



# Penallta Colliery, Hengoed

## Transport Assessment

December 2025

The Power Hall Ltd



**RESIDENTIAL DEVELOPMENT  
PENALLTA COLLIERY  
HENGOD**

**TRANSPORT ASSESSMENT**

**CONTROLLED DOCUMENT**

<i>Document No:</i>	020.0929/TA/2	
<i>Status:</i>	Original	
	<i>Name</i>	<i>Date</i>
<i>Prepared by:</i>	Ollie Samuel-Camps	November 2025
<i>Checked by:</i>	Luke Millar	November 2025
<i>Approved by:</i>	Harry Cross	November 2025

**Revision Record**

<i>Rev.</i>	<i>Date</i>	<i>By</i>	<i>Summary of Changes</i>	<i>Aprvd</i>
2	17.12.25	OSC	Updated Layout	HLC

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The Power Hall Ltd  
6 Burgess Wood Road South  
Beaconsfield  
Buckinghamshire  
HP9 1EU

Paul Basham Associates Ltd  
The Lambourn  
Wyndyke Furlong  
Abingdon  
Oxfordshire  
OX14 1UJ

# RESIDENTIAL DEVELOPMENT PENALLTA COLLIERY HENGOED

## TRANSPORT ASSESSMENT

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## 1. INTRODUCTION

- 1.1 This Transport Assessment (TA) has been prepared by Paul Basham Associates on behalf of The Power Hall Ltd to support a planning application for the development of up to 175 dwellings at Penallta Colliery, Hengoed. The site location is demonstrated in **Figure 1**, with the site layout included in **Appendix A**.

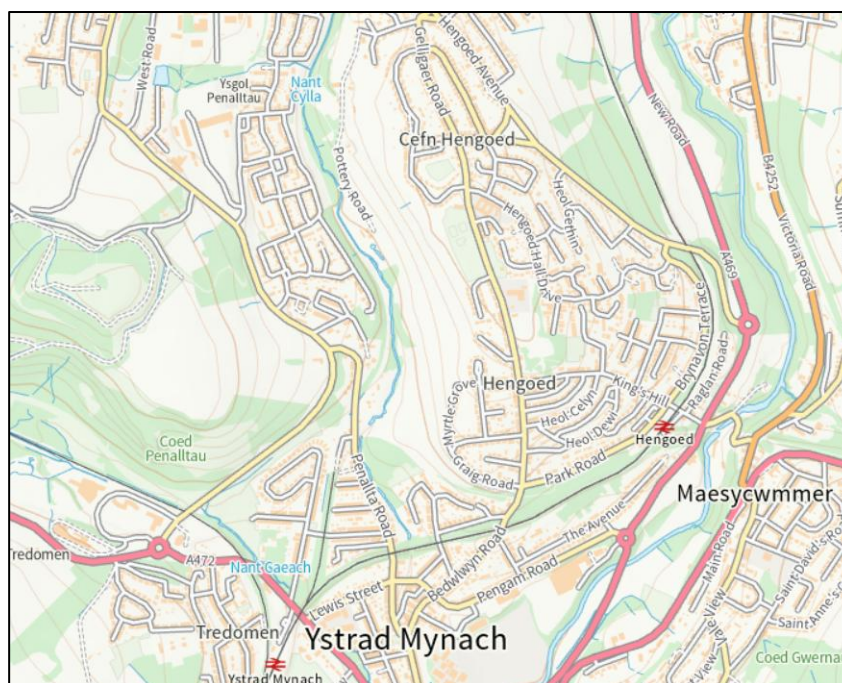


Figure 1: Site Location

- 1.2 Paul Basham Associates have prepared a Full Travel Plan (TP) in support of the application.
- 1.3 There is no recent planning history associated with the site however an application for the development of 48 homes was approved in November 2018 (ref: 18/0362/FULL) to the west of the site. In addition, a live application for the development of 33 affordable homes and a retail unit was submitted in August 2025 (ref: 25/0599/FULL) to the south of the site at Land At Grid Ref 313987 195625 Winding Wheel Lane Penallta.
- 1.4 It should also be noted that Penallta Colliery forms part of Caerphilly County Borough Council's latest Joint Housing Land Availability Study published in July 2019. Within the study it was identified that the site had capacity for 188 units with 156 remaining at the time of the study.
- 1.5 The scope of the highways input required for this application has been discussed at length with Caerphilly County Borough Council (CCBC) and CCBC highways officers through pre-application consultations. More specifically, this TA will cover the following elements:

- Planning Policy
- Site Accessibility and PIA Data review
- Summary of Development Proposals
- Traffic Generation and Distribution
- Summary and Conclusions

1.6 In support of this TA a site visit was conducted in March 2024.

## 2. PLANNING POLICY

2.1 The proposed development and supplementary reports have been prepared in accordance with national, regional and local policy, including:

- Planning Policy Wales (2024);
- Technical Advice Note 18 (2007);
- The Wales Transport Strategy 2021;
- South East Wales Valley Local Transport Plan (2015); and
- Caerphilly County Borough Council Local Development Plan (2010).

### Planning Policy Wales (2024)

2.2 Planning Policy Wales (2024) sets out the land use policies of the Welsh Government. The primary objective of the document is to ensure that the planning system contributes to the delivery of a sustainable development and improves the social, economic, environmental, and cultural well-being of Wales. Chapter 4 of the PPW relates to Active and Social Places with Section 4.1 relating to transport specifically:

#### Paragraph 4.1

The planning system should enable people to access jobs and services through shorter, more efficient and sustainable journeys, by walking, cycling and public transport. By influencing the location, scale, density, mix of uses and design of new development, the planning system can improve choice in transport and secure accessibility in a way which supports sustainable development, increases physical activity, improves health and helps to tackle the causes of climate change and airborne pollution by:

- Bringing services to people to reduce the need to travel. This is not about preventing travel altogether, it is about planning ahead for better physical and digital connectivity to support access to more local services, and more home and remote working. If more people can walk and cycle for everyday trips, we will reduce our dependency on cars.
- Allowing people and goods to move easily from door-to-door by accessible, sustainable and efficient transport. To achieve this, we will need to invest in reliable, efficient and affordable transport services that people want to use, can use and do use. We also need the transport infrastructure to support those services. We will make sure our transport infrastructure is safe, accessible, well-maintained and future-proofed, to adapt to climate change.
- Where we need new transport infrastructure, we will use the sustainable transport hierarchy to give priority to meeting the demand for travel by walking, cycling and public transport ahead of private motor vehicles.

#### Paragraph 4.1.11

Development proposals must seek to maximise accessibility by walking, cycling and public transport, by prioritising the provision of appropriate on-site infrastructure and, where necessary, mitigating transport impacts through the provision of off-site measures, such as the development of active travel routes, bus priority infrastructure and financial support for public transport services. Importantly, sustainable transport infrastructure and services should be prioritised and put in place from the outset, before people have moved in and travel patterns have been established.

#### Paragraph 4.1.15

Careful consideration needs to be given in development plans to the allocation of new sites which are likely to generate significant levels of movement, to ensure that access provisions which enable walking and cycling, as well as for public transport, are included from the outset and that any implications associated with airborne pollution can be addressed.

#### Paragraph 4.1.27

The Active Travel (Wales) Act 2013<sup>23</sup> makes walking and cycling the preferred option for shorter journeys, particularly everyday journeys, such as to and from a workplace or education establishment, or in order to access health, leisure or other services or facilities. The Active Travel Act requires local authorities to produce Active Travel Network Maps (ATNMs),

identifying the walking and cycling routes required to create fully integrated networks for walking and cycling to access work, education, services and facilities.

### Technical Advice Note 18 (2007)

2.3 Technical Advice Note 18 (TAN) is a supplementary document to PPW that focuses on transport. The following paragraphs relate to this TA:

#### Paragraph 3.6

Developers should be able to demonstrate that:

- the development will facilitate access by new residents to public transport stops, local shops and facilities by walking and cycling;
- the walking, cycling, public transport and car routes through or adjacent to the site are integrated in accordance with expressed principles and in the context of their relationship with parking areas and public recreation spaces.

#### Paragraph 6.2

Local authorities should promote walking as the main mode of transport for shorter trips through the use of their planning and transport powers. Consideration should be given to ways in which areas and developments can be made more attractive and safer for pedestrians through the arrangement of land uses and design policy<sup>37 38</sup>. When preparing development plans, design guidance, master plans and in determining planning applications authorities should:

- ensure that new development encourages walking as a prime means for local journeys by giving careful consideration to location, access arrangements and design, including the siting of buildings close to the main footway, public transport stops and pedestrian desire lines;
- ensure that pedestrian routes provide a safe and fully inclusive pedestrian environment, particularly for routes to primary schools;
- ensure the adoption of suitable measures, such as wide pavements, adequate lighting, pedestrian friendly desire lines and road crossings, and traffic calming;

#### Paragraph 6.4

Local authorities should aim to develop an effective network of cycle routes, including safe routes to schools. Development plans, design guidance, and master plans should include encourage cycling through:

- ensuring that new development encourages cycling by giving careful consideration to location, design, access arrangements, travel 'desire lines' through a development, and integration with existing and potential off-site links;
- adopting minimum cycle parking standards within their parking strategies - for commercial premises these standards should include cycle parking for both employees and visitors; and
- ensuring new residential developments provide storage for bicycles so they are easily available for everyday use while secure enough to be left unattended for long periods of time.

### The Wales Transport Strategy

2.4 The Wales Transport Strategy (WTS) acts as the central guidance for Wales. It is identified as a key transport policy document for creating an integrated transport system for Wales as a whole. The WTS identified 3 priorities to achieve an accessible, sustainable and efficient transport system which are detailed below:

- **Priority 1:** Bring services to people in order to reduce the need to travel.
- **Priority 2:** Allow people and goods to move easily and from door to door by accessible, sustainable transport.
- **Priority 3:** Encourage people to make the change to more sustainable transport.

### **South East Wales Valley Local Transport Plan (LTP) 2015**

- 2.5 The five South East Wales Valleys local authorities (Blaenau Gwent, Caerphilly, Merthyr Tydfil, Rhondda Cynon Taf and Torfaen) have combined to prepare the Local Transport Plan. The LTP outlines some of the transport concerns and challenges that the valleys face with increasing pressure to develop vacant land.
- 2.6 This LTP has a number of core activities and interventions identified to ensure the delivery of the LTP is successful, as listed below:
- Develop innovative walking, cycling and Smarter Choices programmes;
  - Continuing investment in the regional rail system;
  - Improve the quality of bus services across the region;
  - Develop better public transport integration; and
  - Make better use of the regional road system.

### **Caerphilly County Borough Local Development Plan (LDP) 2010**

- 2.7 The LDP provides a 'statutory framework' for development and use of land within the Borough, with a focus on ensuring the land is efficiently utilised whilst also stimulating the local economy and safeguarding for the benefit of present and future generations. The aims of the LDP in relation to transport are:
- To ensure that new development minimises emissions of greenhouse gases as far as is practically possible in order to mitigate the effects of climate change;
  - To provide a modern, integrated and sustainable transport system that increases opportunity, promotes prosperity and protects the environment; where public transport, walking and cycling provide real travel alternatives;
  - To contribute to improving public health, by promoting land use development that contribute to healthy lifestyles and wellbeing

### **Caerphilly County Borough Local Development Plan Review (LDPR) (up to 2035)**

- 2.8 A review of the adopted LDP is currently being undertaken.
- 2.9 This TA has been written in accordance with the above policies to meet the sustainable requirements for new developments within CCBC and increase the modal share of alternative transport options for the benefit of the proposed development and wider community.



### 3. SITE LOCATION

#### Site Location

- 3.1 The site is located approximately 2km northwest of Hengoed and 1.7km north of Ystrad Mynach. The site is bordered by Ysgol Gymraeg Penalltau Primary School to the north, Cwm Calon Road and residential development to the east, and Penallta Road to the south and west. It should be noted that there are existing office/workshop uses at the site.

#### Local Road Network

- 3.2 The site will be accessed from Cwm Callon Road which facilitates travel north/south and has a variable speed limit of 30mph in the vicinity of the sites access and 20mph from the Heron Drive roundabout northwards. Cwm Callon Road is flanked on both sides by a shared footway/cycleway c.2m in width and has no parking restrictions along its extent with a c.120m long layby present on the western side of the carriageway north of the Heron Drive roundabout facilitating on-street parking. The existing conditions of Cwm Callon Road can be seen in **Photographs 1 and 2**.



**Photograph 1:** Existing conditions on Cwm Callon Road



**Photograph 2:** Existing conditions on Cwm Callon Road

- 3.3 Approximately 500m south of the site access, Cwm Callon Road connects with Penallta Road via a simple priority T-junction which also contains a refuge island with dropped kerbs and tactile paving. Penallta Road facilitates travel northwest/southeast and has a posted speed limit of 30mph. Approximately 100m northwest of the Cwm Callon Road junction, double yellow lines run to the northwest for the remainder of the road's extent. A footway is present along the northeastern side of the road which links to the footways on both sides of Cwm Callon Road. Approximately 300m south and 150m northwest of the junction a footway is also present on the western extent of the road a refuge island with dropped kerbs and tactile paving is present by the southern footway facilitating pedestrians crossing the road. The existing conditions of Penallta Road can be seen in **Photographs 3 and 4**.



**Photograph 3:** Existing conditions on Penallta Road



**Photograph 4:** Existing conditions on Penallta Road

### Local Facilities

- 3.4 There are several amenities and facilities located within close proximity to the site as seen in **Table 1**. Walking and cycling speeds are based upon the Chartered Institution for Highways and Transportation (CIHT) guidance with walking speeds of 80m/min and cycling speeds of 250m/min.

Amenity	Distance from Site Access	Walking Time (80m per minute)	Cycle Time (250m per minute)
Old Colliery bus stop	350m	4 minutes	1 minute
Ysgol Gymraeg Penalltau Primary School	350m	4 minutes	1 minute
Penbryn Community Centre	900m	11 minutes	4 minutes
The Fox & Hounds	900m	11 minutes	4 minutes
Parc Penallta	950m	12 minutes	4 minutes
Cefn Hengoed Post Office	1.4km	18 minutes	6 minutes
Ystrad Mynach Library	1.4km	18 minutes	6 minutes
Allied Pharmacy	1.5km	19 minutes	6 minutes
Ystrad Mynach Station	1.7km	21 minutes	7 minutes
Tesco Superstore	1.9km	24 minutes	8 minutes
Hengoed Primary School	2km	25 minutes	8 minutes

**Table 1:** Local Amenities and Facilities

- 3.5 Walking and Cycling Isochrone maps are illustrated in **Figures 2 and 3**.

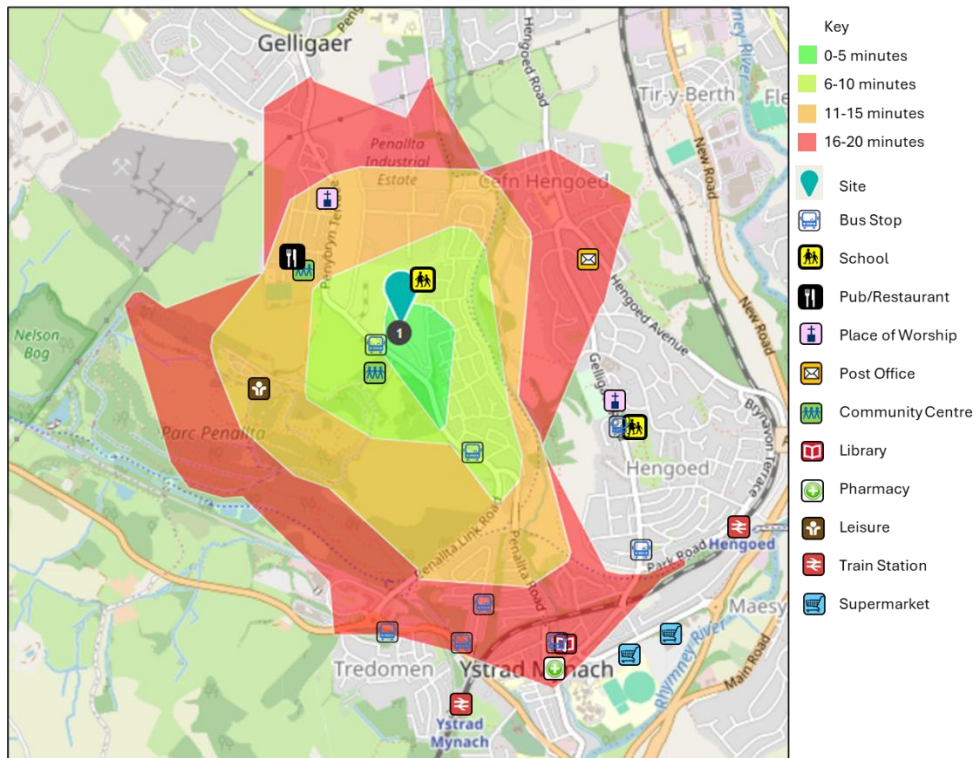


Figure 2: Walking Isochrone Map

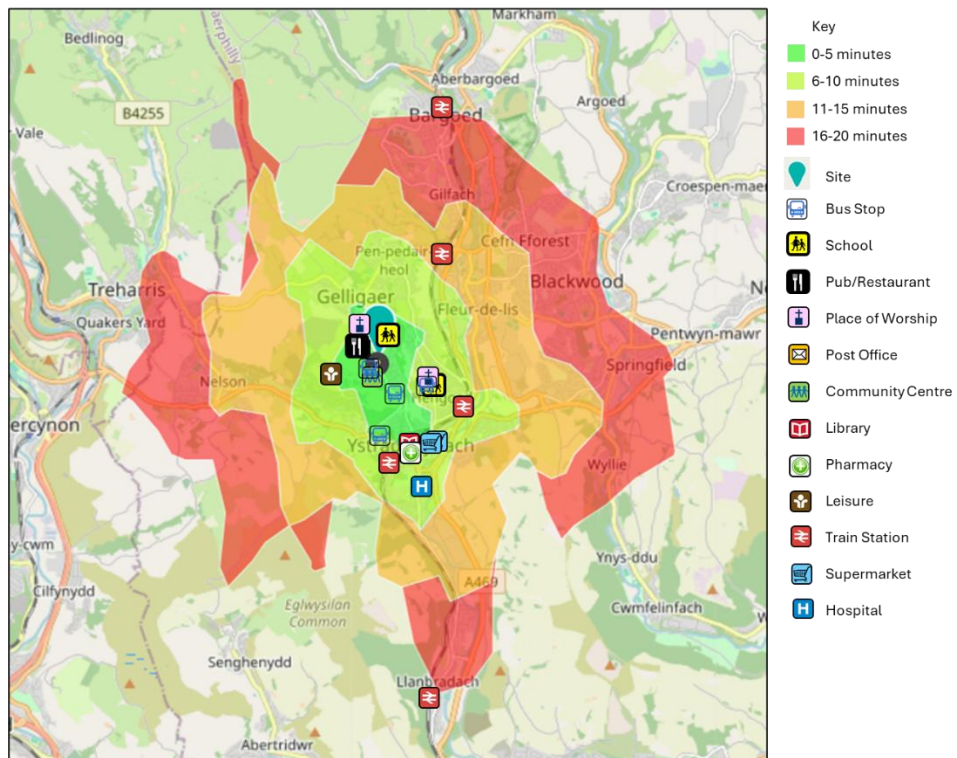


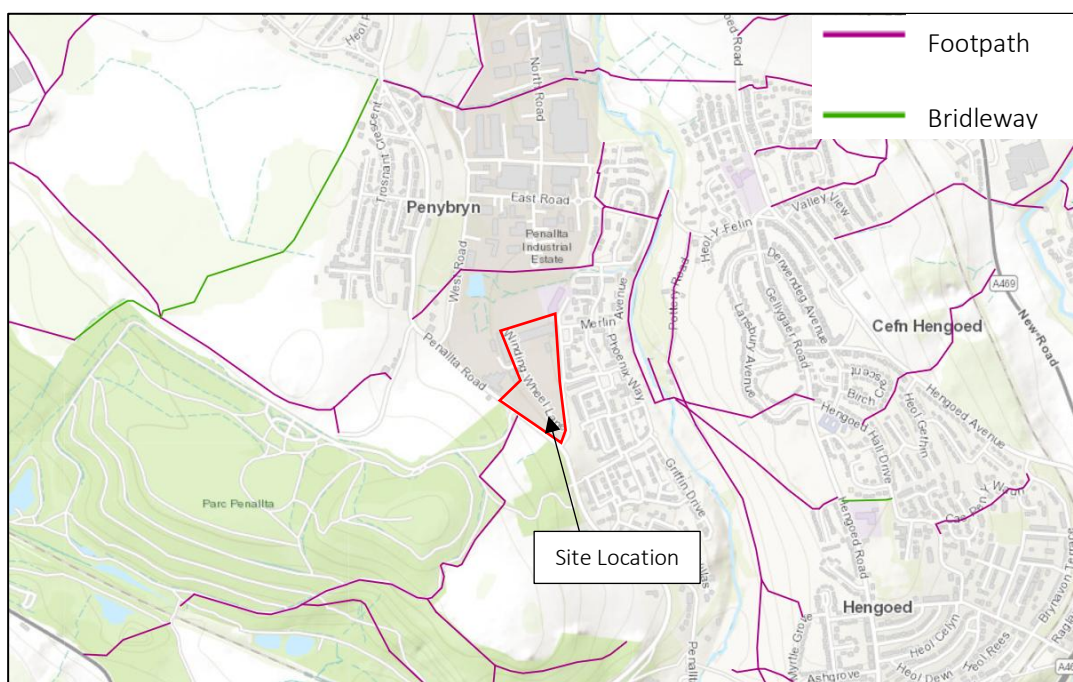
Figure 3: Cycling Isochrone Map



- 3.6 The Chartered Institution of Highways and Transportation's (CIHT) 'Planning for Walking' (April 2015) identifies that the average length of pedestrian journeys is now 1.37km (page 6). Just under half of the amenities within **Table 1** are within this distance, thus there are key amenities deemed accessible by foot, including a bus stop to facilitate further onward travel. In addition, **Figure 2** demonstrates that numerous facilities are accessible within a 20-minute walk of that site, and **Figure 3** shows that areas such as Treharris and Bargoed are within a 20-minute cycle of the site.
- 3.7 These guidelines indicate that the development is within walking distance of some key facilities, and active sustainable travel modes are realistic choices of travel in and around the site.

#### *Public Rights of Way (PROW)*

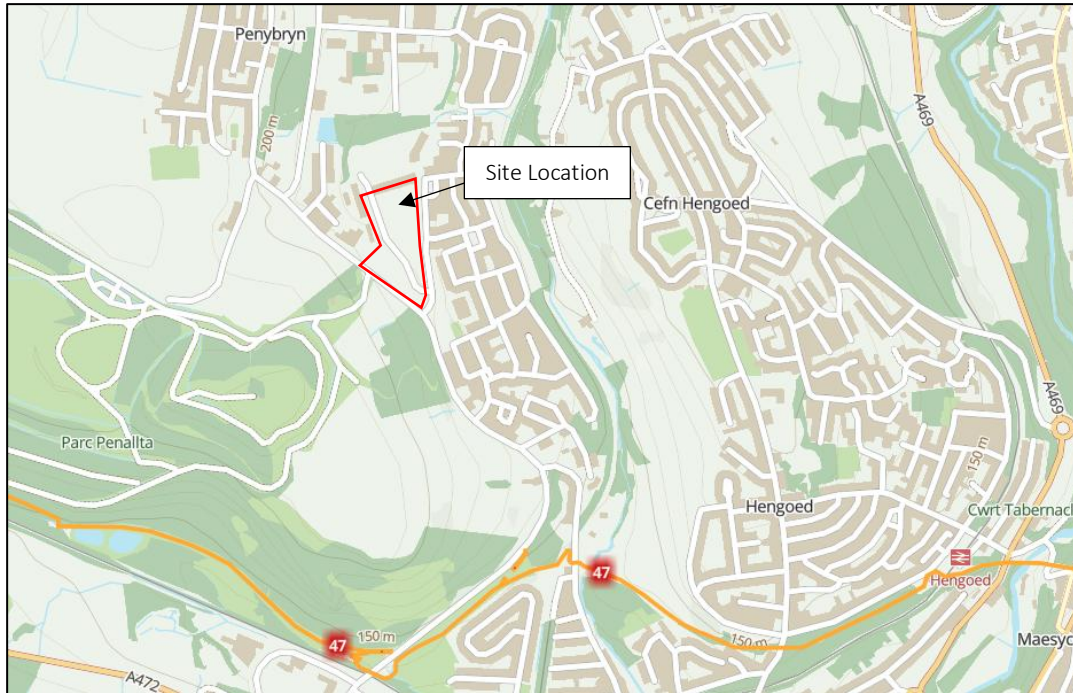
- 3.8 There are a number of Public Rights of Way (PROW) located near to the site as demonstrated in **Figure 4**.



**Figure 4:** Public Rights of Way (PROW) in the vicinity of the site

#### **Cycle Network**

- 3.9 The site is located approximately 1km north of National Cycle Route (NCR) 47 which starts at Newport and runs through Neath and Carmarthen before finishing at Fishguard. The route also forms part of the Three Parks Trail which runs from Crosskeys to The Old Drift Mine c2.3km north of Trelewis and follows NCR 47. NCR 47 provides key pedestrian and cycle route for the site providing access to facilities within Hengoed and Ystrad Mynach. The location of NCR 47 in relation to the site is demonstrated in **Figure 5**.



**Figure 5:** Cycle facilities located within the vicinity of the site

## Public Transport Provision

### *Bus Network*

- 3.10 The closest bus stops to the site are the Old Colliery bus stops (seen in **Photographs 5** and **6**) located approximately 350m west of the site along Penallta Road and accessible via an 4-minute walk or 1-minute cycle. The eastbound stop is comprised of a bus shelter and contains a marked area for the bus to stop on the carriageway with the westbound stop containing only a shelter. The services available from the Old Colliery bus stop are shown in **Table 2**.



**Photograph 5:** The Old Colliery bus stop (southeastbound)



**Photograph 6:** The Old Colliery bus stop (northwestbound)

Service	Operator	Route	Frequency		
			Mon-Fri	Saturday	Sunday
C16	Harris Coaches	Caerphilly – Nelson	Every Hour 8:50 – 22:40		Every 3 Hours 10:20 – 21:20
C17	Harris Coaches	Bargoed – Caerphilly	Every Hour 07:12 – 17:25		No Service

**Table 2:** Bus Services

#### *Rail Network*

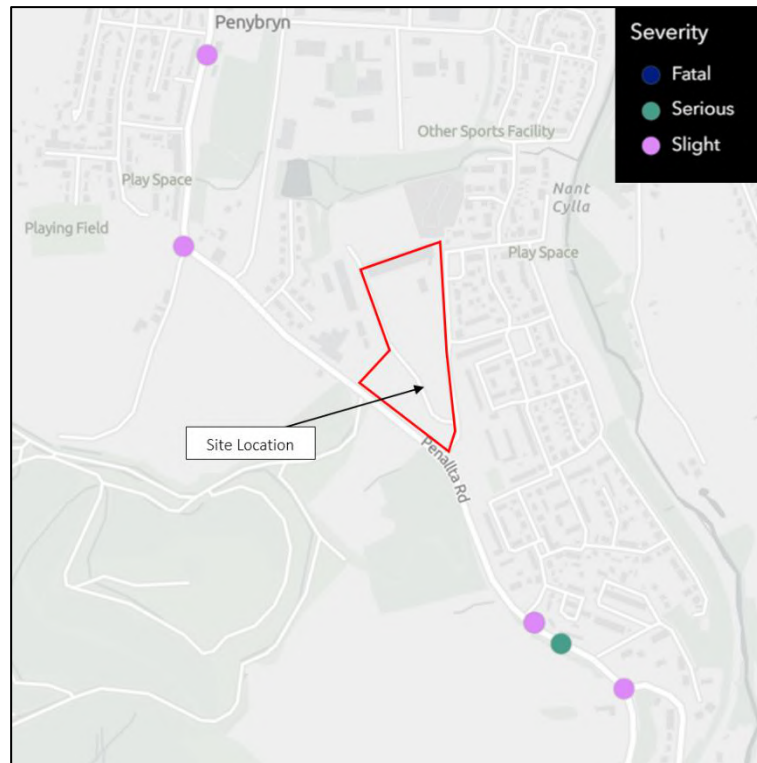
- 3.11 The closest train station to the site is Ystrad Mynach Station (YSM) located approximately 2km from the site and accessible via a 25-minute walk, 8-minute cycle or 5-minute journey on the C16 or C17 bus service. The station is managed by Transport for Wales and offers services to key destinations such as Bargoed (13-minutes), Rhymney (28-minutes), Cardiff (34-minutes) and Penarth (50-minutes).
- 3.12 Ystrad Mynach Station has step-free access to both platforms and offers services such as accessible ticket machines, an induction loop, customer help points and 36 cycle parking spaces in the form of sheltered Sheffield stands.
- 3.13 Additionally, Hengoed Station (HNG) is also located c.2km from the site access and can be accessed directly for NCR47. The station is also accessible via a 25-minute walk, 8-minute cycle or 5-minute journey on the C16 or C17 bus service and is managed by Transport for Wales. Hengoed Station provides services to a number of key destinations such as Bargoed (13 minutes), Rhymney (21 minutes), Barry Island (1 hour 10 minutes) and Bridgend (1 hour 35 minutes).
- 3.14 Hengoed Station has step-free access to both platforms and offers services such as accessible ticket machines, an induction loop, a sheltered seating area and customer help points.

#### **Summary**

- 3.15 In conclusion, the site is located in an accessible location with many amenities and facilities within 2km of the site. Good pedestrian infrastructure also facilitates more sustainable travel to these destinations with frequent bus services from the nearby bus stop allowing for even further sustainable travel. The nearby train stations are also easily accessible via a short bus journey and pedestrian and cycle routes and facilitate travel to destinations further afield.

#### **Personal Injury Accident (PIA) Data Review**

- 3.16 To assess the safety of the local highway network, Personal Injury Accident (PIA) data has been obtained from MAVRIC (Department for Transport) for the latest available 5-year period (2019-2024). The PIA data is shown in **Figure 6**.



**Figure 6: PIA Data**

- 3.17 As seen in **Figure 6**, there have been 5 recorded incidents on the local highway network in the vicinity of the site of which 4 were recorded as slight and 1 was recorded as serious. The slight incident which occurred northwest of the site occurred in June 2023. The slight incident which was recorded to the west of the site occurred in December 2020 and involved a pedestrian. The southernmost slight incident occurred in September 2023 and involved a cyclist. The remaining slight incident occurred in April 2024. The sole serious incident occurred in September 2020 and involved a cyclist. It should be noted that no incidents have occurred in the vicinity of the wider site access or Cwm Callon Road/Penallta Road junction which indicates there is no existing highway safety concern.
- 3.18 With only 5 incidents recorded over a 5-year period, there is not considered to be an existing highways safety concern with the local road network and that the proposed development would exacerbate any existing or result in any new highway safety concerns.



#### 4. PROPOSED DEVELOPMENT

- 4.1 This TA supports an application for the development of up to 175 dwellings at Penallta Colliery, Hengoed. The accommodation schedule is presented in **Table 3**.

Dwelling Type	No. of dwellings
1 Bedroom Flat	18
2 Bedroom Flat	67
3 Bedroom Flat	5
3 Bedroom House	85
<b>Total</b>	<b>175</b>

**Table 3:** Accommodation Schedule

##### Access Arrangements

- 4.2 It is proposed that access to the site as a whole will be taken from Winding Wheel Lane which will retain the existing access arrangements. Within the site the development is split up into 3 parcels each with their own separate access in the form of 5.5m wide bellmouth junctions with 6m radii. Visibility splays at these junctions have been assessed to a design speed of 20mph and in accordance with Manual for Streets (MfS) guidance which has led to visibility splays of 2.4m x 25m in both directions. The visibility splays are shown to be achievable in **Appendix B**.
- 4.3 Pedestrian access to the development will also be taken from Cwm Callon Road via Winding Wheel Lane. It is proposed that the existing footway cycleway on the road's eastern extent and 2m wide footway on the roads western extent will be retained and tie into the internal footway network within the site.

##### Internal Visibility

- 4.4 Forward visibility has also been assessed to speeds of 15mph within the internal layout and is shown to be achievable within **Appendix C**.

##### Car Parking

- 4.5 Car parking provision at the site has been informed by CCBC's LDP5 Car Parking Standards SPD (2017) which require 1 space per bedroom up to a maximum of 3 spaces and operate as 'maximum' parking standards. In addition, 1 space per 5 units would need to be provided for visitor parking.



- 4.6 The proposed development provides 173 parking spaces which falls within the maximum allocation identified within CCBC's Car Parking Standards.
- 4.7 As identified in Section 3 of this report, the site is located in an accessible location with good public transport links and pedestrian and cycle infrastructure facilitating travel into Hengoed and Ystrad Mynach and the amenities and facilities located within. Within CCBC's car parking guidance, it is stated that parking provision will be assessed by taking into account a number of factors including accessibility by sustainable travel modes. Therefore, when considering the accessible nature of the site, the proposed parking provision is considered acceptable.
- 4.8 Swept path analysis of vehicles utilising the proposed car parking spaces is attached in **Appendix D**.

#### **Cycle Parking**

- 4.9 Cycle parking at the proposed development has also been informed by CCBC's Car Parking Standards which require 1 stand per 5 bedrooms to be provided for apartments in the form of long stay cycle parking with no short stay parking required. The proposed development will provide cycle parking in accordance with these standards with cycle parking provided in the form of sheltered and secure shared cycle storage for each apartment block and within the curtilage of each dwelling.

#### **Refuse and Servicing Arrangements**

- 4.10 Swept path analysis of an 11.2m long refuse vehicle and a fire tender has been undertaken and demonstrates that both vehicles are able to manoeuvre around the site in forward gear without issue. In addition, the refuse vehicle is able to get to within 10m distance from the refuse store for apartment blocks with eurobins in accordance with MfS guidance and the fire tender is able to get to within an 18m hose distance from the stairwell for apartment blocks to access a dry riser in accordance with Building Regulations. The swept path analysis is attached in **Appendix E**.

## 5. HIGHWAY IMPACT

### Trip Generation

5.1 In order to assess the impact of the proposed development on the local highway network, trip generation data has been obtained from the TRICS v8.25.11 database. The parameters of the search were as follows:

- Sites in Wales and England (excluding Greater London)
- Trip Parameter Range: 75-200 (units)
- Survey Date Range: 27/03/2017 – 22/05/2025
- Number of weekdays: 52
- No weekend dates selected

5.2 The resulting trip generation is shown in **Table 4** with full outputs attached in **Appendix F**.

	AM Peak (0800-0900)			PM Peak (1700-1800)			Daily (12 hours)
	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-way	
Trip Rate	0.147	0.334	0.481	0.294	0.147	0.441	4.256
Trip Generation (175 units)	26	58	84	51	26	77	745

**Table 4:** Proposed Development Trip Generation (175 units)

5.3 As seen in **Table 4**, the proposed development would be anticipated to generate 84 vehicle trips in the AM peak and 77 vehicle trips in the PM peak with 745 trips generated over a 12-hour period.

5.4 As noted previously within this report, Penallta Colliery is identified within CCBC's latest Joint Housing Land Availability Study (July 2019), as having capacity for 188 units with 156 remaining at the time of the study. It is proposed that up to 175 units will be provided at the proposed development which puts the scheme at most 19 units over the allocation. Therefore, the above trip generation assessment has been broken down for an additional 19 units as presented in **Table 5**.

	AM Peak (0800-0900)			PM Peak (1700-1800)			Daily (12 hours)
	Arrivals	Departures	Two-Way	Arrivals	Departures	Two-way	
Trip Rate	0.147	0.334	0.481	0.294	0.147	0.441	4.256
Trip Generation (19 units)	3	6	9	6	3	8	81

**Table 5:** Proposed Development Trip Generation (19 units)

- 5.5 As seen in **Table 5**, the additional 19 units from the allocation associated with the proposed development would be anticipated to generate 9 vehicle trips in the AM peak and 8 vehicle trips in the PM peak with 81 trips generated over a 12-hour period.
- 5.6 Due to the sites identification in CCBC's latest Joint Housing Land Availability Study, it assumed that the site location is considered suitable for a development of 156 units. Therefore, the proposed development, which includes a provision of up to 175 units which is in excess of the allocation by 19 units is not considered to have an adverse effect on the local road network due to the low highway impact of the additional 19 units.

### Trip Distribution

- 5.7 2011 Census data has been collected from the 'Location of usual residence and place of work' dataset with the Caerphilly 013 middle super output area used as the location of usual residence. The data indicates destinations that people currently travel to work within the ward selected. This data has been used to determine the trip distribution and routes for destinations with over 5 trips. The location and most direct route to this location was then used to confirm the direction of travel from the Cwm Callon Road/Penallta Road junction as well as the route assignment of each destination. Due to the nature of the local road network and to form a robust assessment, it is assumed that all trips from the site will turn right (south) out of the wider site access from Winding Wheel Lane on to Cwm Callon Road.
- 5.8 The distribution of vehicles from the Cwm Callon Road/Penallta Road junction with route assignment is summarised in **Table 5** with full outputs in **Appendix G**.

Workplace Destination	Percentage	Route Assignment from Cwm Callon Road/Penallta Road Junction	
		Northeast	Southwest
Neath	0.2%		0.2%
Bridgend	1.0%	0.5%	0.5%
The Vale of Glamorgan	0.9%		0.9%
Cardiff	22.2%		22.2%
Hirwaun	0.3%	0.2%	0.2%
Llwydcoed	0.2%	0.1%	0.1%
Aberdare	0.5%		0.5%
Mountain Ash	0.4%		0.4%
Treorchy	0.2%	0.1%	0.1%
Abercynon	0.9%		0.9%
Gelli	0.2%		0.2%
Porth	0.4%		0.4%
Pontypridd	2.9%		2.9%
Tonyrefail	0.2%		0.2%
Church Village	0.6%		0.6%
Nantgarw	3.1%		3.1%

Beddau	0.2%		0.2%
Llanharan	0.2%		0.2%
Llantrisant	1.0%		1.0%
Brysadler	0.6%		0.6%
Merthyr Tydfil	6.6%	3.3%	3.3%
Treharris	1.3%	0.7%	0.7%
Rhymney	1.0%	1.0%	
New Tredegar	0.5%	0.5%	
Bargoed	1.4%	1.4%	
Argoed	0.3%	0.3%	
Trinant	1.3%	0.6%	0.6%
Pengam	0.6%	0.6%	
Gelligaer	3.4%	3.4%	
Blackwood	1.4%	1.4%	
Newbridge	0.5%		0.5%
Springfield	2.3%		2.3%
Hengoed	4.3%		4.3%
Ystrad Mynach	15.6%		15.6%
Abercan	0.6%		0.6%
Wattsville	0.6%		0.6%
Risca	0.5%		0.5%
Llanbradach	0.9%		0.9%
Trethomas	2.7%		2.7%
Caerphilly	9.6%		9.6%
Beaufort	0.4%	0.4%	
Sirhowy	0.2%	0.2%	
Ebbw Vale	0.2%	0.1%	0.1%
Tredegar	0.2%	0.2%	
Waun-Lwyd	0.3%	0.1%	0.1%
Abertillery	0.2%	0.1%	0.1%
Blaenavon	0.2%	0.1%	0.1%
Pontypool	1.1%		1.1%
Cwmbran	0.5%		0.5%
Llantarnam	0.7%		0.7%
Abergavenny	0.2%	0.2%	
Usk	0.3%		0.3%
Chepstow	0.2%		0.2%
Newport	3.5%		3.5%
<b>Total</b>	<b>-</b>	<b>15.5%</b>	<b>84.5%</b>

**Table 5:** Trip Distribution and Route Assignment

5.9 The assignment in **Table 5** demonstrates that 84.5% of vehicles are expected to travel southwest along Penallta Road with 15.5% expected to travel northeast. **Table 6** applies the anticipated trip distribution to the proposed trip generation at the site.

Direction of travel	Percentage	AM Trips			PM Trips			Total
		Arrivals	Departures	Two-Way	Arrivals	Departures	Two-Way	
Northeast	15.5%	4	9	13	8	4	12	115
Southwest	84.5%	22	49	71	43	22	65	629

**Table 6:** Trip Distribution and Trip Generation

5.10 As seen in **Table 6**, is anticipated that 13 vehicles will travel to/from the northeast and that 71 vehicles will travel to/from the southwest in the AM peak. Meanwhile 12 vehicles will travel to/from the northeast and 65 vehicles will travel to/from the southeast in the PM peak. Considering the nature of both the proposed development and the local road network in addition to the site being identified within CCBC's latest Joint Housing Land Availability Study as having capacity for 156 additional units, it is not considered that the proposed development would have an adverse effect on the operation of the Cwm Callon Road/Penallta Road junction and therefore a junction capacity assessment has not been undertaken.

## 6. SUMMARY AND CONCLUSIONS

- 6.1 This Transport Assessment (TA) has been prepared by Paul Basham Associates on behalf of The Power Hall Ltd to support a planning application for the development of up to 175 dwellings at Penallta Colliery, Hengoed.
- 6.2 The site is located in an accessible location with many amenities and facilities within 2km of the site. Good pedestrian infrastructure also facilitates more sustainable travel to these destinations with frequent bus services from the nearby bus stop allowing for even further sustainable travel. The nearby train stations are also easily accessible via a short bus journey and pedestrian and cycle routes and facilitate travel to destinations further afield.
- 6.3 A review of PIA data in the vicinity of the site for the latest available 5-year period (2019-2024) demonstrates that there have been 4 recorded incidents on the local highway network in the vicinity of the site of which 3 were recorded as slight and 1 was recorded as serious. It should be noted that no incidents have occurred in the vicinity of the wider site access or Cwm Callon Road/Penallta Road junction which indicates there is no existing highway safety concern. With only 5 incidents recorded over a 5-year period, there is not considered to be an existing highways safety concern with the local road network and that the proposed development would exacerbate any existing or result in any new highway safety concerns.
- 6.4 It is proposed that access to the site as a whole will be taken from Winding Wheel Lane with the site split up into 3 parcels each with their own separate access in the form of 5.5m wide bellmouth junctions with 6m radii. Visibility splays at these junctions have been assessed to a design speed of 20mph and in accordance with Manual for Streets (MfS) guidance which has led to visibility splays of 2.4m x 25m in both directions.
- 6.5 The proposed development provides 173 parking spaces which falls within the maximum allocation identified within CCBC's Car Parking Standards. Within CCBC's car parking guidance, it is stated that parking provision will be assessed by taking into account a number of factors including accessibility by sustainable travel modes. Therefore, when considering the accessible nature of the site, the proposed parking provision is considered acceptable.

- 6.6 Cycle parking at the proposed development has also been informed by CCBC's Car Parking Standards which require 1 stand per 5 bedrooms to be provided for apartments in the form of long stay cycle parking with no short stay parking required. The proposed development will provide cycle parking in accordance with these standards with cycle parking provided in the form of sheltered and secure shared cycle storage for each apartment block and within the curtilage of each dwelling.
- 6.7 Swept path analysis of an 11.2m long refuse vehicle and a fire tender has been undertaken and demonstrates that both vehicle are able to manoeuvre around the site in forward gear without issue. In addition, the refuse vehicle is able to get to within a 30m bin drag distance of all dwellings in accordance with MfS guidance and the fire tender is able to get to within a 45m hose distance of all dwellings in accordance with Building Regulations.
- 6.8 In order to assess the impact of the proposed development on the local highway network, trip generation data has been obtained from the TRICS v8.25.11 database. the proposed development would be anticipated to generate 84 vehicle trips in the AM peak and 77 vehicle trips in the PM peak with 745 trips generated over a 12-hour period.
- 6.9 2011 Census data has been collected from the 'Location of usual residence and place of work' dataset with the Caerphilly 013 middle super output area used as the location of usual residence. The data indicates destinations that people currently travel to work within the ward selected. This data has been used to determine the trip distribution and routes for destinations with over 5 trips. The location and most direct route to this location was then used to confirm the direction of travel from the Cwm Callon Road/Penallta Road junction as well as the route assignment of each destination. Due to the nature of the local road network and to form a robust assessment, it is assumed that all trips from the site will turn right (south) out of the wider site access from Winding Wheel Lane on to Cwm Callon Road.
- 6.10 The trip distribution assessment demonstrates that 84.5% of vehicles are expected to travel southwest along Penallta Road with 15.5% expected to travel northeast. Therefore, it is anticipated that 13 vehicles will travel to/from the northeast and that 71 vehicles will travel to/from the southwest in the AM peak. Meanwhile 12 vehicles will travel to/from the northeast and 65 vehicles will travel to/from the southeast in the PM peak.

- 6.11 Penallta Colliery is identified within CCBC's latest Joint Housing Land Availability Study (July 2019), as having capacity for 188 units with 156 remaining at the time of the study. It is proposed that up to 175 units will be provided at the proposed development which puts it 19 units over the allocation. Therefore, a trip generation assessment for the additional 19 units has also been undertaken which showed the additional 19 units from the allocation associated with the proposed development would be anticipated to generate 9 vehicle trips in the AM peak and 8 vehicle trips in the PM peak with 81 trips generated over a 12-hour period. Due to the sites identification in CCBC's latest Joint Housing Land Availability Study, it assumed that the site location is considered suitable for a development of 156 units. Therefore the proposed development, which includes a provision of up to 175 units which is in excess of the allocation by 19 units is not considered to have an adverse effect on the local road network due to the low highway impact of the additional 19 units.
- 6.12 Therefore, we encourage CCBC to look favourably upon this application with relation to highways.



## Appendix A



Penallta Industrial Estate



N

	Level	Flats 1 Bed	Flats 2 Bed	Flats 3 Bed	House 2 Bed	House 3 Bed	House 4 Bed	Total
Power Hall	L4	2	12	1				15
	L3	2	12	1				15
	L2	2	12	1				15
	L1	2	12	1				15
Block A	L2	2	5	1				8
	L1	2	6					8
Block B	L3	2	2					4
	L2	2	3					5
	L1	2	3					5
T1						54		54
T4						31		31
		18	67		0	85	0	175

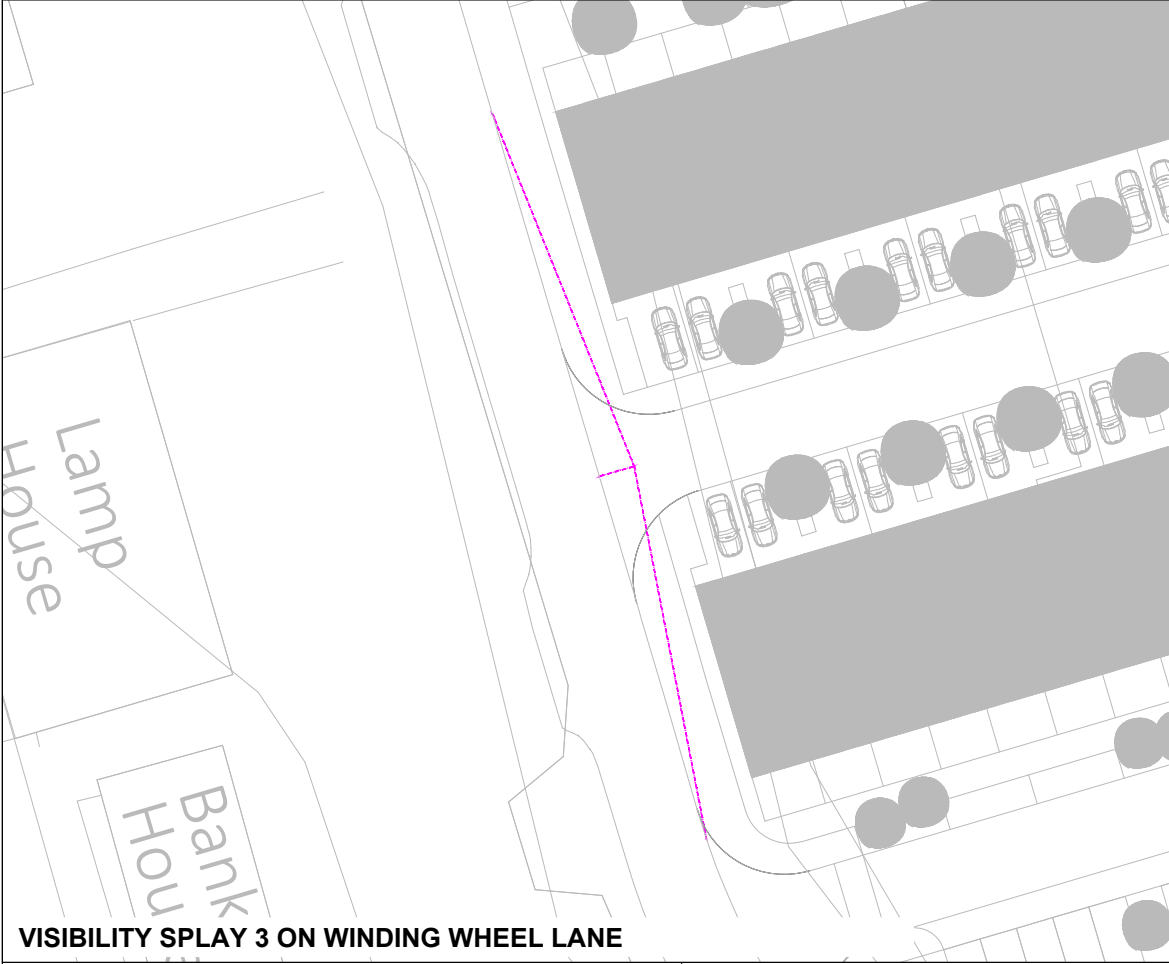
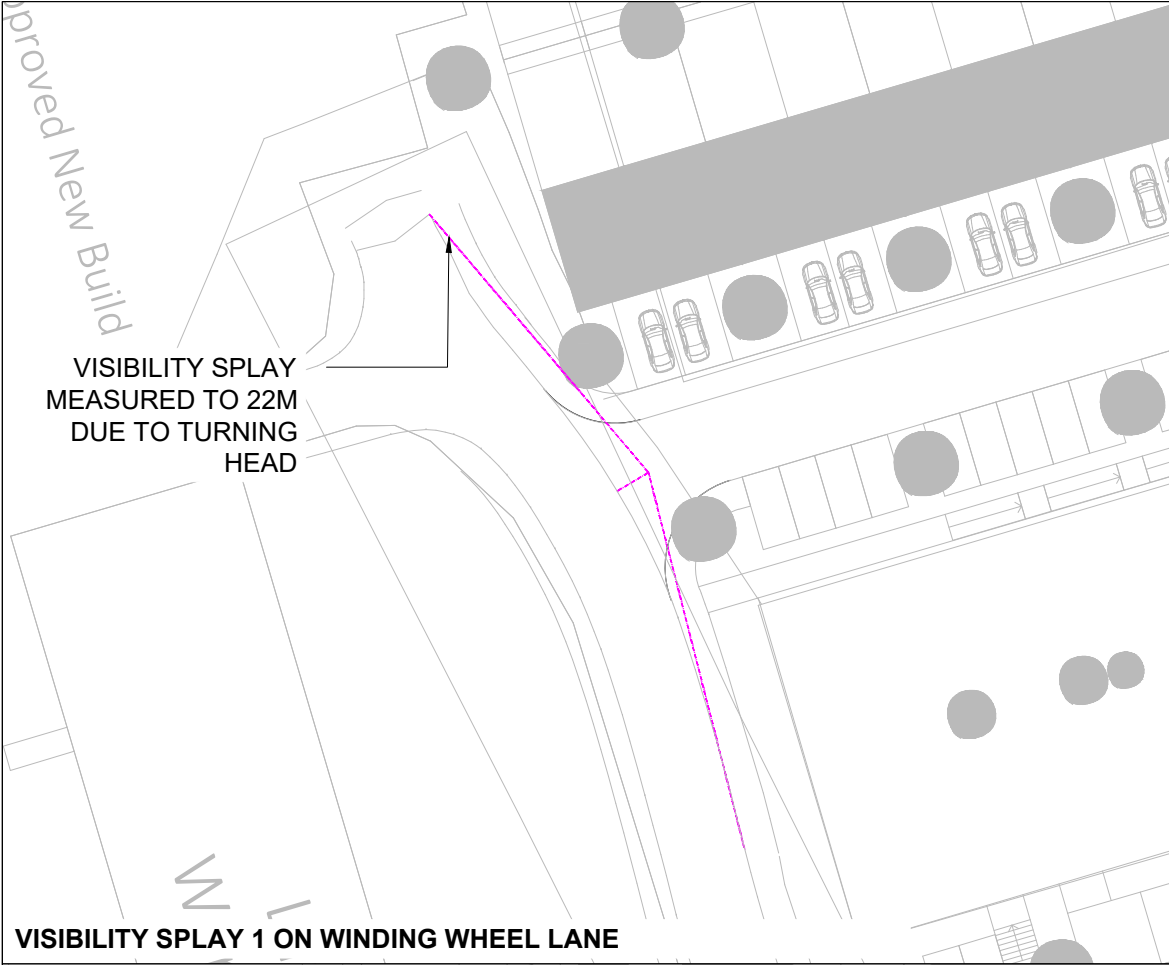
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Winding Wheel Lane, Penallta  
Proving Layout

bba architects & planners

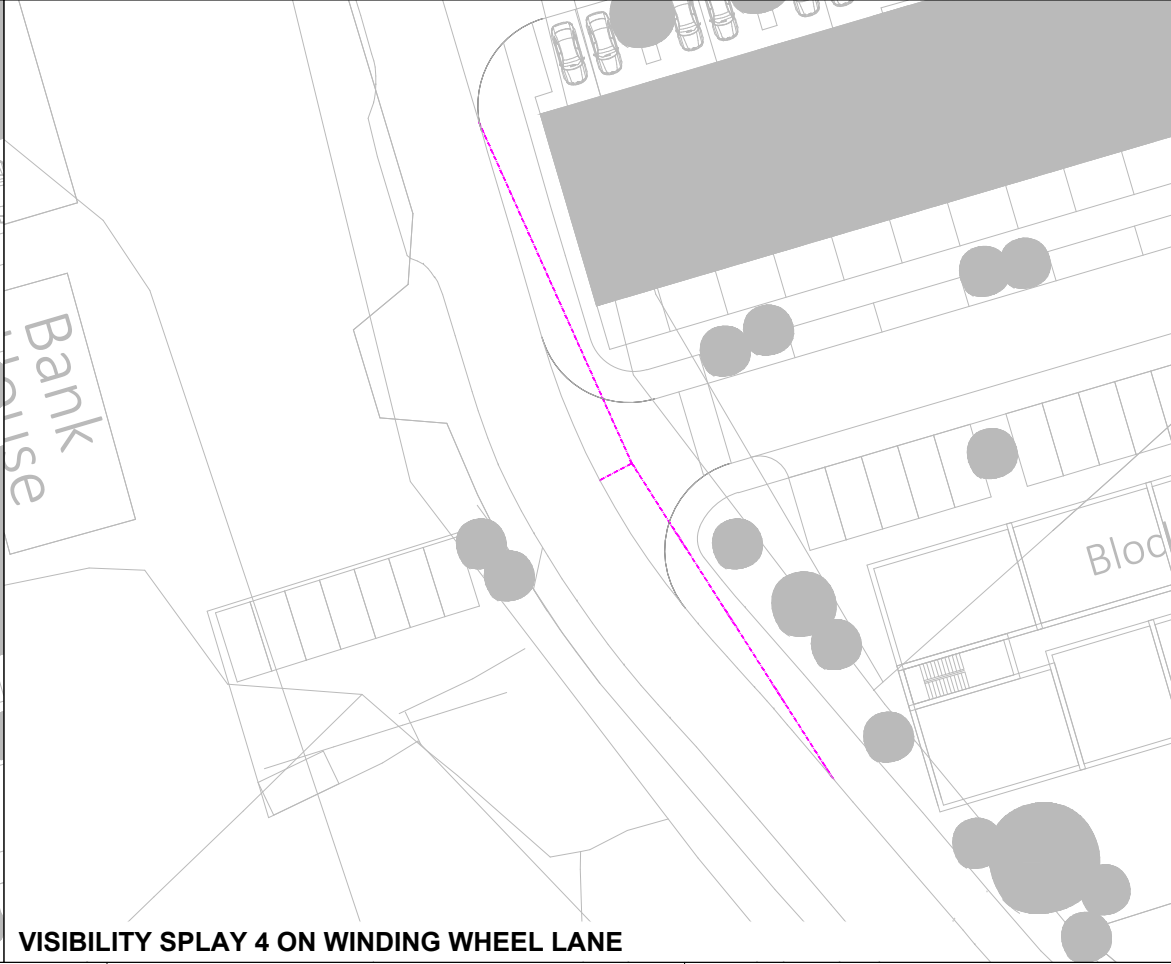
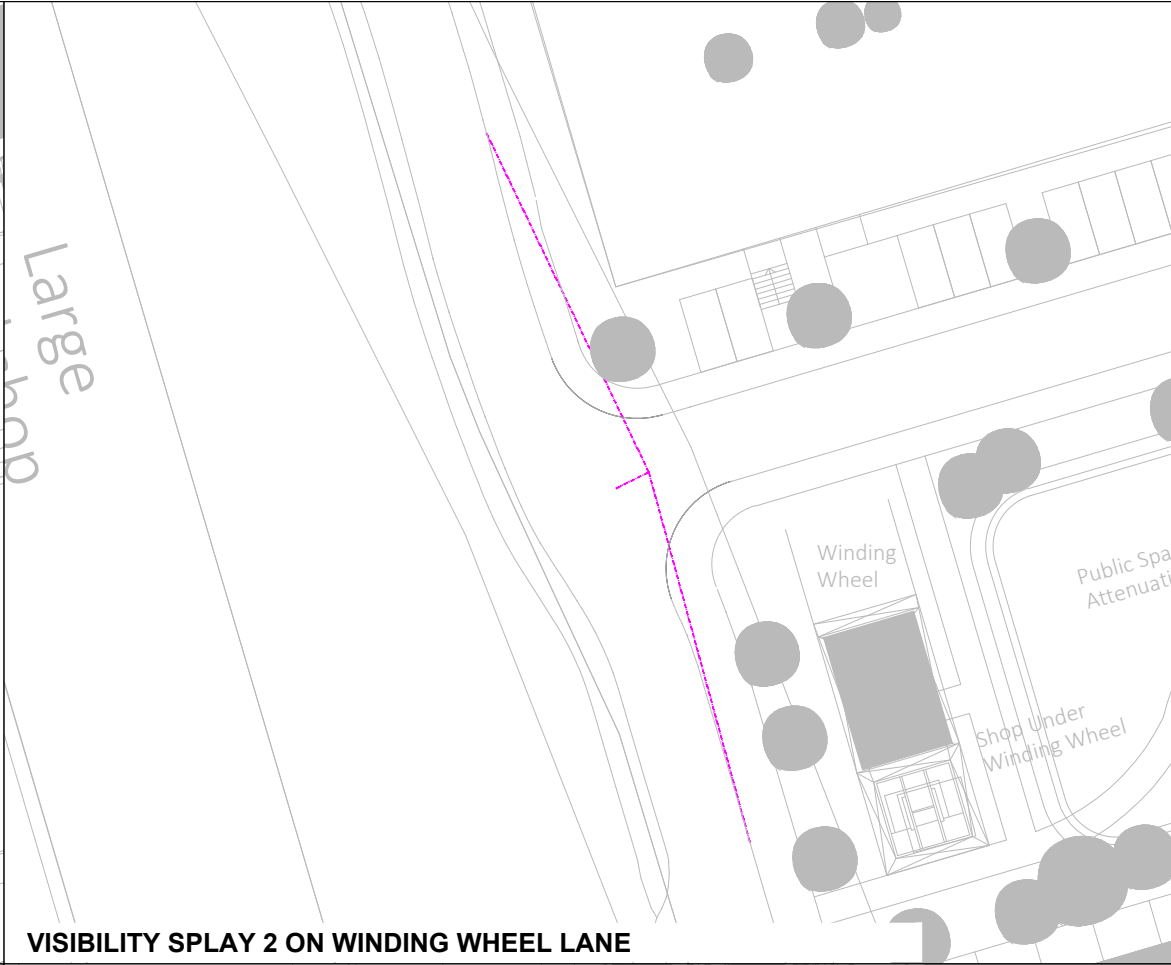
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## Appendix B



Project Name	PENALLTA COLLIERY, HENGOD
Project Phase	PRELIMINARY





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The Bothy, Cams Hall Estate, Fareham, PO16 8UT  
01329 711 000  
info@paulbashamassociates.com www.paulbashamassociates.com

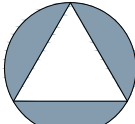
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**KEY**

— VISIBILITY SPLAYS MEASURED AT 2.4M X 25M



NORTH

**PRELIMINARY**

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020.0929		1:500		
PBA Drawing No:			Revision	
020.0929-0002			P01	

QMS2011/v9/020525/IDR



VISIBILITY SPLAY 5 ON WINDING WHEEL LANE

Project Name

PENALLTA COLLIERY,  
HENGOED

Project Phase

PRELIMINARY

Title

INTERNAL JUNCTION  
VISIBILITY SPLAY 2

paulbasham

associates

Paul Basham Associates Ltd

The Bothy, Cams Hall Estate, Fareham, PO16 8UT

01329 711 000

info@paulbashamassociates.com www.paulbashamassociates.com

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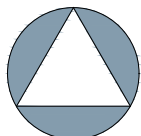
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**KEY**

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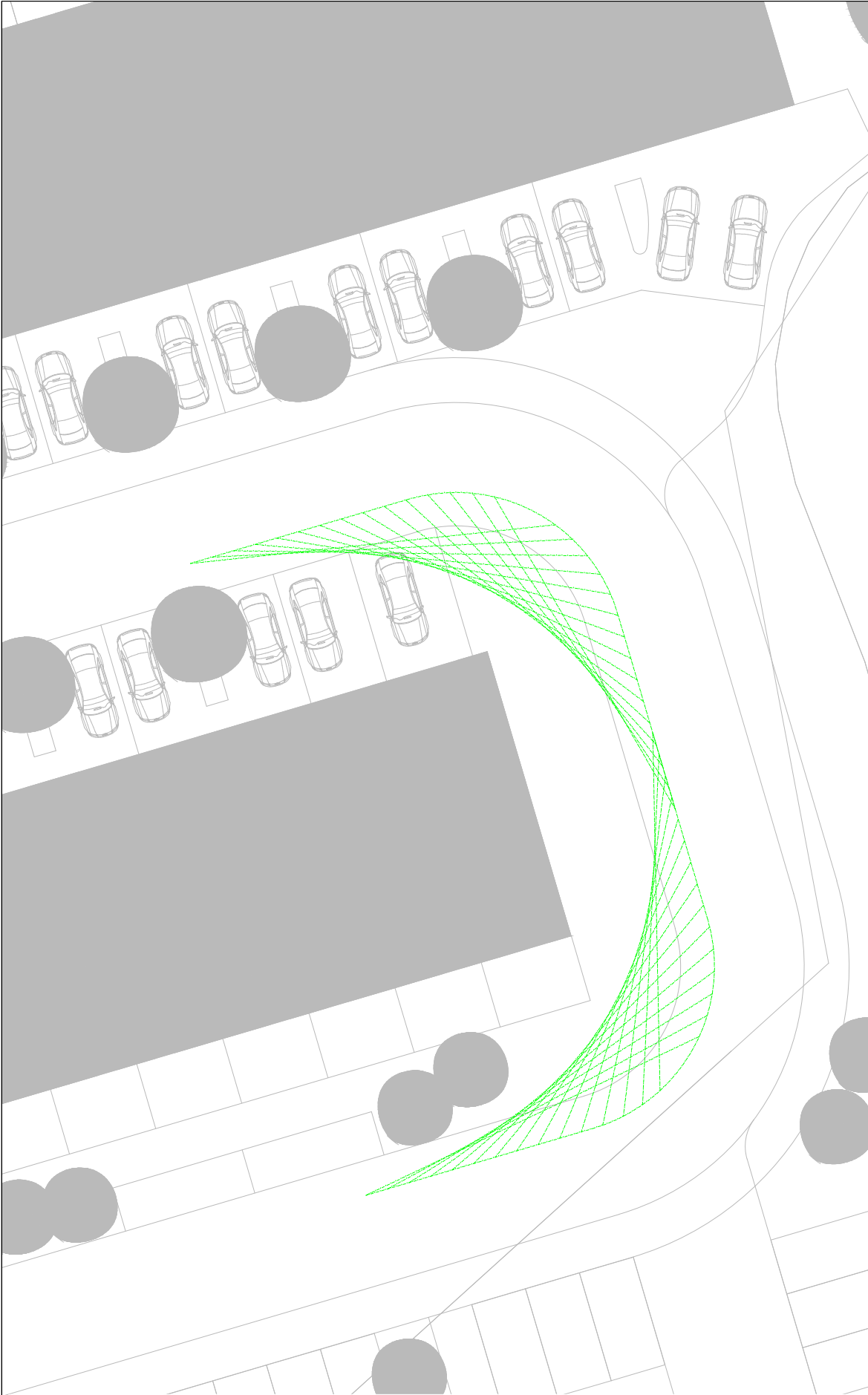
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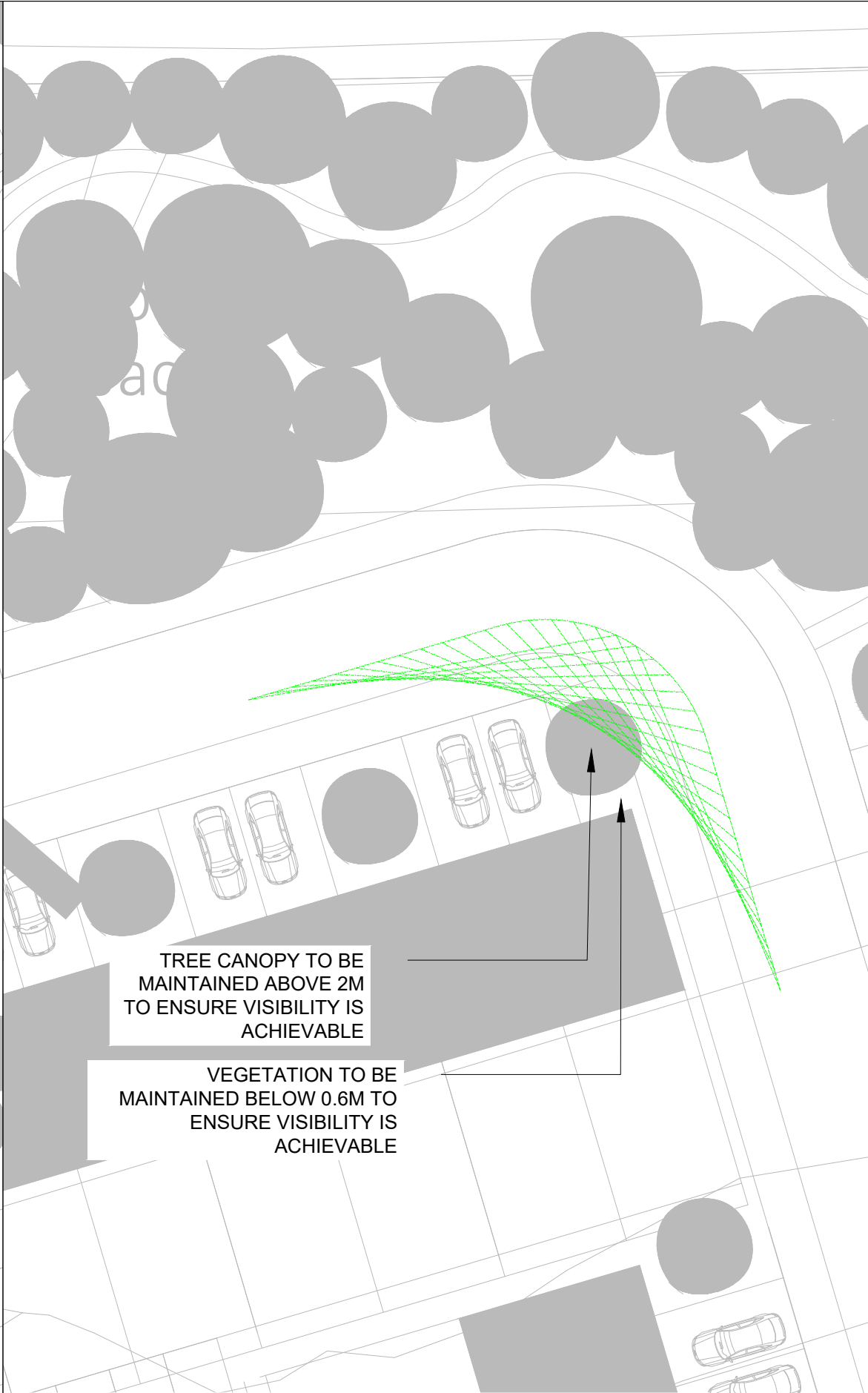
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PBA Drawing No:			Revision	
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## Appendix C



FORWARD VISIBILITY SPLAYS EAST OF BLOCK T4



FORWARD VISIBILITY SPLAYS NORTHEAST OF BLOCK T1


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KEY

— — — — — FORWARD VISIBILITY



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Project Name	FORWARD VISIBILITY AT 15MPH
PENALLTA COLLIERY, HENGOED	
Project Phase	
PRELIMINARY	

Title	FORWARD VISIBILITY AT 15MPH
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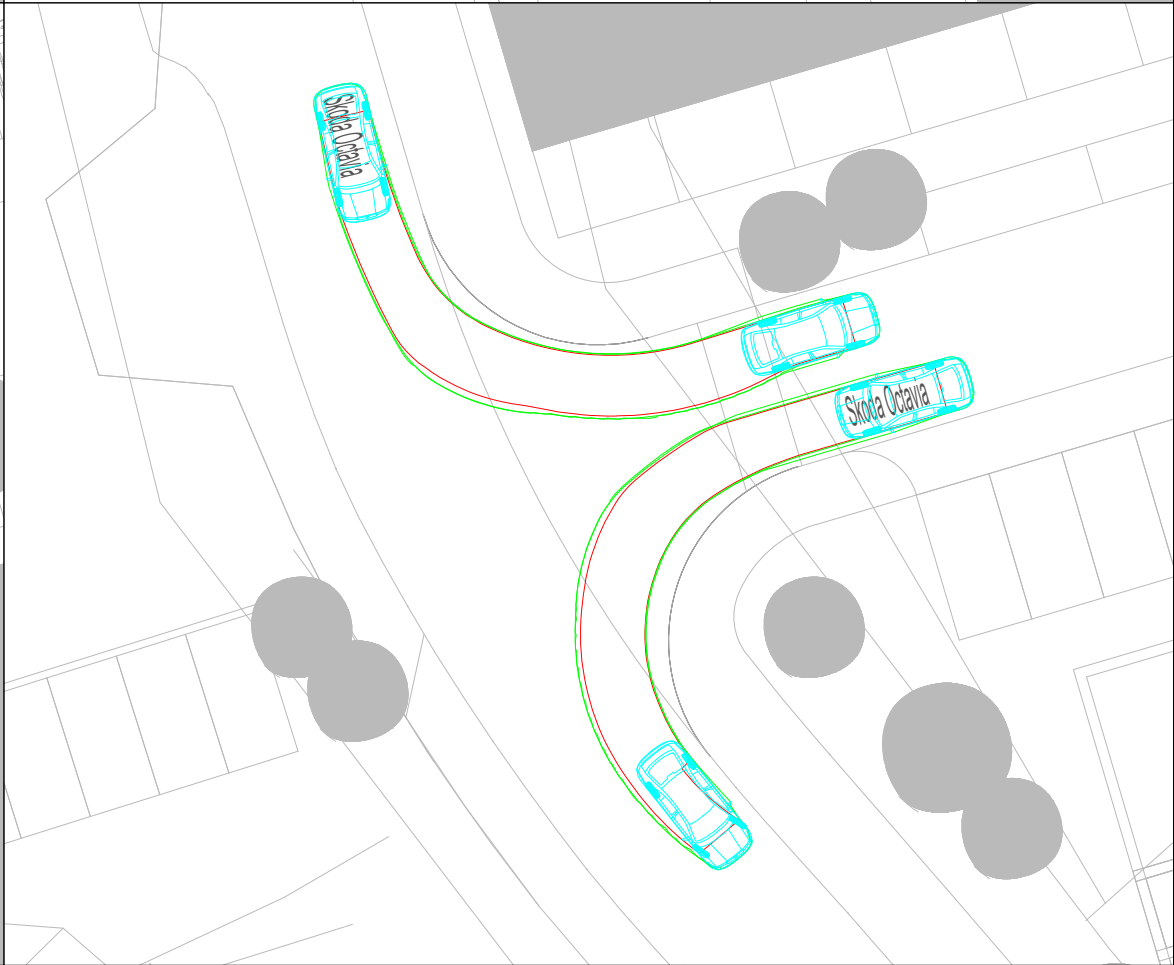
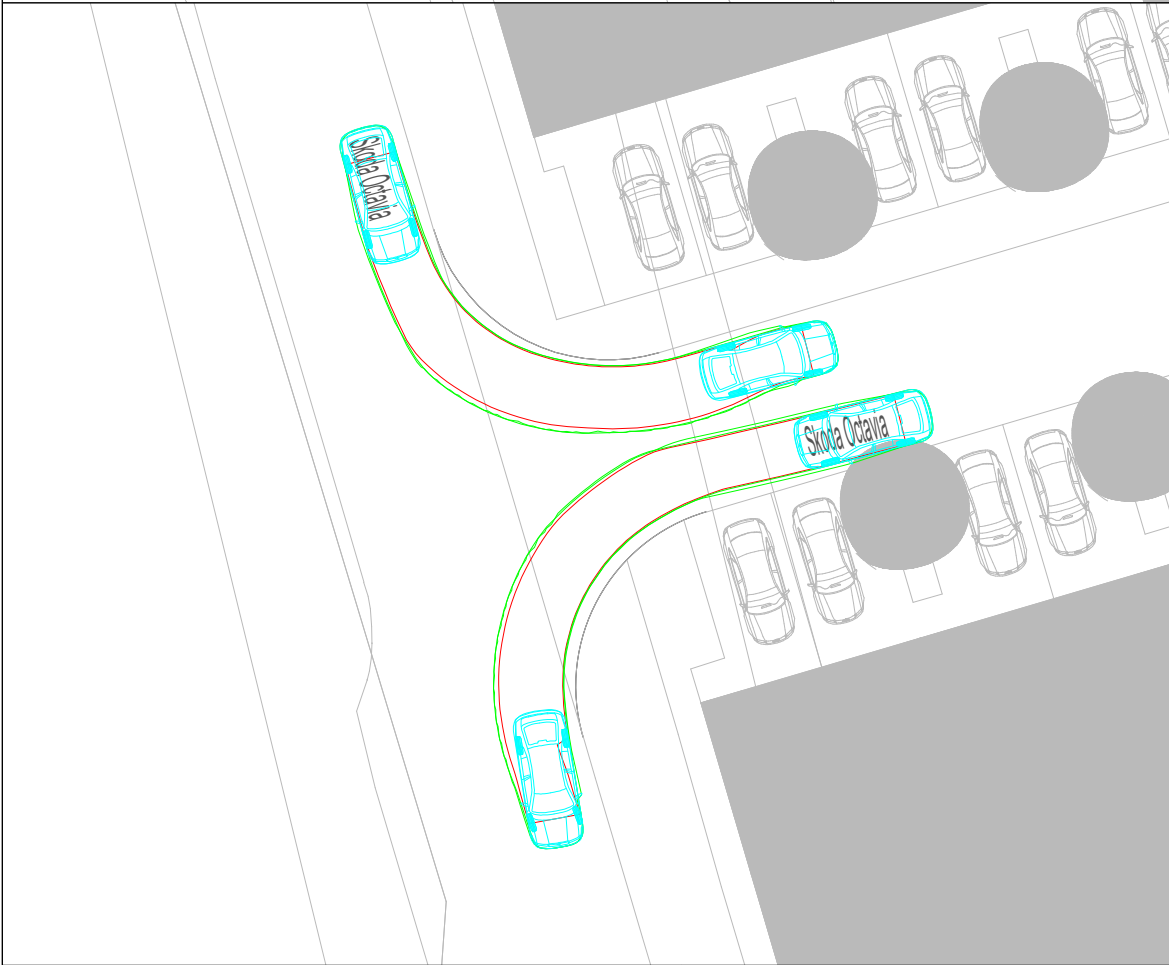
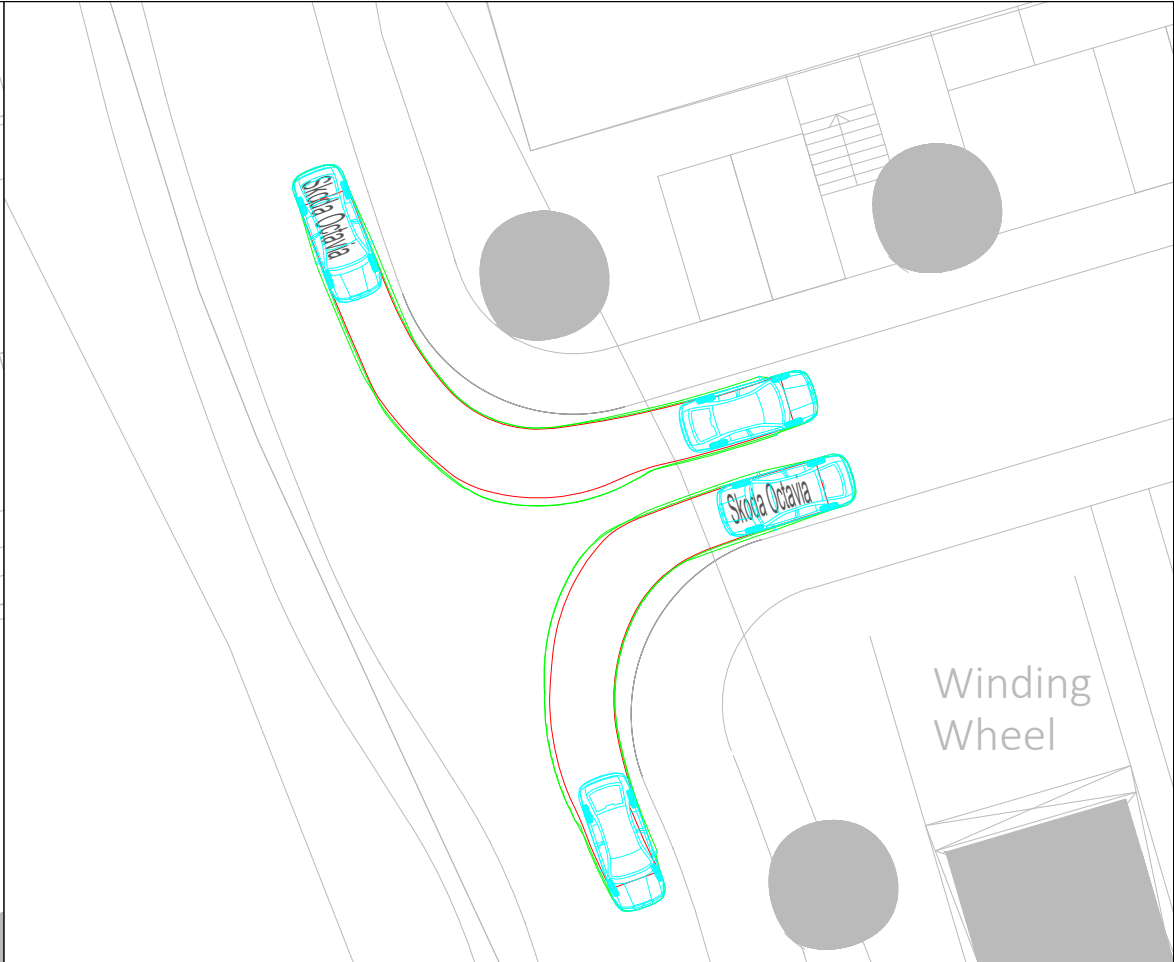
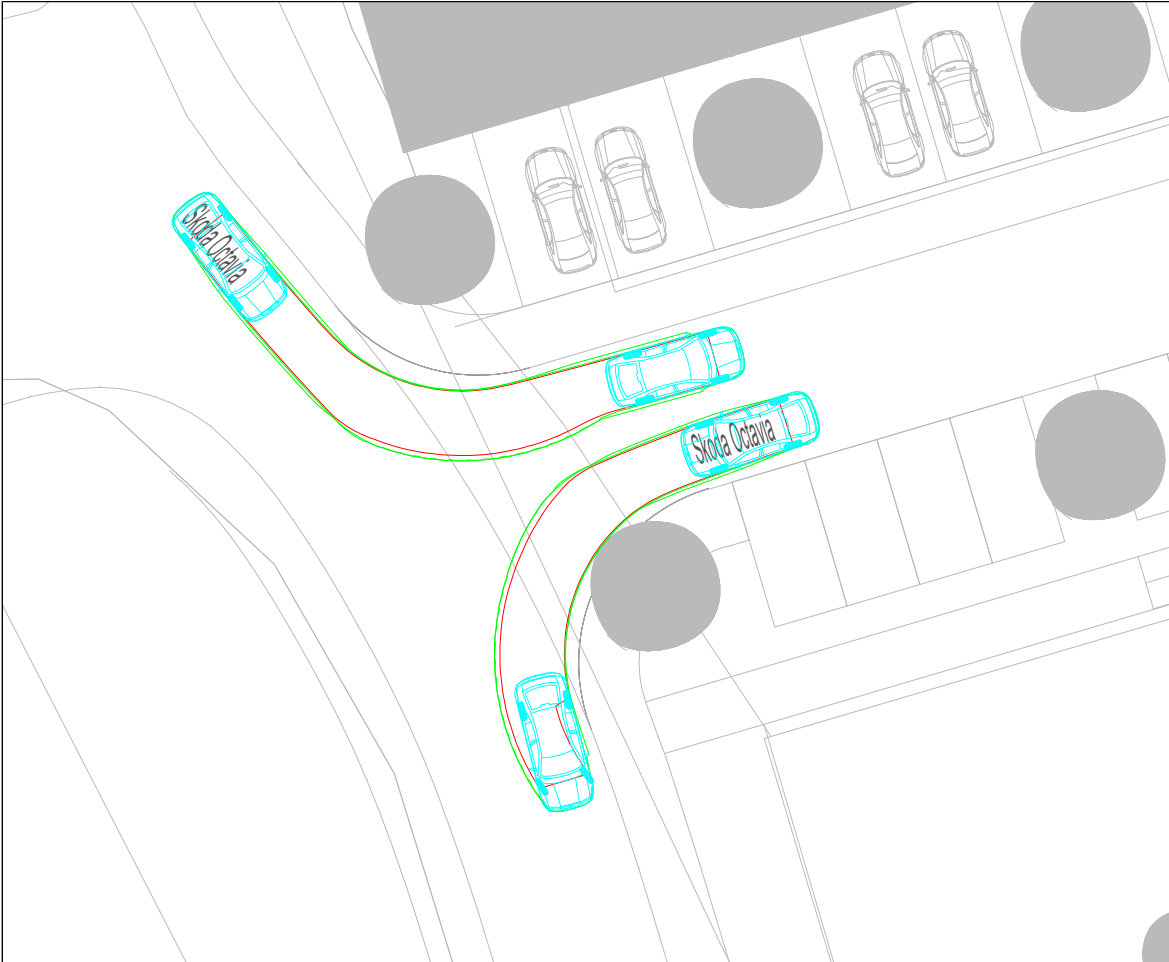
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## Appendix D



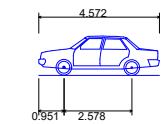


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### VEHICLE PROFILE



Skoda Octavia	4.572m
Overall Length	1.769m
Overall Width	1.488m
Overall Body Height	0.249m
Min Body Ground Clearance	1.713m
Max Track Width	4.00s
Lock to lock time	5.100m
Kerb to Kerb Turning Radius	



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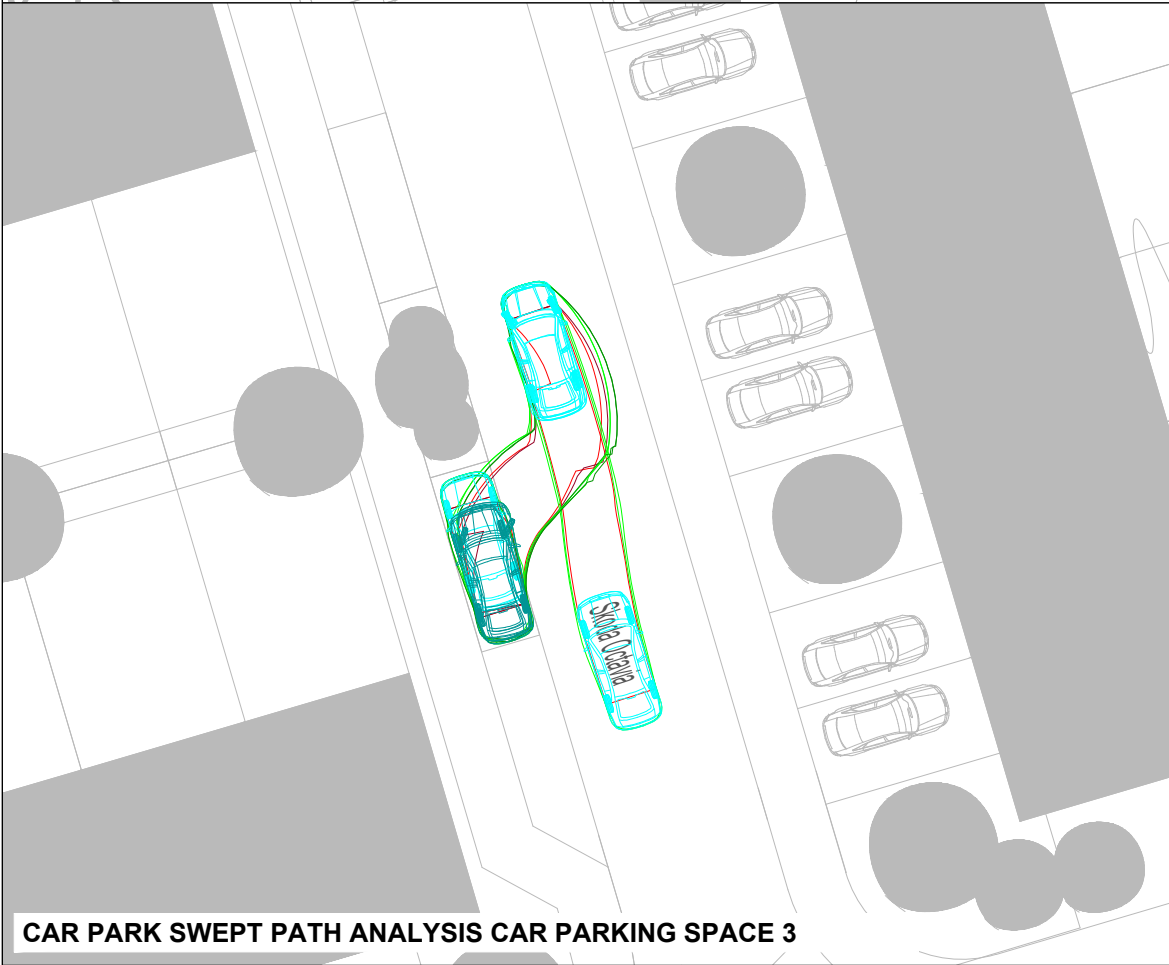
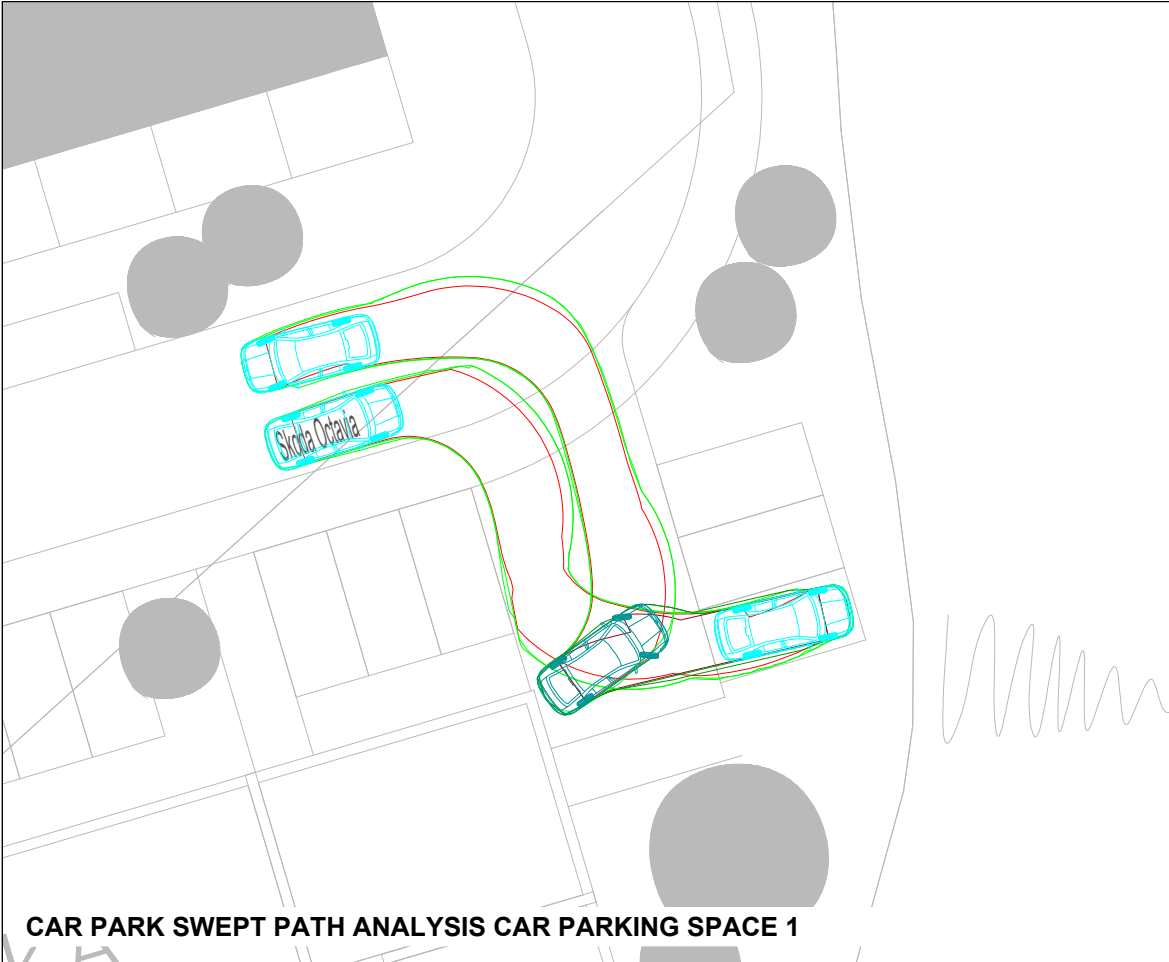
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PENALLTA COLLIERY, HENGOED	
Project Phase	
PRELIMINARY	

Title
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Paul Basham Associates Ltd  
The Bothy, Cams Hall Estate, Fareham, PO16 8UT  
01329 711 000  
info@paulbashamassociates.com www.paulbashamassociates.com

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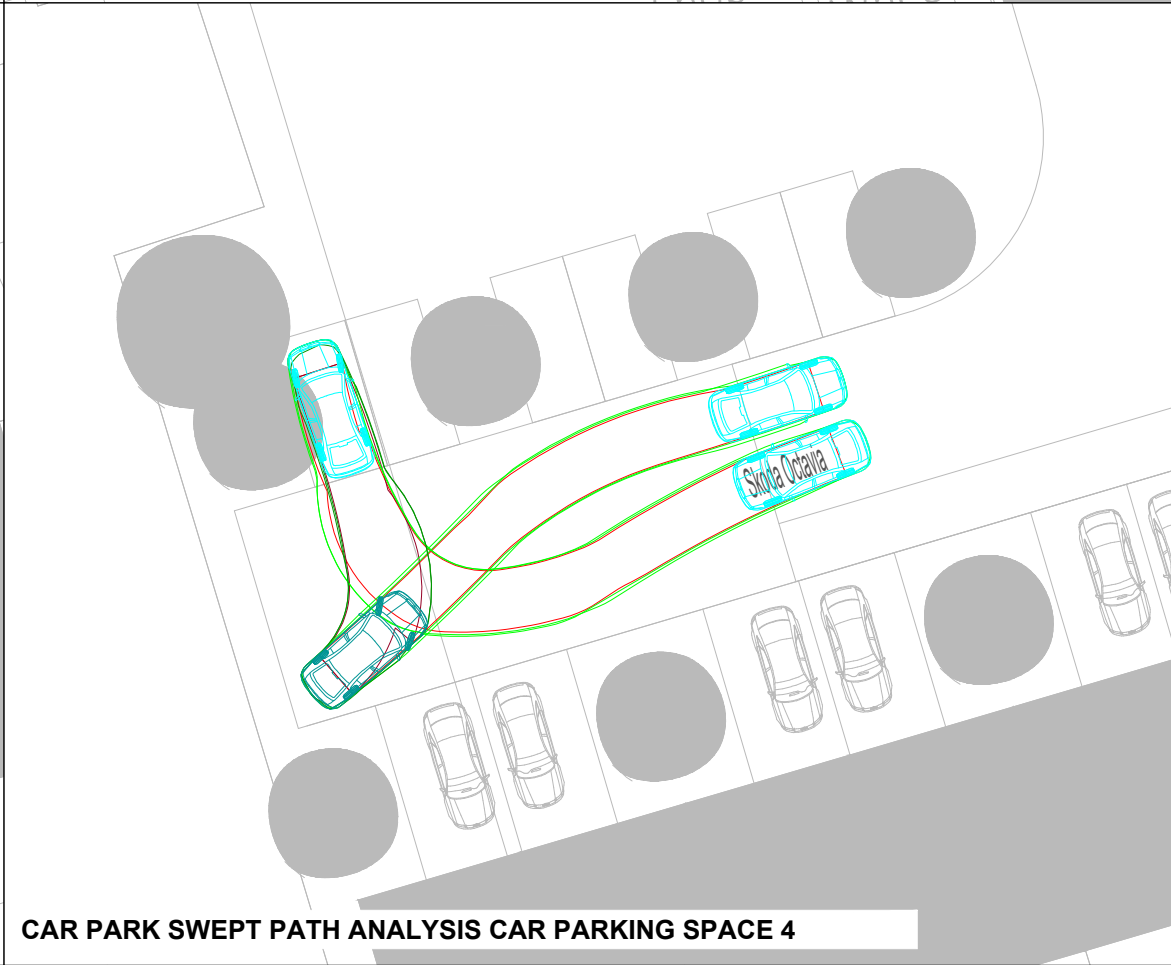
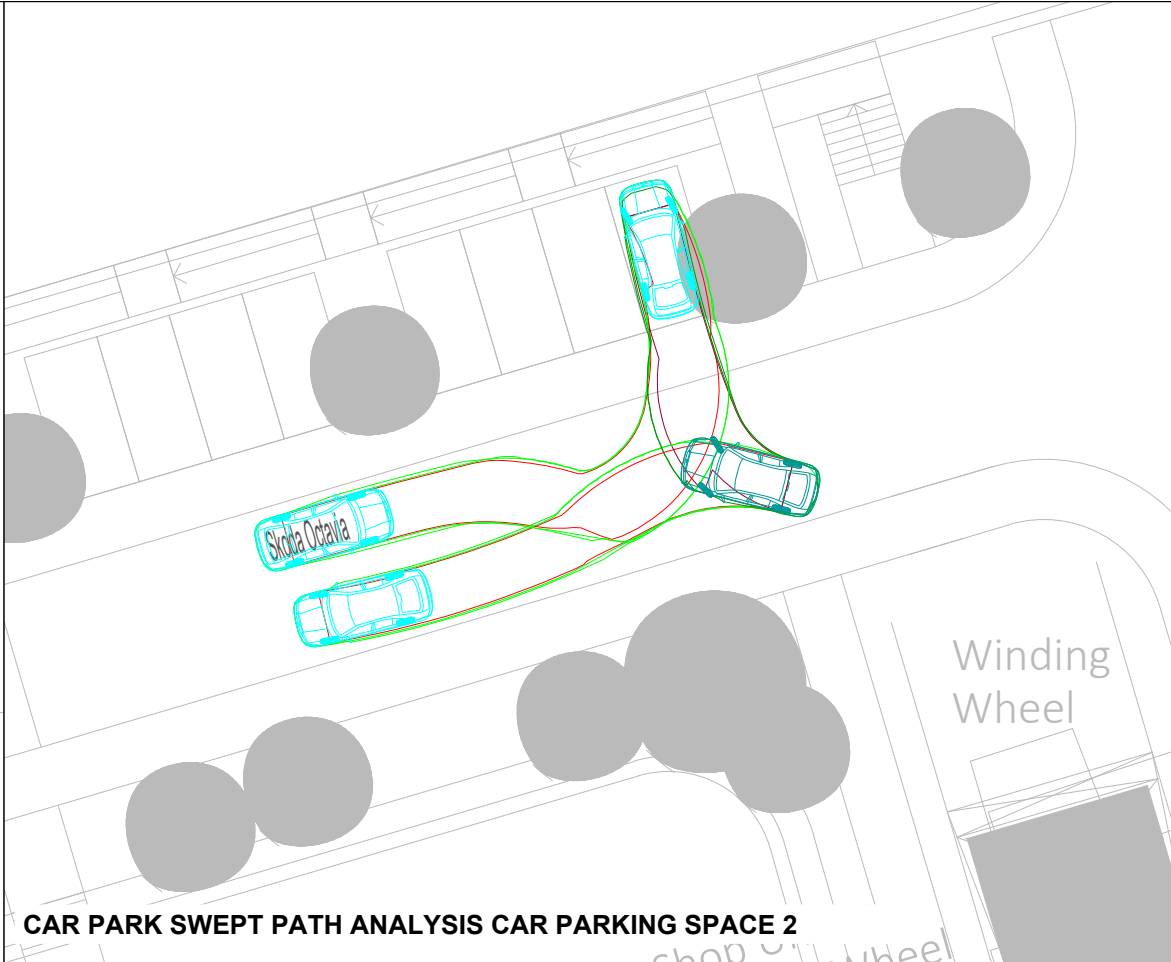
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HENGOED

Project Phase  
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Title  
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ANALYSIS



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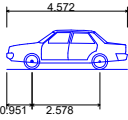
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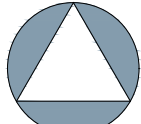
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Max Track Width	4.00s
Lock to lock time	5.100m
Kerb to Kerb Turning Radius	



NORTH

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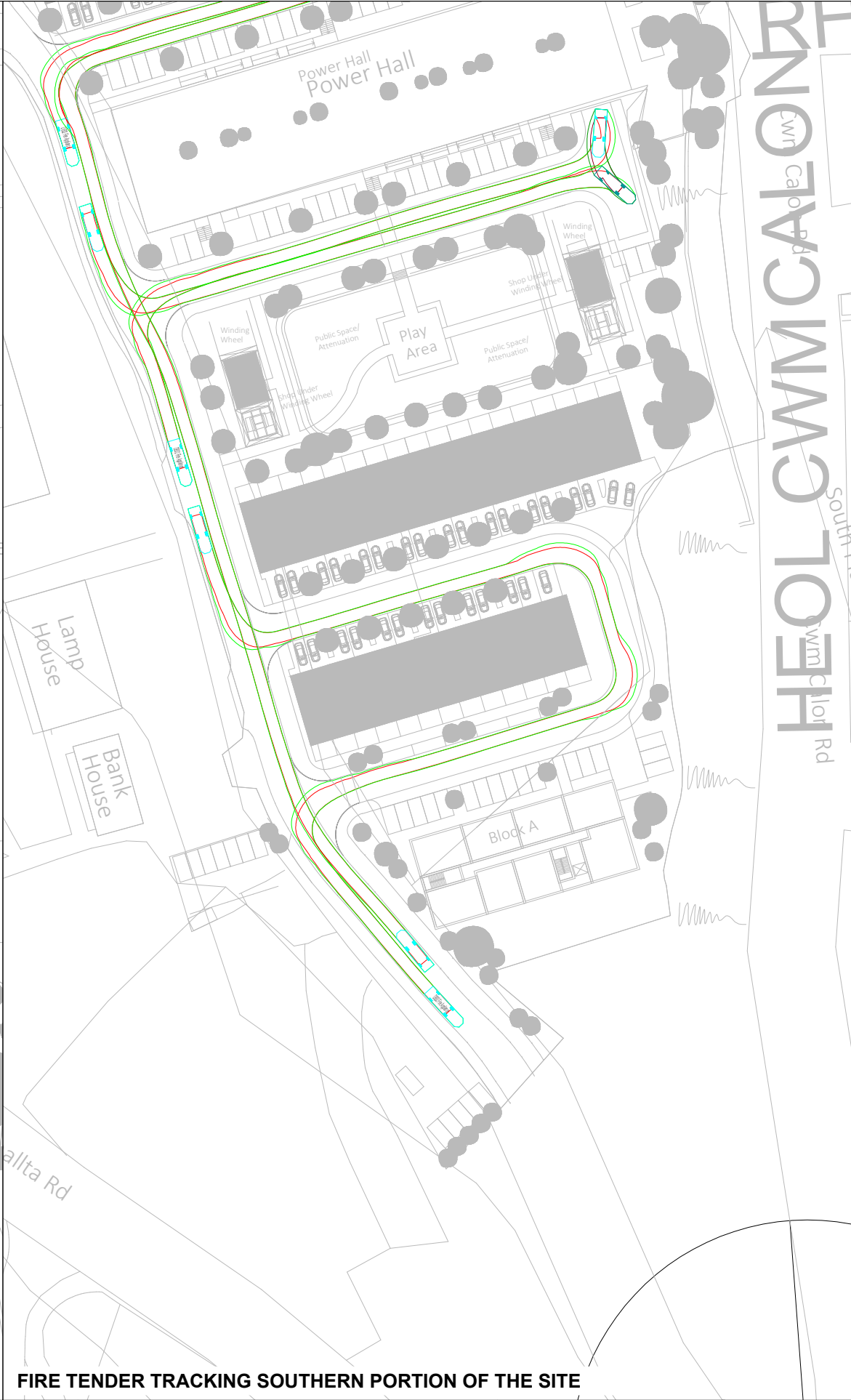
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020.0929		1:250		
PBA Drawing No:			Revision	
020.0929-0006			P01	

## Appendix E





FIRE TENDER TRACKING NORTHERN PORTION OF THE SITE



FIRE TENDER TRACKING SOUTHERN PORTION OF THE SITE

Project Name	PENALLTA COLLIERY, HENGOED
Project Phase	PRELIMINARY

Title	FIRE TENDER SWEPT PATH ANALYSIS
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Paul Basham Associates Ltd  
The Bothy, Cams Hall Estate, Fareham, PO16 8UT  
01329 711 000  
info@paulbashamassociates.com www.paulbashamassociates.com

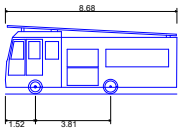
Client	THE POWER HALL LTD.
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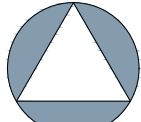
### GENERAL NOTES

- THIS DRAWING IS INTENDED TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS, SERVICES AND SPECIALIST DRAWINGS, DETAILS AND SPECIFICATIONS.
- ANY VARIATIONS OR DISCREPANCIES BETWEEN THESE DRAWINGS IN TERMS OF DIMENSIONS OR DETAILS SHOULD BE DRAWN TO THE ATTENTION OF THE ARCHITECT AND/OR THE ENGINEER FOR CLARIFICATION.
- ALL FIGURED DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DIMENSIONS. DO NOT SCALE THIS DRAWING.
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#### VEHICLE PROFILE



DB32 Fire Appliance	
Overall Length	8.680m
Overall Width	2.180m
Overall Body Height	3.452m
Min Body Ground Clearance	0.337m
Max Track Width	2.121m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	7.910m



NORTH

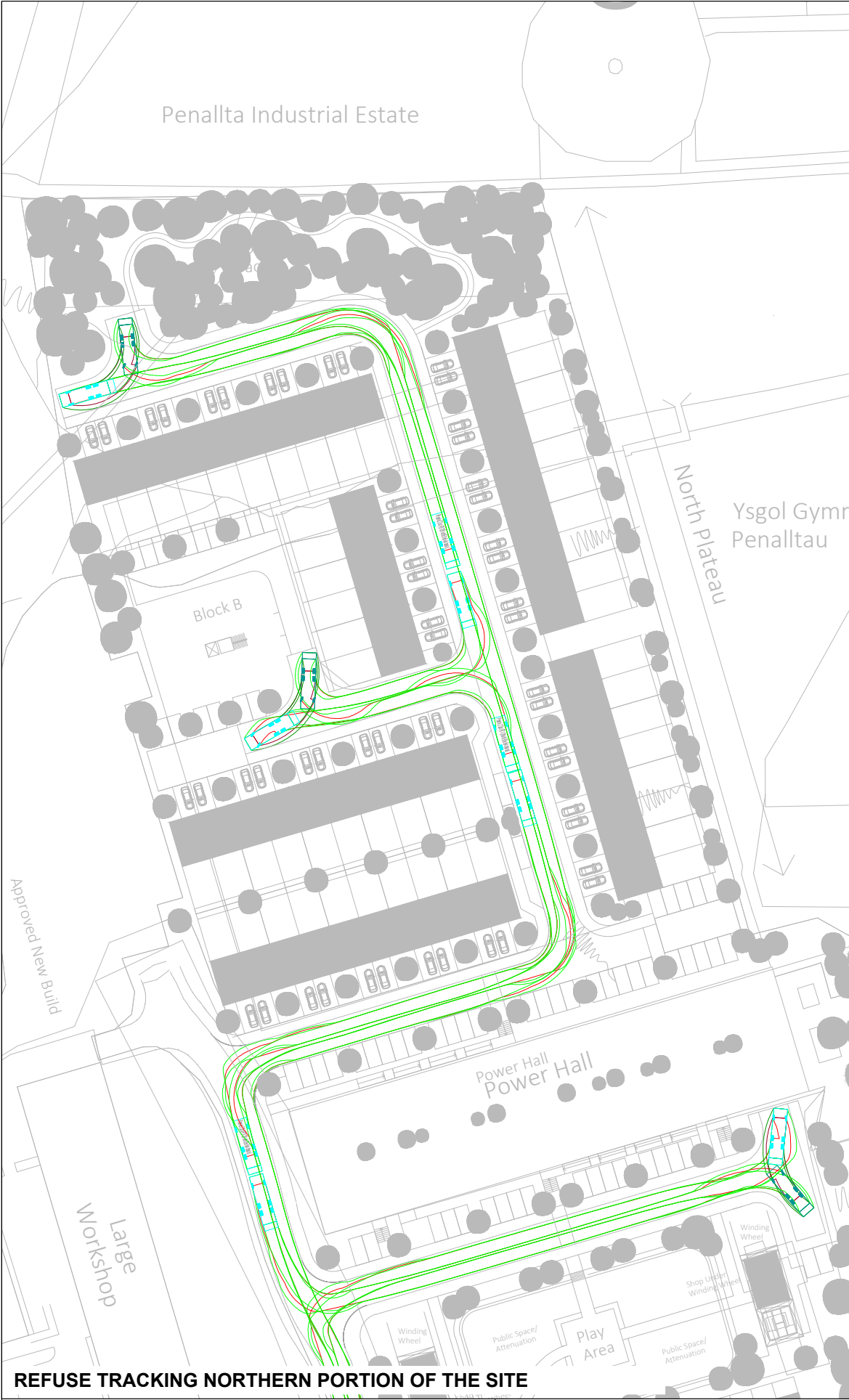
PRELIMINARY

DRAWING/DESIGN IS STILL 'IN DEVELOPMENT'  
YOU ARE ADVISED TO MAKE DUE ALLOWANCE

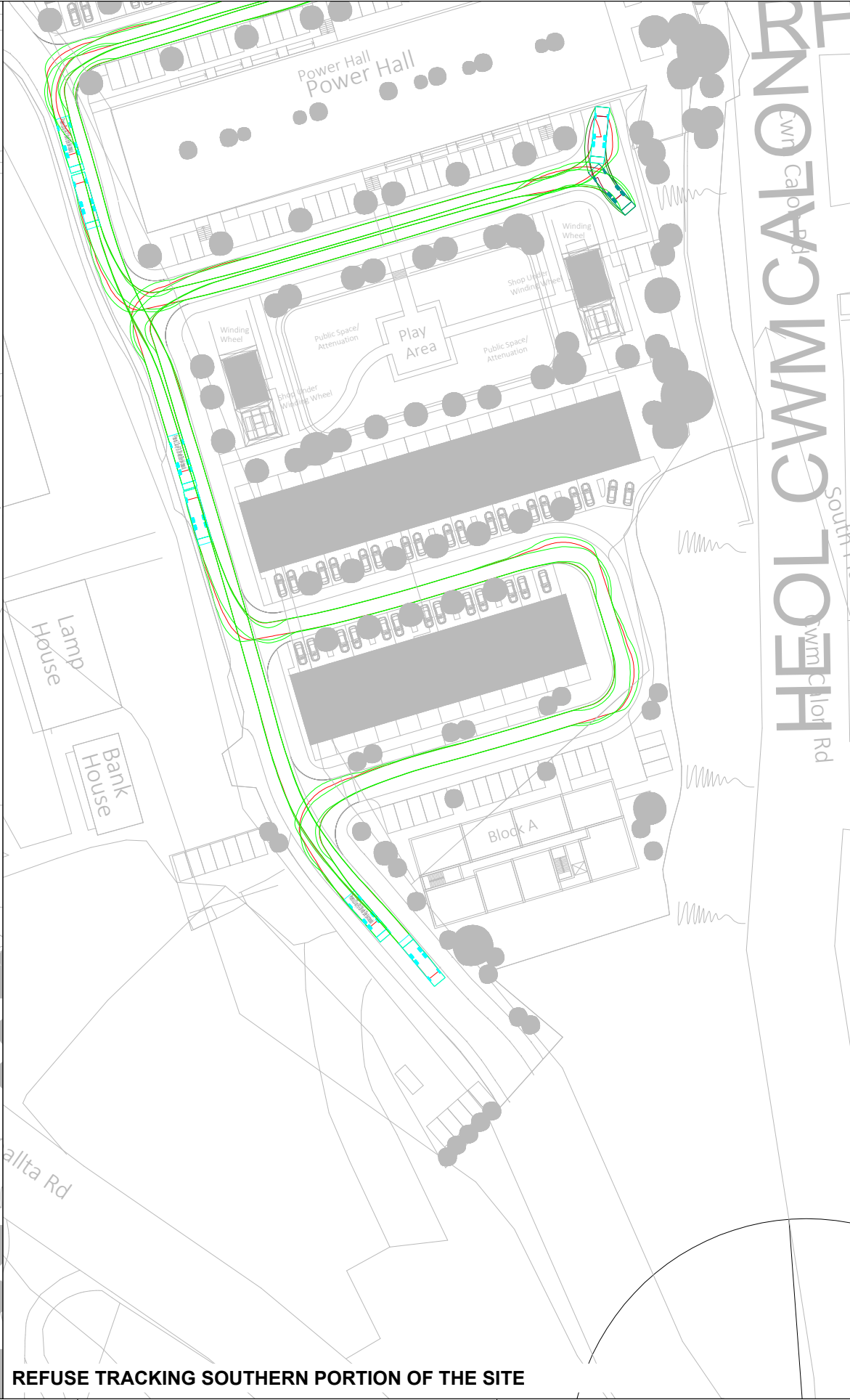
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1:1000

P01	FIRST ISSUE	18.12.25	NMM	IDR
Rev	Description	Date	By	App'd
Date Created	Drawn By	Approved By	Suitability Code	
18.12.25	NMM	IDR	-	
PBA Project Number		Scale	(AT A3)	
020.0929		1:1000		
PBA Drawing No:			Revision	
020.0929-0003			P01	



REFUSE TRACKING NORTHERN PORTION OF THE SITE



REFUSE TRACKING SOUTHERN PORTION OF THE SITE

Project Name	PENALLTA COLLIERY, HENGOED
Project Phase	
PRELIMINARY	

Title	REFUSE VEHICLE SWEEP PATH ANALYSIS
-------	---------------------------------------



Paul Basham Associates Ltd  
The Bothy, Cams Hall Estate, Fareham, PO16 8UT  
01329 711 000  
info@paulbashamassociates.com www.paulbashamassociates.com

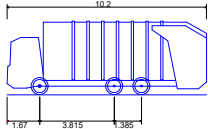
Client	THE POWER HALL LTD.
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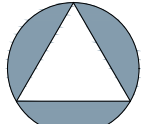
### GENERAL NOTES

- THIS DRAWING IS INTENDED TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS, SERVICES AND SPECIALIST DRAWINGS, DETAILS AND SPECIFICATIONS.
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  - SITE LAYOUT
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#### VEHICLE PROFILE



Phoenix 2 Duo (P2-12W with Elite 6x4 chassis)	10.200m
Overall Length	2.530m
Overall Width	3.751m
Overall Body Height	0.504m
Min Body Ground Clearance	2.500m
Track Width	4.00s
Lock to lock time	7.800m
Kerb to Kerb Turning Radius	



NORTH

PRELIMINARY

DRAWING/DESIGN IS STILL 'IN DEVELOPMENT'  
YOU ARE ADVISED TO MAKE DUE ALLOWANCE

0m50m

1:1000

P01	FIRST ISSUE	18.12.25	NMM	IDR
Rev	Description	Date	By	App'd
Date Created	Drawn By	Approved By	Suitability Code	
18.12.25	NMM	IDR	-	
PBA Project Number		Scale	(AT A3)	
020.0929		1:1000		
PBA Drawing No:			Revision	
020.0929-0004			P01	

QMS2011/v9/020525/IDR

## Appendix F



Audit Code: 651448ac-0f41-4b76-9ab6-5409156146c4

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TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use: 03 - RESIDENTIAL

Category: A - HOUSES PRIVATELY OWNED

Selected Vehicle Type: Total Vehicles

Selected regions and areas:

02	<b>SOUTH EAST</b>	
	ES	EAST SUSSEX 7 days
	EX	ESSEX 2 days
	HC	HAMPSHIRE 5 days
	HF	HERTFORDSHIRE 3 days
	KC	KENT 5 days
	SC	SURREY 4 days
	WB	WEST BERKSHIRE 1 day
	WS	WEST SUSSEX 7 days
03	<b>SOUTH WEST</b>	
	DC	DORSET 1 day
04	<b>EAST ANGLIA</b>	
	CA	CAMBRIDGESHIRE 2 days
	NF	NORFOLK 11 days
05	<b>EAST MIDLANDS</b>	
	LE	LEICESTERSHIRE 1 day
07	<b>YORKSHIRE &amp; NORTH LINCOLNSHIRE</b>	
	NY	NORTH YORKSHIRE 1 day
08	<b>NORTH WEST</b>	
	AC	CHESHIRE WEST & CHESTER 1 day
09	<b>NORTH</b>	
	DH	DURHAM 1 day

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

Audit Code: 651448ac-0f41-4b76-9ab6-5409156146c4

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**Primary Filtering Selection:**

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

Parameter:	DWELLS
Actual Range:	6 to 1882 (units:DWELLS)
Range Selected by User:	75 to 200 (units:DWELLS)
Parking Spaces Range:	6 - 2696

<b>Public Transport Provision:</b>	
Selection by:	All Surveys Included
Date Range:	14/11/25 to 14/11/25

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

<b>Selected survey days:</b>	
Friday	3 days
Monday	7 days
Thursday	17 days
Tuesday	19 days
Wednesday	6 days

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

<b>Selected survey types:</b>	
Manual count	52
Direction ATC Count	0

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

<b>Selected Locations:</b>	
Edge of Town	37 days
Neighbourhood Centre	13 days
Suburban Area	2 days

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

<b>Selected Location Sub Categories:</b>	
Development Zone	1 days
No Sub Category	2 days
Out of Town	1 days
Residential Zone	37 days
Village	11 days

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

<b>Inclusion of Servicing Vehicle Counts:</b>	
Servicing vehicles Excluded	46 days
Servicing vehicles Included	6 days



Audit Code: 651448ac-0f41-4b76-9ab6-5409156146c4

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Secondary Filtering Selection:

Use Class:

C3	52 surveys
----	------------

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

Population within 500m Range:

220 - 6900

Population within 1 mile:

1,001 to 5,000	12 surveys
10,001 to 15,000	14 surveys
15,001 to 20,000	7 surveys
20,001 to 25,000	4 surveys
5,001 to 10,000	15 surveys

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

Population within 5 miles:

100,001 to 125,000	3 surveys
125,001 to 250,000	14 surveys
25,001 to 50,000	11 surveys
250,001 to 500,000	3 surveys
5,001 to 25,000	8 surveys
50,001 to 75,000	8 surveys
75,001 to 100,000	5 surveys

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

Car ownership within 5 miles:

0.6 to 1.0	11 surveys
1.1 to 1.5	34 surveys
1.6 to 2.0	7 surveys

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

Audit Code: 651448ac-0f41-4b76-9ab6-5409156146c4

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Petrol filling station:

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

Travel Plan:

No	9 surveys
Yes	43 surveys

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

PTAL Rating:

2 - Poor	1 surveys
No PTAL Present	51 surveys

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

COVID-19 Restrictions:

No

Audit Code: 651448ac-0f41-4b76-9ab6-5409156146c4

1 COMMON LANE NEAR CHESTER WAVERTON Neighbourhood Centre Village Site area: 6.800000190734863 hect Survey date: Friday 29/04/2022	AC-03-A-06	DETACHED HOUSES	CESHIRE WEST & CHESTER	Survey Type: Manual
2 GIDDING ROAD SAWTRY Neighbourhood Centre Village Site area: 2.680000066757202 hect Survey date: Thursday 13/10/2022	CA-03-A-08	DETACHED & SEMI-DETACHED	CAMBRIDGESHIRE	Survey Type: Manual
3 EDDINGTON AVENUE CAMBRIDGE EDDINGTON Edge of Town Development Zone Site area: 3.57 hect Survey date: Thursday 28/11/2024	CA-03-A-09	MIXED HOUSES & FLATS	CAMBRIDGESHIRE	Survey Type: Manual
4 A350 SHAFTESBURY Edge of Town No Sub Category Site area: 6.630000114440918 hect Survey date: Tuesday 31/10/2023	DC-03-A-11	MIXED HOUSES	DORSET	Survey Type: Manual
5 LEAZES LANE BISHOP AUCKLAND ST HELEN AUCKLAND Neighbourhood Centre Residential Zone Site area: 4.03000020980835 hect Survey date:	DH-03-A-02	MIXED HOUSES	DURHAM	Survey Type: Manual
6 NEW ROAD HAILSHAM HELLINGLY Edge of Town Residential Zone Site area: 3.490000009536743 hect Survey date: Thursday 07/11/2019	ES-03-A-07	MIXED HOUSES & FLATS	EAST SUSSEX	Survey Type: Manual
7 WATERGATE BEXHILL-ON-SEA Edge of Town Residential Zone Site area: 5.409999847412109 hect Survey date: Thursday 28/09/2023	ES-03-A-10	MIXED HOUSES & FLATS	EAST SUSSEX	Survey Type: Manual
8 BISHOPS LANE RINGMER	ES-03-A-11	MIXED HOUSES	EAST SUSSEX	



Audit Code: 651448ac-0f41-4b76-9ab6-5409156146c4

Neighbourhood Centre

Village

Site area: 4.340000152587891 hect

Survey date: Thursday 28/09/2023

Survey Type: Manual

9	ES-03-A-12	MIXED HOUSES & FLATS	EAST SUSSEX
---	------------	----------------------	-------------

HOREBEECH LANE  
HORAM  
Neighbourhood Centre  
Village  
Site area: 8.109999656677246 hect  
Survey date: Tuesday 03/10/2023

Survey Type: Manual

10	ES-03-A-14	MIXED HOUSES & FLATS	EAST SUSSEX
----	------------	----------------------	-------------

RATTLE ROAD  
NEAR EASTBOURNE  
STONE CROSS  
Edge of Town  
Residential Zone  
Site area: 3.4000000953674316 hect  
Survey date: Tuesday 30/04/2024

Survey Type: Manual

11	ES-03-A-19	MIXED HOUSES & FLATS	EAST SUSSEX
----	------------	----------------------	-------------

WRESTWOOD ROAD  
BEXHILL-ON-SEA  
Edge of Town  
Residential Zone  
Site area: 6.699999809265137 hect  
Survey date: Wednesday 09/10/2024

Survey Type: Manual

12	ES-03-A-22	MIXED HOUSES	EAST SUSSEX
----	------------	--------------	-------------

THE FAIRWAY  
NEWHAVEN  
Edge of Town  
Residential Zone  
Site area: 2.5 hect  
Survey date: Tuesday 22/04/2025

Survey Type: Manual

13	EX-03-A-02	DETACHED & SEMI-DETACHED	ESSEX
----	------------	--------------------------	-------

MANOR ROAD  
CHIGWELL  
GRANGE HILL  
Edge of Town  
Residential Zone  
Site area: 6.119999885559082 hect  
Survey date:

Survey Type: Manual

14	EX-03-A-03	MIXED HOUSES	ESSEX
----	------------	--------------	-------

KESTREL GROVE  
RAYLEIGH  
Edge of Town  
Residential Zone  
Site area: 3.5999999046325684 hect  
Survey date:

Survey Type: Manual

15	HC-03-A-28	MIXED HOUSES & FLATS	HAMPSHIRE
----	------------	----------------------	-----------

EAGLE AVENUE  
WATERLOOVILLE  
LOVEDEAN  
Edge of Town  
Residential Zone  
Site area: 5.96999979019165 hect  
Survey date:

Survey Type: Manual

Audit Code: 651448ac-0f41-4b76-9ab6-5409156146c4

<b>16</b> GREEN LANE FARNHAM WEYBOURNE Neighbourhood Centre Residential Zone Site area: 3.2899999618530273 hect Survey date: Thursday 29/06/2023	<b>HC-03-A-32</b>	<b>MIXED HOUSES &amp; FLATS</b>	<b>HAMPSHIRE</b>	Survey Type: Manual
<b>17</b> CROW LANE RINGWOOD CROW Edge of Town Residential Zone Site area: 6.199999809265137 hect Survey date: Tuesday 04/07/2023	<b>HC-03-A-33</b>	<b>MIXED HOUSES &amp; FLATS</b>	<b>HAMPSHIRE</b>	Survey Type: Manual
<b>18</b> HAVANT ROAD EMSWORTH Edge of Town Residential Zone Site area: 6.230000019073486 hect Survey date: Tuesday 12/09/2023	<b>HC-03-A-36</b>	<b>MIXED HOUSES &amp; FLATS</b>	<b>HAMPSHIRE</b>	Survey Type: Manual
<b>19</b> KILN ROAD LIPHOOK Edge of Town Residential Zone Site area: 6.09 hect Survey date: Thursday 14/11/2024	<b>HC-03-A-39</b>	<b>MIXED HOUSES &amp; FLATS</b>	<b>HAMPSHIRE</b>	Survey Type: Manual
<b>20</b> HARE STREET ROAD BUNTINGFORD Edge of Town Residential Zone Site area: 5.670000076293945 hect Survey date:	<b>HF-03-A-03</b>	<b>MIXED HOUSES</b>	<b>HERTFORDSHIRE</b>	Survey Type: Manual
<b>21</b> A505 ROYSTON Edge of Town Residential Zone Site area: 8 hect Survey date: Tuesday 28/11/2023	<b>HF-03-A-06</b>	<b>MIXED HOUSES &amp; FLATS</b>	<b>HERTFORDSHIRE</b>	Survey Type: Manual
<b>22</b> BAKER STREET POTTERS BAR Suburban Area Residential Zone Site area: 6.320000171661377 hect Survey date:	<b>HF-03-A-07</b>	<b>MIXED HOUSES &amp; BUNGALOWS</b>	<b>HERTFORDSHIRE</b>	Survey Type: Manual
<b>23</b> KILN BARN ROAD AYLESFORD DITTON	<b>KC-03-A-04</b>	<b>SEMI-DETACHED &amp; TERRACED</b>	<b>KENT</b>	

Audit Code: 651448ac-0f41-4b76-9ab6-5409156146c4

Edge of Town Residential Zone Site area: 4.309999942779541 hect Survey date: Friday 22/09/2017 Survey Type: Manual			
24 MAIDSTONE ROAD CHARING Neighbourhood Centre Village Site area: 0.8600000143051147 hect Survey date: Tuesday 22/05/2018 Survey Type: Manual	KC-03-A-08	MIXED HOUSES	KENT
25 HEADCORN ROAD STAPLEHURST Edge of Town Residential Zone Site area: 3.9100000858306885 hect Survey date: Tuesday 09/05/2023 Survey Type: Manual	KC-03-A-10	MIXED HOUSES	KENT
26 WESTERN LINK FAVERSHAM DAVINGTON Edge of Town Residential Zone Site area: 6.78000020980835 hect Survey date: Tuesday 19/09/2023 Survey Type: Manual	KC-03-A-12	MIXED HOUSES & FLATS	KENT
27 HEADCORN ROAD STAPLEHURST Edge of Town Residential Zone Site area: 6.84 hect Survey date: Thursday 22/05/2025 Survey Type: Manual	KC-03-A-14	MIXED HOUSES	KENT
28 MELBOURNE ROAD IBSTOCK Neighbourhood Centre Village Site area: 3.296999931335449 hect Survey date: Thursday 28/06/2018 Survey Type: Manual	LE-03-A-02	DETACHED & OTHERS	LEICESTERSHIRE
29 BEAUFORT WAY GREAT YARMOUTH BRADWELL Edge of Town Residential Zone Site area: 5.559999942779541 hect Survey date: Tuesday 11/09/2018 Survey Type: Manual	NF-03-A-13	MIXED HOUSES	NORFOLK
30 HEATH DRIVE HOLT Edge of Town Residential Zone Site area: 3.509999990463257 hect Survey date: Wednesday 22/09/2021 Survey Type: Manual	NF-03-A-26	MIXED HOUSES	NORFOLK

**Audit Code: 651448ac-0f41-4b76-9ab6-5409156146c4**

<b>31</b> YARMOUTH ROAD NEAR NORWICH BLOFIELD Neighbourhood Centre Village Site area: 3.690000057220459 hect Survey date: Thursday 16/09/2021	<b>NF-03-A-27</b>	<b>MIXED HOUSES &amp; FLATS</b>	<b>NORFOLK</b>	Survey Type: Manual
<b>32</b> HUNSTANTON ROAD HUNSTANTON Edge of Town Residential Zone Site area: 7.300000190734863 hect Survey date: Wednesday 21/09/2022	<b>NF-03-A-32</b>	<b>MIXED HOUSES &amp; FLATS</b>	<b>NORFOLK</b>	Survey Type: Manual
<b>33</b> LONDON ROAD ATTLEBOROUGH Edge of Town Residential Zone Site area: 4.78000020980835 hect Survey date: Thursday 29/09/2022	<b>NF-03-A-33</b>	<b>MIXED HOUSES</b>	<b>NORFOLK</b>	Survey Type: Manual
<b>34</b> NORWICH ROAD SWAFFHAM Edge of Town Out of Town Site area: 3.1500000953674316 hect Survey date: Tuesday 27/09/2022	<b>NF-03-A-34</b>	<b>MIXED HOUSES</b>	<b>NORFOLK</b>	Survey Type: Manual
<b>35</b> REPTON AVENUE NORWICH Edge of Town Residential Zone Site area: 5.340000152587891 hect Survey date: Wednesday 28/09/2022	<b>NF-03-A-35</b>	<b>MIXED HOUSES &amp; FLATS</b>	<b>NORFOLK</b>	Survey Type: Manual
<b>36</b> LONDON ROAD WYMONDHAM Edge of Town No Sub Category Site area: 3.200000047683716 hect Survey date: Thursday 29/09/2022	<b>NF-03-A-36</b>	<b>MIXED HOUSES</b>	<b>NORFOLK</b>	Survey Type: Manual
<b>37</b> MILL LANE NEAR NORWICH HORSFORD Neighbourhood Centre Village Site area: 5.400000095367432 hect Survey date: Wednesday 21/09/2022	<b>NF-03-A-44</b>	<b>MIXED HOUSES</b>	<b>NORFOLK</b>	Survey Type: Manual
<b>38</b> BRANDON ROAD SWAFFHAM Edge of Town Residential Zone	<b>NF-03-A-48</b>	<b>MIXED HOUSES</b>	<b>NORFOLK</b>	



Audit Code: 651448ac-0f41-4b76-9ab6-5409156146c4

Site area: 6.739999771118164 hect  
Survey date: Tuesday 17/09/2019

Survey Type: Manual

39 NF-03-A-52 MIXED HOUSES NORFOLK

LYNNSPORT WAY

KING'S LYNN

Suburban Area

Residential Zone

Site area: 5.309999942779541 hect

Survey date: Tuesday 07/11/2023

Survey Type: Manual

40 NY-03-A-15 DETACHED & SEMI-DETACHED NORTH YORKSHIRE

MILBY ROAD

BOROUGHBRIDGE

MILBY

Edge of Town

Residential Zone

Site area: 6.8 hect

Survey date: Thursday 19/09/2024

Survey Type: Manual

41 SC-03-A-09 MIXED HOUSES & FLATS SURREY

AMLETS LANE

CRANLEIGH

Neighbourhood Centre

Village

Site area: 13.479999542236328 hect

Survey date: Tuesday 24/05/2022

Survey Type: Manual

42 SC-03-A-11 MIXED HOUSES SURREY

FOLLY HILL

FARNHAM

Edge of Town

Residential Zone

Site area: 5.820000171661377 hect

Survey date: Tuesday 14/05/2024

Survey Type: Manual

43 SC-03-A-13 MIXED HOUSES & FLATS SURREY

GUILDFORD ROAD

ASH

Neighbourhood Centre

Village

Site area: 5.56 hect

Survey date: Thursday 05/09/2024

Survey Type: Manual

44 SC-03-A-14 MIXED HOUSES & FLATS SURREY

HOLLOWAY HILL

CHERTSEY

Edge of Town

Residential Zone

Site area: 8.1 hect

Survey date: Tuesday 22/10/2024

Survey Type: Manual

45 WB-03-A-04 MIXED HOUSES WEST BERKSHIRE

DORKING WAY

READING

CALCOT

Edge of Town

Residential Zone

Site area: 7.5 hect

Survey date: Thursday 12/09/2024

Survey Type: Manual

46 WS-03-A-08 MIXED HOUSES WEST SUSSEX

ROUNDSTONE LANE



Audit Code: 651448ac-0f41-4b76-9ab6-5409156146c4

ANGMERING

Edge of Town

Residential Zone

Site area: 8.859999656677246 hect

Survey date: Thursday 19/04/2018

Survey Type: Manual

47 WS-03-A-14 MIXED HOUSES WEST SUSSEX

TODDINGTON LANE

LITTLEHAMPTON

WICK

Edge of Town

Residential Zone

Site area: 2.8299999237060547 hect

Survey date: Wednesday 20/10/2021

Survey Type: Manual

48 WS-03-A-18 MIXED HOUSES & FLATS WEST SUSSEX

LONDON ROAD

HASSOCKS

Neighbourhood Centre

Village

Site area: 5.460000038146973 hect

Survey date:

Survey Type: Manual

49 WS-03-A-22 MIXED HOUSES & FLATS WEST SUSSEX

SHOPWHYKE ROAD

CHICHESTER

Edge of Town

Residential Zone

Site area: 3.799999952316284 hect

Survey date: Tuesday 19/03/2024

Survey Type: Manual

50 WS-03-A-23 MIXED HOUSES & FLATS WEST SUSSEX

TURNERS HILL ROAD

EAST GRINSTEAD

Edge of Town

Residential Zone

Site area: 6.639999866485596 hect

Survey date: Tuesday 14/05/2024

Survey Type: Manual

51 WS-03-A-26 MIXED HOUSES & FLATS WEST SUSSEX

RUSPER ROAD

HORSHAM

NORTH HORSHAM

Edge of Town

Residential Zone

Site area: 4 hect

Survey date: Tuesday 24/09/2024

Survey Type: Manual

52 WS-03-A-27 MIXED HOUSES & FLATS WEST SUSSEX

OCKLEY LANE

HASSOCKS

Edge of Town

Residential Zone

Site area: 9.42 hect

Survey date: Friday 20/09/2024

Survey Type: Manual

DESELECTED SURVEYS

Site Ref	Survey Date	Reason for Deselection
AN-03-A-09	12-10-2016	Sites in Wales and England only (excluding Greater London)
AN-03-A-10	07-06-2024	Sites in Wales and England only (excluding Greater London)

Audit Code: 651448ac-0f41-4b76-9ab6-5409156146c4

Site Ref	Survey Date	Reason for Deselection
AS-03-A-02	20-04-2022	Sites in Wales and England only (excluding Greater London)
BN-03-A-03	10-09-2019	Sites in Wales and England only (excluding Greater London)
CV-03-A-02	22-05-2017	Sites in Wales and England only (excluding Greater London)
IM-03-A-03	21-05-2024	Sites in Wales and England only (excluding Greater London)
IM-03-A-06	23-05-2024	Sites in Wales and England only (excluding Greater London)
LU-03-A-01	21-09-2021	Survey undertaken during Covid-19
SF-03-A-09	24-06-2021	Survey undertaken during Covid-19
SF-03-A-10	22-06-2021	Survey undertaken during Covid-19
TI-03-A-01	17-06-2021	Sites in Wales and England only (excluding Greater London)
TY-03-A-02	14-03-2019	Sites in Wales and England only (excluding Greater London)
WS-03-A-12	16-06-2021	Survey undertaken during Covid-19
WS-03-A-13	23-06-2021	Survey undertaken during Covid-19

Audit Code: 651448ac-0f41-4b76-9ab6-5409156146c4

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

Total Vehicles

Calculation factor: 1 DWELLS

*\*BOLD print indicates peak (busiest) period*

Time Range	No. Days	Ave. DWELLS	Arrivals	Departures	Totals
00:00-01:00					
01:00-02:00					
02:00-03:00					
03:00-04:00					
04:00-05:00					
05:00-06:00					
06:00-07:00					
07:00-08:00	52	136	0.075	0.284	0.359
08:00-09:00	52	136	0.147	0.334	0.481
09:00-10:00	52	136	0.132	0.162	0.294
10:00-11:00	52	136	0.114	0.136	0.250
11:00-12:00	52	136	0.123	0.127	0.250
12:00-13:00	52	136	0.137	0.126	0.263
13:00-14:00	52	136	0.147	0.138	0.285
14:00-15:00	52	136	0.141	0.168	0.309
15:00-16:00	52	136	0.239	0.154	0.393
16:00-17:00	52	136	0.238	0.156	0.394
17:00-18:00	52	136	0.294	0.147	0.441
18:00-19:00	52	136	0.237	0.134	0.371
19:00-20:00	1	97	0.062	0.052	0.114
20:00-21:00	1	97	0.031	0.021	0.052
21:00-22:00					
22:00-23:00					
23:00-00:00					
<b>Total Rates:</b>			2.117	2.139	4.256

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

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

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Audit Code: 651448ac-0f41-4b76-9ab6-5409156146c4

Parameter Summary:

Trip rate parameter range selected:	75 - 200 (units: DWELLS)
Survey date date range:	27/03/2017 - 22/05/2025
Number of weekdays (Monday-Friday):	52
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	42
Surveys manually removed from selection:	0

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

## Appendix G

## WF01BEW - Location of usual residence and place of work (OA level)

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population All usual residents ages 16 and over in employment the  
units Persons week before the census  
date 2011

		currently residing in			
place of work : 2011 super output area - middle layer		W02000302 : Caerphilly 013			
			%		
W02000205 : Neath Port Talbot 007	6	0.2%	Neath	0.2%	
W02000225 : Bridgend 008	6	0.2%			
W02000232 : Bridgend 015	28	0.8%	Bridgend	1.0%	
W02000239 : The Vale of Glamorgan 003	13	0.4%			
W02000240 : The Vale of Glamorgan 004	8	0.2%			
W02000250 : The Vale of Glamorgan 014	11	0.3%	The Vale of	0.9%	
W02000369 : Cardiff 003	25	0.7%			
W02000371 : Cardiff 005	80	2.4%			
W02000372 : Cardiff 006	10	0.3%			
W02000375 : Cardiff 009	14	0.4%			
W02000376 : Cardiff 010	27	0.8%			
W02000377 : Cardiff 011	30	0.9%			
W02000384 : Cardiff 018	61	1.8%			
W02000385 : Cardiff 019	7	0.2%			
W02000386 : Cardiff 020	10	0.3%			
W02000387 : Cardiff 021	12	0.4%			
W02000389 : Cardiff 023	6	0.2%			
W02000391 : Cardiff 025	24	0.7%			
W02000392 : Cardiff 026	11	0.3%			
W02000394 : Cardiff 028	7	0.2%			
W02000395 : Cardiff 029	9	0.3%			
W02000397 : Cardiff 031	8	0.2%			
W02000398 : Cardiff 032	170	5.0%			
W02000399 : Cardiff 033	8	0.2%			
W02000400 : Cardiff 034	23	0.7%			
W02000402 : Cardiff 036	29	0.9%			
W02000404 : Cardiff 038	30	0.9%			
W02000406 : Cardiff 040	15	0.4%			
W02000408 : Cardiff 042	10	0.3%			
W02000412 : Cardiff 046	17	0.5%			
W02000422 : Cardiff 048	45	1.3%			
W02000423 : Cardiff 049	67	2.0%	Cardiff	22.2%	
W02000252 : Rhondda Cynon Taf 001	11	0.3%	Hirwaun	0.3%	
W02000253 : Rhondda Cynon Taf 002	8	0.2%	Llwydcoed	0.2%	
W02000254 : Rhondda Cynon Taf 003	7	0.2%			



W02000256 : Rhondda Cynon Taf 005	10	0.3% Aberdare	0.5%
W02000257 : Rhondda Cynon Taf 006	15	0.4% Mountain A	0.4%
W02000261 : Rhondda Cynon Taf 010	7	0.2% Treorchy	0.2%
W02000263 : Rhondda Cynon Taf 012	29	0.9% Abercynon	0.9%
W02000265 : Rhondda Cynon Taf 014	8	0.2% Gelli	0.2%
W02000268 : Rhondda Cynon Taf 017	6	0.2% Porth	0.2%
W02000270 : Rhondda Cynon Taf 019	26	0.8% Pontypridd	0.8%
W02000271 : Rhondda Cynon Taf 020	7	0.2% Porth	0.2%
W02000272 : Rhondda Cynon Taf 021	44	1.3%	
W02000273 : Rhondda Cynon Taf 022	29	0.9% Pontypridd	2.1%
W02000274 : Rhondda Cynon Taf 023	8	0.2% Tonyrefail	0.2%
W02000276 : Rhondda Cynon Taf 025	15	0.4% Church Vill	0.4%
W02000277 : Rhondda Cynon Taf 026	105	3.1% Nantgarw	3.1%
W02000278 : Rhondda Cynon Taf 027	7	0.2% Church Vill	0.2%
W02000279 : Rhondda Cynon Taf 028	7	0.2% Beddau	0.2%
W02000280 : Rhondda Cynon Taf 029	7	0.2% Llanharan	0.2%
W02000281 : Rhondda Cynon Taf 030	34	1.0% Llantrisant	1.0%
W02000282 : Rhondda Cynon Taf 031	21	0.6% Brysadler	1%
W02000284 : Merthyr Tydfil 002	21	0.6%	
W02000285 : Merthyr Tydfil 003	19	0.6%	
W02000286 : Merthyr Tydfil 004	93	2.7%	
W02000287 : Merthyr Tydfil 005	23	0.7%	
W02000288 : Merthyr Tydfil 006	42	1.2% Merthyr Ty	5.8%
W02000289 : Merthyr Tydfil 007	45	1.3% Treharris	1.3%
W02000415 : Merthyr Tydfil 008	28	0.8% Merthyr Ty	0.8%
W02000290 : Caerphilly 001	34	1.0% Rhymney	1.0%
W02000291 : Caerphilly 002	18	0.5% New Trede	0.5%
W02000292 : Caerphilly 003	19	0.6%	
W02000293 : Caerphilly 004	30	0.9% Bargoed	1.4%
W02000294 : Caerphilly 005	10	0.3% Argoed	0.3%
W02000295 : Caerphilly 006	44	1.3% Trinant	1.3%
W02000296 : Caerphilly 007	20	0.6% Pengam	0.6%
W02000297 : Caerphilly 008	117	3.4% Gelligaer	3.4%
W02000298 : Caerphilly 009	49	1.4% Blackwood	1.4%
W02000299 : Caerphilly 010	16	0.5% Newbridge	0.5%
W02000300 : Caerphilly 011	79	2.3% Springfield	2.3%
W02000301 : Caerphilly 012	146	4.3% Hengoed	4.3%
W02000302 : Caerphilly 013	530	15.6% Ystrad Myn	15.6%
W02000303 : Caerphilly 014	20	0.6% Abercan	0.6%
W02000304 : Caerphilly 015	21	0.6% Wattsville	0.6%
W02000306 : Caerphilly 017	18	0.5% Risca	0.5%
W02000308 : Caerphilly 019	30	0.9% Llanbradac	0.9%
W02000309 : Caerphilly 020	91	2.7% Trethomas	2.7%
W02000310 : Caerphilly 021	46	1.4%	
W02000311 : Caerphilly 022	96	2.8%	
W02000312 : Caerphilly 023	44	1.3%	
W02000313 : Caerphilly 024	141	4.1% Caerphilly	9.6%
W02000314 : Blaenau Gwent 001	12	0.4% Beaufort	0.4%

W02000316 : Blaenau Gwent 003	6	0.2% Sirhowy	0.2%
W02000317 : Blaenau Gwent 004	6	0.2% Ebbw Vale	0.2%
W02000319 : Blaenau Gwent 006	6	0.2% Tredegar	0.2%
W02000320 : Blaenau Gwent 007	9	0.3% Waun-Lwy	0.3%
W02000321 : Blaenau Gwent 008	7	0.2% Abertillery	0.2%
W02000323 : Torfaen 001	7	0.2% Blaenavon	0.2%
W02000326 : Torfaen 004	12	0.4%	
W02000327 : Torfaen 005	16	0.5%	
W02000328 : Torfaen 006	10	0.3% Pontypool	1.1%
W02000330 : Torfaen 008	12	0.4%	
W02000332 : Torfaen 010	6	0.2% Cwmbran	0.5%
W02000335 : Torfaen 013	25	0.7% Llantarnan	0.7%
W02000336 : Monmouthshire 001	6	0.2% Abergaven	0.2%
W02000341 : Monmouthshire 006	11	0.3% Usk	0.3%
W02000343 : Monmouthshire 008	7	0.2% Chepstow	0.2%
W02000347 : Newport 001	6	0.2%	
W02000355 : Newport 009	10	0.3%	
W02000358 : Newport 012	6	0.2%	
W02000360 : Newport 014	28	0.8%	
W02000361 : Newport 015	12	0.4%	
W02000364 : Newport 018	15	0.4%	
W02000365 : Newport 019	6	0.2%	
W02000366 : Newport 020	35	1.0% Newport	3.5%
	3404	100.0%	

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