280 | 0.000 | 3 | 6280 | 0.000 | 3 | 6280 | 0.000 |
| 21:00 - 22:00 | | | | | | | | | |
| 22:00 - 23:00 | | | | | | | | | |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 0.173 | | | 0.168 | | | 0.341 |

*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
Total People to Total Vehicles ratio (all time periods and directions): 1.36

| | ARRIVALS | | | DEPARTURES | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|
| Time Range | 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 | 4 | 6560 | 0.217 | 4 | 6560 | 0.008 | 4 | 6560 | 0.225 |
| 06:00 - 07:00 | 4 | 6560 | 0.450 | 4 | 6560 | 0.084 | 4 | 6560 | 0.534 |
| 07:00 - 08:00 | 10 | 5129 | 0.558 | 10 | 5129 | 0.248 | 10 | 5129 | 0.806 |
| 08:00 - 09:00 | 10 | 5129 | 0.784 | 10 | 5129 | 0.524 | 10 | 5129 | 1.308 |
| 09:00 - 10:00 | 10 | 5129 | 0.795 | 10 | 5129 | 0.552 | 10 | 5129 | 1.347 |
| 10:00 - 11:00 | 10 | 5129 | 0.942 | 10 | 5129 | 0.706 | 10 | 5129 | 1.648 |
| 11:00 - 12:00 | 10 | 5129 | 0.833 | 10 | 5129 | 0.870 | 10 | 5129 | 1.703 |
| 12:00 - 13:00 | 10 | 5129 | 0.813 | 10 | 5129 | 0.883 | 10 | 5129 | 1.696 |
| 13:00 - 14:00 | 10 | 5129 | 0.776 | 10 | 5129 | 0.854 | 10 | 5129 | 1.630 |
| 14:00 - 15:00 | 10 | 5129 | 0.661 | 10 | 5129 | 0.813 | 10 | 5129 | 1.474 |
| 15:00 - 16:00 | 10 | 5129 | 0.614 | 10 | 5129 | 0.743 | 10 | 5129 | 1.357 |
| 16:00 - 17:00 | 10 | 5129 | 0.571 | 10 | 5129 | 0.825 | 10 | 5129 | 1.396 |
| 17:00 - 18:00 | 10 | 5129 | 0.376 | 10 | 5129 | 0.737 | 10 | 5129 | 1.113 |
| 18:00 - 19:00 | 10 | 5129 | 0.154 | 10 | 5129 | 0.394 | 10 | 5129 | 0.548 |
| 19:00 - 20:00 | 4 | 6560 | 0.072 | 4 | 6560 | 0.412 | 4 | 6560 | 0.484 |
| 20:00 - 21:00 | 3 | 6280 | 0.000 | 3 | 6280 | 0.064 | 3 | 6280 | 0.064 |
| 21:00 - 22:00 | | | | | | | | | |
| 22:00 - 23:00 | | | | | | | | | |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 8.616 | | | 8.717 | | | 17.333 |

*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 CARS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

| | ARRIVALS | | | DEPARTURES | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|
| Time Range | 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 | 4 | 6560 | 0.160 | 4 | 6560 | 0.004 | 4 | 6560 | 0.164 |
| 06:00 - 07:00 | 4 | 6560 | 0.149 | 4 | 6560 | 0.038 | 4 | 6560 | 0.187 |
| 07:00 - 08:00 | 10 | 5129 | 0.253 | 10 | 5129 | 0.060 | 10 | 5129 | 0.313 |
| 08:00 - 09:00 | 10 | 5129 | 0.271 | 10 | 5129 | 0.135 | 10 | 5129 | 0.406 |
| 09:00 - 10:00 | 10 | 5129 | 0.341 | 10 | 5129 | 0.205 | 10 | 5129 | 0.546 |
| 10:00 - 11:00 | 10 | 5129 | 0.324 | 10 | 5129 | 0.236 | 10 | 5129 | 0.560 |
| 11:00 - 12:00 | 10 | 5129 | 0.294 | 10 | 5129 | 0.310 | 10 | 5129 | 0.604 |
| 12:00 - 13:00 | 10 | 5129 | 0.314 | 10 | 5129 | 0.347 | 10 | 5129 | 0.661 |
| 13:00 - 14:00 | 10 | 5129 | 0.302 | 10 | 5129 | 0.347 | 10 | 5129 | 0.649 |
| 14:00 - 15:00 | 10 | 5129 | 0.252 | 10 | 5129 | 0.345 | 10 | 5129 | 0.597 |
| 15:00 - 16:00 | 10 | 5129 | 0.248 | 10 | 5129 | 0.308 | 10 | 5129 | 0.556 |
| 16:00 - 17:00 | 10 | 5129 | 0.242 | 10 | 5129 | 0.343 | 10 | 5129 | 0.585 |
| 17:00 - 18:00 | 10 | 5129 | 0.205 | 10 | 5129 | 0.386 | 10 | 5129 | 0.591 |
| 18:00 - 19:00 | 10 | 5129 | 0.090 | 10 | 5129 | 0.174 | 10 | 5129 | 0.264 |
| 19:00 - 20:00 | 4 | 6560 | 0.042 | 4 | 6560 | 0.210 | 4 | 6560 | 0.252 |
| 20:00 - 21:00 | 3 | 6280 | 0.000 | 3 | 6280 | 0.037 | 3 | 6280 | 0.037 |
| 21:00 - 22:00 | | | | | | | | | |
| 22:00 - 23:00 | | | | | | | | | |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 3.487 | | | 3.485 | | | 6.972 |

*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 LGVS
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

| | ARRIVALS | | | DEPARTURES | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|
| Time Range | 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 | 4 | 6560 | 0.008 | 4 | 6560 | 0.000 | 4 | 6560 | 0.008 |
| 06:00 - 07:00 | 4 | 6560 | 0.103 | 4 | 6560 | 0.038 | 4 | 6560 | 0.141 |
| 07:00 - 08:00 | 10 | 5129 | 0.131 | 10 | 5129 | 0.123 | 10 | 5129 | 0.254 |
| 08:00 - 09:00 | 10 | 5129 | 0.277 | 10 | 5129 | 0.261 | 10 | 5129 | 0.538 |
| 09:00 - 10:00 | 10 | 5129 | 0.203 | 10 | 5129 | 0.203 | 10 | 5129 | 0.406 |
| 10:00 - 11:00 | 10 | 5129 | 0.306 | 10 | 5129 | 0.265 | 10 | 5129 | 0.571 |
| 11:00 - 12:00 | 10 | 5129 | 0.259 | 10 | 5129 | 0.298 | 10 | 5129 | 0.557 |
| 12:00 - 13:00 | 10 | 5129 | 0.259 | 10 | 5129 | 0.255 | 10 | 5129 | 0.514 |
| 13:00 - 14:00 | 10 | 5129 | 0.226 | 10 | 5129 | 0.238 | 10 | 5129 | 0.464 |
| 14:00 - 15:00 | 10 | 5129 | 0.205 | 10 | 5129 | 0.205 | 10 | 5129 | 0.410 |
| 15:00 - 16:00 | 10 | 5129 | 0.189 | 10 | 5129 | 0.172 | 10 | 5129 | 0.361 |
| 16:00 - 17:00 | 10 | 5129 | 0.152 | 10 | 5129 | 0.177 | 10 | 5129 | 0.329 |
| 17:00 - 18:00 | 10 | 5129 | 0.057 | 10 | 5129 | 0.096 | 10 | 5129 | 0.153 |
| 18:00 - 19:00 | 10 | 5129 | 0.033 | 10 | 5129 | 0.062 | 10 | 5129 | 0.095 |
| 19:00 - 20:00 | 4 | 6560 | 0.015 | 4 | 6560 | 0.034 | 4 | 6560 | 0.049 |
| 20:00 - 21:00 | 3 | 6280 | 0.000 | 3 | 6280 | 0.021 | 3 | 6280 | 0.021 |
| 21:00 - 22:00 | | | | | | | | | |
| 22:00 - 23:00 | | | | | | | | | |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 2.423 | | | 2.448 | | | 4.871 |

*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 MOTOR CYCLES
Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

| | ARRIVALS | | | DEPARTURES | | | TOTALS | | |
|---|---|---|---|---|---|---|---|---|---|
| Time Range | 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 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 |
| 06:00 - 07:00 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 |
| 07:00 - 08:00 | 10 | 5129 | 0.002 | 10 | 5129 | 0.000 | 10 | 5129 | 0.002 |
| 08:00 - 09:00 | 10 | 5129 | 0.004 | 10 | 5129 | 0.002 | 10 | 5129 | 0.006 |
| 09:00 - 10:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.002 | 10 | 5129 | 0.002 |
| 10:00 - 11:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 | 10 | 5129 | 0.000 |
| 11:00 - 12:00 | 10 | 5129 | 0.002 | 10 | 5129 | 0.002 | 10 | 5129 | 0.004 |
| 12:00 - 13:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.002 | 10 | 5129 | 0.002 |
| 13:00 - 14:00 | 10 | 5129 | 0.004 | 10 | 5129 | 0.000 | 10 | 5129 | 0.004 |
| 14:00 - 15:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.002 | 10 | 5129 | 0.002 |
| 15:00 - 16:00 | 10 | 5129 | 0.002 | 10 | 5129 | 0.002 | 10 | 5129 | 0.004 |
| 16:00 - 17:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.002 | 10 | 5129 | 0.002 |
| 17:00 - 18:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.004 | 10 | 5129 | 0.004 |
| 18:00 - 19:00 | 10 | 5129 | 0.000 | 10 | 5129 | 0.002 | 10 | 5129 | 0.002 |
| 19:00 - 20:00 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 | 4 | 6560 | 0.000 |
| 20:00 - 21:00 | 3 | 6280 | 0.000 | 3 | 6280 | 0.000 | 3 | 6280 | 0.000 |
| 21:00 - 22:00 | | | | | | | | | |
| 22:00 - 23:00 | | | | | | | | | |
| 23:00 - 24:00 | | | | | | | | | |
| Total Rates: | | | 0.014 | | | 0.020 | | | 0.034 |

*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.*