SNC·LAVALIN ATKINS Member of the SNC Lavalin Group

Technical Note

Project:	Adamstown		
Subject:	Aderrig Phase 2 - RFI response		
Author:	Peter Foley		
Date:	19/08/2021	Project No.:	5150924
Atkins No.:	5150924		
Distribution:	SDCC Client & Design Team		

Document history

Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
Rev 1.0	Planning – RFI response	PF	NV	NV	KB	08092021

Aderrig Phase 2

Quintain Developments Ireland submitted a planning application (Ref: SDZ21A/0014) for Aderrig Phase 2 to the South Dublin County Council (SDCC). The SDCC decision order number 1031 has requested further information in relation to the above application. Specifically, item 1 of the RFI relates to roads and transport issues.

Below is Atkins' formal response to the RFI items on behalf of our client Quintain Developments Ireland Ltd.

Atkins met and discussed the RFI with South Dublin County Council Traffic Roads Forward Planning Team (John Joe Hegarty and Yasir Khan in to discuss the roads concerns raised in the RFI and develop an appropriate solution. The content below if reflective of an agreed approach which is both in line with the objectives and aims of the Planning Scheme and is in accordance with best practice guidance such as Design Manual for Urban Streets (DMURS).

The following reports and drawings have been submitted in support of this response

Reports

- 5150924DG072 Aderrig Phase 2_RSA Stage 1_Rev1.pdf

Drawings

- 5150924/HTR/04/DR/0101/STAT P/ REV D - Road Layout sheet 1 of 2 (Tandy's Lane Village)
- 5150924/HTR/04/DR/0102/STAT P/ REV D - Road Layout sheet 2 of 2 (Tandy's Lane Village)
- 5150924/HTR/06/DR/0102 Rev _ Road Layout 1 of 2
- 5150924/HTR/06/DR/0103 Rev _ Road Layout 2 of 2
- 5150924/HTR/06/DR/0107 Rev _ Junction Visibility Splay 1 of 3
- 5150924/HTR/06/DR/0108 Rev _ Junction Visibility Splay 2 of 3
- 5150924/HTR/06/DR/0109 Rev _ Junction Visibility Splay 3 of 3
- 5150924/HTR/06/DR/0116 Rev_ – Typical cross sections

1.1. Item 1 (1)

(1) The proposed 64 perpendicular in-curtilage car parking spaces located off Linear Park Road do not appear to be compliant with the Planning Scheme and the Roads Section have raised concerns in relation to traffic hazard. 'Linear Park Road' is identified in the planning scheme as an 'Avenue', the Adamstown Street Design Guide and the Planning Scheme defines as Avenue as: '...Link Streets that provide the main means of access and circulation for public transport services, pedestrians, cyclists and motor vehicles within the SDZ area. The character of these streets will be defined by higher levels of activity, particularly around local centres, nodes and places of civic importance.' Section 6.2 of the Design Guide gives clear guidance on how an Avenue should be designed and constructed. The applicant is requested to demonstrate how the proposed parking complies with the Planning Scheme and the Adamstown Street Design Guide and submit revised proposals to incorporate parallel parking provision along the eastern boundary of the subject site. The Planning Authority understands that this will significantly reduce the parking provision at this location but considers that as the proposed parking provision is at the maximum that is required there is scope to reduce car parking across the Phase 2 lands. Furthermore, there is scope to incorporate more parallel car-parking along the southern boundary at Adamstown Way, similar to the two spaces already proposed in the Parking Strategy.

RESPONSE

The design approach to Linear Park Road has been informed by the following:

1. Adamstown SDZ Planning Scheme and other precedents;
2. An understanding of vehicular activity along this street and the adjoining road network; and
3. Best practice guidance as set out in Design Manual for Urban Roads and Streets and Manual for Streets(DMURS).

The following sections provide the above context and justification for the design approach

1. The approach was also informed through other precedents in Adamstown where streets identified as "avenues" in the Planning Scheme were downgraded to local streets with perpendicular parking to better reflect the street environment, land uses and vehicle traffic flows.

   In Development Area 6, Tandy's Lane Village, the Indicative Layout Drawing shows that the street network includes a number of "avenue" type streets, one heading north-south connecting up to a Local Centre and another traversing the tile in an east -west direction. This is shown in Figure 1.

Figure 1- Tandy's Lane Village Indicative Layout and Roads

Permission was granted by SDCC for Tandy's Lane Phase 1 under reference SDZ19A/0011 with street characteristics including:

Street Name	Road Dimensions	Parking Conditions
North South Avenue	6m	Perpendicular and Parallel parking
East West Avenue	5.5	Perpendicular parking

Figure 2 and 3 are extracts from the above planning drawings that show the typical conditions along the above streets.

Figure 2 – Extract showing perpendicular car parking on "Avenues" in Tandy's Lane Village

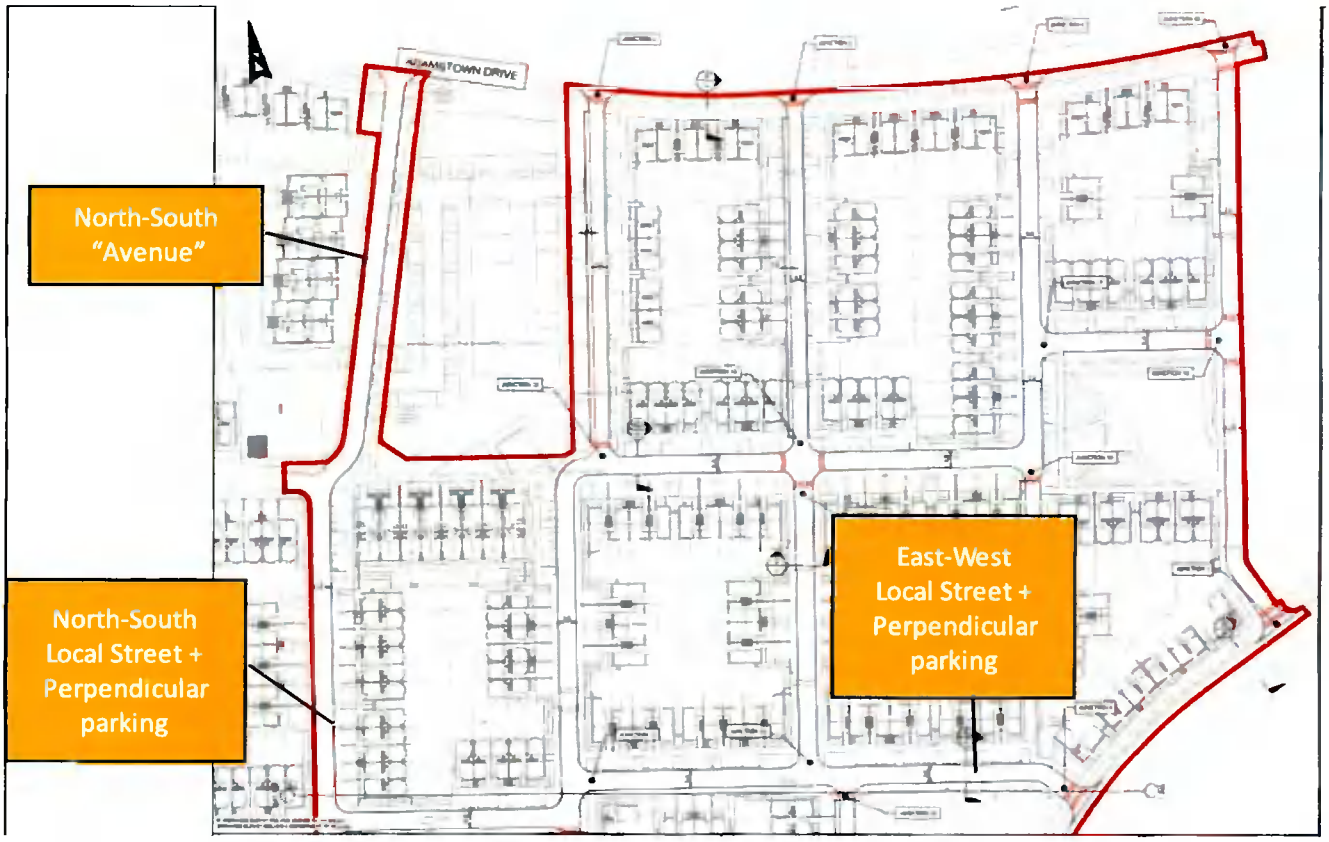
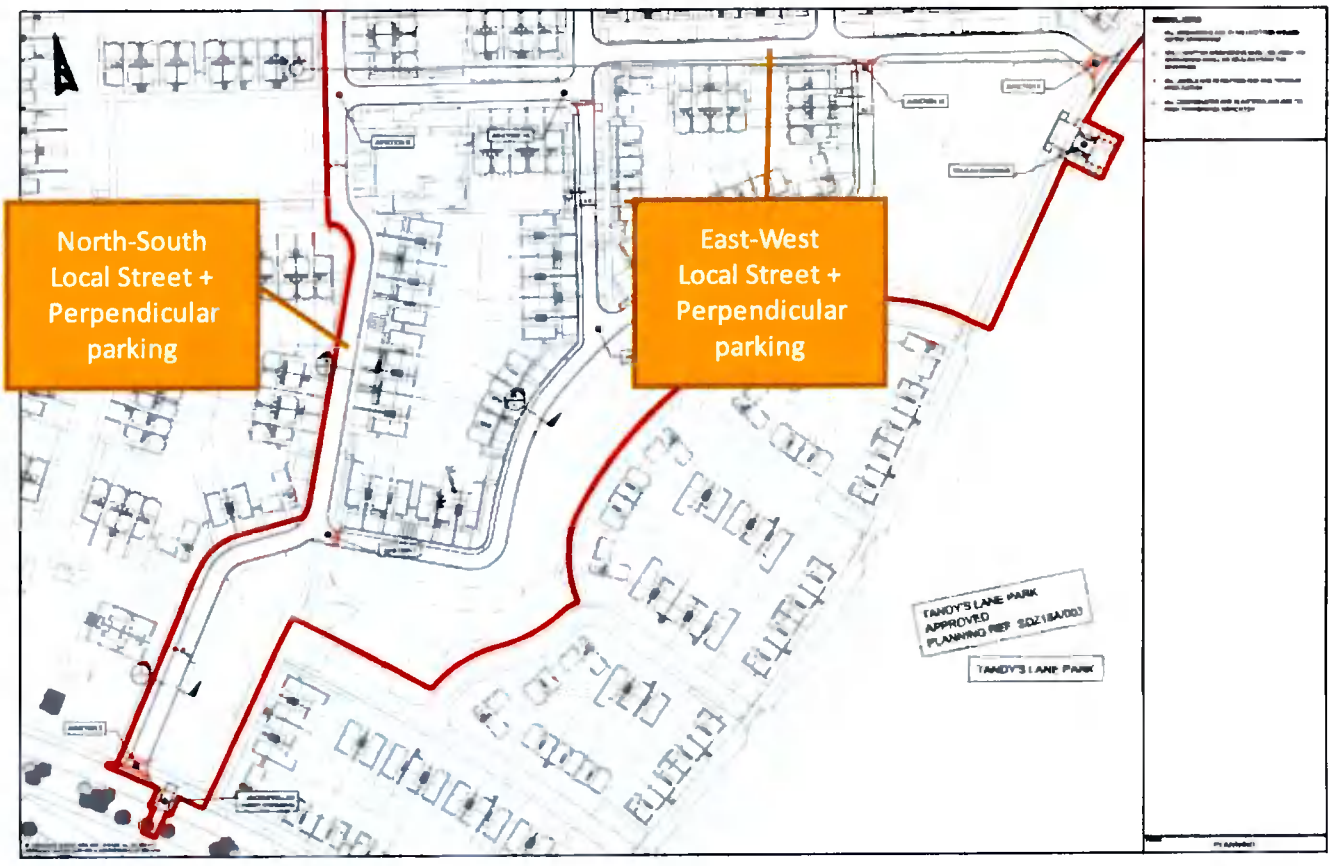


Figure 3– Extract showing perpendicular car parking on "Avenues" in Tandy's Lane Village



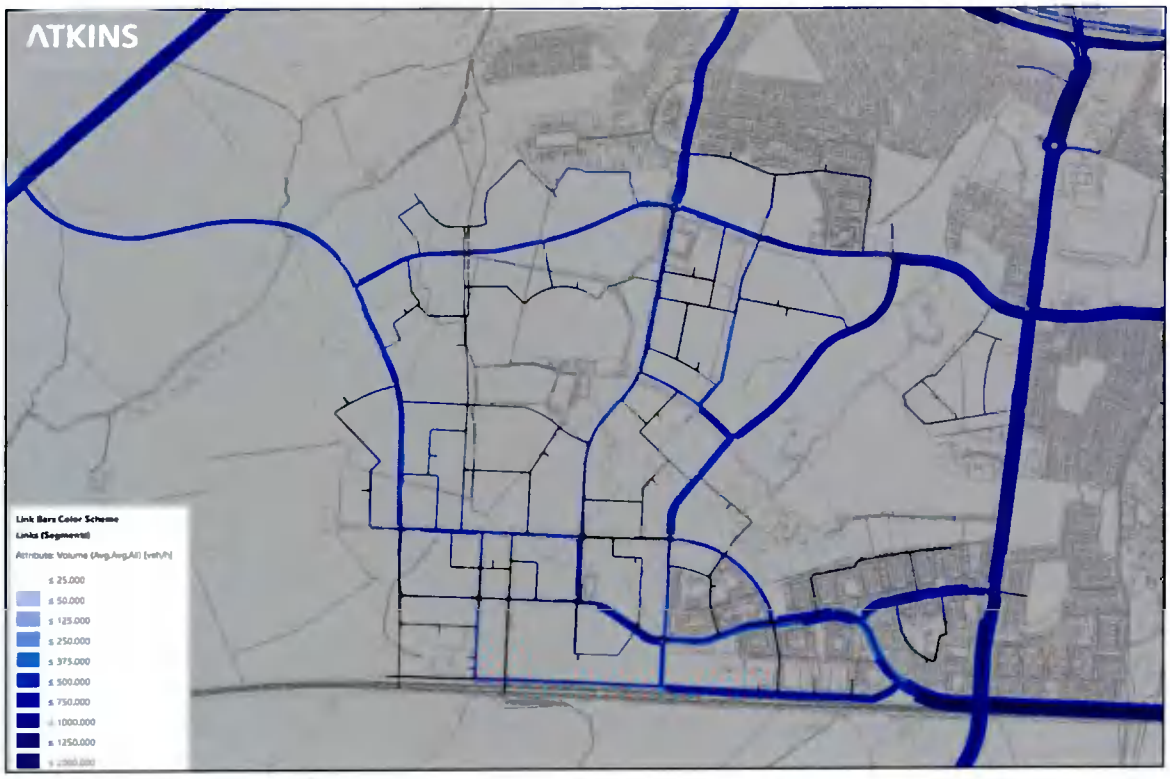
For full details please refer to Atkins drawings:

- 5150924/HTR/04/DR/0101/STAT P/ REV D - Road Layout sheet 1 of 2
- 5150924/HTR/04/DR/0102/STAT P/ REV D - Road Layout sheet 2 of 2

2. Upon review of the Adamstown VISSUM Traffic Model, produced by Atkins on behalf of Adamstown Infrastructure DAC for the entire of Adamstown SDZ, it became apparent that traffic flows along Linear Park Road are anticipated to be light in comparison to the road network surrounding it and specifically in relation to other avenues.

Figure 4- AM Peak Hour Average Traffic Volumes

Figure 5- PM Peak Hour Average Traffic Volumes



It is clear from the traffic model that vehicular flows along Linear Park Road are anticipated to be very low as shown in Table 1.

Table 1 – Traffic flows to and from Linear Park Road during AM / PM peak period

Junction 3	**PCU's AM**	**PCU's PM**
ABC to D (Linear Park Road)	41	22
D (Linear Park Road) to ABC	63	7
Junction 4	**PCU's AM**	**PCU's PM**
AC to B (Linear Park Road)	38	2
B (Linear Park Road) to AC	40	11

In traffic terms, this is less than 1 Passenger Car Unit (PCU) per minute in the AM peak entering or leaving Linear Park through either junction 3 or 4. Anticipated flows in PM peak are expected to be substantially less with maximum flows of 1 PCU every 3 minutes. These flows are more typical of very low traffic environments rather than an avenue type street.

The traffic model also shows that the north South Avenue on Tandy's Lane which was downgraded with perpendicular car parking was anticipatde to have a higher traffic flow in both the AM and PM periods than Linear Park Road.

Specifically in relation to actual traffic flows, Figures 6 and 7 below indicate anticipated AM and PM peak traffic flows from the Traffic Model on the Linear Park Road and the surrounding road network.

Figure 6 – AM Peak Traffic Flows on network surrounding Aderrig Phase 2

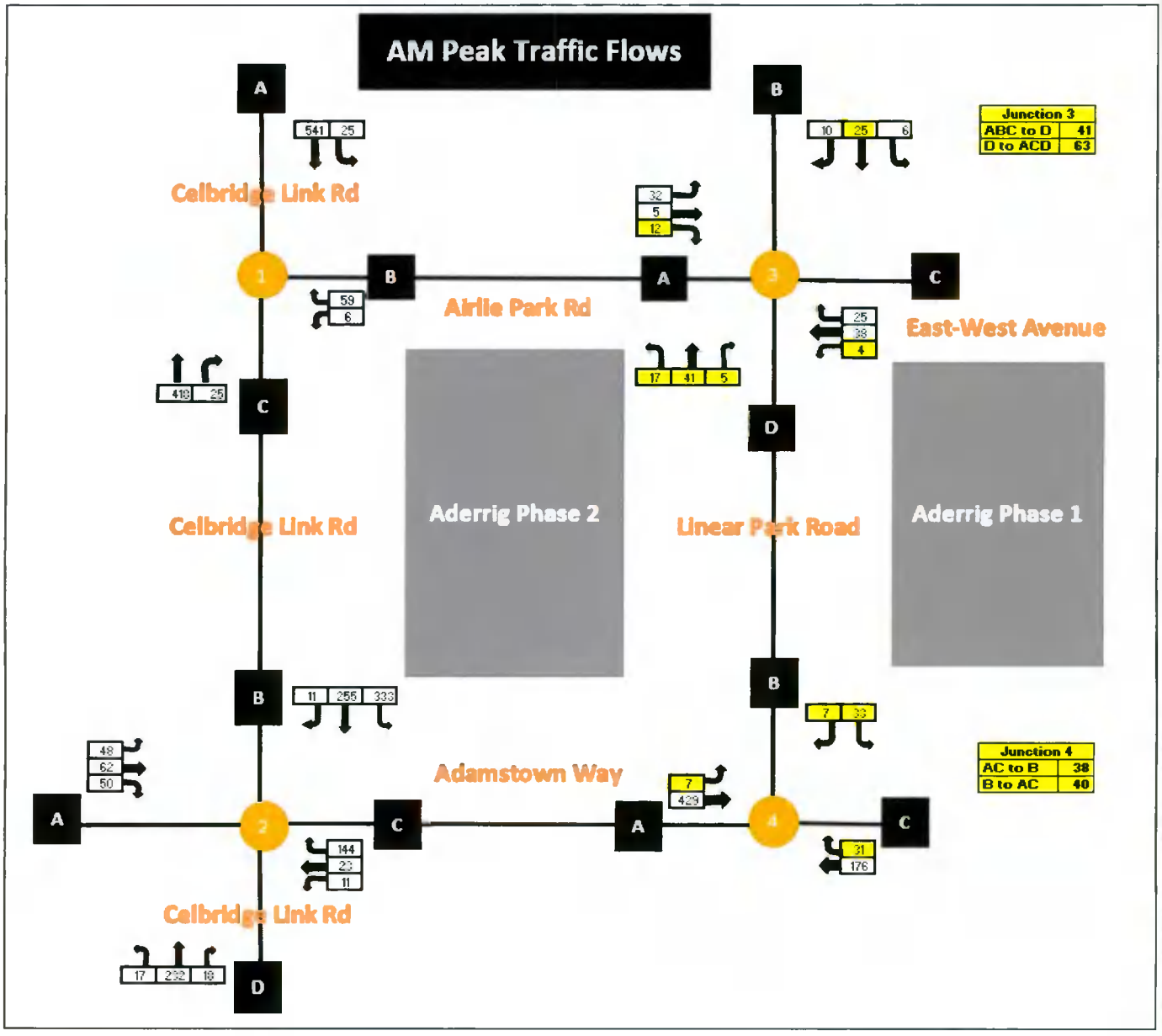
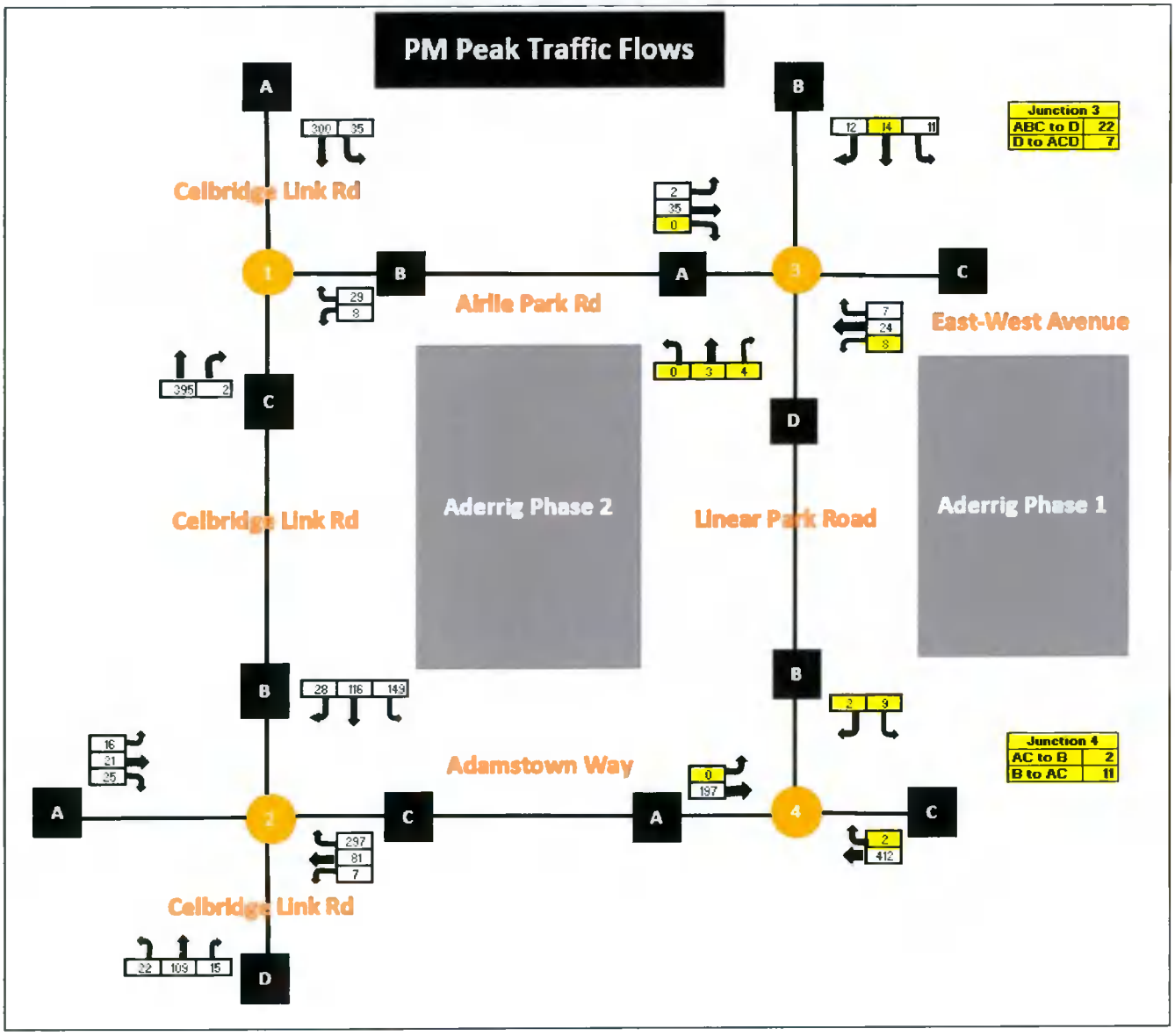


Figure 7 – AM Peak Traffic Flows on network surrounding Aderrig Phase 2



3. Based on the above precedent and understanding of the low traffic flows experienced on Linear Park Road, DMURS and the Manual for Streets Design guidance were used to inform the appropriate design approach for this street.

As set out in DMURS (Chapter 2 Re-Examining the Street) Safety (page 22-23):

"By limiting elements such as junctions and on-street car parking, the number of potential vehicular traffic conflicts/stoppages is reduced. Clearer sightlines and wide carriageways also allow for greater driver reaction time/error correction. Whilst this approach is sensible on isolated roads, within urban areas it can be counterproductive as it may transfer risk to more vulnerable users. Research has found that:

The speed at which drivers travel is principally influenced by the characteristic of the street environment

If the design of a street creates the perception that it is safe to travel at higher speeds drivers will do so, even if this conflicts with the posted speed limit.

By eliminating risk and promoting free-flowing conditions, drivers feel more inclined to drive at higher speeds. The extent to which speeding in urban areas is a problem has been identified in successive surveys carried out by the Road Safety Authority, with 3 out of 5 drivers on urban streets driving in excess of the posted speed limit.

The solution to this is the development of self-regulating streets that mange driver behaviour and calm traffic promoting safer streets. There are a range of traffic calming measures[1] that can be incorporated to achieve this including:

- Introduction vertical and horizontal deflection
- Reducing street widths
- Reductions to forward visibility
- Sense of enclosure and active frontages
- Increased pedestrian activity
- On street parking, particularly perpendicular parking to the carriageway

Given that there is a linear park on the eastern side of the street, the sense of enclosure and active frontage along Linear Park Road is only really achieved by the dwelling units associated with Aderrig Phase 2. In order to calm traffic and create a self-regulating street, the design approach considered most appropriate was to introduce perpendicular parking along the street frontage as recommended in the Manual for Streets. This traffic calming will also benefit future users of the primary school proposed at the junction of Linear Park Road and East-West Avenue. The traffic calming will slow vehicle speeds and make this a more holistically pleasant environment which will encourage active travel modes for pupils.

Subsequent discussions with Brendan Jackson of Goodrock have confirmed that this is an appropriate design approach for this street in the context of the surrounding road network.

[1] See Manual for Streets section 7.4.4
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/341513/pdfmanforstreets.pdf

1.2. ITEM 1(2)

(2) The applicant is requested to submit a rationale for the following and submit revised proposals to address the Planning Authority's concerns:

(a) Location of the proposed Disabled Parking: The Planning Authority considers that the majority of the 8 proposed parking spaces should be located centrally within the Home Zones where off-curtilage car parking is provided.

(b) Location of the proposed EV charging parking locations: The Planning Authority considers that the majority of the EVC parking spaces should be located centrally within the Home Zones where off-curtilage car parking is provided.

(c) The provision of both in- and off- curtilage parking at Side Streets 1 and 4. The Planning Authority seeks an understanding of the parking proposals for Side Streets 1 and 4 as indicated on the 'Parking Strategy' Drawing, where in- and off-curtilage parking are identified in the same bays. It is not clear how the 'off-curtilage' car parking space can be identified once constructed and how this will be managed.

RESPONSE

1 (2) (a) Location of the proposed Disabled Parking

Adjustments have been made to the location of the disabled parking spaces to address the Councils concerns (See BKD Drg 6259 -P-006). It is important to note that the Duplex units located on Home zones 1,2,3 and 4 have own door access for ground floor and upper floor units on opposing sides. In Home Zone 1, for example, all ground floor units are accessed from front doors on Celbridge Link Road with upper level units accessed from Home Zone 1. To facilitate the shortest access route to both upper and lower units, the disabled parking spaces are located both centrally in the Home Zone and at the ends of the Home zone.

1 (2) (b) Location of the proposed EV charging parking locations:

Adjustments have been made to the location of EV charging spaces to provide more charging points in the Home Zones while still providing some charging facilities on the Side Streets which provides an even spread of EV charging spaces across the scheme. (See BKD Drg 6259 -P-006).

1 (2) (c) The provision of both in- and off- curtilage parking at Side Streets 1 and 4.

The parking arrangements proposed at Side Streets 1 and 4 are now more clearly shown in BKD Drg No. 6259-P-010 and BKD Drg No. 6259-P-011. The off curtilage spaces will be controlled by the Management Company and will be marked out with a change of paving surface material and a bollard to identify the boundary between these spaces and the "In curtilage spaces" provided for the other dwellings on this side of the street. Hedging will also be provided around the off-curtilage spaces to provide further identification while offering privacy to houses.

1.3. ITEM 1(3)

(3) The applicant is requested to submit:

(a) A Road Safety Audit for the entire site.

(b) A Traffic and Transport Assessment (TTA).

(c) A Mobility Management Plan.

RESPONSE Item 1 3a

A Stage 1 Road Safety Audit for the entire site is attached with this RFI cover note. Please refer to the following Atkins Document:

- 5150924DG072 Aderrig Phase 2_RSA Stage 1_Rev1.pdf

RESPONSE Item 1 3b & c

In relation to the request for a Traffic and Transport Assessment (TTA) and a Mobility Management Plan (MMP), it is noted that the submission of these two documents has previously not been required by SDCC for residential planning applications in Adamstown SDZ. Recent granted residential planning applications include the following:

Name	SDCC Ref	Brief Development Description
St Helens, Tandy's Lane	SDZ20A/0020	construction of 113 residential units
Aderrig Phase 1	SDZ20A/0017	Construction of 235 dwelling units
Tandy's Lane Village Phase 1	SDZ19A/0011	Construction of 245 dwelling units

Discussion with South Dublin County Council Traffic Roads Forward Planning Team (John Joe Hegarty and Yasir Khan) confirmed that a TTA and MMP are not required as these elements have already been dealt through the development of the Planning Scheme that included a strategic transport assessment that covers the work of the TTA.

1.4. ITEM 1(4)

(4) A revised roads layout to include details plans showing the following (demonstrated to be in compliance with the Adamstown Street Design Guide):

(a) Junction radii dimensions which are a minimum of 4.5m within the development and a minimum of 6.0m at the junction of Airlie Park Road, Adamstown Way and Celbridge Link Road in accordance with recommended DMURS design.

(b) Sightlines with shown dimensions of 2.0m x 23m internally within the site and sightlines of 2.4m x 49m at the junctions with Airlie Park Road, Adamstown Way and Celbridge Link Road. Sightlines must be clear and unobstructed, and it must be demonstrated that planting or car parking will not obstruct any part of the visibility splay.

(c) The transitions between road and homezone at (3, 6, 12 and 13) should be revised to omit the protruding kerb line at the junction which may result in vehicles over-running the corner and will result in a traffic hazard for pedestrians.

RESPONSE Item 1 -4a

All junction radii within the development comply with the Adamstown Street guidance in that:

- Internal junction radii = 4.5m
- External junction radii = 6m

For details of junction radii please refer to Atkins Drawings:

- 5150924/HTR/06/DR/0102 Rev _ Road Layout Sheet 1 of 2
- 5150924/HTR/06/DR/0103 Rev _ Road Layout Sheet 2 of 2

An example of the junction radii is shown in Figure X

RESPONSE Item 1- 4b

All sightlines the development comply with the Adamstown Street guidance in that:

- Internal sight lines = 2.0m x 23m
- External sight lines = 2.4m x 49m

For details of sightlines please refer to Atkins Drawings:

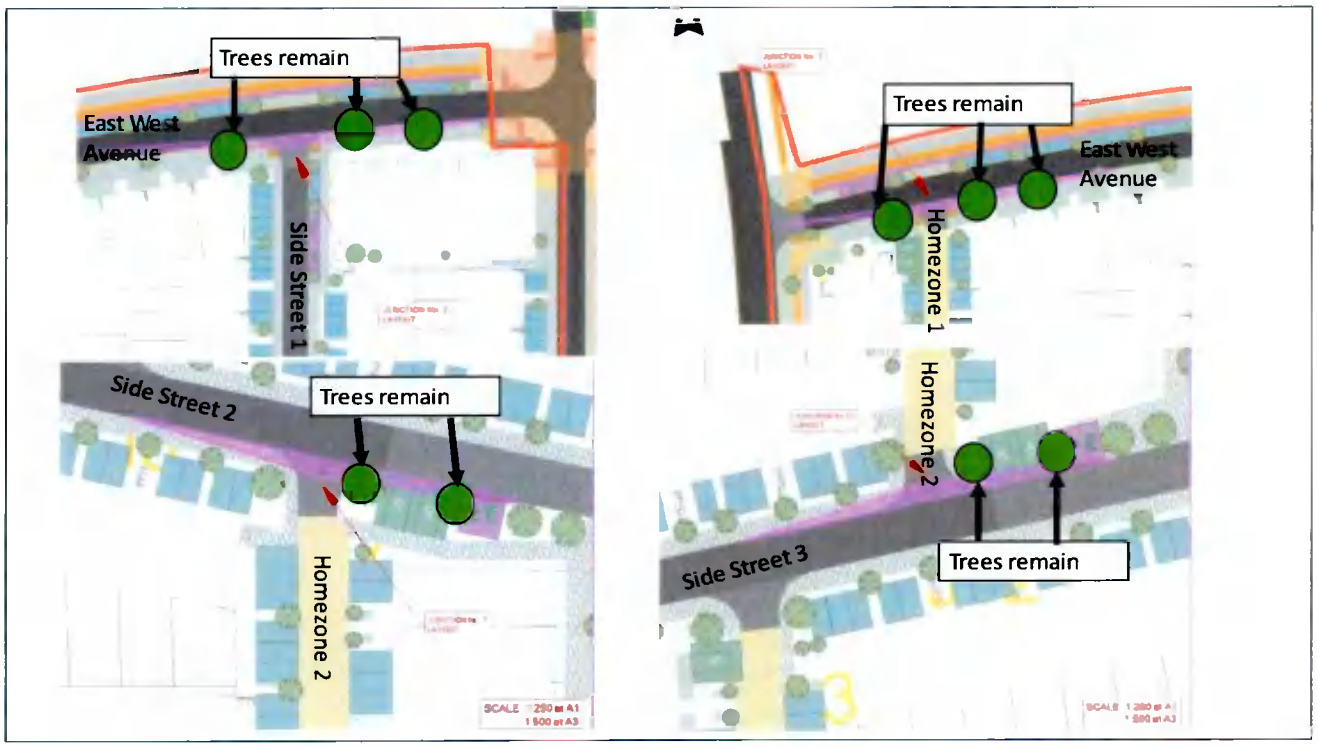
- 5150924/HTR/06/DR/0107 Rev _ Junction Visibility Sheet 1 of 3
- 5150924/HTR/06/DR/0108 Rev _ Junction Visibility Sheet 2 of 3
- 5150924/HTR/06/DR/0109 Rev _ Junction Visibility Sheet 3 of 3

In general, sightlines are unobstructed by landscaping and/or parking. However, there are a number of locations outlined below where sightlines are slightly obstructed. Where partial obstruction of sightlines is occurring, this is a result of SDCC requirements for the provision of street trees along all roads. Examples are shown at the following junctions:

- Junction 2 – East West Avenue and Side Street 1;
- Junction 3 – East West Avenue and Home Zone 1;
- Junction 7 – Side Street 2 and Home Zone 2; and
- Junction 12 – Side Street 3 and Home Zone 2.

An extract from the detailed visibility drawings is shown on Figure 8.

Figure 8 Extract showing visibility splays



Given that the streets have been designed as low traffic, low speed environments in compliance with DMURS principles, it is considered that the landscaping shown above do not represent a road safety risk and should be retained. However, if SDCC considers that the street trees compromise visibility splays and highway safety, then they can be removed. This of course will compromise the ability to provide street trees along this street.

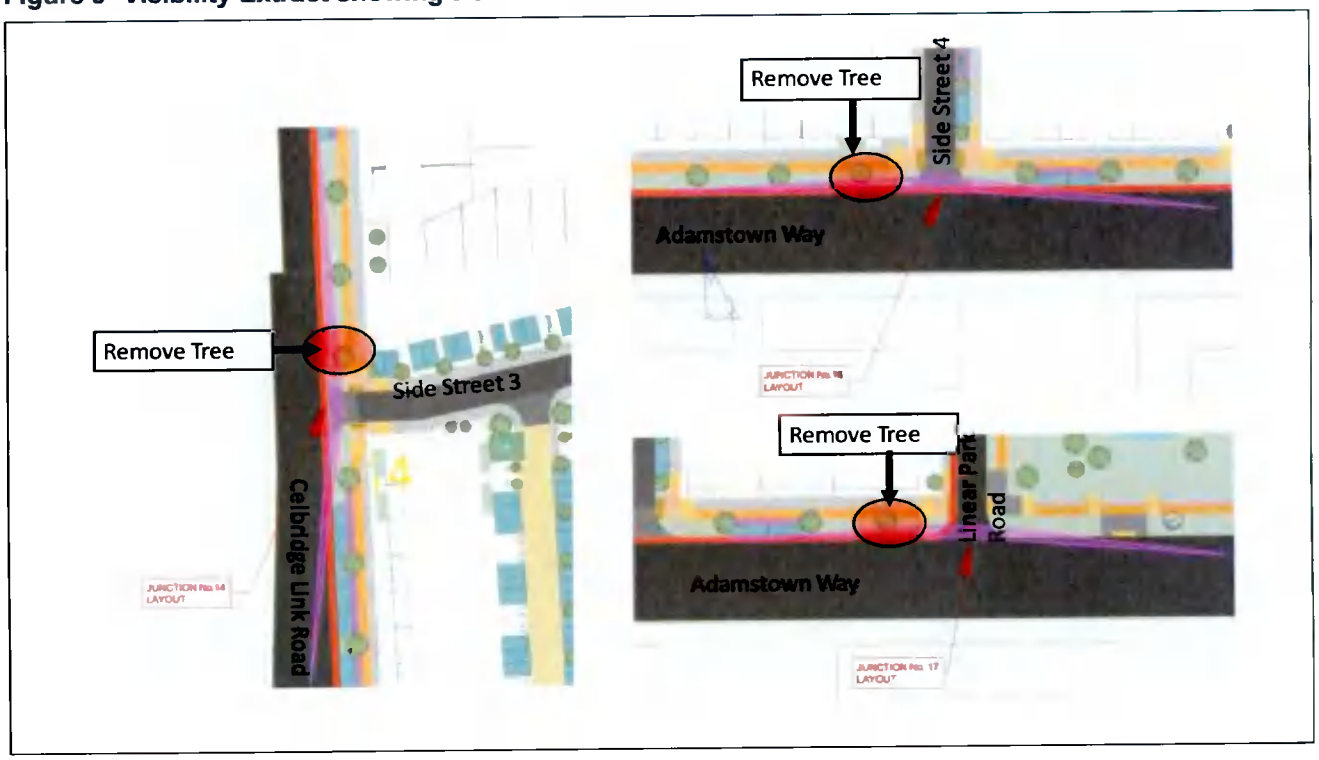
In relation to the following junctions:

- Junction 14 – Celbridge Link Road Side Street 3;

- Junction 16 – Adamstown Way / Side Street 4; and
- Junction 17 – Adamstown Way / Linear Park Road.

It is noted that some street trees are located in the visibility splay as shown in Figure 9. Given the higher volume of traffic on Celbridge Link Road and Adamstown Way it is recommended that the street trees located in the visibility splay are removed. As noted above, this will result in a reduction of the number of street trees achievable along these avenues.

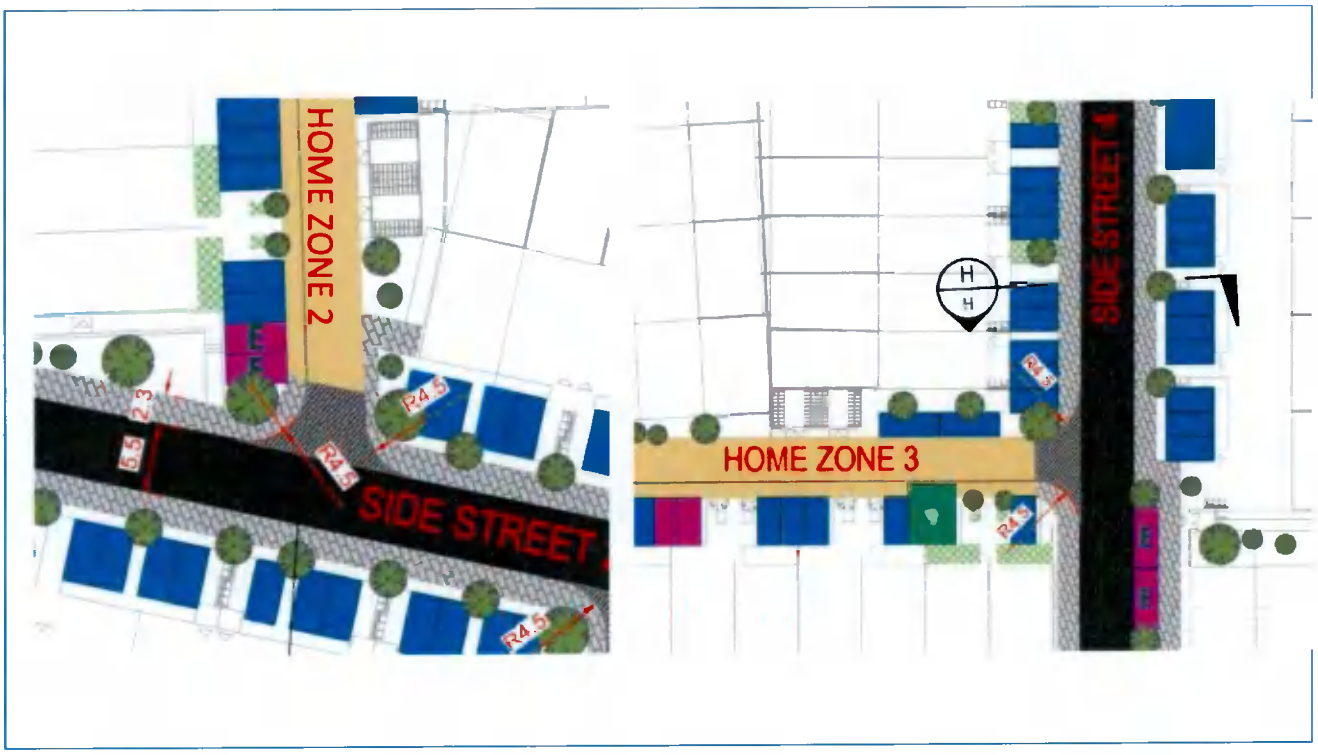
Figure 9- Visibility Extract showing trees to be removed



RESPONSE Item 1 – 4c

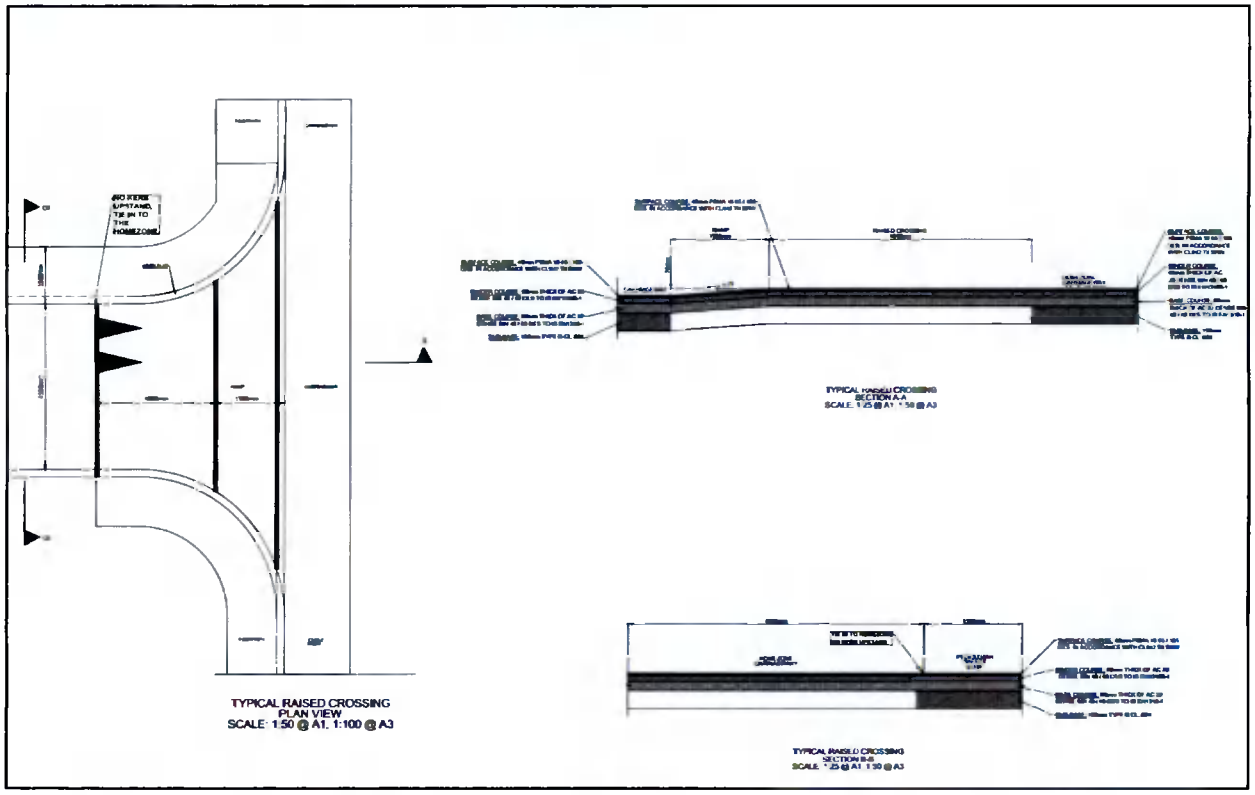
The transitions between road and homezone at has been updated to show that there is no protruding kerb line as shown in Figure 10.

Figure 10: extract from updated road layout drawings showing appropriate tie ins



The design reflects the same approach taken to the transition between home zones and side streets elsewhere across Adamstown, consisting of a raised entry treatment that ties into the homezone creating a flat surface with no kerb upstand. The drawing 5150924HTR/06/DR0116- Typical Cross Section shows this treatment in more detail. An extract of which is shown in Figure 11 below

Figure 11: Typical Cross Section of raised entry treatment



Drawings have been updated to reflect this design change. For details refer to Atkins Drawings:

- 5150924/HTR/06/DR/0102 Rev _ Road Layout Sheet 1 of 2
- 5150924/HTR/06/DR/0103 Rev _ Road Layout Sheet 2 of 2
- 5150924HTR/06/DR0116- Typical Cross Section