

Transport Technical Note

DWT205 – Tanybryn, Main Road, Cadoxton

June 2021

1. Introduction

This technical note has been produced by DW Transportation Limited for MCM Real Estate Ventures Ltd, which is seeking planning permission to introduce a new single dwelling on land adjacent to Tanybryn, Main Road, Cadoxton. Neither Tanybryn nor the application site benefits from frontage vehicle access off Main Road. The proposals therefore include a new dropped vehicle crossover to provide access to the proposed new dwelling only.

Following this introduction, Section 2 sets out the existing situation; Section 3 sets out the proposed development. Section 4 summarises and concludes the report.

There are two appendices attached to this report:

Appendix A – Existing Visibility Splays

Appendix B – Proposed Site Layout; and

2. Existing Situation

The site is located on an area of disused land to the west of Tanybryn, Main Road, Cadoxton. The site is outlined on Figure 2-1 below.

Figure 2-1
Application Site



Local Highway Description

Main Road is a classified non-principal road with a posted advisory speed limit of 20mph (legal speed limit of 30mph). The 20mph speed limit is emphasised using 20mph roundels painted on the carriageway. The road is lit with street lighting columns one of which is located opposite the application site.

The northern side of Main Road is protected from parked cars by double yellow lines and the southern side has yellow zig-zag markings, which form part of the 'School Keep Clear' road markings. There is pedestrian footway on both sides of Main Road.

There is a series of speed reducing measures on Main Road in the vicinity of the site comprising yellow rumble markings, 'ARAF/SLOW' road markings and an area of red hatching segregating the two-way flow of traffic. These features have presumably been provided to help maintain traffic speeds of 20mph in the vicinity of the school.

Existing Visibility Splays on Main Road

There are existing vehicle crossovers on Main Road in the vicinity of the site, which have been investigated to see how the proposed access compares in terms of overall provision such as visibility and the ability to ensure vehicles emerge in forward gear. Two examples are summarised below.

Access Lane Adjacent to Ivy Cottage

Approximately 40m to the east of the application site is a minor bellmouth junction which provides rear access to a significant number of properties along Main Road. This junction has visibility splays of 3m to the east and 8.2m to the west. These splays are shown on the 'existing visibility splays' drawing at **Appendix A**. The access is in a poor state of repair with no dropped kerbs for pedestrians. The junction also appears to have ponding issues.

Gower Villas

Opposite Tanybryn at 1 Gower Villas a dropped vehicle crossing is provided, which merges with the school layby access. This access has visibility splays of 6.8m to the east and 2.8m to the west. Notwithstanding these limited splays, there is no room on site for turning and so any vehicle accessing this off-road parking area in forward gear would be required to reverse back onto Main Road making any visibility splays redundant.

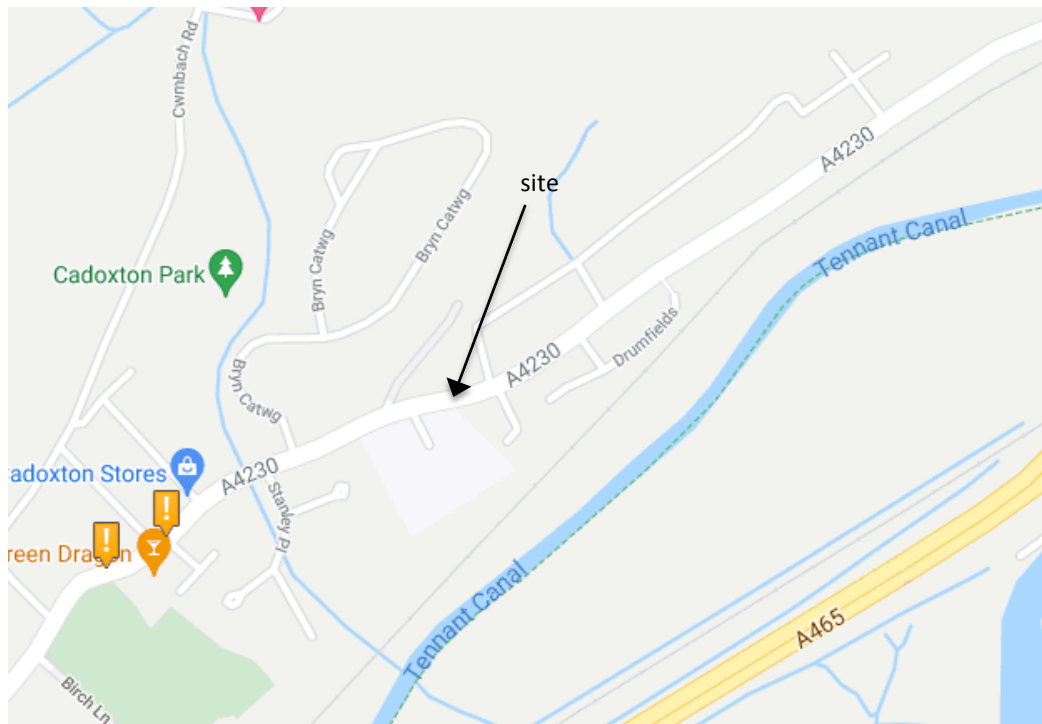
Whilst the applicant is not seeking to demonstrate a precedent for allowing sub-standard vehicle crossings, it is important to note that these accesses are operating legally and are demonstrated through the use of the Crashmap website to be operating without causing personal injury traffic accidents (see next sub-section).

The quality of the applicant's parking and turning area far exceeds any existing access in the area in terms of overall quality safety and so there is no reason to believe that the proposed access would contribute to any accidents.

Highway Safety

Crashmap has been investigated to establish the existing level of highway safety in the vicinity of the site. Crashmap uses only official data published by the Department for Transport, which is based on records submitted to them by police forces. The records relate only to personal injury accidents on public roads that are reported to the police, and subsequently recorded, using the STATS19 accident reporting form. Information on damage-only accidents, with no human casualties or accidents on private roads or car parks are not included in this data. Figure 2-2 is an extract from the Crashmap database indicating that there have been no accidents in the vicinity of the site in the last 5 years.

Figure 2-2
Crashmap Extract



In addition to the Crashmap data, the relationship between traffic flow and road safety for streets with direct frontage access was researched for the MfS. As stated on page 96 of the MfS:

“Data on recorded accidents and traffic flow for a total of 20 sites were obtained. All of the sites were similar in terms of land use (continuous houses with driveways), speed limit (30 mph) and geometry (single-carriageway roads with limited side road junctions). Traffic flows at the sites varied from some 600 vehicles per day to some 23,000 vehicles per day, with an average traffic flow of some 4,000 vehicles per day. It was found that very few accidents occurred involving vehicles turning into and out of driveways, even on heavily-trafficked roads. Links with direct frontage access can be designed for significantly higher traffic flows than have been used in the past, and there is good evidence to raise this figure to 10,000 vehicles per day. It could be increased further, and it is suggested that local authorities review their standards with reference to their own traffic flows and personal injury accident records. The research indicated that a link carrying this volume of traffic, with characteristics similar to those studied, would experience around one driveway-related accident every five years per kilometre.”

Fewer accidents would be expected on links where the speed of traffic is limited to 20 mph or less, which should be the aim in residential areas.”

It is evident from this research that a single dwelling with frontage access in the location proposed would not result in the occurrence of accidents.

3. Proposed Development

The proposal comprises a single detached dwelling with off street parking for three cars. The proposed site layout is shown at **Appendix B**.

Proposed Access

The proposed access would be a dropped vehicle crossing at 3.65m in width between boundary walls. According to the MfS and TAN18: Transport, there are no visibility requirements for single dwellings and this is demonstrated in the following paragraphs.

Manual for Streets Context

Junctions

The MfS does not provide any guidance or state any ‘requirement’ for providing visibility splays at dropped vehicle crossovers for individual dwellings. All of the advice given in the MfS relates to road junctions only. For ease of reference, the relevant extracts from MfS are as follows:

7.6.1 Visibility should be checked at **junctions** and along the street.

7.7.1 The visibility splay at a **junction** ensures there is adequate inter-visibility between vehicles on the **major and minor arms** (Fig. 7.18).

Figure 7.18 – all of the examples are road junctions.

Sub-section 7.3 explains:

7.3.1 **Junctions** that are commonly used in residential areas include:

- crossroads and staggered junctions;
- T and Y junctions; and
- roundabouts.

Evidently, when the MfS refers to visibility at junctions, it is referring to when one road intersects another. A frontage access is not considered to be a road junction.

Private Driveways and Frontage Access

Paragraph 7.8.3 explains, **“the absence of wide visibility splays at private driveways will encourage drivers to emerge more cautiously.”**

The key sub-section in MfS that is relevant to the proposed development is 7.9 Frontage Access. This sub-section makes the following salient points:

7.9.2 The provision of frontage vehicle access onto a street should be considered from the viewpoint of the people passing along the street, as well as those requiring access. Factors to consider include:

- the distance between the property boundary and the carriageway – to provide **adequate visibility** for the emerging driver.

TAN18: Transport Context

TAN 18, at Annex B, provides technical advice on visibility. As with the MfS, the technical advice is provided for visibility splays at junctions and on page 44 explains *“Visibility splays **at priority junctions and crossroads** enable drivers and other road users to see one another at points of conflict.”*

The proposed frontage access is not to be considered in the same context as a priority junction.

Page 46 of TAN18 repeats what is confirmed in MfS:

*“Vehicle exits at the back edge of the footway mean that drivers emerging from properties will have to take account of people on the footway. **The absence of wide visibility splays at private driveways will encourage drivers to emerge more cautiously**”.*

Manual for Streets / TAN18 Context Conclusion

There is no advice given in MfS or TAN 18 that would suggest the visibility standards are the same for a private driveway for a single dwelling as they are for a road junction. The key advice for designing private driveways is that reduced visibility would result in more cautious drivers although visibility does need to be “adequate”.

Available Visibility Splays

Notwithstanding that there is no requirement to provide the same visibility splays as road junctions, the available visibility splays have been plotted on the attached proposed layout and are confirmed as being:

- 2.4m x 29m to the east (to the kerbline); and
- 2.4m x 46m to the centreline*
- 2.4m x 43m to the west.

Visibility to the west meets the same MfS/TAN18 criteria as road junctions, whilst the 46.8m to the east (to the centreline) is perfectly acceptable (and exceeds 43m as required for road junctions) for a single dwelling generating a very modest number of turning movements per day.

With regards to visibility splays, TAN 18 advises:

“Some circumstances make it unlikely that vehicles approaching from the left on the main arm will cross the centreline of the main arm - opposing flows may be physically segregated at that point, for example. If so, the visibility splay to the left can be measured to the centreline of the main arm.”

It is considered that such circumstances exist at the application site even though no physical segregation is provided. An area of hatching is provided on the carriageway fronting the site and therefore, the chance of an overtaking manoeuvre at this point is considered negligible at worst. There is absolutely no reason to believe that there would be a vehicle approaching the site from the east on the wrong side of the road. As stated by TAN 18 on Page 45, *“For simplicity it (the ‘Y’ distance) is measured along the nearside kerb line of the main arm”*.

Evidently, the MfS 43m splay to the kerb is to simplify measuring rather than to take into account reality. The reality is that any car emerging from the site would have at least 46m of vision to a car approaching from the east.

It is significant to note that other accesses on Main Road do not meet MfS/TAN18 visibility requirements for junctions and have not resulted in any personal injury road traffic accidents.

5. Policy Review

Introduction

This section considers the local transport policy against which the proposed development is expected to be assessed. The main local policy document is the Neath Port Talbot Local Development Plan (2011-2026), adopted January 2016.

Neath Port Talbot LDP

The proposed development would be expected to meet the criteria of Policy TR 2, where relevant.

1. The development does not compromise the **safe, effective and efficient use of the highway network** and **does not have an adverse impact on highway safety** or create unacceptable levels of traffic generation;

2. **Appropriate levels of parking** and cycling facilities are provided and the access arrangements for the site allow for the safe manoeuvring of any service vehicles associated with the planned use;
3. The development is accessible by a range of travel means, including public transport and safe cycle and pedestrian routes;
4. Transport Assessments and Travel Plans are provided for developments that are likely to create significant traffic generation.

With regards to the four points above, the relevant points are 1 and 2. Point 3 is geared towards commercial development, whilst point 4 is relevant to significant trip generating proposals only.

In response to point 1, the proposed dwelling would not generate a level of traffic that would have any material affect on the effective and efficient use of the highway. With regards to highway safety Main Road, in the vicinity of the site (including at other site frontages), does not have a history of accidents and so it can be considered to be a safe part of the highway network. The proposed access would be designed in full compliance with local authority highway design standards. Subject to planning approval, the access would be subject to a dropped crossing application whereby it will be ensured that the access is developed to the standard required by the highway authority.

In response to point 2, the proposed development would provide space for three cars, which will be able to access and leave the property in forward gear.

Policy Conclusion

The proposed development would be fully compliant with local and national transport policy. TAN 18 and MfS do not set visibility requirements for frontage access. However, both documents advise that the absence of wide visibility splays would be beneficial in making drivers drive more cautiously. Parking facilities would be provided with a turning facility to ensure cars can exit in forward gear.

6. Summary and Conclusions

The proposal is to provide a single dwelling with a parking and turning area for three cars on land at Tanybryn, Main Road, Cadoxton.

There is no requirement in MfS or TAN18 to provide the same visibility splays at single dwelling driveways as road junctions. Notwithstanding this, splays available at the site are 43m to the west and 46m to the east (to the centreline), which are considered to be more than adequate.

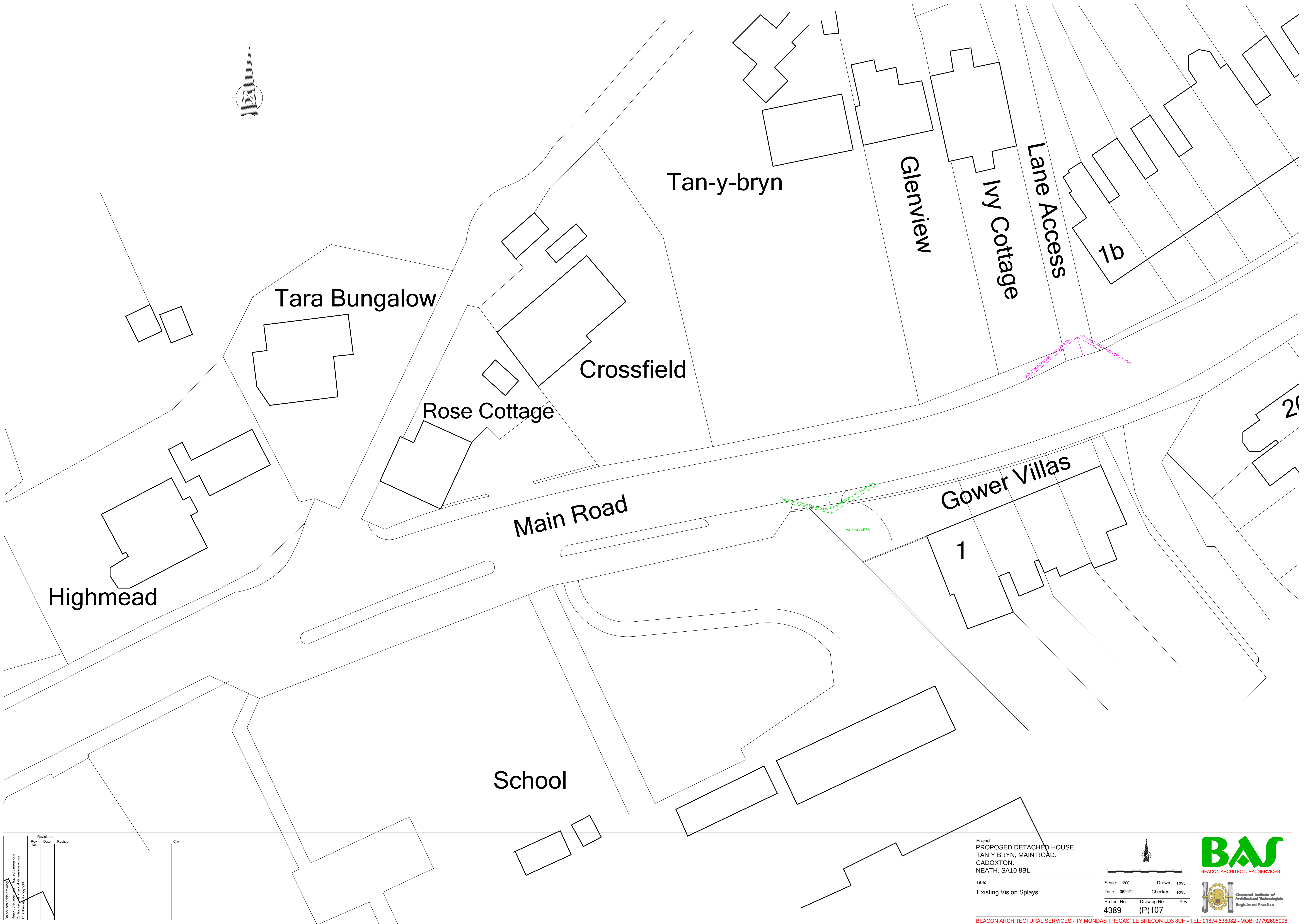
There are other accesses along Main Road that do not meet road junction visibility splays, which have not resulted in any traffic collisions.

The proposed development has been considered in the context of local transport policy and it has been demonstrated that the proposed dwelling could be introduced in full compliance with the Neath Port Talbot LDP.

The proposed access will be designed and constructed to a high standard and would be built in full accordance with Neath Port Talbot Council's design standards for vehicle crossovers.

Having considered the proposed development in some detail, no issues have been identified that should preclude it from being recommended for planning permission.

Appendix **A**



Do not scale this drawing

Report dimensions as figured dimensions

This drawing is copyright

Revisions:	
Rev No.	Date

Chk:

Project:
PROPOSED DETACHED HOUSE
TAN Y BRYN, MAIN ROAD.
CADOXTON.
NEATH. SA10 8BL.

Title:
Existing Vision Splays

Scale: 1:200

Date: 06/2021

Project No.
4389

Drawn: RWJ

Checked: RWJ

Drawing No.
(P)107

Rev.

Scale: 1:200

Drawn: RWJ

Date: 06/2021

Checked: RWJ

Project No.
4389

Drawing No.
(P)107

Rev.

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Appendix **B**



 TREES TO BE REMOVED
 ALL LEVELS RELATED TO OSBM
 + 23.00 PROPOSED LEVELS
 + 24.21 EXISTING LEVELS

EXISTING FRONT BOUNDARY WALL TO BE
REALIGNED OPENINGS FORMED TO SUIT NEW
ACCESS POINT.

EXISTING WALL AND PEDESTRIAN ACCESS TO BE MOVED BACK ONTO THE LINE OF MAXIMUM VISION SPILL AS SHOWN

PARKING AREA IN FRONT OF HOUSE

THE ROAD IN FRONT OF THE SITE IS LIMITED TO 20MPH

NEW VEHICLE ACCESS/CROSS OVER FOR NE
HOUSE ONLY TO HIGHWAYS REQUIREMENTS

THE ROAD IN FRONT OF THE SITE IS LIMITED TO 20MPH

VISION SPLAY TO HERE 43000

AFSL

	Revisions:		Revision:	Chk:
	Rev No:	Date:		
A	041119		GOOGLE PHOTOGRAPHS REMOVED AND BUNGALOW POSITION ALTERED - TREE POSITIONS CORRECTED INLINE WITH REPORT	RWJ
B	091220		ENLARGED AREA SHOWN	RWJ
C	060220		VISION SPLAYS ALTERED	RWJ
D	090220		VEHICLE AND PARKING REQUIREMENTS ALTERED	RWJ
E	110209		REAR PARKING TO TANTERBY SHOWN	RWJ
F	040221		VISION SPLAYS ALTERED	RWJ
G	050221		VARIOUS TWEAKS	RWJ
H	060221		VARIOUS TWEAKS	RWJ

Project:
PROPOSED DETACHED HOUSE
TAN Y BRYN, MAIN ROAD.
CADOXTON.
NEATH. SA10 8BL.

Title:
Proposed Site Layout - Single Access
For New House - Proposed Vision Splays



Potential

Date: 04/20/21 Checked: R

Project No.	Drawing No.
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