

TRANSPORT ASSESSMENT

# Redrow (South Wales)

Land West of Windmill Lane (Bryn Melin)  
Cowbridge

August 2022

Vale of Glamorgan Council

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Transport Assessment

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# 1 Introduction

## Background

- 1.1 Vectos has been appointed by Redrow PLC to provide traffic and transportation advice in support of a new development of 105 residential homes and associated works on Land to the West of Windmill Lane (Bryn Melin), Cowbridge. This site forms part of land allocated for residential development (MG2 19) within the Vale of Glamorgan's (VoG) Local Development Plan (LDP) 2011-2026. The site allocation within the LDP is for 130 homes which comprises two parcels, east and west of St Athan Road and this Transport Assessment (TA) will consider the whole allocation.
- 1.2 A Scoping Note was prepared and agreed with officers at VoG Council, a copy is contained at **Appendix A**.
- 1.3 This TA sets out the transport matters relating to the development, including the provision for pedestrians, cyclists and public transport users. This report also considers the effects of the development on the local highway network and provides a safe and operational access.

## Report Structure

- 1.4 The structure of this TA is as follows:
- Section 2 – Examines the existing level of accessibility for the site and the local area by sustainable modes of travel;
  - Section 3 – Reviews the existing National and Local Policy in the context of the site;
  - Section 4 – Provides an overview of the development proposals;
  - Section 5 – Provides a summary of existing travel behaviour;
  - Section 6 – Analyses the forecast trip generation and trip purpose associated with the development proposals;
  - Section 7 – Assesses the effect of the forecast trip generation on the local highway network; and
  - Section 8 – Summarises and concludes.

## 2 Accessibility

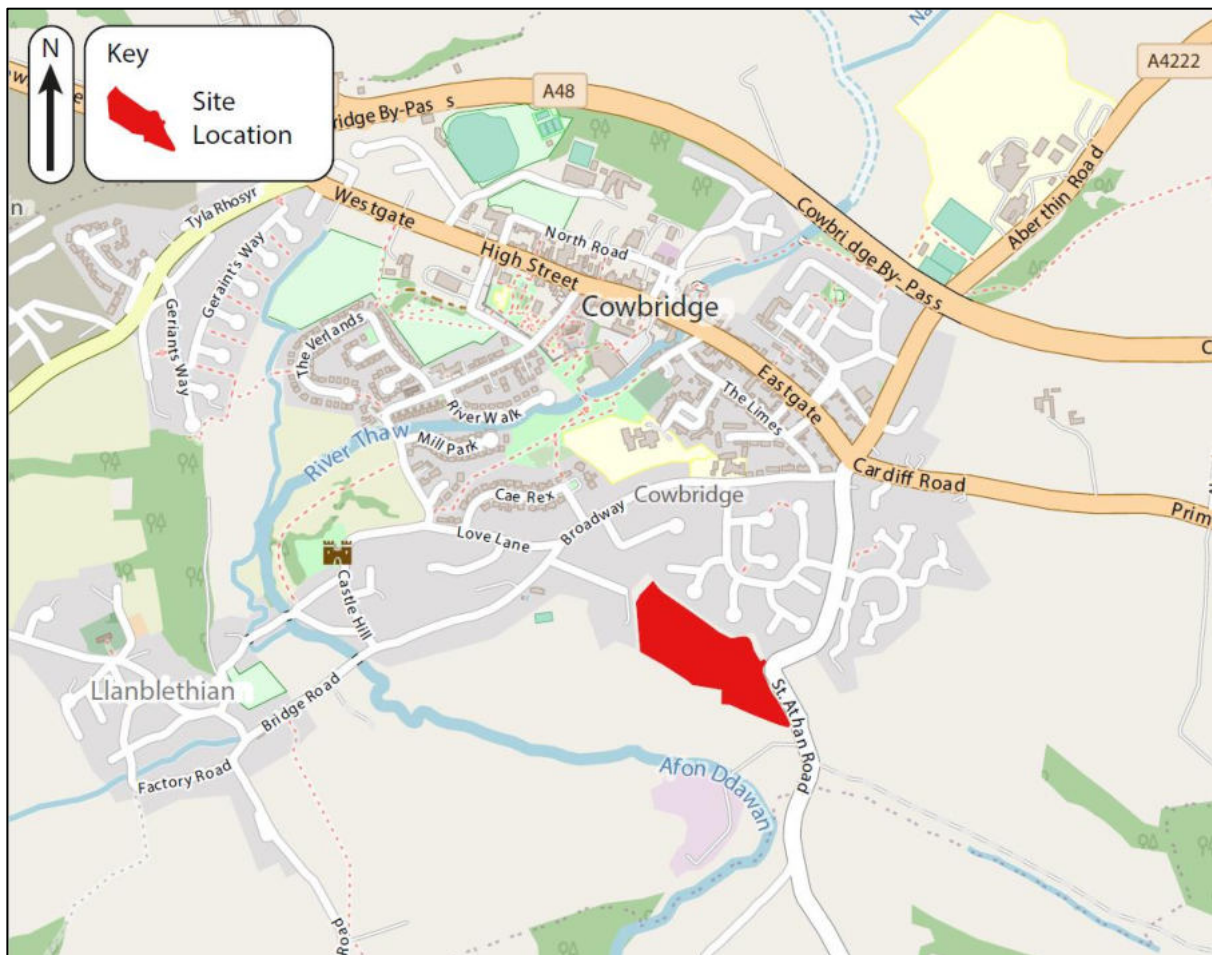
2.1 This section reviews the existing conditions at the site and its local surroundings including accessibility to sustainable modes of transport.

### Site Location

2.2 The site is location approximately one kilometre south of the centre of Cowbridge, a market town located within the Vale of Glamorgan. It currently comprises open, agricultural land.

2.3 The site is bound by St Athan Road to the east, open fields to the south, residential development and Windmill Lane to the west, and residential development to the north.

2.4 The site in its local context is shown on **Figure 2.1**.



**Figure 2.1 – Site Location**

### Local facilities

2.5 One of the primary factors to be considered when determining the suitability of a new development is its proximity, accessibility, and connectivity in relation to key local facilities by non-car modes.

2.6 A number of local facilities are located in the surrounding area of the site, some of which are highlighted in **Table 2.1**. This table includes walking distances from the centre of the site using the proposed sustainable connection via Llanquian Close, using surfaced and lit walking routes. Walking and cycling times are taken using Google Maps’ indicative travel times.

**Table 2.1 – Local Facilities**

Local Facility	Distance from the centre of the site (metres)	Cycling Time (mins)	Walking Time (mins)
<b>Public Transport</b>			
X2 Bus	650	3	8
132 Bus	1,025	4	12
<b>Schools / Education</b>			
Ysgol Iolo Morganwg	350	1	4
Y Bont Faen Primary School	500	2	6
Bijou Nursery & Creche	780	3	9
Cowbridge Comprehensive School	1,150	5	14
Old Boys Grammar School	1,150	5	14
<b>Leisure / Sports</b>			
St Quentin’s Castle	750	3	9
Cowbridge Town Hall	1,025	4	12
Cowbridge Squash Club	1,575	7	19
Cowbridge Leisure Centre	1,575	7	19

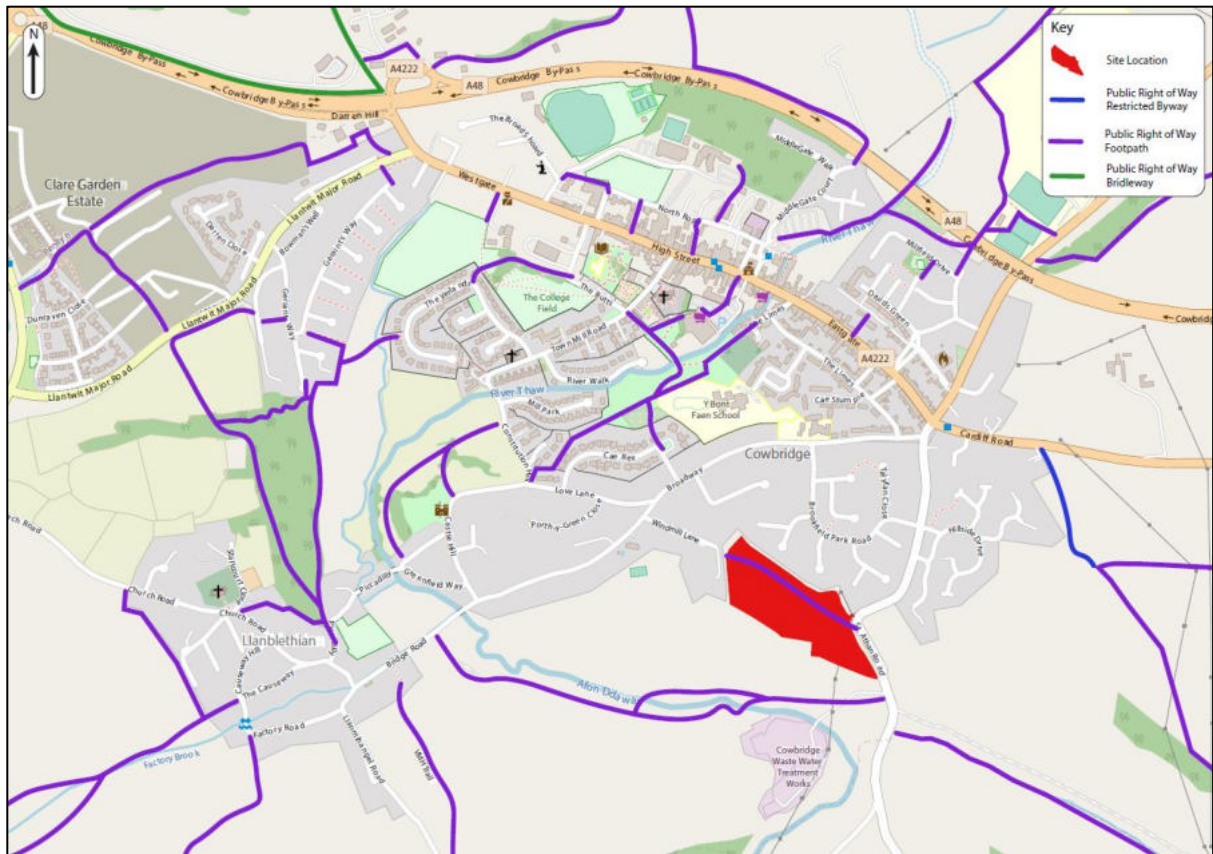


Pub / Restaurants / Food			
Edmondes Arms	575	2	7
Shampan Indian	875	4	10
The Horse & Groom	925	4	11
Cowbridge Fish Bar	975	4	12
Town Hall Square	1,025	4	12
Caffe Nero	1,025	4	12
Rocket and Rye	1,025	4	12
Duke of Wellington	1,075	4	13
Harry's Cowbridge	1,275	5	15
Local Shops			
Waitrose	1,075	4	13
Tesco Express	1,075	4	13
Medical Centres / Health			
Y Bont Faen Dental Surgery	825	3	10
Specsavers	975	4	12
Cowbridge Dental Care	1,025	4	12
Sylvia Williams Chemist	1,075	4	13
Cowbridge Health Centre	1,675	7	20
Cowbridge & Vale Medical Practice	1,775	7	21

2.7 **Table 2.1** demonstrates that the site is connected to various amenities by foot (15-30 minutes) or by bicycle (under 15 minutes) to a wide range of local amenities in including local schools, food stores, health facilities and local high streets.

**Walking**

- 2.8 A public right of way (PRoW) crosses the site in an east to west alignment. It is currently access via St Athan Road to the southwest of the site and Windmill Lane to the east of the site. This is an unsurfaced route and has the potential to be used as a connection for pedestrians to the surrounding residential developments.
- 2.9 There are several PRoWs surrounding the site, as illustrated in **Figure 2.3**. Many provide connections to around the town, as well as providing attractive leisure use for residents to the wider area.



**Figure 2.2 – Public Rights of Way**

- 2.10 There are no footways provided on St Athan Road, within the vicinity of the site. Windmill Lane to the northwest of the site provides an existing pedestrian route. As part of the development proposals, there is the opportunity to improve the pedestrian access to the site, this is discussed further in **Section 4**.
- 2.11 It is reasonable to expect that typical able-bodied people are capable of walking at least 30 minutes for day-to-day activities. The thrust of sustainability policy is that there will be an increasing propensity for people to use non single car occupancy modes, of which walking is one. People will choose their mode based on their journey purpose, and it is reasonable to conclude that a proportion of journeys undertaken to and from the site will be on foot.

2.12 The thrust of land use and transport policy is to promote and encourage the choice of walking and cycling above all else where travel needs to occur. Therefore, it is both reasonable to assume that walking is a viable and growing means of travel, and that new development, such as this one, should be designed to promote and encourage it.

2.13 In practice, the distance that any individual is likely to choose to walk, depends on that individual and their circumstances, but it is fair to assume that over time, given current policies to encourage community, health and well-being, the propensity for individuals to walk, and to walk further, will increase.

**Bus**

2.14 The nearest bus stop to the site is located on Primrose Hill, approximately 550 metres to the north east of the site. Bus service number X2 serves the site and provides links to Cardiff in the east, and Porthcawl to the west. A summary of this service is set out in **Table 2.1** as follows. There are additional bus stops 1km to the north along High Street. This service runs Monday to Sunday.

2.15 **Figure 2.3** shows the buses operating in the local vicinity.



**Figure 2.3 – Local Bus Routes**

2.16 Service number 321 also serves the site and the nearest bus stop is approximately 800 metres to the north on Alberthin Road. This route provides connections to Llantrisant in the north, and Llantwit Major to the south. A regular service is provided with buses running Monday through to Saturday. A summary of this service is provided in **Table 2.2**.



**Table 2.2 – Bus Services**

Number	Route	First Bus (M-F)	Last Bus (M-F)	Frequency (mins)			Operator
				M-F	S	S	
<b>From: 'Geoffrey Ash Court'</b>							
<b>X2</b>	Porthcawl - Cardiff	06:38	22:18	30	30	60	First South & West Wales
	Cardiff - Porthcawl	08:00	23:35				
<b>From: 'Comprehensive' (Monday - Saturday)</b>							
<b>321</b>	Talbot Green – Llantwit Major	06:42	17:42	60	120	-	New Adventure Travel
	Talbot Green – Llantwit Major	08:08	19:40				

### Community Transport

- 2.17 Greenlinks Community Transport offer demand responsive services dependant on vehicle availability and passenger demand, the volunteer driven vehicles can transport residents from their home to their destination.
- 2.18 Greenlinks has four accessible minibuses, two 9-seaters, two 12-seaters and two accessible cars.
- 2.19 A membership fee of £5 is payable and this allows users to request services for a small fee. The rate is dependent on zones, of which there are three; East Vale, West Vale and External. It is also possible to hire a minibus for a day or half day.

### Local Highway Network

#### St Athan Road

- 2.20 St Athan Road is a two-way single carriageway road to the east of the site. It connects St Athan approximately 5.5km to the south, to the A4222 / Cardiff Road / St Athan Road / Eastgate signalised junction, to the northeast of the site.
- 2.21 Within the vicinity of the site, St Athan Road is subject to the National Speed limit (60mph) and has a steep downward gradient from north to south past the site. The existing speed gateway feature (30mph signage) is located approximately 45 metres to the south of Hillside Drive, on the eastern side of St Athan Road.
- 2.22 The horizontal geometry of St Athan Road in the immediate vicinity of the site is also challenging with an almost 90-degree bend in the road on the frontage of the site access.

- 2.23 To the south of its junction with Hillside Drive, St Athan Road has a 7.5 tonne weight restriction, due to a weak bridge.
- 2.24 To ascertain the existing vehicle speeds and traffic volumes on St Athan Road, two, week-long ATC surveys were commissioned between Feb 27th and 4th March 2020 recording traffic conditions for a neutral week and prior to any COVID-19 lockdown measures. The ATC's were positioned to the north and south of the existing bend on St Athan Road in the vicinity of the site and the locations were selected to determine the likely speeds and flows in the vicinity the proposed site access.
- 2.25 Table 2.1 and 2.2 show the recorded traffic flows on St Athan Road.

**Table 2.1 Existing Traffic Flows on St Athan Road (North Site)**

Time Period	N-bound traffic flow (vehicles)	S-bound traffic flow (vehicles)	Two-way vehicle flow
AM Peak Hour (0800-0900)	170	91	261
PM Peak Hour (1700-1800)	117	96	213
Average 24-hour (weekday)	1,276	1,188	2,464

- 2.26 At the northern site, two-way traffic flows were recorded as 2,464 vehicles per day, with peak hour flows recorded as 261 two-way vehicles in the AM peak period and 213 in the PM peak period.

**Table 2.2 Existing Traffic Flows on St Athan Road (South Site)**

Time Period	N-bound traffic flow (vehicles)	S-bound traffic flow (vehicles)	Two-way vehicle flow
AM Peak Hour (0800-0900)	169	93	262
PM Peak Hour (1700-1800)	117	95	212
Average 24-hour (weekday)	1,275	1,194	2,469

- 2.27 Like the flows record at the northern ATC site, at the southern site, the two-way traffic flows were recorded as 2,469 vehicles per day, with peak hour flows recorded as 262 two-way vehicles in the AM peak period and 212 in the PM peak period.
- 2.28 Speeds were also recorded by the ATCs, under free flow conditions, with no exceptional weather conditions reported.

2.29 A summary of the speeds recorded by both ATC's are shown in **Table 2.3** and **2.4**.

**Table 2.3 Existing Traffic Speeds on St Athan Road (North Site)**

Time Period	Average (mph)		85 <sup>th</sup> ile	
	N-bound	S-bound	N-bound	S-bound
AM Peak Hour (0800-0900)	27.9	29.5	30.7	33.6
PM Peak Hour (1700-1800)	28.0	29.3	31.7	33.5
24-hour weekday	27.8	29.1	31.3	33.6

**Table 2.4 Existing Traffic Speeds on St Athan Road (South Site)**

Time Period	Average (mph)		85 <sup>th</sup> ile	
	N-bound	S-bound	N-bound	S-bound
AM Peak Hour (0800-0900)	30.6	29.1	34.0	32.8
PM Peak Hour (1700-1800)	31.2	29.6	35.2	33.6
24-hour weekday	30.9	29.3	34.9	33.4

2.30 A maximum average speed of traffic on St Athan Road is 31.2mph. in both directions.

2.31 The observed two-way average annual daily traffic (AADT) is 2,159 vehicles with 1,114 vehicles travelling northbound and 1,045 vehicles travelling southbound.

2.32 The northbound average speed is between 27.9mph and 30.9mph, and the 85th %tile is between 31.4mph and 34.9mph.

2.33 The southbound average speed is between 29.1mph and 29.2mph and the 85th%tile is between 33.6mph and 33.4mph.

2.34 The AADT demonstrates that the observed flow of traffic on St Athan Road is low and that vehicle speeds are well within the prescribed speed limit and are clearly controlled by the existing horizontal and vertical geometry.

**A4222**

2.35 The A4222 travels in an east to west alignment through the centre of Cowbridge and connects to the A48 Cowbridge Bypass to the east and west of the village.

- 2.36 To the east of the village, the A4222 is known as Primrose Hill and is subject to national speed limit (60mph) and there is a 10% downward gradient towards the centre of the village. A footway is provided on the southern side of the carriageway and is not illuminated. A gateway to the village, with a speed reduction to 30mph is provided within the vicinity of Geoffrey Ashe Court, this section of the road is known as Cardiff Road.
- 2.37 The A4222 Eastgate / High Street travels through the centre of Cowbridge village and connects to the A48 to the west. This section of the road is subject to a 30mph speed limit and is illuminated throughout.

### Highway Safety Record

- 2.38 To determine if any recent collisions have occurred on the adjacent local highway network, collision data has been obtained from Welsh Government (WG). As requested from officers at VoGC, the data covers the latest available three-year period between 01/01/2018 and 31/12/2020.
- 2.39 Recorded collisions are ranked in order of severity, with these being:
- Slight collisions – possible medical attention, as required but no hospital stay is necessary;
  - Serious collisions – medical attention involving a hospital stay was required; and
  - Fatal collisions – casualty who sustained injuries which caused death within 30 days of the collision.
- 2.40 An analysis of the data has been undertaken and it shows that there were four recorded collisions within the latest three-year period, resulting in four slight injuries.
- 2.41 There were no recorded collisions for the length of St Athan Road, any of its junctions or within the vicinity of the proposed site access.
- 2.42 A summary of the four collisions is provided below.
- 2.43 The first recorded collision occurred on Saturday 27 January 2018 at 12:18 in light but wet conditions and resulted in the slight injury of a pedestrian. The incident occurred when a vehicle making a right-hand turn from Eastgate to The Limes failed to see a pedestrian crossing the road and has struck the pedestrian at a low speed, resulting in the pedestrian sustaining a slight injury.
- 2.44 The next collision occurred Friday 01 June 2018 at 17:22 in fine and dry conditions. It occurred when a child cyclist has fallen from their bicycle into the path of an oncoming car. The car was travelling at a low speed and struck the cyclist, causing them to sustain a slight injury.
- 2.45 The third collision occurred on Tuesday 29 January 2019 at 14:25 in fine and dry conditions. The incident occurred when an elderly driver collided with the rear of an unattended vehicle. This resulted in the car driver sustaining a slight injury.



- 2.46 The fourth collision within the study area occurred on Saturday 31 August 2019 at 10:19 in light but wet conditions. The incident occurred when a bus has made a right-hand manoeuvre and the rear of the bus has clipped the rear of a motorcyclist that was stationary in traffic. This caused the rider to fall from his machine and sustain a slight injury.

### **Summary**

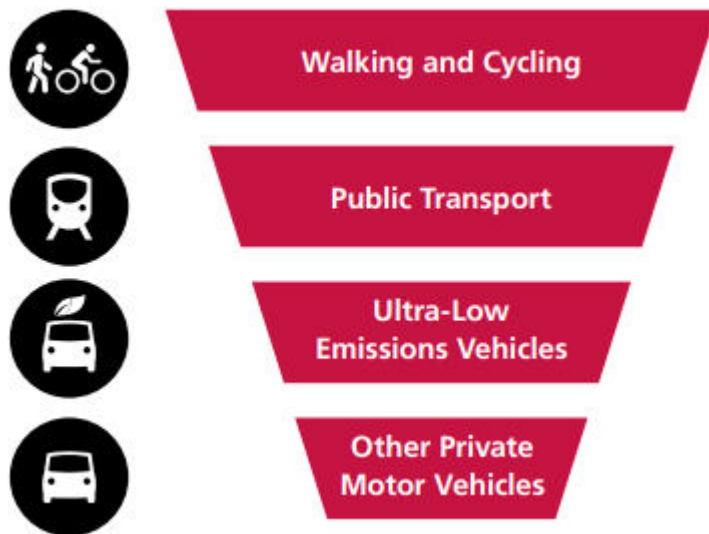
- 2.47 The analysis of the collision data does not identify any abnormal trends or patterns in the collisions recorded, nor does it identify any specific highway safety issues in the vicinity of the site. Furthermore, no collisions occurred within the vicinity of the proposed site access.
- 2.48 The collisions appear to be typical of those in urban locations and at junctions. As such, it can be concluded that, within the study area, there is no inherent issue with respect to road safety.

### 3 Policy and Guidance

#### Overview

3.1 This section of the report outlines relevant policies for development and transport in Wales, which are cognisant of one another and follow a common theme; moving towards carbon reduction in the promotion of communities, virtual and active mobility, followed by public transport with private vehicle trips at the bottom of the hierarchy. This hierarchy is demonstrated in **Figure 3.1**.

**Figure 3.1 - Transport Hierarchy (Active Travel Act Guidance 2021)**



3.2 The site will be fully in line with the principles outlined in the Active Travel Wales Guidance (2021), which places placemaking and sustainable communities at the forefront of new development. Connections to employment, health, education and leisure opportunities are key, but also achievable through the promotion of active travel and public transport above less sustainable modes.

3.3 The policy context for the proposed development is set out in national, regional and local planning policy and guidance. The key policy documents and relevant policies are outlined below.

#### National

##### Planning Policy Wales (Edition 11 – February 2021)

3.4 Planning Policy Wales, edition 11, (PPW11) sets out the land use planning policies of the Welsh Government. The primary objective of PPW11 is to;

*“ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales...”*

- 3.5 Section 4 of PPW11 concerns Active and Social places. It asserts that Active and Social Places are those which provide well-connected cohesive communities and further states that a 'Resilient Wales' is supported by protecting existing communities and natural environments whilst well-connected infrastructure and facilities closer to where people live.
- 3.6 Within Section 4 it stresses that:
- A Healthier Wales can be achieved through the reduction in emissions and air pollution by minimising the need to travel and maximising provision of sustainable forms of transport;
  - A more equal Wales can be achieved by recognising the strengths of existing communities and securing socially inclusive development, so they become desirable places in which to live and work for all members of society;
  - To foster Cohesive Communities development will need to be well connected; and
  - Globally Responsible Wales is promoted by locating and designing developments which reduce trip lengths for everyday journeys and supports sustainable modes of travel.
- 3.7 Section 4 acknowledges the importance of:
- Improving sustainable access to services;
  - Reducing reliance on travel by private car; and
  - Ensuring our transportation infrastructure is adaptable.
- 3.8 Policies within the Active and Social Places theme will:
- Enable sustainable access to housing, employment, shopping, education, health, community, leisure and sports facilities and green infrastructure;
  - Develop sustainable transportation infrastructure;
  - Require developments to encourage modal shift and be easily accessible by walking, cycling and public transport; and
  - Realise the potential of new sustainable transportation infrastructure to create new or renewed hubs of activity.
- 3.9 Moving within and between places is a key theme within PPW11. With regards to sustainable transport, it advises facilitating developments which:
- Are sited where they can be easily accessed by sustainable modes of travel and without the need for a car;
  - Are designed to integrate with existing land uses and neighbourhoods; and
  - Make it possible for all short journeys within and beyond the development to be easily made by walking and cycling.

- 3.10 Regarding active travel PPW11 states that planning authorities must set out in their development plan an integrated planning and transport strategy. This should set out how the planning authority:
- Integrate and co-ordinate sustainable transport and land use planning;
  - Facilitate and promote accessibility for all;
  - Reduce the need to travel;
  - Reduce dependency on private vehicles;
  - Prioritise and support walking, cycling and use of public transport;
  - Support the uptake of Ultra Low Emission Vehicles;
  - Reduce transport related airborne pollution; and
  - Facilitate the provision of transport infrastructure and necessary sustainable transport improvements and development.
- 3.11 It is Welsh government policy to require the use of a sustainable transport hierarchy in relation to new development, which is; walking, cycling, ultra-low emission vehicles and public transport.
- 3.12 Paragraph 4.19 relates specifically to the sustainable transport and states;
- “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”.*

### **Technical Advice Note: 18**

- 3.13 The Technical Advice Note (TAN 18) elaborates on the relationship between land use planning and transport infrastructure by outlining a range of key accessibility principles that should inform future patterns of development.
- 3.14 In the case of new residential development, sites that are accessible to jobs, shops, and services by modes other than car and are afforded sufficient capacity on public transport services are favoured.
- 3.15 TAN 18 advises that development plans should afford priority to the following:
- i) Inclusion of policies and standards on densities, and parking to achieve higher residential densities in places with good public transport accessibility and capacity; and
  - ii) Requirement for layouts and densities, which maximise the opportunity for residents to walk and cycle to local facilities, and public transport stops.



**Llwybr Newydd – The Wales Transport Strategy 2021**

- 3.16 The new Transport Strategy for Wales sets out the ‘new path’ that will shape the transport system over the next 20 years. It is a “*new way of thinking that places people and climate change at the front and centre of our transport system*”. This document crucially defines the climate emergency as one of the biggest defining issues of our time, and the need to achieve net zero by 2050.
- 3.17 This seeks to improve the social, economic, environmental and cultural well-being of Wales. It contains seven well-being goals which local authorities as well as other public bodies must seek to achieve in order to improve well-being both now and in the future several of which support this strategy’s promotion of sustainable travel.
- 3.18 The strategy sets out three urgent priorities which are illustrated in **Figure 3.2**.

**Figure 3.2 – Wales Transport Strategy Priorities**



- 3.19 Priority 1 seeks to reduce the need for people to use their cars on a daily basis by:
  - Supporting remote working in line with Welsh Government target of 30% remote working;
  - Locate new public services close to where people live and to existing public transport routes;
  - Design new developments to be walk and cycle friendly from the outset;
  - Maximise the use of land close to transport hubs;
  - Improve access to fast and reliable broadband; and
  - Set aside land for multi-modal hubs to transfer freight to smaller vans or e-cargo bikes for last mile deliveries.
- 3.20 Priority 2 aims to achieve a shift away from private car use to more sustainable transport modes, enabling more people to walk, cycle, and use public transport, as well as low-emissions vehicles. This will be promoted via the Transport Implementation Strategy contained within **Section 6**.

- 3.21 Infrastructure will be future-proofed to adapt to climate change and facilitate more sustainable transport choices. Where new transport infrastructure is needed, the Sustainable Transport Hierarchy will guide decisions. Infrastructure will be adapted to support modal shift, and new infrastructure will give priority to interventions that support walking and cycling, public transport and ultra-low emissions vehicles over other private motor vehicles.
- 3.22 Priority 3 seeks to encourage people to change their travel behaviour to use low carbon, sustainable transport. This will be done through (but not limited to):
- Developing a range of behaviour-change projects;
  - Move from individual vehicle ownership to shared solutions;
  - Reduce the cost of sustainable travel; and
  - Support digital innovation.
  -
- 3.23 The development proposals for the site will continue to meet these priorities, with the overall aim being to encourage an accessible, sustainable and efficient transport system.

#### **Future Wales – The National Plan 2040**

- 3.24 ‘Future Wales – the National Plan 2040’ (Future Wales) is the national development framework, setting the direction for development in Wales to 2040.
- 3.25 Future Wales strongly considers the Well-Being of Future Generations (Wales) Act 2015, which gives a legally-binding common purpose – the seven well-being goals – for national government, local government, local health boards and other specified public bodies. It details the ways in which these bodies must work, and work together, to improve the well-being of Wales.
- 3.26 Future Wales recognises that Placemaking is at the heart of the planning system in Wales, and that this policy establishes a strategic placemaking approach and principles to support planning authorities to shape urban growth and regeneration.
- 3.27 Policy Two of Future Wales is titled Shaping Urban Growth and Regeneration – Strategic Placemaking. It states that Urban growth and regeneration should be based on the following strategic placemaking principles:
- creating a rich mix of uses;
  - providing a variety of housing types and tenures;
  - building places at a walkable scale, with homes, local facilities and public transport within walking distance of each other;
  - increasing population density, with development built at urban densities that can support public transport and local facilities;
  - establishing a permeable network of streets, with a hierarchy that informs the nature of development;
  - promoting a plot-based approach to development, which provides opportunities for the development of small plots, including for custom and self-builders; and
  - integrating green infrastructure, informed by the planning authority’s Green Infrastructure Assessment.

- 3.28 Within its Strategic Placemaking Principles, Future Wales considers mix of uses, variety of housing, walkable scale, density, street network, plot-based development and green infrastructure.
- 3.29 Of vital importance to new developments such as the proposed site is the concept of the ‘walkable scale’. This strategic placemaking principle states that to enable active and healthy lives, people should be able to easily walk to local facilities and public transport.

### **Active Travel Wales Act 2013**

- 3.30 The Active Travel (Wales) Act 2013 places a requirement on local authorities to continuously improve facilities and routes for pedestrians and cyclists and to prepare maps identifying current and potential routes for their use.
- 3.31 Whilst the Act does not place any responsibility on new development, it does demonstrate the necessary direction of transport policy, and the proposed developments’ promotion of walking and cycling as key modes of travel accords with this.
- 3.32 The Welsh Government seeks to enable more people to walk, cycle and generally travel by more active methods, so that:
- i) More people can experience the health benefits of active travel;
  - ii) We reduce our greenhouse gas emissions;
  - iii) We help address poverty and disadvantage; and
  - iv) We help our economy grow by unlocking sustainable economic growth.

### **Wellbeing of Future Generations (Wales) Act 2015**

- 3.33 This act seeks to improve the social, economic, environmental and cultural well-being of Wales. It contains seven well-being goals which local authorities as well as other public bodies must seek to achieve in order to improve well-being both now and in the future, several of which support this development’s aim for the promotion of sustainable travel.
- 3.34 Of the seven well-being goals, the most relevant ones to this development are:
- A prosperous Wales - encouraging an innovative, prosperous and low carbon society;
  - A healthier Wales – a society in which choices and behaviours that benefit future health are understood;
  - A Wales of cohesive communities – promoting attractive, viable, safe and well-connected communities; and
  - A globally responsible Wales – considering improvement which make positive contributions towards global well-being.

### The Future Generations Report 2020

3.35 This is a once in five years report, which sets out the Commissioner's assessment of the process made in implementing the Act within the reporting period. It reflects on the progress being made.

3.36 In terms of the vision for transport, the report states;

*"Places, which embed active travel infrastructure, fully integrated with a high-speed reliable, zero carbon, affordable and completely accessible public and community transport system. Transport that is co-designed with communities and citizens' needs in mind, and which improves the social, environmental, economic and cultural well-being of Wales".*

### Vale of Glamorgan Local Development Plan (2011-2026)

3.37 The Vale of Glamorgan (VoG) Local Development Plan provides a framework for sustainable development within the VoG up until 2026. It will guide the growth within the Vale over the 15 year plan period and identifies the infrastructure requirements of the communities therein, in terms of employment, facilities and services to support that growth. The Plan demonstrates a firm commitment to the on-going regeneration and development of the VoG.

3.38 Cowbridge is identified as a 'Service Centre Settlement' within the VoG Local Development Plan and is one of the main focal points of development within the South East Zone. The Strategy aims to concentrate the majority of growth in the key, service centre and primary settlements in order to maximise the opportunities for sustainable regeneration, to favour new local service provision and to encourage the use of sustainable travel modes. The allocations in these settlements reflect their respective roles and characteristics as well as their relevant physical or environmental constraints.

3.39 The Strategy aims to concentrate the majority of growth in the key, service centres and primary settlements in order to maximise the opportunities for sustainable regeneration, to favour new local service provision and to encourage the use of sustainable travel modes.

3.40 To ensure the successful delivery of the LDP Strategy, specific area objectives have been identified for each of the service centre settlements. The relevant objectives identified for Cowbridge are as follows:

- Provide for a range and choice of housing to meet the needs of existing residents and the residents of surrounding rural communities.
- Improve the town's existing bus interchange and favour proposals that provide enhanced walking and cycling facilities to and within Cowbridge to alleviate traffic congestion, particularly through traffic along the High Street.
- Promote development proposals which provide opportunities for additional or improved infrastructure, including short stay parking facilities within the town centre.

3.41 This site forms part of land allocated for residential development (MG2 19) within the Vale of Glamorgan's (VoG) Local Development Plan (LDP) 2011-2026. The whole allocation comprises two parcels of land adjacent to the St Athan Road.



**Travel Plan SPG (July 2018)**

- 3.42 The Travel Planning SPG has been prepared to provide guidance to applicants on the production and implementation of travel plans associated with new development proposals.

**Parking Standards SPG (January 2019)**

- 3.43 The Parking Standards SPG has been prepared to expand upon the policies contained within the LDP. It sets out the Council's parking standards for new development that are both consistent and transparent.

**Vale of Glamorgan Local Transport Plan (2015-2030)**

- 3.44 The Local Transport Plan (LTP) seeks to identify the sustainable transport measures required to ensure the Vale of Glamorgan Council adheres to current requirements and good practices to allow for a sustainable transport environment for the period 2015 to 2020 as well as looking forward to 2030.
- 3.45 The LTP seeks ways to secure better conditions for pedestrians, cyclists and public transport users and to encourage a change in travel choices away from the single occupancy car. The LTP also seeks to tackle traffic congestion by securing improvements to the strategic highway corridors for commuters who may need to travel by car as well as providing better infrastructure for freight. It also addresses the key road safety priorities for the Vale.
- 3.46 There are a number of specific short, medium and long-term goals / schemes identified as well as setting out several active travel, park and ride, highway improvement and bus infrastructure schemes to meet its overall goal.

**Summary**

- 3.47 The site is shown to comply with the relevant national and local policies. It is a well-located site with a variety of opportunities to integrate itself with the existing surrounding residential areas in terms of active travel and sustainable transport.

## 4 Development Proposals

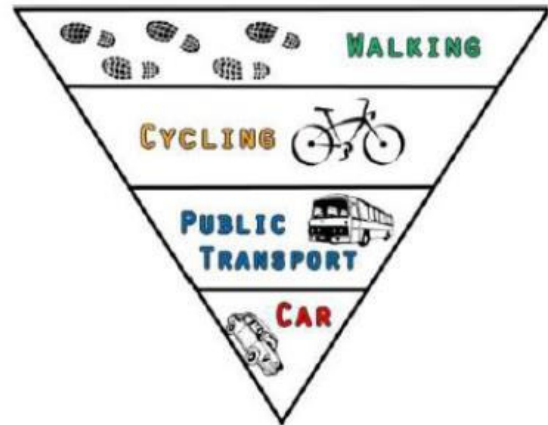
### Overview

- 4.1 The site is shown to comply with the relevant national and local policies. It is a well-located site with a variety of opportunities to integrate itself with the existing surrounding residential areas in terms of active travel and sustainable transport.

### Layout

- 4.2 The site has been developed in line with the guidance and principles of Manual for Streets and Manual for Streets 2. The site follows a clear hierarchical approach in respect of site users, as set out within Planning Policy Wales (PPW, Edition 11), with pedestrians and cyclists at the top of this hierarchy, and the emphasis on creating a sustainable development which links to the surrounding neighbourhoods and existing facilities with safe, direct and convenient pedestrian and cycle connections.
- 4.3 The site has been designed to connect and interact with existing transport networks to the north of the site, connecting to Cowbridge. The internal roads of the site will be conducive to cycling, providing permeability and connection for active travel.
- 4.4 There are four key stages to creating a socially inclusive community that encourages community interaction (within and neighbouring the scheme) in such a way to promote non-motorised modes of travel, prioritising walking and cycling, followed by the use of public transport. The four key stages are;
- Design;
  - Choice;
  - Behaviour; and
  - Network Management.
- 4.5 **Design** is in terms of creating communities, where public interaction, outdoor and indoor, is the norm. Where friends and day to day activities are nearby and easy to get to, and where it is not an automatic reaction when leaving home to get into a car. The site is placed to take advantage of the proximity of plethora of day to day facilities, as set out in **Section 2**.
- 4.6 The site is designed at a pedestrian scale, with walking and cycling an easy and attractive option and vehicle intimidation will be kept to a minimum.
- 4.7 **Choice** is in terms of providing infrastructure and facilities to minimise reliance on any single-option. This widens social inclusion, and for instance, makes contributing to commuter car congestion on average more of a choice and less of a necessity.

- 4.8 Through increased choices, a definite change in behaviour can be affected. The proposals will introduce and maintain any sustainable transport options and seek to encourage a net behavioural change.
- 4.9 **Behaviour** is in terms of educating people in the options and consequences. It brings together awareness, health, environment, and personal convenience.
- 4.10 Finally, one of the 'By-design' aims is to create an environment where fewer people automatically choose to use their cars when leaving their homes, therefore decreasing the impact on the highway network. These proposals strive not only to influence the traffic impact of the proposed development, but also the surrounding community of Cowbridge.



- 4.11 **Network Management** is in terms of managing the road network in accord with a user hierarchy. Car travel is the lowest capacity network in terms of space occupied per person. It also occupies the lowest priority in the user hierarchy. This means, for instance, prioritising the reliability and speed of bus and cycle movements over that of cars during the commuter peaks.
- 4.12 The illustrative masterplan is shown in **Figure 4.1** and **Appendix B**.

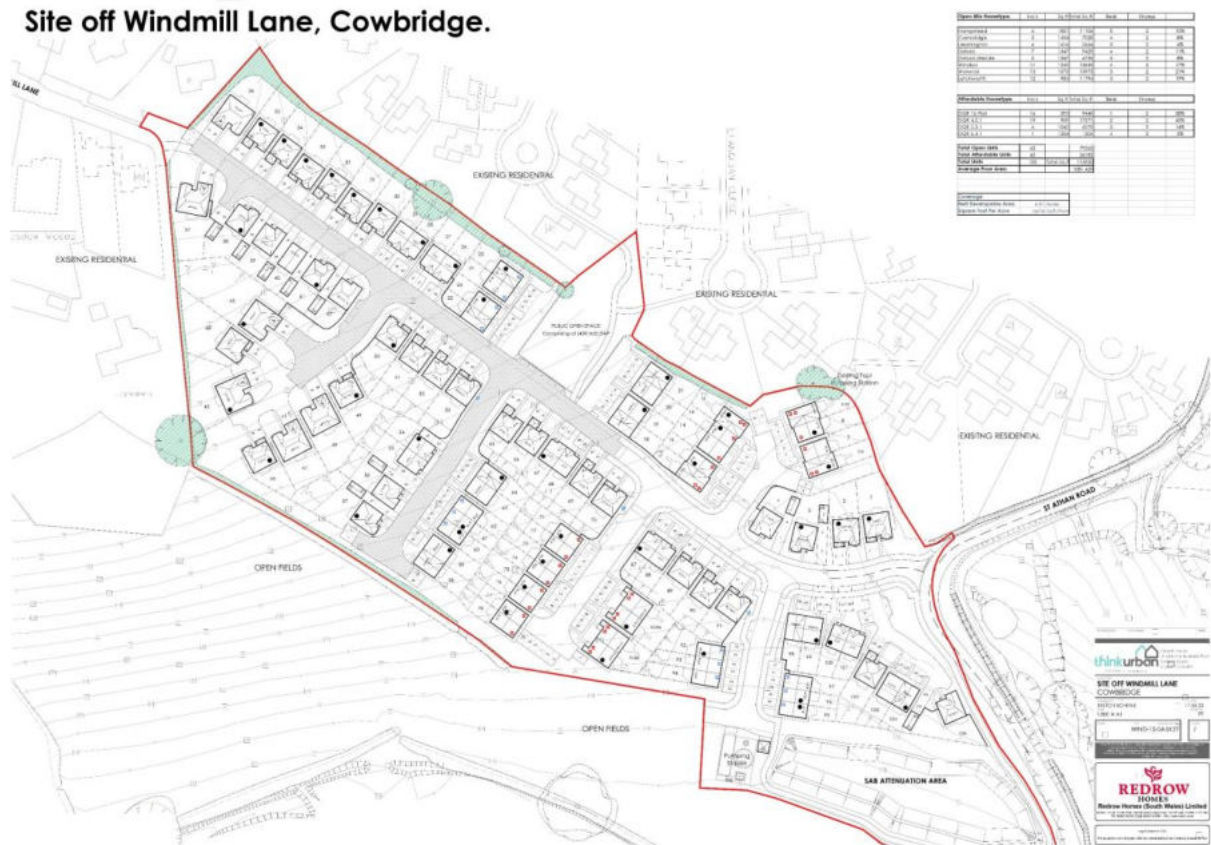


Figure 4.1 – Illustrative Masterplan

- 4.13 A review of the site layout has been undertaken and this demonstrates that both a fire appliance and a refuse vehicle can access and egress the site in a forward gear. The swept path analysis and waste collection zones are shown at **Appendix C**.
- 4.14 An accommodation schedule for the proposed development is contained within **Table 4.1**.

Table 4.1 – Accommodation Schedule

Number of Bedrooms / Type	Total
1 Bed Flat	16
2 Bed Houses	19
3 Bed Houses	40
4 Bed Houses	24
5 Bed Houses	6
Total number of units	105



## Access Arrangements

### Pedestrian / Cyclist

- 4.15 The aim is to create an environment in which pedestrians and cyclists feel as though they are afforded highest priority. The proposals will aim to create direct, convenient, and attractive active travel links from the site to the existing network and will seek to maximise and enhance the permeability of the site to pedestrians and cyclists to encourage these modes for shorter trips.
- 4.16 Designing the site to a pedestrian scale allows for the maximum opportunity to provide social inclusion. Pedestrian and cycle routes are designed to ensure full permeability through the site.
- 4.17 The road network within the site has been designed to encourage low speeds and prioritise active travel. The intention will be to create a 10-15mph environment within the site in order to encourage pedestrian and cycle activity and to prioritise social inclusion before the private car / motorist.
- 4.18 The majority of the site will be a shared space arrangement and will be 6.8 metre wide in block construction. There will be tapping edges to assist blind and partially sighted users. This will further instil the priority to pedestrians and cyclists over vehicles. The layout has been agreed in principle with officers at VoGC during pre-application discussions with the designer.
- 4.19 As demonstrated within the site layout, a new pedestrian and cycle access is proposed along the northern boundary of the site, connecting to the existing residential development via Bessant Close and Llanquian Close and to the west of the site via the existing Public Right of Way (PRoW) alignment via Windmill Lane. These new links will provide easily accessible active travel links to the existing community and existing amenities. The existing PRoW will be retained along its current alignment.

### Vehicular

- 4.20 The proposed means of vehicular access to the site is via a priority junction with St Athan Road as shown on **Figure 4.2**. The relevant drawings and associated swept paths are contained at **Appendix D**.



**Figure 4.2 – Indicative site access arrangement via St Athan Road**

- 4.21 The proposals include realigning St Athan Road to the west of its existing alignment to improve the forward visibility splays and the horizontal alignment of St Athan Road, thus reducing the curvature of the existing road and improving road safety at this location.
- 4.22 This would be accompanied by a new Traffic Regulation Order (TRO) implementing a 30mph speed limit prior to the junction on either side of St Athan Road together with the necessary signage and traffic management.
- 4.23 It is considered that this new access arrangement is the most appropriate for a development of this scale whilst additionally providing a betterment to the existing arrangement and along this section of St Athan Road. The proposed access arrangement is policy compliant and has been confirmed by a Stage 1 Road Safety Audit (RSA) that it is a safe means of access to the site; it is also in keeping with the semi-rural nature of the location.
- 4.24 In addition, the proposed access arrangement for the land to the west of St Athan Road does not prejudice access to the land on the eastern side of St Athan Road which also forms part of the overall residential allocation of 130 units, within the Local Plan. An indicative access arrangement into the eastern parcel is also shown on **Figure 4.2**, although would need to be developed further by the promoters of this land.

### Car Parking

- 4.25 The Vale of Glamorgan Parking Standards SPD (January 2019) has adopted maximum car parking standards with appropriate consideration to the local context of each site. The standards are summarised in **Table 4.2**.

**Table 4.2 - Summary of Maximum Car Parking Standards**

Type	Residents	Visitors*
Houses	1 space per bedroom (maximum 3 spaces)	1 space per 5 units
Apartments	1 space per bedroom (maximum 3 spaces)	1 space per 5 units

- 4.26 The proposed development will conform to VoG’s maximum car parking standards, a total of 241 car parking spaces will be provided, providing a ratio of 2.3 spaces per dwelling, including the requisite number of visitor parking spaces.
- 4.27 Garages will represent a proportion of these spaces, designed to accommodate parking in a discreet manner and minimise visual intrusion, and will meet the minimum internal dimensions of 6.0m x 3.0m for a single garage.

**Cycle Parking**

- 4.28 Cycle parking will be available for all plots within sheds or garages, within the curtilage of properties, as part of the development.

## 5 Existing Travel Behaviour

### Overview

5.1 This chapter provides details of the anticipated travel behaviour of the future users of the proposed development with reference to existing travel patterns and trends.

### Mode Shares

5.2 A review of the current travel behaviour within the local area has been undertaken using the 2011 Census ‘QS703EW – Method of Travel to Work’ dataset. Although it is noted that this reflects travel behaviour now some 10 years ago and travel habits have changed significantly since then (particularly more recently as our travel habits have evolved due to the COVID-19 pandemic), this data is considered a suitable proxy to understand local travel behaviour by mode.

5.3 The proposed development site lies within the Middle Super Output Area (MSOA), ‘W02000238: The Vale of Glamorgan 002’ and therefore the existing mode split for this area has been obtained. This is summarised in **Table 5.1**.

**Table 5.1 – Existing Mode Share – MSOA W02000238**

Travel Mode	Persons	Percentage (%)	Adjusted
Work mainly at or from home	316	7%	-
Underground, metro, light rail or tram	10	0%	0%
Train	24	1%	1%
Bus, minibus or coach	39	1%	2%
Taxi	8	0%	0%
Motorcycle, scooter or moped	9	0%	0%
Driving a car or van	2,030	46%	81%
Passenger in a car or van	89	2%	4%
Bicycle	23	1%	1%
On foot	240	5%	10%
Other	20	0%	1%
Not in Employment	1,651	37%	-
<b>Total</b>	<b>4,459</b>	<b>100%</b>	<b>100%</b>

5.4 The figures shown in **Table 5.1** have been adjusted to remove those residents who are either not in employment or work mainly at, or from home. This provides a more realistic modal split of those who a commute to work, away from home.

### Car Ownership

- 5.5 The 2011 census 'QS416EW – Car or Van Availability' has been analysed for the MSOA 'W02000238: The Vale of Glamorgan 002' to determine the likely level of car ownership of residents of the proposed development. The results are summarised by **Table 5.2**.

**Table 5.2 – Car or Van Availability – MSOA W02000238**

Number of Vehicles	2011 Output Area W02000238	
	Count	Percentage
No car or van	271	10%
1 car or van	956	35%
2 cars or vans	1,112	41%
3 cars or vans	283	10%
4 or more cars or vans	93	3%
Total Households	2,715	100%

- 5.6 The level of car or van ownership within the MSOA W02000238 is higher than the national average, with the percentage of households without access to a car at just 10% in comparison to the 26% average for England and Wales. Over half (54%) of households have access to two or more cars or vans which is also higher than the England and Wales national average of 32%.

## 6 Trip Forecast

- 6.1 To determine the anticipated level of multi-modal trips generated by the whole allocation of 130 homes (MG2 19), the national standards for trip generation analysis TRICS has been used.
- 6.2 TRICS is a database of trip generation from a wide variety of land uses (housing, retail, employment, etc.) across the UK. Traffic surveys are carried out to measure how many people travel to a site, by mode and what time of day. The purpose of the database is to provide an estimate of likely trip generation to/from a land use, by comparing it with trip generation from existing comparative sites of the same land use.
- 6.3 A trip generation exercise has been undertaken using the trip rates extracted from the TRICS database. The ‘Residential’ category and ‘Houses Privately Owned’ subcategory has been assessed as this is considered most representative of the proposals.
- 6.4 To obtain the most accurate representation of the site, the following site parameters have been used:
- Sites in England and Wales (excluding Greater London);
  - Sites with no Travel Plan;
  - Weekday surveys;
  - Sites in ‘Edge of town’ or ‘Suburban’ locations; and
  - Sites with up to 300 dwellings.
- 6.5 In the context of local and national transport policy, the focus should not be on traffic impact rather than accommodating people movement and providing safe and efficient active travel routes to key local amenities. As such, an initial indication of the multi-modal trip demand as a result of the delivery of 130 dwellings, in this location is provided in **Table 6.1**.
- 6.6 The full TRICS report is contained at **Appendix E**.

**Table 6.1 –Multi-modal Trip Rates and Number of Trips (130 dwellings)**

Mode	AM Peak Hour (08:00 – 09:00)		PM Peak Hour (17:00 – 18:00)	
	Arrivals	Departures	Arrivals	Departures
Total People*	0.227	0.727	0.498	0.264
	30	95	65	34
Total Vehicles**	0.140	0.348	0.282	0.156
	18	45	37	20
*the ‘total people’ category includes pedestrians, cycles, public transport users and vehicle occupants				
**the ‘total vehicles’ category includes all occupants of cars, taxis, motorcycles, light goods vehicles and OGV’s. Excludes taxi drivers’ and similar				



6.7 **Table 6.1** shows that the development proposals could be associated with up to 63 two-way vehicular trips in the AM peak period and up to 57 two-way vehicular trips in the PM peak period.

**Journey Purpose**

6.8 The National Travel Survey, which consists of a face-to-face interviews and a seven day self-completed written travel diary, allows us to understand trips by journey purpose, and the mode split of trips for each purpose.

6.9 A summary of trips by journey purpose in the AM, Inter and PM peak periods is provided in **Table 6.2**.

**Table 6.2 – National Travel Survey – Trips by Journey Purpose**

Start Time	Commuting	Business	Education	Escort education	Shopping	Other personal business and escort	Visiting friends/ entertainment/ sport	Holiday/ Day trip/ Other
0800 - 0859	20%	3%	29%	23%	4%	14%	3%	4%
1700 - 1759	32%	3%	3%	2%	12%	20%	20%	8%

6.10 **Table 6.2** demonstrates that trips can be classified into three general journey purposes, commuting, education, and leisure/recreation, with the proportion of trips for each purpose as summarised in **Table 7.5**.

**Table 6.3 - Trips by Journey Purpose – Commuting, Education, Leisure / Recreation**

Start Time	Commuting	Education	Leisure Recreation /
0800 - 0859	23%	51%	26%
1700 - 1759	36%	5%	59%

6.11 Distributing the total number of trips summarised in **Table 6.1** by the journey purpose summarised in **Table 6.2**, results in a breakdown of trips by journey purposes as summarised in **Table 6.4**.

**Table 6.4 - Total Trips by Journey Purpose**

Time Period	Commuting		Education		Leisure / Recreation	
	Arrivals	Departure	Arrivals	Departure	Arrivals	Departure
0800 - 0859	5	17	15	48	9	29
1700 - 1759	21	11	3	1	41	22

**Commuting Trips**

6.12 Given the ongoing Covid-19 pandemic and the shift of office-base work to the majority of the population working from home, it is expected that the work-from-home numbers will remain higher than pre-pandemic levels. There has been no reduction to account for working from home and it is therefore considered that this a robust assessment.

6.13 The commuter trips are therefore shown in **Table 6.5**.

**Table 6.5 – Commuting Trips (130 dwellings)**

Time Period	External Trips	
	Arrivals	Departure
0800 - 0859	5	17
1700 - 1759	21	11

6.14 Using the data available from the NTS, a judgement has been made that in the AM peak period 23% of trips are for the purpose of commuting, increasing to 36% of trips in the PM peak period.

6.15 In order to estimate an appropriate mode split for the external employment trips, the ‘Method of Travel to Work’ Census data for 2011 for the Mid Layer Super Output Areas (MSOA) Vale of Glamorgan 002, within which the site lies, has been analysed. The recorded mode split from the Census data is summarised in **Table 6.6**.

6.16 It is noted that census data only records main mode, and does not give any indication of occasional modes, for instance it does not record whether a person works one day a week from home. As such, this is likely to overestimate car borne proportion and underestimate active travel and working from home.

**Table 6.6 – Vale of Glamorgan 002 – Census Data 2011 – Method of Travel to Work**

Method of Travel to Work	Percentage
Train	1%
Bus, Minibus or Coach	2%
Taxi	0%
Motorcycle, Scooter or Moped	0%
Driving a Car or Van	81%
Passenger in a Car or Van	4%
Cycling	1%
Walking	10%
Other Method of Travel to Work	1%
<b>Total</b>	<b>100%</b>

6.17 Applying the mode split in **Table 6.6** to the employment trips results in a trip demand as summarised in **Table 6.7**.

**Table 6.7 – Residential Employment Trips – 130 Dwellings**

	AM (0800-0900)		PM (1700-1800)	
	Arrivals	Departures	Arrivals	Departures
Train	0	0	0	0
Bus, minibus or coach	0	0	0	0
Taxi	0	0	0	0
Motorcycle, scooter or moped	0	0	0	0
Driving a car or van	4	14	17	9
Passenger in a car or van	0	1	1	0
Bicycle	0	0	0	0
On foot	1	2	2	1
Other method of travel to work	0	0	0	0
<b>Total</b>	<b>5</b>	<b>17</b>	<b>21</b>	<b>11</b>

**Education**

- 6.18 The NTS data demonstrates that in the AM peak 51% of journeys are undertaken for the purpose of education, reducing to 5% in the PM peak. Of these journeys, approximately 50% relate to primary education, and 50% to secondary education.
- 6.19 The nearest primary schools to the site are Ysgol Iolo Morganwg and Y Bont Faen Primary School (650m and 850m from the site, respectively).
- 6.20 The NTS (National Travel Survey) mode split for 5–10-year-olds for all distances will be applied as provided in **Table 6.8**.

**Table 6.8 – NTS Primary Education Mode Split (All Distances)**

Mode	Mode Split
Walk	46%
Bicycle	1%
Car / van	47%
Bus	5%
Other Transport	1%
All modes	100%

6.21 Applying the mode split in **Table 7.9** to the primary education trips (50% of those in **Table 6.4**) results in a multi-modal trip demand for the purpose of primary school education, as summarised in **Table 6.9**.

**Table 6.9 – Educational Multi-Modal Trip Demand – Primary – 130 Dwellings**

	AM (0800-0900)		PM (1700-1800)	
	Arrivals	Departures	Arrivals	Departures
Train	0	0	0	0
Bus, minibus or coach	0	0	0	0
Taxi	0	0	0	0
Motorcycle, scooter or moped	0	0	0	0
Driving a car or van	0	1	0	0
Passenger in a car or van	0	0	0	0
Bicycle	0	1	0	0
On foot	7	22	1	1
Other method of travel to work	0	0	0	0
<b>Total</b>	<b>8</b>	<b>24</b>	<b>1</b>	<b>1</b>

- 6.22 In terms of secondary education, the nearest secondary schools to the site are Cowbridge Comprehensive School approximately one kilometre from the site.
- 6.23 The NTS (National Travel Survey) mode split for 11–16-year-olds for all distances will be applied as provided in **Table 6.10**.

**Table 6.10 – NTS Secondary Education Mode Split (All Distances)**

Mode	Mode Split
Walk	39%
Bicycle	3%
Car / van	26%
Bus	29%
Other Transport	4%
All modes	100%

- 6.24 Applying the mode split in **Table 6.10** to the secondary education trips (50% of those in **Table 6.4**) results in a multi-modal trip demand for the purpose of primary school education, as summarised in **Table 6.11**.



**Table 6.11 – Educational Multi-Modal Trip Demand – Secondary – 130 Dwellings**

	AM (0800-0900)		PM (1700-1800)	
	Arrivals	Departures	Arrivals	Departures
<b>Train</b>	0	0	0	0
<b>Bus, minibus or coach</b>	0	0	0	0
<b>Taxi</b>	0	0	0	0
<b>Motorcycle, scooter or moped</b>	0	0	0	0
<b>Driving a car or van</b>	1	4	0	0
<b>Passenger in a car or van</b>	0	0	0	0
<b>Bicycle</b>	0	1	0	0
<b>On foot</b>	6	19	1	1
<b>Other method of travel to work</b>	0	0	0	0
<b>Total</b>	8	24	1	1

6.25 The total Education trips are shown in **Table 6.12**.

**Table 6.12 – Educational Multi-Modal Trip Demand – 130 Dwellings**

	AM (0800-0900)		PM (1700-1800)	
	Arrivals	Departures	Arrivals	Departures
<b>Train</b>	0	0	0	0
<b>Bus, minibus or coach</b>	0	0	0	0
<b>Taxi</b>	0	0	0	0
<b>Motorcycle, scooter or moped</b>	0	0	0	0
<b>Driving a car or van</b>	2	5	0	0
<b>Passenger in a car or van</b>	0	0	0	0
<b>Bicycle</b>	0	1	0	0
<b>On foot</b>	13	42	2	1
<b>Other method of travel to work</b>	0	0	0	0
<b>Total</b>	15	48	3	1

**Leisure / Recreation**

- 6.26 The NTS data demonstrates that in the AM peak, 26% of journeys are undertaken for the purpose of leisure / recreation (shopping, personal business, visiting friends, holiday / day trips etc), increasing to 59% in the PM peak.
- 6.27 The proposals do not include community, retail or leisure facilities and therefore all trips will be external. The same mode split which was used to distribute the ‘employment’ trips has also been used to distribute the leisure / recreation trips, as summarised in **Table 6.6**.
- 6.28 A breakdown of the leisure / recreation trips is provided in **Table 6.13**.

**Table 6.13 – Mode Split of Leisure / Recreation Trips – 130 Dwellings**

	AM (0800-0900)		PM (1700-1800)	
	Arrivals	Departures	Arrivals	Departures
<b>Train</b>	0	0	1	0
<b>Bus, minibus or coach</b>	0	0	1	0
<b>Taxi</b>	0	0	0	0
<b>Motorcycle, scooter or moped</b>	0	0	0	0
<b>Driving a car or van</b>	7	24	33	18
<b>Passenger in a car or van</b>	0	1	1	1
<b>Bicycle</b>	0	0	0	0
<b>On foot</b>	1	3	4	2
<b>Other method of travel to work</b>	0	0	0	0
<b>Total</b>	9	29	41	22

**Total Development Demand**

6.29 The total residential demand, combining all journey purposes (employment, education, leisure / recreation) is summarised in **Table 6.14**.

**Table 6.14 – Total Residential Demand – 130 Dwellings**

	AM (0800-0900)		PM (1700-1800)	
	Arrivals	Departures	Arrivals	Departures
<b>Train</b>	0	1	1	0
<b>Bus, minibus or coach</b>	0	1	1	1
<b>Taxi</b>	0	0	0	0
<b>Motorcycle, scooter or moped</b>	0	0	0	0
<b>Driving a car or van</b>	13	43	51	27
<b>Passenger in a car or van</b>	1	2	2	1
<b>Bicycle</b>	0	2	1	0
<b>On foot</b>	14	46	8	4
<b>Other method of travel to work</b>	0	1	1	0
<b>Total</b>	30	95	65	34

## 7 Highway Network Assessment

7.1 This section values the impact of the proposed vehicular trip generation at the site access junction on St Athan Road, as well as the Aberthin Road / Cardiff Road / St Athan Road / Eastgate signalised junction, to the north of the site and the Gileston Rod / B4265 junction, to the south. These junctions were agreed with officers at VoG Council as part of the scoping exercise.

### Trip Distribution

7.2 The 2011 Census ‘Location of Usual Residence and Place of Work’ data has been analysed for the MSOA ‘W02000238: The Vale of Glamorgan 002’ in which the settlement of Cowbridge lies, to determine the likely route split of the commuter trips to and from the proposed development. The results are summarised by **Table 7.1**.

**Table 7.1 – Location of Place of Work (2,116 residents) – MSOA W02000238**

Place of Work	2011 Output Area W02000238			
	Route			
	1	2	3	4
All Destinations	12.1%	33.0%	23.2%	31.7%

7.3 The routes are as follows:

1. St Athan Road (South)
2. St Athan Road (North), Cardiff Road (E)
3. St Athan Road (North), Eastgate (W)
4. St Athan Road (North), Aberthin Road (N).

### Traffic Growth

7.4 In the context of traffic growth and for a robust assessment, TEMPro growth has been applied to the observed base flows to growth them to 2022 and 2027. The factors are presented without any adjustment and given the changing traffic patterns and future trends accelerated by the Covid-19 pandemic they are considered to be robust.

7.5 The proposed TEMPro growth factors are shown in **Table 7.2**.

**Table 7.2 – TEMPro Growth Factors**

		Level	Area	Local Growth Figure
2022 > 2027	AM	W020000238	The Vale of Glamorgan 002	1.0382
	PM	W020000238	The Vale of Glamorgan 002	1.0393

7.6 TEMPro includes all strategic development growth in the local area, and therefore associated traffic growth predictions. As such, this has been used as the basis on which impacts assessments associated with committed developments have been based to avoid double counting.

**Committed Development**

7.7 A list of committed developments to be included within the traffic assessment was received from officers at VoG. It comprised the following:

- a) Gileston Road, Gileston – 18 units;
- b) Flemingston Road, St Athan – 80 units;
- c) Barratts development St Athan Road / Cowbridge Road – 300 units; and
- d) Darren Farm, Cowbridge Phase 1 & 2 – 470 units.

7.8 Sites a and b have been fully built out and have therefore not been included in the assessment. Construction has begun at sites c and d, although it is not clear the status, so these two sites have been included within the assessments for robustness.

**Percentage Impact Assessment**

7.9 Using the 2022 base surveys, a percentage impact assessment has been undertaken. The results for the surveys compared with the forecast development flows for the allocation are shown in **Table 7.3**.

**Table 7.3 – Percentage Impact**

Junction	AM Peak			PM Peak		
	Dev Trips	Base Flows	% Impact	Dev Trips	Base Flows	% Impact
St Athan / Cardiff Road Signals	49	1,164	4%	70	982	7%
B4265 / Gileston Road Crossroads	2	1,018	0.2%	3	1,204	0.3%

7.10 **Table 7.3** shows the development is forecast to have a maximum impact of 7% on any of the observed junctions; St Athan Road / Cardiff Road signals during the PM peak.

7.11 As agreed with officers, further assessment would be undertaken on any junction that the development is considered to have a material impact on. As a result, the St Athan Road / Cardiff Road signals has been assessed in further detail using junction modelling software.



### Highway Network Assessment

7.12 The relevant junctions have been further reviewed using the appropriate modelling software, for the following scenarios:

- 2022 Opening Year (Observed Traffic + Traffic Growth + Committed Development);
- 2022 Opening Year and Full Development (130 dwellings);
- 2027 Future Year (Observed Traffic + Committed Development); and
- 2027 Future Year and Full Development (130 dwellings) + Committed Development.

### Site Access Junction

7.13 The results of the site access priority junction are presented in **Table 7.4**, and the full PICADY output is contained in **Appendix F**. The site access junction is a proposed new junction and therefore has been assessed for the development scenarios only.

**Table 7.4 – Site Access Modelling Results**

	AM			PM		
	Q (PCU)	Delay (s)	RFC	Q	Delay (s)	RFC
	<b>2022+ Committed Development + Full Development (130)</b>					
<b>Stream B-AC</b>	0.1	6.81	0.08	0.1	6.25	0.05
<b>Stream C-AB</b>	0.0	5.76	0.03	0.2	5.99	0.10
	<b>2027 + Committed Development Full Development (130 Dwellings)</b>					
<b>Stream B-AC</b>	0.1	6.85	0.08	0.1	6.28	0.05
<b>Stream C-AB</b>	0.0	5.74	0.03	0.2	5.98	0.10

**A – St Athan Road (S)**

**B – Site Access**

**C – St Athan Road (N)**

7.14 **Table 7.4** shows that the site access junction will operate well within its theoretical capacity, with minimal queuing on St Athan Road, and a maximum RFC of 0.1.

**Aberthin Road / Cardiff Road / St Athan Road / Eastgate Signals**

- 7.15 The results of the Aberthin Road / Cardiff Road / St Athan Road / Eastgate signalised junction are presented in **Table 7.5**, and the full LinSIG output is contained in **Appendix G**.
- 7.16 Signal timing data was requested from VoG, however this has not been received and therefore the results omit this information.

**Table 7.5 – Aberthin Road / Cardiff Road / St Athan Road / Eastgate Signals Modelling Results**

Arm	AM				PM			
	DoS (%)	MMQ (PCU)	Delay (s/PCU)	PRC (%)	DoS (%)	MMQ (PCU)	Delay (s/PCU)	PRC (%)
<b>2022 Observed</b>								
Cardiff Road (E)	82.3	10	60	8.8	43.4	5	33	39.0
St Athan Road (S)	82.4	10	64		64.6	6	53	
Eastgate (W)	67.6	8	42		64.0	8	39	
Aberthin Road	82.7	13	63		64.7	8	38	
<b>2022 + Committed Development</b>								
Cardiff Road (E)	83.7	11	63	5.6	48.7	5	35	32.4
St Athan Road (S)	83.8	12	65		68.0	6	54	
Eastgate (W)	72.5	10	46		67.5	8	41	
Aberthin Road	85.2	14	61		66.7	9	39	
<b>2022 + Committed Development + Development (130 units)</b>								
Cardiff Road (E)	87.5	12	72	1.1	52.6	6	37	25.3
St Athan Road (S)	89.1	14	78		71.7	7	55	
Eastgate (W)	74.7	10	48		71.8	10	44	
Aberthin Road	88.0	15	68		70.9	10	42	
<b>2027</b>								
Cardiff Road (E)	83.4	11	66	6.7	46.2	5	34	34.1
St Athan Road (S)	82.9	10	64		67.1	6	55	
Eastgate (W)	72.9	9	46		66.5	8	40	
Aberthin Road	84.4	14	56		67.0	9	39	
<b>2027 + Committed Development</b>								
Cardiff Road (E)	87.5	12	72	1.6	50.0	6	35	28.0
St Athan Road (S)	86.5	13	70		68.1	7	53	
Eastgate (W)	75.1	10	47		70.1	9	42	
Aberthin Road	88.6	16	67		70.3	9	41	
<b>2027 + Committed Development + Development (130 units)</b>								
Cardiff Road (E)	90.2	13	87		55.3	6	37	

St Athan Road (S)	91.7	13	79	-3.8	74.0	7	57	20.8
Eastgate (W)	75.7	10	48		74.5	10	46	
Aberthin Road	93.4	16	80		73.3	10	43	

7.17 **Table 7.4** shows that the St Athan Road / Cardiff Road signalised junction will operate within its theoretical capacity, with an acceptable level of queuing during the PM peak, and a maximum DoS of 75%.

7.18 As shown in **Table 7.4**, the St Athan Road / Cardiff Road signal junction is shown to operate with 8.8% capacity in 2022 with no development in the AM peak scenario and 6.7% in the 2027 base scenario. It also shows that there would be a maximum degree of saturation (DoS) of 82.7 % on the Aberthin Road arm during the 2022 base scenario and 84.4% during the 2027 base scenario. **Table 7.4** also shows that during the 2027 with the development and committed development, it would operate close to capacity with a maximum DoS of 93.4% on the Aberthin Road arm, with up to 87 seconds of queuing on the Cardiff Road East arm of the junction. It has therefore been established that this junction will operate close to capacity in 2027 without the proposed site being approved. It should also be noted that the junction has been assessed for the whole allocation of 130 units, however the proposed development is for up to 90 units.

7.19 For the purposes of a single hour in the day that the junction operates close to capacity, no mitigation has been deemed necessary. It is also considered that due to COVID and the changes in work practises that it has brought, working from home and more flexible working patterns available, future residents can actively avoid this junction during the AM peak. Indeed, Welsh Government have announced their desire to give workers in Wales more flexibility, and the aim is that 30% of the Welsh workforce will work at home or near their home.

**Summary**

7.20 The impact of the proposed development on the local highway is demonstrated to be minimal, with mostly imperceptible increases to delay and queuing on existing junctions.

7.21 The proposed site access junction will not result in any perceptible queuing as a result of the proposed development and will therefore have a minimal impact on the existing operation of St Athan Road.

7.22 The conclusion is that the effect of the development, in terms of highway capacity, is not significant.

## 8 Summary and Conclusion

### Summary

- 8.1 The site is location approximately one kilometre south of the centre of Cowbridge, a market town located within the Vale of Glamorgan.
- 8.2 The site is located in close proximity to nearby local facilities and services, with access achievable by active modes of travel as well as by public transport. The development proposals include connections to the existing pedestrian and cycle networks in the vicinity of the site to provide continuous pedestrian routes between the site and local facilities.
- 8.3 This TA has been prepared in accordance with relevant advice and guidance. It demonstrates that the site is in accordance with national and local transport policies. The TA has been scoped with the highway officers at the Vale of Glamorgan Council (VoGC).
- 8.4 The relevant national and local planning policy and guidance has been referenced in the preparation of this TA. The National Planning Policy Framework (NPPF) sets out a presumption in favour of sustainable development.
- 8.5 The development promotes travel choice from the outset where possible by providing links to existing residential areas and the established pedestrian routes. The accompanying Travel Plan will aid in encouraging sustainable travel for short journeys and shared or public travel for longer journeys. First and foremost, the development is designed to reduce the need to travel in the first instance which takes advantage of rapidly accelerating attitudes to home working and local living.
- 8.6 Vehicular access to the site will be from St Athan Road via a new priority junction. The junction has been demonstrated to cater for the capacity of the development, with significant spare capacity and minimal queuing on St Athan Road.
- 8.7 The form of the access which was extensively discussed through pre-application meetings with the VoG is considered the most appropriate for a development of this scale and whilst additionally providing a betterment to the exiting arrangement along this section of St Athan Road, the proposed access arrangement is policy compliant and in keeping with the semi-rural nature of this location. In addition, the proposed access arrangement for this parcel (land to the west of St Athan Road) does not prejudice access to the land on the eastern side of St Athan Road, which also forms part of the overall residential allocation of 130 units, within the Local Plan.
- 8.8 With the changing nature of travel, which has been accelerated by the Covid-19 events, accounting also for generational mindsets and the changing priorities reflected in policy, the potential to create sustainable travel habits for all residents from the outset is excellent. Therefore, delivery of this site ought to see far fewer vehicular trips than forecasted. It is clear that an ongoing shift in the travel methods of the UK is underway and ongoing. The dominance of the car is gradually being eroded by the pressing need to shift travel patterns towards more sustainable means of travel.

## Conclusion

- 8.9 The site is considered to be well located for a residential development of this scale, with opportunities to connect to the existing active travel network and the local public transport options.
- 8.10 The development of this site offers an opportunity to create a sustainable community from the outset, through creative design and sustainable travel offer.
- 8.11 In conclusion, this is a well-located and sustainable site which, in transport terms, is policy compliant and hence should be acceptable from a transport and highways perspective.

# Appendix A

## Scoping Note



# Land adjacent to St Athan Road, Cowbridge

## Technical note – vehicular access

195148-TN01-V2

### Introduction

1. Vectos is retained by Redrow Homes Plc to advise on transport and highways matters relating to a residential site of up to 100 units as allocated (MG2(19)) within the Vale of Glamorgan's (VoG) LDP.
2. The purpose of this Technical Note (TN) is to set out the proposed vehicular access arrangement for the site and establish the principle of this access to facilitate further detailed masterplanning on the site ahead of any planning application. As such, the views of the VoG highways team are sought in this regard.
3. The location of the site relative to Cowbridge and St Athan Road is shown in **Figure 1**.

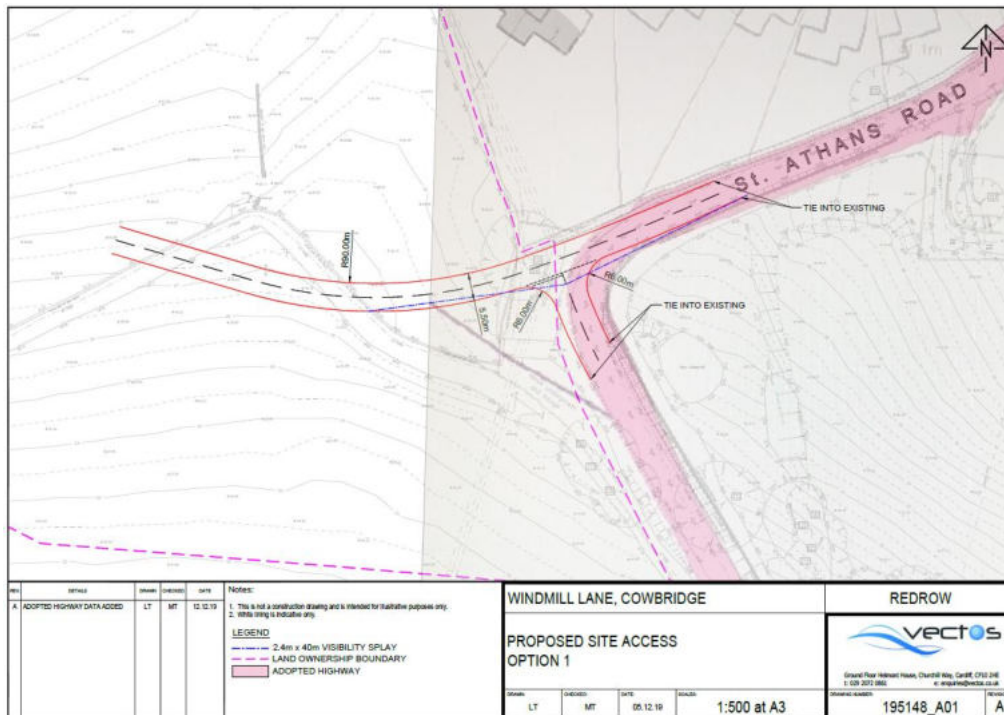
**Figure 1 – Site location (MG2 (19), St Athan Road, Cowbridge.**



### Background

4. The original access proposed for the site and as shown in **Figure 2**, was to change the priority of St Athan Road into the site in order to respond to the engineering constraints and landownership boundaries including the adopted highway boundary.

**Figure 2 – Original access proposal with a change of priority on St Athan Road**



5. During the initial pre application discussions, VoG highway officers raised concerns about this proposed access arrangement, namely this being a confusing road layout for motorists and suggesting that a roundabout would be a more appropriate access to the site.
6. Following this feedback we have sought to address these initial concerns raised by the VoG highway officers.
7. Initially, a roundabout option was considered and whilst this form of access may provide a degree of traffic calming on St Athan Road, it is extremely inefficient in terms of land take/density and problematic with existing / proposed levels. The consequential impact would be significant on the viability of the development. In addition, and when evaluated against the effect on a semi-rural setting, landscape sensitivities and placemaking, a roundabout is not considered to be the most appropriate form of access for this proposed development.

**Existing Conditions**

8. St Athan Road in the vicinity of the site is subject to the National Speed limit (60mph) and has a steep downward gradient from north to south past the site. The existing speed gateway feature (30mph signage) is located to the south of Hillside Drive on the eastern side of St Athan Road. St Athan road provides a vehicular link from the south of Cowbridge to St Athan some 5.5km to the south
9. The horizontal geometry of St Athan Road in the immediate vicinity of the site is also challenging with an almost 90 degree bend in the road on the frontage of the site access.
10. In order to ascertain the existing vehicle speeds and traffic volumes on St Athan Road, an ATC survey was commissioned between Feb 27<sup>th</sup> and 4<sup>th</sup> March 2020 recording traffic conditions for a neutral week

and prior to any COVID-19 lockdown measures. Two ATC's were commissioned and positioned to the north and south of the existing bend on St Athan Rd in the vicinity of the site as shown in **Figure 3**.

**Figure 3 – Location of ATC on St Athan Road**

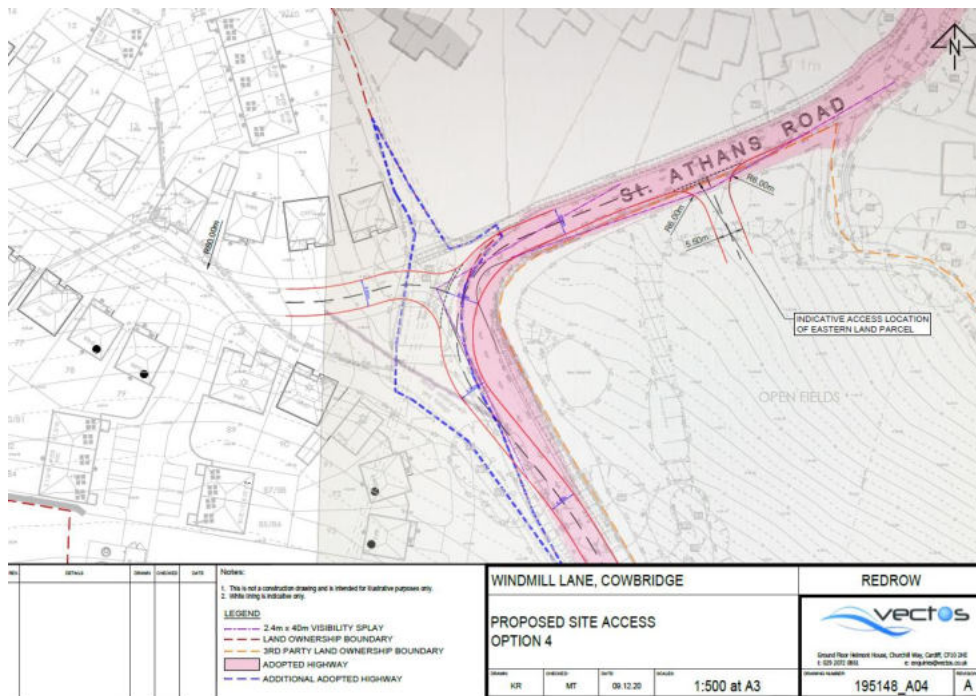


11. The results of this traffic survey show that:
  - The observed AADT (two way) is 2159 vehicles with 1114 vehicles travelling northbound and 1045 vehicles travelling southbound.
  - The observed vehicle speeds are well within the prescribed speed limit (60mph) ranging from:
  - Northbound average - 27.9mph -30.9mph, 85<sup>th</sup> 'ile - 31.4mph -34.9mph
  - Southbound average - 29.1mph-29.2mph, 85<sup>th</sup> 'ile - 33.6mph -33.4mph.
  
12. The ADDT demonstrates that the observed flow of traffic on St Athan Road is low and that vehicle speeds are well within the prescribed speed limit and are clearly controlled by the existing horizontal and vertical geometry.

### Proposed Vehicular Access

13. The proposed vehicular access to the site from St Athan Road is shown in **Figure 4** together with a revised overlay of the adopted highway boundary. This proposed access would be subject to detailed design and Road Safety Audit and is provided in preliminary 2D layout at this stage.

Figure 4 – Proposed Vehicular Access from St Athan Road



14. The proposed means of vehicular access to the site is via a standard priority junction with St Athan Road. The relevant drawings and associated track plots are also shown in greater detail in **Appendix A**.
15. The proposal is to realign St Athan Road to the west of its existing alignment to improve the forward visibility splays and the horizontal alignment of St Athan Road, thus reducing the curvature of the existing road and hence improving highway safety.
16. This would be accompanied by a TRO implementing a 30mph speed limit prior to the junction on either side of St Athan Road together with the necessary signage and traffic management which has yet to be developed. The design would also be subject to a full capacity analysis and an independent Road Safety Audit.
17. The vehicle speed measurements recorded by the traffic surveys demonstrate that a 30mph speed limit will be appropriate at this location and commensurate with existing vehicle speeds, albeit those recorded within the context of the existing National Speed Limit. In addition, the vertical and horizontal geometry of St Athan Road is naturally suppressing vehicle speeds and the presence of a new access to the site together with built form, greater activity and traffic management will ensure that vehicle speeds are kept within 30mph.
18. It is considered that this form of access is the most appropriate for a development of this scale whilst additionally providing a betterment to the existing arrangement along this section of St Athan Road. The proposed access arrangement is policy compliant and, subject to the Road Safety Audit referenced above, a safe means of access into the site. It is also in keeping with the semi-rural nature of this location.
19. In addition, the proposed access arrangement for the land to the west of St Athan Road does not prejudice access to the land on the eastern side of St Athan Road which also forms part of the overall residential allocation (130 units) within the Local Plan. An indicative access arrangement into the eastern



land parcel is also shown in **Figure 4** although this would need to be developed by the promoters of this land.

## Conclusion

20. This Technical Note has set out the rationale for the proposed means of access to a residential site of up to 100 units allocated within the VoG's Local Plan and following initial pre application discussions with the VoG.
21. The basis of the proposed access arrangement responds to the initial feedback received and the challenges of existing horizontal and vertical geometry, land ownership and the information gathered in respect of existing vehicle speeds / volumes on St Athan Road. It is a standard priority junction arrangement.
22. Whilst it is acknowledged that this preliminary 2D access arrangement would be subject to full 3D design, highway capacity analysis and an independent Road Safety Audit, the views of the highway department within VoG are sought at this stage prior to developing a potential planning application.
23. It would also be useful to gauge opinion from the VoG in terms of the indicative layout for the site in relation to the type of junction and proximity of residential dwellings to the access proposed from St Athan Road.

Appendix A – Proposed Access



REV.	DETAILS	DRAWN	CHECKED	DATE

**Notes:**

1. This is not a construction drawing and is intended for illustrative purposes only.
2. White lining is indicative only.

**LEGEND**

- 2.4m x 40m VISIBILITY SPLAY
- LAND OWNERSHIP BOUNDARY
- 3RD PARTY LAND OWNERSHIP BOUNDARY
- ADOPTED HIGHWAY
- ADDITIONAL ADOPTED HIGHWAY

**WINDMILL LANE, COWBRIDGE**

**PROPOSED SITE ACCESS  
OPTION 4**

DRAWN: KR    CHECKED: MT    DATE: 09.12.20    SCALES: 1:500 at A3

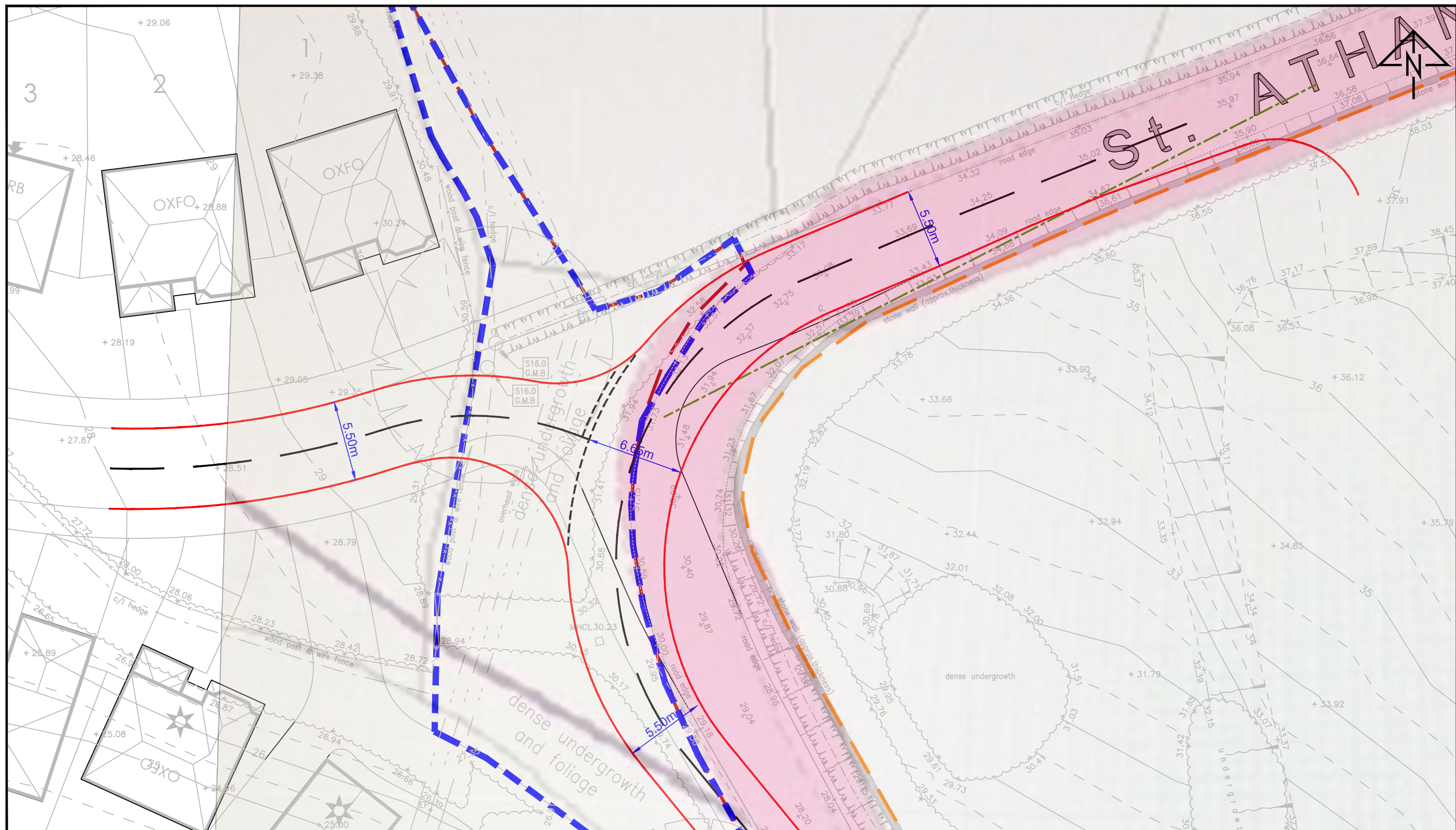
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DRAWING NUMBER: **195148\_A04**    REVISION: **A**





REV.	DETAILS	DRAWN	CHECKED	DATE

**Notes:**

- This is not a construction drawing and is intended for illustrative purposes only.
- White lining is indicative only.

**LEGEND**

- 50m FORWARD VISIBILITY (30mph WITH A 12% GRADIENT PER MFS)
- ADOPTED HIGHWAY

**WINDMILL LANE, COWBRIDGE**

**PROPOSED SITE ACCESS FORWARD VISIBILITY**

DRAWN: KR    CHECKED: MT    DATE: 09.12.20    SCALES: 1:250 at A3

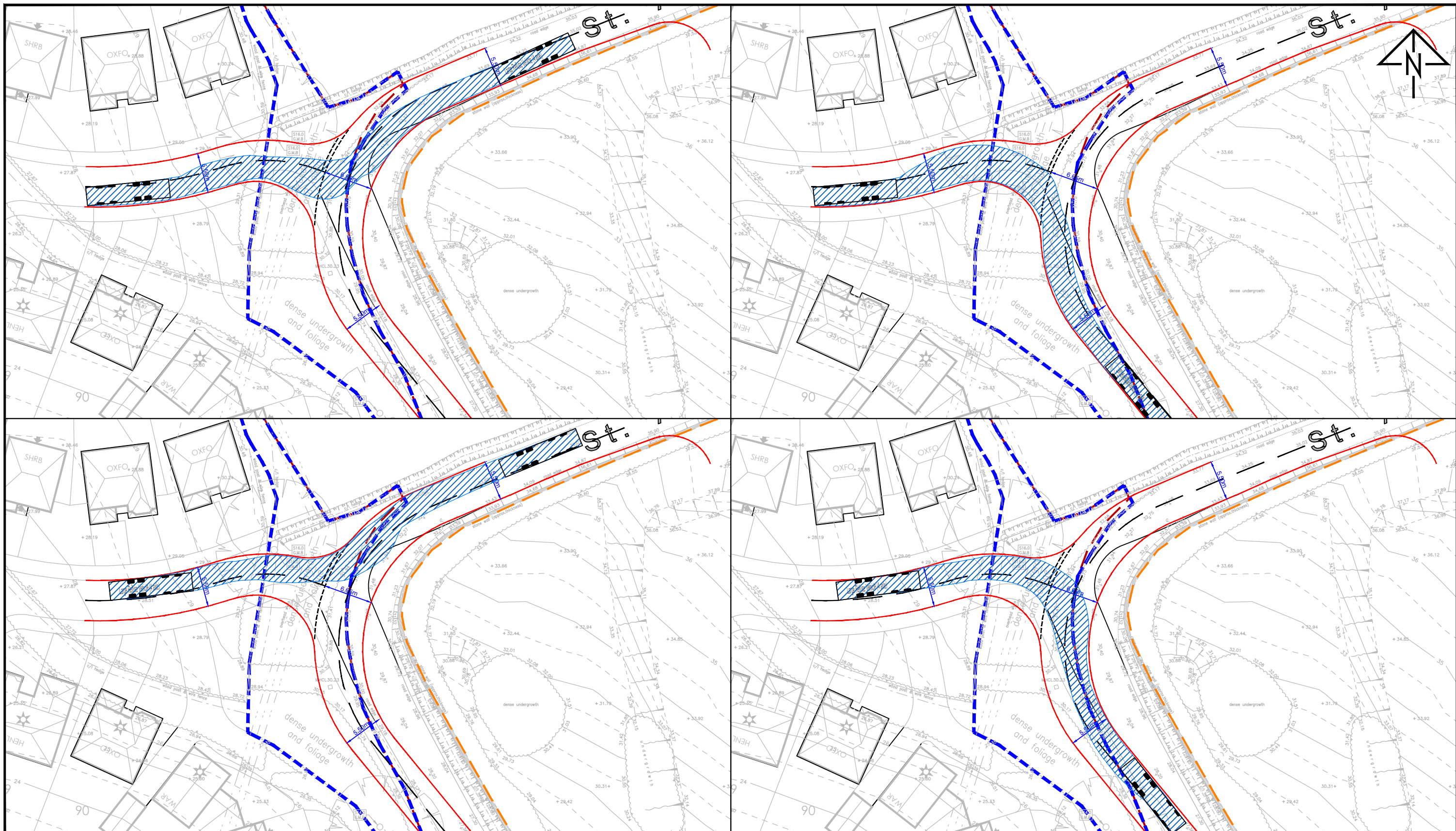
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DRAWING NUMBER: 195148\_SK01    REVISION: A





REV.	DETAILS	DRAWN	CHECKED	DATE

**Notes:**

- This is not a construction drawing and is intended for illustrative purposes only.
- White lining is indicative only.

Large Refuse Vehicle (4 axle)

Overall Length 11.347m  
 Overall Width 2.500m  
 Overall Body Height 3.751m  
 Min Body Ground Clearance 0.304m  
 Track Width 2.500m  
 Lock to lock time 6.00s  
 Wall to Wall Turning Radius 11.330m

**WINDMILL LANE, COWBRIDGE**

**11.3m REFUSE VEHICLE  
 SWEPT PATH ANALYSIS  
 ST ATHANS ROAD JUNCTION**

DRAWN: KR	CHECKED: MT	DATE: 09.12.20	SCALES: 1:500 at A3
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DRAWING NUMBER: 195148_AT_A02	REVISION: A
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# Appendix B

Site Layout