

J000246-TS01c
FEBRUARY 2022

Proposed Residential Development

Land at Groesfan, Penycae

Transport Statement

Prepared on behalf of:



Wales & West Housing
Association Limited

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1.0 INTRODUCTION

1.1 This Transport Statement (TS) has been prepared by Focus Transport Planning (Focus TP) on behalf of Wales & West Housing Association Limited to consider highways and transport matters relating to proposals for the development of 36 new residential dwellings at land to the south of Groesfan, Penycae, Wrexham.

1.2 This TS report has been prepared to inform the Local Planning and Highway Authority, Wrexham County Borough Council (WCBC) of relevant highways and transport matters associated with the residential development, including an assessment of the level of traffic demand anticipated to be generated by the application scheme, and to set out the design & nature of the proposed site access arrangements. The TS report also considers the anticipated traffic operational effects of the application scheme over the immediate local highway network.

1.2.1 The scope and nature of matters considered in this TS report reflects the extent of issues that are likely to be of material interest to WCBC highways. The core structure of the remainder of this TS report is therefore as follows:

- A description of the location of the application site and a review of relevant planning history & planning guidance.
- A review of existing local highway network conditions - including the presentation of historical road safety records.
- An audit of sustainable transport opportunities available within the immediate vicinity of the application site, including a review of local walking, cycling and public transport connections, along with an audit of the site's proximity to everyday shops and services.
- A description of the main development elements proposed as part of the application scheme - including a review of the proposed site access arrangements, car & cycle parking and provision to enable large vehicle servicing.

- An assessment of the anticipated travel demand associated with the application scheme.

 - Summary and conclusions.
- 1.3 The contents of this TS report have been prepared to reflect guidance set out in Welsh Government Technical Advice Note TAN18 “Transport”. Para D4 to Annex D of TAN 18 states that proposed developments that could be expected to generate significant levels of movement or are likely to have significant effects on existing patterns of movement should be the subject of a formal TA report. To assist in identifying when such reports would be necessary, TAN18 sets out ‘rule of thumb’ thresholds for new development, above which formal TA reports can be typically considered as being likely to be required. In the case of residential development, the identified threshold is 100 dwellings. Whilst the proposed development at Groesfan represents a level of development below this minimum threshold level, it is considered that the preparation of a form Transport Statement (TS) document to support the planning application is appropriate in this case to review key transport matters.

2.0 SITE LOCATION AND RELEVANT PLANNING HISTORY

2.1 Site Location

2.1.1 The application site is located on the southern edge of Penycae, a village in the county borough of Wrexham. Penycae adjoins the village of Rhosllanerchrugog, and is situated to the south west of Wrexham. Plans illustrating the location of the application site in relation to Rhosllanerchrugog and Wrexham, as well as the A483 strategic highway network and the immediate local highway network are included as **Figure TS1** and **Figure TS2** to this report.

2.2 Existing Site Layout and Land Use

Existing Site Land Use

2.2.1 The proposal land represents a greenfield site of approximately 1.2ha located on the southern boundary of the Penycae. To the immediate north the site is bounded by Groesfan, a residential distributor road and an existing property with garden and mature planting. The eastern boundary is formed by the alignment of Cristionydd Lane and a wooded area. The application site is bounded by agricultural land to the south and west.

2.2.2 Public Right of Way PEN/4 runs through the site from Cristionydd Lane to Groesfan.

2.3 Relevant Planning History

2.3.1 The application site does not benefit from any recent extant planning consents that are relevant to the consideration of highways and transport matters.

2.4 Relevant Planning Policy

National Planning Policy: Future Wales - the National Plan 2040

2.4.1 Future Wales represents the national development plan for Wales to 2040, and was adopted in February 2021. With reference to transport matters, this document

seeks to ensure “a Wales where people live in places where travel is sustainable’, identifying that sustainable transport much be “embedded within development to enable easy and convenient access from one place to another”.

- 2.4.2 This document references the Active Travel (Wales) Act 2013 as the influence to integrating active travel with new development. The Active Travel Guidance (February 2020) has been referenced in the design of the site access which incorporates footways, with dropped kerbs/tactile paving to be provided.

National Planning Policy: Planning Policy Wales (PPW)

- 2.4.3 PPW11 (updated 24 February 2021) sets out the land use planning policies of the Welsh Government, and is supported by a series of Technical Advice Notes.
- 2.4.4 Transport is considered in detail in Chapter 4.1 of PPW. The document sets out the aims “to ensure new development is located and designed in a way which minimises the need to travel, reduces dependency on the private car and enables sustainable access to employment, local services and community facilities.”
- 2.4.5 The document states that this will be done by “integrating development with sustainable transport infrastructure and designing schemes in a way which maximises provision and use of sustainable forms of travel, including prioritising these modes over the private car.”
- 2.4.6 The document states that the planning system can assist with improving transport choice and achieve the above aims in the following ways:
- Enabling More Sustainable Travel Choices - measures to increase walking, cycling and public transport, reduce dependency on the car for daily travel;
 - Network Management - measures to make best use of the available capacity, supported by targeted new infrastructure; and
 - Demand Management - the application of strategies and policies to reduce travel demand, specifically that of single-occupancy private vehicles.

- 2.4.7 Accordingly, this TS has been structured to include consideration of: accessibility by sustainable modes, including walking, cycling and public transport; road safety; and the impacts of the development on the local highway network.

Technical Advice Note 18: Transport (TAN18)

- 2.4.8 PPW is supplemented by Technical Advice Note (TAN) 18 which provides detailed guidance on implementing the transport objectives contained in PPW.
- 2.4.9 TAN18 sets out thresholds of development at which a TA is necessary, identifying a threshold of >100 dwellings for residential developments. Although the development proposals are well below the threshold criteria it is considered appropriate to provide a Transport Statement setting out the accessibility of the application site by sustainable modes and a road safety review.

North Wales Joint Local Transport Plan 2015

- 2.4.10 The North Wales Joint Local Transport Plan (LTP) was jointly prepared by the North Wales Local Authorities. The LTP's vision is to "remove barriers to economic growth, prosperity and well-being by delivering safe, sustainable, affordable and effective transport networks".
- 2.4.11 The LTP aims to address the following key issues for North Wales:
- The ability of the strategic road and rail corridors to provide the necessary good connectivity, for people and freight, within North Wales, to the ports and to the rest of the UK to support the economy and jobs, including tourism;
 - The lack of resilience of the road and rail networks to planned and unplanned events including extreme weather;
 - The need for good access to and between the three Enterprise Zones in North Wales;
 - The lack of viable and affordable alternatives to the car to access key employment sites and other services; and

- The need for good road links to / from the trunk road network into the rural areas to help retain the viability of local businesses and support the Welsh language and culture.

2.4.12 This Plan therefore provides the strategic baseline for considering developments that have a transportation element within the wider area. With reference to the proposed residential development which is the subject of this TS, consideration will be made of the wider integration within the highways network and access by sustainable modes.

3.0 REVIEW OF THE SURROUNDING LOCAL HIGHWAY NETWORK & SITE ACCESSIBILITY

3.1 Description of Local Highway Network

3.1.1 The northern site boundary to the application site is formed by the residential road known as Groesfan. Groesfan is 4.9m in width at the application site frontage, which accommodates the passage of a car and service vehicle. On-street parking occurs at Groesfan adjacent to some frontage properties, resulting in some give-way shuttle working. Such shuttle working, however, is not considered to be an issue due to the relatively low traffic demand experienced on Groesfan.

3.1.2 A circa 1.5m width footway is available along the northern side of the Groesfan carriageway. A footway is present along the southern edge of Groesfan up to the application site frontage. This footway varies in width from over 2m down to circa 0.8m on approaching the application site.

3.1.3 At its eastern end Groesfan forms the minor arm of a simple priority junction with Cristionydd Lane. Groesfan also forms the northern arm of this junction towards Penycae. In the vicinity of its junction with Groesfan and through Penycae, Cristionydd Lane operates under 20mph speed limit, becoming national speed limit circa 30m south of its junction with Groesfan. Visibility at the junction is limited to 2.4m x 25m to the north, and 2.4m x 20m to the south (measured to a 1m offset of the nearside kerb). We would note, however, that this is an existing junction which has operated with no evidence of safety issues (review of personal injury accident data identifies that no accidents have occurred at this location of 20+ years - see section 3.3).

3.1.4 Cristionydd Lane is a north south route connecting Penycae to Acrefair and Rhosymedre to the south. In the vicinity of the application site, Cristionydd Lane is circa 4.7 - 6.0m in width with both white edge of carriageway and centre line markings.

3.1.5 Within Penycae, Cristionydd Lane / Groesfan is street lit and subject to a 30mph speed limit. This speed limit changes to the national speed limit some 25m to the

south of the junction with Groesfan. Footways are present along both sides of Cristionydd Lane/Groesfan north of the Groesfan junction.

3.1.6 Some 95m to the north of this simple junction, Groesfan forms the minor arm of a simple priority junction with Chapel Street and Hall Street. Connections can be made from Chapel Street and Hall Street to the B5097 Afoneitha Road which provides a link to Rhosllanerchrugog to the north.

3.2 Road Safety: Review of Personal Injury Accident Records

3.2.1 An appraisal of the operational safety of the immediate local highway network to the application site has been carried out through a review of historical Personal Injury Accident (PIA) data obtained from the crashmap.co.uk database for the most recently available five-year search period (2016 to 2020 inclusive). This database includes for all accident incidents as recorded by the police & emergency services and therefore represents 'industry standard' data utilised for the calculation of accident rates and the assessment of highway safety. The specification of a five-year search period accords with the search period criteria recommended in industry good practice.

3.2.2 Details of the extent of the accident search area and recorded historical accident events are illustrated in **Figure TS3** to this report - with the search area including for Groesfan and immediate sections of Cristionydd Lane. Review of this accident search exercise identifies that no accident events have been recorded along the immediate sections of Groesfan and Cristionydd Lane to the application site. More detailed review of the accident database identifies that no personal injury accident events have occurred within the study over the last 22 years.

3.2.3 There are therefore no prevailing road safety issues that would call the proposed development of the application site for residential land use into question or require direct highway safety mitigation measures funded by the development proposals.

3.3 Site Accessibility Audit

3.3.1 Local and national planning policy identifies that the development of the application site for residential land use would need to satisfy the key planning and transport related sustainability objectives of:

- Reducing the need to travel, especially by private car;
- Ensuring accessibility to a range of sustainable travel options.

3.3.2 The nature of local sustainable transport connections available within the immediate catchment of the application site are summarised in the paragraphs below.

Public Transport Connections

3.3.3 Closest bus stop to the application site is located at the junction of Hall Street with Groesfan (circa 180m north east of the proposed site access). This stop lies well within the Chartered Institution of Transport (CIHT) preferred 400m maximum walk catchment to a local public transport facility. This bus stop is regularly served by the 3 bus services (see **Table TA3.1** below). The bus stop is of a simple ‘flagpost’ design with a passenger information board.

3.3.4 A summary of the available services from the identified local bus stop is set out in **Table TA3.1** below.

Table TA3.1: Bus Services Available from Local Bus Stops

Service	Route	Mon-Fri / Sat / Sun Daytime Frequency
<i>Hall Street / Groesfan Bus Stop north of Application Site</i>		
3	Wrexham - Rhosllanerchrugog - Penycae (Circular)	30mins / 30 mins / No service

3.3.5 This bus service provides a regular connection to the nearby larger settlements of Rhosllanerchrugog (7 minutes) and Wrexham Bus Station (25 minutes).

**NB - It should be noted that the review of bus service provision in the area surrounding the application site has taken place during the COVID-19 pandemic*

and, as such, the service provision may have been revised to allow for social distancing practises / levels of available staffing.

Walking & Cycling Connections

- 3.3.6 In addition to the above identified local public transport connections, the application site is also well located to provide opportunities for access to a good range of local services by foot or cycle. National planning guidance notes that walking is the most important mode of travel at the local scale, offering the greatest potential to replace short distance car trips of under 2km. Guidance produced by CIHT also notes that 800m represents an ‘acceptable’ walking distance to community facilities and shops, with 1200m representing a ‘preferred maximum’. 2000m has been identified as a suitable walk distance for commuting trips and journeys to / from school.
- 3.3.7 **Figures TS4 & 5** to this report illustrates walking catchments from the application site and demonstrates that a wide range of ‘everyday’ type destinations lie within a convenient walking distance, including the whole of Penycae, local schools, a pharmacy and local corner shop.
- 3.3.8 National planning guidance also notes that cycling has the potential to substitute for short car trips - particularly those of less than 5km or which could form part of a longer journey by public transport. A 5km cycle journey from the application site allows access across the whole of Penycae, Rhosllanerchrugog and Johnstown to the north east, Ruabon to the south east and Rhosmedre to the south (see **Figure TS6**).
- 3.3.9 Three ‘Active Travel Routes’, have been identified between Penycae and Rhosllanerchrugog, comprising:
- Wrex-Rhos P0015 - footway alongside road
 - Wrex-Rhos C0020 - Rhosllanerchrugog Railway Path - segregated shared use path segregated foot / cycle path away from road
 - Wrex-Rhos C0030 - shared use foot/cycle path away from road

- 3.3.10 An extract of the Rhosllnaerchrugog Active Travel map is attached as **Figure TS7** to this report. These Active Travel Routes are accessible via footway connections from the site and provide continuous connection to key destinations in the town.

Accessibility Summary

- 3.3.11 Overall, based on the above review of matters, it is concluded that the application site represents a suitable location for new residential development, being located within a practical walking distance of a wide range of local ‘everyday’ services / facilities. Good frequency public transport services are also available within a short walk of the site, providing connections to Rhosllnaerchrugog and Wrexham and its bus station.
- 3.3.12 Such locational characteristics can be expected to help meet core sustainable planning objectives of promoting alternative travel modes to the private car for some journeys and thereby managing the overall traffic impact associated with new development.

4.0 REVIEW OF THE DEVELOPMENT PROPOSALS

4.1 Development Proposals

4.1.1 The application scheme represents the development of land at Groesfan for new residential development of 36 dwellings, comprising the following:

- 6 * 1 bed bungalows
- 19 * 2 bed houses
- 4 * 3 bed houses
- 1 * 4 bed house
- 6 * 1 bed apartments
- **36 TOTAL**

4.1.2 The proposed site plan of the application scheme is included as **Appendix TS1** to this report.

4.2 Highway Access Arrangements

4.2.1 Access to the application scheme is proposed to be taken via a new junction off Groesfan, opposite an existing residential access connection which serves circa 19 dwellings located around a green area. It is considered that this is acceptable on the basis that Groesfan is lightly trafficked, serving as a residential access route only rather than through traffic. Furthermore, there would also not be any cross movements between the proposed new access and residential access directly opposite.

4.2.2 Key layout principles of the site access are illustrated in **Appendix TS2** to this report. This plan illustrates a simple priority T-junction connection formed with Groesfan and including for the following key layout elements:

- 5.5m access road width, maintained throughout the development
- 7.5m left turn entry / exit radii
- 2m footway throughout the development, including at the site frontage to Groesfan

- Dropped kerbs and tactile paving would be provided at the site access and throughout the development, in order to ensure a lasting active travel legacy.
- 4.2.3 This junction layout includes lateral sightlines of 2.4m x 43m in both directions, which is suitable for access to a 30mph route. Visibility splay drawings are attached in **Appendix TS2**.
- 4.2.4 The internal access road would be promoted as a 20mph route in accordance with guidelines for new residential routes. A minimum 25m forward visibility is available along the route.
- 4.2.5 It is proposed that Public Right of Way PEN/4 is re-routed through the residential site along the footways provided adjacent to the internal access road. The Public Right of Way provides access from Christionydd Lane at the southeastern corner of the application site, and would be routed along the internal footways, connecting to the existing alignment of the Public Right of Way at the western end of the application site.
- 4.3 **Development Car Parking & Cycle Parking**
- 4.3.1 The site layout plan identifies 1.5 parking spaces per apartment and 2 parking spaces per house. Such proposed level of parking is considered to be appropriate.
- 4.3.2 Cycle parking for individual houses will be provided either through the integrated / stand-alone garage provision or, for those properties without a garage, through provision of cycle store facilities within rear gardens. Covered, secured cycle storage would be provided for the apartments at a ratio of 1 per unit.
- 4.4 **Site Servicing & Emergency Access**
- 4.4.1 Residential schemes typically generate a relatively low level of daily HGV demand, with HGV access being mainly restricted to waste collection and ad-hoc deliveries of goods to residents. In practice the majority of delivery movements would likely be undertaken by Transit Van or Luton Van (7.5tmgw) vehicles and would not require a long duration of stay on site.

4.4.2 In recognition of the need to accommodate occasional large service vehicle movements, such as fire tender **and** large refuse collection vehicles, however, the site access arrangement has been designed to accommodate such vehicles, with appropriate turning/manoeuvring areas to ensure that large vehicles can enter and exit the site in forward gear. **Appendix TS3** to this report demonstrates a range of vehicle swept path assessment runs.

5.0 PREDICTED TRAVEL DEMAND ASSOCIATED WITH THE PROPOSALS

5.1 Introduction

5.1.1 This section of the TA report seeks to identify the future level of trip demand anticipated to be generated by the application scheme.

5.2 Predicted Development Traffic Demand

5.2.1 Traffic demand associated with new residential development at the application site has been estimated via reference to suitable mixed private/affordable residential development trip rates extracted from the industry standard TRICS trip rate database.

5.2.2 Average and 85th percentile trip rates per dwelling for the traditional AM & PM ‘rush hour’ time periods are illustrated in **Table TA5.1** below (see also **Appendix TS4**).

Table TA5.1 - Predicted Residential Development Trip Rates

	Average Trip Rates (per dwelling)			85th Percentile Trip Rates (per dwelling)		
	Arrival	Departure	Total	Arrival	Departure	Total
08:00-09:00 AM Peak	0.145	0.337	0.482	0.250	0.498	0.747
17:00-18:00 PM Peak	0.301	0.186	0.487	0.418	0.331	0.749
07:00-19:00	2.406	2.453	4.859	3.129	3.240	6.369

5.2.3 These trip rates have been applied to the proposed 36 dwellings with the results set out in the **Table TA5.2** below.

Table TA5.2 -Development Trip Demand

	Average Trip Demand (36 dwellings)			85th Percentile Trip Demand (36 dwellings)		
	Arrival	Departure	Total	Arrival	Departure	Total
08:00-09:00 AM Peak	5	12	17	9	18	27
17:00-18:00 PM Peak	11	7	18	15	12	27
07:00-19:00	87	88	175	113	117	229

(Vehicle Trips)

5.2.4 Review of this information suggests that the application scheme is not anticipated to generate a substantive level of additional peak hour travel, with maximum peak hour two-way (in + out) vehicle demand unlikely to exceed 18 vehicle movements in the AM & PM peak periods under average demand conditions, and 27 vehicle

movements under 85th percentile demand conditions. Such demand is the equivalent of less than one additional vehicle movement every minute and therefore would not typically be expected to result in a material impact on local network operating conditions.

5.3 Network Impact Assessment

5.3.1 Given the limited level of predicted additional development related traffic highlighted above (a maximum of 18 two-way vehicles per hour under average demand conditions), it is not considered that the application scheme would give rise to any material detrimental change in local highway network conditions.

6.0 SUMMARY AND CONCLUSIONS

- 6.1 This Transport Statement (TS) has been prepared by Focus Transport Planning (Focus TP) on behalf of Wales & West Housing Association Limited to consider highways and transport matters relating to proposals for the development of 36 new residential dwellings at land to the south of Groesfan, Penycae, Wrexham. The scope and nature of matters considered in this TS report reflects the extent of issues that are understood to be of material interest to WCBC highways.
- 6.2 This report has demonstrated that the Groesfan application scheme would represent appropriate and sustainable development when considered in highways and transport terms. The site is located adjacent to a mature residential area and offers the potential to encourage access by alternative sustainable travel modes to the private car for some day-to-day journeys. The proposals incorporate a suitable level of car and cycle parking, and appropriate servicing arrangements are available for refuse collection and delivery vehicles.
- 6.3 There is no evidence to suggest that the application scheme would give rise to a severe detrimental impact on local highway network operation, with development traffic increases would be of a strictly limited scale and would not require the provision of specific network capacity improvements.
- 6.4 Focus Transport Planning would therefore commend the proposals to the Council with respect to highways and transport considerations.





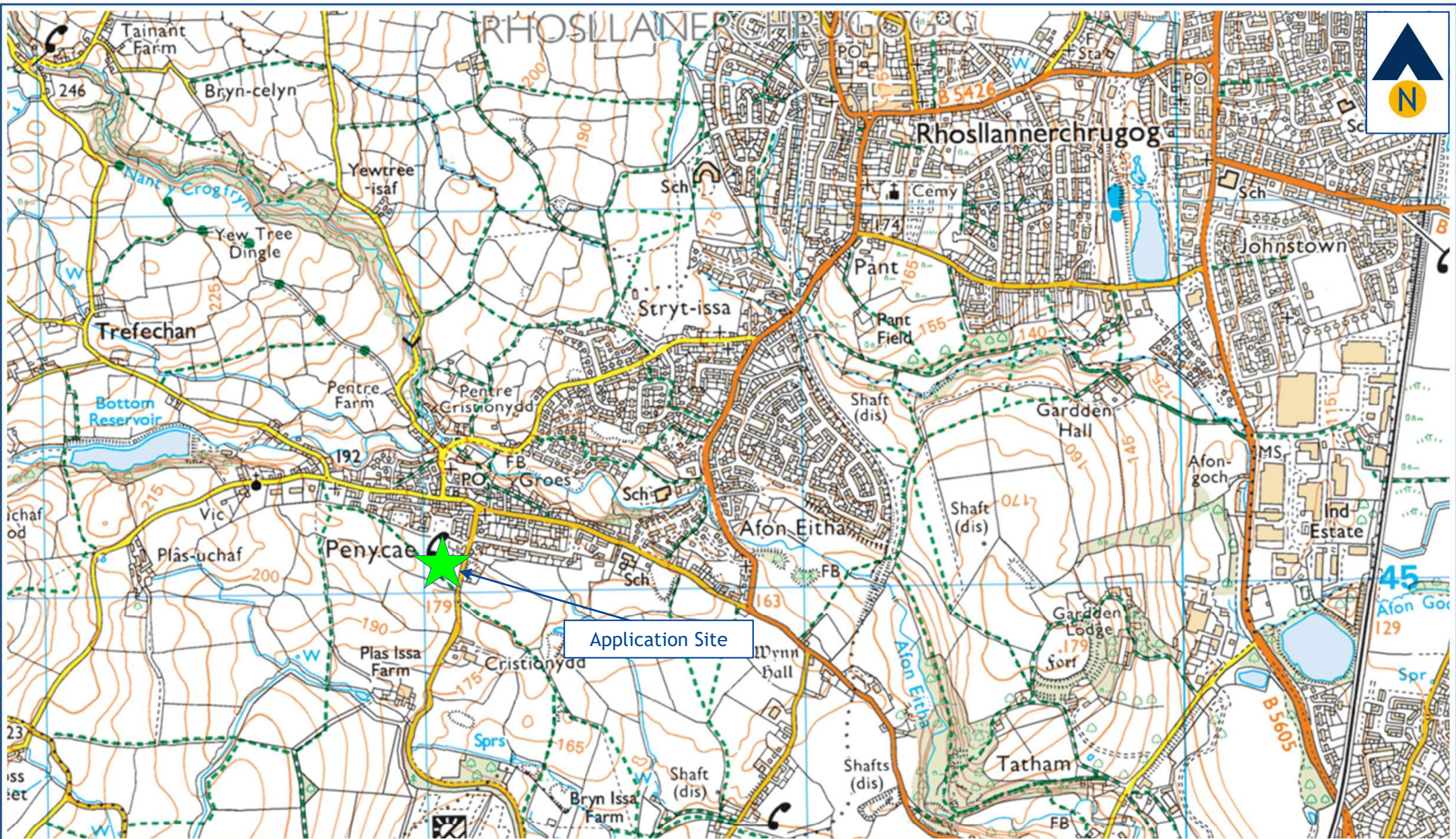


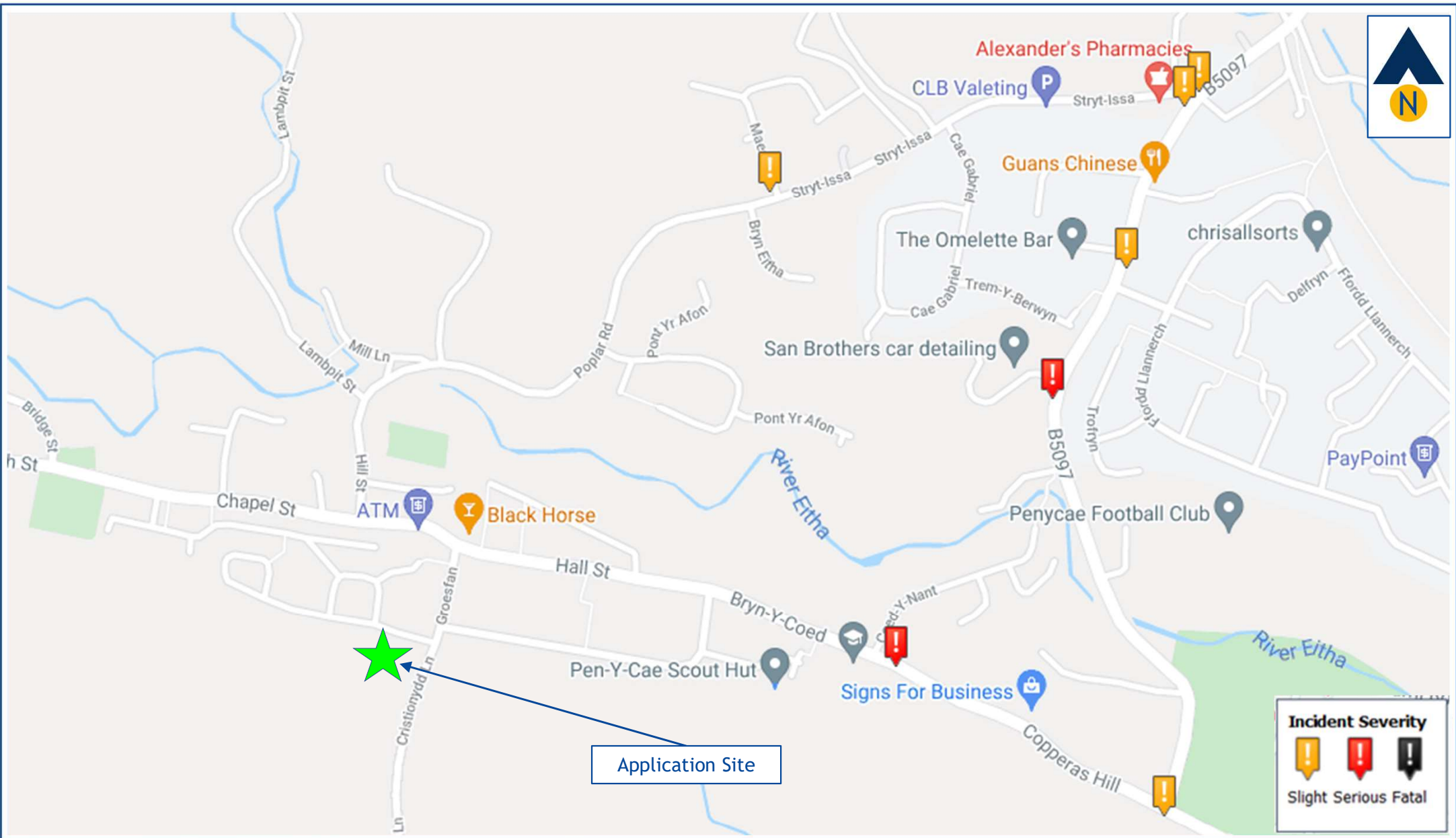
Figure TS2

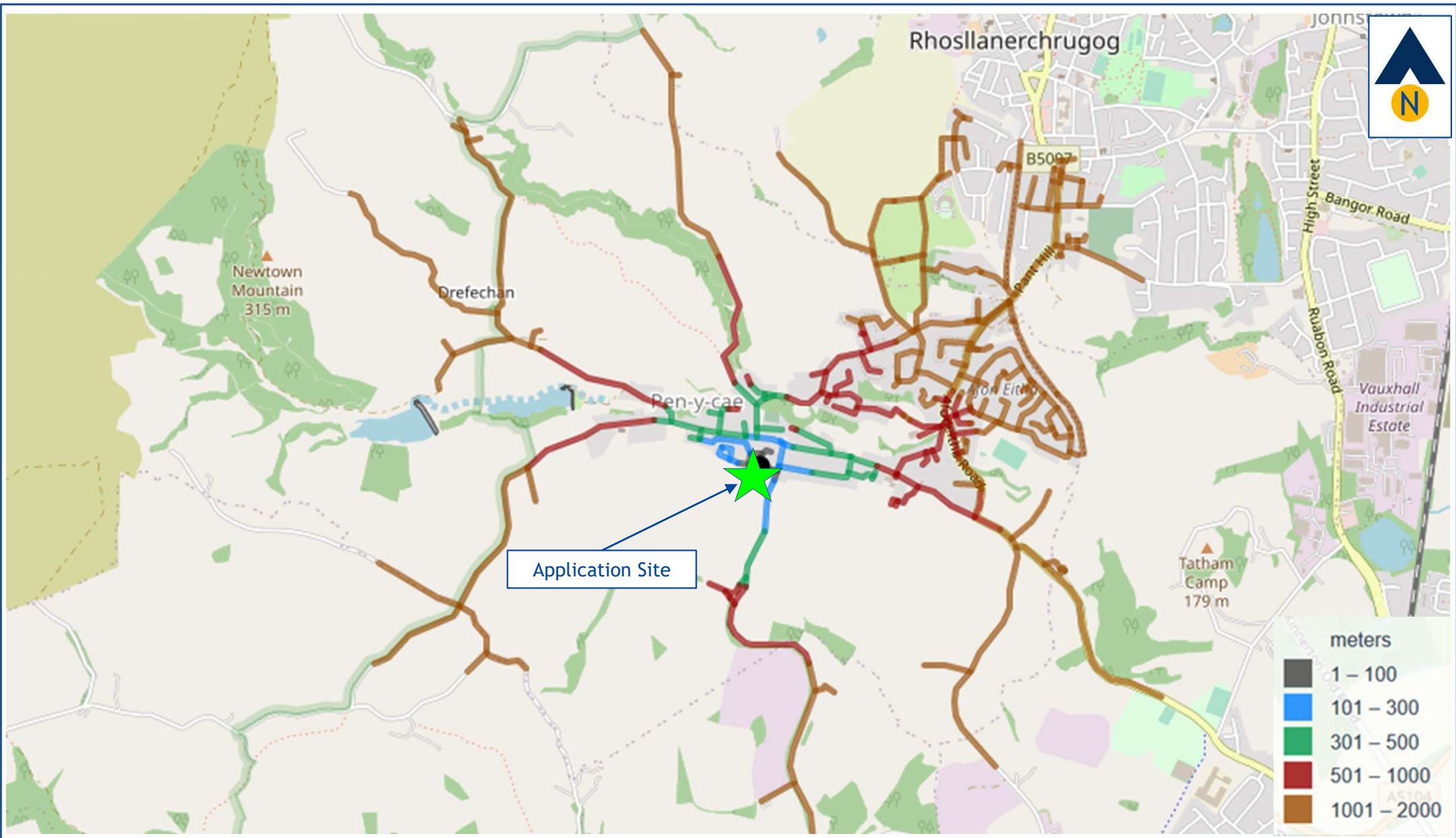
Site Location: Local Context

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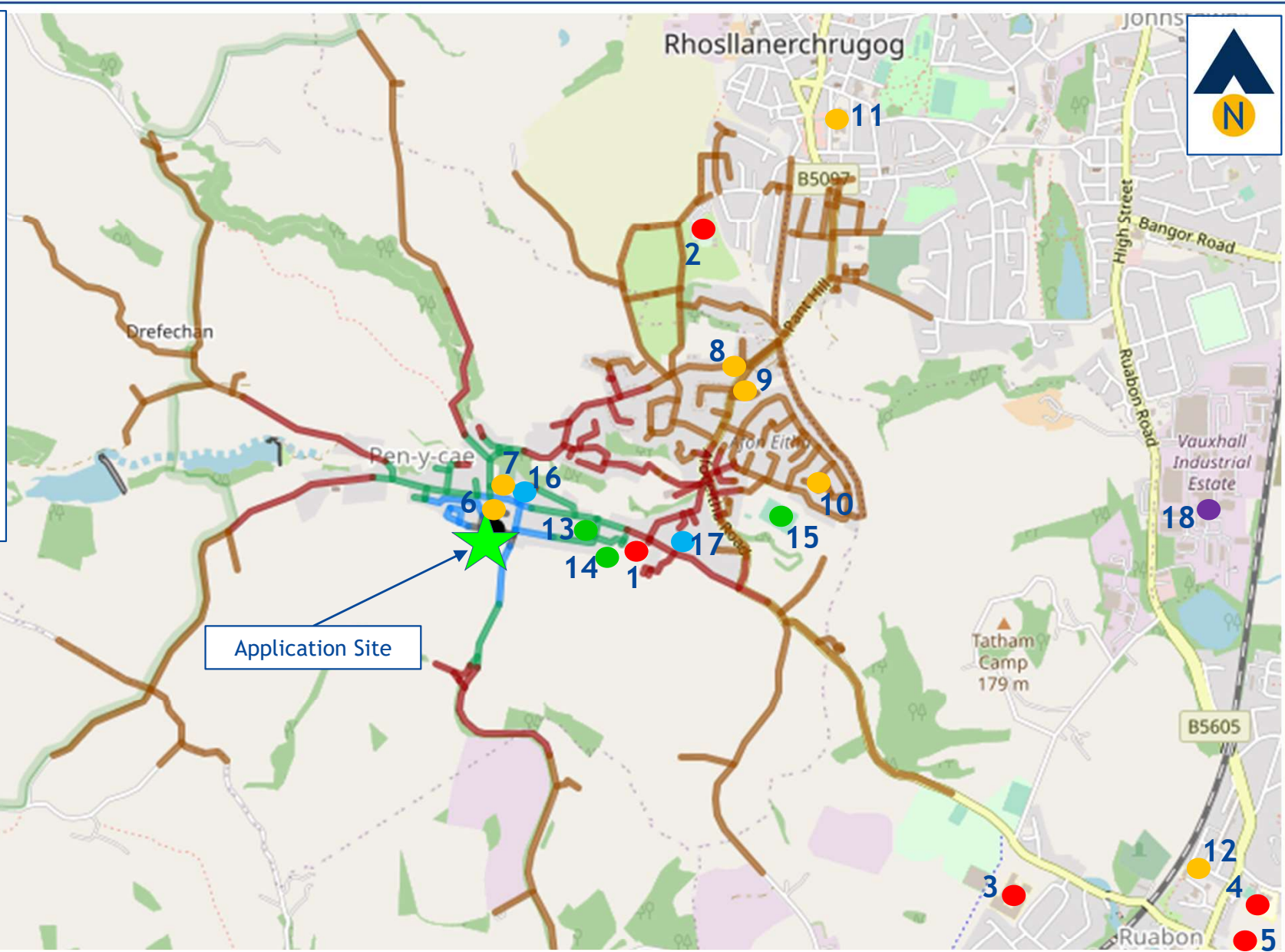
Residential Development, Penycae

September 2021





- Key**
- Education** ●
1. Ysgol Penycae
 2. Ysgol I D Hooson
 3. Ysgol Rhiwabon Secondary School
 4. Ysgol Maes-y-Llan & Mini World Nursery
 5. St Mary's Church in Wales School
- Local Facilities** ●
6. Take Away
 7. Village Hall & Post Office
 8. Pharmacy
 9. Take Away
 10. Corner Shop & Take away
 11. Rhosllanerchrugog Medical Centre
 12. Ruabon Medical Centre
- Leisure** ●
13. Play Area
 14. Penycae Scout Hut
 15. Penycae Football Club
- Pub/Restaurant** ●
16. Black Horse
 17. Cross Foxes
- Business / Employment** ●
18. Vauxhall Industrial Estate



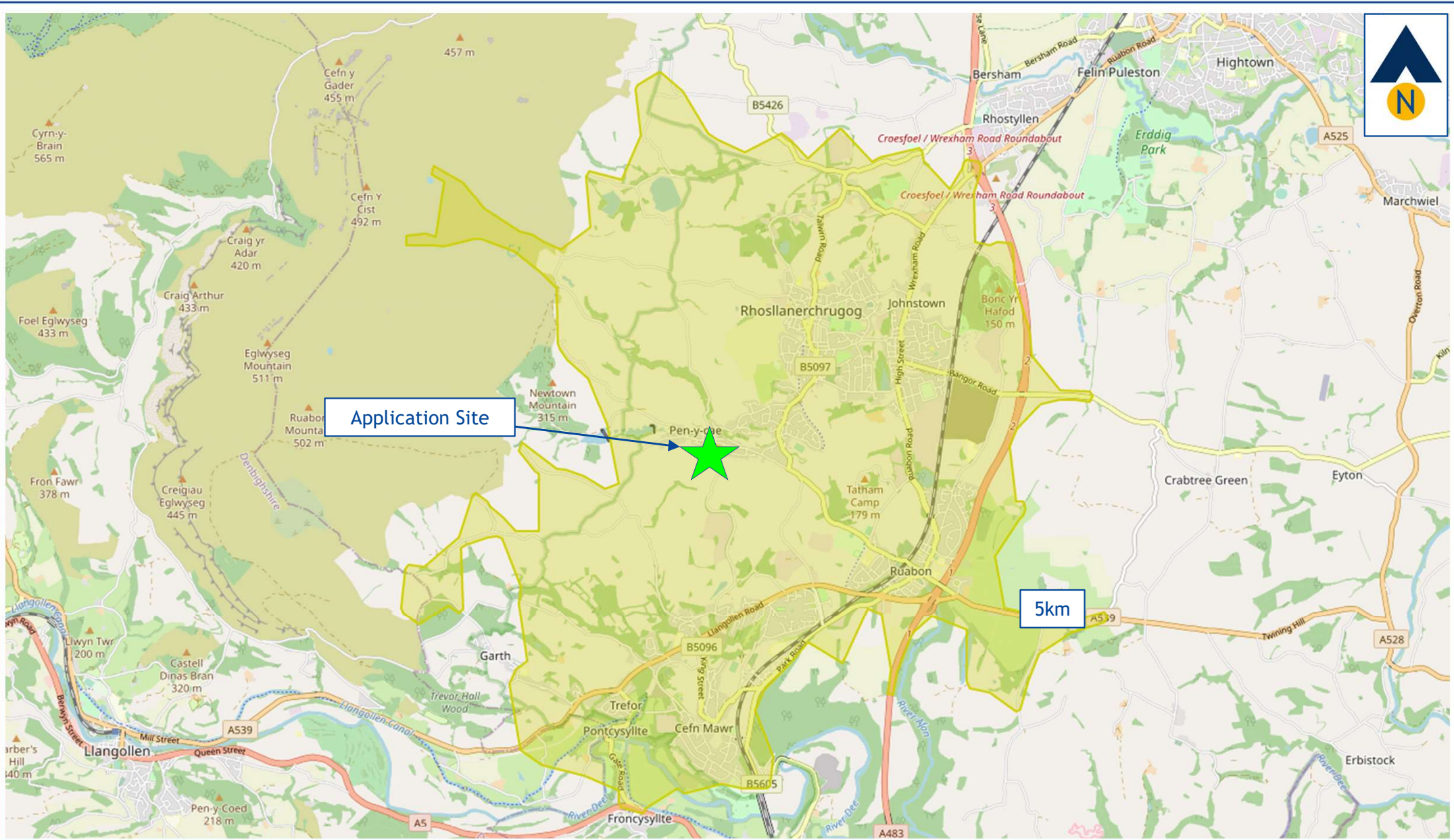


Figure TS6

5km Cycle Catchment to the Application Site

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Residential Development, Penycae

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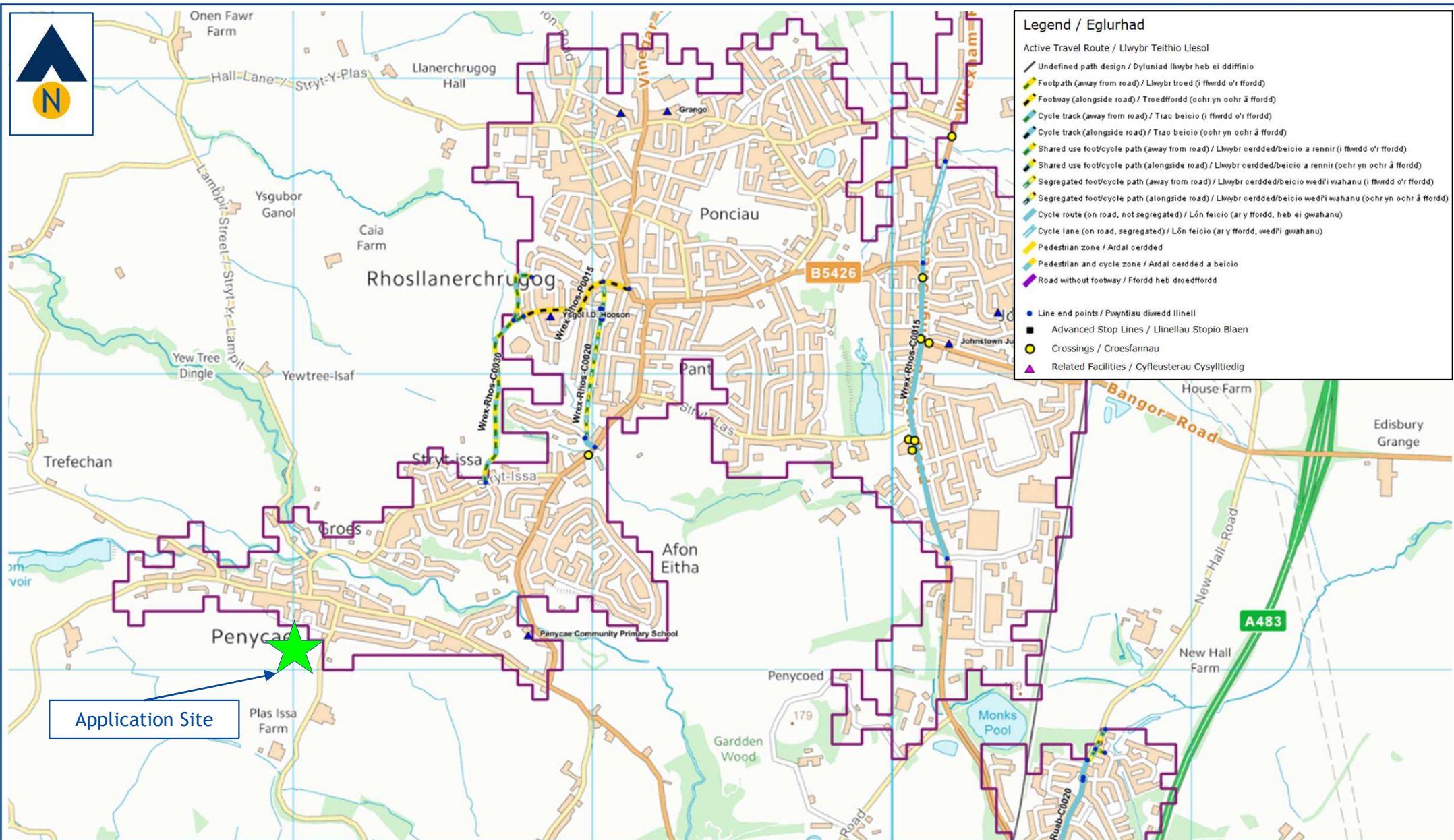


Figure TS7

Rhosllanerchrugog Active Travel Map

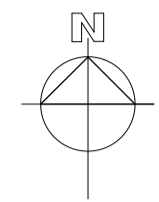
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Residential Development, Penycae

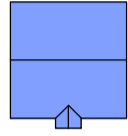
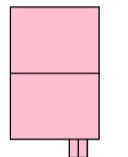
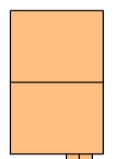
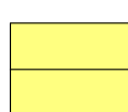
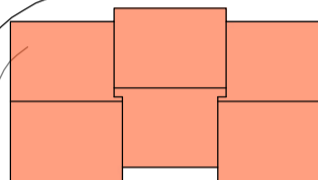
September 2021







LEGEND TO HOUSE TYPES

-  1B2P - Bungalow
x 6 No.
-  2B4P - House
x 19 No.
-  3B5P - House, Option One
x 4 No.
-  4B7P - House
x 1 No.
-  1B2P - Apartment
x 6 No.

36 Total no. Dwellings
 2no Parking spaces per dwelling.
 Space Separation in accordance with WCBC standards.
 Rear gardens exceed 40sq.m.

P2	TURNING HEAD REVS KOH	28.01.2022
P1	INITIAL ISSUE	25.11.2021
REV	DESCRIPTION BY CHK APP	DATE
RIBA	PLAN OF WORK 2013 WORKSTAGE	LEVEL OF MODEL DEFINITION (LOD)
PURPOSE OF ISSUE - FIT FOR ...	APPROVAL	



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CLIENT
WALES & WEST HOUSING

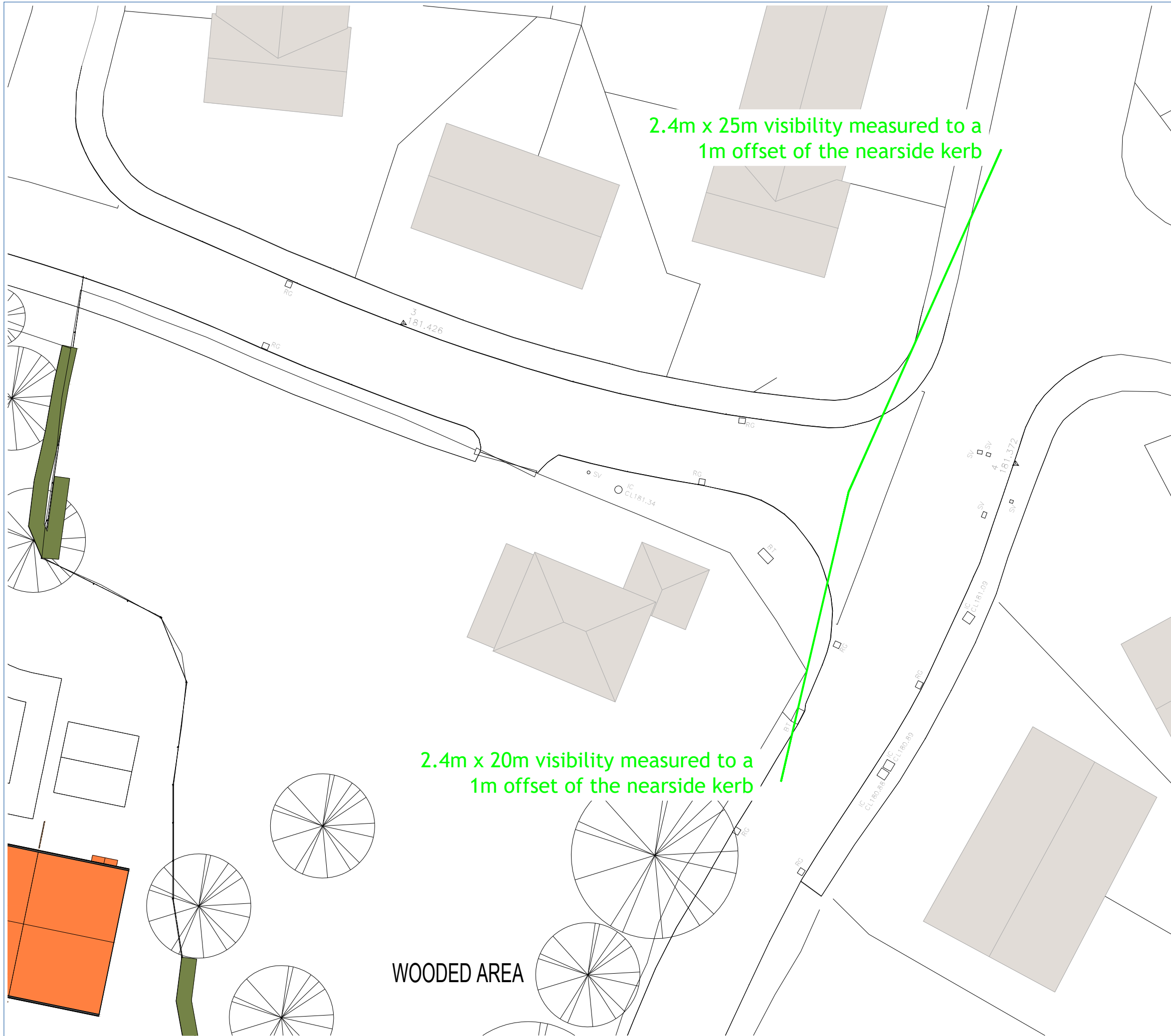
PROJECT TITLE
**PROPOSED RESIDENTIAL DEVELOPMENT
 CRISTIONYDD LANE, PENYCAE**

DRAWING TITLE
PROPOSED SKETCH SITE PLAN

DATE	SCALE @ A1	DRAWN	CHECKED	APPROVED
03.21	1:500	KOH	-	-

PROJECT No.	DRAWING No.	REV
19446	CLP-LAW-X-X-DR-A-090011	P2





2.4m x 25m visibility measured to a 1m offset of the nearside kerb

2.4m x 20m visibility measured to a 1m offset of the nearside kerb

WOODED AREA

Revision:	
A Updated site plan	11.10.21

Client:	Wales & West Housing Association		
Project:	Land at Groesfan, Penycae		
Drawing Title:	Available Visibility at Groesfan/Cristionydd Ln Junction		
Drawing Number:	J000246_SK101	Revision:	A
Date:	01/09/2021	Scale:	1:250@A3
Drawn By:	KG	Checked By:	KG
Status:	Information		

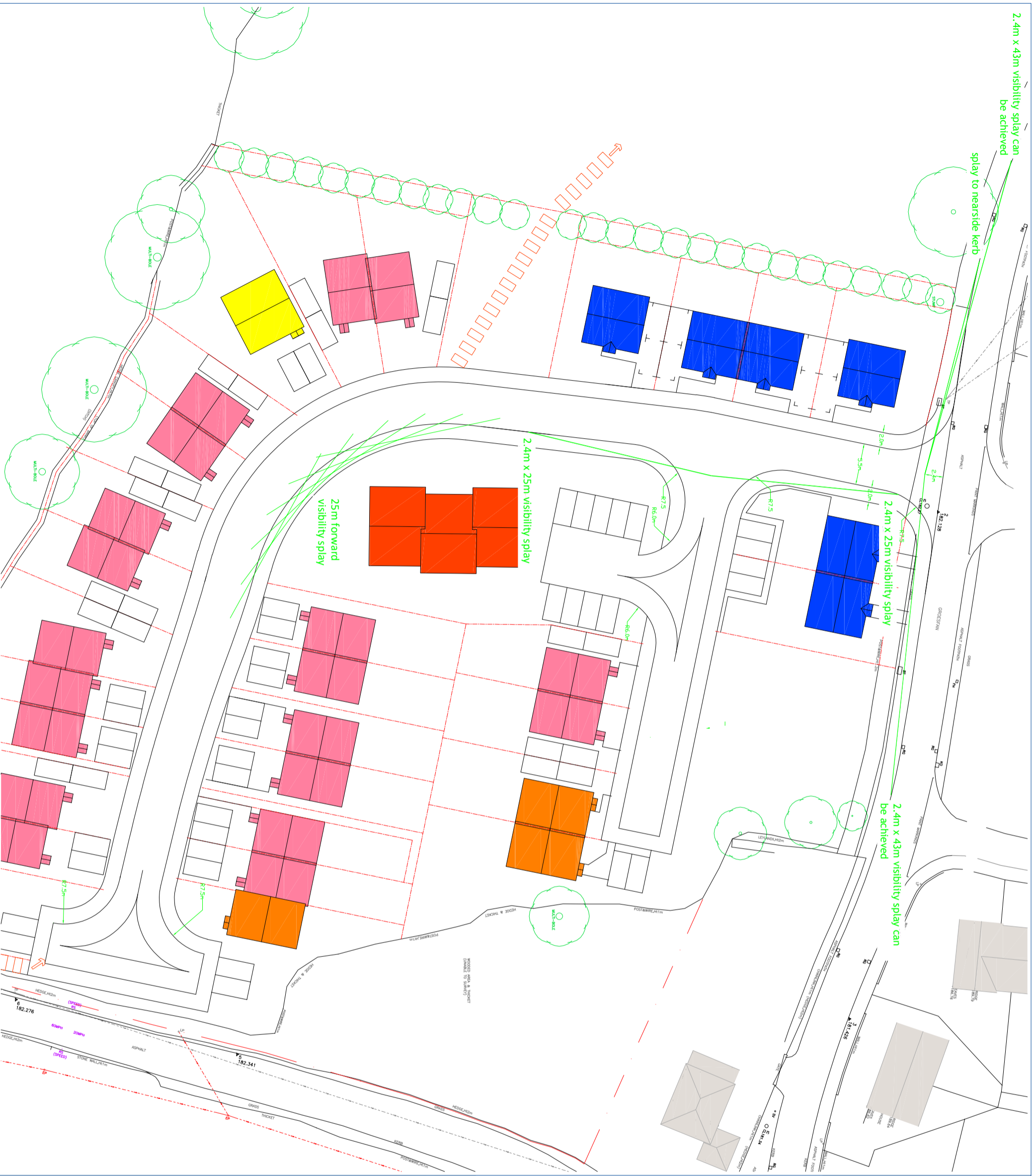
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Penarth House
 Village Way, Wilmfrow
 SK9 2GH
 0161 826 4631
 www.focuspl.co.uk
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 TRANSPORT PLANNING



Revision:
 A Updated site plan
 B Updated site plan

11.10.21
 31.01.22

Client:
 Wales & West Housing Association

Project:
 Land at Groesfan, Penycae

Drawing Title:
 Proposed Access Arrangements

Drawing Number:
 J000246_SK102

Revision:
 B

Date:
 01/09/2021

Scale:
 1:500@A3

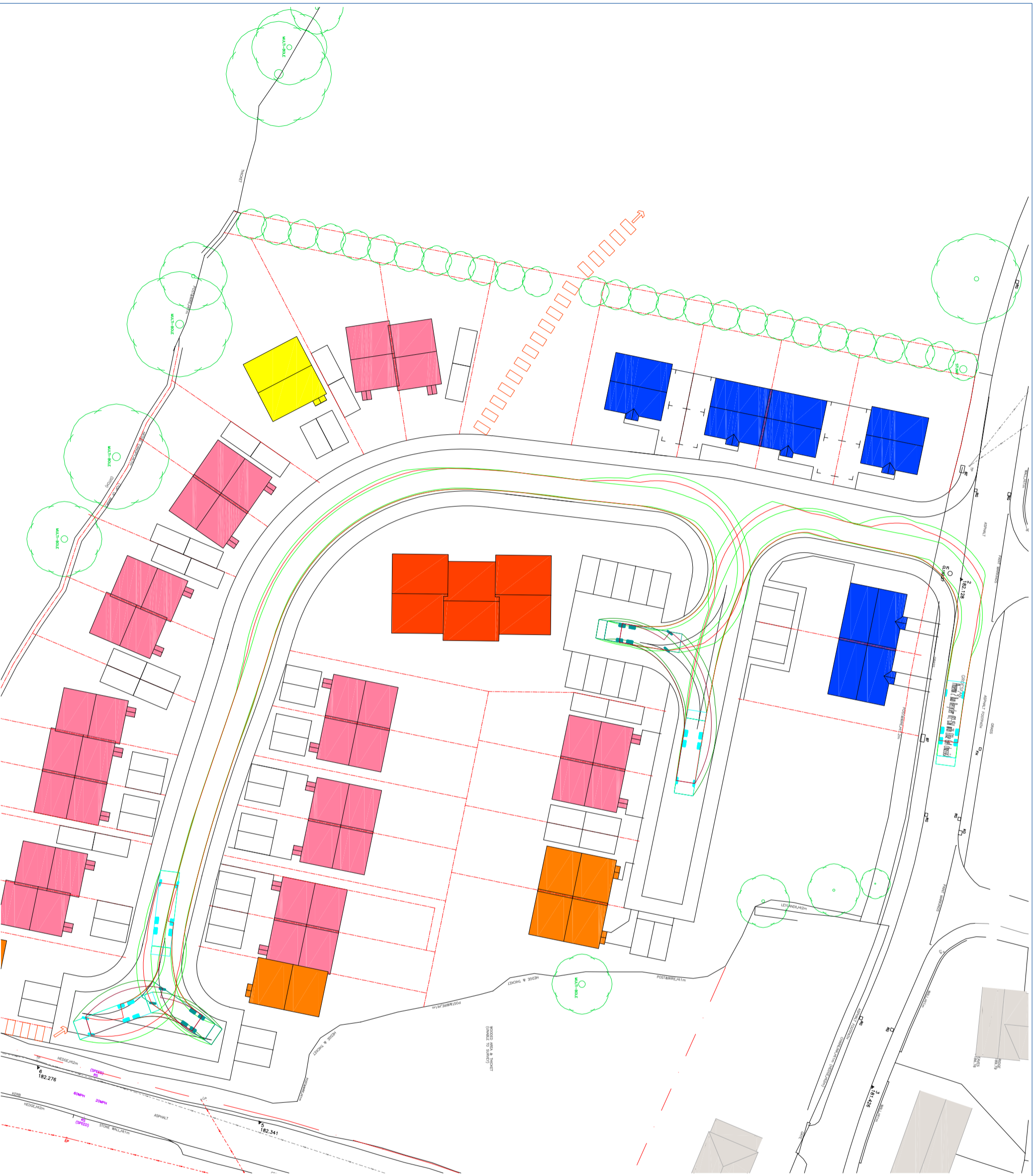
Drawn By:
 KG

Checked By:
 KG

Status:
 Information

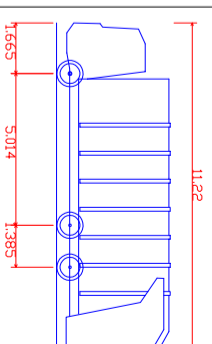
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Revision:
 A Updated site plan
 B Updated site plan

11.10.21
 31.01.22



Phoenix 2 Duo Recycler (P2-15W) with Elite
 Overall Length 11.220m
 Overall Width 5.3930m
 Overall Body Height 3.7356m
 Min Body Ground Clearance 0.309m
 Track Width 2.530m
 Lock to lock time 4.005
 Kerb to kerb turning Radius 11.550m

Client: Wales & West Housing Association

Project: Land at Groesfan, Penycae

Drawing Title: Proposed Access Arrangements
 Swept Path Assessment
 Refuse Vehicle Entry

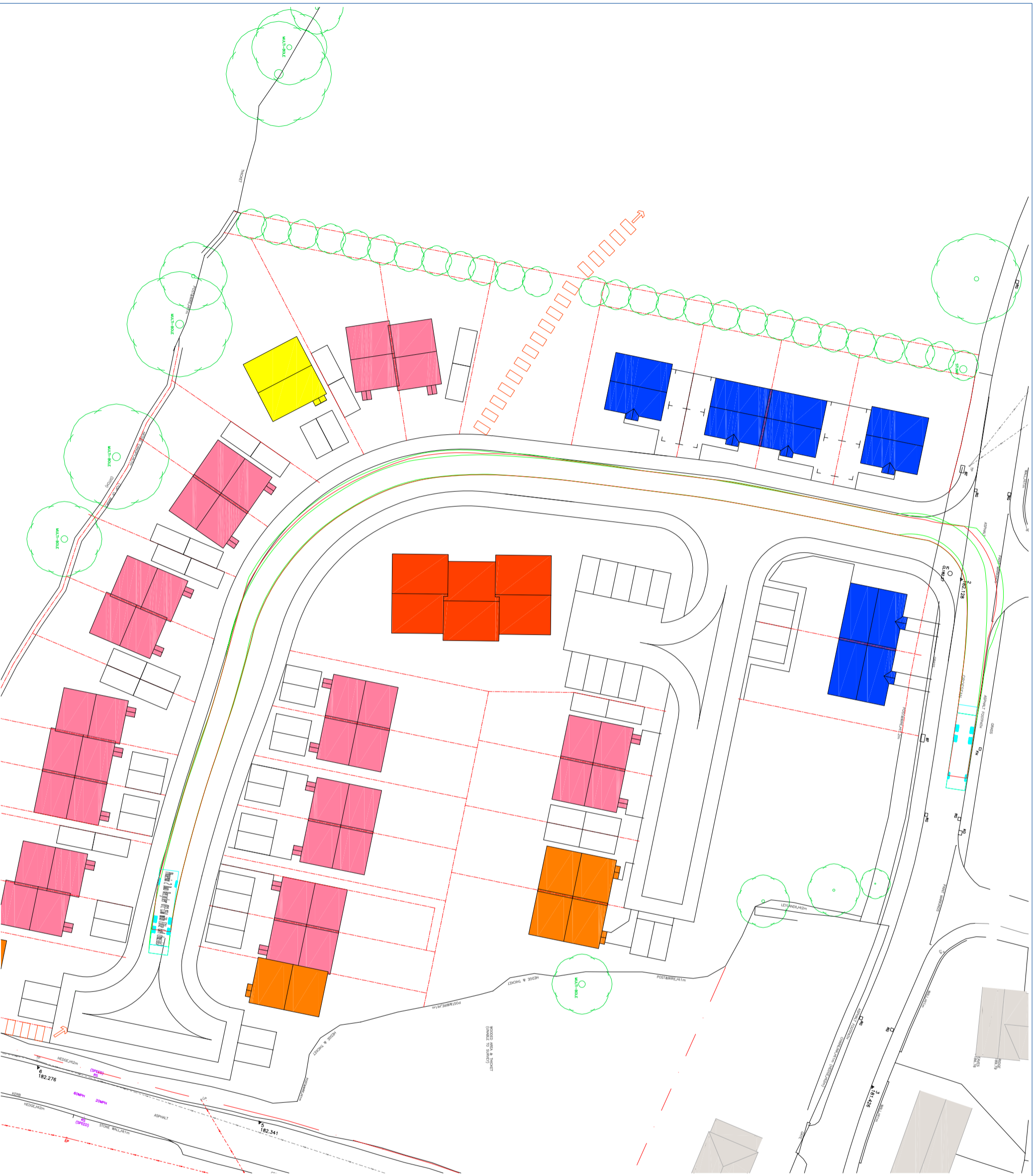
Drawing Number: J000246_ATR101 Revision: B

Date: 01/09/2021 Scale: 1:500@A3

Drawn By: KG Checked By: KG

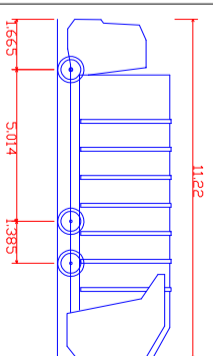
Status: Information

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Revision:
A Updated site plan
B Updated site plan

11.10.21
31.01.22



Phoenix 2 Duo Recycler (P2-15W) with Elite
 Overall Length 11,822mm
 Overall Width 5,014mm
 Overall Body Height 3,756mm
 Min Body Ground Clearance 0,309m
 Track Width 2,530mm
 Lock to lock time 4,005s
 Kerb to Kerb Turning Radius 11,550m

Client: Wales & West Housing Association

Project: Land at Groesfan, Penycae

Drawing Title: Proposed Access Arrangements
 Swept Path Assessment
 Refuse Vehicle Exit

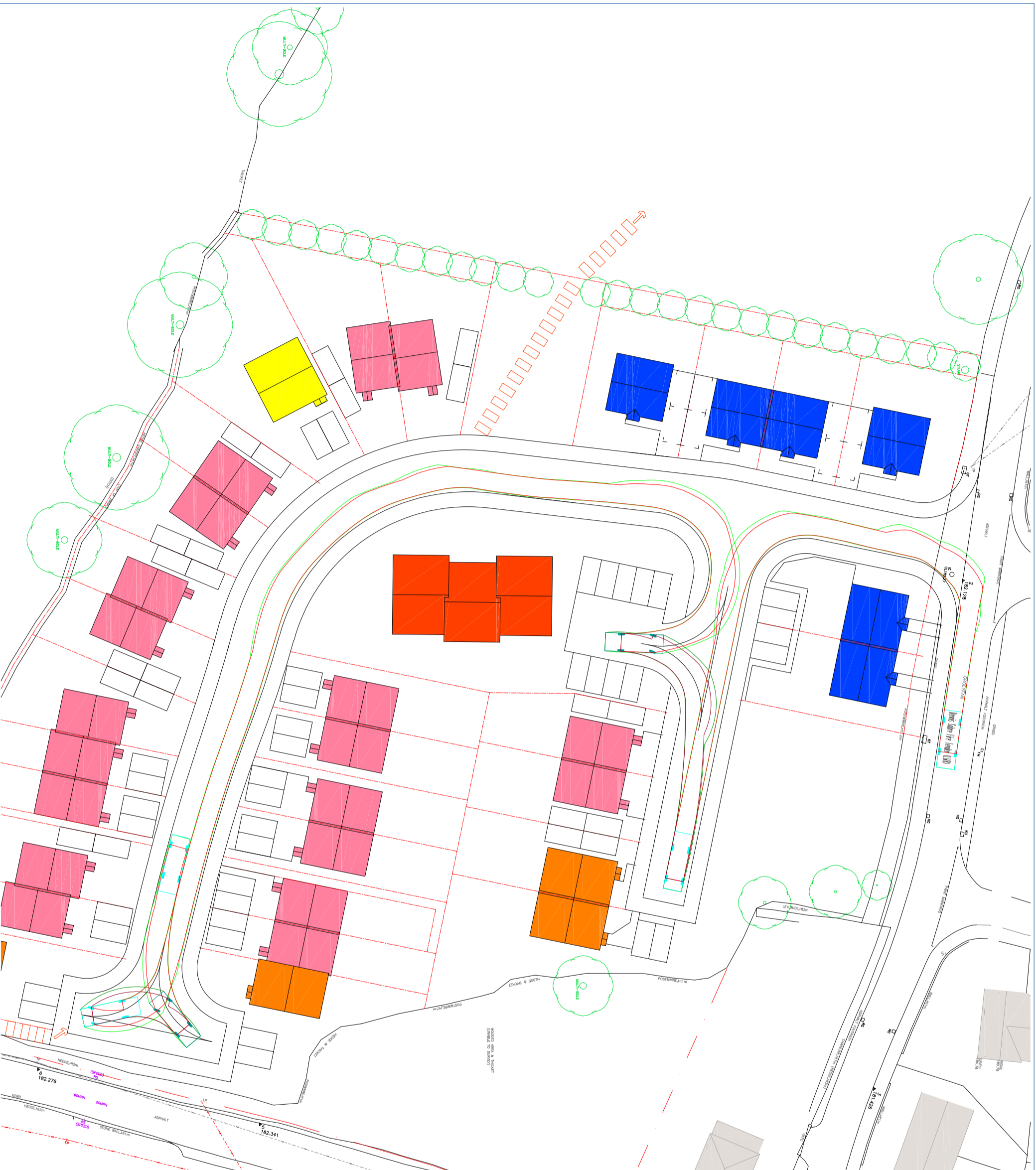
Drawing Number: J000246_ATR102
 Revision: B

Date: 01/09/2021
 Scale: 1:500@A3

Drawn By: KG
 Checked By: KG

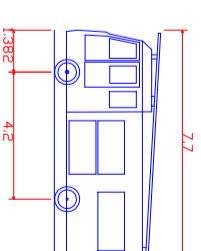
Status: Information

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Revision:
A Updated site plan
B Updated site plan

11.10.21
31.01.22



Dennis Sabre Fire Tender (LWB)
Overall Length 7.700m
Overall Width 4.200m
Overall Body Height 3.397m
Min Body Ground Clearance 2.380m
Track Width 2.905m
Lock to lock time 7.400m
Kerbs to Kerbs Turning Radius

7.700m
2.430m
3.512m
0.3397m
2.380m
2.905m
7.400m

Client: Wales & West Housing Association

Project: Land at Groesfan, Penycae

Drawing Title: Proposed Access Arrangements
Swept Path Assessment
Fire Tender Entry

Drawing Number: J000246_ATR103

Revision: B

Date: 01/09/2021

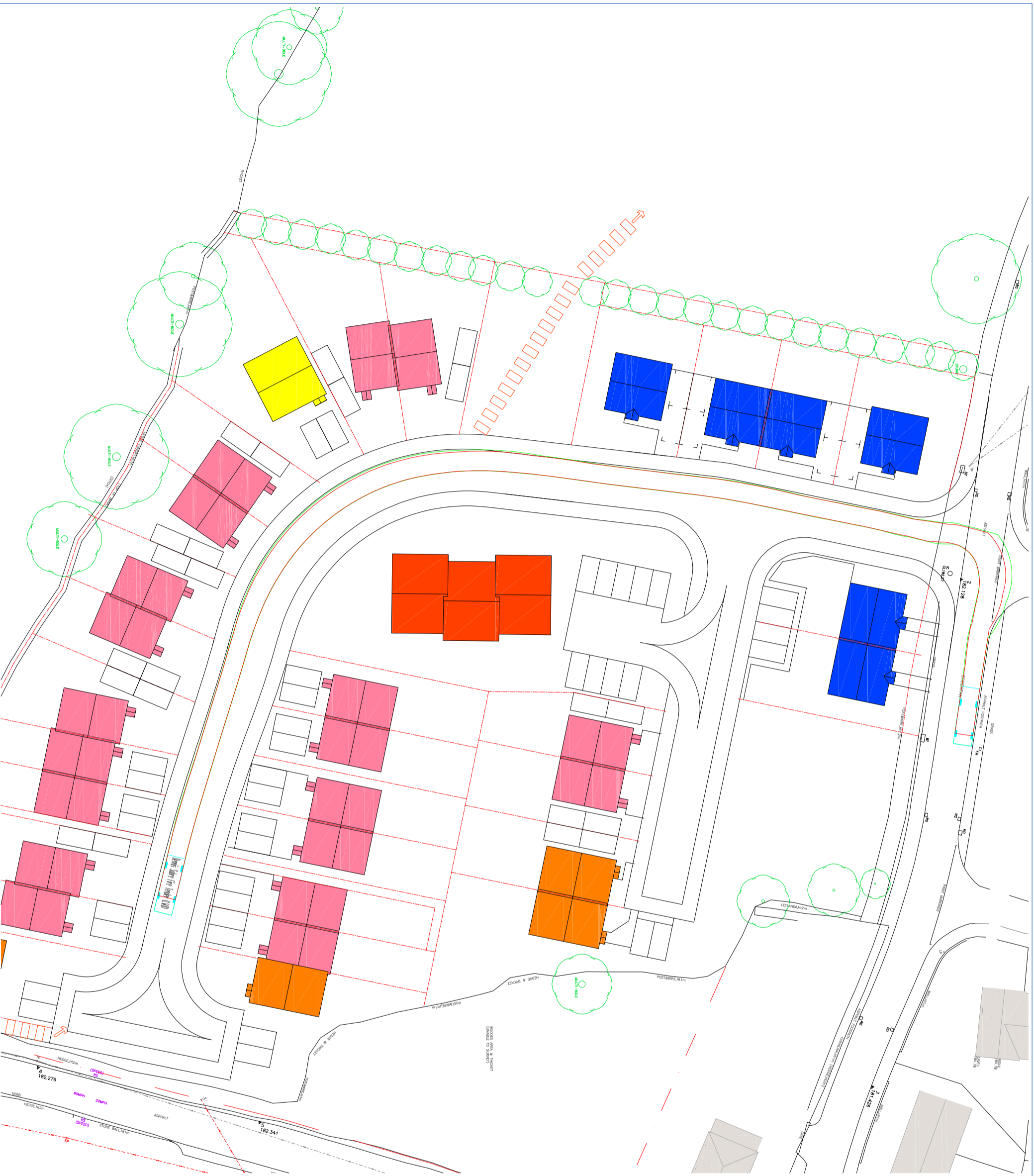
Scale: 1:500@A3

Drawn By: KG

Checked By: KG

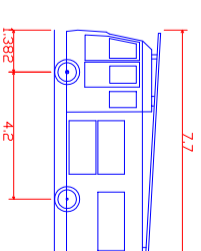
Status: Information

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Revision:
A Updated site plan
B Updated site plan

11.10.21
31.01.22



Dennis Sabre Fire Tender (LWB)
Overall Length 7.700m
Overall Width 2.430m
Overall Body Height 3.512m
Min Body Ground Clearance 0.397m
Track Width 2.380m
Lock to Lock 2.505m
Kerb to Kerb 2.7400m

7.700m
2.430m
3.512m
0.397m
2.380m
2.505m
2.7400m

Client: Wales & West Housing Association

Project: Land at Groesfan, Penycae

Drawing Title: Proposed Access Arrangements
Swept Path Assessment
Fire Tender Exit

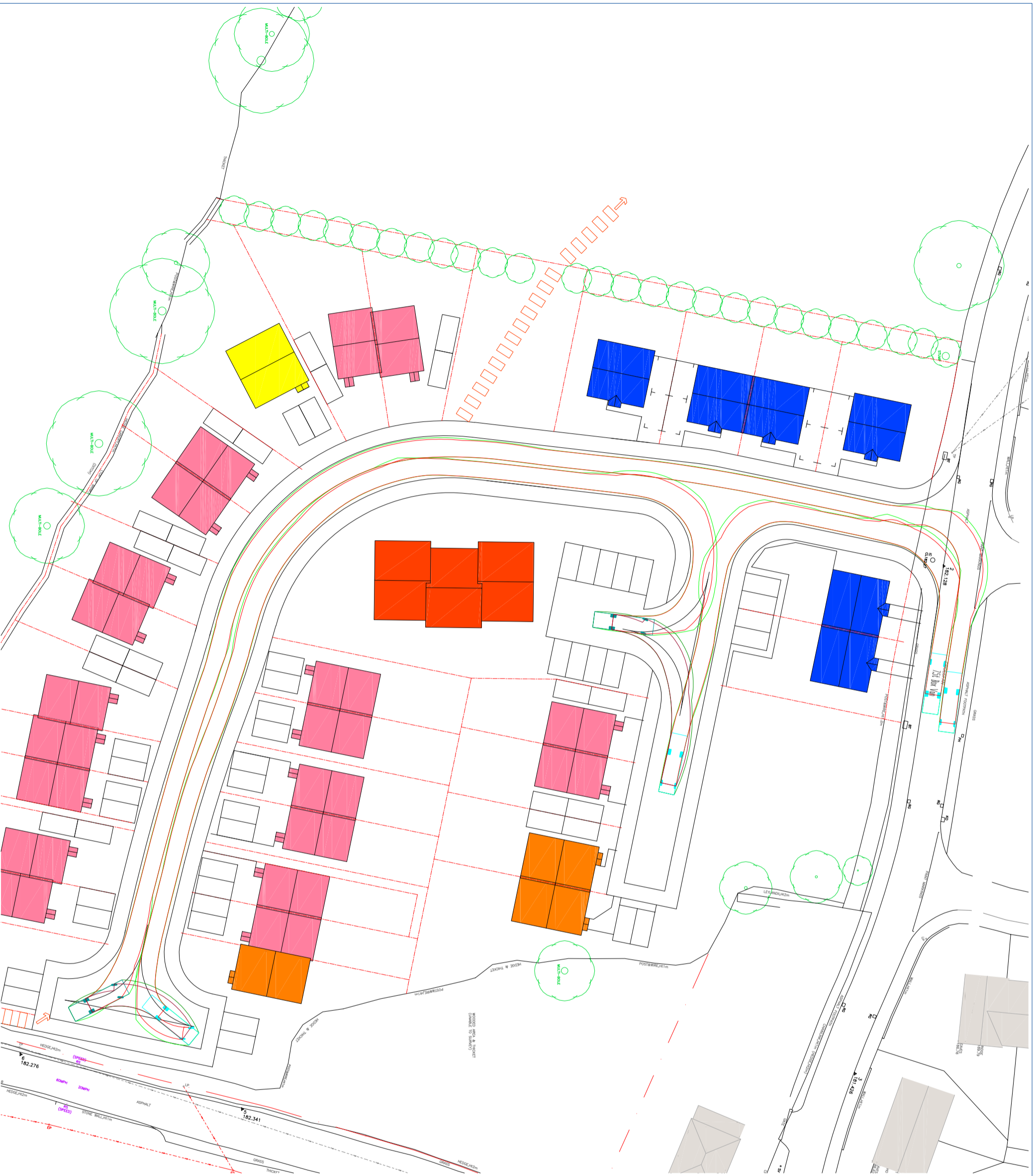
Drawing Number: J000246_ATR104
Revision: B

Date: 01/09/2021
Scale: 1:500@A3

Drawn By: KG
Checked By: KG

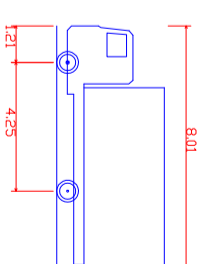
Status: Information

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Revision:
A Updated site plan
B Updated site plan

11.10.21
31.01.22



7.5t Box Van
Overall Length
Overall Width
Min. Body Ground Clearance
Track Width
Lock to lock time
Kerb to kerb Turning Radius

8.010m
4.250m
2.100m
0.3556m
2.064m
4.005m
7.400m

Client: Wales & West Housing Association

Project: Land at Groesfan, Penycae

Drawing Title: Proposed Access Arrangements
Swept Path Assessment
Delivery Vehicle Entry & Exit

Drawing Number: J000246_ATR105

Revision: B

Date: 01/09/2021

Scale: 1:500@A3

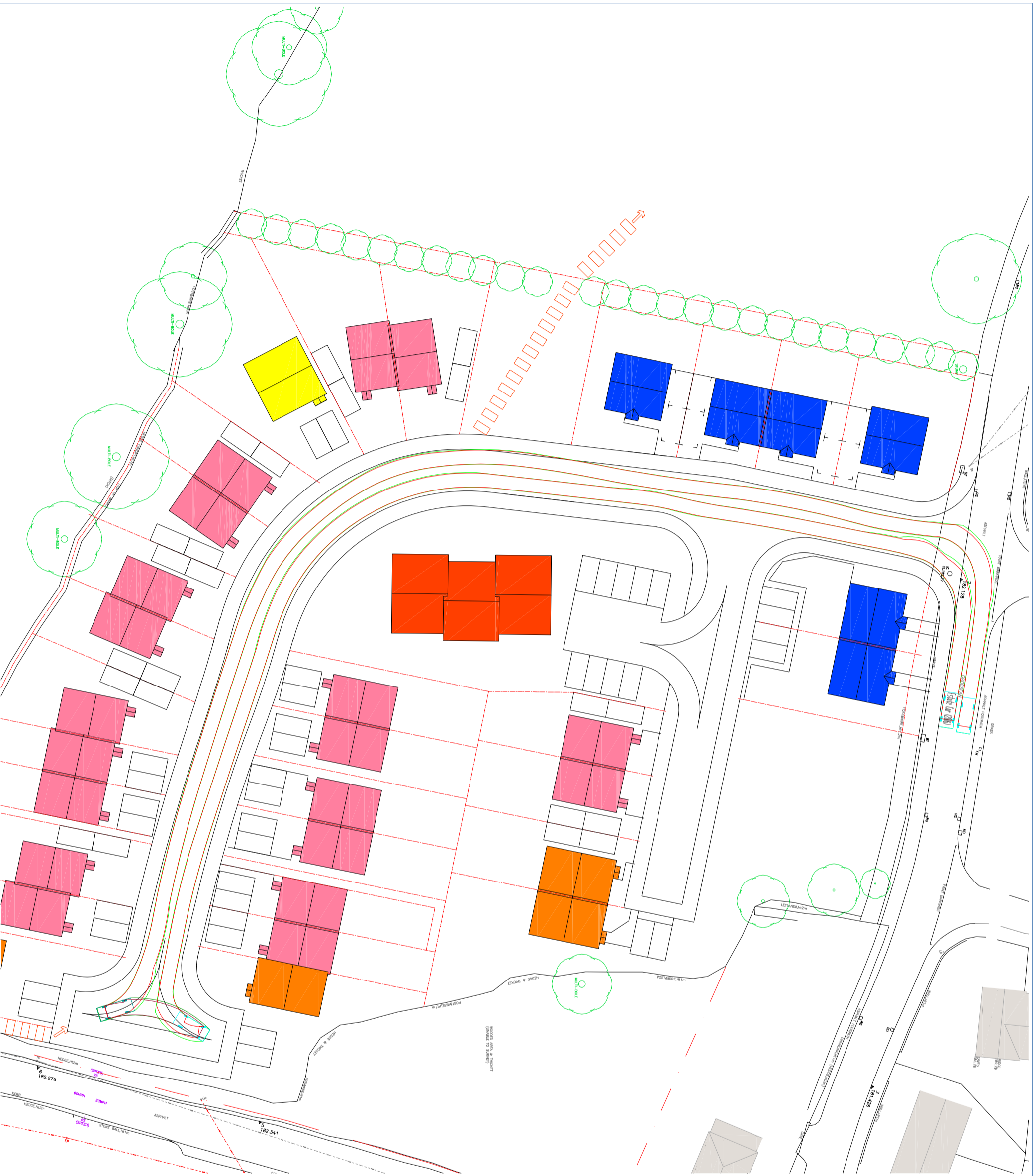
Drawn By: KG

Checked By: KG

Status: Information

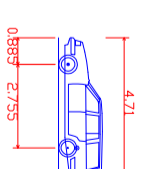
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Revision:
A Updated site plan
B Updated site plan

11.10.21
31.01.22



Estate Car (2006)
Overall Length
Overall Width
Overall Body Height
Min Body Ground Clearance
Max Track Width
Lock to lock time
Kerb to Kerb Turning Radius

4.710m
1.804m
1.442m
0.207m
1.755m
4.005
5.950m

Client:
Wales & West Housing Association

Project:
Land at Groesfan, Penycae

Drawing Title:
Proposed Access Arrangements
Swept Path Assessment
Car Entry & Exit

Drawing Number:
J000246_ATR106

Revision:
B

Date:
01/09/2021

Scale:
1:500@A3

Drawn By:
KG

Checked By:
KG

Status:
Information

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Calculation Reference: AUDIT-506501-210831-0847

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : M - MIXED PRIVATE/AFFORDABLE HOUSING
 TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	ES EAST SUSSEX	3 days
	HC HAMPSHIRE	1 days
	WS WEST SUSSEX	4 days
03	SOUTH WEST	
	DC DORSET	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	7 days
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	WY WEST YORKSHIRE	1 days
08	NORTH WEST	
	GM GREATER MANCHESTER	1 days
	MS MERSEYSIDE	2 days
09	NORTH	
	CB CUMBRIA	1 days
	TW TYNE & WEAR	1 days
10	WALES	
	CM CARMARTHENSHIRE	1 days
17	ULSTER (NORTHERN IRELAND)	
	DE DERRY	1 days

Primary Filtering selection:

Parameter: No of Dwellings
 Actual Range: 9 to 75 (units:)
 Range Selected by User: 9 to 75 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 30/11/20

Selected survey days:

Monday	1 days
Tuesday	6 days
Wednesday	6 days
Thursday	6 days
Friday	9 days

Selected survey types:

Manual count	24 days
Directional ATC Count	4 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	9
Edge of Town	12
Neighbourhood Centre (PPS6 Local Centre)	7

Selected Location Sub Categories:

Residential Zone	21
Village	7

Secondary Filtering selection:

Use Class:

C3 28 days

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000 11 days

5,001 to 10,000 5 days

10,001 to 15,000 2 days

15,001 to 20,000 2 days

20,001 to 25,000 2 days

25,001 to 50,000 6 days

Population within 5 miles:

5,001 to 25,000 7 days

25,001 to 50,000 5 days

50,001 to 75,000 2 days

75,001 to 100,000 3 days

100,001 to 125,000 3 days

125,001 to 250,000 3 days

250,001 to 500,000 4 days

500,001 or More 1 days

Car ownership within 5 miles:

0.6 to 1.0 8 days

1.1 to 1.5 19 days

1.6 to 2.0 1 days

Travel Plan:

Yes 12 days

No 16 days

PTAL Rating:

No PTAL Present 28 days

Covid-19 Restrictions Yes

At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions

LIST OF SITES relevant to selection parameters

1	CA-03-M-01 BANNOLD ROAD WATERBEACH	MIXED HOUSES & FLATS	CAMBRI DGESHI RE
	Edge of Town Residential Zone Total No of Dwellings: 52 <i>Survey date: WEDNESDAY 20/06/18</i>		<i>Survey Type: MANUAL</i>
2	CB-03-M-04 STANHOPE ROAD CARLISLE	SEMI -DETACHED & TERRACED	CUMBRIA
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 20 <i>Survey date: FRIDAY 24/06/16</i>		<i>Survey Type: MANUAL</i>
3	CM-03-M-02 COLLEGE ROAD CARMARTHEN	HOUSES & FLATS	CARMARTHENSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 49 <i>Survey date: TUESDAY 14/10/14</i>		<i>Survey Type: MANUAL</i>
4	DC-03-M-02 KINGS ROAD DORCHESTER FORDINGTON	TERRACED & BUNGALOWS	DORSET
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 37 <i>Survey date: FRIDAY 16/09/16</i>		<i>Survey Type: MANUAL</i>
5	DE-03-M-01 RUGBY AVENUE COLERAINE	MIXED HOUSES & FLATS	DERRY
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 21 <i>Survey date: WEDNESDAY 12/10/16</i>		<i>Survey Type: MANUAL</i>
6	DS-03-M-01 COCKAYNE STREET DERBY BOULTON	TERRACED/SEMI DETACHED	DERBYSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 32 <i>Survey date: TUESDAY 21/10/14</i>		<i>Survey Type: MANUAL</i>
7	ES-03-M-03 FIELD END MARESFIELD	MIXED HOUSES	EAST SUSSEX
	Edge of Town Residential Zone Total No of Dwellings: 68 <i>Survey date: WEDNESDAY 02/10/13</i>		<i>Survey Type: MANUAL</i>

LIST OF SITES relevant to selection parameters (Cont.)

8	ES-03-M-09 STATION ROAD NORTHIAM	DETACHED/SEMI -DETACHED	EAST SUSSEX
	Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 16 <i>Survey date: WEDNESDAY 17/05/17</i>		
9	ES-03-M-13 NORTH COMMON ROAD WIVELSFIELD GREEN	MIXED HOUSES	EAST SUSSEX
	Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 66 <i>Survey date: FRIDAY 22/06/18</i>		
10	GM-03-M-01 PARK ROAD ROCHDALE	TERRACED & FLATS	GREATER MANCHESTER
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 9 <i>Survey date: TUESDAY 25/11/14</i>		
11	HC-03-M-05 WIMPSON LANE SOUTHAMPTON MAYBUSH	HOUSES & FLATS	HAMPSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 62 <i>Survey date: FRIDAY 03/10/14</i>		
12	MS-03-M-02 LOVEL ROAD LIVERPOOL SPEKE	TERRACED	MERSEYSIDE
	Edge of Town Residential Zone Total No of Dwellings: 27 <i>Survey date: FRIDAY 21/06/13</i>		
13	MS-03-M-03 LOVEL ROAD LIVERPOOL SPEKE	SEMI DETACHED/TERRACED	MERSEYSIDE
	Edge of Town Residential Zone Total No of Dwellings: 24 <i>Survey date: FRIDAY 21/06/13</i>		
14	NF-03-M-04 HUNSTANTON ROAD HUNSTANTON	MIXED HOUSES & FLATS	NORFOLK
	Edge of Town Residential Zone Total No of Dwellings: 70 <i>Survey date: THURSDAY 19/09/19</i>		
15	NF-03-M-13 MACMILLAN WAY NEAR NORWICH LITTLE PLUMSTEAD	MIXED HOUSES	NORFOLK
	Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 75 <i>Survey date: FRIDAY 20/09/19</i>		
16	NF-03-M-19 PIGOT LANE NEAR NORWICH FRAMINGHAM EARL	MIXED HOUSES	NORFOLK
	Neighbourhood Centre (PPS6 Local Centre) Village Total No of Dwellings: 62 <i>Survey date: WEDNESDAY 19/09/18</i>		

LIST OF SITES relevant to selection parameters (Cont.)

17	NF-03-M-21	MIXED HOUSES	NORFOLK
	MILL LANE		
	NEAR NORWICH		
	HORSFORD		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	57	
	Survey date: TUESDAY	11/10/16	Survey Type: DIRECTIONAL ATC COUNT
18	NF-03-M-31	MIXED HOUSES & FLATS	NORFOLK
	LONG LANE		
	NEAR NORWICH		
	MULBARTON		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	48	
	Survey date: THURSDAY	05/10/17	Survey Type: DIRECTIONAL ATC COUNT
19	NF-03-M-35	MIXED HOUSES	NORFOLK
	BRANDON ROAD		
	SWAFFHAM		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	75	
	Survey date: FRIDAY	14/10/16	Survey Type: DIRECTIONAL ATC COUNT
20	NF-03-M-39	MIXED HOUSES	NORFOLK
	LONDON ROAD		
	ATTLEBOROUGH		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	61	
	Survey date: WEDNESDAY	14/10/20	Survey Type: MANUAL
21	SF-03-M-01	TERRACED & SEMI-DETACHED	SUFFOLK
	THE SANDLINGS		
	NEAR IPSWICH		
	MARTLESHAM		
	Neighbourhood Centre (PPS6 Local Centre)		
	Village		
	Total No of Dwellings:	35	
	Survey date: THURSDAY	24/09/20	Survey Type: MANUAL
22	TW-03-M-01	DETACHED & BUNGALOWS	TYNE & WEAR
	WESTLANDS		
	NEWCASTLE		
	CHAPEL HOUSE		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	27	
	Survey date: FRIDAY	13/11/15	Survey Type: MANUAL
23	WM-03-M-01	SEMI DETACHED	WEST MIDLANDS
	MEADOWSWEET AVENUE		
	BIRMINGHAM		
	KINGS NORTON		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	56	
	Survey date: MONDAY	09/11/15	Survey Type: MANUAL
24	WS-03-M-06	SEMI DETACHED/DETACHED	WEST SUSSEX
	SOUTHFIELDS CLOSE		
	CHICHESTER		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	67	
	Survey date: TUESDAY	27/01/15	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

25	WS-03-M-13	TERRACED & FLATS	WEST SUSSEX
	IRENE AVENUE		
	WORTHING		
	LANCING		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	23	
	Survey date: TUESDAY	21/06/16	Survey Type: MANUAL
26	WS-03-M-19	MIXED HOUSES & FLATS	WEST SUSSEX
	ADLINGTON GARDENS		
	BOGNOR REGIS		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total No of Dwellings:	32	
	Survey date: THURSDAY	17/10/19	Survey Type: MANUAL
27	WS-03-M-21	MIXED HOUSES	WEST SUSSEX
	CLAPPERS LANE		
	BRACKLESHAM BAY		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	57	
	Survey date: THURSDAY	14/11/19	Survey Type: MANUAL
28	WY-03-M-01	SEMI DETACHED & FLATS	WEST YORKSHIRE
	HOLMEFIELD VIEW		
	BRADFORD		
	Edge of Town		
	Residential Zone		
	Total No of Dwellings:	31	
	Survey date: THURSDAY	14/03/19	Survey Type: MANUAL

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING

TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	28	45	0.091	28	45	0.283	28	45	0.374
08:00 - 09:00	28	45	0.145	28	45	0.337	28	45	0.482
09:00 - 10:00	28	45	0.156	28	45	0.183	28	45	0.339
10:00 - 11:00	28	45	0.160	28	45	0.160	28	45	0.320
11:00 - 12:00	28	45	0.190	28	45	0.188	28	45	0.378
12:00 - 13:00	28	45	0.191	28	45	0.172	28	45	0.363
13:00 - 14:00	28	45	0.180	28	45	0.181	28	45	0.361
14:00 - 15:00	28	45	0.178	28	45	0.199	28	45	0.377
15:00 - 16:00	28	45	0.268	28	45	0.204	28	45	0.472
16:00 - 17:00	28	45	0.270	28	45	0.187	28	45	0.457
17:00 - 18:00	28	45	0.301	28	45	0.186	28	45	0.487
18:00 - 19:00	28	45	0.276	28	45	0.173	28	45	0.449
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.406			2.453			4.859

Parameter summary

Trip rate parameter range selected: 9 - 75 (units:)
 Survey date date range: 01/01/13 - 30/11/20
 Number of weekdays (Monday-Friday): 32
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 2
 Surveys manually removed from selection: 0