

Former Police Station, Llantwit Major

Transport Note

Client: Evening All Ltd

REPORT DETAILS

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1. INTRODUCTION

1.1 Overview

- 1.1.1 This Transport Note (TN) has been produced on behalf of Evening All Ltd to support a planning application for a residential redevelopment of the former Police Station in Llantwit Major.
- 1.1.2 The proposals are for the conversion of the existing building into four three-bedroom houses with associated parking of one space per dwelling.
- 1.1.3 This TN has been produced to inform the Vale of Glamorgan Council (VoGC) of the highways and transport implications of the proposals. It considers the connectivity of the site by all modes of travel, the site layout and access arrangements, as well as considering highway safety.
- 1.1.4 The TN also considers the proposed parking provision on the site. It sets out that the parking provision is considered to be in accordance with standards, would meet the demand generated by the site, is at appropriate levels given the highly sustainable location and would not lead to overspill parking on the highway network which would cause a material safety issue.
- 1.1.5 The TN concludes that the proposals would therefore not have an unacceptable impact on highway safety and are in accordance with key Welsh Government planning policies for reducing car use and encouraging sustainable travel.

1.2 Scope of Report

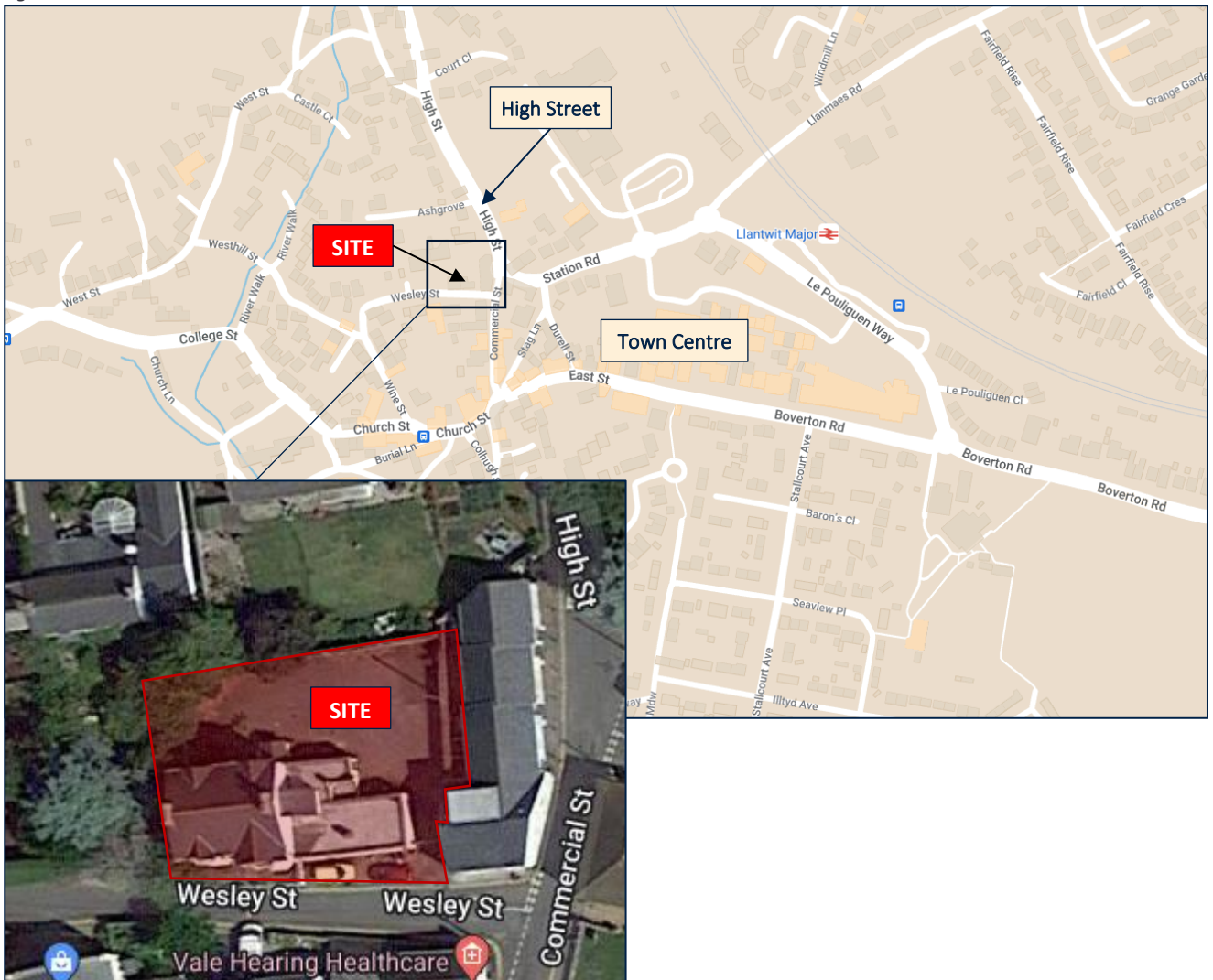
- 1.2.1 The scope of work has considered policies and advice set out in Planning Policy Wales 11 (PPW11), Technical Advice Note 18: Transport (TAN18), the Active Travel Act (Wales – 2013), the VoGC Local Development Plan (LDP), Parking Standards SPG, as well as considering previous experience of other similar sites.
- 1.2.2 The TN has been structured to include the following:
- A description of the existing conditions including, site location, road safety analysis and existing travel behaviour and car ownership in the surrounding area
 - A review of local and national planning policy in context to the proposed development and in relation to sustainable travel
 - A review of the connectivity of the site by sustainable modes including walking, cycling and public transport
 - Description of the development proposals, demonstrating safe and appropriate access by all modes, car and cycle parking and servicing and delivery arrangements

2. EXISTING CONDITIONS

2.1 Site Location, Use and Access

- 2.1.1 The site is located within the town centre in Llantwit Major, approximately 275m to the west of Llantwit Major Railway Station. The site is also in close proximity to Ysgol Gynradd St Illtyd Primary School and numerous commercial and retail units. Surrounding the site are residential dwellings.
- 2.1.2 The site is accessed directly from Wesley Street via an informal crossover arrangement, approximately 10m west of the junction with Commercial Street.
- 2.1.3 The site was formerly a police station although is not currently occupied. The building is still intact and as such retains its existing planning use, and has historically generated vehicle movements onto the network. It has a car park in the rear which can accommodate up to approximately five vehicles as well as providing two parking spaces at the site frontage (seven spaces in total).
- 2.1.4 The indicative location of the site in its local context, is provided in Figure 2-1.

Figure 2-1: Indicative Site Location



Source: Google Maps

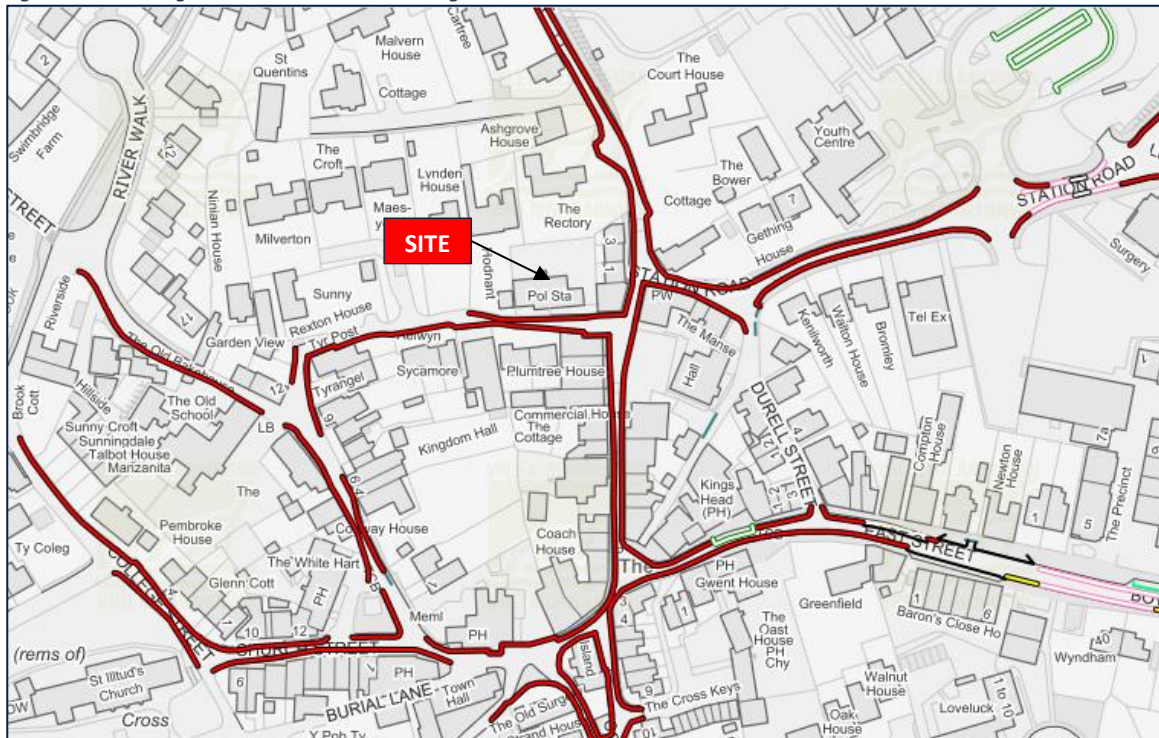
2.2 Local Highway Network

- 2.2.1 Wesley Street is a residential street typical of the surrounding streets. It is a two-way single carriageway road providing frontage access to residential properties along its length, although narrows in places to a width of approximately 2.4m. Street lighting is provided along this street. At its eastern end it connects to Commercial Street as the minor arm of a priority junction. There is a footway on the northern side of the carriageway connecting the site access to Commercial Street to the east.
- 2.2.2 Commercial Street becomes High Street to the north of Wesley Street. Commercial Street / High Street is a single carriageway road which varies in width ranging from approximately 3m up to approximately 8m. Within the vicinity of Wesley Street it is a one-way only street in a southbound direction. As such, all vehicles exiting from Wesley Street travel to the south and would route around East Street, Durell Street and Station Road to head north on High Street. Commercial Street benefits from a footway on both sides of the carriageway heading to the south from Wesley Street, which in turn link to footways on East Street connecting to the town centre.
- 2.2.3 There are traffic calming measures provided along High Street and Commercial Street in the form of road humps which reduce speeds within the vicinity of Wesley Street. As such, this self-enforces speeds to below the 30mph posted speed limit.

2.3 Car Parking

- 2.3.1 The site is surrounded by no waiting at any time parking restrictions along High Street, Commercial Street and Wesley Street, as well as on other routes into the town centre. As such, there are limited on-street parking opportunities within the vicinity of the site, which would minimise any potential for overspill parking or inconsiderate / illegal parking on the highway. The no waiting at any time restrictions surrounding the site are shown on

Figure 2-2: Parking Restrictions on Surrounding Streets



Source: VoGC Online Mapping

2.3.2 There are a number of formal public and privately owned car parks in the vicinity of the site which can accommodate visitor parking or any minimal overspill resulting from the development, as required. These have been summarised in Table 2-1.

Table 2-1: Proximity of the site to local car parks

Car Park	Distance from site access (metres)	Number of Spaces
Wine Street	150m	22 spaces
Town Hall	155m	45 spaces
Poundfield Shopping	215m	230 spaces
Le Pouligan Way	325m	80 spaces
Bowls Club	600m	60 spaces

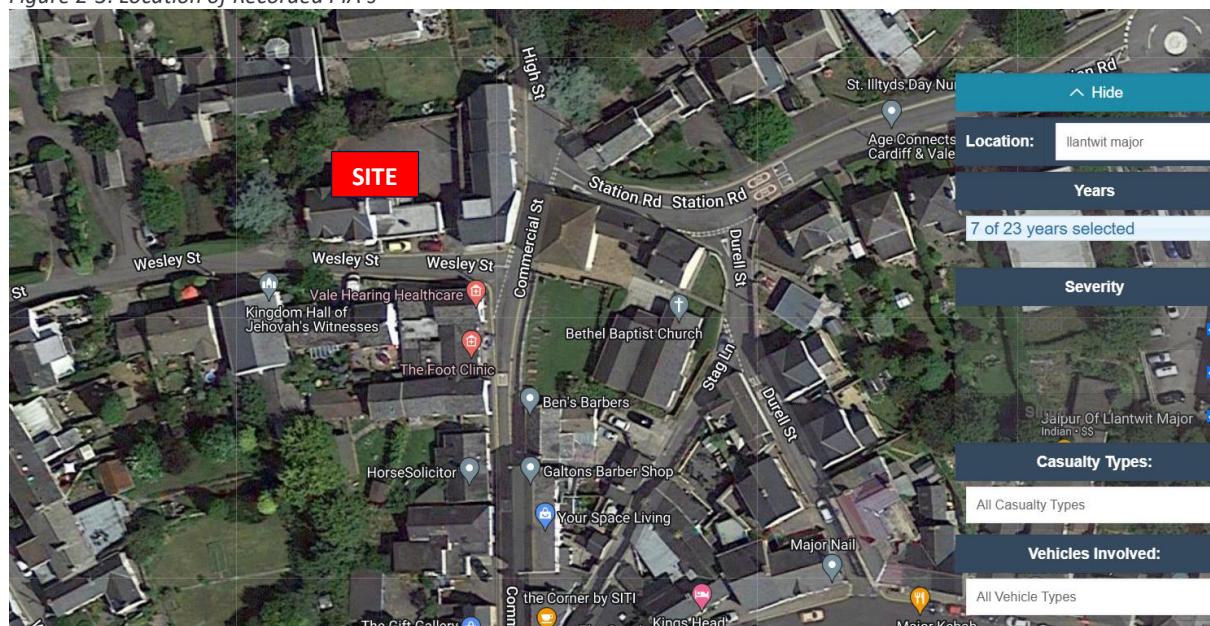
2.3.3 As such, off-site parking during times of overspill, on the rare occasions where this occurs, would be a viable alternative parking option as there is a significant level of car parking (437 spaces) within a short walk of the site, the majority of which is not chargeable.

2.4 Road Safety

2.4.1 Personal Injury Accident (PIA) data has been obtained from road safety data published annually by the Department for Transport (DfT). The statistics provide PIA data which has been recorded using the STATS19 accident reporting form. The most recently available five-year dataset, prior to the pandemic therefore covering a position with typical traffic flows, covers between 1st January 2015 and 31st December 2019. The review has also considered the data in 2020 and 2021. A total of seven years of data has therefore been reviewed.

2.4.2 The study area considered within the analysis covers the local highway network within the vicinity of the site access, with the entire study area and PIA's shown in Figure 2-3.

Figure 2-3: Location of Recorded PIA's



Source: Crashmap

2.4.3 Over the seven year period, there were no recorded incidents within the study area. Indeed, all available data has been reviewed which starts from 1999 so includes 23 years of data. There were no

PIAs recorded on Wesley Street, at the existing site access or at the junction of Wesley Street / Commercial Street.

2.4.4 As such, there is no evidence to suggest that there is an existing road safety issue relating to the access arrangements, particularly when considering that the area already accommodates pedestrian and vehicular activity.

2.5 Modal Share

2.5.1 The site is located within output area (OA) W00005868, although a significant proportion of this area is further from the town centre than the site. As such, the adjacent OA has also been reviewed - W00005871, which is considered a more comparable area which encompasses the town centre.

2.5.2 Table 2-2 shows how the existing residents of these output areas currently travel to work, which have been compared with the entire of VoGC as obtained from 2011 Census data. Although this data is available from the 2021 census, this is not considered as appropriate due to restrictions in place at that time reducing the level of movements to and from work, particularly by public transport.

Table 2-2: Journey to Work Mode Split (Census 2011)

Mode	W00005868	W00005871	Vale of Glamorgan
Public Transport	5%	12%	10%
Car Driver	79%	70%	72%
Motorcycle	1%	2%	1%
Car Passenger	2%	6%	6%
Bicycle	2%	2%	2%
On Foot	10%	6%	9%
Other	1%	1%	1%
Total	100%	100%	100%

2.5.3 The census data shows that 70% - 79% of residents living in the area surrounding the site commute to work as a car driver, with 6%-10% walking, 5%-12% travelling by public transport, 2%-6% as a car passenger and 2% by cycle.

2.5.4 The data shows that residents in this area have a similar level of journeys by driving in comparison with the wider Vale of Glamorgan area, although those in the more comparable area have a higher level of travel by sustainable modes.

2.5.5 These statistics have been adjusted to exclude working from home which allows for a worst case scenario. If this was included, c.5%-7% of residents currently in work, do so from home rather than commuting. These levels are likely to have significantly increased since 2011. This demonstrates that there is further potential for the site to constrain car use

2.5.6 It is noted that travelling to work is only one journey purpose during peak hours from a residential site. A significant proportion of journeys will also be for education, leisure, and retail purposes and these are likely to have higher levels of sustainable travel, particularly given the town centre, local schools, retail, and leisure opportunities are situated within suitable walking distances.

2.5.7 The data demonstrates that there is good potential for walking, cycling, and public transport trips to be made to and from the site and that these movements already occur in this area.

2.6 Car Ownership

2.6.1 The 2011 Census data has been reviewed for the average car ownership in the area in output areas W00005868, being the most comparable output area and W00005871, within which the site is situated. The 2011 data has been analysed due to the modal share data also being taken from the 2011 census. This shows an average of 1.51 cars per household in W00005868 and 1.11 in W00005871

(the most comparable area). Within OA W00005868, 9.2% of households do not own a car and of those that do own a car 55% of households own one car or less. Within OA W00005871, 27.7% of households do not own a car and of those that do own a car 66% of households own one car or less. This compares within an average of 1.3 cars per household across the Vale of Glamorgan and 19% not owning a car.

- 2.6.2 The 2021 data has also been reviewed, and compared to the 2011 data. This shows an average of 1.47 cars per household in W00005868 and 1.13 per household in W00005871. There are similar levels of no car ownership and one car or less ownership as the 2011 data. Within OA W00005868, 18% of households do not own a car and of those that do own a car 56% of households own one car or less. Within OA W00005871, 25.7% of households do not own a car and of those that do own a car 73.5% of households own one car or less. These figures are broadly comparable with the 2011 data.
- 2.6.3 As such, the most comparable output area has a significantly lower car ownership per household and a significantly higher proportion of low (or no) car ownership households than across the wider VoGC area.
- 2.6.4 Based on the census data, it is considered that the potential future residents would be likely to have one car or less and the site would attract those that choose not to own a car or do not drive. The sustainable modes available would provide realistic and attractive alternatives and are currently being used by existing residents in the area, as well as by employees historically working at the site.

3. PLANNING CONTEXT

3.1 Future Wales: The National Plan 2040

- 3.1.1 This is the national development framework, setting the direction for development in Wales to 2040. It provides an overarching development plan with a strategy for addressing key national priorities through the planning system. Planning decisions at every level of the planning system in Wales must be taken in accordance with the development plan as a whole.
- 3.1.2 In relation to transport, it is stated on page 51 that *“Growth should be shaped around sustainable forms of transport and places that make us and the environment healthier”*. Page 55 continues on to state that *“Development will focus on active travel and public transport, allied with a reduced reliance on private vehicles”*.
- 3.1.3 In the supporting text for Policy 2 - Shaping Urban Growth and Regeneration – Strategic Placemaking, it is stated that *“To enable active and healthy lives, people should be able to easily walk to local facilities and public transport.”*
- 3.1.4 Policy 11 sets out National Connectivity, this states that *“Our priorities are to encourage longer distance trips to be made by public transport, while also making longer journeys possible by electric vehicles.”*
- 3.1.5 Policy 12 sets out Regional Connectivity. This states that *“in urban areas our priorities are improving and integrating active travel and public transport.”*
- 3.1.6 In relation to Active Travel and developments it is stated that *“Active travel must be an essential and integral component of all new developments, large and small.”*
- 3.1.7 In relation to travelling in Wales, on page 84 it is stated that *“The Welsh Government’s aim is to reduce the need to travel, particularly by private vehicles, and support a modal shift to walking, cycling and public transport.”*
- 3.1.8 On page 174, supporting Policy 36, it is stated that *“Welsh Government wishes to see development built in sustainable locations that are supported by the active travel and public transport infrastructure and services needed to enable people to live active and healthy lives.”*
- 3.1.9 It also states on page 86 that *“Planning authorities should promote car-free and low car developments in accessible locations.”*
- 3.1.10 Policy 12 states that *“Planning authorities must act to reduce levels of car parking in urban areas, including supporting car free developments in accessible locations and developments with car parking spaces that allow them to be converted to other uses over time.”*
- 3.1.11 As such, the key themes are that development should be sited where it can benefit from active travel and public transport connections and reduce the need to travel by car. Facilities should be within easy walking distance. Car parking should be reduced in urban areas.
- 3.1.12 The site is situated in a town centre within a short walking distance to public transport links, key facilities and employment areas. Existing active travel connections connect to the site which encourages walking and cycling for local journeys. The site is also excellently situated to benefit from public transport services.

3.1.13 The site location is consistent with the policies and aims of Future Wales and is exactly in accordance with the Welsh Government aspirations for where development should be focused. Full details of the sustainable connectivity are set out within Section 4.

3.2 Planning Policy Wales 11th Edition (PPW11)

3.2.1 PPW11 provides overarching Welsh Government policies with transport policies set out in Section 4.1. This states in paragraph 4.1.10 *“The planning system has a key role to play in reducing the need to travel, particularly by private car, and supporting sustainable transport, by facilitating developments which:*

** are sited in the right locations, where they can be easily accessed by sustainable modes of travel and without the need for a car*

** make it possible for all short journeys within and beyond the development to be easily made by walking and cycling.”*

3.2.2 PPW11 sets out a *“Sustainable Transport Hierarchy for Planning”* in Figure 9. This states in paragraph 4.1.12 *“It is Welsh Government policy to require the use of a sustainable transport hierarchy in relation to new development, which prioritises walking, cycling and public transport ahead of the private motor vehicles. The transport hierarchy recognises that Ultra Low Emission Vehicles also have an important role to play in the decarbonisation of transport.”*

3.2.3 It continues to state that *“The sustainable transport hierarchy should be used to reduce the need to travel [and] prevent car-dependent developments in unsustainable locations”.*

3.2.4 PPW11 also states in paragraph 3.39 that development should *“where possible, offer good active travel connections to the centres of settlements to reduce the need to travel by car for local journeys.”*

3.2.5 The site is situated in a location which is highly accessible by walking, cycling and public transport, with active travel links to the centre of a town centre, which is fully compliant with PPW11, as demonstrated in this section of this TN.

3.3 Technical Advice Note 18: Transport (TAN18)

3.3.1 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 local journeys but also the considerable contribution they play in forming parts of longer journeys by public transport.

3.3.2 The importance of the location of a site in relation to encouraging sustainable travel is set out within paragraph 3.3 which states *“The location of new residential development has a significant influence on travel patterns as the majority of trips start or finish at home... It should be a key aim of development plans to identify residential sites that are accessible to jobs, shops and services by modes other than the car”.*

3.3.3 Paragraph 3.8 continues on to state that *“Locations that are highly accessible by a variety of travel modes offer significant opportunities to make travel patterns more sustainable.”*

3.3.4 As such it is recognised by TAN18 that the sustainable location of a site, such as the application site within a town centre, has a significant influence in engraining sustainable travel habits.

3.4 VoGC – Local Development Plan (LDP) 2011-2026

- 3.4.1 The existing LDP provides transportation policies in SP7 setting out details of strategic improvements being delivered to bring forwards strategic sites.
- 3.4.2 Within the LDP Objectives, Objective 2 highlights the importance that new developments are located in sustainable locations to minimise the need to travel.
- 3.4.3 Objective 3 is *“To reduce the need for Vale of Glamorgan residents to travel to meet their daily needs and enabling them greater access to sustainable forms of transport”*. It sets out that *“The LDP will seek to increase the use of sustainable transport and reduce congestion by concentrating new development within the settlements... which are, or can be, well served by public transport or by walking or cycling. It seeks to reduce people’s propensity to travel by private car by increasing the use of sustainable transport.”*
- 3.4.4 MD2 relates to the design of new development and in relation to transport it outlines that *“in order to create high quality, healthy, sustainable, and locally distinct places development proposals should:*
- *Provide a safe and accessible environment for all users, giving priority to pedestrians, cyclists, and public transport users*
 - *Have no unacceptable impact on highway safety nor cause or exacerbate existing traffic congestion to an unacceptable degree”*
- 3.4.5 Paragraph 7.8 states that *“All new development should be highly accessible. Walking and cycling have an important role to play in the management of movement across the area, particularly reducing the number of short trips taken by car. Developers will be required to ensure that new developments encourage walking and cycling by giving careful consideration to location, design, access arrangements, travel ‘desire lines’ through a development, and integration with existing and potential off-site links. Providing safe and convenient walking and cycling environments will help tackle health problems associated with physical inactivity and social exclusion factors arising from car dependency, poor access to services and public transport facilities.”*
- 3.4.6 The proposals are consistent with the LDP as there are alternative modes of travel available.

4. SUSTAINABLE CONNECTIVITY

4.1 Introduction

4.1.1 This section sets out the connectivity of the site to the surrounding area by sustainable modes of travel and demonstrates its proximity to schools, public transport, facilities, services and employment. The site location is demonstrated to be consistent with the aims of TAN18 and in accordance with sustainable transport policies in Future Wales and PPW11.

4.2 Walking and Cycling

Infrastructure and Routes

4.2.1 Walking and cycling (collectively known as active travel) are the most important modes of travel at a local level and offer the greatest potential to replace short car journeys.

4.2.2 The site is well situated to benefit from existing and proposed new walking and cycling routes. Suitable footways and a mix of informal and formal crossings are provided throughout the local area, as would be expected within an existing and established urban area situated within the town centre. The majority of local streets have a footway on at least one side of the carriageway and narrow streets, traffic calming and on-street parking (in the wider area) enforces low vehicle speeds. All surrounding streets on the key pedestrian routes have street lighting along their length. The local area appropriately accommodates existing pedestrian and cycling movements in relation to residential uses, as well as for those visiting the town centre.

4.2.3 Immediately adjacent to the site access, there is a footway connecting to the east along Wesley Street which provides a dropped kerb crossing to the footway along Commercial Street routing to the south. Footways are provided on both sides of Commercial Street which connect to footways on East Street and Church Street which in turn connect to local facilities and services. Although there is no footway to the west of the site on Wesley Street, there would likely be a lower level of demand for walking in this direction as the majority of services and facilities are situated to the east and south of the site. However, Wesley Street is a lightly trafficked residential road with low vehicle speeds which is suitable for shared use by pedestrians and vehicles and already accommodates movements relating to the existing residential properties. As such, routing via this street, then Wine Street to connect to services and facilities along Church Street is appropriate and the data shows no evidence of a safety issue for pedestrians on this route.

4.2.4 There are a number of existing walking and shared walking / cycling routes within and surrounding the town centre which provide good width footways for pedestrians and are well lit with streetlighting. These existing routes provide access to the local primary school and Llantwit Major Rail Station to the east, among other key services and facilities.

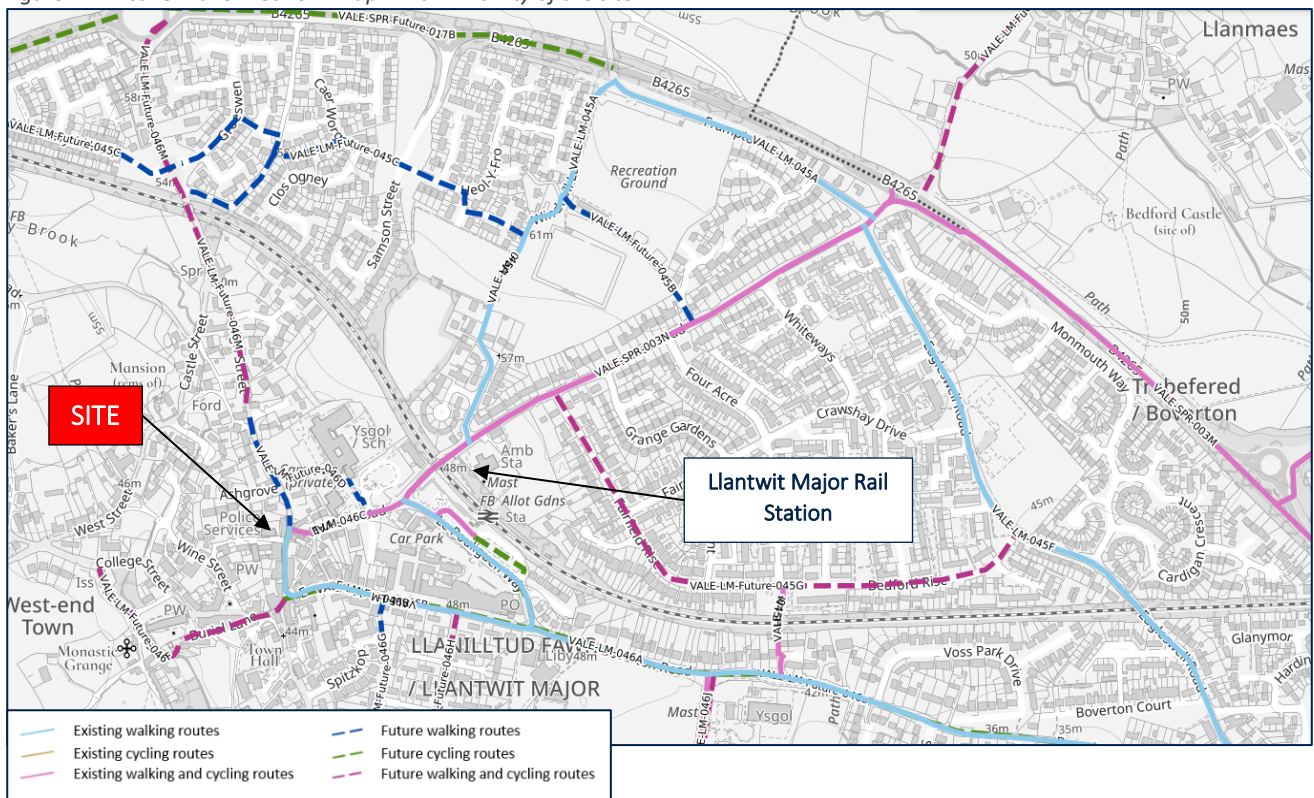
Active Travel Network Map

4.2.5 The Welsh Government DataMap Wales shows the Active Travel Network Maps (ATNM) across all authorities, including Vale of Glamorgan Council (VoGC). This shows existing walking, cycling and shared walking / cycling routes and where upgrades or new routes are anticipated to be provided.

4.2.6 The nearest existing routes to the site include the Vale-LM-046B, Vale-LM-046C, Vale-SPR-003N, Vale-LM-045A and provide a network of routes within and surrounding the town centre, linking with the nearby MOD and Welsh Government Aerospace Business Park site, residential developments and numerous key services and facilities.

- 4.2.7 The Vale-LM-046B is an existing walking route which spans directly from the site, through the town centre and to the Boverton Road / Tre-Beferad junction. From here, there is a proposed shared footway / cycleway route which will continue along Boverton Road and provide access to the Welsh Government Aerospace Business Park and MOD site.
- 4.2.8 There are numerous proposed footways, cycleways and shared routes which will further improve the connectivity from the site. The key proposed routes are the Vale-LM-Future-046K shared walking / cycling route spanning from an existing route along Mill Lay Lane to Llantwit Major Beach, and the Vale-SPR-Future-017B cycle route along the B4265 to provide safe cycling options to the local areas of Wick, Llandow and beyond.
- 4.2.9 Therefore, the site well positioned to benefit from existing and potential future high quality walking and cycling links, which connect to further routes in the wider area and improve links to local employment and residential areas, to the local rail station and to services and facilities.
- 4.2.10 VoGC is undertaking a review of its Integrated Network routes and ATNM routes, however at this stage the active travel routes located throughout Llantwit Major are considered to be appropriate by VoGC for walking and cycling.
- 4.2.11 The DataMap Wales ATNM showing these and other routes within the vicinity of the site has been reproduced in Figure 4-1.

Figure 4-1: Active Travel Network Map - within vicinity of the site



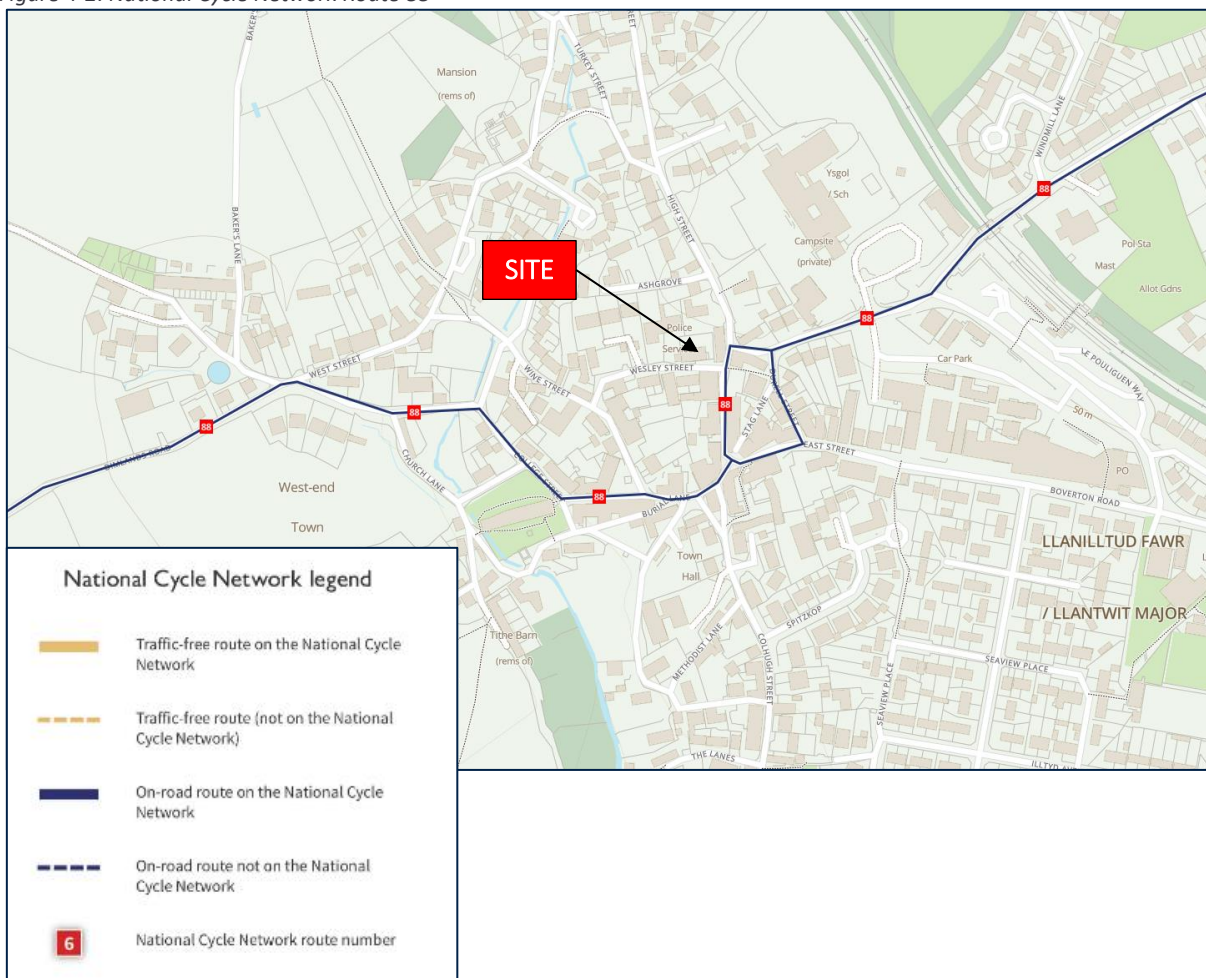
Source: Welsh Government Active Travel Map

- 4.2.12 The plan demonstrates that the site is situated within a short distance of a number of existing and proposed future walking, cycling and shared routes, which are considered appropriate for use by VoGC.

Cycling Routes and Infrastructure

- 4.2.13 The local streets within the vicinity of the site within Llantwit Major are considered conducive to cycling, encouraged by 30mph speed limits. The surrounding highway network is provided with street lighting, which encourages pedestrian and cycle trips to occur during hours of darkness. The site is also situated within proximity to formal cycle routes, set out as follows.
- 4.2.14 Reference has been made to the Sustrans website and the National Cycle Network (NCN) map. The nearest NCN route, being NCN Route 88, is located close by routing along High Street and Commercial Street to the east of the site. This promotes cycling via an appropriate signed route within close proximity to the site.
- 4.2.15 NCN Route 88 provides a route between Newport, Cardiff, Bridgend and Margam Country Park. There are signs for the route spanning from the B4265 to the north east, through Llantwit Major and to Dimlands Road to the south west and is a mainly on-carriageway route including the use of quiet country lanes.
- 4.2.16 The NCN route within the vicinity of the site, obtained from the Sustrans website, is shown on Figure 4-2.

Figure 4-2: National Cycle Network Route 88



Source: Sustrans

- 4.2.17 The site is well positioned to benefit from existing and potential future high quality walking and cycling links, which connect to further routes, to local services and facilities. The active travel routes located

throughout Llantwit Major are considered appropriate for walking and cycling (more so once all are completed). Therefore, active travel movements would be attractive for potential future residents.

4.3 Distance to Facilities

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

- Welsh Government - Active Travel (Wales) Act Guidance 2021: It is stated within paragraph 9.1.5 that *“Walking is most suitable for journeys of less than two miles whilst cycling is also convenient for longer journeys, typically up to five miles for regular utility journeys”*. This equates to distances for walking of up to 3.2km and cycling of up to 8km.
- This also states in paragraph 9.5.3 that *“Walkable neighbourhoods also referred to as ‘low-traffic neighbourhoods’, or ‘active neighbourhoods’, (see figure 9.6) are characterised by having a range of facilities within 20 minutes’ walking distance which people may access comfortably on foot.”* This would equate to c.1.6km.
- Department for Transport (DfT) – Manual for Streets (2007): MfS states that *‘walkable neighbourhoods’* are typically characterised by having a range of facilities within 10 minutes walking distance (c. 800 metres). MfS also acknowledges that this is not an upper limit and references previous planning policy guidance in that it is generally acknowledged that walking offers the greatest potential to replace short car trips, particularly under 2km.
- CIHT (2015) – Planning for Walking: In relation to shorter trips in particular, (section 2.1) states that across Britain about *‘80% of journeys shorter than 1 mile (1.6km) are made wholly on foot’*.
- CIHT - Guidelines for Providing for Journeys on Foot (2000): suggests preferred maximum distances for commuting journeys are up to 2km.
- DfT – LTN1/20 Cycle Infrastructure Design (paragraph 2.2.2) – states that *“Two out of every three personal trips are less than five miles in length, an achievable distance to cycle for most people”* (c.8km).

4.3.2 As such, based on guidance, it is considered that suitable walking distances are up to 3.2km but journeys within 2km have a greater potential to be made on foot. A 2km distance equates to around a 25-minute walk travelling at 3mph (4.8kph). A 3.2km distance equates to around a 40-minute walk. Sites with a range of facilities within 1.6km are considered to be within a *‘walkable neighbourhood’*.

4.3.3 It is considered that journeys of up to 8km are within a suitable cycling distance. A cycling journey of 8km would equate to approximately a 25-minute travel time.

4.3.4 To demonstrate the site’s connectivity, facilities within appropriate distances which are accessed via suitable and established routes have been summarised in Table 4-1. The location of the facilities in the context of the site are shown in Figure 4-3. These facilities have been summarised based on approximate travel distances from the site access via appropriate routes, not straight-line distances.

Table 4-1: Proximity of the site to local facilities and services

Facility / Amenity	Distance from site access (metres)	Walking Travel Time (minutes) *	Cycling Travel Time (minutes) *
Community Facilities			
1 Town Centre (post office, banks, services, various retail, foodstores, pharmacies, cafés, bars, pubs, restaurants, takeaways, etc)	0	0	0
2 Vale Hearing Healthcare (within Town Centre)	10	<1	<1
3 The Foot Clinic (within Town Centre)	30	<1	<1
4 Hairdressers (within Town Centre)	50	1	<1
5 Llantwit Major Town Hall	155	2	<1
6 Medical Practice (within Town Centre)	200	3	<1
7 Church	320	4	1
8 Fire Station	350	4	1
9 Post Office (within Town Centre)	410	5	1
10 Scout Hall	470	6	1
11 Duck pond	475	6	2
12 Library	600	8	2
13 Llantonian Community Hall	605	8	2
Public Transport			
Llantwit Major Rail Station	325	4	1
Llantwit Major Bus Station	400	5	1
Retail			
1 Co-op foodstore (within Town Centre)	215	3	<1
2 Boots Pharmacy (within Town Centre)	285	4	<1
Education			
1 Ysgol Gynradd St Illtyd Primary School	225	3	<1
2 Ysgol Gymraeg Dewi Sant	820	10	3
3 Llantwit Major School	965	12	3
4 Ysgol y Ddraig	1,110	14	4
Leisure			
1 The Cwtch Restaurant / The Corner Coffee Shop	100	12	3
2 Illtuds 216 Restaurant	140	2	<1
3 White Hart Public House	160	2	<1
4 The Old Swan Inn Public House	170	2	<1
5 Tudor Tavern Public House	190	2	<1
6 Llantwit Major Bowls Club / Tennis Club / Rugby Club	605	8	2
7 Llantwit Major AFC	735	9	2
8 Leisure Centre	920	9	2
9 Cricket Club	1,075	13	3
10 Skate Park	1,100	14	3
Employment			
1 MOD	2,500	31	8
2 Welsh Government Aerospace Business Park	3,430	43	11

* Based on walking speeds of 80 metres per minute and Cycling Speeds of 320 metres per minute

Figure 4-3: Location of facilities within proximity of the site



Source: Google Maps

- 4.3.5 Table 4-1 and Figure 4-3 show there are a significant number and range of facilities and services situated within comfortable walking and cycling distances which can be accessed via suitable active travel routes. All facilities are within Welsh Government guidance walking and cycling distances.
- 4.3.6 The site is within the Town Centre which provides a number of key services and facilities within a 400m or less walk from the site. Residents would be able to access the local rail station and bus station (located adjacent one another), multiple healthcare services, post office, foodstore, leisure and community facilities, and numerous cafés, bars, takeaways and restaurants.
- 4.3.7 Although walking distances are shown to numerous facilities, separate walking distances to individual facilities are not as applicable to a town centre, as residents are likely to walk to the town centre as an experience and have a longer dwell time and visit a number of facilities in one overall trip. This would include meeting friends and dining, shopping, visiting the post office, bank and other every day needs

facilities. Residents would be extremely unlikely to drive to the town centre and as such, there is less of a requirement to own a car or travel by car.

- 4.3.8 Within an 800m walk (10 minutes or less) residents would be able to access various local community facilities such as open green space, sporting clubs and the local community hall. A primary school is also located within this distance. As such, the site is considered to be situated in a highly sustainable ‘walkable neighbourhood’ consistent with the Welsh Government and MfS guidance.
- 4.3.9 Within 1km are additional schools and the local MOD and employment areas are situated within cycling distance of the site (within 12 mins) which is also within an appropriate walking distance of the site, in accordance with Welsh Government guidance.
- 4.3.10 The site is therefore situated in a highly sustainable location, as would be expected for a site within the town centre in an existing and established urban area. This will encourage walking and cycling and reduce the reliance on the private car, consistent with relevant policies and guidance, including sustainable transport policies in Future Wales, PPW11 and TAN18.

4.4 Public Transport

Bus

- 4.4.1 The closest bus stop to the site is located on Church Street, approximately a 180m walk to the south of the site. This stop is served by the number 303 services.
- 4.4.2 However, the site is also situated within approximately 400m of the bus station to the east (within a five minute walk). The bus station (Llantwit Major Interchange) is situated within the Llantwit Major Rail Station Car Park and provides three bus services, including the 303, which have been summarised in Table 4-2.

Table 4-2: Local Bus Timetables

Route No.	Operator	Route	Hours of Operation	Frequency (Mon-Fri)	Frequency (Saturdays)	Frequency (Sundays)
303	Adventure Travel	Llantwit Major - Bridgend	05:50 - 23:05	Hourly	Hourly	Every two hours
304	Adventure Travel	Llantwit Major - Cardiff	06:45 - 23:05	Hourly	Hourly	Every two hours
321	Adventure Travel	Llantwit Major - Talbot Green	06:30 - 20:00	Every two hours	Every two hours	No Services

Source: Traveline.Cymru

- 4.4.3 Potential future residents of the site can access a good number of frequent bus services, linking to a variety of destinations including local and more regional destinations.
- 4.4.4 This includes hourly services to Cardiff and Bridgend and a service every two hours to Talbot Green. All services run from early until late and as such provide a feasible option for work related journeys. They can also be used to access destinations for leisure, retail and health purposes.
- 4.4.5 Given the extent and proximity of a number of bus routes, the site has good accessibility by bus which offers a realistic travel option for potential future residents of the site. This will assist in minimising the vehicle trip generation from the site and reduce the need for residents to own a car.

Rail

- 4.4.6 Llantwit Major Rail Station is located within an approximate 325m walk east of the site, within a four minute walk and one minute cycle.

- 4.4.7 Llantwit Major Rail Station provides eight secure covered cycle parking spaces, which potential future residents could utilise for a combined cycle then rail journey.
- 4.4.8 There are two services per hour in either direction, stopping at locations such as Barry, Cardiff Central, Cardiff Queen Street and Pontypridd. There is a journey time of around 45-minutes to Cardiff Central, and c.17-minutes to Bridgend from where passengers can interchange to regional and national destinations.
- 4.4.9 As such, it is feasible and attractive to use the rail services for commuting purposes, particularly to Cardiff and Bridgend, although rail is also likely to be attractive for other journey purposes such as leisure, retail, or business journeys. A combined walk and rail journey has excellent potential for replacing car journeys and further reducing the requirement for owning or travelling by car.

4.5 Summary

- 4.5.1 The site is situated in a highly sustainable location. Potential future residents can walk or cycle to a number and range of facilities, services and employment within appropriate distances via good quality routes, reducing the need to own a car. In this regard, the site location is consistent with the sustainable transport policies in PPW11 (in particular paras 4.1.10 - 4.1.17).
- 4.5.2 The site also has excellent public transport links, which provide a suitable, attractive and realistic alternative to travelling by car. This will assist in constraining vehicle generation and reduce the need for residents to own a car. It will also benefit and attract residents that would prefer to travel by public transport.
- 4.5.3 Potential future residents would have a realistic choice of modes of travel for all journey purposes. This will minimise the impact of the development and reduce the parking demand on the site.
- 4.5.4 The site location will encourage and promote sustainable travel behaviour, be attractive to residents who do not own a car or have low car ownership and is fully in accordance with transport policies in TAN18, PPW11 and Future Wales.

5. DEVELOPMENT PROPOSALS

5.1 Overview

- 5.1.1 The proposals are for the conversion of and minor extension to the existing building to 4no. three-bedroom houses with each having a rear garden and one dedicated parking space. The houses will front Wesley Street and span across three-storeys in height.
- 5.1.2 The proposed site layout plan is provided in Appendix A.

5.2 Site Access and Layout

- 5.2.1 The site will be accessed directly from Wesley Street, as per the existing arrangements. Three perpendicular parking bays will be provided, two of which are in the same location as the existing spaces. A further parallel space will be incorporated within the existing crossover access, which vehicles can reverse onto from Wesley Street.
- 5.2.2 The site access is being reduced in width slightly from the existing arrangements and would accommodate movements associated with just one vehicle, as opposed to serving the existing car park which can accommodate 5 vehicles. As such, there would be a significant reduction in movements to and from the access point, which is considered appropriate in this location given the access has operated over an extended period with no evidence of a safety issue. On this basis the geometry and visibility at the junction is considered appropriate and safe, consistent with the existing arrangements.
- 5.2.3 This access arrangement is also similar to other access points/ driveways along Wesley Street, whereby vehicles reverse on or off driveways onto Wesley Street. As this is a lightly trafficked street with no evidence of a safety issue, these arrangements are considered safe and suitable for the existing use and would remain safe for the proposed residential use of the building.
- 5.2.4 Vehicles are able to turn into and out of all parking spaces safely and appropriately, as shown in the swept path analysis in Appendix B.

5.3 Parking Provision

Car Parking

- 5.3.1 VoGC's Supplementary Planning Guidance (SPG) Car Parking Standards Revision 2, as adopted in 2011 and updated in 2019 ('the Parking SPG') provides the applicable standards to apply to the proposed development. The SPG guidance is based on the CSS Wales Parking Standards 2008.
- 5.3.2 In accordance with the SPG Plan 1, the site is situated within Zone A which is a 'Town Centre' location. The maximum parking standards in Zones A-E for new residential houses are one space per bedroom (maximum requirement three spaces) for residents, and for visitors there is a requirement of one space per five units.
- 5.3.3 Applying the standards to the site proposals, this would equate to a maximum of 12 parking spaces for the 4 residential dwellings. No visitor parking provision is required for four dwellings. Based on the highly sustainable location of the site, and to encourage sustainable travel in accordance with PPW11, a provision of 12 spaces is considered excessive and contrary to relevant planning policy and guidance.
- 5.3.4 The Parking Standards SPG was also produced prior to the publication of Future Wales. As set out in Section 3, this requires planning authorities to promote low car parking provision developments in accessible locations (such as this) and act to reduce levels of car parking in urban areas (as per at this site location).

- 5.3.5 The SPG allows for flexibility to be applied to the maximum provision to reflect local conditions and the availability of alternative forms of transport and *“may result in a reduction in the level of vehicle parking required”* (paragraph 5.2 of the SPG). Providing less than the maximum level would also be in accordance with the objective of reducing the reliance on private car (as per paragraph 5.1 of the SPG). The following is also stated in paragraph 5.5 of the SPG *“There is the potential for a reduction in residential parking levels particularly if the property is in close proximity to local community facilities, public car parks, is well served by public transport and/or there is evidence of low car ownership.”*
- 5.3.6 The SPG sets out that the Council will assess the parking requirements for a particular development based on the number of factors which would include; the accessibility to and from the site by public transport, access by walking and cycling to everyday good and services, potential impacts on highway safety and the availability of public / private car parking spaces.
- 5.3.7 The site has a significant number of local public / private car parks which offer the opportunity for visitor parking as set out in Section 2. There are a number of off-site locations where parking can be suitably accommodated in designated car parks, without impacting on safety or vehicle manoeuvring.
- 5.3.8 As shown in Section 3, the site is located in a highly sustainable town centre location with access to a significant number and range of everyday needs facilities, as well as excellent access to public transport services. As such, this is a highly sustainable town centre site which is well suited to a scheme with parking provision below maximum levels.
- 5.3.9 In addition, the car ownership data showed an average of 1.1 cars per household in the most comparable town centre area. This is a low car ownership area, significantly below that across the wider VoGC area.
- 5.3.10 The proposals are for four car parking spaces, all of which can be accessed appropriately. This closely reflects the existing car ownership within this area, as shown in Section 2 at around 1.1 cars per household in the most comparable town centre area.
- 5.3.11 The proposed parking provision is within the maximum levels and allows for flexibility based on the highly sustainable location, likely car ownership and availability of public car parks, therefore the parking provision is fully in accordance with the VoGC standards.
- 5.3.12 In addition, potential residents will be in an informed position on a variety of matters, including the availability of parking and alternative travel modes prior to purchasing a property. If they perceive parking to be an issue, they would be unlikely to purchase a property with one parking space. The highly sustainable location of the site would be helpful and attractive to occupiers who do not own a car or have low car ownership. This would also be in line with the ownership of occupants in the surrounding town centre based on Census data.
- 5.3.13 This is also consistent with paragraph 8.3.6 of MfS which states *“For residents who choose not to own a car, living in such an area may be an attractive proposition.”*
- 5.3.14 Electric vehicle charging points and/ or infrastructure will also be provided for each space in accordance with the policies in Future Wales for increasing electric vehicle use (Policy 11 and 12).

Cycle Parking

- 5.3.15 The SPG sets out the cycle parking standards in VoGC. This does not include a standard for houses. However, to further encourage travel via this mode, high quality secure and covered cycle parking will be provided adjacent to the building at the eastern end of the site. This will accommodate 8 cycles, using four Sheffield Stands. This equates to two spaces per dwelling, which is considered appropriate

and will encourage cycling. This can be accessed directly from Wesley Street from the existing access point, with at least 1m width maintained past the parking bay for Plot 4, which is sufficient space for cycling access.

5.4 Servicing and Deliveries

- 5.4.1 Servicing would mainly relate to refuse collection which would be undertaken on-street from Wesley Street, as would have occurred for the existing use when operational and occurs for the other surrounding residential uses.
- 5.4.2 The bin stores would be located on the eastern side of the building within 12-15m of the carriageway edge. MfS states Building Regulations on refuse collection distances in that waste collection vehicles should be able to get within 25 metres of the storage point and residents should not carry waste further than 35 metres. As such, the arrangements are in line with Building Regulations and considered safe and appropriate.
- 5.4.3 All other delivery vehicles would stop adjacent to the site, as occurs for the other residential properties along Wesley Street.
- 5.4.4 A fire tender would gain access to the site from Wesley Street.

6. POTENTIAL IMPACTS

6.1 Trip Generation

Introduction

- 6.1.1 This section sets out the forecast trip generation of the proposed development and the estimated vehicle generation from the existing use. The existing and proposed uses have then been compared. The existing planning use is a lawful use which forms the fallback position for the site. The site could theoretically be reoccupied within this lawful use without the requirement for planning permission and therefore this forms the baseline position against which the proposals should be assessed.
- 6.1.2 The forecast vehicle trip generation has been obtained using the Trip Rate Information Computer System (TRICS). The TRICS database predicts the likely numbers of arrivals and departures by utilising surveys of existing sites. The database has been analysed for sites with similar characteristics in terms of use, scale, parking, location, and accessibility. Trip rates have been obtained and applied to forecast trip generation during the typical network peak hours and over a daily (12 hour) period.

Existing Site

- 6.1.3 The site was historically used as police station and this remains as the existing planning use of the site. This had the ability to accommodate up to 7 cars at one time, within the car park and at the site frontage. The site would have generated movements of staff and visitors, as well as movements for operational purposes. The staff movements would likely occur during peak network hours.
- 6.1.4 There are no comparable sites within the TRICS database for this type of use, but assuming that staff occupy five of the car parking spaces and made two movements (one to and one from the site), this would equate to 10 movements per day (and it would be assumed that five movements would be made in each of the network AM and PM hours for a 'typical' working day).
- 6.1.5 The site would also then have visitors and operational movements, if it is assumed that these use the frontage bays, and these spaces are used three times throughout the day, this would equate to 6 vehicles, or 12 additional movements. As such, a forecast of 22 vehicle movements per day has been used as a basis for comparison with the proposed site, although the movements may be higher than this if the site received more than 3 visitor vehicles per day or 3 operational vehicle movements.

6.2 Proposed Development

- 6.2.1 The following parameters have been applied to the search criteria to obtain as many similar sites as possible to the proposed residential use:
- 03 – Residential/ A - Houses Privately Owned
 - Located in England and Wales (including London)
 - Sites with 35 units or below
 - Surveys from Monday to Friday
 - Town Centre / Edge of Town Centre
 - From 2010 onwards
 - Sites with a parking ratio of less than 2 spaces per dwelling
 - Removed sites carried out during COVID-19 restrictions
- 6.2.2 The application of these parameters resulted in a total of three surveys of similar sites. A summary of the forecast total vehicle trip rates and trip generation associated with the four proposed dwellings is

shown in Table 6-1. The full outputs of the TRICS analysis including the sites used can be found in Appendix C.

Table 6-1: Proposed Residential Dwellings – Vehicle Trip Rates and Trip Generation

Time Period	Trip Rates (per unit)			Trip Generation (4 dwellings)		
	Arrivals	Departures	Two-way	Arrivals	Departures	Two-way
AM Peak (07:00-08:00)	0.123	0.246	0.369	0	1	1
AM Peak (08:00-09:00)	0.193	0.333	0.526	1	1	2
PM Peak (16:00-17:00)	0.228	0.193	0.421	1	1	2
PM Peak (17:00-18:00)	0.351	0.228	0.579	1	1	2
12 Hours (07:00-19:00)	2.58	2.735	5.315	10	11	21

- 6.2.3 The proposed development is forecast to generate approximately 1-2 two-way total movements during the network peak hours and 21 two-way total movements over a daily period.
- 6.2.4 This would equate to a maximum of just one vehicle movement on the network every c.30 minutes, on average, during the busiest hour.
- 6.2.5 It is considered that this trip generation would be a robust forecast of vehicle movements given the site is only providing four car parking spaces. However, there will also be vehicle movements generated on the network for delivery and servicing movements, as well as taxis and visitor vehicles (which can be accommodated in local car parks).
- 6.2.6 Based on this analysis, the proposals would therefore provide a small net beneficial impact on the highway network in relation to vehicle movements and highway capacity in the peak hours and a similar level of movements over a daily period in comparison to the existing use. As such, the proposals would not have a material impact on the highway and no mitigation is required.
- 6.2.7 There would also be a significant reduction in movements into and out of the site access, as there would be just one space served from this point, in comparison to at least five spaces currently. As such, the proposals would not have an unacceptable impact on road safety given the reduction in vehicle movements into and out of the site access.

6.3 On-Street Parking

- 6.3.1 It is unlikely there would be any significant overspill parking from the development, as the demand for parking is likely to be in line with the parking provision and the site is in an area with significant parking restrictions. In addition, the site is situated close to a number of nearby formal car parks. As such, there will not be a material impact on parking stress, or inconsiderate or illegal parking on local residential streets.

7. SUMMARY AND CONCLUSIONS

7.1 Summary

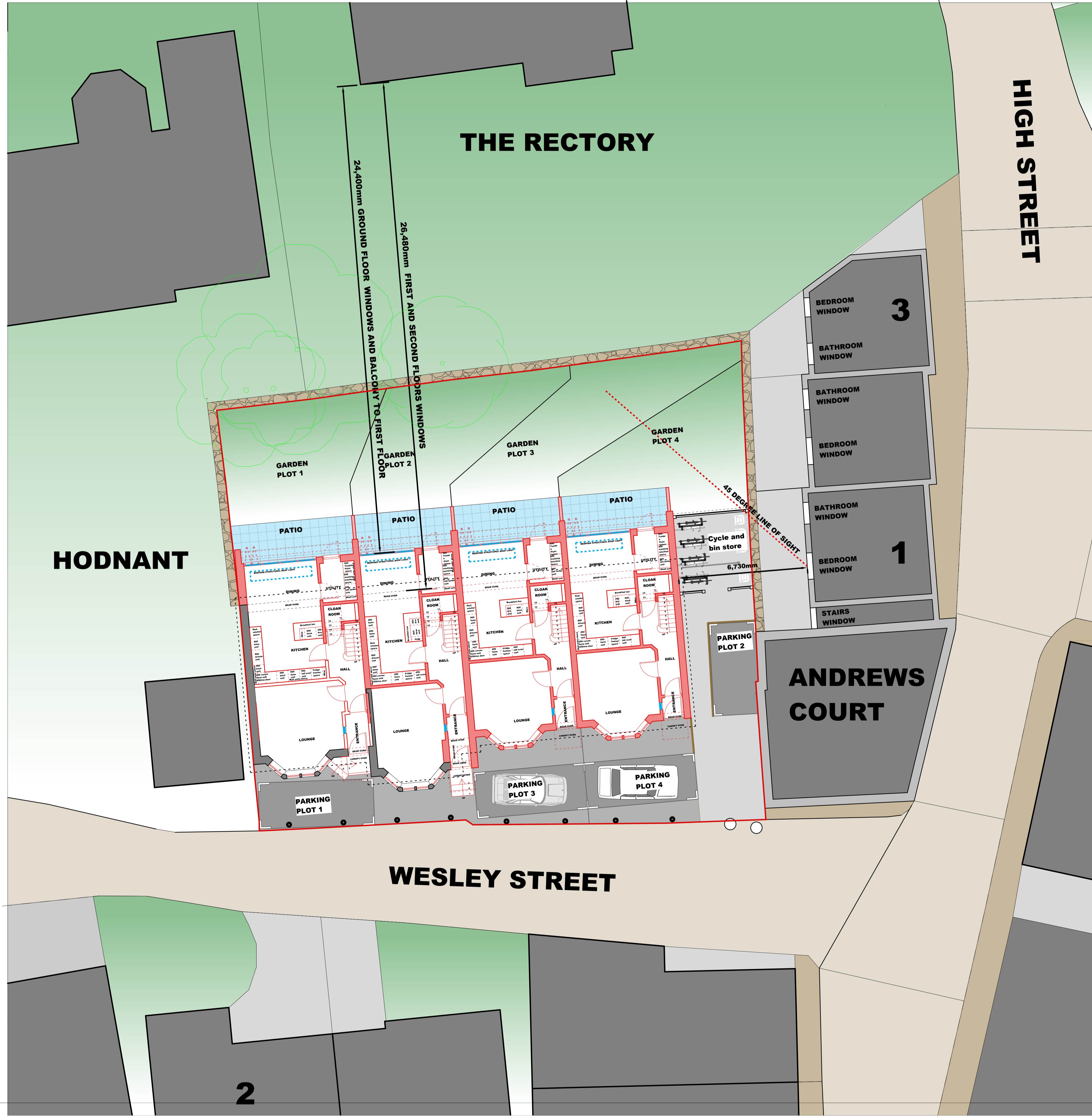
- 7.1.1 This Transport Note (TN) has been produced to support a planning application for a residential redevelopment of the former Police Station in Llantwit Major.
- 7.1.2 The proposals are for the conversion of the existing building into four three-bedroom houses with associated parking of one space per dwelling.
- 7.1.3 This TN has been produced to inform the Vale of Glamorgan Council (VoGC) of the highways and transport implications of the proposals.
- 7.1.4 The site will be accessed directly from Wesley Street, as per the existing arrangements. Three perpendicular parking bays will be provided, two of which are in the same location as existing spaces for the Police Station. A further parallel space will be incorporated within the existing crossover access, which vehicles can reverse onto from Wesley Street.
- 7.1.5 Obtained road safety data does not indicate an existing safety issue which would be exacerbated by the proposals, with no accidents recorded within the vicinity of the site. As such, there is no evidence of a safety issue at the existing site access or parallel parking bays from along Wesley Street.
- 7.1.6 The site is situated in a highly sustainable town centre location in an existing and established residential area which will encourage travel by walking, cycling and public transport, including to key everyday facilities. There are a significant number of facilities situated within a short walking distance and excellent opportunities to travel by public transport. The site location provides realistic and attractive options for access by sustainable modes, which will reduce the need to travel by or own a car.
- 7.1.7 Parking is provided at an appropriate level in accordance with the parking standards SPG considering the likely demand, the availability of local car parks, the surrounding parking restrictions and the highly sustainable location of the site. The provision is also in line with the aspirations of Future Wales in relation to minimising parking. The site also provides dedicated cycle parking to further encourage travel by this mode.
- 7.1.8 Trip generation analysis has shown that the proposed residential use would likely reduce vehicle movements into and out of the site during the network peak hours and generate a similar level of movements over a daily period. The level of movements into and out of the existing crossover site access would reduce as this provides access to an existing car park which can accommodate approximately five vehicles. The arrangements are being amended to accommodate a single car parking space. As such, the proposals would not have an adverse impact on the operational capacity of the highway or an unacceptable impact on road safety.

7.2 Conclusions

- 7.2.1 The site location will encourage and promote sustainable travel behaviour, attract residents who choose not to own a car or have low car ownership and is fully in accordance with transport policies in Future Wales, PPW11, TAN18 and the LDP.
- 7.2.2 Data does not indicate a road safety issue which would be exacerbated by the proposals. The development would not have an unacceptable impact on road safety and the access arrangements onto the highway would remain suitable.

- 7.2.3 The on-site parking provision is fully in accordance with the objectives for encouraging sustainable travel and reducing car use as set out in PPW11 and Future Wales. It would not have a material impact on parking stress, inconsiderate or illegal parking, given the surrounding parking restrictions and availability of public car parking.
- 7.2.4 The proposals will not have a material impact on the operation of the highway network and as such no mitigation is considered to be required.
- 7.2.5 It is therefore considered that there are no reasons relating to transport or highways for objecting to the application.

Appendix A Proposed Site Layout

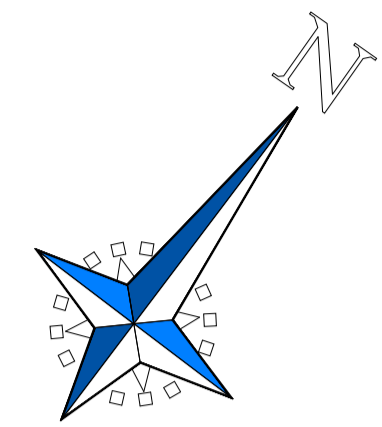


KEY

- SITE BOUNDARY
- THE SITE
- REAR GARDENS
- HARD SURFACES
- SURROUNDING BUILDINGS
- ROADS AND REAR LANES
- FOOTPATHS

SITE LOCATION PLAN
(scale 1 to 100 at A1)

Do not scale, use figured dimensions only. Dimensions to be checked on site and any discrepancies reported to the Architect immediately. This drawing is copyright.



SCHEME :
PARTIAL DEMOLITION, EXTENSION AND CHANGE OF USE OF A FORMER POLICE STATION TO PROVIDE FOUR DWELLINGS (USE CLASS C3) ASSOCIATED LANDSCAPING, DRAINAGE, PARKING, ACCESS AND WORKS, AT THE OLD POLICE STATION, 1 COMMERCIAL STREET, AT THE FORMER POLICE STATION, WESLEY STREET, LLANTWIT MAJOR FOR
SOPHIE RIDDELL WESTBURY, FACTORY ROAD, LLANBLETHIAN CF71 7JD

DRAWING :
SITE LAYOUT PLAN IN CONTEXT

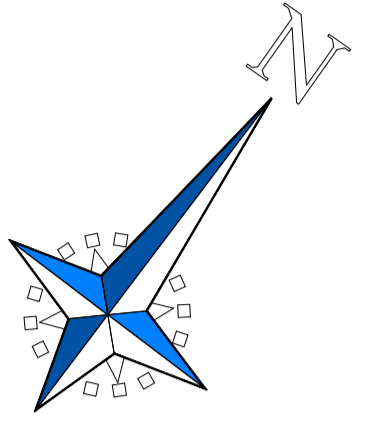
STAGE :
DESIGN

SCALE : 1 to 250
DRAWING NO : 367 - 218
DATE : May 2023
DRAWN BY : Reuben Evans

AMENDMENTS	DATE

SITE LOCATION PLAN

Do not scale, use figured dimensions only. Dimensions to be checked on site and any discrepancies reported to the Architect immediately. This drawing is copyright.



SCHEME :
 PARTIAL DEMOLITION, EXTENSION AND CHANGE OF USE OF A FORMER POLICE STATION TO PROVIDE FOUR DWELLINGS (USE CLASS C3) ASSOCIATED LANDSCAPING, DRAINAGE, PARKING, ACCESS AND WORKS, AT THE OLD POLICE STATION, 1 COMMERCIAL STREET, AT THE FORMER POLICE STATION, WESLEY STREET, LLANTWIT MAJOR

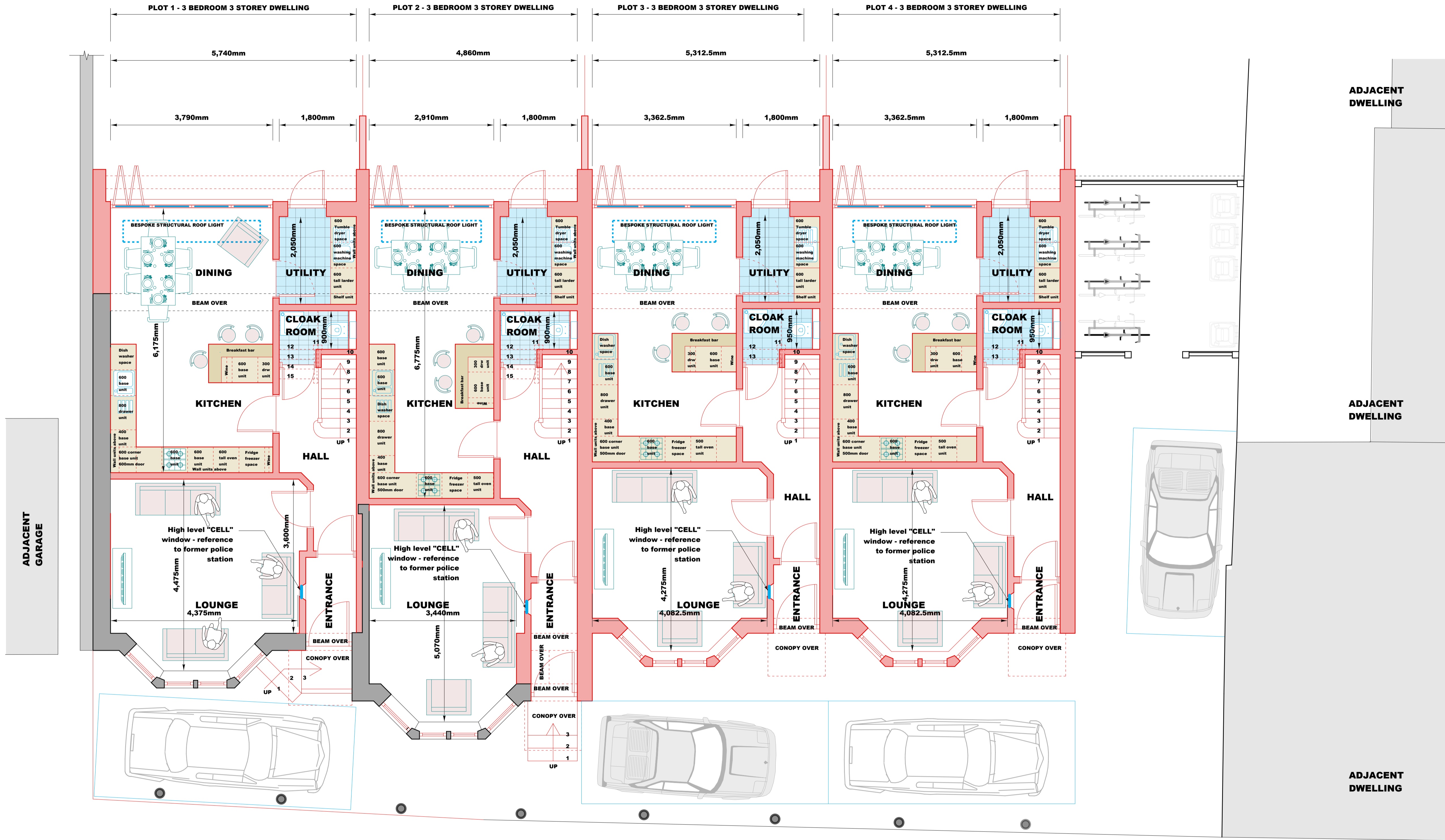
FOR
 SOPHIE RIDDELL
 WESTBURY,
 FLYNN ROAD,
 LLANBLETHIAN
 CF71 7JD

DRAWING :
 PROPOSED GROUND FLOOR PLANS

STAGE :
 DESIGN

SCALE : 1 to 50
DRAWING NO.: 367 - 210
DATE : May 2023
DRAWN BY : Reuben Evans

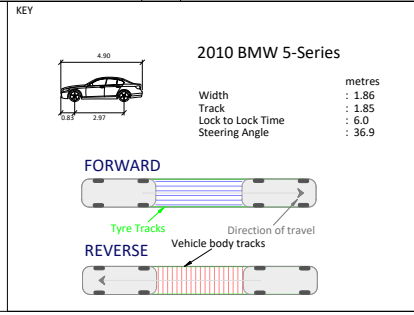
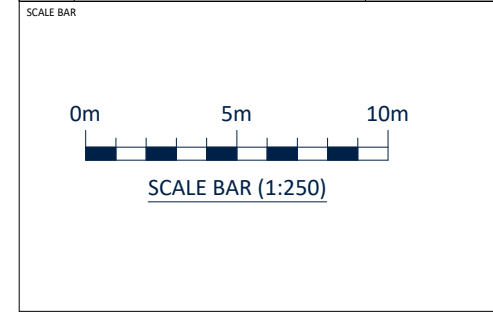
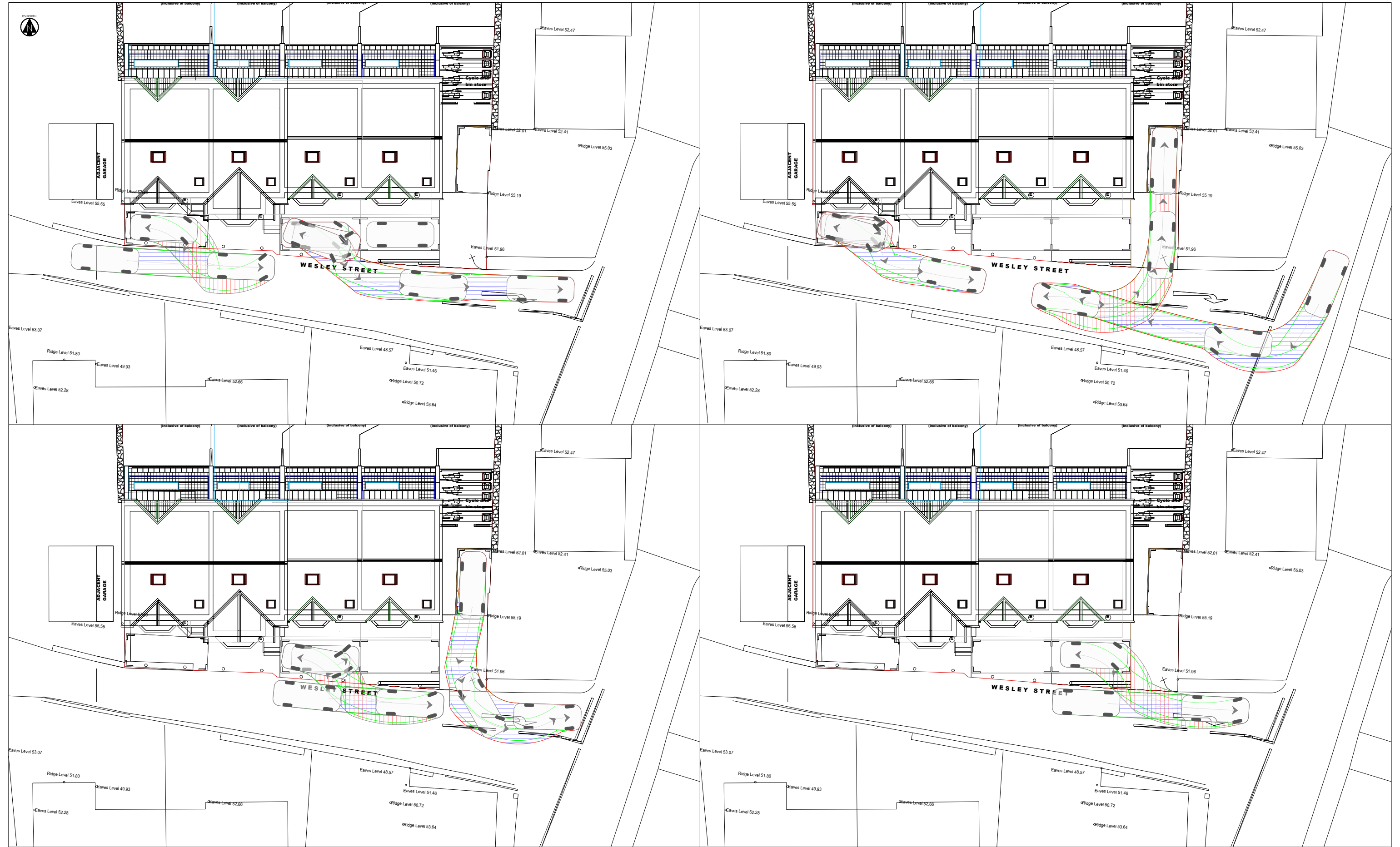
AMENDMENTS	DATE



PROPOSED GROUND FLOOR PLAN (scale 1 to 50 at A1)

PROPOSED FLOOR PLANS

Appendix B Swept Path Analysis



NOTES

REVISIONS (CONTINUED)

REVISIONS

Rev	Date	Description	By	App
P01	31/05/23	First Issue.	DC	DC

11-13 PENHILL ROAD
CARDIFF
CF11 9PQ
t: 02920 619 361
e: info@apexp.co.uk

CLIENT
EVENING ALL LTD

PROJECT
FORMER POLICE STATION, LLANTWIT MAJOR

TITLE
SWEEP PATH ANALYSIS - LARGE CAR

PROJECT NO. C23-024	SCALE @ A3 1:250
STATUS DESCRIPTION INFORMATION	STATUS S2
DRAWING NO. C23024-ATP-DR-TP-001	

Appendix C TRICS Outputs

Apex Transport Planning Ltd 11-13 Penhill Road Cardiff

Licence No: 502501

Filtering Summary

Land Use	03/A	RESIDENTIAL/HOUSES PRIVATELY OWNED
Selected Trip Rate Calculation Parameter Range	6-35 DWELLS	
Actual Trip Rate Calculation Parameter Range	16-24 DWELLS	
Date Range	Minimum: 01/01/10	Maximum: 09/11/22
Parking Spaces Range	All Surveys Included	
Parking Spaces Per Dwelling Range:	All Surveys Included	
Bedrooms Per Dwelling Range:	All Surveys Included	
Percentage of dwellings privately owned:	All Surveys Included	
Days of the week selected	Monday	1
	Friday	2
Main Location Types selected	Edge of Town Centre	3
Inclusion of Servicing Vehicles Counts	Servicing vehicles Included	X - Selected
	Servicing vehicles Excluded	5 - Selected
Population within 500m	All Surveys Included	
Population <1 Mile ranges selected	5,001 to 10,000	2
	25,001 to 50,000	1
Population <5 Mile ranges selected	5,001 to 25,000	1
	250,001 to 500,000	2
Car Ownership <5 Mile ranges selected	0.6 to 1.0	1
	1.1 to 1.5	2
PTAL Rating	No PTAL Present	3

Calculation Reference: AUDIT-502501-230601-0620

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

06	WEST MIDLANDS	
	ST STAFFORDSHIRE	1 days
08	NORTH WEST	
	BP BLACKPOOL	1 days
10	WALES	
	PS POWYS	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
 Actual Range: 16 to 24 (units:)
 Range Selected by User: 6 to 35 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/10 to 09/11/22

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	1 days
Friday	2 days

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

Selected survey types:

Manual count	3 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	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	2
No Sub Category	1

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

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included	X days - Selected
Servicing vehicles Excluded	5 days - Selected

Secondary Filtering selection:

Use Class:

C3 3 days

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

Population within 500m Range:

All Surveys Included

Population within 1 mile:

5,001 to 10,000 2 days

25,001 to 50,000 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 1 days

250,001 to 500,000 2 days

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

Car ownership within 5 miles:

0.6 to 1.0 1 days

1.1 to 1.5 2 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 3 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present 3 days

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

LIST OF SITES relevant to selection parameters

1	BP-03-A-01 WATSON ROAD BLACKPOOL	SEMI -DETACHED		BLACKPOOL
	Edge of Town Centre Residential Zone Total No of Dwellings:		24	
	<i>Survey date: FRIDAY</i>		<i>14/06/13</i>	<i>Survey Type: MANUAL</i>
2	PS-03-A-01 BRYN GLAS WELSHPOOL	MIXED HOUSES		POWYS
	Edge of Town Centre Residential Zone Total No of Dwellings:		16	
	<i>Survey date: MONDAY</i>		<i>11/05/15</i>	<i>Survey Type: MANUAL</i>
3	ST-03-A-06 STANFORD ROAD WOLVERHAMPTON BLAKENHALL	SEMI -DET. & TERRACED		STAFFORDSHIRE
	Edge of Town Centre No Sub Category Total No of Dwellings:		17	
	<i>Survey date: FRIDAY</i>		<i>09/05/14</i>	<i>Survey Type: MANUAL</i>

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
HC-03-A-30	parking too high
LN-03-A-04	parking too high

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

TOTAL 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	3	19	0.123	3	19	0.246	3	19	0.369
08:00 - 09:00	3	19	0.193	3	19	0.333	3	19	0.526
09:00 - 10:00	3	19	0.193	3	19	0.140	3	19	0.333
10:00 - 11:00	3	19	0.123	3	19	0.211	3	19	0.334
11:00 - 12:00	3	19	0.123	3	19	0.175	3	19	0.298
12:00 - 13:00	3	19	0.193	3	19	0.263	3	19	0.456
13:00 - 14:00	3	19	0.246	3	19	0.175	3	19	0.421
14:00 - 15:00	3	19	0.263	3	19	0.333	3	19	0.596
15:00 - 16:00	3	19	0.281	3	19	0.175	3	19	0.456
16:00 - 17:00	3	19	0.228	3	19	0.193	3	19	0.421
17:00 - 18:00	3	19	0.351	3	19	0.228	3	19	0.579
18:00 - 19:00	3	19	0.263	3	19	0.263	3	19	0.526
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.580			2.735			5.315

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.

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Parameter summary

Trip rate parameter range selected:	16 - 24 (units:)
Survey date range:	01/01/10 - 09/11/22
Number of weekdays (Monday-Friday):	3
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	2

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

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

TAXIS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	19	0.000	3	19	0.018	3	19	0.018
08:00 - 09:00	3	19	0.000	3	19	0.000	3	19	0.000
09:00 - 10:00	3	19	0.018	3	19	0.000	3	19	0.018
10:00 - 11:00	3	19	0.018	3	19	0.035	3	19	0.053
11:00 - 12:00	3	19	0.000	3	19	0.000	3	19	0.000
12:00 - 13:00	3	19	0.018	3	19	0.018	3	19	0.036
13:00 - 14:00	3	19	0.018	3	19	0.000	3	19	0.018
14:00 - 15:00	3	19	0.018	3	19	0.018	3	19	0.036
15:00 - 16:00	3	19	0.000	3	19	0.018	3	19	0.018
16:00 - 17:00	3	19	0.000	3	19	0.018	3	19	0.018
17:00 - 18:00	3	19	0.035	3	19	0.018	3	19	0.053
18:00 - 19:00	3	19	0.018	3	19	0.035	3	19	0.053
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.143			0.178			0.321

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

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

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

OGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	19	0.018	3	19	0.018	3	19	0.036
08:00 - 09:00	3	19	0.053	3	19	0.053	3	19	0.106
09:00 - 10:00	3	19	0.018	3	19	0.000	3	19	0.018
10:00 - 11:00	3	19	0.000	3	19	0.018	3	19	0.018
11:00 - 12:00	3	19	0.000	3	19	0.000	3	19	0.000
12:00 - 13:00	3	19	0.000	3	19	0.000	3	19	0.000
13:00 - 14:00	3	19	0.018	3	19	0.018	3	19	0.036
14:00 - 15:00	3	19	0.000	3	19	0.000	3	19	0.000
15:00 - 16:00	3	19	0.000	3	19	0.000	3	19	0.000
16:00 - 17:00	3	19	0.000	3	19	0.000	3	19	0.000
17:00 - 18:00	3	19	0.018	3	19	0.018	3	19	0.036
18:00 - 19:00	3	19	0.000	3	19	0.000	3	19	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.125			0.125			0.250

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

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

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

CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	3	19	0.000	3	19	0.000	3	19	0.000
08:00 - 09:00	3	19	0.018	3	19	0.035	3	19	0.053
09:00 - 10:00	3	19	0.000	3	19	0.000	3	19	0.000
10:00 - 11:00	3	19	0.000	3	19	0.000	3	19	0.000
11:00 - 12:00	3	19	0.000	3	19	0.000	3	19	0.000
12:00 - 13:00	3	19	0.018	3	19	0.000	3	19	0.018
13:00 - 14:00	3	19	0.000	3	19	0.000	3	19	0.000
14:00 - 15:00	3	19	0.000	3	19	0.000	3	19	0.000
15:00 - 16:00	3	19	0.000	3	19	0.000	3	19	0.000
16:00 - 17:00	3	19	0.000	3	19	0.018	3	19	0.018
17:00 - 18:00	3	19	0.053	3	19	0.018	3	19	0.071
18:00 - 19:00	3	19	0.018	3	19	0.018	3	19	0.036
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.107			0.089			0.196

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

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

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

CARS

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	3	19	0.088	3	19	0.175	3	19	0.263
08:00 - 09:00	3	19	0.070	3	19	0.246	3	19	0.316
09:00 - 10:00	3	19	0.088	3	19	0.088	3	19	0.176
10:00 - 11:00	3	19	0.088	3	19	0.123	3	19	0.211
11:00 - 12:00	3	19	0.123	3	19	0.140	3	19	0.263
12:00 - 13:00	3	19	0.175	3	19	0.228	3	19	0.403
13:00 - 14:00	3	19	0.193	3	19	0.158	3	19	0.351
14:00 - 15:00	3	19	0.193	3	19	0.263	3	19	0.456
15:00 - 16:00	3	19	0.246	3	19	0.123	3	19	0.369
16:00 - 17:00	3	19	0.211	3	19	0.175	3	19	0.386
17:00 - 18:00	3	19	0.281	3	19	0.175	3	19	0.456
18:00 - 19:00	3	19	0.193	3	19	0.193	3	19	0.386
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.949			2.087			4.036

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

LGVS

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	3	19	0.018	3	19	0.035	3	19	0.053
08:00 - 09:00	3	19	0.070	3	19	0.035	3	19	0.105
09:00 - 10:00	3	19	0.070	3	19	0.053	3	19	0.123
10:00 - 11:00	3	19	0.018	3	19	0.035	3	19	0.053
11:00 - 12:00	3	19	0.000	3	19	0.035	3	19	0.035
12:00 - 13:00	3	19	0.000	3	19	0.018	3	19	0.018
13:00 - 14:00	3	19	0.018	3	19	0.000	3	19	0.018
14:00 - 15:00	3	19	0.053	3	19	0.053	3	19	0.106
15:00 - 16:00	3	19	0.035	3	19	0.035	3	19	0.070
16:00 - 17:00	3	19	0.018	3	19	0.000	3	19	0.018
17:00 - 18:00	3	19	0.018	3	19	0.018	3	19	0.036
18:00 - 19:00	3	19	0.053	3	19	0.035	3	19	0.088
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.371			0.352			0.723

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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