PEGASUS DEVELOPMENTS

CLYDESMUIR INDUSTRIAL ESTATE, CARDIFF

Transport Statement

25-01068/TS/01

January 2026

CORUN
Transport and Highway Engineering

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1 INTRODUCTION

1.1 Background

1.1.1 This Transport Statement (TS) has been produced by Corun Associates Ltd (Corun) on behalf of Pegasus Developments (the applicant), to examine the highway and transportation issues associated with a proposed re-development of land within the Clydesmuir Industrial Estate, in the Tremorfa area of Cardiff.

1.1.2 The re-development proposals would see the demolition of all existing buildings on the site, and construction of 96 residential units, and associated internal access road network. The residential units will be delivered as 100% affordable.

1.1.3 This TS provides an assessment of the proposals on the site, with an aim to demonstrate that there are no reasons, in highway and transportation terms, why the proposed development should not be granted planning permission.

1.2 Scope

1.2.1 This report will discuss the following key transportation issues arising from the proposals:

(i) the development site location and accessibility;

(ii) analysis of personal injury traffic accident data;

(iii) the site's compliance with applicable transport policy;

(iv) the development proposals; and

(v) the anticipated traffic impact of the proposals.

2 EXISTING CONDITIONS

2.1 Site Location

2.1.1 The proposed re-development site (herein referred to as the 'site') is located within the Clydesmuir Industrial Estate, in the Tremorfa area of Cardiff.

2.1.2 The site is currently occupied by several buildings that are used for a range of B2 commercial and light industrial uses, along with associated servicing / parking area space. The existing buildings on the site total approximately 10,227m^2 GFA.

2.1.3 The site is accessed via the adopted un-named access road which connects to Clydesmuir Road in the east, and continues through the wider Clydesmuir Industrial Estate.

2.1.4 The site is bordered by a railway line to the north, further industrial estate uses to the east and west, and residential units to the south.

2.1.5 **Figure 2.1** shows the site location in a local context, with an indicative red line boundary.

Figure 2.1: Site location in local context with indicative red line boundary

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2.2 Local Highway Network

2.2.1 Access into the site is provided in the south via a number of gated and un-gated access arrangements with the un-named Clydesmuir Industrial Estate access road running along the southern boundary.

2.2.2 The un-named access road is approximately 400m in length, and provides a no through route continuing west from Clydesmuir Road, providing access to both the site and the neighbouring industrial / commercial units within the wider Clydesmuir Industrial Estate area to the west.

2.2.3 The un-named access road has a carriageway width of approximately 9m, and connects to Clydesmuir Road via a priority junction arrangement.

2.2.4 Clydesmuir Road provides one of the key strategic routes through the Tremorfa area. The road is residential in nature, and subject to a 20mph speed limit with traffic calming measures (speed humps, chicanes etc) and on-street parking along its length.

2.2.5 South from the site, Clydesmuir Road connects into the local road network routing through into the Cardiff city centre area (approximately 3.5km).

2.2.6 North from the site, Clydesmuir Road provides an onward connection through to Rover Way, which in turn connects directly into the A-Road network routing through the wider Cardiff area (via the A4232 and A4161).

2.2.7 The A4232 provides a by-pass route around the west and south of the wider Cardiff area, also connecting into the A48 to the north. The route provides onward connections to M4 junctions within the Cardiff area.

2.2.8 The A4161 continues west, connecting into onward routes through the central Cardiff area.

2.2.9 The site is shown in a wider strategic context in **Figure 2.2**.

Figure 2.2: Site location in wider strategic context

© Google Earth Pro

2.3 Accessibility by Non-Car Modes of Travel

Walking

2.3.1 The un-named access road has footways of approximately 2m in width along both sides of its carriageway. These footways continue east from the site, connecting into footways along Clydesmuir Road, which in turn connect into the established pedestrian network continuing through the wider Tremorfa area.

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

Table 2.1– Acceptable Walking Distance (IHT Guidelines - Providing for Journeys on Foot)

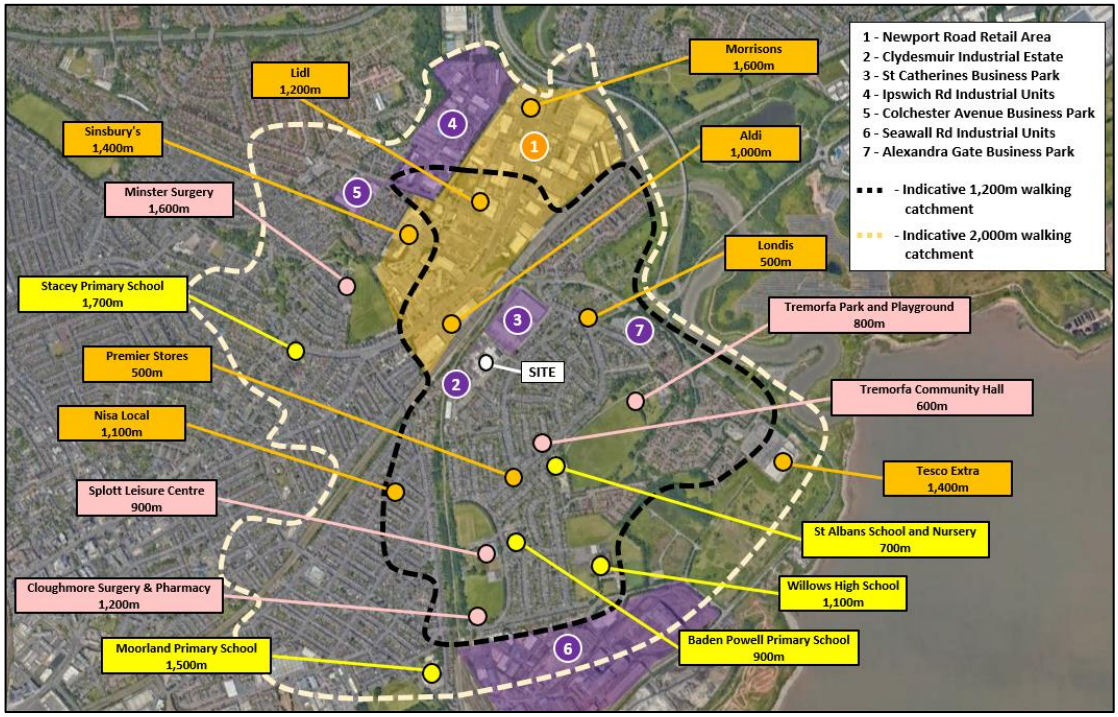
Walking Distance Band	Town Centres (m)	Commuting/School Sight-seeing (m)	Elsewhere (m)
Desirable	200	500	400
Acceptable	400	1,000	800
Preferred maximum	800	2,000	1,200

2.3.3 **Table 2.2** identifies the approximate walking distances to a range of key facilities accessible from the site. The location of each identified facility is also shown in **Figure 2.3**.

Table 2.2: Approximate walking distances to key local facilities

Facility	Approximate Walking distance (m)	IHT Acceptability Band
Retail Facilities		
Londis	500m	Acceptable
Premier Stores	500m	Acceptable
Newport Road Retail Area	900m	Preferred Maximum
Aldi	1,000m	Preferred Maximum
Nisa Local	1,100m	Preferred Maximum
Lidl	1,200m	Preferred Maximum
Sainsbury's	1,400m	Within 2km
Tesco Extra	1,400m	Within 2km
Morrisons	1,600m	Within 2km
Education Facilities		
St Albans School & Nursery	700m	Acceptable
Baden Powell Primary School	900m	Acceptable
Willows High School	1,100m	Preferred Maximum
Moorland Primary School	1,500m	Preferred Maximum
Stacey Primary School	1,700m	Preferred Maximum
Community Facilities		
Tremorfa Community Hall	600m	Acceptable
Tremorfa Park & Playground	800m	Acceptable
Splott Leisure Centre	900m	Preferred Maximum
Cloughmore Surgery & Pharmacy	1,200m	Preferred Maximum
Minster Surgery	1,600m	Within 2km
Significant Employment Sites		
Clydesmuir Industrial Estate	100m	Desirable
St Catherines Business Park	300m	Desirable
Alexandra Gate Business Park	1,000m	Acceptable
Ipswich Road Industrial Units	1,600m	Preferred Maximum
Seawall Road Industrial Units	1,600m	Preferred Maximum
Colchester Avenue Business Park	1,700m	Preferred Maximum

Figure 2.3: Key facilities within an approximate 2km walking catchment



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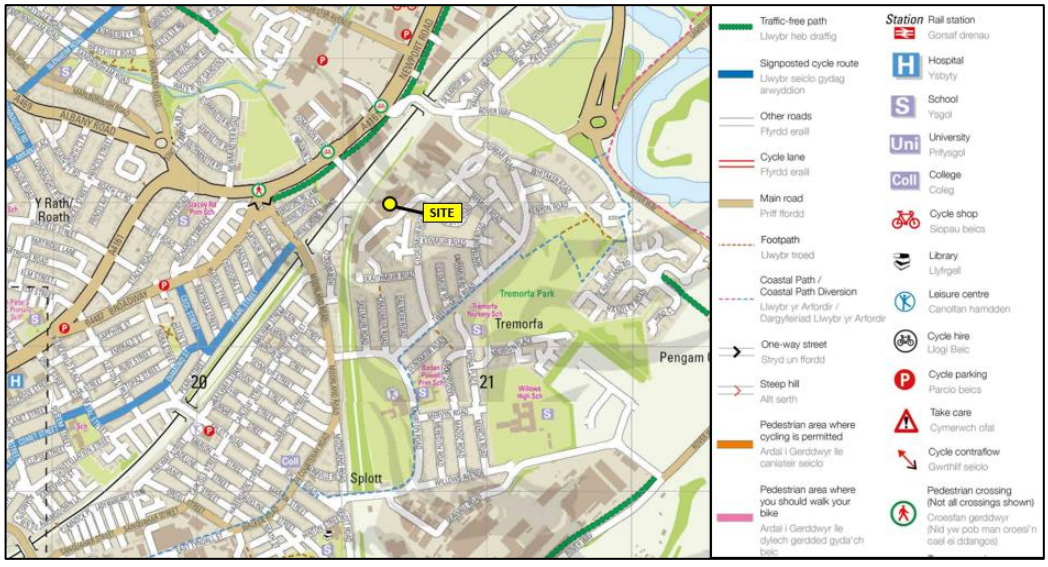
2.3.4 **Table 2.2** and **Figure 2.3** show that the site is within viable walking distance to a wide range of key facilities within the local site area that may be used on a daily or regular basis by residents of the site. These include multiple supermarkets, the Newport Road retail area (high street stores, discount stores, gym, fast food offerings etc), schools, doctor surgeries, a leisure centre, parks, and many significant employment sites (business parks and industrial estates etc).

Cycling

2.3.5 Cycling facilities within Cardiff are outlined on the 'Cardiff Walking and Cycling Map' published by Cardiff Council. An extract of this map for the local site area is shown in **Figure 2.4.**

Figure 2.4: Cardiff Council Cycle Map extract for site area



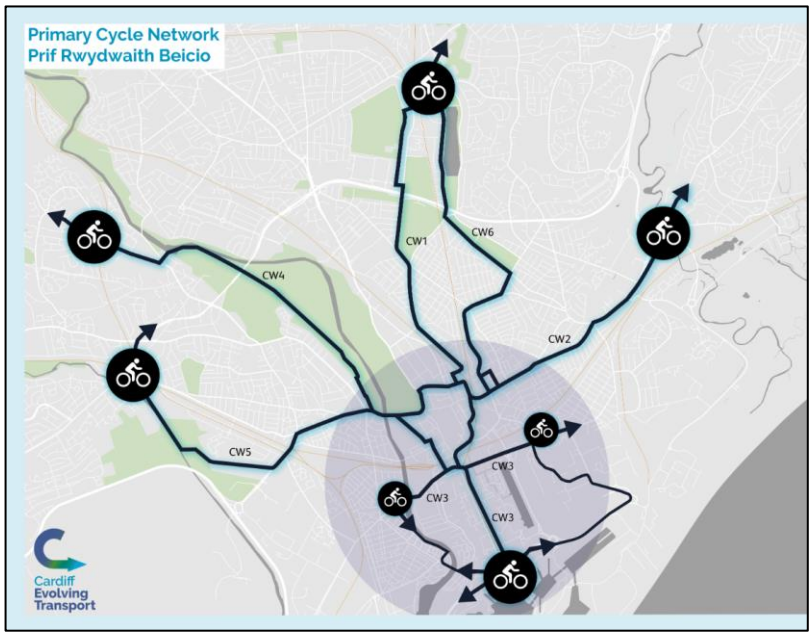
Source – www.cardiff.gov.uk

2.3.6 As shown on **Figure 2.4**, cycling through the immediate Tremorfa area is typically accommodated on-road. An off-road route however is provided along Newport Road, which is located directly north of the site (across the railway line), and can be accessed within an approximate 5-minute cycle time from the site.

2.3.7 LTN1/04 identifies that the mean average length for cycling journeys is 4km (2.4 miles). The site is located approximately 2km east of the Cardiff city centre area, which can be accessed within an approximate 15-minute cycle journey from the site. Many parts of the wider Cardiff area are also accessible on cycle from the site within a 4km distance.

2.3.8 Cardiff Council are also currently developing the 'Cardiff Cycleways' scheme with the aim of developing 6 cycleways through Cardiff, with segregated routes that are comfortable for all cycle users. The indicative Cardiff Cycleways scheme map is identified in **Extract 2.1**.

Extract 2.1: Proposed Cardiff Cycleways scheme routes



Source – www.cardiff.gov.uk

2.3.9 'Cycleway 2' of the scheme will route between St Mellons and Cardiff city centre, via Newport Road. Parts of this route are currently in the early planning / development stage, but if / when completed would provide an improved cycle connection from the site into the Cardiff city centre area.

Bus

2.3.10 Guidance relating to the accessibility of development proposals to public transport is provided in the Institution of Highways and Transportation (IHT) document 'Planning for Public Transport in Development' (March 1999). The IHT guidance recommends that:

> *"'new developments should be located so that public transport trips involve a walking distance of less than 400m from the nearest bus stop …".*

2.3.11 Bus stops located within the immediate vicinity of the site are shown on **Figure 2.5**.

Figure 2.5: Bus stops in the vicinity of the site

© Google Earth Pro

2.3.12 The nearest bus stops to the site are the 'Taymuir Road' and 'Kenmuir Road' stops located along Clydesmuir Road, approximately a 170m walk to the north and south of the site respectively. These stops provide access to the Cardiff Bus Service 11 routing between Pengam Green and Cardiff city centre. This service operates with a daytime frequency of approximately one service every 20-minutes between Monday to Saturday, and approximately one service every 30-minutes on Sunday.

2.3.13 The stops along Clydesmuir Road provide access to eastbound routing services towards Pengam Green only. Access to the westbound services routing towards Cardiff city centre can be accessed from the 'Whitaker Road' and 'Cairnmuir Road' bus stops located approximately 450m and 650m from the site respectively. Although slightly beyond the IHT suggested 400m distance, this distance is not definitive, and would not be a barrier to accessing these stops.

2.3.14 These additional stops also provide access to the Cardiff Bus service 2 / 2A which is the City Circle (anticlockwise) route (via Splott, Tremorfa, Heath Hospital, Cardiff Met, Grangetown, Cardiff Bay). This service operates with a daytime frequency of approximately one service every 60-minutes between Monday to Saturday. No services operate along this route on Sunday.

2.3.15 A bus journey between these identified stops and Cardiff city centre takes between approximately 15-minutes and 20-minutes.

2.3.16 A further range of bus services can also be accessed from the 'City Link' stop located along Newport Road, approximately a 900m walk north from the site. Although again beyond the IHT suggested 400m distance, these stops can be accessed within an approximate 12-minute walk time, and would be accessible to more mobile residents at the site. The services accessible from this stop again route into the Cardiff city centre area, and also to additional destinations such as St Mellons, Newport, Cwmbran, and Pontypool.

Rail

2.3.17 The nearest rail stations are located within the Cardiff city centre area (Cardiff Central and Cardiff Queen Street stations). Although these stations are beyond a comfortable walking distance for most, each can be reached within an approximate 15-minute cycle journey time. Bus Service 11 also routes to Cardiff Queen Street station, and Services 11 / 2 /2A route to Cardiff Central station Bus Interchange.

2.3.18 Multi-modal rail and cycle, or rail and bus travel is therefore a viable option to accommodate any potential longer distance journeys from the site.

Summary

2.3.19 Located within the established Tremorfa area of Cardiff, the site is located within viable walking and cycling distance to a wide range of key local facilities which residents of the site would likely make use of on a daily or regular basis.

2.3.20 The site also provides access to a wide range of regular bus services routing through both the local and wider Cardiff areas.

2.3.21 Cardiff city centre is also very accessible by both bus and cycle from the site.

2.3.22 As such, the site is able to offer potential residents a viable choice of sustainable transport options, which can reduce reliance on private car travel for many regular or occasional journeys.

2.4 Local Highway Safety

2.4.1 A review has been carried out on local highway network safety in order to establish whether there are any current accident clusters or blackspots in the vicinity of the site that may be exacerbated by the development proposal.

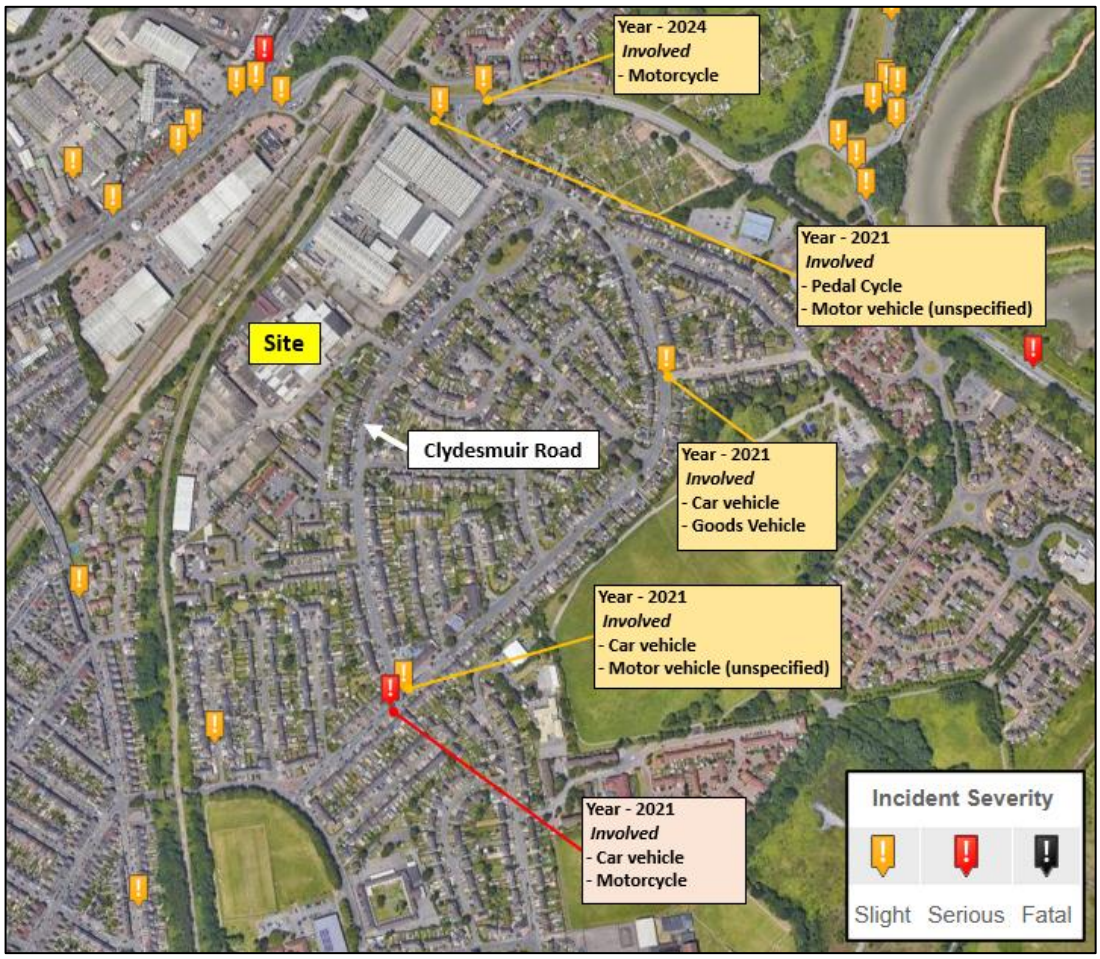
2.4.2 The STATS19 data published by the DfT for the latest 5-year period up to the end of 2024 has been explored (2020 to 2024 inclusive). The website www.crashmap.co.uk sets out this latest STATS19 data in an easily accessible format, and has therefore been referenced.

2.4.3 An extract showing all identified Personal Injury Collisions (PICs) occurring within the local area over the 5-year period between 2020 and 2024 is shown in **Figure 2.6**.

2.4.4 The STATS19 data identifies that over the 5-year study period, no PICs have occurred in the immediate vicinity of the site along either the Clydesmuir Industrial Estate access road, or along Clydesmuir Road.

2.4.5 Two PICs are identified at the southern end of Clydesmuir Road, at the priority junction with Tweedsmuir Road, through which a proportion of site traffic would be anticipated to route.

Figure 2.6: PIC plot extract for site area



Source: www.crashmap.co.uk - data extracted January 2026

2.4.6 One of these PICs occurred on a Sunday in May 2021. This was a slight incident which involved a car and a motorcycle vehicle. The collision occurred in a period of daylight at approximately 19:00, with fine and dry weather conditions. The car vehicle was making a right turn movement out of Clydesmuir Road when it collided with the motorcycle vehicle travelling eastbound on Tweedsmuir Road.

2.4.7 The other PIC occurred on a Sunday in August 2021. This was a serious incident which involved an unspecified vehicle (possibly a motorcycle), which collided with two parked motor vehicles. The collision occurred in a period of daylight at approximately 19:00, with fine and dry weather conditions. The un-specified vehicle was travelling eastbound along Tweedsmuir Road when it skidded and collided with the stationary parked vehicles along the road.

2.4.8 Although all incidents are regrettable, each of these identified PICs appear to have occurred due to human error rather than any identifiable highway design reason. Both PICs also occurred in 2021, when Tweedsmuir Road was subject to a 30mph speed limit. The speed limit along the road has since been reduced to 20mph, which should help reduce vehicle speeds, and further improve highway safety along the road.

2.4.9 North from the site, two further PICs are identified in the vicinity of the Pengam Way / Rover Road priority junction, which is again a junction through which a proportion of site traffic would be anticipated to route.

2.4.10 One of these PICs occurred on a Saturday in March 2021. This was a slight incident which involved a single pedal cycle and an un-specified motor vehicle. The collision occurred in a period of darkness early in the morning at approximately 05:00, with fine and dry weather condition. The pedal cycle was making a left turn movement out of Clydesmuir Road when it collided with the motor vehicle travelling westbound on Pengam Way.

2.4.11 The other PIC occurred on a Saturday in June 2024. This was a slight incident which involved a single motorcycle vehicle only. The collision occurred in a period of darkness late at night at approximately 01:00, with fine and dry weather conditions. The motorcycle was travelling eastbound along the road towards the junction, when it collided with a 'road works' object in the carriageway.

2.4.12 Each of these PICs are isolated incidents occurring late at night / early in the morning during periods of darkness (the road however is street lit), and again appear to have occurred due to human error rather than any identifiable highway design reason.

2.4.13 Over the wider area, some clustering of PICs is identified along the A4161 Newport Road to the north, and the A4232 roundabout junction to the east. These however are key strategic routes through the Cardiff area, carrying high volumes of traffic. The volume of PICs identified at these points are therefore likely reflective of the volume of vehicles travelling along busy key strategic roads of these types. Traffic generated from the proposed development would have a minimal impact on total traffic volumes along these sections of road.

2.4.14 The STATS19 data therefore identifies that there are no existing highway safety issues within the immediate area of the site. The changes in traffic anticipated from the proposed re-development of the site (as outlined in **Section 5** of this report) is unlikely to exacerbate this existing safety record to a significant enough level to warrant concern.

3 LOCAL AND NATIONAL PLANNING GUIDANCE

3.1 Overview

3.1.1 In preparing this TS, the site has been considered in the context of relevant transport planning policy guidance at national, regional and local level. The following documents have been reviewed:

3.1.2 In transport terms the relevant policy guidance that applies to this site are contained in the following documents:

- Planning Policy Wales (Edition 12, February 2024);
- Wales Transport Strategy (2021);
- Future Wales – The National Plan 2040 (Feb 2021);
- National Transport Delivery Plan 2022 to 2027; and
- Cardiff Local Development Plan 2006 – 2026 (January 2016);

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

- Active Travel Wales Act 2013;
- Well-being of Future Generations (Wales) Act 2015;
- Cardiff Transport Strategy (approved October 2016); and
- Cardiff Transport White Paper: Changing How We Move Around A Growing City (January 2020).

3.2 Summary

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

3.2.2 More specifically the Cardiff LDP sets out an ambitious target for 50% of all journeys to be made by walking, cycling, and public transport by 2026, with Cardiff Council's Transport White Paper identifying an ambition for 76% of all of all journeys to be made by sustainable modes by 2030.

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

3.3 Conclusion

3.3.1 As outlined in **Section 2**, the site is in an excellent location to promote and encourage travel by walking, cycling, and public transport options. The site is therefore concluded to be highly compliant with transport planning policy at a local and national level.

4 OUTLINE PROPOSALS

4.1 Proposed Development Outline

4.1.1 The re-development proposals would see the demolition of all existing buildings on the site, and construction of 96 residential units, and associated internal access road network.

4.1.2 The residential units are to be provided as follows:

- 18 x 1-bed flats;
- 24 x 1-bed Walk-up flats;
- 6 x 2-bed Walk-up flats;
- 36 x 2-bed houses; and
- 12 x 3-bed houses.

4.1.3 The residential units will be delivered as 100% affordable.

4.1.4 The proposed site layout is included at **Appendix A**.

4.2 Proposed Site Access

4.2.1 Vehicular access to the site will be provided in the south, via a single priority access point along the un-named Clydesmuir Industrial Estate access road.

4.2.2 The access junction will be formed within adopted highway extents, and will consist of a 5.5m wide carriageway, with a 6.0m radius, and 2.0m wide footways on either side.

4.2.3 Junction visibility splays of 2.4m x 25m can be achieved to the east and west from the proposed new access junction, in line with requirements for a road speed of 20mph.

4.2.4 An internal access road 5.5m in width, will continue north into the site from the site access, forming a looped arrangement connecting with onward private access roads, and private driveways, to provide access to all units.

4.2.5 The internal road network will be designed to allow sufficient space for all anticipated vehicles to safely enter, manoeuvre within, and exit the site in a forward gear.

4.2.6 Corun drawings 25-01068 / SP01 and SP02, contained at **Appendix B,** illustrates swept path analysis for both a Cardiff Olympus 6x2RS narrow refuse vehicle, and an 8.7m fire appliance. The refuse vehicle used for tracking purposes was taken from Cardiff Council's technical guidance document for developers. These drawings identify sufficient space for vehicles of this size to safely enter, manoeuvre and turn along the internal access road, and exit the site in a forward gear.

4.2.7 Pedestrian access will be provided on both sides of the proposed new site access junction, and into the site, connecting directly into the existing footway along the northern edge of the Clydesmuir Industrial Estate access road carriageway. Dropped kerbs will be provided across the site access junction.

4.2.8 The applicant is also willing to undertake improvements to sustainable pedestrian infrastructure along Clydesmuir Road, and will liaise with Cardiff Highways through the planning application process, to agree an appropriate level of works.

4.3 Parking Provision

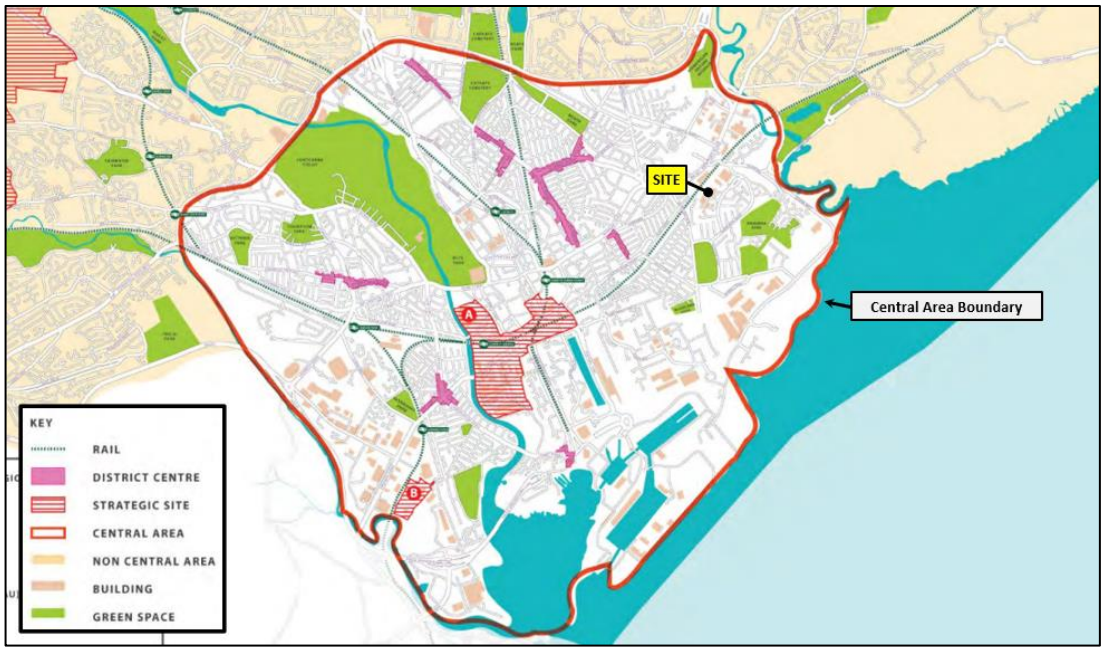
4.3.1 Cardiff Council parking standards are set out in the Supplementary Planning Guidance (SPG) document 'Managing Transportation Impacts (Incorporating Parking Standards), July 2018'.

Car Parking

4.3.2 The parking standards aim to set a maximum level of car parking to be provided at developments, in line with national and regional policies to encourage a move to more sustainable modes of transport.

4.3.3 As shown in **Figure 4.1**, the site is located within the outlined 'Cardiff Central Area' zone for parking standards. This Central Area zone is subject to lower levels of parking provision in order to meet the Councils LDP target 50:50 mode split.

Figure 4.1: Cardiff Central Area boundary for parking requirements



Source: Cardiff Council SPG 'Managing Transportation Impacts (Incorporating Parking Standards, July 2018' (p24)

4.3.4 For residential developments within the Central Area zone, the SPG states that a maximum of one car parking space should be provided per unit for residents. There is no requirement for visitor parking.

4.3.5 In line with these SPG requirements, the proposed development will provide just one parking space for each house and walk-up unit on the site. These spaces will be provided within off-road private driveway or parking bay spaces at the frontage of each unit.

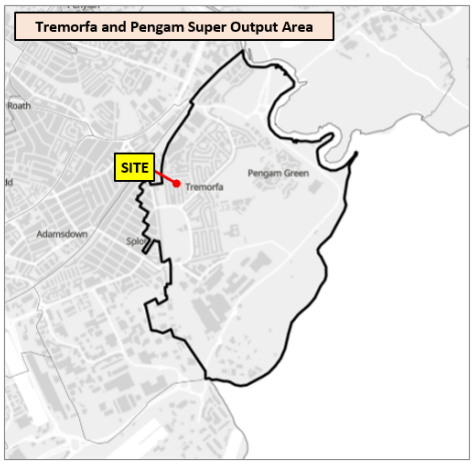
4.3.6 For the 18 1-bed flat units (provided across two separate apartment blocks), a total of 8 parking spaces will be provided to accommodate parking across each (4 spaces per apartment block). This equates to a provision of approximately 1 parking space per 2 units (rounded value). These spaces will be provided within un-allocated parking bays at the frontage of each apartment block.

4.3.7 Although the parking provision at these flat units is below the SPG maximum value, the parking requirements are for a broad range of all residential tenure types, and do not reflect the likely difference in car ownership volumes between flats and houses, or private and affordable dwellings.

4.3.8 As evidence to support the suitability of the proposed parking provision at the flat units, Census 2021 data has been reviewed to establish the prevailing car ownership statistics for the local area between differing tenure types.

4.3.9 **Figure 4.2** identifies the Census 2021 car ownership data for the Census ward area of Tremorfa and Pengam Green (Mid Layer Super Output Area ref: W02000403) that the site falls within.

Figure 4.2: Census 2021 car ownership data for Tremorfa and Pengam Green area



Total Cars or Vans in Household	All Households		Whole House or Bungalow		Flat, Maisonette, Apartment	
	Count	%	Count	%	Count	%
0	1,058	32.6%	730	28.2%	327	49.6%
1	1,445	44.5%	1,176	45.4%	269	40.8%
2+	746	23.0%	685	26.4%	63	9.6%
Total	3,249	100.0%	2,591	100.0%	659	100.0%

Total Cars or Vans in Household	All Households		Privately Owned or Rented Tenures		Socially Rented Tenures	
	Count	%	Count	%	Count	%
0	1,058	32.6%	521	23.1%	537	54.2%
1	1,445	44.5%	1,099	48.6%	346	34.9%
2+	746	23.0%	639	28.3%	107	10.8%
Total	3,249	100.0%	2,259	100.0%	990	100.0%

Data source www.nomisweb.co.uk (dataset RM001 and RM131)

4.3.10 Within the Tremorfa and Pengam Green Census area, approximately 33% of all households have no access to a car, with 45% having access to one car, and 23% having access to two or more cars.

4.3.11 When comparing between house types however, approximately half (49.6%) of all flat or apartment tenure types have no access to a car, with the majority of the remainder (40.8%) having access to one car, and just 9.6% having access to two or more cars. These levels are significantly lower than those for house units where only 28.2% of households have no access to a car, 45.4% have access to one car, and 26.4% have access to two or more cars.

4.3.12 When also comparing between occupation types, just over half (54.2%) of all socially rented tenure types have no access to a car, with just 34.9% having access to one car, and 10.8% having access to two or more cars. These levels are again lower than those for privately owned or rented tenures, where only 23.1% of households have no access to a car, 48.6% have access to one car, and 28.3% have access to two or more cars.

4.3.13 The Census data identifies therefore that within the Tremorfa and Pengam Green area, less than half of residents in socially rented flat / apartment tenure types would have access to a car or van, and require a parking space.

4.3.14 Combined with the excellent accessibility at the site by non-car modes of travel, the proposed provision of 8 parking spaces across the 18 1-bed flat units on the site would therefore be considered adequate to accommodate parking requirements for these residents.

Cycle Parking

4.3.15 The SPG sets out a minimum level of cycle parking provision to be provided at developments, and states the following regarding residential cycle parking provision:

> *"6.22: Residential and long stay cycle parking should be secure and sheltered. The shelter may be in the form of accommodation within buildings, in cycle sheds or other sheltered structures and can include cycle lockers or cages located in close proximity to the main building access. For houses, where cycle parking is not specifically accommodated within individual dwellings (e.g. where garages are not available), appropriate alternative secure and sheltered provision should be made. Where communal cycle parking is provided, it is often better to have several small groups of stands rather than one large facility. Cycle provision should be designed into a scheme from the outset to ensure adequate provision is made available from first occupation. Reference should be made to the Cardiff Residential Design Guide and other relevant guidance. Innovative approaches to cycle storage and facilities, such as two-tier storage systems and lockers for cycle helmets, are encouraged."*

4.3.16 For residential developments within the Central Area zone, the SPG states that a minimum of one cycle parking space should be provided per bedroom. Cycle parking at the site will be provided in line with these minimum SPG requirements.

4.3.17 At the house units, cycle parking will be accommodated within covered and secure facilities provided within the curtilage of each unit. These parking facilities are to include sheds provided within rear garden spaces, and / or cycle storage lockers provided at the frontage of units.

4.3.18 At the walk-up and apartment units, cycle parking will be accommodated within covered and secure communal cycle stores.

5 ANTICIPATED TRAFFIC GENERATION

5.1 Introduction

5.1.1 The following section provides an estimate of the traffic generation impact of the change of use proposals.

5.1.2 Estimated traffic flows for the site uses have been forecast using the TRICS database. TRICS is a nationally accepted database providing information relating to the total number of trips generated by various land uses, based on existing traffic surveys at similar sites throughout the United Kingdom.

5.1.3 From the TRICS database, a trip rate is derived which provides the number of expected trips per unit of measure.

5.1.4 To identify the traffic impact of the change of use proposals, a trip assessment has been undertaken for both the extant and proposed uses.

5.1.5 Both the extant and proposed uses on the site would be anticipated to generate trips over the entire week period. This section of the report however focuses on trips generated during the weekday period only, when highway capacity is typically at its most strained, and will therefore be more affected by traffic changes resultant of the re-development proposals.

5.1.6 The impact over each of the typical critical weekday AM and PM highway peak hour periods (08:00 to 09:00 and 17:00 to 18:00 respectively), and the total 12-hour weekday period between 07:00 to 19:00 have been assessed and summarised.

5.1.7 A copy of all TRICS outputs are included in **Appendix C**.

5.2 Extant Use Anticipated Trip Generation

5.2.1 The site is currently occupied by several buildings that are used for a range of B2 commercial and light industrial uses, totalling approximately 10,227m^2 GFA.

5.2.2 The TRICS category '02 – Employment / C – Industrial Unit' has been utilised to represent the extant use on the site.

5.2.3 In order to extract a representative sample of survey sites from the TRICS database, the following parameters were applied:

- Includes only sites with a GFA in the range between 500m^2 and 10,000m^2;
- Includes only 'Edge of Town Centre' and 'Suburban Area' located sites; and
- Sites with surveys identified as undertaken during the Covid pandemic period were excluded.

5.2.4 Utilising the TRICS trip rates, **Table 5.1** identifies a typical anticipated trip generation for the extant industrial use on the site.

Table 5.1: Anticipated trip generation for extant industrial use on site (based on 10,227m² GFA)

Time Period	Trip Rates (per 100m² GFA)			Total Trips (all vehicles)		
	Arr.	Dep.	Total	Arr.	Dep.	Total
07:00 - 08:00	0.405	0.055	0.460	41	6	47
08:00 - 09:00	0.478	0.038	0.516	49	4	53
09:00 - 10:00	0.214	0.122	0.336	22	12	34
10:00 - 11:00	0.148	0.110	0.258	15	11	26
11:00 - 12:00	0.122	0.142	0.264	12	15	27
12:00 - 13:00	0.182	0.252	0.434	19	26	45
13:00 - 14:00	0.174	0.220	0.394	18	22	40
14:00 - 15:00	0.098	0.127	0.225	10	13	23
15:00 - 16:00	0.078	0.153	0.231	8	16	24
16:00 - 17:00	0.041	0.403	0.444	4	41	45
17:00 - 18:00	0.017	0.333	0.350	2	34	36
18:00 - 19:00	0.012	0.072	0.084	1	7	8
12-Hour Total	**-**	**-**	**-**	**201**	**207**	**408**

5.2.5 **Table 5.1** shows that the extant industrial use on the site would be anticipated to generate approximately 53 two-way vehicular trips during the typical weekday AM peak hour period, and 36 two-way trips during the typical weekday PM peak hour period. Over the 12-hour weekday period a total of 408 two-way vehicular trips would be anticipated.

5.3 Proposed Use Anticipated Trip Generation

5.3.1 The re-development proposals would see the demolition of all existing buildings on the site, and construction of 96 residential units, to be delivered as 100% affordable.

5.3.2 To represent the proposed residential use, the TRICS category '03 – Residential / L – Mixed Affordable Housing (Flats and Houses)' was utilised.

5.3.3 In order to extract a representative sample of survey sites from the TRICS database, the following parameters were applied:

- Excludes sites with over 200 dwellings;
- Includes only 'Edge of Town Centre', 'Suburban Area' and 'Edge of Town' sites;
- Sites with a population within 5-miles below 100,000 excluded;
- Sites with excessive public transport accessibility excluded; and
- Sites with surveys identified as undertaken during the Covid pandemic period were excluded.

5.3.4 Utilising the TRICS trip rates, **Table 2.2** identifies a typical anticipated trip generation for the proposed residential use on the site.

Table 5.2: Anticipated trip generation for proposed residential use (based on 96 dwellings)

Time Period	Trip Rates (per dwelling)			Total Trips (all vehicles)		
	Arr.	Dep.	Total	Arr.	Dep.	Total
07:00 - 08:00	0.076	0.196	0.272	7	19	26
08:00 - 09:00	0.128	0.226	0.354	12	22	34
09:00 - 10:00	0.141	0.157	0.298	14	15	29
10:00 - 11:00	0.129	0.141	0.270	12	14	26
11:00 - 12:00	0.131	0.136	0.267	13	13	26
12:00 - 13:00	0.138	0.119	0.257	13	11	24
13:00 - 14:00	0.138	0.153	0.291	13	15	28
14:00 - 15:00	0.151	0.139	0.290	14	13	27
15:00 - 16:00	0.217	0.190	0.407	21	18	39
16:00 - 17:00	0.216	0.182	0.398	21	17	38
17:00 - 18:00	0.239	0.158	0.397	23	15	38
18:00 - 19:00	0.214	0.137	0.351	21	13	34
12-Hour Total	**-**	**-**	**-**	**184**	**185**	**369**

5.3.5 **Table 5.2** shows that the proposed residential use on the site would be anticipated to generate approximately 34 two-way vehicular trips during the typical weekday AM peak hour period, and 38 two-way trips during the typical weekday PM peak hour period. Over the 12-hour weekday period a total of 369 two-way vehicular trips would be anticipated.

5.4 Extant and Proposed Use Anticipated Trip Generation Comparison

5.4.1 Comparing the anticipated trip generation of the extant and proposed uses on the site, **Table 5.3** identifies the anticipated traffic generation impact of the re-development proposals.

Table 5.3: Anticipated traffic impact change from the re-development proposals

Time Period	Extant Use Anticipated Total Two-Way Trips	Proposed Use Anticipated Total Two-Way Trips	Difference (proposed - extant)
07:00 - 08:00	47	22	**-21**
08:00 - 09:00	53	28	**-19**
09:00 - 10:00	34	24	**-5**
10:00 - 11:00	26	21	**+0**
11:00 - 12:00	27	22	**-1**
12:00 - 13:00	45	21	**-21**
13:00 - 14:00	40	23	**-12**
14:00 - 15:00	23	23	**+4**
15:00 - 16:00	24	33	**+15**
16:00 - 17:00	45	32	**-7**
17:00 - 18:00	36	32	**+2**
18:00 - 19:00	8	28	**+26**
12-Hour Total	**408**	**309**	**-39**

5.4.2 **Table 5.3** shows that the re-development proposals would be anticipated to generate a decrease of approximately -39 two-way vehicle trips at the site across the weekday 12-hour period.

5.4.3 This anticipated decrease in trips is predominantly anticipated across the weekday morning and early afternoon period (total decrease of -75 two-way trips over period between 07:00 to 14:00), with a slight increase in trips anticipated across the weekday late afternoon period (total increase of +36 two-way trips over period between 14:00 to 19:00).

5.4.4 A maximum increase of +26 two-way vehicle trips is anticipated over any weekday hour period, occurring between 18:00 to 19:00. This equates to an increase of approximately just one additional vehicle trip on the highway network every 2-minutes across this hour period.

5.4.5 A maximum decrease of -21 two-way vehicle trips is anticipated over any weekday hour period, occurring between both 07:00 to 08:00 and 08:00 to 09:00.

5.4.6 Over the typical weekday AM peak hour period (08:00 to 09:00), the proposed change of use would be anticipated to generate a decrease of approximately -19 two-way vehicle trips.

5.4.7 Over the typical weekday PM peak hour period (17:00 to 18:00), the proposed change of use would be anticipated to generate a slight increase of approximately just +2 two-way vehicle trips.

5.5 Traffic Generation Impact Summary

5.5.1 This section has set out the anticipated traffic generations of both the extant and proposed uses on the site, over the most critical weekday period.

5.5.2 The trip generation assessment has identified that the re-development proposals would likely lead to a decrease in total trips generated at the site over a weekday 12-hour period (07:00 to 19:00).

5.5.3 This anticipated decrease in trips is predominantly anticipated across the weekday morning and early afternoon period, with a slight increase in trips anticipated across the weekday late afternoon period. Any such increase in trips over this late afternoon period however is anticipated to be minimal, and on average, at a maximum of approximately one additional vehicle trip every 2-minutes, over any hour period.

5.5.4 The re-development proposals are therefore anticipated to have a negligible impact on total traffic volumes and capacity across the surrounding highway network.

6 SUMMARY AND CONCLUSION

6.1 Summary

6.1.1 This Transport Statement has been produced by Corun Associates Ltd on behalf of Pegasus Developments (the applicant), to examine the highway and transportation issues associated with a proposed re-development of land within the Clydesmuir Industrial Estate, in the Tremorfa area of Cardiff.

6.1.2 The re-development site is currently occupied by several buildings that are used for a range of B2 commercial and light industrial uses, along with associated servicing / parking area space. The existing buildings on the site total approximately 10,227m^2 GFA.

6.1.3 The re-development proposals would see the demolition of all existing buildings on the site, and construction of 96 residential units, and associated internal access road network. The residential units will be delivered as 100% affordable.

6.1.4 Located within the established Tremorfa area of Cardiff, the site is able to offer potential residents a wide choice of viable sustainable transport options, which can reduce reliance on private car travel for many regular or occasional journeys.

6.1.5 Vehicular access to the site will be provided in the south, via a single priority access point along the un-named Clydesmuir Industrial Estate access road.

6.1.6 The access will be formed within adopted highway extents, and will consist of a 5.5m wide carriageway, with a 6.0m radius, and 2.0m wide footways on either side.

6.1.7 Junction visibility splays of 2.4m x 25m can be achieved to the east and west from the proposed new access junction, in line with requirements for a road speed of 20mph.

6.1.8 An internal access road, which will be 5.5m wide, will continue north into the site from the site access, forming a looped arrangement connecting with onward private access roads, and private driveways, to provide access to all units. The internal road network has been designed to allow sufficient space for all anticipated vehicles to safely enter, manoeuvre within, and exit the site in a forward gear.

6.1.9 Pedestrian access will be provided on both sides of the proposed new site access junction, and into the site, connecting directly into the existing footway along the northern edge of the Clydesmuir Industrial Estate access road carriageway. Dropped kerbs will be provided across the site access junction.

6.1.10 The applicant is also willing to undertake improvements to sustainable pedestrian infrastructure along Clydesmuir Road, and will liaise with Cardiff Highways through the planning application process, to agree an appropriate level of works.

6.1.11 The proposed development will provide one parking space for each house and walk-up unit on the site. These spaces will be provided within off-road private driveway or parking bay spaces at the frontage of each unit.

6.1.12 For the 18 1-bed flat units (provided across two separate apartment blocks), a total of 8 parking spaces will be provided to accommodate parking (4 spaces per apartment block). These spaces will be provided within un-allocated parking bays at the frontage of each apartment block.

6.1.13 Cycle parking at the site will be provided at a rate of one space per bedroom. At the house units, cycle parking will be accommodated within covered and secure facilities provided within the curtilage of each unit. At the walk-up and apartment units, cycle parking will be accommodated within covered and secure communal cycle stores.

6.1.14 This report has set out the anticipated traffic generations of both the extant and proposed uses on the site, across the most critical weekday period.

6.1.15 The proposed residential use on the site would be anticipated to generate approximately 34 two-way vehicular trips during the typical weekday AM peak hour period (08:00 to 09:00), and 38 two-way trips during the typical weekday PM peak hour period (17:00 to 18:00). Over the 12-hour weekday period (07:00 to 19:00) a total of 369 two-way vehicular trips would be anticipated.

6.1.16 The re-development proposals would likely lead to a decrease in trips generated at the site over a weekday 12-hour period (07:00 to 19:00).

6.1.17 This anticipated decrease in trips is predominantly anticipated across the weekday morning and early afternoon period (07:00 to 14:00), with a slight increase in trips anticipated across the weekday late afternoon period (14:00 to 19:00). Any such increase in trips over this late afternoon period however is anticipated to be minimal, and on average at a maximum of approximately one additional vehicle trip every 2-minutes, over any hour period.

6.1.18 Overall, the re-development proposals on the site are anticipated to have a minimal impact on total traffic volumes and capacity across the surrounding highway network.

6.1.19 A review of the accident record has identified no apparent existing highway safety concern in the immediate vicinity of the site. The changes in traffic generation anticipated from the proposed re-development is highly unlikely to exacerbate this existing safety record to a significant enough level to warrant concern.

6.2 Conclusion

6.2.1 There are no reasons in highway and transportation terms, why the proposed development should not be granted consent.

APPENDIX A

Proposed Layout Plans

Proposed Site Layout

1 : 500

Accommodation Schedule

	House Type	Unit Count
	3B5P House	12
	2B4P House	36
	2B3P Walkup	6
	1B2P Walkup	24
	1B2P Flats	18
	Total	**96**

Parking
Parking spaces are provided as one per dwelling except for apartments, each apartment block has 4 parking spaces.

Cycle Spaces
Cycle spaces are provided as one per bedroom in dedicated cycle stores to each dwelling. Apartment and walk up type buildings use a communal cycle store.

10 0 10 20 30 40 50

SCALE 1:1000 m

Rev	Status	Date	Check	Description
P03	S0	09.01.26	AP	Update to numbers Issued for PAC
P02	S0	24.12.25	AP	Issued for PAC
P01	S0	04.12.25	AP	First Issue

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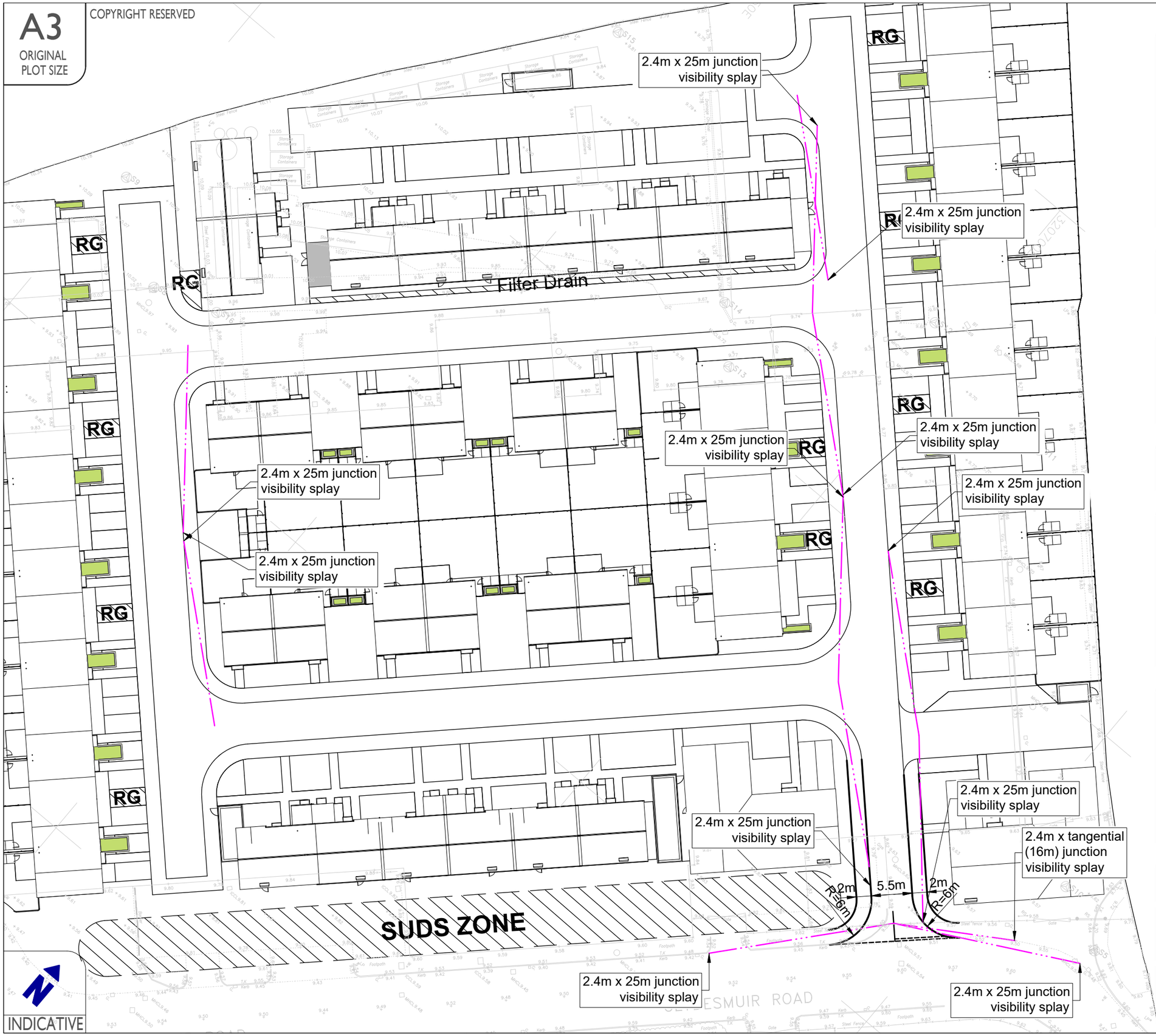
Project
Clydesmuir
Cardiff
Pegasus

Title
Proposed Site Layout

Job No	Scale at A3	Classification	Status Revision
4594	As indicated		S0 P03

Project - Originator - Functional Breakdown - Spatial Breakdown - Form - Discipline - Number
CMWW-HMA-ZZ-ZZ-D-A-90003

A3
ORIGINAL PLOT SIZE



INDICATIVE

NOTES:

1. Drawing based on site layout plan CMWW-HMA-ZZ-ZZ-DA-90002 received from Holder Mathias Architects on 03.12.2025.

This drawing is based on [Company's Name] Drawing No:

Rev	Date	Details	Drawn by	Checked by

CORUN
Transport and Highway Engineering

Corun Associates Ltd
Swansea

E swansea@corun.uk.com
W www.corun.uk.com

CLIENT:
Pegasus Developments

PROJECT:
CLYDESMUIR ROAD
CARDIFF

TITLE:
PROPOSED SITE ACCESS ARRANGEMENT

STATUS:
PRELIMINARY

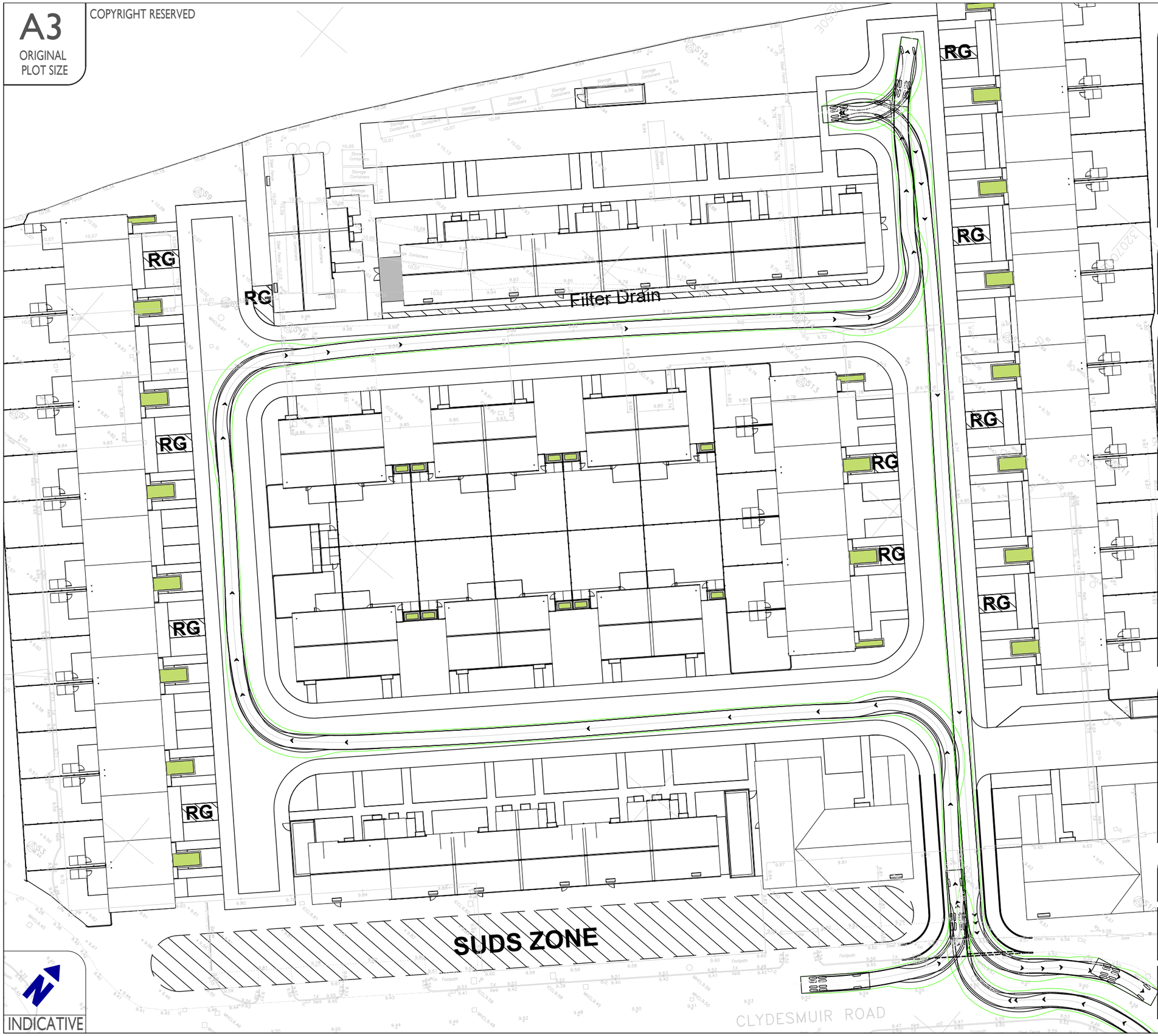
SCALE:	DATE:	DRAWN:	CHECKED:
1:500	04.12.25	MP	MA

JOB NO:	DRAWING NO:	REVISION:
24-01068	PL01	

Appendix B

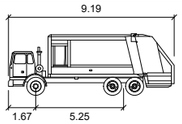
Vehicle Swept Path Drawings

A3
ORIGINAL PLOT SIZE



NOTES:

1. Drawing based on site layout plan CMWW-HMA-ZZ-ZZ-DA-90002 received from Holder Mathias Architects on 03.12.2025.



Cardiff Olympus 6x2RS Narrow

	meters
Width	: 2.25
Track	: 1.90
Lock to Lock Time	: 4.0
Steering Angle	: 22.0

Rev	Date	Details	Drawn by	Checked by

CORUN
Transport and Highway Engineering

Corun Associates Ltd
Swansea

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W www.corun.uk.com

CLIENT:
Pegasus Developments

PROJECT:
CLYDESMUIR ROAD
CARDIFF

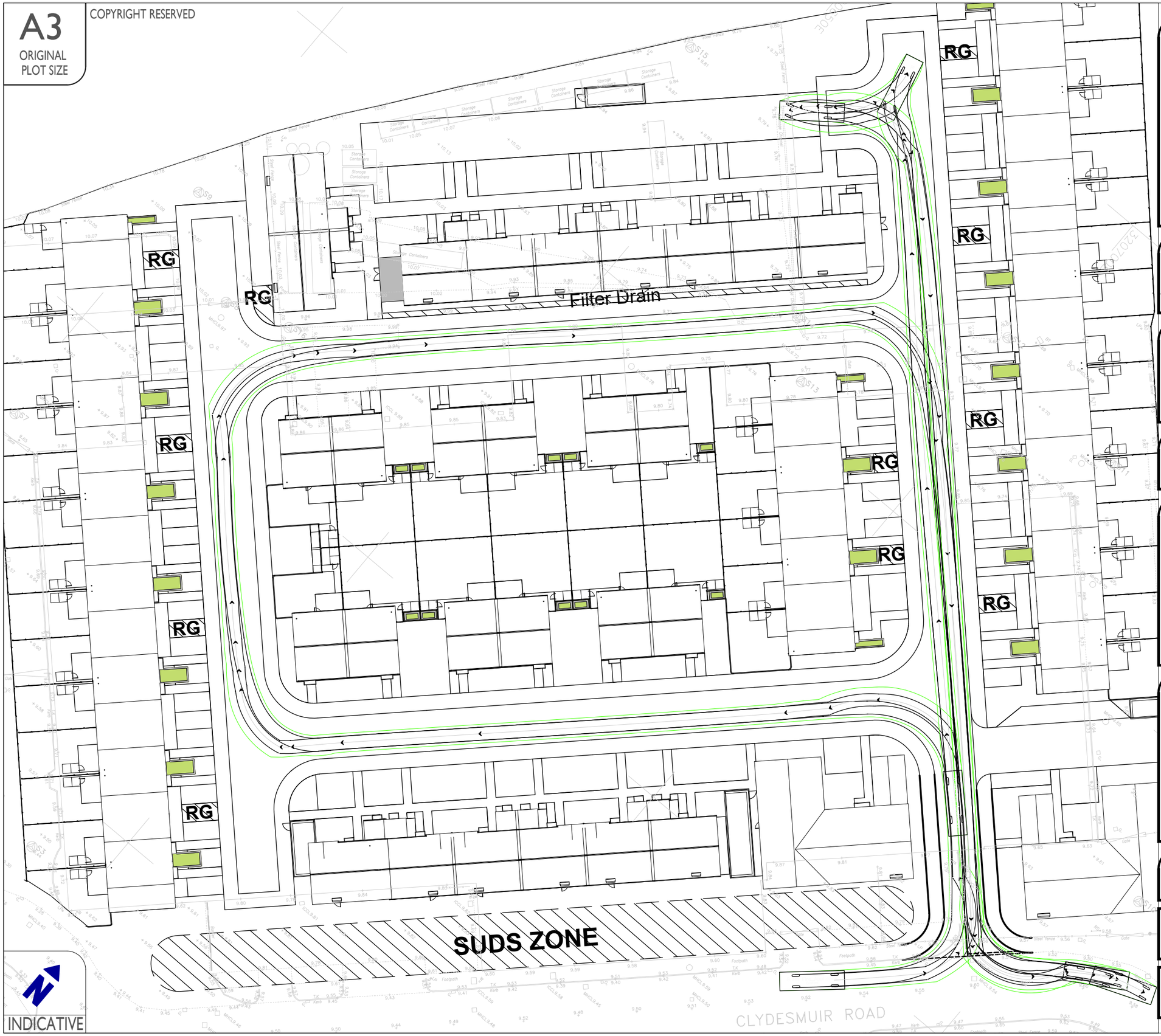
TITLE:
REFUSE VEHICLE
SWEPT PATHS

STATUS:
PRELIMINARY

SCALE:	DATE:	DRAWN:	CHECKED:
1:500	04.12.25	MP	MA

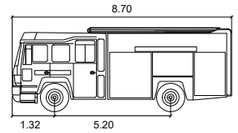
JOB NO:	DRAWING NO:	REVISION:
24-01068	SP01	

A3
ORIGINAL PLOT SIZE



NOTES:

1. Drawing based on site layout plan CMWW-HMA-ZZ-ZZ-DA-90002 received from Holder Mathias Architects on 03.12.2025.



8.7m Fire Appliance

	meters
Width	: 2.50
Track	: 1.75
Lock to Lock Time	: 6.0
Steering Angle	: 34.3

Rev	Date	Details	Drawn by	Checked by

CORUN
Transport and Highway Engineering

Corun Associates Ltd
Swansea

E swansea@corun.uk.com
W www.corun.uk.com

CLIENT:
Pegasus Developments

PROJECT:
CLYDESMUIR ROAD
CARDIFF

TITLE:
FIRE TENDER
SWEPT PATHS

STATUS:
PRELIMINARY

SCALE:	DATE:	DRAWN:	CHECKED:
1:500	04.12.25	MP	MA

JOB NO:	DRAWING NO:	REVISION:
24-01068	SP02	

Appendix C

TRICS Outputs

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use: 03 - RESIDENTIAL

Category: L - MIXED AFFORD HOUS (FLATS AND HOUSES)

Selected Vehicle Type: Total Vehicles

Selected regions and areas:

01	**GREATER LONDON**		
	EG	EALING	1 day
	HM	HAMMERSMITH AND FULHAM	1 day
	RB	REDBRIDGE	1 day
02	**SOUTH EAST**		
	ES	EAST SUSSEX	1 day
	EX	ESSEX	1 day
	HC	HAMPSHIRE	2 days
04	**EAST ANGLIA**		
	NF	NORFOLK	1 day
06	**WEST MIDLANDS**		
	WM	WEST MIDLANDS	1 day
	WO	WORCESTERSHIRE	1 day
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	LS	LEEDS	1 day
09	**NORTH**		
	TW	TYNE & WEAR	1 day
10	**WALES**		
	SW	SWANSEA	1 day
11	**SCOTLAND**		
	ER	EAST RENFREWSHIRE	1 day

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:	DWELLS
Actual Range:	18 to 920 (units:DWELLS)
Range Selected by User:	18 to 200 (units:DWELLS)
Parking Spaces Range:	7 - 524

Public Transport Provision:

Selection by:	All Surveys Included
Date Range:	24/05/88 to 25/03/24

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:

Friday	1 days
Monday	2 days
Thursday	1 days
Tuesday	6 days
Wednesday	4 days

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

Selected survey types:

Manual count	14
Direction ATC Count	0

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:

Edge of Town	6 days
Edge of Town Centre	1 days
Suburban Area	7 days

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:

Built-Up Zone	1 days
No Sub Category	3 days
Residential Zone	10 days

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 Vehicle Counts:

Servicing vehicles Included	1 days
Servicing vehicles Unknown	13 days

Secondary Filtering Selection:

Use Class:

C3	14 surveys

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®.

Population within 500m Range:

300 - 11700

Population within 1 mile:

15,001 to 20,000	2 surveys
20,001 to 25,000	3 surveys
25,001 to 50,000	7 surveys
5,001 to 10,000	1 surveys
50,001 to 100,000	1 surveys

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

Population within 5 miles:

100,001 to 125,000	2 surveys
125,001 to 250,000	6 surveys
250,001 to 500,000	3 surveys
500,001 or More	3 surveys

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	10 surveys
1.1 to 1.5	3 surveys
Not Known	1 surveys

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.

Petrol filling station:

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:

No	12 surveys
Yes	2 surveys

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:

2 - Poor	1 surveys
No PTAL Present	13 surveys

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

COVID-19 Restrictions:

No

1	**EG-03-L-03**	**MIXED HOUSING**	**EALING**

ISLIP MANOR ROAD
NORTHOLT
Edge of Town
Residential Zone
Site area: 1.2000000476837158 hect
Survey date: Wednesday 08/01/1992
Survey Type: Manual

2	**ER-03-L-01**	**MIXED HOUSING**	**EAST RENFREWSHIRE**

GLEN STREET
BARRHEAD
Suburban Area
No Sub Category
Site area: 1.7000000476837158 hect
Survey date: Tuesday 17/11/1998
Survey Type: Manual

3	**ES-03-L-03**	**HOUSES & FLATS**	**EAST SUSSEX**

HUGHENDEN ROAD
HASTINGS
ORE VALLEY
Suburban Area
Residential Zone
Site area: 0.9399999976158142 hect
Survey date: Tuesday 26/06/2018
Survey Type: Manual

4	**EX-03-L-02**	**MIXED HOUSES & FLATS**	**ESSEX**

FIRST AVENUE
CHELMSFORD
PATCHING HALL
Suburban Area
Residential Zone
Site area: 2.7899999618530273 hect
Survey date:
Survey Type: Manual

5	**HC-03-L-02**	**HOUSES/FLATS**	**HAMPSHIRE**

HUNTS POND ROAD
NEAR FAREHAM
TITCHFIELD
Edge of Town
Residential Zone
Site area: 1.0499999523162842 hect
Survey date: Tuesday 09/11/2010
Survey Type: Manual

6	**HC-03-L-04**	**MIXED FLATS & HOUSES**	**HAMPSHIRE**

WOODSIDE AVENUE
EASTLEIGH
Suburban Area
No Sub Category
Site area: 2.5299999713897705 hect
Survey date: Thursday 16/11/2023
Survey Type: Manual

7	**HM-03-L-01**	**MIXED HOUSING**	**HAMMERSMITH AND FULHAM**

STEVENAGE ROAD
FULHAM
Suburban Area
Residential Zone
Site area: 0.1599999964237213 hect
Survey date:
Survey Type: Manual

8	**LS-03-L-01**	**FLATS & HOUSES**	**LEEDS**

STATION ROAD
LEEDS
HORSFORTH

Edge of Town
Residential Zone
Site area: 1.6399999856948853 hect
Survey date: Wednesday 21/09/2016 Survey Type: Manual

9	**NF-03-L-01**	**TERRACED/FLATS**	**NORFOLK**

POTTERGATE
NORWICH
Edge of Town Centre
Built-Up Zone
Site area: 0.30000001192092896 hect
Survey date: Tuesday 07/11/2000 Survey Type: Manual

10	**RB-03-L-01**	**MIXED HOUSES & FLATS**	**REDBRIDGE**

LONG GREEN
HAINAULT
Edge of Town
Residential Zone
Site area: 2.119999885559082 hect
Survey date: Tuesday 28/11/2017 Survey Type: Manual

11	**SW-03-L-01**	**MIXED HOUSING**	**SWANSEA**

NEATH ROAD
SWANSEA
HAFOD
Edge of Town
No Sub Category
Site area: 1.2999999523162842 hect
Survey date: Wednesday 04/06/2003 Survey Type: Manual

12	**TW-03-L-02**	**MIXED HOUSES & FLATS**	**TYNE & WEAR**

HOGARTH DRIVE
WASHINGTON
COLUMBIA
Suburban Area
Residential Zone
Site area: 2.700000047683716 hect
Survey date: Tuesday 12/09/2023 Survey Type: Manual

13	**WM-03-L-01**	**TERRACED/FLATS**	**WEST MIDLANDS**

KINGSBURY ROAD
BIRMINGHAM
ERDINGTON
Suburban Area
Residential Zone
Site area: 0.5600000023841858 hect
Survey date: Tuesday 25/11/2008 Survey Type: Manual

14	**WO-03-L-01**	**TERRACED/FLATS**	**WORCESTERSHIRE**

TOLLADINE ROAD
WORCESTER
WARNDON
Edge of Town
Residential Zone
Site area: 3.200000047683716 hect
Survey date: Friday 08/03/2002 Survey Type: Manual

TRIP RATE for Land Use 03 - RESIDENTIAL/L - MIXED AFFORD HOUS (FLATS AND HOUSES)

Total Vehicles

Calculation factor: 1 DWELLS

**BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
Data before 07:00 deselected by time slice					
07:00-08:00	**14**	**82**	**0.076**	**0.196**	**0.272**
08:00-09:00	**14**	**82**	**0.128**	**0.226**	**0.354**
09:00-10:00	**14**	**82**	**0.141**	**0.157**	**0.298**
10:00-11:00	**14**	**82**	**0.129**	**0.141**	**0.270**
11:00-12:00	**14**	**82**	**0.131**	**0.136**	**0.267**
12:00-13:00	**14**	**82**	**0.138**	**0.119**	**0.257**
13:00-14:00	**14**	**82**	**0.138**	**0.153**	**0.291**
14:00-15:00	**14**	**82**	**0.151**	**0.139**	**0.290**
15:00-16:00	**14**	**82**	**0.217**	**0.190**	**0.407**
16:00-17:00	**14**	**82**	**0.216**	**0.182**	**0.398**
17:00-18:00	**14**	**82**	**0.239**	**0.158**	**0.397**
18:00-19:00	**14**	**82**	**0.214**	**0.137**	**0.351**
Data after 19:00 deselected by time slice					
Total Rates:			**1.918**	**1.934**	**3.852**

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.

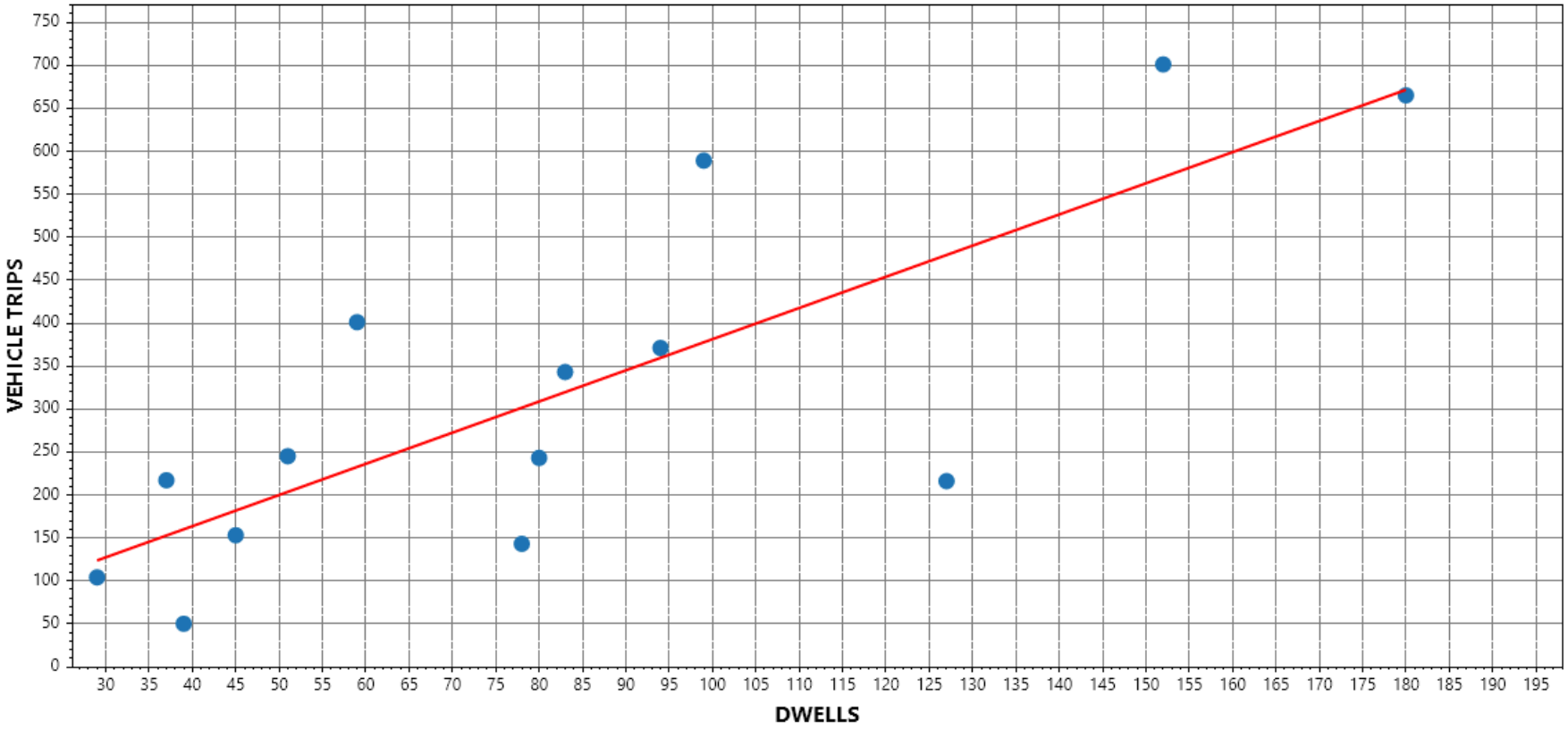
*To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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.*

Parameter Summary:

Trip rate parameter range selected:	18 - 200 (units: DWELLS)
Survey date date range:	08/01/1992 - 25/03/2024
Number of weekdays (Monday-Friday):	14
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	12
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.

SCATTER PLOT - Total Time Range: 07:00-19:00 Total Vehicles CALCULATION FACTOR DWELLS



Calculation Reference: AUDIT-751101-250808-0853

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
Category : C - INDUSTRIAL UNIT
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST		
	HC	HAMPSHIRE	1 days
03	SOUTH WEST		
	DV	DEVON	1 days
	SM	SOMERSET	1 days
04	EAST ANGLIA		
	PB	PETERBOROUGH	1 days
06	WEST MIDLANDS		
	WK	WARWICKSHIRE	1 days
	WM	WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YORKSHIRE	1 days
08	NORTH WEST		
	BP	BLACKPOOL	1 days
	EC	CHESHIRE EAST	1 days
11	SCOTLAND		
	FI	FIFE	1 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:	1010 to 9216 (units: sqm)
Range Selected by User:	1000 to 10000 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/16 to 29/06/23

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	1 days
Tuesday	1 days
Wednesday	2 days
Thursday	6 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)	3
Edge of Town	7

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:

Servicing vehicles Included	2 days - Selected
Servicing vehicles Excluded	13 days - Selected

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

Secondary Filtering selection (Cont.):

Population within 1 mile:

5,001 to 10,000	3 days
10,001 to 15,000	2 days
15,001 to 20,000	1 days
20,001 to 25,000	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	2 days
75,001 to 100,000	3 days
100,001 to 125,000	1 days
125,001 to 250,000	3 days
250,001 to 500,000	1 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	1 days
1.1 to 1.5	9 days

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

Travel Plan:

No	10 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	10 days

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

LIST OF SITES relevant to selection parameters

1 BP-02-C-01 POWDER COATINGS BLACKPOOL
CHORLEY ROAD
BLACKPOOL
LITTLE CARLETON
Edge of Town
Industrial Zone
Total Gross floor area: 1010 sqm
Survey date: THURSDAY *20/06/19* *Survey Type: MANUAL*

2 DV-02-C-02 ENERGY RECOVERY FACILITY DEVON
GRACE ROAD SOUTH
EXETER
MARSH BARTON TRAD. EST.
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 3513 sqm
Survey date: THURSDAY *06/07/17* *Survey Type: MANUAL*

3 EC-02-C-01 OFFICE FURNITURE CHESHIRE EAST
BRUNEL ROAD
MACCLESFIELD
LYME GREEN BUS. PARK
Edge of Town
Development Zone
Total Gross floor area: 6658 sqm
Survey date: MONDAY *19/09/16* *Survey Type: MANUAL*

4 FI-02-C-02 GLASS SPECIALISTS FIFE
DICKSON STREET
DUNFERMLINE

Edge of Town
Industrial Zone
Total Gross floor area: 1240 sqm
Survey date: THURSDAY *20/04/23* *Survey Type: MANUAL*

5 HC-02-C-01 ENGINEERING COMPANY HAMPSHIRE
JAYS CLOSE
BASINGSTOKE

Edge of Town
Industrial Zone
Total Gross floor area: 3000 sqm
Survey date: THURSDAY *16/06/16* *Survey Type: MANUAL*

6 NY-02-C-03 WORKWEAR MANUFACTURER NORTH YORKSHIRE
WETHERBY ROAD
KNARESBOROUGH

Edge of Town
Industrial Zone
Total Gross floor area: 1500 sqm
Survey date: THURSDAY *29/06/23* *Survey Type: MANUAL*

7 PB-02-C-01 STEEL FABRICATOR PETERBOROUGH
NEWARK ROAD
PETERBOROUGH
FENGATE
Edge of Town
Industrial Zone
Total Gross floor area: 1772 sqm
Survey date: THURSDAY *29/09/22* *Survey Type: MANUAL*

8 SM-02-C-01 WET BLASTING EQUIPMENT SOMERSET
ROBINS DRIVE
BRIDGWATER

Suburban Area (PPS6 Out of Centre)
No Sub Category
Total Gross floor area: 2300 sqm
Survey date: WEDNESDAY *14/09/22* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9 WK-02-C-01 MACHINE ENGINEERING WARWICKSHIRE
CASTLE MOUND WAY
RUGBY

Edge of Town
Industrial Zone
Total Gross floor area: 9216 sqm
Survey date: WEDNESDAY *10/11/21* *Survey Type: MANUAL*

10 WM-02-C-04 FOUNDRY WEST MIDLANDS
STOURVALE ROAD
STOURBRIDGE
LYE
Suburban Area (PPS6 Out of Centre)
Industrial Zone
Total Gross floor area: 4324 sqm
Survey date: TUESDAY *21/11/17* *Survey Type: MANUAL*

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
BO-02-C-01	Undertaken during identified Covid period
EC-02-C-02	Undertaken during identified Covid period
GS-02-C-02	Undertaken during identified Covid period
TV-02-C-02	Undertaken during identified Covid period
VG-02-C-01	Undertaken during identified Covid period

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
TOTAL VEHICLES
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	1	9216	0.098	1	9216	0.000	1	9216	0.098
06:00 - 07:00	2	5228	0.134	2	5228	0.000	2	5228	0.134
07:00 - 08:00	10	3453	0.405	10	3453	0.055	10	3453	0.460
08:00 - 09:00	10	3453	0.478	10	3453	0.038	10	3453	0.516
09:00 - 10:00	10	3453	0.214	10	3453	0.122	10	3453	0.336
10:00 - 11:00	10	3453	0.148	10	3453	0.110	10	3453	0.258
11:00 - 12:00	10	3453	0.122	10	3453	0.142	10	3453	0.264
12:00 - 13:00	10	3453	0.182	10	3453	0.252	10	3453	0.434
13:00 - 14:00	10	3453	0.174	10	3453	0.220	10	3453	0.394
14:00 - 15:00	10	3453	0.098	10	3453	0.127	10	3453	0.225
15:00 - 16:00	10	3453	0.078	10	3453	0.153	10	3453	0.231
16:00 - 17:00	10	3453	0.041	10	3453	0.403	10	3453	0.444
17:00 - 18:00	10	3453	0.017	10	3453	0.333	10	3453	0.350
18:00 - 19:00	9	3699	0.012	9	3699	0.072	9	3699	0.084
19:00 - 20:00	1	9216	0.000	1	9216	0.000	1	9216	0.000
20:00 - 21:00	1	9216	0.000	1	9216	0.000	1	9216	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.201			2.027			4.228

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.

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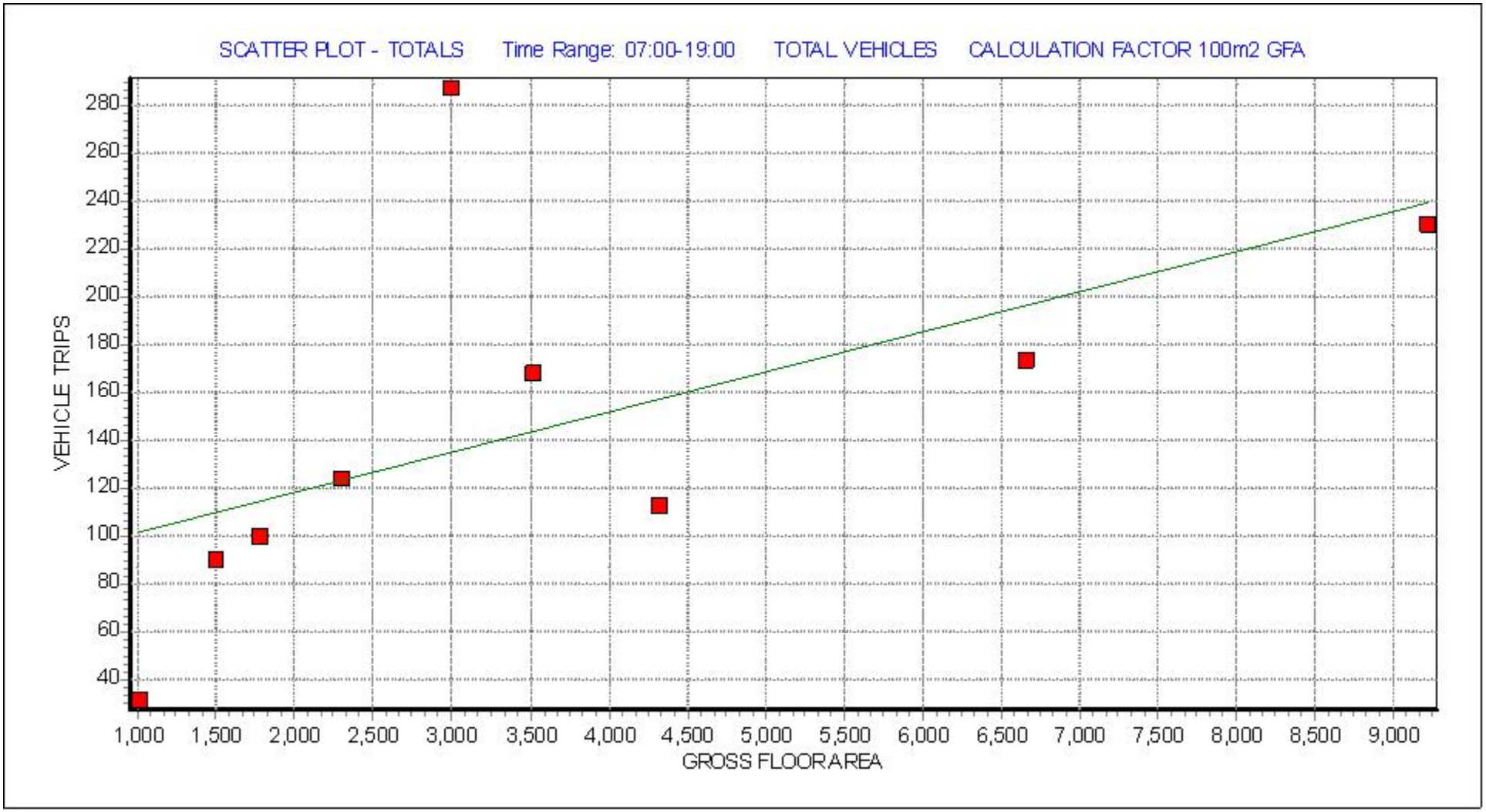
Parameter summary

Trip rate parameter range selected:	1010 - 9216 (units: sqm)
Survey date date range:	01/01/16 - 29/06/23
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:	5

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.


SCATTER PLOT - TOTALS Time Range: 07:00-19:00 TOTAL VEHICLES CALCULATION FACTOR 100m2 GFA
VEHICLE TRIPS
280
260
240
220
200
180
160
140
120
100
80
60
40
1,000
1,500
2,000
2,500
3,000
3,500
4,000
4,500
5,000
5,500
6,000
6,500
7,000
7,500
8,000
8,500
9,000
GROSS FLOOR AREA