GK Consulting Engineers

Proposed Residential Development at Elmfield, Clondalkin, Dublin 22

Stage 1 Quality Audit Report

July 2026

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1 Quality Audit Report

1.1 Background

This report was prepared in response to a request from Mr Liam Gleeson of GK Consulting Engineers to provide a Stage 1 Quality Audit of the proposed residential development in Elmfield, Clondalkin, Dublin 22.

Quality Audits consist of a number of overlapping audits, as described in the Design Manual for Urban Roads and Streets (Ireland). Table 1-1 outlines the transport-related audits undertaken by PMCE and includes a brief overview of the purpose or goal of each report.

TABLE 1-1 QUALITY AUDIT REPORT CONTENTS

Access Audit	The purpose of the Access Audit is to review the proposed Development to assess if it can be accessed, understood, and used to the greatest extent possible by all people regardless of their age, size or disability.
Cycle Audit	The purpose of the Cycle Audit is to review the proposed Development to assess if it will cater comfortably for cyclists, of all ages and abilities, and that the needs of cyclists have been prioritised over vehicular traffic.
Walking Audit	The purpose of the Walking Audit is to review the proposed Development to assess if it can be readily and comfortably traversed by pedestrians, that the needs of pedestrians have been prioritised over cyclists & vehicles, and that footpaths are continuous and wide enough to cater for the anticipated number of pedestrians.
Road Safety Audit	The purpose of a Road Safety Audit is to identify problems that may lead to road safety issues, collisions or injuries, and to offer recommendations that would mitigate identified safety risks.
Non-Motorised User Audit[1]	The purpose of the Non-Motorised User (NMU) Audit is to review the proposed Development to assess if it will cater comfortably for all non-motorised road users, of all ages and abilities, and that the needs of these vulnerable road users have been prioritised over vehicular traffic.

A Quality Audit is not intended to pass or fail a design, rather it is intended as an assessment tool that highlights areas for potential improvements

1.2 Local Environment

The subject site comprises an existing developed parcel of land currently occupied by warehouse and associated logistics uses at Elmfield, L1026 (Ninth Lock Road), Clondalkin, Dublin 22. The site is located within an established urban area and benefits from frontage onto Ninth Lock Road, with the surrounding context characterised by a mix of residential, commercial and transport-related land uses. Existing pedestrian and road infrastructure is provided in the vicinity of the site, including footpaths and connections to the wider local and strategic road network, which support accessibility to nearby services, employment areas and public transport facilities.

[1] A separate Non-motorised User (NMU) Audit has not been prepared. For the proposed development, separate Access, Walking & Cycling Audits have been undertaken, and these should be referred to for findings in relation to NMUs.

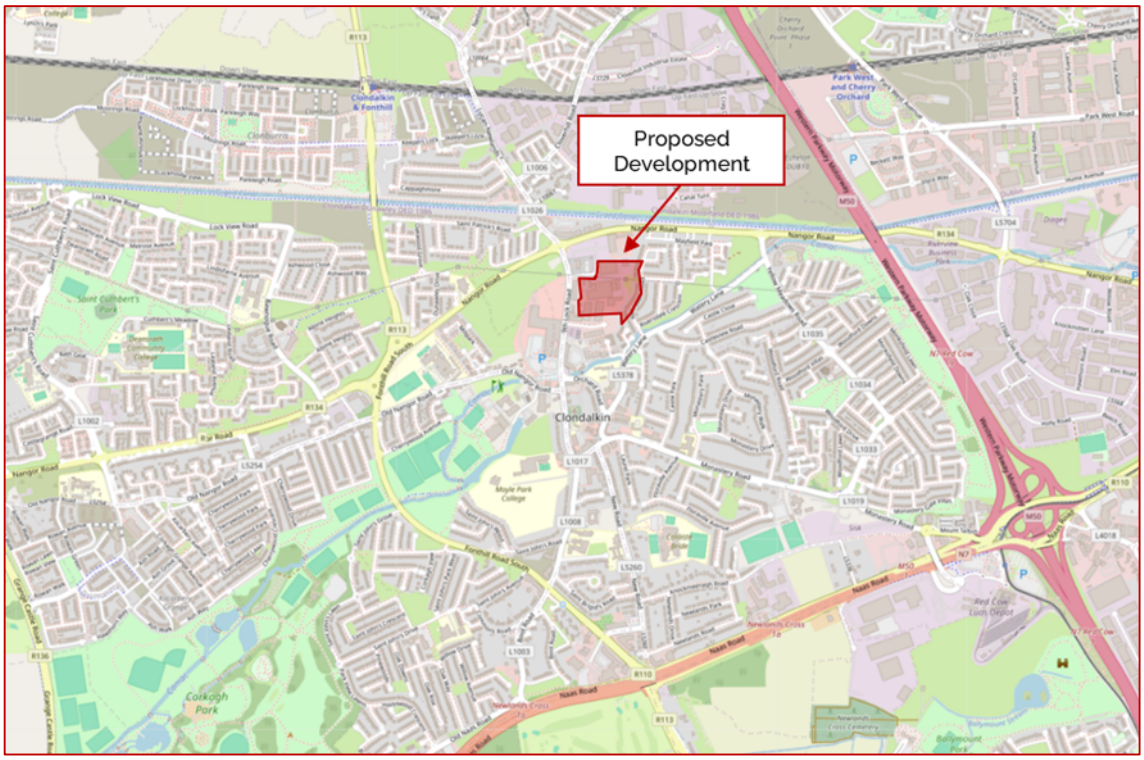


FIGURE 1.1: SITE LOCATION (SOURCE: WWW.OPENSTREETMAP.ORG)

1.3 Existing Pedestrian & Cyclist Facilities

Pedestrian access to the proposed development will be provided from the both sides of Oakfield which is accessed from Ninth Lock Road. The surrounding road network in the vicinity of the site includes footpaths on both sides of the roads, providing safe, continuous and accessible pedestrian connectivity throughout the area.

The development will be integrated with the existing footpath network in the area. To the north, existing pedestrian routes on Ninth Lock Road link to the R134 (New Nangor Road), which provides connectivity to the M50 and onward to Dublin City Centre.

There are no existing cycle facilities on Oakfield or Ninth Lock Road.

1.3.1 Public Transport

There is an existing bus route, and thus a number of existing bus stops, located on Ninth Lock Road providing residents, and users, of the development with direct access to the local bus network. The nearest bus stop on Ninth Lock Road is within good proximity to a signal-controlled pedestrian crossing, allowing residents to safely cross the road to access bus services travelling in both directions.

The nearest bus stops to the proposed development are listed in Table 1-2 including the bus routes servicing these stops and the frequency of service, and Figure **1.2** shows the location of the nearest bus stops to the proposed development.

TABLE 1-2: BUS ROUTES NEAR PROPOSED DEVELOPMENT

Route	From/To	Stop	Frequency		
			Mon-Fri	Sat	Sun
L54	River Forest – Red Cow Luas	2115/ 2158/ 2114	30 min	60 min	60 min
W2	Liffey Valley SC		20 min	30 min	30 min
68	Newcastle – Greenogue Business Park		30 min	40 min	40 min
60	John Rogerson's Quay - Red Cow Luas		30 min	60 min	60 min
Route	**Ninth Lock Road**	**Stop**	**Frequency**		
			Mon-Fri	**Sat**	**Sun**
60	John Rogerson's Quay - Red Cow Luas	7875	30 min	60 min	60 min
W2	Ballineaspig Beg to Mahon		60 min	-	-
Route	**New Nangor Road**	**Stop**	**Frequency**		
			Mon-Fri	**Sat**	**Sun**
151	Docklands (East Road) - Foxborough	6143/ 6242	30 min	60 min	60 min
Route	**Ninth Lock Road**	**Stop**	**Frequency**		
			Mon-Fri	**Sat**	**Sun**
68	Newcastle – Greenogue Business Park	6014/ 6011	30 min	40 min	40 min
151	Docklands (East Road) - Foxborough		30 min	60 min	60 min
L54	River Forest – Red Cow Luas		30 min	60 min	60 min

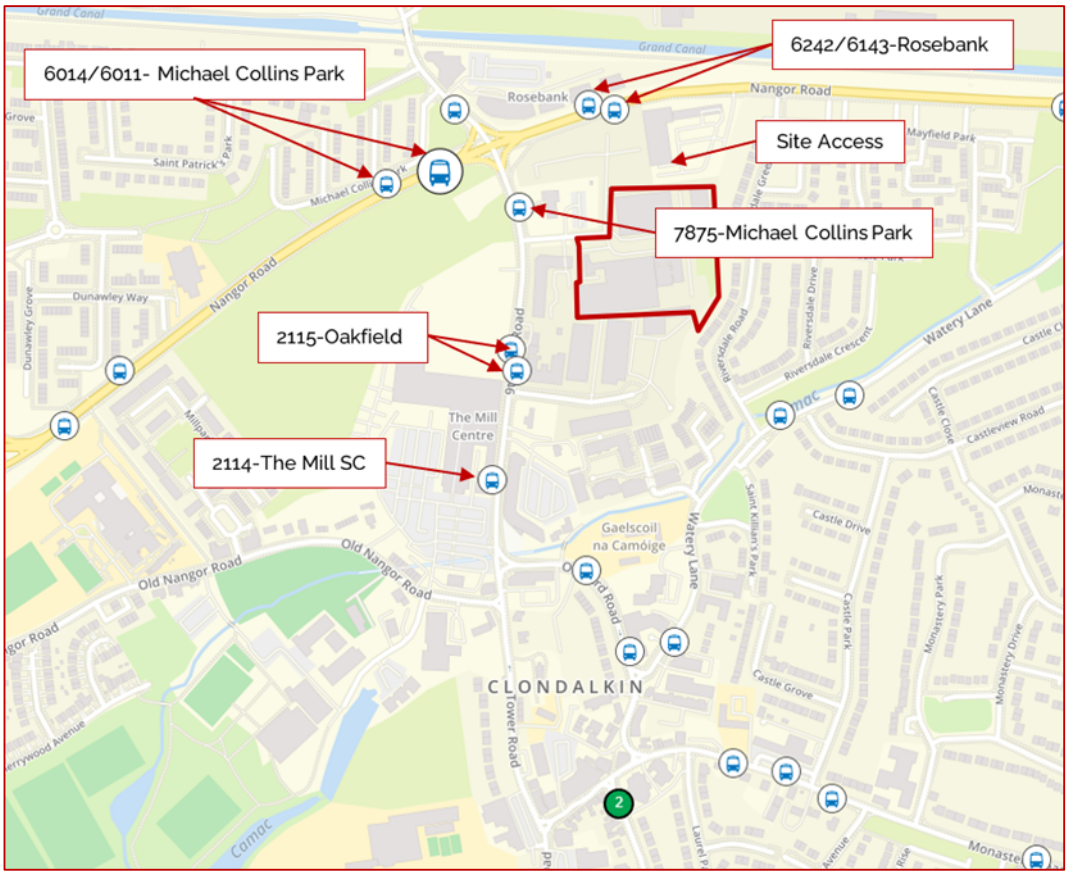


FIGURE 1.2: NEARBY BUS STOPS AND LUAS STOP (SOURCE: WWW.TRANSPORTFORIRELAND.IE)

1.3.2 Description of Proposed Development

The proposed development will comprise the demolition of the existing warehouses and structures on site and the construction of a mixed-use residential-led scheme including 408 residential units and 1 childcare facility.

The residential accommodation, which will range in height from 2-9 storeys, will comprise a mix of apartments and own-door houses including:

- 24 studio units.
- 230 one-bedroom units.
- 149 two-bedroom/three-person units.
- 5 three-bedroom/five-person units.
- 1 Childcare facility

The development will also include 205 car parking spaces, cycle parking, refuse and storage areas, plant, landscaping, open space, boundary treatment, public lighting, ESB substations, and all associated site and infrastructural works necessary to facilitate the proposed development.

1.4 Summary of Individual Audit Findings

The following table summarises the issues identified by the component audits of this Quality Audit, and the Design Team's response to the issues raised.

#					Summary of Audit Issue	Design Team Response/Action
1	✓			✓	Absence of tactile paving on pedestrian desire lines, including at transitions to Home Zone carriageways, may lead to visually impaired pedestrians inadvertently entering the carriageway, increasing the risk of vehicle-pedestrian collisions.	Works on the Oakfield Rd are being omitted. This road is in private ownership. New drawings to be issued. Drawings updated to reflect this.
2	✓			✓	It is unclear if clearly delineated safe zones for visually impaired pedestrians would be provided within the Home Zones, and there are obstructions indicated within the footpath at the edge of the Home Zone carriageways which may lead to pedestrians being unable to step off the carriageway to avoid cyclists or motorised vehicles.	Install tactile steel ground surface indicators between homezone & carriageway. Detail added to drawing.
3	✓		✓	✓	There is a narrow footpath indicated between the cycle track and parking spaces on its southern side. Vehicles parked in these parking spaces may overhang the kerb edge, reducing the effective width of the footpath.	We can provide parking bump stops to prevent parked cars from encroaching into footpath. Note added to drawings.
4	✓			✓	Provision of the incorrect crossing type/layout may lead to confusion for drivers and pedestrians regarding who has priority at the crossing resulting in a risk of vehicle-pedestrian collisions.	Note will be updated to uncontrolled pedestrian crossing.
5	✓			✓	The confusing tactile paving layout on both sides of the cycle track crossing may lead to visually impaired pedestrians being unbale to safely and independently navigate the road layout.	We will adjust the width of tactile paving to remove confusion. Drawings updated to reflect this.

#					Summary of Audit Issue	Design Team Response/Action
6	✓			✓	It is unclear if there would be a level difference between the footpath and Home Zone carriageways and, if there is a level difference, the absence of a dropped kerb and tactile paving at the accessible parking spaces may lead to mobility impaired vehicle occupants being unable to travel between their vehicle and the adjacent footpath.	A 25mm kerb will be provided at this location to introduce a level difference. A 25mm dropped kerb will be added to drawings.
7	✓		✓	✓	A failure to provide pedestrian crossings along likely pedestrian desire lines, including where these are across the proposed cycle track, may lead to difficulties for the visually and mobility impaired, particularly wheelchair users, when crossing the carriageway or cycle track.	A 25mm dropped kerb will be added to drawings & tactile steel ground surface indicators.
8	✓		✓	✓	A verge is indicated separating the footpath and Home Zone carriageway which would lead to pedestrians having to travel a longer distance within the Home Zone carriageway to access the footpath, where there is an increased risk of vehicle pedestrian collisions.	The verge is defensive planting and prevents pedestrians entering the Homezone in areas where vehicular pedestrian collisions may occur. 25mm dropped kerbs throughout allow for ease of travel between homezone area and footpath.
9	✓				There appears to be a lack of accessible parking spaces for the Crèche and Apartment Blocks 02.A and 02.B.	Accessible parking has been provided for the Creche. Accessible parking provision is 5% as per Part M.
10	✓			✓	It is unclear if a 'Safe Zone' for visually impaired pedestrians would be provided within the Home Zones in the proposed development.	We will provide line markings for homezone safezone in front of parking spaces.
11	✓			✓	There are raised timber walkways and stepping stones indicated in the areas of open space within the development which may lead to difficulties for mobility impaired pedestrians, or trips and falls for other pedestrians, when trying to traverse the pedestrian routes.	Stepping stones and timber walkways are informal landscape features and do not form part of the primary accessible pedestrian route. Accessible routes throughout the development will be provided in accordance with the relevant design standards.

#					Summary of Audit Issue	Design Team Response/Action
12	✓		✓	✓	Absence of pedestrian crossings across the cycle track at pedestrian desire lines may lead to trips and falls as pedestrians cross the cycle track.	A 25mm dropped kerb will be added to drawings & tactile steel ground surface indicators.
13		✓	✓	✓	A minimum clear stem of 1.5m for street trees has been indicated within the proposed development which may impede cyclist and pedestrians travelling on the cycle track and footpaths, resulting in head strikes and personal injuries.	The landscape design intends to provide adequate clearance over all pedestrian and cycle routes. Street trees adjacent to footpaths and cycle tracks will be specified, planted and maintained to achieve a minimum clear stem height of 1.8m.
14			✓	✓	On-Street parking within the footpath on the southern side of the Oakfield carriageway may lead to pedestrians having to travel within the carriageway to avoid parked vehicles, where there is an increased risk of being stuck by a vehicle.	The landscape design will ensure that planting and landscape elements do not obstruct pedestrian routes or reduce the effective footpath width. The suitability of the parking arrangement and associated pedestrian clearances should be reviewed by the engineering team.
15			✓		It is unclear how waste will be collected within the development, and how bins will be transported from the bin stores within the apartment blocks in the development to the designated collection point(s).	Bin area directly accessible from public road, and collection point is less then 10m from storage area. Max gradient is less then 1/12.
16		✓			A bicycle parking area has been indicated at Apartment Block 02.B only. It is, therefore, unclear if the rest of the apartment blocks, and the Creche, within the proposed development are intended to provide bicycle parking spaces.	Each block has Bicycle Storage areas, refer to GF Layout.
17		✓			A 3m wide cycle track is indicated running through the development in an east to west direction. It is unclear, however, if the cycle track is proposed to be a one-way, or two-way, cycle track.	The Cycle Design Manual defines the desirable minimum width for a two-way cycle lane as 3.0 metres.

#					Summary of Audit Issue	Design Team Response/Action
18		✓		✓	Insufficient lateral clearance between the bollards at the edge of the cycle track and the adjacent traffic lane may lead to drivers/cyclists striking the bollards, resulting in material damage or personal injuries.	Works on the Oakfield Rd are being omitted. This road is in private ownership. New drawings to issued. Drawings updated to reflect this.
19		✓		✓	Insufficient definition of the cycle track at its tie-ins with the existing road layout/adjacent developments may lead to cyclist confusion, resulting in a risk of collisions.	Works outside the site boundary are outside our scope. Future tie-ins will be per Local Authority designs.
20		✓			It is unclear if showers, lockers and changing rooms will be provided for cyclists within the Creche.	Crèche has change rooms and showers provided for employees.
21		✓			It is unclear from the information provided whether there are doors along the routes to/from the proposed bicycle parking area, and, if there are, whether they are manually operated or powered.	Proposed bicycle areas will have doors, door type will be selected during detailed design stage.
22		✓			It is unclear how long-stay bicycle parking locations will be accessed, and if these will be adequately secure.	Proposed bicycle areas will have doors, door type will be selected during detailed design stage.
23				✓	Absence of red coloured surfacing where the cycle lane crosses accesses may lead to drivers being insufficiently aware of cyclists, resulting vehicle-cyclist collisions.	Works on the Oakfield Rd are being omitted. This road is in private ownership. New drawings to be issued. Drawings updated to reflect this.
24				✓	Termination of the footpath at the edge of the carriageway, and the edge of the cycle track, may lead to visually impaired pedestrians tripping at the kerb, or inadvertently entering the carriageway or cycle track, where there is risk of pedestrian-cyclist, or vehicle-pedestrian, collisions.	The footpath is intended to provide access to parked cars not a road crossing. There is a 125mm kerb at the end of the FP to avoid road crossing.
25				✓	Absence of junction priority at the junctions within the proposed development may lead to driver confusion and hesitation resulting in collisions.	Road markings will be provided at the central junction to indicate priority. Drawings updated.

#					Summary of Audit Issue	Design Team Response/Action
26				✓	It is unclear if drivers will be able to safely enter/exit the proposed parking spaces adjacent the raised junctions within the development, and at the westernmost parking space to the south of Apartment Block 04.A.	An autoturn manoeuvre will be carried out & added to the drawings.
27				✓	Turning heads have not been indicated at the end of all cul de sacs within the proposed development which may lead to unsafe reversing, or U-turn, manoeuvres where there is an increased risk of collisions with parked vehicles and other road users.	Turning heads have been added & autotracked.
28				✓	It is unclear if there would be sufficient inter-visibility between a driver exiting the proposed off-street carpark and a westbound vehicle/cyclist/pedestrian travelling along the Home Zone.	This area is a cul-de sac & a 6m wide entrance is sufficient for vehicles to enter & exit the U/G parking. There are two access points. A one way system will resolve this issue.
29				✓	No tapers have been indicated at the ends of the parallel parking spaces which may lead to material damage collisions as drivers attempt to enter/exit these spaces.	5mx2.5m spaces are considered adequate for parking. an auto turn maneuver has been added.
30				✓	It is unclear if a vehicle approaching the crossroads on the northern arm would have sufficient inter-visibility with vehicles/cyclists on the astern and western arms.	Sufficient sight lines per DMURS, 2m setback and 14m sightliness (20km/h HZ). Speed table and priority control junction.
31				✓	It is unclear if eastbound drivers on Oakfield would anticipate the change in direction in the horizontal alignment at the access to the proposed development, which may lead to them entering the verge or footpath, resulting in a risk of vehicle-pedestrian collisions.	Works outside the site boundary are outside our scope. Future tie-ins will be per Local Authority designs.

Appendix A: Access Audit

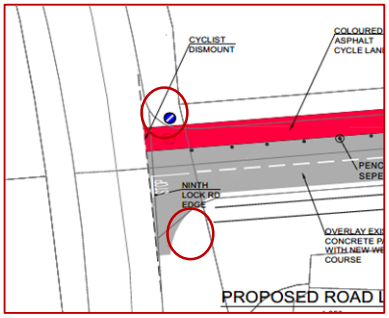
The purpose of this Access Audit is to review the proposed Development, and the existing surrounding environment, to assess if it can be accessed, understood, and used to the greatest extent possible by all people regardless of their age, size, or disability.

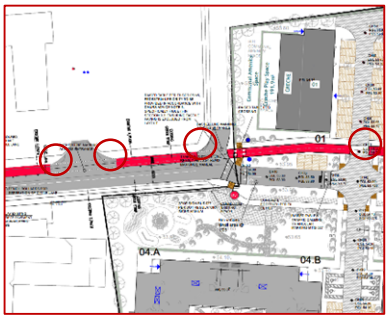
A.1 Access Audit Findings

A.1.1 Lack of Tactile Paving at Crossing Points

Absence of tactile paving was noted at a number of locations within the proposed development, and also within the existing road layout on Oakfield and Ninth Lock Road, including:

- No tactile paving currently provided, or indicated, at the retained dropped kerbs at the existing uncontrolled pedestrian crossing across Oakfield at its junction with Ninth Lock Road.
- No tactile paving currently provided, or indicated, at the retained dropped kerbs at the existing uncontrolled pedestrian crossings across the vehicle accesses on either side of Oakfield





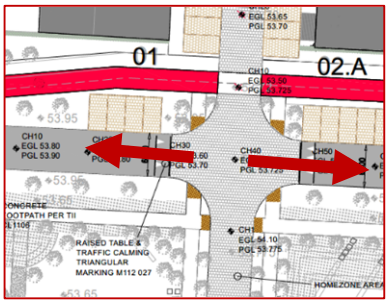
The absence of tactile paving at these existing locations, and within the proposed development, may create difficulties for visually impaired, or partially sighted, pedestrians in identifying the crossing points and understanding the road layout.

Recommendation

Appropriate tactile paving should be provided at the retained dropped kerbs at the existing uncontrolled pedestrian crossings on Oakfield, and along pedestrian desire lines within the proposed development, where not currently indicated.

A.1.2 Delineation between Home Zone Areas and Carriageway

It is unclear if any delineation would be provided between the Home Zone carriageways within the proposed development and carriageways for vehicular use only. A lack of clear delineation between Home Zones and other primarily vehicle-occupied areas within the development may lead to a risk of visually impaired pedestrians inadvertently entering the adjacent carriageway from the Home Zone.

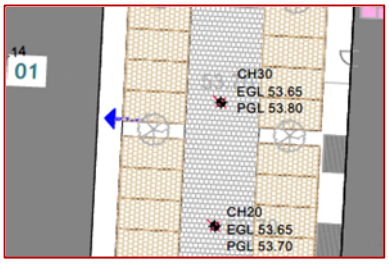


Recommendation

Measures should be provided at transitions between Home Zone carriageways and adjacent carriageways to clearly advise visually impaired pedestrians of the transition between the different surfaces.

A.1.3 Parked Vehicles Encroaching into Footpaths

Footpaths adjacent to perpendicular parking spaces appear to be narrow in some locations. Should vehicles parked within these parking spaces overhang the adjacent footpath it may decrease the effective width of the footpath below sufficient levels, which may lead to difficulties for visually and mobility impaired road users, particularly wheelchair users, when travelling on the footpath.

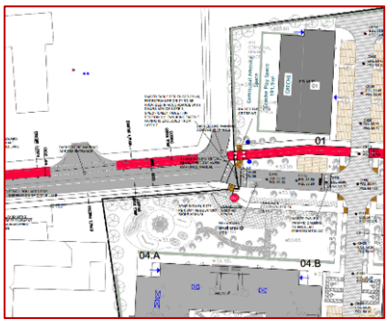


Recommendation

Measures should be provided to prevent parked vehicles from significantly encroaching into the adjacent footpath.

A.1.4 Pedestrian Priority at Development Access

A note on the drawing indicates that the pedestrian crossing across the access road to the proposed development is to include pedestrian priority suggesting that either a continuous footpath or Zebra crossing would be provided. The layout proposed does not indicate either of these types of arrangements, and suggests that an uncontrolled pedestrian crossing would be provided.



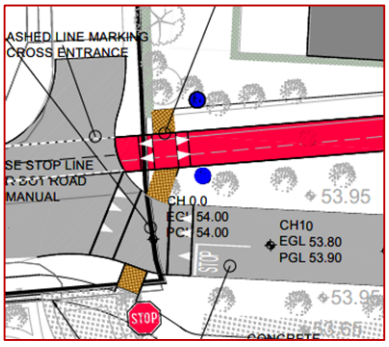
If road user priority is not clear from the road layout it may lead to confusion for road users regarding who has priority at the crossing, leading to difficulties for visually impaired pedestrians, in particular, in independently navigating the road layout.

Recommendation

The layout of the proposed crossing at this location should clearly convey the intended priority at the crossing to all road users, and be easily understood by visually impaired pedestrians.

A.1.5 Tactile Paving Arrangement at Cycle Track Crossing

A raised cycle track crossing and raised carriageway crossing are proposed adjacent to each other at the access to the proposed development. The tactile paving on the southern side of the cycle track crossing is indicated as connecting with the tactile paving on the northern side of the raised carriageway crossing, such that it is laid across the full length of this short footpath link. The tactile paving layout on the southern side of the carriageway crossing also does not align with the tactile paving at the crossing across the cycle track. In addition, the tactile paving on the northern side of the cycle track crossing is indicated across the full depth of the footpath.



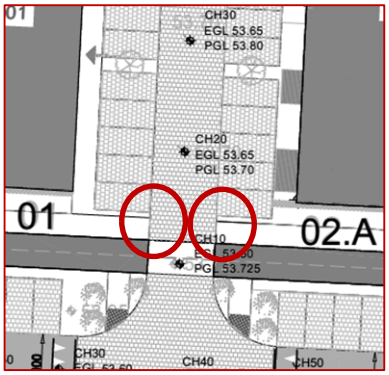
The tactile paving layout at both of these crossings may lead to confusion for visually impaired pedestrians resulting in them being unable to safely and independently navigate the road layout.

Recommendation

The tactile paving layouts on both sides of these crossings should be revised to provide a gap between the tactile paving at each crossing, to remove the tactile paving from the full depth of the footpath on the northern side of the cycle track and to ensure the tactile paving on both sides of the carriageway crossing are sufficiently aligned.

A.1.6 Delineation between Home Zone Carriageway and Footpath

Home Zones have been indicated within the proposed development. It is unclear, however, at this early stage in the design development, if a level difference would be provided between the Home Zone carriageway and the adjacent footpath, or if the footpath will be flush with the Home Zone. If adequate delineation is not provided between the Home Zone carriageway and the adjacent footpath visually impaired pedestrians could inadvertently enter the Home Zone and be insufficient aware that this space is shared with cyclists and motorised vehicles.

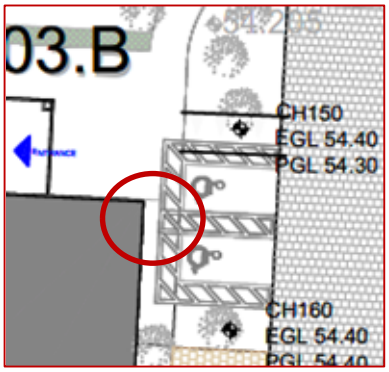


Recommendation

A level difference, detectable by a visually impaired pedestrian, should be provided between the footpath and the Home Zone carriageway.

A.1.7 Access to/from Accessible Parking Spaces

There are a number of accessible parking spaces indicated within the Home Zones in the proposed development. It is unclear if the accessible parking spaces within the Home Zones are level with the adjacent footpath and, if a level difference is provided, mobility impaired vehicle occupants may experience difficulties travelling between the footpath and their vehicle.

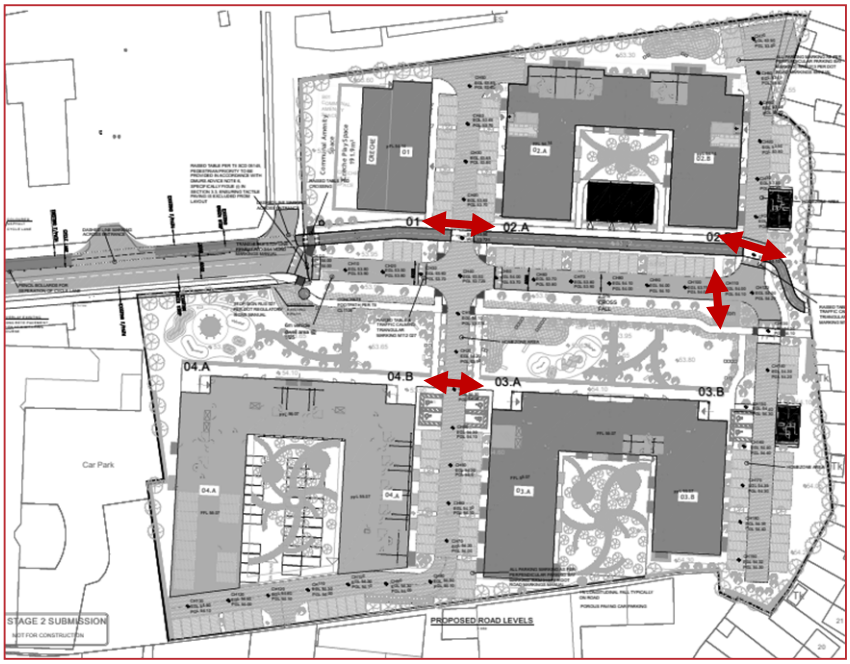


However, if a level difference is intended between the parking spaces and footpath, no dropped kerbs and tactile paving have been indicated at the accessible parking spaces to advise visually impaired pedestrians of the transition between the footpath and parking space/carriageway.

Recommendation

If a level difference is being proposed, ensure dropped kerbs and tactile paving are provided at the accessible parking spaces.

A.1.8 Pedestrian Crossing Desire Lines



There is likely to be a number of pedestrian desire lines within the proposed development, including between the residential units and the areas of open space and across side roads at the development's internal junctions.

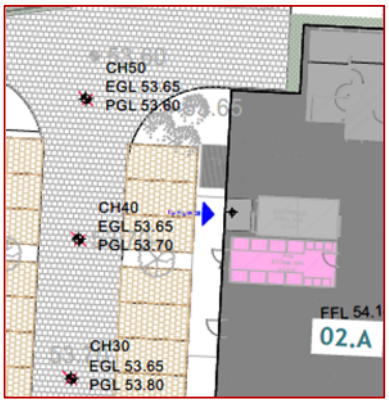
A failure to provide pedestrian crossings along likely pedestrian desire lines, including where these are across the proposed cycle track, may lead to difficulties for the visually and mobility impaired, particularly wheelchair users, when crossing the carriageway or cycle track.

Recommendation

During the design development, an assessment should be undertaken of the likely non-motorised road user desire lines and associated road/cycle track crossings. Pedestrian crossings, including dropped kerbs and tactile paving, should be provided at appropriate locations to support the identified desire lines.

A.1.9 Connection between Home Zone and Footpath

Home Zones have been indicated throughout the proposed development. It is unclear how pedestrians would access the footpath on both sides of the Home Zone carriageway in some of these Home Zones as there is a verge indicated between the footpath and the Home Zone carriageway. A verge separating the footpath and Home Zone carriageway would present a barrier for visually and mobility impaired pedestrians when accessing the footpath.



Recommendation

Clear and accessible connections should be provided between the Home Zone carriageways and the adjacent footpaths.

A.1.10 Insufficient Accessible Parking Provision

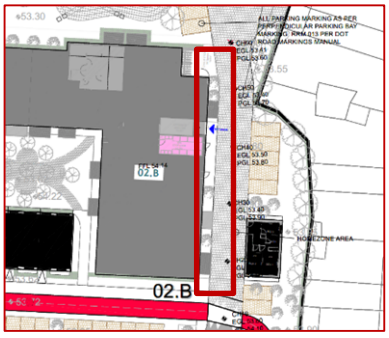
There appears to be a lack of accessible parking spaces for the Crèche and Apartment Blocks 02.A and 02.B. The absence of accessible parking spaces at these locations may reduce convenience and accessibility for mobility impaired users visiting or living within these buildings, as they may be required to park further away from their intended destination, and travel longer distances, which may be difficult for some users.

Recommendation

The accessible parking provision for the Crèche and Apartment Blocks 02.A and 02.B should be reviewed in accordance with the South Dublin City Council Development Plan.

A.1.11 Absence of Safe Zone in Home Zones

It is unclear if a 'Safe Zone' for visually impaired pedestrians would be provided within the Home Zones in the proposed development. The absence of a designated 'Safe Zone' would lead to visually impaired pedestrians having to share the same space as cyclists and motorised vehicles, which they may be insufficiently aware of when travelling through the development.

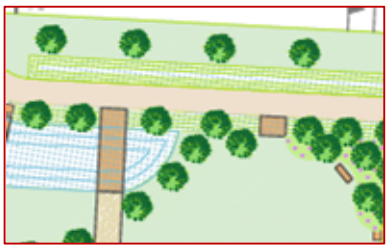


Recommendation

Home Zones should include a designated 'Safe Zone' for visually impaired pedestrians which should be clearly delineated from the adjacent area used by motorised vehicles and cyclists, tie-into the footpaths on adjacent roads and be clear of all obstacles.

A.1.12 Timber Raised Walkway

Raised timber walkways and stepping stones are indicated within the areas of open space within the proposed development. It is unclear if these paths/stepping stones would be able to be traversed safely and independently by mobility impaired pedestrians, particularly wheelchair users, should the space/gaps between the timber members be wide or contain soft ground/grass.

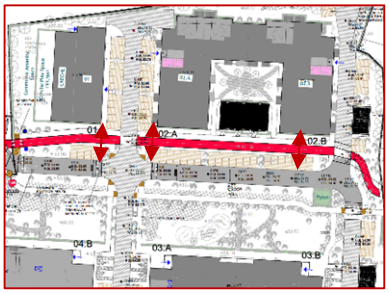


Recommendation

Ensure the proposed raised timber walkways and stepping stones can be safely traversed by all road users.

A.1.13 Access to/from Parking Spaces

A cycle track is indicated running through the proposed development in an east to west direction. There are a number of pedestrian desire lines across the cycle track between the parking spaces on the southern side of the cycle track and the footpath on the northern side of the cycle track which are not catered for with a crossing. Absence of crossings across the cycle track at these pedestrian desire lines may lead to mobility impaired vehicle occupants, parked on the southern side of the cycle track, being unable to safely and independently cross the cycle track to access the footpath.



Recommendation

Provide additional cycle track crossings on pedestrian desire lines.

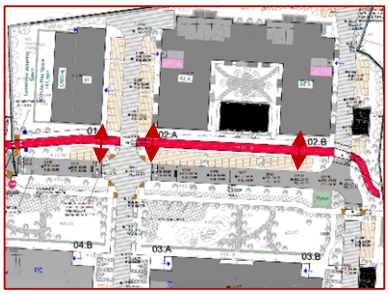
Appendix B: Walking Audit

The purpose of this Walking Audit is to review the proposed Development, and the existing surrounding environment, to assess if it can be readily and comfortably traversed by pedestrians, that the needs of pedestrians have been prioritised over cyclists & vehicles, and that footpaths are continuous and wide enough to cater for the anticipated number of pedestrians.

B.1 Walking Audit Findings

B.1.1 Access to/from Parking Space

A cycle track is indicated running through the proposed development in an east to west direction. There are a number of pedestrian desire lines across the cycle track between the parking spaces on the southern side of the cycle track and the footpath on the northern side of the cycle track which are not catered for with a crossing. Absence of crossings across the cycle track at these pedestrian desire lines would require pedestrians to ascend/descend high kerbs when crossing the cycle track.

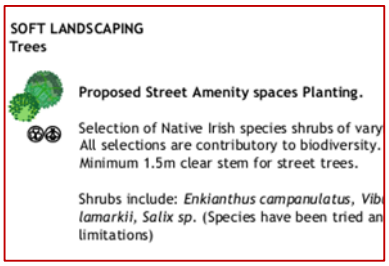


Recommendation

Provide additional cycle track crossings on pedestrian desire lines.

B.1.2 Tree Canopies

Trees have been indicated at the edge of the footpaths throughout the proposed development. A minimum clear stem of 1.5m for trees within the development has been indicated. This clearance beneath tree canopies would be insufficient for trees that overhang footpaths. Low hanging tree canopies may impede pedestrians travelling on the footpaths, resulting in a risk of head strikes and personal injury.

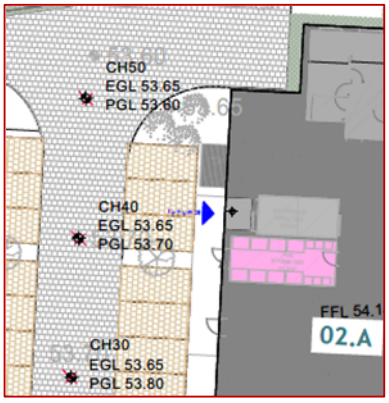


Recommendation

Trees adjacent to, or overhanging, the footpath should have a vertical clearance of 2.3m to the footpath.

B.1.3 Connection between Home Zone and Footpath

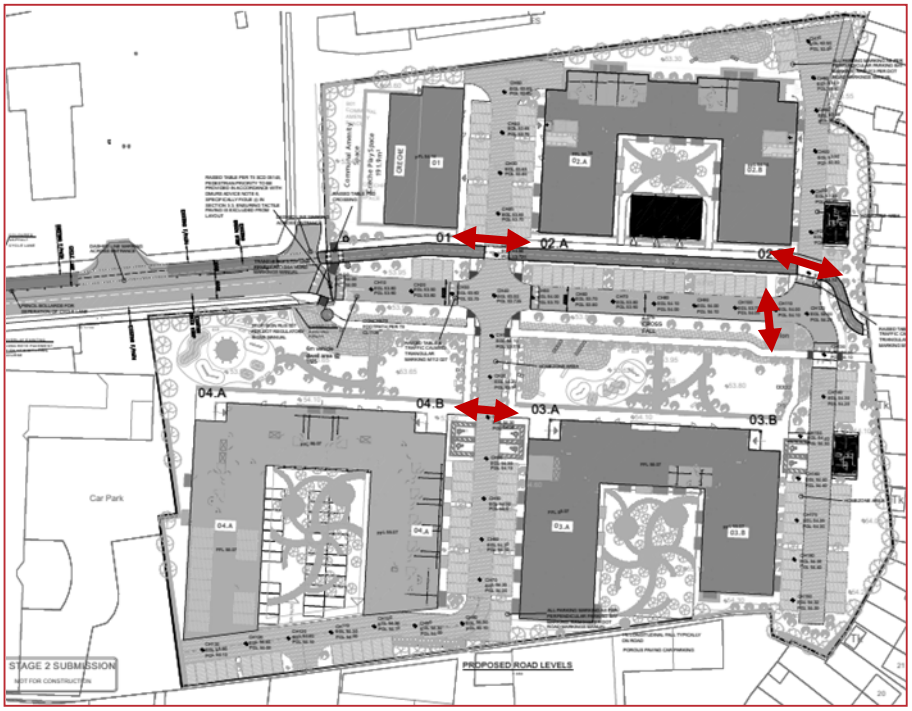
Home Zones have been indicated throughout the proposed development. It is unclear how pedestrians would access the footpath on both sides of the Home Zone carriageway in some of these Home Zones as there is a verge indicated between the footpath and the Home Zone carriageway. A verge separating the footpath and Home Zone carriageway would present a barrier for pedestrians when accessing the footpath, leading to them either trying to cross the verge to access the footpath or having to travel longer distances to a suitable access.



Recommendation

Clear and accessible connections should be provided between the Home Zone carriageways and the adjacent footpaths.

B.1.4 Pedestrian Crossing Desire Lines



There is likely to be a number of pedestrian desire lines within the proposed development, including between the residential units and the areas of open space and across side roads at the development's internal junctions.

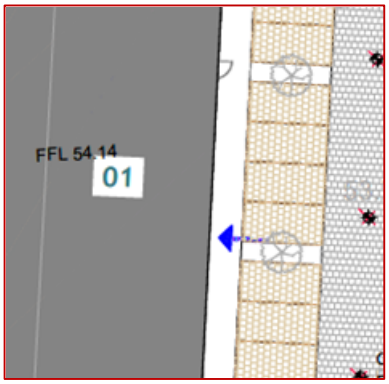
A failure to provide pedestrian crossings along likely pedestrian desire lines, including where these are across the proposed cycle track, may lead to pedestrians having to ascend/descend high kerbs when crossing the carriageway or cycle track.

Recommendation

During the design development, an assessment should be undertaken of the likely non-motorised road user desire lines and associated road/cycle track crossings. Pedestrian crossings, including dropped kerbs and tactile paving, should be provided at appropriate locations to support the identified desire lines.

B.1.5 Parked Vehicle Encroaching into Footpaths

Footpaths adjacent to perpendicular parking spaces appear to be narrow in some locations. Should vehicles parked within these parking spaces overhang the adjacent footpath it may decrease the effective width of the footpath below sufficient levels, which may lead to difficulties for pedestrians when travelling on the footpath.



Recommendation

Measures should be provided to prevent parked vehicles from significantly encroaching into the adjacent footpath.

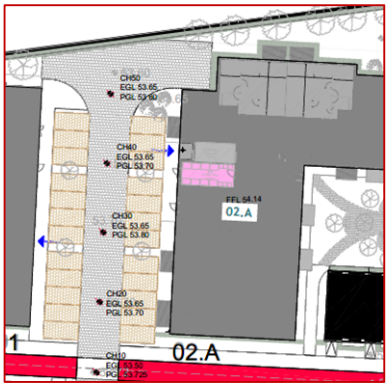
B.1.6 On-Street Parking on Oakfield

During the site visit, a number of vehicles were noted parked within, or partially within, the footpath on the southern side of Oakfield. On-street parking within the footpath at this location may force pedestrians to travel within the carriageway to avoid the parked vehicles.

Recommendation

Provide measures to deter parking within the footpath on the southern side of Oakfield.

B.1.7 Waste Collection



It is unclear how waste will be collected within the development, and how bins will be transported from the bin stores within the apartment blocks in the development to the designated collection point(s). There is a concern that relatively large bins, which are common for apartment blocks, may be placed within the footpaths when waiting to be collected, which may block pedestrian routes.

Recommendation

An appropriate waste collection plan should be prepared for the apartment blocks within the proposed development, ensuring bins are not placed where they would block pedestrian routes when waiting to be collected

Appendix C: Cycle Audit

The purpose of this Cycle Audit is to review the proposed development, and the existing surrounding environment, to assess if it will cater comfortably for cyclists, of all ages and abilities, and that the needs of cyclists have been prioritised over vehicular traffic.

C.1 Cycle Audit Finding

C.1.1 Bicycle Parking Provision

A bicycle parking area has been indicated at Apartment Block 02.B only. It is, therefore, unclear if the rest of the apartment blocks, and the Creche, within the proposed development are intended to provide bicycle parking spaces.

In addition, the quantum and the breakdown of bicycle parking provided for all apartment blocks and the Creche, including internal storage, bicycle stand size, however, is unclear from the drawing provided and it has, therefore, not been possible to undertake a full assessment of the bicycle parking provision associated with the apartments and Creche.

Recommendation

The proposed bicycle parking provision for the apartments and Creche should be in accordance with the South Dublin County Council County Development Plan, and should include a mix of bicycle parking infrastructure that can accommodate all types of bicycles (e.g. cargo, electric etc.).

C.1.2 Layout of Cycle Track

A 3m wide cycle track is indicated running through the development in an east to west direction. It is unclear, however, if the cycle track is proposed to be a one-way, or two-way, cycle track. The lack of definition of the cycle facility may lead to confusion for cyclists regarding the operation of the cycle track.

In addition, if a two-way cycle track is proposed, the proposed width of the cycle track may not accommodate the volume of cyclists using it.

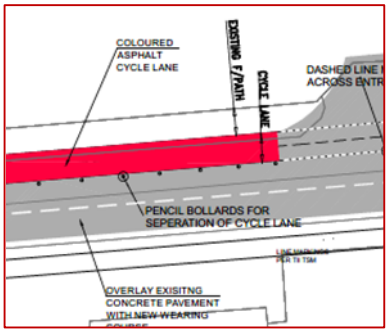
Recommendation

The cycle track should be of a sufficient width, and clearly marked, for its intended layout, and operation, and should be designed in accordance with the Cycle Design Manual.

Access control at its tie-in with Ninth Lock Road should be considered also if it is proposed that the cycle track is two-way.

C.1.3 Pencil Bollards

Pencil bollards are indicated, separating the proposed cycle track and adjacent traffic lane on Oakfield. It is unclear from the drawings, however, what the proposed lateral clearance of the bollards to the cycle track would be. Insufficient lateral clearance along the cycle track may lead to cyclists striking the bollards, or colliding with opposing cyclists should the cycle track intended to be two-way.

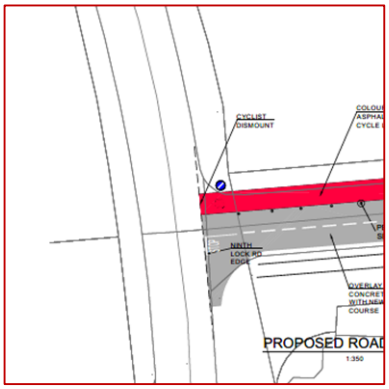


Recommendation

Provide sufficient later clearance between the bollards and the cycle track.

C.1.4 Termination of Cycle Track

The cycle track indicated along the northern side of Oakfield is indicated terminating at the junction with Ninth Lock Road, where it is unclear how cyclists would navigate between the Ninth Lock Road carriageway and the cycle track, particularly in the case of westbound and northbound cyclists on Ninth Lock Road who would have to cross the carriageway to turn onto, or off, the cycle track.



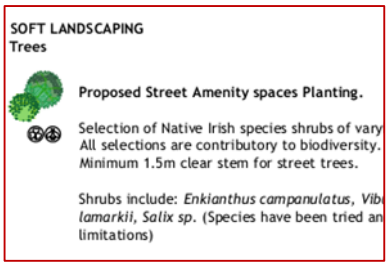
In addition ,it is unclear how the cycle track will tie in with the adjacent development at its eastern end. There is a concern that eastbound cyclists may have to continue their journey within the adjacent grassed area, which may present loss of traction, and bicycle control, issues for cyclists.

Recommendation

A clear, safe route should be provided for cyclists entering/leaving the cycle track at each end.

C.1.5 Tree Canopies

Trees have been indicated at the edge of the cycle track within the proposed development. A minimum clear stem of 1.5m for trees within the development has been indicated. This clearance beneath tree canopies would be insufficient for trees that overhang the cycle track. Low hanging tree canopies may impede cyclists travelling on the cycle track, resulting in a risk of head strikes and personal injury.



Recommendation

Trees adjacent to, or overhanging, the cycle track should have a vertical clearance of 2.5m to the cycle track.

C.1.6 Showers and Lockers

It is unclear if showers, lockers and changing rooms will be provided for cyclists within the Creche, as details of the internal layout of the buildings has not been provided. A lack of provision of necessary facilities for staff that cycle to/from the Creche may discourage staff from choosing cycling as a mode of transport

Recommendation

Showers, lockers and changing rooms should be provided within the Creche.

C.1.7 Long-Stay Bicycle Parking Area Doors

It is unclear from the information provided whether there are doors along the routes to/from the proposed bicycle parking area, and, if there are, whether they are manually operated or powered.

Manually operated doors may present difficulties for cyclists accessing/egressing the parking area.

Recommendation

Doors used by cyclists should be operated electronically by automatic detection or with a push button located a maximum of 3m from the door.

C.1.8 Bicycle Parking Security

It is unclear how long-stay bicycle parking locations will be accessed, and if these will be adequately secure. Insufficient security for long-stay bicycle parking locations could discourage cyclists from cycling to and from the proposed development.

Recommendation

All bicycle parking should be covered and located within a dedicated, secure, area within the development.

Appendix D: Road Safety Audit

GK Consulting Engineers

Proposed Residential Development at Elmfield, Clondalkin, Dublin 22

Stage 1 Road Safety Audit

July 2026

GK Consulting Engineers

Proposed Residential Development at Elmfield, Clondalkin, Dublin 22

Stage 1 Road Safety Audit

Document Ref:	P25142-PMCE-XX-XX-RP-SA-3_0001

Rev	Prepared By	Reviewed By	Approved By	Issue Date	Reason for Revision
2.0	AOR	AMG	AOR	30th July 2026	Final
1.0	AMG	AOR	AOR	20th May 2026	Draft Report

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Table of Contents

1 Introduction

1.1 General

This report results from a Stage 1 Road Safety Audit on the Proposed Residential Development at Elmfield, Clondalkin, Dublin 22 carried out at the request of Mr Liam Gleeson of GK Consulting Engineers.

The members of the Road Safety Audit Team are independent of the design team, and include:

Mr. Alan O'Reilly
(BA, BAI, MSc, PGDip(PM), RSACert, CEng, MIEI)
Road Safety Audit Team Leader

Mr. Aaron McGowan
(BA, BSc (Hons) MIEI)
Road Safety Audit Team Member

The Road Safety Audit took place during May 2026 and comprised an examination of the documents provided by the designers (see Appendix A). In addition to examining the documents supplied the Road Safety Audit Team visited the site of the proposed measures on the 12th of May 2026. Weather conditions during the site visit were dry and the road surface was dry. Traffic volumes during the site visit were low, pedestrian and cyclist volumes were low and traffic speeds were considered to be generally within the posted speed limit.

Where problems are relevant to specific locations these are shown on drawing extracts within the main body of the report and their locations are shown in Appendix B. Where problems are general to the proposals sample drawing extracts are included within the main body of the report, where considered necessary.

This Stage 1 Road Safety Audit has been carried out in accordance with the requirements of GE-STY-01024 - Road Safety Audit, contained on the Transport Infrastructure Ireland (TII) Publications website.

The scheme has been examined and this report compiled in respect of the consideration of those matters that have an adverse effect on road safety and considers the perspective of all road users. It has not been examined or verified for compliance with any other standards or criteria. The problems identified in this report are considered to require action in order to improve the safety of the scheme and minimise collision occurrence.

If any of the recommendations within this road safety audit report are not accepted, a written response is required, stating reasons for non-acceptance. Comments made within the report under the heading of Observations are intended to be for information only. Written responses to Observations are not required.

1.2 Items Not Submitted for Auditing

Details of the following items were not submitted for audit, therefore, no specific problems have been identified at this stage relating to these design elements, however where the absence of this information has given rise to a safety concern it has been commented upon in Section 3:

- Vehicle swept paths
- Drainage
- Public Lighting
- Visibility splays

2 Project Description

Thornmeadow Developments Limited intend to apply for permission for a Large-Scale Residential Development on lands at the Securispeed Logistics site, Elmfield, Ninth Lock Road, Clondalkin, Dublin 22.

Access to the development will be via the existing Ninth Lock Road and Oakfield. Pedestrian footpaths within the development will link to existing pedestrian footpaths on Ninth Lock Road and Oakfield. Ninth Lock Road is a two-way single carriageway approximately 6m wide, which runs in a predominantly north-south direction. Pedestrian footpaths and public lighting are provided on both sides of Ninth Lock Road. The posted speed limit on Ninth Lock Road in the vicinity of the site is 50kph.

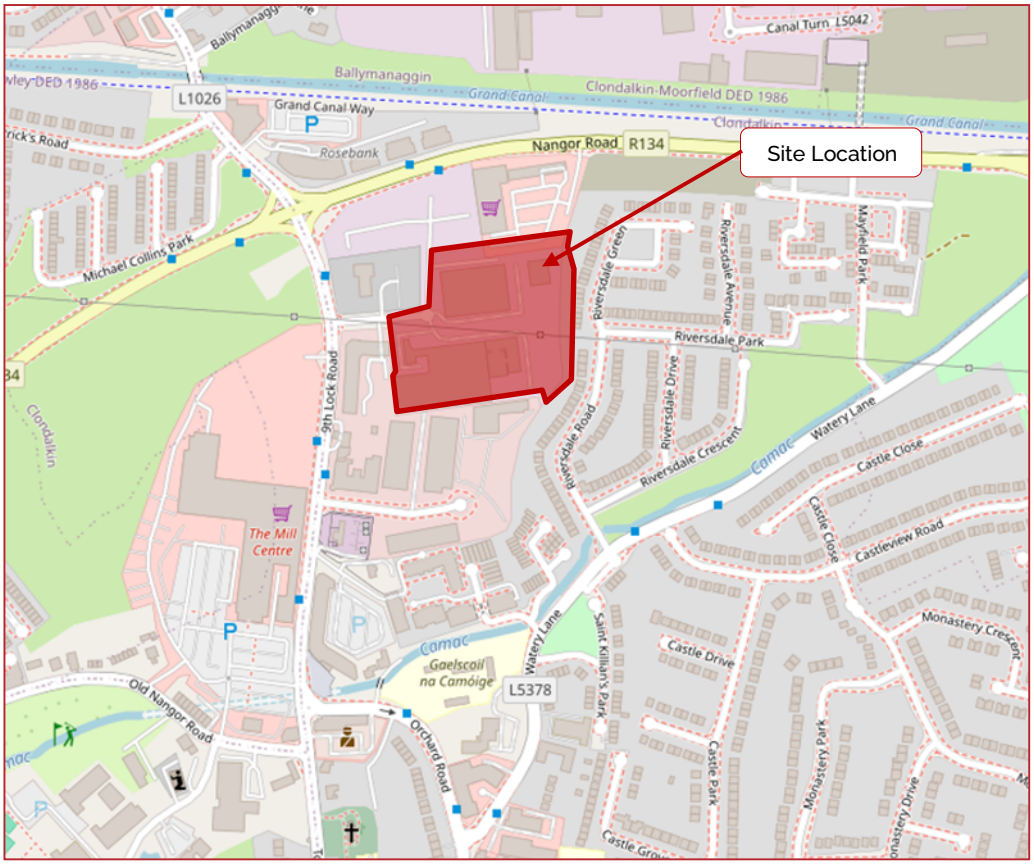


FIGURE 2.1: LOCATION PLAN (SOURCE: WWW.OPENSTREETMAP.ORG)

The proposed development will consist of the demolition of the existing warehouses and structures on site and the construction of a mixed-use residential-led development comprising a total of 408 no. residential units (403 apartments consisting of 24 no. studio units, 230 no. 1 bed units and 149 no. 2 bed units, and 5 no. 3 bed 2 storey houses) and 1 no. childcare facility. The residential units will comprise a mixture of apartments and own-door houses and range in height from 2-9 storeys.

The proposed development will also comprise all associated car parking (205 no. spaces), cycle parking, refuse and storage areas, plant, landscaping, open space, boundary treatment, public lighting, ESB substations, and site and infrastructural works necessary to facilitate the proposed development.

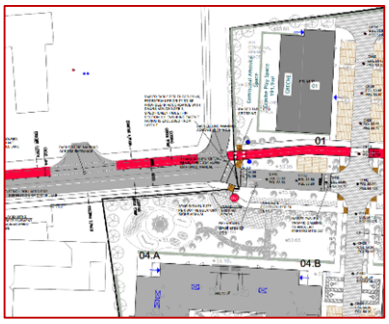
3 Items Arising from the Audit

3.1 Cycle Lane Surface Colour Across Accesses

Location: *Drawing No. GK25126_C100 (Rev. PL1)*

Summary: *Absence of red coloured surfacing where the cycle lane crosses accesses may lead to drivers being insufficiently aware of cyclists, resulting vehicle-cyclist collisions.*

A cycle lane is proposed along the northern side of Oakfield, which would cross the junction mouth at two existing accesses. No red coloured surfacing is proposed on the carriageway where the cycle lane crosses these accesses.



This may lead to drivers being insufficiently aware of the potential for approaching cyclists when approaching, and stopped at, the accesses resulting in them failing to take due care and consideration to approaching cyclists when entering/exiting and an increased risk of vehicle-cyclist collisions.

Recommendation

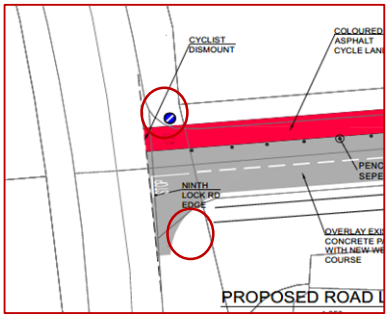
Provide sufficient coloured surfacing within the cycle lane where it crosses accesses.

3.2 Lack of Tactile Paving

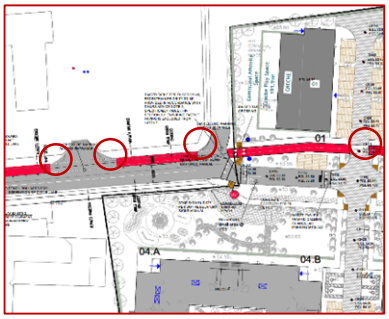
Location: *General*

Summary: *Absence of tactile paving on pedestrian desire lines, including at transitions to Home Zone carriageways, may lead to visually impaired pedestrians inadvertently entering the carriageway, increasing the risk of vehicle-pedestrian collisions.*

The existing footpaths on both sides of Oakfield are indicated as being retained however the dropped kerbs on both sides of the existing accesses on this road do not currently include tactile paving, nor is any indicated as part of the proposed scheme. There is also no tactile paving provided across the Oakfield/Ninth Lock Rd Junction. A failure to provide tactile paving at road/access crossings on the existing pedestrian desire lines may lead to visually impaired pedestrians inadvertently entering the carriageway, increasing the risk of vehicle-pedestrian collisions.



There is also a likely pedestrian desire line across the northern arm of the crossroad junction, within the proposed development, where no tactile paving has been indicated. An absence of tactile paving at road crossings within the development may lead to visually impaired pedestrians being insufficiently aware they are entering a Home Zone, increasing the risk of collisions with other road users.



In addition, no tactile paving has been indicated where the carriageway transitions to Home Zone carriageways throughout the development. An absence of tactile paving at these transitions may lead to visually impaired pedestrians being insufficiently aware that they are entering a Home Zone, increasing the risk of a collisions with other road users.

Recommendation

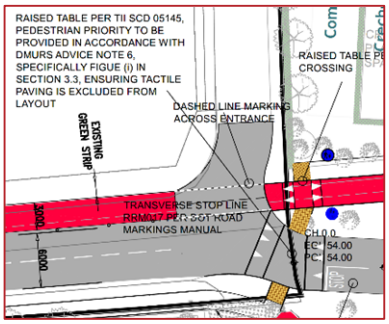
Provide tactile paving at road/access crossings on pedestrian desire lines and at the transitions to the proposed Home Zone carriageways within the development.

3.3 Incorrect Crossing Layout

Location: *Drawing No. GK25126_C100 (Rev. PL1)*

Summary: *Provision of the incorrect crossing type/layout may lead to confusion for drivers and pedestrians regarding who has priority at the crossing resulting in a risk of vehicle-pedestrian collisions.*

A note on the drawing indicates that the pedestrian crossing across the access road to the proposed development is to include pedestrian priority suggesting that either a continuous footpath or Zebra crossing would be provided. The layout proposed does not indicate either of these types of arrangements, and suggests that an uncontrolled pedestrian crossing would be provided.



If road user priority is not clear from the road layout it may lead to confusion for road users regarding who has priority at the crossing, resulting in a risk of vehicle-pedestrian collisions.

Recommendation

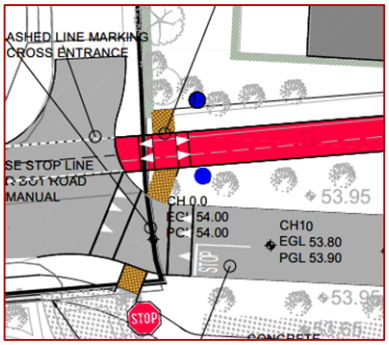
The layout of the proposed crossing at this location should clear convey the intended priority at the crossing to all road users.

3.4 Alignment of Pedestrian Crossing & Tactile Paving Layout

Location: *Drawing No. GK25126_C100 (Rev. PL1)*

Summary: *The confusing tactile paving layout on both sides of the cycle track crossing may lead to visually impaired pedestrians being unbale to safely and independently navigate the road layout.*

A raised cycle track crossing and raised carriageway crossing are proposed adjacent to each other at the access to the proposed development. The tactile paving on the southern side of the cycle track crossing is indicated as connecting with the tactile paving on the northern side of the raised carriageway crossing, such that it is laid across the full length of this short footpath link. The tactile paving layout on the southern side of the carriageway crossing also does not align with the tactile paving at the crossing across the cycle track. In addition, the tactile paving on the northern side of the cycle track crossing is indicated across the full depth of the footpath.



The tactile paving layout at both of these crossings may lead to confusion for visually impaired pedestrians resulting in them being unable to safely and independently navigate the road layout.

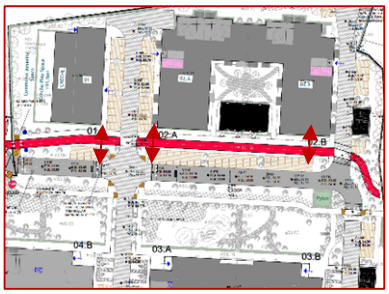
Recommendation

The tactile paving layouts on both sides of these crossings should be revised to provide a gap between the tactile paving at each crossing, to remove the tactile paving from the full depth of the footpath on the northern side of the cycle track and to ensure the tactile paving on both sides of the carriageway crossing are sufficiently aligned.

3.5 Lack of Crossings Across Cycle Track

Location: *Drawing No. GK25126_C100 (Rev. PL1)*

Summary: *Absence of pedestrian crossings across the cycle track at pedestrian desire lines may lead to trips and falls as pedestrians cross the cycle track.*



A cycle track is indicated running through the proposed development in an east to west direction. There are a number of pedestrian desire lines across the cycle track between the parking spaces on the southern side of the cycle track and the footpath on the northern side of the cycle track which are not catered for with a crossing. Absence of crossings across the cycle track at these pedestrian desire lines may lead to trips and falls as pedestrians cross the cycle track.

In addition, a lack of formal crossings across the cycle track at these desire lines may also lead to mobility impaired vehicle occupants, parked on the southern side of the cycle track, being unable to safely and independently cross the cycle track to access the footpath.

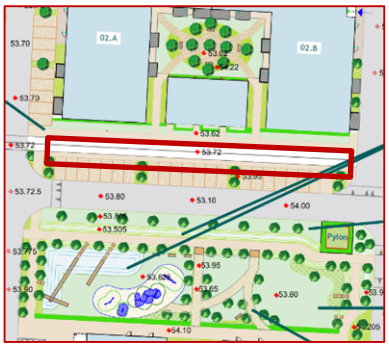
Recommendation

Provide additional cycle track crossings on pedestrian desire lines.

3.6 Footpath Adjacent Parking

Location: *Drawing No. GK25126_C100 (Rev. PL1)*

Summary: *Insufficient footpath width may force pedestrians into the cycle track where there is an increased risk of cyclist-pedestrian collisions.*



There is a narrow footpath indicated between the cycle track and parking spaces on its southern side. Vehicles parked in these parking spaces may overhang the kerb edge, reducing the effective width of the footpath.

Insufficient footpath width at this location may force pedestrians into the cycle track, after exiting their vehicle, where there is an increased risk of cyclist-pedestrian collisions.

Recommendation

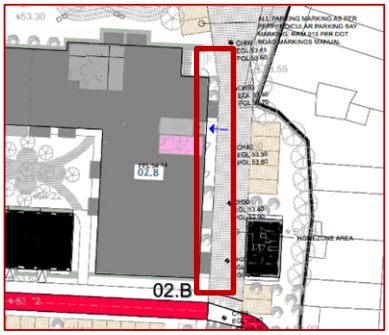
The footpath adjacent to the parking spaces should be a minimum of 1.2m wide with measures provided to prevent vehicles from overhanging the footpath.

3.7 Home Zones

Location: *Drawing No. GK25126_C100 (Rev. PL1)*

Summary: *It is unclear if safe zones for visually impaired pedestrians would be provided within the Home Zones, and there are obstructions indicated within the footpath at the edge of the Home Zone carriageways which may lead to pedestrians being unable to step off the carriageway to avoid cyclists or motorised vehicles.*

Home Zone carriageways are indicated throughout the proposed development. It is unclear, however, if there would be a level difference between the footpath at the edge of the Home Zones and the Home Zone carriageways. A level difference between the footpath and the Home Zone carriageways may increase the risk of trips and falls as road users travel within these spaces.



It is also unclear if a safe zone for visually impaired pedestrians would be provided at the edge of the Home Zone carriageways. The absence of a safe zone within the Home Zone carriageways may lead to pedestrians being unable to step off the carriageway to avoid cyclists or motorised vehicles resulting in an increased risk of pedestrian-cyclist and vehicle-pedestrian collisions.

In addition, it is unclear what the grey rectangles are which are indicated within the footpath adjacent the Home Zone carriageways. Trees, and these rectangles, indicated within these areas, would likely reduce the effective width of the footpath which may force pedestrians into the Home Zone carriageway where there is an increased risk of pedestrian-cyclist and vehicle-pedestrian collisions.

Recommendation

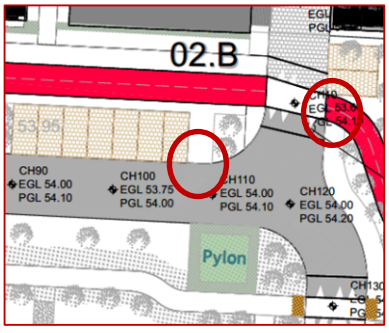
Provide a segregated safe zone within the Home Zones in the proposed development, free from any obstructions.

3.8 Footpath Termination

Location: *Drawing No. GK25126_C100 (Rev. PL1)*

Summary: *Termination of the footpath at the edge of the carriageway, and the edge of the cycle track, may lead to visually impaired pedestrians tripping at the kerb, or inadvertently entering the carriageway or cycle track, where there is risk of pedestrian-cyclist, or vehicle-pedestrian, collisions.*

There are sections of footpath which terminate at the edge of the carriageway and at the edge of the cycle track at the easternmost junction within the proposed development. Abrupt termination of the footpath at the edge of the carriageway or cycle track may lead to visually impaired pedestrians tripping at the kerb, or inadvertently entering the carriageway or cycle track, where there is risk of pedestrian-cyclist, or vehicle-pedestrian collisions.



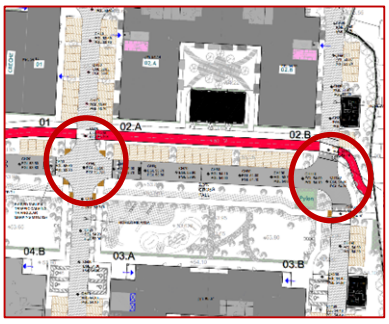
Recommendation

Ensure adequate footpath terminations are provided throughout the scheme.

3.9 Junction Priority

Location: *Drawing No. GK25126_C100 (Rev. PL1)*

Summary: *Absence of junction priority at the junctions within the proposed development may lead to driver confusion and hesitation resulting in collisions.*



The junction control (stop, yield etc.), and thus priority, at the crossroad junction and the easternmost junction within the proposed development has not been indicated. It is, therefore, unclear who has priority at these junctions. This could lead to driver confusion and hesitation resulting in collisions should opposing drivers assume that they have priority over vehicles on adjacent roads and enter the junctions simultaneously.

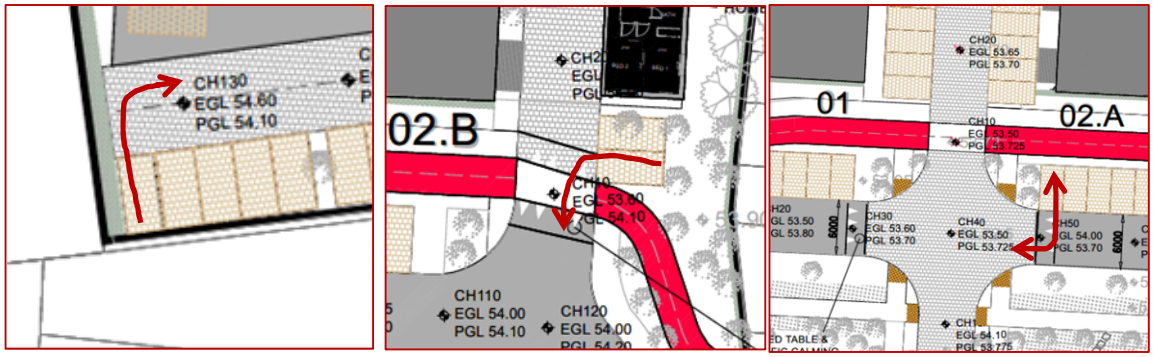
Recommendation

Provide clear junction priority at the junctions within the proposed development.

3.10 Access/Egress to/from Parking Spaces

Location: *Drawing No. GK25126_C100 (Rev. PL1)*

Summary: *It is unclear if drivers will be able to safely enter/exit the proposed parking spaces adjacent the raised junctions within the development, and at the westernmost parking space to the south of Apartment Block 04.A.*



It is unclear if drivers will be able to safely enter/exit the proposed parking spaces adjacent the raised junctions within the proposed development, and at the westernmost parking space to the south of Apartment Block 04.A, due to a combination of the proximity to the boundary and the angle of the carriageway, or junction.

If sufficient space is not provided at these parking spaces for safe access/egress, it may lead to drivers having to undertake complex turning manoeuvres, resulting in material damage collisions, to access/exit the parking spaces, particularly if the adjacent parking spaces are occupied.

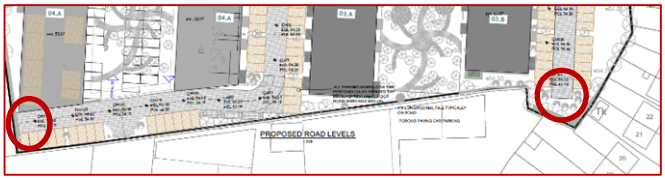
Recommendation

Ensure ease of access is provided to/from all parking spaces within the proposed development.

3.11 Absence of Turning Heads

Location: *Drawing No. GK25126_C100 (Rev. PL1)*

Summary: *Turning heads have not been indicated at the end of all cul de sacs within the proposed development which may lead to unsafe reversing, or U-turn, manoeuvres where there is an increased risk of collisions with parked vehicles and other road users.*



Turning heads have not been indicated at the end of all cul de sacs within the proposed development to allow drivers, who may enter these roads in error, or drivers of delivery/refuse vehicles, to perform a U-turn manoeuvre safely. This could, therefore, lead to unsafe reversing, or U-turn, manoeuvres where there is an increased risk of collisions with parked vehicles and other road users.

This is a particular concern for drivers of refuse trucks and other large vehicles likely to enter the development.

Recommendation

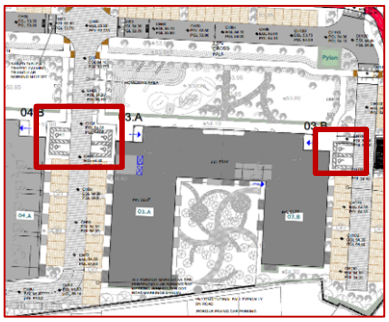
Turning heads should be provided at the ends of all cul de sacs within the proposed development. The shape and size of these turning heads should be sufficient to allow all vehicles to turn safely within the carriageway extents, and should be determined via a swept path analysis.

3.12 Accessible Parking Spaces

Location: *Drawing No. GK25126_C100 (Rev. PL1)*

Summary: *It is unclear if there would be a level difference between the footpath and Home Zone carriageways and, if there is a level difference, the absence of a dropped kerb and tactile paving at the accessible parking spaces may lead to mobility impaired vehicle occupants being unable to travel between their vehicle and the adjacent footpath.*

There are a number of accessible parking spaces indicated within the Home Zones in the proposed development. It is unclear if the accessible parking spaces within the Home Zones are level with the adjacent footpath and, if a level difference is provided, mobility impaired vehicle occupants may experience difficulties travelling between the footpath and their vehicle resulting in them having to travel within the carriageway, where there is an increased risk of being struck by a vehicle.



However, if a level difference is intended between the parking spaces and footpath, however, no dropped kerbs and tactile paving have been indicated at the accessible parking spaces.

Recommendation

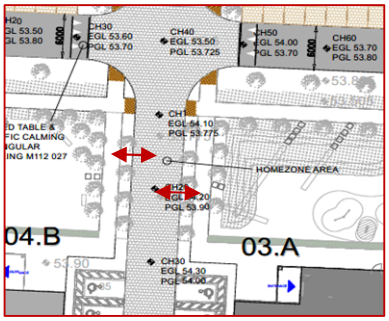
If a level difference is being proposed, ensure dropped kerbs and tactile paving are provided at the accessible parking spaces.

3.13 Access to Footpath from Homezone

Location: *Drawing No. GK25126_C100 (Rev. PL1)*

Summary: *A verge is indicated separating the footpath and Home Zone carriageway which would lead to pedestrians having to travel a longer distance within the Home Zone carriageway to access the footpath, where there is an increased risk of vehicle pedestrian collisions.*

Home Zones have been indicated throughout the proposed development. It is unclear how pedestrians would access the footpath on both sides of the Home Zone carriageway in some of these Home Zones as there is a verge indicated between the footpath and the Home Zone carriageway. A verge separating the footpath and Home Zone carriageway would lead to pedestrians having to travel a longer distance within the Home Zone carriageway, where there is an increased risk of vehicle-pedestrian collisions.



In addition, pedestrians that try to cross the verge to access the footpath may slip and fall on the grass, and sustain personal injuries, particularly during icy conditions.

Recommendation

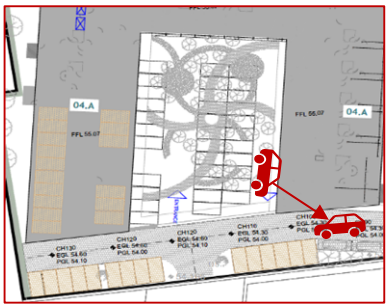
Remove the verges which separate the footpath from the Home Zone carriageway.

3.14 Off-Street Carpark

Location: *Drawing No. GK25126_C100 (Rev. PL1)*

Summary: *It is unclear if there would be sufficient inter-visibility between a driver exiting the proposed off-street carpark and a westbound vehicle/cyclist/pedestrian travelling along the Home Zone.*

It is unclear from the information provided if the carpark indicated between each side of Apartment Block 04.A would be an underground carpark, or if it would be located at surface level.



If the carpark is at surface level, it is unclear if there would be sufficient inter-visibility between a driver exiting the carpark and a westbound vehicle, cyclist or pedestrian travelling along the Home Zone carriageway.

Restricted inter-visibility at the exit from the carpark may lead to exiting drivers being insufficiently aware of the other road users travelling along the Home Zone resulting in them exiting when it is unsafe to do so and collisions with other road users.

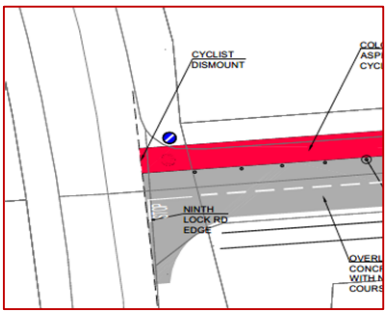
Recommendation

Ensure sufficient inter-visibility is provided at the exit from the carpark.

3.15 Cycle Track

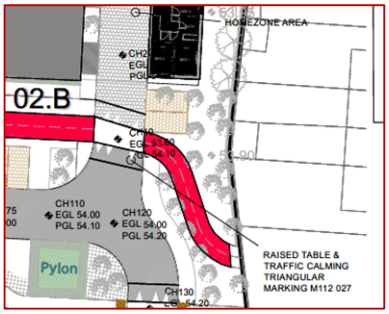
Location: *Drawing No. GK25126_C100 (Rev. PL1) & GK25126_C101 (Rev. PL1)*

Summary: *Insufficient definition of the cycle track at its tie-ins with the existing road layout/adjacent developments may lead to cyclist confusion, resulting in a risk of collisions.*



A 3m wide cycle track is indicated running through the development in an east to west direction. It is unclear, however, if the cycle track is proposed to be a one-way, or two-way, cycle track. The lack of definition of the cycle facility may lead to confusion for cyclists regarding the operation of the cycle track, resulting in collisions with other cyclists.

It is also unclear how cyclists would access the cycle track from the existing road layout on Ninth Lock Road at its western tie-in. The absence of a safe tie-in with the existing road layout on Ninth Lock Road may lead to cyclists undertaking unsafe manoeuvres between the Ninth Lock Road and the cycle track, resulting in a risk of vehicle-cyclist collisions.



In addition, if the cycle track is proposed to be two-way, it is unclear if the width of the cycle track, particularly at its eastern extents, would be wide enough to accommodate two-way cyclist volumes. Insufficient width of the cycle track for two-way flow may lead to an increased risk of collisions between cyclists.

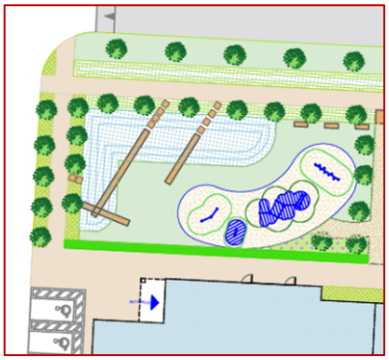
Recommendation

Provide a well-defined cycle track, with sufficient width throughout its full length, that ties-in safely with the existing road layout on Ninth Lock Road.

3.16 Timber Walkways

Location: *Drawing No. GK25126_C100 (Rev. PL1)*

Summary: *There are raised timber walkways and stepping stones indicated in the areas of open space within the development which may lead to difficulties for mobility impaired pedestrians, or trips and falls for other pedestrians, when trying to traverse the pedestrian routes.*



Raised timber walkways and stepping stones are indicated within the areas of open space within the proposed development. It is unclear if these paths/stepping stones would be able to be traversed safely and independently by mobility impaired pedestrians, particularly wheelchair users, should the space/gaps between the timber members be wide or contain soft ground/grass.

In addition, there is also a risk of trips and falls for other pedestrians when trying to traverse the raised timber walkways and stepping stones.

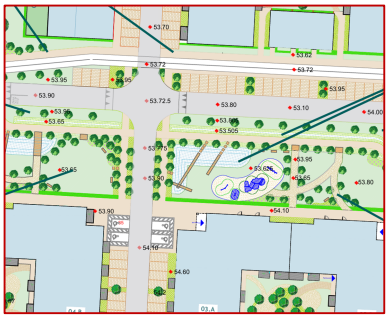
Recommendation

Ensure the proposed raised timber walkways and stepping stones can be safely traversed by all road users.

3.17 Tree Canopies

Location: *Drawing No. 096925_LP_01 (Rev. PL1)*

Summary: *A minimum clear stem of 1.5m for street trees has been indicated within the proposed development which may impede cyclist and pedestrians travelling on the cycle track and footpaths, resulting in head strikes and personal injuries.*



Trees have been indicated at the edge of the cycle track and footpaths throughout the proposed development. A minimum clear stem of 1.5m for trees within the development has been indicated. This clearance beneath tree canopies would be insufficient for trees that overhang the cycle track and footpaths. Low hanging tree canopies may impede cyclist and pedestrians travelling on the cycle track and footpaths, resulting in a risk of head strikes and personal injury.

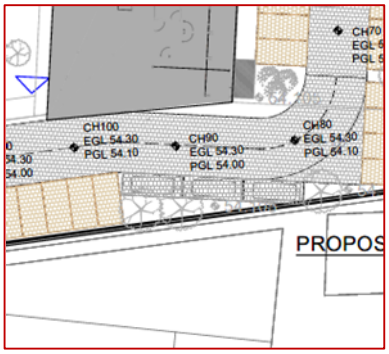
Recommendation

The vertical clearance beneath tree canopies should be a minimum of 2.3m where these overhang pedestrian-only routes, and 2.5m where they overhang cycle routes.

3.18 Absence of Tapers at Parallel Parking Spaces

Location: *Drawing No. GK25126_C100 (Rev. PL1)*

Summary: *No tapers have been indicated at the ends of the parallel parking spaces which may lead to material damage collisions as drivers attempt to enter/exit these spaces.*



Parallel parking spaces have been indicated at the southern extents of the proposed development within the Home Zone between Apartment Blocks 04.A and 03.A. No tapers have been indicated at the ends of these parallel parking spaces. An absence of tapers at the ends of the parallel parking spaces may lead to drivers being unable to enter/exit the parking spaces if the adjacent spaces are occupied, resulting in material damage collisions.

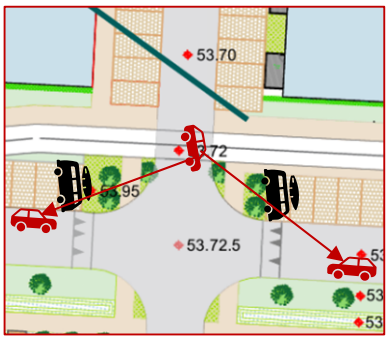
Recommendation

Provide tapers at both ends of the row of parallel parking spaces.

3.19 Restricted Inter-Visibility

Location: *Drawing No. 096925_LP_01 (Rev. PL1)*

Summary: *It is unclear if a vehicle approaching the crossroads on the northern arm would have sufficient inter-visibility with vehicles/cyclists on the astern and western arms.*



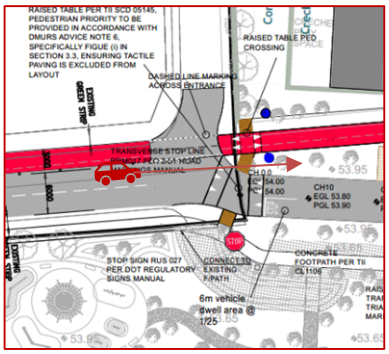
It is unclear if a southbound driver on the northern arm of the crossroad junction within the proposed development would have sufficient inter-visibility with westbound or eastbound drivers/cyclists approaching the junction on the eastern or western arms. Trees are indicated within the verges on both sides of the northern arm which may restrict inter-visibility between opposing road users resulting in a risk of side-on collisions should opposing road users enter the junction simultaneously.

In addition, if a high-sided vehicle is parked in the parking spaces on either side of the crossroad junction, this would further restrict the inter-visibility between road users.

Recommendation

Ensure sufficient inter-visibility is provided between all road users approaching the crossroad junction, on all arms.

3.20 Alignment of Carriageway



Location: *Drawing No. GK25126_C100 (Rev. PL1)*

Summary: *It is unclear if eastbound drivers on Oakfield would anticipate the change in direction in the horizontal alignment at the access to the proposed development, which may lead to them entering the verge or footpath, resulting in a risk of vehicle-pedestrian collisions.*

The alignment of the existing Oakfield carriageway does not align with the proposed alignment of the carriageway at the access to the proposed development. Eastbound drivers travelling along Oakfield, using the edge of the cycle track to maintain their position within the traffic lane, may continue along that line of travel and fail to negotiate the sudden change in horizontal alignment at the access, resulting in them entering the verge or footpath/uncontrolled crossing, where there is a risk of collisions with pedestrians.

Recommendation

A smooth alignment should be provided through the proposed development access junction between the Oakfield carriageway and the development's internal road layout.

3.21 On-Street Parking Along Oakfield

Location: *Drawing No. GK25126_C100 (Rev. PL1)*

Summary: *On-Street parking within the footpath on the southern side of the Oakfield carriageway may lead to pedestrians having to travel within the carriageway to avoid parked vehicles, where there is an increased risk of being stuck by a vehicle.*

During the site visit the Audit Team noted a number of vehicles parked within, or partially within, the footpath on the southern side of Oakfield. On-street parking within the footpath at this location may force pedestrians to travel within the carriageway to avoid the parked vehicles, where there is a risk of them being stuck by a vehicle.

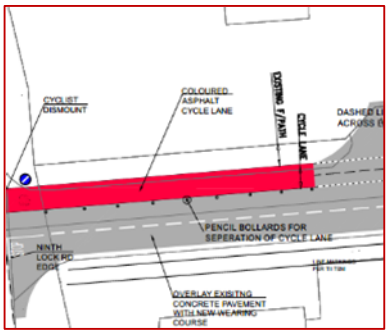
Recommendation

Provide measures to deter parking within the footpath on the southern side of Oakfield.

3.22 Pencil Bollards

Location: *Drawing No. GK25126_C100 (Rev. PL1)*

Summary: *Insufficient lateral clearance between the bollards at the edge of the cycle track and the adjacent traffic lane may lead to drivers/cyclists striking the bollards, resulting in material damage or personal injuries.*



Pencil bollards are indicated between the cycle track and eastbound traffic lane on Oakfield. It is unclear from the drawings provided, however, what the proposed lateral clearance is between the bollards and the cycle track and adjacent traffic lane. Insufficient lateral clearance between the cycle track and traffic lane may lead to cyclists, or drivers, striking the bollards, resulting in personal injuries or material damage, respectively.

Recommendation

Provide sufficient later clearance between the pencil bollards and the adjacent cycle track and traffic lane.

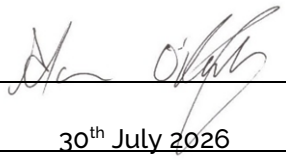
4 Audit Team Statement

We certify that we have examined the drawings referred to in this report. The examination has been carried out with the sole purpose of identifying any features of the design that could be removed or modified in order to improve the safety of the scheme.

The problems identified have been noted in this report together with associated safety improvement suggestions, which we would recommend should be studied for implementation.

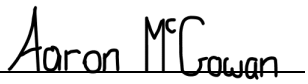
No one on the Road Safety Audit Team has been involved with the design of the scheme.

ROAD SAFETY AUDIT TEAM LEADER

Alan O'Reilly Signed: 

Dated: 30th July 2026

ROAD SAFETY AUDIT TEAM MEMBER

Aaron McGowan Signed: 

Dated: 30th July 2026

5 Road Safety Audit Feedback Form

Road Safety Audit Feedback Form

Scheme: Proposed Residential Development at Elmfield, Clondalkin, Dublin 22

Route No.: Oakfield, Ninth Lock Road

Audit Stage: 1 **Date Audit Completed:** 20th May 2026

	To be Completed by Designer			To be Completed by Audit Team Leader
Paragraph No. in Safety Audit Report	**Problem Accepted (Yes/No)**	**Recommended Measure(s) 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)**
3.1	No	No	No proposed works outside the estate on Oakfield Lane, refer to updated redline boundary	Yes
3.2	No	No	No proposed works outside the estate on Oakfield Lane, refer to updated redline boundary	Yes
3.3	Yes	Yes	Updated note added, crossing as per TII 05145, DMURS Note 6 Figure ii	
3.4	Yes	Yes	N/A	
3.5	Yes	Yes	N/A	
3.6	No	No	The footpath width provided is 1.5m. Vehicle stops have been provided in the parking spaces to avoid overhang	Yes
3.7	Yes	Yes	The 1.8m footpath is provided as a safe zone for pedestrians as well as a 1m safezone with a 25mm kerb acting as a ground surface indicator within the road width.	
3.8	Yes	Yes	Footpath intended to provide access to parked cars 125mm kerb at footpath termination.	

Road Safety Audit Feedback Form

Scheme: Proposed Residential Development at Elmfield, Clondalkin, Dublin 22

Route No.: Oakfield, Ninth Lock Road

Audit Stage: 1 **Date Audit Completed:** 20th May 2026

	To be Completed by Designer			To be Completed by Audit Team Leader
Paragraph No. in Safety Audit Report	**Problem Accepted (Yes/No)**	**Recommended Measure(s) 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)**
3.9	Yes	Yes	Crossings updated with road markings to comply. Tactile paving updated along with road markings.	
3.10	Yes	Yes	Refer to revised autotrack illustrating parking compliance.	
3.11	Yes	Yes	Turning heads added.	
3.12	No	No	There is no level difference with the homezone apart from 25mm step.	Yes
3.13	Yes	No	A new crossing point has been added just north of the disabled parking between Blocks 04B and 03A. This along with the crossing point just south of the internal link road offers direct access onto the internal footpath within the green space. The two entry points allow pedestrians to move to the internal footpath. The verge with its tree planting acts as a visual border separating the internal pedestrian footpath from the mixed traffic homezone thereby encouraging foot traffic to move within the internal footpaths.	Yes
3.14	Yes	Yes	Refer to revised sightlines lines for visibility of cars exiting the parking.	
3.15	No	No	3m cycle track width complies with the cycle design manual for two way cycling.	Yes

Road Safety Audit Feedback Form

Scheme: Proposed Residential Development at Elmfield, Clondalkin, Dublin 22

Route No.: Oakfield, Ninth Lock Road

Audit Stage: 1 **Date Audit Completed:** 20th May 2026

	To be Completed by Designer			To be Completed by Audit Team Leader
Paragraph No. in Safety Audit Report	**Problem Accepted (Yes/No)**	**Recommended Measure(s) 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)**
			Works to Oakfield Road are outside the site boundary.	
3.16	No	No	Stepping stones and timber walkways are informal landscape features and do not form part of the primary accessible pedestrian route. Accessible routes throughout the development will be provided in accordance with the relevant design standards.	Yes
3.17	Yes	Yes	The landscape design intends to provide adequate clearance over all pedestrian and cycle routes. Street trees adjacent to footpaths and cycle tracks will be specified, planted and maintained to achieve a minimum clear stem height of 1.8m.	
3.18	Yes	Yes	5 x 2.5 is sufficient, refer to revised autotrack submitted.	
3.19	No	No	Sufficient sight lines per DMURS, 2m setback and 14m sightliness (20km/h HZ). Speed table and priority control junction.	Yes
3.20	No	No	No works on private road (Oakfield) any further alignment changes would be works by the council.	Yes
3.21	No	No	No works on private road (Oakfield).	Yes

Road Safety Audit Feedback Form

Scheme: Proposed Residential Development at Elmfield, Clondalkin, Dublin 22

Route No.: Oakfield, Ninth Lock Road

Audit Stage: 1 **Date Audit Completed:** 20th May 2026

	To be Completed by Designer			To be Completed by Audit Team Leader
Paragraph No. in Safety Audit Report	Problem Accepted (Yes/No)	Recommended Measure(s) 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)
3.22	No	No	No works on private road (Oakfield).	Yes

Signed: [signature] Designer **Date** 29/07/2026

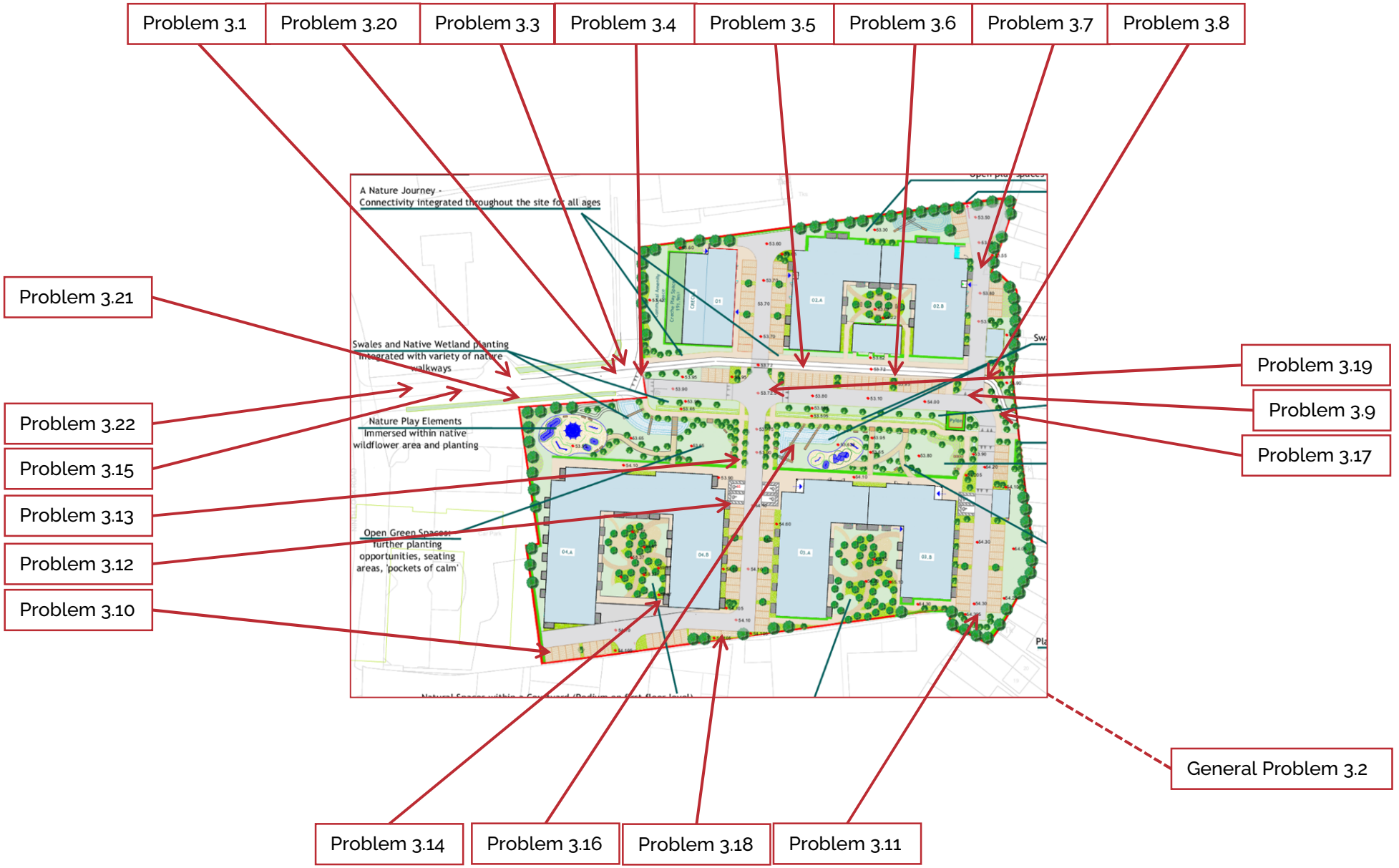
Signed: [signature] Audit Team Leader **Date** 30th July 2026

Signed: [signature] Employer **Date** 19/8/2026

Appendix A - Documents Submitted to the Road Safety Audit Team

DOCUMENT/DRAWING TITLE	DOCUMENT/DRAWING NO.	REVISION
Landscape Design	096925_LP_01	K
Proposed site access, road layout and levels sheet 1	GK25126_C100	A
Proposed site access, road layout and levels sheet 2	GK25126_C101	A

Appendix B – Problem Locations


Problem 3.1
Problem 3.20
Problem 3.3
Problem 3.4
Problem 3.5
Problem 3.6
Problem 3.7
Problem 3.8
Problem 3.21
Problem 3.22
Problem 3.15
Problem 3.13
Problem 3.12
Problem 3.10
Problem 3.19
Problem 3.9
Problem 3.17
General Problem 3.2
Problem 3.14
Problem 3.16
Problem 3.18
Problem 3.11
A Nature Journey -
Connectivity integrated throughout the site for all ages
Swales and Native Wetland planting
integrated with variety of nature
walkways
Nature Play Elements
Immersed within native
wildflower area and planting
Open Green Spaces
further planting
opportunities, seating
areas, 'pockets of calm'