Proposed residential allocation on land off Cefneithin Road, Gorslas

Transport Statement

30 September 2020

Project Ref: 2020-565

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1 INTRODUCTION

1.1 LvW Highways Ltd has been appointed by Mannor Homes to produce a Transport Statement to support the promotion of land for a Proposed residential allocation on land off Cefneithin Road, Gorslas in Carmarthenshire County Council's Revised Local Development Plan 2018 – 2033.

1.2 Part of the candidate site currently accommodates a metals recycling yard with the remainder of the site comprising of undeveloped land. It is considered that the candidate site has the potential to deliver up to around 120 residential dwellings. **Figure 1** shows the candidate site's location and the local surrounding area.

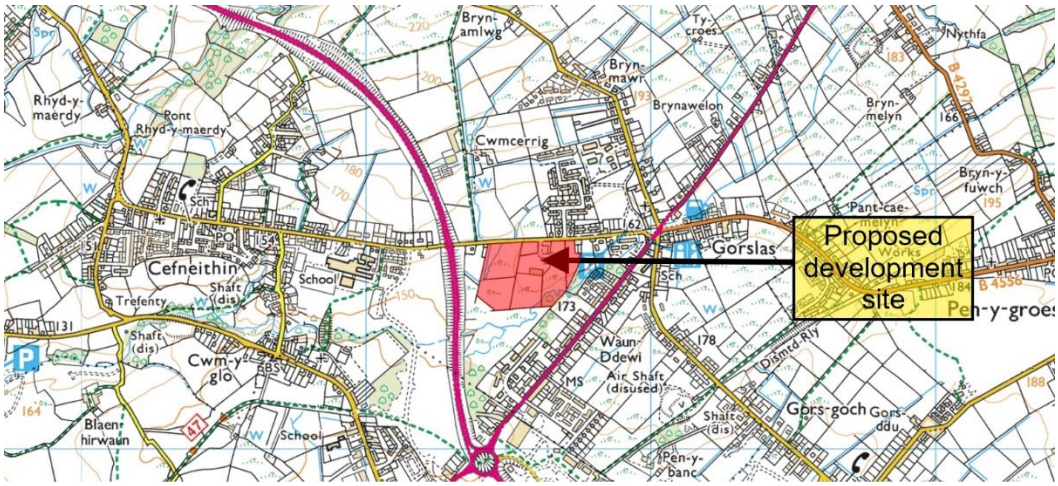

Figure 1: Pen-Y-Banc Yard site location

1.3 This Transport Statement sets out the transport context relating to the existing Cymru/Simms Metals recycling yard (existing conditions) and details of the application proposals (proposed situation).

1.4 This Transport Statement is produced in accordance with, and in recognition of, local and central government guidance and follows our understanding of the requirements set out in national guidance for Transport Statements.

1.5 LvW Highways Ltd as independent transport planning Consultants have prepared this Transport Statement providing what we consider is a fair and unbiased appraisal of the current situation and the impact of the proposed application with consideration of other proposed developments in the area.

1.6 In particular, this Transport Statement demonstrates that the candidate site is in a sustainable location that is closely related to existing facilities and services and is accessible to pedestrians, cyclists and public transport users. It is also demonstrated that safe vehicular access to the site can be provided.

1.7 The report is based on a review of the existing vehicle movements associated with the approved operation of metals recycling yard compared to the proposed 120 residential dwellings. A summary of the local highway authority required parking provision will be provide.

1.8 The remainder of this report is set out as follows;

- Section 2 of the report gives a description of the existing site and the surrounding area and provides a review of its current operation.
- Section 3 describes the application proposal and proposed parking allocations.
- Section 4 provides an environmental assessment of the highway impacts by comparing the existing site operation as a metals recycling yard and the proposed 120 residential dwellings development.
- Finally, a summary and overall conclusion is provided in Section 4.

2 EXISTING CONDITIONS

2.1 The location of the candidate site is identified in Figure 1 and **Figure 2** west of Gorslas and east of Cefneithin (OSGR 256614, 213726).

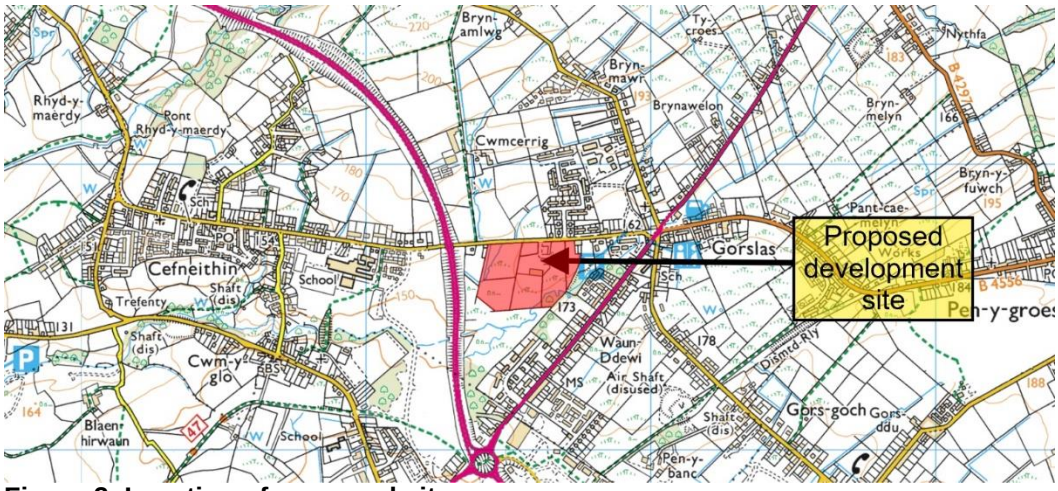

Figure 2: Location of proposed site

2.2 The site is located to the south of and will be accessed from Cefneithin Road, which links Gorslas and Cefneithin. The site is some 450m west of Gorslas Square and 1.3km north of Cross Hands.

Traffic & Transportation Policy

2.3 Policy TR3 of the Carmarthenshire Local Development Plan 2006-2021, relates to the design of highways in developments and requires that developments provide:

- An integrated network of convenient and safe pedestrian and cycle routes (within and from the site) which promotes the interests of pedestrians, cyclists and public transport;
- Suitable provision for access by public transport;
- Appropriate parking and where applicable, servicing space in accordance with required standards;
- Infrastructure and spaces allowing safe and easy access for those with mobility difficulties;
- Required access standards reflective of the relevant Class of road and speed restrictions including visibility splays and design features and calming measures necessary to ensure highway safety and the ease of movement is maintained, and where required enhanced;
- Provision for Sustainable Urban Drainage Systems to allow for the disposal of surface water run-off from the highway.

2.4 Proposals that do not generate unacceptable levels of traffic on the surrounding road network and would not be detrimental to highway safety or cause significant harm to the amenity of residents will be permitted.

2.5 Proposals that will not result in offsite congestion in terms of parking or service provision or where the capacity of the network is sufficient to serve the development will be permitted. Developers may be required to facilitate appropriate works as part of the granting of any permission.

The Active Travel (Wales) Act 2013

2.6 The Active Travel (Wales) Act 2013 is Welsh Government legislation aimed to support an increase in the level of walking and cycling in Wales, to encourage a shift in travel behaviour to active travel modes, and to facilitate the building of walking and cycling infrastructure.

2.7 The planning system has a key role to play in facilitating active travel. Planning Policy Wales (PPW) and Technical Advice Note (TAN) 18: Transport, promote walking and cycling, in line with the aims of the Active Travel (Wales) Act 2013.

2.8 The Active Travel (Wales) Act 2013 makes it a legal requirement for local authorities in Wales to map and plan for suitable routes for active travel, and to build and improve infrastructure for walking and cycling every year. It creates new duties to consider the needs of walkers and cyclists and make better provision for them. It also requires the consideration of walking and cycling as a mode of transport and the Act focuses on the promotion of walking and cycling for purposeful journeys, rather than as a purely recreational activity.

2.9 The Active Travel (Wales) Act 2013 became effective on 25th September 2014. The Act will be supported by the Active Travel Action Plan Wales (2014), and many of the actions of the Active Travel Action Plan Wales document will also benefit recreational or competitive walking and cycling. 'Walking' in the Active Travel Action Plan for Wales includes the use of wheelchairs and mobility scooters and 'cycling' includes the use of electric bikes, but not motorcycles.

Pedestrian Infrastructure and Access

2.10 The assessment has considered the accessibility of the site from local provisions by foot and the quality of the surrounding pedestrian environment.

2.11 It is considered that 2km, a distance that can be walked in around 25 to 30 minutes, represents a reasonable distance to expect that walking can be a viable option.

2.12 The site is accessible to pedestrians from the adjacent foot/cycleway on Cefneithin Road. This footway links with, and is part of, the wider pedestrian network in the area that provides good quality pedestrian routes in all directions.

2.13 There are a number of facilities available near to the site including primary and secondary schools, shops and employment opportunities. Walk distances to some of these facilities from the candidate site are provided in **Table 1**.

Table 1: Walk Distances from the Site to Local Facilities

Facility	Walk Distance from Site
Gorslas Primary School	400m
Ysgol Maes y Gwendraeth	600m
Convenience Store (Gorslas Square)	400m
Cross Hands Retail Park	1000m
Cross Hands Business Park	1600m

2.14 The services and facilities listed in Table 1 are therefore within reasonable walking distance to the site.

2.15 The Manual for Streets (DfT, 2007), notes at Section 4.4.1 that *"walking offers the greatest potential to replace short car trips, particularly those under 2km"*. A 20 minute's walking isochrones from the proposed development site access is inclusive of the majority of a large residential catchment in the west, north and east and shown in **Figure 3**.

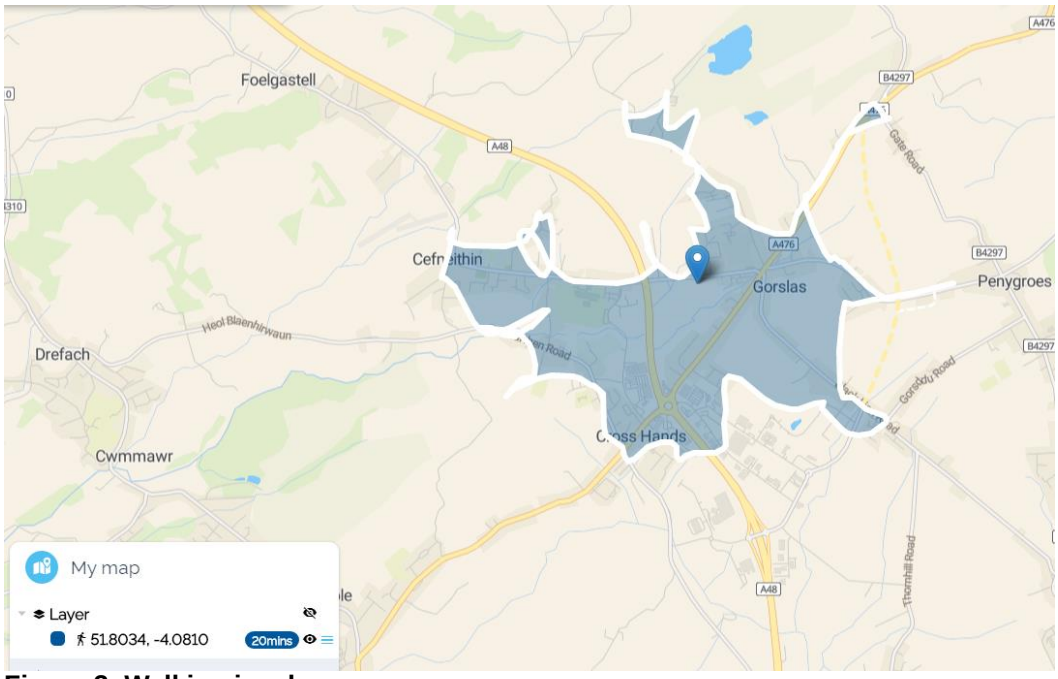

Figure 3: Walking isochrones

Cycling

2.16 The Chartered Institution of Highways and Transportation's 'Planning for Cycling' (2014) states that 'cycle use is more seasonal than for other modes, with up to twice as many cyclists in summer compared with winter.

2.17 The majority of cycling trips are for short distances, with 80% being less than eight kilometres and with 40% being less than three kilometres. However, the majority of trips by all modes are also short distances (67% are less than eight kilometres, and 38% are less than three kilometres); therefore, the bicycle is a potential mode for many of these trips (National Travel Survey, 2013, Department for Transport).'

2.18 Advice on meeting cyclists' needs is given in Chapter 6 of MfS1 and that advice applies to all highways that fall within the scope of MfS1 and MfS2 i.e. all roads that are subject to 40mph and less (apart from trunk roads).

2.19 In the vicinity of the site, cyclists are accommodated on the public highways in line with the guidance contained in MfS1 and the Highway Code.

2.20 A shared foot/cycleway runs alongside the site on Cefneithin Road. It is currently some 2m wide, less than the recommended minimum width of 3m. The development of the site provides the opportunity to improve this facility by widening the foot/cycleway.

2.21 National Cycle Network Route 47 passes within some 900m of the site. This provides a long distance cycle route between Swansea and Pembrokeshire.

2.22 **Figure 4** indicates that the cycling isochrones of 15 and 30 minutes from the site assuming a comfortable average cycle speed of 15km/hr (9mph).

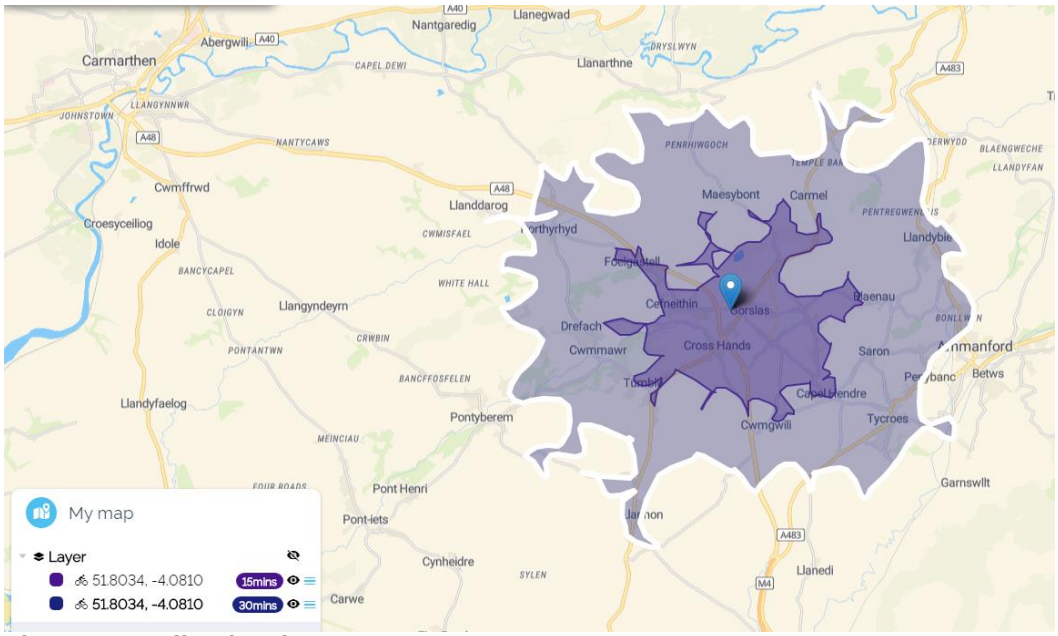

Figure 4: Cycling isochrones

Public Transport

2.23 The nearest bus stop is located approximately 80m to the east of the site on Cefneithin Road, at the junction with Brynlluan. The bus stops are served by the 129 service that is detailed in **Table 2**.

Table 2: Bus Services from Cefneithin Road Bus Stops

Service No.	Route	Details
129	Ammanford - Carmarthen	8 Trips Each Direction (Mon – Sat)

2.24 The bus services passing the site provide access to Carmarthen's bus and rail stations that provide national public transport links.

Highway Network

2.25 The site is adjacent to and will be accessed from Cefneithin Road that links Gorslas and Cefneithin. The road is subject to a 30mph speed limit.

2.26 At Gorslas Square, some 400m to the east of the site, Cefneithin Road meets the A476. The junction is known locally as the six-ways junction due to the number of roads that meet here. The junction can become congested at peak times. However, the Cross Hands Economic Link Road is currently being constructed and this will, upon completion, create a bypass that will remove some 25% to 30% of traffic from the six ways junction and thereby relieve the congestion currently experienced.

2.27 From Gorslas Square the A476 provides a link to the A48 dual carriageway, which heads west to Carmarthen and east to the M4. Alternatively the A48 can be reached from the site via the Cross Hands Retail Park. Both routes to the A48 are a similar length, around 1.5km.

2.28 The site therefore benefits from good access to the local and strategic road networks.

2.29 In summary therefore the site is in an appropriate location where there is a wide range of services and facilities nearby. This will minimise the distance travelled

by residents of the site to access services and increase the possibility that sustainable modes of travel are used to make those trips.

Existing Use

2.30 The site currently accommodates an industrial unit that has an established planning use as a commercial metals recycling yard.

2.31 The environmental permit for Pen-Y-Banc Yard (Permit Number EPR/AP3198FZ) states *"The total quantity of waste accepted at the site shall be less than 150,000 tonnes a Year."*

Staff

2.32 Cymru/Simms Metals employed approximately 80 staff working across the site in various operations throughout the day. In addition to on-site staff, the site would have regular visits from sales representatives and occasionally checks from various agency staff.

Associate vehicle movements

2.33 To provide an understanding of the number of vehicle movements that the metals recycling yard attracted and produced, we have applied first principals to the allowed tonnage of material to be processed.

2.34 Typically all heavy goods and light goods vehicles would arrive full and leave empty. The 44t articulated lorries and 32t 8 wheelers would either arrive full and leave empty or arrive empty and leave full. Only the eight 'Cymru/Simms metal' owned 44t articulated lorries would arrive full and leave full.

2.35 There are no time restrictions on when the heavy goods vehicles could arrive or depart from Pen-Y-Banc Yard.

2.36 **Table 3** shows the average daily vehicle movements that Pen-Y-Banc Yard could generate and attract assuming 149,999 tonnes of material per year with 305 working days per year i.e. every weekday and every Saturday but excluding Bank Holidays.

Table 3: Average daily vehicle movements for Pen-Y-Banc Yard

	Arrivals	Departures	Total
HGV 44t Artics.	24	24	48
HGV 32t 8 wheelers	10	10	20
HGV 26t 6 wheelers	4	4	8
HGV 18t 4 wheelers	4	4	8
HGV 12t 4 wheelers	6	6	12
HGV 7.5t 4 wheelers	16	16	32
HGV movements per day	64	64	128
LGV 3.5t vans and pick-ups	49	49	98
80+ Staff and visitors (cars and LGVs)	76	76	152
Total vehicle movements per day	189	189	378

2.37 Table 3 shows that Pen-Y-Banc Yard when operational could produce and attract, 128 Heavy Goods vehicle movements a day and 250 car and Light Goods vehicle movements a day. In total 378 vehicle movements per day on average 305 days a year.

Passenger Car Unit (PCU) / Passenger Car Equivalent (PCE)

2.38 A PCU is a unit of measurement of traffic flow or capacity - equivalent to that of a single car. Individual vehicle classes are given different PCU values (for the purpose of traffic capacity calculations).

2.39 PCU values vary from country to country and also depend upon the number of vehicle categories used, e.g. when using just two categories light vehicles and heavy vehicles (i.e. 'lights and heavies') PCU values used are typically 1 and 2 respectively.

2.40 If we consider all Heavy Goods Vehicles have a PCU factor of 2 then the equivalent number of PCU's per day can be seen in **Table 4**.

Table 4: Average daily PCU movements for Pen-Y-Banc Yard

	Arrivals	Departures	Total
HGV 44t Artics as PCUs	48	48	96
HGV 32t 8 wheelers as PCUs	20	20	40
HGV 26t 6 wheelers as PCUs	8	8	16
HGV 18t 4 wheelers as PCUs	8	8	16
HGV 12t 4 wheelers as PCUs	12	12	24
HGV 7.5t 4 wheelers as PCUs	32	32	64
HGV movements per day as PCUs	128	128	256
LGV 3.5t vans and pick-ups	49	49	98
80+ Staff and visitors (cars and LGVs)	76	76	152
Total PCU movements per day	253	253	506

2.41 If all the vehicles were considered as passenger car units, then Pen-Y-Banc Yard would generate and attract 506 PCU movements per day for 305 days of the year.

Personal Injury Accident (PIA) Analysis

2.42 A preliminary study of Personal Injury Accident (PIA) collision data on www.crashmap.uk shows that there have been no collisions on Cefneithin Road in the past five years.

2.43 Therefore, the search was extended to the past ten years where full year's data is available (01/01/2010 to 31/12/2019).

2.44 It showed only one collisions on Cefneithin Road within the vicinity of the proposed development site.

2.45 The location and severity of the collisions can be seen in **Figure 5** and it shows that on the 4th October 2010 a collision occurred near to the site entrance involving two vehicles that resulted in one casualty experiencing a serious injury.

Figure 5: Location of PIC in the vicinity of the site.

2.46 The remaining incidents are dispersed along the surrounding highway network with no apparent patterns that might suggest any deficiency in the existing highway infrastructure.

2.47 The above information suggests that there is not an identifiable safety problem that could be attributable to the road layout. The proposed development is unlikely to result in any material increase in total traffic using the local highway and, on this basis, the accident data does not have a negative bearing on the acceptability of the development proposals.

Air Quality Management Area (AQMA)

2.48 The location of the site is not within or near a designated Air Quality Management Area (AQMA).

Abnormal Loads

2.49 There are no abnormal load uses associated with the current site or expected with the development of the site.

Summary

2.50 There is good pedestrian infrastructure in the immediate vicinity of the site and there is comprehensive provision throughout the surrounding areas providing opportunities for future pedestrians to access the site by foot.

2.51 Cefneithin Road is trafficked by both cars and HGVs and therefore it will be the experienced cyclists that use it.

2.52 The site is well positioned with respect to existing bus stops where regular services run between Ammanford and Carmarthen.

2.53 The PIA data indicated that there are no discernible patterns in recent accidents on the local road network that suggest there are any existing material highway safety issues.

2.54 Overall, the site is accessible by foot, cycle and bus. In conclusion, it is considered that the site is positioned in an accessible location and that there would be good opportunities for journeys from the site to be made by sustainable modes of travel as required by TAN18 and The Active Travel Wales Act.

3 PROPOSED DEVELOPMENT

3.1 It is considered that the candidate site is capable of delivering approximately 120 dwellings.

3.2 An indicative site layout plan is provided in **Appendix A** and in the submitted documents. It is likely that further discussions on the site layout will take place as part of the detail design process and therefore this illustrative plan may change as a result of the planning processes.

3.3 The approach taken in developing the layout plan is founded on giving maximum encouragement to walking and cycling within the layout of the development. The inclusion of high quality pedestrian and cycle routes within the development will play an important role in connecting the development to its surroundings.

3.4 The layout design will place an emphasis on the principles of "Manual for Streets" in facilitating a choice of direct and attractive routes for pedestrians and cyclists that are aligned with key desire lines and take advantage of the attractiveness associated with a suburban location.

3.5 For the purposes of the assessment, all the residential dwellings will be classified as private properties in order to provide a robust case in terms of ownership of the properties, as houses for rent typically generate a lower volume of vehicle traffic flows.

Access

3.6 The proposed access to the proposed development site will be to adoptable standards, providing a 5.5m wide carriageway with 2m wide footways on both sides that connect with the existing Cefneithin Road footway.

3.7 As the access is located within a 30mph speed limit area, visibility splays of 2.4 x 43m would normally be the minimum requirement. In this case it is possible to provide in excess of the minimum requirement; 2.4 x 90m in both directions.

On Site Parking

3.8 TAN 18 supplements Planning Policy Wales and states in paragraph 4.6 that *"Maximum car parking standards should be used at regional and local level as a form of demand management."* and in paragraph 4.7 it requires LHA's in determining maximum car parking standards for new development, regard should be given to alternative transport modes, economic objectives, public and shared parking arrangements.

3.9 Paragraph 4.13 goes on to say *"Where appropriate, the local parking strategy should link parking levels on new development sites with either the existence or introduction of on-street control regimes. Maximum parking standards should not be applied so rigidly that they become minimum standards. Maximum standards should allow developers the discretion to reduce parking levels.*"

Carmarthenshire Parking Standards

3.10 The proposed development site's parking requirement is guided by the local authority parking standards. The County Surveyors' Society Revised Parking Standards 2014 presents guidelines for the provision of parking to inform developers, designers and builders what is expected of them and from them at an early stage of the development process.

3.11 The parking standards guidance is determined by land use and location, with development being located in zones 1 to 6, with zone one being applicable to city

centre and the centres of largest towns. The location of the application site is considered to be within the guidance for a development within Zones 2 – 6 as the site lies within Zone 5 for parking calculation purposes.

3.12 The parking standard for the type and location of the proposed new development is provided in **Table 5**.

Table 5: Parking Standards for private dwellings in Zones 2 to 6

Type of Development	Residents	Visitors
a) Residential - Houses	1 space per bedroom (maximum requirement 3 spaces)	1 space per 5 units

3.13 For each individual dwelling the parking requirement are a maximum of 1 car parking space per bedroom up to a maximum of 3 spaces.

3.14 The site will also provide off-carriageway parking for visitors at a rate of 1 space per 5 dwellings. A 5.5 metres wide access road allows for the visitor parking to be on-carriageway with no separate allocation for visitors.

3.15 It is proposed to provide a minimum of two designated car parking space per dwelling and therefore, this does not exceed the maximum of 1 space per bedroom or three spaces.

3.16 Provision for secure cycle storage will be provided within each dwelling.

3.17 In accordance with Planning Policy Wales requirements one ULEV charge point will be provided at each dwelling. It is intended that this be passive provision in that the underlying infrastructure will be put in place that will allow a charge point to be easily installed at a future date.

Servicing

3.18 The site will be designed so that all service vehicles and emergency vehicles can enter and leave the site in a forward gear. The vehicle turning head has been designed in accordance with the advice set out in the local CCC Highway Design Guide 2018.

Highway Trips

3.19 This section describes the traffic analysis undertaken to determine the likely effect that the proposed residential development of 120 dwellings accessed off Cefneithin Road may have on the surrounding highway network. The traffic analysis includes the calculation of the number of vehicle trips associated with the development.

Trip Generation for the Proposed Development

3.20 Trip generation is an element of the Transport Statement and study of the highway impact caused by the proposed development, and is the process to estimate the amount of trips associated with the specific land use or development. Peak hour trips are typically estimated, as this is when the greatest impact may occur.

3.21 In order to assess the impact of the development, it is necessary to produce figures for the trip generation of the site. This was achieved through an interrogation of the TRICS® Version 7.7.2 database using the parameters identified in the 'TRICS Good Practice Guide'. TRICS is a database containing details of trip generations from sites across Britain for various land uses.

Proposed use – Residential Dwellings Private

3.22 The vehicle trip generation rates for the proposed 120 residential dwellings has been obtained from the TRICS 7.7.2 trip generation database. Sites were selected on the basis of number of dwellings and the following selection criteria:

- 03/M – Mixed Private/Affordable Housing(GDO use class C3); Housing developments where at least 75% of units are privately owned. Of the total number of units, 75% must also be houses (sum of "non-split" terraced, detached, semi-detached, bungalows, etc.), with no more than 25% of the total units being flats. Includes properties that are privately owned and then privately rented. Trip rates are calculated by Site Area, Dwellings, Housing Density, or Total Bedrooms.
- Calculate trip rate for Vehicles.
- Regions of the development: All.
- Survey days: Monday – Friday, excludes weekend.
- Locations of the development: Suburban Area, Edge of Town and Neighbourhood Centre.
- Population within 1 mile: limit to 15,001 to 20,000.

3.23 The TRICS output is provided in detail in **Appendix B** and summarised below.

3.24 The trip rate has been calculated based on the proposed total number of 120 dwellings.

3.25 **Table 6** shows the balanced average hourly trips during the day as well as the daily flows that 120 private dwellings could typically have. These are calculated by multiplying the trip rates produced from the TRICS data with the proposed number of private dwellings.

Table 6: Vehicular Trips for 120 dwellings (Proposed Use)

Time Range	Arrivals	Departures	Totals
07:00-08:00	10	36	46
08:00-09:00	13	41	54
09:00-10:00	14	21	35
10:00-11:00	14	16	30
11:00-12:00	15	16	31
12:00-13:00	17	16	33
13:00-14:00	16	18	34
14:00-15:00	16	19	35
15:00-16:00	27	21	48
16:00-17:00	29	19	48
17:00-18:00	37	20	57
18:00-19:00	33	19	52
19:00-20:00	15	1	15
20:00-21:00	12	2	14
Daily Trip Rates:	266	266	532

3.26 This clearly shows that if the 120 dwellings were occupied, it is estimated that it could attract and produce 532 vehicle movements a day.

3.27 To visualise how these trips arrive and depart throughout a typical day, the arrivals and departures are plotted on **Chart 1**. It can been seen that a development of 120 private dwellings there are two peak periods in the morning and the afternoon to evening.

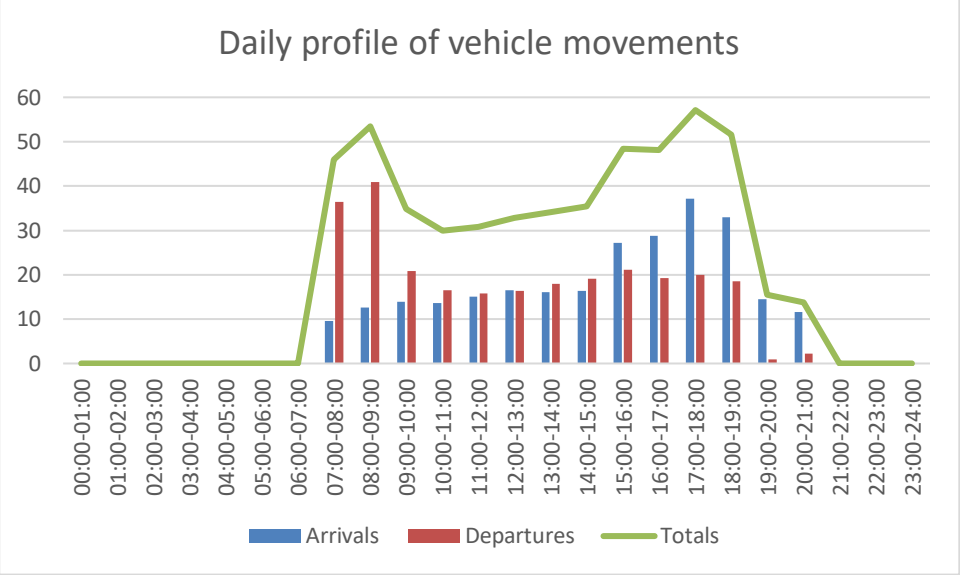

Chart 1: Vehicular Trips for 35 private dwellings (Proposed Use)

3.28 During the AM peak hour (08:00-09:00) it is anticipated that the proposed development could attract 13 vehicle movements (arrivals) and produce 41 vehicle movements (departures). To put this in context, vehicle movements per hour equates to on average, no more than one movement every minute. This is not considered to be significant.

3.29 During the PM peak hour (17:00-18:00) it is anticipated that the proposed development could attract 37 vehicle movements (arrivals) and produce 20 vehicle movements (departures). To put this in context, vehicle movements per hour equates to on average, no more than one movement every minute. This is not considered to be significant.

3.30 The TRICS data suggests that, based on typical trip rates for residential, the proposed development has the potential to generate around 266 arrivals and 266 departures per day. The development is likely to be at its busiest during the early evening and the data suggests that 57 vehicle movements will be generated during its busiest hour (17:00-18:00).

Comparison of Trips

3.31 It is shown that the current land use on the site of a metals recycling yard could generate and produce 378 vehicle movements a day of which 128 will be heavy goods vehicles. (See Table 3). However, if the heavy goods vehicles are converted to car equivalents i.e. 1 HGV equals 2 PCUs, then the metals recycling yard could generate and produce the equivalent of 506 car movements a day. (See Table 4).

3.32 The proposal to convert the metals recycling yard to a residential development of 120 dwellings, could generate and produce 532 vehicle movements a day. (See Table 6).

3.33 Therefore, the proposed development will generate a slightly greater number of vehicle movements to and from the site compared to its existing uses. However,

there will be a significant reduction in heavy goods vehicle movements along Cefneithin Road through the residential areas of Cefneithin and Gorslas.

Trip Distribution

3.34 Trip distribution refers to the estimate of origins and destinations of the new generated trips to and from the development site, which needs to be assigned across the highway network. Route assignment concerns the selection of routes between origin and destination. At this stage, the generated traffic volumes have been distributed and assigned to the adjacent road system.

3.35 The residents will use the access onto Cefneithin Road to access and depart from the site. It is anticipated that there will be a fairly even split between vehicles arriving and departing from the east and west.

3.36 The A48 can be reached to the west via the new Spine Road linking Cefneithin Road/Heol-Y-Parc to the A476 and then on to Cross Hands Roundabout (approx. 1.5km). To the east the route will be via Gorslas six ways junction then along the A476 Cross Hands Road on to Cross Hands Roundabout (approx. 1.3km).

Construction Traffic

3.37 It is anticipated that the transport impacts of site construction traffic, including the requirements of abnormal loads in the construction, use and decommissioning the present development will be negligible.

3.38 At this stage details of construction traffic is unknown and will not be finalised until a contractor is appointed. It is envisaged that a Construction Management Plan will be implemented via a suitably worded planning condition subject to planning approval.

Alternative sites

3.39 We are aware that the land on the opposite side of Cefneithin Road is being considered for 29 residential dwellings. The proposed access to this site needs to be considered in terms of its relation and proximity to the existing site access to Pen-Y-Banc Yard.

Conclusion

3.40 This section has reviewed the proposed development and the mitigation measures, and it has concluded the following:

3.41 **Site Access Scheme and Parking:** A simple T-junction access to the development site is proposed at its connection with Cefneithin Road. The internal layout will be designed where pedestrians and cyclists will have priority over motorised traffic.

3.42 **Pedestrian and Cycle Facilities and Routes:** The development site is surrounded by good pedestrian facilities, with footways provided as part of the site access junction connecting the site with the local pedestrian network in Gorslas. A number of footpaths are located within close proximity to the development that provide recreational routes to other areas of Gorslas.

3.43 **Public Transport:** There are several bus stops located within close proximity to the development site providing frequent access to the main towns of Carmarthen and Ammanford.

4 HIGHWAYS ENVIRONMENTAL ASSESSMENT

4.1 This chapter of the Transport Statement provides an environmental assessment of the traffic impacts from the site operating as a metals recycling yard compared to the projected traffic impacts of the 120 residential dwellings development proposals on sensitive receptors, pedestrians, driver delay, travel severance or an increased accident rate.

4.2 The following rules, summarised from the IEMA guidelines, have been used as a screening process to define the scale and extent of this assessment.

4.3 Rule 1: Include roads where traffic flows are predicted to increase by more than 30% (or where the numbers of HGVs are predicted to increase by more than 30%).

4.4 Rule 2: Include any specifically sensitive areas where traffic flows are predicted to increase by 10% or more.

Methodology

Overview

4.5 A baseline year of 2019 has been adopted for the purposes of this assessment.

Methodology for establishing baseline conditions

4.6 To establish a baseline position, traffic survey data has been collected along Cefneithin Road. The metals recycling yard was not in operation when the traffic survey was undertaken.

Assessment methodology

4.7 The IEMA guidelines recommend that the recommendations set out in Table 2.1 may be considered important when considering traffic from an individual development and include the following:

- Severance;
- Pedestrian delay;
- Pedestrian amenity;
- Fear and intimidation;
- Driver delay; and
- Accidents and safety.

4.8 There are other potential effects that could arise from the traffic impacts of the proposed development including noise, vibration, visual impact, heritage and conservation, ecological effects and air quality. These are not assessed within this chapters of the Transport Statement.

Significance Criteria

4.9 **Table 7** outlines the criteria by which potential effects have been assessed. The IEMA guidelines have been used as a basis for developing the assessment criteria.

Table 7: Assessment criteria

Impact	Assessment Criteria			
	Negligible	Minor	Moderate	Major

Severance	Change in traffic flow of up to 30%	Change in traffic flow of 30% to 60%	Change in traffic flow of 60% to 90%	Change in traffic flow of over 90%
Pedestrian delay	To be assessed on a case by case basis, with consideration given to the sensitivity and vulnerability of the receptor.			
Pedestrian amenity	To be assessed on case by case basis using professional judgement with consideration given to changes to traffic flow.			
Fear and intimidation	To be assessed on case by case basis using professional judgement with consideration given to the increase in HGV			
Driver delay	To be assessed on case by case basis using professional judgement and the results of the junction modelling assessments.			
Accidents and Safety	To be assessed on case by case basis using professional judgement with consideration given to accident assessment and the forecast increase in traffic flows resulting from the development			

4.10 The assessment criteria set out in Table 7 above indicates the key evidence needed to understand the assessment is an increase in traffic or HGV flows.

4.11 The following assessment criteria included within the IEMA guidance has been set for raising the significance of effect on any link:

- An increase in total traffic flows of 30% from 0-30%, 30-60% and 60-90% and greater than 90% to represent the effect of the development from negligible to major; or
- An increase in HGV traffic of 10%.

4.12 These assessment criteria allow for simultaneous assessments to be conducted on any link whereby total traffic has increased as a result of the development proposals.

4.13 The sensitivity of a receptor can be defined by the degree by which it responds to change in its environment. In this assessment, it will be predominately relating to the effect in an increase in traffic flow.

4.14 Paragraph 2.5 of the IEMA guidance indicates the followings groups are susceptible to changes in traffic conditions:

- People at home;
- People in work places;
- Sensitive groups including children, elderly and disabled;
- Sensitive locations, e.g. hospital, churches, schools, historical buildings;
- People walking;
- People cycling;
- Open spaces, recreational sites, shopping areas;
- Sites of ecological/nature conservation value; and
- Sites of tourist/visitor attraction.

4.15 **Table 8** below presents the receptor sensitivity based on paragraph 2.5 of the IEMA guidelines and adapted using professional judgements.

Table 8: Receptor Sensitivity

Receptor Sensitivity	Receptor Type
Major	Receptors of greatest sensitivity to traffic flow including roads without footways, schools/colleges/playgrounds, historic accident hotpots and retirement homes.
Moderate	Receptors sensitive to traffic flow including roads with limited/narrow footway or unsegregated cycleways, congested junctions, GPs/hospitals/shopping areas with roadside frontages, parks and recreational facilities.
Minor	Receptors with some sensitivity to traffic flow including residential streets with suitable footway provision, places with ecological/nature/heritage value and tourist/visitor attractions
Negligible	Receptors with low sensitivity to traffic flow and those located sufficiently away from affected roads and junctions.

Assessment of the significance of potential effects

4.16 The assessment criteria and the receptor sensitivity have been compared to determine overall significance.

4.17 The significance of potential effects of traffic impacts on receptors has been estimated by combining the sensitivity of the receptor and the magnitude of the potential impact as shown in **Table 9**.

Table 9: Significance of Effects

Sensitivity of Receptor	Magnitude of Impact			
	Negligible	Minor	Moderate	Major
Negligible	Negligible	Negligible	Negligible	Minor
Minor	Negligible	Negligible	Minor	Moderate
Moderate	Negligible	Minor	Moderate	Major
Major	Minor	Moderate	Major	Major

4.18 Potential effects are therefore categorised as either Major, Moderate, Minor or Negligible significance. Major and moderate significance represents effects considered to be significant in IEMA guidelines.

Limitations and assumptions

Limitations

4.19 The overall mitigation strategy for this development requires an estimation of average daily trips factored to Annual Average Daily Traffic. As these are average estimates, on some days the vehicle flows will be greater than that suggested and on others, they will be lower than that suggested.

4.20 The figures quoted do not include background traffic, only a best estimate of those associated with the operation of the metals recycling yard and the residential development.

Assumptions

4.21 For the purposes of this assessment we have assumed that all the deliveries of scrap metal etc. will be evenly split to the west and east of the access. The recycled material is then distributed similarly to the arrivals with 50% west and 50% east.

4.22 For the residential development we have assumed the same arrivals and departures patterns.

4.23 This assumption is considered to provide a robust assessment as traffic is evenly distributed across a number of junctions.

Baseline Environment

Traffic Flows

4.24 An automatic traffic counter was installed on Cefneithin Road and data collected from 12th October 2019 and 18th October 2019. A summary of the results is included in **Table 10**.

Table 10: Traffic Survey Data

	5 Day Ave.	HGVs.	%age HGVs
Two way	4081	95	2.33

Assessment of effects

4.25 It is proposed to redevelop the metals recycling yard and some surrounding land with 120 residential dwellings however, if the site is not allocated, then the site will remain as a metal recycling yard.

4.26 The predicted flows if Pen-Y-Banc Yard is to remain as a metals recycling yard (see Table 3) and if Pen-Y-Banc Yard is to be developed with 120 residential dwellings (see Table 6) are shown in **Table 11**.

Table 11: Traffic data associated with metals recycling and 120 dwellings

Two way	5 Day Ave.	HGVs.	%age HGVs
Metals Recycling	378	128	33.86
120 Dwellings	532	10	1.88

4.27 We have also taken the trip distribution of the two development scenarios as 50% westbound and 50% eastbound.

4.28 From the information contained with the 2019 Base Traffic Flows (Table 10) and the Predicted Average Flows table (Table 11), the difference between the current situation and the proposed situation is calculated and the results are summarised in **Table 12**.

Table 12: Difference in Average Flows

Two way	5 Day Ave.	HGVs.	%age HGVs
Existing	4081	95	2.33
+ Metals Recycling	4270	159	3.72
+ 120 Dwellings	4347	100	2.30

4.29 This assessment shows that Cefneithin Road will experience an overall increase in traffic flows due to the two development scenarios. However, the metals recycling yard will greatly increase the number of heavy goods vehicle movements along Cefneithin Road.

Assessment of effects from operation

4.30 The percentage impact assessment of the net development trips during the operational period along Cefneithin Road is presented in the **Table 13**. The percentage impact assessment has been calculated using the 2019 Base Year Traffic Flows presented in Table 10.

Table 13: Percentage traffic increase on Cefneithin Road

From/To	%age Increase	
	All Vehicles	HGVs
Metals Recycling	+4.6	+67.4
120 Dwellings	+6.5	+5.3

4.31 There are no links with a total percentage increase in traffic exceeding 30%. However, if the site continues to operate as a metals recycling yard then the increase in HGV traffic running along Cefneithin Road will be significantly greater than 10% and therefore requires further assessment.

Severance

4.32 The existing metals recycling yard is expected to generate a great number of HGV movements once in operation that will be travelling through Gorslas six ways junction past Gorslas Park, the site of Ysgol Gorslas School, causing between a **major** and **moderate** effect on severance.

4.33 The proposed residential development is judged to have a **negligible** effect upon severance when the site is operational due to the limited increase in vehicle movements.

Pedestrian delay

4.34 As shown in Table 13, the percentage increase in total vehicle movements on Cefneithin Road as a result of the existing metals recycling yard becoming operational again or the proposed 120 residential dwellings trips is anticipated to be a slight increase compared with the existing traffic flow.

4.35 This level of growth is anticipated to have a negligible impact on pedestrian delay, especially considering the very minimal number of vehicles on the highway and the very low number of pedestrians using the highway.

4.36 It is anticipated that there will be no increase in pedestrian demand in the vicinity of the site if the metals recycling yard remains operational however, there will be an increase in pedestrian movements if it is developed as a 120 dwellings residential development. This will be mitigated through the provision of an increased width footway/cycleway fronting the site on Cefneithin Road.

4.37 The highway network is not currently heavily trafficked and as such, if the site becomes operational again as a metals recycling yard, the increase in heavy goods vehicle movements along Cefneithin Road is expected to have a **moderate** effect on pedestrian delay.

4.38 The increase in vehicle movements (if the site is developed as a 120 dwellings residential development) along Cefneithin Road is expected to have a negligible effect on pedestrian delay. Therefore, it has been judged that the impact on pedestrian delay will be **negligible**.

Pedestrian amenity

4.39 The forecast total traffic impact of the metals recycling yard (presented in Table 13) is limited however the increase in the number of HGV movements is significant and it is therefore considered that the development proposals will have a **moderate** effect on pedestrian amenity.

4.40 If the site is built out as a residential development with 120 dwellings then there will be a limited increase in total vehicle movements and a limited number of HGV movements and it is therefore considered that the development proposals will have a **negligible** effect on pedestrian amenity.

Fear and intimidation

4.41 If the site remains as a metals recycling yard there will be a significant increase in HGVs travelling along Cefneithin Road. Due to the limited widths of the footways, pedestrians and cyclists will have an unpleasant experience using Cefneithin Road with heavy goods lorries travelling up and down the road. With an increase of 67% of heavy goods vehicles it is considered that they will have a **major** impact on fear and intimidation.

4.42 As set out previously, it is anticipated that if the site is developed with 120 residential dwellings and becomes operational, it will not generate a significant number of additional HGV trips. The development proposals are therefore expected to have a **negligible** effect on fear and intimidation.

Driver delay

4.43 The Traffic Assessment (above) provides an assessment of the following scenarios:

- Baseline Flows; and
- Operational Flows.

4.44 As described above there will be an increase in traffic movements on Cefneithin Road.

4.45 The effect of the increase in heavy goods vehicle movements due to the metals recycling yard being operational and slow turning movements in and out of the site access on driver delay is therefore considered to be **moderate** on Cefneithin Road.

4.46 If the site is developed with 120 residential dwellings there will be very few heavy goods movements in to and out of the site access and therefore the impact on driver delay will be **negligible**.

Accidents and safety

4.47 As set out in the previous section on accidents and safety in the operational phase, the assessment of road traffic collision data did not identify any correlations between highway layout, design or condition that were considered contributory factors in the pattern of accidents since the metals recycling yard has been closed. However, if accident data is considered for a period during which the site was operational, then there were reported a low number of accidents in the vicinity of the site access.

4.48 It is therefore considered that any increases in traffic resulting from the operation of the yard for recycling metals will have a **minor** effect on accidents on Cefneithin Road.

4.49 If the site is developed with 120 residential dwellings there will be very few heavy goods movements in to and out of the site access and therefore the impact on accidents and safety will be **negligible**.

Mitigation and enhancement

4.50 If the site was to continue operating as a metals recycling yard then no highway mitigations or enhancements are required.

Mitigation of effects from operation (residential development only)

Severance

4.51 The proposed development is considered to have a negligible effect on severance during the operation of the proposed development and therefore no mitigation measures have been proposed.

Pedestrian Delay

4.52 It is expected that there will be a negligible effect on pedestrian delay during operation of the development and therefore no mitigation measures are currently proposed.

Pedestrian Amenity

4.53 Assuming the site is developed with 120 residential dwellings and it becomes operational, it is anticipated to have a negligible impact on pedestrian amenity and therefore no mitigation measures are currently proposed. However, it is proposed to increase the width of the footway fronting the site.

Fear and Intimidation

4.54 As set out previously, the development proposals are anticipated to have a negligible effect on fear and intimidation and therefore no mitigation measures are proposed.

Driver Delay

4.55 A mitigation scheme has been considered at the access junction to Pen-Y-Banc Yard where the development is forecast to have a negligible impact on delay.

Accidents and Safety

4.56 The residential development proposals are not expected to contribute significantly to road traffic or increase the likelihood of accidents. It is therefore considered during operation there will be a negligible impact on accidents and safety, therefore no mitigation is proposed.

Residual effects

4.57 **Table 14** provides a summary of the effects of the existing metals recycling yard if it becomes operational on the environment after taking into account mitigation measures.

Residual effects from metals recycling yard becoming operational

Table 14: Residual Effects (Existing Metals Recycling Yard)

Potential Impact	Mitigation	Residual Impact
Severance	None	Major
Pedestrian Delay	None	Moderate
Pedestrian Amenity	None	Moderate
Fear and Intimidation	None	Major
Driver Delay	None	Moderate
Accidents and Safety	None	Minor

Residual effects from residential operation

4.58 **Table 15** provides a summary of the effects of the proposed residential development if it becomes operational on the environment after taking into account mitigation measures.

Table 15: Residual Effects (Proposed 120 dwellings)

Potential Impact	Mitigation	Residual Impact
Severance	None	Negligible
Pedestrian Delay	None	Negligible
Pedestrian Amenity	Widen footway	Negligible
Fear and Intimidation	None	Negligible
Driver Delay	None	Negligible
Accidents and Safety	None	Negligible

Highways Environmental Assessment Summary

4.59 It is very clear that the proposals to develop the site with 120 residential dwellings is significantly better in environmental terms when compared with the situation of the site continuing operating as a metals recycling yard.

5 SUMMARY AND CONCLUSIONS

Summary

5.1 LvW Highways Ltd have been appointed by Mannor Homes to provide transport advice relating to the planning application for the Proposed residential allocation on land off Cefneithin Road, Gorslas.

5.2 In summary this Transport Statement has demonstrated that:

- The site has good facilities for pedestrian access, cycling can take place on the network of active travel links, there is a regular bus service that passes along Cefneithin Road;
- The site's location adjacent to the Cefneithin Road provides good access to the highway network;
- On review of the STATS 19 Personal Injury Accidents from 1999 to 2019, there is no evidence to show that there is a road safety issue in the vicinity of the access roundabout;
- Adequate parking provision and circulating space is made within the grounds;
- It has been shown that the existing metals recycling yard generates and attracts 378 vehicle movements a day of which 128 are HGVs. The traffic generation of the proposed residential development is predicted to be 532 vehicle movements during the day however only 10 will be HGV movements.
- The highway environmental assessment clearly shows that the proposals to develop the site with 120 residential dwellings is significantly better in environmental terms when compared with the situation of the site continuing to operate as a metals recycling yard.

5.3 It is considered that the application site meets planning policy requirements in terms of being in an appropriate location that is safely accessed and that the impacts of the development on the continued operation and safety of the surrounding highway network would be acceptable.

Conclusions

5.4 In conclusion, it can be seen that Pen-Y-Banc Yard is accessible by private car and that the proposals would not result in a material impact upon the local highway network nor change to demand on the existing pedestrian, cycling and public transport facilities and services.

5.5 The effect of the proposals has been assessed and it has also been concluded that the effects in terms of traffic impact, car parking and servicing would not be material.

5.6 As such, it is concluded that the proposals are acceptable from a transport and highways perspective and in keeping with TAN18 and Policy TR3 of the Carmarthenshire Local Development Plan.

5.7 It is concluded therefore that there are no transport related issues that should prevent the proposed development from being included as an allocated site.

Closure

5.8 LvW Highways Ltd has prepared this report with all reasonable skill, care and due diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on interpretation of data collected has been accepted in good faith as being accurate and fair.

5.9 This report is for the exclusive use of Mannor Homes; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from LvW Highways Ltd.

5.10 LvW Highways Ltd disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of work.

APPENDIX A

Indicative Site Layout

L.E.A.P / L.A.P removed	28.09.20	O
areas added	17.09.20	N
layout amended	15.09.20	M
areas elaborated	08.04.20	L
areas added	18.03.20	K
layout amended	11.03.20	J
new areas added	27.02.20	I
yellow boundary added	05.02.20	H
layout updated	31.07.18	G
ecology zones enlarged	15.05.18	F
layout updated	08.05.18	E
layout updated	02.05.18	D
layout updated	01 05 18	C
layout updated	25 04 18	B
drainage line added	17 04 18	A

CONNECTIONS DESIGN
ARCHITECTURE & INTERIORS
21 Penlline Road Whitchurch Cardiff CF14 2AA - Tel : 02920 626 521 - E-Mail : paul@connections-design.co.uk

Project	Drawing Title	Scale	Job No.	Dwg No.	Rev
CLDP Proposed Residential Allocation on land off Cefneithin Road, Gorslas	Propsed Site Layout	1:1250 @ A3	J18/03	SK03	O

PLANNING

APPENDIX B

TRICS Data

Calculation Reference: AUDIT-452201-200917-0905

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	SOUTH EAST		
	ES	EAST SUSSEX	9 days
	HC	HAMPSHIRE	2 days
	OX	OXFORDSHIRE	1 days
	WS	WEST SUSSEX	6 days
03	SOUTH WEST		
	DC	DORSET	1 days
	DV	DEVON	1 days
	SM	SOMERSET	1 days
	WL	WILTSHIRE	1 days
04	EAST ANGLIA		
	CA	CAMBRIDGESHIRE	1 days
	NF	NORFOLK	10 days
06	WEST MIDLANDS		
	WK	WARWICKSHIRE	3 days
08	NORTH WEST		
	MS	MERSEYSIDE	2 days
10	WALES		
	CM	CARMARTHENSHIRE	1 days
16	ULSTER (REPUBLIC OF IRELAND)		
	CV	CAVAN	1 days
	MG	MONAGHAN	1 days
17	ULSTER (NORTHERN IRELAND)		
	DE	DERRY	1 days

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

Primary Filtering selection:

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

Parameter: No of Dwellings
Actual Range: 16 to 395 (units:)
Range Selected by User: 9 to 1874 (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: 01/01/12 to 14/11/19

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

Selected survey days:

Monday	2 days
Tuesday	5 days
Wednesday	12 days
Thursday	11 days
Friday	12 days

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

Selected survey types:

Manual count	36 days
Directional ATC Count	6 days

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

Selected Locations:

Suburban Area (PPS6 Out of Centre)	5
Edge of Town	25
Neighbourhood Centre (PPS6 Local Centre)	12

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

Selected Location Sub Categories:

Industrial Zone	1
Residential Zone	27
Village	11
Out of Town	2
No Sub Category	1

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

Secondary Filtering selection:

Use Class:

C3	42 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

1,000 or Less	1 days
1,001 to 5,000	18 days
5,001 to 10,000	11 days
10,001 to 15,000	10 days
15,001 to 20,000	2 days

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

Population within 5 miles:

5,001 to 25,000	11 days
25,001 to 50,000	13 days
50,001 to 75,000	11 days
75,001 to 100,000	7 days

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

Car ownership within 5 miles:

0.6 to 1.0	7 days
1.1 to 1.5	30 days
1.6 to 2.0	5 days

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

Travel Plan:

Yes	30 days
No	12 days

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

PTAL Rating:

No PTAL Present	42 days

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

LIST OF SITES relevant to selection parameters

1 CA-03-M-01 MIXED HOUSES & FLATS CAMBRIDGESHIRE
BANNOLD ROAD
WATERBEACH

Edge of Town
Residential Zone
Total No of Dwellings: 52
Survey date: WEDNESDAY *20/06/18* *Survey Type: MANUAL*

2 CM-03-M-02 HOUSES & FLATS CARMARTHENSHIRE
COLLEGE ROAD
CARMARTHEN

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 49
Survey date: TUESDAY *14/10/14* *Survey Type: MANUAL*

3 CV-03-M-01 SEMI DETACHED & TERRACED CAVAN
KILNAVARRAGH LANE
CAVAN

Edge of Town
Out of Town
Total No of Dwellings: 60
Survey date: MONDAY *22/05/17* *Survey Type: MANUAL*

4 DC-03-M-02 TERRACED & BUNGALOWS DORSET
KINGS ROAD
DORCHESTER
FORDINGTON
Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 37
Survey date: FRIDAY *16/09/16* *Survey Type: MANUAL*

5 DE-03-M-01 MIXED HOUSES & FLATS DERRY
RUGBY AVENUE
COLERAINE

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 21
Survey date: WEDNESDAY *12/10/16* *Survey Type: MANUAL*

6 DV-03-M-02 MIXED HOUSES & FLATS DEVON
SAINT PETER ' SQUAY
TOTNES

Edge of Town
Residential Zone
Total No of Dwellings: 90
Survey date: FRIDAY *29/03/19* *Survey Type: MANUAL*

7 ES-03-M-05 HOUSES & FLATS EAST SUSSEX
A26 CROWBOROUGH RD
NEAR UCKFIELD
FIVE ASH DOWN VILLAGE
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 138
Survey date: MONDAY *30/06/14* *Survey Type: MANUAL*

8 ES-03-M-07 MIXED HOUSING EAST SUSSEX
SOUTH COAST ROAD
PEACEHAVEN

Edge of Town
Residential Zone
Total No of Dwellings: 188
Survey date: THURSDAY *12/11/15* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9 ES-03-M-09 DETACHED/SEMI-DETACHED EAST SUSSEX
STATION ROAD
NORTHIAM

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 16
Survey date: WEDNESDAY 17/05/17 Survey Type: MANUAL

10 ES-03-M-11 MIXED HOUSES & FLATS EAST SUSSEX
HEMPSTEAD LANE
HAILSHAM
UPPER HORSEBRIDGE
Edge of Town
Residential Zone
Total No of Dwellings: 354
Survey date: WEDNESDAY 13/07/16 Survey Type: MANUAL

11 ES-03-M-12 MIXED HOUSES & FLATS EAST SUSSEX
PARK ROAD
HAILSHAM

Edge of Town
Residential Zone
Total No of Dwellings: 93
Survey date: THURSDAY 21/06/18 Survey Type: MANUAL

12 ES-03-M-13 MIXED HOUSES EAST SUSSEX
NORTH COMMON ROAD
WIVELSFIELD GREEN

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 66
Survey date: FRIDAY 22/06/18 Survey Type: MANUAL

13 ES-03-M-15 MIXED HOUSES EAST SUSSEX
FIELD END
MARESFIELD

Edge of Town
Residential Zone
Total No of Dwellings: 80
Survey date: WEDNESDAY 13/03/19 Survey Type: MANUAL

14 ES-03-M-16 MIXED HOUSES & FLATS EAST SUSSEX
BARNHORN ROAD
BEXHILL
LITTLE COMMON
Edge of Town
Residential Zone
Total No of Dwellings: 119
Survey date: WEDNESDAY 10/07/19 Survey Type: MANUAL

15 ES-03-M-17 MIXED HOUSES & FLATS EAST SUSSEX
NEW ROAD
HAILSHAM
AMBERSTONE
Edge of Town
Residential Zone
Total No of Dwellings: 91
Survey date: THURSDAY 07/11/19 Survey Type: MANUAL

16 HC-03-M-09 MIXED HOUSES & FLATS HAMPSHIRE
ROMSEY ROAD
WINCHESTER
STANMORE
Edge of Town
Residential Zone
Total No of Dwellings: 157
Survey date: THURSDAY 07/06/18 Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

17 HC-03-M-10 MIXED HOUSES & FLATS HAMPSHIRE
RAWLINGS LANE
ALTON

Edge of Town
Residential Zone
Total No of Dwellings: 176
Survey date: TUESDAY *05/03/19* *Survey Type: MANUAL*

18 MG-03-M-01 TERRACED & SEMI-DETACHED MONAGHAN
ROWANTREE ROAD
MONAGHAN
MULLACH GLAS
Edge of Town
No Sub Category
Total No of Dwellings: 17
Survey date: WEDNESDAY *16/11/16* *Survey Type: MANUAL*

19 MS-03-M-02 TERRACED MERSEYSIDE
LOVEL ROAD
LIVERPOOL
SPEKE
Edge of Town
Residential Zone
Total No of Dwellings: 27
Survey date: FRIDAY *21/06/13* *Survey Type: MANUAL*

20 MS-03-M-03 SEMI DETACHED/TERRACED MERSEYSIDE
LOVEL ROAD
LIVERPOOL
SPEKE
Edge of Town
Residential Zone
Total No of Dwellings: 24
Survey date: FRIDAY *21/06/13* *Survey Type: MANUAL*

21 NF-03-M-01 MIXED HOUSES & FLATS NORFOLK
LONG LANE
NEAR NORWICH
MULBARTON
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 173
Survey date: FRIDAY *20/09/19* *Survey Type: MANUAL*

22 NF-03-M-02 MIXED HOUSES NORFOLK
CAWSTON ROAD
AYLSHAM

Edge of Town
Out of Town
Total No of Dwellings: 250
Survey date: TUESDAY *17/09/19* *Survey Type: MANUAL*

23 NF-03-M-04 MIXED HOUSES & FLATS NORFOLK
HUNSTANTON ROAD
HUNSTANTON

Edge of Town
Residential Zone
Total No of Dwellings: 70
Survey date: THURSDAY *19/09/19* *Survey Type: MANUAL*

24 NF-03-M-06 MIXED HOUSES NORFOLK
STALHAM ROAD
HOVETON

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 120
Survey date: FRIDAY *20/09/19* *Survey Type: DIRECTIONAL ATC COUNT*

25 NF-03-M-07 MIXED HOUSES NORFOLK
MENDHAM LANE
HARLESTON

Edge of Town
Residential Zone
Total No of Dwellings: 120
Survey date: FRIDAY *20/09/19* *Survey Type: DIRECTIONAL ATC COUNT*

LIST OF SITES relevant to selection parameters (Cont.)

26 NF-03-M-10 MIXED HOUSES & FLATS NORFOLK
BURGH ROAD
AYLSHAM

Edge of Town
Residential Zone
Total No of Dwellings: 300
Survey date: FRIDAY *27/09/19* *Survey Type: DIRECTIONAL ATC COUNT*

27 NF-03-M-12 MIXED HOUSES NORFOLK
BRANDON ROAD
SWAFFHAM

Edge of Town
Residential Zone
Total No of Dwellings: 181
Survey date: THURSDAY *19/09/19* *Survey Type: DIRECTIONAL ATC COUNT*

28 NF-03-M-13 MIXED HOUSES NORFOLK
MACMILLAN WAY
NEAR NORWICH
LITTLE PLUMSTEAD
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 75
Survey date: FRIDAY *20/09/19* *Survey Type: DIRECTIONAL ATC COUNT*

29 NF-03-M-14 MIXED HOUSES & FLATS NORFOLK
NORWICH COMMON
WYMONDHAM

Edge of Town
Residential Zone
Total No of Dwellings: 321
Survey date: THURSDAY *19/09/19* *Survey Type: MANUAL*

30 NF-03-M-32 MIXED HOUSES & FLATS NORFOLK
MACMILLAN WAY
NEAR NORWICH
LITTLE PLUMSTEAD
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 240
Survey date: WEDNESDAY *12/09/18* *Survey Type: DIRECTIONAL ATC COUNT*

31 OX-03-M-01 MIXED HOUSES OXFORDSHIRE
WENMAN ROAD
THAME

Edge of Town
Industrial Zone
Total No of Dwellings: 100
Survey date: THURSDAY *28/06/18* *Survey Type: MANUAL*

32 SM-03-M-01 DETACHED & TERRACED HOUSES SOMERSET
MILTON HILL
TAUNTON
MONKTON HEATHFIELD
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 135
Survey date: WEDNESDAY *26/09/18* *Survey Type: MANUAL*

33 WK-03-M-01 MIXED HOUSES & FLATS WARWICKSHIRE
BIRMINGHAM ROAD
STRATFORD UPON AVON

Edge of Town
Residential Zone
Total No of Dwellings: 395
Survey date: FRIDAY *29/06/18* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

34 WK-03-M-02 MIXED HOUSES WARWICKSHIRE
BISHOPTON LANE
STRATFORD UPON AVON
BISHOPTON
Edge of Town
Residential Zone
Total No of Dwellings: 130
Survey date: FRIDAY *29/06/18* *Survey Type: MANUAL*

35 WK-03-M-03 MIXED HOUSES WARWICKSHIRE
STOCKTON ROAD
LONG ITCHINGTON

Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 124
Survey date: WEDNESDAY *27/06/18* *Survey Type: MANUAL*

36 WL-03-M-03 MIXED HOUSES & FLATS WILTSHIRE
WARNEFORD CRESCENT
NEAR SALISBURY
LONGHEDGE
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 260
Survey date: TUESDAY *09/10/18* *Survey Type: MANUAL*

37 WS-03-M-04 HOUSES & FLATS WEST SUSSEX
SUMMERSDALE ROAD
CHICHESTER

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 214
Survey date: THURSDAY *08/05/14* *Survey Type: MANUAL*

38 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*

39 WS-03-M-16 MIXED FLATS & HOUSES WEST SUSSEX
BROYLE ROAD
CHICHESTER

Suburban Area (PPS6 Out of Centre)
Residential Zone
Total No of Dwellings: 252
Survey date: WEDNESDAY *21/03/18* *Survey Type: MANUAL*

40 WS-03-M-17 MIXED HOUSES & FLATS WEST SUSSEX
STANE STREET
CHICHESTER
WESTHAMPNETT
Neighbourhood Centre (PPS6 Local Centre)
Village
Total No of Dwellings: 99
Survey date: WEDNESDAY *03/10/18* *Survey Type: MANUAL*

41 WS-03-M-20 MIXED HOUSES & FLATS WEST SUSSEX
OLD GUILDFORD ROAD
HORSHAM
BROADBRIDGE HEATH
Neighbourhood Centre (PPS6 Local Centre)
Residential Zone
Total No of Dwellings: 121
Survey date: THURSDAY *24/10/19* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

42 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*

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

TRIP RATE for Land Use 03 - RESIDENTIAL/M - MIXED PRIVATE/AFFORDABLE HOUSING
VEHICLES
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	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	42	135	0.083	42	135	0.292	42	135	0.375
08:00 - 09:00	42	135	0.109	42	135	0.328	42	135	0.437
09:00 - 10:00	42	135	0.120	42	135	0.168	42	135	0.288
10:00 - 11:00	42	135	0.117	42	135	0.132	42	135	0.249
11:00 - 12:00	42	135	0.130	42	135	0.127	42	135	0.257
12:00 - 13:00	42	135	0.143	42	135	0.131	42	135	0.274
13:00 - 14:00	42	135	0.139	42	135	0.144	42	135	0.283
14:00 - 15:00	42	135	0.141	42	135	0.153	42	135	0.294
15:00 - 16:00	42	135	0.235	42	135	0.169	42	135	0.404
16:00 - 17:00	42	135	0.249	42	135	0.155	42	135	0.404
17:00 - 18:00	42	135	0.321	42	135	0.161	42	135	0.482
18:00 - 19:00	42	135	0.285	42	135	0.149	42	135	0.434
19:00 - 20:00	1	119	0.126	1	119	0.008	1	119	0.134
20:00 - 21:00	1	119	0.101	1	119	0.017	1	119	0.118
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.299			2.134			4.433

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

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

Parameter summary

Trip rate parameter range selected:	16 - 395 (units:)
Survey date date range:	01/01/12 - 14/11/19
Number of weekdays (Monday-Friday):	62
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	17
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.