DMURS Quality Audit

Proposed Large Residential Development at Castlelands, Mallow, Co. Cork

Reside (Castlepark) Ltd

October 2024 **HDC1340/13**

Hegsons Design Consultancy Limited

Dublin I Cork I Bedford I High Wycombe I Buxton I Saint-Denis-Le-Gast

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Proposed Large Residential Development
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HEGSONS
Design Consultancy limited

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Contents

1 Introduction

This Quality Audit report has been prepared by Hegsons Design Consultancy Ltd for the proposed development of 469 No. residential units, 1 No. Crèche on site and an upgrade of the existing former lodge at Castlepark, Castlelands, Mallow, Co Cork, on behalf of Reside (Castlepark) Ltd.

2 Methodology

This DMURS Quality Audit has been prepared in the context of the following:

- The Department of Transport (DoT) Design Manual for Urban Roads and Streets (DMURS), including Advice Note 4 – Quality Audits;
- Cork County Council's Cork County Development Plan 2022-2028 Volume Three North Cork;
- A site inspection by Hegsons Design Consultancy Ltd, most recently on the 20th September 2024;
- The Department of Transport (DoT) Design Manual for Urban Roads and Streets (DMURS);
- The National Disability Authority (NDA) Guidelines for Access Auditing of the Built Environment;
- The NDA Shared Space, Shared Surfaces and Home Zones from a Universal Design Approach for the Urban Environment in Ireland; and
- The Irish Wheelchair Association (IWA) Best Practice Guidelines, Designing Accessible Environments.

DMURS Advice Note 4 – Quality Audits states that *"the Quality Audit Report will summarise the issues raised within each individual Design Audit, identify any potential conflicts between audits and propose solutions."* The Advice Note indicates that individual design audits *"will consist of a DMURS Street Design Audit and other individual Design Audits that assess different aspects of street design, as required."*

3 Description of Proposed Development

The proposed residential development site is located on the east side of Mallow town centre at Kingsfort Avenue, Castlepark, off St. Joseph's Road, in the townland of Castlelands, within the urban speed limit zone.

The subject site is located within lands at St. Joseph's Road, Mallow, Co. Cork. The is located approximately 800m east of Mallow town centre. The site is bordered by existing residential developments to the west and north and green fields to the south and east. Mallow GAA complex is located approximately 1.2km north-east of the site. The land use in the area is generally a mix between residential and agricultural.

The proposed residential development site location is shown in Figure 3.1.

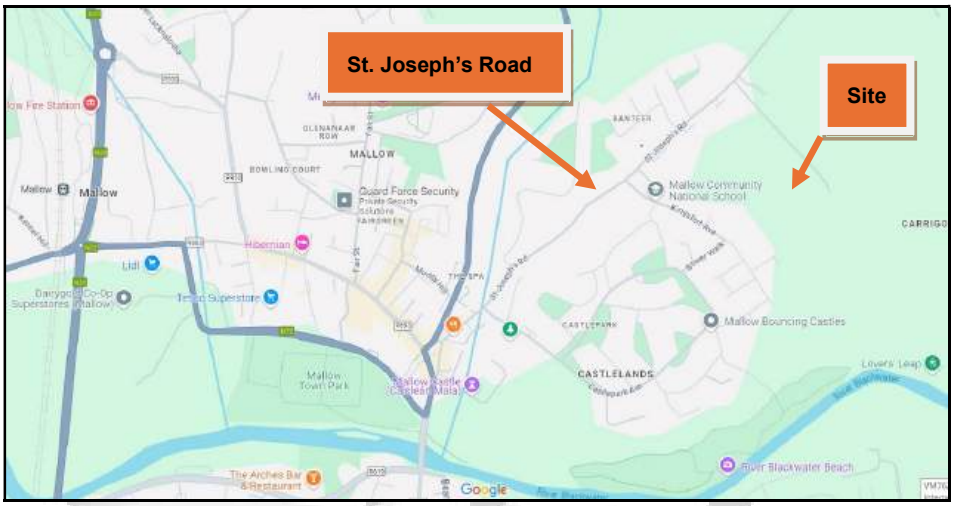


Figure 3.1: Proposed Residential Development Site Location Map

The proposed development is a large residential development consisting of 469 No. residential units, 1 No. Crèche on site and an upgrade of the existing former lodge. The LRD comprises of 5no. development phases namely 1a, 1b, 1c, phase 2 and phase 3. Phase 1a and 1b of this LRD are being assessed under a different planning application 24/04519. The layout is outlined on a series of architectural, engineering and landscaping plans that should be viewed in conjunction with this report.

The proposed residential development consists of 68 No. 4-bed semi-detached dwellings, 132 No. 3-bed detached and semi-detached dwellings, 60 No. 3-bed townhouse dwellings, 42 No. 2-bed townhouse dwellings, 164 No. duplex and ground floor apartments and 3 No. 1-bed bungalows. The development also proposes the provision of 122 No. child Creche.

The development also includes the provision of 589 No. on-site car parking spaces and secure cycle parking spaces. The scheme layout incorporates site access points off Kingsfort Avenue, both to the west of the subject development site. Access streets are proposed on Kingsfort Avenue at the following locations:

- West of Bower Lane;
- At Kingsfort Square;

- At the southeast end of Kingsfort Avenue; and
- Along Maple Square.

An internal off-road shared footway/cycleway is proposed between Kingsfort Avenue at Bower Walk, and the existing Blackwater Amenity Corridor, linking with the proposed internal streets and open spaces.

4 Future Baseline Conditions

Cork County Council's Cork County Development Plan 2022-2028 Volume Three North Cork includes the hereunder policies and objectives for Mallow.

"Green Infrastructure and Recreation

There remains a strong need to improve movement and accessibility to existing recreational facilities."

"The Blackwater Amenity Corridor

The advancement of a linear green recreational corridor along the Blackwater in Mallow has been long promoted and there has been significant progress in recent years in delivering different aspects of this, particularly in the area south and east of the town centre (including Mallow Castle, Mallow Town Park and Spa House Park). Existing walkways have been enhanced and expanded and there is now a continuous link from the walkway to the west of the railway line via the town park/Mallow castle and as far as the picturesque Lovers Leap to the east of the town. To complement this a nature themed inclusive children's playground amenity at Mallow Castle partly funded by the Urban Regeneration and Development Fund (URDF) has recently been completed."

"Movement

In terms of the wider built up area, general accessibility and connectivity for pedestrians and cyclists needs to be improved between residential areas and the town centre, transport services, employment areas, schools and other services to enhance opportunities, and provide convenient routes for walking and cycling on local journeys. Ongoing enhancement of the town centre to make it more people focused and permeable is needed. The previous Traffic and Transportation Study proposed a Cycle Friendly Zone in the town centre while the potential for new pedestrian amenity routes along the banks of the river Blackwater should also continue to be explored."

"As the population grows, consideration should also be given to the provision of a public bus service within the town and the design and layout of new development should consider the requirements of such a service."

The Cork County Development Plan Mallow Green Infrastructure Map is shown in Figure 4.1.

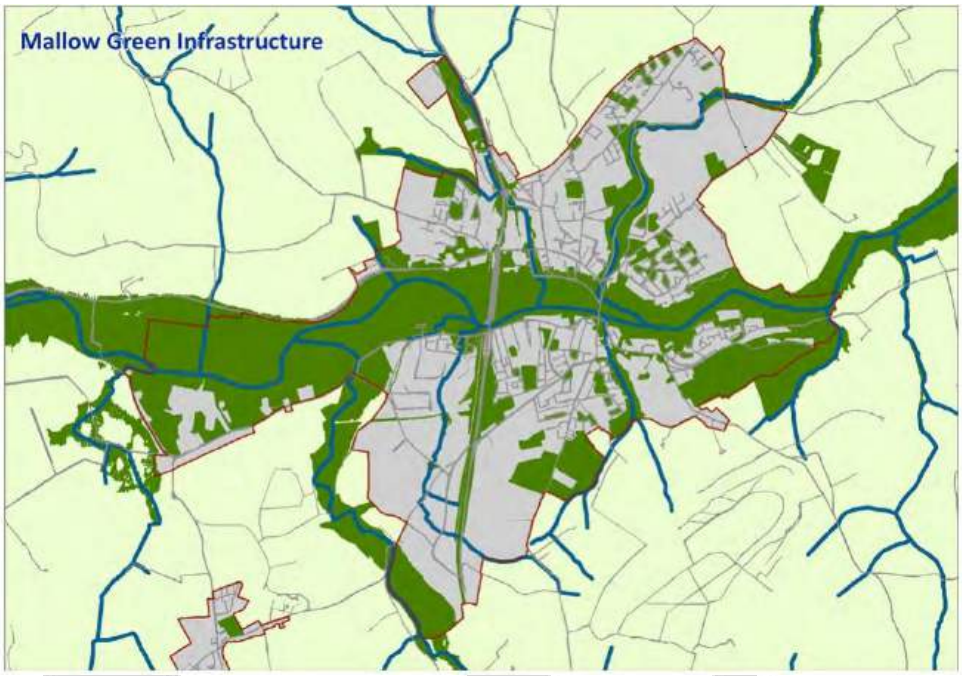


Figure 4.1: Cork County Development Plan Mallow Green Infrastructure Map

The Cork County Development Plan Land Use Zonings Map is shown in Figure 4.2.

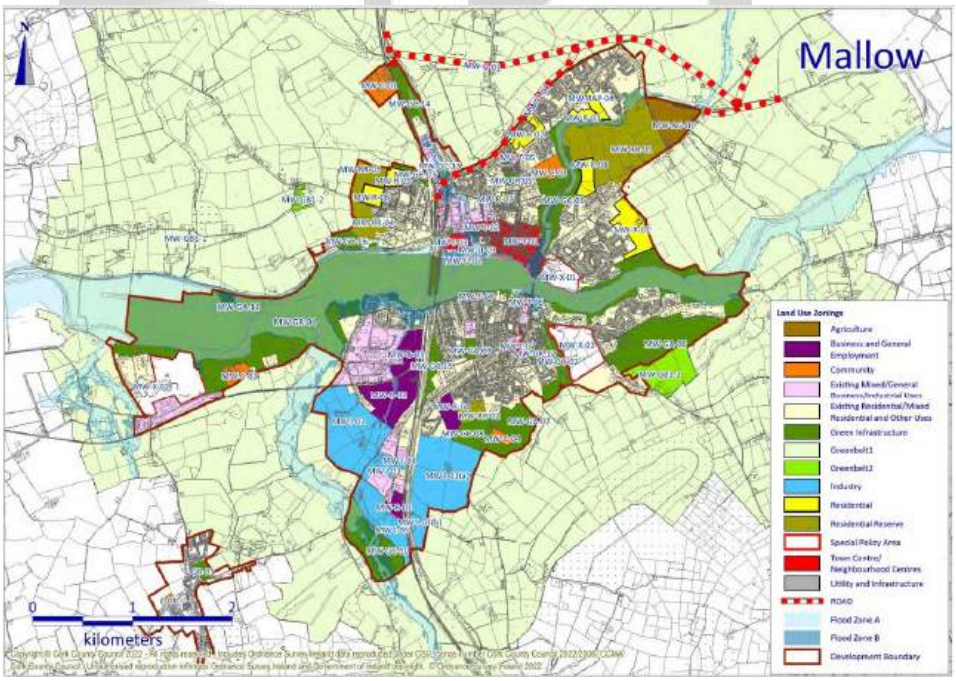


Figure 4.2: Cork County Development Plan Mallow Land Use Zonings Map

5 Stage 1/2 Road Safety Audit

A Stage 1/2 Road Safety Audit of the proposed residential development was prepared by CST Group in November 2023 and updated in October 2024.

A copy of the original Stage 1/2 Road Safety Audit is provided in Appendix A and a summary of the Audit problems and recommendations is provided in Table 5.1.

Table 5.1: Summary of Stage 1/2 Road Safety Audit

Problem	Recommendation / Action Undertaken
Forward Visibility at Bends / Junctions.	The design team should ensure that suitable forward visibility is provided throughout the scheme. **Action:** The sharp bends have been removed as per the revised Proposed Site Layout Drawing No.'s 6621-2010-RevC, 6621-2011-RevC & 6621-2012-RevC. Further details on the junctions have been indicated on the Proposed Traffic Calming Measures Drawing No.'s 6621-2013-RevA, 6621-2014-RevA, 6621-2015-RevA & 6621-2016-RevA.
Uncontrolled Pedestrian Crossings.	Suitable dropped kerbs and tactile paving should be provided on all anticipated pedestrian desire lines. **Action:** The location of the dropped kerbs and tactile paving have been indicated on the Proposed Traffic Calming Measures Drawing No.'s 6621-2013-RevA, 6621-2014-RevA, 6621-2015-RevA & 6621-2016-RevA.
Cyclepath Carriageway Crossings.	The design team should undertake detailed designs at all intersections and ensure that suitable crossing facilities are provided with suitable intervisibility and signage, where all users understand the priority. **Action:** The location of the crossing facilities have been indicated on the Proposed Traffic Calming Measures Drawing No.'s 6621-2013-RevA, 6621-2014-RevA, 6621-2015-RevA & 6621-2016-RevA. These crossing have been designed in compliance with the Cycle Design Manual (CDM) prepared by the National Transport Authority (NTA).
Long and Straight Roads.	The design team should ensure that vehicle speeds are controlled to acceptable levels by physical means. **Action:** The long and straight roads have been

	altered to include horizontal alignment to ensure speeds are controlled to acceptable levels by physical means.
Crossroad Junctions	The design team should omit the crossroad junctions. **Action:** Crossroad junction have been omitted where possible and the road alignment amended to / share use spaces provided in order to improve safety within the proposed development. Junctions have been revised with further detail on the junction provided on the Proposed Traffic Calming Measures Drawing No.'s 6621-2013-RevA, 6621-2014-RevA, 6621-2015-RevA & 6621-2016-RevA.
Shared Use Streets.	The design team should ensure suitable route guidance is incorporated to guide the pedestrian to the segregated footpath. **Action:** Tactile crossing points have been indicated at the end of the footpath entering shared use spaces to facilitate the safe transfer of sight impaired users.
Shared Use Streets – Characteristics	The design team should ensure there are sufficient physical features provided within the spaces (bends, tree planting, street furniture, etc) to ensure the motorist understands the shared use intent and that they are invited into the pedestrianised space. **Action:** Shared use features have been incorporated into the site layout design in order to address these comments.
Carriageway Alignment at Tight Bends	The design team should be mindful that pedestrians desire lines may require crossings at some of the bends and therefore excessive carriageway widening should be avoided as part of the solution to remove this problem. **Action:** Shared use features have been incorporated into the site layout design in order to address these comments.
Turning Heads	The design team should undertake swept path analysis for the service vehicle sizes used by the operators in this area and redesign heads to suit. **Action:** An Auto-Track analysis on the proposed turning head has been undertaken on site to ensure to ensure that large vehicles e.g., a refuse lorry, can manoeuvre through this turning head. This analysis is indicated on

	the Proposed Auto-Track Analysis Drawing No.'s 6621-2017-RevA, 6621-2018-RevA & 6621-2019-RevA.
Turning Head Near Maple Wood.	The design team should undertake swept path analysis for the service vehicle sizes used by the operators in this area. **Action:** An Auto-Track analysis on the proposed turning head has been undertaken on site to ensure to ensure that large vehicles e.g., a refuse lorry, can manoeuvre through this turning head. This analysis is indicated on the Proposed Auto-Track Analysis Drawing No.'s 6621-2017-RevA, 6621-2018-RevA & 6621-2019-RevA.

All the Road Safety Audit problems were accepted by the Design Team Leader in the Designer's Feedback Form provided in the designer's response to the audit. Alternative measures were proposed by the Design Team Leader in respect of two of the recommendations, and both were accepted by the Audit Team Leader.

A subsequent Stage 1 / 2 Road Safety Audit was undertaken by Hegsons Design Consultancy Ltd in October 2024 on the final site layout and this accompanies the planning submission in a separate report.

6 Quality Audit Report

6.1 Quality Audit (Original Report November 2023)

A Quality Audit Report of the proposed residential development was prepared by CST Group in November 2023.

A copy of the Quality Audit Report (Original Report November 2023 / October 2024) is provided in Appendix B.

The Quality Audit Report comprised the following:

- Stage 1/2 Road Safety Audit;
- Access Audit;
- Cycle Audit; and
- Walking Audit.

A summary of the Stage 1/2 Road Safety Audit included in the Quality Audit Report is provided in the foregoing Section 5. A summary of the Access Audit, Cycle Audit and Walking Audit included in the Quality Audit Report is provided in Table 6.1.

Table 6.1: Summary of Quality Audit Report (November 2023)

Audit	Scope of Recommendation/Action
Stage 1/2 Road Safety Audit	Refer to Table 5.1 in Section 5.
Access Audit	
Key Items (4.2.1 – 4.6.4) Paths and Footpaths in Streets, Roads and Public Areas. Public Seating in the Street or Public Area. Uncontrolled Pedestrian Crossings. Disabled User Parking Spaces. Wayfinding.	**Action:** Revised layout and design rational have result in the Access Audit Item being incorporated into the revised site layout, where possible.
Cycle Audit	
5.1.1: Provision of cycle facilities	**Action:** The designated paths within the open space area have been designed along with the junctions in compliance with the Cycle Design Manual (CDM) prepared by the National Transport Authority (NTA).
5.1.2: Advance Stop Lines (ASL) provided for On-Road at the signal-controlled junctions	**Action:** No signalised junctions provided within the scheme.

5.1.3: Provision of cycle parking / storage	**Action:** The cycle parking proposals have been revised with further detail on the type, location and number of spaces provided on Deady Gahan Architects Drawing – Proposed Typical Secure Bike Store Drawing No. 23107/P/010A-P1
Walking Audit	
6.1: Connectivity of footpaths	**Action: T**he proposed footpaths will connect and tie-into the existing footpaths, and future paths anticipated in the future phases of the development to ensure connectivity.
6.2: Confirm footpath widths	**Action: T**he footpaths will be at least 2.0m wide.
6.3: Provision of pedestrian access	**Action: T**he proposed footpaths will connect and tie-into the existing footpath and to the link to the southern walkway
6.4: Directness of footpaths	**Action: T**he footpaths are direct without necessary diversions and loops with no actions required.
6.5: Potential conflict with other road users	**Action:** The designated paths within the open space area have been designed along with the junctions in compliance with the Cycle Design Manual (CDM) prepared by the National Transport Authority (NTA).
6.6: Provision of direction signage	**Action:** Direction signage for pedestrians and cyclist will be provided where it may be beneficial, for example routes via the open space at detailed design stage.
6.7: Provision of signage ref shared use facility.	**Action:** This signage will be provided at detail design stage.

The recommendations and actions identified in the Quality Audit Report are included in the designer's drawings in response to the opinion received form the pre-planning LRD meeting with Cork County Council on the 22nd April 2024.

6.2 Supplementary Quality Audits (September 2024)

Two supplementary Quality Audit Reports for the surrounding area were prepared by CST Group in September 2024.

A copy of the Supplementary Quality Audit Report (September 2024) area provided in Appendix C, namely:

- Castlepark, Castlelands (Townlands) – to – Mallow Town Centre Route, Co Cork; and
- St Joseph's Road Castle Crest/Kingsfort Avenue-to-GAA Grounds

The Supplementary Quality Audit Reports comprised the following:

- Access Audit;
- Cycle Audit; and
- Walking Audit.

A summary of the Access Audit, Cycle Audit and Walking Audit included in the Quality Audit and Supplementary along with the Hegsons Design Consultancy Ltd design team's further input are summarised in Section 9 of this report

7 Pre-Planning LRD – Opinion Cork County Council

Further to a pre-planning LRD meeting with Cork County Council on the 22nd April 2024 a number of items in relation to the site layout were raised.

The proposed residential development layout drawings were revised in response to Cork County Council's Opinion in respect of the foregoing Active Travel, Connectivity and Mobility Management, Mobility Management Plan, Road Safety Audit & Quality Audit, and DMURS items.

A detailed Mobility Management Plan has been prepared for the proposed development, with proposed reduced car parking provision for less than the maximum car parking standards identified by the Cork County Development Plan.

Raised table internal junction layouts are proposed with crossing facilities for pedestrians and cyclists.

Car Parking

The proposed residential scheme includes 589 No. car parking spaces for the proposed 469 No. residential units, including visitor car parking spaces and short-stay EV spaces and 14 of these car parking and drop off spaces are proposed at the crèche, including two accessible spaces.

The car parking provision is less than the maximum standards identified in the Cork County Development Plan, with one car parking space per house, for two and three bedroom houses, compared to two spaces maximum identified in the Development Plan parking standards.

Bicycle Parking

It is proposed to provide covered bicycle parking stores are proposed for 1/2/3 bed mid-townhouses, bungalows and apartment/duplexes with a total of 207 No cycle parking spaces, duplex apartments are provided with 192 No. cycle parking spaces plus 84 visitor spaces.

In relation to the semi-detached and end-townhouses, where side access is provided to the proposed residential units, ample space for 3-4 cycle parking spaces and storage is provided.

A covered bicycle parking store with 12 spaces is proposed at the crèche plus three Cargo Bike secure spaces. The total proposed bicycle parking spaces exceeds the County Development Plan standards.

Motorcycle Parking

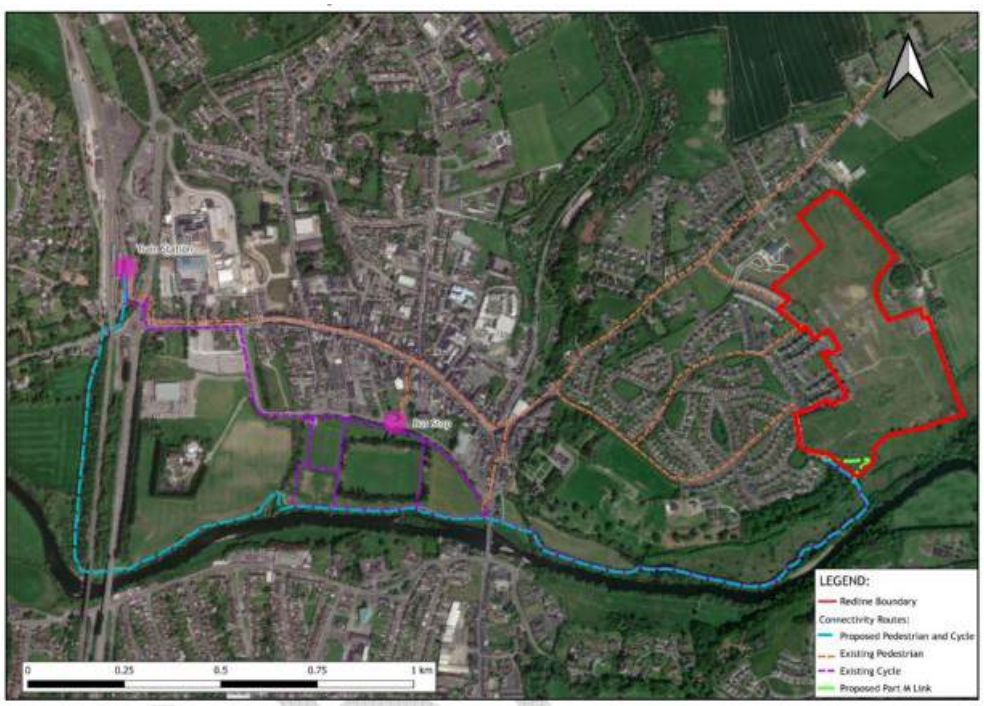
Two motorcycle parking spaces are proposed at the crèche.

Shared Footway/Cycleway and Blackwater Amenity Corridor Link

An internal off-road shared footway/cycleway is proposed between Kingsfort Avenue and the existing Blackwater Amenity Corridor, linking with the proposed internal streets and open spaces.

The existing Blackwater Amenity Corridor links with Mallow town centre and Mallow Train Station. The proposed residential development shared footway/cycleway link

with the Blackwater Amenity Corridor will provide an off-street link with Mallow town centre, Mallow Train Station and the Mallow Bus Éireann bus stop, as shown in Figure 7.4.



(Source: Punch Consulting Engioneers TTA October 2024)

Figure 7.4: Proposed Town Centre, Train Station and Bus Stop Links

Future Local Town Bus Service

The proposed residential development for Castlelands would support the warrant for a future Local Town Bus Service for Mallow, identified in the County Development Plan objectives, with the future support of Transport for Ireland (TFI).

8 DMURS Street Design Audit

The DMURS Street Design Audit is an auditing tool that can be used to ensure that the relevant issues contained within DMURS have been duly considered.

The DMURS Street Design Audit has been prepared using the template available from www.dmurs.ie

Design Manual for Urban Roads and Streets

Street Design Audit

Prepared in respect of: Proposed Large Residential Development at Castlepark, Castlelands, St. Joseph's Road, Mallow, Co. Cork.

Prepared by: Hegsons Design Consultancy

Date: October 2024

Connectivity		
Key Issues	**Key DMURS Reference.**	**Design Response**
Strategic routes/major desire lines have been identified and are clearly incorporated into the design.	3.1 – Integrated Street Network 3.2.1 – Movement Function 3.3.1 – Street layouts 3.3.4 - Wayfinding	The proposed residential development is set around a network of Link and Local Streets, interlinked pedestrian and cyclist pathways and open spaces, shaped by a shared footway/cycleway between Kingsfort Avenue and the existing Blackwater Amenity Corridor, linking with the proposed internal streets and open spaces.
Multiple points of access are provided to the site/place, in particular for sustainable modes.	3.3.1 – Street Layouts 3.3.3 – Retrofitting[1]	Access Streets are proposed on Kingsfort Avenue at the following locations: • West of Bower Lane; • At Kingsfort Square; • At the south east end of Kingsfort Avenue; and • At Maple Square. An internal off-road shared footway/cycleway is proposed between Kingsfort Avenue at Bower Walk, and the existing Blackwater Amenity Corridor, linking with the proposed Local Streets and open spaces.

[1] *When connecting with existing communities a detailed analysis and extensive community consultation should be carried out to identify the optimal location for connections (refer also to the NTA Permeability in Existing Urban Areas: Best Practice Guide).*

		The shared footway/cycleway link with the Blackwater Amenity Corridor will provide an off-street link with Mallow town centre, Mallow Train Station and the Mallow Bus Éireann bus stop.
Accessibility throughout the site is maximised for pedestrians and cyclists, ensuring route choice.	3.3.1 – Street Layouts 3.3.2 – Block Sizes 3.4.1 – Vehicle Permeability	Access for pedestrians and cyclists is along the Link and Local Streets and shared footway/cycleway. Footways and crossing treatments are provided for pedestrians. Raised table internal street junction layouts are proposed with crossing facilities for pedestrians and cyclists, including along the shared footway/cycleway.
Through movements by private vehicles on local streets are discouraged by an appropriate level of traffic calming measures.	3.2.1 – Movement Function 3.2.2 – Place Context 3.4.1 – Vehicle Permeability	There is no through route for vehicles on Link and Local Streets within the scheme. Traffic calming is provided by horizontal curves along Street alignments, contrasting surface materials and raised tables at junctions.

Self-Regulating Street Environment		
Key Issues	**Key DMURS Reference.**	**Design Response**
A suitable range of design speeds have been applied with regard to context and function.	3.2.1 – Movement Function. 3.2.3 – Place Context. 4.1.1 – A Balanced Approach to Speed[2]	The design speed is 30 km/hour, consistent with DMURS 'Slow Zones' and 'Homezones'.
The street environment will facilitate the creation of a traffic clamed environment via the use of 'softer' or passive measures.[3]	4.2.1 – Building Height and Street Width 4.2.2 – Street Trees 4.2.3 – Active Street Edges 4.2.4 – Signage and Line Marking 4.2.7 – Planting 4.4.2 – Carriageway Surfaces 4.4.9 - On-Street Parking	The residential units are two storey. A design speed of 30 km/hour is applied to the geometric design of all Streets. All Street widths are in accordance with DMURS. All Streets are overlooked by residential units. On-street car parking is provided at the crèche. Minimal signage and line markings are proposed on Local Streets balancing with self-regulating characteristics in accordance with DMURS guidance.

[2] *Refer also to the National Speed Limit Guidelines*

[3] *In retrofit situations a detailed analysis should be carried out to establish what measures exist, what their likely effectiveness is and level of intervention required to achieve the designed design speed.*

	Advice Note 1 – Transitions and Gateways	Trees and soft landscaping are proposed within the integrated design strategy. Thresholds, buffers/low hedging and tree frames frame vistas and create a sense of place, consistent with the low vehicle speed residential environment.
A suitable range of design standards/measures have been applied that are consistent with the applied design speeds.	4.4.1 - Carriageway Widths 4.4.4 – Forward Visibility 4.4.5 – Visibility Splays 4.4.6 – Alignment and curvature 4.4.7 – Horizontal and Vertical Deflections Advice Note 1 – Transitions and Gateways	A design speed of 30 km/hour is applied to the geometric design of all Streets, consistent with 'Slow Zones' and 'Homezones', including horizontal and vertical alignment. Junction visibility splay distances and forward visibility distances of 23 metres are provided for the 30 km/hour design speed, in accordance with DMURS. Carriageway widths are in accordance with DMURS, as follows: • 3.00 metres lane widths on Link Streets; and • 2.75 and 2.50 metres lane widths on Local Streets. Relatively short length Link Streets and cul-de-sac Local Streets are provided.

Pedestrian and Cycling Environment		
Key Issues	**Key DMURS Reference**	**Design Response**
The built environment contributes to the creation of a safe and comfortable pedestrian environment.	4.2.1 – Building Height and Street Width 4.2.3 – Active Street Edges 4.2.5 – Street Furniture 4.4.9 - On-Street parking	The two storey residential units create robust streetscapes and an appropriate sense of enclosure. All Streets are overlooked by residential units providing passive surveillance to streets, green areas, shared footway/cycleway, parking and the public realm generally. All street furniture and bicycle parking is clear of pedestrian routes. Bin stores are located off footways. All on-street car parking is recessed.
Junctions have been designed to ensure the needs of pedestrians and cyclists are prioritised[4].	4.3.2 - Pedestrian Crossings 4.3.3 – Corner Radii 4.4.3 - Junction Design 4.4.7 - Horizontal and Vertical Deflections	Raised table pedestrian crossing facilities are provided at Street junctions, including along the shared footway/cycleway. All junction radii are in accordance with DMURS.
Footpaths are continuous and wide enough to cater for the anticipated number of pedestrian movements.	3.2.1 – Movement Function. 3.2.3 – Place Context.	Footway widths of 2.0 metres are provided in accordance with DMURS. A 4.0 metres wide shared footway/cycleway width is provided. An integrated footway network is provided throughout the scheme, with all footway widths in accordance

[4] *Refer also to the National Cycle Manual (2011)*

	4.2.5 – Street Furniture 4.3.1 - Footways, Verges and Strips 4.3.2 - Pedestrian Crossings	with DMURS, for the expected pedestrian demand.
The particular needs of visually and mobility impaired users have been identified and incorporated in the design.	4.2.5 - Street Furniture 4.3.1 - Footways, Verges and Strips 4.2.5 - Street Furniture 4.3.2 - Pedestrian Crossings 4.3.4 - Pedestrianised and Shared Surfaces	Tactile paving is provided at all pedestrian crossing locations for visually impaired users, with raised junction tables, or dropped kerbs at footways. All street furniture is clear of pedestrian routes.
Cycling facilities will cater for cyclists of all ages and abilities.[5]	3.2.1 – Movement Function. 3.2.3 – Place Context. 4.3.5 - Cycle facilities.	Access for cyclists is along the relatively short length Link and Local Streets, which will cater for cyclists of all ages and abilities in accordance with the NTA National Cycle Manual 2023 and DMURS; and along the shared footway/cycleway between Kingsfort Avenue and the existing Blackwater Amenity Corridor, linking with the proposed internal streets and open spaces.

[5] *Refer also to the National Cycle Manual (2011)*

Visual Quality		
Key Issues	**Key Considerations and DMURS Ref:**	**Design Response**
The landscape plan responds to the street hierarchy and the value of the place.	3.2.1 – Movement Function. 3.2.3 – Place Context. 4.2.2 – Street Trees 4.2.7 – Planting Advice Note 1 – Transitions and Gateways	Street trees sited on Link and Local Streets are included, where possible, and a hierarchy of tree, shrub and hedgerow planting is proposed within open spaces. Thresholds, buffers/low hedging and tree frames frame vistas and create a sense of place.
Street furniture is orderly placed.	3.2.1 – Movement Function. 3.2.3 – Place Context. 4.2.5 - Street Furniture. 4.3.1 Footways, Verges and Strips	All street furniture is clear of pedestrian routes.

The use of signage and line marking has been minimised.	3.2.1 – Movement Function. 3.2.3 – Place Context. 4.2.4 - Signage and Line Marking.	Minimal signage and line markings are proposed on Link and Local Streets balancing with self-regulating characteristics in accordance with DMURS guidance.
Materials and finishes used throughout the scheme have been selected from a limited palette and respond to the value of the place?	3.2.1 – Movement Function. 3.2.3 – Place Context. 4.2.6 – Materials and Finishes 4.2.8 – Historic Contexts. 4.3.2 – Pedestrian Crossings 4.4.2 – Carriageway Surfaces Advice Note 2 – Materials and Specifications	A hierarchical approach to the use of different materials and finishes is applied. Tactile paving is provided at all pedestrian crossing locations for visually impaired users.

9 Walking, Accessibility & Cycling Audit

9.1 Background

A Walking, Accessibility & Cycling Audit was carried out by Hegsons Design Consultancy on the existing local Street network, external to the proposed residential development site, on the 20th September 2024, during dry weather conditions. Record photographs were taken.

The extent of the local Street network audited comprises the existing Streets located between Mallow town centre and the proposed residential development site, including the following:

- Kingsfort Avenue;
- Bower Walk;
- Maple Avenue;
- Maple Square;
- Maple Wood;
- Castlepark Avenue;
- St. Joseph's Road;
- Bridewell Lane;
- Bridge Street;
- Infirmary Lane;
- Spa Walk; and
- Thomas Davis Street.

The existing Streets are shown in the local street map provided in Figure 9.1 and the local town centre street map provided in Figure 9.2.

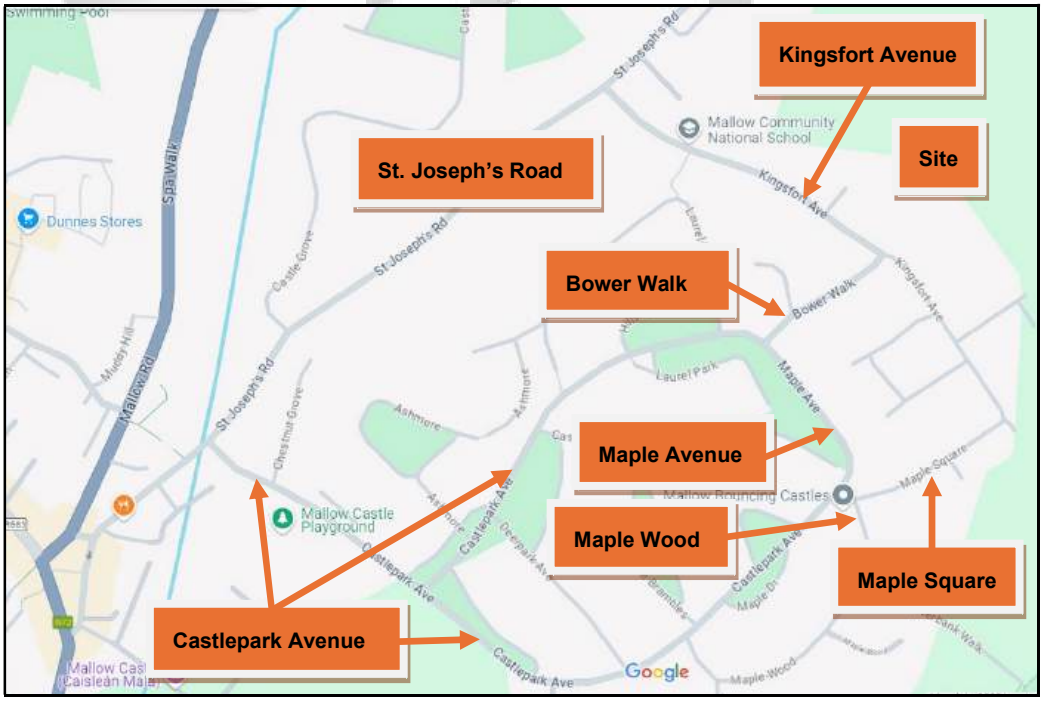


Figure 9.1: Proposed Residential Development Site Local Street Map

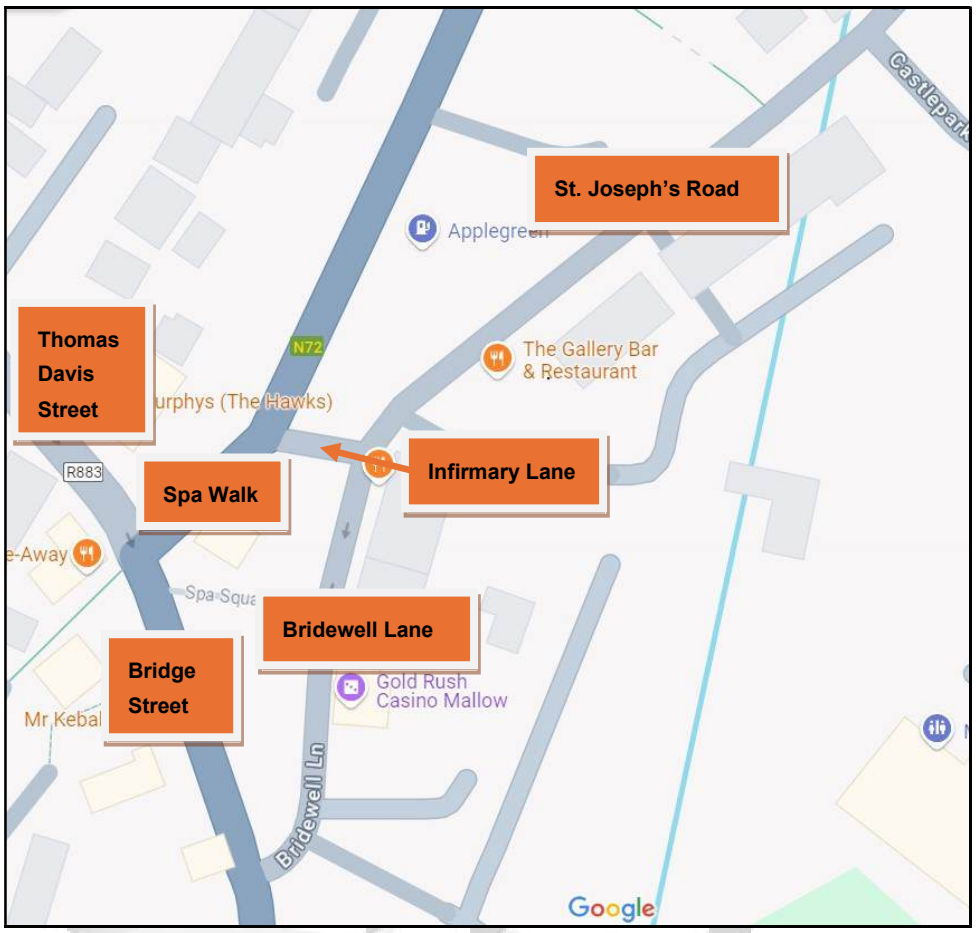


Figure 9.2: Proposed Residential Development Site Local Town Centre Street Map

The hereunder inventories and issues were recorded and identified during the Walking, Accessibility & Cycling Audit of the existing local Streets, together with associated suggestions for consideration, in the context of existing and future users.

9.1.1 Existing Castlepark/Castlelands Streets

Kingsfort Avenue, Bower Walk, Maple Avenue, Maple Square, Maple Wood and Castlepark Avenue are located within the existing Castlepark/Castlelands residential estate.

Footways are provided along both sides of Kingsfort Avenue. A vertical traffic calming ramp is provided on Kingsfort Avenue adjacent to its St. Joseph's Road junction. A raised table Stripe marking pedestrian crossing facility is provided on Kingsfort Avenue, immediately west of its Scoil Aonghusa Community National School access junction, as shown in the hereunder photograph. A series of vertical traffic calming ramps are provided along Kingsfort Avenue east of the raised pedestrian crossing facility.

Photograph 1: View East of Kingsfort Avenue Raised Crossing

A series of vertical traffic calming ramps are also provided along Bower Walk, Maple Avenue, Maple Square, Maple Wood and Castlepark Avenue. Footways are provided along Bower Walk, Maple Avenue, Maple Square, Maple Wood and Castlepark Avenue. Footways are provided along both sides of Castlepark Avenue at and in the vicinity of its access junction with St. Joseph's Road.

Heritage street lamps are provided along Kingsfort Avenue, Bower Walk, Maple Avenue and Castlepark Avenue.

9.1.2 Urban Speed Limit Streets

St. Joseph's Road, Bridewell Lane, Bridge Street, Infirmary Lane, Spa Walk and Thomas Davis Street are located within the existing Mallow 50 km/hour urban speed limit zone.

St. Joseph's Road has a footway along its south east side between Mallow town centre and its Castlepark Avenue and Kingsfort Avenue access junctions, located on its south east side. A west side footway is provided on St. Joseph's Road between the town centre and Castlepark Avenue. An intermittent north west side footway is provided on St. Joseph's Road, between the Kingsfort Avenue access and the Castlepark Avenue access, which includes reduced widths.

Central median splitter traffic islands are provided on St. Joseph's Road at its Kingsfort Avenue access junction, with traffic calming ramps. Traffic calming ramps are also provided on St. Joseph's Road, between its Castlepark Avenue and Kingsfort Avenue access junctions.

A Zebra pedestrian crossing is provided on St. Joseph's Road, south of its Castlepark Avenue junction, as shown in the hereunder photograph.

Photograph 2: View South West of St. Joseph's Road Zebra Crossing

Street lighting standards are provided along the west side of St. Joseph's Road and within Mallow town centre.

Footways are provided on both sides of Infirmary Lane, Spa Walk, Thomas Davis Street and Bridge Street; and on the east side of Bridewell Lane. Controlled pedestrian crossing facilities are provided on Spa Walk, Thomas Davis Street and Bridge Street at their traffic signals controlled junction.

There are no defined cyclist facilities provided along the extent of the local Street network audited. Cyclists were observed cycling with traffic, within the existing Street urban traffic lanes.

9.2 Quality Audit Issues

Issue 9.1: Kingsfort Avenue Footway & Sign Restricted by Vegetation

The clear width of the Kingsfort Avenue north east side footway, located opposite Bower Walk, is restricted by vegetation growth, as shown in the hereunder photographs. The visibility of the warning sign (Caution Children At Play) for inbound drivers is also restricted by the vegetation.

Photographs 3-4 : Kingsfort Avenue Footway & Sign Restricted by Vegetation

Suggestion: It is recommended that the vegetation should be cut back and maintained to provide a clear footway width and signage visibility.

Issue 9.2: No Slow Zone/Homezone Speed Limit Signage

There is no Slow Zone/Homezone speed limit signage provided on the Kingsfort Avenue and Castlepark Avenue access streets to the existing Castlepark/Castlelands residential estate, with reference to DMURS and the DoT Traffic Signs Manual. A reduced speed limit of 30 km/hour is standard in urban residential estates.

Photograph 5: Kingsfort Avenue Streetscape

Suggestion: It is recommended that standard 30 km/hour Slow Zone speed limit signage should be provided on the Kingsfort Avenue and Castlepark Avenue access streets to the existing Castlepark/Castlelands residential estate, with reference to DMURS and the DoT Traffic Signs Manual.

Issue 9.3: Speed Reduction / Vertical Deflection along Kingsfort Avenue

In conjunction with Issue 9.2, there is no Slow Zone/Homezone speed limit signage provided on the Kingsfort Avenue access streets, there is a requirement for the incorporation of vertical deflections along the main trafficked routes to the propose development.

Suggestion: It is recommended that vertical deflection, in the form of raised tables at the internal junctions along Kingsfort Avenue are considered in order to better enforce the 30km/hour Slow Zone speed limit signage.

Issue 9.4: Possible Inadequate Layouts and Facilities for Pedestrians at Existing Access Junctions

The layout and facilities of the existing Kingsfort Avenue and Castlepark Avenue access junctions, at St. Joseph's Road, may be inadequate for pedestrians, with reference to DMURS and the DoT Traffic Management Guidelines.

Pedestrian users of the St. Joseph's Road footway don't have priority at the junction and no defined dished crossing location is provided along the pedestrian desire line. Kingsfort Avenue has a dished internal crossing location adjacent to the St. Joseph's Road junction, with an adjacent traffic calming ramp. A raised table Stripe marking pedestrian crossing is located on Kingsfort Avenue prior to (west of) the first internal junction.

Photograph 6: Kingsfort Avenue Adjacent to St. Joseph's Road Junction

The Castlepark Avenue junction has a relatively long crossing distance, without priority, for pedestrian users of the St. Joseph's Road footway, with non-aligned existing footway dishing; and no defined internal crossing location on the adjacent Castlepark Avenue.

Photograph 7: Castlepark Avenue at its St. Joseph's Road Junction

Suggestion: It is recommended that enhanced junction layouts and facilities for pedestrians should be provided at the existing access junctions on St. Joseph's Road, in consultation with Cork County Council.

Issue 9.5: St. Joseph's Road North West Side Footway Uneven Locally

The footway on the north west side of St. Joseph's Road, located immediately south west of the Kingsfort Avenue access junction, is uneven locally, as shown in the hereunder photograph, resulting in a potential trip hazard.

Photograph 8: View North East of St. Joseph's Road North West Side Footway

Suggestion: It is recommended that the St. Joseph's Road footway should be reinstated, locally, in consultation with Cork County Council.

Issue 9.6: St. Joseph's Road North West Side Discounted Footway close to Kingsfort Avenue access junction.

The footway on the north west side of St. Joseph's Road, located immediately south west of the Kingsfort Avenue access junction, is discounted, as shown in the hereunder photograph, resulting in a potential hazard for users.

Photograph 9: View North East of St. Joseph's Road North West Side Discounted Footway

Suggestion: It is recommended that the provision of an uncontrolled pedestrian crossing is investigated at this location on the St. Joseph's Road to locally connect the footways on either side of the road, in consultation with Cork County Council.

Issue 9.7: St. Joseph's Road North West Side Discounted Footway close to Castle Grove access junction

The footway on the north west side of St. Joseph's Road, located immediately south of the Castle Grove access junction, is discounted, as shown in the hereunder photograph, resulting in a potential hazard for users.

Photograph 10: View of Discounted Footway on St. Joseph's Road close to Castle Grove

Suggestion: It is recommended that the provision of an uncontrolled pedestrian crossing is investigated at this location on the St. Joseph's Road to locally connect the footways on either side of the road, in consultation with Cork County Council.

Issue 9.8: St. Joseph's Road Footway Restricted by Bollards

The St. Joseph's Road south east side footway is restricted at its town centre end by bollards, locally, as shown in the hereunder photograph.

Photograph 11: View South West of St. Joseph's Road North West Side Footway

Suggestion: It is recommended that an appropriate clear width footway should be provided, with reference to DMURS, in consultation with Cork County Council.

Issue 9.9: Incomplete/Restricted Footways/Crossing Tie-Ins at Town Centre

The footways and crossing locations at the town centre tie-ins are incomplete/restricted at the St. Joseph's Road/Infirmary Lane/Bridewell Lane intersection, as shown in the hereunder photographs.

Photographs 12-13: Views of St. Joseph's Road North West Side Footway End Tie-Ins

Photographs 14-15: Views of Bridewell Lane West Side Footway

Suggestion: It is recommended that appropriate footway widths and crossing facilities should be provided, with reference to DMURS, in consultation with Cork County Council.

Issue 9.10: No Tactile Paving at Footway Crossing Locations

There is limited provision of tactile paving, for visually impaired users, at existing footway crossing locations.

Suggestion: It is recommended that appropriate treatments for impaired users should be provided at existing crossing locations, in consultation with Cork County Council.

Issue 9.11: Directional Signage / Road Naming

There is limited and unclear direnction signage and road naming throughout the existing estate, in particular along Kingsfort Avenue and Castle Park Avenue, as shown in the hereunder photographs.

Photographs 14-15: Unclear and Lack of Directional Signage within the Existing Residential Estate

Suggestion: It is recommended that directional signage and road naming should be upgraded through the estate from the 2 No public road entrances on St Joseph's Road along Kingsfort Avenue and Castle Park Avenue to aid traffic through the site and to minimize potential disturbance of existing residential areas with through traffic.

10 Riverside Amenity Walk / Cycle Facility

10.1 Introduction

The proposed development includes several measures aimed at facilitating and incentivising a shift from vehicular travel to more sustainable modes of transportation.

10.2 Riverside Amenity Walk/ Cycle Facility

The proposed development provides for enhanced pedestrian and cyclist connectivity within the development and its adjacent residential areas to public transport, the nearby River Walk, and public parks. This will be achieved through

- Establishing a 4m wide amenity route dedicated to cyclists throughout the development and installing four cycle priority crossings within the development as part of the aforementioned amenity route.
- Construction of Part-M compliant links and improvements along the existing Greenway.

The shared cycle and pedestrian thoroughfare are proposed to be created through purposeful green spaces in the proposed development to permeate and connect the new development to existing residential area and to the existing river amenity park, creating a link via Mallow Town Park to the town centre, bus stops and train station.

The proposed development creates a focal point with meaningful green space, nearby creche, existing school and existing road infrastructure to allow collection and direction of the pedestrian traffic.

10.2.1 Proposed Additional Infrastructure

With the proposal to connect to and utilise the existing Riverside Amenity Walk as a thoroughfare for cycle traffic a potential constraint beyond the site could be seen as the 1.5m wide trussed bridge spanning a minor tributary to the Blackwater – by way of a financial contribution the developer would be amenable to upgrade this bridge to a concrete bridge that matches the 3.3m wide concrete path adjacent.

11 Conclusions

This DMURS Quality Audit summaries the issues raised within each individual design audit. No conflicts between audits were identified.

Revised drawings in response to Cork County Council's Opinion Meeting of the 22nd April 2024, including in respect of the previous Stage 1/2 Road Safety Audit, previous Quality Audit Report July/August 2023 and this Quality Audit, have been prepared for submission.

The DMURS Street Design Audit, included in this Quality Audit, confirms that the relevant issues contained within DMURS have been duly considered. The DMURS Street Design Audit has been completed using the template available from www.dmurs.ie

A number of suggestions are contained in the forgoing Walking, Accessibility & Cycling Audit for consideration, in consultation with Cork County Council.

Appendix A : Stage 1/2 Road Safety Audit

Stage 1/2 Road Safety Audit

Proposed LRD Development at Castle Park, Castlelands (Townland), Mallow, Co Cork

On behalf of **Reside (Castlepark) Ltd**

Prepared By:

CST GROUP
Chartered Consulting Engineers
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October 2024

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Checked By:	PE	PE	PE								
Approved By:	SS	SS	SS								

1. INTRODUCTION

1.1. This report describes a Stage 1/2 Road Safety Audit carried out on behalf of Reside (Castlepark) Ltd on a proposed LRD development at Castle Park, Castlelands Mallow, Co Cork.

1.2. The audit was carried out between 14th July – 14th November 2023.

1.3. The audit team were as follows:

Team Leader: Stuart Summerfield, HNC (Civil) FCIHT FSoRSA
Certificate of Competency in Road Safety Audits (SoRSA, 2015)
TII Auditor Ref. SS73290

Team Member: Philip Edwards, BSC Hons, GMICE

1.4. The audit comprised an examination of the drawings relating to the scheme supplied by the design office. A site visit was carried out by both Audit Team members together on 14th July 2023 between the hours of 10:30 – 11;15. Weather conditions during the inspection were light showers and the road surface was wet. Traffic conditions were considered light with cars and occasional pedestrians. Photographs were taken during the inspection.

1.5. This Stage 1/2 audit has been carried out in accordance with the relevant sections of the Transport Infrastructure Ireland (TII) Publication (Standard) GE-STY-01024 (Dec 2017) 'Road Safety Audit'. The audit team has examined only those issues within the design relating to the road safety implications of the scheme and has therefore not examined or verified the compliance of the design to any other criteria. Elements of design that are normally included for review at Stage 2 RSA have not been provided to the audit team. These include but not limited to, surface finishes, road markings and signage, drainage, carriageway and footpath gradients, street lighting etc. and therefore have not been assessed in this audit.

1.6. **Appendix A** describes the documents examined by the Audit Team.

Appendix B contains the Audit Feed Back Form. The Designer shall consider the Audit Report and prepare a Designer Response to each of the recommendations, using the Feedback Form. The response shall state clearly whether each recommendation is accepted, rejected, or whether an alternative recommendation is proposed. Copies of the Designer Response shall be sent to the Employer and the Audit Team. The Audit Team shall then consider the Designer Response and indicate on the Feedback Form whether the Designer's response to each recommendation is accepted. The completed Report contains the completed Feedback Form with signatures of all three parties involved - Designer, Audit Team Leader and Employer.

1.7. All of the problems described in this report are considered by the Audit Team to require action in order to improve the safety of the scheme and minimise collision occurrence.

2. ITEMS RESULTING FROM PREVIOUS STAGE 1/2 AUDIT

A Stage 1/2 Road Safety Audit was undertaken by CST Group on Stage 1 of the development in July 2023. Access to these LRD development works is via the Stage 1 development and therefore the Stage 1 audit should be read in conjunction with this report.

3. ITEMS RESULTING FROM THIS STAGE 1/2 AUDIT

3.1 Collision Data

Collision data has not been supplied with this scheme.

Road Collision Data is not currently available on the Road Safety Authority Database, therefore no collision trends in the immediate vicinity of the proposed site can be analysed.

3.2 General Problems / Problems at Multiple Locations

3.2.1 Forward Visibility at Bends / Junctions

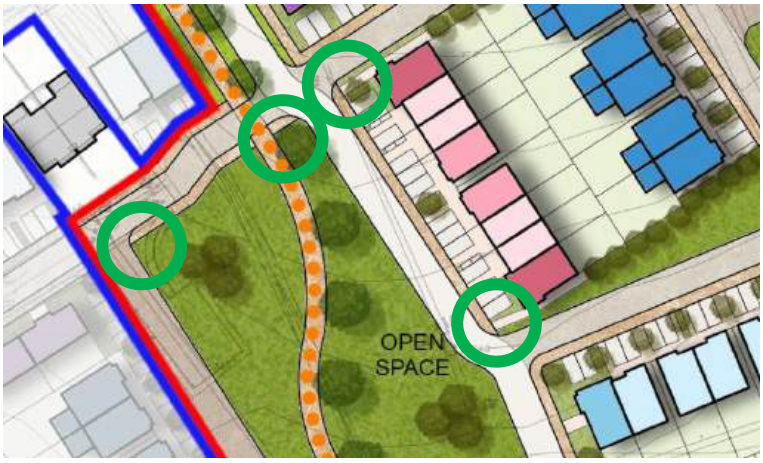
Problem: The design incorporates a number of sharp bends and tight junctions. Some of these bends and/or junctions have development plots, landscaping or car parking bays located to the inside of the bend. Buildings, high landscaping or high sided vehicles parked in the bays may restrict forward visibility for motorists.

Hazard: Motorists may impact with unseen road users, crossing pedestrians or detritus in the carriageway.

Recommendation: The design team should ensure suitable forward visibility is provided throughout the scheme.

3.2.2 Uncontrolled Pedestrian Crossings

Problem: The proposed development indicates footpaths terminating at the junction radii. It is not clear how these footpaths will incorporate dropped kerbs or tactile paving. In some cases, the footpath does not align with the continuation on the opposite side of the road.



Hazard: Sight or mobility impaired pedestrians may errantly enter the carriageway into the path of oncoming traffic. Wheelchair and mobility scooter users may be at risk of overturning when negotiating full height kerbs and may be impeded when crossing the carriageway.

Recommendation: Suitable dropped kerbs and tactile paving should be provided on all anticipated pedestrian desire lines. The footpath alignment should provide clear continuity to safely connect to the footpath opposite, or lead pedestrians into a clearly defined “shared space”.

3.2.3 Cyclepath Carriageway Crossings

Problem: There are a number of locations where the proposed cycle path crosses carriageways and/or footpaths. There is no priority, intervisibility or details shown at these crossing points.

Hazard: Cyclists may impact with vehicles or pedestrians.

Recommendation: The design team should undertake detailed designs at all intersections and ensure suitable crossing facilities are provided with suitable intervisibility and signage where all users understand the priority.

3.2.4 Long and Straight Roads

Problem: Some of the roads within the development are long and straight. Long and straight roads have a poor history of undesirably high vehicle speeds. Certain roads in this phase incorporate a slight shift in alignment, but this is insufficient to require vehicles to slow if there are no opposing vehicles.

Hazard: Vehicle loss of control or high-speed impact with crossing pedestrians may result.

Recommendation: The design team should ensure vehicle speeds are controlled to acceptable levels by physical means.

3.2.5 Crossroads Junctions

Problem: There are crossroads junctions proposed within the LRD development.

Hazard: Crossroads junctions have a poor collision history of overshoot type collision.

Recommendation: The design team should omit the crossroad junction.

3.2.6 Shared Use Streets

Problem: Some of the streets appear to be designated as "shared use" where pedestrians, cyclists and motorists all use the same space. It is not clear how sight impaired pedestrians are meant to transfer from the shared space to the segregated footpath at the carriageway junction. There is concern the sight impaired user may errantly continue to walk out into the carriageway.

Hazard: Impact from vehicles may result.

Recommendation: The design team should ensure suitable route guidance is incorporated to guide the pedestrian to the segregated footpath.

3.2.7 Shared Use Streets – Characteristics

Problem: Some of the streets appear to be designated as "shared use" where pedestrians, cyclists and motorists all use the same space, however the design of these spaces appear to be very similar to standard streets elsewhere in the development, including in some areas segregated footpaths.

Hazard: Motorists may not comprehend the nature of the space and drive without sufficient care. Impact with pedestrians who are in the process of entering the space may result.

Recommendation: The design team should ensure there are sufficient physical features provided within the space (bends, tree planting, street furniture, etc.) to ensure the motorist understands the shared use intent and that they are invited into a pedestrianised space.

3.2.8 Carriageway Alignment at tight Bends

Problem: The carriageway contains very tight bends where large service vehicles are expected to navigate.

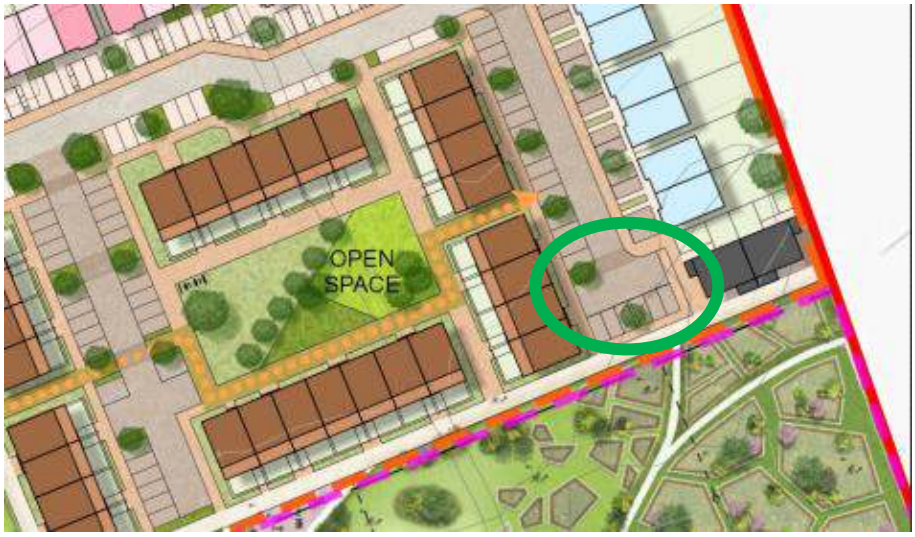
Hazard: Long vehicles may over-run the inside of the bend. Pedestrians may be struck by a vehicle if it overruns the footpath. Where there is no footpath, detritus may be dragged into the carriageway. Following vehicles, possibly two-wheeled vehicles, may lose control on the detritus.

Recommendation: The design team should undertake vehicle swept path analysis and redesign the carriageways alignment to accommodate large service vehicles.

Note: The design team should be mindful that pedestrian desire lines may require crossings at some of the bends and therefore excessive carriageway widening should be avoided as part of the solution to remove this problem.

3.2.9 Turning Heads

Problem: The turning heads appear small. It is not clear if this turning head can accommodate turning of service vehicles.



Hazard: Service vehicles may be required to reverse over long distances. Impact with other vehicles or crossing pedestrians may result.

Recommendation: The design team should undertake swept path analysis for the service vehicle sizes used by the operators in this area and redesign the turning heads to suit.

3.3 Problems at Specific Locations

3.3.1 Dead End Near Maple Wood

Problem: The proposals include for an access road parallel with Maple Square without any vehicle turning facility. There does not appear to be a vehicle link through to Maple Wood. Service vehicles who enter this road may be required to reverse over a long distance.

Hazard: Impact with other road users may result.

Recommendation: Provide a suitable turning head.

4. AUDIT TEAM STATEMENT

We certify that we have examined the drawings and other information listed in Appendix A. This examination has been carried out with the sole purpose of identifying any features of the design that could be removed or modified to improve the safety of the scheme. The problems that we have identified have been noted in the report, together with suggestions for improvement which we recommend should be studied for implementation. No one in the Audit Team has been involved with the scheme design as shown in Appendix A.

Signed .....
Stuart Summerfield
Audit Team Leader

Date 14-11-2023

Signed .....
Philip Edwards
Audit Team Member

Date 14-11-2023

Appendix A List of Documents Examined

DOCUMENT REF / NAME:	RECEIVED FROM:	DATE:
Deady Gaman 23107-P-003-C Proposed LRD layout Plan	PUNCH	13.11.2023

Appendix B RSA Feedback Form

ROAD SAFETY AUDIT FEEDBACK FORM

CST Group Chartered Consulting Engineers
1, O'Connell Street, Sligo, F91 W7YV, Ireland

Scheme: Proposed LRD Development at Castle Park, Castlelands (Townland), Mallow, Co Cork

Audit Stage: 1/2 **Date Audit Completed:** 15/11/2023 **Route No.** **Our Ref :**123255|R0

TO BE COMPLETED BY DESIGNER				TO BE COMPLETED BY AUDIT TEAM LEADER
Paragraph No. in Safety Audit Report	**Problem accepted (Yes/No)**	**Recommended measure accepted (Yes/No)**	**Describe alternative measure(s). Give reasons for not accepting recommended measure. Only complete if recommended measure is not accepted.**	**Alternative measures or reasons accepted by Auditors (Yes/No)**
3.2.1	Yes	Yes		
3.2.2	Yes	Yes		
3.2.3	Yes	Yes		
3.2.4	Yes	Yes		
3.2.5	Yes	Yes		
3.2.6	Yes	Yes		
3.2.7	Yes	Yes		
3.2.8	Yes	Yes		
3.2.9	Yes	Yes		
3.3.1	Yes	Yes		

Signed: Stephen O' Grady Design Team Leader Date: 18/10/2024
Stephen O Grady
DOSA Consulting Engineers

Signed: Design Team Leader Date: 18/10/2024
Stuart Summerfield
CST Group Chartered Consulting Engineers

Signed: Employer Date: 03.10.2024
For Reside (Castleparks) Ltd

Appendix B : Quality Audit Report

Quality Audit Report

Proposed LRD Development at Castle Park, Castlelands (Townland), Mallow, Co Cork

On behalf of **Reside (Castlepark) Ltd**

Prepared By:

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Chartered Consulting Engineers
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October 2024

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Originator:	SS	SS	SS								
Checked By:	PE	PE	PE								
Approved By:	SS	SS	SS								

1. Introduction

1.1. This report describes a Quality Audit carried out on behalf of Reside (Castle Park) Ltd. on a proposed LRD development at Castle Park, Castlelands, Mallow, Co. Cork.

1.2. The proposed development is for 364 residential plots, a crèche, open space with associated access roads and footpaths.

1.3. The Quality Audit will demonstrate appropriate consideration has been given to all relevant aspects of the development in accordance with the guidance provided in the Design Manual for Urban Roads and Streets (DMURS) produced by the Department of Transport, Tourism and Sport in June 2019.

1.4. This Quality Audit includes the following individual audits: -

- ⇒ Stage 1/2 Road Safety Audit.
- ⇒ Access Audit
- ⇒ Cycle Audit
- ⇒ Walking Audit.

1.5. The Audit team comprised of:

Team Leader:	Stuart Summerfield, HNC (Civil) FCIHT FSoRSA
Team Member:	Philip Edwards BSc (Hons.) (Civil Engineering).

1.6. The audit was carried out during July and November 2023.

1.7. The audit comprised an examination of the drawings relating to the scheme supplied by the Design Team. Appendix A describes the documents examined by the Audit Team

1.8. A site visit was carried out by the Audit Team on 14th July 2023 between the hours of 10:30 – 11;15. Weather conditions during the inspection were light showers and the road surface was wet. Traffic conditions were considered light with cars and occasional pedestrians.

2. Road Safety Audit

A Stage 1/2 Road Safety Audit has been undertaken by CST Group (November 2023) and is contained within a separate report which should be referred to in conjunction with this Quality Audit Report.

3. Items Resulting from Individual Design Audits

This Quality Audit contains separate Audits for Access, Cycling, Walking and the Stage 1/2 Road Safety Audit. The headlines forming these individual audits are summarised in Table 3.1 below. Table 3.1 also cross references across the columns, items which have been identified in more than one of the audits, such that the issue can be considered in the wider context of the overall scheme design, rather than in isolation.

Table 3.1: Quality Audit Summary

Access Audit	Cycling Audit	Walking Audit	Road Safety Audit	Quality Audit Summary
4.2.1		6.1.2		Confirm footpath widths.
4.2.2				Possible obstructions to footpath.
4.2.3				Suitability of drainage.
4.2.4				Confirm footpath paving materials.
4.2.5				Possible obstructions to footpath.
4.2.6				Possible excessive gradients
4.2.7				Possible abrupt level changes or excessive crossfalls
4.2.8				Possible obstructions opening onto footpaths.
4.2.9				Possible insufficient headroom over footpath.
4.2.10			3.2.2	Possible slip/trip hazards.
4.2.11				A-Boards – no further comment.
4.2.12	5.1.1	6.1.5 6.1.7	3.2.3 3.2.6 3.2.7	Provision of shared use paths – design details required.
4.2.13				Adequacy of public lighting unknown.
4.2.14			3.2.2	Detailing of tactile paving.
4.3.1				Review provision of public seating.
4.3.2				
4.3.3				Provision of level areas along slopes.
4.4.1			3.2.2	Provision of dropped kerbs and associated tactile paving at un-controlled crossings.
4.4.2				
4.4.3				Suitability of footpath gradients at un-controlled crossings.
4.4.4				Suitability of drainage at un-controlled crossings.
4.4.5			3.2.1	Controlled crossings Intervisibility at un-controlled crossings.
4.4.6				Adequacy of public lighting unknown at un-controlled crossings.
4.5.1				Adequacy of provision of disabled parking spaces.
4.5.2				Road markings associated with disabled parking bays – no comment.
4.5.3				Provision of flush kerbs associated with disabled parking space.
4.5.4				Provision of hatched area associated with disabled parking space should be improved.
4.6.1		6.1.6		Provision of direction signage.

Access Audit	Cycling Audit	Walking Audit	Road Safety Audit	Quality Audit Summary
4.6.2				Sign Design - legibility.
4.6.3				Sign Design – mounting height.
4.6.4				Sign Design - location.
4.2.12	5.1.1	6.1.5	3.2.3 3.2.6 3.2.7	Provision of cycle facilities.
	5.1.2			Advance Stop Lines.
	5.1.3			Review provision of cycle parking/storage.
		6.1.1		Overall suitability of footpaths.
4.2.1		6.1.2		Confirm footpath widths.
		6.1.3		Termination of footpaths – no comment.
		6.1.4		Directness of footpaths – no comment.
4.2.12	5.1.1	6.1.5	3.2.3 3.2.6 3.2.7	Potential conflict with other road-users – tactile paving and signage and required.
4.6.1		6.1.6		Provision of direction signage.
4.2.12	**5.1.5**	6.1.7	3.2.3 3.2.6 3.2.7	Provision of signage ref shared use facility.
4.4.5			3.2.1	Forward visibility at junctions and bends.
4.2.10 4.2.14 4.4.1 4.4.2 4.4.3 4.4.4			3.2.2	Lack of dropped kerbs and associated tactile paving.
4.2.12	5.1.1	6.1.5 6.1.7	3.2.3	Cycle crossing points insufficient detail provided.
			3.2.4	Road alignment and lack of speed restraint.
			3.2.5	Crossroads layout, poor safety record.
4.2.12	5.1.1	6.1.5 6.1.7	3.2.6	Transition to/from “shared use” streets unclear.
4.2.12	5.1.1	6.1.5 6.1.7	3.2.7	“Shared use” streets not clearly identifiable.
			3.2.8	Swept paths of large vehicles – risk of overunning footpaths at tight bends
			3.2.9	Risk of reversing vehicles colliding with other road users.
			3.3.1	Risk of large vehicles overrunning footpaths at turning heads

4. Access Audit

4.1 Overview

The Access Audit identifies a range of barriers that potentially restrict access for disabled people in the external and internal built environments.

For the purposes of the access assessment, the environment's features have been broken down into its constituent features. Each feature is assessed for conformity against certain access criteria. These criteria are derived from the following range of Best Practice sources, guidelines, standards, publications and legislation:

- Building Regulations 2000, Technical Guidance Document M -Access for People with Disabilities (Department of the Environment, Heritage and Local Government) Buildings for Everyone -Access and use for all citizens (National Disability Authority) Access to the Historic Environment -Meeting the needs of Disabled People (Lisa Foster)
- Traffic Management Guidelines (Irish Government Publications 2003)
- Design Manual for Urban Road and Streets (Department of Transport, Tourism and Sport)
- Inclusive Mobility A Guide to Best Practice on Access to Pedestrian and Transport Infrastructure (Department of Transport United Kingdom)
- Guidance on the use of Tactile Paving Surfaces: UK Department for Transport.

Where a site feature does not conform to this guidance, an explanation as to the potential restriction on access is provided, together with a suggested action and the priority in which such actions should be undertaken.

The Disability Act 2005 and the National Disability Authority's initiatives build on relationships and practices which currently exist among councils, city planners, building professionals and community groups to make services in Ireland more accessible to people with disabilities. In addition to people who use wheelchairs or have restricted mobility, there are many people affected by some degree of hearing loss, learning disability, visual impairment or conditions such as arthritis. This access assessment seeks to consider the needs of all potential users from a universal access perspective.

The audit is an organisation's first step in identifying physical barriers that people with disabilities may encounter when engaging with the community, public services and facilities.

4.2 Paths and Pavements in Streets, Roads and Public Areas

The scheme provides for vehicular access via a network of new access road. Generally these are provided with a separate footpath adjacent, but some of the roads are proposed to be "shared space" where there is no segregated footway.

The proposed development is accessed from the existing Kingsfort Avenue, which in turn connects to St Joseph's Road and the wider road network. Additional access points are provided via Maple Square and Phase 1 of the masterplan development. It is noted that the proposals also include a link through the open space which connects Riverbank Walk, which currently appears to be an access leading to parkland adjacent to the River Blackwater.

The surrounding existing roads adjacent to the development are not subject to the planning application for which this report is required, and therefore this audit is focused on the proposed alterations to the existing infrastructure and the proposed development itself.

Ref	Feature	Conforms	Access Comment	Action
4.2.1	Are the footways a minimum width of 1.5m (1.8-2.0m in high volume areas)?	Unknown	Footpaths appear to be 2.0m (scaling), but the drawings provided are not dimensioned.	Designer to detail footpaths to appropriate width. 2.0m minimum is recommended.
4.2.2	Is the main footway clear of obstructions that would impede wheelchair users or be a trip hazard to sight-impaired users?	Unknown	Insufficient detail at this preliminary design stage.	To be taken into account at detailed design. Lighting columns, sign posts etc. should be positioned accordingly.
4.2.3	Are all surface water gullies / slot drains outside of the desire line or less than 13mm wide and set at right angles to the line of traffic?	Unknown	Insufficient detail at this preliminary design stage.	To be taken into account at detailed design. Low-spots and gulleys should be kept clear of pedestrian crossing points.
4.2.4	Are all paving materials suitable for the passage of sight impaired and arthritic and wheelchair users?	Unknown	Noted concrete surfacing is proposed for new footways. Materials finish for shared use areas is not stated.	To be taken into account at detailed design.
4.2.5	Is the footpath clear of obstacles mounted more than 300mm above ground and protruding into the footpath by more than 100mm?	Unknown	Insufficient detail at this preliminary design stage.	To be taken into account at detailed design. For a new development, there should be no reason for any features to protrude into the footpath.

Ref	Feature	Conforms	Access Comment	Action
4.2.6	Is the footway route to an acceptable gradient of less than 1:20?	Unknown		Proposed carriageway and plot levels to be reviewed and amended where necessary to achieve acceptable gradients to roads and footpaths, private drives and paths and gardens.
4.2.7	Is the footway route clear of abrupt changes in level with crossfalls less than 2.5%?	Unknown	Insufficient detail at this preliminary design stage.	To be taken into account at detailed design
4.2.8	Is the footway clear of physical obstructions or windows, doors, and gates that open onto the access route?	Unknown	Generally plots are set back from the footpaths. It is noted that some plots are close to footpath. These may need careful detailing at detailed design stage.	To be taken into account at detailed design
4.2.9	Are the footway routes clear of headroom hazards (2.1m or 2.3m if shared with cyclists)?	Unknown	Insufficient detail at this preliminary design stage. However, provided any traffic signs are carefully detailed, there does appear to be any reason for objects to overhang the footpaths.	To be taken into account at detailed design
4.2.10	Is the footway route clear of any slip, trip hazards for sight impaired users?	No	The drawings do not indicate provision of dropped kerbs and associated tactile paving at pedestrian crossing points. .	Provision of dropped kerbs and associated tactile paving at safe and convenient locations should be included in the detailed design. This includes the recreational paths within the open space where they intersect the roads
4.2.11	Is the footpath clear of advertising 'A' boards?	Yes	Proposed residential development. 'A' boards not anticipated in such a location.	None
4.2.12	Is the footway shared with cyclists or abutting a cycle lane where cyclists may encroach?	Unknown	The drawings provided do not indicate any specific provision for cyclists. However, it is likely that cyclists will wish to take the most direct route and therefore can be expected to ride via the	To be taken into account at detailed design. The paths via the open space should be designed to standards appropriate for use by pedestrians and cyclists.

Ref	Feature	Conforms	Access Comment	Action
			recreational paths within the open space.	
4.2.13	Is the footway or public area adequately illuminated for night-time use?	Unknown	Insufficient detail at this preliminary design stage	To be taken into account at detailed design. This should include the paths via open space.
4.2.14	Is suitable tactile surfacing provided at all pedestrian crossing locations?	No	Further to 4.2.10 above the drawings do not indicate provision of dropped kerbs and associated tactile paving at pedestrian crossing points. This includes the recreational paths within the open space where they intersect the roads.	Provision of dropped kerbs and associated tactile paving at safe and convenient locations should be included in the detailed design

4.3 Public Seating in the Street or Public Area

It is recommended that seating should be provided to public areas or within a street environment at intervals of approximately 50 metres, particularly in streets and pavements that have inclines or slopes to give rest points for persons with mobility-impairments, also to provide a wheelchair rest position on hillside streets, sloping footways and other public areas.

Ref	Feature	Conforms	Access Comment	Action
4.3.1	Is seating provided at intervals of approximately 50m?	No	No details are indicated on the drawings provided. In view of the steep terrain of the site, this is considered a pertinent point.	The detailed design should provide public seating in safe and convenient locations.
4.3.2	Is seating provided at inclines or slopes as rest points for mobility impaired users?	No		
4.3.3	Are flat areas provided at regular intervals on inclines or slopes as rest point for mobility assisted (wheelchair, frames, stick) users?	No	No details are indicated on the drawings provided. In view of the steep terrain of the site, this is considered a pertinent point.	Further to 4.3.2 above, the detailed design should seek to provide accessible gradients, supplemented by flat areas for resting.

4.4 Un-controlled Pedestrians Crossings

The proposals include for un-controlled crossing within the development.

Ref	Feature	Conforms	Access Comment	Action
4.4.1	Does the crossing have tactile paving in compliance with the standards and in buff colour?	No	The drawings do not indicate provision of dropped kerbs and associated tactile paving at pedestrian crossing points. See also 3.2.2 of the Stage 1 / 2 RSA.	Provision of dropped kerbs and associated tactile paving at safe and convenient locations should be included in the detailed design. This includes the recreational paths within the open space where they intersect the roads.
4.4.2	Does the un-controlled crossing have dished kerbs with an unobstructed width of 1200mm?	No		
4.4.3	Are the kerbs lowered to form a dished kerb approach gradient no greater than 1:12 and an upstand above road level no greater than 6mm?	Unknown	Insufficient detail at this preliminary design stage.	To be taken into account at detailed design. Low-spots and gulleys should be kept clear of pedestrian crossing points.

Ref	Feature	Conforms	Access Comment	Action
4.4.4	Is the crossing free of road gullies, gratings or channels that may cause wheelchair or stick users' problems?	Unknown	Insufficient detail at this preliminary design stage.	To be taken into account at detailed design.
4.4.5	Is visibility to approaching traffic achieved from all crossing locations and clear of temporary obstructions such as parked vehicles?	No	Insufficient detail at this preliminary design stage. See also 3.2.1 of the Stage 1 / 2 RSA raised a problem concerning this issue.	To be checked as part of detailed design, especially where there may be existing or proposed vegetation.
4.4.6	Is the crossing area adequately covered with street lighting?	Unknown	Insufficient detail at this preliminary design stage.	To be taken into account at detailed design.

4.5 Disabled User Parking Spaces

For Disabled Parking Spaces within a parking scheme, it is important to provide designated Accessible Parking Spaces to serve the needs of disabled drivers or passengers. These spaces should be located to minimise travel distance for the user from the space to their intended destination.

The number of Disabled User spaces provided will change dependant on the destination i.e. a medical centre will require a greater provision than a crèche.

Ref	Feature	Conforms	Access Comment	Action
4.5.1	Are Disabled User Parking spaces provided	Unknown	No parking restrictions are indicated and it is anticipated that on-street parking will be permitted. Most plots appear to have on-plot parking. Therefore, designated on-street parking bays for disabled may be un-necessary within this scheme.	Ensure that the layout of disabled parking bays (if any) comply with standards.
4.5.3	Are disabled parking spaces provided with a clearly marked RRM 015 symbol on the road surface to show parking assigned to disabled or mobility-impaired drivers or passenger?	Yes	For designated disabled spaces at the creche.	None

Ref	Feature	Conforms	Access Comment	Action
4.5.4	Is there a flush kerb to allow wheelchair access to the adjacent footpath?	No	Insufficient detail at this preliminary design stage.	To be taken into account at detailed design.
4.5.5	Is there a yellow cross hatch marking to indicate the travel clear route for the user?	N/A	There are no dedicated disabled user parking spaces shown.	To be taken into account at detailed design.

4.6 Wayfinding

It is important to provide way-finding signage in the area. It should be noted that information signage should not be positioned too high for persons of short stature and wheelchair users to access. Also, visitors to the area with vision impairment will find it difficult to read signage at high levels.

Information boards benefit blind or visually-impaired persons if essential notes and information are provided in conjunction with existing visual signs, directional routes in Braille and tactile will assist visitors to the area.

Effective colour contrast on signage is essential and is as important as the size of the lettering or symbols. Colours can appear different under various light sources, so when choosing sign colours ensure that under the same lighting conditions be used in the area where the sign is to be located at night. Particularly avoid red and green colour schemes in signage due to the prevalence of red/green colour blindness.

Ref	Feature	Conforms	Access Comment	Action
4.6.1	Is signage provided to guide the user through the development?	No	No direction signage for pedestrians or cyclists has been proposed.	Direction signage for pedestrians and cyclist should be provided where it may be beneficial, for example routes via the open space.
4.6.2	Are the signs of a suitable size and colour combination?	Unknown	Insufficient detail at this preliminary design stage.	To be taken into account at detailed design.
4.6.3	Are the signs mounted at a suitable height so they can be read but not cause a head clearance issue?	Unknown	Insufficient detail at this preliminary design stage.	To be taken into account at detailed design.
4.6.4	Are the signs positions so they do not cause a hazard?	Unknown	Insufficient detail at this preliminary design stage.	To be taken into account at detailed design.

5. Cycle Audit

Cycling in Ireland is increasing in popularity. Advice for the safe provision of cycle facilities is given in both the DMURS and the National Cycle Manual (NCM) publications in order to promote cycling as a sustainable form of transport and seeks to rebalance design priorities to promote a safer and more comfortable environment for cyclists.

The Stage 1 / 2 Road Safety Audit has also identified Cyclist related problems.

5.1 Cycleway Provision

Construction costs for the provision of segregated cycleways can be considerable and not always warranted. The provision of cycleways that are remote from the carriageway can raise concerns for the safety of the user as 'over looking' is less likely. The NCM provides guidance on where best to accommodate the cyclist in the public environment i.e. on lightly trafficked/low speed streets designers are generally dictated to create shared streets where cyclists and motor vehicles share the carriageway. On busier/moderate speed streets designers are generally dictated to apply separate cycle lanes/cycle tracks.

Ref	Feature	Conforms	Access Comment	Action
5.1.1	Are cycle facilities appropriate to the environment?	Unknown	The drawings provided do not indicate any specific provision for cyclists. It is inferred that cyclists are intended to use the carriageway, since the footpaths are not wide enough for pedestrian/cycle shared use, although is to be taken into account at detailed design, is noted some shared pedestrian/cyclists routes are proposed. It is likely that cyclists will wish to take the most direct route and therefore can be expected to ride via includes the recreational paths within the open space.	To be taken into account at detailed design. The paths via the open space should be designed to standards appropriate for use by pedestrians and cyclists. The provision of shared surface streets should be clarified. Measures should be provided on shared surface streets to establish the priority of vulnerable road users over vehicles. See also RSA problem 3.2.7.
5.1.2	Are Advanced Stop Lines (ASL) provided for the on-road at the signal-controlled junction?	N/A	No signalised junctions are within the scheme,	None

Ref	Feature	Conforms	Access Comment	Action
5.1.3	Are suitable and safe bike storage solutions provided at the nodes of demand?	No	No provision for cycle parking or storage is indicated within the scheme. Provision of secure covered cycle parking/storage and charging is an important measure where it is intended to promote cycling (including ebikes) as a viable alternative mode of transport.	Design Team should take into account the proposed land use and provide facilities accordingly. For example, the creche should include secure covered cycle parking. The proposed dwellings should provide secure covered cycle storage which is also accessible without having to pass through the house/apartment.

6. Walking Audit

Walking audits examine and evaluate the walking environment in a given area. The audit's purpose is to identify concerns for pedestrians related to the safety, access, comfort, and convenience of the walking environment.

Many of the concerns for able-bodied pedestrians are the same as for the disabled users i.e., footpath surface condition, footpath width etc. and may also be raised in the Mobility Audit.

Ref	Feature	Conforms	Access Comment	Action
6.1.1	Does the proposed design adequately cater for the safe passage of existing pedestrian users after completion of the project by reinstating existing facilities or providing alternative new facilities?	Yes	Noted that proposed footpaths will connect and tie-in to existing footpaths.	None
6.1.2	Are the footpaths of adequate width to cater for expected pedestrian numbers?	Unknown	The footpaths have been scaled from the drawings provided as approximately 2m wide.	The width of the footpaths should be confirmed. 2.0m is recommended as a minimum. Shared use paths should be wider.
6.1.3	Do the footpaths terminate at an appropriate location?	Unknown	Some footpaths terminate at the commencement of the shared use roads. It is not clear the detail of the termination or how mobility and/or sight impaired pedestrian travel between the two areas.	To be taken into account at detailed design.
6.1.4	Are the footpaths direct without unnecessary diversions, loops etc?	Yes		None
6.1.5	Do the footpaths conflict with cycle or motor users?	Yes	The drawings provided do not indicate any specific provision for cyclists.	To be taken into account at detailed design. The paths via the open space should be designed to

Ref	Feature	Conforms	Access Comment	Action
			It is inferred that cyclists are intended to use the carriageway, since the footpaths are not wide enough for pedestrian/cycle shared use. However, it is likely that cyclists will wish to take the most direct route and therefore can be expected to ride via includes the recreational paths within the open space. There are a number of locations where the shared footpath / cycle path crosses the carriageway. No details are provided of who has priority in these locations.	standards appropriate for use by pedestrians and cyclists. Measures should be provided to establish the priority of vulnerable road users over vehicles at the shared use path crossings.
6.1.6	Are suitable signs provided to enable wayfinding though the development?	No	No direction signage for pedestrians or cyclists has been proposed.	No direction signage for pedestrians or cyclists has been proposed Direction signage for pedestrians and cyclist should be provided where it may be beneficial, for example routes via the open space. See also 4.6.1 above.
6.1.7	Are any areas of shared use suitably signed by way of change in environment (surface colour, texture, signage, furniture, etc.)?	No	The drawings provided do not indicate any specific provision for cyclists. It is inferred that cyclists are intended to use the carriageway, since the footpaths are not wide enough for pedestrian/cycle shared use. However, it is likely that cyclists will wish to take the most direct route and therefore can be expected to ride via includes the recreational paths within the open space.	To be taken into account at detailed design. The paths via the open space should be designed to standards appropriate for use by pedestrians and cyclists. The provision of shared surface streets should be clarified. Measures should be provided on shared surface streets to establish the priority of vulnerable road users over vehicles.

7. Quality Audit Statement

We certify that we have examined the drawings and other information listed in Appendix A. This Quality Audit has been undertaken to demonstrate that appropriate consideration has been given to all of the relevant aspects of the design.

Signed .....
Stuart Summerfield
Audit Team Leader

Date 2nd October 2024

Signed .....
Philip Edwards BSc Hons GMICE
Audit Team Member

Date 2nd October 2024

Appendix A List of Documents Examined

DOCUMENT REF / NAME:	RECEIVED FROM:	DATE:
DG drawing 23107-P-003 C – Proposed LRD Layout	PUNCH Consulting Engineers	13/11/2023
	-	-

Appendix C: Supplementary Quality Audit Report

Supplementary Quality Audit

Castlepark, Castlelands (Townland)-to-Mallow Town Centre Route, Co Cork

On behalf of **Reside (Castlepark) Ltd**

Prepared By:

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September 2024

Civil
Structural
Traffic

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Purpose of Issue: P=Preliminary C=Comment F= Final	C	PL							
Date:	08 08 24	20 09 24							
Originator:	PE	PE							
Checked By:	SS	SS							
Approved By:	SS	SS							

1. INTRODUCTION

1.1. This report describes a Supplementary Quality Audit carried out on behalf of Reside (Castlepark) Ltd on roads adjacent to a proposed residential development - Phase 1 of the proposed residential development at Castlepark, Castlelands, Mallow, Co. Cork. There has been a previous Quality Audit (CST Group August 2023) undertaken on the proposed on-site scheme proposals. This Supplementary Quality Audit has been carried out on the existing adjacent roads, of Bridewell Lane, from its junction with the N72 Bridge Street, St Joseph's Road to its junction with Castle Crest, and a loop within Castlepark via Kingsfort Avenue, Bower Walk, Maple Avenue and Castlepark Avenue. These are indicated in YELLOW on Figure 1 below.

~~1.2.~~ **Figure 1 -** Roads subject to this Supplementary Quality Audit

1.2 The Supplementary Quality Audit will demonstrate appropriate consideration has been given to all relevant aspects of the existing roads based on the guidance provided in the Design Manual for Urban Roads and Streets (DMURS) produced by the Department of Transport, Tourism and Sport in June 2019, and advises what further Action may be required.

1.3 This Quality Audit includes the following individual audits: -

- ⇒ an Access Audit
- ⇒ a Walking Audit
- ⇒ a Cycle Audit
- ⇒ Other Considerations

Given that this Supplementary Quality Audit relates entirely to existing roads, there is no Road Safety Audit available for consideration as part of the Quality Audit process.

1.4 The Audit team comprised of:

Team Leader:	Stuart Summerfield, HNC (Civil) FCIHT FSoRSA
Team Member:	Philip Edwards BSc (Hons.) (Civil Engineering).

1.5 The Audit Team visited the site on 20st July 2024 between the hours of 16:55 – 18:00. Weather conditions during the inspection were dry with sunny spells. Google Streetview was also used to assist in explaining some of the problems, given the extensive length of roads subject to this report.

2. ACCESS AUDIT

2.1 Overview

The Access Audit identifies a range of barriers that potentially restrict access for disabled people in the external and internal built environments.

For the purposes of the access assessment, the environment's features have been broken down into its constituent features. Each feature is assessed for conformity against certain access criteria. These criteria are derived from the following range of Best Practice sources, guidelines, standards, publications and legislation:

- Building Regulations 2022, Technical Guidance Document M -Access for People with Disabilities (Department of Housing, Local Government and Heritage)
- Buildings for Everyone -Access and use for all citizens (National Disability Authority) Access to the Historic Environment -Meeting the needs of Disabled People (Lisa Foster)
- Traffic Management Guidelines (Irish Government Publications 2003)
- Design Manual for Urban Road and Streets (Department of Transport, Tourism and Sport)
- Guidance on the use of Tactile Paving Surfaces: UK Department for Transport.

Where a site feature does not conform to this guidance, an explanation as to the potential restriction on access is provided, together with a suggested action and the priority in which such actions should be undertaken.

The Disability Act 2005 and the National Disability Authority's initiatives build on relationships and practices which currently exist among councils, city planners, building professionals and community groups to make services in Ireland more accessible to people with disabilities. In addition to people who use wheelchairs or have restricted mobility, there are many people affected by some degree of hearing loss, learning disability, visual impairment or conditions such as arthritis. This access assessment seeks to consider the needs of all potential users from a universal access perspective.

The audit is an organisation's first step in identifying physical barriers that people with disabilities may encounter when engaging with the community, public services and facilities.

2.2 Footpaths and Pavements in Streets, Roads and Public Areas

Table 2.2 Footpaths and Pavements in Streets, Roads and Public Areas

Ref	Feature	Conforms	Audit Comment	Action
2.2.1	Are the footways a minimum width of 1.5m (1.8-2.0m in high volume areas)?	No	Some sections of footpath on the western side of Bridewell Lane and St Joseph's Road are narrow, possibly less than 1.5m wide. The eastern side of Bridewell Lane/St Joseph's Road (south of Infirmary Lane) does not have a consistent/continuous footpath. There are multiple trip-hazards and obstructions. There is no suitable provision for pedestrians on the eastern side of the road. It may be possible that Bridewell Lane became a shared space/ pedestrianised street with access for residents and deliveries only. All other traffic would have to curve round from St Joseph's Road onto Infirmary Lane and its junction with the N72. This could help mitigate the sub-standard footpath provision in Bridewell Lane.	Design Team to investigate.
			There is a short section of footpath on the western side of St Joseph's Road, past the Gallery Bar/Restaurant, where the footpath appears to be very narrow and there are bollards mounted on the kerb. This section may be too narrow for wheelchairs, double buggies, disability scooters, etc. If the footpath is too narrow, wheelchairs and disability scooters would be forced to use the carriageway, with the added difficulty that there are no suitable flush kerbs nearby.	Design Team to investigate.

Ref	Feature	Conforms	Audit Comment	Action
			The footpath may require widening and/or removal of the bollards.	
		Not fully, but there is alternative provision.	There is no footpath on the eastern side of St Joseph's Road between the junction with Castlepark Avenue and the junction Castle Crest. However, it is noted that there is a zebra crossing south of Castlepark Avenue, such that pedestrians can cross from the eastern side to western side where there is a continuous footpath.	None.
		Yes	The newer roads, Kingsfort Avenue, Bower Way4 and Castlepark Avenue, appear to have reasonable footpath widths.	None.
2.2.2	Is the main footway clear of obstructions that would impede wheelchair users or be a trip hazard to sight impaired users?	Not fully. Some existing bollards obstruct the footpath.	There are some bollards on the narrow footpath in places on Bridewell Lane and the southern part of St Joseph's Road. The necessity for these bollards should be reviewed. If they are still considered necessary, the bollards could be repainted, and contrasting bands added to make them more conspicuous to visually impaired pedestrians.	Design Team to investigate.
			As identified in 2.2.1 above, the footpath on the western side of St Joseph's Road, past the Gallery Bar/Restaurant, appears to be very narrow and there are bollards mounted on the kerb. This section may be too narrow for wheelchairs, double buggies, disability scooters, etc. If the footpath is too narrow, wheelchairs and disability scooters would be forced to use the carriageway.	Design Team to investigate

Ref	Feature	Conforms	Audit Comment	Action
2.2.3	Are all surface water gullies / slot drains outside of the desire line or less than 13mm wide and set at right angles to the line of traffic?	Yes	No existing gulleys are observed within pedestrian crossing points or desire lines where crossing points are not provided.	None.
2.2.4	Are all paving materials suitable for the passage of sight impaired and arthritic and wheelchair users?	No	It is noted that there is a small area of tegular paving or similar, which is bounded by a 300mm approx. strip of granite sets outside the Gallery Bar at the southern end of St Joseph's Road. Granite setts create an uneven surface which may be difficult to walk on for some mobility impaired pedestrians and could also be uncomfortable for wheelchair users. Adjacent to the building's access ramp, the footpath is very narrow, and the granite set boundary may be unavoidable, and alternative more suitable paving could be provided.	Design Team to investigate.
		Yes	Elsewhere it is noted that the footpath surfacing is butt jointed slabs, tegular paving, or concrete (including imprinted concrete). These types of surface material should be satisfactory provided that they are well maintained.	None.

Ref	Feature	Conforms	Audit Comment	Action
2.2.5	Is the footpath clear of obstacles mounted more than 300mm above ground and protruding into the footpath by more than 100mm?	No	As identified in 2.2.2 above, there are some bollards on the narrow footpath in places on Bridewell Lane and the southern part of St Joseph's Road.	Design Team to investigate.
			There are some electrical cabinets which are positioned within the footpath, albeit at the back of the footpath. Locations include within the narrow footpath along Bridewell Lane, St Joseph's Road and Castle Crest. In several cases, they may lack contrast from the adjacent background, e.g. galvanised grey cabinets against grey concrete surface and in Castle Crest, a black cabinet on a dark grey concrete surface.	Design Team to investigate. Existing cabinets could be painted to improve their conspicuity to visually impaired pedestrians.
2.2.6	Is the footway route to an acceptable gradient not exceeding 1:20?	Unknown	Footpath levels and gradients have not been explicitly checked, and in any case, for this Quality Audit of the existing roads, levels and gradients are fixed. However, as a general observation St Joseph's Road, Castle Crest/Kingsfort Avenue and Castlepark Avenue do have significant gradients. Given that gradients are fixed, other mitigation measures could be considered.	Design Team to investigate. If locations with a gradient exceeding 1 in 20 are identified, mitigation could be provided such as benches for resting and handrails for support. In St Joseph's Road, this would have to be balanced with maintaining a minimum 1.5m footpath width. Elsewhere, within the Castlepark development, there are grassed

Ref	Feature	Conforms	Audit Comment	Action
				areas and open space adjacent to most of the roads where seating could be installed.
2.2.7	Is the footway route clear of abrupt changes in level with crossfalls not exceeding 2.5%?	No	Abrupt changes in level of the footpath itself have not been noted. But there appears to be many locations where lowered kerbs to assist pedestrians and wheelchair users to cross the carriageway are not provided, or even where the footway may have been lowered, there is still an excessive upstand and are not suitable for wheelchair users.	Design Team to investigate. Flush kerbs (upstand 0 to 6mm) should be provided at all pedestrian crossing points throughout the roads subject to this Quality Audit. These should also be provided with associated blister tactile paving.
		Unknown	Footpath crossfalls have not been explicitly checked. However, excessive crossfalls have not been noted.	Design Team to investigate. If locations with a crossfall exceeding 2.5% are identified, the feasibility of reducing the cross fall should be investigated.
2.2.8	Is the footway clear of physical obstructions or windows, doors, and gates that open onto the access route?	Not fully	On the eastern side of Bridewell Lane, it appears some doors may open into the street. However, as noted in 2.2.1 above, there is no consistent/continuous footpath on this eastern side of Bridewell Lane, and other measures are suggested.	Design Team to investigate. Passing pedestrians should not be put at risk from features projecting from buildings.

Ref	Feature	Conforms	Audit Comment	Action
2.2.9	Are the footpath routes clear of headroom hazards (2.1m or 2.3m if shared with cyclists)?	Yes	No low overhead obstructions were observed.	None.
2.2.10	Is the footpath route clear of any slip, trip hazards for sight impaired users?	No	As identified in 2.2.7, flush kerbs have generally not been provided to assist wheelchair users and pedestrians at road crossings.	Design Team to investigate. Flush kerbs (upstand 0 to 6mm) should be provided at all pedestrian crossing points throughout the roads subject to this Quality Audit. These should also be provided with associated blister tactile paving.
		Generally, yes	Apart from the potential obstructions identified in 2.2.2 and 2.2.5 above, and absence of flush kerbs, no other slip or trip hazards were observed. There are numerous utility covers located within the footpaths, and these should be inspected and maintained on a regular basis.	Regular inspection and maintenance required.

Ref	Feature	Conforms	Audit Comment	Action
2.2.11	Is the footpath clear of advertising 'A' boards and other temporary obstructions	No	No A-boards were observed during the site visit. Some commercial wheeled bins were evident, particularly at Bridewell Lane. These may sometimes be placed haphazardly and could impede pedestrians, especially visually impaired. Use of A-boards is not anticipated in the Castleparks residential development.	Placing of A boards, and storage of wheeled bins within the public road be managed in accordance with local regulations and may require ongoing monitoring.
2.2.12	Is the footway shared with cyclists or abutting a cycle lane where cyclists may encroach?	Not applicable	There are no cycle facilities within the roads subject to this report.	None.
2.2.13	Is the footpath or public area adequately illuminated for night-time use?	Unknown	It is noted that there is existing street lighting along all of the roads subject to this report.	Design Team to investigate. Street lighting should be assessed and upgraded as necessary.
2.2.14	Is suitable tactile surfacing provided at all pedestrian crossing locations?	No	As identified in 2.2.7 above, there is a general lack of suitable facilities to assist mobility impaired or visually impaired cross the roads subject to this report. This includes the relatively new roads on the Castlepark development. Flush kerbs (0 to 6mm upstand) with associated blister tactile paving should be provided in safe and convenient locations for pedestrians to cross the various roads. This should include all side road junctions.	Design Team to investigate. Flush kerbs (upstand 0 to 6mm) should be provided at all pedestrian crossing points throughout the roads subject to this Quality Audit. These should also be provided with associated blister tactile paving.

2.3 Public Seating in the Street or Public Area

It is recommended that seating should be provided to public areas or within a street environment at intervals of approximately 50 metres, particularly in streets and pavements that have inclines or slopes to give rest points for persons with mobility-impairments, also to provide a wheelchair rest position on hillside streets, sloping footways and other public areas.

Table 2.3 Public Seating in the Street or Public Area

Ref	Feature	Conforms	Audit Comment	Action
2.3.1	Is seating provided at suitable intervals?	No	No public seating was observed along the roads subject to this report. There would appear to be many locations where seating could be provided, especially within the grassed areas adjacent to the footpaths throughout the Castlepark development.	Design Team to investigate.
2.3.2	Is seating provided at inclines or slopes as rest points for mobility impaired users?	No	As stated in 2.2.6 above, footpath levels and gradients have not been explicitly checked, and in any case, for this Quality Audit of the existing roads, levels and gradients are fixed. However, as a general observation St Joseph's Road, Castle Crest/Kingsfort Avenue and Castlepark Avenue do have significant gradients. Given that gradients are fixed, other mitigation measures such as those suggested in 2.2.6 could be considered.	
2.3.3	Are flat areas provided at regular intervals on inclines or slopes as rest point for mobility assisted (wheelchair, frames, stick) users?			

2.4 Controlled and Un-controlled Pedestrians Crossings

Table 2.4 Controlled and Un-controlled Pedestrians Crossings

Ref	Feature	Conforms	Audit Comment	Action
Zebra Crossing on St Joseph's Road				
2.4.1	Do the controlled crossing have tactile paving in compliance with the standards and in appropriate colour?	Yes	There is a zebra crossing on St Joseph's Road, which connects Tip O Neil Park with Castlepark Avenue. The layout appears correct.	None.
2.4.2	Do the controlled crossing have dished kerbs with an unobstructed width of 2400mm?			
2.4.3	Are the kerbs lowered to form a dished kerb approach gradient no greater than 1:12 and an upstand above road level no greater than 6mm?			
2.4.4	Is the crossing free of road gullies, gratings or channels that may cause wheelchair or stick users' problems?			
2.4.5	Is visibility to approaching traffic achieved from all crossing locations and clear of temporary obstructions such as parked vehicles?		It appears that visibility to approaching traffic is achieved, and parking on the approaches is controlled by the zig-zag road markings.	
2.4.6	Is the crossing area adequately	Unknown		Design Team to investigate.

Ref	Feature	Conforms	Audit Comment	Action
	covered with street lighting?			Street lighting should be assessed and upgraded as necessary.
Zebra Crossing on Castle Crest				
2.4.7	Do the controlled crossing have tactile paving in compliance with the standards and in appropriate colour?	No	There is a zebra crossing in Castle Crest adjacent to the school access road. However, the provision is not in accordance with design standards.	To be taken into account by the Design Team. The crossing installation should be constructed in accordance with design standards, which includes tactile paving, flush kerbs, road markings and belisha beacons
2.4.8	Do the controlled crossing have dished kerbs with an unobstructed width of 2400mm?	No	Kerbs are not flush.	
2.4.9	Are the kerbs lowered to form a dished kerb approach gradient no greater than 1:12 and an upstand above road level no greater than 6mm?			
2.4.10	Is the crossing free of road gullies, gratings or channels that may cause wheelchair or stick users' problems?	Yes		
2.4.11	Is visibility to approaching traffic achieved from all crossing locations and clear of temporary obstructions such as parked vehicles?	No	There are no zig-zag markings, which should be used to indicate the controlled zone associated with the crossing.	
2.4.12	Is the crossing area adequately	Unknown		Design Team to investigate.

Ref	Feature	Conforms	Audit Comment	Action
	covered with street lighting?			Street lighting should be assessed and upgraded as necessary.
2.4.13	Do the un-controlled crossing have tactile paving in compliance with the standards and in appropriate colour?	No	The tactile paving at the uncontrolled crossing of Bridewell in line with Spa Square passageway, which is an inline crossing, is just 800mm deep. 1200mm deep is recommended for this situation.	Design Team to investigate. Tactile paving should be improved
		No	The location of the crossing point of St Joseph's Road, at the junction with Infirmary Lane, is poorly located, there is insufficient width on the eastern footpath, and it is blocked with an electricity cabinet. The narrow strip of tactile paving on the eastern side. The crossing may be better located slightly further north, nearer to Infirmary Lane.	Design Team to investigate. Crossing point should be improved.
		No	No tactile paving is provided at any other crossing point throughout any of the roads subject to this report.	Design Team to investigate. Provision of pedestrian crossing points with flush kerbs and associated tactile paving should be provided at safe and convenient locations to assist pedestrian to cross the road to serve pedestrian desire lines, such as at side road junctions.
2.4.14	Do the un-controlled crossing have dished kerbs with an unobstructed width of 1200mm?	No	There is no consistent provision of dished kerbs for pedestrian crossing points throughout the roads subject to this report. Currently the provision is not suitable for wheelchair users and other mobility impaired pedestrians.	
2.4.15	Are the kerbs lowered to form a dished kerb approach gradient no greater than 1:12 and an upstand above road level no greater than 6mm?	No		

Ref	Feature	Conforms	Audit Comment	Action
2.4.16	Are the crossings free of road gullies, gratings or channels that may cause wheelchair or stick users' problems?	Unknown		To be taken into account by the Design Team. Low-spots and gulleys should be kept clear of pedestrian crossing points.
2.4.17	Is visibility to approaching traffic achieved from all crossing locations and clear of temporary obstructions such as parked vehicles?	Unknown	.	Design Team to investigate.
2.4.18	Is the crossing area adequately covered with street lighting?	Unknown	.	Design Team to investigate. Street lighting should be assessed and upgraded as necessary.

2.5 Disabled User Parking Spaces

For Disabled Parking Spaces within a parking scheme, it is important to provide designated Accessible Parking Spaces to serve the needs of disabled drivers or passengers. These spaces should be located to minimise travel distance for the user from the space to their intended destination.

The number of Disabled User spaces provided will change dependant on the destination i.e., a medical centre will require a greater provision than a crèche.

Table 2.5 Disabled User Parking Spaces

Ref	Feature	Conforms	Audit Comment	Action
2.5.1	Are Disabled User Parking spaces provided	Unknown	No dedicated disabled parking spaces were observed within the roads subject to this report. In the vicinity of Bridewell Lane and the southern part of St Joseph's Road, which is within the commercial/town centre area of Mallow, provision for disabled parking spaces is expected. However, there are various dedicated disabled parking spaces on-street and within car parks in the town centre, which may already provide sufficient provision.	The design Team should assess anticipated demand to ensure that the total number of designated disabled parking spaces will be sufficient, and compliant with, local guidance. If any additional disabled parking spaces are assessed to be required, they should be located in safe and convenient locations to serve anticipated destinations.
			Outside of the commercial/town centre area, there did not appear to be any other specific destinations where dedicated disabled parking spaces would be required.	None

Ref	Feature	Conforms	Audit Comment	Action
2.5.2	Are disabled parking spaces provided with a clearly marked RRM 015 symbol on the road surface to show parking assigned to disabled or mobility-impaired drivers or passenger?	Not applicable	No dedicated disabled parking spaces were observed within the roads subject to this report.	To be taken into account by the Design Team if any additional spaces are provided.
2.5.3	Is there a flush kerb to allow wheelchair access to the adjacent footpath?			
2.5.4	Is there a yellow cross hatch marking to indicate the travel clear route for the user?			

2.6 Wayfinding

It is important to provide way-finding signage in the area. It should be noted that information signage should not be positioned too high for persons of short stature and wheelchair users to access. Also, visitors to the area with vision impairment will find it difficult to read signage at high levels.

Information boards benefit blind or visually-impaired persons if essential notes and information are provided in conjunction with existing visual signs, directional routes in Braille and tactile will assist visitors to the area.

Effective colour contrast on signage is essential and is as important as the size of the lettering or symbols. Colours can appear different under various light sources, so when choosing sign colours ensure that under the same lighting conditions be used in the area where the sign is to be located at night. Particularly avoid red and green colour schemes in signage due to the prevalence of red/green colour blindness.

It is noted that one of the project's objectives is *"Clear and appropriately sited public information and way-finding signage".* No specific details are indicated on the drawings provided.

Table 2.6 Wayfinding

Ref	Feature	Conforms	Audit Comment	Action
2.6.1	Is signage provided to guide the user through the development?	Not fully	There appears to be little signage provided in the vicinity of Bridewell Lane and the southern part of St Joseph's Road in the town centre/commercial area. It is noted there is a finger-post direction sign to Mallow GAA at Infirmary Lane. Notably, there did not appear to be direction signable to Mallow Castle, or Blackwater Park, which may be attractions for visitors to the area.	Design Team to investigate. Direction signage for pedestrians should be provided where it may be beneficial. It is appreciated that local people will be familiar with the area, but consideration should be given to signage to places of importance or interest to visitors to the area. There should be a coordinated review of all existing direction signage. A list of local destinations appropriate for pedestrians, especially visitors,
			There is no direction signage at the junctions to Castlepark from St Joseph's Road.	
			Within the Castlepark development, street names are indicated inscribed into substantial stone blocks. Landscape planting is obscuring some of these signs, .	

Ref	Feature	Conforms	Audit Comment	Action
			At some junctions within the development (but not all), there are finger posts indicating the street names. Again, landscape planting is obscuring some of these signs.	should be determined, and signs then placed in appropriate locations to identify coherent routes. Vegetation should be maintained such that signs are not obscured.
2.6.2	Are the signs of a suitable size and colour combination?	No	Within the Castlepark development, street names are indicated inscribed into substantial stone blocks. Although these may be attractive, there is little contrast between the inscription and the background. This may not be ideal for visually impaired pedestrians, particularly as the stone weathers. Also, landscape planting obscures some of these street name blocks. At some junctions within the development (but not all), there are finger posts indicating the street names. Some of these have gold text on a black background. Others have a white text on green background. The gold text on black background may not be as clearly legible as white text on green background.	Design Team to investigate. The clarity of the signs, with respect to the text and background colours should be reviewed. The white text on either the black or green background is likely to be clearer.
2.6.3	Are the signs mounted at a suitable height so they can be read but not cause a head clearance issue?	Generally, yes	The mounting height of the finger post signs has not been checked specifically, but the mounting height appeared reasonable. However, landscape planting is obscuring some of these signs.	Vegetation should be maintained such that signs are not obscured.

Ref	Feature	Conforms	Audit Comment	Action
2.6.4	Are the signs positions so they do not cause a hazard?	Yes		None

3. WALKING AUDIT

3.1 Overview

Walking audits examine and evaluate the walking environment in a given area. The audit's purpose is to identify concerns for pedestrians related to the safety, access, comfort, and convenience of the walking environment.

Many of the concerns for able-bodied pedestrians are the same as for the disabled users i.e., footpath surface condition, footpath width etc. and may also be raised in the Mobility Audit.

Table 3.1 Walking Audit

Ref	Feature	Conforms	Audit Comment	Action
3.1.1	Does the proposed design adequately cater for the safe passage of existing pedestrian users after completion of the project by reinstating existing facilities or providing alternative new facilities?	Not applicable	There are no scheme proposals yet to be considered. This report considers the existing situation, which may then be used to inform new scheme proposals.	None.
3.1.2	Are the footpaths of adequate width to cater for expected pedestrian numbers?	No	The Audit Comments and suggestions of 2.2.1 relating to Bridewell Lane and St Joseph's Road are reiterated.	Design Team to investigate.
3.1.3	Do the footpaths terminate at an appropriate location?	No	The eastern side of Bridewell Lane does not have a consistent/continuous footpath. There are multiple trip-hazards and obstructions. There is no suitable provision for pedestrians on the eastern side of the road.	Design Team to investigate.
		Not fully, but there is alternative provision.	There is no footpath on the eastern side of St Joseph's Road between the junction with Castlepark Avenue and the junction Castle Crest. However, it is noted that there is a zebra crossing south of Castlepark Avenue, such that pedestrians	None.

Ref	Feature	Conforms	Audit Comment	Action
			can cross from the eastern side to western side where there is a continuous footpath.	
		Yes	Within the Castlepark development, the footpaths along Castle Crest, Kingsfort Avenue, Bower Walk and Castlepark Avenue appear to provide a comprehensive network and connect to other footpaths within the development.	None.
3.1.4	Are the footpaths direct without unnecessary diversions, loops etc?	Yes	None	No further comment
3.1.5	Do the footpaths conflict with cycle or motor users?	Yes	There are no cycle facilities within the roads subject to this report.	No further comment
3.1.6	Are suitable signs provided to enable wayfinding though the development?	No	The comments made in 2.6.1, 2.6.2, 2.6.3, and 2.6.4 are reiterated.	Design Team to investigate. Direction signage for pedestrians should be provided where it may be beneficial. It is appreciated that local people will be familiar with the area, but consideration should be given to signage to places of importance or interest to visitors to the area.

Ref	Feature	Conforms	Audit Comment	Action
3.1.7	Are any areas of shared use suitably signed by way of change in environment (surface colour, texture, signage, furniture, etc.)?	Not Applicable	There are no existing areas of “shared use”.	None.

4. CYCLE AUDIT

Cycling in Ireland is increasing in popularity. Advice for the safe provision of cycle facilities is given in both the DMURS and the National Cycle Manual (NCM) publications in order to promote cycling as a sustainable form of transport and seeks to rebalance design priorities to promote a safer and more comfortable environment for cyclists.

4.1 Cycleway Provision

Construction costs for the provision of segregated cycleways can be considerable and not always warranted. The provision of cycleways that are remote from the carriageway can raise concerns for the safety of the user as 'over looking' is less likely. The NCM provides guidance on where best to accommodate the cyclist in the public environment i.e. on lightly trafficked/low speed streets designers are generally dictated to create shared streets where cyclists and motor vehicles share the carriageway. On busier/moderate speed streets designers are generally dictated to apply separate cycle lanes/cycle tracks.

There are no existing cycle facilities within any of the roads subject to this report.

Table 4.1 Cycle Audit

Ref	Feature	Conforms	Audit Comment	Action
4.1.1	Are cycle facilities appropriate to the environment?	Not fully	Bridewell Lane/St Joseph's Road south of Infirmary Lane:- This is a narrow road, with substandard footpaths. As already identified in 2.2.1 above, potentially vehicular traffic could be restricted with access for residents and deliveries only. This may improve the environment for cyclists in this section of road.	Design Team to investigate.
			St Joseph's Road from Infirmary Lane to the junction with Castle Crest:- The carriageway is estimated to be 7 to 7.5m wide. It is anticipated that this section of road which currently has a 50kph speed limit will default to 30kph when revised speed limits are enacted (Road Traffic Act 2024). This section of road could be suitable for 1.5m advisory cycle lanes to be provided within the carriageway.	Design Team to investigate suitability of cycle lanes. Also, in association with the roads authority traffic speeds should be monitored after the reduced speed limits are introduced. If speeds are

Ref	Feature	Conforms	Audit Comment	Action
				observed to be high, additional traffic calming measures should, be provided.
			Castlepark residential development:- On-road cycling is considered reasonable within the development where there is traffic calming, e.g. speed humps, and the default speed limit is due to become 30kph speed limit. Vehicle speeds should be monitored, and additional traffic calming provided if deemed necessary.	Design Team to investigate.
4.1.2	Are Advanced Stop Lines (ASL) provided for the on-road at the signal-controlled junction?	Not Applicable	There are no traffic signal junctions within the roads subject to this report.	None.
4.1.3	Are suitable and safe bike storage solutions provided at the nodes of demand?	No	There do not appear to be any cycle stands within the roads subject to this report, or scheme proposals, or more generally within the town centre. Provision of secure cycle parking/storage and is an important measure where it is intended to promote cycling (including e-bikes) as a viable alternative mode of transport.	Design Team to investigate. Provision of safe and secure cycle storage including battery charging should be considered. This should include both within the public realm and possibly within private areas too.

5. OTHER CONSIDERATIONS

Table 5.1 Other Considerations

Ref	Feature	Conforms	Audit Comment	Action
5.1	Bus Stops – Location and facilities	No.	There are no bus stops on any of the roads subject to this report, and there do not appear to be any local bus services. From internet search, it appears there is a bus service from Cork to Charleville via Mallow. The nearest bus stop is on Park Road, by the Town Park. (Approx. 350m/5 minute walk from Bridewell Lane, and 1.5km/20min walk from within Castlepark development. Therefore, bus services may be inaccessible to some residents of Castlepark development, unable to walk to Park Road bus stop.	Design Team to investigate. Provision of bus services and associated facilities should be included within the proposals for such a large development.
5.2	Provision of Electric vehicle Charging points	No	No electric vehicle charging points were observed.	Design Team to investigate. Potential demand for EV charging points should be assessed, taking into account facilities which may already nearby. If demand is expected to justify, EV charging points should be installed.

6. ITEMS RESULTING FROM INDIVIDUAL DESIGN AUDIT

This Quality Audit contains separate Audits for Access, Walking and Cycling. The headlines from these individual audits are summarised in Table 6.1 below. Table 6.1 also cross references across the columns items which have been identified in more than one of the audits, such that the issue can be considered in the wider context of the overall scheme design, rather than in isolation.

Table 6.1 Quality Audit Summary

Access Audit	Walking Audit	Cycling Audit	Other	Quality Audit Issue
2.2.1	3.1.2	4.1.1		Confirm footpath widths
2.2.2				Possible obstructions to footpath
2.2.3				Suitability of drainage
2.2.4				Confirm footpath paving materials.
2.2.5				Possible obstructions to footpath
2.2.6				Excessive gradients
2.2.7				Excessive crossfalls
2.2.8				Possible obstructions to footpaths from opening gates, doors or windows
2.2.9				Possible overhead obstructions
2.2.10				Potential slip/trip hazards
2.2.11				A-Boards and wheeled bins
2.2.12				Possible pedestrian/cycle conflict
2.2.13				Adequacy of public lighting
2.2.14				Detailing of tactile paving
2.3.1				Review provision of public seating
2.3.2				Provision of seating and level areas along slopes
2.3.3				
2.4.1				Provision of dropped kerbs and associated tactile paving
2.4.2				Provision of dropped kerbs
2.4.3				Suitability of footpath gradients
2.4.4				Suitability of drainage
2.4.5				Intervisibility
2.4.6				Adequacy of public lighting
2.4.7				Provision of dropped kerbs and associated tactile paving
2.4.8				Provision of dropped kerbs
2.4.9				Suitability of footpath gradients
2.4.10				Suitability of drainage
2.4.11				Intervisibility
2.4.12				Adequacy of public lighting
2.4.13				Provision of dropped kerbs and associated tactile paving
2.4.15				Provision of dropped kerbs
2.4.15				Suitability of footpath gradients
2.4.16				Suitability of drainage
2.4.17				Intervisibility
2.4.18				Adequacy of public lighting

Access Audit	Walking Audit	Cycling Audit	Other	Quality Audit Issue
2.5.1				Consider extra provision for disabled parking spaces.
2.5.2				Road markings associated with disabled parking bays
2.5.3				Provision of flush kerbs associated with disabled parking space.
2.5.4				Provision of hatched area associated with disabled parking space.
2.6.1	3.1.6			Provision of direction signage
2.6.2	3.1.6			Sign Design - layout
2.6.3	3.1.6			Sign Design – mounting height
2.6.4	3.1.6			Sign Design – location
	3.1.1			Overall suitability of footpaths.
2.2.1	3.1.2			Footpath widths
	3.1.3			Termination of footpaths
	3.1.4			Directness of footpaths – no comment
	3.1.5			Potential conflict with other road-users
2.6.1, 2.6.2, 2.6.3, 2.6.4	3.1.6			Provision of direction signage
	3.1.7			Provision of shared use facilities
2.2.1		4.1.1		Provision of cycle facilities
		4.1.2		Advance Stop Lines – N/A
		4.1.3		Review provision of cycle parking/storage
			5.1.1	Bus service/bus stop provision and details
			5.1.2	Provision of Electric Vehicle Charging Points

7. QUALITY AUDIT STATEMENT

This Quality Audit has been undertaken to demonstrate that appropriate consideration has been given to the existing roads outlined the scope of works.

Approved for Issue by: _____

Stuart Summerfield
HNC FSoRSA FCIHT

Date: 20th September 2024

Supplementary Quality Audit

St Joseph's Road Castle Crest/Kingsfort Avenue-to-GAA Grounds

On behalf of **Reside (Castlepark) Ltd**

Prepared By:
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September 2024

Civil
Structural
Traffic

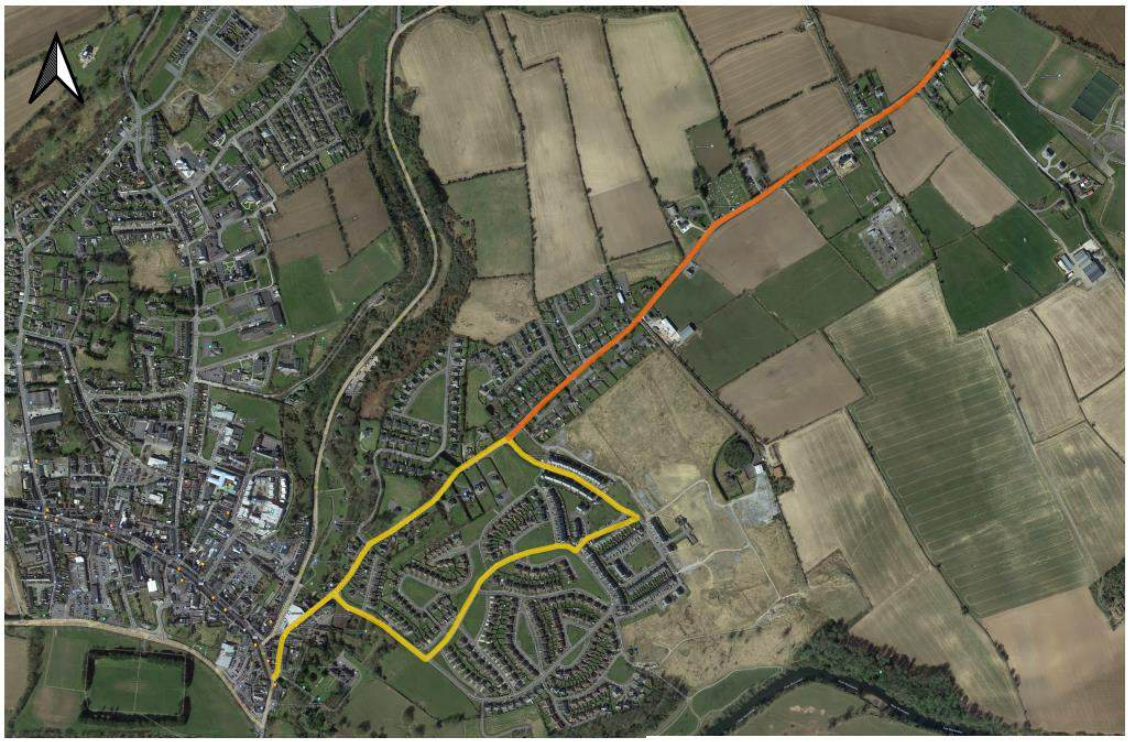
TABLE OF CONTENTS

DOCUMENT HISTORY

Revision	R0	R0							
Purpose of Issue: P=Preliminary PG=Progress C=Comment I=Information PL=Planning T=Tender CN=Construction	C	PL							
Date:	16 08 24	20 09 24							
Originator:	PE	PE							
Checked By:	SS	SS							
Approved By:	SS	SS							

1. INTRODUCTION

1.1. This report describes a Supplementary Quality Audit carried out on behalf of Reside (Castlepark) Ltd on St Joseph's Road north of a proposed residential development - Phase 1 of the proposed residential development at Castlepark, Castlelands, Mallow, Co. Cork. There has been a previous Quality Audit (CST Group August 2023) undertaken on the proposed on-site scheme proposals. This Supplementary Quality Audit has been carried out on the existing adjacent St Joseph's Road from its junction with Castle Crest/Kingsfort Avenue for a distance of 1.35km north to the junction access with Mallow GAA Sports Complex. This is indicated in ORANGE on Figure 1 below.



~~1.2.~~

Figure 1 - Roads subject to this Supplementary Quality Audit

1.2 The Supplementary Quality Audit will demonstrate appropriate consideration has been given to all relevant aspects of the existing roads based on the guidance provided in the Design Manual for Urban Roads and Streets (DMURS) produced by the Department of Transport, Tourism and Sport in June 2019, and advises what further Action may be required.

1.3 This Quality Audit includes the following individual audits: -

- ⇒ an Access Audit
- ⇒ a Walking Audit
- ⇒ a Cycle Audit
- ⇒ Other Considerations

Given that this Supplementary Quality Audit relates entirely to existing roads, there is no Road Safety Audit available for consideration as part of the Quality Audit process.

1.4 The Audit team comprised of:

Team Leader:	Stuart Summerfield, HNC (Civil) FCIHT FSoRSA
Team Member:	Philip Edwards BSc (Hons.) (Civil Engineering).

1.6 The audit team visited the site on 20st July 2024 between the hours of 16:55 – 18:00 Weather conditions during the inspection was dry with sunny spells. Google Streetview was also used to assist in explaining some of the problems, given the extensive length of roads subject to this report.

2. ACCESS AUDIT

2.1 Overview

The Access Audit identifies a range of barriers that potentially restrict access for disabled people in the external and internal built environments.

For the purposes of the access assessment, the environment's features have been broken down into its constituent features. Each feature is assessed for conformity against certain access criteria. These criteria are derived from the following range of Best Practice sources, guidelines, standards, publications and legislation:

- Building Regulations 2022, Technical Guidance Document M -Access for People with Disabilities (Department of Housing, Local Government and Heritage)
- Buildings for Everyone -Access and use for all citizens (National Disability Authority) Access to the Historic Environment -Meeting the needs of Disabled People (Lisa Foster)
- Traffic Management Guidelines (Irish Government Publications 2003)
- Design Manual for Urban Road and Streets (Department of Transport, Tourism and Sport)
- Guidance on the use of Tactile Paving Surfaces: UK Department for Transport.

Where a site feature does not conform to this guidance, an explanation as to the potential restriction on access is provided, together with a suggested action and the priority in which such actions should be undertaken.

The Disability Act 2005 and the National Disability Authority's initiatives build on relationships and practices which currently exist among councils, city planners, building professionals and community groups to make services in Ireland more accessible to people with disabilities. In addition to people who use wheelchairs or have restricted mobility, there are many people affected by some degree of hearing loss, learning disability, visual impairment or conditions such as arthritis. This access assessment seeks to consider the needs of all potential users from a universal access perspective.

The audit is an organisation's first step in identifying physical barriers that people with disabilities may encounter when engaging with the community, public services and facilities.

2.2 Footpaths and Pavements in Streets, Roads and Public Areas

Table 2.2 Footpaths and Pavements in Streets, Roads and Public Areas

Ref	Feature	Conforms	Audit Comment	Action
2.2.1	Are the footways a minimum width of 1.5m (1.8-2.0m in high volume areas)?	Generally yes	Although the existing footpaths widths were not specifically measured, the existing footpaths appear to be generally at least 1.5m wide. In some locations, vegetation was observed to be encroaching and restricting the available width of the footpaths.	Design Team to investigate. Sections less than 1.5m minimum should be widened. Regular maintenance should be provided and vegetation reduced where necessary to maintain footpath width.
			For most of the length of St Joseph's Road, there is only a footpath on one side, and this flips sides north east of St Joseph's Cemetery. Ideally there should be a footpath provided along both sides of the road. However, (subject to further comments raised in the points below, especially concerning provision of crossing points) the footpath on just one side of the road does provide an accessible route over the length of St Joseph's Road which is subject to this report.	Design Team to investigate. Pedestrian crossing points of St Josephs' Road should be provided in safe and convenient locations to provide connectivity between the footpath on the southeastern side and the interrupted sections of footpath on the northwestern side.
2.2.2	Is the main footway clear of obstructions that would impede wheelchair users or be a trip hazard to sight impaired users?	Not fully.	There are existing lighting columns/overhead cable poles, although it is noted that they are positioned at the back of the footpaths and as such the obstruction is minimised. The columns could be painted, and contrasting bands added to make them more conspicuous to visually impaired pedestrians.	Design Team to investigate.

Ref	Feature	Conforms	Audit Comment	Action
2.2.3	Are all surface water gullies / slot drains outside of the desire line or less than 13mm wide and set at right angles to the line of traffic?	Yes	No existing gulleys are observed within pedestrian crossing points or desire lines where crossing points are not provided.	None
2.2.4	Are all paving materials suitable for the passage of sight impaired and arthritic and wheelchair users?	Yes	It is noted that the footpath surfacing is generally insitu concrete (including imprinted concrete adjacent to the Castle Crest junction.) or bituminous macadam. These types of surface material should be satisfactory provided that they are well maintained.	None
2.2.5	Is the footpath clear of obstacles mounted more than 300mm above ground and protruding into the footpath by more than 100mm?	Not fully.	As identified in 2.2.2 above, there are existing lighting columns/overhead cable poles, although it is noted that they are positioned at the back of the footpaths and as such the obstruction is minimised. The columns could be painted, and contrasting bands added to make them more conspicuous to visually impaired pedestrians.	Design Team to investigate.
2.2.6	Is the footway route to an acceptable gradient not exceeding 1:20?	Unknown	Footpath levels and gradients have not been explicitly checked, and in any case, for this Quality Audit of the existing roads, levels and gradients are fixed. However, as a general observation this section of St Joseph's Road, north of the Castle Crest/Kingsfort Avenue junction does not appear to have significantly steep gradients.	Design Team to investigate. If locations with a gradient exceeding 1 in 20 are identified, mitigation could be provided such as benches for resting and handrails for support.

Ref	Feature	Conforms	Audit Comment	Action
2.2.7	Is the footway route clear of abrupt changes in level with crossfalls not exceeding 2.5%?	No	Abrupt changes in level of the footpath itself have not been noted. But there appear to be many locations where lowered kerbs to assist pedestrians and wheelchair users to cross the carriageway are not provided. Also, in locations where the footway may have been lowered, there is still an excessive upstand and are not suitable for wheelchair users.	Design Team to investigate. Flush kerbs (upstand 0 to 6mm) should be provided at all pedestrian crossing points. These should also be provided with associated blister tactile paving.
		Unknown	Footpath crossfalls have not been explicitly checked, although excessive crossfalls were noted from the site visit.	Design Team to investigate. If locations with a crossfall exceeding 2.5% are identified, the feasibility of reducing the cross fall should be investigated.
2.2.8	Is the footway clear of physical obstructions or windows, doors, and gates that open onto the access route?	Yes	There are no buildings which directly abut the footpaths. It appears that where there are gates to property driveways these are set back from the back of footpath and/or open inwards.	None
2.2.9	Are the footpath routes clear of headroom hazards (2.1m or 2.3m if shared with cyclists)?	Yes	No low overhead obstructions were observed.	None
2.2.10	Is the footpath route clear of any slip, trip hazards for sight impaired users?	No	As identified in 2.2.7, flush kerbs have generally not been provided to assist wheelchair users and pedestrians at road crossings.	Design Team to investigate. Flush kerbs (upstand 0 to 6mm) should be provided at all pedestrian crossing points.

Ref	Feature	Conforms	Audit Comment	Action
2.2.10 /contd				These should also be provided with associated blister tactile paving.
			There are numerous utility covers located within the footpaths, and these should be inspected and maintained on a regular basis.	Regular inspection and maintenance required.
2.2.11	Is the footpath clear of advertising 'A' boards and other temporary obstructions	Yes	No A-boards or similar obstructions such as wheeled bins were observed during the site visit.	Placing of A boards, and storage of wheeled bins within the public road should be managed in accordance with local regulations and may require ongoing monitoring.
2.2.12	Is the footway shared with cyclists or abutting a cycle lane where cyclists may encroach?	Not applicable	There are no cycle facilities within the roads subject to this report.	None
2.2.13	Is the footpath or public area adequately illuminated for night-time use?	Unknown	It is noted that there is existing street lighting along St Joseph's Road between the junction with Castle Crest/Kingsfort Avenue and the entrance to Mallow GAA Sport Complex, including along the sports complex access road. However, it is unknown how effective the existing streetlighting may be.	Design Team to investigate. Street lighting should be assessed and upgraded as necessary.

Ref	Feature	Conforms	Audit Comment	Action
2.2.14	Is suitable tactile surfacing provided at all pedestrian crossing locations?	No	As identified in 2.2.7 above, there is a general lack of suitable facilities to assist mobility impaired or visually impaired cross one side to the other of St Joseph's Road, and at the side road junctions. Flush kerbs (0 to 6mm upstand) with associated blister tactile paving should be provided in safe and convenient locations for pedestrians to cross the various roads. This should include all side road junctions.	Design Team to investigate. Flush kerbs (upstand 0 to 6mm) should be provided at all pedestrian crossing points throughout the roads subject to this Quality Audit. These should also be provided with associated blister tactile paving.

2.3 Public Seating in the Street or Public Area

It is recommended that seating should be provided to public areas or within a street environment at intervals of approximately 50 metres, particularly in streets and pavements that have inclines or slopes to give rest points for persons with mobility-impairments, also to provide a wheelchair rest position on hillside streets, sloping footways and other public areas.

Table 2.3 Public Seating in the Street or Public Area

Ref	Feature	Conforms	Audit Comment	Action
2.3.1	Is seating provided at suitable intervals?	No	No public seating was observed along the roads subject to this report. There may be a few limited locations where seating provided. Considering the 1.35km length of this section of road, seating could be helpful for some mobility impaired pedestrians.	Design Team to investigate feasibility of providing seating.
2.3.2	Is seating provided at inclines or slopes as rest points for mobility impaired users?	No	As stated in 2.2.6 above, footpath levels and gradients have not been explicitly checked, and in any case, for this Quality Audit of the existing roads, levels and gradients are fixed. However, as a general observation this section of St Joseph's Road, north of the Castle Crest/Kingsfort Avenue junction does not appear to have significant gradients.	
2.3.3	Are flat areas provided at regular intervals on inclines or slopes as rest point for mobility assisted (wheelchair, frames, stick) users?			

2.4 Controlled and Un-controlled Pedestrians Crossings

There are no controlled crossings (signalised or zebra crossings) along this section of St Joseph's Road.

Table 2.4 Controlled and Un-controlled Pedestrians Crossings

Ref	Feature	Conforms	Audit Comment	Action
Controlled Crossings on St Joseph's Road				
2.4.1	General provision Are controlled crossings required?	Unknown	There are no controlled crossings on this section of St Joseph's Road. Locations where there is a potential desire line for pedestrians to cross the road include:- • In the vicinity of the junction with Castle Crest/Kingsfort Ave (especially considering the route for children attending Mallow Community NS). • Near to Aldworth Heights • Near to Castle Heights • At the existing uncontrolled crossing point (where the footpath flips sides) north east of St Joseph's Cemetery. • Near the access to Mallow GAA Sports Complex. At the time of the site visit, traffic flows appeared low, and very few pedestrians were observed. However, at other times, such as school term, there is likely to be increased pedestrian and vehicle traffic.	The Design Team should investigate potential pedestrian desire lines, and also the demand to determine potential justification for controlled crossings. Any proposed controlled crossing should be located in a safe and convenient location, and constructed in accordance with Transport Infrastructure Ireland Standards

Ref	Feature	Conforms	Audit Comment	Action
Un-controlled Crossings on St Joseph's Road				
2.4.2	Are un-controlled crossings provided to assist pedestrians including wheelchair users and visually impaired pedestrians cross the road.	No	North east of St Joseph's Cemetery, and at the Mallow GAA Sports Complex, there are uncontrolled crossing points of St Joseph's Road (with dropped kerbs and associated tactile paving). There is also an uncontrolled crossing point of the GAA Sports Complex access road. This uncontrolled crossing is provided (with dropped kerbs and associated tactile paving). There do not appear to be any other un-controlled pedestrian crossings of St Joseph's Road or the side road junctions. Un-controlled crossings are required to assist wheelchair users and other mobility or visually impaired pedestrians to cross the road.	Design Team to investigate. Un-controlled crossings with flush kerbs and associated tactile paving should be provided at side road junctions, and also to cross St Joseph's Road, where there is a potential desire line connecting between footpaths on each side of the road.
2.4.3	Do the un-controlled crossing have tactile paving in compliance with the standards and in appropriate colour?	North east of St Joseph's Cemetery:- Yes	It was observed during the site visit (and from Google Streetview) that silt appears to collect at this crossing on the eastern side of St Joseph's Road. Drainage may require improving.	Design Team to investigate. The existing facility requires regular maintenance.
		St Joseph's Road at Mallow GAA Sports Complex:- No	The extent of the dropped kerbs is greater than the extent of the tactile paving. The kerbs are not flush - which is partly due to the	Design Team to investigate. Uncontrolled crossing should be amended to comply with Transport

Ref	Feature	Conforms	Audit Comment	Action
2.4.3 /contd			crossing being shared with a field access on the northwestern side of the road.	Infrastructure Ireland Standards
		GAA Sports Complex access road:- No	The extent of the dropped kerbs is greater than the extent of the tactile paving. The tactile paving is not orientated correctly to guide for visually impaired pedestrians.	Design Team to investigate. Uncontrolled crossing should be amended to comply with Transport Infrastructure Ireland Standards
2.4.4	Do the un-controlled crossing have dished kerbs with an unobstructed width of 1200mm?	Not fully	Kerbs are not flush in all cases	All pedestrian crossing points should have flush kerbs (0 – 6mm upstand).
2.4.5	Are the kerbs lowered to form a dished kerb approach gradient no greater than 1:12 and an upstand above road level no greater than 6mm?			
2.4.6	Are the crossings free of road gullies, gratings or channels that may cause wheel-chair or stick users' problems?	Yes		None
2.4.7	Is visibility to approaching traffic achieved from all crossing locations and clear of temporary obstructions such as parked vehicles?	No	On St Joseph's Road at Mallow GAA Sports Complex, it appears that the south eastern side, intervisibility is restricted by vegetation.	Design Team to investigate. Appropriate intervisibility should be provided. Vegetation should be cleared as necessary.

Ref	Feature	Conforms	Audit Comment	Action
2.4.8	Is the crossing area adequately covered with street lighting?	Unknown	.	Design Team to investigate. Street lighting should be assessed and upgraded as necessary.

2.5 Disabled User Parking Spaces

For Disabled Parking Spaces within a parking scheme, it is important to provide designated Accessible Parking Spaces to serve the needs of disabled drivers or passengers. These spaces should be located to minimise travel distance for the user from the space to their intended destination.

The number of Disabled User spaces provided will change dependant on the destination i.e., a medical centre will require a greater provision than a crèche.

Table 2.5 Disabled User Parking Spaces

Ref	Feature	Conforms	Audit Comment	Action
2.5.1	Are Disabled User Parking spaces provided	Yes	No dedicated disabled parking spaces were observed along the section of St Joseph's Road subject to this report. Given this is outside of the commercial/town centre area, there did not appear to be any other specific destinations where dedicated disabled parking spaces would be required.	None
		Unknown	The GAA Sports Complex has some dedicated disabled parking on site, although an assessment of the on-site facilities is outside the scope of this report.	Design Team to liaise with Mallow GAA Sports Complex. With the agreement of the GAA Sports Complex, if any additional disabled parking spaces are assessed to be required, they should be located in safe and convenient locations to serve anticipated destinations.
2.5.2	Are disabled parking spaces provided with a clearly marked RRM 015 symbol on the road surface to show parking assigned to disabled or mobility-impaired drivers or passenger?	Not applicable	No dedicated disabled parking spaces were observed within the roads subject to this report.	None

Ref	Feature	Conforms	Audit Comment	Action
2.5.3	Is there a flush kerb to allow wheelchair access to the adjacent footpath?			None
2.5.4	Is there a yellow cross hatch marking to indicate the travel clear route for the user?			

2.6 Wayfinding

It is important to provide way-finding signage in the area. It should be noted that information signage should not be positioned too high for persons of short stature and wheelchair users to access. Also, visitors to the area with vision impairment will find it difficult to read signage at high levels.

Information boards benefit blind or visually-impaired persons if essential notes and information are provided in conjunction with existing visual signs, directional routes in Braille and tactile will assist visitors to the area.

Effective colour contrast on signage is essential and is as important as the size of the lettering or symbols. Colours can appear different under various light sources, so when choosing sign colours ensure that under the same lighting conditions be used in the area where the sign is to be located at night. Particularly avoid red and green colour schemes in signage due to the prevalence of red/green colour blindness.

It is noted that one of the project's objectives is *"Clear and appropriately sited public information and way-finding signage".* No specific details are indicated on the drawings provided.

Table 2.6 Wayfinding

Ref	Feature	Conforms	Audit Comment	Action
2.6.1	Is signage provided to guide the user through the development?	Not fully	It is noted that in the town centre, there is a finger-post direction sign to Mallow GAA at St Joseph's Road/ Infirmary Lane. There is a further finger post identifying the entrance to the Mallow GAA Sports Complex. There do not appear to be any other directions signs along the section of St Joseph's Road subject to this report. Notably, the return to the town centre is not sign-posted. Given that it is 2km approx. from the GAA Sports Complex to the Town Centre, signs indicating the direction for pedestrians to the town centre may be useful.	Design Team to investigate. Direction signage for pedestrians should be provided where it may be beneficial. It is appreciated that local people will be familiar with the area, but consideration should be given to signage to places of importance or interest to visitors to the area. There should be a coordinated review of all existing direction signage. A list of local destinations appropriate for pedestrians, especially

Ref	Feature	Conforms	Audit Comment	Action
2.6.1 /contd			There is no direction signage at the junctions to the Castlepark development from St Joseph's Road.	visitors, should be determined, and signs then placed in appropriate locations to identify coherent routes.
2.6.2	Are the signs of a suitable size and colour combination?	Not fully	It is noted that the finger post direction sign for Mallow GAA Sports Complex appears to be to prescribed text and colours.	None
			The ornamental text and gold on black signs at the entrance to Aldworth Heights may not be ideal for visually impaired pedestrians. However, this existing signage may not be part of the public infrastructure and in which case outside the scope of this report.	Design Team to investigate. The clarity of the signs, with respect to the text and background colours should be reviewed.
2.6.3	Are the signs mounted at a suitable height so they can be read but not cause a head clearance issue?	Generally yes	The mounting height of the finger post signs has not been checked specifically, but the mounting height appeared reasonable.	None
2.6.4	Are the signs positions so they do not cause a hazard?	Yes		None

3. WALKING AUDIT

3.1 Overview

Walking audits examine and evaluate the walking environment in a given area. The audit's purpose is to identify concerns for pedestrians related to the safety, access, comfort, and convenience of the walking environment.

Many of the concerns for able-bodied pedestrians are the same as for the disabled users i.e., footpath surface condition, footpath width etc. and may also be raised in the Mobility Audit.

Table 3.1 Walking Audit

Ref	Feature	Conforms	Audit Comment	Action
3.1.1	Does the proposed design adequately cater for the safe passage of existing pedestrian users after completion of the project by reinstating existing facilities or providing alternative new facilities?	Not applicable	There are no scheme proposals yet to be considered. This report considers the existing situation, which may then be used to inform new scheme proposals.	None
3.1.2	Are the footpaths of adequate width to cater for expected pedestrian numbers?	Generally yes	The Audit Comments and suggestions of 2.2.1 are reiterated.	Design Team to investigate, as per 2.2.1 above.
3.1.3	Do the footpaths terminate at an appropriate location?	Not fully	As identified in 2.2.1 above, for most of the length of St Joseph's Road, there is only a footpath on one side, and this flips sides north east of St Joseph's Cemetery. Ideally there should be a footpath provided along both sides of the road. There are interrupted sections of footpath along the northwestern side of St Joseph's Road, which not always terminate in appropriate locations. This could be mitigated by providing crossing	Design Team to investigate. Pedestrian crossing points of St Josephs' Road should be provided in safe and convenient locations to provide connectivity between the footpath on the south eastern side and the interrupted sections of footpath opposite.

Ref	Feature	Conforms	Audit Comment	Action
3.1.3 /contd			points to the footpath on the southeastern side of St Joseph's Road.	
3.1.4	Are the footpaths direct without unnecessary diversions, loops etc?	Yes	None	None
3.1.5	Do the footpaths conflict with cycle or motor users?	Yes	There are no cycle facilities within the roads subject to this report.	None
3.1.6	Are suitable signs provided to enable wayfinding though the development?	No	The comments made in 2.6.1 and 2.6.2 are reiterated.	Design Team to investigate. Direction signage for pedestrians should be provided where it may be beneficial. It is appreciated that local people will be familiar with the area, but consideration should be given to signage to places of importance or interest to visitors to the area.
3.1.7	Are any areas of shared use suitably signed by way of change in environment (surface colour, texture, signage, furniture, etc.)?	Not Applicable	There are no existing areas of "shared use".	None

4. CYCLE AUDIT

Cycling in Ireland is increasing in popularity. Advice for the safe provision of cycle facilities is given in both the DMURS and the National Cycle Manual (NCM) publications in order to promote cycling as a sustainable form of transport and seeks to rebalance design priorities to promote a safer and more comfortable environment for cyclists.

4.1 Cycleway Provision

Construction costs for the provision of segregated cycleways can be considerable and not always warranted. The provision of cycleways that are remote from the carriageway can raise concerns for the safety of the user as 'over looking' is less likely. The Cycle Manual provides guidance on where best to accommodate the cyclist in the public environment i.e. on lightly trafficked/low speed streets designers are generally dictated to create shared streets where cyclists and motor vehicles share the carriageway. On busier/moderate speed streets designers are generally dictated to apply separate cycle lanes/cycle tracks.

There are no existing cycle facilities within any of the roads subject to this report.

Table 4.1 Cycle Audit

Ref	Feature	Conforms	Audit Comment	Action
4.1.1	Are cycle facilities appropriate to the environment?	No	There are no existing facilities for cyclists along the section of St Joseph's Road subject to this report. The current speed limit on St Joseph's Road from Mallow Town Centre past Castlelands development to a point 400m approx. northeast of the junction with Castle Crest/Kingsfort Avenue is 50kph. It is anticipated that this section of road will default to 30kph when revised speed limits are enacted (Road Traffic Act 2024). Beyond this point, for the remainder of St Joseph's Road past the Mallow GAA Sports Complex is currently 60kph. The Cycle Design Manual indicates that roads with a 60kph speed limit a "stepped cycle lane" is the minimum	Design Team to investigate suitability of providing a "mixed traffic" scheme as outlined in the Cycle Design manual. Also, in association with the roads' authority, traffic speeds should be monitored after the reduced speed limits are introduced. If speeds are observed to be high, additional traffic calming measures should, be provided.

Ref	Feature	Conforms	Audit Comment	Action
			standard of provision recommended. However, the footpath appears too narrow to become a shared use footpath/cycle track. The road carriageway appears too narrow for a stepped cycle track to be provided. a.	
4.1.2	Are Advanced Stop Lines (ASL) provided for the on-road at the signal-controlled junction?	Not Applicable	There are no traffic signal junctions within the roads subject to this report.	None
4.1.3	Are suitable and safe bike storage solutions provided at the nodes of demand?	No	There do not appear to be any cycle stands within the section of St Joseph's Road subject to this report, although there may be few, if any, public destinations where cycle parking stands are required. St Joseph's Cemetery could be considered. Provision of secure cycle parking/storage and is an important measure where it is intended to promote cycling (including e-bikes) as a viable alternative mode of transport.	Design Team to investigate. Provision of safe and secure cycle storage including battery charging should be considered. This should include both within the public realm and possibly within private areas too.
			The GAA Sports Complex should have on-site cycle parking, although an assessment of the on-site facilities is outside the scope of this report.	Design Team to liaise with Mallow GAA Sports Complex. The suitability of the type and amount of any existing cycle parking should be assessed, with a view to being upgraded if necessary, with the agreement of the GAA Sports Complex.

5. OTHER CONSIDERATIONS

Table 5.1 Other Considerations

Ref	Feature	Conforms	Audit Comment	Action
5.1	Bus Stops – Location and facilities	No.	There are no bus stops on the section of St Joseph's Road subject to this report, and there do not appear to be any local bus services. From internet search, it appears there is a bus service from Cork to Charleville via Mallow. The nearest bus stop is on Park Road, by the Town Park. Therefore local destinations such as St Joseph's Cemetery, Mallow GAA Sports Complex and the various residential properties along the section of St Joseph's Road subject to this report are not accessible by bus.	Design Team to investigate. The feasibility of a bus service serving St Joseph's Road should be considered.
5.2	Provision of Electric vehicle Charging points	Unknown	No electric vehicle charging points were observed. There do not appear to be any locations, apart from private dwellings along St Joseph's Road that would require EV charging facilities. Although the GAA Sports Complex is outside the scope of this report, it is considered that it may be beneficial for the GAA Sports Complex to have EV charging facilities for staff and visitors.	Design Team to liaise with Mallow GAA Sports Complex. The feasibility of providing EV charging points should be assessed with the agreement of the GAA Sports Complex.

6. ITEMS RESULTING FROM INDIVIDUAL DESIGN AUDIT

This Quality Audit contains separate Audits for Access, and Cycling. The headlines form these individual audits are summarised in Table 6.1 below. Table 6.1 also cross6 references across the columns items which have been identified in more than one of the audits, such that the issue can be considered in the wider context of the overall scheme design, rather than in isolation.

Table 6.1 Quality Audit Summary

Access Audit	Walking Audit	Cycling Audit	Other	Quality Audit Issue
2.2.1	3.1.2 3.1.3			Confirm footpath widths
2.2.2				Possible obstructions to footpath
2.2.3				Suitability of drainage
2.2.4				Confirm footpath paving materials.
2.2.5				Possible obstructions to footpath
2.2.6				Excessive gradients
2.2.7				Excessive crossfalls
2.2.8				Possible obstructions to footpaths from opening gates, doors or windows
2.2.9				Possible overhead obstructions
2.2.10				Potential slip/trip hazards
2.2.11				A-Boards and other temporary obstructions
2.2.12				Possible pedestrian/cycle conflict
2.2.13				Adequacy of public lighting
2.2.14				Detailing of tactile paving
2.3.1				Review provision of public seating
2.3.2				Provision of seating and level areas along slopes
2.3.3				
2.4.1				Provision of Controlled crossings
2.4.2				Provision of Un-controlled crossings
2.4.3				Provision of dropped kerbs and associated tactile paving
2.4.4				Provision of dropped kerbs
2.4.5				Suitability of footpath gradients
2.4.6				Suitability of drainage
2.4.7				Intervisibility
2.4.8				Adequacy of public lighting
2.5.1				Provision of disabled parking spaces.
2.5.2				Road markings associated with disabled parking bays
2.5.3				Provision of flush kerbs associated with disabled parking space.
2.5.4				Provision of hatched area associated with disabled parking space.
2.6.1	3.1.6			Provision of direction signage
2.6.2	3.1.6			Sign Design - layout
2.6.3				Sign Design – mounting height

Access Audit	Walking Audit	Cycling Audit	Other	Quality Audit Issue
2.6.4				Sign Design – location
	3.1.1			Overall suitability of footpaths.
2.2.1	3.1.2			Footpath widths
	3.1.3			Termination of footpaths
	3.1.4			Directness of footpaths – no comment
	3.1.5			Potential conflict with other road-users
2.6.1, 2.6.2	3.1.6			Provision of direction signage
	3.1.7			Provision of shared use facilities
		4.1.1		Provision of cycle facilities
		4.1.2		Advance Stop Lines – N/A
		4.1.3		Review provision of cycle parking/storage
			5.1.1	Bus service/bus stop provision and details
			5.1.2	Provision of Electric Vehicle Charging Points

7. QUALITY AUDIT STATEMENT

We certify that we have examined the drawings and other information listed in Appendix A. This Quality Audit has been undertaken to demonstrate that appropriate consideration has been given to all of the relevant aspects of the design.

Approved for Issue by: _____

Stuart Summerfield
HNC FSoRSA FCIHT

Date: 20th September 2024

Appendix A List of Documents Examined

DOCUMENT REF / NAME:	RECEIVED FROM:	DATE:
None		

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