



# **CELTIC DEVELOPMENTS PENARTH LTD**

## **LAND AT NORTHCLIFF LODGE, PENARTH**

### **TRANSPORT STATEMENT**

#### **DECEMBER 2015**

Longcross Court, 47 Newport Road, Cardiff, CF24 0AD


Tel: 029 2045 5321



## Document Control

Project: Land at Northcliff Lodge, Penarth  
Client: Celtic Developments Penarth Ltd.  
Job Number: A094791

### Document Checking:

Prepared by: Phillip Ayres	Signed: 
----------------------------	---

Checked by: Matthew Perry	Signed: 
---------------------------	---

Verified by: Matthew Perry	Signed: 
----------------------------	---

Issue	Date	Status
1	November 2015	Draft
2	December 2015	For planning
3		
4		



## **Contents Page**

1.0	Introduction.....	1
2.0	Existing Conditions.....	2
3.0	Accessibility by Sustainable Modes of Transport .....	3
4.0	Proposed Development.....	7
5.0	Residential Trip Generation.....	10
6.0	Summary and Conclusions.....	11



## **List of Figures**

Figure 2.1 Site Location and Local Facilities Plan

Figure 3.1 Sustainable Transport Plan

## **Appendices**

Appendix A – Masterplan

Appendix B – Site Access

Appendix C – Swept Path Analysis

Appendix D – TRICS Output



## 1.0 Introduction

- 1.1.1 WYG have been appointed to prepare a Transport Statement (TS) for a proposed residential development comprising 30 apartments on land east of Northcliffe Drive, Penarth.
- 1.1.2 The client team has undertaken initial scoping with the Vale of Glamorgan (VOG) regarding the proposed development.
- 1.1.3 This TS outlines the highway and transport matters in relation to the development proposals and considers the accessibility of the site by sustainable modes of transport.

## 1.2 Structure of Report

- 1.2.1 The structure of this report is summarised below:
- Section 2: Describes the existing conditions on the transportation network surrounding the development site;
  - Section 3: Identifies the accessibility of the site by sustainable modes of transport;
  - Section 4: Outlines the characteristics of the proposed development and details the access arrangements proposed to serve the site;
  - Section 5: Estimates the number of additional trips that would be generated by the proposed development;
  - Section 6: Presents a summary of the report and identifies the main conclusions that can be drawn from the Transport Statement.



## 2.0 Existing Conditions

### 2.1 Site Location

- 2.1.1 The application site is located to the east of Northcliffe Drive in Penarth, above the Custom House and Marina, and is bounded by residential properties to the west, south and east.
- 2.1.2 The location of the site is illustrated in **Figure 2.1**. The site currently comprises a single property which is accessed via Northcliffe Drive.

### 2.2 Local Highway Network

- 2.2.1 The local highway network is illustrated on **Figure 2.1** of this report.
- 2.2.2 The site is located directly north of Paget Place in Penarth and to the east of Northcliffe Drive. The latter is a cul-de-sac that takes its access from Paget Place, a residential street that runs east and then south to the A4160 Windsor Road. To the west, Paget Place continues south, and provides access to the A4160 via Albert Road.
- 2.2.3 Albert Road forms a five-arm roundabout with the A4160 and two other residential streets. To the north-west, the A4160 form a signalised crossroads junction with the A4055 Barry Road.
- 2.2.4 From the crossroads with the A4160, Barry Road runs north where it forms a roundabout with the A4232, which routes north-east to Cardiff Bay and Cardiff City Centre and north-west towards the A48. To the south west, Barry Road also routes south-west towards Dinas Powys
- 2.2.5 Routing south then south-west from the five-arm roundabout with Albert Road, the A4160 Station Road from a priority junction with the B4267 Redlands Road. The B4267 runs south-west to the village of Sully, before heading west into Barry.



### 3.0 Accessibility by Sustainable Modes of Transport

#### 3.1 Introduction

3.1.1 The accessibility of the site by sustainable modes of transport is important as it can assist in reducing the number of private car trips made to and from the site. This section outlines the existing accessibility of the site by walking, cycling and public transport.

3.1.2 The site is located in an accessible location relative to Penarth town centre and offers the opportunity for new residents to travel by modes other than the private car, as outlined below.

#### 3.2 Location of Services and Facilities

3.2.1 Government guidance is that new residential developments must be located where they are not solely dependent on the use of the private car. The location of day to day services and facilities in relation to a proposed site is therefore of key consideration. The nearer services and facilities are to the site the more likely it is that future residents will choose to travel sustainably by walking, cycling or the use of public transport.

3.2.2 The locations of a number of key local destinations are shown on **Figure 2.1**. The walking distance from the centre of the site to various destinations is shown in Table 3.1 below, measured from the approximate centre of the proposed development site via the most direct route.

**Table 3.1: Walking Distance to Local Facilities**

Service or Facility	Name / Location	Walking Distance
Primary School	Headlands School	220m
Park / Leisure	Dock Park, Paget Road	300m
Public House	Clive Arms	350m
Nursery / Primary School	Albert Primary School and Nursery Unit	500m
Doctors Surgery	Albert Road Surgery	550m
Café / Restaurant	Custom House	550m
Post Office	Penarth Post Office	800m
Dentist	Penarth Dental Healthcare	850m
Local Food Store	<b>Sainsbury's Local</b>	950m
Railway Station	Penarth Railway Station	1,150m
Supermarket	Tesco	1,400m
Secondary School	Stanwell School / St Cyres School	1,850m / 2,450m

3.2.3 Guidance on appropriate walking distances is given in the Institution of Highways and Transportation



document: Providing for Journeys on Foot. In general terms, this document identifies the preferred maximum walking distance to a town centre as being 800m, for commuting or walking to school as being 2,000m and for other more general destinations as being 1,200m.

- 3.2.4 As shown in Table 3.1, a number of key services and facilities are within acceptable walking distances from the site. The Headlands School and the Clive Arms public house are located within 400m walk of the site. There are also a range of community and local facilities including a shop and a cafe within the local area which are readily accessible on foot or by bicycle. The Stanwell Secondary School is also within 2000m of the site.

### **3.3 Pedestrian Infrastructure**

- 3.3.1 Footways are available on both sides of Paget Place and continue beyond Headlands School. The footways are lit and the adjacent road has a speed limit of 30mph. To the west of the site, there is a footway on the western side of Paget Road which connects to Penarth Portway, providing access to Penarth Marina and local restaurants.
- 3.3.2 South of the site, there are footways on both sides of Albert Road towards Penarth Town Centre. These footways are lit and the speed limit for the adjacent road reduces to 20mph in the vicinity of Albert Primary School.
- 3.3.3 There is a segregated Public Right Of Way (PROW) which runs between Royal Close and Terra Nova Way, approximately 650m west of the site. The PROW is hard surfaced and provides access to Penarth Marina and the Tesco supermarket.

### **3.4 Cycle Facilities**

- 3.4.1 There are on-road cycle markings 150m west of the site on Paget Road, which links to Penarth Portway. A local cycle route continues north from here, providing a segregated cycleway to Cardiff Bay. National Cycle Route 88 (NCR 88) runs west from Paget Road/Royal Close along Penarth Portway. From here, principally traffic free local cycle routes provide links to Cardiff Bay and Cardiff City Centre.
- 3.4.2 NCR 88 continues south from Royal Close/Paget Road via Arcot Street towards Penarth Railway Station. From Penarth Station NCR 88 becomes a principally off-road cycleway to Sully, following the Railway Walk.
- 3.4.3 There is an on-road cycle track on Plassey Street running in an east-west direction from Arcot Street,





located approximately 650m south of the site. This route provides a link to Cogan Railway Station.

- 3.4.4 The site is therefore suitably located to encourage cycling to local employment areas including those located within Cardiff Bay and Cardiff City Centre.
- 3.4.5 In addition to the above, there are cycle parking facilities at Penarth railway station, Tesco supermarket and in Penarth Town Centre.

### 3.5 Public Transport

- 3.5.1 A regular bus service (route 89A/B) runs between Dinas Powys and Cardiff via Penarth, operated by Watts Coaches, to an hourly frequency Monday to Saturday. The service routes via the bus stops located on Paget Place, approximately 75m south of the site. There is a flag and timetable at these stops.
- 3.5.2 There are also a number of other bus services which travel along Windsor Road, located approximately 800m south of the development site. These stops can be accessed via footways on Paget Place and Albert Road. The number 92, 93 and 94 bus services run between Penarth and Cardiff and are operated by Cardiff Bus. The three hourly services combined provide frequent services to Cardiff and Barry.
- 3.5.3 A summary of these services are shown in Table 3.1 below, and is illustrated on **Figure 3.1**.

**Table 3.1: Existing Bus Service Summary**

No.	Route	Operator	Service		Mon-Fri	Saturday	Sunday
<b>Services from Paget Place</b>							
89A/B	Dinas Powys – Penarth - Cardiff	Watts Coaches	To Cardiff	First	08:22	08:22	No service
			From Cardiff	Last	17:00	17:00	
			Frequency		Hourly	Hourly	n/a
<b>Services from Windsor Road</b>							
92	Penarth - Cardiff	Cardiff Bus	To Cardiff	First	06:29	06:29	07:15
			From Cardiff	Last	23:19	23:19	17:30
			Frequency		Hourly	Hourly	Hourly
93	Barry – Penarth - Cardiff	Cardiff Bus	To Barry	First	07:33	08:36	No service
			From Barry	Last	17:34	17:34	
			Frequency		Hourly	Hourly	n/a
94	Cardiff – Penarth – Sully - Barry	Cardiff Bus	To Cardiff	First	6:43	6:43	8:41
			From Cardiff	Last	22:29	22:29	23:00
			Frequency		Hourly	Hourly	Hourly



- 3.5.4 Penarth Railway Station and Dingle Road Railway Station are located 1,150m south and 1,200m south-west of the site respectively, and therefore considered within walking and cycling distance for the site. Suitable links for pedestrians and cyclists from the site to Penarth Railway Station are available via Albert Road and NCR 88. Pedestrians can access Dingle Road railway station via a footway link from Windsor Road, and a footbridge over the railway.
- 3.5.5 The stations are both served by a train every 15 minutes that travel from Penarth to Cardiff. Beyond Cardiff, the trains continue to Ystrad Mynach, Bargoed and Rhymney.
- 3.5.6 Trains from Penarth Station run between 06:02 and 23:26, with an average journey time to Cardiff Central of 12 minutes. From Cardiff Central, there are direct trains to Swansea, Bristol and London.
- 3.5.7 There is a small car park at Penarth Station, comprising 13 spaces plus 3 disabled bays, and there is also additional public parking adjacent for up to 32 vehicles. There are four secured cycle stands on the platform for up to eight bicycles.
- 3.5.8 Cardiff Waterbus operates between Cardiff Bay and the Barrage in Penarth, 500m from the site. The Waterbus provides a link across the bay, operating to a 40 minute frequency between 11:00 and 16:00 every day of the week.

### **3.6 Summary**

- 3.6.1 The above identifies that the site is well located to enable a significant proportion of local trips to be made to and from the site by sustainable modes of transport. Many day to day services are available within walking distance of the site and there are a number of on-road and traffic free cycleways linking the site with Penarth and Cardiff. In addition, the availability of public transport means that there is considerable potential for trips to and from the site to be undertaken by non-car modes of travel rather than the private car.



## 4.0 Proposed Development

### 4.1 Introduction

- 4.1.1 It is proposed to submit a planning application for a residential development of 30 apartments on land east of Northcliffe Drive, Penarth. A detailed masterplan of the site is attached as **Appendix A**.
- 4.1.2 The site consists of three rows of apartments facing north towards Cardiff Bay. As a result of the drop in levels between the middle and northern row of apartments, vehicular access is restricted to the parking area between the southern and central block of flats.

### 4.2 Site Access

- 4.2.1 The transport infrastructure proposed includes facilities for vehicles, walking and cycling in order that an integrated transport network is provided to serve the site. Access by each of these modes is detailed separately in the remainder of this section. An integrated approach to transport issues helps to ensure that the different modes of travel compliment rather than exclude each other.

### 4.3 Vehicular Access

- 4.3.1 It is proposed that the vehicular access will be taken directly from Paget Place via a new priority junction, located approximately 100m east of the junction with Northcliffe Drive and 20m west of the private access to Northcliffe Apartments, as shown in **Appendix B**. The proposed width of the access road is 5.5m. The access will include the provision of 2m pedestrian footways on both sides of the road at the bell mouth.
- 4.3.2 The required visibility to the west and east will be based on the posted speed limit of 30mph. The visibility splays drawn for this junction are therefore 2.4m x 45m, as illustrated in **Appendix B**.
- 4.3.3 North of the junction with Paget Place, it is proposed for the access road within the site to be shared surface with a total width for vehicles and pedestrians of 7.3m. A Shared surface approach for the access road is considered to be appropriate given the low number of trips associated with the development, as discussed further in the following section.

### 4.4 Parking Provision

- 4.4.1 VOG indicated in the scoping response that it would be appropriate for parking provision to be calculated using CSS Wales Parking Standards 2008. The draft VOG Parking Zones plan indicates that the development site is located within Zone 3. The standards suggest for apartments, one parking



space should be provided per bedroom (to a maximum of three per apartment). The proposed application is for 30 two bed apartments, suggesting 60 parking spaces should be provided.

4.4.2 However the parking standards allow for a reduction in the provision of parking for developments that meet specific sustainability criteria. Table 4.2 below identifies the sustainability score for the proposed development as per Schedule 6 of the Parking Standards.

**Table 4.1: Sustainability Score as per CSS Parking Standards Schedule 6**

Sustainability Criteria	Site Description	Sustainability Points
Local Facilities	Within 800m of the development site: <ul style="list-style-type: none"> <li>• Headlands School</li> <li>• Public House</li> <li>• Dock Park</li> <li>• Penarth Post Office</li> <li>• J.M. Janes Newsagent</li> <li>• Albert Road Surgery</li> </ul>	2pts
Public Transport	Bus stop is accessible within 300m of the site	3pts
Public Transport Frequency	Bus Stop on Windsor Terrace (within 800m of development site): <ul style="list-style-type: none"> <li>• Bus service every 20 minutes between the hours of 7am and 7pm</li> </ul>	2pts
Cycle route	Within 200m of the site there are on-road cycle markings on Paget Road leading to National Cycle Route 88 on Penarth Portway	1pt
Total		8pts

4.4.3 The Parking Standards state that a sustainability score of at least 7 pts result in a 1 space reduction per residential unit, where this does not result in less than one space per dwelling. Using these reductions in parking requirements, a total of 30 spaces should ideally be provided.

4.4.4 In addition to the above, Parking standards require 1 visitor space for every 5 units. As a result, six visitor spaces have been provided within the site boundary. It is therefore considered that the proposed provision of 36 parking spaces, of which 6 will be visitor spaces, is appropriate for this development.



## 4.5 Facilities for Pedestrians and Cyclists

- 4.5.1 The site access and internal layout of the development will consist primarily of shared surface. This is considered acceptable given the low number of trips likely to be associated with this development. There is also potential for a footway link from the site down the cliff towards Custom House.
- 4.5.2 Given the gradient of the site, steps are proposed between the middle and northern row of apartments. A ramp is also proposed in the north west corner of the site to provide an alternative access to the northern row of apartments.
- 4.5.3 Secured and sheltered storage for 30 cycles are proposed on site. This is double the number of stands suggested in CSS Parking Standards in order to encourage cycling. The access road has been designed to reduce gradients which will be conducive to cycling.

## 4.6 Vehicle Servicing

- 4.6.1 A Swept Path Analysis (SPA) has been undertaken for the proposed site access and internal layout to ensure it is suitable for the appropriate refuse vehicle, and attached as **Appendix C**.



## 5.0 Residential Trip Generation

- 5.1.1 This section of the TS considers the number of trips forecast to be generated by the proposed development of 30 apartments. For the purposes of this traffic assessment, it is assumed that the residential development will comprise of 100% privately owned apartments.
- 5.1.2 In order to establish predicted vehicular trip rates for the privately owned apartments, average trip rates have been taken from the TRICS database. The assessment is based on weekday AM (08:00-09:00) and PM (17:00-18:00) peak hours. The category used for the TRICS assessment is Flats Privately Owned.
- 5.1.3 To calculate the trip rates for the privately owned apartments, sites in Greater London and Ireland (Northern and Republic) were excluded. Only developments located in suburban, edge of town and neighbourhood centre areas were included, to represent the local conditions as far as possible whilst returning a reasonable number of survey sites.
- 5.1.4 The resultant vehicular trip rates and trip generation for the peak hours, based on 30 privately owned apartments, are summarised in Table 6.1 below, with the full output attached in **Appendix D**.

**Table 5.1: Residential Vehicular Trip Generation**

Residential	Weekday Morning Peak (08:00-09:00)		Weekday Evening Peak (17:00 – 18:00)	
	Arrivals	Departures	Arrivals	Departures
Trip Rate per Unit	0.119	0.381	0.393	0.143
Number of Trips (30 Units)	4	11	12	4

- 5.1.5 It is forecast that the residential development will generate 15 two-way vehicular trips during the morning peak hour and 16 two-way vehicular trips during the PM peak hour, which equates to only one vehicle trip every 4 minutes. It should also be noted the development will involve the removal of a single dwelling, resulting in a slightly lower net impact on the local highway network. This indicates the development will have a very low impact on the local highway network and as a result, it is not considered necessary to undertake any off-site traffic assessment.



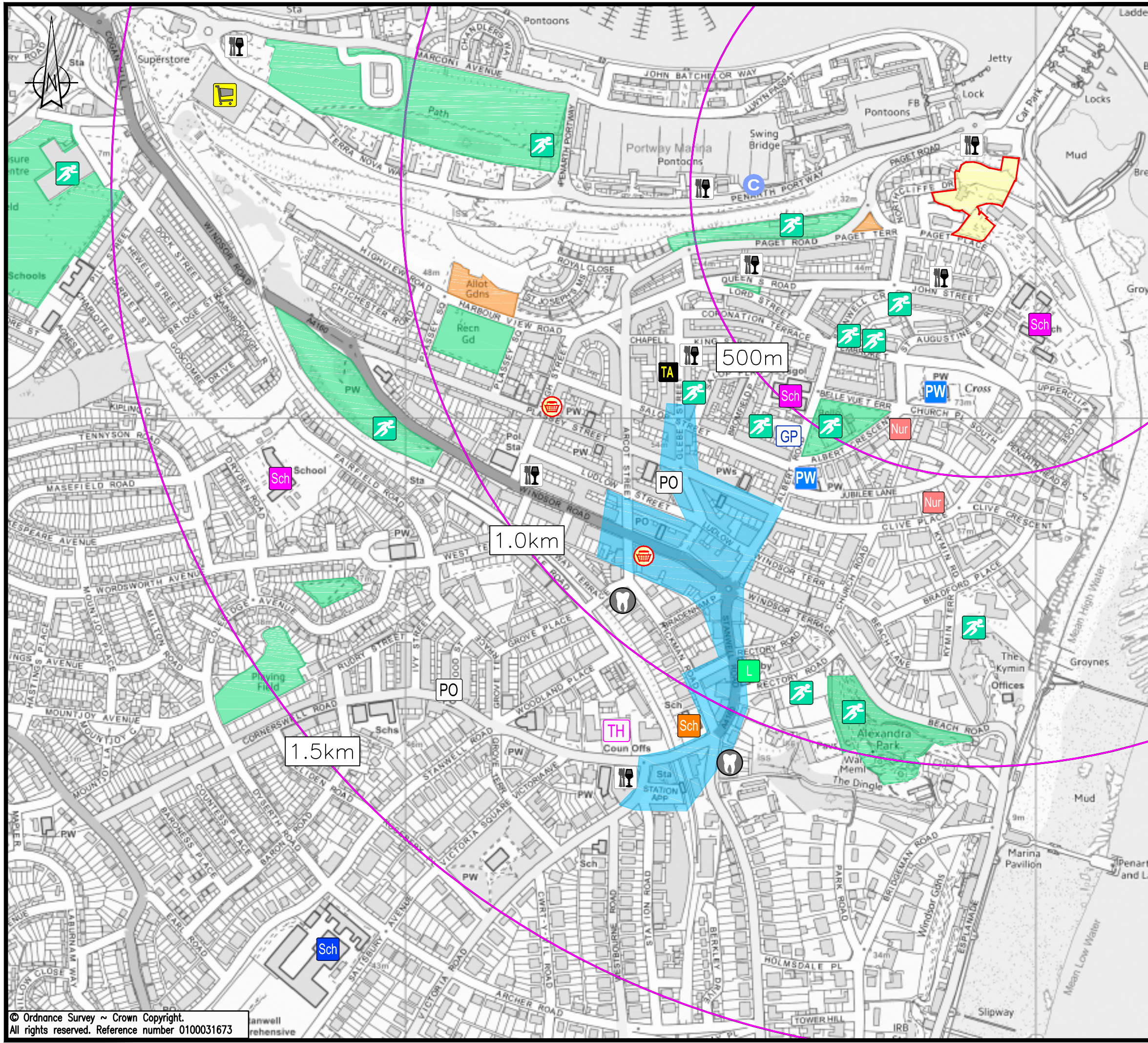
## 6.0 Summary and Conclusions

- 6.1.1 WYG have been appointed to produce a Transport Statement in support of a proposed residential development comprising 30 apartments on land east of Northcliffe Drive, Penarth, in the Vale of Glamorgan.
- 6.1.2 Vehicular access to the development site is proposed by the provision of a priority junction onto Paget Place, approximately 100m east of the junction with Northcliffe Drive. The access will include 2m wide footways on both sides of the roads at the bell mouth. The internal layout of the development consists primarily of shared surface and is considered acceptable given the low number of trips likely to be associated with this development.
- 6.1.3 There are a number of local facilities within close proximity of the site including a Primary School. There is also good accessibility to the site by cycling and public transport, with quality cycle routes to Penarth Town Centre and Cardiff, and two bus stop within close proximity of the site. These stops provide access to an hourly service to Cardiff and Dinas Powys, and other bus and rail services are also accessible.
- 6.1.4 It is forecast that the development will generate a total of 15 vehicular trips in the AM peak hour and 16 vehicular trips in the PM peak hour, indicating the proposed development will have little impact on the local highway network. It is therefore not considered necessary to undertake further assessment.
- 6.1.5 It is considered that the proposed development is acceptable in transport terms.



# Figures



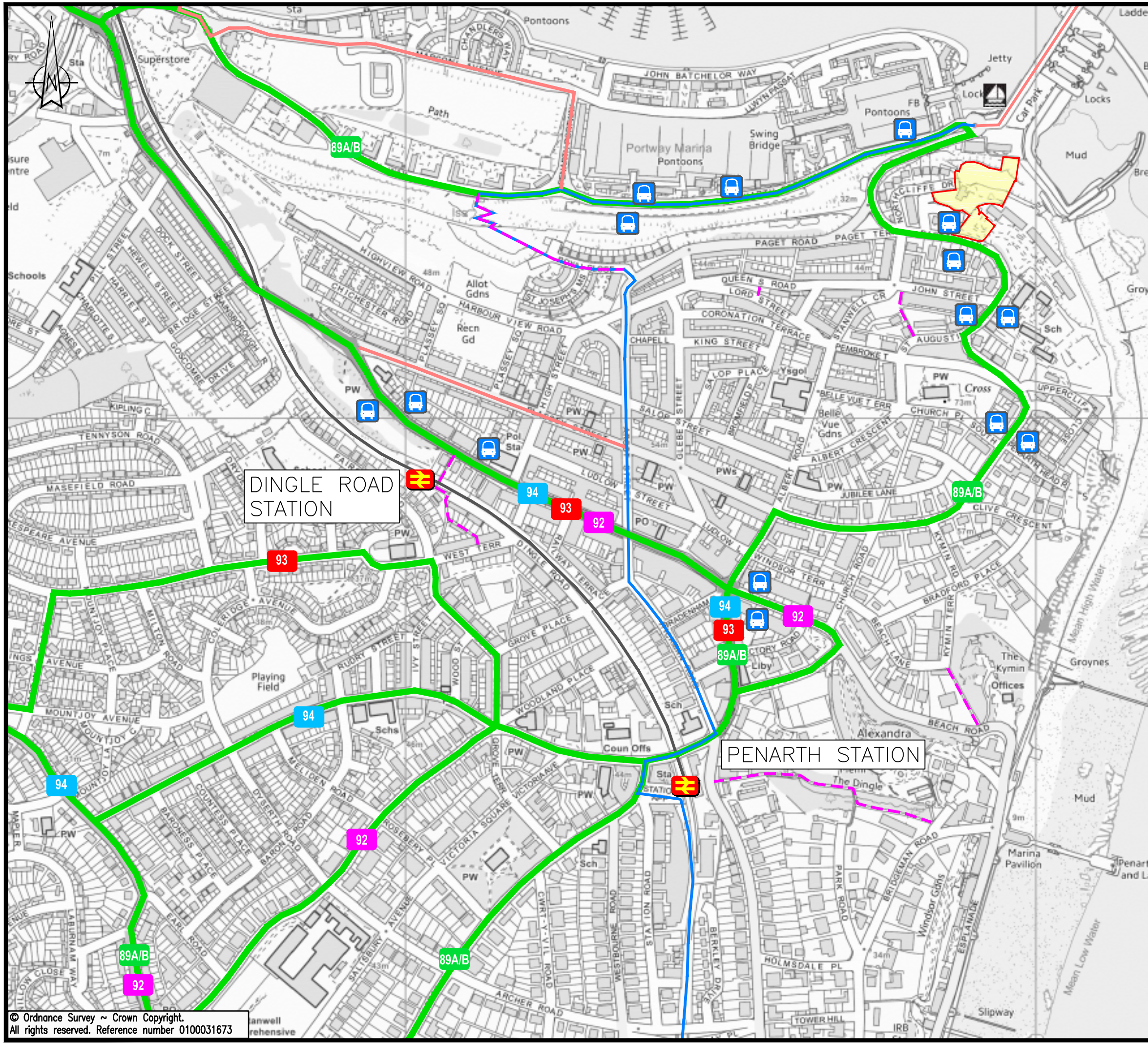


- KEY:
- SITE LOCATION
  - DISTANCE FROM SITE
  - 🛒 LOCAL SHOP
  - 🏪 SUPERSTORE
  - 🎒 NURSERY SCHOOL
  - 🎒 PRIMARY SCHOOL
  - 🎒 SECONDARY SCHOOL
  - 🎒 INDEPENDENT SECONDARY SCHOOL
  - 📖 LIBRARY
  - 👨‍⚕️ GENERAL PRACTITIONER
  - 🏃 LEISURE / COMMUNITY FACILITY
  - 🏛️ PLACE OF WORSHIP
  - 🏛️ TOWN HALL
  - 📮 POST OFFICE
  - 🍷 PUBLIC HOUSE
  - 👤 DENSIT
  - ☕ CAFE
  - 🍷 TAKE AWAY
  - 🏡 ALLOTMENTS
  - 🌳 PLAYING FIELDS / PARK
  - 🏙️ TOWN CENTRE

REV	DETAILS	DRAWN	CHECKED	DATE
CLIENT: <b>CELTIC DEVELOPMENTS PENARTH LTD</b>				
PROJECT: <b>NORTHCLIFF, PENARTH</b>				
DRAWING TITLE: <b>SITE LOCATION AND LOCAL FACILITIES PLAN</b>				
SCALES: <b>NTRS</b>		SHEET SIZE: <b>A3</b>		
DRAWN: BJ	CHECKED: PA/MP	DATE: 04.11.2015		
<p>part of WYG group</p> <p>5th Floor, Longcross Court 47 Newport Road, Cardiff, CF24 0AD t: 029 2082 9200 f: 029 2045 5321 e: transport.cardiff@wyg.com</p>				
DRAWING NUMBER: <b>A094791_FIGURE 2.1</b>				REVISION: -

© Ordnance Survey ~ Crown Copyright.  
All rights reserved. Reference number 0100031673

NOTE: THE PROPERTY OF THIS DRAWING AND DESIGN IS VESTED IN WYG ENVIRONMENT PLANNING TRANSPORT LTD. IT MUST NOT BE COPIED OR REPRODUCED IN ANY WAY WITHOUT THEIR PRIOR WRITTEN CONSENT.



- KEY:**
- SITE LOCATION
  - 89A/B DINAS POWYS – CARDIFF VIA PENARTH BUS ROUTE (HOURLY SERVICE)
  - 92 PENARTH – CARDIFF VIA COGAN BUS ROUTE (HOURLY SERVICE)
  - 93 BARRY – CARDIFF VIA PENARTH BUS ROUTE (HOURLY SERVICE)
  - 94 BARRY – CARDIFF VIA SULLY BUS ROUTE (HOURLY SERVICE)
  - B BUS STOPS
  - W WATER BUS STOP
  - R RAILWAY STATIONS
  - RAILWAY LINE
  - CYCLE ROUTE (NCN 88)
  - LOCAL CYCLE ROUTES
  - PROW

REV	DETAILS	DRAWN	CHECKED	DATE
CLIENT: <b>CELTIC DEVELOPMENTS PENARTH LTD</b>				
PROJECT: <b>NORTHCLIFF, PENARTH</b>				
DRAWING TITLE: <b>SUSTAINABLE TRANSPORT PLAN</b>				
SCALES: <b>NTRS</b>		SHEET SIZE: <b>A3</b>		
DRAWN: BJ	CHECKED: PA/MP	DATE: 04.11.2015		
<p>WYG Transport part of WYG group</p> <p>5th Floor, Longcross Court 47 Newport Road, Cardiff, CF24 0AD t: 029 2082 9200 f: 029 2045 5321 e: transport.cardiff@wyg.com</p>				
DRAWING NUMBER: <b>A094791_FIGURE 3.1</b>				REVISION: -

© Ordnance Survey ~ Crown Copyright.  
All rights reserved. Reference number 0100031673

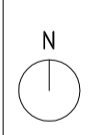
NOTE: THE PROPERTY OF THIS DRAWING AND DESIGN IS VESTED IN WYG ENVIRONMENT PLANNING TRANSPORT LTD. IT MUST NOT BE COPIED OR REPRODUCED IN ANY WAY WITHOUT THEIR PRIOR WRITTEN CONSENT.



## Appendices



## **Appendix A – Masterplan**



REVISIONS:

PROJECT  
LAND AT NORTHCLIFF LODGE

DRAWING  
PROPOSED GROUND FLOOR PLAN  
BLOCK B

SCALE  
1:200 @ A1  
DATE  
NOV 15

DRAWING NO.  
RT 1321/S204

DRAWING STATUS

PRELIMINARY	<input type="checkbox"/>	INFORMATION	<input type="checkbox"/>	APPROVAL	<input type="checkbox"/>	PLANNING	<input checked="" type="checkbox"/>
TENDER	<input type="checkbox"/>	B REGS	<input type="checkbox"/>	CONTRACT	<input type="checkbox"/>	CONSTRUCTION	<input type="checkbox"/>

LOYN & CO ARCHITECTS  
21 VICTORIA ROAD PENARTH VALE OF GLANSGRAN EF64 3EG  
T: +44 (0)129 2897632 F: +44 (0)129 2842784 E: architects@loyn.co.uk  
COPYRIGHT LOYN & CO ARCHITECTS. DO NOT SCALE THIS DRAWING EXCEPT FOR PLANNING PURPOSES



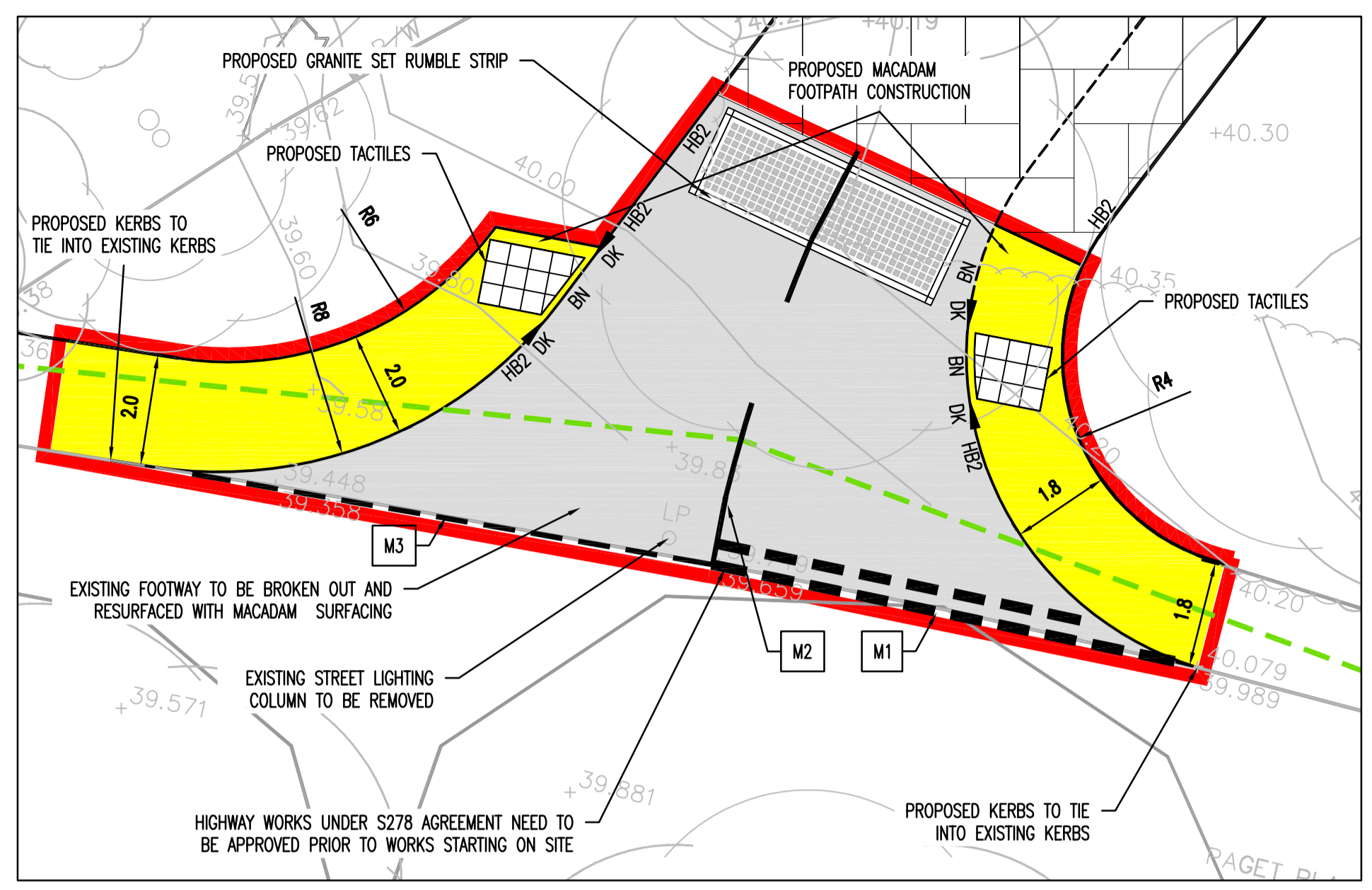
## **Appendix B – Site Access**

NOTES

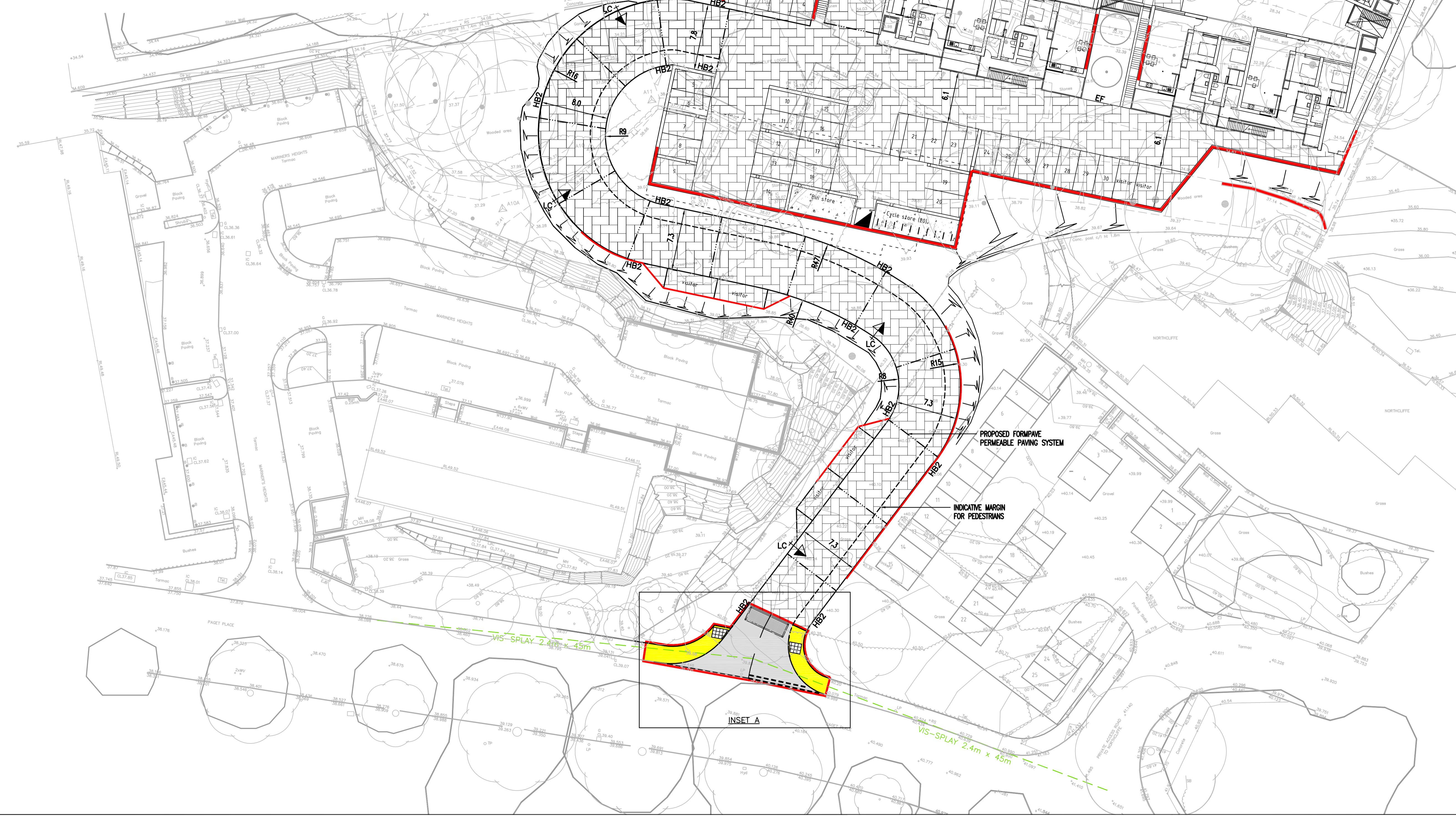
- GENERAL**
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
  2. ALL LEVELS RELATE TO ORDNANCE DATUM UNLESS NOTED OTHERWISE.
  3. DO NOT SCALE FROM THIS DRAWING. USE FIGURED DIMENSIONS ONLY.
  4. ANY DISCREPANCIES TO BE REPORTED IMMEDIATELY TO THE ENGINEER.
  5. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SUBCONTRACTORS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS.
  6. THIS DRAWING IS COPYRIGHT © PROPERTY OF SHEAR DESIGN LIMITED.

- KEY**
- PROPOSED FORMPAVE PERMEABLE PAVING SYSTEM
  - PROPOSED MACADAM SURFACING
  - HIGHWAY WORKS TO ADOPTABLE STANDARDS
  - PROPOSED CONCRETE SURFACING
  - TACTILE PAVING AT PEDESTRIAN CROSSING
  - RUMBLE STRIP
  - HB2 HALF BATTERED KERB (HB2) 125 x 255mm
  - CONCRETE KERB Baffle IN FORMPAVE SUB-BASE
  - PROPOSED STREET LIGHTING
  - M1 1003 ONE WAY LINE  
DASHED LINE 600mm PAINT 300mm GAP 200mm WIDE 300mm BETWEEN LINES IN THE PARALLEL
  - M2 1004 CENTERLINE  
DASHED LINE 4000mm PAINT 2000mm GAP 100mm WIDE
  - M3 1009 EDGE OF CARRIAGEWAY LINE  
DASHED 600mm PAINT 300mm GAP 100mm WIDE

LAYOUT SHOWN IS INDICATIVE FOR PLANNING PURPOSES ONLY AND SUBJECT TO DETAIL DESIGN



INSET A  
SCALE 1:100



REV	DATE	DESCRIPTION	BY	CHK
A	26.11.15	LAYOUT AMENDED	BH	SJM

CLIENT: CELTIC DEVELOPMENTS PENARTH LTD.

PROJECT: NORTHCLIFFE LODGE, PAGET ROAD PENARTH

TITLE: PROPOSED FINISHES PLAN

**SHEAR design**  
Consulting Civil and Structural Engineers  
7 Ashtree Court - Woody Close - Cardiff Gate Business Park - Cardiff - CF23 8RW  
Tel: 029 2054 7000 - Fax: 029 2054 7001 - www.shear-design.com - enquiries@shear-design.com

DRAWN	BH	CHECKED	SM	DATE	NOV 15	SCALE	1:250 @ A1
-------	----	---------	----	------	--------	-------	------------

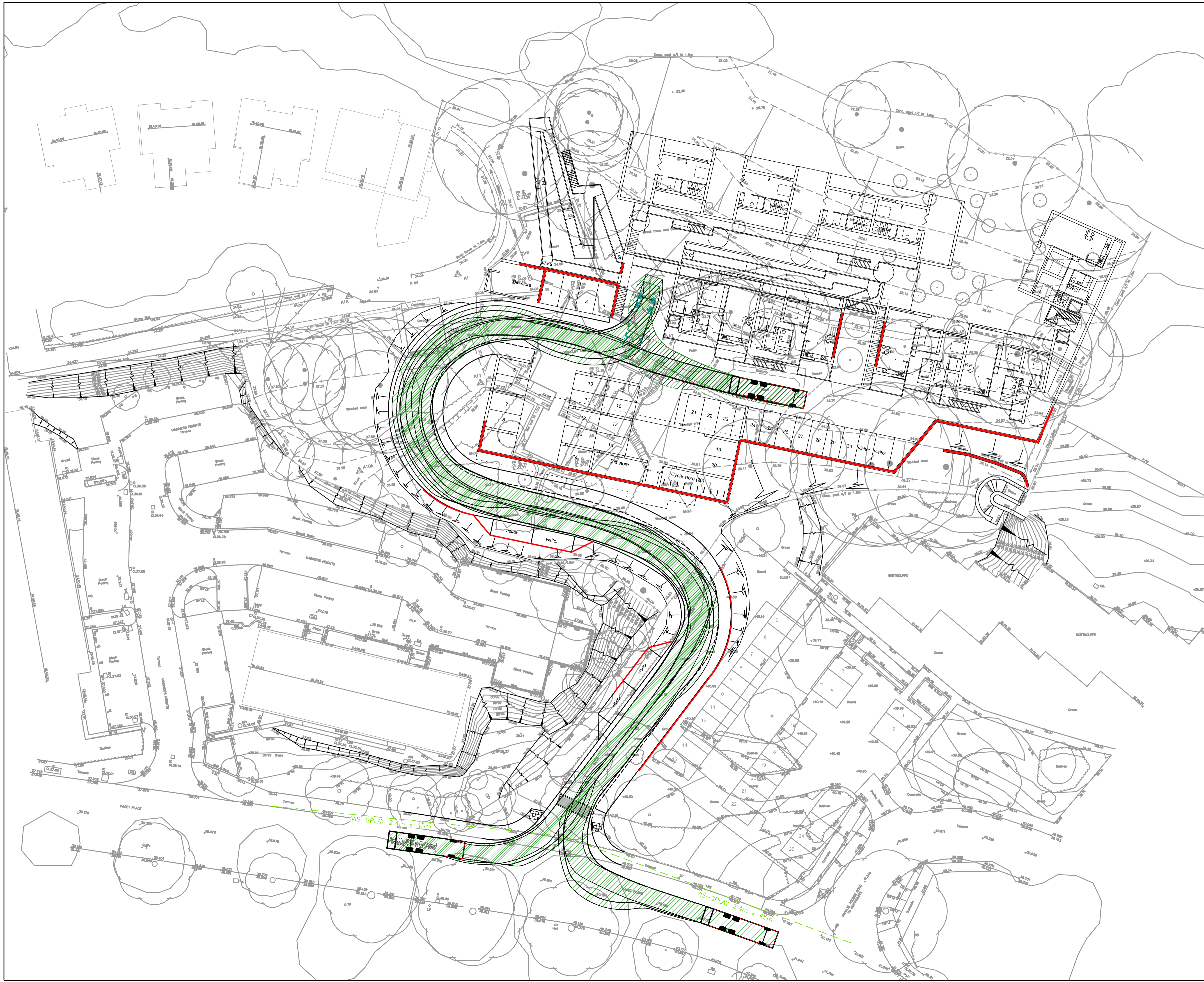
STATUS KEY: I = INFORMATION P = PRELIMINARY A = APPROVAL CO = CONTRACT  
T = TENDER C = CONSTRUCTION AB = AS-BUILT

STATUS	A	DRAWING NUMBER	15025-102	REVISION	A
--------	---	----------------	-----------	----------	---



## **Appendix C – Swept Path Analysis**

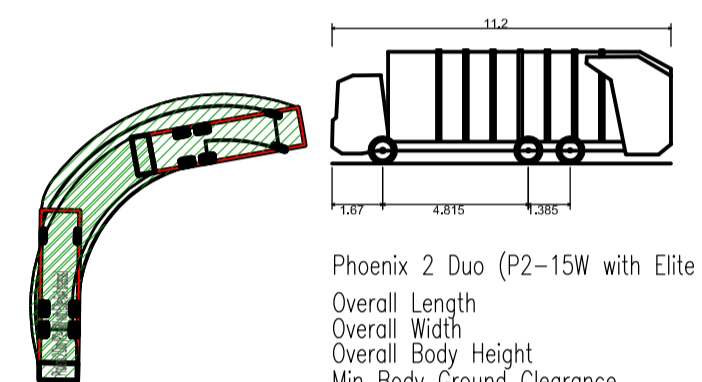




**NOTES**

- GENERAL**
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
  2. ALL LEVELS RELATE TO ORDNANCE DATUM UNLESS NOTED OTHERWISE.
  3. DO NOT SCALE FROM THIS DRAWING. USE FIGURED DIMENSIONS ONLY.
  4. ANY DISCREPANCIES TO BE REPORTED IMMEDIATELY TO THE ENGINEER.
  5. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, SUBCONTRACTORS AND SPECIALISTS DRAWINGS AND SPECIFICATIONS.
  6. THIS DRAWING IS COPYRIGHT © PROPERTY OF SHEAR DESIGN LIMITED.

**KEY**



Phoenix 2 Duo (P2-15W with Elite 6x4 chassis)

- Overall Length 11.200m
- Overall Width 2.530m
- Overall Body Height 3.751m
- Min. Body Ground Clearance 0.304m
- Track Width 2.500m
- Lock-to-lock time 4.00s
- Curb to Curb Turning Radius 9.500m

REV	DATE	DESCRIPTION	BY	CHK
AMENDMENTS				
CLIENT: CELTIC DEVELOPMENTS PENARTH LTD.				
PROJECT: NORTHCLIFFE LODGE, PAGET ROAD PENARTH				
TITLE: PROPOSED VEHICLE TRACKING				

**SHEAR design**  
 Consulting Civil and Structural Engineers

7 Ashtree Court - Woody Close - Cardiff Gate Business Park - Cardiff - CF23 8RW  
 Tel: 029 2054 7000 - Fax: 029 2054 7001 - www.shear-design.com - enquiries@shear-design.com

DRAWN: BH	CHECKED: SM	DATE: DEC15	SCALE: 1:250 @ A1
STATUS KEY: I = INFORMATION P = PRELIMINARY A = APPROVAL CO = CONTRACT		T = TENDER C = CONSTRUCTION AB = AS-BUILT	
DRAWING NUMBER: A	15025-105	REVISION: -	



## **Appendix D – TRICS Output**

Calculation Reference: AUDIT-742101-151106-1140

**TRIP RATE CALCULATION SELECTION PARAMETERS:**

Land Use : 03 - RESIDENTIAL  
 Category : C - FLATS PRIVATELY OWNED

**VEHICLES**Selected regions and areas:

02	SOUTH EAST		
	HC	HAMPSHIRE	1 days
	OX	OXFORDSHIRE	1 days
03	SOUTH WEST		
	DC	DORSET	1 days
05	EAST MIDLANDS		
	NR	NORTHAMPTONSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE		
	RI	EAST RIDING OF YORKSHIRE	1 days

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

**Filtering Stage 2 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: Number of dwellings  
 Actual Range: 14 to 20 (units: )  
 Range Selected by User: 6 to 50 (units: )

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/07 to 26/05/15

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:

Tuesday	1 days
Wednesday	1 days
Thursday	1 days
Friday	2 days

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

Selected survey types:

Manual count	5 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	4
Edge of Town	1

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:

Residential Zone	5
------------------	---

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.

**Filtering Stage 3 selection:****Use Class:**

C3	5 days
----	--------

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

**Population within 1 mile:**

1,001 to 5,000	2 days
10,001 to 15,000	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	3 days
100,001 to 125,000	1 days
125,001 to 250,000	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	2 days
1.1 to 1.5	3 days

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

**Travel Plan:**

No	5 days
----	--------

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.

LIST OF SITES relevant to selection parameters

1	DC-03-C-02	FLATS IN BLOCKS		DORSET
	PALM COURT SPA ROAD WEYMOUTH Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 14			
		Survey date: FRIDAY	28/03/14	Survey Type: MANUAL
2	HC-03-C-02	FLATS		HAMPSHIRE
	WORTING ROAD  BASINGSTOKE Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 16			
		Survey date: THURSDAY	21/10/10	Survey Type: MANUAL
3	NR-03-C-01	BLOCK OF FLATS		NORTHAMPTONSHIRE
	ROCKINGHAM ROAD  CORBY Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 20			
		Survey date: FRIDAY	21/11/08	Survey Type: MANUAL
4	OX-03-C-01	BLOCK OF FLATS		OXFORDSHIRE
	OXFORD ROAD COWLEY OXFORD Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 14			
		Survey date: WEDNESDAY	20/10/10	Survey Type: MANUAL
5	RI-03-C-01	FLATS		EAST RIDING OF YORKSHIRE
	465 PRIORY ROAD  HULL Edge of Town Residential Zone Total Number of dwellings: 20			
		Survey date: TUESDAY	13/05/14	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 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

**VEHICLES**

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	17	0.071	5	17	0.214	5	17	0.285
08:00 - 09:00	5	17	0.119	<b>5</b>	<b>17</b>	<b>0.381</b>	5	17	0.500
09:00 - 10:00	5	17	0.095	5	17	0.190	5	17	0.285
10:00 - 11:00	5	17	0.095	5	17	0.060	5	17	0.155
11:00 - 12:00	5	17	0.119	5	17	0.095	5	17	0.214
12:00 - 13:00	5	17	0.143	5	17	0.167	5	17	0.310
13:00 - 14:00	5	17	0.107	5	17	0.083	5	17	0.190
14:00 - 15:00	5	17	0.131	5	17	0.095	5	17	0.226
15:00 - 16:00	5	17	0.131	5	17	0.095	5	17	0.226
16:00 - 17:00	5	17	0.119	5	17	0.143	5	17	0.262
17:00 - 18:00	<b>5</b>	<b>17</b>	<b>0.393</b>	5	17	0.143	<b>5</b>	<b>17</b>	<b>0.536</b>
18:00 - 19:00	5	17	0.155	5	17	0.179	5	17	0.334
19:00 - 20:00	2	15	0.333	2	15	0.200	2	15	0.533
20:00 - 21:00	2	15	0.100	2	15	0.033	2	15	0.133
21:00 - 22:00	2	15	0.133	2	15	0.100	2	15	0.233
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.244			2.178			4.422

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:	14 - 20 (units: )
Survey date date range:	01/01/07 - 26/05/15
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

**TAXIS**

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	<b>17</b>	<b>0.012</b>	5	<b>17</b>	<b>0.012</b>	5	<b>17</b>	<b>0.024</b>
08:00 - 09:00	5	17	0.012	5	17	0.012	5	17	0.024
09:00 - 10:00	5	17	0.000	5	17	0.000	5	17	0.000
10:00 - 11:00	5	17	0.000	5	17	0.000	5	17	0.000
11:00 - 12:00	5	17	0.000	5	17	0.000	5	17	0.000
12:00 - 13:00	5	17	0.000	5	17	0.000	5	17	0.000
13:00 - 14:00	5	17	0.012	5	17	0.012	5	17	0.024
14:00 - 15:00	5	17	0.012	5	17	0.012	5	17	0.024
15:00 - 16:00	5	17	0.000	5	17	0.000	5	17	0.000
16:00 - 17:00	5	17	0.000	5	17	0.000	5	17	0.000
17:00 - 18:00	5	17	0.000	5	17	0.000	5	17	0.000
18:00 - 19:00	5	17	0.000	5	17	0.000	5	17	0.000
19:00 - 20:00	2	15	0.000	2	15	0.000	2	15	0.000
20:00 - 21:00	2	15	0.000	2	15	0.000	2	15	0.000
21:00 - 22:00	2	15	0.000	2	15	0.000	2	15	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.048			0.048			0.096

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: 14 - 20 (units: )  
 Survey date date range: 01/01/07 - 26/05/15  
 Number of weekdays (Monday-Friday): 5  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

OGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	17	0.000	5	17	0.000	5	17	0.000
08:00 - 09:00	5	17	0.000	5	17	0.000	5	17	0.000
09:00 - 10:00	<b>5</b>	<b>17</b>	<b>0.012</b>	<b>5</b>	<b>17</b>	<b>0.012</b>	<b>5</b>	<b>17</b>	<b>0.024</b>
10:00 - 11:00	5	17	0.000	5	17	0.000	5	17	0.000
11:00 - 12:00	5	17	0.000	5	17	0.000	5	17	0.000
12:00 - 13:00	5	17	0.012	5	17	0.012	5	17	0.024
13:00 - 14:00	5	17	0.000	5	17	0.000	5	17	0.000
14:00 - 15:00	5	17	0.000	5	17	0.000	5	17	0.000
15:00 - 16:00	5	17	0.000	5	17	0.000	5	17	0.000
16:00 - 17:00	5	17	0.000	5	17	0.000	5	17	0.000
17:00 - 18:00	5	17	0.000	5	17	0.000	5	17	0.000
18:00 - 19:00	5	17	0.000	5	17	0.000	5	17	0.000
19:00 - 20:00	2	15	0.000	2	15	0.000	2	15	0.000
20:00 - 21:00	2	15	0.000	2	15	0.000	2	15	0.000
21:00 - 22:00	2	15	0.000	2	15	0.000	2	15	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.024			0.024			0.048

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: 14 - 20 (units: )  
 Survey date date range: 01/01/07 - 26/05/15  
 Number of weekdays (Monday-Friday): 5  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

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



TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

PSVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	17	0.000	5	17	0.000	5	17	0.000
08:00 - 09:00	5	17	0.000	5	17	0.000	5	17	0.000
09:00 - 10:00	5	17	0.000	5	17	0.000	5	17	0.000
10:00 - 11:00	5	17	0.000	5	17	0.000	5	17	0.000
11:00 - 12:00	5	17	0.000	5	17	0.000	5	17	0.000
12:00 - 13:00	5	17	0.000	5	17	0.000	5	17	0.000
13:00 - 14:00	5	17	0.000	5	17	0.000	5	17	0.000
14:00 - 15:00	5	17	0.000	5	17	0.000	5	17	0.000
15:00 - 16:00	5	17	0.000	5	17	0.000	5	17	0.000
16:00 - 17:00	5	17	0.000	5	17	0.000	5	17	0.000
17:00 - 18:00	5	17	0.000	5	17	0.000	5	17	0.000
18:00 - 19:00	5	17	0.000	5	17	0.000	5	17	0.000
19:00 - 20:00	2	15	0.000	2	15	0.000	2	15	0.000
20:00 - 21:00	2	15	0.000	2	15	0.000	2	15	0.000
21:00 - 22:00	2	15	0.000	2	15	0.000	2	15	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.000			0.000			0.000

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

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

#### Parameter summary

Trip rate parameter range selected:	14 - 20 (units: )
Survey date date range:	01/01/07 - 26/05/15
Number of weekdays (Monday-Friday):	5
Number of Saturdays:	0
Number of Sundays:	0
Surveys manually removed from selection:	0

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

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

**CYCLISTS**

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	5	17	0.000	5	17	0.000	5	17	0.000
08:00 - 09:00	5	17	0.000	5	17	0.000	5	17	0.000
09:00 - 10:00	5	17	0.000	5	17	0.000	5	17	0.000
10:00 - 11:00	5	17	0.000	5	17	0.000	5	17	0.000
11:00 - 12:00	5	17	0.000	<b>5</b>	<b>17</b>	<b>0.012</b>	<b>5</b>	<b>17</b>	<b>0.012</b>
12:00 - 13:00	5	17	0.000	5	17	0.000	5	17	0.000
13:00 - 14:00	5	17	0.000	5	17	0.000	5	17	0.000
14:00 - 15:00	5	17	0.000	5	17	0.000	5	17	0.000
15:00 - 16:00	5	17	0.000	5	17	0.000	5	17	0.000
16:00 - 17:00	5	17	0.000	5	17	0.000	5	17	0.000
17:00 - 18:00	<b>5</b>	<b>17</b>	<b>0.012</b>	5	17	0.000	5	17	0.012
18:00 - 19:00	5	17	0.000	5	17	0.000	5	17	0.000
19:00 - 20:00	2	15	0.000	2	15	0.000	2	15	0.000
20:00 - 21:00	2	15	0.000	2	15	0.000	2	15	0.000
21:00 - 22:00	2	15	0.000	2	15	0.000	2	15	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.012			0.012			0.024

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: 14 - 20 (units: )  
 Survey date date range: 01/01/07 - 26/05/15  
 Number of weekdays (Monday-Friday): 5  
 Number of Saturdays: 0  
 Number of Sundays: 0  
 Surveys manually removed from selection: 0

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