

Transport Statement

Aberthin Road, Cowbridge

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1. Introduction

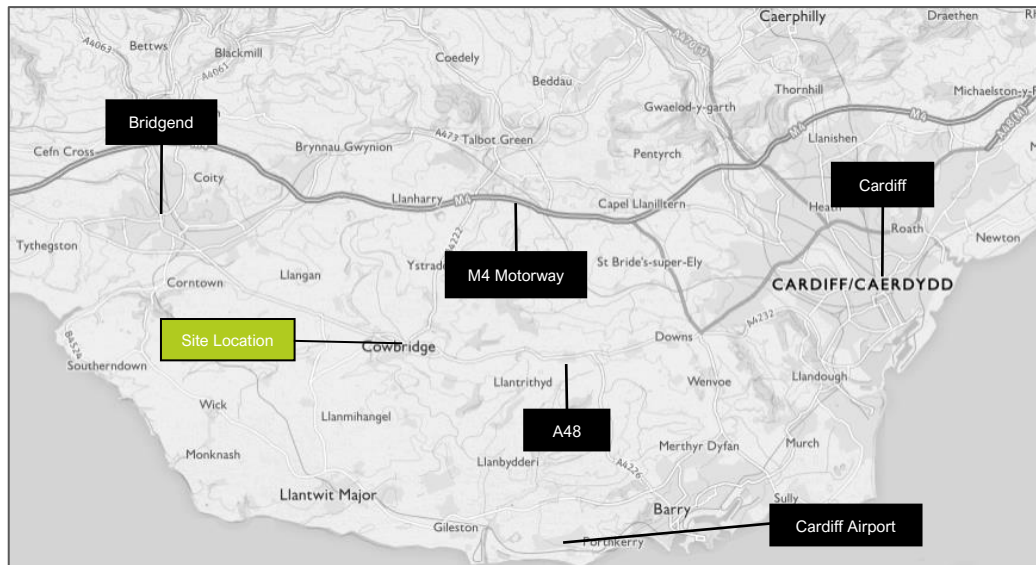
1.1 Background

- 1.1.1 Calibro has been appointed by *Hafod Housing* (herein referred to as “the Applicant”) to provide an appraisal of the traffic and transport implications associated with the proposed redevelopment of an existing school on Aberthin Road, Cowbridge for a residential scheme comprising 48 social rented dwellings.
- 1.1.2 The application site is a brownfield parcel of land that formerly housed the Cowbridge Comprehensive School Sixth Form. It is understood that the existing school buildings are derelict and it is assumed that, in planning terms, the use of the school remains a viable planning fall-back. In this respect, it is assumed that the trip generation potential of the school buildings can be used to offset much, if not all, of the traffic generation associated with the proposed development.
- 1.1.3 This report has therefore been prepared with the purpose of providing the Local Planning and Highway Authorities with an evidence base that establishes the magnitude and severity of the transport-related effects of the redevelopment, including consideration of the site’s sustainability credentials. The assessment process has been undertaken with due regard to best practice and current policy, particularly in respect of Planning Policy Wales (PPW) including the Technical Advice Note 18: Transport (2007).

1.2 Site Location

- 1.2.1 The site is located to the western side of the A4222 Aberthin Road to the south of the A48 on the north-eastern fringe of the town of Cowbridge, Vale of Glamorgan, approximately 20 km west of Cardiff, 13 km east of Bridgend, and 14 km north-east of the Cardiff Airport
- 1.2.2 The application site is shown in its strategic context below.

Figure 1-1 - Strategic Site Context



- 1.2.3 The area of the site is approximately 0.5 hectares. It comprises school buildings with a total room area of 1,222sqm and two storeys.
- 1.2.4 Vehicular access to the existing site is facilitated by a vehicle crossover to the south of the existing school buildings. This provides access to the parking area located to the rear of the building which has space for around 50 vehicles.
- 1.2.5 The site is bound by the A48 to the north, Aberthin Road to the east, and residential dwellings on Slade Close and Millfield Drive to the south and west.
- 1.2.6 The application site is shown in its local context below.

Figure 1-2 - Local Site Context



1.2.7 A full description of the road network is provided at [Section 4.0](#) of this report.

1.3 Structure of the Report

1.3.1 This report has been prepared as a Transport Statement to provide the planning and highway authorities with the evidence they require to consider the implications of a planning application for the proposed residential redevelopment of the former Cowbridge Comprehensive Sixth Form school buildings at Aberthin Road. The report constitutes the following structure:

[Section 2.0: Development Proposals](#)

This section of the report outlines the development proposals with a particular focus on transport and parking provision.

[Section 3.0: Non-Car Travel Credentials](#)

The existing non-car travel credentials of the application site are considered within this section of the report with scrutiny given to the sustainability of the site in terms of walking, cycling and public transport.

Section 4.0 Car-borne Travel Credentials

The existing car-borne travel credentials of the application site are considered within this section of the report. This includes a review of the surrounding highway network and its suitability to accommodate vehicular trips associated with the proposed development.

Section 5.0 Traffic Impact

This section of the report considers the magnitude of any traffic effects resultant from the proposed redevelopment, together with its potential significance in the context of the safe and efficient operation of the public highway network.

Section 6.0: Summary and Conclusion

A summary of the findings and closing conclusions are provided in this section of the report.

2. Development Proposals

2.1 Application Details

2.1.1 A detailed description of the proposed development is provided in the Planning Statement prepared by LRM Planning which accompanies the planning application. However, a plan illustrating the proposed site layout is shown below and to scale at Appendix A.

Figure 2-1 – Proposed Site Layout



2.1.2 In respect of traffic and transport, the salient elements of the proposed scheme comprise the demolition of the existing buildings within the site and the redevelopment of the land to include 48 residential units comprising a mix of houses and flats, with associated parking. The accommodation schedule is summarised below:

- 5 x 3 bed houses;
- 31 x 1 bed apartments; and
- 12 x 2 bed apartments.

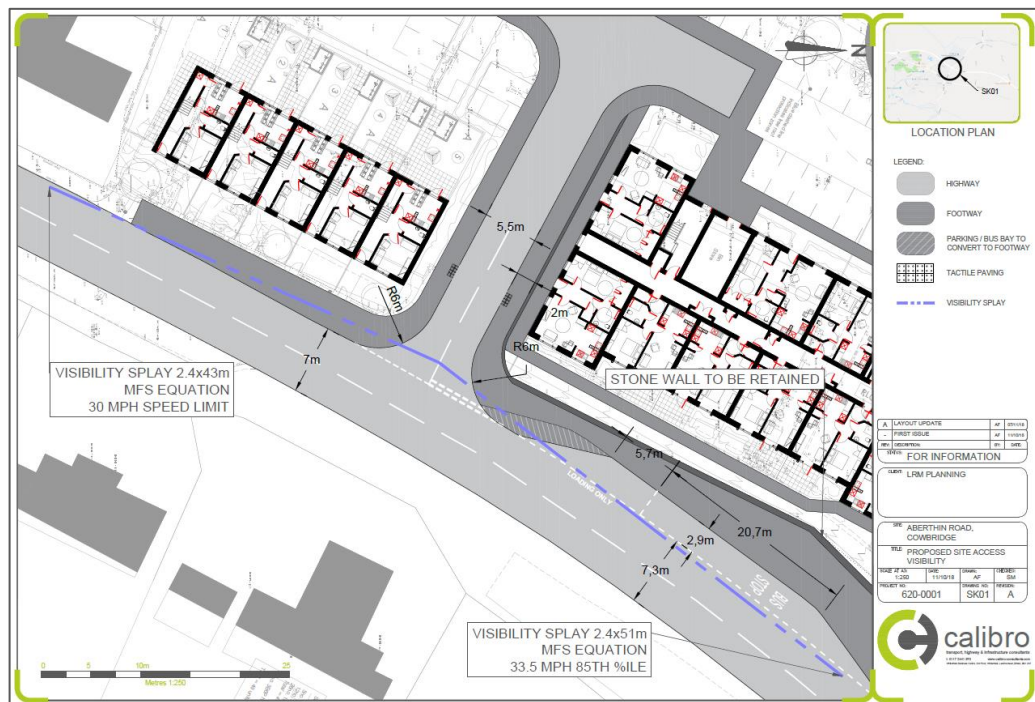
2.1.3 The houses will be provided in terraced arrangement in the southern extent of the site whereas the apartments will be arranged in one block in the northern part of the site.

2.2 Means of Access

Vehicular Access

2.2.1 Vehicular access is proposed to be provided via a simple priority T-junction onto Aberthin Road, as shown on the figure below which is included to scale at [Appendix B](#).

Figure 2-2 - Proposed Site Access



2.2.2 The proposed site access road will be provided to the north of the Houses and south of the flats. The access road is proposed to be 5.5-metres wide which is sufficient to accommodate two large HGV type vehicles passing. This is supported by 6.0-metre radii at the junction with Aberthin Road. The junction design broadly in accords to guidance set out within Manual for Street guidance (MfS).

- 2.2.3 To maximise visibility and ensure appropriate kerb radii are provided, the junction has been built out on its northern side into the existing lay-by. A small area of the southern end of the lay-by will be converted to footway. This will not impact on its safety or operation.
- 2.2.4 The proposals take the opportunity to formalise the lay-by using white lining. As shown on the above plan, it is proposed that a delivery bay will be provided at its southern end. This will be used for shopping deliveries to the site so that delivery vehicles do not need to enter the site.
- 2.2.5 The swept-path analysis included at [Figure 2.3](#) below demonstrates that a loading bay can be incorporated in this location without detriment to arrivals and departures by buses. Furthermore, the bus stop is serviced once per hour during the day and it is therefore unlikely that deliveries to the site and bus arrivals will coincide. This will be used as a loading and parking bay for any deliveries to the site.
- 2.2.6 An uncontrolled pedestrian crossing point comprising dropped kerbs and tactile paving will be provided across the access road some 20-metres to the west of the junction with Aberthin Road.
- 2.2.7 A 2.0-metre wide footway will be provided on both sides of the access road and will connect to the footways on the western side of Aberthin Road to provide connectivity between the entrances to the buildings and the established footway network.
- 2.2.8 The design of the junction has also considered appropriate Stopping Sight Distances (SSD) and in this way secures visibility envelopes in accordance with recorded speeds from an ATC survey undertaken by an independent surveyor on Aberthin Road within the vicinity of the site, between Thursday 18th October and Wednesday 24th October.
- 2.2.9 The results are summarised in the table below:

Table 2-1 - Aberthin Road ATC Speed Survey Results

Vehicle Speeds	Northbound	Southbound
Mean Speed (mph)	21.4	27.6
85th Percentile (mph)	28.5	33.3

- 2.2.10 Whereas Aberthin Road is subject to a 30mph speed limit within the vicinity of the site, the above data suggest that the southbound speeds were in excess of the speed limit.
- 2.2.11 On this basis, a 30mph design speed is appropriate for the northbound direction, for which Manual for Streets (MfS) suggests 43-metre visibility splays from a 2.4-metre set back. In respect of southbound speeds, the MfS SSD equation has been used and identifies a requirement for 51-metres, as shown on [Figure 2.2](#) above.
- 2.2.12 Based on the above, it is considered that the proposed access arrangements are considered appropriate to serve the proposed redevelopment.

Pedestrian and Cycle Access

- 2.2.13 Under the proposals, 2.0-metre footways will be provided on both sides of the site access and will connect to the existing contiguous footway on the eastern side of Aberthin Road.
- 2.2.14 Internal footways will provide access to the apartments and the rear of the houses as shown on the site layout above. The houses will have frontage pedestrian access onto the footway on the western side of Aberthin Road.
- 2.2.15 Cycle access will be via the proposed vehicular access.
- 2.2.16 Further details concerning the availability of pedestrian and cycle infrastructure in the locality is given at [Section 3.0](#) of this report.

Service Arrangements

- 2.2.17 Refuse vehicles will serve the proposed houses via Aberthin Road mirroring the existing servicing arrangements for the houses on Aberthin Road within the vicinity of the site.
- 2.2.18 A bin store for the apartments will be provided within the site, as shown on the site layout plan above. It is located such that future residents of the apartments will not have to carry waste more than 30-metres to the storage point, and within 25-metres of the turning head at the end of the access road, in accordance with guidance set out within MfS.
- 2.2.19 To allow refuse vehicles to turn within the site, turning head, constructed to adoptable standards, will be provided at the end of the access road. As such, vehicles will be able to ingress and egress the site in a forward gear ensuring no reversing onto the highway takes place, in accordance with MfS.

2.2.20 For rigour, 10.17-metre refuse vehicle has been assumed and the below swept path analysis, included at [Appendix C](#), demonstrates that such a vehicle can safely enter and egress the site in a forward gear.

Figure 2-3 - Swept Path Analysis of Refuse Vehicle



2.3 Car Parking Provision

2.3.1 The development proposals include the provision of a total of 47 car parking spaces to serve the development.

2.3.2 This level of car parking provision is considered appropriate on the basis that the proposed units will be social rented dwellings which are accepted to have lower rates of car ownership than privately owned or rented dwellings. Allied to this, a proportion of the social rented households are not anticipated to own a vehicle.

2.3.3 Indeed, this is evidenced by bespoke data from the 2011 Census provided by the Office of National Statistics (ONS). The data demonstrates the relationship between car ownership, tenure and number of bedrooms for dwellings within the Local Authority District (The Vale of Glamorgan) and the Middle Super Output Area (MSOA) (The Vale of Glamorgan 002) within which the site is located.

2.3.4 The raw data is included at [Appendix D](#) whilst a summary is presented in the table below.

Table 2-2 - Car Ownership Per Dwelling

Tenure Type	Number of Rooms	Vale of Glamorgan	Vale of Glamorgan 002
Total or Shared Ownership	5 bed house	1.38	1.48
	1 bed apt	0.74	0.46
	2 bed apt	0.94	0.81
Social Rented	5 bed house	0.75	0.96
	1 bed apt	0.33	0.22
	2 bed apt	0.40	0.72
Private Rented or Living Rent Free	5 bed house	0.96	1.49
	1 bed apt	0.56	0.74
	2 bed apt	0.81	0.92

2.3.5 The table above clearly demonstrates that social rented apartments are associated with lower rates of car ownership than other tenure types. The above figures have been applied to the proposed schedule of accommodation and the resultant forecast car ownership associated with the development is set out in the table below.

Table 2-3 - Forecast Car Ownership

Social Rented Apartments	Vale of Glamorgan (Local Authority District)	Vale of Glamorgan 015 MSOA
5 x 3 bed houses	4	5
31 x 1 bed apts	10	7
12 x 2 bed apts	5	9
Total (48 Units)	19	20

*Note the above table is subject to rounding.

2.3.6 The above table suggests that the proposed development is forecast to be associated with a total car ownership of between 19 and 20 vehicles.

2.3.7 The Vale of Glamorgan (VoG) Local Development Plan (2011-2026) Supplementary Planning Guidance 2015: Parking Standards document suggest that one visitor parking spaces per five dwellings should be provided. This equates to a visitor parking provision of 10 spaces.

2.3.8 The evidence above suggests that a total of 30 car parking spaces are required to accommodate the parking demand from the residents and visitors associated with the development. As such, the proposed parking provision of 35 spaces is considered appropriate to serve the development.

- 2.3.9 Allied to the above, PPW states *“Parking provision should be informed by the local context, including public transport accessibility, urban design principles and the objective of reducing reliance on the private car and supporting a modal shift to walking, cycling and public transport. Planning authorities must support schemes which keep parking levels down, especially off-street parking, when well designed”*.
- 2.3.10 On the basis of the above, it is considered that the proposals are supportive of the car parking objectives set out within PPW.

2.4 Cycle Parking Provision

- 2.4.1 The level cycle of parking provision is set out within the VoG Parking Standards document identified above. The guidance suggests that one long-stay cycle parking stand should be provided per five bedrooms for the apartments.
- 2.4.2 It is proposed to provide a cycle store with space for 22 bicycles to the north of the apartment block. This exceeds the minimum suggested provision set out within the parking guidance and is therefore considered appropriate.
- 2.4.3 Each of the houses will be provided with a dedicated bike store in the back gardens which can be accessed via the footway to the rear of the houses.

3. Existing Travel Credentials

3.1 Introduction

- 3.1.1 The existing non-car credentials of the application site are considered within this section of the report, including the accessibility and availability of pedestrian, cycle and public transport infrastructure. All accessibility analysis outputs are included at [Appendix E](#) of this report.
- 3.1.2 Paragraph 4.1.8 of Planning Policy Wales (PPW) Edition 10 sets out that “*The Welsh Government is committed to reducing reliance on the private car and supporting a modal shift to walking, cycling and public transport. Delivering this objective will make an important contribution to decarbonisation, improving air quality, increasing physical activity, improving the health of the nation and realising the goals of the Well-being of Future Generations Act*”.
- 3.1.3 The document goes on to state that the planning system should facilitate 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*”. This section demonstrates how the proposed development supports these goals.

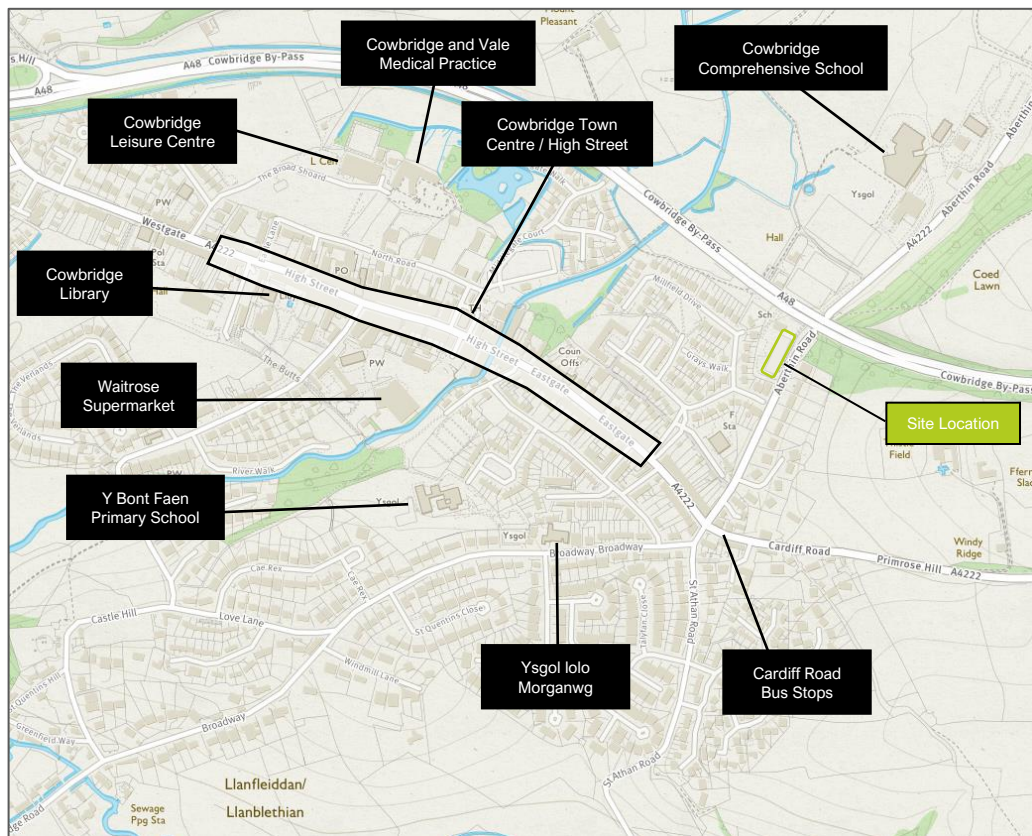
3.2 Non-Car Travel Credentials

Accessibility by Foot

- 3.2.1 PPW and Transport Advice Note (TAN) 18 does not define a catchment within which travel by foot is considered feasible and the suggested maximum desirable walk distance of 2-kilometres advocated with the document entitled ‘*Guidelines for Providing for Journeys on Foot*’ has been adopted.
- 3.2.2 The scheme directly connects to the existing contiguous footway on the western side of Aberthin Road, which provides access to Cowbridge Comprehensive School and the village of Aberthin to the north of the site and takes pedestrians towards the town centre to the south. The footway measures around 1.5-metres wide and is illuminated to a modern standard by street lighting. A footway is provided intermittently on the eastern side of Aberthin Road.

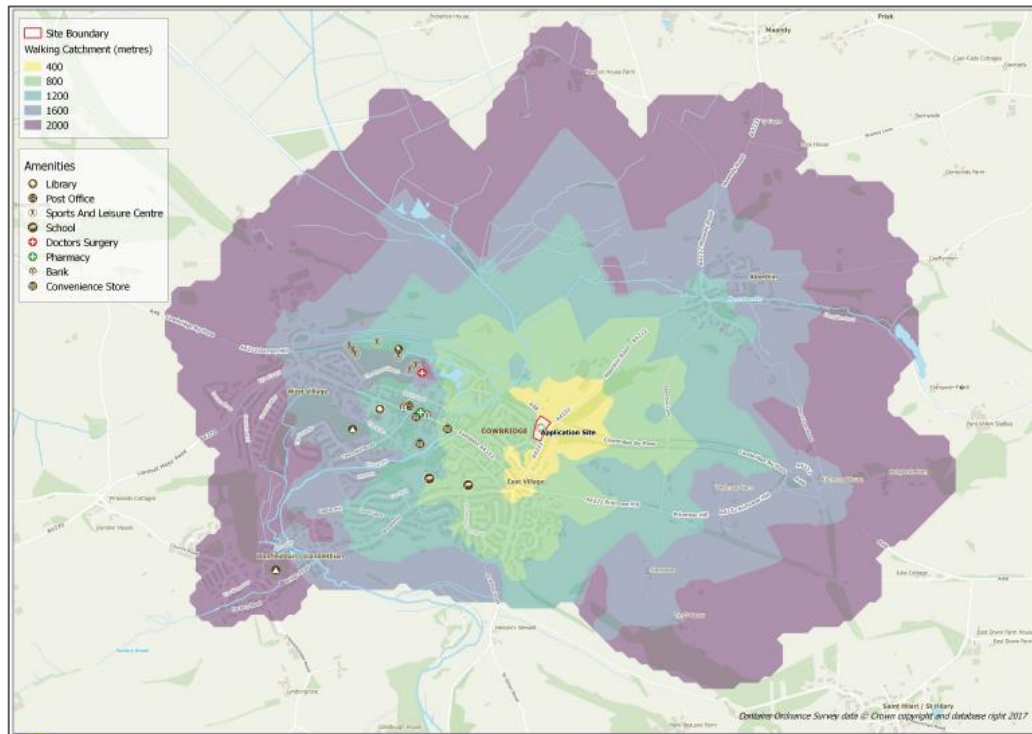
- 3.2.3 To the south of the site, the footways on Aberthin Road connect to the wider network of footways provided throughout the town via dropped kerbs and tactile paving provided at the signalised pedestrian crossing at the junction between Aberthin Road, Cardiff Road, St Anthan Road and Eastgate.
- 3.2.4 The scheme is located within walking distance of a wide range of facilities and amenities which may be accessed by future residents on a daily basis.
- 3.2.5 Facilities and amenities located within a two-kilometre distance from the centre of the site are illustrated on the figure below:

Figure 3-1 – Local Facilities and Amenities



- 3.2.6 The plan above demonstrates that there are a wide range of facilities located within walking distance of the redevelopment site. These facilities include;
- Schools, including Cowbridge Comprehensive, Y Bont Faen Primary and Ysgol Iolo Morganwg;
 - Bus stops, including Aberthin Road, Cardiff Road and High Street;
 - Cowbridge High Street / Town Centre which includes cafes, pubs, banks, a post office, library, pharmacy/chemist, and supermarkets / convenience stores among others;
 - Cowbridge and Vale Medical Practice;
 - Cowbridge Leisure Centre; and
 - Waitrose Supermarket.
- 3.2.7 Additionally, major supermarkets such as Sainsbury's, Waitrose and Asda provide an online shopping / home delivery service and can deliver to the site, reducing the need for residents to travel by car.
- 3.2.8 A bus stop is located adjacent to the site with additional stops approximately 370-metres walking distance from the site. The bus stops and interchange lie within the maximum desirable distance of 400-metres identified by the Institute of Highways and Transportation (IHT).
- 3.2.9 On the basis of current infrastructure provision, a GIS-based accessibility model has been created to indicate the geographical area that is accessible from the site based on the industry standard walk-threshold of two kilometres.
- 3.2.10 The area accessible by walking from the site is shown on the figure below and included at [Appendix E](#):

Figure 3-2 - Walking Catchment



3.2.11 The above figure demonstrates that the site has good walking credentials in the context of PPW. It illustrates that the bus stops located on Aberthin Road and Cardiff Road are accessible by foot and are located within 400 metres walking distance. It also shows that the entirety of the Cowbridge is accessible by foot and located within two kilometres walking distance, in addition to the village of Aberthin to the north. The site is therefore compliant with policy in terms of accessibility by foot.

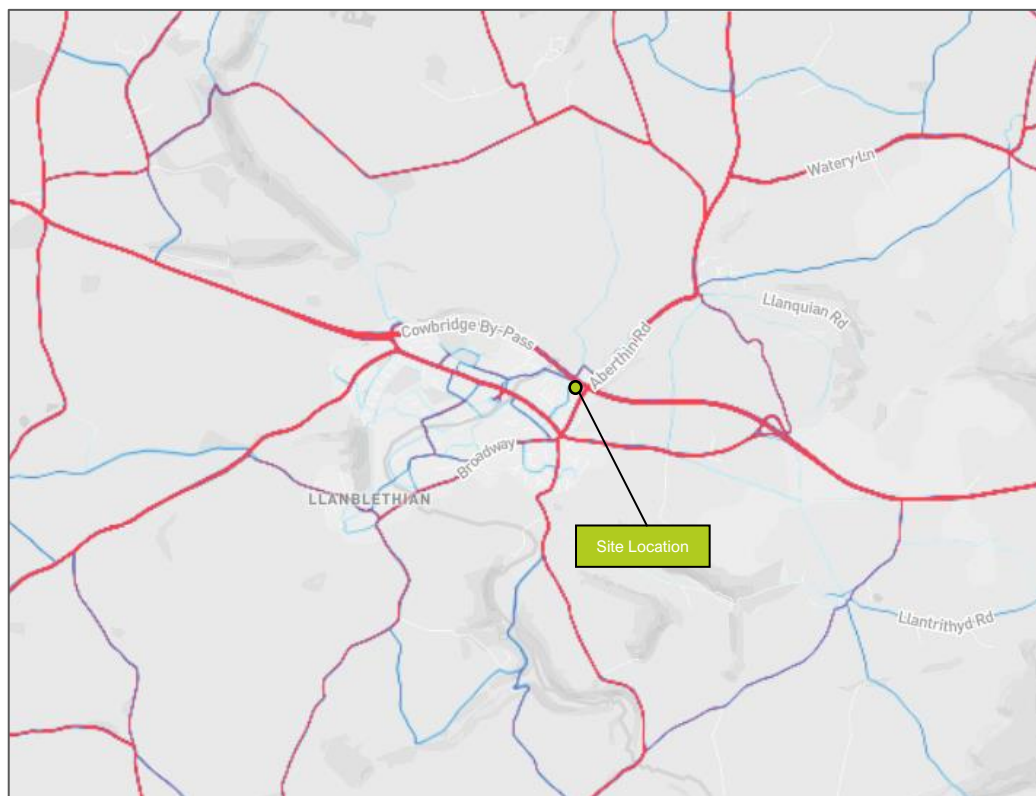
Accessibility by Bike

3.2.12 The industry-accepted distance over which cycling is feasible for most of the population is five kilometres, although it is noted that there will always be a part of the population that have a natural propensity to cycle and will be willing and able to travel further by bike.

3.2.13 Application of this threshold to the site would indicate the potential for residents to travel to all extents of the town in addition to the surrounding villages and hamlets including Graig Penllyn, Ystradowen and Llysworney.

3.2.14 Whilst there is no specific cycling infrastructure provided within Cowbridge, the roads within the cycling catchment area are considered suitable for cycling as they appear to have sufficient geometry and low vehicle speeds so that informal cycling on the carriageway is possible without detriment to highway safety. Indeed, the below extract from the Strava Heat Map demonstrates that the roads within the vicinity of the site are frequently used by cyclists.

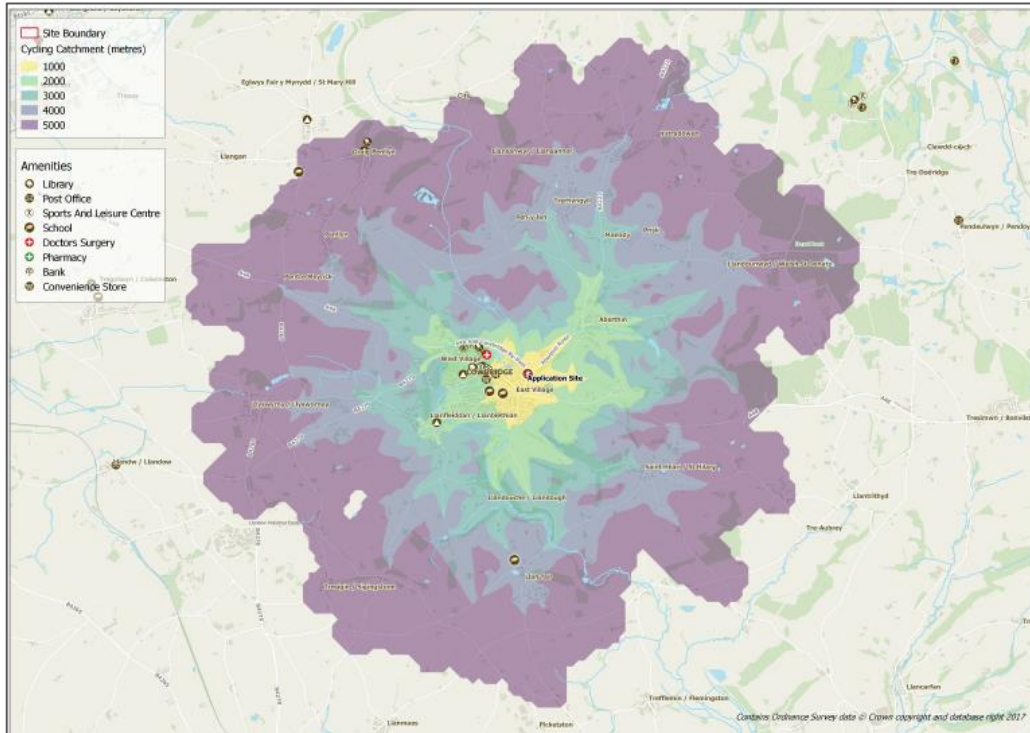
Figure 3-3 - Strava Heat Map



3.2.15 The highway safety analysis included at Section 4.3 below demonstrates that there is no adverse safety record on the roads within the vicinity of the site as a consequence of the above cycle use.

3.2.16 On the basis of the above, the resultant catchment area for cycling is shown in the below figure.

Figure 3-4 - Cycling Catchment



3.2.17 In consideration of the above, the application site is located where access by bicycle is a realistic alternative to car travel for some journeys. As such, the proposed development is acceptable in the context of its credentials to encourage journeys by bike.

Accessibility by Bus

3.2.18 It is accepted that public transport comprises two principle aspects:

1. Access to public transport which is concerned with how far the development is from the public transport network and the level of service on that network; and
2. Access by public transport which takes account of where the services go and the opportunities to access amenities located within the catchment areas served.

3.2.19 In the case of the first criterion, the nearest bus stop, named Comprehensive School, is located directly adjacent to the site at the lay-by on the western side of Aberthin Road. The stop is serviced by the number 321 bus which runs between Llanwit Major and Talbot Green.

3.2.20 The next closest bus stops, named Geoffery Ash Court, are located on Cardiff Road some 370-metres south of the site. They are served by X2 buses which runs between Porthcawl and Cardiff via Bridgend.

3.2.21 The table below summarises the services at the above bus stops.

Table 3-1 - Comprehensive School, Aberthin Road Bus Services

Comprehensive School, Aberthin Road – Adjacent to Site						
Service	Route	Weekday			Sat	Sun
		Start	Freq. (mins)	End	Freq. (mins)	Freq. (mins)
321	Llantwit - Talbot Green	06:42	60 to 120	17:42	120	-

Table 3-2 - Geoffrey Ashe Court, Cardiff Road Bus Services

Geoffrey Ashe Court, Cardiff Road – 350m from Site						
Service	Route	Weekday			Sat	Sun
		Start	Freq. (mins)	End	Freq. (mins)	Freq. (mins)
X2	Porthcawl - Cardiff via Bridgend	06:31	15 to 60	22:37	15 to 60	60
X2	Cardiff - Porthcawl via Bridgend	08:19	15 to 60	23:45	15 to 60	60

3.2.22 The below figures demonstrate the frequency of buses servicing the stops within the vicinity of the application site. Larger versions are included at [Appendix E](#).

Figure 3-5 - Bus Stop Frequencies - Morning Peak Period

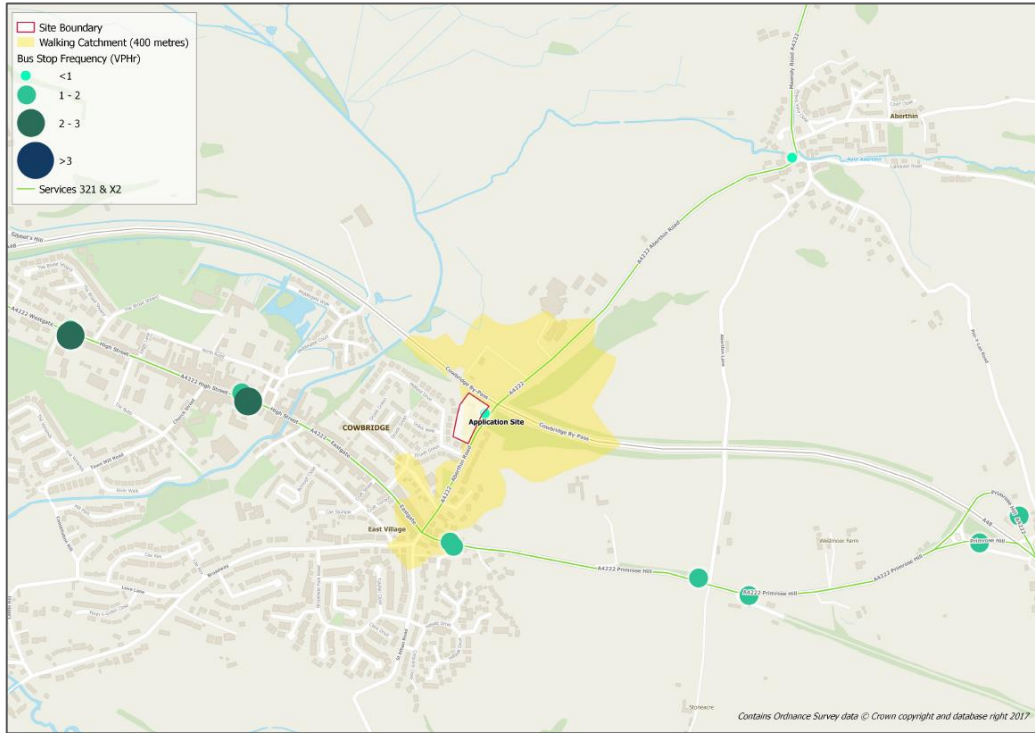
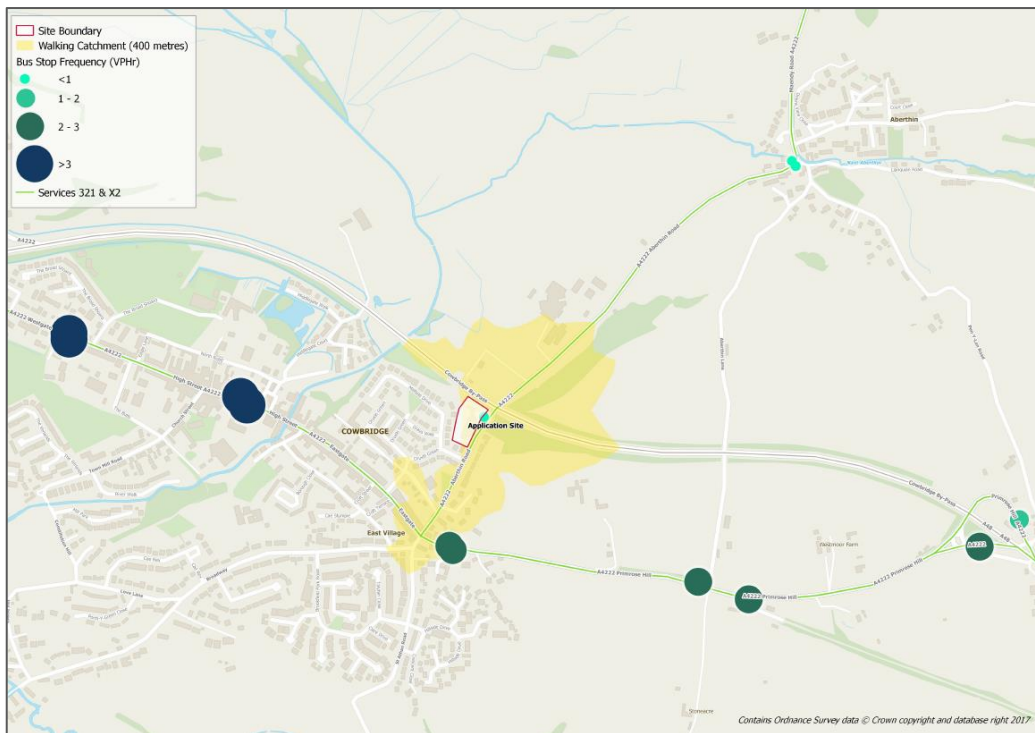


Figure 3-6 - Bus Stop Frequencies - Afternoon Peak Period



- 3.2.23 On the basis of the above, bus travel represents a viable alternative to car use for future residents and visitors associated with the development of the application site.
- 3.2.24 In consideration of the accessibility afforded by bus, an accessibility model has been created to identify the geographical catchment that is accessible within a 60-minute intermodal travel time, i.e. walk>bus>walk. This reflects the maximum commute time that is considered to be reasonable, particularly for those residents that are on the lower incomes that may be willing to travel longer distances for employment. However, it is noted that the typical length of commute in the area is 35-minutes which has also been shown.
- 3.2.25 An analysis of bus frequency has been undertaken for all bus stops in the locality for the Weekday morning and evening peak periods. The results are summarised on the plans below, which are provided at a larger scale at [Appendix E](#) at the rear of this report. The plans also account for the walking distance to the stops.
- 3.2.26 The catchment areas for the bus services during the morning and afternoon peak periods are shown in the below figures:

Figure 3-7 - Bus AM Peak Catchment

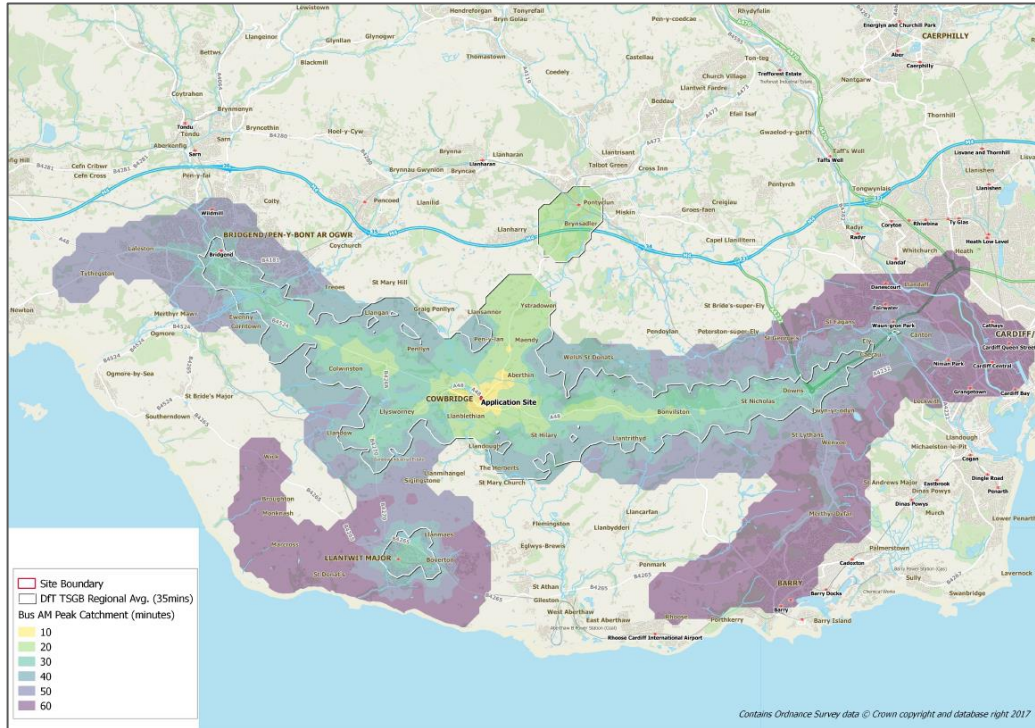
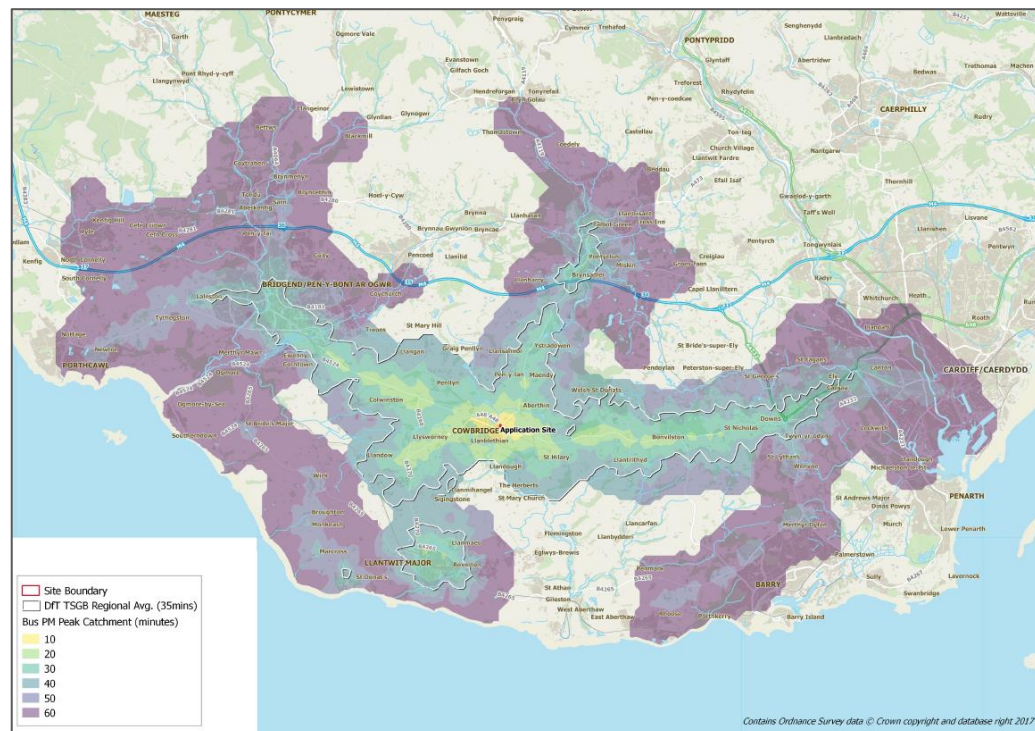


Figure 3-8 - Bus PM Peak Catchment



3.2.27 The figures above demonstrate that, a range of destinations are accessible by bus including Cardiff City Centre, Bridgend, Barry and Llanwit Major.

3.2.28 As illustrated above, a wide range of railway stations can be accessed by bus including; Cardiff Central, Barry, Pontyclun, Llanwit Major and Bridgend among others. These provide the opportunity for onward journeys to a wider range of destinations including a range of employment areas, shops and amenities, in accordance with policy.

Accessibility by Rail

3.2.29 Llanwit Major is the nearest railway station to the site located some 7.4-kilometres to the south. The station has 40 car parking spaces and 10 cycle parking spaces which are covered by CCTV. The station can also be accessed via the 321 bus service which stops at Llanwit Major Bus Station located adjacent to the railway station.

3.2.30 The station is served by hourly trains to Bridgend, Cardiff Central and Aberdare.

3.3 Section Conclusion

3.3.1 The evidence set out within this section of the report confirms that a wide range of non-car travel options would be available to the future residents of the proposed redevelopment which offer viable alternatives to trips by car.

4. Car Borne Travel Credentials

4.1 Introduction

4.1.1 This section of the report considers the road network surrounding the application site. The highway network study area therefore comprises the following links:

- A4222 Aberthin Road;
- Cardiff Road;
- St Athan Road; and
- A4222 Eastgate / High Street

4.2 A4222 Aberthin Road

4.2.1 Locally, the A4222 Aberthin Road connects Cowbridge to the village Aberthin some 1.0-kilometres to the north-east of the site.

4.2.2 Within the vicinity of the site, it is subject to a 30-mph speed limit and illuminated to a modern standard. It serves around eight private dwellings with frontage access in addition to the residential cul-de-sacs of The Paddock and Greenside.

4.2.3 A Vehicle Actuated Sign (VAS) is located on the eastern side of the road facing northbound traffic adjacent to the site.

4.2.4 A layby is located on the western side of the carriageway adjacent to the site and accommodated a bus stop which is serviced by the 321 bus which runs at a maximum frequency of once per hour. The lay-by measures approximately 50-metres in length.

4.2.5 Within the vicinity of the site, there is no central white lining but Aberthin Road measures 7.2-metres in width and can therefore safely accommodate large vehicles passing safely, in line with Manual for Streets (MfS) principles.

4.2.6 Some 260-metres to the south of the site, the A4222 Aberthin Road connects to Cardiff Road, St Athan Road and Eastgate via a signalised crossroad junction.

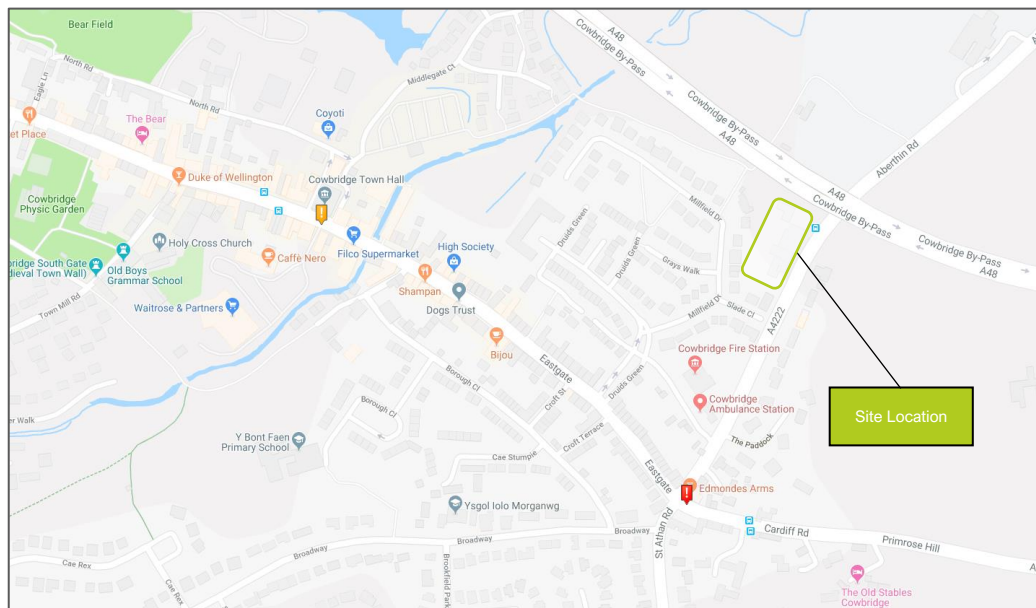
4.2.7 Each approach to the junction comprises one lane of around 3-metres in width and pedestrian crossing points are provided across all arms.

- 4.2.8 The stop lines are set back from the junction to allow large vehicles such as buses to safely turn at the junction.
- 4.2.9 Within the vicinity of the junction, Cardiff Road measures a minimum of 6.5-metres wide and can therefore accommodate two-way HGV traffic. It serves a small number of residential dwellings within Cowbridge in addition to eastbound and westbound bus stops located some 75-metres to the east of the signalised junction. Some 1.5-kilometres to the east of the junction with Aberthin Road, Cardiff Road connects to the A48 Cowbridge By-Pass via a slip-road junction which appears to be constructed in line with DMRB principles.
- 4.2.10 St Athan Road serves residential dwellings with frontage access, within the extents of the town, in addition to the residential roads of Brookfield Park Road and Hillside Drive. St Athan Road provides access to the hamlets and villages located to the south of Cowbridge such as The Herberts, St Marys Church and St Athan itself, in addition to MOD St Athan. Within Cowbridge, it measures approximately 5.5-metres in width and is illuminated to a modern standard.
- 4.2.11 The A4222 Eastgate comprises the main road which runs through the centre of Cowbridge. Further to the east it becomes High Street.
- 4.2.12 Some 1.3-kilometres to the northwest of the junction with Aberthin Road, the A4222 connects to the A48 via slip-road arrangement which appears to be provided in line with DMRB principles.
- 4.2.13 For the majority of its length between the A48 and the Aberthin Road, the A4222 serves dwellings, shops, businesses and public buildings with frontage access. It is subject to a 30-mph speed limit and illuminated to a modern standard. Sections of on-street parking and double yellow line parking restrictions are provided along the road. Bus stops and pedestrian crossings are also present.
- 4.2.14 The A48 provides a connection to Bridgend and North Cornelly to the west of Cowbridge and to Cardiff to the east.

4.3 Highway Safety Risks

- 4.3.1 Road safety data has been obtained via the public database available at crashmap.co.uk for the most recent five-year period available: 2015 to 2017 inclusive. Within the vicinity of the site, no personal injury accidents (PIAs) have occurred during the most recent five-year period available. The study area comprises the links set out in the section above, as illustrated on the figure below.
- 4.3.2 The data demonstrates that an incident was recorded Aberthin Road / Cardiff Road / St Athan Road / Eastgate signalised crossroad junction. The incident involved one vehicle, which resulted in one serious casualty. Another incident was recorded on High Street opposite the Town Hall which involved two vehicles and resulted in one slight casualty. As illustrated by the figure below, there are no accident clusters or hotspots within the study area during the most recent 5-year period.

Figure 4-1 - PIA Accident Data



4.4 Section Conclusion

- 4.4.1 The proposed development benefits from easy access to the local and strategic highway network which provides good links to local, regional and national centres.
- 4.4.2 The analysis included above confirms that there are no inherent highway safety risks in the existing operation of the adjoining highway network and the proposed redevelopment is therefore acceptable in the context of highway safety and geometry.

5. Traffic Impact

5.1 Introduction

5.1.1 This section of the report considers the impacts of the redevelopment in the context of the magnitude and significance of the possible changes in traffic movements on the adjoining highway network.

5.2 Extant Trip Attraction Potential

5.2.1 The site comprises the Cowbridge Comprehensive Sixth Form Buildings. Whilst the premises are currently vacant, the site has a planning fall-back as a school/educational establishment with an established trip attraction potential. Should the Comprehensive School and sixth form require additional capacity, then it is probable that the site would be bought back into use.

5.2.2 The sixth form site is considered to have a greater vehicle trip attraction potential than a Primary or Secondary school given that many of the pupils would be of a driving age. In combination with this, the surrounding hinterland is relatively remote suggesting the modal split for students and staff travelling to the site would be weighted towards the car.

5.2.3 On this basis, the extant use of the site would heavily discount the net impact of the proposed development in terms of vehicle trips. Notwithstanding, for the purpose of a robust assessment the proposed development has not been considered against the backdrop of the sixth form.

5.3 Future Trip Generation Potential

5.3.1 The proposals are for the redevelopment of the site for a social rented residential scheme comprising five houses and 43 apartments.

5.3.2 The industry standard TRICS 7.5.3 database has been used to undertake a multi-modal trip generation assessment to ascertain trip rate information based on surveys of similar sites throughout the United Kingdom.

5.3.3 The TRICS database calculates an average trip rate from a number of sites similar to the development site, which have been selected based on a range of characteristics such as geography, size and composition.

5.3.4 With regards to the proposed development, the following selection criteria was used:

Figure 5-1 - TRICS Selection Criteria - Proposed Development

Land-Use	Selection Criteria
5 Social/Affordable Houses	<ul style="list-style-type: none"> • 03 - Residential • B – Affordable/Local Authority Houses • Excluding sites in Ireland, Scotland & London • Suburban and Edge of Town Locations
43 Social/Affordable Flats	<ul style="list-style-type: none"> • 03 - Residential • D – Affordable/Local Authority Houses • Excluding sites in Ireland, Scotland & London • Suburban, Edge of Town and Neighbourhood Centre Locations

5.3.5 The raw TRICS output data is provided at [Appendix F](#) of this report. The resultant peak hour and daily trip generation rates are summarised in the table below:

Table 5-1 - Proposed Development Vehicle Trip Rates

Trip Rates Land Use	AM Peak Hour (0800-0900)		PM Peak Hour (1700-1800)		Daily	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Houses	0.162	0.313	0.192	0.131	1.85	1.909
Flats	0.74	0.108	0.162	0.122	1.57	1.542

5.3.6 The above trips rates have been applied to the proposed development and the resultant vehicle trips are set out in the table below:

Table 5-2 - Proposed Development Vehicle Trips

Trip Rates Land Use	AM Peak Hour (0800-0900)		PM Peak Hour (1700-1800)		Daily	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Houses	1	2	1	1	9	10
Flats	3	5	7	5	68	66
Total	4	7	8	6	77	76

- 5.3.7 The table above suggests that the proposed development is forecast to generate 11 and 14 vehicle trips in the morning and afternoon peak hours respectively. This equates to on average one additional vehicle trip every five minutes in the morning peak period and one additional vehicle trip every four minutes in the afternoon peak period, which in its own right, is neither material nor discernible in the context of highway safety or operation.
- 5.3.8 The majority of development trips are likely to travel south from the site on Aberthin Road where they would encounter the signalised junction with Cardiff Road, St Athan Road and Eastgate. It is assumed that the signals would have a 120 second cycle time, which is typical of this type of junction meaning that any vehicles waiting at this junction would flush through every two minutes. On this basis, in the afternoon peak hour, the proposed development would result in one additional vehicle arriving at the junction every second cycle on average, which is considered indiscernible.

5.4 Section Conclusion

- 5.4.1 Based on the above, the multi-modal trips associated with the proposed development are not considered material nor discernible in the case of highway safety or the capacity of the surrounding highway network, even without consideration of the extant trip attraction potential of the sixth form college.
- 5.4.2 The traffic impact of the proposed redevelopment therefore cannot be considered to be severe.

6. Summary and Conclusion

6.1 Report Summary

6.1.1 Calibro has been appointed on behalf of the Applicant to consider the traffic and transportation implications of a residential redevelopment at the former sixth form building associated with Cowbridge Comprehensive on Aberthin Road. To this end, this report has considered the various transport-related effects and its findings may be summarised as follows: -

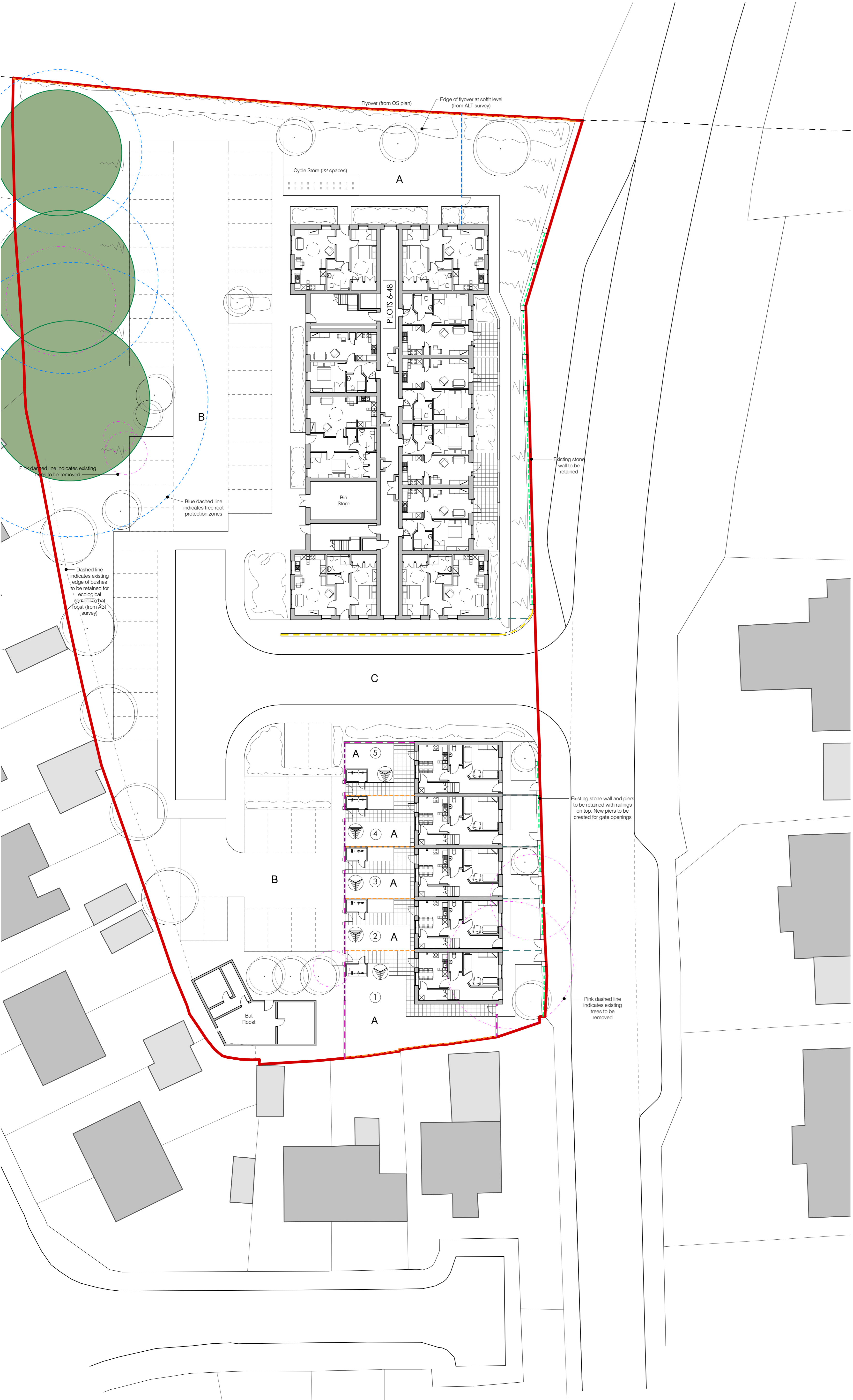
- a) The proposed redevelopment will provide 48 social rented residential dwellings comprising five houses, and 43 apartments.
- b) The non-car accessibility credentials of the site have been considered in [Section 3.0](#) of this report with reference to GIS-based modelling techniques in combination with a review of the primary desire lines and availability of infrastructure. With reference to this, Calibro concludes the site is sustainable and that future residents will have the opportunity to travel to key destinations and amenities by a range of sustainable transport modes, including first tier walking and cycling. Therefore, the proposals comply with sustainability principles.
- c) The existing highway network has also been appraised. The review concluded that the surrounding highway network adheres to existing design guidance and would be of a suitable standard to accommodate the immaterial number of vehicular trips generated by the scheme.
- d) The trip generation potential of the proposed development was considered with the use of the industry standard TRICS database. For a robust assessment, the extant trip attraction potential of the sixth form was not considered. The assessment concluded that it is therefore unlikely that any material or severe impact would be created on the surrounding highway network.

6.2 Report Conclusion

- 6.2.1 In view of the above findings, it is concluded that the accessibility credentials of the proposed development set out within [Section 3.0](#) meet with the requirements of sustainability, which underpins current planning policy. Future residents will therefore have opportunities to travel to key destinations in addition to and local facilities and amenities by a range of non-car travel, including the primary modes of walking and cycling.
- 6.2.2 [Section 5.0](#) concludes that the vehicle trips associated with the proposed redevelopment are not considered material nor discernible in the case of highway safety or the capacity of the surrounding highway network.
- 6.2.3 It is concluded that there are no highway or transportation reasons, which should prevent the proposed redevelopment of this site.

Appendix A

Proposed Site Layout Plan



Boundary Key

	TYPE 01 - 1100mm high black powder coated steel railings
	TYPE 02 - 1800mm high timber close boarded fencing
	TYPE 03 - Proposed retaining wall in strict accordance with Structural Engineer's specification
	TYPE 04 - 1800mm high black powder coated steel railings
	TYPE 05 - 1200mm high black powder coated steel railings fixed atop low 600mm high wall
	TYPE 06 - 1100mm high black powder coated steel railings above existing stone boundary wall and between existing / new stone piers
	TYPE 07 - 1800mm high facing brick wall

Landscape Key

	Grass / turfed areas
	Concrete block paviers
	Fine grade tarmac
	450 x 450mm concrete flag paving
	Existing trees to be retained. Dashed line indicated root protection zone
	Existing trees to be demolished
	New tree positions in accordance with Landscape Architect's design & specification
	New low level vegetation in accordance with Landscape Architect's design & specification

General Key

	Plot number
	Proprietary bike shed
	3-arm rotary clothes line
	Site Boundary

NOTES

Site plan developed using detailed survey prepared by ALT Surveys ref: '156074A' dated: 5th November 2018.

Plans are subject to imposed planning conditions and thorough drainage investigations. Position of all existing in use and redundant drainage runs to be confirmed following further investigation.

Position of any existing underground services to be confirmed following further investigation.

Refer to engineer's proposals for details of upgrading works to existing highways, proposed highways within new development and for proposed site levels and drainage details.

Refer to landscape architect's proposal for details of soft landscaping.

Ownership of all boundaries to be confirmed by client.

SCHEDULE OF ACCOMMODATION

5no. wheelchair accessible 1 bed apartment
12no. 2B3P apartments
26no. 1B2P apartments
Total = 43 apartments
5no. 3B6P houses
Total = 48 units