

Transport Statement

TRANSPORT STATEMENT: HYBRID MIXED USE DEVELOPMENT

SITE: WATTS DYKE, WREXHAM
CLIENT: Royal British Legion Limited
DATE: 4th April 2017
REFERENCE: VC0085 R1.0
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1 INTRODUCTION

Vectio Consulting have been appointed by the Royal British Legion Limited to prepare a Transport Statement in support of a hybrid planning application. The application includes outline permission for the construction of 51 residential units, a 370 m² retail unit, and premises for the relocation of a local boxing club (D2 Assembly and Leisure use – 85 m²). As part of the application a detailed permission is also sought for amendments to the Royal British Legion club (RBL) car park.

The proposals include alterations to the existing RBL car park access, along with new vehicular accesses from Watts Dyke and Llay New Road.

The site is bound by the B5425 Llay New Road to the east, open countryside to the south, residential dwellings to the west and Watts Dyke to the north. The site is located in a mainly residential area of Llay.

The site lies approximately 4 miles north of Wrexham town centre. The location of the development site is shown in Figure 1.

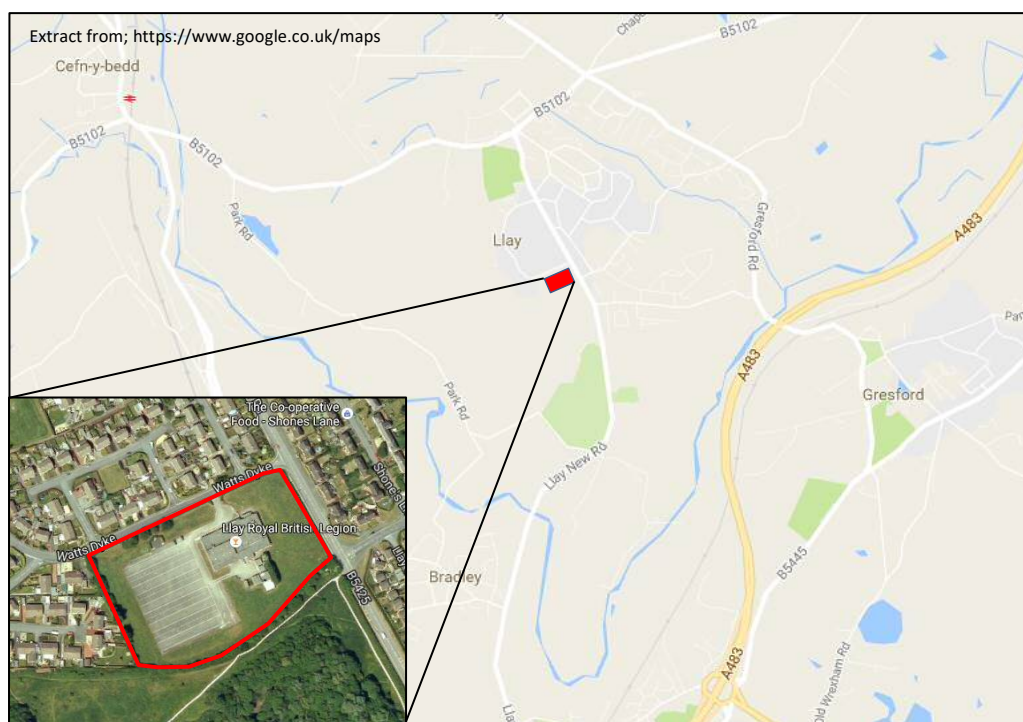


Figure 1: Site Location Plan

The applicant's agent has recently sought pre-application advice from the local planning authority, whereby a response was received on the 10th February 2017. The Highway Authority was consulted as part of the internal consultation process, raising no particular concerns associated with the proposed points of access, other than the need for the access junctions to achieve viability criteria as detailed in the Welsh Governments TAN18- Transport, and the Manual for Streets. In addition, the required parking standards were also clarified. A copy of the pre-application response is presented in Appendix A.

This Transport Statement has been based on the Department for Transport's (DfT), guidance document "Transport Evidence bases in plan making" dated 10th October 2014, the National Planning Policy Framework (NPPF), Wrexham County Borough Councils Local Planning Guidance Note 30 (A Guide for

Developers and Architects when Designing Residential Developments) and Manual for Streets 1 & 2. However, where appropriate, guidance from the archived document Guidance on Transport Assessment (GTA) has been adopted.

1.1 Background and Focus of the Report

The report assesses the transport impacts the proposed development is estimated to create on the adjacent public highway network, connectivity with its surroundings and assesses the development access arrangements.

Wrexham County Borough Council is both the Planning and Highway Authority.

Owing to the size of the site, being less than 80 residential units, but including alterations to the existing Royal British Legion car park, it has been considered appropriate to prepare a Transport Statement, focussing on the following aspects:

Full Application – Royal British Legion car park

- Discuss the existing and proposed development;
- Access arrangements to the site including geometry and visibility;
- Car parking supply and demand; and,
- Servicing arrangements and vehicle tracking.

Outline Application – Mixed use development including Residential, Retail and Small Employment

- Discuss the development proposals;
- Access arrangements to the site including geometry and visibility;
- Applicable parking standards;
- Non-motorised user accessibility;
- Traffic impact; and
- Road safety impacts.

2 DEVELOPMENT PROPOSALS

2.1 Overall Site Composition

As discussed previously, the development proposals are to comprise:

- 51 residential dwellings (C3);
- A 370 m² retail unit (A1);
- Reduction in the RBL clubs parking provision from circa 250 + spaces, down to 50 spaces;
- An 85 m² small leisure use building (relocation of the local boxing club) (D2); along with
- Two new and one revised vehicular access junctions.

The high level masterplan associate with the full site presented in Appendix B, whilst an extract is provided in Figure 2.



Figure 2: Indicative Site Layout

Owing to the hybrid nature of the application both the overall development master plan and initial detailed element of the application have been discussed independent of one another for simplicity.

2.2 Detailed Application Proposals

The detailed element of the planning application, whereby full planning permission is sought, includes the revised RBL access onto Watts Dyke and the proposed RBL carpark.

2.2.1 Development Layout

The extent of the proposed revised RBL car park and access junction are illustrated in Figure 3.



Figure 3: Extent of RBL Carpark Application Boundary

2.2.2 Vehicular Access

Vehicular access arrangements from Watts Dyke will remain as existing, other than some minor amendments to the kerb alignment. 2m wide footways will lead into the site on either side of the proposed vehicular access. Dropped kerbs and tactile paving will be provided for pedestrians crossing the access.

A drawing showing the proposed access arrangements leading from Watts Dyke is presented in Appendix C, whilst an extract is shown in Figure 4.

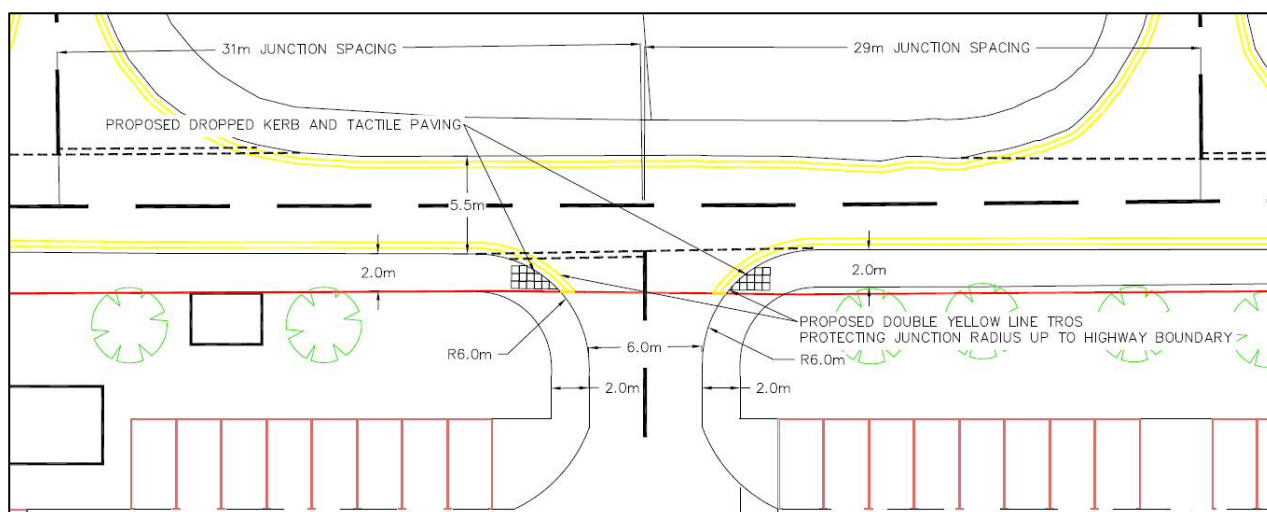


Figure 4: RBL Vehicular Access

2.2.3 Access to the War Memorial

The War Memorial located within the grounds of the RBL site is to be relocated to the north east, and is to benefit from direct pedestrian access from Watts Dyke.

The revised location of the War Memorial is illustrated in masterplan submitted in support of the application.

2.2.4 Internal Layout

The existing RBL club building is to remain, although minor outbuildings located to the rear of the site are to be demolished. The proposed internal layout is to provide 50 car parking spaces located along the northern and western sides of the existing building. A large service yard is proposed to the rear (south) of the site, accessed through the car park, to the west of the RBL club building. The service yard is to be secure and gated. Internal car park aisle widths are to be minimum of 6m. The internal layout of the site is illustrated in Figure 3.

Vehicle tracking has been prepared to illustrate the operational viability of the proposed RBL carpark and service area layout. This is discussed in Section 5 of this report.

2.2.5 Parking Provision

Parking provision associated with the RBL site is to reduce, due to changes in operation of the site over a number of years. The existing 250+ space provision is to be reduced to 50 delineated parking spaces located to the north and west of the building. Of the 50 spaces, 4 are to be allocated for disabled use, being located to the north east of the building adjacent to the main entrance.

2.3 Overall Masterplan Proposals

The overall site wide masterplan is illustrated in Figure 2.

In addition to the proposed revised RBL club site, the overall scheme includes 51 residential dwellings located to the west and south of the site, a 370 m² retail unit located to the east of the site, and a small leisure building to accommodate the relocation of an existing small boxing club, access from within the RBL carpark.

Two new points of vehicular access are proposed leading onto the adjacent public highway, along with an internal connection with the RBL site.

2.3.1 Vehicular Access

The first access is to be located on Watts Dyke, 73 m to the west of the RBL access. The junction is to be formed by a priority T arrangement with 6m radii, 6m wide estate road width, and 2m wide footways on either side. Dropped kerbs and tactile paving will be provided for pedestrians crossing the junction. The layout of the proposed junction is presented in Appendix C, whilst an extract is shown in Figure 5.

The access will require the relocation of the existing bus stop and associated infrastructure located on the southern side of Watts Dyke. It is proposed that this bus stop is relocated to the east of the existing, as shown on the Access Arrangement Plan presented in Appendix C. In addition to relocating the bus stop, new infrastructure is proposed including: bus shelter sited within the RBL site boundary so as not to restrict the footway width, new pole with flag, time table and raised kerb for level access.

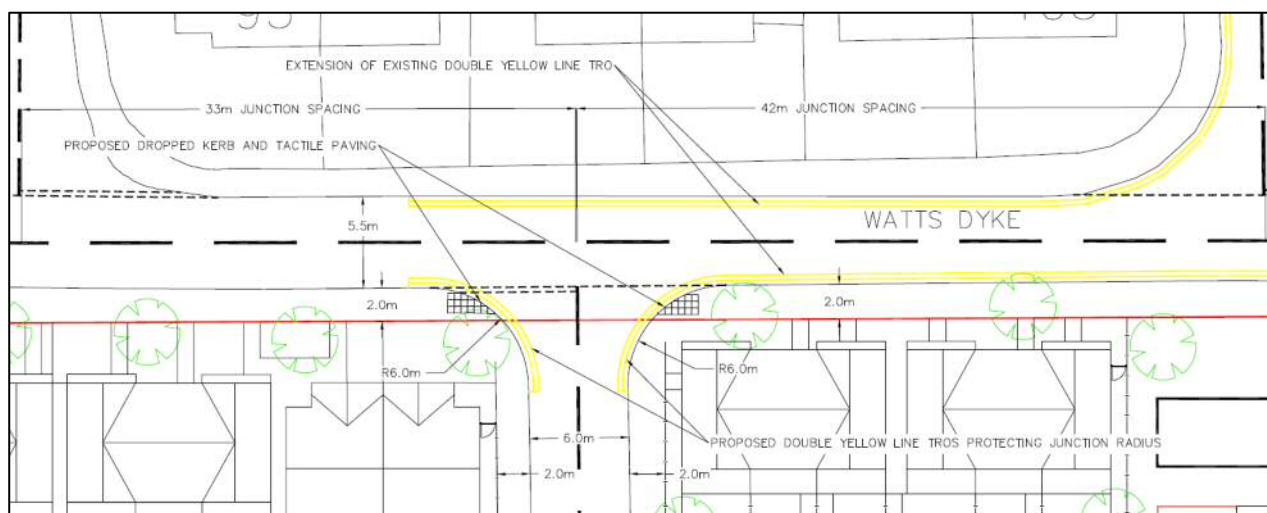


Figure 5: Watts Dyke Residential Vehicular Access

The second access is to be located on the B5425 Llay New Road to the east of the site. The junction is to be formed by a priority T arrangement with 6m radii, 6m wide estate road width, and 2m wide footways on either side. Dropped kerbs and tactile paving will be provided for pedestrians crossing the junction. The layout of the proposed junction is presented in Appendix C, whilst an extract is shown in Figure 6.

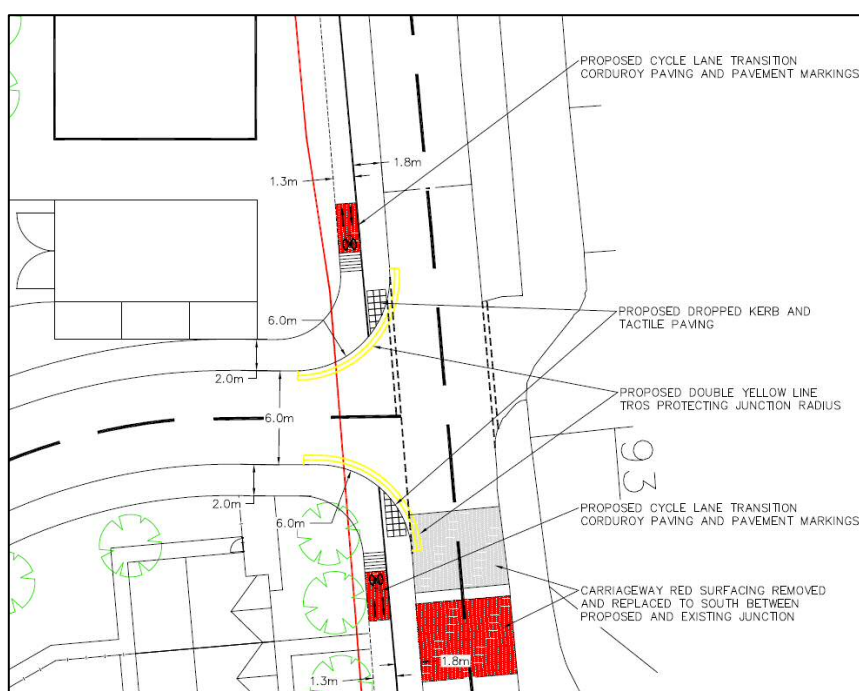


Figure 6: Llay New Road Vehicular Access

The proposed layout will also include cycle crossing facilities at the junction, consistent with the adjacent junction crossings.

2.3.2 Internal Layout

This estate road will have active residential frontages, be a minimum width of 6m, increasing around bends. To the eastern end, access to the retail unit car park will be provided by means of a footway crossover

arrangement. The layout proposes a pedestrian and vehicular link between the retail unit carpark, into the RBL carpark.

A service yard is proposed to the south of the retail unit. The service yard will be gated and secure, although provide sufficient space in front of the gated access for a service vehicle to park, without impacting the free-flowing operations of the proposed car park.

Vehicles will enter the site from Watts Dyke, turn right heading around the existing building to the rear, where adequate space is provided for a vehicle to easily turn, load and unload, and leave the site in a forward gear.

2.3.3 Parking Provision

A review of Wrexham County Borough Councils Local Guidance Note 16 has been undertaken, to ensure parking provision is made in accordance to the current guidance. An extract of the parking guidance is provided in Table 1.

Table 1: Residential Development Parking Standards

Type of Development		Parking Standard	Cycle Parking Standard
C3 Residential	1 Bedroom	1.5 car spaces per unit	Sufficient space to provide at least 2 secure cycle parking spaces per dwelling. In the case of flats, this should be provided via safe and secure communal cycle parking areas.
	2 Bedrooms	2 car spaces per unit	
	3/4 Bedrooms	3 car spaces per unit	
	5 or more Bedrooms	4 car spaces per unit	
Notes: 1 An area suitable for ambulance / service vehicles to load/unload and turn within the site will normally be required for C1 and C2 uses, particularly for sites accessed from a classified road. Any extensions should not result in the loss of this loading/unloading/turning spaces unless an adequate alternative can be provided within the site. 2 Driveways should be wide enough to allow pedestrian access alongside parked cars (including wheelchair access). 3 Garages will not be counted as contributing towards on-site parking provision. 4 The parking provision for housing developments does not always need to be located within the curtilage of individual dwellings. Communal parking areas/courtyards may be an appropriate way to provide some/all of the parking spaces for dwellings, particularly smaller properties.			
A1 Shops	Food retail in excess of 300 m ² floor space	1 car space per 14 m ² gross floor space.	1 cycle space per 140 m ² gross floor space.
Notes: Retail development should provide an adequate are for delivery vehicles to unload and to turn within the site, particularly those accessed form a classified road.			
D2 Assembly & Laisure	Includes : Cinemas, concert halls, Leisure centres and sports centres	1 car space per 15 m ² gross floor space.	1 cycle space per 150 m ² gross floor space.

The parking provision detailed in Table 2 compares the calculated policy requirement to the proposed parking provision associated with the residential, retail and leisure (boxing club) land uses detailed on the masterplan (excluding RBL carpark).

Table 2: Parking Provision Comparison

Land Use	Type	Policy requirement	Proposed Provision	Meets Parking Standards
Residential	Car Parking	141 (Maximum)	108 (2 per unit plus 6 integral garages)	-33, complies
Retail	Car Parking	26	26	Complies
	Disabled Parking	3	3 (included within overall provision)	Complies
	Cycle Parking	3	3	Complies
Boxing Club	Car Parking	6	10	+4, complies
	Cycle Parking	1	1	Complies

The parking provision detailed in Table 2 highlights that the proposed supply is in line with WCBC's policy guidance.

Cycle parking associated with the retail and leisure units will be provided by means of secure and sheltered parking, located adjacent to the respective building entrances, or within the buildings themselves.

3 EXISTING SITE AND TRANSPORT CONDITIONS

3.1 Existing Site Information

The site currently operates as the Royal British Legions Llay club house. The site access is located to the north of the plot served from Watts Dyke.

The exiting site includes:

- the RBL club building with an indicative Gross Floor Area of approximately 1,500 m²,
- a car park providing delineated parking for in the order of 250 cars,
- a servicing area to the rear of the building; and,
- the remaining land surrounding the building and parking areas laid to lawn.

The layout of the existing site is illustrated in Figure 7.



Figure 7: Aerial Image of Existing RBL Car Park

3.1.1 Watts Dyke

The existing RBL access is formed by a simple priority junction with a footway leading into the site provided on the eastern radius as shown in plate 2. The access has a width of 4.2 m with 5 m/ 6 m junction radii. Double yellow line parking restrictions are in place within the access and along the northern kerb line of Watts Dyke.



Plate 1: Existing RBL Club access

Watts Dyke is an existing residential street with an approximate carriageway width of 6m, with development to both sides. Watts Dyke forms a crescent, with two points of access leading onto Llay New Road. There are 2m wide footways on both sides of Watts Dyke, the street carries a 30 mph speed limit and is street lit.

There is an existing bus stop located approximately 75 m west of the existing access which includes flag and pole. Double yellow waiting restrictions exist between the site access leading to the east, continuing onto Llay New Road. To the west, the waiting restrictions cease just past the priority junction with Penderyn Way.

Watts Dyke adjacent to the site forms the minor arm of a simple priority T-junction Llay New Road. Llay New Road carries a speed limit of 30 mph and is generally 7.3 m wide. There are footways on either side of the road and a segregated cycle way to the rear of the footway on its western side. Llay New Road is Street Lit and provide direct vehicular connection to the Llay Industrial estate located approximately 850 m to the north, and Wrexham to the south.

Access for pedestrians is currently gained from the vehicular access leading onto Watts Dyke.

3.1.2 Llay New Road

The B5425 Llay New Road is a primary road forming part of the local principle road network, connecting Llay to Wrexham. The road is street lit with footways on either side and carries a speed limit of 30 mph. The road carriageway is generally 6m wide, along the frontage of the site. Adjacent to the site, there is a 1.6 m (approx.) wide cycle lane, located to the rear of the existing footway.

To the south of the site frontage, there is red pavement surfacing within the road carriageway, providing a form of speed reduction / gateway feature.

Llay New Road adjacent to the site is shown in Plate 2.



Plate 2: Photograph of Llay New Road Adjacent to the Site

3.2 Accessibility

This section undertakes a review of sustainable accessibility to the proposed site, including current infrastructure, and highlights measures to be put in place to benefit vulnerable road users.

3.2.1 Measures to Create a Better Environment for Pedestrians

The Chartered Institution of Highways and Transportation (CIHT) in their document 'Guidelines for Providing for Journeys on Foot, 2000' state that "walking accounts for over a quarter of all journeys and four fifths of journeys less than one mile". It is generally considered that people are prepared to walk up to 2km (1.24 miles) to and from work, given suitable walking routes and facilities.

When assessing the accessibility of a site for pedestrians, and the proximity of local facilities, an average walking speed of 1.4 m/s can be assumed, which equates to approximately 400 metres in 5 minutes, or 3 mph. This document also contains a table of suggested walking distances for different purposes. Table 3 recreates this table:

Table 3: Extract from IHT 'Guidelines for Providing for Journeys on Foot, 2000'

	Town Centre (m)	Commuting School (m)	Elsewhere (m)
Desirable	200	500	400
Acceptable	400	1000	800
Maximum	800	2000	1200

The 800 metre and 2km walking isochrones shown in Figure 8 demonstrates that there is a plethora of key facilities within an acceptable walking distance of the site. The isochrone measurement has been taken from the centre, rather than the boundary of the site.

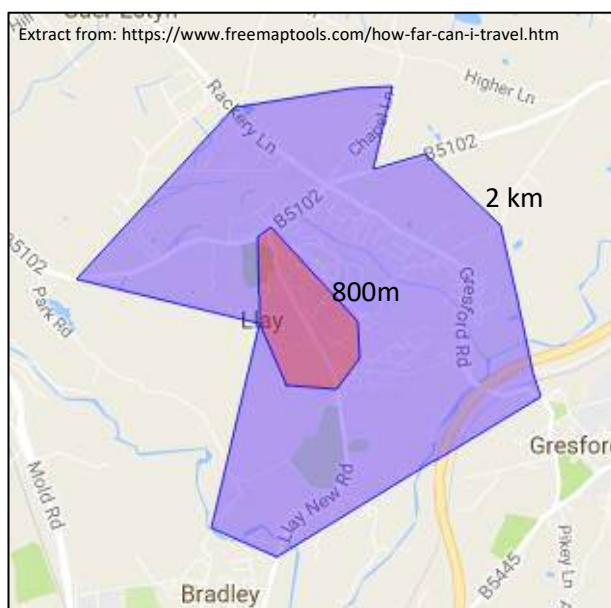


Figure 8: Walking Isochrone (Indicative)

Based on the isochrones in Figure 8, it can be seen that the whole of Llay is accessible by foot. The topography of the area is considered to be conducive to walking journeys and as such, local shops, employment opportunities and leisure facilities would be accessible to future occupants of the site.

3.2.2 Measures to Create a Better Environment for Cyclists

It is generally considered that a distance of 5km (3 miles) represents a reasonable cycling distance to and from work, while 8km (5 miles) is a maximum realistic range for cycle trips. Figure 9 illustrates cycling isochrones (crow-flies) taken as distances from the centre of the site.

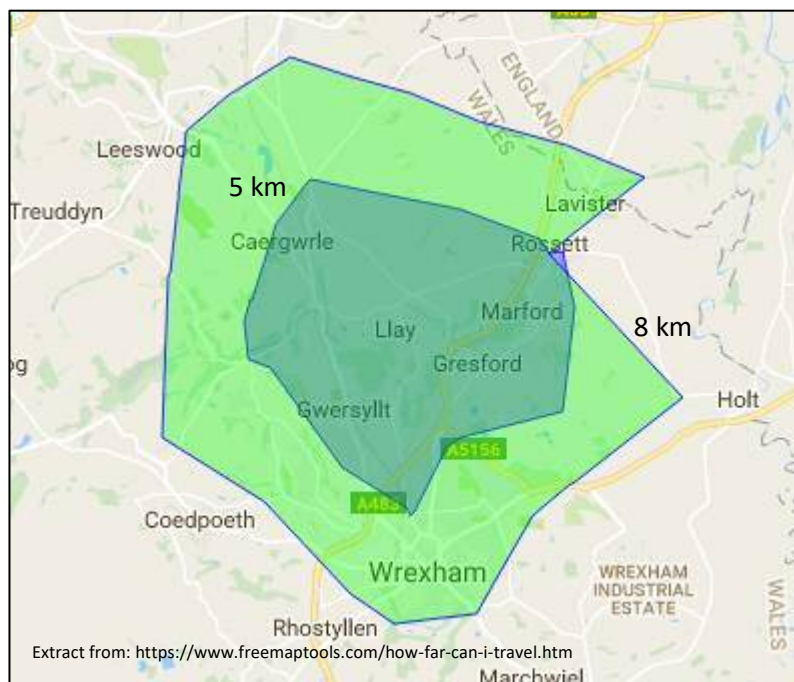


Figure 9: Cycling Isochrone (Indicative)

Based on the isochrones in Figure 9, it can be seen that the whole of Llay, Marford, Gresford, Gwersyllt are accessible by bicycle along with northern areas of Wrexham, Coedpoeth, eastern areas of Leeswood and south western areas of Lavister. The topography of the area is considered to be conducive to cycling journeys and as such, local shops, employment opportunities and leisure facilities would be accessible to future occupants of the site.

3.2.3 Public Transport

There are 4 bus stops located adjacent to the site, within 250 m walk from the centre of the site. Two are located on Watts Dyke, benefiting from flags and poles. The two stops located on Llay New Road, to the south of the site, benefit from shelters, timetables, cage markings / laybys and seating.

Figure 10 illustrates the location of the adjacent bus stop, in context with the existing site.



Figure 10: Adjacent Bus Stop Locations

The bus stops on Llay New Road are frequented by services 32/33 (Wrexham to Llay) on a half hourly or better basis during a weekday provided by Arriva, service 34 (Wrexham to Trevalyn) on a two hourly basis provided by GHA Coaches, and service 28 (Wrexham to Flint) on a 2 hourly basis provided by Town Lynx.

It is therefore concluded that a good level of public transport infrastructure is available to encourage the use of public transport by future occupants of the site.

4 PROPOSED JUNCTION VISIBILITY

4.1 Royal British Legion Access

It is appreciated that the proposed access layout is to remain similar to that of the existing, although widened slightly, with an additional footway leading into the site. As such no detriment to the safe operation of the junction is expected.

Based on a 30 mph speed limit, applying visibility splay criteria detailed in the Manual for Streets, a design standard visibility splay of 2.4 m by 42.9 m has been calculated (including bonnet length adjustment).

Based on site observations and measurements taken from topographical survey data, the proposed access arrangement can achieve the required junction visibility splays.

A drawing illustrating the visibility splays is presented in Appendix D, whilst an extract from the drawing is presented in Figure 11.

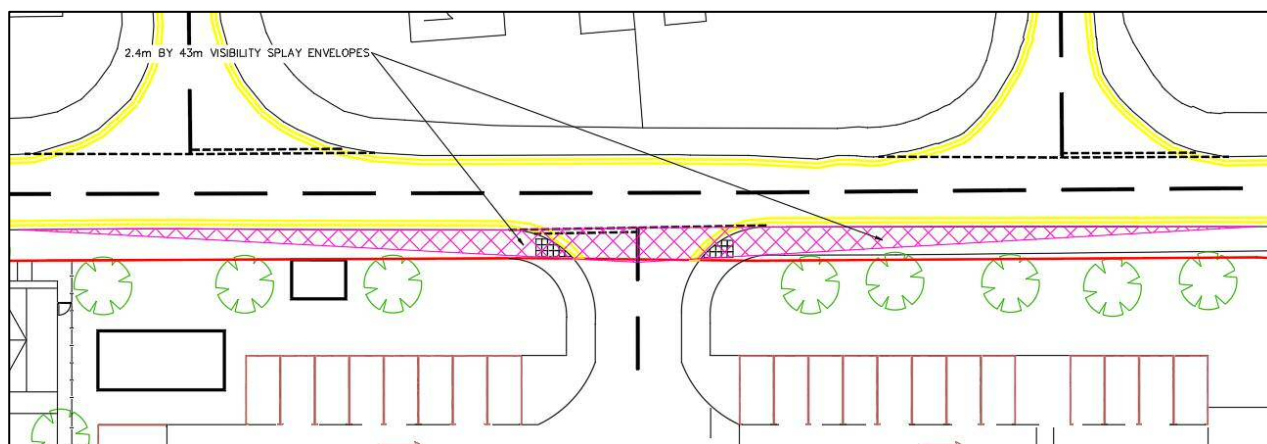


Figure 11: Proposed RBL Access Visibility Splays

4.2 Access from Watts Dyke

Based on a 30 mph speed limit, applying visibility splay criteria detailed in the Manual for Streets, a design standard visibility splay of 2.4 m by 42.9 m has been calculated (including bonnet length adjustment).

Based on site observations and measurements taken from topographical survey data, the proposed access arrangement can achieve the required junction visibility splays.

A drawing illustrating the visibility splays is presented in Appendix D, whilst an extract from the drawing is presented in Figure 12.

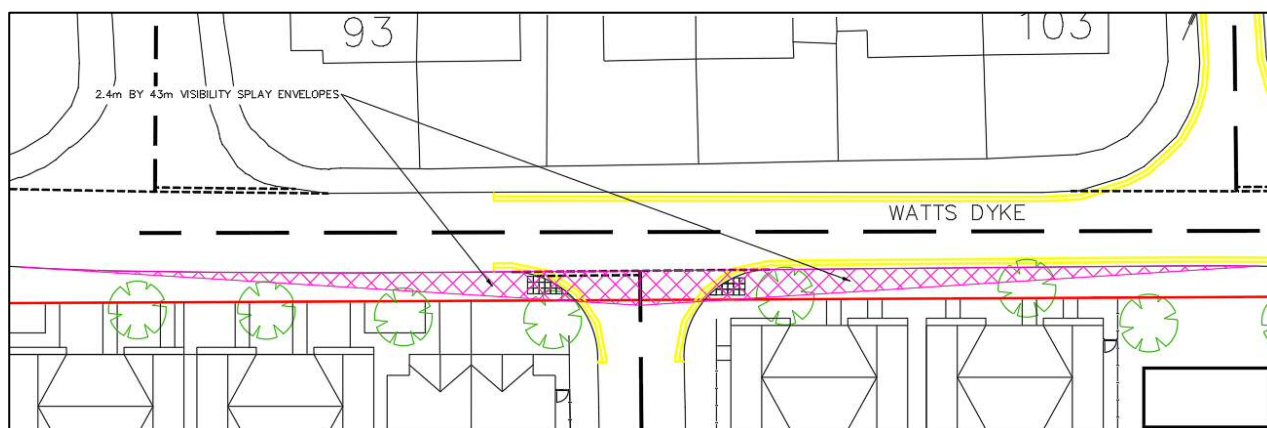


Figure 12: Proposed Watts Dyke Access Visibility Splay

4.3 Access from Llay New Road

Based on a 30 mph speed limit, applying visibility splay criteria detailed in the Manual for Streets, a design standard visibility splay of 2.4 m by 42.9 m has been calculated (including bonnet length adjustment).

It is however noted the mixed use of the development and operation of the cycle lane located on the western side of Llay New Road. As such a 4.5 m 'x' distance has been adopted, so as to ensure an enhanced level of visibility can be achieved.

Based on site observations and measurements taken from topographical survey data, the proposed access arrangement can achieve the required junction visibility splays.

A drawing illustrating the visibility splays is presented in Appendix D, whilst an extract from the drawing is presented in Figure 13.



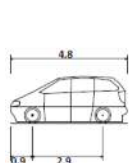
Figure 13: Proposed Llay New Road Access Visibility Splay

5 SWEPT PATH ANALYSIS

5.1 Proposed Site Access Junctions

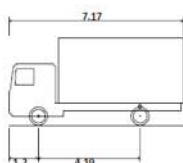
To illustrate the viability of the proposed access arrangements leading into the site, a vehicle tracking exercise has been undertaken. The exercise has modelled the swept paths of a standard car, LGV and DB32 fire appliance entering and exiting each access in all directions.

The profiles of the vehicles adopted for the swept path analysis exercise are detailed below:



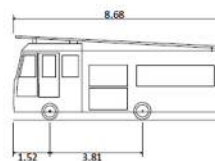
Standard Design Vehicle (SDV)

Overall Length	4.800m
Overall Width	2.000m
Overall Body Height	1.950m
Min Body Ground Clearance	0.100m
Track Width	2.000m
Lock to lock time	4.00s
Wall to Wall Turning Radius	6.000m



FTA Design LG Rigid Vehicle (1998)

Overall Length	7.170m
Overall Width	2.300m
Overall Body Height	3.580m
Min Body Ground Clearance	0.375m
Track Width	2.120m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	7.000m



DB32 Fire Appliance

Overall Length	8.680m
Overall Width	2.180m
Overall Body Height	3.452m
Min Body Ground Clearance	0.337m
Max Track Width	2.121m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	7.910m

A copy of the vehicle tracking drawing is presented on Appendix E.

5.2 Royal British Legion – Detailed Application Site

Considering the detailed nature of the RBL carpark and service yard element of the application, an additional vehicle tracking exercise has been undertaken to illustrate the viability for vehicles to enter, turn / park, and exit the site in a forward gear. The results of the analysis are presented in a drawing in Appendix E, which concludes that the proposed layout is suitable for its intended use.

6 TRAFFIC IMPACT

6.1 Introduction

This section considers the impacts the proposed development is likely to create on the adjacent highway network. Regarding the impact created by the RBL site, this is likely to reduce owing to the carpark reducing in size from approximately 250 parking spaces, down to 50.

It is however noted that travel patterns associated with residential, retail land uses, along with the D2 assembly and leisure, are different to that of the existing RBL club, with general peak hours not coinciding with one another. As such the reduction in car parking provision associated with the RBL car park is unlikely to create a net nil detriment in terms of traffic impact.

Considering standard weekday peak hour operating periods on the adjacent highway network, being 8:00 to 9:00 and 17:00 to 18:00, an interrogation of the TRICS database has been undertaken to gain an appreciation of the likely trip generation site proposed development site is likely to create.

A copy of the TRICS reports are presented in Appendix F, whilst the estimated trip generation rates adopted and forecast development peak hour trip generations are detailed in Table 4.

No specific information is contained in the TRIC's database for a boxing club, nor is information available regarding the operating hours of the club. For the purpose of this assessment, it is assumed that the land use will generate 10 two way trips per peak hour period.

Table 4: Forecast Peak Hour Vehicular Trip Generations

Land Use / GFA	Period	Arr	Dep't	Total	Period	Arr	Dep't	Total
TRIP GENERATION RATES								
C3 Residential, Privately owned Houses (51 units)	AM Peak (08:00 to 09:00)	0.132	0.374	0.506	PM Peak (16:00 to 17:00)	0.315	0.175	0.490
A1 Local Retail (370 m²)		9.168	8.491	17.659		10.893	10.555	21.448
FORECAST TRIP GENERATIONS								
C3 Residential	AM Peak (08:00 to 09:00)	7	26	33	PM Peak (16:00 to 17:00)	16	9	25
A1 Local Retail		34	31	65		40	39	79
D2 Assembly and Leisure		5	5	10		5	5	10
Total Trips		46	62	108		61	53	114

Based on the findings detailed in Table 4, it is anticipated that the development site, excluding those of the reduce RBL site, will generate in the order of 108 two way trips during a the AM peak hour period, and 114 trips during the PM peak hour period.

This is likely to be split 50/50 between both points of access onto the adjacent highway network, resulting in just over 50 two way movements at the new junction leading onto Llay New Road, and at the Watts Dyke / Llay New Road junction. This volume of traffic equates to less than one vehicle per minute, and as such is not likely to create a significant impact on the adjacent highway network.

7 ACCIDENT ANALYSIS

A review of the local recorded road traffic accident records has been undertaken for the most recent 5-year period (2012 to 2016). This assessment has been based on the publicly available information detailed on the www.crashmap.co.uk website. The extent of study area is illustrated in Figure 14.

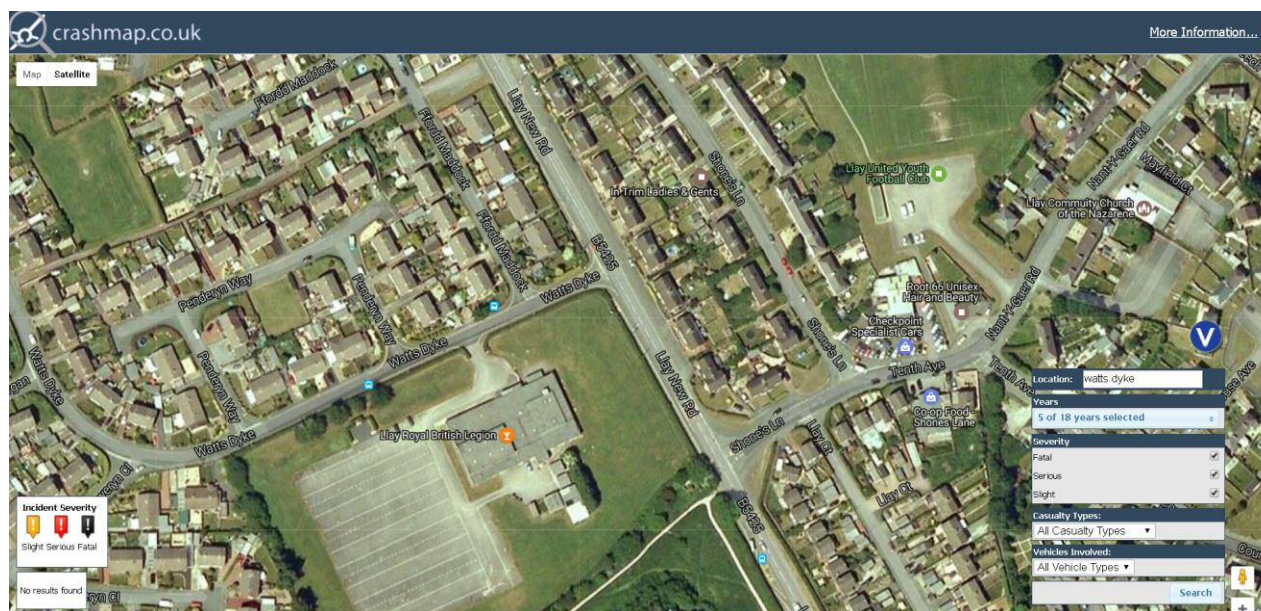


Figure 14: Extent of Accident Analysis Study Area (Extract from www.crashmap.co.uk)

Over the last 5 years there have been no recorded road traffic accidents on Watts Dyke, nor has there been any accidents recorded at its junction with Llay New Road or Llay New Road within the vicinity of the site. It is therefore considered that the proposed development is unlikely to exacerbate any existing accident problems in the local area.

8 SUMMARY AND CONCLUSIONS

Vectio Consulting have been appointed by the Royal British Legion Limited to prepare a Transport Statement in support of a hybrid planning application. The application includes outline permission for the construction of 51 residential units, a 370 m² retail unit, and premises for the relocation of a local boxing club (D2 Assembly and Leisure use – 85 m²). As part of the application a detailed permission is also sought for amendments to the Royal British Legion club (RBL) car park.

The proposals include alterations to the existing RBL car park access, along with new vehicular accesses from Watts Dyke and Llay New Road.

The site is bound by the B5425 Llay New Road to the east, open countryside to the south, residential dwellings to the west and Watts Dyke to the north. The site is located in a mainly residential area of Llay.

This report assesses the transport impacts the proposed development will have on the adjacent public highway network, connectivity with its surroundings and assesses the development access arrangements.

8.1 Summary

This report has appraised key transport aspects and the findings are summarised as follows:

Parking provision has been provided in line with local planning policy requirements.

The proposed access junction geometries and infrastructure have been discussed, along with vehicle tracking undertaken, illustrating the suitability of the layout.

Owing to the full application nature of the Royal British Legion club car park layout, a vehicle tracking exercise has been undertaken illustrating the suitability of the proposed car park and service yard layout.

A review of the likely traffic impact the proposed development will create has been calculated, concluding that the two access junctions leading onto the wider highway network are likely to generate an additional 50 to two way trips during peak hour periods. This increase in traffic is unlikely to create a significant impact and would not be classified as severe.

The assessment has reviewed accessibility to the site for pedestrians and cyclist, and identified that a range of areas / services and facilities are accessible to future occupants.

An assessment of the latest 5-year road traffic accident data records has not highlight any specific trends or patterns that would give rise to the proposed development exacerbating any existing accident issues.

8.2 Conclusions

The assessments included within this report conclude that in terms of highways and transportation, the proposed development is not expected to have a severe impact on the highway network, and as such conforms with the NPPF.

APPENDIX A: Pre-app Correspondence



Head of Environment and Planning
Pennaeth yr Amgylchedd a Chynllunio
Lawrence Isted

16 Lord Street, Wrexham, LL11 1LG
16 Stryt yr Arglwydd, Wrecsam, LL11 1LG
Tel/Ffon: 01978 292016 Minicom: 01978 292067
www.wrexham.gov.uk www.wrecsam.gov.uk



MR ANDY MCMULLAN
KNIGHT FRANK
11TH FLOOR
1 MARSDEN STREET
MANCHESTER
M2 1HW

Your Ref/Eich Cyf	ENQ/2016 /0226
Our Ref/Ein Cyf	10/02/2017
Date/Dyddiad	Philip Forster
Ask for/Gofynner am	01978 298786
Direct Dial/Rhif Union	philip.forster@wrexham.gov.uk
E-mail/E-bost	

By email: andy.mcmullan@knightfrank.com

Dear Sir,

Town and Country Planning Act 1990

**RESIDENTIAL DEVELOPMENT, RETAIL UNIT AND ASSOCIATED WORKS
LAND AT ROYAL BRITISH LEGION WATTS DYKE, LLAY, WREXHAM.**

Thank you for your enquiry made in relation to the above mentioned proposed development. Having considered the nature of the proposal, visited the site and consulted with specialist colleagues I have the following response to make.

This response is split into topic areas for clarity.

Policy

The site is located within a defined settlement. In accordance with the guiding principles of Planning Policy Wales and policies PS1, H2 and S6 of the Wrexham Unitary Development Plan, development for the purposes described would be acceptable.

Development is expected to result in a high standard of design and this is reflected in site specific policies within the same UDP. For clarity I have listed relevant planning policies and guidance notes applicable in this instance:

Wrexham Unitary Development Plan

PS1, PS2, PS3 and PS4 – Strategic Planning Policies
GDP1 and GDP2 – General Development Principles
EC4 – Trees and Hedgerows
EC13 – Surface Water and New Developments
H2 – Residential development of Unannotated Land
S6 – Local Needs Shopping
CLF5 – Open Space Provision

*Rydym yn croesawu gohebiaeth yn Gymraeg.
Byddwn yn ymateb i unrhyw ohebiaeth yn Gymraeg ac ni fydd hyn yn arwain at unrhyw oedi.*

*We welcome correspondence in Welsh.
We will respond to any correspondence in Welsh and this will not lead to any delay.*

T8 - Parking

Supplementary Planning Guidance

Local Planning Guidance (LPG) Notes 16 – Parking Standards, 10 – Public Open Space in New Developments, 21 – Space Around Dwellings, 27 – Developer Contributions to Schools, 28 – Affordable Housing, 30 – Residential Design Guide.

The retention of the British Legion and its associated War Memorial is encouraged in this instance. The retention of a community facility will be seen as a positive element of the overall proposal and will integrate new development to within the existing community.

The addition of a 4000SqFt retail unit (370m²) would broadly accord with requirements of policy S6. This seeks to ensure that where retail development is considered outside the defined District Shopping Centres, the retail floor space is limited (300m²) as not to erode the important strategic nature of the DSCs and Wrexham Town Centre. I am satisfied that the inclusion of a retail unit in this location would allow for safe access for residents on foot and would not adversely impact upon the amenity of neighbouring occupiers by way of disturbance (subject to good design).

Design

I consider that there are merits to the overall design of the scheme. The retention of the existing Royal British Legion (RBL) building effectively dictates the overall layout towards the most visible element of the site when viewed from Llay New Road and Wats Dyke. The location of the retail unit on the corner of the site seems logical and potentially would be a feature building on the junction. It would also better integrate the facility to the existing settlement and promote better access to the site.

Appreciating the outline nature of the proposal at this stage, my comments are based on the indicative layout plan as presented. There are positive elements to the development which I can support, namely the frontage aspect of the retail development and the dwellings onto the main highway frontages. The use of communal parking areas is also supported reducing the amount of car parking to the property frontages.

I do have some concerns about certain elements of the scheme. Of most prominence is the significant amount of parking provision to the dwelling frontage. For example to the entire frontage of units 1 to 14 and 22 to 35. I do have significant concerns that this would lead a very substandard streetscene and, whilst I do not have any objection to the uniformity of the layout, it could potentially lead to a very bland format. I am also concerned that the number of proposed 3 and 4 bed units with only car parking spaces would not be supported given the potential traffic congestion that may be caused as a result.

We discussed previously the lack of open space provision on the indicative site plan. LPG10 requires public open space provision on developments more than 10 units. On developments of less than 20, the same guidance does allow for the provision of a monetary contribution for the improvement of existing facilities off site where there is a proven need. Whilst I acknowledge and agree to a certain extent that the provision of play areas and open space within developments may not always be needed given other facilities in the neighbourhood, I must also stress that open space provision can also make a positive contribution to the overall quality of life in developments, enhancing the overall visual appearance of the site by creating pockets of open planting areas and providing open aspects within developments.

This leads me onto the overall conclusion regarding the site layout. I fear that the scheme as presented represents an over development. It reflects local development patterns but I have

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concerns that the provision of high numbers (60 plus) 3 and 4 bed dwellings is too high. The dwellings do not provide for sufficient parking provision and where it is provided, it is all to the frontage of the dwellings resulting in a car dominant development. I do not have objection to this method of parking provision on a limited number of dwellings, but not as presented. The density of the development is also not favourable without any form of landscaping or open space provision. I am willing to entertain and negotiate on this position (as part of further discussions) given the proximity of the site to Alyn Waters Country Park, but I cannot accept the layout as presented with no consideration given to the provision of landscaped open spaces.

Highways

I understand that the intention is to seek approval of access details at the outline stage. I see no objection to the proposed access positions subject to the appropriate visibility splays in accordance with Welsh Government TAN18 - Transport and Manual for Streets.

The Council's maximum parking standards for new development are laid down in LPG16. These are maximum parking provisions and any shortfall put forward as part of any design must be accompanied by a justification as to why this provision is not considered necessary. In general, the Council would expect to see residential developments provide parking spaces in accordance with guidance. For clarity I have shown the relevant extract from LPG16 below in relation to C3 uses.

C3 Dwellings	1 bedroom	1.5 car space per unit	Sufficient space to provide at least 2 secure cycle parking spaces per dwelling. In the case of flats, this should be provided via safe and secure communal cycle parking areas.
	2 bedrooms	2 car spaces per unit	
	3/4 bedrooms	3 car spaces per unit	
	5 or more bedrooms	4 car spaces per unit	

LPG16 – C3 maximum parking standards

Environment

Trees

I note that there are number of trees to the southern and western boundaries of the site. It is expected that any designs be informed by the preparation of an Arboricultural Report to determine the importance of any such trees on the site and this should be submitted with any formal application for planning permission.

Noise

I would strongly suggest that consideration is given to the compatibility of uses on site with regards noise. I understand that the RBL is an established use and could possibly result in noise disturbance as with any other D2 use. I would consider the preparation of a Noise Survey of the existing use to inform the overall layout of the scheme.

Ecology

Whilst I appreciate that the site is currently laid out as hardstanding and mowed grass, there are significant stretches of hedgerow around the site along with mature trees. North East Wales is a stronghold for great crested newts which are known to use hedgerows for foraging. The mature hedgerows and tree growth may also be strong habitat for bats and breeding birds. As with most developments of this scale I would strongly recommend the preparation of an Ecological Report to accompany a planning application.

*Rydym yn croesawu gohebiaeth yn Gymraeg.
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Developer contributions

I have consulted with the Council's Education and Assets section regarding this proposed development. I can confirm that at this moment in time the catchment primary and secondary schools are at capacity. In accordance with policy GDP2 and the guidance contained in LPG 27 - Developer Contributions to Schools, a contribution will be required to offset the impact of the development upon these education facilities. Such contributions will be based upon the formal set out in the same guidance note and is based on overall dwelling numbers and their bedroom spaces.

The Council will also expect any proposal to provide for affordable housing in accordance with the requirements of policy H7 and Local Planning Guidance Note 28 - Affordable Housing. You may wish to speak directly with the council's Affordable Housing Officer, Maureen Lee on 01978 315574 or at maureen.lee@wrexham.gov.uk for further detailed advice on current County Borough requirements.

Open space requirements are discussed above. In general, it is now Council policy to seek that open space provision is managed in perpetuity by a management company, detail of which will be required to form part of a planning obligation.

Validation requirements

Were an application for planning permission to be submitted, the following would be required:

- Application forms
- Statutory planning fee
- Location Plan (1:1250)
- Associated plans and particulars depending on the nature of the application type
- Ecological survey and report
- Arboricultural report
- Noise Report (subject to further discussion)

Conclusion

The proposal as presented is of significant merit in that it proposes residential development in a sustainable location within a defined settlement limit on previously developed land. There are a number of issues which require further consideration – and, in my opinion, the ultimate reduction in dwelling numbers to facilitate a less dense development. A favourable solution for the site is not insurmountable and I would encourage further discussions to take place with the Council to engage on these matters.

Please note that the above views are the informal opinion of an Officer of the Council. They do not commit the Council to reach any particular decision should a formal application for planning permission be presented. The decision reached is also based on the information presented. Any variance upon which may invalidate the nature of the response given.

Should you wish to discuss any of the above matters please do not hesitate to contact the Officer named above.

Yours faithfully,

Pennaeth yr Amgylchedd a Chynllunio/Head of Environment and Planning

Rydym yn croesawu gohebiaeth yn Gymraeg.

Byddwn yn ymateb i unrhyw ohebiaeth yn Gymraeg ac ni fydd hyn yn arwain at unrhyw oedi.

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APPENDIX B: Masterplan





2 Bed Townhouse (Affordable)	12
3 Bed Semi-detached	16
4 Bed Semi-detached	16
4 Bed Detached with garage	7
Total:	51

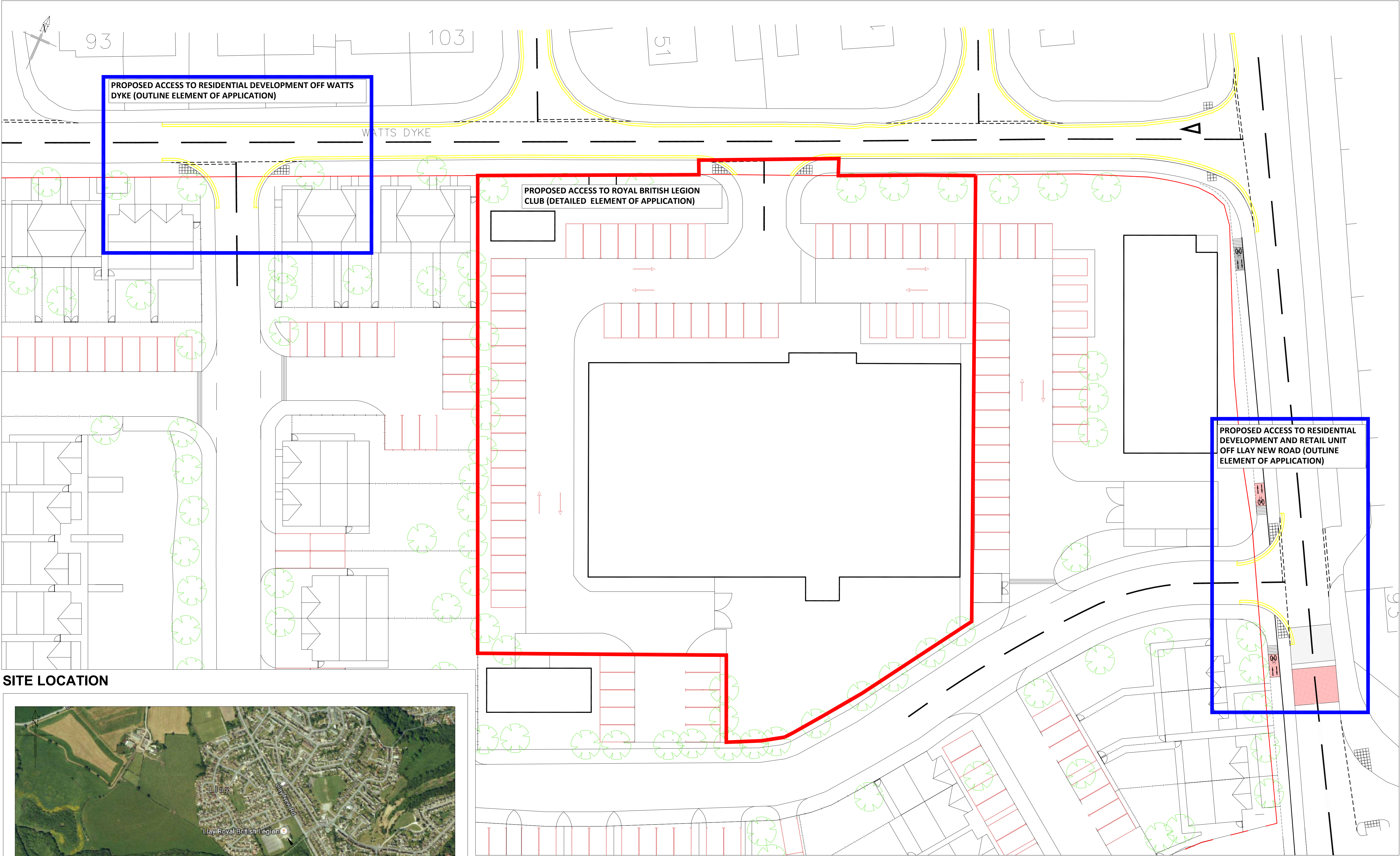
DAY Architectural Ltd

452 - 16 Wats Dyke Road, Wrexham
Proposed Indicative Plan Layout
28/03/2017

APPENDIX C: Access Arrangement Drawings



INDICATIVE SKETCH LAYOUT (Scale : 1:250)



SITE LOCATION

Revision	Amendment	Approved	Revision Date
A	REVISION TO BASE PLAN - PLOTS 48 TO 52	MC	04/04/17



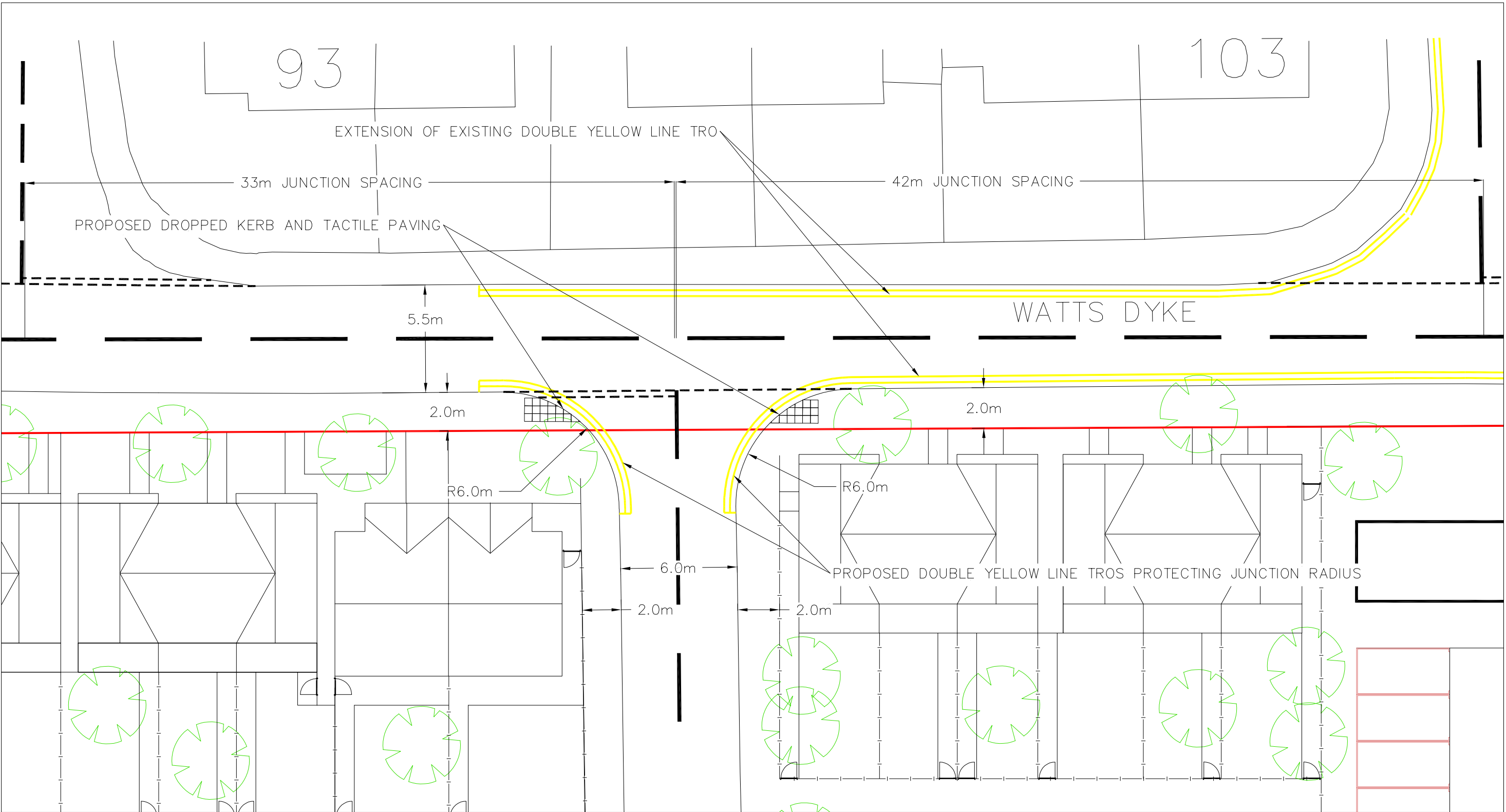
Drawn MC	Designed MC	Approved LC	Drawing Date APRIL2017
Project No. VC0085	Scale AS-SHOWN@A1		

Project
LLAY, BRITISH LEGION CLUB, WATTS DYKE
LLAY, WREXHAM - MIXED USE DEVELOPMENT

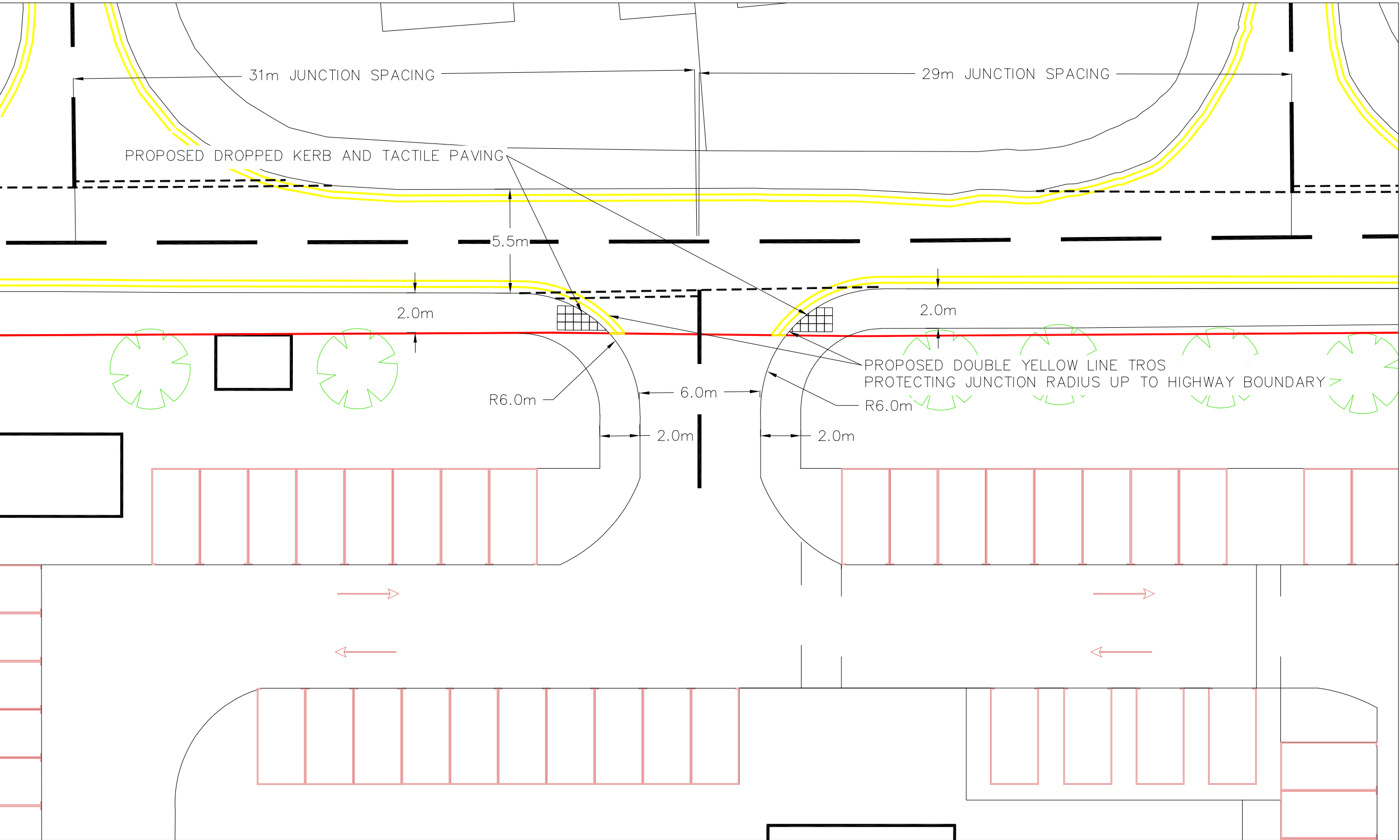
Sheet
PROPOSED ACCESS ARRANGEMENTS LOCATION PLAN

Drawing No. VC0085	Sheet No. 001	Revision A
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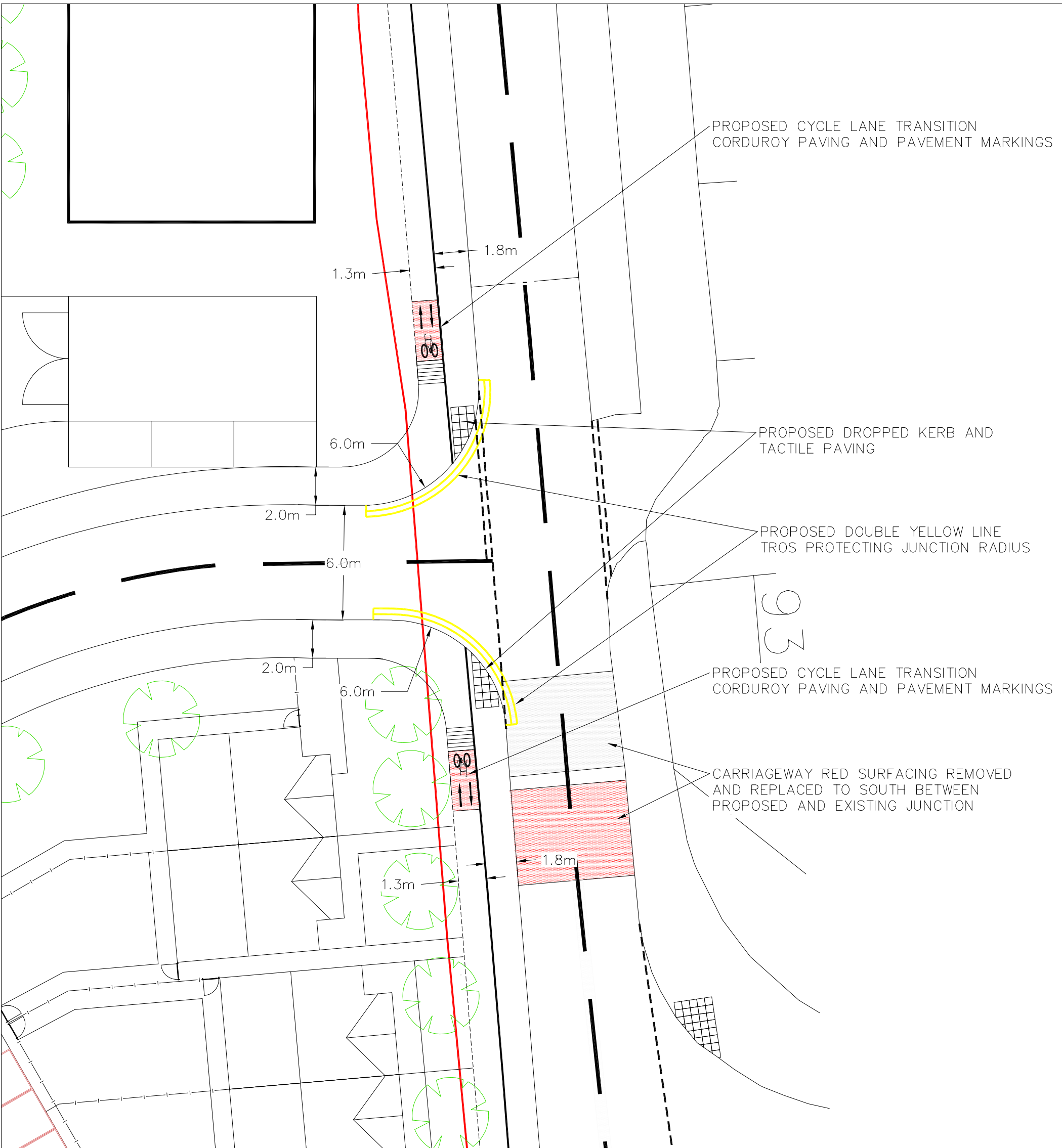
INSET 1: PROPOSED RESIDENTIAL ACCESS OFF WATTS DYKE (1:200)



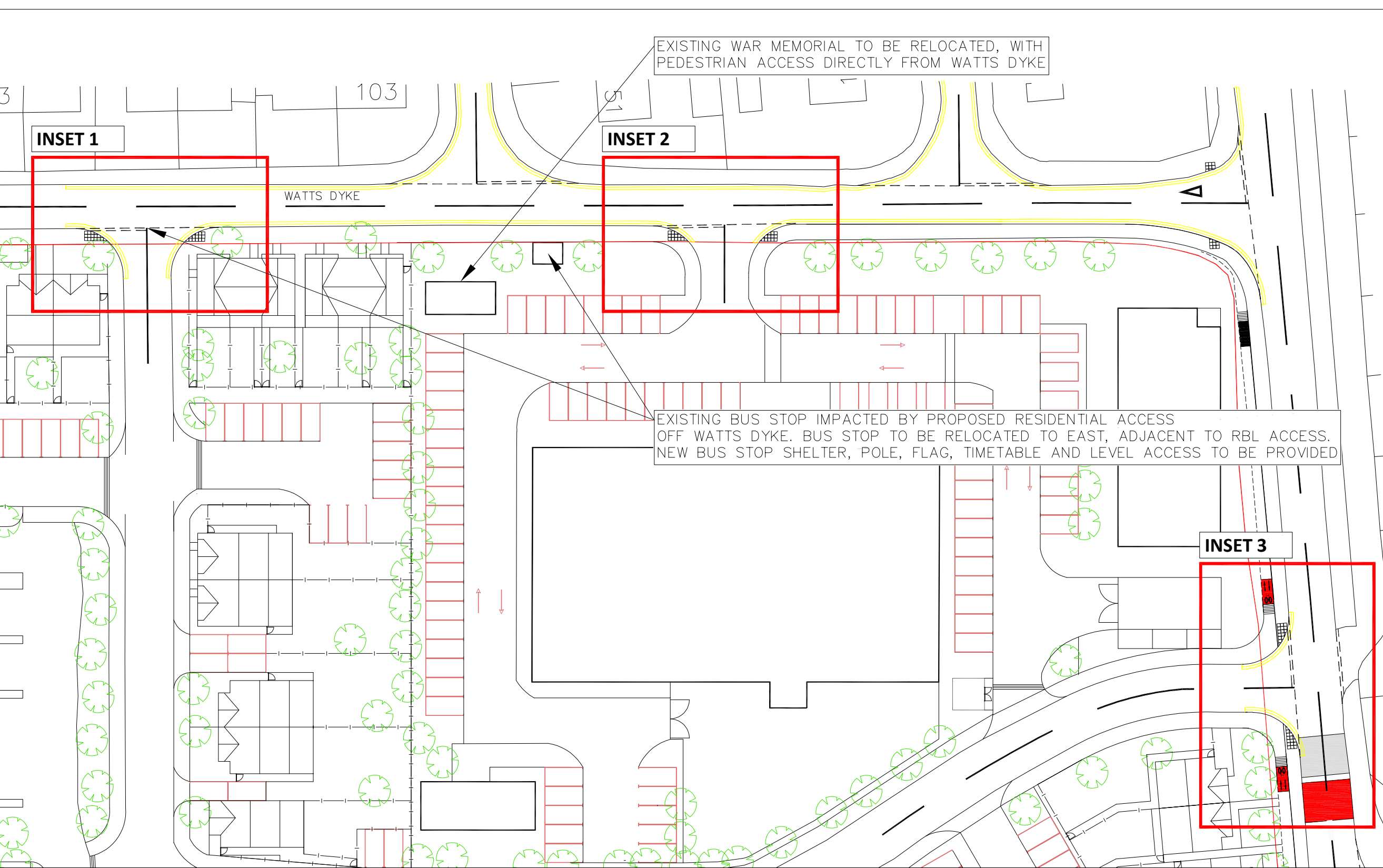
INSET 2: PROPOSED ROYAL BRITISH LEGION CLUB ACCESS OFF WATTS DYKE (1:200)



INSET 1: PROPOSED RESIDENTIAL ACCESS OFF LLAY NEW ROAD (1:200)



INDICATIVE SKETCH LAYOUT (Scale : 1:500)



Revision	Amendment	Approved	Revision Date
A	REVISION TO BASE PLAN - PLOTS 48 TO 52	MC	04/04/17



Drawn	Designed	Approved	Drawing Date
MC	MC	LC	APRIL2017
Project No.	Scale		
VC0085	AS-SHOWN@A1		

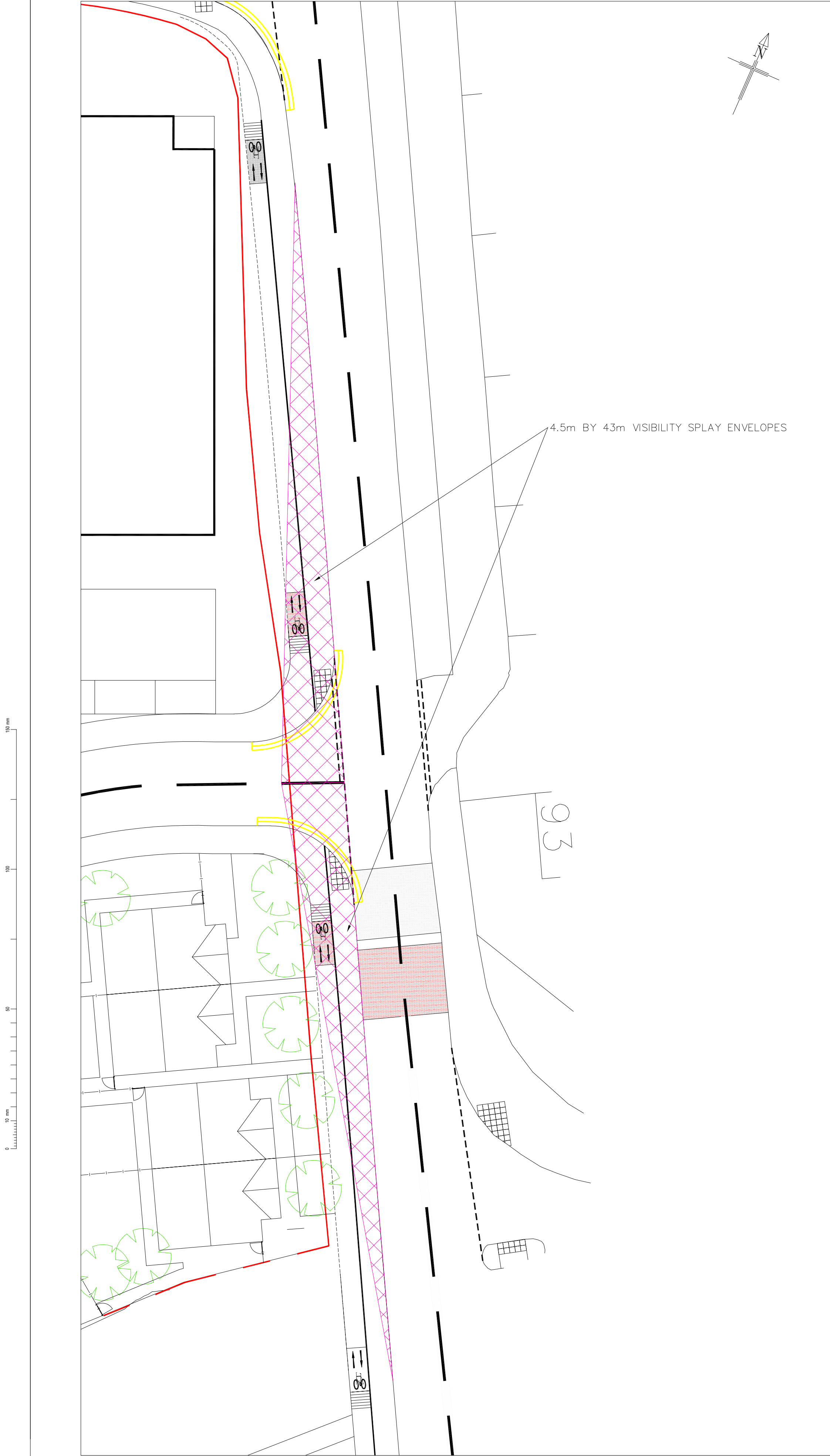
Project	LLAY, BRITISH LEGION CLUB, WATTS DYKE LLAY, WREXHAM - MIXED USE DEVELOPMENT
Sheet	PROPOSED ACCESS ARRANGEMENTS PLAN
Drawing No.	VC0085

Sheet No.	Revision
002	A

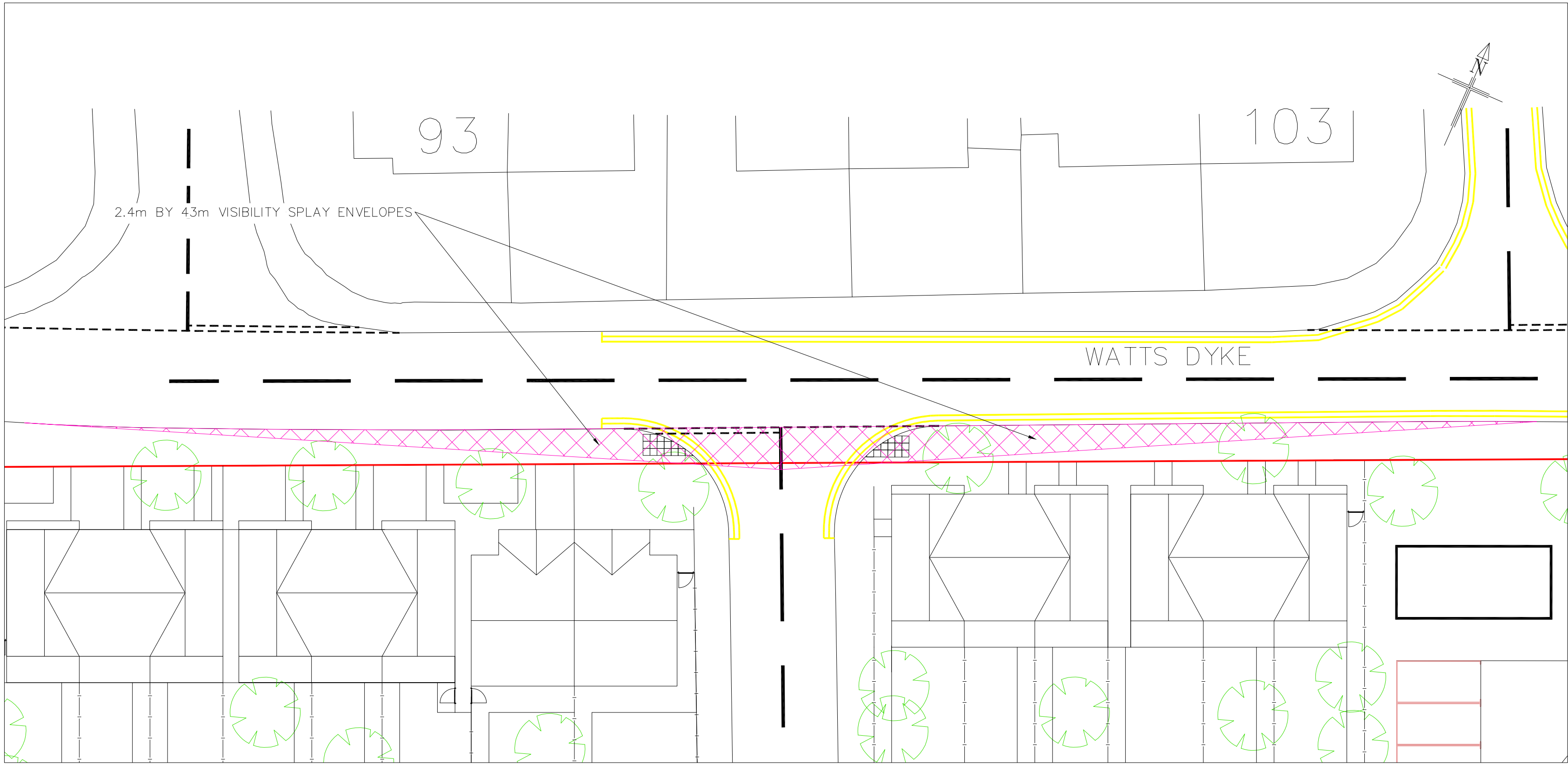
APPENDIX D: Proposed Visibility Splays



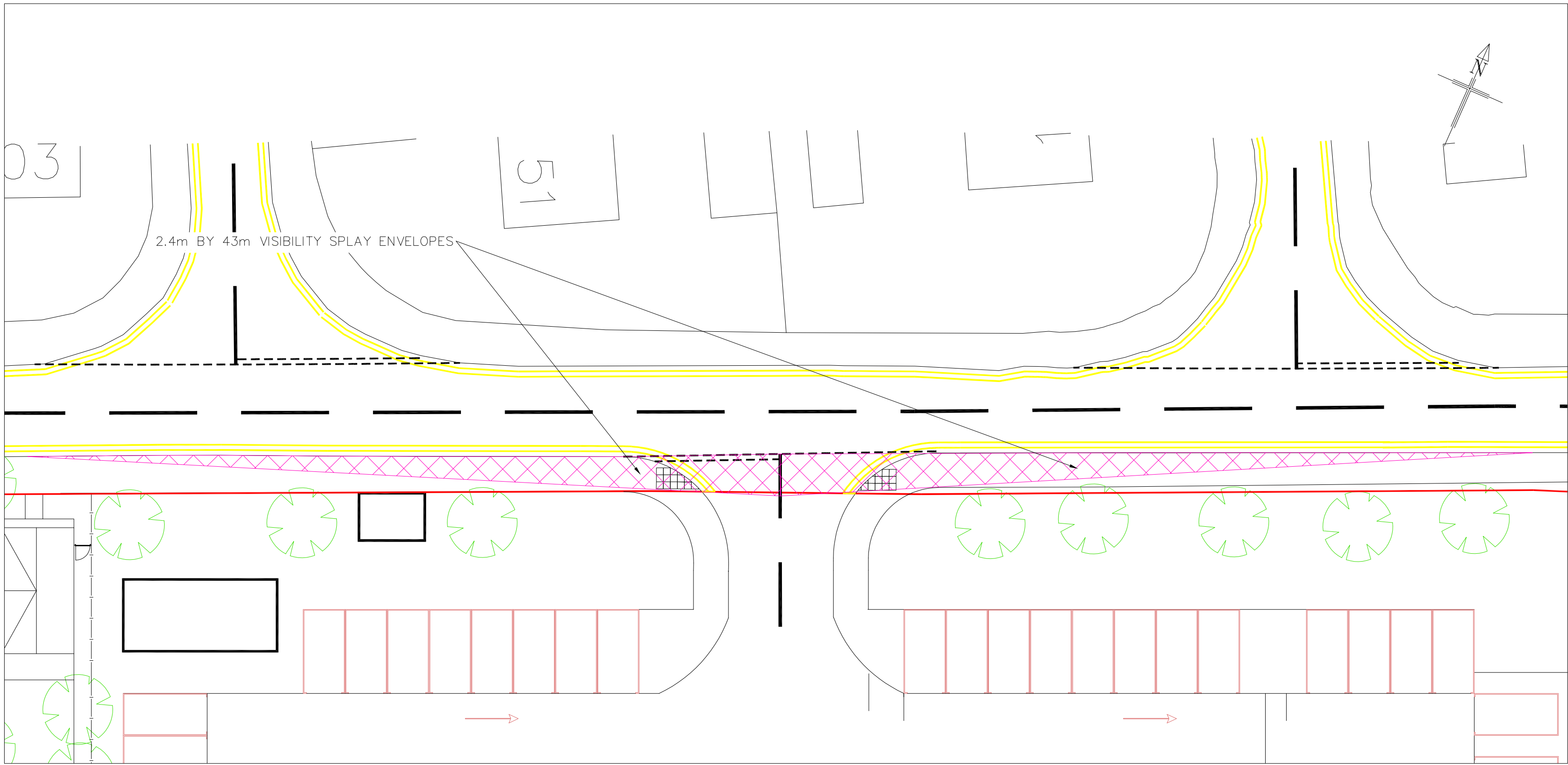
LLAY NEW ROAD, RESIDENTIAL ACCESS VISIBILITY SPLAY (1:200)



WATTS DYKE, RESIDENTIAL ACCESS VISIBILITY SPLAY (1:200)



WATTS DYKE, ROYAL BRITISH LEGION CLUB ACCESS, VISIBILITY SPLAY (1:200)



Revision	Amendment	Approved	Revision Date
A	REVISION TO BASE PLAN - PLOTS 48 TO 52	MC	04/04/17

KEY:-
INTER VISIBILITY SPLAY ENVELOPE
(600MM OBJECT HEIGHT)



Drawn MC	Designed MC	Approved LC	Drawing Date APRIL2017
Project No. VC0085	Scale AS-SHOWN@A1		

Project LLAY, BRITISH LEGION CLUB, WATTS DYKE LLAY, WREXHAM - MIXED USE DEVELOPMENT
Sheet PROPOSED ACCESS VISIBILITY SPLAY PLAN
Drawing No. VC0085

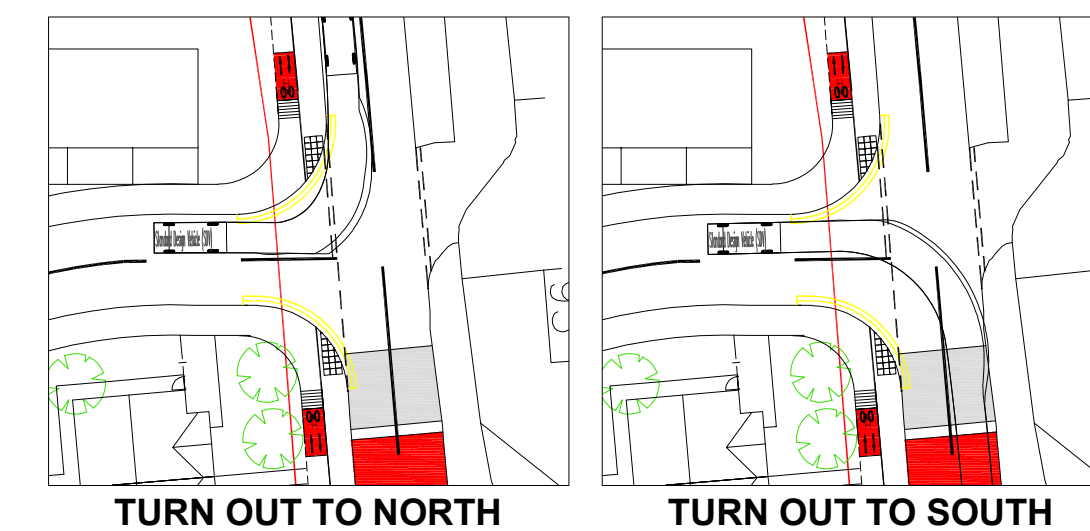
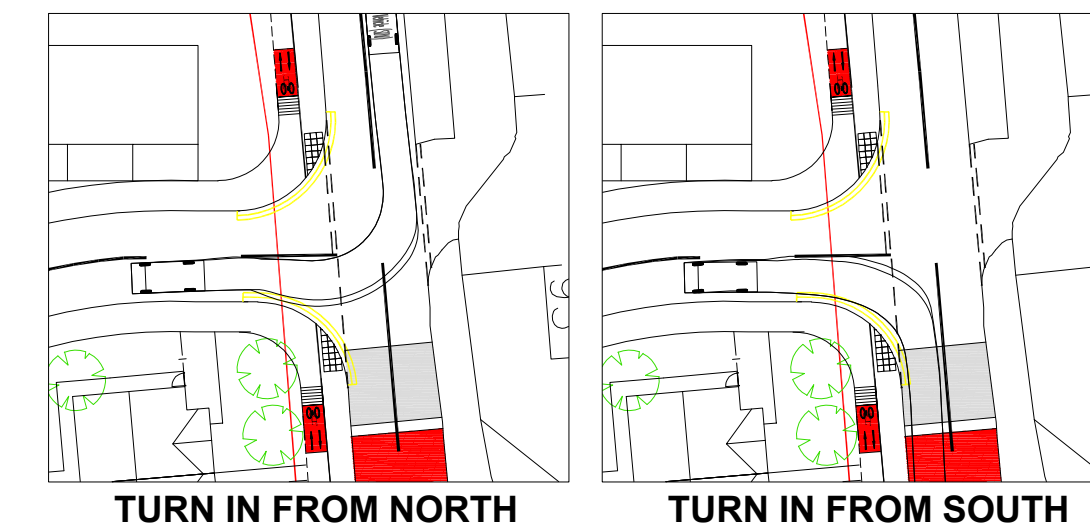
Sheet No. 003	Revision A
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APPENDIX E: Swept Path Analysis Drawings

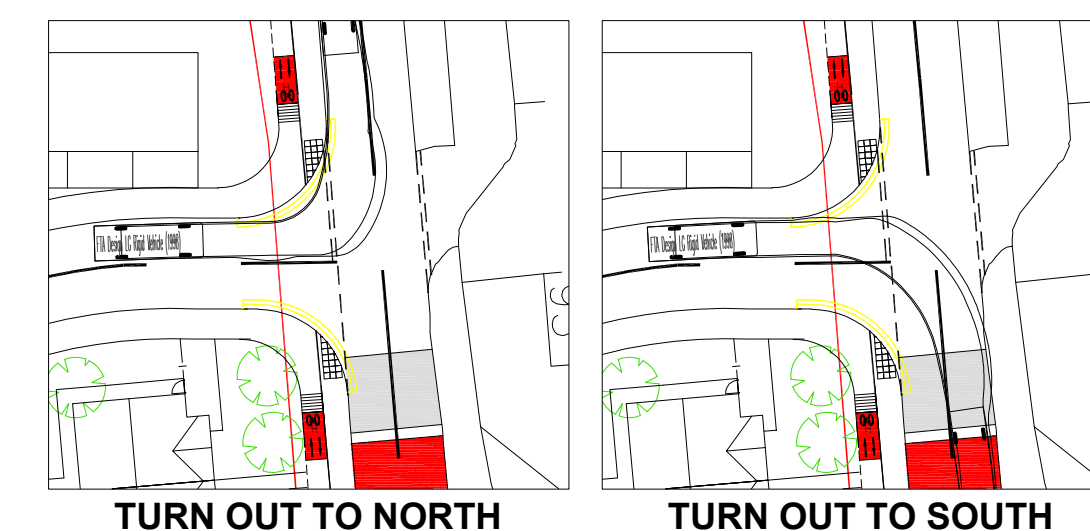
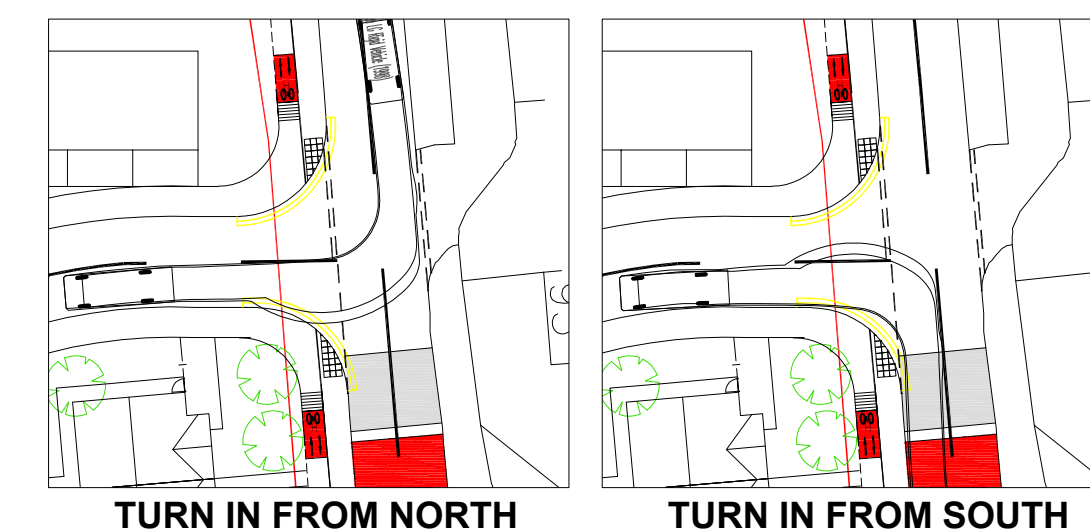


LLAY NEW ROAD ACCESS - SWEPT PATHS (Scale : 1:500)

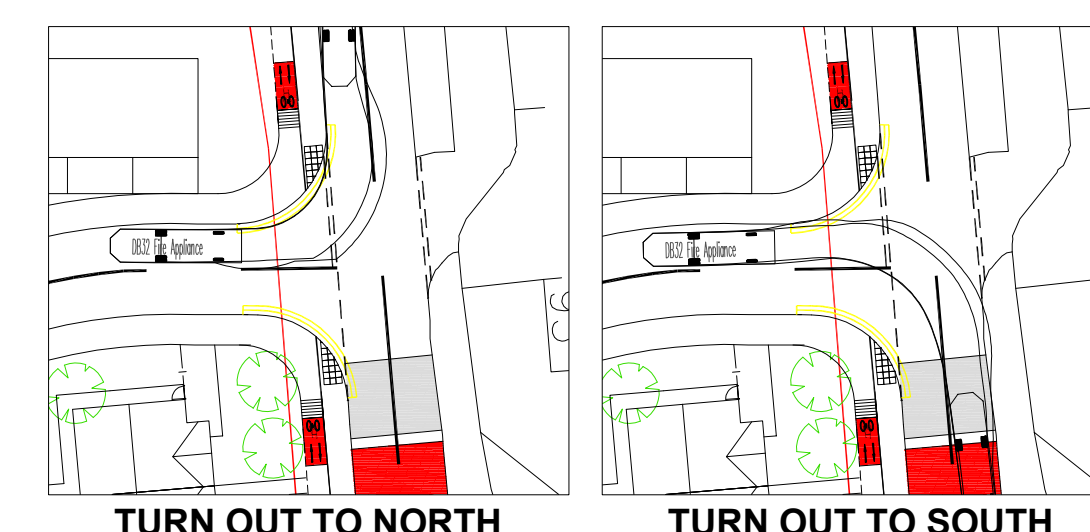
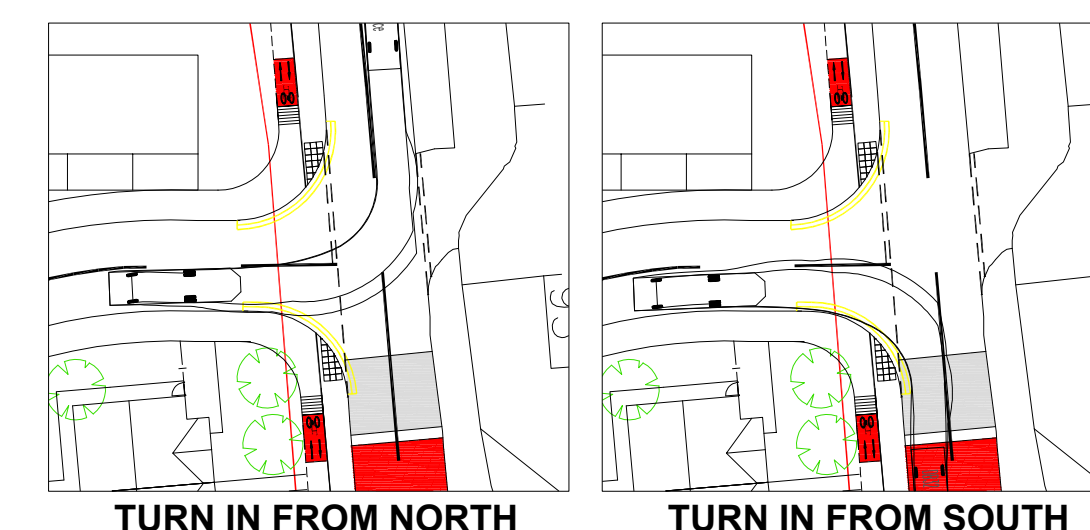
CAR ACCESS MANOEUVRES (Scale : 1:500)



LGV ACCESS MANOEUVRES (Scale : 1:500)

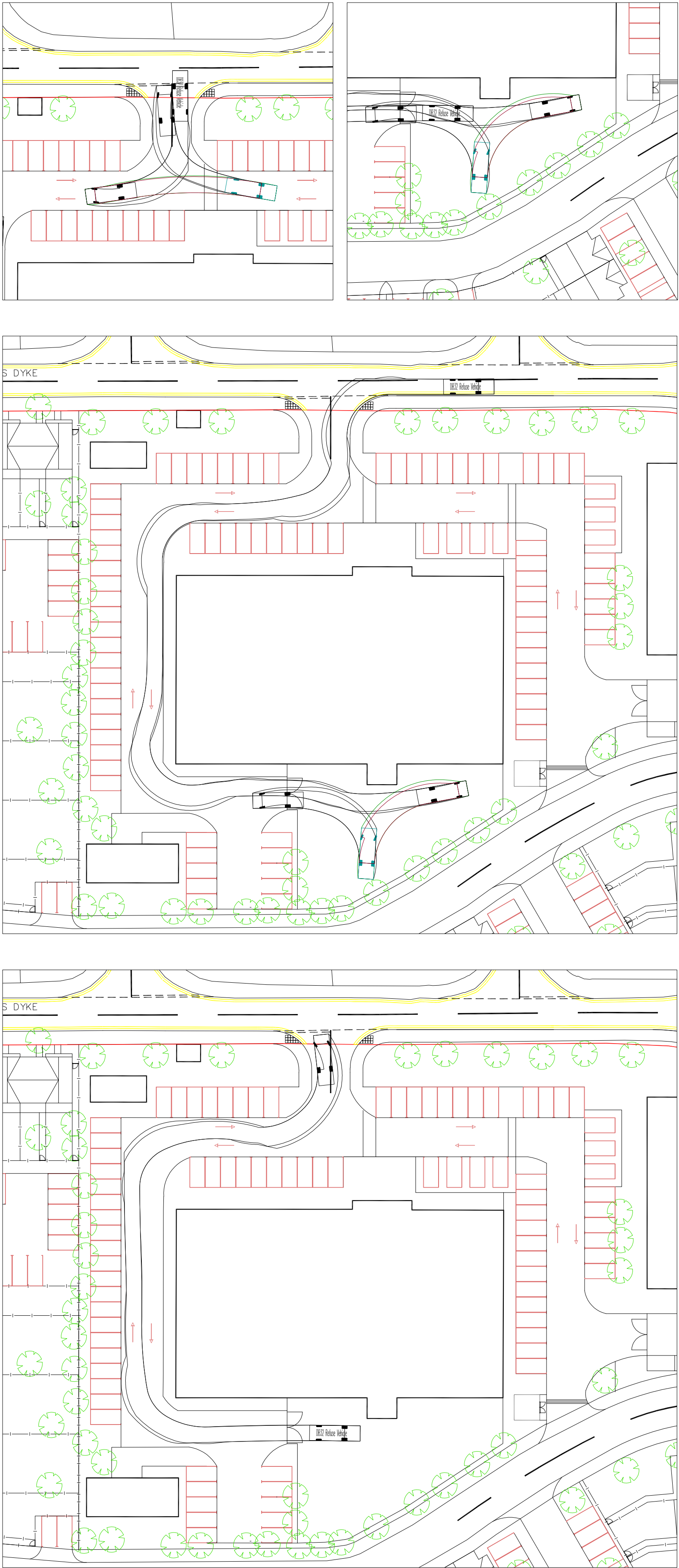


FIRE TENDER ACCESS MANOEUVRES (Scale : 1:500)

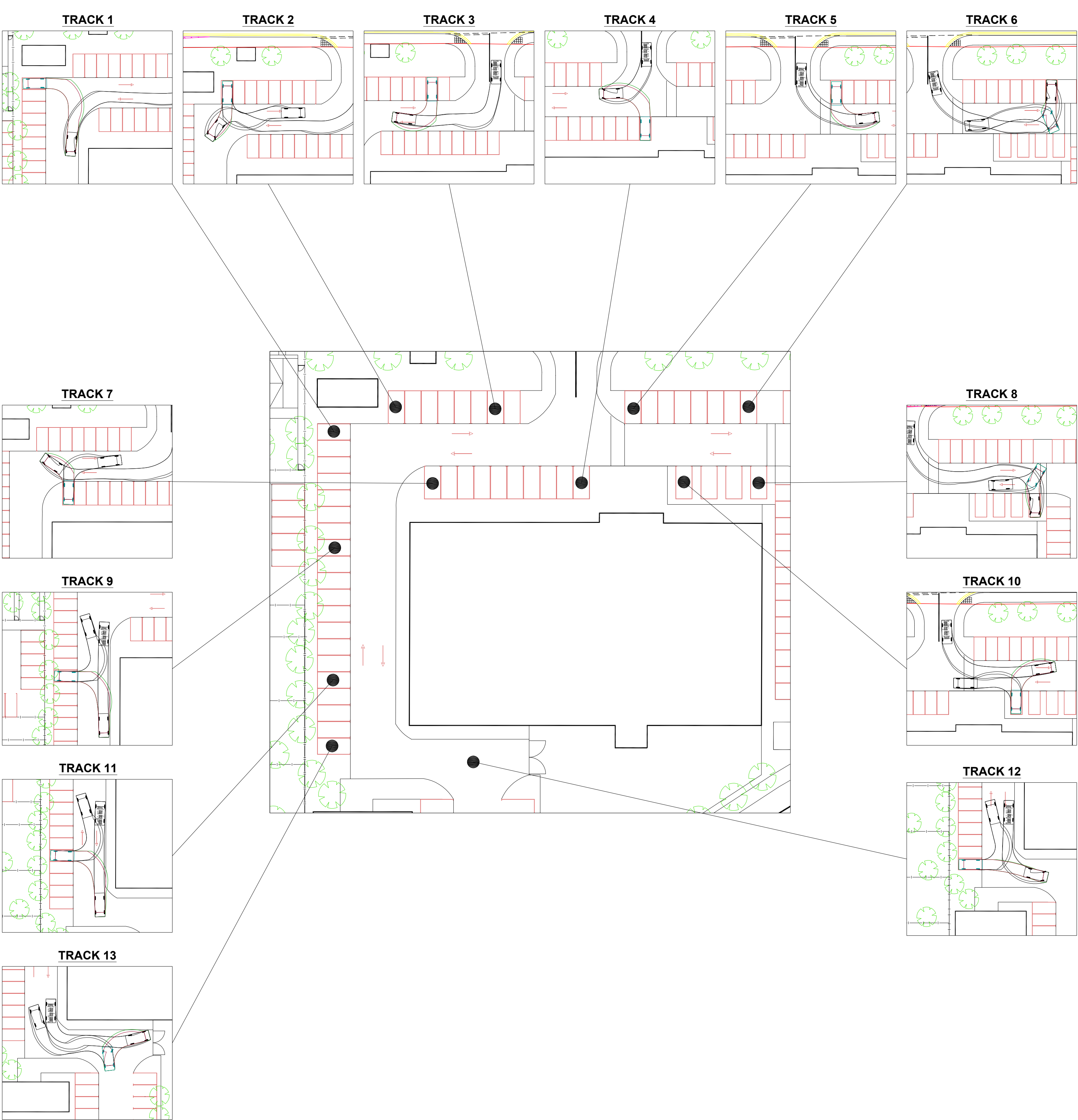


Drawing No. VC0085	Sheet No. 004	Revision A
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ROYAL BRITISH LEGION INTERNAL REFUSE VEHICLE MANOEUVRES - SWEEP PATHS (Scale : 1:500)

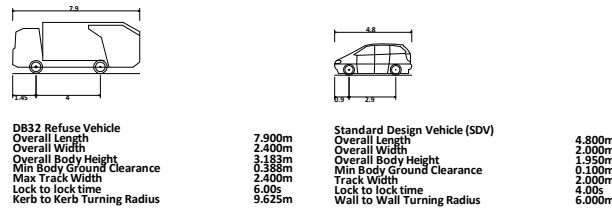


ROYAL BRITISH LEGION INTERNAL CAR PARKING MANOEUVRES - SWEEP PATHS (Scale : 1:500)



Revision	Amendment	Approved	Revision Date
A	REVISION TO BASE PLAN - PLOTS 48 TO 52	MC	04/04/17

VEHICLE PROFILES



Drawn	Designed	Approved	Drawing Date
MC	MC	LC	APRIL2017
Project No.	Scale		
VC0085	AS-SHOWN@A1		

Project
LLAY, BRITISH LEGION CLUB, WATTS DYKE
LLAY, WREXHAM - MIXED USE DEVELOPMENT

Sheet
ROYAL BRITISH LEGION CAR PARK VEHICLE TRACKING PLAN

Project No.	Scale	Sheet No.	Revision
VC0085	AS-SHOWN@A1	005	A

APPENDIX F: TRICS Reports



TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : A - HOUSES PRIVATELY OWNED

MULTI-MODAL VEHICLESSelected regions and areas:

02	SOUTH EAST	
	EX ESSEX	1 days
	SC SURREY	1 days
	WS WEST SUSSEX	1 days
03	SOUTH WEST	
	DV DEVON	2 days
04	EAST ANGLIA	
	NF NORFOLK	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	2 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NE NORTH EAST LINCOLNSHIRE	1 days
	NY NORTH YORKSHIRE	3 days
	SY SOUTH YORKSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	1 days
09	NORTH	
	CB CUMBRIA	1 days

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

Filtering Stage 2 selection:

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

Parameter: Number of dwellings
 Actual Range: 52 to 432 (units:)
 Range Selected by User: 50 to 500 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/08 to 28/09/15

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	4 days
Tuesday	3 days
Wednesday	1 days
Thursday	4 days
Friday	3 days

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

Selected survey types:

Manual count	15 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	8
Edge of Town	7

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

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

Filtering Stage 3 selection:

Use Class:

C3

15 days

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

Population within 1 mile:

1,001 to 5,000	2 days
5,001 to 10,000	4 days
10,001 to 15,000	5 days
15,001 to 20,000	3 days
20,001 to 25,000	1 days

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

Population within 5 miles:

5,001 to 25,000	3 days
25,001 to 50,000	2 days
50,001 to 75,000	1 days
75,001 to 100,000	4 days
100,001 to 125,000	2 days
125,001 to 250,000	2 days
250,001 to 500,000	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	12 days

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

Travel Plan:

Yes	1 days
No	14 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	CB-03-A-04	SEMI DETACHED	CUMBRIA
	MOORCLOSE ROAD		
	SALTERBACK		
	WORKINGTON		
	Edge of Town		
	No Sub Category		
	Total Number of dwellings:	82	
	Survey date: FRIDAY	24/04/09	Survey Type: MANUAL
2	CH-03-A-06	SEMI-DET./BUNGALOWS	CHESHIRE
	CREWE ROAD		
	CREWE		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total Number of dwellings:	129	
	Survey date: TUESDAY	14/10/08	Survey Type: MANUAL
3	DV-03-A-02	HOUSES & BUNGALOWS	DEVON
	MILLHEAD ROAD		
	HONITON		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	116	
	Survey date: FRIDAY	25/09/15	Survey Type: MANUAL
4	DV-03-A-03	TERRACED & SEMI DETACHED	DEVON
	LOWER BRAND LANE		
	HONITON		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	70	
	Survey date: MONDAY	28/09/15	Survey Type: MANUAL
5	EX-03-A-01	SEMI-DET.	ESSEX
	MILTON ROAD		
	CORRINGHAM		
	STANFORD-LE-HOPE		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	237	
	Survey date: TUESDAY	13/05/08	Survey Type: MANUAL
6	NE-03-A-02	SEMI DETACHED & DETACHED	NORTH EAST LINCOLNSHIRE
	HANOVER WALK		
	SCUNTHORPE		
	Edge of Town		
	No Sub Category		
	Total Number of dwellings:	432	
	Survey date: MONDAY	12/05/14	Survey Type: MANUAL
7	NF-03-A-02	HOUSES & FLATS	NORFOLK
	DEREHAM ROAD		
	NORWICH		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	98	
	Survey date: MONDAY	22/10/12	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8	NY-03-A-06	BUNGALOWS & SEMI DET.	NORTH YORKSHIRE
	HORSEFAIR		
	BOROUGHBRIDGE		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	115	
	Survey date: FRIDAY	14/10/11	Survey Type: MANUAL
9	NY-03-A-09	MIXED HOUSING	NORTH YORKSHIRE
	GRAMMAR SCHOOL LANE		
	NORTHALLERTON		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	52	
	Survey date: MONDAY	16/09/13	Survey Type: MANUAL
10	NY-03-A-10	HOUSES AND FLATS	NORTH YORKSHIRE
	BOROUGHBRIDGE ROAD		
	RIPON		
	Edge of Town		
	No Sub Category		
	Total Number of dwellings:	71	
	Survey date: TUESDAY	17/09/13	Survey Type: MANUAL
11	SC-03-A-04	DETACHED & TERRACED	SURREY
	HIGH ROAD		
	BYFLEET		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	71	
	Survey date: THURSDAY	23/01/14	Survey Type: MANUAL
12	SH-03-A-04	TERRACED	SHROPSHIRE
	ST MICHAEL'S STREET		
	SHREWSBURY		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total Number of dwellings:	108	
	Survey date: THURSDAY	11/06/09	Survey Type: MANUAL
13	SH-03-A-05	SEMI-DETACHED/TERRACED	SHROPSHIRE
	SANDCROFT		
	SUTTON HILL		
	TELFORD		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	54	
	Survey date: THURSDAY	24/10/13	Survey Type: MANUAL
14	SY-03-A-01	SEMI DETACHED HOUSES	SOUTH YORKSHIRE
	A19 BENTLEY ROAD		
	BENTLEY RISE		
	DONCASTER		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	54	
	Survey date: WEDNESDAY	18/09/13	Survey Type: MANUAL

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LIST OF SITES relevant to selection parameters (Cont.)

15	WS-03-A-04	MIXED HOUSES	WEST SUSSEX
	HILLS FARM LANE		
	BROADBRIDGE HEATH		
	HORSHAM		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	151	
	Survey date: THURSDAY	11/12/14	Survey Type: MANUAL

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

MULTI-MODAL VEHICLES**Calculation factor: 1 DWELLS****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	15	123	0.069	15	123	0.257	15	123	0.326
08:00 - 09:00	15	123	0.132	15	123	0.374	15	123	0.506
09:00 - 10:00	15	123	0.146	15	123	0.162	15	123	0.308
10:00 - 11:00	15	123	0.130	15	123	0.170	15	123	0.300
11:00 - 12:00	15	123	0.143	15	123	0.141	15	123	0.284
12:00 - 13:00	15	123	0.164	15	123	0.153	15	123	0.317
13:00 - 14:00	15	123	0.157	15	123	0.148	15	123	0.305
14:00 - 15:00	15	123	0.157	15	123	0.167	15	123	0.324
15:00 - 16:00	15	123	0.276	15	123	0.199	15	123	0.475
16:00 - 17:00	15	123	0.277	15	123	0.172	15	123	0.449
17:00 - 18:00	15	123	0.315	15	123	0.175	15	123	0.490
18:00 - 19:00	15	123	0.226	15	123	0.165	15	123	0.391
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.192			2.283			4.475

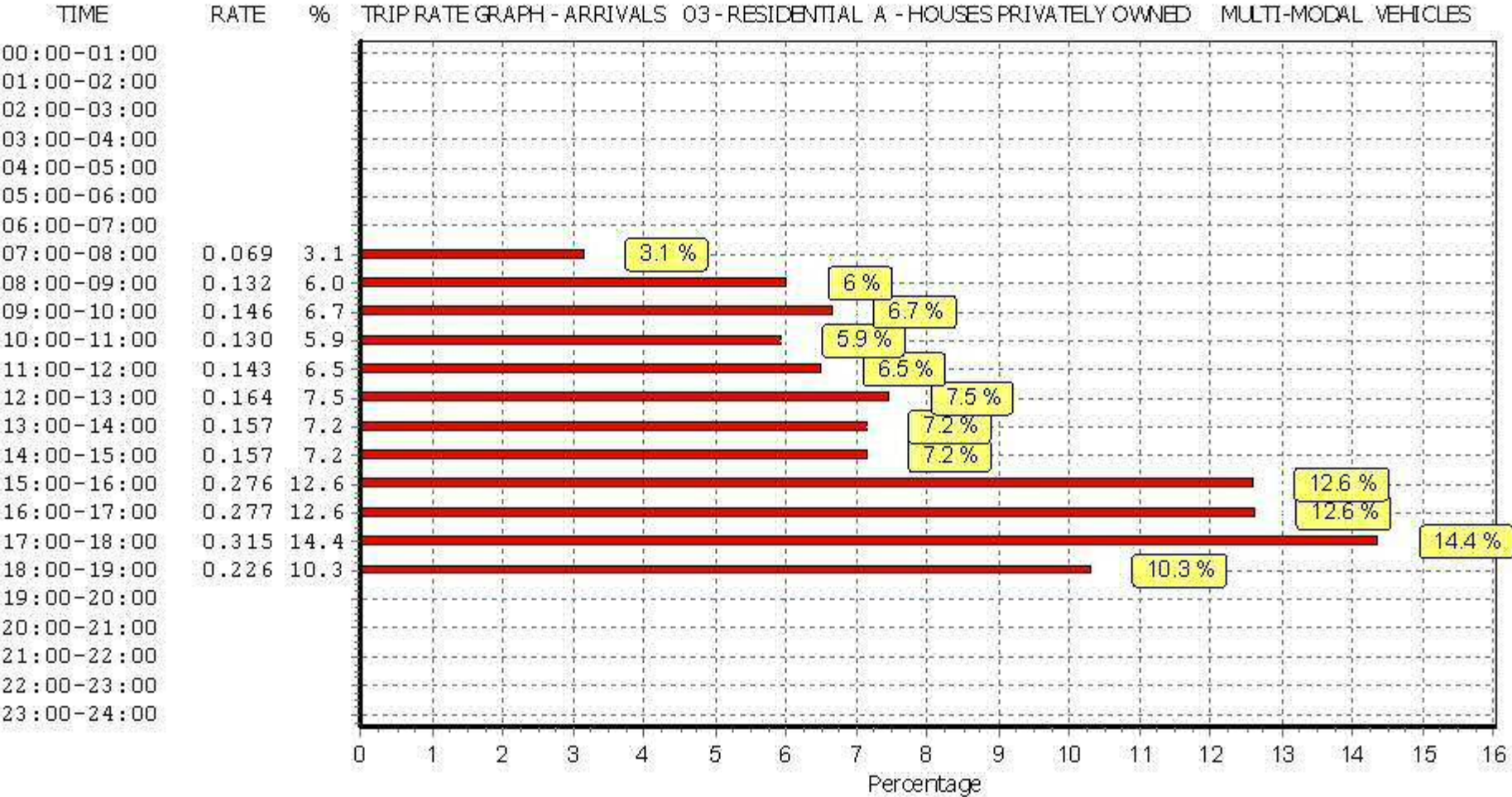
This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are 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.

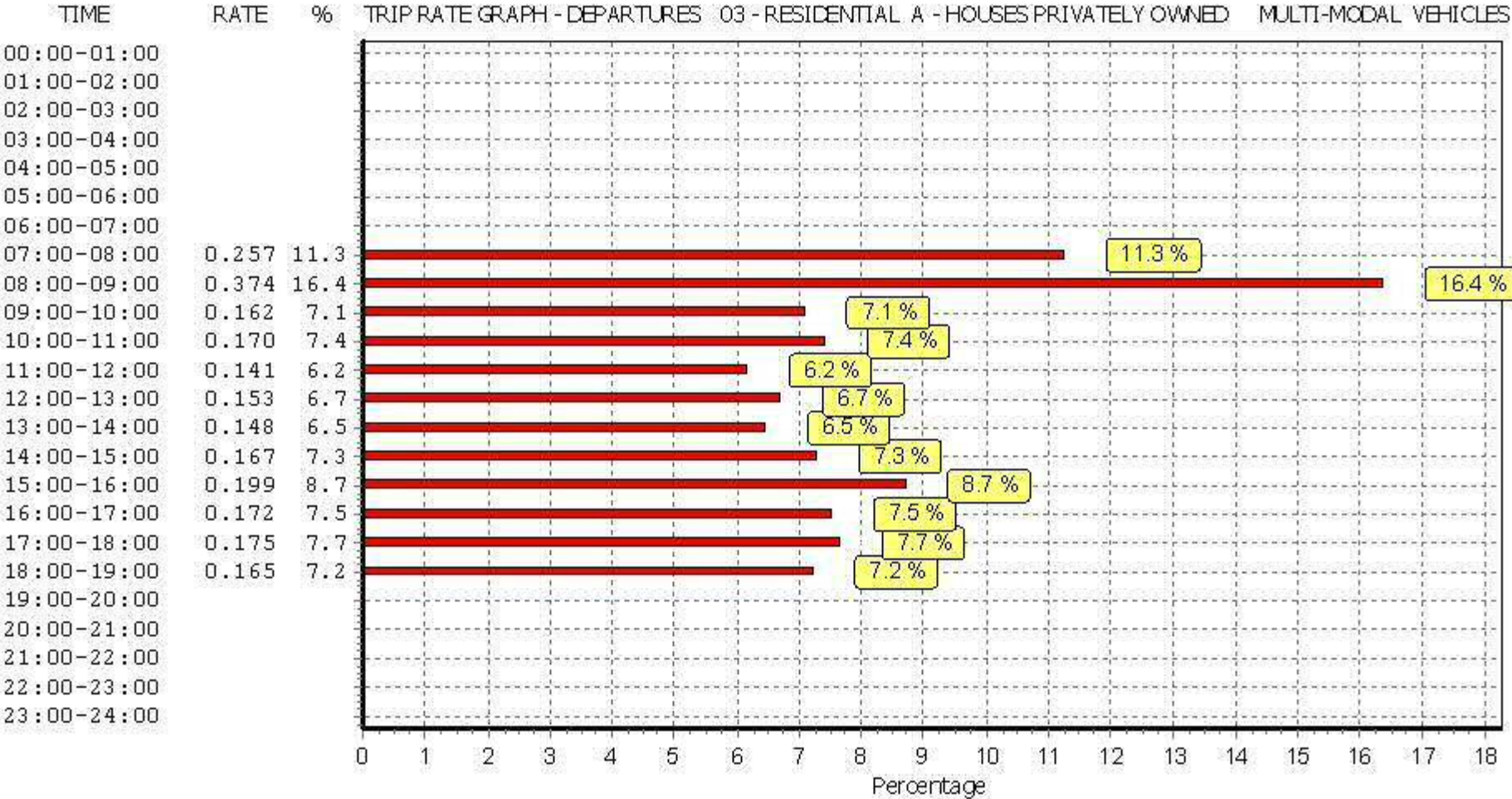
Parameter summary

Trip rate parameter range selected:	52 - 432 (units:)
Survey date date range:	01/01/08 - 28/09/15
Number of weekdays (Monday-Friday):	15
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	1
Surveys manually removed from selection:	0

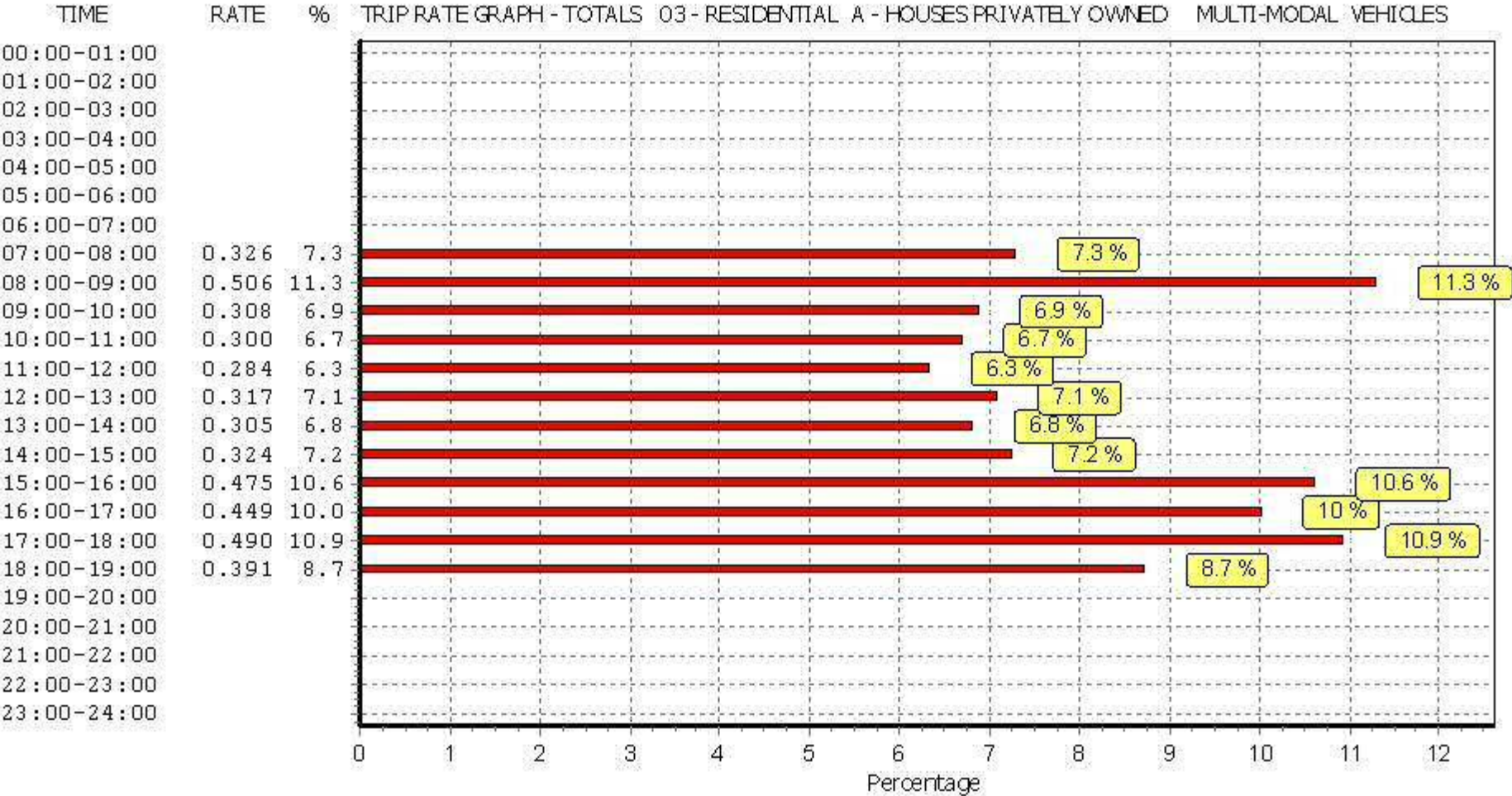
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected 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.



This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



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Calculation Reference: AUDIT-310901-170403-0425

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
 Category : 0 - CONVENIENCE STORE
 VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	ES EAST SUSSEX	1 days
03	SOUTH WEST	
	DV DEVON	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	1 days
05	EAST MIDLANDS	
	LE LEICESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
	WY WEST YORKSHIRE	2 days
09	NORTH	
	DH DURHAM	1 days

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

Secondary Filtering selection:

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

Parameter: Gross floor area
 Actual Range: 70 to 539 (units: sqm)
 Range Selected by User: 70 to 1200 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/09 to 26/09/16

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	4 days
Wednesday	2 days
Thursday	2 days
Friday	1 days

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

Selected survey types:

Manual count	9 days
Directional ATC Count	0 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	6
Edge of Town	1
Neighbourhood Centre (PPS6 Local Centre)	2

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	9
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This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

A1

9 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	2 days
10,001 to 15,000	2 days
15,001 to 20,000	1 days
20,001 to 25,000	2 days
25,001 to 50,000	2 days

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

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
75,001 to 100,000	1 days
100,001 to 125,000	1 days
125,001 to 250,000	2 days
250,001 to 500,000	3 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	5 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.

Petrol filling station:

Included in the survey count	0 days
Excluded from count or no filling station	9 days

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

Travel Plan:

No	9 days
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This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	9 days
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This data displays the number of selected surveys with PTAL Ratings.

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LIST OF SITES relevant to selection parameters

1	CA-01-O-01	CO-OP		CAMBRIDGESHIRE
	MAYORS WALK			
	NETHERTON			
	PETERBOROUGH			
	Neighbourhood Centre (PPS6 Local Centre)			
	Residential Zone			
	Total Gross floor area:	375 sqm		
	Survey date: MONDAY	17/10/11		Survey Type: MANUAL
2	DH-01-O-01	SAINSBURY'S LOCAL		DURHAM
	132 STATION LANE			
	SEATON CAREW			
	HARTLEPOOL			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:	469 sqm		
	Survey date: MONDAY	26/11/12		Survey Type: MANUAL
3	DV-01-O-01	PREMIER		DEVON
	MELROSE AVENUE			
	PLYMOUTH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:	70 sqm		
	Survey date: WEDNESDAY	18/07/12		Survey Type: MANUAL
4	ES-01-O-01	ONE STOP		EAST SUSSEX
	THE SIDINGS			
	ORE VALLEY			
	HASTINGS			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:	280 sqm		
	Survey date: WEDNESDAY	19/12/12		Survey Type: MANUAL
5	LE-01-O-01	BEST ONE		LEICESTERSHIRE
	THE FAIRWAY			
	AYLESTONE PARK			
	LEICESTER			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:	220 sqm		
	Survey date: THURSDAY	27/09/12		Survey Type: MANUAL
6	NF-01-O-01	TESCO EXPRESS		NORFOLK
	DEREHAM ROAD			
	NORWICH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:	298 sqm		
	Survey date: FRIDAY	26/10/12		Survey Type: MANUAL
7	NY-01-O-03	CO-OPERATIVE		NORTH YORKSHIRE
	FOREST ROAD			
	NORTHALLERTON			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Gross floor area:	305 sqm		
	Survey date: MONDAY	19/09/16		Survey Type: MANUAL

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LIST OF SITES relevant to selection parameters (Cont.)

8	WY-01-O-01	SAINSBURY'S LOCAL	WEST YORKSHIRE
	KEIGHLEY ROAD		
	BRADFORD		
	Edge of Town		
	Residential Zone		
	Total Gross floor area:	400 sqm	
	Survey date: THURSDAY	06/12/12	Survey Type: MANUAL
9	WY-01-O-02	CO-OPERATIVE	WEST YORKSHIRE
	AINSTY ROAD		
	WETHERBY		
	Neighbourhood Centre (PPS6 Local Centre)		
	Residential Zone		
	Total Gross floor area:	539 sqm	
	Survey date: MONDAY	26/09/16	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.

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TRIP RATE for Land Use 01 - RETAIL/O - CONVENIENCE STORE
VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	6	311	3.696	6	311	3.321	6	311	7.017
07:00 - 08:00	9	328	6.901	9	328	6.461	9	328	13.362
08:00 - 09:00	9	328	9.168	9	328	8.491	9	328	17.659
09:00 - 10:00	9	328	6.901	9	328	6.664	9	328	13.565
10:00 - 11:00	9	328	6.935	9	328	6.597	9	328	13.532
11:00 - 12:00	9	328	6.597	9	328	6.834	9	328	13.431
12:00 - 13:00	9	328	8.627	9	328	8.424	9	328	17.051
13:00 - 14:00	9	328	6.935	9	328	6.563	9	328	13.498
14:00 - 15:00	9	328	7.781	9	328	7.612	9	328	15.393
15:00 - 16:00	9	328	8.694	9	328	8.863	9	328	17.557
16:00 - 17:00	9	328	9.337	9	328	8.187	9	328	17.524
17:00 - 18:00	9	328	10.893	9	328	10.555	9	328	21.448
18:00 - 19:00	9	328	11.299	9	328	11.908	9	328	23.207
19:00 - 20:00	9	328	7.916	9	328	9.168	9	328	17.084
20:00 - 21:00	8	361	3.985	8	361	5.059	8	361	9.044
21:00 - 22:00	7	381	2.963	7	381	3.413	7	381	6.376
22:00 - 23:00	2	422	1.066	2	422	1.896	2	422	2.962
23:00 - 24:00									
Total Rates:			119.694			120.016			239.710

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.

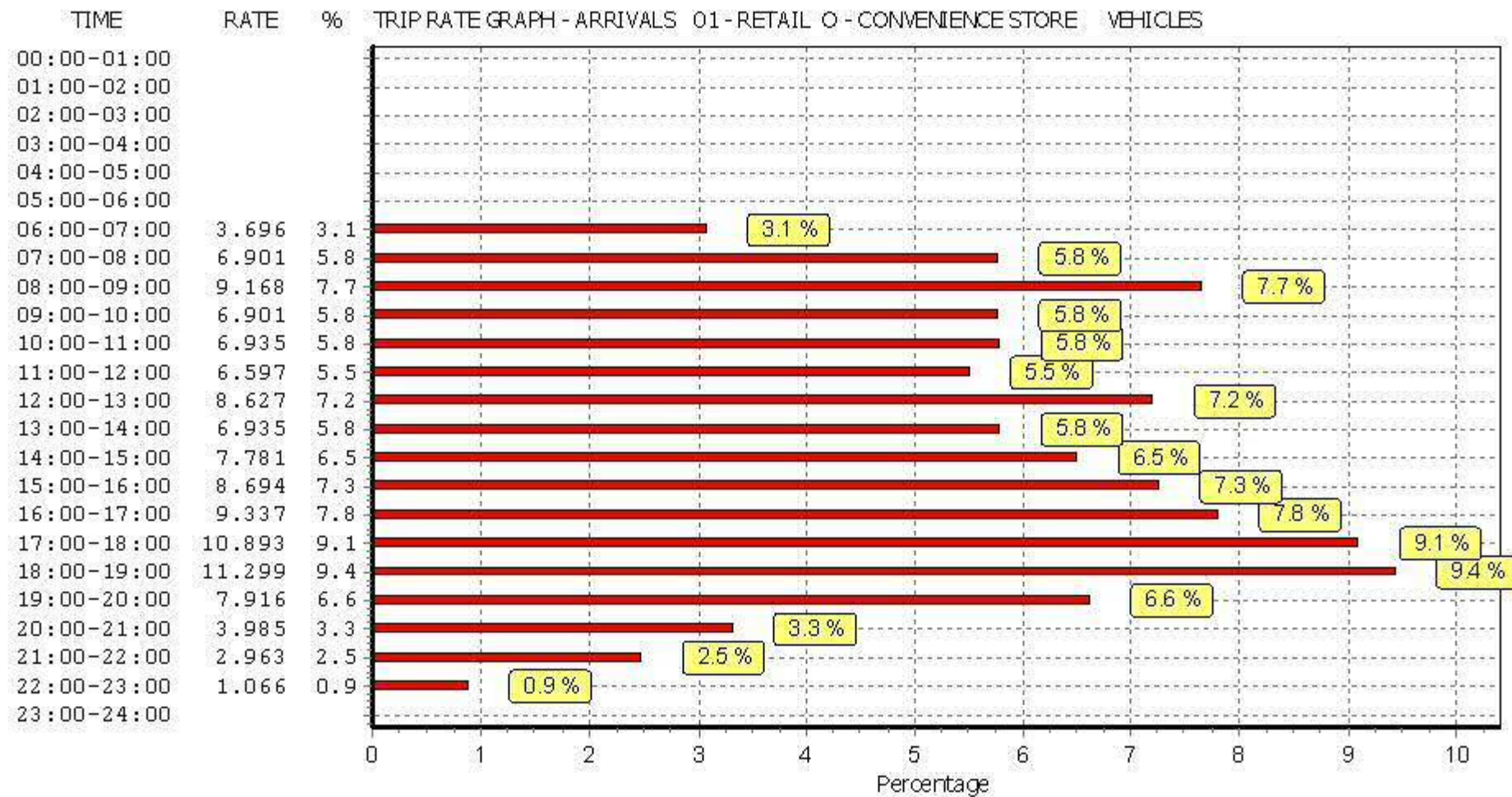
To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected 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: 70 - 539 (units: sqm)
 Survey date range: 01/01/09 - 26/09/16
 Number of weekdays (Monday-Friday): 9
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

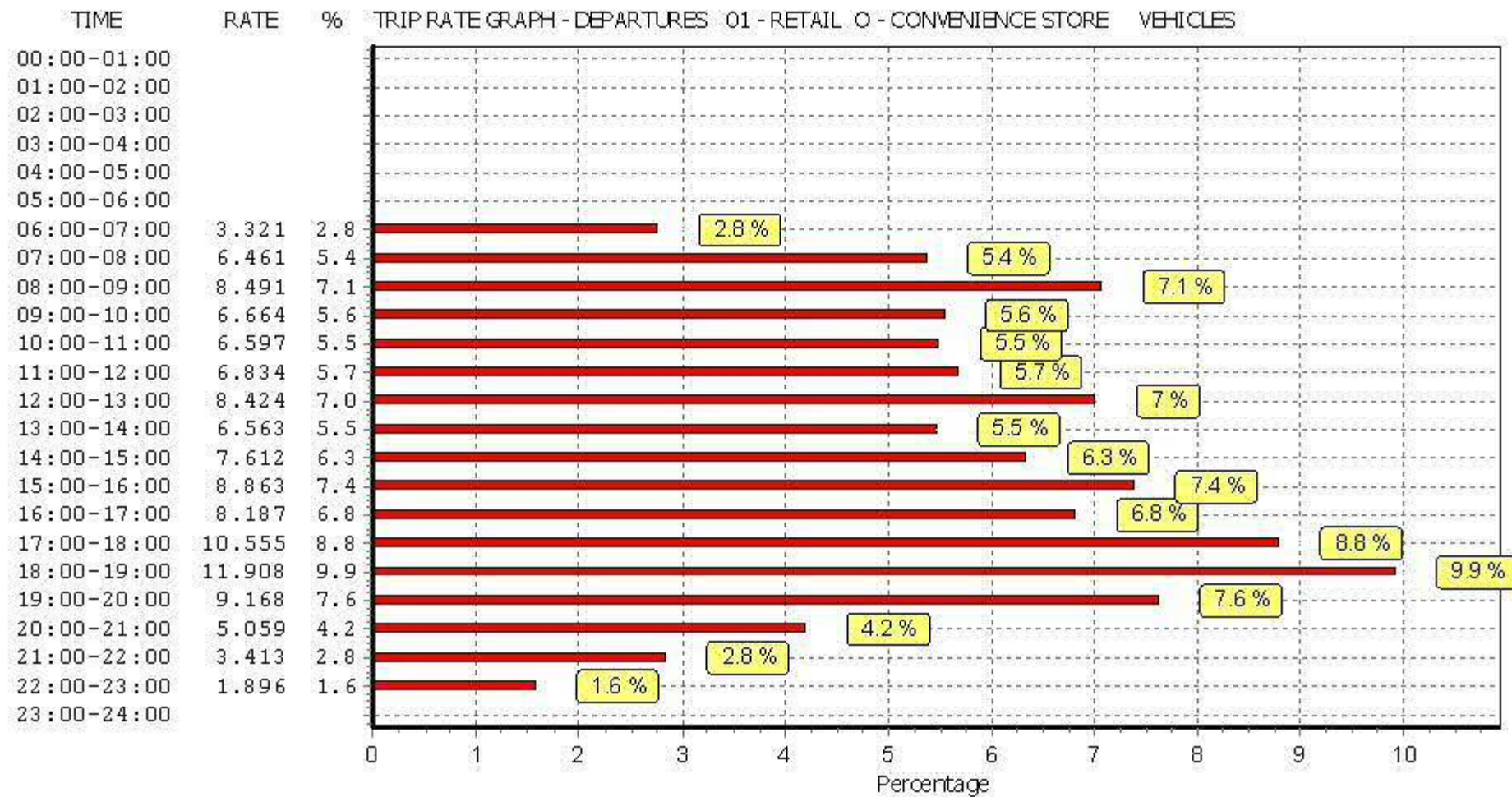
This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected 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.

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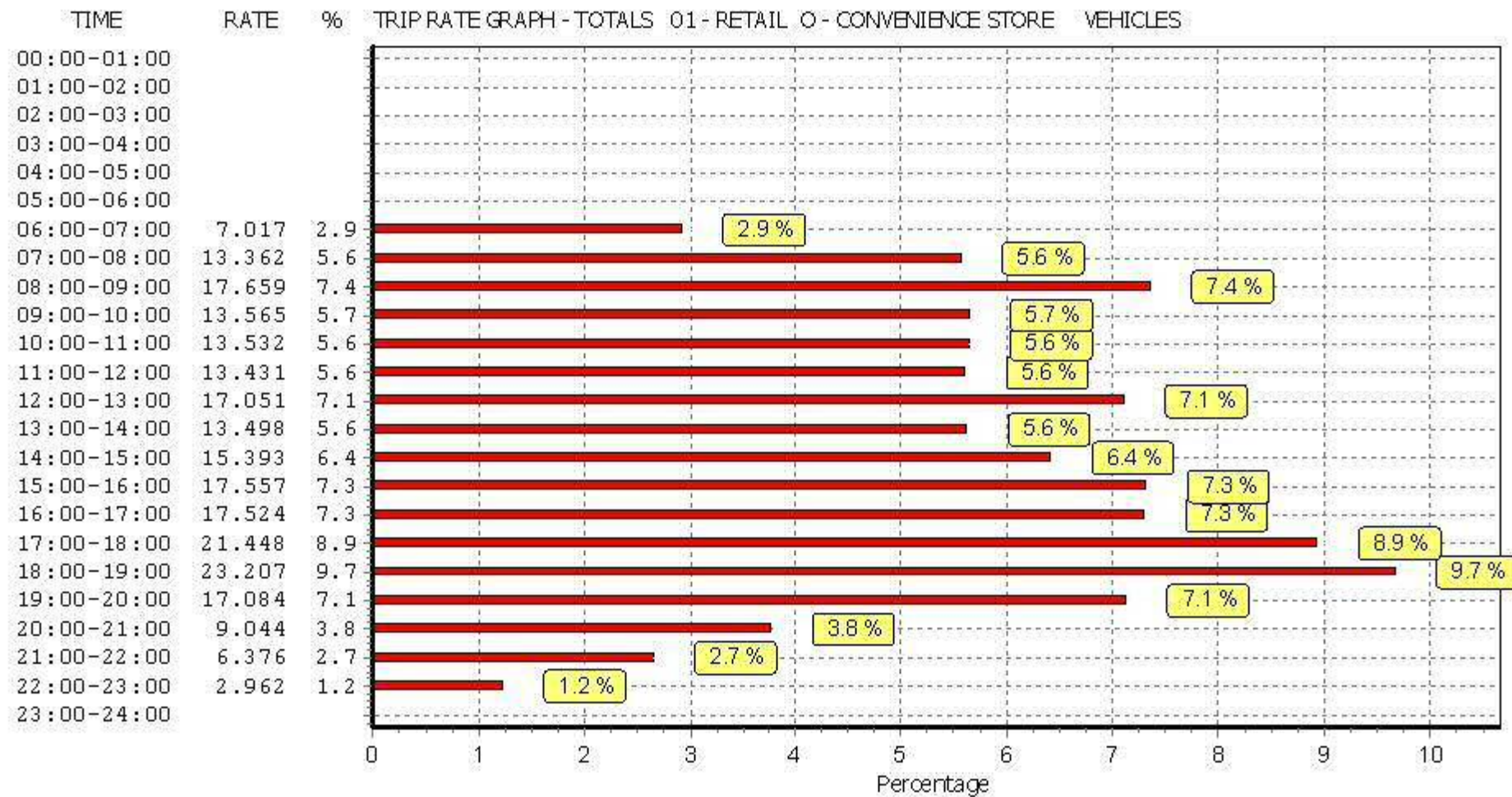
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This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.

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This graph is a visual representation of the trip rate calculation results screen. The same time periods and trip rates are displayed, but in addition there is an additional column showing the percentage of the total trip rate by individual time period, allowing peak periods to be easily identified through observation. Note that the type of count and the selected direction is shown at the top of the graph.



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