

## TECHNICAL NOTE (TN01 – Access)

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**John & Sheila Murphy**

**The Muddies**

**Whitechurch Road**

**Rathfarnham**

**Dublin 16**

Prepared By:



**Richard White** BSc(Hons) MSc CEngNZ MCIHT

CMILT

Checked By:



**Martin Peters** MSc Eng, CEng MIEI, MStructE MCIHT

**CONTENTS:**

**1.0 INTRODUCTION..... 1**

1.1 Background..... 1

1.2 Purpose ..... 1

**2.0 EXISTING TRAFFIC CONDITIONS..... 2**

2.1 Surrounding Road Network ..... 2

2.2 Traffic Data ..... 2

**3.0 PROPOSED DEVELOPMENT..... 4**

3.1 Site Area ..... 4

3.2 Planning History ..... 5

**4.0 VISIBILITY SPLAYS..... 6**

4.1 Whitechurch Road/The Muddies..... 6

4.2 Site Accesses..... 7

**5.0 SUMMARY AND CONCLUSIONS..... 9**

5.1 Summary..... 9

5.2 Conclusion ..... 9

**APPENDICES:**

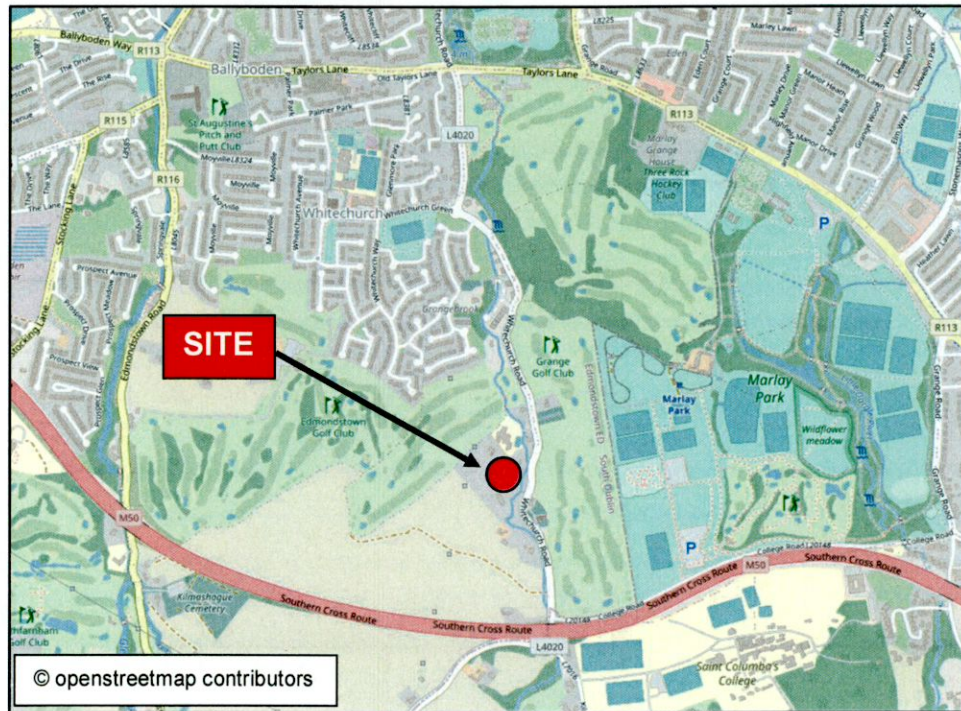
- Appendix A – ATC Data
- Appendix B – Drawing Number 221021-SK01
- Appendix C – Drawing Number 221021-SK02

## 1.0 INTRODUCTION

### 1.1 Background

1.1.1 This Technical Note has been prepared by MPA Consulting Engineers on behalf of John & Sheila Murphy in relation to the proposed provision of an additional residential dwelling on land located on The Muddies to the west of Whitechurch Road in Rathfarnham, Dublin 16.

1.1.2 The location of the site is shown in **Figure 1.1** below.



**FIGURE 1.1: SITE LOCATION**

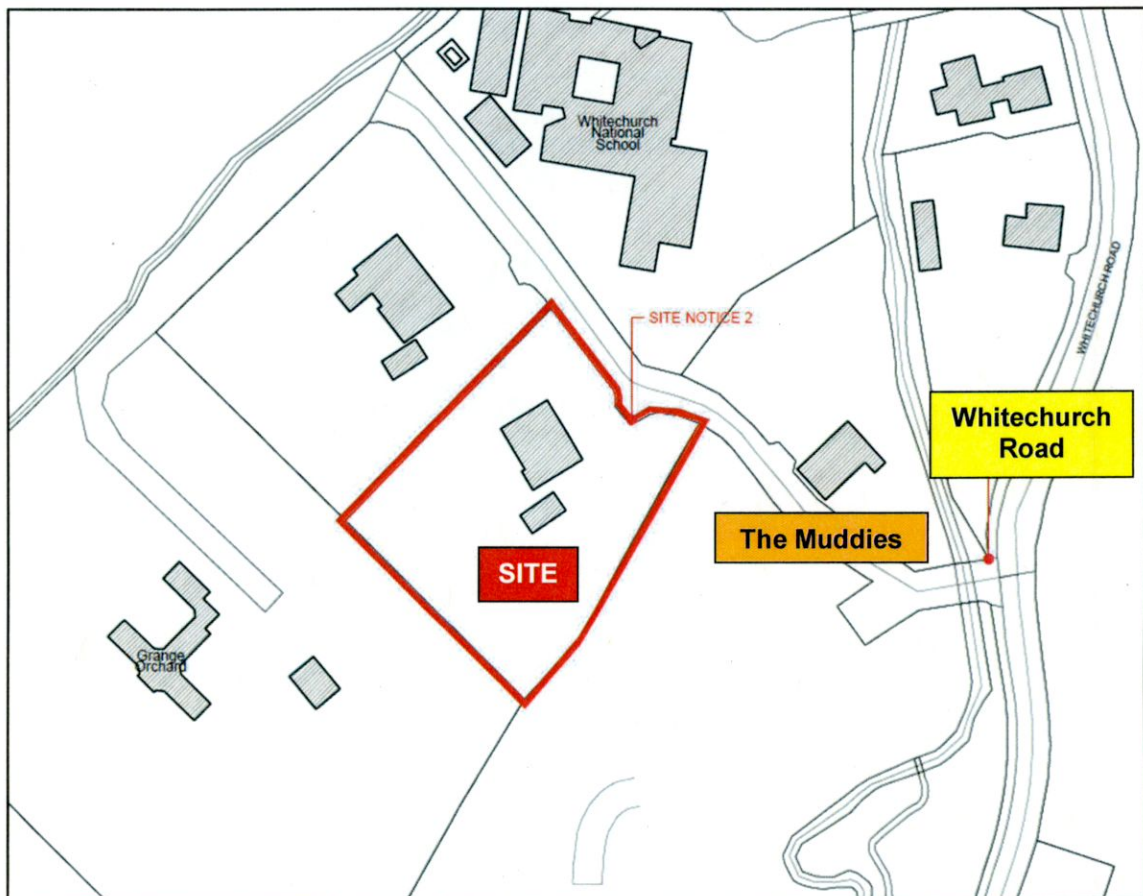
### 1.2 Purpose

1.2.1 This Technical Note has been prepared to demonstrate that safe and suitable access can be achieved for additional residential development on the site.

## 2.0 EXISTING TRAFFIC CONDITIONS

### 2.1 Surrounding Road Network

2.1.1 The location of the site in relation to the surrounding road network is shown below in **Figure 2.1**.



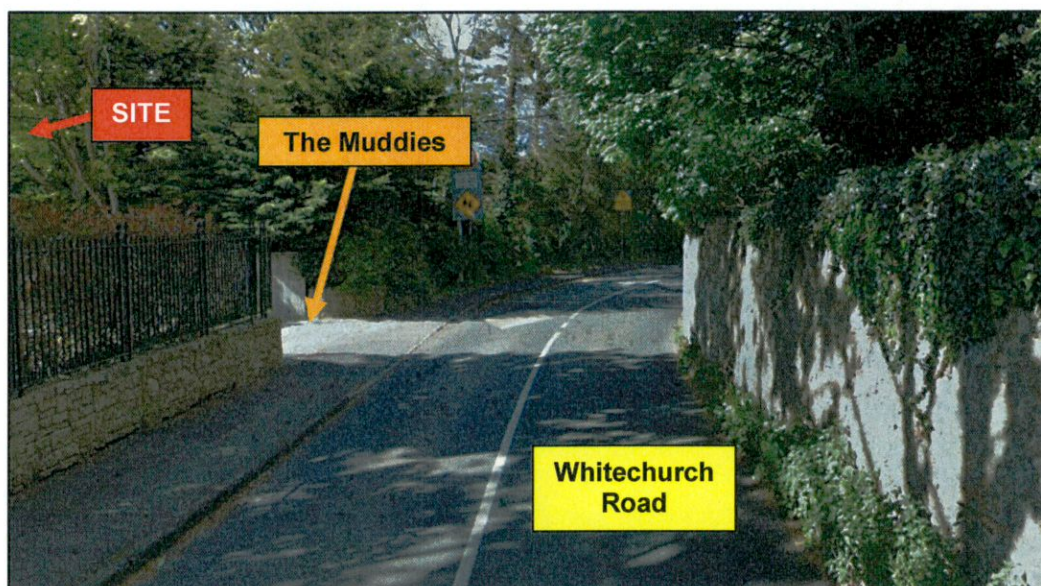
**FIGURE 2.1: SITE AND SURROUNDING ROAD NETWORK**

2.1.2 The L4020 Whitechurch Road runs north-south from the R115 in Willbrook to the roundabout immediately south of the M50 motorway leading to Tibbradden Road and Kilmashogue Lane.

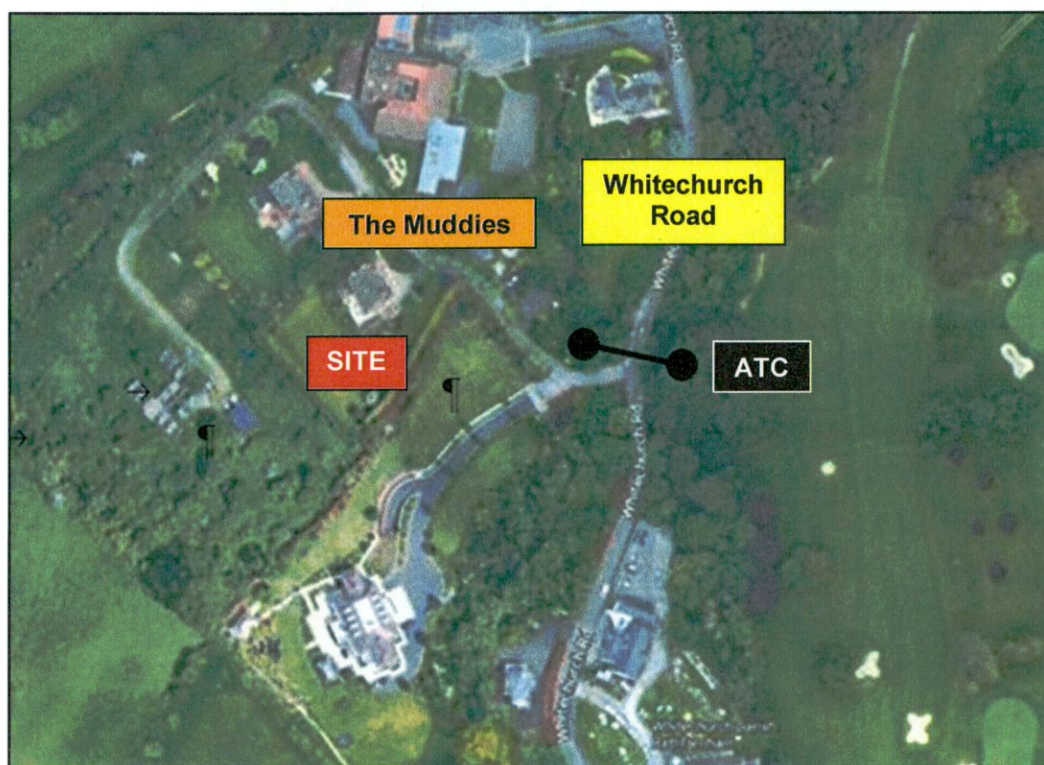
2.1.3 In the vicinity of The Muddies (and the site), Whitechurch Road is subject to a 50kph speed limit to the south and a 30kph speed limit to the north. It provides a single traffic lane in each direction and a footway on the western side of the carriageway as shown overleaf in **Figure 2.2**. It benefits from street lighting and has a solid white line in the centre of the carriageway in the vicinity of The Muddies junction.

## 2.2 Traffic Data

2.2.1 An Automatic Traffic Counter (ATC) was installed on Whitechurch Road just north of the existing site access during the week commencing 4<sup>th</sup> April 2022 in the location shown overleaf in **Figure 2.3**.



**FIGURE 2.2: WHITECHURCH ROAD AND THE MUDDIES**



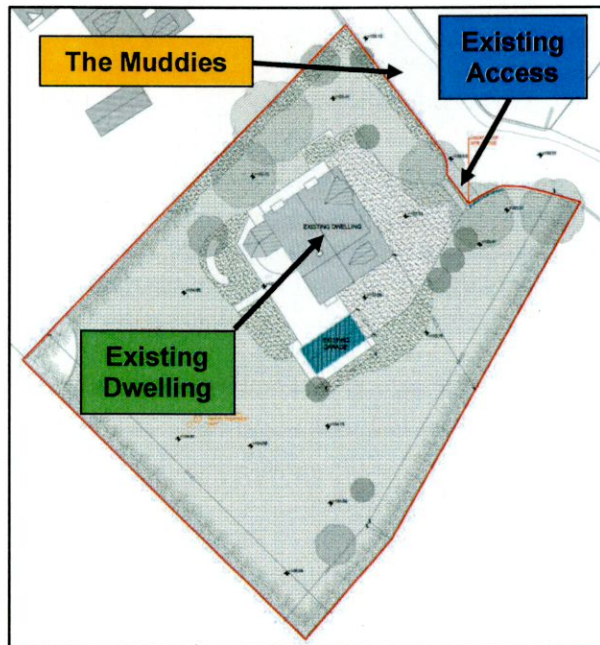
**FIGURE 2.3: ATC LOCATION ON WHITECHURCH ROAD**

- 2.2.2 The ATC data is attached as **Appendix A**.
- 2.2.3 This identified average 12-hour traffic volumes of 798 vehicles northbound and 897 vehicles southbound.
- 2.2.4 The recorded vehicle speeds (85<sup>th</sup> percentile) were 41.58kph northbound and 42.30kph southbound, which reflects the transition area between the 30kph and 50kph speed limits on this part of Whitechurch Road.

### 3.0 PROPOSED DEVELOPMENT

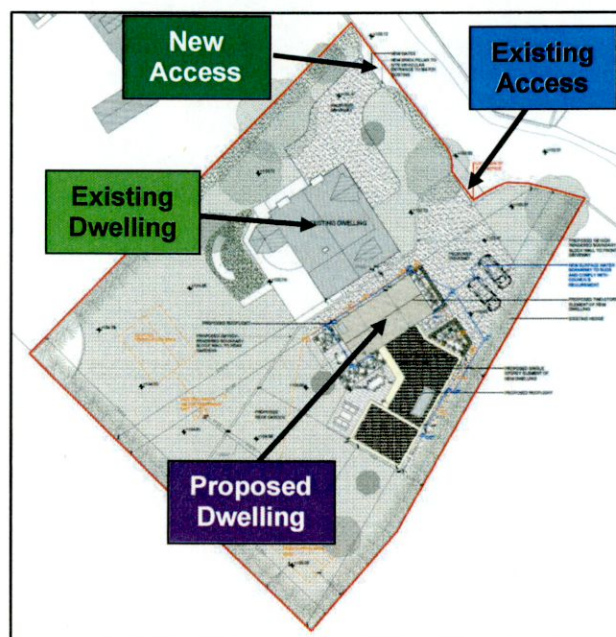
#### 3.1 Site Area

3.1.1 The existing site comprises a single residential dwelling accessed from The Muddies as shown below in **Figure 3.1**.



**FIGURE 3.1: EXISTING SITE LAYOUT**

3.1.2 Our clients propose to construct an additional residential dwelling to the southeast of the existing dwelling that would be served by the existing access. The existing dwelling would be served from a new access in the northern corner of the site as shown below in **Figure 3.2**. These accesses would be separate and would not allow vehicles to travel between the two dwellings within the site.



**FIGURE 3.2: PROPOSED SITE LAYOUT**

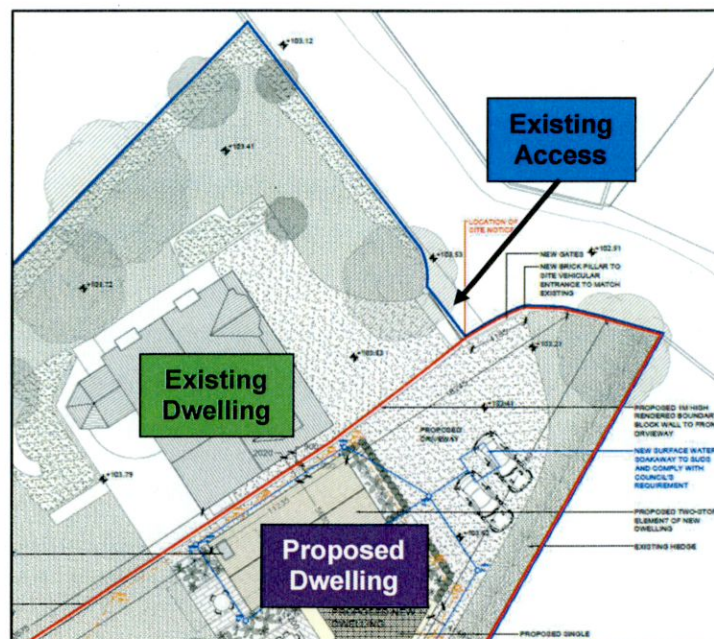
## 3.2 Planning History

3.2.1 Planning permission was refused by South Dublin County Council (SDCC) on 12<sup>th</sup> January 2022 for a similar level of development on the site (planning reference SD21A/0303) for three reasons.

3.2.2 The first reason for refusal related to traffic and transport issues as follows:

1. “This proposal provides for additional traffic movements on a substandard private laneway off Whitechurch Road and would set an undesirable precedent for further similar developments in the area. The proposed development would represent an intensification of use of the substandard road network and would endanger public safety by reason of traffic hazard. Due to said endangerment to public safety and traffic hazard, the development would contravene the 'RES' land-use zoning objective for the area under the South Dublin County Development Plan 2016 - 2022, which reads, 'To protect and/or improve residential amenity.' Furthermore, the Planning Authority is not satisfied that the proposed vehicular access is safe, and is likely to give rise to traffic hazard.”

3.2.3 The Record of Executive Business and Chief Executive’s Order noted under the ‘Access, Transport and Parking’ heading that the level of visibility at the junction of Whitechurch Road/The Muddies and at the previously proposed access were a concern to SDCC. The refused application proposed that both residential dwellings (i.e. the existing and the proposed) were accessed via the existing access as shown below in **Figure 3.3**.



**FIGURE 3.3: REFUSED SITE LAYOUT**

## 4.0 VISIBILITY SPLAYS

### 4.1 Whitechurch Road/The Muddies

4.1.1 Table 4.2 in the Design Manual for Urban Roads and Streets (DMURS) provides guidance on Stopping Sight Distances (SSD) as shown below in **Figure 4.1**.

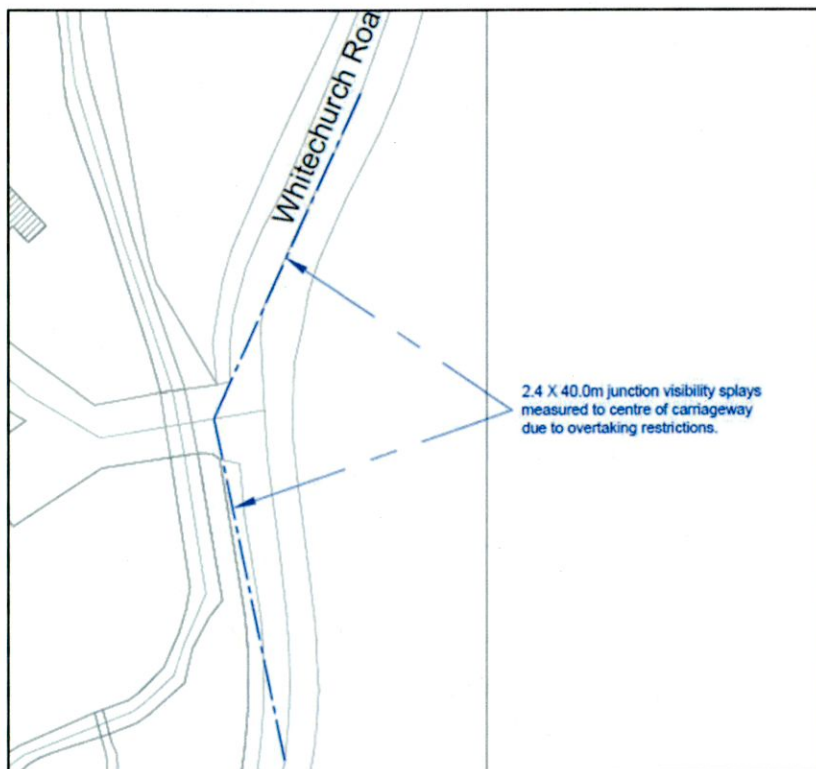
SSD STANDARDS			
<b>Design Speed (km/h)</b>	<b>SSD Standard (metres)</b>	<b>Design Speed (km/h)</b>	<b>SSD Standard (metres)</b>
10	7	10	8
20	14	20	15
30	23	30	24
40	33	40	36
50	45	50	49
60	59	60	65
Forward Visibility		Forward Visibility on Bus Routes	

Table 4.2: Reduced SSD standards for application within cities towns and villages. Reduced forward visibility increases driver caution and reduces vehicle speeds.

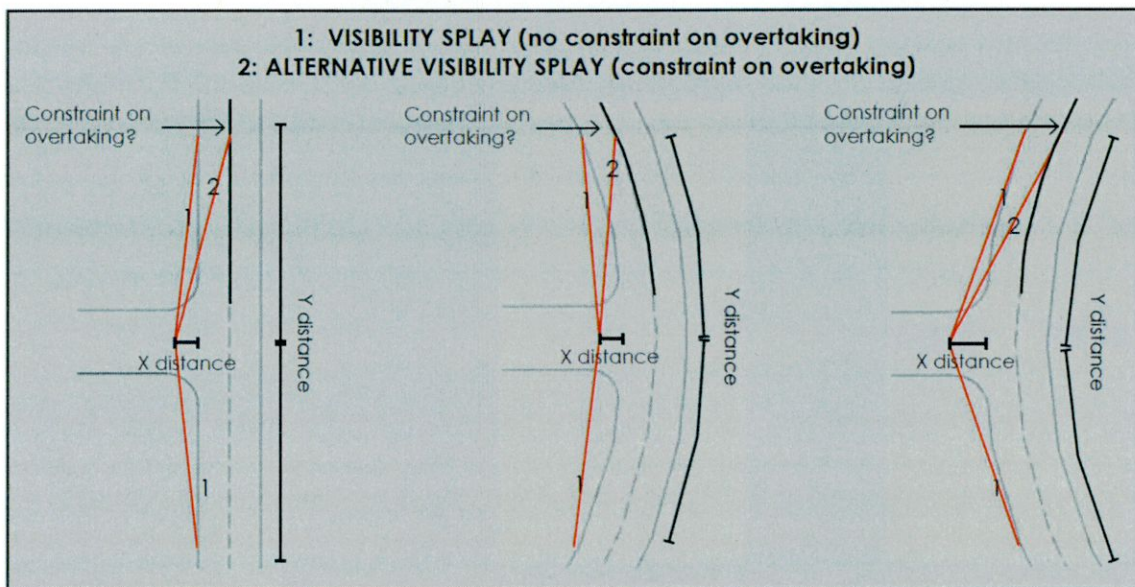
#### **FIGURE 4.1: EXTRACT FROM DMURS SHOWING STOPPING SIGHT DISTANCES**

- 4.1.2 The speed survey results showed 85<sup>th</sup> percentile speeds of approximately 42kph on Whitechurch Road meaning the design speed would be closer to 40kph rather than the 50kph (or 30kph) speed limits in place on the road.
- 4.1.3 DMURS identifies an SSD of 33m for a road with a design speed of 40kph that is not a bus route, such as Whitechurch Road. Given that the surveyed speeds were just above 40kph, an SSD of 40m has been used as it would represent the SSD associated with a speed of 45kph using the SSDs contained in Table 4.2 of DMURS (the midpoint between 40kph and 50kph is actually 39m).
- 4.1.4 Using 40m as the SSD at this junction provides a robust assessment of whether the achievable level of visibility at this location is sufficient and appropriate for the speeds recorded on Whitechurch Road.
- 4.1.5 **Figure 4.2** overleaf shows a 2.4m x 40m visibility splay at this junction and demonstrates that this is clear of permanent obstructions (above 0.6m) as it passes over road or footway. This is also shown in Drawing Number 221021-SK01 attached as **Appendix B**.
- 4.1.6 The sightlines have been measured to the centre of the carriageway (rather than the nearside kerb) as permitted in DMURS, which identifies such an approach when there is a “*constraint on overtaking*” (in this case a solid white line along the centre of Whitechurch Road) in Figure 4.63 as repeated overleaf as **Figure 4.3**.
- 4.1.7 Thus, the level of visibility available at the junction of Whitechurch Road and The Muddies is acceptable as it accords with the guidance contained in DMURS.
- 4.1.8 Moreover, it is our professional view that the existing junction is capable of catering for the additional traffic associated with the provision of one residential dwelling at the site and will not create a road safety hazard at this location or have an adverse effect upon road safety in general.





**FIGURE 4.2: APPROPRIATE VISIBILITY SPAY AT WHITECHURCH ROAD/THE MUDDIES JUNCTION**



**FIGURE 4.3: MEASUREMENT OF VISIBILITY SPLAY (FROM DMURS)**

**4.2 Site Accesses**

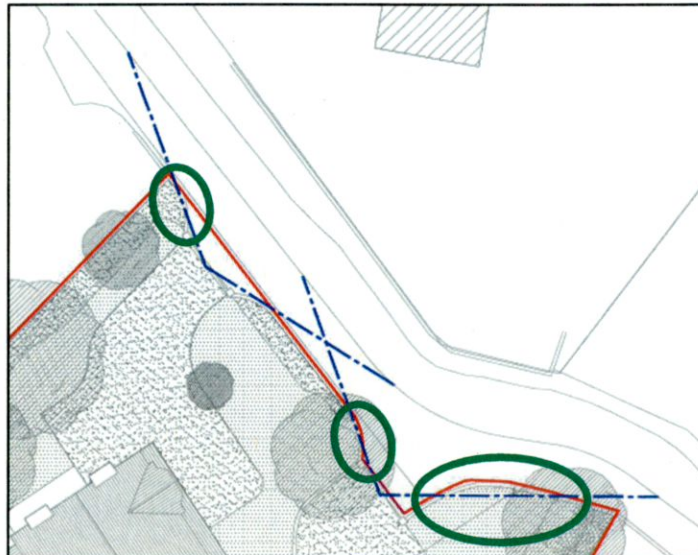
4.2.1 It is envisaged that vehicle speeds on The Muddies will be low (up to but not exceeding 20kph) due to the width and character of the lane. DMURS identifies an SSD of 14m for a road with a design speed of 20kph.

- 4.2.2 DMURS states that the SSD should normally be clear of permanent obstructions (above 0.6m) from a setback distance of 2.4m. However, DMURS does allow the 'X' distance (the distance back along the minor arm that the sightline along the major road – the 'Y' distance – is measured) to be reduced in certain circumstances as shown below in **Figure 4.4**, which is an extract from Section 4.4.5 of DMURS.

For this reason, priority junctions in urban areas should be designed as Stop junctions, and a maximum X distance of 2.4 metres should be used. In difficult circumstances this may be reduced to 2.0 metres where vehicle speeds are slow and flows on the minor arm are low. However, the use of a 2.0 metre X distance may result in some vehicles slightly protruding beyond the major carriageway edge, and may result in drivers tending to nose out cautiously into traffic. Care should be taken to ensure that cyclists and drivers can observe this overhang from a reasonable distance and manoeuvre to avoid it without undue difficulty.

**FIGURE 4.4: EXTRACT FROM DMURS ON RELAXATION TO THE 'X' DISTANCE**

- 4.2.3 Given that each of the two accesses would only serve a single residential dwelling in the future, it is considered that such a relaxation is appropriate.
- 4.2.4 Thus, the required visibility splay is considered to be 2m x 14m in this location for the reasons advanced above.
- 4.2.5 **Figure 4.5** below shows the 2m x 14m sightlines at each access point. It can be seen that the existing or proposed walls will need to be repositioned or reduced in height in three areas as shown marked in green below, which is a matter that could be conditioned should planning permission be granted. This is also shown in Drawing Number 221021-SK02 attached as **Appendix C**.



**FIGURE 4.5: APPROPRIATE VISIBILITY SPLAYS AT ACCESSES**

- 4.2.6 Thus, the proposed access arrangement accords with the guidance contained in DMURS and is therefore capable of providing a safe and acceptable form of access to the level of development proposed.

## 5.0 SUMMARY AND CONCLUSIONS

### 5.1 Summary

- 5.1.1 This Technical Note has been prepared to support the construction of an additional residential dwelling on land located on The Muddies to the west of Whitechurch Road in Rathfarnham, Dublin 16.
- 5.1.2 The recorded vehicle speeds (85<sup>th</sup> percentile) were 41.58kph northbound and 42.30kph southbound 38.97kph northbound and 40.32kph southbound, which reflects the transition area between the 30kph and 50kph speed limits on this part of Whitechurch Road.
- 5.1.3 The existing site comprises a single residential dwelling accessed from The Muddies. Our clients propose to construct an additional residential dwelling to the southeast of the existing dwelling that would be served by the existing access.
- 5.1.4 The existing dwelling would be served from a new access in the northern corner of the site. These accesses would be separate and would not allow vehicles to travel between the two dwellings within the site.
- 5.1.5 Planning permission was refused by South Dublin County Council (SDCC) on 12<sup>th</sup> January 2022 for a similar level of development on the site where both residential dwellings (i.e. the existing and the proposed) would be accessed via the existing access. The level of visibility at the junction of The Muddies/Whitechurch Road and at the previously proposed access were a concern to SDCC.
- 5.1.6 A visibility splay of 2.4m x 40m is available at the junction of Whitechurch Road and The Muddies, which accords with the guidance in DMURS, and thus the level of visibility available is acceptable.
- 5.1.7 Moreover, it is our professional view that the existing junction is capable of catering for the additional traffic associated with the provision of one residential dwelling at the site and will not create a road safety hazard at this location or have an adverse effect upon road safety in general.
- 5.1.8 The required visibility splay at the two proposed access points is 2m x 14m is achievable if the existing/proposed walls are repositioned or reduced in height, which is a matter that could be conditioned should planning permission be granted.

### 5.2 Conclusion

- 5.2.1 In conclusion, this Technical Note demonstrates that the level of visibility available at the junction of Whitechurch Road/The Muddies and achievable at the two site access points, accords with DMURS and is therefore deemed to be acceptable.
- 5.2.2 Therefore, it is concluded that there are no traffic or transportation reasons why this proposed development should not be permitted.

# Appendix A



## ATC Data

# Site Location



# Site Location



	Job number: TRA/22/098	Job Date: Week Commencing Monday 4 <sup>th</sup> April 2022	Drawing No: TRA/22/098-01	
	Client: MPA		Author: SPW	

**LOCATION:** Whitechurch Road, Rathfarnham @ Clients Access (Google Maps Ref: 53.271221, -6.281041)

**SPEED SURVEY SUMMARY:**

**NORTHBOUND** 85% Speed = 41.58 km/h, 95% Speed = 44.82 km/h, Median = 36.36 km/h Maximum = 77.1 km/h, Minimum = 9.7 km/h, Mean = 36.1 km/h

**SOUTHBOUND** 85% Speed = 42.30 km/h, 95% Speed = 45.59 km/h, Median = 37.17 km/h Maximum = 59.9 km/h, Minimum = 1.3 km/h, Mean = 36.7 km/h

**VOLUMETRIC VEHICLE COUNTS:**

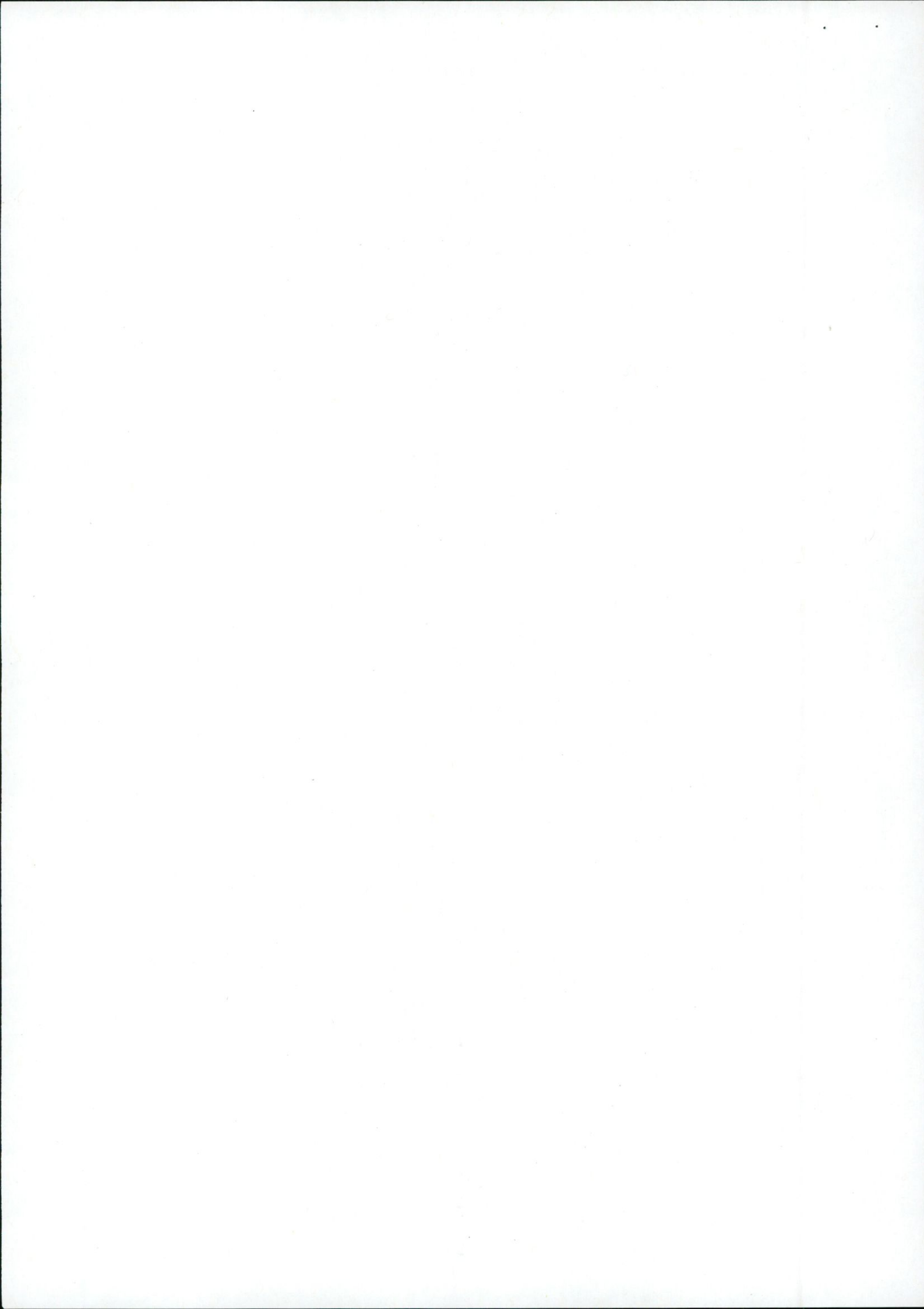
Direction	Time	Monday 4 April 2022	Tuesday 5 April 2022	Wednesday 6 April 2022	Thursday 7 April 2022	Friday 8 April 2022	Saturday 9 April 2022	Sunday 10 April 2022	No. Vehicles 7 day Mean
NORTHBOUND	07-19	763	748	742	779	796	969	786	5583
SOUTHBOUND	07-19	862	849	792	884	863	1105	925	6280
NORTHBOUND	00-00	901	919	901	962	943	1071	876	6573
SOUTHBOUND	00-00	986	969	914	1027	992	1185	994	7067

**PEAK FLOW SUMMARY:**

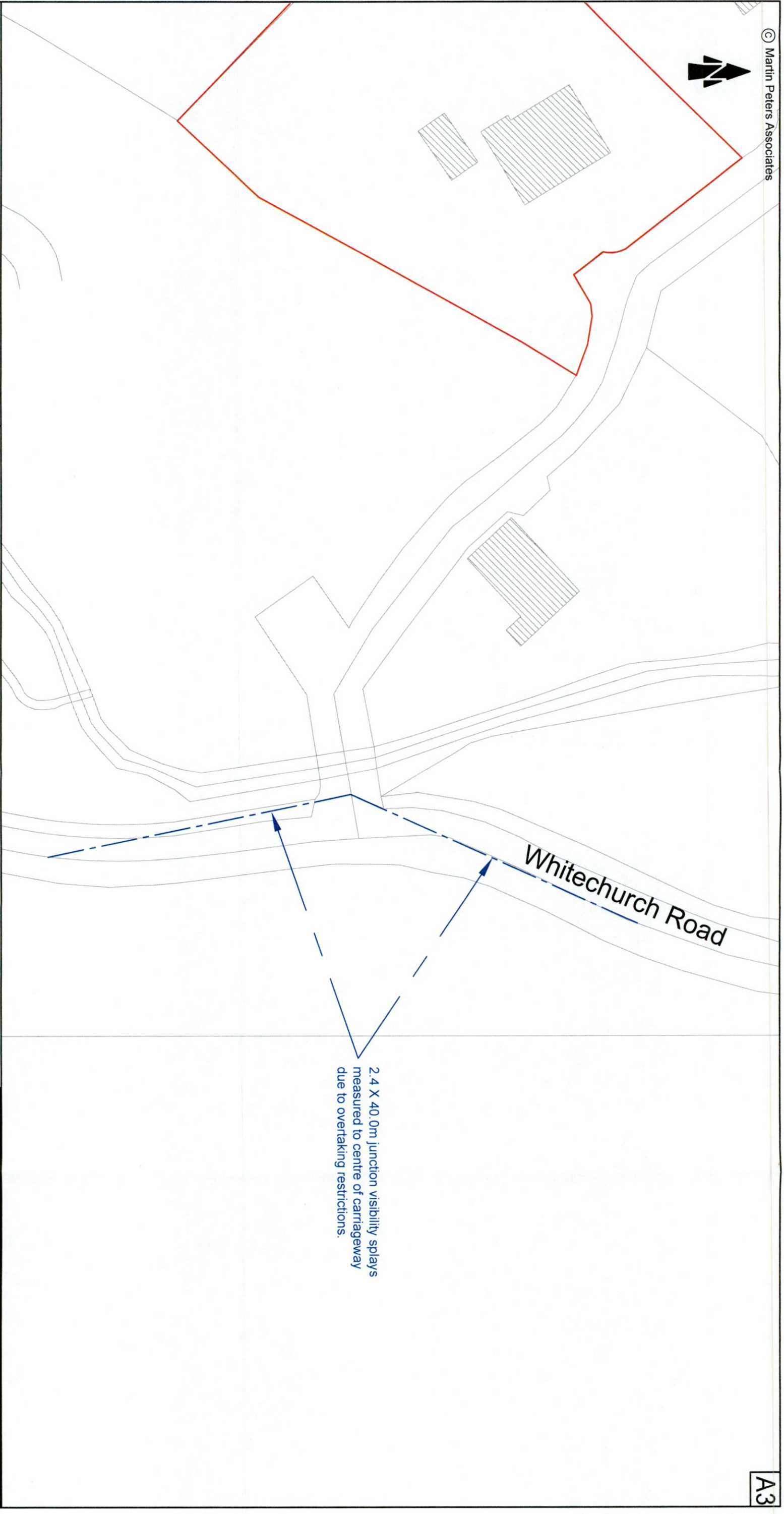
Peak	AM	IP	PM
Most Frequent Peak Hour	0800	1200	1700
Average Vehicles per Peak Hour	91	92	94

# Appendix B

Drawing No. 221021-SK01







**Issue Register**

No.	Date	Description	Drawn	Checked	Approved
P1	31/05/22	ISSUE FOR DISCUSSION	NH	RW	-
-	-	-	-	-	-
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-	-	-	-	-	-
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**General notes:-**

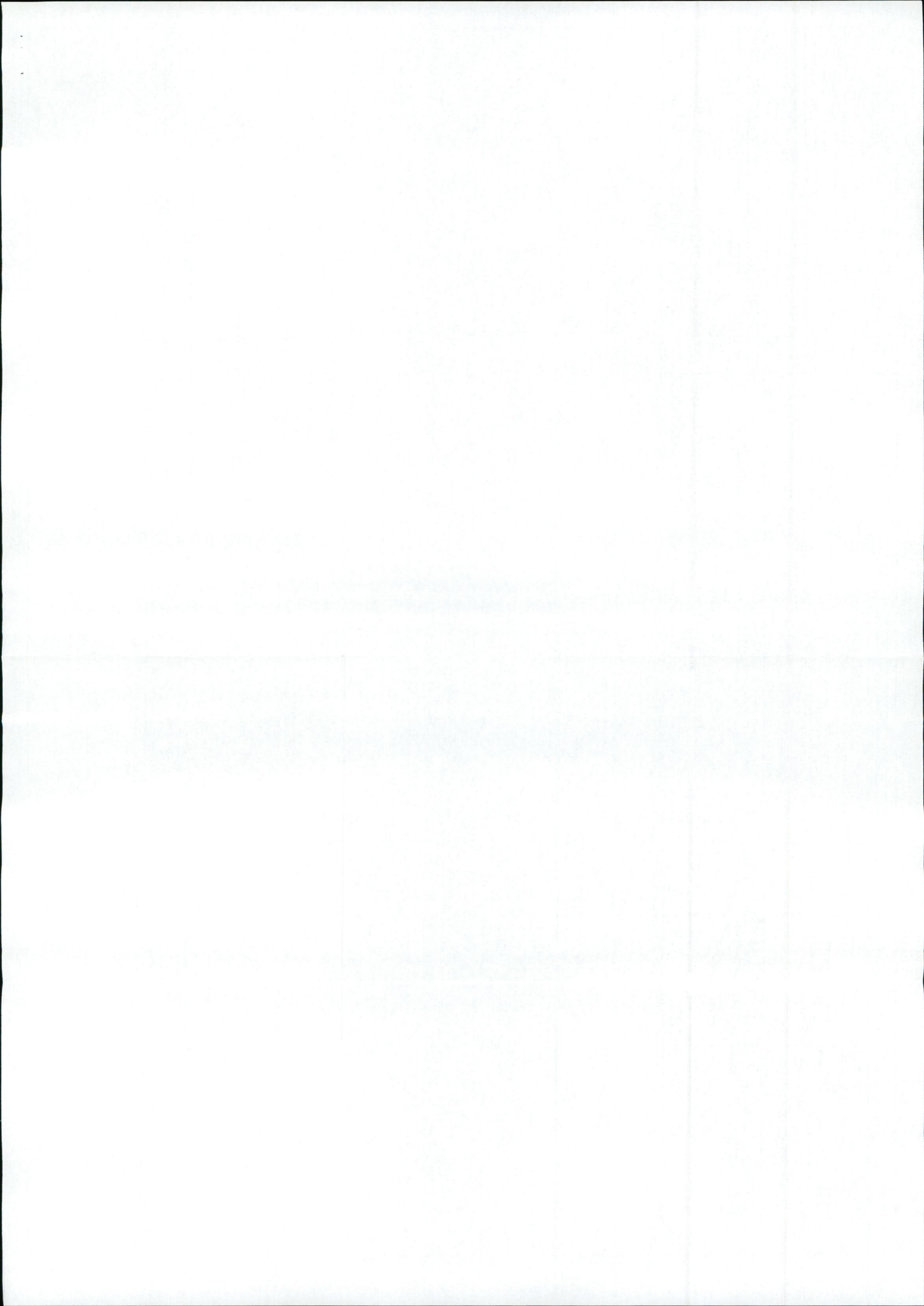
1. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS & ENGINEERS DRAWINGS & SPECIFICATIONS.
2. DO NOT SCALE. USE FIGURED DIMENSIONS ONLY.
3. ALL DIMENSIONS ON DRAWINGS ARE IN METRES UNLESS OTHERWISE NOTED.

**Key**

— Site boundary

**INFORMATION**

<p><b>Martin Peters Associates</b> Consulting Engineers</p> <p style="font-size: 8px;">Ormond Road Kilkenny R95 AHX8 T: + 353 56 7702761 F: + 353 56 7702728 E: info@mpoa.ie W: www.mpoa.ie</p>		
Client: <b>John &amp; Shelia Murphy</b>		
Project: The Muddies, Rathfarnham, Dublin 16		
Drawing Title: <b>Whitechurch Road Sighting</b>		
Project No: <b>221021</b>	Scale: <b>A3:</b>	
Drawing No: <b>SK01</b>	Rev: <b>P1</b>	
Drawn: NH	Checked: RW	Date: 31/05/2022



# Appendix C

Drawing No. 221021-SK02





**Issue Register**

No.	Date	Description	Drawn	Checked	Approved
P1	31/05/22	ISSUE FOR DISCUSSION	NH	RW	
-	-	-	-	-	-
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**General notes:-**

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2. DO NOT SCALE: USE FIGURED DIMENSIONS ONLY.
3. ALL DIMENSIONS ON DRAWINGS ARE IN METRES UNLESS OTHERWISE NOTED.

**Key**

- Site boundary
- 2.0 x 14.0m driveway visibility splays

**INFORMATION**

**Client:**  
John & Sheila Murphy

**Project:**  
The Muddies, Rathfarnham, Dublin 16

**Drawing Title:**  
Proposed Driveways  
Sightlines

**Project No:** 221021  
**Scale:** A3  
**1:250**

**Drawing No:** SK02  
**Rev:** P1

**Drawn:** NH  
**Checked:** RW  
**Date:** 31/05/2022



**Martin Peters Associates**  
Consulting Engineers

Ormeau Road  
Kilkeny  
R95 AXKX  
T: +353 96 7702761  
F: +353 96 7780728  
E: info@mpa.ie  
W: www.mpa.ie

NEW SURFACE WATER  
SOAKAWAY TO SUDS  
AND COMPLY WITH  
COUNCIL'S  
REQUIREMENT

