



Secure Training Facility, Porth Teigr, Cardiff

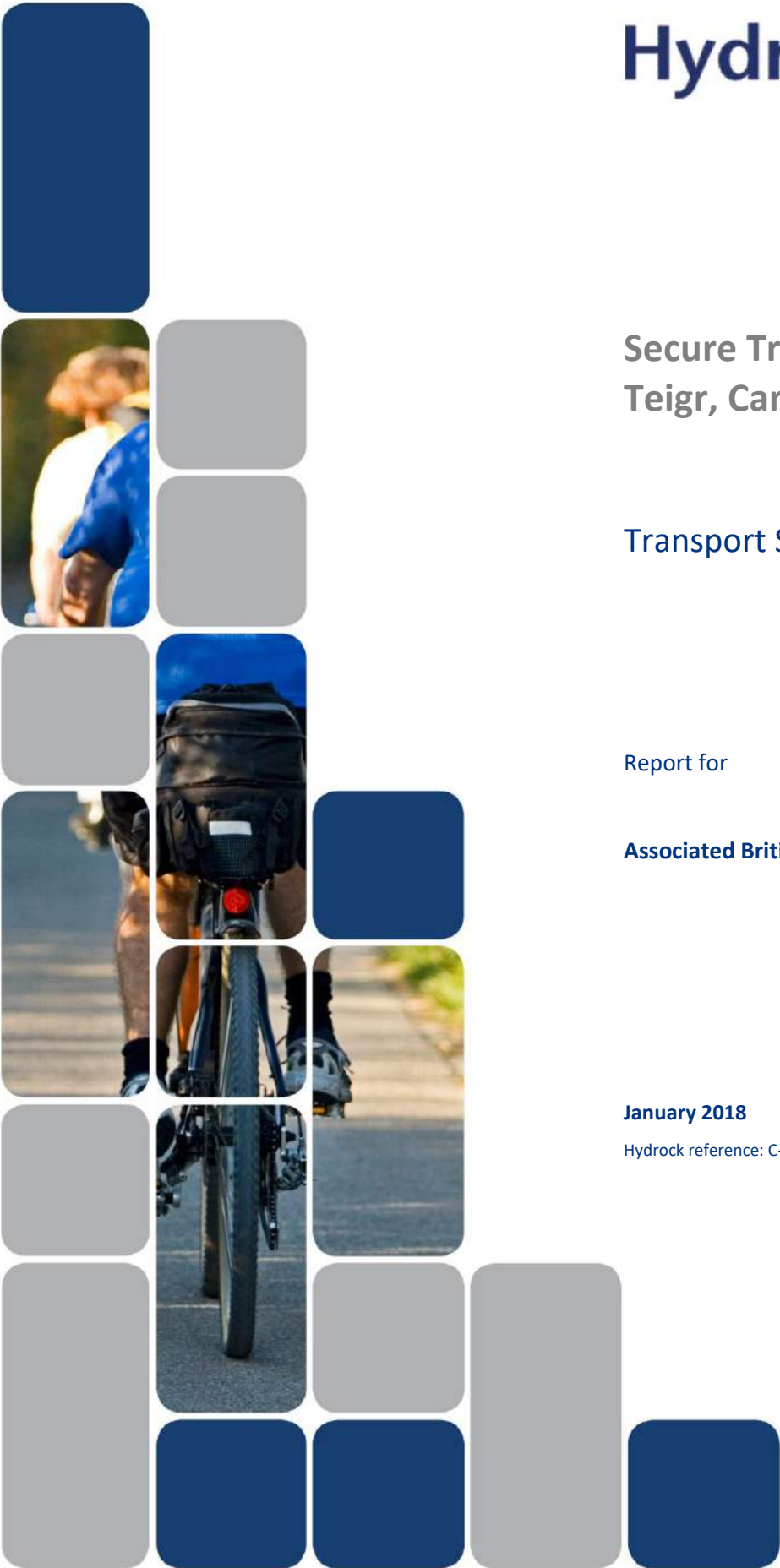
Transport Statement

Report for

Associated British Ports

January 2018

Hydrock reference: C-04330-C/002





DOCUMENT CONTROL SHEET

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Client: Associated British Ports

Project: Secure Training Facility, Port Teigr, Cardiff

Document Title: Transport Statement

Date: January 2018

Copy No.: 06

Document Production Record

Issue	Purpose/Status	Prepared by	Checked	Approved	Date
01	Draft for client comment	David Cooke	David Chapman	David Chapman	03/10/2016
02	Second Draft for client comment	David Cooke	David Chapman	David Chapman	14/10/2016
03	Final Issue to Client	David Cooke	David Chapman	David Chapman	11/01/2017
04	Final Issue to Client	David Cooke	David Chapman	David Chapman	13/01/2017
05	Final Issue to Client	David Cooke	David Chapman	David Chapman	16/01/2017
06	Final Issue to Client	David Cooke	David Chapman	David Chapman	02/01/2018

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1.0 INTRODUCTION

1.1 Overview

- 1.1.1 Hydrock have been commissioned to produce a Transport Statement (TS) in relation to the proposed development of a secure training facility on behalf of Associated British Ports (ABP).
- 1.1.2 The application site covers an area of 1.86 acres and is located on the south-eastern periphery of the Central Area Boundary directly adjacent to Roath Dock within the Porth Teigr area of Cardiff Bay.
- 1.1.3 The proposed site will comprise of training facilities, a parade ground, a gym, accommodation for up to 60 adult volunteers, 53 car parking spaces, two minibus spaces and six disabled spaces.
- 1.1.4 These facilities are proposed to be accessible 24 hours a day via controlled / secure access arrangements. The main hours of operation for the proposed training facility will however be on three weekday evenings between 1830 and 2230 and on weekends between 1930 on a Friday and 1530 on a Sunday. A total of approximately 70 adult volunteers and 10 staff are anticipated to be on-site at any one time during these hours of operation.
- 1.1.5 The majority of the movements associated with the site are likely to occur outside of the network AM (0800 – 0900) and PM (1700 – 1800) peak hours.
- 1.1.6 Outside of the main hours of operation the site will be available for use by the wider community.
- 1.1.7 Access to the site will be provided via a relocated priority junction with Tyneside Road / Cargo Road bordering the western periphery of the application site. This access will be used to service both the proposed development site and an adjacent site directly to the west of the development site.

1.2 Scope

- 1.2.1 Pre-application discussions have been held with highway officers at Cardiff Council (CC). A Scoping Note was produced detailing the approach for this TS, which has been based on advice set out in TAN18. This approach was agreed with highway officers via email on 28 September 2016. The Scoping Note and highway officer response has been included in **Appendix A**.
- 1.2.2 The Scoping Note was produced following a formal pre-application meeting which was attended by the project team and officers from the local planning authority, including the highway authority. This took place on 5th September and suggested that a Transport Statement should be produced.
- 1.2.3 The scope of transport work has therefore been through detailed pre-application discussions and agreement. The report is therefore set out as follows:
 - **Section 2** – Provides a review of the existing situation including a review of the extant site use, details of the surrounding local highway network and analysis of road safety data;
 - **Section 3** – Sets out the accessibility of the site including proximity to local facilities and amenities and the pedestrian, cycling and public transport network surrounding the site;
 - **Section 4** – Provides a summary of the development proposals, access arrangements, car parking provision, servicing arrangements and construction traffic management measures;



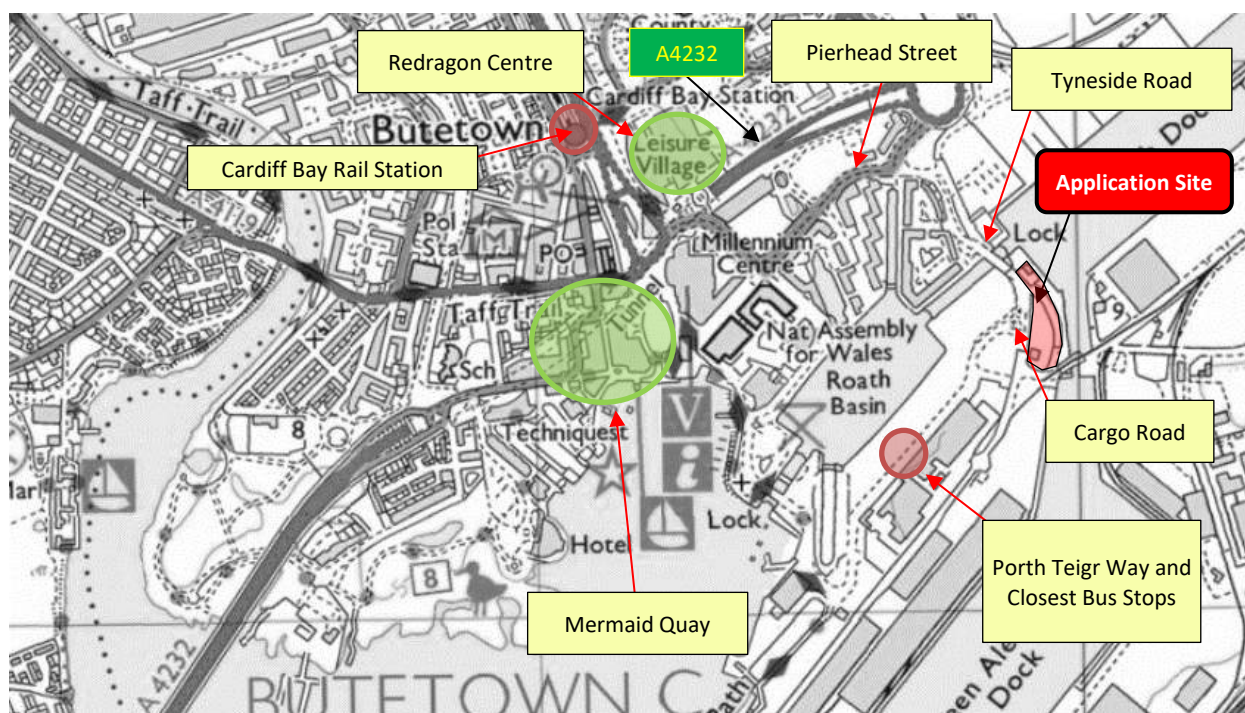
- **Section 5** – Provides analysis of the forecast trips to be generated to / from the proposed development site by all modes;
- **Section 6** – Sets out details of mitigation measures; and
- **Section 7** – Provides a summary and conclusions

2.0 EXISTING CONDITIONS

2.1 Site Location and Use

- 2.1.1 The application site is located within Cardiff Bay on land previously occupied by Cardiff Docks and is owned and maintained by ABP.
- 2.1.2 The site is bounded by a dock associated with the operation of the port of Cardiff to the north, a waterway associated with the port of Cardiff to the east, Compass Road to the south and Cargo Road to the west.
- 2.1.3 The location of the site in its wider geographical context is shown in **Figure 2.1** below.

Figure 2.1: Site Location Plan



Source: Bing Maps

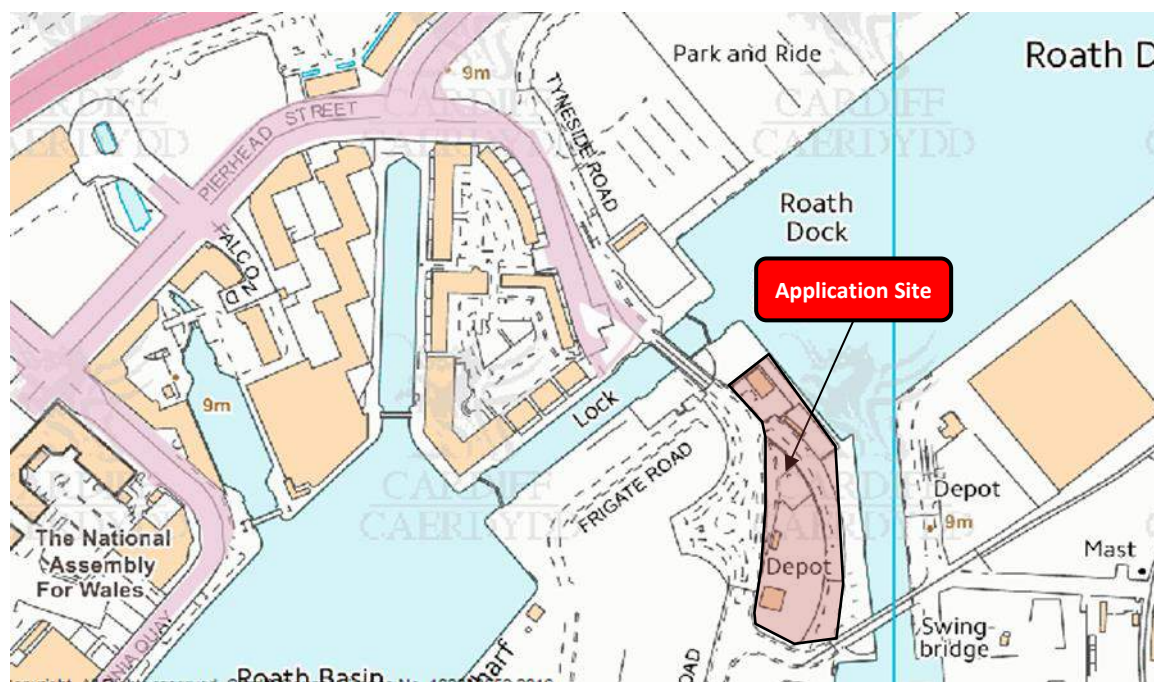
2.2 Planning History

- 2.2.1 The site appears to have primarily been used for the storage and sale of gas supplies through Air Products LTD. The extant use would therefore have generated HGV movements associated with storage operations on site.
- 2.2.2 A previous planning application (Ref:01/02091/C) was submitted on the proposed development site for the accommodation of a workshop / store and headquarters for the Sea Cadets in October 2001. Planning permission was granted for the development in December 2001.

2.3 Local Highway Network

2.3.1 The local highway network within the vicinity of the site is generally well lit, maintained to a good standard and is subject to a 30mph speed limit. On crossing of the swing bridge approximately 50 metres to the north-west of the site, the highway changes from being maintained by Cardiff Council to being privately maintained by ABP. This is shown in the adopted highway network plan in **Figure 2.2**.

Figure 2.2: Adopted Local Highway Network Extents



2.3.2 A section 38 agreement was signed in May 2008. However, formal adoption is still outstanding.

Tyneside Road

2.3.3 The proposed development site is accessed via Tyneside Road via an existing priority junction which borders the western periphery of the site. The road is a local distributor road which connects the development site to Pierhead Street and the A4232. Tyneside Road currently continues as a spur into the proposed development site and connects with Cargo Road on the site frontage directly adjacent to the existing access arrangement.

2.3.4 A swing bridge is located directly adjacent to the north-western corner of the application site. The swing bridge and the road itself, although constructed to adoptable standards, is privately maintained by Associated British Ports within the vicinity of the application site. To the north of the swing bridge the road is adopted and therefore is maintained by Cardiff Council.

2.3.5 Tyneside Road is primarily a two-way single carriageway access road approximately seven metres wide. The road widens to approximately 11 metres within the vicinity of the existing site access to provide a segregated ahead lane at the Porth Teigr Way / Cargo Road roundabout to enable access to Cardiff Docks. It also widens to 11 metres to the northwest of the swing bridge to provide a ghost island right turn lane to access Adventurers Quay.

2.3.6 Parking is prohibited along the entirety of the road by double yellow line 'no stopping or waiting at any time' Traffic Regulation orders (TRO's).



Pierhead Street

- 2.3.7 Pierhead Street is another local distributor road which connects Tyneside Road with the A4232 and A4234 to the north, via Caspian Way and a large, part-time signal controlled, 100 metre ICD roundabout, and Falcon Drive and Britannia Quay to the west via signal controlled crossroad junctions.
- 2.3.8 Pierhead Street is an urban dual carriageway road with two lanes in each direction and a carriageway width of approximately 7 metres in each direction. Two on-road bus cages are present along Pierhead Street, to the north and south of the Falcon Drive junction (both in a southbound direction) and on-street bus parking is provided between Falcon Drive and Britannia Quay on the northbound carriageway.
- 2.3.9 With the exception of the bus parking provision within the vicinity of Britannia Quay, parking is restricted along Pierhead Street through the presence of double yellow line TRO's.
- 2.3.10 A multi-storey car park is accessed from Pierhead Street, via Falcon Street. This could accommodate demand for parking within the vicinity of the site which cannot be accommodated on the site itself should this be required.

Cargo Road

- 2.3.11 Cargo Road is a privately maintained two-way access road to the Port of Cardiff owned by ABP. This commences from the existing site access providing a connection into the port from the Cargo Road / Port Teigr Way Roundabout.
- 2.3.12 Directly to the south of the roundabout vehicular movements are restricted by a gatehouse with access only permitted to vehicles associated with the operation of the port. The internal access road runs in a north – south alignment parallel to Porth Teigr Way.
- 2.3.13 The road is generally well lit and footways are located on both sides of the carriageway.
- 2.3.14 Past the gatehouse Cargo Road is subject to a 10mph speed limit which is controlled by the provision of traffic calming measures in the form of speed cushions.

Porth Teigr Way

- 2.3.15 Porth Teigr Way is another road within the vicinity of the proposed application site which is privately maintained by ABP. The road generally runs in a north – south alignment connecting with Cargo Road via a roundabout to the north and terminating for general vehicular movements at a bus gate within the vicinity of the Dr Who Exhibition to the south.
- 2.3.16 Porth Teigr Way generally consists of a two-way single carriageway road approximately 6.5 metres wide with good pedestrian and cycling infrastructure on both sides of the carriageway. Two on-road bus cages are present on both sides of Porth Teigr Way directly adjacent to the BBC Roath Lock Drama Village entrance. A shared surface environment connects the two bus stops.
- 2.3.17 Short stay pay and display parking bays are located intermittently along Porth Teigr Way within the vicinity of the BBC Drama Village. Outside of these parking bays, on-street parking is restricted by the presence of double yellow line TRO's.
- 2.3.18 Traffic calming measures in the form of speed tables are in place to assist in reducing speeds to within the 30mph speed limit.



2.4 Road Safety

- 2.4.1 Personal Injury Accident (PIA) Data has been obtained from Cardiff Council for the most recent five-year period available (1st January 2010 to 31st December 2014) on the local highway network within the vicinity of the application site. The study area and full details of the PIA data are provided within **Appendix B**.
- 2.4.2 During the five-year assessment period a total of 10 PIA's occurred within the study area. Of these nine were classed as 'slight' and one was classed as 'serious' in severity. One PIA involved a cyclist. No PIAs involving a pedestrian, motorcyclist or HGV were recorded within the study area and period.
- 2.4.3 The serious PIA involved a single vehicle losing control whilst on the circulatory carriageway of the A4232 roundabout and colliding with the raised central island.
- 2.4.4 A further eight incidents classed as slight in severity occurred either on the circulatory carriageway or approach to the A4232 roundabout. Two of these incidents were rear end shunts, two were single vehicle accidents with the drivers of the vehicles losing control of their vehicle and four occurred as a result of vehicles colliding whilst on the circulatory carriageway.
- 2.4.5 The remaining incident involved a vehicle egressing from Adventurers Quay colliding with a cyclist travelling along Tyneside Road.
- 2.4.6 There was a cluster of five PIAs on the circulatory of the A4232 Roundabout opposite the Caspian Way arm. Four of these resulted in slight injuries and one resulted in a serious injury. Two of these occurred as a result of vehicles changing lanes, one occurred due to a vehicle colliding with the deflection island, one occurred when a vehicle collided with the central island and one occurred as a result of a vehicle losing control. These accidents did not occur due to common causalities and are considered to be typical for a roundabout with high traffic volumes. Lane markings are clear on the roundabout and it is considered that these PIAs did not occur as a result of deficiencies in the highway geometry or layout.
- 2.4.7 The obtained data therefore does not indicate an issue with the geometry of the highway that would be exacerbated by the proposals.
- 2.4.8 In addition, it should be noted that improvement works are currently being carried out at the A4232 roundabout which will change the nature of the operation of the roundabout.



3.0 ACCESS BY SUSTAINABLE MODES

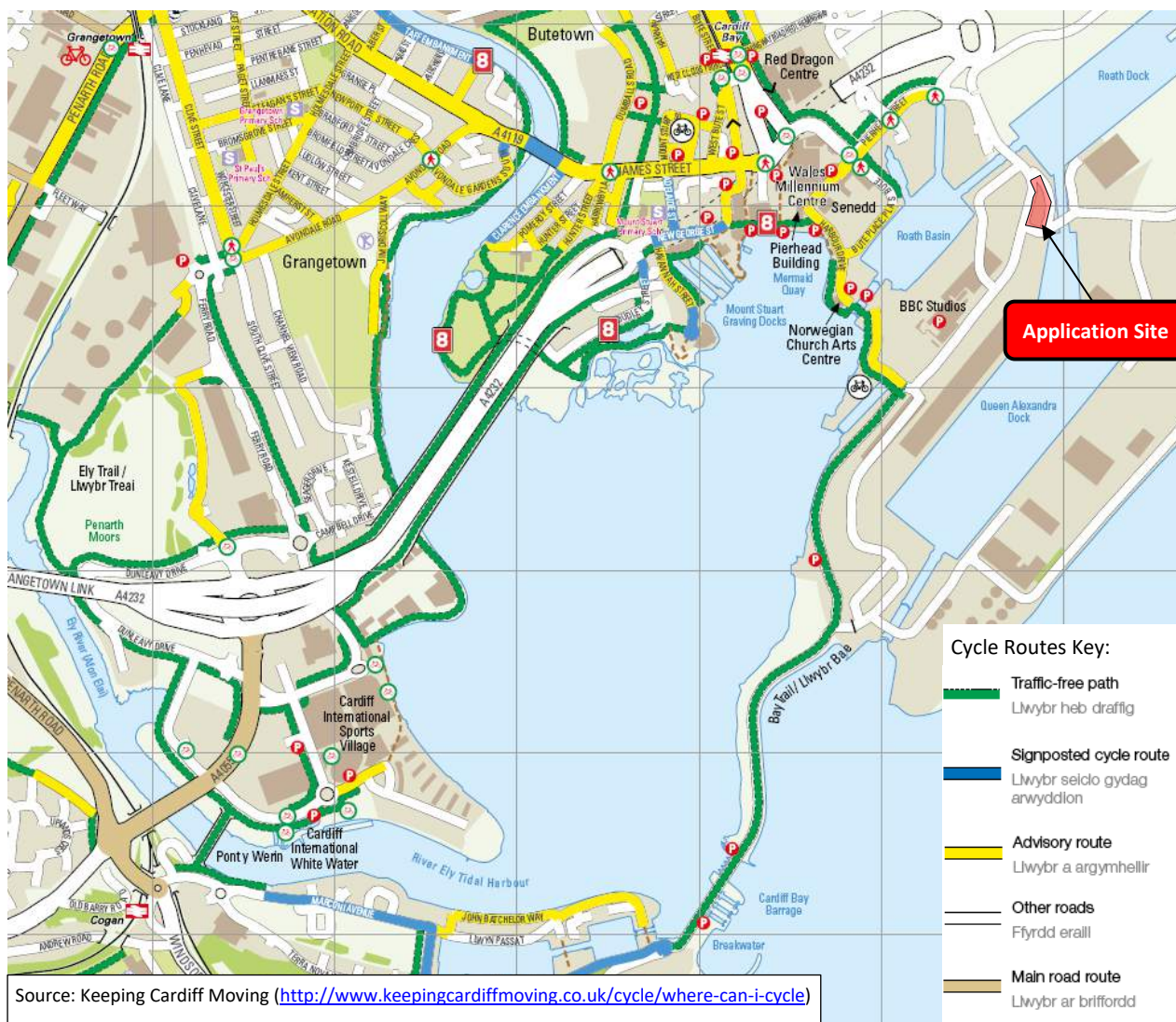
3.1 Walking and Cycling Introduction

3.1.1 The importance of walking and cycling in contributing towards sustainable travel patterns is detailed in the guidance contained within TAN18: Transport (March 2007). The guidance emphasises not only the role walking and cycling can have as main modes of transport for, inter alia, commuter journeys but also the considerable contribution they play in forming parts of longer journeys by public transport. Paragraph 6.2 of TAN18 states that Local Authorities should promote walking as the main mode of transport for shorter trips.

3.2 Walking and Cycling Infrastructure and Routes

3.2.1 The site is connected to the surrounding area via a network of footways and shared use footway / cycleways. These are of good quality, well-lit and are flat and suitable for cycling. Details of the walking and cycling infrastructure and routes within the vicinity of the site are set out within this section. The cycle network within the vicinity of the site is shown in **Figure 3.1**.

Figure 3.1 – Cycle Network Plan



Tyneside Road

- 3.2.2 Footways of between 1.5 and 4 metres in width are located on each side of Tyneside Road within the vicinity of the site.
- 3.2.3 On the western side of the carriageway there is a shared use walking and cycling path which continues along Porth Teigr Way. Within the vicinity of the site the width of this walking and cycling path is approximately 4 metres. This narrows to two metres in width due to space constraints associated with the swing bridge.
- 3.2.4 To the north-west of the bridge the footway continues with a width of between 2-3 metres. At the Adventurers Quay access a pedestrian refuge is provided to ease movements across the junction. Central refuge islands are also provided either side of the Adventurers Quay access junction linking the footways on both sides of Tyneside Road. One of the central refuge crossing points on Tyneside Road is shown in **Plate 3.1**.

Plate 3.1 – Pierhead Street Crossing



- 3.2.5 A two-metre wide footway is also provided on the eastern side of the carriageway adjacent to the site frontage. The footway on the eastern side of the carriageway terminates at the swing bridge. No crossing facilities are provided to access the footway on the western side of the carriageway between the site access and the swing bridge. The footway on the eastern side recommences opposite Adventurers Quay.
- 3.2.6 Both these footways are of good quality with a flat gradient and are well lit. The footways adjacent to the site on both sides of Tyneside Road / Cargo Road on the site frontage are shown in **Plates 3.2 and 3.3**.

Plate 3.2 - Shared Use Footway / Cycleway western side of Tyneside Road



Plate 3.3 - Footway eastern side of Tyneside Road



Pierhead Street

- 3.2.7 Good quality shared use pedestrian / cycling infrastructure is in place along both sides of Pierhead Street. These form part of a local walking and cycling route which joins National Cycle Network Route 8 at Britannia Quay.
- 3.2.8 Advanced Stop Lines for cyclists are in place at all of the signal controlled junctions along Pierhead Street to allow for priority to be given to cyclists. Pedestrian stages have been built into these junctions to allow for safe crossings. Pedestrian crossings at Caspian Way are shown in **Plate 3.4**.

Plate 3.4 - Pedestrian Crossing at Pierhead Street / Caspian Way Junction



- 3.2.9 Immediately to the southwest of the A4232 Pierhead Street / Falcon Drive junction the footway on the north-western side of the carriageway widens to a five to six-metre-wide shared surface foot / cycleway as shown in **Plate 3.5**.

Plate 3.5 - Shared Use Footway / Cycleway north-western side of Pierhead Street



3.2.10 At the two signal controlled junctions with Falcon Drive and Britannia Quay there are staggered pedestrian crossing stages on all approach arms to ease pedestrian movements.

3.2.11 At its signalised crossing with Bute Place the shared use footway / cycleway on Pierhead Street joins National Cycle Network Route 8 which consists of a five to six-metre-wide shared use cycle path as shown in **Plates 3.6** and **3.7** below.

Plate 3.6 - National Cycle Network Route 8



Plate 3.7 - National Cycle Network Route 8 Bute Place



Porth Teigr Way

3.2.12 Dropped kerbs and tactile paving are provided at the uncontrolled crossing points on all arms at the Porth Teigr Way / Cargo Road roundabout as shown in **Plate 3.8**.

Plate 3.8 – Cargo Road Crossing



3.2.13 The shared use foot / cycleway in place on the north-western side of Cargo Road continues along Porth Teigr Way at a width of between four and six metres as shown in **Plate 3.9**.

Plate 3.9 - Shared Footway / Cycleway Porth Teigr Way



3.2.14 Within the vicinity of the Roath Dock bus stops and the BBC drama village main entrance a shared space environment is present with a raised carriageway speed table facility giving no clear priority to either vehicles and pedestrians. This is shown in **Plate 3.10**.

Plate 3.10 - Shared Surface Environment outside BBC Drama Village



3.2.15 Within the vicinity of the BBC drama village, pedestrians and cyclists have an option of continuing along the shared use path along Porth Teigr Way or spurring off via a shared use footway / cycleway on the south-eastern side of Roath Dock as shown in **Plates 3.11** and **3.12**.

Plate 3.11 Footway / Cycleway on South-eastern side of Roath Dock



Plate 3.12 Footway / Cycleway on South-western side of Roath Dock



Roath Basin Footway / Cycleway

3.2.16 A dedicated footway / cycleway links the swing bridge to Britannia Park in the south west running adjacent to Roath Basin. This has a minimum width of four metres. Two bridges over the wharf sidings are provided to allow for a more direct route. The routes are well lit and maintained with good natural surveillance and provide a convenient walking route from the site to areas in the south. The footway / cycleways are shown in **Plates 3.13, 3.14 and 3.15**.

Plate 3.13 - Roath Dock Shared Footway / Cycleway



Plate 3.14 - Roath Dock Shared Footway / Cycleway



Plate 3.15 - Roath Dock Shared Footway / Cycleway



Enfys Route 4 and National Cycle Routes

3.2.17 Enfys Route 4 offers a direct connection between Cardiff Bay and Cardiff City Centre along Lloyd George Avenue via a 14-metre-wide shared use footway / cycleway as shown in **Plate 3.16**. This route connects to Pierhead Street via Bute Place.

Plate 3.16 - Shared Footway / Cycleway Lloyd George Avenue



- 3.2.18 This route links with Mermaid Quay, Penarth, the international sports village and Cardiff Bay Railway Station. It also connects with NCN Route 8 which provides a cycle route through Llandaff and Caerphilly and NCN Route 42 which provides a cycle route through Leckwith and Fairwater through to St Fagans.
- 3.2.19 As part of the ENFYS Cardiff Cycle Network significant signage is provided for cyclists detailing the appropriate route and expected journey times to key destinations. An example of the cycle route signage within the vicinity of the site is shown in **Plate 3.17**.

Plate 3.17 – Cycle Signage



Overall routes summary

- 3.2.20 The footways, cycleways and crossings provide good walking and cycling routes to and from the site to local facilities and amenities which may be required by users of the site and to local public transport stops and facilities.
- 3.2.21 Some areas within the vicinity of the site are currently undeveloped and some routes therefore do not benefit from good natural surveillance. However, the masterplan for the area proposes the redevelopment of the various plots fronting Roath Dock, including the provision of additional mixed use local facilities and amenities and residential apartments. This will enhance the built-up nature of the area and further improve walking and cycling routes.



3.3 Walking and Cycling Distances

3.3.1 There are a number of publications which suggest guidance for appropriate walking and cycling distances to facilities. For reference, these have been summarised as follows.

Welsh Government - *Active Travel (Wales) Act 2013*: Within the Active Travel Act Design Guidance (ATADG) it is stated within paragraph 4.1.4 that “*walking as a mode of travel predominates for journeys of less than two miles whilst cycling is more convenient for longer journeys, typically of up to five miles for regular journeys*”. This equates to walking distances of up to 3.2km and cycling distances of up to 8km.

Department for Transport (DfT) – *Manual for Streets (2007)*: The ATADG continues on to reference MfS guidance. MfS states that ‘walkable neighbourhoods’ are typically characterised by having a range of facilities within 10 minutes walking distance which can be accessed comfortably on foot. When assessing the accessibility of a site for pedestrians and the proximity of local facilities, an average walking speed of 1.4m/s (3mph) is generally considered appropriate, which equates to approximately 400m in five minutes or 800m in 10 minutes (Guidelines for Providing for Journeys on Foot, CIHT, 2000).

MfS also states previous planning policy guidance in that it is generally acknowledged that walking offers the greatest potential to replace short car trips, particularly under 2km.

Chartered Institution of Highways and Transportation (CIHT) - *Guidelines for Providing for Journeys on Foot (2000)*: Table 3.2 contains suggested acceptable walking distances for individuals without mobility impairment to facilities and services. These have been summarised as follows:

- Desirable – 400m;
- Acceptable – 800m; and
- Preferred maximum – 1.2km

It also suggests preferred maximum distances for commuting / sightseeing and school journeys are up to 2km and states that the average walking journey is approximately 1km.

DfT - *Local Transport Note (LTN) 2/08*: Further guidance set out in LTN2/08, suggests that the average distance that cyclists will generally travel is approximately 5km (16 minute journey based on a cycling speed of 19.2km/h as set out in LTN2/08).

3.3.2 As such, based on the guidance above, it is considered that an upper walking distance threshold would be up to 3.2km but journeys within 2km are more likely to be made on foot. A 2km distance equates to around a 25-minute walk travelling at 3mph (4.8kph). In addition, a site with a variety of facilities within 800 metres is considered to be situated within a ‘walkable neighbourhood’.

3.3.3 An upper limit of 8km has been assumed for cycling journeys, with an average journey being 5km. A cycling journey of between 5km and 8km would equate to approximately a 16 to 25 minute trip.

3.3.4 It is however expected that the catchment area for the proposed training facility will be regional and therefore that walking and cycling trips may be limited to individuals which reside in a more local context to the site.

3.3.5 Facilities which are available within the immediate vicinity of the site and are located within acceptable walking and cycling distances, based on established routes, have been summarised in **Table 3.1** below. The location of these facilities is shown in **Figure 3.2**. Although Table 2.1 sets



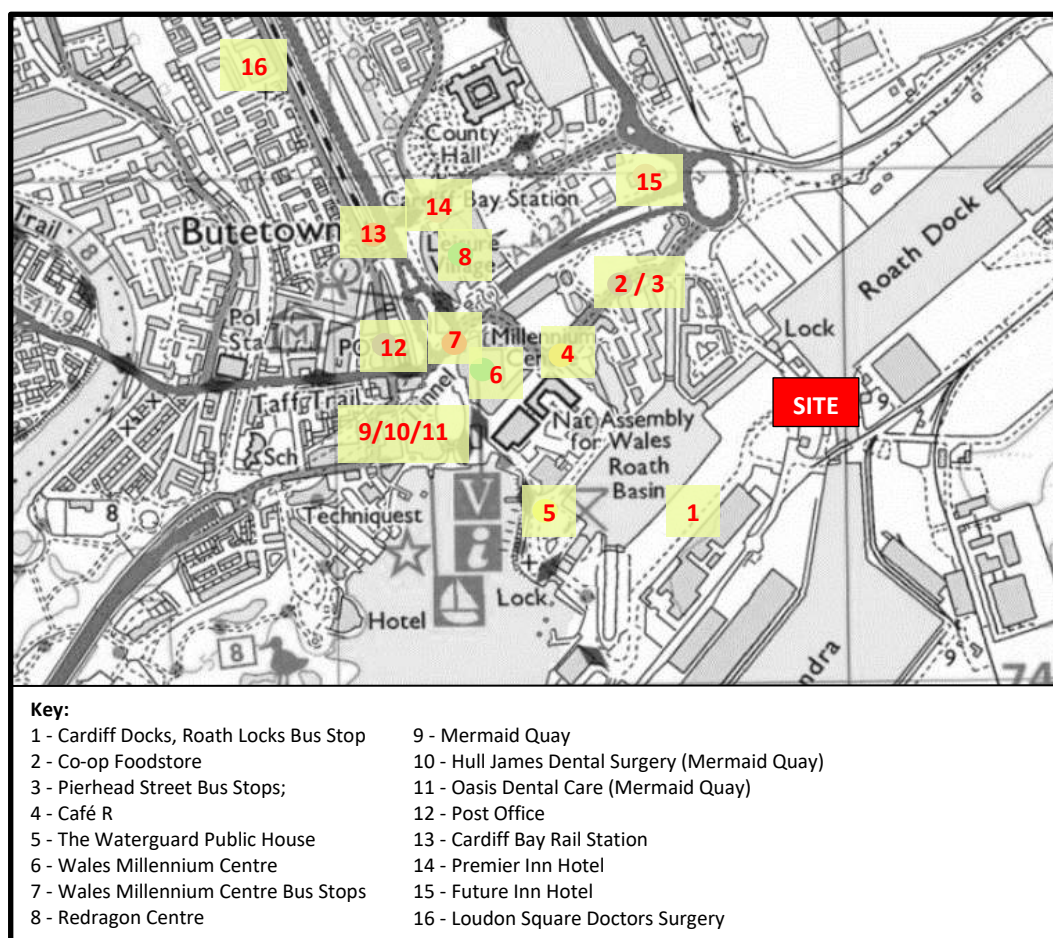
out the facilities which could be accessed within acceptable walking and cycling distances, the site will primarily operate self-sufficiently. There will be some movements off the site but these are unlikely to be made on a daily basis.

Table 3.1: Local Facilities and Amenities within the vicinity of the proposed application site

	Distance	Walking Time	Cycling Time
Cardiff Docks, Roath Locks Bus Stop (1)	400	5	1
Co-op Foodstore (2)	500	6	2
Pierhead Street Bus Stops (3)	500	6	2
Café R (4)	680	9	2
The Waterguard Public House (5)	740	9	2
Wales Millennium Centre (6)	800	10	3
Wales Millennium Centre Bus Stops (7)	800	10	3
Redragon Centre (8)	920	12	3
Mermaid Quay (9)	980	12	3
Hull James Dental Surgery (Mermaid Quay) (10)	1,050	13	3
Oasis Dental Care (Mermaid Quay) (11)	1,100	14	3
Post Office (12)	1,140	14	4
Cardiff Bay Rail Station (13)	1,240	16	4
Premier Inn Hotel (14)	1,250	16	4
Future Inn Hotel (15)	1,350	17	4
Loudon Square Doctors Surgery (16)	1,640	21	5

* Based on walking speed of 80m/minute (4.8kph) and cycling speed of 320m/minute (19.2kph)

Figure 3.2: Local Facilities and Amenities Location Plan





- 3.3.6 **Table 3.1** and **Figure 3.2** demonstrate that there are a number and range of local facilities within an 800 metre ‘walkable neighbourhood’ distance of the application site including a shop, café, bus stop, public house and entertainment venue.
- 3.3.7 There are also a significant number of additional facilities and services, including the Cardiff Bay Rail Station, the various facilities and amenities located in Mermaid Quay and the Redragon Centre within a 2km walk (a likely distance within which people would choose to walk).
- 3.3.8 All facilities in **Table 3.1** are within the ATADG upper walking distance thresholds and can be accessed via suitable walking routes in accordance with the ATADG.
- 3.3.9 It is therefore concluded that the site has good accessibility to services and facilities within walking and cycling distance via high quality and appropriate routes and crossing points. These will encourage linked trips.

3.4 Public Transport

Bus

- 3.4.1 The closest bus stops to the site are located on Porth Teigr Way directly adjacent to the entrance to the BBC Drama Village approximately 400 metres to the south-west of the application site. The location of these bus stops is shown in **Figure 3.2**.
- 3.4.2 Both the northeast and southwest bound bus stops consist of on-street bus cages, raised kerbs, shelters, seating, timetable information, real time information boards and bus stops flags.
- 3.4.3 These bus stops are served by the Baycar (service number 6) which offers a high frequency bus service between Cardiff City Centre and Cardiff Bay / Porth Teigr.
- 3.4.4 Bus service 8 also offers a high frequency service to Cardiff City Centre and the International Sports Village from the Pierhead Street bus stops located approximately 500 metres to the north-west of the proposed development site.
- 3.4.5 The details of the services operating from within close proximity of the proposed development site are summarised in **Table 3.2**. A full bus routes map and full service timetables are included within **Appendix C**.

Table 3.2: Bus Services

Service	Bus Stop	Route	First / Last Bus	Approximate Frequency			
				Daytime	Evenings	Saturday	Sunday
6	Roath Lock	Porth Teigr / Cardiff Bay – Cardiff City Centre / Cathays Park	0712 / 1927	12 mins	12 – 15 mins	15 mins	15 mins
		Cardiff City Centre / Cathays Park - Porth Teigr / Cardiff Bay	0703 / 1923	12 mins	12 mins	15 mins	15 mins
8	Pierhead Street	Cardiff City Centre – Cardiff Bay	0604 / 2336	20 mins	Hourly	20 mins	30 mins
		Cardiff Bay – Cardiff City Centre	0512 / 2244	20 mins	Hourly	20 mins	30 mins

- 3.4.6 Service number 6 also offers a half hourly bus service between 2000 and 2300. This departs from the Wales Millennium Centre, located approximately 800 metres walking or cycling distance from



the application site with bus stops benefiting from shelters, seating, real time information, timetable information and local area information. This will provide a useful service to individuals travelling to and from the site by public transport following the completion of their training on the weekday evenings (2230).

- 3.4.7 Due to the site being located within close proximity of high frequency bus services, public transport offers a realistic alternative to the use of the private car for staff, volunteers and visitors to access the proposed new facility.
- 3.4.8 It is also considered that these bus services will provide a good connection for future staff and visitors to access the various local facilities and amenities located in Cardiff City Centre.

Rail

- 3.4.9 The closest rail station to the site is Cardiff Bay Rail Station located approximately 1.2km (16-minute walk or 4-minute cycle) from the proposed application site.
- 3.4.10 Cardiff Bay Rail Station provides a service every 12 minutes to Cardiff Queen Street station from which connecting services can be caught to access various regional destinations along the valleys lines including Coryton, Radyr, Caerphilly, Pontypridd, Aberdare, Treherbert, Merthyr Tydfil, Bargoed and Rhymney.
- 3.4.11 This station as well as Cardiff Central Station can be accessed via both bus services number 6 and 8 which provides a regular service between the site and the rail station with a journey time of approximately 10 and 15 minutes respectively.
- 3.4.12 Cardiff Central provides access to a wide variety of regional and national destinations including London, Manchester, Swansea and Portsmouth.
- 3.4.13 However, due to the nature of the main operations on the site being primarily on weekday evenings (1830 – 2230) and weekends (Friday 1930 – Sunday 1530) the availability of public transport provision to the wider area may be limited. As an example, the last trains to the end destinations of the Regional Rail lines within the surrounding area is shown in **Table 3.3**.

Table 3.3: Last Weekday Rail Services

Origin	Destination	Last Train (Weekday)
Cardiff Bay	Merthyr Tydfil	2218
	Aberdare	2230
	Rhymney	2230
	Maesteg	2206
	Ebbw Vale	2230
	Treherbert	2242
	Penarth	2242
	Danescourt	2230
	Llantwit Major	2218
	Coryton	2218



3.5 Summary

- 3.5.1 It is considered that the proposed application site has good accessibility to local facilities and public transport stops within appropriate distances accessed by good quality infrastructure. This supports and promotes the use of sustainable means of travel.
- 3.5.2 The surrounding walking and cycling infrastructure is in accordance with the Active Travel Act.



4.0 DEVELOPMENT PROPOSALS

4.1 Overview and Layout

4.1.1 The proposals are for a 3,460sqm secure training facility which will consist of the following:

- The main training facility including a lobby, induction area, male and female changing areas, dormitories for 50 individuals, a kitchen and canteen area, a bar, office space (open plan and enclosed with break out areas and teaching spaces);
- A gatehouse and secure vehicle checking area;
- A car park including 53 general use spaces, two minibus spaces and six disabled spaces;
- A general assembly area; and
- An outdoor fitness area including a high ropes course.

4.1.2 The facility will primarily be used by adult volunteers on three evenings during the working week between 1830 and 2230. Adult volunteers will also use the accommodation facilities on the weekends between 1930 on a Friday and 1530 on a Sunday. Occasionally, the accommodation within the training facility may also be used during weekdays and Sundays.

4.1.3 It is anticipated that a maximum of 70 adult volunteers and 10 staff are anticipated to be on-site at any one time during the three weekday evenings and the weekend, these facilities are proposed to be accessible 24 hours a day via controlled / secure access arrangements.

4.1.4 It is also proposed that the facility occasionally be made available to accommodate other uses on-site such as conferences, functions, lectures, wedding parties etc. These are not likely to occur on a regular basis and it is anticipated that the trips associated with any of these uses will primarily be outside of the network peak hours. The use of the site will therefore be similar to a community centre at these times.

4.1.5 The site masterplan is included in **Appendix D**.

4.2 Vehicular Access

4.2.1 The site is proposed to be accessed via a new priority junction with Tyneside Road / Cargo Road approximately 45 metres to the north of the Cargo Road / Porth Teigr Way Roundabout. This will replace the existing priority junction.

4.2.2 A plan of the proposed site access arrangement is included as **Drawing 04330-HYD-XX-XX-DR-TP-2001** in **Appendix E**.

4.2.3 The visibility, at the site access junction with Tyneside Road / Cargo Road, is considered suitable based on a speed limit of 30mph in the surrounding built up area with a visibility splay of 2.4 x 43 metres achievable to the nearside kerb in both directions and to the Porth Teigr roundabout exit onto Cargo Road to the east.

4.2.4 The new access would provide access to both the Secure Training Facility and the neighbouring plot to the northwest.

4.2.5 The secure training facility will be accessed via security gates with permissions checked by security staff in the gatehouse. The entire perimeter of the site would be gated and therefore all movements would be through this access.



4.3 Walking and Cycling

- 4.3.1 A two-metre-wide footway will be provided on the eastern side of the proposed site access to allow for pedestrian access to the site via the gatehouse. This will ensure that motorised and non-motorised movements are separated within the site.
- 4.3.2 In addition, footways will be provided within the site providing pedestrian linkages between the security area and the main training facility as shown in the illustrative masterplan included as **Appendix D**.
- 4.3.3 A new dropped kerb and tactile paving crossing will be implemented at the site access junction. These are shown in **Drawing 04330- DR-TP-2001** included within **Appendix E**.
- 4.3.4 Cyclists accessing the site will be expected to dismount and walk their bicycles through the pedestrian entrance ways to allow for their security clearance to be checked by security staff.

4.4 Internal Layout and Servicing Arrangements

- 4.4.1 The internal site layout has been informed through guidance set out in Manual for Streets and TAN18 and through swept path analysis of a number of vehicles to ensure manoeuvrability is appropriate.
- 4.4.2 The entirety of the internal layout will remain privately maintained. Refuse collections will be carried out by council contracted refuse operators and the site has been designed to accommodate such movements.
- 4.4.3 Swept path analysis of the largest vehicle likely to access the site, a 9.2-metre-long refuse vehicle, is shown in **Drawing 04330-HYD- TP-2200 and Drawing 04330- DR-TP-2201** included in **Appendix F**. This is in line with guidance as to the size of refuse vehicles set out in Appendix 5 of the Waste Collection and Storage Facilities SPG Document as adopted by Cardiff Council in October 2016.
- 4.4.4 The swept path analysis includes tracking at the site access and the internal layout to ensure that vehicles can turn into and out of the junction safely and to ensure that the of the site has been designed to accommodate these movements so that vehicles can enter and exit in forward gear.

4.5 Parking

Car Parking

- 4.5.1 Guidance on parking standards is set out in Cardiff Councils Supplementary Planning Guidance (SPG): Access, Circulation and Parking Standards as adopted by the council in January 2010.
- 4.5.2 In accordance with the map of the central area zone, included as Figure 3.1 of the SPG, the application site is located on the south-eastern periphery of the zone.
- 4.5.3 The application is for a 'Sui Generis' land use and the standards in the SPG for the central area zone state that a bespoke provision should be provided.
- 4.5.4 Although a number of uses, including for assembly and training centre uses, make no provision for car parking within the central area, it is considered appropriate for the development to provide appropriate car parking provision on-site due to the nature of the operations on-site. This is supported by Condition 2 of the previous planning consent on-site (Ref: 01/02091/C) which states that: *'Prior to the development hereby permitted being brought into beneficial use provision shall be made within the site for the parking of vehicles'*.



- 4.5.5 The number of car parking spaces provided on-site has been considered with regard to the aspirations of the Cardiff Local Plan (2006 – 2026) to achieve a 50% modal share by sustainable means whilst also ensuring that operational viability is maintained on site.
- 4.5.6 A total of approximately 80 individuals (70 adult volunteers and 10 staff) would be on-site at any one-time. If the Census modal split (calculated in Section 5) for existing workplace trips in the area is applied to this level of occupancy, this would equate to a total demand for 53 car parking spaces.
- 4.5.7 The Census model split data is based on existing workplace trips in the area, the majority of which would occur during normal working hours (0900 – 1700) when a higher frequency of public transport services area typically available. This also considers the sustainable location of Cardiff Bay which is highly accessible by public transport services, walking and cycling routes.
- 4.5.8 In addition, the catchment area for the proposed secure training facility is likely to be regional as opposed to local which reduces the potential for walking and cycling trips to the site.
- 4.5.9 Alternative modes of travel will be promoted to staff, visitors and trainees through the implementation of a Travel Plan to encourage, where feasible, more sustainable travel modes. The implementation of a Travel Plan can be secured by way of condition of any forthcoming planning consent.
- 4.5.10 It is therefore considered that the provision of 53 car parking spaces on-site will provide an appropriate level of car parking so that the development is operationally viable and ensure that sustainable travel modes are encouraged. This level of provision is slightly in excess of the 50% modal split aspiration but fully considers the wide regional catchment area and late evening hours of operation.
- 4.5.11 The operator has therefore taken into account the aspirations of Cardiff Council in the promotion of alternative means of travel through the restriction in the supply of car parking provision and has reduced the car parking provision to the minimum level that can be tolerated for a viable operational development.
- 4.5.12 The car parking spaces within the site have been designed to minimum dimensions of 2.4 x 4.8 metres with a six-metre aisle width.
- 4.5.13 In addition, two minibus spaces are being provided on the site. The minibus parking will allow for groups to arrive on-site in tandem when events are held on-site.
- Motorcycle Parking and Disabled Parking***
- 4.5.14 In line with the Access, Circulation and Parking Standards SPG a total of three motorcycle and six disabled spaces will be provided on-site. These will be provided within the main car parking area.
- 4.5.15 Disabled spaces will be designed to a minimum dimension of 3.6 x 4.8 metres including a 1.2 metres wide buffer and motorcycle spaces have been designed to minimum dimensions of 1 x 2.5 metres.
- Cycle Parking***
- 4.5.16 Cardiff Council's Access, Circulation and Parking SPG states that for residential training centres in the central area zone one cycle parking space for residents per unit should be provided. The SPD does not however, make specific reference to how many cycle parking spaces should be provided for non-residential training centres.
- 4.5.17 It is therefore considered appropriate to provide the number of cycle parking spaces on-site based on the percentage proportion of people likely to travel to the site calculated through the 2011



Census journey to work data for the Cardiff 048 MSOA in which the site is located. This data is included in **Appendix G** and advises that approximately 4.4% of people working within the area travel to work by bicycle. This equates to a total requirement for approximately eight cycle parking spaces or four Sheffield stands. It is therefore considered that the provision of a minimum of 20 cycle parking spaces or 10 Sheffield stands, is appropriate to accommodate the demand and allows for some flexibility in trip patterns whilst also encouraging use by sustainable means.

- 4.5.18 Cycle parking is proposed to be provided within the vicinity of the main building directly adjacent to the car parking facilities and the main access point to the training facilities as shown in the masterplan in **Appendix D**. The cycle parking spaces will be sheltered and a minimum width of 1.2 metres will be maintained between cycle stands to allow for cycle parking on either side. A distance in excess of 0.9 metres will be maintained between the kerblines and the cycle stands to ensure that cycles do not overhang onto the vehicle access road.
- 4.5.19 The number of cycle parking spaces will be monitored regularly to ensure that supply meets demand. Should the requirement for additional spaces be identified further spaces will be provided as and when appropriate.

4.6 Construction

- 4.6.1 Construction vehicles will access the site via the A4232 roundabout, Pierhead Street and Tyneside Road. This is considered an appropriate route due to the large number of Heavy Goods Vehicles (HGV's) that currently use this route associated with the operation of the port of Cardiff.
- 4.6.2 As a Condition of any forthcoming planning permission, a CTMP can be provided should this be deemed as a requirement by highway officers at Cardiff Council. This would include details of the routes of construction traffic, temporary signage including the proposed location of warning signs, delivery timetables and the location of wheel washing facilities on site.
- 4.6.3 Measures will also be adopted during the construction of the site to minimise the impact of construction traffic movements with potential measures set out below:
- the production of a plan detailing measures to reduce the contract duration and the number of trips made;
 - Techniques and measures to assist in minimising construction freight trips on the local highway network, particularly during peak times (such as a vehicle booking system).
 - Measures to encourage construction staff to reduce car use to the site, particularly through car sharing and also where feasible by public transport, walking and cycling.
 - The accommodation of construction worker vehicles on-site or in nearby car parks to reduce the impact of overspill parking on the local highway network
 - Wheel washing and dust sheeting will be undertaken to reduce the impact of mud, dust and dirt on the local highway network.



5.0 TRIP GENERATION

5.1 Introduction

5.1.1 The number of trips likely to be generated by the proposed development has been assessed based on the maximum number of staff and adult volunteers on-site at any one time. The numbers have been provided by the operator of the existing site in Sully, Vale of Glamorgan.

5.2 Proposed Trip Generation

5.2.1 As set out in **Chapter 3**, the main hours of operation for the site are anticipated to be on weekday evenings and on weekends given the nature of the training facility.

5.2.2 However, the facility will have the ability to operate 24 hours a day should it be required. The training facility will therefore be accessible 24 hours a day with constant access provided to facilities such as the gym, although trip movements are likely to be minimal.

5.2.3 Based on a maximum of 10 staff and 70 adult volunteers being located on-site at any one time the site is likely to generate a maximum of 80 one-way movements in any given hour (if all users of the site arrive or depart in one hour).

5.2.4 Arrival flows to the site are likely to be during 1730 to 1830 hour (the hour prior to operational start times). These are anticipated to be arriving on-site against the general flow of traffic as the primary movements at this time of day would be away from as opposed to into Central Cardiff. In addition, these movements would occur on only three weekday evenings per week. Departure flows from the site are likely to be outside of the network peak hours at between 2200 and 2300 on a weekday and between 1500 and 1600 on a Sunday.

5.2.5 The likely multimodal trip generation associated with the site has been derived from information set out in the 2011 method of travel to work data (Table WU03EW) for the MLSOA Cardiff 048 in which the site is located. This takes into account method of travel to work dependent on the location of residency and the location of employment.

5.2.6 The modal split proportions are shown in Table 4.1 below with the full analysis shown in **Appendix G**.

Table 5.1: Modal Split Proportions

Mode	MLSOA Cardiff 048 Modal Split
Walking	11.2%
Cycling	4.4%
Public Transport	12.8%
Car	65.7%
Car Share	5.1%
Other	0.8%

5.2.7 The arrivals and departures to and from the site based on the **Table 5.1** are set out in **Table 5.2**.



Table 5.2: Primary Arrival and Departure Trips

Mode	Weekday PM Peak (1730 – 1830)			Weekday Off-Peak (2200 – 2300) and Sundays (1500 – 1600)		
	ARR	DEP	TOT	ARR	DEP	TOT
Walking	9	0	9	0	9	9
Cycling	4	0	4	0	4	4
Public Transport	10	0	10	0	10	10
Car	53	0	53	0	53	53
Car Share	4	0	4	0	4	4
Other	1	0	1	0	1	1

5.2.8 The peak vehicle movements are predicted to be 53 vehicles in one direction during the evening peak hour. This is a robust assessment assuming that all vehicles associated with the users of the site arrive in the same hour.

5.2.9 Based on the forecast vehicle generation and as journeys are likely to occur against the tidal flow in the PM peak hour it is considered that the proposed development would not have a material impact on the operation or capacity of the surrounding highway network.

5.3 Additional Uses – Community Centre

5.3.1 As stated in Section 4 of this TS, when the site is not operational as a training facility, it may be used by the wider community as a community facility.

5.3.2 The facility is therefore likely to act similarly to the operation of a community centre. To estimate the trips likely to be generated by this use, analysis has been undertaken of the TRICS (v7.3.3) trip generation database.

5.3.3 The trip rates for a community centre have been derived from TRICS based on the following selection parameters:

- 07- Leisure / Q – Community Centre or
- Sites within England and Wales
- Surveys from Monday to Friday
- Surveys from 2003
- Sites in Edge of Town Centre and Suburban locations
- Population in excess of 100,000 people within 5 miles

5.3.4 This resulted in eight surveys being identified from which average trip rates have been derived. The proposed site area (c. 0.64 hectares) has been applied to the trip rates to forecast the potential trip generation from a community type use. The resultant vehicle trip rates and trip generation have been summarised in Table 5.3 below. The full TRICS reports are included as **Appendix H** of this report.



Table 5.3: Community Centre Use Forecast Vehicle Trip Generation

Time Period	Trip Rates (per hectare)			Trip Generation (0.64 hectares)		
	In	Out	Two-Way	In	Out	Two-Way
AM peak hour (08:00-09:00)	21.053	7.237	28.29	13	5	18
PM peak hour (17:00-18:00)	24.194	18.548	42.742	15	12	27
Peak Hour of movements (18:00-19:00)	41.935	20.161	62.096	27	13	40

- 5.3.5 Should the site be used as a facility closely associated to the operation of a community centre, it could attract around 40 two-way vehicular movements during the worst-case hour (1800-1900). This is at a lower level than the vehicle trips generated by the main use of the site.
- 5.3.6 The level of vehicle generation would therefore not have a material impact on the operation of the highway network.



6.0 MITIGATION AND IMPROVEMENTS

- 6.1.1 Tactile paving and dropped kerbs will be provided at the site access to improve movements across the junction. This is an improvement on the existing situation.
- 6.1.2 With the implementation of this proposed improvement it is considered that the site would be fully compliant with the Active Travel Act.



7.0 SUMMARY AND CONCLUSIONS

7.1 Summary

- 7.1.1 This Transport Statement has been prepared by Hydrock Consultants Ltd in support of a full planning application for the development of a secure training facility. The application site covers an area of 1.86 acres and is located on the south-eastern periphery of the Central Area Boundary directly adjacent to Roath Dock within the Porth Teigr area of Cardiff Bay. The site was formerly owned by Associated British Ports (ABP) and supported the operation of the port of Cardiff.
- 7.1.2 The proposed site will comprise of training facilities, a parade ground, a gym, accommodation for up to 60 adult volunteers and 53 car parking spaces. This is considered to be the minimum number of car parking spaces which would be required on site to allow for operational viability due to the regional catchment area from which staff and trainees would be likely travel.
- 7.1.3 The main hours of operation for the proposed training facility will be three weekday evenings between 1830 and 2230 and on weekends between 1930 on a Friday and 1530 on a Sunday. A maximum of 70 adult volunteers and 10 staff are anticipated to be on-site at any one time during these hours of operation, however, these facilities are proposed to be accessible 24 hours a day via controlled / secure access arrangements. It is therefore considered that the majority of the movements associated with the site will fall outside of the AM (0800 – 0900) and PM (1700 – 1800) peak hours.
- 7.1.4 Outside of the main hours of operation the site will be available for use by the wider community.
- 7.1.5 Access to the site will be provided via a new priority junction with Tyneside Road / Cargo Road from the western boundary of the site situated approximately 10 metres south of the existing access. The existing access is currently used to service both the proposed development site and an adjacent site.
- 7.1.6 Road safety data does not indicate any specific highway safety issue within the vicinity of the site.

7.2 Conclusions

- 7.2.1 The site is forecast to generate around 53 vehicle movements across a daily period. In a typical week, these movements would be generated on three out of five weekdays with the site operating on three evenings per week.
- 7.2.2 Within the vicinity of the site, the majority of these vehicle movements are likely to occur outside the AM (0800 – 0900) and PM (1700 – 1800) peak hours as the site is operational from 1830 hours. It is considered that the vehicle trips will not have material impact on the safe and efficient operation of the surrounding local highway network.
- 7.2.3 The site is accessible by sustainable means of travel with good walking and cycling infrastructure within the vicinity of the site as well as high frequency bus services operating throughout the day and in the evenings within a 5 to 10-minute walk.
- 7.2.4 An appropriate level of on-site car parking has been proposed to suitably accommodate the operational requirements of the development whilst encouraging the use of sustainable modes of travel. The parking provision ensures that any impact from overspill parking on local streets is minimised and is provided to minimum requirements for the operational viability of the site.
- 7.2.5 There are therefore no reasons with regard to highways and transport as to why the proposed development should not be permitted.



- **Section 5** – Provides analysis of the forecast trips to be generated to / from the proposed development site by all modes;
- **Section 6** – Sets out details of mitigation measures; and
- **Section 7** – Provides a summary and conclusions



APPENDICES



APPENDIX A

Local Highway Authority Scoping Discussions



Secure Training Facility, Porth Teigr, Cardiff

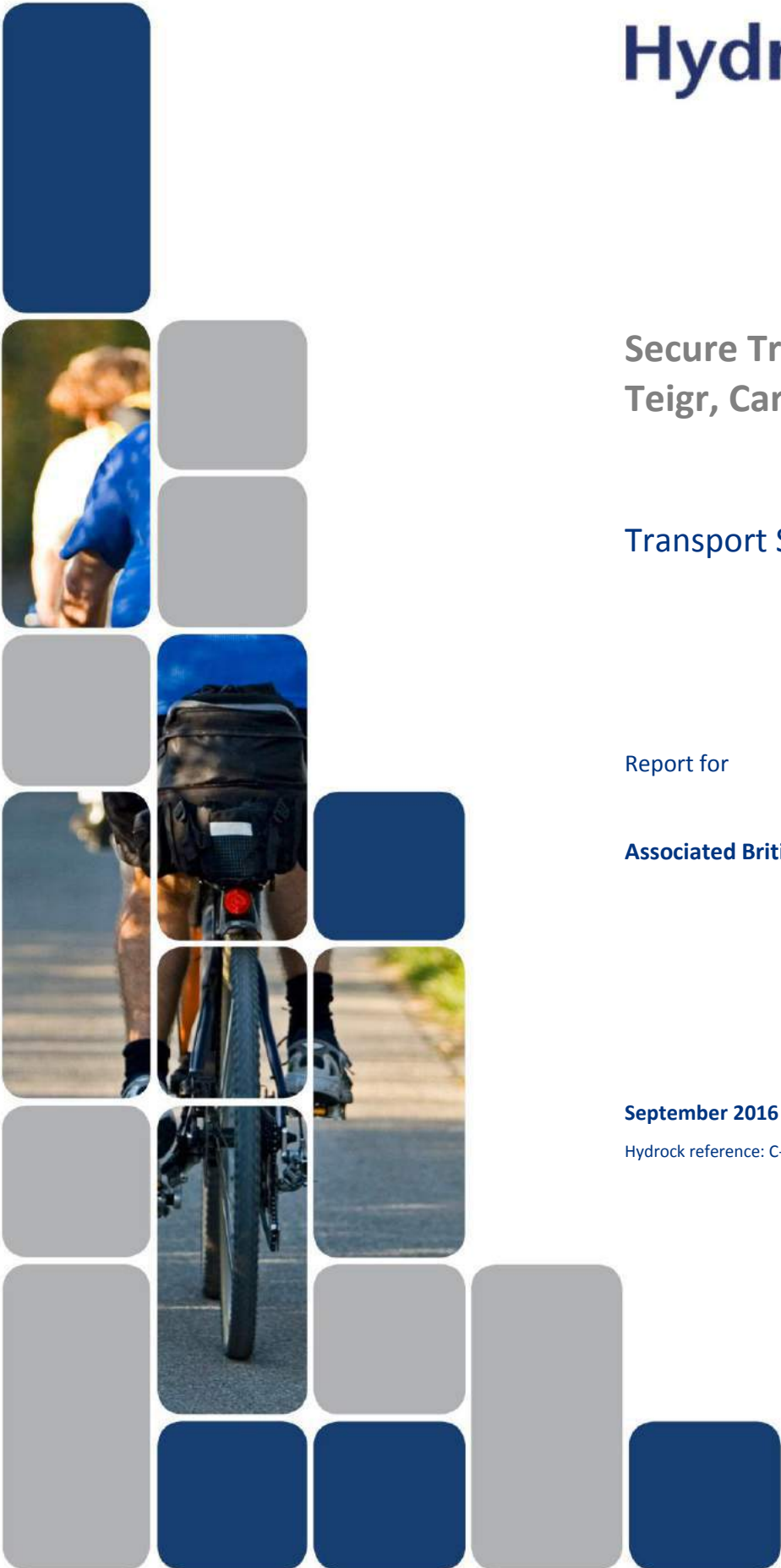
Transport Statement Scoping Note

Report for

Associated British Ports

September 2016

Hydrock reference: C-04330-C/001





DOCUMENT CONTROL SHEET

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Client: Associated British Ports

Project: Secure Training Facility, Port Teigr, Cardiff

Document Title: Transport Statement Scoping Note

Date: September 2016

Copy No.: 01

Document Production Record

Issue	Purpose/Status	Prepared by	Checked	Approved	Date
01	Scoping Note	David Cooke	David Chapman	David Chapman	23/09/16

Hydrock has prepared this report in accordance with the instructions of the above named client for their sole and specific use. Any other persons who may use the information contained herein do so at their own risk.



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1.0 INTRODUCTION

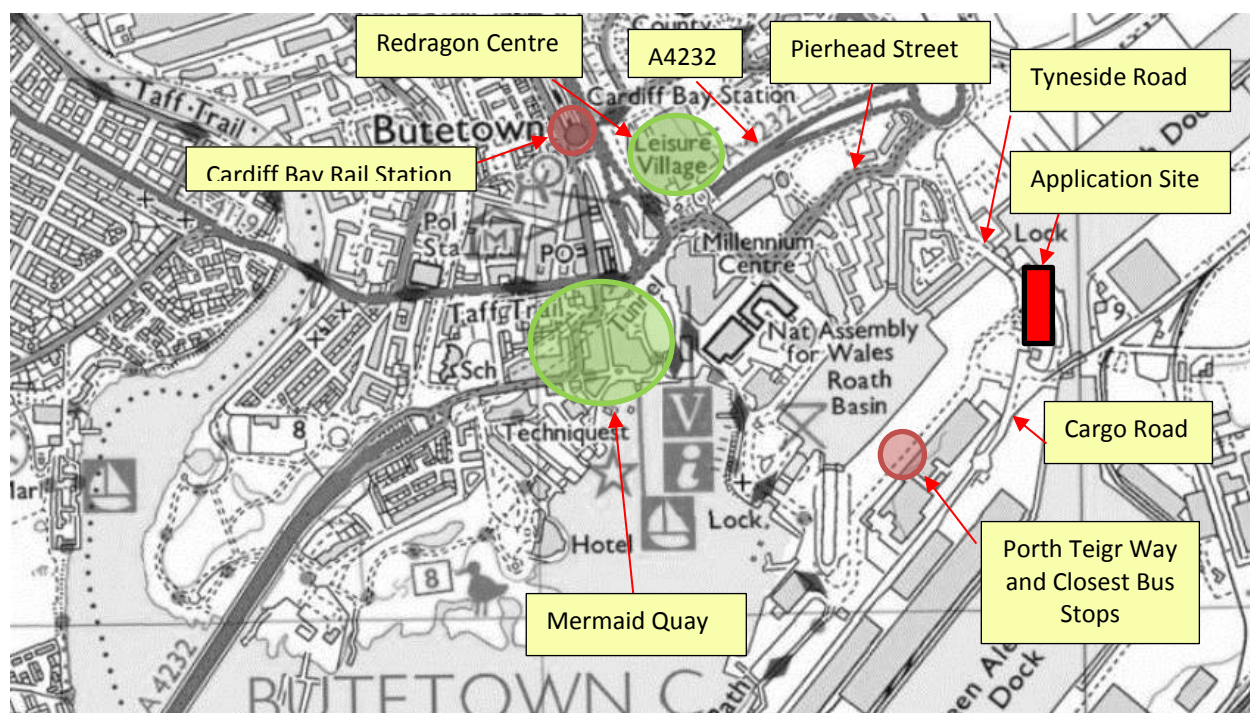
- 1.1.1 This Transport Statement Scoping Note has been prepared by Hydrock Consultants Ltd on behalf of Associated British Ports (ABP) in relation to the proposed development of a secure training facility.
- 1.1.2 The application site covers an area of 1.6 acres and is located on the south-eastern periphery of the Central Area Boundary directly adjacent to Roath Dock within the Porth Teigr area of Cardiff Bay.
- 1.1.3 The proposed site will comprise of training facilities, a gym, accommodation for up to 60 adult volunteers and 65 car parking spaces (including five disabled spaces).
- 1.1.4 The main hours of operation will be three weekday evenings between 1830 and 2230 and on weekends between 1930 on a Friday and 1530 on a Sunday. A maximum of 60 adult volunteers and 20 staff are anticipated to be on-site at any one time during these hours of operation.
- 1.1.5 Outside of the main hours of operation the site will be available to the wider community as a D2 assemble facility similar to a community centre.
- 1.1.6 Access to the site will be provided via an existing priority junction with Tyneside Road bordering the western periphery of the application site. This access is currently used to service both the proposed development site and an adjacent site. This will continue to be maintained by ABP as a potential future development site served from an alternate access arrangement.

2.0 EXISTING CONDITIONS

Site Location and Use

- 2.1.1 The application site is located within Cardiff Bay on land previously occupied by Cardiff Docks and is owned and maintained by ABP.
- 2.1.2 The site is bounded by a dock associated with the operation of the port of Cardiff to the north, a waterway associated with the port of Cardiff to the east, ABP land and Compass Road to the south and Tyneside Road to the west.
- 2.1.3 The location of the site in its wider geographical context is shown in **Figure 2.1** below.

Figure 2.1: Site Location Plan



Source: Bing Maps

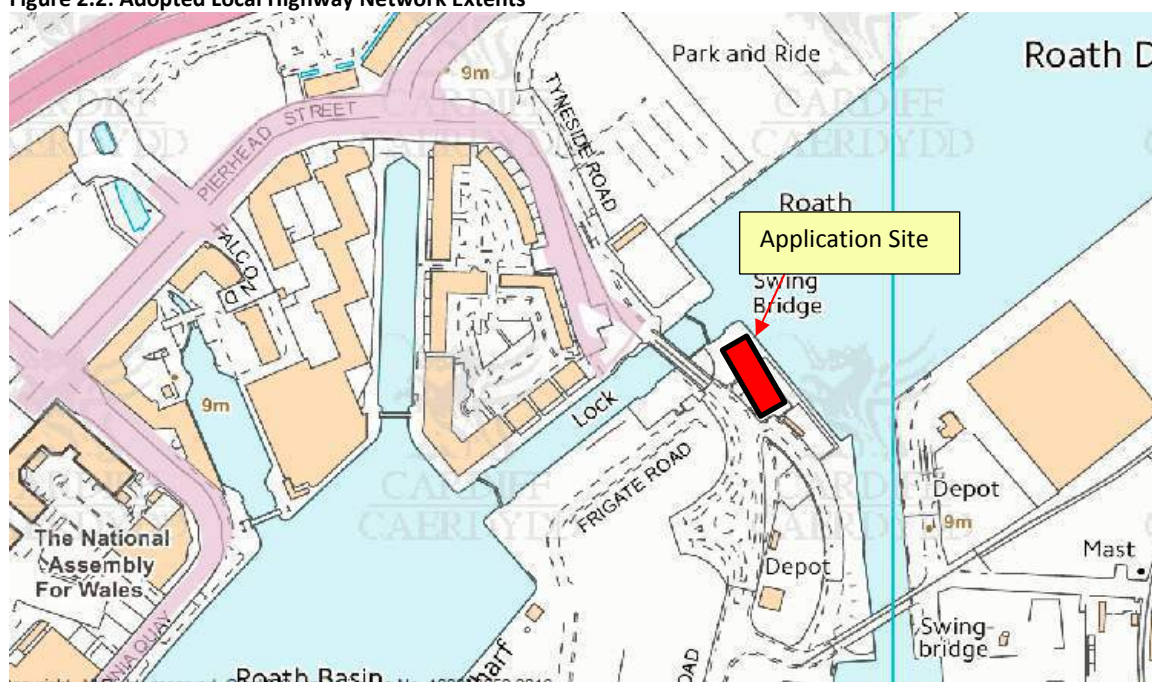
Planning History

- 2.1.4 The site appears to have primarily been used for the storage and sale of gas supplies through Air Products LTD. The extant use would therefore have been associated with HGV movements associated with storage operations on site.
- 2.1.5 A previous planning application (Ref:01/02091/C) was submitted on the proposed development site for the accommodation of a workshop / store and headquarters for the Sea Cadets in October 2001. Planning permission was granted for the development in December 2001.

Local Highway Network

- 2.1.6 The local highway network within the vicinity of the site is generally well lit, well maintained and is subject to a 30mph speed limit. On crossing of the swing bridge approximately 50 metres to the north-west of the site the road changes from being maintained by Cardiff Council to being privately maintained by ABP. This is shown in the Adopted local highway network plan shown in Figure 2.2.

Figure 2.2: Adopted Local Highway Network Extents



Tyneside Road

- 2.1.7 The proposed development site is accessed via Tyneside Road which borders the western periphery of the site. The road is a private local distributor road which connects Porth Teigr Way and Cargo Road Roundabout on the south-western periphery of the proposed development site to Pierhead Street and the A4232 approximately 250 metres to the north-west of the development site.
- 2.1.8 Tyneside Road is primarily a two-way single carriageway access road approximately seven metres wide.
- 2.1.9 Parking is prohibited along the entirety of the road by double yellow line 'no stopping or waiting at any time' Traffic Regulation orders (TRO's).

Pierhead Street

- 2.1.10 Pierhead Street is another local distributor road which connects Tyneside Road and the application site with the A4232 via a spur road and large 100 metre ICD roundabout to the north and Britannia Quay and the A470 to the west. This road is maintained by Cardiff Council.
- 2.1.11 With the exception of the bus parking provision within the vicinity of Britannia Quay, parking is restricted along Pierhead Street through the presence of double yellow line TRO's. A multi-storey car park is accessed from Pierhead Street, via Falcon Street, which can accommodate demand for parking within the vicinity of the site which cannot be accommodated on the site itself.

Porth Teigr Way

- 2.1.12 Porth Teigr Way is another road within the vicinity of the proposed application site which is privately maintained by ABP. The road generally runs in a north – south alignment connecting with Tyneside Road and Cargo Road via a roundabout to the north and terminating for general vehicular movements at a bus gate within the vicinity of the Dr Who Exhibition to the south.



- 2.1.13 The road generally consists of a two-way single carriageway road approximately 6.5 metres wide with good pedestrian and cycling infrastructure on both sides of the carriageway.
- 2.1.14 Short stay pay and display parking bays are located intermittently along the road and on-road bus cages and a shared surface environment is located within the vicinity of the BBC Roath Lock Drama Village entrance. Outside of these parking bays on-street parking is restricted by the presence of double yellow line TRO's.
- 2.1.15 Traffic calming measures in the form of speed tables are in place to assist in reducing speeds to within the 30mph speed limit.

Cargo Road

- 2.1.16 Cargo Road is a privately maintained two-way access road to the Port of Cardiff owned by ABP and runs in a general north – south alignment parallel to Porth Teigr Way. Vehicular movements are restricted along this road by a gatehouse with the only access permitted being movements associated with the operation of the port.

Road Safety

- 2.1.17 Personal Injury Accident (PIA) Data has been obtained from Cardiff Council for the most recent five-year period available (1st January 2010 to 31st December 2014) on the local highway network within the vicinity of the application site.
- 2.1.18 During the five-year assessment period a total of 10 PIA's occurred within the study area. Of these nine were classed as 'slight' and one was classed as 'serious' in severity.
- 2.1.19 The incident classed as serious involved a single vehicle losing control whilst on the roundabout circulatory carriageway and colliding with the raised central island.
- 2.1.20 A further eight incidents classed as slight in severity occurred either on the circulatory carriageway or approach to the roundabout. Two of these incidents were rear end shunts, two were single vehicle accidents with the drivers of the vehicles losing control of their vehicle and four occurred as a result of vehicles colliding whilst on the circulatory carriageway.
- 2.1.21 The remaining incident involved a cyclist colliding with a van exiting the Adventurers Quay junction.
- 2.1.22 No PIAs involving a pedestrian, motorcyclist or HGV were recorded within the study area and period. There were no locations within the study area where a cluster of four or more accidents occurred as a result of common causes.
- 2.1.23 The one PIA, involving a cyclist does not indicate an issue with the geometry of the highway that would be exacerbated by the proposals.

Walking and Cycling Infrastructure and Routes

- 2.1.24 A shared use footway / cycleway is generally provided on both sides of the carriageway. This is of good quality, well maintained and is flat and suitable for cycling. Details of the pedestrian and cycle provision within the vicinity of the site will be set out in further detail as part of the Transport Statement in accordance with the Active Travel Act.

Walking and Cycling Distances

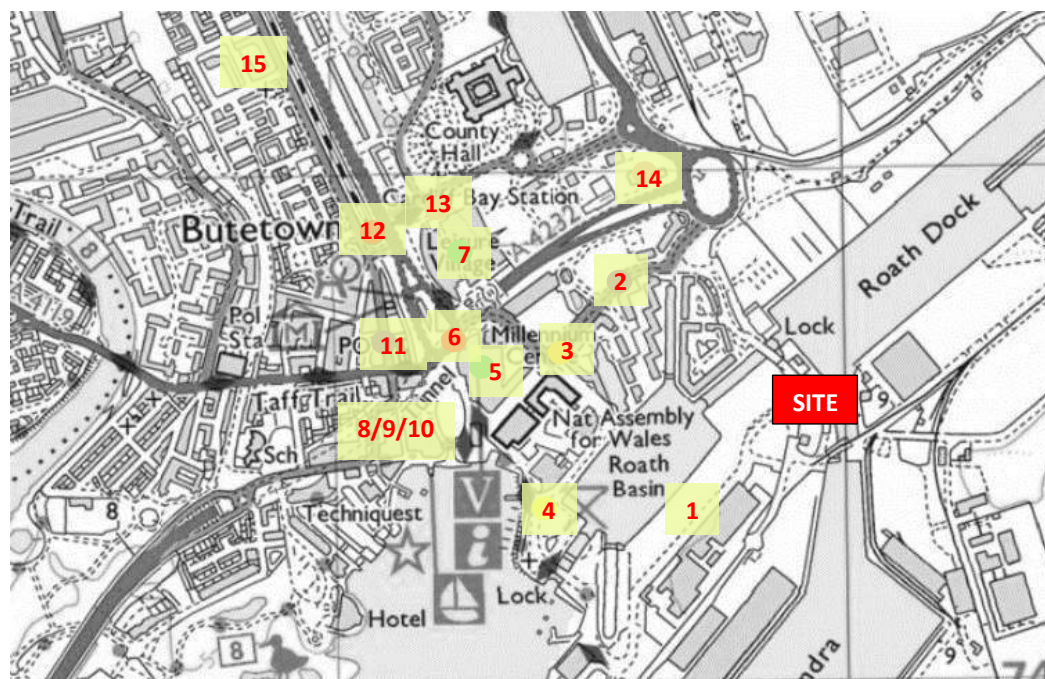
2.1.25 Facilities which are available within the immediate vicinity of the site and are located within acceptable walking (up to 2 km's) and cycling (up to 5 km's) distances, based on established routes, have been summarised in **Table 2.1** below. The location of these facilities is shown in **Figure 2.3**.

Table 2.1: Local Facilities and Amenities within the vicinity of the proposed application site

Facilities	Distance	Walking Time	Cycling Time
Cardiff Docks, Roath Locks Bus Stop (1)	400	5	1
Co-op Foodstore (2)	500	6	2
Café R (3)	680	9	2
The Waterguard Public House (4)	740	9	2
Wales Millenium Centre (5)	800	10	3
Wales Millenium Centre Bus Stops (6)	800	10	3
Redragon Centre (7)	920	12	3
Mermaid Quay (8)	980	12	3
Hull James Dental Surgery (Mermaid Quay) (9)	1,050	13	3
Oasis Dental Care (Mermaid Quay) (10)	1,100	14	3
Post Office (11)	1,140	14	4
Cardiff Bay Rail Station (12)	1,240	16	4
Premier Inn Hotel (13)	1,250	16	4
Future Inn Hotel (14)	1,350	17	4
Loudon Square Doctors Surgery (15)	1,640	21	5

* Based on walking speed of 80m/minute (4.8kph) and cycling speed of 320m/minute (19.2kph)

Figure 2.3: Local Facilities and Amenities Location Plan



2.1.26 **Table 2.1** and **Figure 2.3** demonstrate that there are a number and range of local facilities within an 800 metre 'walkable neighbourhood'¹ distance of the application site including a shop, café, bus stop, public house and entertainment venue. There are also a significant number of additional

¹ Department for Transport – Manual for Streets (2007)



facilities and services, including the various facilities and amenities located in Mermaid Quay and the Redragon Centre within a 2km walk (a likely distance within which people would choose to walk).

2.2 Public Transport

Bus

- 2.2.1 The closest bus stops to the site are located on Porth Teigr Way directly adjacent to entrance to the BBC Drama Village between 400 and 420 metres to the south-west of the application site. The location of these bus stops is shown in **Figure 2.3**.
- 2.2.2 Both the northeast and southwest bound bus stops consist of on-street bus cages, raised kerbs, shelters, seating, timetable information, real time information boards and bus stops flags.
- 2.2.3 These bus stops are served by the Baycar (service number 6) which offers a high frequency bus service between Cardiff City Centre and Cardiff Bay / Porth Teigr. The details of the service are summarised in **Table 2.2**.

Table 2.2: Bus Services

Service	Bus Stop	Route	First / Last Bus	Approximate Frequency			
				Daytime	Evenings	Saturday	Sunday
6	Roath Lock	Porth Teigr / Cardiff Bay – Cardiff City Centre / Cathays Park	0712 / 1927	12 mins	12 – 15 mins	15 mins	15 mins
		Cardiff City Centre / Cathays Park - Porth Teigr / Cardiff Bay	0703 / 1923	12 mins	12 mins	15 mins	15 mins

- 2.2.4 Service number 6 also offers a half hourly bus service between 2000 and 2300. This evening service departs from the Wales Millennium Centre, located approximately 800 metres walking or cycling distance from the application site with bus stops benefiting from shelters, seating, real time information, timetable information and local area information.
- 2.2.5 Due to the site being located within close proximity of a high frequency bus service, public transport offers a realistic alternative to the use of the private car for staff, volunteers and visitors to access the proposed new facility.

Rail

- 2.2.6 The closest rail station to the site is Cardiff Bay Rail Station located approximately 1.2km (16-minute walk or 4-minute cycle) from the proposed application site.
- 2.2.7 Cardiff Bay Rail Station provides a service every 12 minutes to Cardiff Queen Street station from which connecting services can be caught to access various regional destinations along the valleys lines including Coryton, Radyr, Caerphilly, Pontypridd, Aberdare, Treherbert, Merthyr Tydfil, Bargoed and Rhymney.
- 2.2.8 This station, as well as Cardiff Central Station, can be accessed via bus service number 6 which provides a regular service between the site and the rail station with a journey time of approximately 10 and 15 minutes respectively.
- 2.2.9 Cardiff Central provides access to a wide variety of regional and national destinations including London, Manchester, Swansea and Portsmouth.



3.0 DEVELOPMENT PROPOSALS

Overview and Layout

- 3.1.1 The proposals are for a secure training facility which will consist of the following:
- The main training facility including a lobby, induction area, male and female changing areas, dormitories for 50 individuals, a kitchen and canteen area, a bar, office space (open plan and enclosed with break out areas and teaching spaces);
 - A gatehouse and secure vehicle checking area;
 - A 60 space car park;
 - An overflow car parking area / general assembly area; and
 - An outdoor fitness area including a high ropes course.
- 3.1.2 The main hours of operation will be three weekday evenings and on weekends between 1930 on a Friday and 1530 on a Sunday.
- 3.1.3 The facility will primarily be used by adult volunteers on three evenings during the working week between 1830 and 2230. Adult volunteers will also use the accommodation facilities on the weekends between 1930 on a Friday and 1530 on a Sunday. Occasionally, the accommodation within the training facility may also be used during weekdays and Sundays.
- 3.1.4 It is anticipated that a maximum of 60 adult volunteers and 20 staff are anticipated to be on-site at any one time during the three weekday evenings and the weekend, these facilities are proposed to be accessible 24 hours a day via controlled / secure access arrangements.
- 3.1.5 It is also proposed that the facility occasionally be made available to accommodate other uses on-site such as conferences, functions, lectures, wedding parties etc. These are not likely to occur on a regular basis and it is anticipated that the trips associated with any of these uses will primarily be outside of the network peak hours. The use of the site will therefore be similar to a community centre at these times.
- 3.1.6 The site masterplan is included in **Appendix A**.

Vehicular Access

- 3.1.7 The site is proposed to be accessed via the existing priority junction with Tyneside Road approximately 50 metres to the north of the Porth Teigr Roundabout.
- 3.1.8 The site would be accessed via security gates with permissions checked by security staff in the gatehouse. The entire perimeter of the site would be gated and therefore all movements would be through this junction.

Walking and Cycling

- 3.1.9 A two metre wide footway will be provided on the eastern side of the proposed site access to allow for walking access to the site via the gatehouse.

Internal Layout and Servicing Arrangements

- 3.1.10 The internal site layout has been designed based on swept path analysis conducted with a 12 metre rigid HGV as the maximum sized vehicle which will require access to the site.



- 3.1.11 Swept path analysis will also be carried out with a 9 metre refuse vehicle, in accordance with the Supplementary Planning Guidance: Waste Collection and Storage Facilities (March 2007), to ensure that these vehicles can access and egress the site in forward gear.
- 3.1.12 The entirety of the internal layout will remain privately maintained. Refuse collections will be carried out by council contracted refuse operators and the site has been designed to accommodate such movements.

Parking

Car Parking

- 3.1.13 Guidance on parking standards is set out in Cardiff Councils Supplementary Planning Guidance: Access, Circulation and Parking Standards as adopted by the council in January 2010.
- 3.1.14 In accordance with the map of the central area zone, included as Figure 3.1 of the SPG, the application site is located on the south-eastern periphery of the zone.
- 3.1.15 Parking standards for the site have been derived based on a guidance set out for residential (Table 3.8 of SPD) and non-residential (Table 3.9 of SPD) training centres. The guidance suggests that for non-residential training centres in the central zone that no car parking provision should be provided on-site. However, for residential training centres in a central zone the guidance suggests that one car parking space should be provided per bed.
- 3.1.16 Based on a review of the 2011 travel to work census data for the Middle Level Super Output Area Cardiff 048, in which the site is located, a total of approximately 65.7% of people working in the area currently travel to work by car. A total of approximately 80 individuals (60 adult volunteers and 20 staff) would be on-site at any one-time. This would therefore equate to a total requirement for approximately 53 car parking spaces. It is therefore considered that the provision of 60 car parking spaces allows for some operational flexibility allowing a space for all staff and volunteers likely to travel to / from the site by car to ensure that no overspill parking occurs on the surrounding local highway network.
- 3.1.17 It should also be noted that on special occasions additional car parking may be required on-site. Therefore, an overspill area for car parking on-site is proposed, should this be required.

Cycle Parking

- 3.1.18 Cardiff Council's Access Circulation and Parking SPD stated that for residential training centres in the central area zone one cycle parking space for residents per unit should be provided. The SPD does not however, make specific reference to how many cycle parking spaces should be provided for non-residential training centres.
- 3.1.19 It is therefore considered appropriate to provide the number of cycle parking spaces on-site based on the percentage proportion of people likely to travel to the site based on the 2011 census travel to work data for the Cardiff 048 MSOA in which the site is located. This data advises that approximately 4.4% of people working within the area travel to work by bicycle. This would therefore equate to a total requirement for approximately eight cycle parking spaces or four Sheffield stands. It is therefore considered that the provision of 10 cycle parking spaces or five Sheffield stands, as proposed, is appropriate to accommodate the demand and allows for some flexibility in trip patterns.



Construction

- 3.1.20 Construction vehicle movements will be assessed as part of the Transport Statement. A CTMP can be provided as a condition of planning approval should highway officers deem this as necessary.



4.0 TRIP GENERATION

Introduction

- 4.1.1 The number of trips likely to be generated by the proposed development have been assessed based on the maximum number of staff and adult volunteers on-site at any one time.
- 4.1.2 As set out in **Chapter 3**, the main hours of operation for the site are anticipated to be on weekday evenings and on weekends given the nature of the training facility.
- 4.1.3 As set out within **paragraph 3.1.16** the site is forecast to generate 53 trips by car.
- 4.1.4 Arrival flows to the site are likely to be during the PM peak hour (1700 – 1800) however these are anticipated to be arriving on-site against the general flow of traffic as the primary movements at this time of day would be away from as opposed to into Central Cardiff. Departure flows from the site are likely to be outside of the network peak hours at between 2200 and 2300 on a weekday and between 1500 and 1600 on a Sunday.

Additional Uses – Community Centre

- 4.1.5 The site will also be made available to the wider community to allow for conferences, functions, lectures, weddings or baby groups etc. The facility is therefore likely to act similarly to a community centre. The trip rates for a community centre have been derived from the TRICS trip generation database and are forecast to generate a maximum of 23 two-way movements during the AM (0800 – 0900) and PM (1700 – 1800) network peak period and 53 two-way movements during the operational peak period (between 1200 and 1300).

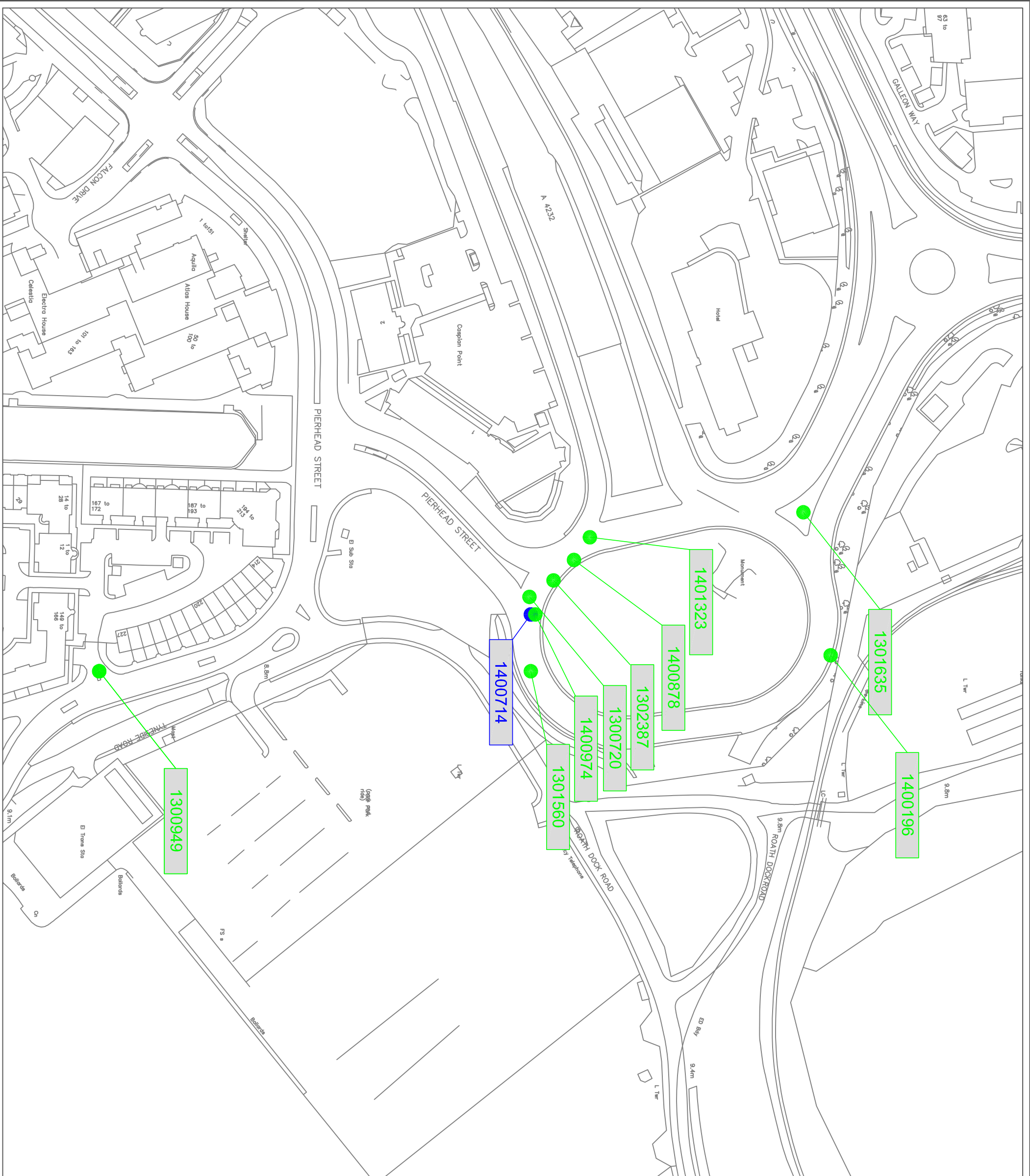
Multi-Modal Trips

- 4.1.6 Further details as to the multi-modal trip generation will be provided as part of the Transport Statement which will be prepared in support of the planning application submission.



APPENDIX B

Personal Injury Accident (PIA) Data



NOTES:

■ SLIGHT
■ SERIOUS

REV	DATE	AMENDMENT

Strategic Planning, Highways, Traffic & Transport

Cynllunio Strategol, Prifffyrdd, Traffig a Thrafnidiaeth

Director for Strategic Planning, Highways, Traffic & Transport
 Cyfarwyddwr Cynllunio Strategol, Prifffyrdd, Traffig a Thrafnidiaeth
 Andrew Gregory

PROJECT TITLE
 Queensgate Roundabout Area
 Collision Data
 01/01/10 - 31/12/14

DRAWING TITLE
 Queensgate Roundabout Area
 Collision Data

SCALE @ A3
 NTS
 DATE 01/09/2016

PROJECT No.
 CD16003A
 DRAWING No.
 Collision Data

DRAWN BY
 CHECKED BY
 APPROVED BY
 D Plews
 D Plews
 D Plews

CARDIFF COUNTY COUNCIL
 CYNGOR SIR CAERDYDD

TRAFFIC MANAGEMENT,
 County Hall,
 Atlantic Wharf,
 Cardiff,
 CF10 4UW.



The attached road casualty collision data has been provided solely for the purpose for which it was requested and the data set supplied must be treated in confidence. Data summaries and analysis of the data should be checked to ensure that there is no risk that any person could be identified by the application of other knowledge about any incident. Any other use of any part of the data, or passing it to a third party, could result in a breach of the data protection act.



CRASH INFORMATION REPORT



Active Query Name : ~5 Year Data (10-14)

Reference Number : 1300720

Severity of Crash	3 - Slight
Date of Crash	26-04-2013
Time of Crash	18:37
Day of Week	6 - Friday
Easting	319730
Northing	174900
Road Type	1 - Roundabout
Speed Limit	030 - 30mph
Junction Detail	01 - Roundabout
Light Conditions	1 - Daylight
Weather	1 - Fine, no high winds
Road Surface Condition	1 - Dry
Contributory Factor 1	403 - Poor turn or manoeuvre
Vehicle or Casualty 1	V - Vehicle
Veh or Cas Reference Number 1	001
Crash Description	BOTH VEHICLES NEGOTIATING ROUNDABOUT HAVE COLLIDED. BOTH STATING OTHER DRIVER AT FAULT.
Location Description	QUEENS GATE ROUNDABOUT (A4232) AT JUNCTION WITH PIERHEAD STREET, CARDIFF

Vehicle Reference No : 001

Record Type	21 - New Record
Vehicle Type	20 - Goods vehicle between 3.5 and 7.5 tonnes
Vehicle Movement - to	5 - S
Vehicle Movement - from	1 - N
First Point of Impact	3 - Offside
Sex of Driver	1 - Male
Age of Driver	49

Vehicle Reference No : 002	
Record Type	21 - New Record
Vehicle Type	09 - Car
Vehicle Movement - to	5 - S
Vehicle Movement - from	1 - N
First Point of Impact	4 - Nearside
Sex of Driver	2 - Female
Age of Driver	27

Casualty Reference No : 001	
Vehicle Ref No	001
Casualty Ref No	001
Casualty Class	1 - Driver/rider
Sex of Casualty	1 - Male
Age of Casualty	49
Severity of Casualty	3 - Slight

Casualty Reference No : 003	
Vehicle Ref No	001
Casualty Ref No	003
Casualty Class	2 - Vehicle/pillion passenger
Sex of Casualty	1 - Male
Age of Casualty	44
Severity of Casualty	3 - Slight

Casualty Reference No : 002	
Vehicle Ref No	002
Casualty Ref No	002
Casualty Class	1 - Driver/rider
Sex of Casualty	2 - Female
Age of Casualty	27
Severity of Casualty	3 - Slight

Reference Number : 1300949	
Severity of Crash	3 - Slight
Date of Crash	06-06-2013
Time of Crash	07:37
Day of Week	5 - Thursday
Easting	319760

01-09-2016

Northing	174710
Road Type	6 - Single carriageway
Speed Limit	030 - 30mph
Junction Detail	03 - T/staggered junction
Light Conditions	1 - Daylight
Weather	1 - Fine, no high winds
Road Surface Condition	1 - Dry
Contributory Factor 1	405 - Failed to look properly
Vehicle or Casualty 1	V - Vehicle
Veh or Cas Reference Number 1	001
Crash Description	CYCLIST HAS COLLIDED WITH VAN WHICH WAS EXISTING ADVENTURERS QUAY
Location Description	EXIT OF ADVENTURERS QUAY, CARDIFF

Vehicle Reference No : 001

Record Type	25 - Ammended Record
Vehicle Type	09 - Car
Vehicle Movement - to	1 - N
Vehicle Movement - from	7 - W
First Point of Impact	3 - Offside
Sex of Driver	1 - Male
Age of Driver	24

Vehicle Reference No : 002

Record Type	25 - Ammended Record
Vehicle Type	01 - Pedal cycle
Vehicle Movement - to	1 - N
Vehicle Movement - from	5 - S
First Point of Impact	1 - Front
Sex of Driver	1 - Male
Age of Driver	37

Casualty Reference No : 002

Vehicle Ref No	002
Casualty Ref No	002
Casualty Class	1 - Driver/rider
Sex of Casualty	1 - Male
Age of Casualty	37

Severity of Casualty	3 - Slight
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Reference Number : 1301560

Severity of Crash	3 - Slight
Date of Crash	29-07-2013
Time of Crash	22:41
Day of Week	2 - Monday
Easting	319760
Northing	174900
Road Type	7 - Slip road
Speed Limit	030 - 30mph
Junction Detail	01 - Roundabout
Light Conditions	4 - Darkness, street lights lit
Weather	1 - Fine, no high winds
Road Surface Condition	1 - Dry
Contributory Factor 1	406 - Failed to judge other person's path or speed
Vehicle or Casualty 1	V - Vehicle
Veh or Cas Reference Number 1	001
Crash Description	V1 COLLIDED WITH V2 - INJURY SUSTAINED
Location Description	A4232 ROUNDABOUT, CARDIFF

Vehicle Reference No : 001

Record Type	21 - New Record
Vehicle Type	09 - Car
Vehicle Movement - to	7 - W
Vehicle Movement - from	1 - N
First Point of Impact	3 - Offside
Sex of Driver	2 - Female
Age of Driver	21

Vehicle Reference No : 002

Record Type	21 - New Record
Vehicle Type	09 - Car
Vehicle Movement - to	6 - SW
Vehicle Movement - from	1 - N
First Point of Impact	1 - Front
Sex of Driver	1 - Male

Age of Driver	48
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Casualty Reference No : 001

Vehicle Ref No	001
Casualty Ref No	001
Casualty Class	1 - Driver/rider
Sex of Casualty	2 - Female
Age of Casualty	21
Severity of Casualty	3 - Slight

Reference Number : 1301635

Severity of Crash	3 - Slight
Date of Crash	15-09-2013
Time of Crash	14:47
Day of Week	1 - Sunday
Easting	319690
Northing	175020
Road Type	1 - Roundabout
Speed Limit	050 - 50mph
Junction Detail	01 - Roundabout
Light Conditions	1 - Daylight
Weather	2 - Rain/hail, no high winds
Road Surface Condition	2 - Wet or damp
Contributory Factor 1	406 - Failed to judge other person's path or speed
Vehicle or Casualty 1	V - Vehicle
Veh or Cas Reference Number 1	001
Crash Description	V2 STATIONARY AT APPROACH TO ROUNDABOUT WHEN V1 HAS FAILED TO STOP IN TIME AND COLLIDED WITH REAR OF V2.
Location Description	A4232, CARDIFF ROUNDABOUT WITH PIERHEAD STREET

Vehicle Reference No : 001

Record Type	21 - New Record
Vehicle Type	09 - Car
Vehicle Movement - to	4 - SE
Vehicle Movement - from	8 - NW
First Point of Impact	1 - Front

01-09-2016

Sex of Driver	1 - Male
Age of Driver	44

Vehicle Reference No : 002	
Record Type	21 - New Record
Vehicle Type	09 - Car
Vehicle Movement - to	4 - SE
Vehicle Movement - from	8 - NW
First Point of Impact	2 - Back
Sex of Driver	1 - Male
Age of Driver	52

Casualty Reference No : 002	
Vehicle Ref No	002
Casualty Ref No	002
Casualty Class	1 - Driver/rider
Sex of Casualty	1 - Male
Age of Casualty	52
Severity of Casualty	3 - Slight

Reference Number : 1302387	
Severity of Crash	3 - Slight
Date of Crash	21-12-2013
Time of Crash	10:43
Day of Week	7 - Saturday
Easting	319720
Northing	174910
Road Type	1 - Roundabout
Speed Limit	030 - 30mph
Junction Detail	01 - Roundabout
Light Conditions	1 - Daylight
Weather	4 - Fine, with high winds
Road Surface Condition	2 - Wet or damp
Contributory Factor 1	409 - Swerved
Vehicle or Casualty 1	V - Vehicle
Veh or Cas Reference Number 1	001
Crash Description	V1 NEGOTIATING ROUNDABOUT WHEN DRIVER HAS FOR UNKNOWN REASON LOST CONTROL OF VEHICLE AND SWERVED ONTO OFFSIDE LANE AND COLLIDED WITH V2, V1 HAS LEFT ROAD TO OFFSIDE AND COUNTED ROUNDABOUT AND COLLIDED WITH ROAD SIGN.

Location Description	A4232 QUEENS GATE ROUNDABOUT, CARDIFF J/ W PIERHEAD STREET
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Vehicle Reference No : 001

Record Type	21 - New Record
Vehicle Type	09 - Car
Vehicle Movement - to	7 - W
Vehicle Movement - from	8 - NW
First Point of Impact	1 - Front
Sex of Driver	2 - Female
Age of Driver	20

Vehicle Reference No : 002

Record Type	21 - New Record
Vehicle Type	09 - Car
Vehicle Movement - to	7 - W
Vehicle Movement - from	8 - NW
First Point of Impact	3 - Offside
Sex of Driver	2 - Female
Age of Driver	63

Casualty Reference No : 001

Vehicle Ref No	001
Casualty Ref No	001
Casualty Class	1 - Driver/rider
Sex of Casualty	2 - Female
Age of Casualty	20
Severity of Casualty	3 - Slight

Reference Number : 1400196

Severity of Crash	3 - Slight
Date of Crash	15-01-2014
Time of Crash	02:00

Day of Week	4 - Wednesday
Easting	319753
Northing	175032
Road Type	1 - Roundabout
Speed Limit	030 - 30mph
Junction Detail	01 - Roundabout
Light Conditions	4 - Darkness, street lights lit
Weather	1 - Fine, no high winds
Road Surface Condition	2 - Wet or damp
Contributory Factor 1	501 - Impaired by alcohol
Vehicle or Casualty 1	V - Vehicle
Veh or Cas Reference Number 1	001
Crash Description	V1 LOST CONTROL EXITING ROUNDABOUT
Location Description	QUEENSGATE ROUNDABOUT A4232 CARDIFF

Vehicle Reference No : 001

Record Type	21 - New Record
Vehicle Type	09 - Car
Vehicle Movement - to	4 - SE
Vehicle Movement - from	1 - N
First Point of Impact	1 - Front
Sex of Driver	2 - Female
Age of Driver	21

Casualty Reference No : 001

Vehicle Ref No	001
Casualty Ref No	001
Casualty Class	1 - Driver/rider
Sex of Casualty	2 - Female
Age of Casualty	21
Severity of Casualty	3 - Slight

Reference Number : 1400714

Severity of Crash	2 - Serious
Date of Crash	13-04-2014
Time of Crash	21:05
Day of Week	1 - Sunday

Easting	319735
Northing	174900
Road Type	1 - Roundabout
Speed Limit	050 - 50mph
Junction Detail	01 - Roundabout
Light Conditions	4 - Darkness, street lights lit
Weather	1 - Fine, no high winds
Road Surface Condition	1 - Dry
Contributory Factor 1	403 - Poor turn or manoeuvre
Vehicle or Casualty 1	V - Vehicle
Veh or Cas Reference Number 1	001
Crash Description	V1 NEGOTIATED THE ROUNDABOUT AND COLLIDED WITH THE CENTRAL ISLAND
Location Description	QUEENSGATE ROUNDABOUT CARDIFF BAY

Vehicle Reference No : 001

Record Type	21 - New Record
Vehicle Type	08 - Taxi
Vehicle Movement - to	6 - SW
Vehicle Movement - from	8 - NW
First Point of Impact	1 - Front
Sex of Driver	1 - Male
Age of Driver	35

Casualty Reference No : 003

Vehicle Ref No	001
Casualty Ref No	003
Casualty Class	2 - Vehicle/pillion passenger
Sex of Casualty	2 - Female
Age of Casualty	52
Severity of Casualty	3 - Slight

Casualty Reference No : 002

Vehicle Ref No	001
Casualty Ref No	002
Casualty Class	2 - Vehicle/pillion passenger
Sex of Casualty	2 - Female
Age of Casualty	33

Severity of Casualty	3 - Slight
Casualty Reference No : 001	
Vehicle Ref No	001
Casualty Ref No	001
Casualty Class	1 - Driver/rider
Sex of Casualty	1 - Male
Age of Casualty	35
Severity of Casualty	2 - Serious
Reference Number : 1400878	
Severity of Crash	3 - Slight
Date of Crash	09-05-2014
Time of Crash	08:28
Day of Week	6 - Friday
Easting	319711
Northing	174919
Road Type	1 - Roundabout
Speed Limit	030 - 30mph
Junction Detail	01 - Roundabout
Light Conditions	1 - Daylight
Weather	1 - Fine, no high winds
Road Surface Condition	1 - Dry
Contributory Factor 1	405 - Failed to look properly
Vehicle or Casualty 1	V - Vehicle
Veh or Cas Reference Number 1	001
Crash Description	V1 ATTEMPTED TO TURN LEFT & COLLIDED WITH V2 WHICH WAS ALONGSIDE.
Location Description	QUEENSGATE ROUNDABOUT CARDIFF
Vehicle Reference No : 002	
Record Type	21 - New Record
Vehicle Type	19 - Goods vehicle under 3.5 tonnes
Vehicle Movement - to	8 - NW
Vehicle Movement - from	4 - SE
First Point of Impact	3 - Offside
Sex of Driver	1 - Male
Age of Driver	33

01-09-2016

10

Vehicle Reference No : 001

Record Type	21 - New Record
Vehicle Type	09 - Car
Vehicle Movement - to	8 - NW
Vehicle Movement - from	4 - SE
First Point of Impact	1 - Front
Sex of Driver	2 - Female
Age of Driver	33

Casualty Reference No : 001

Vehicle Ref No	001
Casualty Ref No	001
Casualty Class	1 - Driver/rider
Sex of Casualty	2 - Female
Age of Casualty	33
Severity of Casualty	3 - Slight

Reference Number : 1400974

Severity of Crash	3 - Slight
Date of Crash	27-05-2014
Time of Crash	21:43
Day of Week	3 - Tuesday
Easting	319735
Northing	174902
Road Type	1 - Roundabout
Speed Limit	030 - 30mph
Junction Detail	01 - Roundabout
Light Conditions	5 - Darkness, street lights unlit
Weather	1 - Fine, no high winds
Road Surface Condition	2 - Wet or damp
Contributory Factor 1	403 - Poor turn or manoeuvre
Vehicle or Casualty 1	V - Vehicle
Veh or Cas Reference Number 1	001
Crash Description	DRIVER HAS COLLIDED WITH RAISED CONCRETE REFUGE CAUSING VEHICLE TO MOUNT REGUGE SLIDE ACROSS IT AND COME TO A STOP ON PIERHEAD STREET.

Location Description	QUEENS GATE ROUNDABOUT CARDIFF.
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Vehicle Reference No : 001

Record Type	21 - New Record
Vehicle Type	09 - Car
Vehicle Movement - to	1 - N
Vehicle Movement - from	4 - SE
First Point of Impact	1 - Front
Sex of Driver	1 - Male
Age of Driver	24

Casualty Reference No : 001

Vehicle Ref No	001
Casualty Ref No	001
Casualty Class	1 - Driver/rider
Sex of Casualty	1 - Male
Age of Casualty	24
Severity of Casualty	3 - Slight

Reference Number : 1401323

Severity of Crash	3 - Slight
Date of Crash	14-07-2014
Time of Crash	09:11
Day of Week	2 - Monday
Easting	319701
Northing	174926
Road Type	1 - Roundabout
Speed Limit	030 - 30mph
Junction Detail	01 - Roundabout
Light Conditions	1 - Daylight
Weather	1 - Fine, no high winds
Road Surface Condition	1 - Dry
Contributory Factor 1	406 - Failed to judge other person's path or speed
Vehicle or Casualty 1	V - Vehicle
Veh or Cas Reference Number 1	001
Crash Description	"V2 WAS STATIONERY IN QUEUING TRAFFIC, V1 HAS FAILED TO REACT TO THE QUEUING TRAFFIC AND HAS COLLIDED WITH THE REAR OF V2, THE DRIVER OF V2 SUFFERING WHIPLASH 12 TYPE INJURIES"

Location Description	"A4232, ELY LINK ROAD, JUNCTION WITH QUEENS GATE ROUNDABOUT, CARDIFF"
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Vehicle Reference No : 001	
Record Type	21 - New Record
Vehicle Type	09 - Car
Vehicle Movement - to	6 - SW
Vehicle Movement - from	4 - SE
First Point of Impact	1 - Front
Sex of Driver	2 - Female
Age of Driver	74

Vehicle Reference No : 002	
Record Type	21 - New Record
Vehicle Type	09 - Car
Vehicle Movement - to	6 - SW
Vehicle Movement - from	4 - SE
First Point of Impact	2 - Back
Sex of Driver	1 - Male
Age of Driver	40

Casualty Reference No : 002	
Vehicle Ref No	002
Casualty Ref No	002
Casualty Class	1 - Driver/rider
Sex of Casualty	1 - Male
Age of Casualty	40
Severity of Casualty	3 - Slight



APPENDIX C

Bus Service Timetables and Network Map



city centre

15 51 53 56 64 65 66 86 X91
 these services are operated by Capital Links

Cardiff network map

X91 Llantwit Major | St Athan | Wenvoe | city centre
 see website for route map

95 to Dinas Powys & Barry
 95A 95B to Penarth, Dinas Powys & Barry

15 Heath Hospital | Ely | Canton | city centre
 see website for route map

56 Pen-y-Lan | city centre
 see website for route map

86 Livisna | Thornhill | Heath | city centre
 see website for route map

51 53 City Centre | Pentwyn | Cyncoed | Heath Hospital | city centre
 see website for route map

30 to Castleton & Newport
 Business Park

45B certain journeys only

Business Park

44 64 45 65 X45

certain journeys only

63

63

62 63

64 65

66

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Cardiff Bay | city centre | Cathays | UHW Heath Hospital via Grangetown, City Road, Crwys Road

8

Sports Village | city centre | Cathays | UHW Heath Hospital via Grangetown, City Road, Crwys Road

9

Sports Village | Channel View | city centre | Cathays | UHW Heath Hospital via Grangetown, City Road, Crwys Rd

9A

Mondays to Fridays

route number	8	8	8	8	9A	8	9A	8	9A	8	9	8	9	8	9	8	9	8	9		
	A																				
Sports Village Olympian Drive Toys R Us					0624		0649		0704		0727		0746		0818		0835		0855	0915	
Cardiff Bay Asda					0626		0655		0710		0733		0752		0824		0841		0901	0921	
Channel View Flats					0630		0659		0714												
Cardiff Bay County Hall	0510	0532	0602		0640		0700		0720		0733		0758		0821		0845		0906		
Millennium Centre	0513	0535	0605		0643		0703		0723		0736		0801		0824		0848		0909		
Mermaid Quay	0515	0537	0607		0646		0706		0726		0739		0804		0827		0850		0911		
Grange Gardens		0540	0611		0651		0711		0731		0744		0809		0832		0855		0916		
city centre Wood Street JV arr	0530	0546	0617		0645	0700	0713	0720	0729	0739	0747	0754	0806	0819	0828	0842	0855	0904	0915	0925	0935
city centre Wood Street JV dep	0530	0550	0620	0633	0646	0701	0714	0721	0730	0740	0748	0755	0807	0820	0829	0843	0856	0905	0916	0926	0936
city centre Bute Terrace JK	0531	0551	0621	0637	0650	0703	0718	0725	0732	0745	0753	0800	0812	0825	0834	0848	0900	0909	0920	0930	0940
city centre Churchill Way HQ	0534	0554	0625	0641	0654	0707	0722	0729	0736	0749	0757	0804	0816	0829	0838	0852	0905	0914	0925	0935	0945
Newport Road City Road	0536	0556	0627	0643	0657	0710	0725	0732	0740	0753	0802	0809	0821	0834	0843	0857	0910	0919	0930	0940	0950
Whitchurch Road Companies House	0542	0602	0633	0649	0704	0717	0732	0742	0751	0804	0815	0821	0834	0846	0855	0908	0921	0930	0941	0951	1001
Gabalfa Interchange Whitchurch Road	0545	0605	0636	0652	0707	0721	0736	0746	0757	0812	0820	0826	0839	0851	0859	0912	0924	0933	0944	0954	1004
Heath Hospital opp Main Entrance	0550	0610	0643	0659	0714	0728	0744	0756	0804	0822	0827	0836	0846	0901	0906	0921	0931	0942	0951	1003	1011

route number	8	9	8	9	8	9	9	8	9	8	9	8	9	8	9	8	9	8	9	8		
Sports Village Olympian Drive Toys R Us			35		55		15		1415		1435		1455		1516		1535		1553		1612	
Cardiff Bay Asda			41		01		21		1421		1441		1501		1522		1541		1559		1618	
Cardiff Bay County Hall		26	46		06				1426		1446		1506		1526		1542		1602		1625	
Millennium Centre		29	49		09				1429		1449		1509		1529		1545		1605		1628	
Mermaid Quay		31	51		11				1431		1451		1511		1531		1547		1607		1630	
Grange Gardens		36	56		16				1436		1456		1516		1536		1552		1612		1635	
city centre Wood Street JV arr		45	55	05	15	25	35		1435	1445	1455	1505	1515	1525	1536	1545	1555	1601	1613	1621	1632	1644
city centre Wood Street JV dep		46	56	06	16	26	36		1436	1446	1456	1506	1516	1526	1537	1547	1556	1603	1614	1623	1634	1646
city centre Bute Terrace JK		50	00	10	20	30	40		1440	1450	1500	1510	1520	1531	1541	1552	1600	1608	1618	1628	1639	1651
city centre Churchill Way HQ		55	05	15	25	35	45		1445	1455	1505	1515	1525	1536	1546	1556	1605	1613	1623	1633	1644	1656
Newport Road City Road		00	10	20	30	40	50		1450	1500	1510	1520	1530	1541	1551	1601	1610	1618	1628	1638	1649	1701
Whitchurch Road Companies House		11	21	31	41	51	01		1501	1511	1521	1531	1541	1552	1602	1613	1621	1630	1639	1651	1706	1714
Gabalfa Interchange Whitchurch Road		14	24	34	44	54	04		1504	1514	1524	1534	1544	1558	1605	1619	1624	1638	1642	1659	1714	1722
Heath Hospital opp Main Entrance		23	31	43	51	03	11		1511	1523	1531	1543	1551	1607	1612	1628	1631	1647	1649	1711	1721	1734

A instead of Corporation Road this bus runs via Avondale Road, Beecher Drive, Channel View (0520), Clive Street, Penarth Road, Clare Road then as route 8 to Heath Hospital

Cardiff Bay | city centre | Cathays | UHW Heath Hospital via Grangetown, City Road, Crwys Road

8

Sports Village | city centre | Cathays | UHW Heath Hospital via Grangetown, City Road, Crwys Road

9

Sports Village | Channel View | city centre | Cathays | UHW Heath Hospital via Grangetown, City Road, Crwys Rd

9A

Mondays to Fridays

route number	9	8	9	8	9	8	9	8	9	8	9	8	9	8	9A	8	9A	8	9A	9A	8	
Sports Village Olympian Drive Toys R Us	1634		1655		1715		1735		1755		1816		1842		1900		1922		2002	2022		
Cardiff Bay Asda	1640		1701		1721		1741		1801		1822		1848		1907		1929		2009	2029		
Channel View Flats															1911		1933		2013	2033		
Cardiff Bay County Hall		1646		1702		1726		1746		1806		1832		1855		1917		1946				2046
Millennium Centre		1649		1709		1729		1749		1809		1835		1858		1920		1949				2049
Mermaid Quay		1651		1711		1731		1751		1811		1837		1900		1922		1951				2051
Grange Gardens		1656		1716		1736		1756		1816		1842		1905		1927		1956				2056
city centre Wood Street JV arr	1654	1705	1715	1725	1735	1745	1755	1805	1815	1825	1836	1851	1902	1914	1924	1936	1946	2005	2026	2046	2105	
city centre Wood Street JV dep	1656	1707	1717	1727	1737	1747	1757	1807	1817	1827	1838	1853	1904	1916	1926	1938	1947	2007	2027	2047	2107	
city centre Bute Terrace JK	1701	1712	1722	1732	1742	1752	1802	1812	1822	1832	1842	1858	1909	1921	1931	1942	1951	2011	2031	2051	2111	
city centre Churchill Way HQ	1706	1717	1727	1737	1747	1757	1806	1816	1826	1836	1847	1902	1913	1925	1935	1946	1955	2015	2035	2055	2115	
Newport Road City Road	1711	1722	1732	1742	1752	1802	1811	1821	1831	1841	1851	1906	1917	1929	1939	1948	1957	2017	2037	2057	2117	
Whitchurch Road Companies House	1728	1735	1749	1758	1806	1818	1824	1833	1844	1853	1901	1916	1927	1939	1949	1958	2007	2027	2047	2107	2127	
Gabalfa Interchange Whitchurch Road	1736	1743	1757	1805	1813	1825	1829	1838	1849	1858	1906	1919	1930	1942	1952	2001	2010	2030	2050	2110	2130	
Heath Hospital opp Main Entrance	1743	1755	1804	1812	1820	1832	1836	1845	1856	1905	1913	1926	1937	1949	1959	2007	2016	2036	2056	2116	2136	

route number	9A	9A	8	9A	9A	8	8	8	8	8
Sports Village Olympian Drive Toys R Us	2102	2122		2202	2222	GE				
Cardiff Bay Asda	2109	2129		2209	2229					
Channel View Flats	2113	2133		2213	2233					
Cardiff Bay County Hall			2146			2246				
Millennium Centre			2149			2249				
Mermaid Quay			2151			2251				
Grange Gardens			2156			2256				
city centre Wood Street JV arr	2126	2146	2205	2226	2246	2305				
city centre Wood Street JV dep	2127	2147	2207	2227	2247	2320				
city centre Bute Terrace JK	2131	2151	2211	2231	2251	2322	0032	0132	0232	0332
city centre Churchill Way HQ	2135	2155	2215	2235	2255	2324	0036	0136	0236	0336
Newport Road City Road	2137	2157	2217	2237	2257	2326	0039	0139	0239	0339
Whitchurch Road Companies House	2147	2207	2227	2247	2307	2331	0045	0145	0245	0345
Gabalfa Interchange Whitchurch Road	2150	2210	2230	2250	2310	2335	0046	0146	0246	0346
Heath Hospital opp Main Entrance	2156	2216	2236	2256	2316		0052	0152	0252	0352
Western Avenue Tesco Extra							0059	0159	0259	0359

these buses run on Thursday and Friday nights only

GE follows service 8 route to Whitchurch Road then via Gabalfa Interchange, The Philog, Merthyr Road, College Road and Gabalfa Avenue

Cardiff Bay | city centre | Cathays | UHW Heath Hospital via Grangetown, City Road, Crwys Road

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Sports Village | city centre | Cathays | UHW Heath Hospital via Grangetown, City Road, Crwys Road

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Sports Village | Channel View | city centre | Cathays | UHW Heath Hospital via Grangetown, City Road, Crwys Rd

9A

Saturdays

route number	8	8	8	8	8	8	8	9	8	9	8	9	8	9	8	9	8	9	8	9		
Sports Village Olympian Drive Toys R Us								0720		0758		0828		0858		0920		0940		1000		1020
Cardiff Bay Asda								0726		0804		0834		0904		0926		0946		1006		1026
Cardiff Bay County Hall	0510		0601		0648		0748		0823		0845		0909		0929		0949		1009			
Millennium Centre	0513		0604		0651		0749		0824		0848		0912		0932		0952		1012			
Mermaid Quay	0515		0606		0653		0751		0826		0850		0914		0934		0954		1014			
Grange Gardens			0609		0656		0755		0830		0855		0919		0939		0959		1019			
city centre Wood Street JV arr	0530		0614		0701		0738	0801	0816	0836	0846	0904	0916	0928	0938	0948	0958	1008	1018	1028	1038	
city centre Wood Street JV dep	0530	0549	0614	0641	0701	0721	0743	0801	0821	0836	0851	0906	0918	0930	0940	0950	1000	1010	1020	1030	1040	
city centre Bute Terrace JK	0531	0551	0616	0643	0703	0728	0748	0808	0826	0843	0856	0911	0923	0935	0945	0955	1005	1015	1025	1035	1045	
city centre Churchill Way HQ	0534	0554	0619	0647	0707	0732	0752	0812	0830	0847	0900	0915	0927	0939	0949	0959	1009	1019	1029	1039	1049	
Newport Road City Road	0536	0556	0621	0649	0708	0734	0755	0815	0833	0850	0903	0918	0930	0942	0952	1002	1012	1024	1032	1044	1052	
Whitchurch Road Companies House	0542	0602	0627	0655	0714	0740	0801	0821	0839	0856	0909	0924	0936	0948	0958	1008	1018	1033	1038	1053	1058	
Gabalfa Interchange Whitchurch Road	0545	0605	0630	0658	0717	0743	0804	0824	0842	0859	0912	0927	0939	0951	1001	1011	1021	1036	1041	1056	1101	
Heath Hospital opp Main Entrance	0550	0610	0635	0704	0722	0749	0810	0830	0848	0905	0918	0933	0945	0957	1007	1017	1027	1042	1047	1102	1107	

route number	8	9	8	9	8	9	8	9	8	9	8	9	8	9	8	9	8	9A	8	9A	8	9A				
Sports Village Olympian Drive Toys R Us			1040				00	20	40			1700	1720	1740	1800	1822	1852	1922								
Cardiff Bay Asda			1046				06	26	46			1706	1726	1746	1806	1827	1857	1927								
Channel View Flats																1832	1902	1932								
Cardiff Bay County Hall	1029		1049				09	29	49			1709	1729	1749	1809	1841	1911	1947								
Millennium Centre	1032		1052				12	32	52			1712	1732	1752	1812	1844	1914	1947								
Mermaid Quay	1034		1054				14	34	54			1714	1734	1754	1814	1846	1916	1947								
Grange Gardens	1039		1059				19	39	59			1719	1739	1759	1819	1851	1921	1947								
city centre Wood Street JV arr	1048	1058	1108				18	28	38	48	58	08		1718	1728	1738	1748	1758	1808	1818	1828	1845	1900	1915	1930	1945
city centre Wood Street JV dep	1050	1100	1110				20	30	40	50	00	10		1720	1730	1740	1750	1800	1810	1823	1834	1846	1902	1917	1932	1947
city centre Bute Terrace JK	1055	1105	1115				25	35	45	55	05	15		1725	1735	1745	1755	1805	1815	1828	1839	1851	1907	1922	1937	1952
city centre Churchill Way HQ	1059	1109	1120				30	40	50	00	10	20		1730	1740	1750	1800	1810	1819	1832	1843	1855	1911	1926	1941	1956
Newport Road City Road	1104	1112	1125				35	45	55	05	15	25		1735	1745	1755	1805	1815	1823	1835	1847	1859	1915	1930	1945	2000
Whitchurch Road Companies House	1113	1118	1136				46	56	06	16	26	36		1746	1756	1806	1816	1826	1833	1841	1857	1909	1925	1940	1955	2010
Gabalfa Interchange Whitchurch Road	1116	1121	1139				49	59	09	19	29	39		1749	1759	1809	1819	1829	1837	1844	1901	1913	1928	1943	1958	2013
Heath Hospital opp Main Entrance	1122	1127	1147				57	07	17	27	37	47		1757	1807	1817	1827	1837	1844	1850	1908	1920	1935	1950	2005	2020

A instead of Corporation Road this bus runs via Avondale Road, Beecher Drive, Channel View (0520), Clive Street, Penarth Road, Clare Road then as route 8 to Heath Hospital

Cardiff Bay | city centre | Cathays | UHW Heath Hospital via Grangetown, City Road, Crwys Road

8

Sports Village | city centre | Cathays | UHW Heath Hospital via Grangetown, City Road, Crwys Road

9

Sports Village | Channel View | city centre | Cathays | UHW Heath Hospital via Grangetown, City Road, Crwys Rd

9A

Saturdays

route number	8	9A	8	9A	8	9A	9A	8	9A	9A	8	8	8	8	8	8
												GE	E			
Sports Village Olympian Drive Toys R Us	1952		2022		2102	2122		2202	2222							
Cardiff Bay Asda	1959		2029		2109	2129		2209	2229							
Channel View Flats	2003		2033		2113	2133		2213	2233							
Cardiff Bay County Hall	1941	2011		2046			2146					2246	2336			
Millennium Centre	1944	2014		2049			2149					2249	2337			
Mermaid Quay	1946	2016		2051			2151					2251	2338			
Grange Gardens	1951	2021		2056			2156					2256	2340			
city centre Wood Street JV arr	2000	2016	2030	2046	2105	2126	2146									
city centre Wood Street JV dep	2002	2017	2032	2047	2107	2127	2147									
city centre Bute Terrace JK	2007	2021	2037	2051	2111	2131	2151	2211	2231	2251	2320	2347	0032	0132	0232	0332
city centre Churchill Way HQ	2012	2025	2042	2055	2115	2135	2155	2215	2235	2255	2324	2350	0036	0136	0236	0336
Newport Road City Road	2017	2027	2047	2057	2117	2137	2157	2217	2237	2257	2326	2351	0039	0139	0239	0339
Whitchurch Road Companies House	2028	2037	2058	2107	2127	2147	2207	2227	2247	2307	2331	2357	0045	0145	0245	0345
Gabalfa Interchange Whitchurch Road	2031	2040	2101	2110	2130	2150	2210	2230	2250	2310	2335	0001	0046	0146	0246	0346
Heath Hospital opp Main Entrance	2039	2046	2109	2116	2136	2156	2216	2236	2256	2316			0052	0152	0252	0352
Western Avenue Tesco Extra													0059	0159	0259	0359

GE follows service 8 route to Whitchurch Road then via Gabalfa Interchange, The Philog, Merthyr Road, College Road and Gabalfa Avenue

E after Whitchurch Road this bus runs via Western Avenue to Talybont / Tesco Extra, Excelsior Drive arriving at 0008

Cardiff Bay | city centre | Cathays | UHW Heath Hospital via Grangetown, City Road, Crwys Road

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Sports Village | city centre | Cathays | UHW Heath Hospital via Grangetown, City Road, Crwys Road

9

Sports Village | Channel View | city centre | Cathays | UHW Heath Hospital via Grangetown, City Road, Crwys Rd

9A

Sundays and public holidays

route number	8	8	8	8	9A	8	9A	8	9A	8	9A	8	9A	8	9A	8	9A	8	9A	8	9A	8		
Sports Village Olympian Drive Toys R Us					0915		1015		1100		1130			00	30			1700		1730		1802		
Cardiff Bay Asda					0922		1022		1107		1137			07	37			1707		1737		1809		
Channel View Flats					0926		1026		1111		1141			11	41			1711		1741		1813		
Cardiff Bay County Hall			0815	0855		0950		1050		1120				50	20			1650		1720		1751		1816
Millennium Centre			0817	0857		0954		1054		1124				54	24			1654		1724		1755		1819
Mermaid Quay			0819	0859		0956		1056		1126				56	26			1656		1726		1757		1821
Grange Gardens			0823	0903		1000		1100		1130				00	30			1700		1730		1801		1826
city centre Wood Street JV arr			0830	0910	0939	1010	1040	1110	1125	1140	1155			10	25	40	55	1710	1725	1740	1754	1811	1826	1835
city centre Wood Street JV dep	0635	0735	0831	0911	0940	1011	1041	1111	1126	1141	1156			11	26	41	56	1711	1726	1741	1755	1812	1827	1837
city centre Bute Terrace JK	0639	0739	0832	0912	0944	1015	1045	1115	1130	1145	1200			15	30	45	00	1715	1730	1745	1759	1816	1831	1841
city centre Churchill Way HQ	0643	0743	0836	0916	0948	1019	1049	1119	1134	1149	1204			19	34	49	04	1719	1734	1749	1803	1820	1835	1845
Newport Road City Road	0646	0746	0838	0918	0950	1022	1052	1122	1137	1152	1207			22	37	52	07	1722	1737	1752	1805	1822	1837	1847
Whitchurch Road Companies House	0652	0752	0848	0928	1000	1032	1102	1132	1147	1202	1217			32	47	02	17	1732	1747	1802	1815	1832	1847	1857
Gabalfa Interchange Whitchurch Road	0655	0755	0851	0931	1003	1036	1106	1136	1151	1206	1221			36	51	06	21	1736	1751	1806	1818	1835	1850	1900
Heath Hospital opp Main Entrance	0700	0800	0857	0937	1009	1043	1113	1143	1158	1213	1228			43	58	13	28	1743	1758	1813	1824	1841	1856	1906

route number	9A	8	9A	9A	8	9A	9A	8	9A	9A	8	9A	8
Sports Village Olympian Drive Toys R Us	1832		1902	1922		2002	2022		2102	2122		2202	
Cardiff Bay Asda	1839		1909	1929		2009	2029		2109	2129		2209	
Channel View Flats	1843		1913	1933		2013	2033		2113	2133		2213	
Cardiff Bay County Hall		1846			1946			2046			2146		2236
Millennium Centre		1849			1949			2049			2149		2240
Mermaid Quay		1851			1951			2051			2151		2242
Grange Gardens		1856			1956			2056			2156		2246
city centre Wood Street JV arr	1856	1905	1926	1946	2005	2026	2046	2105	2126	2146	2205	2226	2256
city centre Wood Street JV dep	1857	1907	1927	1947	2007	2027	2047	2107	2127	2147	2207	2227	2256
city centre Bute Terrace JK	1901	1911	1931	1951	2011	2031	2051	2111	2131	2151	2211	2231	2300
city centre Churchill Way HQ	1905	1915	1935	1955	2015	2035	2055	2115	2135	2155	2215	2235	2304
Newport Road City Road	1907	1917	1937	1957	2017	2037	2057	2117	2137	2157	2217	2237	2306
Whitchurch Road Companies House	1917	1927	1947	2007	2027	2047	2107	2127	2147	2207	2227	2247	2316
Gabalfa Interchange Whitchurch Road	1920	1930	1950	2010	2030	2050	2110	2130	2150	2210	2230	2250	2319
Heath Hospital opp Main Entrance	1926	1936	1956	2016	2036	2056	2116	2136	2156	2216	2236	2256	2325

UHW Heath Hospital | Cathays | city centre | Cardiff Bay via Crwys Road, City Road, Grangetown

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UHW Heath Hospital | Cathays | city centre | Sports Village via Crwys Road, City Road, Grangetown

9

UHW Heath Hospital | Cathays | city centre | Channel View | Sports Village via Grangetown, City Road, Crwys Rd

9A

Mondays to Fridays

route number	8	9	9	8	9	8	9	8	9	8	9	8	9	8	9	8	9	8	9		
	G																				
Heath Hospital opp Main Entrance	0520	0600	0620	0645	0651	0707	0720	0732	0745	0754	0808	0813	0828	0833	0848	0853	0907	0912	0930	0935	0950
Gabalfa Interchange Whitchurch Road	0531	0605	0625	0650	0700	0716	0729	0741	0754	0803	0812	0823	0832	0843	0852	0903	0911	0922	0934	0944	0954
Cathays Library	0534	0608	0628	0653	0705	0719	0734	0746	0759	0808	0820	0830	0840	0850	0900	0910	0919	0929	0939	0949	0959
Newport Road City Road	0540	0616	0636	0701	0715	0727	0744	0756	0809	0818	0835	0842	0855	0902	0915	0922	0934	0941	0949	0959	1009
city centre Westgate Street KG arr	0548	0626	0646	0711	0725	0737	0754	0806	0819	0828	0845	0853	0905	0913	0925	0933	0944	0952	0959	1009	1019
city centre Westgate Street KG dep	0548	0627	0647	0712	0726	0738	0755	0807	0820	0829	0846	0854	0906	0914	0926	0934	0945	0953	1000	1010	1020
Grange Gardens	0554			0720		0748		0817		0839		0904		0924		0944		1003		1020	
Mermaid Quay	0556			0725		0753		0822		0844		0909		0929		0949		1008		1025	
Cardiff Bay County Hall	0558			0729		0757		0826		0848		0913		0933		0953		1012		1029	
Cardiff Bay Asda		0637	0657		0728		0757		0834		0900		0920		0940		0959		1014		1034
Olympian Drive Toys R Us		0641	0701		0732		0801		0838		0904		0924		0944		1003		1018		1038

G after Heath Hospital operates via Gabalfa Interchange (Celtic Road), The Philog, Merthyr Road, College Road (05:26), Gabalfa Avenue, Western Avenue, Gabalfa Interchange then as route 8 to Cardiff Bay

route number	8	9		8	9	8	9	8	9		9	8	9	8	9	8	9	8	9	8	9	8	9	
	then at																							
Heath Hospital opp Main Entrance	0955	1010		15	30	35	50	55	10		1410	1415	1430	1435	1451	1456	1510	1515	1531	1535	1552	1555	1611	
Gabalfa Interchange Whitchurch Road	1004	1014		24	34	44	54	04	14		1414	1424	1434	1444	1455	1505	1514	1526	1536	1546	1557	1606	1616	
Cathays Library	1009	1019		29	39	49	59	09	19		1419	1429	1439	1449	1500	1510	1520	1532	1542	1552	1603	1612	1622	
Newport Road City Road	1019	1029		39	49	59	09	19	29		1429	1439	1449	1459	1510	1520	1533	1549	1601	1609	1622	1629	1641	
city centre Westgate Street KG arr	1029	1039		49	59	09	19	29	39		1439	1449	1459	1509	1520	1530	1543	1559	1611	1619	1632	1639	1651	
city centre Westgate Street KG dep	1030	1040		50	00	10	20	30	40		1440	1450	1500	1510	1521	1531		1601	1613	1621	1634	1641	1653	
Grange Gardens	1040			00		20		40			1500		1520		1541		1611		1631		1651			
Mermaid Quay	1045			05		25		45			1505		1525		1546		1616		1636		1656			
Cardiff Bay County Hall	1049			09		29		49			1509		1529		1550		1620		1640		1700			
Cardiff Bay Asda		1054			14		34		54		1454		1514		1535		1557		1627		1648		1707	
Olympian Drive Toys R Us		1058			18		38		58		1458		1518		1539		1601		1629		1650		1709	

route number	8	9	8	9	8	9	8	9	8	9A	8	9A	8	9A	8	9A	8	9A	9A	8	9A	9A
Heath Hospital opp Main Entrance	1616	1632	1637	1653	1657	1714	1724	1737	1746	1800	1806	1815	1830	1845	1900	1917	1937	2005	2025	2045	2105	2125
Gabalfa Interchange Whitchurch Road	1627	1637	1648	1658	1708	1719	1735	1742	1756	1804	1815	1819	1839	1853	1908	1925	1944	2012	2032	2052	2112	2132
Cathays Library	1633	1643	1654	1704	1714	1728	1741	1751	1802	1810	1820	1825	1844	1858	1913	1930	1947	2016	2036	2056	2116	2136
Newport Road City Road	1650	1702	1713	1723	1733	1744	1800	1807	1816	1822	1832	1837	1856	1908	1923	1940	1957	2026	2046	2105	2126	2146
city centre Westgate Street KG arr	1700	1712	1723	1733	1743	1754	1810	1817	1826	1832	1842	1847	1906	1916	1931	1948	2005	2035	2055	2115	2135	2155
city centre Westgate Street KG dep	1702	1714	1725	1735	1745	1756	1812	1819	1828	1834	1844	1849	1908	1917	1932	1949	2006	2036	2056	2116	2136	2156
Grange Gardens	1712		1735		1755		1822		1838		1855		1919		1941		2015		2123			
Mermaid Quay	1717		1740		1800		1827		1843		1900		1924		1946		2020		2128			
Cardiff Bay County Hall	1721		1744		1804		1831		1847		1904		1928		1951		2025		2133			
Channel View Flats										1847		1902		1930		2002		2049	2109		2149	2209
Cardiff Bay Asda		1728		1749		1810		1833		1851		1906		1934		2006		2053	2113		2153	2213
Olympian Drive Toys R Us		1730		1751		1814		1837		1856		1911		1939		2011		2058	2118		2158	2218

UHW Heath Hospital | Cathays | city centre | Cardiff Bay via Crwys Road, City Road, Grangetown

8

UHW Heath Hospital | Cathays | city centre | Sports Village via Crwys Road, City Road, Grangetown

9

UHW Heath Hospital | Cathays | city centre | Channel View | Sports Village via Grangetown, City Road, Crwys Rd

9A

Mondays to Fridays

route number	8	9A	9A	8	8	8	8	8	8	8	
Western Avenue Tesco Extra								0059	0159	0259	0359
Heath Hospital opp Main Entrance	2145	2205	2225	2245	2305	2325		0104	0204	0304	0404
Gabalfa Interchange Whitchurch Road	2152	2212	2232	2252	2310	2330		0110	0210	0310	0410
Cathays Library	2155	2216	2236	2255	2313	2333		0113	0213	0313	0413
Newport Road City Road	2205	2226	2246	2305	2320	2340		0118	0218	0318	0418
city centre Westgate Street KG arr	2213	2235	2255	2313	2328	2348		0127	0227	0327	0427
city centre Westgate Street KG dep	2214	2236	2256	2314							
Grange Gardens	2223					2323					
Mermaid Quay	2228					2328					
Cardiff Bay County Hall	2233					2333					
Channel View Flats		2249	2309								
Cardiff Bay Asda		2253	2313								
Olympian Drive Toys R Us		2258	2318								

these buses run on Thursday and Friday nights only

Saturdays

route number	8	8	9	8	9	8	9	8	9	8	9	8	9	8	9	8	9		
Heath Hospital opp Main Entrance	0520	0607	0637	0707	0737	0757	0817	0837	0857	0917	0932	0947	0959	1011	1023	1033	1043	1053	1103
Gabalfa Interchange Whitchurch Road	0525	0612	0642	0713	0743	0802	0823	0842	0903	0924	0939	0954	1006	1018	1030	1041	1051	1101	1111
Cathays Library	0528	0615	0645	0717	0747	0805	0827	0845	0907	0928	0943	0958	1010	1022	1034	1046	1056	1106	1116
Newport Road City Road	0535	0622	0652	0727	0757	0812	0837	0852	0917	0938	0953	1008	1020	1032	1044	1056	1106	1116	1126
city centre Westgate Street KG arr	0543	0630	0700	0736	0806	0820	0846	0900	0926	0947	1002	1017	1029	1041	1053	1106	1116	1126	1136
city centre Westgate Street KG dep	0545	0632	0701	0737	0807	0822	0847	0902	0927	0948	1003	1018	1030	1042	1054	1108	1118	1128	1138
Grange Gardens	0551	0638		0747		0828		0908		0957		1027		1051		1118		1138	
Mermaid Quay	0555	0642		0752		0832		0912		1002		1032		1056		1123		1143	
Cardiff Bay County Hall	0557	0644		0756		0836		0916		1006		1036		1100		1127		1147	
Cardiff Bay Asda			0712		0818		0858		0938		1014		1041		1105		1132		1152
Olympian Drive Toys R Us			0716		0822		0902		0942		1018		1045		1109		1136		1156

route number	8	9	8	9	8	9	8	9	8	9	8	9A	8	9A	8	9A	8	9A	9A	8				
Heath Hospital opp Main Entrance		13	23	33	43	53	03		1713	1723	1733	1743	1753	1803	1813	1828	1843	1858	1913	1928	1945	2005	2025	2045
Gabalfa Interchange Whitchurch Road		21	31	41	51	01	11		1721	1731	1741	1751	1801	1811	1821	1835	1850	1905	1920	1935	1952	2012	2032	2052
Cathays Library		26	36	46	56	06	16		1726	1736	1746	1756	1806	1816	1826	1839	1854	1909	1924	1939	1956	2016	2036	2056
Newport Road City Road		36	46	56	06	16	26		1736	1746	1756	1806	1816	1826	1836	1849	1904	1919	1934	1949	2006	2026	2046	2106
city centre Westgate Street KG arr		46	56	06	16	26	36		1746	1756	1806	1816	1826	1836	1846	1858	1913	1928	1943	1958	2015	2035	2055	2115
city centre Westgate Street KG dep		48	58	08	18	28	38		1748	1758	1808	1818	1828	1838	1848	1859	1914	1929	1944	1959	2016	2036	2056	2116
Grange Gardens		58	18	38					1758	1818		1838		1858		1923		1953		2025				2125
Mermaid Quay		03	23	43					1803	1823		1843		1903		1928		1958		2030				2130
Cardiff Bay County Hall		07	27	47					1807	1827		1847		1907		1932		2002		2034				2134
Channel View Flats														1912		1942		2012		2049				2109
Cardiff Bay Asda			12	32	52				1812	1832		1852		1916		1946		2016		2053				2113
Olympian Drive Toys R Us			16	36	56				1816	1836		1856		1921		1951		2021		2058				2118

UHW Heath Hospital | Cathays | city centre | Cardiff Bay via Crwys Road, City Road, Grangetown

8

UHW Heath Hospital | Cathays | city centre | Sports Village via Crwys Road, City Road, Grangetown

9

UHW Heath Hospital | Cathays | city centre | Channel View | Sports Village via Grangetown, City Road, Crwys Rd

9A

Saturdays

route number	9A	9A	8	9A	9A	8	8	8	8
Western Avenue Tesco Extra						0059	0159	0259	0359
Heath Hospital opp Main Entrance	2105	2125	2145	2205	2225	0104	0204	0304	0404
Gabalfa Interchange Whitchurch Road	2112	2132	2152	2212	2232	0110	0210	0310	0410
Cathays Library	2116	2136	2156	2216	2236	0113	0213	0313	0413
Newport Road City Road	2126	2146	2206	2226	2246	0118	0218	0318	0418
city centre Westgate Street KG arr	2135	2155	2215	2235	2255	0127	0227	0327	0427
city centre Westgate Street KG dep	2136	2156	2216	2236	2256				
Grange Gardens			2225						
Mermaid Quay			2230						
Cardiff Bay County Hall			2234						
Channel View Flats	2149	2209		2249	2309				
Cardiff Bay Asda	2153	2213		2253	2313				
Olympian Drive Toys R Us	2158	2218		2258	2318				

UHW Heath Hospital | Cathays | city centre | Cardiff Bay via Crwys Road, City Road, Grangetown

8

UHW Heath Hospital | Cathays | city centre | Sports Village via Crwys Road, City Road, Grangetown

9

UHW Heath Hospital | Cathays | city centre | Channel View | Sports Village via Grangetown, City Road, Crwys Rd

9A

Sundays and public holidays

route number	8	8	9A	8	9	8	9	8	9A	8	9A	8	9A	9A	8	9A	9A	8	9A	9A				
Heath Hospital opp Main Entrance	0704	0804		0900	0920	0940	1000	1020	1035	then at	50	05	20	35	until	1750	1805	1825	1845	1905	1925	1945	2005	2025
Gabalfa Interchange Whitchurch Rd	0709	0810		0906	0926	0946	1006	1026	1042		57	12	27	42		1757	1812	1832	1852	1912	1932	1952	2012	2032
Cathays Library	0712	0814		0910	0930	0950	1010	1030	1046		01	16	31	46		1801	1816	1836	1856	1916	1936	1956	2016	2036
Newport Road City Road	0719	0824		0920	0940	1000	1020	1040	1056		11	26	41	56		1811	1826	1846	1906	1926	1946	2006	2026	2046
city centre Westgate Street KG arr	0727	0833		0929	0949	1008	1029	1048	1105		20	35	50	05		1820	1835	1855	1915	1935	1955	2015	2035	2055
city centre Westgate Street KG dep		0835	0900	0930	0950	1009	1030	1049	1107		22	37	52	07		1822	1836	1856	1916	1936	1956	2016	2036	2056
Grange Gardens		0842		0937		1016		1056			29	59				1829			1923			2023		
Mermaid Quay		0847		0942		1021		1101			34	04				1834			1928			2028		
Cardiff Bay County Hall		0851		0946		1025		1105			38	08				1838			1932			2032		
Channel View Flats									1120		50	20				1849	1909		1949	2009		2049	2109	
Cardiff Bay Asda			0910		1000		1040		1124		54	24				1853	1913		1953	2013		2053	2113	
Olympian Drive Toys R Us			0915		1005		1045		1129		59	29				1858	1918		1958	2018		2058	2118	

Sundays and public holidays

route number	8	9A	9A	8	9A	9A	9A	8	8
Heath Hospital opp Main Entrance	2045	2105	2125	2145	2205	2225	2245	2305	2325
Gabalfa Interchange Whitchurch Rd	2052	2112	2132	2152	2212	2232	2249	2308	2328
Cathays Library	2056	2116	2136	2156	2216	2236	2252	2311	2331
Newport Road City Road	2106	2126	2146	2206	2226	2246	2301	2317	2337
city centre Westgate Street KG arr	2115	2135	2155	2215	2235	2255	2308	2327	2346
city centre Westgate Street KG dep	2116	2136	2156	2216	2236	2256			
Grange Gardens	2123			2223					
Mermiad Quay	2128			2228					
Cardiff Bay County Hall	2132	↓	↓	2232	↓	↓			
Channel View Flats		2149	2209		2249	2309			
Cardiff Bay Asda		2153	2213		2253	2313			
Olympian Drive Toys R Us		2158	2218		2258	2318			

Porth Teigr | Cardiff Bay | city centre | Cathays Park

via Central Station, Queen Street Station



6

Mondays to Fridays

Porth Teigr BBC Studios			0712	0724	0736	0748	0800			1424	1436			1638	1650	1702	1714	1726	1738	1750	1803	1815	1824
East Bute St rear of Wales Millennium Centre			0716	0728	0740	0752	0804			1428	1440			1642	1654	1706	1718	1730	1742	1754	1807	1819	1828
Cardiff Bay Wales Millennium Centre	0628	0658	0718	0730	0742	0754	0806			1430	1442			1644	1656	1708	1720	1732	1744	1756	1809	1821	1830
County Hall			0720	0732	0744	0756	0808			1432	1444			1646	1658	1710	1722	1734	1746	1758	1811	1823	1832
Lloyd George Avenue	0629	0659	0722	0734	0746	0758	0810			1434	1446			1648	1700	1712	1724	1736	1748	1800	1813	1825	1834
Central Station Penarth Road	0634	0704	0727	0739	0751	0803	0815			1439	1451			1653	1705	1717	1729	1741	1753	1805	1818	1830	1839
Queen Street Station stop HR	0638	0708	0732	0744	0756	0808	0821			1445	1457			1700	1712	1724	1736	1748	1800	1812	1825	1836	1845
city centre Dumfries Place stop HV	0639	0709	0733	0745	0757	0809	0822			1446	1458			1702	1714	1726	1738	1750	1801	1813	1826	1837	1846
city centre Kingsway stop GR	0641																						
Cathays Park Welsh Government			0714	0738	0750	0803	0815	0828		1452	1505			1709	1721	1734	1746	1758	1808	1820	1833	1843	1852
Porth Teigr BBC Studios	1836	1848	1900	1912	1927																		
East Bute St rear of Wales Millennium Centre	1840	1852	1904	1916	1931																		
Cardiff Bay Wales Millennium Centre	1842	1854	1906	1918	1933	2000	2030	2100	2130	2200	2230	2300											
County Hall	1844	1856																					
Lloyd George Avenue	1846	1858	1907	1919	1934	2001	2031	2101	2131	2201	2231	2301											
Central Station Penarth Road	1851	1903	1912	1924	1939	2005	2035	2105	2135	2205	2235	2305											
Queen Street Station stop HR	1857	1909	1917	1929	1944																		
city centre Dumfries Place stop HV	1858	1910	1918	1930	1945																		
city centre Kingsway stop GR																							
Cathays Park Welsh Government	1904	1916	1924	1936	1951																		
city centre St Mary Street Philharmonic						2008	2038	2108	2138	2208	2238	2308											

● on Friday nights these buses drop off in Customhouse Street not St Mary Street

Saturdays

Porth Teigr BBC Studios														1010										1710							
East Bute Street rear of Wales Millennium Centre			0733		0813	0833	0856	0916	0936					1015										1715	1728	1743	1758	1813	1830	1830	1845
Cardiff Bay Wales Millennium Centre	0700	0740	0800	0820	0840	0900	0920	0940	1000	1020														1720	1735	1750	1805	1820	1835	1835	1850
Lloyd George Avenue	0701	0741	0801	0821	0841	0901	0921	0941	1001	1021														1721	1736	1751	1806	1821	1836	1836	1851
Central Station Penarth Road	0705	0745	0805	0826	0846	0906	0926	0946	1006	1026														1726	1741	1756	1811	1826	1841	1841	1856
Queen Street Station stop HR	0709	0749	0809	0831	0851	0911	0931	0951	1013	1033														1733	1748	1803	1818	1833	1848	1848	1903
city centre Dumfries Place stop HV	0710	0750	0810	0832	0852	0912	0932	0952	1014	1034														1734	1749	1804	1819	1834	1849	1849	1904
city centre Kingsway stop GR	0713	0753	0813	0835	0855	0915	0935	0955	1018	1038														1738	1753	1808	1822	1837	1852	1852	1907
Cardiff Bay Wales Millennium Centre	1910	1930	2000	2030	2100	2130	2200	2230	2300																						
Lloyd George Avenue	1911	1931	2001	2031	2101	2131	2201	2231	2301																						
Central Station Penarth Road	1916	1936	2006	2036	2106	2136	2206	2236	2306																						
city centre St Mary Street Philharmonic	1918	1938	2008	2038	2108	2138																									
city centre Customhouse St							2208	2238	2308																						

Sundays and public holidays

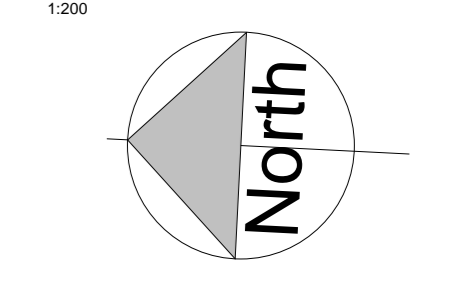
Porth Teigr BBC Studios					1025	1040	1055							1710																	
Cardiff Bay Wales Millennium Centre	0920	0940	1000	1020	1035	1050	1105							1720	1740	1800	1820	1840	1900	1930	2000	2030	2100	2130	2200	2230					
Lloyd George Avenue	0921	0941	1001	1021	1036	1051	1106							1721	1741	1801	1821	1841	1901	1931	2001	2031	2101	2131	2201	2231					
Central Station Penarth Road	0926	0946	1006	1026	1041	1056	1111							1726	1746	1806	1826	1845	1905	1935	2005	2035	2105	2135	2205	2235					
Queen Street Station stop HR	0930	0950	1010	1030	1048	1103	1118							1733	1753	1811	1831	1850													
city centre Dumfries Place stop HV	0931	0951	1011	1031	1049	1104	1119							1734	1754	1812	1832	1851													
city centre Kingsway stop GR	0934	0954	1014	1034	1053	1108	1123							1738	1758	1815	1835	1854													
city centre St Mary Street Philharmonic																															



APPENDIX D

Development Site Masterplan

NOTES:
 1. Confirm that only all dimensions on site before commencing any work or site change. This drawing is not to be used for any other purpose.
 2. All dimensions are in meters unless otherwise stated.
 3. The site boundary is shown in red. The 3m high CPNI Base Protection Level Welded Mesh (SF) Fence is shown in green.
 4. The site is shown in grey. The site is shown in grey.
 5. The site is shown in grey. The site is shown in grey.
 6. The site is shown in grey. The site is shown in grey.
 7. The site is shown in grey. The site is shown in grey.
 8. The site is shown in grey. The site is shown in grey.
 9. The site is shown in grey. The site is shown in grey.
 10. The site is shown in grey. The site is shown in grey.



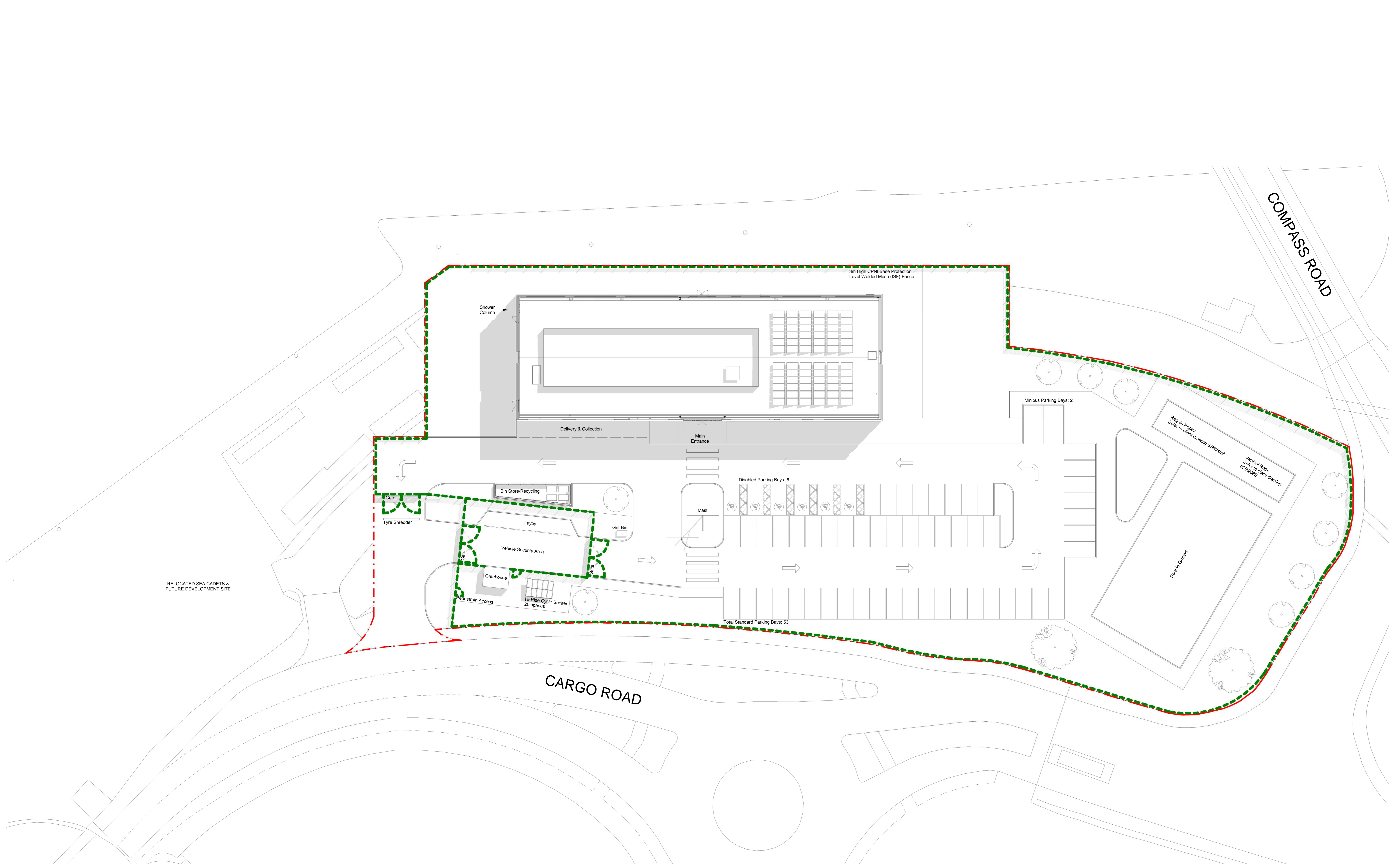
— Site Boundary
 - - - 3m High CPNI Base Protection Level Welded Mesh (SF) Fence

Site Area
 Red Line Boundary: 1.91a / 0.77ha

Parking Schedule
 Standard Parking Bays: 53
 Disabled Parking Bays: 6
 Minibus Parking Bays: 2
 Cycle Spaces: 20

Accommodation Schedule
 Ground Floor: 1025sq.m
 First Floor: 972sq.m
 Second Floor: 783sq.m
 Third Floor: 975sq.m
 Total: 3755sq.m

Gatehouse
 Area: 12sq.m



1 Proposed Site Plan
 1 : 200

PL 3	Boundary line amended	11/01/18	ST
PL 2	Site not amended to not use cadets boundary	28/11/17	ST
PL 1	Revised to reflect EC scheme	24/11/17	ST
Rev	Revision Description	Date	Author

PLANNING
 32 Freedom Street,
 Birmingham, B1 3PT
 +44 (0)121 234 7500
 www.chekwoods.com



Project:
SECURE TRAINING FACILITY

Client:
ABP

Drawing Title:
PROPOSED SITE PLAN

Date	Site	Drawn	Checked	Date
1 : 200	A0	ST	TM	09/05/16

Author	Originator	Zone	Level	Type	Risk	Number	Rev
4079	CHT	00	DR	A	01060	PL3	



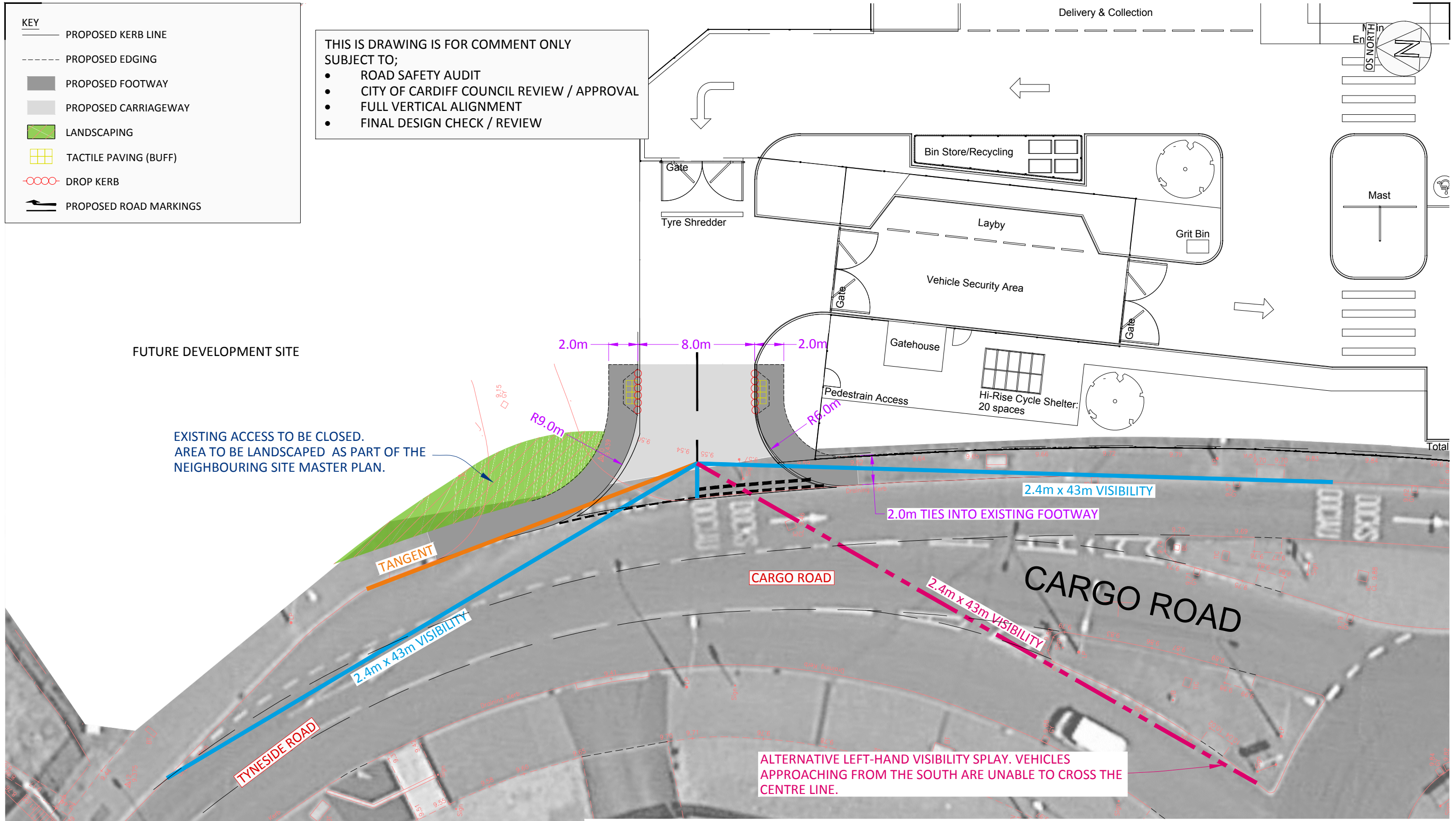
APPENDIX E

Site Access Junction

KEY	
	PROPOSED KERB LINE
	PROPOSED EDGING
	PROPOSED FOOTWAY
	PROPOSED CARRIAGEWAY
	LANDSCAPING
	TACTILE PAVING (BUFF)
	DROP KERB
	PROPOSED ROAD MARKINGS

THIS IS DRAWING IS FOR COMMENT ONLY
SUBJECT TO;

- ROAD SAFETY AUDIT
- CITY OF CARDIFF COUNCIL REVIEW / APPROVAL
- FULL VERTICAL ALIGNMENT
- FINAL DESIGN CHECK / REVIEW



FUTURE DEVELOPMENT SITE

EXISTING ACCESS TO BE CLOSED.
AREA TO BE LANDSCAPED AS PART OF THE
NEIGHBOURING SITE MASTER PLAN.

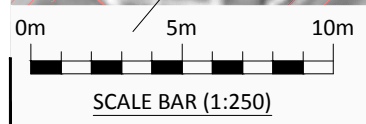
ALTERNATIVE LEFT-HAND VISIBILITY SPLAY. VEHICLES
APPROACHING FROM THE SOUTH ARE UNABLE TO CROSS THE
CENTRE LINE.

NOTE
BASED UPON DRAWING TITLED PROPOSED SITE
PLAN DRAWING NUMBER
4079-CHT-00-00-DR-A-01050 REV PL6
PRODUCED BY CHETWOODS ARCHITECTS
DATE 09/05/2016

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or visit www.hydrock.com

Project:
**SECURE TRAINING FACILITY,
PORTH TEIGR**

Drawing Title:
**PROPOSED SITE ACCESS
GENERAL ARRANGEMENT AND
VISIBILITY SPLAYS**
Project Number: **C-04330**



Rev	Date	Description	By	Ckd
P3	16/01/17	CARGO ROAD - TEXT SHOWN	SCJ	DCo
P2	13/01/17	APPLICATION AREA REMOVED	SCJ	DCo

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Client:
**SECURE TRAINING FACILITY,
PORTH TEIGR**

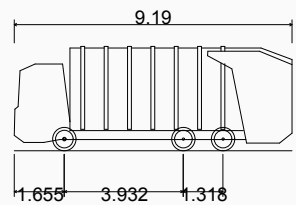
Drawn:	Checked:	Scale @ A3:	Drawn Date:	First Issue:
SCJ	DCo	1:250	11/01/17	11/01/17
Status:	S2	Purpose of Issue:	INFORMATION	
Drawing No.	04330-HYD-XX-XX-DR-TP-2001			
Revision	P4			



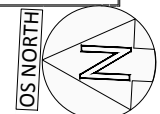
APPENDIX F

Swept Path Analysis

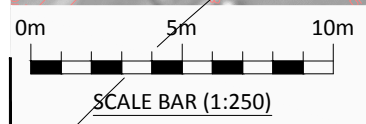
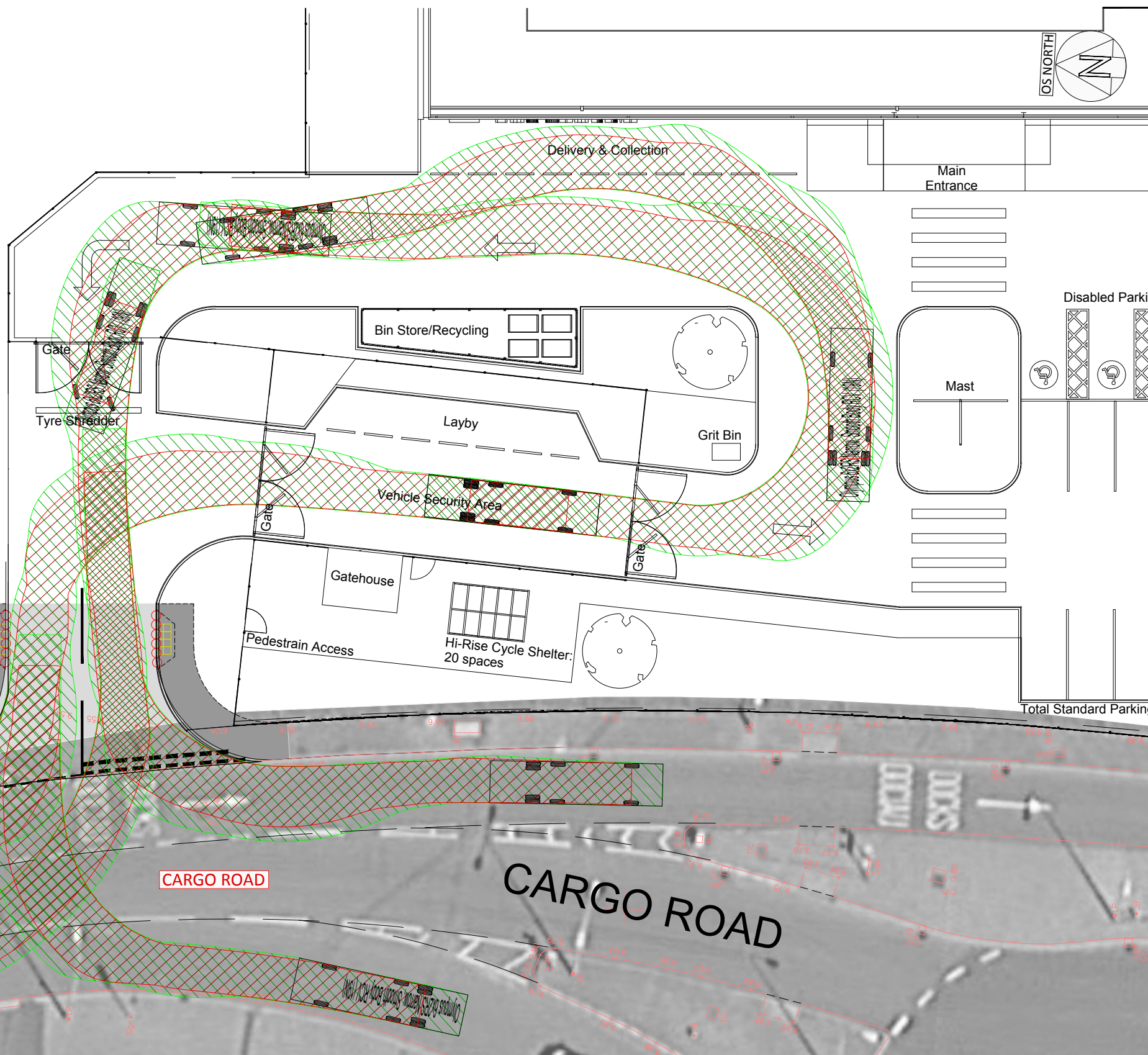
VEHICLE DETAIL



OLYMPUS 6X2RS NARROW, SMOOTH BODY RCV (19N)
 OVERALL LENGTH 9.190m
 OVERALL WIDTH 2.250m
 OVERALL BODY HEIGHT 3.450m
 MIN BODY GROUND CLEARANCE 0.251m
 TRACK WIDTH 2.200m
 LOCK TO LOCK TIME 4.00s
 KERB TO KERB TURNING RADIUS 8.850m



FUTURE DEVELOPMENT SITE



NOTE
 BASED UPON DRAWING TITLED PROPOSED SITE PLAN DRAWING NUMBER 4079-CHT-00-00-DR-A-01050 REV PL6 PRODUCED BY CHETWOODS ARCHITECTS DATE 09/05/2016

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Rev	Date	Description	By	Ckd
P3	16/01/17	CARGO ROAD - TEXT SHOWN	SCJ	DCo
P2	13/01/17	APPLICATION AREA REMOVED	SCJ	DCo

Project:
 SECURE TRAINING FACILITY,
 PORTH TEIGR

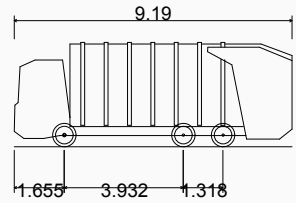
Client:
 SECURE TRAINING FACILITY,
 PORTH TEIGR

Drawing Title:
 SWEPT PATH ANALYSIS OF
 PROPOSED SITE ACCESS AND
 INTERNAL SITE LAYOUT

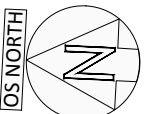
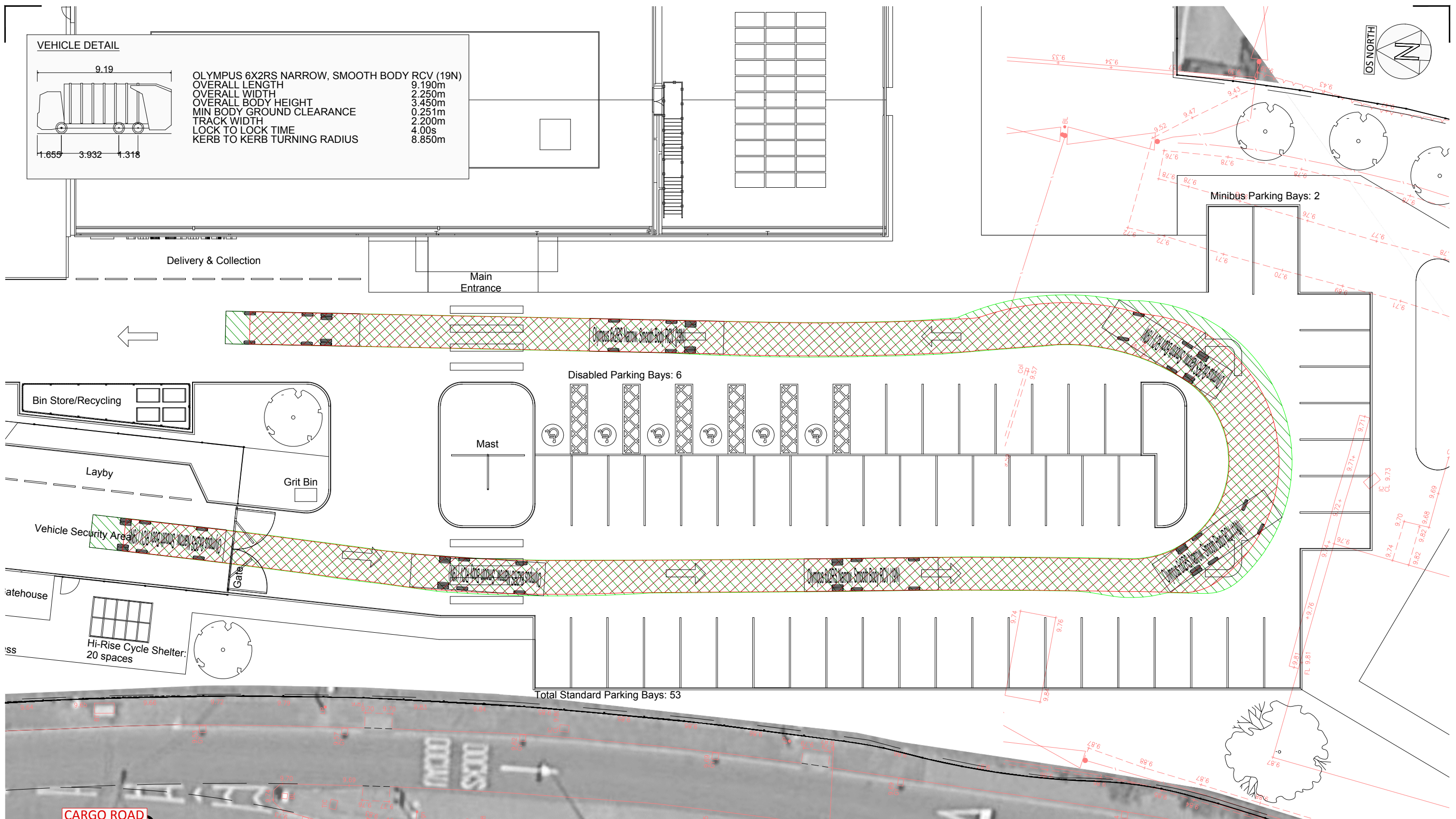
Project Number: C-04330

Drawn:	Checked:	Scale @ A3:	Drawn Date:	First Issue:
SCJ	DCo	1:250	11/01/17	11/01/17
Status: S2		Purpose of Issue: INFORMATION		
Drawing No. 04330-HYD-XX-XX-DR-TP-2200		Revision: P4		

VEHICLE DETAIL

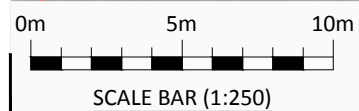


OLYMPUS 6X2RS NARROW, SMOOTH BODY RCV (19N)
 OVERALL LENGTH 9.190m
 OVERALL WIDTH 2.250m
 OVERALL BODY HEIGHT 3.450m
 MIN BODY GROUND CLEARANCE 0.251m
 TRACK WIDTH 2.200m
 LOCK TO LOCK TIME 4.00s
 KERB TO KERB TURNING RADIUS 8.850m



CARGO ROAD

CARGO ROAD



NOTE

BASED UPON DRAWING TITLED PROPOSED SITE
 PLAN DRAWING NUMBER
 4079-CHT-00-00-DR-A-01050 REV PL6
 PRODUCED BY CHETWOODS ARCHITECTS
 DATE 09/05/2016

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Rev	Date	Description	By	Ckd
P3	16/01/17	CARGO ROAD - TEXT SHOWN	SCJ	DCo
P2	13/01/17	APPLICATION AREA REMOVED	SCJ	DCo

Project:

**SECURE TRAINING FACILITY,
 PORTH TEIGR**

Client:

**SECURE TRAINING FACILITY,
 PORTH TEIGR**

Drawing Title:

**SWEPT PATH ANALYSIS OF
 INTERNAL SITE LAYOUT**

Project Number: C-04330

Drawn:	Checked:	Scale @ A3:	Drawn Date:	First Issue:
SCJ	DCo	1:250	11/01/17	11/01/17

Status: S2 Purpose of Issue: INFORMATION

Drawing No. 04330-HYD-XX-XX-DR-TP-2201 Revision P4



APPENDIX G

Census 2011 Journey to Work Data Analysis

WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level)
ONS Crown Copyright Reserved [From Nomis on 1 September 2016]

Population :
Units :
Date :
place of work :

All usual residents aged 16 and over in employment the week before the census
Persons
2011
WU02000422 : Cardiff 048 (2011 super output area - middle layer)

usual residence : 2011 super output area - middle layer

All category: Train Bus, minibus or coach Taxi Motorcycle, scooter or moped Driving a car or van Passenger in a car or van Bicycle On foot Other method of travel to work

	Train	Bus, minibus or coach	Taxi	Motorcycle, scooter or moped	Driving a car or van	Passenger in a car or van	Bicycle	On foot	Other method of travel to work
WU0200423 : Cardiff 049	525	2	17	2	0	125	11	31	333
WU0200422 : Cardiff 048	494	4	11	2	0	159	7	26	284
WU0200412 : Cardiff 046	328	1	16	0	2	126	15	19	146
WU0200410 : Cardiff 044	286	4	29	1	0	108	18	17	109
WU0200240 : The Vale of Glamorgan 004	279	9	7	2	5	189	24	27	16
WU0200241 : The Vale of Glamorgan 005	270	11	9	1	0	155	15	37	31
WU0200406 : Cardiff 040	250	3	29	0	2	142	16	33	25
WU0200244 : The Vale of Glamorgan 008	227	1	7	0	1	184	12	13	9
WU0200399 : Cardiff 033	221	27	30	2	1	94	7	29	31
WU0200402 : Cardiff 036	211	26	34	4	0	72	9	26	37
WU0200242 : The Vale of Glamorgan 006	201	17	0	1	3	151	19	6	4
WU0200394 : Cardiff 026	200	13	30	0	1	130	14	7	5
WU0200396 : Cardiff 030	185	8	27	0	1	89	5	31	24
WU0200408 : Cardiff 042	174	2	39	2	0	55	9	21	45
WU0200400 : Cardiff 034	165	1	26	1	0	87	9	19	22
WU0200369 : Cardiff 003	164	1	5	0	2	146	5	2	3
WU0200371 : Cardiff 005	163	16	11	0	1	120	4	4	7
WU0200248 : The Vale of Glamorgan 012	155	17	4	0	3	117	11	0	3
WU0200245 : The Vale of Glamorgan 009	153	9	4	0	0	129	9	0	0
WU0200380 : Cardiff 014	147	3	5	0	0	125	9	1	4
WU0200372 : Cardiff 006	142	23	2	0	0	104	5	4	4
WU0200401 : Cardiff 035	142	1	21	0	1	86	7	20	6
WU0200394 : Cardiff 028	140	19	28	2	1	50	6	11	23
WU0200377 : Cardiff 011	139	0	16	0	2	110	6	1	4
WU0200397 : Cardiff 031	139	1	19	0	1	91	9	4	12
WU0200403 : Cardiff 037	138	1	24	0	0	82	9	8	14
WU0200411 : Cardiff 045	137	0	18	1	0	100	9	5	4
WU0200249 : The Vale of Glamorgan 013	136	13	0	0	1	109	11	1	1
WU0200251 : The Vale of Glamorgan 015	135	22	1	0	1	102	6	3	0
WU0200386 : Cardiff 020	133	14	9	0	0	94	8	6	1
WU0200398 : Cardiff 032	133	16	32	1	1	42	5	5	30
WU0200378 : Cardiff 012	130	12	3	0	0	97	8	7	3
WU0200389 : Cardiff 023	130	12	16	0	0	77	5	9	10
WU0200404 : Cardiff 038	129	1	15	1	0	74	6	12	19
WU0200368 : Cardiff 002	125	6	5	0	0	101	7	0	5
WU0200381 : Cardiff 015	125	0	16	0	0	93	7	3	6
WU0200383 : Cardiff 017	124	2	19	0	2	86	5	3	7
WU0200239 : The Vale of Glamorgan 003	122	1	2	0	0	115	3	0	1
WU0200405 : Cardiff 039	120	0	31	0	0	60	16	5	7
WU0200282 : Rhondda Cynon Taf 031	120	10	3	0	0	95	10	1	1
WU0200375 : Cardiff 009	116	0	17	0	1	81	10	3	4
WU0200384 : Cardiff 018	115	6	11	0	3	84	2	5	3
WU0200250 : The Vale of Glamorgan 014	114	10	2	0	1	92	7	1	1
WU0200409 : Cardiff 043	114	0	17	1	1	77	9	1	8
WU0200387 : Cardiff 021	113	3	12	1	2	78	6	8	3
WU0200393 : Cardiff 027	113	1	16	2	0	73	7	4	10
WU0200407 : Cardiff 041	113	0	17	1	2	78	8	2	5
WU0200395 : Cardiff 029	112	3	18	0	0	63	5	17	6
WU0200278 : Rhondda Cynon Taf 027	112	1	4	0	2	97	8	0	0
WU0200376 : Cardiff 010	110	7	6	1	0	83	3	5	5
WU0200388 : Cardiff 022	110	0	9	0	0	88	5	2	6
WU0200391 : Cardiff 025	107	2	19	0	0	51	4	13	18
WU0200385 : Cardiff 019	105	10	6	0	0	79	0	5	4
WU0200366 : Newport 020	105	1	2	0	1	96	5	0	0
WU0200243 : The Vale of Glamorgan 007	104	5	2	0	1	86	4	5	0
WU0200390 : Cardiff 024	101	6	6	0	0	75	5	0	2
WU0200373 : Cardiff 007	100	0	12	0	1	69	7	4	7
WU0200370 : Cardiff 004	99	2	7	0	0	77	6	4	3
WU0200374 : Cardiff 008	94	6	4	2	0	75	2	3	2
WU0200379 : Cardiff 013	90	2	22	0	0	55	6	1	4
WU0200313 : Caerphilly 024	89	7	2	0	0	74	3	3	0
WU0200367 : Cardiff 001	86	4	4	1	1	71	2	1	1
WU0200382 : Cardiff 016	76	0	13	0	1	53	4	0	5
WU0200246 : The Vale of Glamorgan 010	73	1	0	0	0	71	1	0	0
WU0200277 : Rhondda Cynon Taf 026	70	11	2	0	0	51	5	1	0
WU0200247 : The Vale of Glamorgan 011	63	5	0	0	1	52	4	0	1
WU0200234 : Bridgend 017	61	4	0	0	0	53	3	0	1
WU0200281 : Rhondda Cynon Taf 030	60	0	0	0	0	55	0	0	0
WU0200238 : The Vale of Glamorgan 002	58	2	0	0	1	52	3	0	0
WU0200272 : Rhondda Cynon Taf 021	56	13	0	0	0	38	2	3	0
WU0200226 : Bridgend 009	54	6	0	0	0	44	4	0	0
WU0200280 : Rhondda Cynon Taf 029	54	10	0	0	0	39	3	2	0
WU0200312 : Caerphilly 023	53	3	0	0	0	48	1	0	1
WU0200311 : Caerphilly 022	48	11	0	0	0	32	5	1	0
WU0200308 : Caerphilly 019	47	6	1	0	0	39	1	0	0
WU0200302 : Caerphilly 013	45	4	0	0	0	37	4	0	0
WU0200237 : The Vale of Glamorgan 001	42	1	0	0	0	40	0	0	1
WU0200266 : Rhondda Cynon Taf 015	41	4	1	0	0	35	0	1	0
WU0200355 : Newport 009	36	2	2	0	0	32	0	0	0
WU0200279 : Rhondda Cynon Taf 028	33	0	4	0	0	27	0	0	0
WU0200273 : Rhondda Cynon Taf 022	32	9	1	0	0	21	0	0	1
WU0200310 : Caerphilly 021	31	1	0	0	0	29	1	0	0
WU0200350 : Newport 004	31	2	0	0	0	27	2	0	0
WU0200257 : Rhondda Cynon Taf 006	30	4	1	0	0	21	2	0	2
WU0200298 : Caerphilly 009	29	6	0	0	0	21	2	0	0
WU0200348 : Newport 002	29	3	1	0	0	22	2	0	0
WU0200232 : Bridgend 004	28	1	0	0	0	26	0	0	1
WU0200274 : Rhondda Cynon Taf 023	28	0	0	0	0	25	3	0	0
WU0200365 : Newport 019	27	1	1	0	0	21	1	0	3
WU0200358 : Newport 012	26	2	1	0	0	20	1	0	1
WU0200289 : Merthyr Tydfil 007	25	2	0	0	0	20	2	0	1
WU0200357 : Newport 011	25	4	2	0	0	16	2	0	1
WU0200359 : Newport 013	25	1	3	1	0	14	5	0	0
WU0200228 : Bridgend 011	24	0	0	0	0	24	0	0	0
WU0200268 : Rhondda Cynon Taf 017	24	4	2	0	0	16	2	0	0
WU0200270 : Rhondda Cynon Taf 019	24	1	0	0	0	23	0	0	0
WU0200362 : Newport 016	24	0	0	0	0	23	1	0	0
WU0200301 : Caerphilly 012	23	4	0	0	0	19	0	0	0
WU0200346 : Monmouthshire 011	23	4	0	0	0	18	1	0	0
WU0200352 : Newport 006	23	2	1	0	0	18	1	0	1
WU0200353 : Newport 007	23	1	1	0	0	21	0	0	0
WU0200233 : Bridgend 016	22	0	0	0	0	21	1	0	0
WU0200307 : Caerphilly 018	22	2	0	0	0	20	0	0	0
WU0200309 : Caerphilly 020	22	2	0	0	0	19	1	0	0
WU0200295 : Caerphilly 006	21	2	0	0	0	16	0	3	0
WU0200297 : Caerphilly 008	21	7	0	0	0	14	0	0	0
WU0200236 : Bridgend 019	20	0	0	0	0	20	0	0	0
WU0200256 : Rhondda Cynon Taf 005	20	4	1	0	0	13	1	0	1
WU0200275 : Rhondda Cynon Taf 024	20	0	1	0	0	19	0	0	0
WU0200354 : Newport 008	20	4	0	0	0	16	0	0	0
WU0200360 : Newport 014	20	6	0	0	0	13	0	0	1
WU0200221 : Bridgend 004	19	0	0	0	0	17	2	0	0
WU0200254 : Rhondda Cynon Taf 003	19	6	0	0	0	13	0	0	0
WU0200276 : Rhondda Cynon Taf 025	19	0	0	0	1	15	3	0	0
WU0200300 : Caerphilly 011	19	2	0	0	0	16	1	0	0
WU0200349 : Newport 003	19	3	2	0	0	14	0	0	0
WU0200224 : Bridgend 007	18	3	0	0	1	13	0	1	0
WU0200227 : Bridgend 010	18	0	0	0	0	18	0	0	0
WU0200258 : Rhondda Cynon Taf 007	18	2	0	0	0	13	2	0	1
WU0200269 : Rhondda Cynon Taf 018	18	5	1	0	0	11	0	0	1
WU0200304 : Caerphilly 015	18	4	0	0	0	12	1	0	1
WU0200305 : Caerphilly 016	18	4	0	0	0	12	2	0	0
WU0200341 : Monmouthshire 006	18	0	0	0	0	18	0	0	0
WU0200361 : Newport 015	18	2	0	0	0	12	2	0	1
WU0200363 : Newport 017	18	1	0	0	0	17	0	0	0
WU0200235 : Bridgend 018	17	0	0	0	0	17	0	0	0
WU0200259 : Rhondda Cynon Taf 008	17	1	1	0	0	8	4	0	3
WU0200262 : Rhondda Cynon Taf 011	17	2	0	0	0	12	2	1	0
WU0200265 : Rhondda Cynon Taf 014	17	5	0	0	0	11	0	0	1
WU0200364 : Newport 018	17	1	0	1	0	13	0	1	1
WU0200225 : Bridgend 008	16	1	0	0	0	14	1	0	0
WU0200284 : Merthyr Tydfil 002	16	1	0	0	0	14	1	0	0
WU0200296 : Caerphilly 007	16	3	0	0	0	13	0	0	0
WU0200231 : Bridgend 014	15	3	0	0	0	10	1	0	1
WU0200293 : Caerphilly 004	15	5	0	0	0	10	0	0	0

W02000334 : Torfaen 012	15	0	1	0	0	14	0	0	0	0
W02000263 : Rhondda Cynon Taf 012	14	3	1	0	0	8	2	0	0	0
W02000267 : Rhondda Cynon Taf 016	14	1	0	0	0	11	1	0	1	0
W02000303 : Caerphilly 014	14	0	0	0	0	14	0	0	0	0
W02000347 : Newport 001	14	1	1	0	0	12	0	0	0	0
W02000351 : Newport 005	14	0	0	0	0	11	1	0	2	0
W02000252 : Rhondda Cynon Taf 001	13	2	1	0	0	9	0	0	1	0
W02000253 : Rhondda Cynon Taf 002	13	1	0	0	0	11	1	0	0	0
W02000285 : Merthyr Tydfil 003	13	0	0	0	0	11	2	0	0	0
W02000294 : Caerphilly 005	13	2	0	0	0	10	1	0	0	0
W02000306 : Caerphilly 017	13	1	0	0	0	11	1	0	0	0
W02000330 : Torfaen 008	13	4	0	0	0	8	0	0	1	0
W02000344 : Monmouthshire 009	13	1	0	0	0	10	2	0	0	0
W02000202 : Neath Port Talbot 004	12	0	0	0	0	11	1	0	0	0
W02000222 : Bridgend 005	12	0	0	0	0	10	2	0	0	0
W02000223 : Bridgend 006	12	2	0	0	0	10	0	0	0	0
W02000230 : Bridgend 013	12	1	0	0	0	11	0	0	0	0
W02000290 : Caerphilly 001	12	1	0	0	0	11	0	0	0	0
W02000189 : Swansea 022	11	1	1	0	0	9	0	0	0	0
W02000255 : Rhondda Cynon Taf 004	11	1	0	0	0	10	0	0	0	0
W02000260 : Rhondda Cynon Taf 009	11	0	0	0	0	10	1	0	0	0
W02000264 : Rhondda Cynon Taf 013	11	1	0	0	0	9	1	0	0	0
W02000415 : Merthyr Tydfil 008	11	4	1	0	0	5	0	0	1	0
W02000292 : Caerphilly 003	11	2	0	0	0	6	3	0	0	0
W02000328 : Torfaen 006	11	0	1	0	0	10	0	0	0	0
W02000329 : Torfaen 007	11	3	0	0	0	8	0	0	0	0
W02000331 : Torfaen 009	11	0	0	0	0	11	0	0	0	0
W02000190 : Swansea 023	10	0	2	0	0	7	1	0	0	0
W02000218 : Bridgend 001	10	0	0	0	0	9	1	0	0	0
W02000229 : Bridgend 012	10	1	0	0	0	8	0	0	1	0
W02000271 : Rhondda Cynon Taf 020	10	3	0	0	0	7	0	0	0	0
W02000288 : Merthyr Tydfil 006	10	1	0	0	0	9	0	0	0	0
W02000326 : Torfaen 004	10	0	1	0	0	9	0	0	0	0
W02000333 : Torfaen 011	10	1	0	0	0	9	0	0	0	0
W02000335 : Torfaen 013	10	1	0	0	0	7	1	0	0	0
W02000171 : Swansea 004	9	0	0	0	0	9	0	0	0	0
W02000175 : Swansea 008	9	1	1	0	0	7	0	0	0	0
W02000198 : Swansea 031	9	3	0	0	0	6	0	0	0	0
W02000204 : Neath Port Talbot 006	9	4	0	0	0	5	0	0	0	0
W02000220 : Bridgend 003	9	0	0	0	0	7	2	0	0	0
W02000261 : Rhondda Cynon Taf 010	9	2	0	0	0	5	1	1	0	0
W02000286 : Merthyr Tydfil 004	9	0	2	0	0	7	0	0	0	0
W02000291 : Caerphilly 002	9	2	0	0	0	6	1	0	0	0
W02000327 : Torfaen 005	9	0	0	0	0	9	0	0	0	0
W02000191 : Swansea 024	8	0	1	0	0	5	1	0	1	0
W02000193 : Swansea 026	8	1	1	0	0	4	2	0	0	0
W02000216 : Neath Port Talbot 018	8	4	0	0	0	4	0	0	2	0
W02000316 : Blaenau Gwent 003	8	0	0	0	0	4	4	0	0	0
W02000336 : Monmouthshire 001	8	1	0	0	0	7	0	0	0	0
W02000338 : Monmouthshire 003	8	2	0	0	0	5	1	0	0	0
W02000356 : Newport 010	8	0	1	0	0	4	2	0	1	0
W02000174 : Swansea 007	7	0	1	0	0	5	1	0	0	0
W02000180 : Swansea 013	7	0	0	0	0	5	0	0	2	0
W02000186 : Swansea 019	7	1	1	0	0	2	0	0	1	0
W02000207 : Neath Port Talbot 009	7	2	0	0	1	3	0	0	1	0
W02000212 : Neath Port Talbot 014	7	0	0	0	0	7	0	0	0	0
W02000217 : Neath Port Talbot 019	7	1	0	0	0	5	1	0	0	0
W02000299 : Caerphilly 010	7	0	0	0	0	6	1	0	0	0
W02000320 : Blaenau Gwent 007	7	3	0	0	0	4	0	0	2	0
W02000324 : Torfaen 002	7	0	0	0	0	7	0	0	0	0
W02000339 : Monmouthshire 004	7	0	1	0	0	5	1	0	0	0
W02000342 : Monmouthshire 007	7	1	0	0	0	6	0	0	0	0
W02000345 : Monmouthshire 010	7	1	0	0	0	6	0	0	0	0
W02000114 : Powys 018	6	0	0	0	0	6	0	0	0	0
W02000173 : Swansea 006	6	0	0	0	0	5	1	0	0	0
W02000185 : Swansea 018	6	0	0	0	0	4	0	0	1	0
W02000197 : Swansea 030	6	1	0	0	0	3	2	0	0	0
W02000208 : Neath Port Talbot 010	6	1	0	0	0	3	2	0	0	0
W02000211 : Neath Port Talbot 013	6	1	0	0	0	5	0	0	0	0
W02000219 : Bridgend 002	6	2	0	0	0	4	0	0	0	0
E02004635 : Forest of Dean 010	5	0	0	0	0	5	0	0	0	0
W02000157 : Carmarthenshire 016	5	0	0	0	0	2	1	0	2	0
W02000168 : Swansea 001	5	0	0	0	0	5	0	0	0	0
W02000177 : Swansea 010	5	0	0	0	0	5	0	0	0	0
W02000179 : Swansea 012	5	0	0	0	0	5	0	0	0	0
W02000210 : Neath Port Talbot 012	5	1	0	0	0	4	0	0	0	0
W02000287 : Merthyr Tydfil 005	5	2	0	0	0	3	0	0	0	0
W02000325 : Torfaen 003	5	0	0	0	0	5	0	0	0	0
E02002945 : Telford and Wrekin 018	4	0	0	0	0	1	3	0	0	0
W02000416 : Powys 021	4	0	0	0	0	4	0	0	0	0
W02000170 : Swansea 003	4	0	0	0	0	3	1	0	0	0
W02000178 : Swansea 011	4	0	0	0	0	3	1	0	0	0
W02000192 : Swansea 025	4	1	1	0	0	2	0	0	0	0
W02000203 : Neath Port Talbot 005	4	1	0	0	0	3	0	0	0	0
W02000314 : Blaenau Gwent 001	4	0	0	0	0	4	0	0	0	0
W02000322 : Blaenau Gwent 009	4	2	1	0	0	1	0	0	0	0
W02000343 : Monmouthshire 008	4	0	0	0	0	3	0	1	0	0
E02003310 : Thurrock 015	3	0	0	0	0	2	1	0	0	0
E02003024 : Bristol 013	3	3	0	0	0	0	0	0	0	0
E02003047 : Bristol 036	3	0	0	0	0	3	0	0	0	0
E02003075 : North Somerset 011	3	2	0	0	0	1	0	0	0	0
E02003098 : South Gloucestershire 009	3	1	0	0	0	2	0	0	0	0
E02003106 : South Gloucestershire 017	3	1	0	0	0	2	0	0	0	0
E02004628 : Forest of Dean 003	3	2	0	0	0	1	0	0	0	0
E02006072 : Sedgemoor 012	3	0	0	0	0	3	0	0	0	0
W02000113 : Powys 017	3	0	0	0	0	3	0	0	0	0
W02000117 : Ceredigion 002	3	0	0	0	0	1	0	0	2	0
W02000123 : Ceredigion 008	3	0	0	0	0	3	0	0	0	0
W02000145 : Carmarthenshire 004	3	0	0	0	0	2	1	0	0	0
W02000156 : Carmarthenshire 015	3	1	0	0	0	2	0	0	0	0
W02000158 : Carmarthenshire 017	3	0	0	0	0	3	0	0	0	0
W02000160 : Carmarthenshire 019	3	0	0	0	0	3	0	0	0	0
W02000169 : Swansea 002	3	0	0	0	0	1	1	0	0	0
W02000176 : Swansea 009	3	0	0	0	0	3	0	0	0	0
W02000183 : Swansea 016	3	1	0	0	0	2	0	0	0	0
W02000184 : Swansea 017	3	0	0	0	0	1	2	0	0	0
W02000194 : Swansea 027	3	0	1	0	0	2	0	0	0	0
W02000195 : Swansea 028	3	0	0	0	0	3	0	0	0	0
W02000209 : Neath Port Talbot 011	3	1	0	0	0	2	0	0	0	0
W02000213 : Neath Port Talbot 015	3	1	0	0	0	2	0	0	0	0
W02000214 : Neath Port Talbot 016	3	1	0	0	0	2	0	0	0	0
W02000215 : Neath Port Talbot 017	3	0	0	0	0	3	0	0	0	0
W02000417 : Neath Port Talbot 020	3	0	0	0	0	3	0	0	0	0
W02000323 : Torfaen 001	3	0	0	0	0	3	0	0	0	0
W02000340 : Monmouthshire 005	3	0	0	0	0	3	0	0	0	0
E02002608 : Warrington 019	2	0	1	0	0	1	0	0	0	0
E02001366 : Liverpool 020	2	0	0	0	0	1	0	0	0	0
E02001401 : Liverpool 055	2	1	0	0	0	1	0	0	0	0
E02005380 : Hinckley and Bosworth 004	2	0	0	0	0	1	0	0	0	0
E02005382 : Hinckley and Bosworth 006	2	0	0	0	0	2	0	0	0	0
E02005401 : North West Leicestershire 005	2	0	0	0	0	0	0	0	2	0
E02002922 : Herefordshire 018	2	0	0	0	0	2	0	0	0	0
E02003311 : Thurrock 016	2	0	0	0	0	1	1	0	0	0
E02006859 : Thurrock 019	2	0	0	0	0	1	0	0	1	0
E02000169 : Camden 004	2	0	0	0	0	2	0	0	0	0
E02006801 : Lambeth 036	2	0	0	0	0	0	0	2	0	0
E02000014 : Barking and Dagenham 013	2	0	0	0	0	2	0	0	0	0
E02000490 : Havering 027	2	0	0	0	0	2	0	0	0	0
E02004835 : Winchester 007	2	0	0	0	0	2	0	0	0	0
E02003025 : Bristol 014	2	1	0	0	0	1	0	0	0	0
E02003027 : Bristol 016	2	2	0	0	0	0	0	0	0	0
E02003033 : Bristol 022	2	0	0	0	0	1	0	0	1	0
E02003037 : Bristol 026	2	0	0	0	0	1	1	0	0	0
E02003043 : Bristol 032	2	0	0	0	0	2	0	0	0	0
E02003048 : Bristol 037	2	0	1	0	0	1	0	0	0	0
E02003053 : Bristol 042	2	1	0	0	0	1	0	0	0	0
E02006887 : Bristol 054	2	2	0	0	0	0	0	0	0	0
E02006846 : North Somerset 027	2	0	0	0	0	2	0	0	0	0
E02003093 : South Gloucestershire 004	2	0	0	0	0	2	0	0	0	0
E02003101 : South Gloucestershire 012	2	0	0	0	0	0	0	0	0	0
E02003102 : South Gloucestershire 013	2	1	0	0	0	1	0	0	0	0
E02003104 : South Gloucestershire 015	2	1	0							

EO2003039 : Bristol 028	1	1	0	0	0	0	0	0	0	0	0	0	0						
EO2003040 : Bristol 029	1	1	0	0	0	0	0	0	0	0	0	0	0						
EO2003046 : Bristol 035	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2003050 : Bristol 039	1	1	0	0	0	0	0	0	0	0	0	0	0						
EO2003051 : Bristol 040	1	1	0	0	0	0	0	0	0	0	0	0	0						
EO2003052 : Bristol 041	1	1	0	0	0	0	0	0	0	0	0	0	0						
EO2003054 : Bristol 043	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2003059 : Bristol 048	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2006890 : Bristol 057	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2003900 : Cornwall 026	1	1	0	0	0	0	0	0	0	0	0	0	0						
EO2003904 : Cornwall 037	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2003066 : North Somerset 002	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2003067 : North Somerset 003	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2003072 : North Somerset 008	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2003076 : North Somerset 012	1	0	0	0	0	1	0	0	0	0	0	0	0						
EO2003081 : North Somerset 017	1	0	0	0	0	0	0	0	0	0	1	0	0						
EO2003087 : North Somerset 023	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2006845 : North Somerset 026	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2003133 : Plymouth 012	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2003137 : Plymouth 016	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2003145 : Plymouth 024	1	0	0	0	0	0	0	0	0	0	0	0	0						
EO2003091 : South Gloucestershire 002	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2003094 : South Gloucestershire 005	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2003100 : South Gloucestershire 011	1	0	1	0	0	0	0	0	0	0	0	0	0						
EO2003107 : South Gloucestershire 018	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2003114 : South Gloucestershire 025	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2003219 : Swindon 008	1	1	0	0	0	0	0	0	0	0	0	0	0						
EO2003222 : Swindon 011	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2003225 : Swindon 015	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2003228 : Swindon 017	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2003232 : Swindon 021	1	1	0	0	0	0	0	0	0	0	0	0	0						
EO2006847 : Swindon 026	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2006848 : Swindon 027	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2003156 : Torbay 003	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2006679 : Wiltshire 021	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2006682 : Wiltshire 027	1	1	0	0	0	0	0	0	0	0	0	0	0						
EO2006686 : Wiltshire 033	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2006687 : Wiltshire 035	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2006688 : Wiltshire 036	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2004135 : East Devon 007	1	0	0	0	0	0	0	0	0	0	0	1	0						
EO2004142 : East Devon 014	1	0	0	0	0	0	0	0	0	0	1	0	0						
EO2004163 : Exeter 015	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2004192 : South Hams 004	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2004208 : Teignbridge 008	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2004261 : North Dorset 007	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2004618 : Cotswold 004	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2004621 : Cotswold 007	1	1	0	0	0	0	0	0	0	0	0	0	0						
EO2004631 : Forest of Dean 006	1	0	0	0	0	0	0	0	0	0	1	0	0						
EO2004645 : Gloucester 010	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2004662 : Stroud 012	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2004663 : Stroud 013	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2004672 : Tewkesbury 007	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2006058 : Mendip 012	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2006062 : Sedgemoor 002	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2006068 : Sedgemoor 008	1	0	0	0	0	0	0	1	0	0	0	0	0						
EO2006074 : Sedgemoor 014	1	0	0	0	0	0	1	0	0	0	0	0	0						
EO2006099 : Taunton Deane 001	1	0	0	0	0	0	1	0	0	0	0	0	0						
W02000013 : Gwynedd 004	1	0	0	0	0	0	1	0	0	0	0	0	0						
W02000059 : Flintshire 002	1	0	0	0	0	0	1	0	0	0	0	0	0						
W02000111 : Powys 015	1	0	0	0	0	0	1	0	0	0	0	0	0						
W02000116 : Ceredigion 001	1	0	0	0	0	0	1	0	0	0	0	0	0						
W02000124 : Ceredigion 009	1	0	0	0	0	0	1	0	0	0	0	0	0						
W02000125 : Ceredigion 010	1	0	0	0	0	0	1	0	0	0	0	0	0						
W02000421 : Ceredigion 011	1	1	0	0	0	0	0	0	0	0	0	0	0						
W02000126 : Pembrokeshire 001	1	0	0	0	0	0	1	0	0	0	0	0	0						
W02000127 : Pembrokeshire 002	1	0	0	0	0	0	1	0	0	0	0	0	0						
W02000128 : Pembrokeshire 003	1	0	0	0	0	0	1	0	0	0	0	0	0						
W02000134 : Pembrokeshire 009	1	0	0	0	0	0	0	1	0	0	0	0	0						
W02000135 : Pembrokeshire 010	1	0	0	0	0	0	1	0	0	0	0	0	0						
W02000142 : Carmarthenshire 001	1	0	0	0	0	0	1	0	0	0	0	0	0						
W02000152 : Carmarthenshire 011	1	0	0	0	0	0	1	0	0	0	0	0	0						
W02000159 : Carmarthenshire 018	1	0	0	0	0	0	1	0	0	0	0	0	0						
W02000161 : Carmarthenshire 020	1	0	0	0	0	0	1	0	0	0	0	0	0						
W02000181 : Swansea 014	1	0	0	0	0	0	1	0	0	0	0	0	0						
W02000200 : Neath Port Talbot 002	1	1	0	0	0	0	0	0	0	0	0	0	0						
W02000205 : Neath Port Talbot 007	1	0	0	0	0	0	1	0	0	0	0	0	0						
W02000315 : Blaenau Gwent 002	1	0	0	0	0	0	1	0	0	0	0	0	0						
TOTAL	13054	758	908	35	59	8581	663	571	1458	21	5.8%	7.0%	0.3%	0.5%	65.7%	5.1%	4.4%	11.2%	0.2%

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies be affected, particularly small counts at the lowest geographies



APPENDIX H

TRICS Data Outputs

Calculation Reference: AUDIT-540501-161003-1035

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 07 - LEISURE
 Category : Q - COMMUNITY CENTRE
 VEHICLES

Selected regions and areas:

03	SOUTH WEST	
	BA BATH & NORTH EAST SOMERSET	2 days
	WL WILTSHIRE	1 days
05	EAST MIDLANDS	
	NT NOTTINGHAMSHIRE	1 days
06	WEST MIDLANDS	
	ST STAFFORDSHIRE	1 days
09	NORTH	
	DH DURHAM	1 days
	TV TEES VALLEY	1 days
10	WALES	
	SW SWANSEA	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: Site area
 Actual Range: 0.12 to 0.28 (units: hect)
 Range Selected by User: 0.04 to 2.50 (units: hect)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/03 to 13/11/15

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:

Monday	1 days
Tuesday	2 days
Wednesday	1 days
Thursday	1 days
Friday	3 days

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

Selected survey types:

Manual count	8 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	5
Suburban Area (PPS6 Out of Centre)	3

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	4
Built-Up Zone	2
High Street	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.

Filtering Stage 3 selection:

Use Class:

D2 8 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:

5,001 to 10,000	1 days
15,001 to 20,000	1 days
25,001 to 50,000	5 days
50,001 to 100,000	1 days

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

Population within 5 miles:

100,001 to 125,000	4 days
125,001 to 250,000	2 days
250,001 to 500,000	1 days
500,001 or More	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	4 days
1.1 to 1.5	4 days

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

Travel Plan:

No 8 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	BA-07-Q-01 SAINT MARKS ROAD	COMMUNITY CENTRE	BATH & NORTH EAST SOMERSET
	BATH Edge of Town Centre Built-Up Zone Total Site area: 0.12 hect Survey date: FRIDAY 29/09/06		
	Survey Type: MANUAL		
2	BA-07-Q-02 OFF THE A36	COMMUNITY CENTRE	BATH & NORTH EAST SOMERSET
	BATH Edge of Town Centre Residential Zone Total Site area: 0.27 hect Survey date: MONDAY 02/10/06		
	Survey Type: MANUAL		
3	DH-07-Q-01 JUTLAND ROAD	COM. CENTRE	DURHAM
	HARTLEPOOL Suburban Area (PPS6 Out of Centre) No Sub Category Total Site area: 0.13 hect Survey date: FRIDAY 28/09/07		
	Survey Type: MANUAL		
4	NT-07-Q-01 61B MANSFIELD ROAD	COMMUNITY CENTRE	NOTTINGHAMSHIRE
	NOTTINGHAM Edge of Town Centre Residential Zone Total Site area: 0.13 hect Survey date: THURSDAY 13/06/13		
	Survey Type: MANUAL		
5	ST-07-Q-01 DUDLEY ROAD	COMMUNITY CENTRE	STAFFORDSHIRE
	WOLVERHAMPTON Edge of Town Centre Built-Up Zone Total Site area: 0.20 hect Survey date: FRIDAY 09/05/14		
	Survey Type: MANUAL		
6	SW-07-Q-01 HIGH STREET	COMMUNITY CENTRE	SWANSEA
	SWANSEA Edge of Town Centre High Street Total Site area: 0.19 hect Survey date: TUESDAY 22/10/13		
	Survey Type: MANUAL		
7	TV-07-Q-01 FULBECK ROAD	COM. CENTRE	TEES VALLEY
	MIDDLESBROUGH Suburban Area (PPS6 Out of Centre) Residential Zone Total Site area: 0.28 hect Survey date: WEDNESDAY 26/09/07		
	Survey Type: MANUAL		

LIST OF SITES relevant to selection parameters (Cont.)

8	WL-07-Q-01 OLD COURT	COM.CENTRE		WILTSHIRE
	WOOTTON BASSETT			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Site area:		0.20 hect	
	Survey date: TUESDAY		03/10/06	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 07 - LEISURE/Q - COMMUNITY CENTRE
VEHICLES

Calculation factor: 1 hect

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	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	2	0.15	3.226	2	0.15	3.226	2	0.15	6.452
08:00 - 09:00	8	0.19	21.053	8	0.19	7.237	8	0.19	28.290
09:00 - 10:00	8	0.19	27.632	8	0.19	15.789	8	0.19	43.421
10:00 - 11:00	8	0.19	17.105	8	0.19	15.789	8	0.19	32.894
11:00 - 12:00	8	0.19	14.474	8	0.19	23.026	8	0.19	37.500
12:00 - 13:00	7	0.18	31.452	7	0.18	25.806	7	0.18	57.258
13:00 - 14:00	7	0.18	21.774	7	0.18	19.355	7	0.18	41.129
14:00 - 15:00	7	0.18	15.323	7	0.18	26.613	7	0.18	41.936
15:00 - 16:00	7	0.18	21.774	7	0.18	32.258	7	0.18	54.032
16:00 - 17:00	7	0.18	10.484	7	0.18	13.710	7	0.18	24.194
17:00 - 18:00	7	0.18	24.194	7	0.18	18.548	7	0.18	42.742
18:00 - 19:00	7	0.18	41.935	7	0.18	20.161	7	0.18	62.096
19:00 - 20:00	7	0.18	20.968	7	0.18	16.935	7	0.18	37.903
20:00 - 21:00	7	0.18	3.226	7	0.18	15.323	7	0.18	18.549
21:00 - 22:00	5	0.19	7.527	5	0.19	36.559	5	0.19	44.086
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			282.147			290.335			572.482

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: 0.12 to 0.28 (units: hect)
 Survey date date range: 01/01/03 - 13/11/15
 Number of weekdays (Monday-Friday): 8
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

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

TRIP RATE for Land Use 07 - LEISURE/Q - COMMUNITY CENTRE
TAXIS

Calculation factor: 1 hect

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	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	2	0.15	0.000	2	0.15	0.000	2	0.15	0.000
08:00 - 09:00	8	0.19	0.000	8	0.19	0.000	8	0.19	0.000
09:00 - 10:00	8	0.19	2.632	8	0.19	2.632	8	0.19	5.264
10:00 - 11:00	8	0.19	0.658	8	0.19	0.658	8	0.19	1.316
11:00 - 12:00	8	0.19	0.658	8	0.19	0.658	8	0.19	1.316
12:00 - 13:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
13:00 - 14:00	7	0.18	0.806	7	0.18	0.806	7	0.18	1.612
14:00 - 15:00	7	0.18	4.032	7	0.18	4.032	7	0.18	8.064
15:00 - 16:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
16:00 - 17:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
17:00 - 18:00	7	0.18	1.613	7	0.18	0.806	7	0.18	2.419
18:00 - 19:00	7	0.18	3.226	7	0.18	3.226	7	0.18	6.452
19:00 - 20:00	7	0.18	0.806	7	0.18	1.613	7	0.18	2.419
20:00 - 21:00	7	0.18	2.419	7	0.18	0.000	7	0.18	2.419
21:00 - 22:00	5	0.19	2.151	5	0.19	5.376	5	0.19	7.527
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			19.001			19.807			38.808

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: 0.12 to 0.28 (units: hect)
 Survey date date range: 01/01/03 - 13/11/15
 Number of weekdays (Monday-Friday): 8
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

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

TRIP RATE for Land Use 07 - LEISURE/Q - COMMUNITY CENTRE
OGVS

Calculation factor: 1 hect

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	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	2	0.15	0.000	2	0.15	0.000	2	0.15	0.000
08:00 - 09:00	8	0.19	0.000	8	0.19	0.000	8	0.19	0.000
09:00 - 10:00	8	0.19	0.000	8	0.19	0.000	8	0.19	0.000
10:00 - 11:00	8	0.19	0.000	8	0.19	0.000	8	0.19	0.000
11:00 - 12:00	8	0.19	0.658	8	0.19	0.658	8	0.19	1.316
12:00 - 13:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
13:00 - 14:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
14:00 - 15:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
15:00 - 16:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
16:00 - 17:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
17:00 - 18:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
18:00 - 19:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
19:00 - 20:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
20:00 - 21:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
21:00 - 22:00	5	0.19	0.000	5	0.19	0.000	5	0.19	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.658			0.658			1.316

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: 0.12 to 0.28 (units: hect)
 Survey date date range: 01/01/03 - 13/11/15
 Number of weekdays (Monday-Friday): 8
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

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

TRIP RATE for Land Use 07 - LEISURE/Q - COMMUNITY CENTRE
PSVS

Calculation factor: 1 hect

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	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	2	0.15	0.000	2	0.15	0.000	2	0.15	0.000
08:00 - 09:00	8	0.19	0.658	8	0.19	0.658	8	0.19	1.316
09:00 - 10:00	8	0.19	0.658	8	0.19	0.658	8	0.19	1.316
10:00 - 11:00	8	0.19	0.000	8	0.19	0.000	8	0.19	0.000
11:00 - 12:00	8	0.19	0.658	8	0.19	0.000	8	0.19	0.658
12:00 - 13:00	7	0.18	0.000	7	0.18	0.806	7	0.18	0.806
13:00 - 14:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
14:00 - 15:00	7	0.18	1.613	7	0.18	1.613	7	0.18	3.226
15:00 - 16:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
16:00 - 17:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
17:00 - 18:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
18:00 - 19:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
19:00 - 20:00	7	0.18	0.806	7	0.18	0.806	7	0.18	1.612
20:00 - 21:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
21:00 - 22:00	5	0.19	0.000	5	0.19	0.000	5	0.19	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			4.393			4.541			8.934

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: 0.12 to 0.28 (units: hect)
 Survey date range: 01/01/03 - 13/11/15
 Number of weekdays (Monday-Friday): 8
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

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

TRIP RATE for Land Use 07 - LEISURE/Q - COMMUNITY CENTRE
CYCLISTS

Calculation factor: 1 hect

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	Trip Rate	No. Days	Ave. AREA	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	2	0.15	0.000	2	0.15	0.000	2	0.15	0.000
08:00 - 09:00	8	0.19	0.000	8	0.19	0.000	8	0.19	0.000
09:00 - 10:00	8	0.19	0.000	8	0.19	0.000	8	0.19	0.000
10:00 - 11:00	8	0.19	0.000	8	0.19	0.000	8	0.19	0.000
11:00 - 12:00	8	0.19	1.316	8	0.19	0.658	8	0.19	1.974
12:00 - 13:00	7	0.18	0.000	7	0.18	0.806	7	0.18	0.806
13:00 - 14:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
14:00 - 15:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
15:00 - 16:00	7	0.18	0.806	7	0.18	0.806	7	0.18	1.612
16:00 - 17:00	7	0.18	0.000	7	0.18	0.000	7	0.18	0.000
17:00 - 18:00	7	0.18	2.419	7	0.18	0.000	7	0.18	2.419
18:00 - 19:00	7	0.18	0.806	7	0.18	0.000	7	0.18	0.806
19:00 - 20:00	7	0.18	0.000	7	0.18	2.419	7	0.18	2.419
20:00 - 21:00	7	0.18	0.000	7	0.18	0.806	7	0.18	0.806
21:00 - 22:00	5	0.19	0.000	5	0.19	0.000	5	0.19	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			5.347			5.495			10.842

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: 0.12 to 0.28 (units: hect)
 Survey date date range: 01/01/03 - 13/11/15
 Number of weekdays (Monday-Friday): 8
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

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

