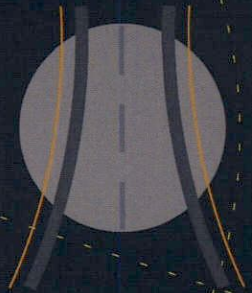
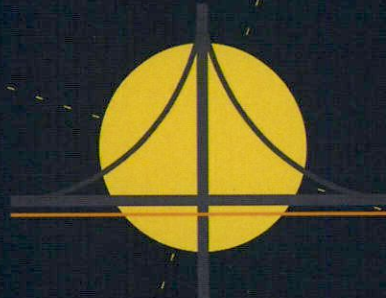
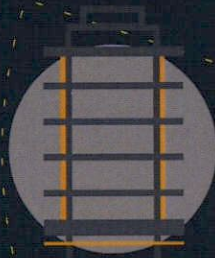


Clonburris T3

Road Safety Audit Response Report

CLB-T3-ZZZ-SW-DTM-RP-DBFL-CE-0005

INFRASTRUCTURE



April 2023



DBFL CONSULTING ENGINEERS



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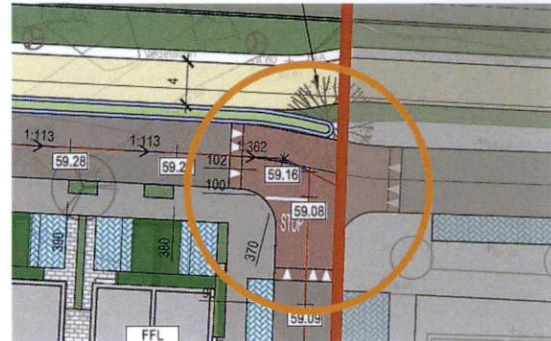


2 Stage 1 Road Safety Audit Items and Detailed Responses

2.1 Problems at General Locations

Location (G1) – Dropped Kerbs and Tactile Paving Problem

The drawings provided for the purpose of the RSA do not show provision of dropped kerbs and tactile paving at certain locations where pedestrian crossing points are proposed. This could lead to accessibility issues for road users, particularly wheelchair users and can cause confusion for partially sighted pedestrians who may encounter difficulties when crossing the road carriageway.

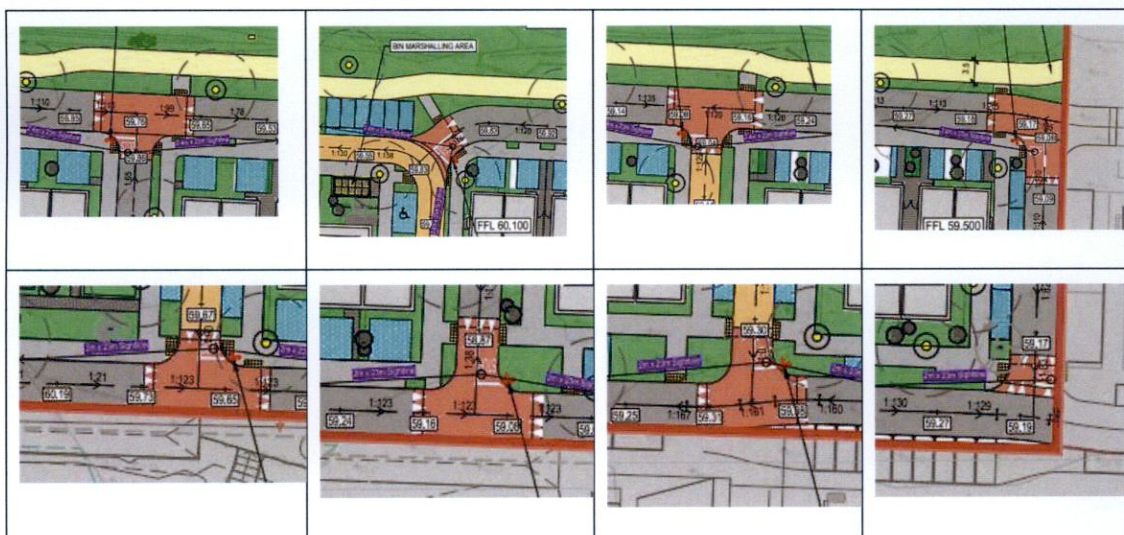


Recommendation:

It is recommended that dropped kerbs and / or tactile paving in accordance with the appropriate design recommendations is provided at all key pedestrian travel desire lines that require a pedestrian to cross a road carriageway.

Solution Implemented:

Pedestrian road crossing points and tactiles at all appropriate locations have been added to ensure safety of regular and disabled pedestrians. Key pedestrian desire lines have been considered at intersections and as close as possible to the middle of residential housing blocks.



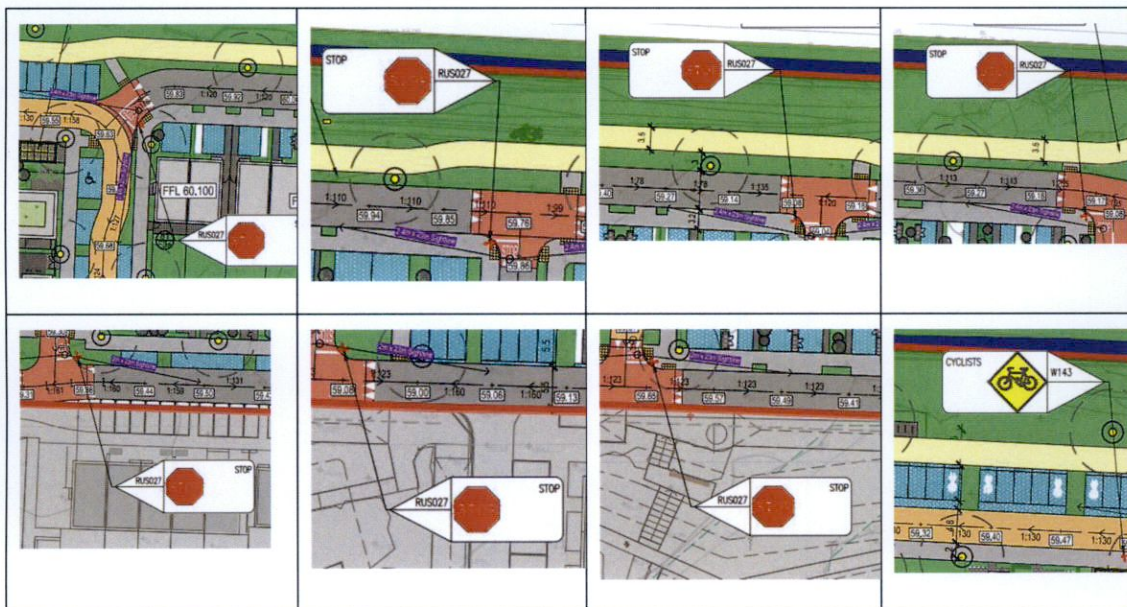
junctions which may lead to side impact collisions with vehicles travelling along the major arm through junctions.

Recommendation:

It is recommended that appropriate road marking and signages are provided in accordance with the requirements of the Traffic Signs Manual.

Solution Implemented:

Proposed signage has been added to the roads layout drawing CLB-T3-95-SW-DTM-DR-DBFL-CE-1201 in accordance with the Traffic Signs Manual.



Location (G4) – Street Lighting

Problem

No details regarding the proposed schemes street lighting have been provided to the audit team. As a result, the audit team cannot comment upon the appropriateness of the proposed schemes street lighting strategy.

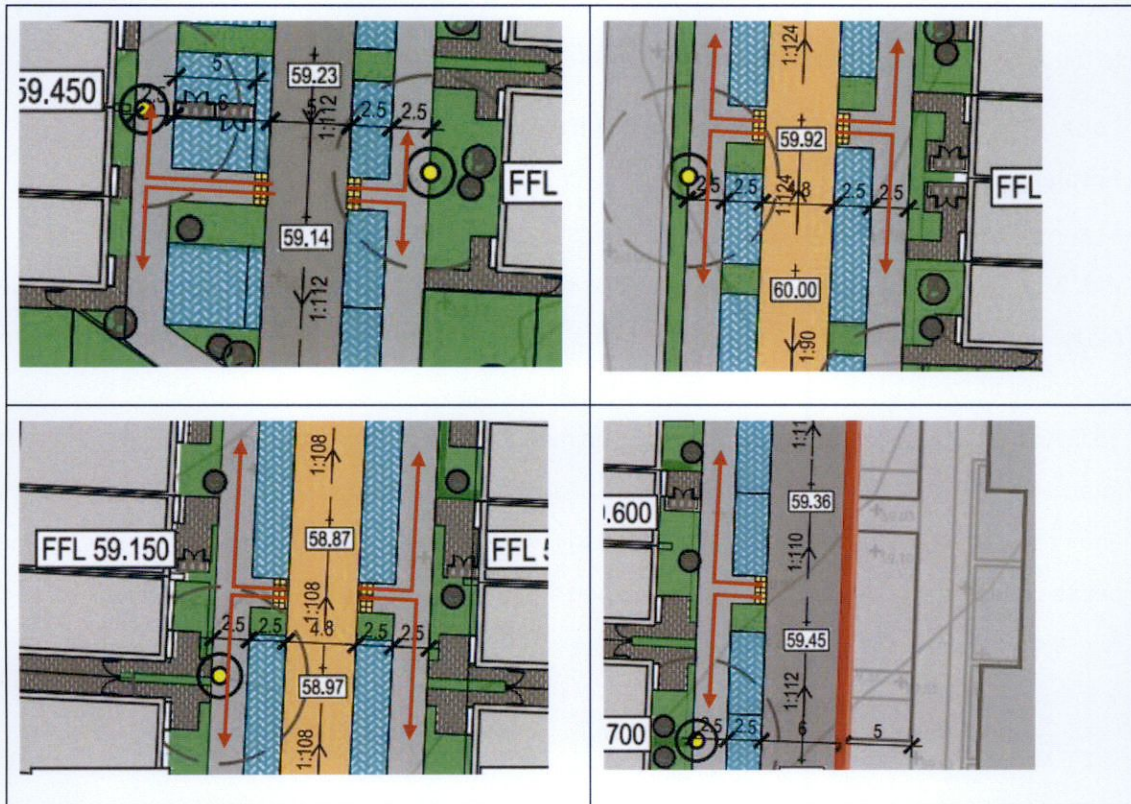
Recommendation:

Ensure appropriate street lighting is provided across all pedestrians, cycle, and vehicle routes.

Solution Implemented:



the middle of the streets to allow a link from the houses to the road for bin collection. Refer to drawing CLB-T3-95-SW-DTM-DR-DBFL-CE-1201 for further details.



Location (G6) – Surface Drainage

Problem

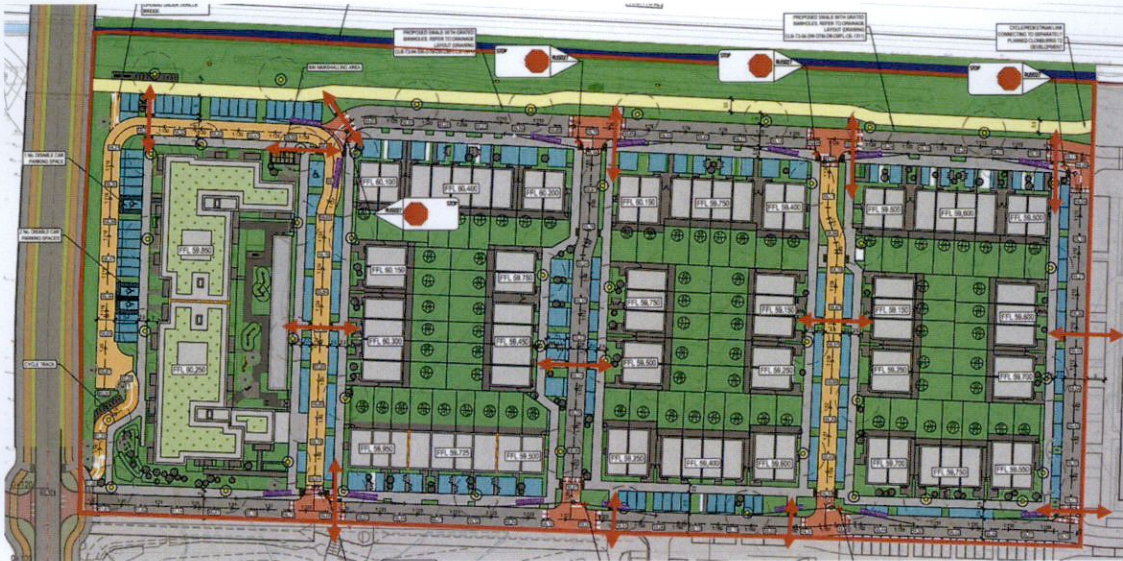
From the scheme information provided for this audit, it has not been possible to ascertain the specific details of the surface drainage strategy. Surface water can prove a trip hazard in both warm and cold weather conditions in addition to adversely impacting the skid resistance of bicycles and motorized vehicles.

Recommendation:

During the detail design stage, the design team should provide adequate measures are taken to ensure that all surface areas benefit from having sufficient drainage and that localised ponding does not arise during wet weather conditions. All access routes leading to/from the subject site should have adequate surface water drainage.

Solution Implemented:

Appropriate pedestrian crossing points have been added at all desire lines indicated in the Road Safety Audit. Refer to drawing CLB-T3-95-SW-DTM-DR-DBFL-CE-1201.



Location (G8) – Long Straight Sections of Carriageway

Problem

The internal local roads exhibit long straight sections with the carriageway lacking necessary traffic calming measures. This could lead to high excessive vehicle speeds. Higher speeds would lead to higher severity injury collisions should a driver lose control or come into contact with another road user.

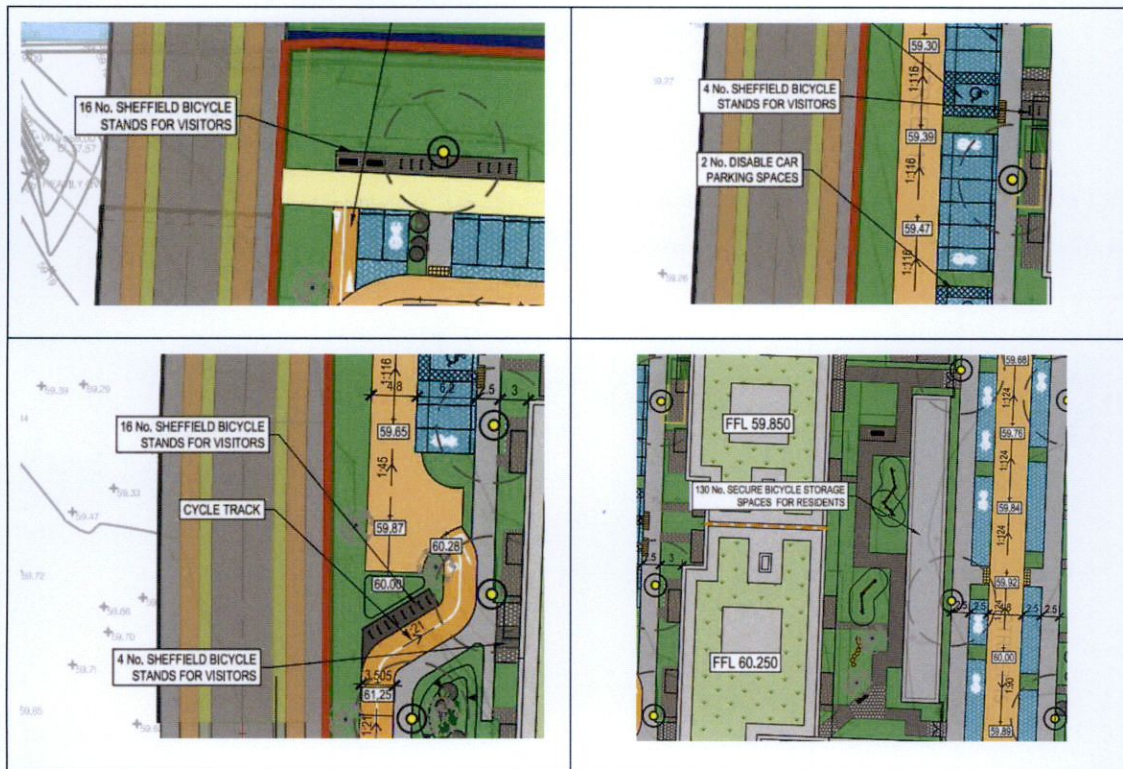
Recommendation:

The designers are requested to confirm the adopted design speed for each of the development streets. It is recommended that suitable traffic calming measures are provided to manage vehicular speeds along the local road/streets and ensure vehicle drivers do not exceed the adopted design speed. The measures should be in compliance with the principles set out in DMURS in regards to managing vehicle speeds.



Solution Implemented:

The design speed of the development is 30km/h. Several bends in alignment have been introduced in Local Streets and different carriageway treatment utilised in Home Zones to manage vehicle speeds. Additional raised intersections and pedestrian crossings have also been introduced to



Location (G10) – EV Parking

Problem

It is noted upon review of TTA report that a minimum of 34 no. electric vehicle (EV) parking spaces will be provided. However, the scheme does not provide details of the location and size of EV parking bays or the location of EV charging points. The auditors are concerned that the proposed EV parking bays may be of a substandard size that could impact accessibility and result in cables encroaching to the public footpath which would represent trip hazard. Furthermore, the auditors are concerned that EV charge point may be located in either 1) the public footpath which could subsequently represent obstruction and /or 2) a grass landscaped area which, particularly in wet conditions, could be slip hazard for drivers seeking to access the charge point.

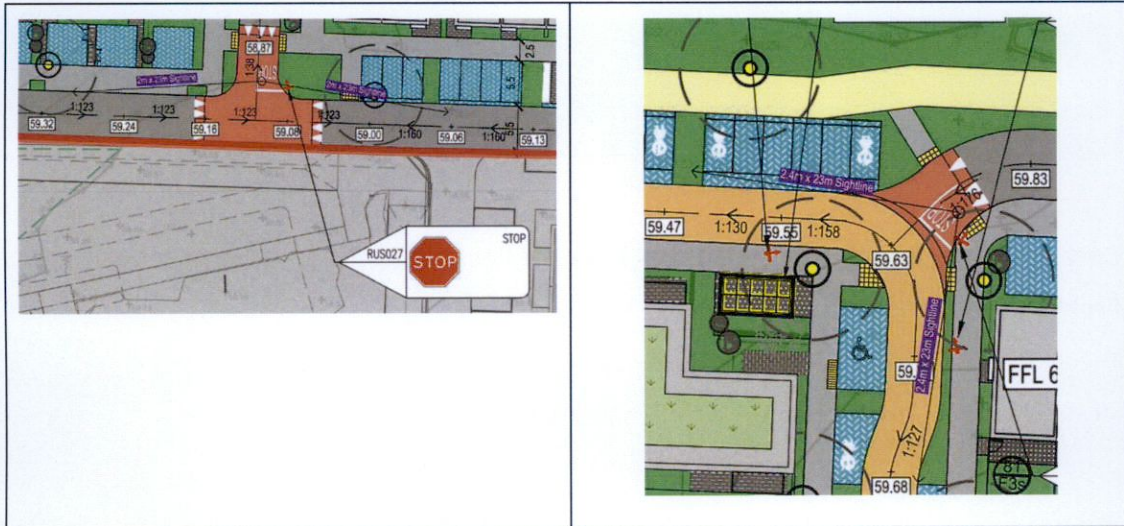
Recommendation:

The designers are requested to confirm the location and size of all EV parking spaces meet best practice design guidance. EV charging points should be located in an area of hard standing, outside of the footpath area, and in close proximity to EV bays.

Solution Implemented:



Visibility splays have been indicated on the roads layout CLB-T3-95-SW-DTM-DR-DBFL-CE-1201 to ensure there are no obstructions to any vehicle sight lines at junctions



2.2 PROBLEMS AT SPECIFIC LOCATIONS

Location (S1) – Mobility Impaired Parking Bay

Problem

The mobility impaired parking bays are proposed to adjoin the landscaping area that does not provide a hardstanding area or dropped kerbs. A disabled person may find it difficult when entering / egressing the vehicle parked at this bay if a kerb is present which could result in a fall and cause an injury.

Recommendation:

It is recommended that appropriate hardstanding areas with dropped kerb are provided to connect the parking bay with the footpath. The layout of 'parallel' disabled bay should respect the guidance outlined in the Traffic Signs Manual.

Solution Implemented:

Dropped kerbs have been provided for all disable parking bays to allow users to access the adjacent footpaths as per the Traffic Signs Manual. Refer to the roads layout CLB-T3-95-SW-DTM-DR-DBFL-CE-1201.





Location (S3) – Parking Bay Close to Two-Way Cycle Track

Problem

It is noted that the proposed two-way cycle track located to the south-west of the site is located very close to the car parking bay along the frontage of Block B. Vehicle reversing out from parking bay would encroach onto the two-way cycle track. A conflict could occur between a cyclist travelling northwards and a vehicle reversing at the same time.



Recommendation:

The two-way cycle track could commence / terminate further south to ensure that a reversing vehicle does not need to drive onto the cycle track.

Solution Implemented:

The roadway could not be extended as suggested as the cycle link to the south would no longer meet part M gradient requirements. Parking bays were however moved farther north and a hammerhead has been introduced to assist vehicle turning and create a safe tie-in space for the cycle track to the roadway.





Location (S5) – Tactile Paving

Problem

The tactile paving on the eastern edge of the minor arm is misleading and would currently direct visually impaired pedestrians towards the carriageway resulting in collisions .

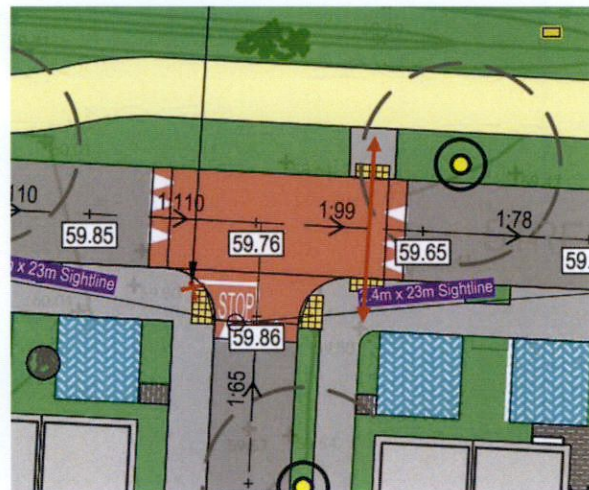


Recommendation:

Ensure tactile paving is appropriately placed . A separate tactile paving should be provided for north-south movements at the eastern arm of this junction.

Solution Implemented:

Separate tactiles have been provided for the north-south and east-west pedestrian routes to avoid any confusion of visually impaired users of the footpaths.





Location (S7) – Lack of Vehicle Turning Head

Problem

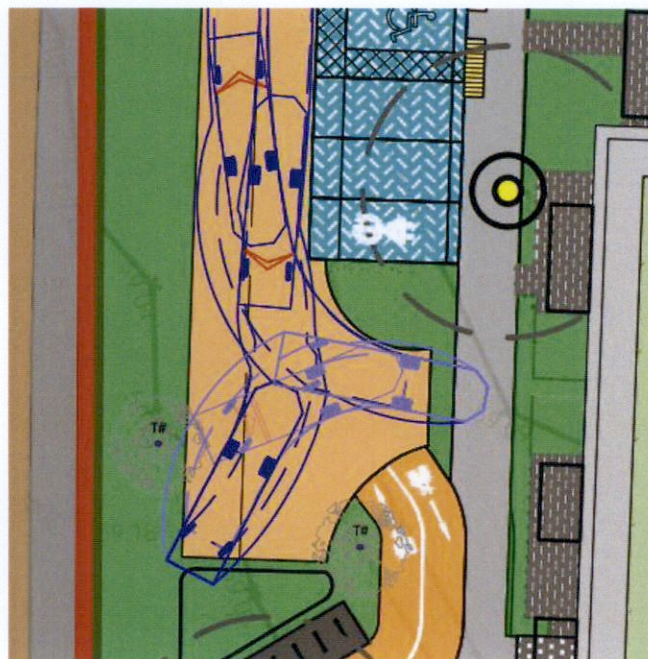
It is unclear how cars and large refuge vehicles will be able to access and undertaking u turn manoeuvre at the southern termination of the north-south street located immediately to the west of apartment block at the western edge of the site. The auditors request clarification regarding how large vehicles can be accommodated as the road terminates with a cul-de-sac.

Recommendation:

To ensure a safe and convenient turning movement at this location, it is recommended to provide a turning head on this carriageway.

Solution Implemented:

A turning head has been added to the end of Street 14 to allow sufficient turning space for a fire tender vehicle. Refer to drawing CLB-T3-95-SW-DTM-DR-DBFL-CE-1202 for further vehicle tracking details for the site.





Location (S9) – Classification of East-West Road

Problem

The designers are requested to clarify the intended function and associated traffic characteristics of the east-west orientated street along the southern boundary of the subject Tile 3 plot. The proposals advocate the potential for perpendicular car parking along the northern and southern sides of this street. It is noted that DMURS does not permit such perpendicular parking arrangements on either arterial or link streets due to problems associated with vehicles reversing into and from a high volume trafficked street.

Recommendation:

In the context of the overall SDZ master plan proposals and , the number of external plots serviced by this east-west oriented Tile 3 street, the designers are requested to clarify the function of this street in reference to DMURS principles. Should it be classified as a 'link' street (or above) then the specification of perpendicular parking should be revisited. If the street is to function as a local street then additional traffic calming should be considered.

Solution Implemented:

As stated and accepted in the Road Safety Audit responses. The East/West street along the southern border of the subject site is designed as a Local Street. A parallel 'Link' street is to be provided a short distance to the south as part of another phase of the SDZ development. The additional measures now Yes 220047 incorporated in response to G8 will ensure that vehicle speeds are maintained to that appropriate for a Local street.

Location (S10) – Perpendicular Parking Bays

Problem

The auditors have noted that perpendicular car parking bays are provided immediately adjacent pedestrian walkways in several locations. It is noted that there are no physical barriers (e.g. bollards, wheel stops etc) between the parking bays and pedestrian walkway. There is a risk that drivers parking their cars (or worse case light goods vehicle such as vans) may cross over / encroach into the intended pedestrian footway resulting in pedestrian / vehicle collisions and / or pedestrian movements becoming obstructed.

Recommendation:

It is recommended that measures are implemented to prevent vehicles encroaching into the pedestrian footway.



3 COMMENTS

Comment (C1) – Junction Performance

The subject Tile 3 development is proposed to be accessed via a priority controlled junction located south-west of the site. This junction will also be used by other development Phases of Clonburris SDZ, therefore, the auditors feel that the priority arrangement of this junction, due to anticipated high traffic volume may result in the junction poor performance. The designer may consider signalised junction arrangement which could operate better in this case.



Solution Implemented:

The Link Street adjacent to the proposed development has been granted planning under a separate planning application and has been deemed compliant.

Comment (C2) – Need for Controlled Pedestrians Crossings

Further to C1, uncontrolled crossing is provided at the site access junction. The auditors feel that there is a need for controlled crossing for pedestrian and cyclists at this location due to anticipated high number of pedestrians and cyclists using the facility.



Solution Implemented:

The Link Street adjacent to the proposed development has been granted planning under a separate planning application and has been deemed compliant.