

Change of Use of primary school to a
community enterprise, arts, education and
energy centre, together with related building
works and ground source heating details

Technical Note

20 October 2020

For and on behalf of

Awel Aman Tawe

Project Ref: 2020-552

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1 INTRODUCTION

1.1 LwW Highways Ltd has been appointed by Awel Aman Tawe to produce a Technical Note in support of a planning application for the Change of Use of primary school to a community enterprise, arts, education and energy centre, together with related building works and ground source heating details.

1.2 **Figure 1** shows the location of Cwmgors Primary School within the local context.



Figure 1: Cwmgors Primary School site location

- 1.3 The site comprises of a primary school and playground on approximately 4011m² of land. The primary school building has a footprint of 325m² Gross Floor Area (GFA).
- 1.4 Pedestrian, cycle and vehicular access to the Cwmgors Primary School is currently provided directly from the A474 Heol y Gors and the side road Llwynhen Road.
- 1.5 The proposed community venture will facilitate a café, food bank, 3 studio areas, 2 x separate office space, an indoors amenity area and a main hall. This is a mixed use facility open seven days a week between 8am to 10pm, each provision will be attracting different clientele during the opening hours of the centre.
- 1.6 An example of a similar scheme is the Black Mountain Centre in Brynamman.
- 1.7 Concern has been raised by Neath Port Talbot County Borough Council Highway officers about the speed of traffic using the A474 past the school.
- 1.8 LwW Highways Ltd as independent Transportation and Highway Consultants have prepared this Technical Note providing what we consider is a fair and unbiased appraisal of the situation.

2 HIGHWAY AUTHORITY COMMENTS

2.1 As part of the planning process the Neath Port Talbot County Borough Council has responded to the submissions with the following:

The access to the application site is off the A474 which is classified A road and has a mandatory known traffic speed of 30mph. whilst the applicant has tried to justify the reduction by means of this highway being a street due to development on both sides of the carriageway, and therefore using Manual For Street which is guidance document only. We feel that this highway in particular should apply the statutory guidance set out in TAN 18 having taken in to account the following:-

- *Houses along this route are intermittent and there is very little 'back land development' therefore it is unlikely that that you will get significant amounts of traffic turning off into various minor roads which has the means to slow traffic down.*
- *Classified roads such as this are "Highways which have more than local importance and are an essential route for traffic, particularly between trunk roads. They act as regional and district distributor routes and complement the trunk road network" As quoted under TAN 18 [Page 47 item C.6].*
- *The A474 is a traffic sensitive highway and also an abnormal traffic route with a high volume of traffic, which shall be increased as a result of this development therefore the frequency of vehicle movement will be much higher than existing.*
- *The footway fronting the application site varies in width below the standard 2m required for safe pedestrian access, and this development would seek to increase pedestrian movements by means of a constant flow of pedestrian footfall over a prolong period of time rather than peaks during school dropping off and picking up i.e. previous use.*
- *The applicant must understand that the access into the school together with existing residential use will increase in vehicular movements due to the parking provisions for this development being within the curtilage of the site, therefore the junction onto the A474 needs to be increased to allow for this change of use.*
- *The A474 at this location is assumed to be 30mph but not confirmed, together with no known 85th percentile wet weather as shown on Table A TAN 18 [page 44] therefore unless the applicant is willing to undertake a speed survey we would require a visibility splay of 2.4m by 90m as previously recommended.*

In view of the above and to try and move this application forward, I would request that the required speed survey is undertaken.

3 RESPONSE TO H.A. COMMENTS

- 3.1 To address the Highway Authorities concerns on vehicle speeds using the A474 Heol-Y-Gors a manual speed survey using a handheld radar speedometer was undertaken in accordance with the Design Manual for Roads and Bridges; CA185 Vehicle Speed Measurement.

Speed Survey Methodology

- 3.2 All speed measurements were undertaken in free flow conditions as the vehicles approached the access junction from both directions. Free-flow is defined as driving conditions where drivers are in no way prevented, by the close proximity of other vehicles, from driving at the speed of their choice. For example, if a group of five vehicles approaches the survey site, only the speed of the lead vehicle will be measured. As the lead vehicle dictates the speeds of all other vehicles in the group, the following vehicles are not considered to be free-flow and are therefore ignored.
- 3.3 A minimum of 200 vehicles speeds were recorded in each direction.
- 3.4 The speed surveys were undertaken over two days with vehicle speeds undertaken during different times of the day. The first survey was undertaken on Tuesday 13th October 2020 between 10am and 1pm for the northbound direction and between 2pm and 5pm for the southbound direction. The second survey was undertaken on Wednesday 14th October 2020 between 2pm and 5pm for the northbound direction and between 10am and 1pm for the southbound direction.
- 3.5 The radar gun was operated from the location of the existing access, so that it would be approximately the same position as for a driver emerging from the single access point for the dwelling. The aim was to record the speeds of the vehicles at the point at which a driver would make the decision as to whether or not to exit the development access point.
- 3.6 When undertaking the manual speed measurements, the surveyors and vehicle were parked in the access away from the carriageway with the equipment positioned inconspicuously so that it did not impact on the speed or flow of vehicles.
- 3.7 For direction 1, this is vehicles travelling in the northbound direction i.e. vehicles travelling from Pontardawe towards Gwaun-Cae-Gurwen, the radar gun was aimed to measure the speeds of vehicles at approximately 70 metres as requested by the Local Highway Authority.
- 3.8 A typical view from the access towards Pontardawe can be seen in **Plate 1**.



Plate 1: View looking south from access towards Pontardawe

- 3.9 A typical view from the Pontardawe direction towards the access can be seen in **Plate 2**.



Plate 2: View looking north from 70m towards access

- 3.10 For direction 2, vehicles travelling in the southbound direction i.e. vehicles travelling from Gwaun-Cae-Gurwen towards Pontardawe, the radar gun was aimed to measure the speeds of vehicles at approximately 70 metres as requested by the Local Highway Authority.

- 3.11 A typical view from the access towards Gwaun-Cae-Gurwen can be seen in **Plate 3**.



Plate 3: View looking north from access towards Gwaun-Cae-Gurwen

- 3.12 A typical view from the Gwaun-Cae-Gurwen direction towards the access can be seen in **Plate 4**.



Plate 4: View looking south from Gwaun-Cae-Gurwen

- 3.13 This method of speed survey gives better information than would be obtained by using static vehicle detectors placed adjacent to the proposed access.
- 3.14 The weather on site on both days was dry, blue skies and clouds in the morning and cloudy in the afternoon for the duration of the survey period.
- 3.15 The average results for both days have been tabulated, and the 85th percentile speeds calculated for both wet and dry conditions in accordance with Departmental Advice Note CA185. The lowest and highest speeds and the calculated average and 85th percentile speeds are detailed in **Table 1**.

Table 1: Summary of Speed Survey

Direction	Min Speed	Max Speed	Average Speed	85 th %ile Dry	85 th %ile Wet
Northbound	17	41	28	32	30
Southbound	14	41	27	32	29

Speed Survey Summary

- 3.16 It can be seen from these results that the average dry weather speeds are below the speed limit of 30mph when travelling in both directions. However, the 85th percentile wet weather speeds are at the speed limit in the northbound direction and just below the speed limit in the southbound direction. The full speed survey data is included in **Appendix A**.

Visibility Requirements

- 3.17 Guidance on appropriate visibility provision at accesses and junctions is provided within Technical Advice Note 18 (TAN18) transport. The guidance of visibility requirements differs depending on the situation of the access and the

speed of traffic passing. TAN 18 states in paragraph 5.11 “*New junctions must have adequate visibility...*” and in paragraph 9.16 “*...Whatever the access, good visibility is essential for drivers and non-drivers alike.*”

3.18 TAN18 Transport in Annex B paragraph B.3 *Recommended SSD are included in Tables A and B. Table B is designed for roads in built up areas where actual or design speeds are 60km/h or below (not applicable to trunk roads). Figures in Table B may be interpolated from this table or calculated as in Manual for Streets. SSD will be affected by gradient and should be adjusted accordingly.*

3.19 Therefore, as the site is located on a stretch of highway within a built up area, calculations based on the criteria set out in Table B (TAN18) provides the appropriate information to be used for the observed traffic speeds.

3.20 The basic formula for calculating SSD (in Metres) is:

$$SSD = vt + v^2/2(d + 0.1a)$$

Where:

v = speed (m/s)

t = driver perception-reaction time (seconds)

d = deceleration (m/s²)

a = longitudinal gradient (%) (+ for upgrades and – for downgrades)

3.21 Table 10.1 of MfS2 provides the relevant criteria for the formula and recommends that, where speeds are below 60kph (37mph) that driver perception/reaction time is taken as 1.5 seconds and that deceleration is taken as 0.45g.

3.22 Based on the above recorded 85th percentile wet weather speeds, the required SSD (metres) at the A474 junction with the access are as follows in **Table 2** based on the formula for calculating SSD as described above with the driver perception/reaction time is taken as 1.5 seconds and that deceleration is taken as 0.45g.

3.23 The A474 Heol-Y-Gors is relatively flat as it passes Llwynhen Road so the gradient has been set to zero.

Table 2: Calculated stopping sight distances

TAN18 Table B	85th Percentile wet weather speed	Required Minimum Stopping Sight Distance
Northbound traffic	30 mph	43 m
Southbound traffic	29 mph	41 m

3.24 However, as the Local Highway Authority consider that Table A is the appropriate reference, we have also undertaken calculations based on the criteria set out in Table A (TAN18).

3.25 For speeds above 60kph the driver perception/reaction time is taken as 2 seconds and that deceleration is taken as 0.25g.

3.26 Based on the above recorded 85th percentile wet weather speeds, the required SSD (metres) at the A474 junction with the access are as follows in **Table 3** based on the formula for calculating SSD as described above with the driver perception/reaction time is taken as 2 seconds and that deceleration is taken as 0.25g.

Table 3: Calculated stopping sight distances

TAN18 Table A	85th Percentile wet weather speed	Required Minimum Stopping Sight Distance
Northbound traffic	30 mph	66 m
Southbound traffic	29 mph	63 m

Visibility splays at junctions

- 3.27 The relevant SSD dimension should usually be measured from a point measured 2.4m back from the give-way line at the centre of each access (X-distance), although this can be relaxed to a minimum X distance of 2m in some slow-speed situations when flows on the minor arm are low (MfS2 para 10.5.8).
- 3.28 Visibility (Y-distance) should be measured to the nearside edge of the approaching vehicle's path (MfS2 10.5.3), however, for simplicity it is often measured along the nearside edge of the carriageway.
- 3.29 MfS2 states in para 10.5.9; *"The Y-distances should be based on recommended SSD values. However, based on the research referred to above, unless there is local evidence to the contrary, a reduction in visibility below recommended levels will not necessarily lead to a significant problem."*
- 3.30 **In the research undertaken for MfS2 (see para 10.4.2) carried out by TMS Consultancy¹ they have found no evidence that failure to provide visibility at priority junctions in accordance with the values recommended in MfS1 or DMRB (as appropriate) will result in an increased risk of injury collisions. Research into cycle safety at T-junctions found that higher cycle collision rates are associated with greater visibility².**

Visibility Assessment

Northbound

- 3.31 Based on the recorded 85th percentile wet weather speeds, the required visibility splay to the accesses for vehicles travelling in the northbound direction i.e. vehicles travelling from Pontardawe towards Gwaun-Cae-Gurwen, are 2.4m x 43m if it is considered the development is within a built up area and Table B of TAN 18 is appropriate (Table 2).
- 3.32 However, if, as the local highway authority consider Table A of TAN 18 is the appropriate requirement then the required visibility splay is 2.4m x 66m (Table 3).
- 3.33 The current available visibility to the near side edge of an approaching vehicle for traffic emerging from the proposed access to its left is clear and fully achievable for both the visibility requirement as can be seen in Plate 1 and Plate 2.
- 3.34 The photo in Plate 1 was taken at a distance of 2.4m back from the edge of the A474 carriageway at a height of approximately 1.05m above the access ground level.

Southbound

- 3.35 Based on the recorded 85th percentile wet weather speeds, the required visibility splays to the accesses for vehicles travelling in the southbound direction i.e.

¹ Research for MfS2 – High risk collisions sites and Y distance visibility, TMS Consultancy, 2010

² Layout and design factors affecting cycle safety at T-junctions, Traffic Engineering and Control, October 1992

vehicles travelling from Gwaun-Cae-Gurwen towards Pontardawe, are 2.4m x 41m if it is considered the development is within a built up area and Table B of TAN 18 is appropriate (Table 2).

- 3.36 However, if, as the local highway authority consider Table A of TAN 18 is the appropriate requirement then the required visibility splay is 2.4m x 63m (Table 3).
- 3.37 The current available visibility to the near side edge of an approaching vehicle for traffic emerging from the proposed access to the right is blocked by the school wall and letter box as can be seen in Plate 3 and Plate 4.
- 3.38 To achieve the required visibility to the north, the school wall will be lowered below 600mm and the letter box moved, this is shown on the plans included in **Appendix B**.
- 3.39 The photo in Plate 3 was taken at a distance of 2.4m back from the edge of the A474 carriageway at a height of approximately 1.05m above the access ground level.

Summary

- 3.40 The proposed access and requested visibility splays from the LHA officer (2.4m x 70m) are shown on the plan SK01 included in Appendix B. The drawing shows that the requested visibility splays are achievable with some work undertaken to the school wall and also by moving the letter box.
- 3.41 Visibility splays of 2.4m x 70m to the left and 2.4m x 70m to the right can be achieved with work undertaken within the control of the applicant to that required for the recorded 85th percentile speeds of traffic.
- 3.42 Therefore, the access will conform to current visibility requirements as set out in TAN18: Transport; Annex B - Table A and Table B.

4 HIGHWAY CODE

Accident Risk - Responsibility of Highway Users

- 4.1 As highlighted in Manual for Streets 2 (para 3.1.7) the use of the public highway is governed by the Highway Code, and “confirms that users must behave reasonably, taking into account other people and local conditions.”
- 4.2 The UK Roads Board and Institution of Civil Engineers (ICE) document “Highway Risk and Liability Claims” 2009 (2nd edition) sets out to “provide an overview of the current position on highways liability arising from maintenance and design, including latest philosophy and views on best practice and legislation”. This document states that “the use of the Highway is governed by the Highway Code. It may be used in evidence in court cases, and is also a guide to reasonable use.
- 4.3 The duty on the person to observe the Highway Code is set out in Section 38 of the Road Traffic Act 1988 and the key guidance and instruction on how to use the public highway is set out in rule 146 of the Highway Code as follows:

Highway Code Rule 146:

‘Adapt your driving to the appropriate type and condition of road you are on. In particular

- do not treat speed limits as a target. It is often not appropriate or safe to drive at the maximum speed limit*
- take the road and traffic conditions into account. Be prepared for unexpected or difficult situations, for example, the road being blocked beyond a blind bend. Be prepared to adjust your speed as a precaution*
- where there are junctions, be prepared for road users emerging*
- in side roads and country lanes look out for unmarked junctions where nobody has priority*
- be prepared to stop at traffic control systems, road works, pedestrian crossings or traffic lights as necessary*
- try to anticipate what pedestrians and cyclists might do. If pedestrians, particularly children, are looking the other way, they may step out into the road without seeing you’*

- 4.4 The Highway Code provides rules for Road Junctions from Rule 170 to Rule 183. The relevant rules for using a simple T-junction are included in **Appendix C**.

5 CONCLUSION

- 5.1 This report has investigated the transport implications of the development proposals for the proposed Change of Use of primary school to a community enterprise, arts, education and energy centre, together with related building works and ground source heating details.
- 5.2 It identifies that the visibility splays can and will be provided for the recorded speeds of vehicles using the A474 +with some minor modifications to the existing school wall.
- 5.3 The existing access has good visibility in both directions and sufficient width within the existing bell mouth of the access to allow two cars to pass.
- 5.4 The proposed development is **NOT** contrary to Policy TR2 and BE1 of the Adopted Neath Port Talbot Local Development Plan (2016) as it has full regard for the safe, effective and efficient use of the transportation network.
- 5.5 Therefore, we conclude that this development is appropriate and acceptable in traffic and transport terms. It is considered that the increases in traffic movements associated with the development proposals at this location would be accommodated on the highway network and not have a detrimental impact on the free flow of traffic due to the existing volumes of traffic using the local highway network.

Closure

- 5.6 LvW Highways Ltd has prepared this report with all reasonable skill, care and 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.
- 5.7 This report is for the exclusive use of Awel Aman Tawe 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.
- 5.8 LvW Highways Ltd disclaims any responsibility to the client and others in respect of any matters outside the agreed scope of work.

APPENDIX A

Speed Survey Results

Vehicle	Direction 1	Direction 2
1	32	35
2	29	23
3	27	24
4	34	25
5	27	29
6	34	31
7	22	24
8	31	27
9	36	27
10	31	19
11	29	20
12	32	30
13	32	30
14	31	19
15	27	27
16	24	29
17	26	25
18	32	25
19	29	38
20	32	28
21	27	29
22	27	28
23	25	21
24	29	22
25	26	23
26	27	15
27	24	16
28	29	31
29	28	39
30	24	25
31	37	29
32	32	28
33	26	24
34	31	28
35	30	26
36	29	26
37	33	31
38	25	27
39	29	33
40	30	23
41	19	26
42	31	25
43	27	36
44	30	29
45	17	25
46	27	22
47	25	23
48	32	21
49	29	31
50	30	27
51	29	28
52	27	19
53	28	25
54	21	29
55	25	24
56	21	28
57	35	33
58	32	24
59	33	35
60	22	32
61	22	30
62	24	30
63	25	31
64	28	21
65	25	18
66	30	21
67	29	21
68	24	27
69	32	20
70	27	26
71	23	27

SPEED SURVEY		LvW Highways
Job No:	2020-552	
Location:	A474 Heol-Y-Gors with Llwynhen Road	
Date:	Tuesday 13th October 2020	
Start Time Direction 1:	10:00	
Finish Time Direction 1:	13:00	
Start Time Direction 2:	14:00	
Finish Time Direction 2:	17:00	
What is existing speed limit ?	30mph	
Surveyed by:	KJvW	

Weather conditions:
Blue skies with clouds in the morning becoming overcast in the afternoon

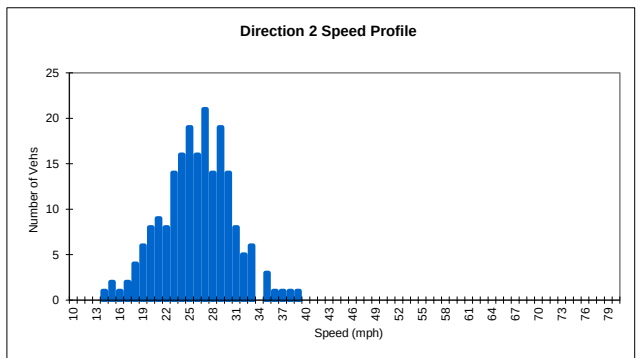
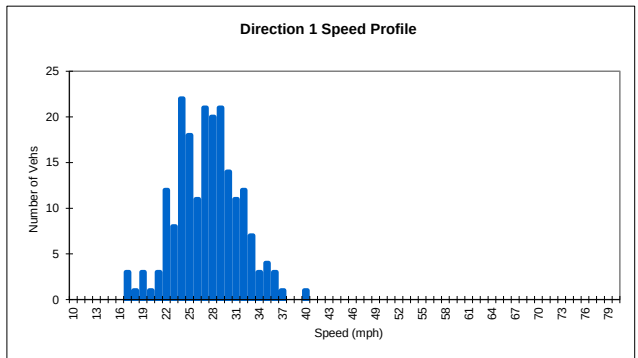
Notes (please state if traffic calming, school zone or speed cameras are present, etc):
Direction 1 Pontardawe towards Gwaun-Cae-Gurwen (Northbound); Direction 2 Gwaun-Cae-Gurwen towards Pontardawe (Southbound). No disruptions to the free flow of traffic

Results: (Dry conditions)	Vehicle No:	Calculations
85 %ile Direction1	170	31
85 %ile Direction 2	170	30

Results: (Wet conditions)	Vehicle No:	Calculations
85 %ile Direction1	N/A	29
85 %ile Direction 2	N/A	28

Results:	Vehicle No:	Calculations
Av Speed Direction1	100	27
Av Speed Direction 2	100	26

Results:	Vehicle No:	Calculations
Mean Speed Direction1	N/A	27
Mean Speed Direction 2	N/A	26



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72	29	28
73	28	27
74	23	29
75	23	24
76	26	27
77	27	20
78	24	30
79	31	32
80	30	28
81	22	27
82	34	22
83	29	21
84	22	28
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91	25	18
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180	29	25
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182	27	22
183	28	25
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187	19	26
188	21	22
189	24	26
190	24	28
191	22	33
192	28	24
193	28	23
194	27	19
195	24	23
196	19	29
197	25	23
198	24	26
199	24	30
200	26	26
Sum	5460	5193
85th%ile	32	30
Average	27	26
Median	27	26
Max	40	39
Min	17	14

Vehicle	Direction 1	Direction 2
1	24	27
2	28	28
3	26	27
4	22	32
5	18	28
6	26	38
7	24	27
8	30	27
9	32	27
10	26	30
11	22	34
12	31	41
13	30	28
14	29	23
15	27	30
16	29	27
17	25	28
18	23	26
19	22	25
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34	30	31
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39	29	24
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43	22	35
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45	27	26
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55	25	22
56	27	30
57	31	24
58	28	29
59	31	26
60	28	26
61	26	25
62	22	24
63	23	24
64	26	23
65	28	29
66	26	32
67	24	24
68	28	20
69	26	28
70	32	30
71	27	31

SPEED SURVEY		LvW Highways
Job No:	2020-552	
Location:	A474 Heol-Y-Gors with Llwynhen Road	
Date:	Wednesday 14th October 2020	
Start Time Direction 1:	14:00	
Finish Time Direction 1:	17:00	
Start Time Direction 2:	10:00	
Finish Time Direction 2:	13:00	
What is existing speed limit ?	30mph	
Surveyed by:	KJvW	

Weather conditions:
Cloudy in the morning becoming overcast in the afternoon

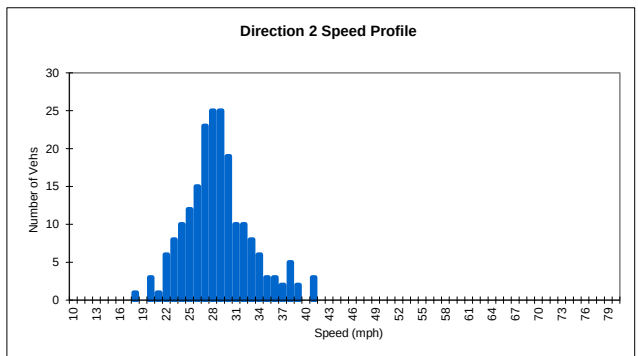
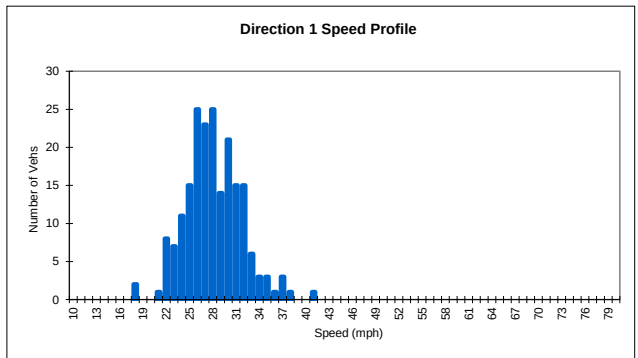
Notes (please state if traffic calming, school zone or speed cameras are present, etc):
Direction 1 Pontardawe towards Gwaun-Cae-Gurwen (Northbound); Direction 2 Gwaun-Cae-Gurwen towards Pontardawe (Southbound). No disruptions to the free flow of traffic

Results: (Dry conditions)	Vehicle No:	Calculations
85 %ile Direction1	170	32
85 %ile Direction 2	170	33

Results: (Wet conditions)	Vehicle No:	Calculations
85 %ile Direction1	N/A	29
85 %ile Direction 2	N/A	30

Results:	Vehicle No:	Calculations
Av Speed Direction1	100	28
Av Speed Direction 2	100	29

Results:	Vehicle No:	Calculations
Mean Speed Direction1	N/A	28
Mean Speed Direction 2	N/A	29



[Please click here for instructions on how to use this spreadsheet](#)

72	30	30
73	26	27
74	25	32
75	25	36
76	30	34
77	26	30
78	27	28
79	31	28
80	24	27
81	32	27
82	32	26
83	28	28
84	28	41
85	33	41
86	28	27
87	27	25
88	26	29
89	26	26
90	29	31
91	30	37
92	34	28
93	32	25
94	28	25
95	30	29
96	26	28
97	28	35
98	29	28
99	26	24
100	27	26
101	25	26
102	28	30
103	27	29
104	23	30
105	24	32
106	26	36
107	26	24
108	25	23
109	30	23
110	38	27
111	23	23
112	41	29
113	33	25
114	33	25
115	18	30
116	22	27
117	29	35
118	30	38
119	30	30
120	28	32
121	37	27
122	27	27
123	33	30
124	31	31
125	34	29
126	31	33
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128	29	22
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142	31	27
143	35	29

144	32	30
145	31	31
146	31	29
147	35	34
148	22	29
149	24	29
150	28	20
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152	25	39
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155	26	21
156	24	33
157	30	30
158	24	26
159	27	38
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163	28	32
164	37	27
165	32	33
166	27	29
167	30	38
168	32	31
169	25	23
170	25	22
171	30	28
172	25	29
173	26	28
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175	28	28
176	29	25
177	33	24
178	30	23
179	27	29
180	30	36
181	27	34
182	28	27
183	29	30
184	28	28
185	26	29
186	33	26
187	23	33
188	25	34
189	27	28
190	28	29
191	28	31
192	32	29
193	32	31
194	27	33
195	26	34
196	36	26
197	30	32
198	25	33
199	24	28
200	28	25
Sum	5616	5737
85th%ile	32	33
Average	28	29
Median	28	28
Max	41	41
Min	18	18

Stopping Sight Distance Calculation

Choose method of Calculation **3** MfS

DMRB Option 1
Highway Code Option 2
MfS Option 3

		Direction 1	Direction 2	
t = seconds		d = m/(s*s)	d = m/(s*s)	
1	2	2.4525	2.4525	DMRB
2	0.67	6.5727	6.5727	Highway Code
3	1.5	4.4145	4.4145	MfS

Direction 1 speed Northbound **30** mph
Direction 2 speed Southbound **29** mph

A 10% gradient will increase (or decrease) the rate by arroung 0.1g.

Gradient Direction 1 Northbound **0%**
Gradient Direction 2 Southbound **0%**

Adjusted SSD Direction 1 = **43** m
Adjusted SSD Direction 2 = **41** m

Stopping Sight Distance Calculation

Choose method of Calculation **1** DMRB

DMRB Option 1
 Highway Code Option 2
 MfS Option 3

		Direction 1	Direction 2	
		t = seconds	d = m/(s*s)	d = m/(s*s)
1	2	2.4525	2.4525	DMRB
2	0.67	6.5727	6.5727	Highway Code
3	1.5	4.4145	4.4145	MfS

Direction 1 speed Northbound **30** mph
 Direction 2 speed Southbound **29** mph

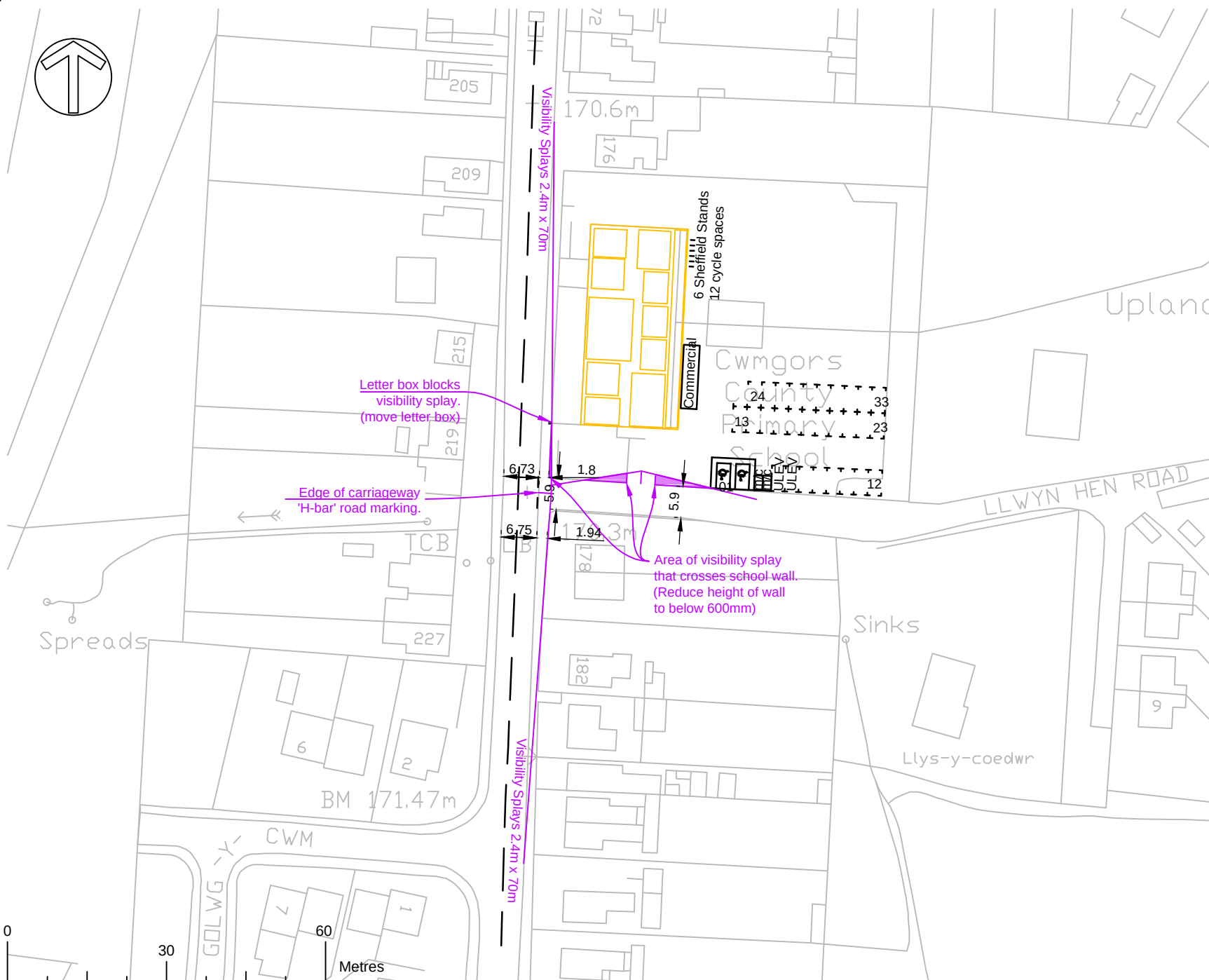
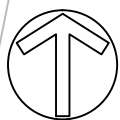
A 10% gradient will increase (or decrease) the rate by arroung 0.1g.

Gradient Direction 1 Northbound **0%**
 Gradient Direction 2 Southbound **0%**

Adjusted SSD Direction 1 = **66** m
 Adjusted SSD Direction 2 = **63** m

APPENDIX B

Access Plans



General Notes

1. ALL DIMENSIONS ARE INDICATIVE AND IN METRES UNLESS NOTED OTHERWISE.
2. DO NOT SCALE THIS DRAWING, USE FIGURED DIMENSIONS ONLY.
3. ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM (AOD) BASED ON THE TOPOGRAPHICAL SURVEY DRAWING SUPPLIED BY THE CLIENT.
4. ANY DISCREPANCIES TO BE REPORTED TO THE ENGINEER.
5. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
6. THE SPECIFICATION IN ALL ASPECTS SHALL BE IN ACCORDANCE WITH THE CURRENT RESIDENTIAL DESIGN GUIDE AND SPECIFICATION IN FORCE WITHIN THE COUNTY AT THE TIME OF CONSTRUCTION.
7. COPYRIGHT OF THIS DRAWING IS RETAINED BY THE ENGINEER AND IT MUST NOT BE REPRODUCED IN WHOLE OR PART WITHOUT WRITTEN CONSENT.

C	LHA requested design amendments	20.10.2020
B	LHA requested design amendments	03.09.2020
A	For Discussion	24.07.2020
No.	Revision/Issue	Date

First Name and Address

LvW
Highways

LvW Highways Ltd
Blowpans
Fellingsham, Lichfield
Staffordshire
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Tel: 01257 220789
Mob: 07709 220895

Project Name and Address

Cwmgor's Primary School
Heol y Gors, Cwmgor's,
Neath Port Talbot CBC.
Existing Highway and
Visibility Splays

Project	2020-552	Sheet
Date	20.10.2020	SK01
Scale	1:1000@A4L	

APPENDIX C

Extract from Highway Code

Highway Code Road Junctions (rules 170 to 183)

Rule 170

Take extra care at junctions. You should

- watch out for cyclists, motorcyclists, powered wheelchairs/mobility scooters and pedestrians as they are not always easy to see. Be aware that they may not have seen or heard you if you are approaching from behind
- watch out for pedestrians crossing a road into which you are turning. If they have started to cross they have priority, so give way
- watch out for long vehicles which may be turning at a junction ahead; they may have to use the whole width of the road to make the turn (see [Rule 221](#))
- watch out for horse riders who may take a different line on the road from that which you would expect
- not assume, when waiting at a junction, that a vehicle coming from the right and signalling left will actually turn. Wait and make sure
- look all around before emerging. Do not cross or join a road until there is a gap large enough for you to do so safely.

Rule 171

You **MUST** stop behind the line at a junction with a 'Stop' sign and a solid white line across the road. Wait for a safe gap in the traffic before you move off.

Laws [RTA 1988 sect 36](#) & [TSRGD regs 10](#) & [16](#)

Rule 172

The approach to a junction may have a 'Give Way' sign or a triangle marked on the road. You **MUST** give way to traffic on the main road when emerging from a junction with broken white lines across the road.

Laws [RTA 1988 sect 36](#) & [TSRGD regs 10\(1\),16\(1\)](#) & [25](#)

Rule 173 Dual Carriageways

Rule 174 Box Junctions

Rules 175 to 177 Junctions controlled by traffic lights

Rule 178 Advanced stop lines

Turning right

Rule 179

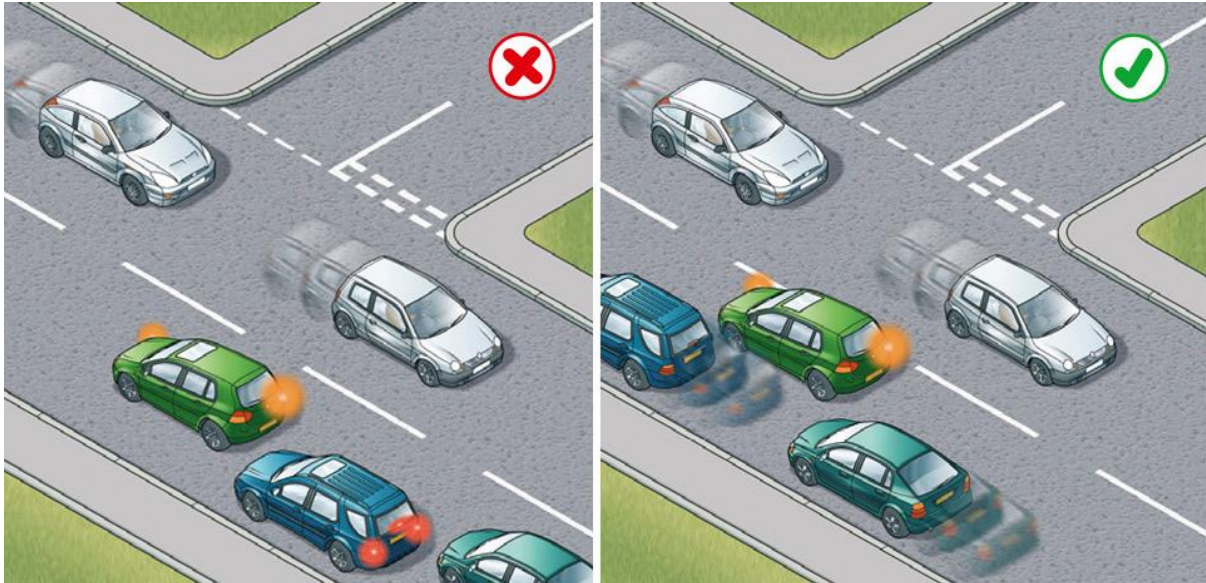
Well before you turn right you should

- use your mirrors to make sure you know the position and movement of traffic behind you
- give a right-turn signal
- take up a position just left of the middle of the road or in the space marked for traffic turning right
- leave room for other vehicles to pass on the left, if possible.

Rule 180

Wait until there is a safe gap between you and any oncoming vehicle. Watch out for cyclists, motorcyclists, pedestrians and other road users. Check your mirrors and blind spot again to make sure you are not being overtaken, then make the turn. Do not cut the corner. Take great care when turning into a main road; you will need to watch for traffic in both directions and wait for a safe gap.

Remember: Mirrors – Signal – Manoeuvre

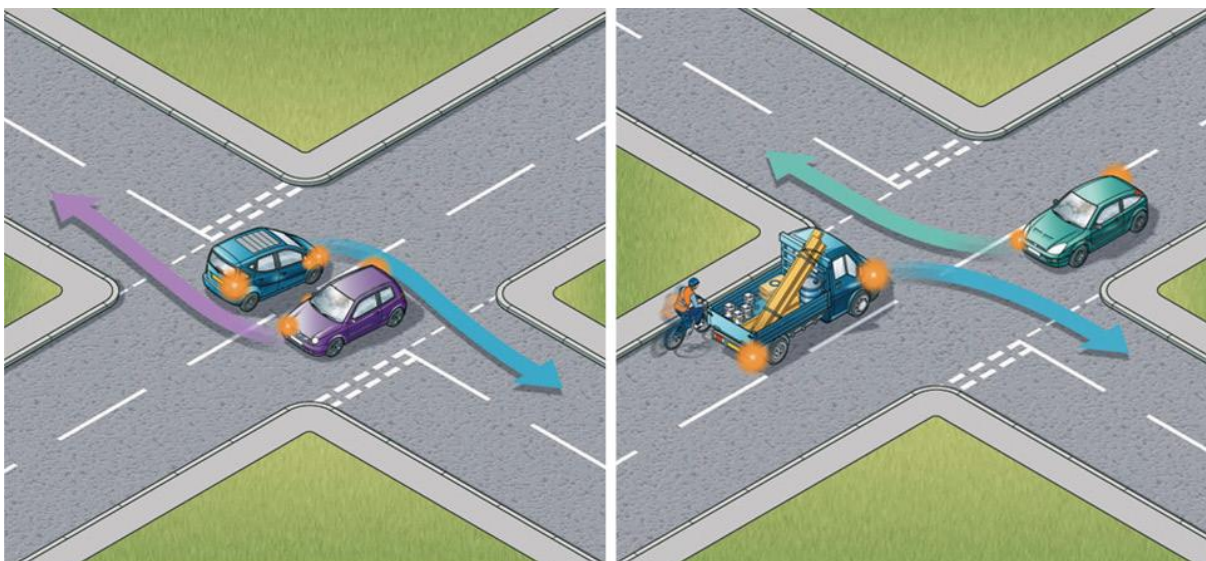


Rule 180: Position your vehicle correctly to avoid obstructing traffic

Rule 181

When turning right at crossroads where an oncoming vehicle is also turning right, there is a choice of two methods

- turn right side to right side; keep the other vehicle on your right and turn behind it. This is generally the safer method as you have a clear view of any approaching traffic when completing your turn
- left side to left side, turning in front of each other. This can block your view of oncoming vehicles, so take extra care. Cyclists and motorcyclists in particular may be hidden from your view. Road layout, markings or how the other vehicle is positioned can determine which course should be taken.

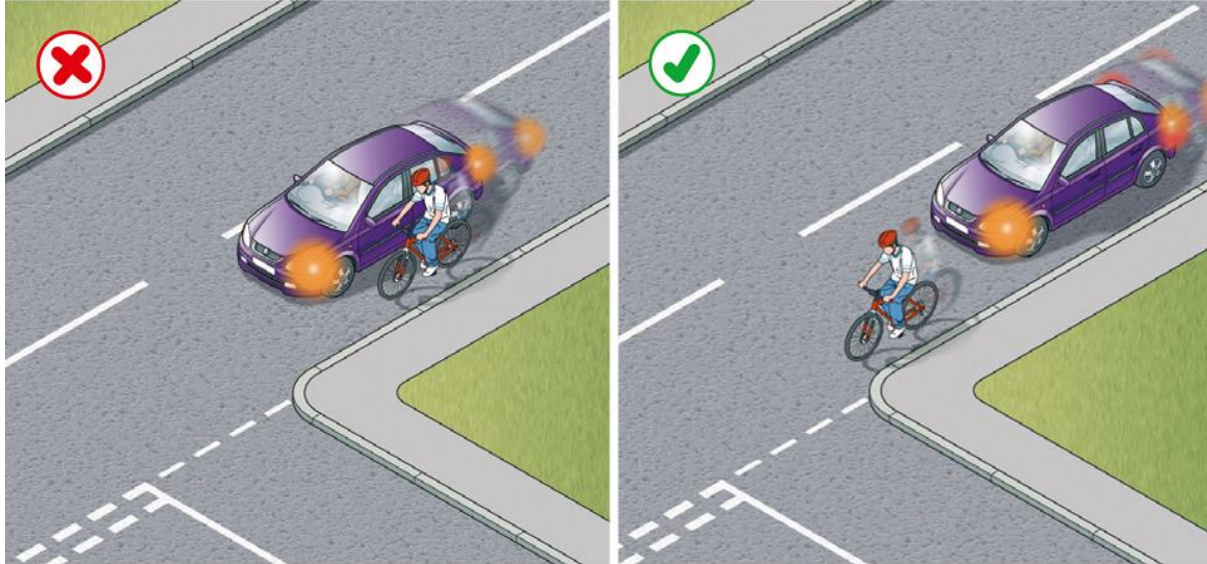


Rule 181: Left - Turning right side to right side. Right - Turning left side to left side

Turning left

Rule 182

Use your mirrors and give a left-turn signal well before you turn left. Do not overtake just before you turn left and watch out for traffic coming up on your left before you make the turn, especially if driving a large vehicle. Cyclists, motorcyclists and other road users in particular may be hidden from your view.



Rule 182: Do not cut in on cyclists

Rule 183

When turning

- keep as close to the left as is safe and practicable
- give way to any vehicles using a bus lane, cycle lane or tramway from either direction.