

Proposed Mixed Use Development



Quality Audit Report

**SEPTEMBER 2021**



**MHL & Associates Ltd.**  
**Consulting Engineers**



**Document Control Sheet**

<b>Client</b>	Bellmount Developments
<b>Project Title</b>	Proposed Mixed Use Development
<b>Project Location</b>	Blackpool, Cork City
<b>Document Title</b>	Quality Audit Report
<b>Document No.</b>	MHL-20068TT-RED-DOC04-QAR
<b>Job No.</b>	20068TT

Rev.	Status	Author	Reviewed By	Approved By	Date
	Internal Draft	D. Murphy	-	-	11th- May-2021
A	External Draft	D. Murphy	D. Murphy	B. Murphy	22nd-Jun- 2021
B	Client Issue	D. Murphy	D. Murphy	B. Murphy	30 <sup>th</sup> -Jun- 2021
C	Client Issue	D. Murphy	D. Murphy	B. Murphy	08 <sup>th</sup> -Sept- 2021

***M.H.L. & Associates Ltd.***

**Consulting Engineers**

Carraig Mór House,  
10 High Street,  
Douglas Road,  
Cork.

Tel 021-4840214 Fax: 021-4840215

E-Mail: [info@mhl.ie](mailto:info@mhl.ie)

## Table of Contents

1	Introduction .....	3
1.1	Background .....	3
1.2	Scope of Quality Audit .....	4
1.3	Overview .....	4
1.4	Quality Audit Procedure .....	5
2	Applicant's Site.....	7
2.1	Site Location .....	7
2.2	Proposed Development .....	8
3	Existing Site Transport .....	11
3.1	Existing Modal Split .....	11
3.2	Modal Split Targets .....	11
3.3	Motorised Users .....	12
3.4	Pedestrians and Cyclists.....	12
3.5	Street Lighting.....	13
3.6	Collisions .....	13
3.7	Paths and Pavements in Streets, Roads and Public Areas .....	14
4	WCAR Assessment .....	15
4.1	WCAR Methodology .....	15
4.2	Assessment Parameters .....	15
4.3	WCAR Routes .....	15
4.3.1	Route 1: Applicants' Site to Existing Bus Stops. Redforge Road .....	16
4.3.2	Route 2: Applicants' Site to Commons Road .....	16
4.3.3	Route 3: Applicants' Site to Blackpool Retail Centre .....	16
4.3.4	Route 4: Applicants' Site to Blackpool.....	16
5	Walking, Cycling, Access aSSESSMENT & Review .....	17
5.1	Assessed Streets.....	17
6	Route 1: Applicant's Site to bus services- Redforge road .....	18
6.1.1	QAR Problem Route 1 Ref No.1 .....	18
6.1.2	QAR Problem Route 1 Ref No.2 .....	19
6.1.3	QAR Problem Route 1 Ref No.3 .....	19
6.1.4	QAR Problem Route 1 Ref No.4 .....	20
6.1.5	QAR Problem Route 1 Ref No.5 .....	20
6.1.6	QAR Problem Route 1Ref No.6 .....	21
6.1.7	QAR Problem Route 1Ref No.7 .....	21
6.1.8	QAR Problem Route 1 Ref No.8 .....	22
6.1.9	QAR Problem Route 1Ref No.9.....	22
6.1.10	QAR Problem Route 1Ref No.10 .....	23
7	Route 2 and Route 3: Applicant's Site to Commons Road/ Black pool Shopping Centre .....	24
7.1.1	QAR Problem Route 2 & Route 3 Ref No.1 .....	24
7.1.2	QAR Problem Route 2 & Route 3 Ref No.2 .....	25
7.1.3	QAR Problem Route 2 & Route 3 Ref No.3 .....	25
7.1.4	QAR Problem Route 2 & Route 3 Ref No.5 .....	26
7.1.5	QAR Problem Route 2 & Route 3 Ref No.6 .....	26
8	Route 4: Applicant's Site to Blackpool SHopping Centre .....	27
8.1.1	QAR Problem Route 4 Ref No.1 .....	27
8.1.2	QAR Problem Route 4 Ref No.2 .....	28
8.1.3	QAR Problem Route 4 Ref No.3 .....	28
8.1.4	QAR Problem Route 4 Ref No.4 .....	29
8.1.5	QAR Problem Route 4 Ref No.5 .....	29
8.1.6	QAR Problem Route 4 Ref No.6 .....	30
8.1.7	QAR Problem Route 4 Ref No.7 .....	30
9	Summary .....	32
10	Quality Audit Team Statement .....	35

11 References ..... 36

**Table of Figures**

Figure 1.1 Quality Audit Process ..... 6  
 Figure 2.1 Site Location ..... 7  
 Figure 2.2 Site Location ..... 8  
 Figure 2.3 Applicant’s Site ..... 9  
 Figure 2.4 CCC Bus Connects Corridor Provision (Commons Road) ..... 10  
 Figure 3.1 2016 Census online SAP data – Means of Travel ..... 11  
 Figure 3.2 2016 Census online SAP data – CSO Small Area ..... 11  
 Figure 3.3 Sustainable Travel Mode Share Targets ..... 12  
 Figure 3.4 Bus Stop north of site boundary ..... 13  
 Figure 3.5 Bus services passing applicant’s site ..... 13  
 Figure 4.1 WCAR Assessment Routes ..... 16  
 Figure 5.1 Problem Location Map ..... 17  
 Figure 6.1 Photo Direction A ..... 18  
 Figure 6.2 Photo Direction A ..... 19  
 Figure 6.3 Photo Direction B ..... 19  
 Figure 6.4 Photo Direction C ..... 20  
 Figure 6.5 Photo Direction D ..... 20  
 Figure 6.6 Photo Direction E ..... 21  
 Figure 6.7 Photo Direction F ..... 21  
 Figure 6.8 Photo Direction G ..... 22  
 Figure 6.9 Photo Direction G ..... 22  
 Figure 6.10 Photo Direction H ..... 23  
 Figure 7.1 Photo Direction I ..... 24  
 Figure 7.2 Photo Direction R ..... 25  
 Figure 7.3 Photo Direction S ..... 25  
 Figure 7.4 Photo Direction U ..... 26  
 Figure 7.5 Photo Direction V ..... 26  
 Figure 8.1 Photo Direction J , K ..... 27  
 Figure 8.2 Photo Direction L ..... 28  
 Figure 8.3 Photo Direction M ..... 28  
 Figure 8.4 Photo Direction N ..... 29  
 Figure 8.5 Photo Direction O ..... 29  
 Figure 8.6 Photo Direction P ..... 30  
 Figure 8.7 Photo Direction Q ..... 30  
 Figure 8.8 Assessment Schedule ..... 31  
 Figure 9.1 Summary Assessment ..... 34

## 1 INTRODUCTION

### 1.1 Background

M.H.L. & Associates Ltd. Consulting Engineers have been engaged by McCutcheon Halley Planning Consultants on behalf of Bellmount Developments to prepare a Quality Audit Report (QAR) to supplement a SHD housing planning application process for a proposed mixed use (residential and commercial) complex. The site is currently operating as fuel station and is located to the north of the Commons Road.

The site description is as follows:

- The proposed development is for a 5-year permission for a Strategic Housing Development at Millfield Service Station, Redforge Road, Blackpool, Cork comprising:
- The demolition of existing structures on site including a single storey building, pump island canopy, 4 no. fuel pumps and the decommissioning/removal of 4 no. underground fuel tanks; and
- The construction of 114 no. Build to Rent apartments (comprising a mix of 1 and 2 bed apartments) in 2 no. blocks, ranging in height from 4 to 9 storeys;
- 1 no. retail unit;
- Residential amenity facilities including a reception, residents' gym, lounge area and shared workspace;
- The provision of landscaping and amenity areas including an enclosed courtyard and 1 no. rooftop garden;
- The provision of public realm improvements on Redforge Road including widened footpaths and pavement improvements, pedestrian crossing, tree planting, raised tables/planters and seating areas; and
- All associated ancillary development including pedestrian/cyclist facilities, lighting, drainage, boundary treatments, bin and bicycle storage, ESB Sub-station and plant at ground floor level.

The WCAR was undertaken on Thursday 19th November 2020 and at the time of the survey the weather was dry, and the ground conditions were dry. This WCAR will assess how pedestrians, cyclists and other vulnerable road users including the mobility impaired, push chair users and wheelchair users will navigate from the proposed development along perceived desire lines within the proximity of the development by using existing and proposed infrastructure.

The assessment was carried out on four different routes which are deemed to be desire lines to/from local amenities for residents within the development. The assessed routes are provided in following reporting.

## 1.2 Scope of Quality Audit

The geographical scope of this Quality Audit has been assumed to consider the applicant's development site (extent of proposed new infrastructure works within the site boundary) and the proposed site access/egress locations. In addition, the immediate pedestrian/cycle/vehicular routes leading to/from the development site have also been included within the Quality Audit.

## 1.3 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:

- The Disability Act 2005 and related Sectoral Plans
- British Standards Institute BS8300:2001 and BS5588
- 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)
- Traffic Management Guidelines (Irish Government Publications 2003)
- Design Manual for Urban Road and Streets (Department of Transport, Tourism and Sport)
- Access Auditing of the Built Environment guidelines (National Disability Authority)
- 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 considers 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.

#### 1.4 Quality Audit Procedure

The definition of a Quality Audit is provided within the Department for Transport (UK) Traffic Advisory Leaflet 5/11 "Quality Audit", and states:

"QA is a defined process, independent of, but involving, the design team, that through planning, design, construction and management stages of a project, provides a check that high quality places are delivered and maintained by all relevant parties, for the benefit of all end users. QA is a process, applied to highway, traffic management or development schemes, which systematically reviews projects using a series of discrete but linked evaluations and ensures that the broad objectives of a place, functionality, maintenance and safety are achieved."

The design manual for Urban Roads and Streets (DMURS) states:

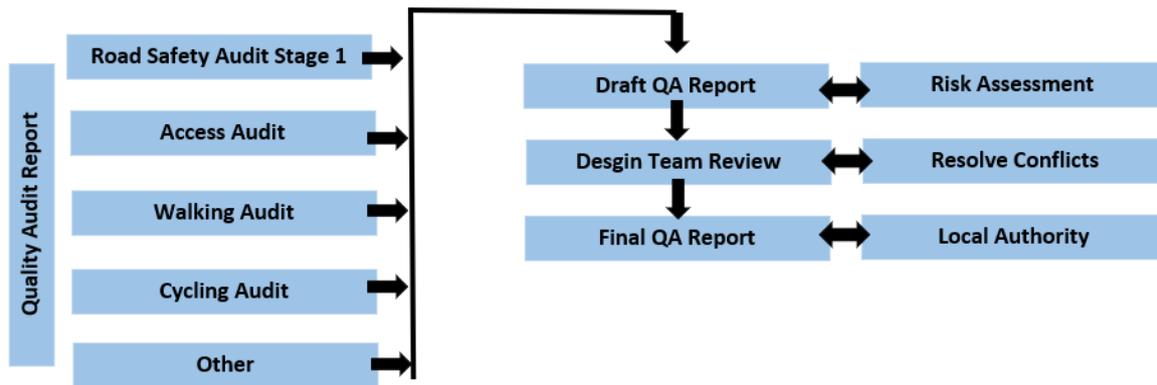
"the intention of a Quality Audit is not to pass or fail a design rather it is intended as an assessment tool that highlights the strengths and weakness of a design and a documented process of how decisions were made".

Quality Audits are a relatively new process within Ireland and as such no formal detailed guidance has been published here to date. Accordingly, until the publication of such guidance in Ireland, DBFL continue to use our internally derived Quality Audit report structure which has been compiled in reference to international best practice guidance including, amongst others, the Department for Transport (UK) Traffic Advisory Leaflet 5/11 "Quality Audit", and the CIHT document "Manual for Streets 2". Through the adoption of the guidance detailed within the aforementioned documents, DBFL submit that this Quality Audit complies fully with the requirements introduced in DMURS.

For developer led schemes the Quality Audit is an integral element of the development team approach through which all relevant disciplines contribute to the planning process.

The Quality Audit seeks to identify a set of clear, agreed outcomes and recommendations that are set fed back into the design process through discussion and agreement with the relevant parties of the design team (e.g. architects, planners, engineers etc.).

The Quality Audit process can be summarised as follows:



**Figure 1.1 Quality Audit Process**

The Quality Audit encompasses an Access Audit, Walking Audit and Cycling Audit. The scope of the audit considers the subject development site and the immediate pedestrian/cycle/vehicular routes leading to/from the development site.

The Quality Audit Team was as follows:

**Brian Murphy BE C.Eng., MIEI**  
**MHL Consulting Engineers Ltd.**

**David Murphy B.Eng. (Hons), M.A., MIEI**  
**MHL Consulting Engineers Ltd.**

The Audit comprised a review of the drawings/documents as detailed in this report in addition to an examination of the existing conditions on site. The site was visited on Wednesday 28/04/2021 with the objective of quantifying:

- Existing traffic (pedestrian, cyclist and vehicular) and travel demand characteristics
- The provision of dedicated facilities available for NMU's and their functionality
- The likely travel desire lines/links to/from the subject site; and
- Any issues that might impact the comfort and safety of NMU's.

This Audit has been carried out in accordance with the DMRB (UK) Section 5 Part 2 HD45/02 Non-Motorised User Audits, the relevant sections of Transport Infrastructure Ireland guidance, in addition to respecting the requirements of the Access Audit, Cycling Audit and Walking Audit.

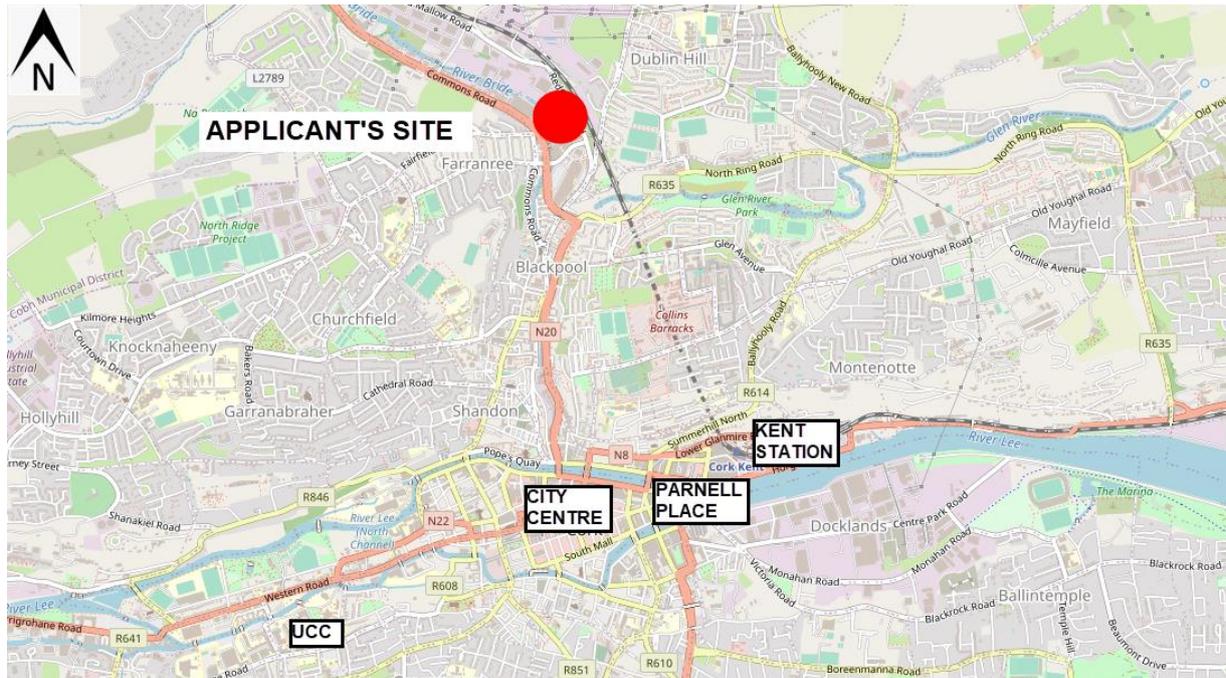
The problems identified and described in this report are considered by the Audit Team to require action in order to improve accessibility, enhance comfort and safety levels of the scheme and minimise accident occurrence.

## 2 APPLICANT'S SITE

### 2.1 Site Location

The site is located to the north of the Blackpool Retail Park in Cork City.

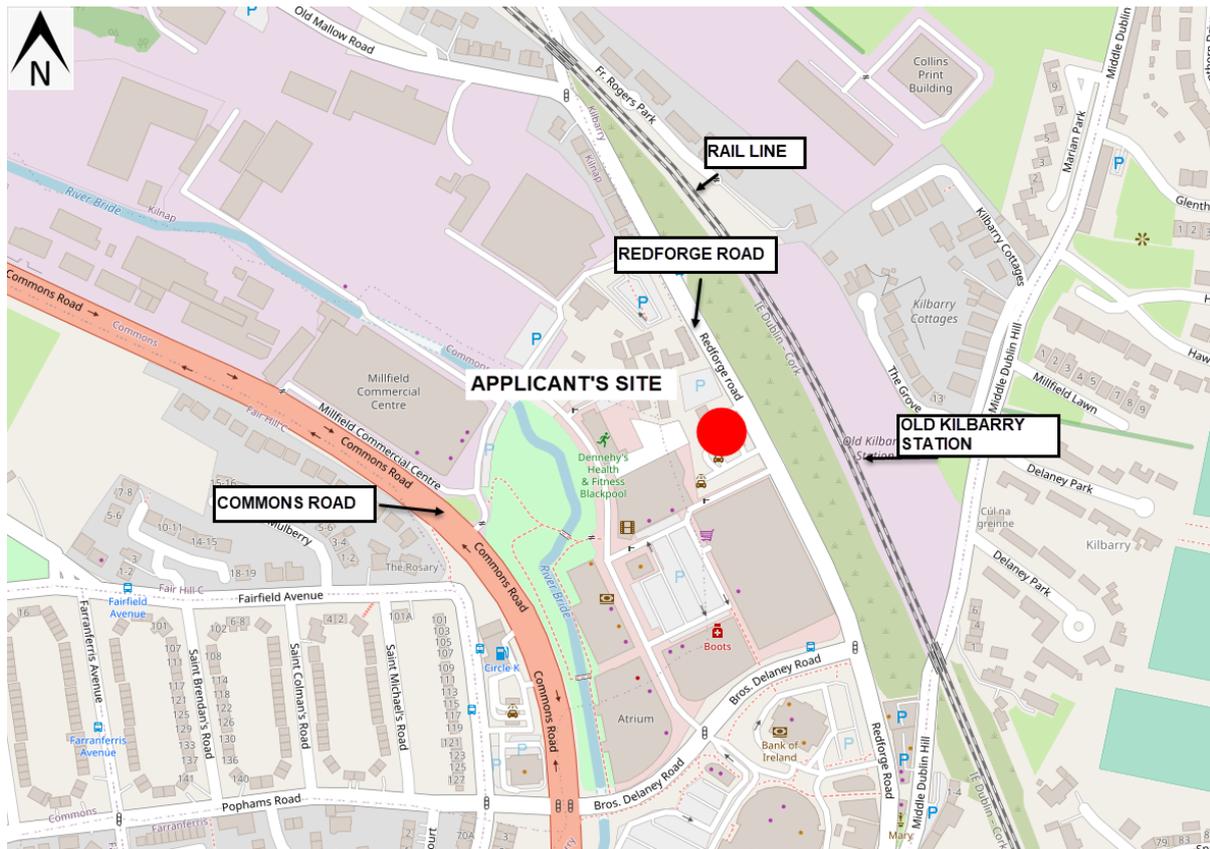
<b>Location:</b>	Redforge Road, Blackpool, Cork
<b>Classification:</b>	Proposed Residential Apartment Development
<b>Internal Road Speed Limit:</b>	50kph
<b>Local Authority:</b>	Cork City Council
<b>Type of Roads:</b>	City street/ Local Road



**Figure 2.1 Site Location**

Figure 2.1 highlights the proximity of the site to the City Centre, Parnell Bus Station and Kent Train Station. It shows that majority of the city's amenities are within a 5km cycle radius of the site, as identified in the Cork City Development Plan. Furthermore, UCC campus grounds and Cork University Hospital are located on or within the 5km cycling radius. The provision of existing pedestrian and public transport facilities in the vicinity of the site also ensure that the uptake of sustainable travel modes can be realised.

The site is currently operating as fuel station. The figure below shows the site location proximity to Blackpool Retail Park, the adjacent Redforge Road and the nearby Commons Road (N20). These are busy urban routes, with the N20 a busy national primary route linking the site to Cork City, to north cork (Blarney, Mallow and Charleville) and onwards to Limerick. Locally the road network links the site to the northside of Cork City including Gurrabraher, Farranree, Fairhill, Ballyvolane and Mayfield. The road is a single carriageway road. The site is currently accessed via two simple priority entrances to the existing fuel station on the Redforge Road.



**Figure 2.2 Site Location**

## 2.2 Proposed Development

The revised development proposal following pre consultation, ABP-308573-20 is the development of 114 no. Build to Rent apartments (comprising a mix of 1 and 2 bed apartments) in 2 no. blocks, ranging in height from 4 to 9 storeys. No onsite parking provision is proposed except for set down vehicle only.

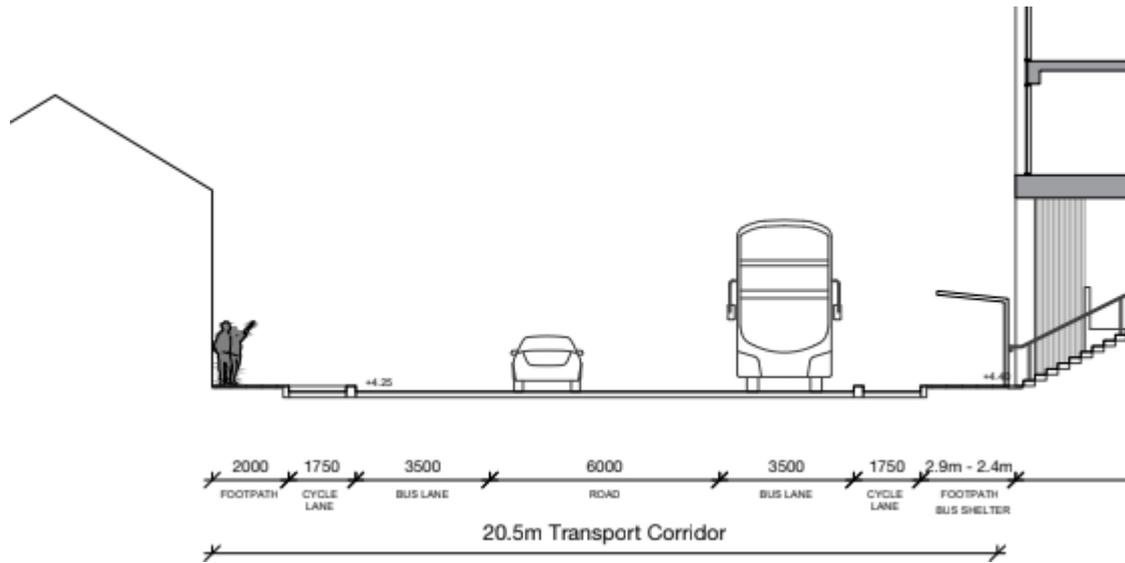


**Figure 2.3 Applicant's Site**

The limited parking space numbers aligns with an established trend to provide limited parking in student apartment complexes. From a sustainable travel perspective, limiting vehicular parking spaces serves to force end users to adopt alternative travels modes, different to the private car. This strategy supports national transport policy and with the objectives of the Cork City Development Plan 2015-2021.

The site does not include any vehicular parking with an entrance provided for fire tender access and service access only. A set down space is provided on Redforge Road to accommodate drop off's to the complex as well as taxi movement. Upgrade improvement to the existing bus stop to the north of the applicant's site are also proposed as part of the application submission, following requests from Cork City Council.

The nearby road and rail infrastructure has been identified in CMATS as routes for significant bus, rail, cycle, and pedestrian improvements. These CCC proposed improvements aim to deliver a high quality multi modal transportation corridor along the N20, Dublin Hill, Delaney Road and Commons Road. The proposed Bus Connects corridor section for the nearby Common's Road is presented below:



**Figure 2.4 CCC Bus Connects Corridor Provision (Commons Road)**

### 3 EXISTING SITE TRANSPORT

#### 3.1 Existing Modal Split

This section describes the current level of modal split (the use of sustainable modes of travel) based on available data and compares these to national targets.

The 2016 Census online SAP data was used to assess current modal shift patterns in the Blackpool area, specifically the electoral division of Commons, Cork City which encompasses the site. As outlined below, 35.7% of population in this area were commuting on foot, bike or using public transport.

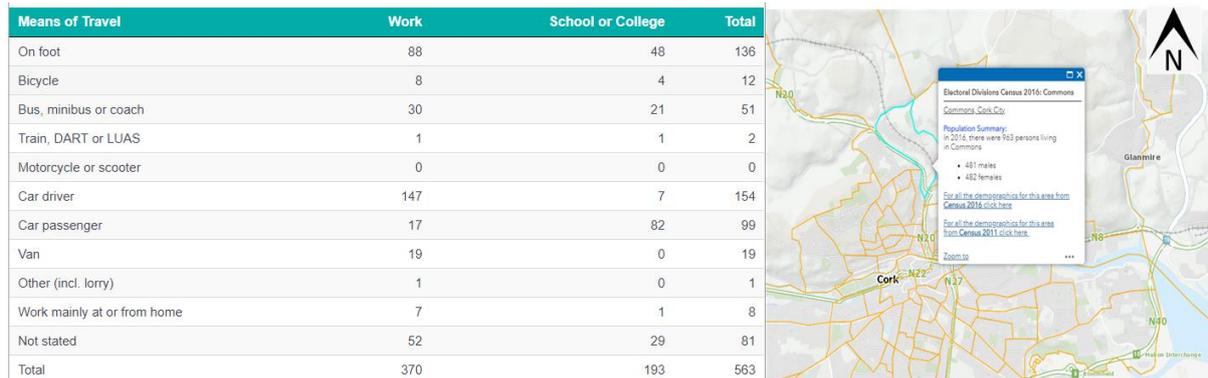


Figure 3.1 2016 Census online SAP data – Means of Travel

In looking more closely at the site location a review of the CSO “Small Area” population statistics (CSO Ref: Sa2017\_048019004) presents information of the population in the immediate vicinity of the site. This small area covers a small area along the Redforge Road and along the Mallow Road and encompasses a mainly private housing.

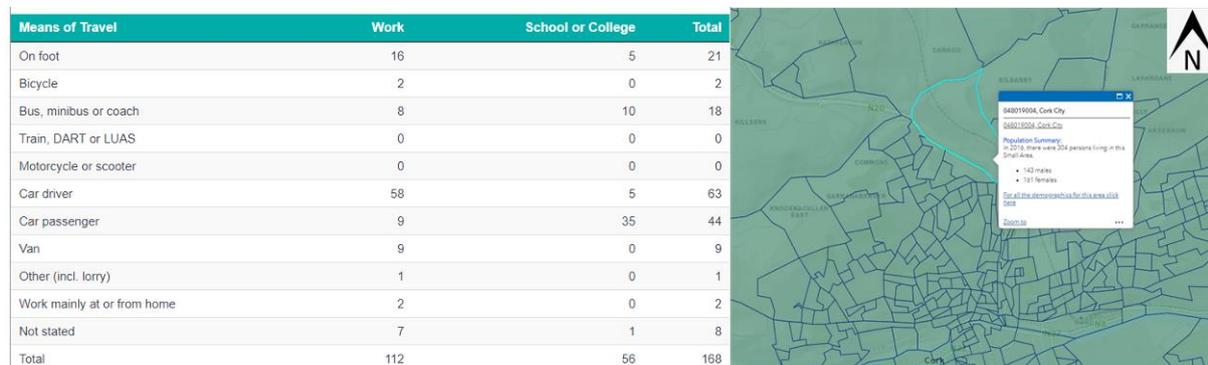


Figure 3.2 2016 Census online SAP data – CSO Small Area

These statistics cover a population of just 168no. residents and reports that **24.4%** of commuters travel by sustainable modes (walking/cycle/bus). Of these **51.2%** walk to work school or college.

#### 3.2 Modal Split Targets

The national policy document on sustainable transport Smarter Travel: A Sustainable Transport Future, 2009 – 2020 sets out a long-term objective to reduce the percentage of car-based commuter trips to 45%, therefore a proposed mode share assigned to sustainable travel modes of 55%.

The modal shift targets as set out in the Cork Area Strategic Plan (CASP) is 15% mode share for public transport in Cork City, this could be achieved primarily by a modal shift to bus and to a lesser extent rail. The existing and proposed, target mode splits for the various sustainable travel modes for the Study Area are set out in the table in Figure 4.7 below:

<b>TRANSPORT MODE</b>	<b>TARGET MODE SPLIT</b>
Public Transport	15%*
Cycling	10%**
Walking	30%***
<b>TOTAL SUSTAINABLE MODES</b>	<b>55%****</b>
<p>* Based on the Cork Area Strategic Plan (CASP) aspirations for Cork City            ** Based on the Cork City Development Plan 2015-2021, the Cork Cycle Network Plan 2015 &amp; National Cycle Policy Framework            *** Based on Cork City Walking Strategy 2013 to 2018            **** Based on Smarter Travel: A Sustainable Transport Future</p>	

**Figure 3.3 Sustainable Travel Mode Share Targets**

As seen in the above table the existing modal split for residents in the immediate vicinity of the subject site exceed the national and Cork City modal split targets. Given that the subject site is to accommodate similar student apartments to those in the vicinity it is reasonable to assume that a similar modal split will be achieved. The statistics point to the suitability of the local infrastructure for promoting sustainable travel modes and also indicate that the location is appropriate for the promotion of such sustainable travel modes.

### **3.3 Motorised Users**

The Redforge Road and nearby N20 connect the site to the surrounding city road infrastructure and major urban artery roads, for commuters to/from the City Centre to Blackpool/ Blarney/ Dublin Hill and surrounding areas. During the site visit traffic flows were generally observed to be high. Pedestrian and cycle numbers were moderate however this could have been affected by the current Covid-19 restrictions on third level student attendance.

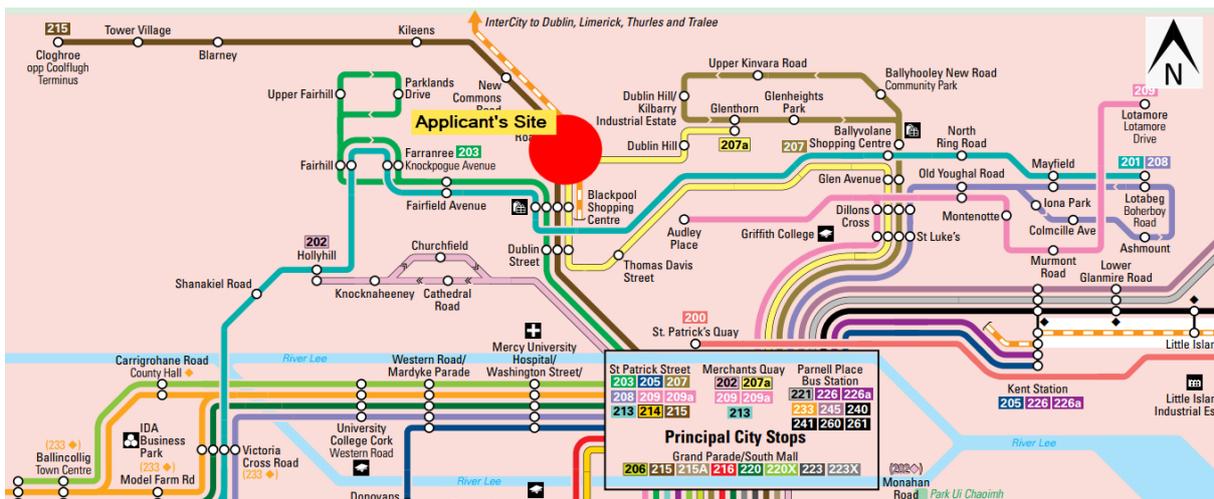
The speed limit on the Redforge Road in the area of the proposed site is 50kph. From site observations it appears that this speed limit is generally obeyed. There are no proposals shown to further reduce the speed limit for the development roads.

### **3.4 Pedestrians and Cyclists**

An existing footpath is provided on the near side of the Redforge Road. Although the Redforge Road is utilitarian in its current form, the connectivity beyond the immediate vicinity of Redforge road is considered suitable for purpose, especially factoring in the revised urban street layouts proposals developed for this application. On the morning of the site visit pedestrian numbers were limited, however the Covid-19 restrictions may have impacted on the pedestrian activity. There are bus shelters on both sides of the Redforge Road near the proposed development access. The city (inbound) service bus stop is immediately north to the site boundary. Cyclists share the carriageway on the Redforge Road.



**Figure 3.4 Bus Stop north of site boundary**



**Figure 3.5 Bus services passing applicant's site.**

### 3.5 Street Lighting

Public lighting is provided on the Redforge Road. The site visit was undertaken in daylight hours and therefore, the performance of the lighting was not observed.

### 3.6 Collisions

No specific road accident data was provided to the audit team. The auditors reviewed the RSA Road Accident Records, in the vicinity of the applicant site. Four incidents are recorded in the immediate vicinity of the proposed development along the Redforge Road. Three collisions were minor in severity, and one was recorded as fatal. All recorded accidents occurred prior to 2009. A road safety audit was carried out on the application proposals and is included in the submission. Please refer to this document for further details.

### **3.7 Paths and Pavements in Streets, Roads and Public Areas**

Streets, Roadways and Access for vehicle routes would have a footway provided for the safety of pedestrians particularly in cities, built-up urban areas, developed towns and village environments. 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 confined to the proposed alterations to the existing infrastructure and the proposed development itself. Works to the public footpath along the Redforge Road are referenced.

## **4 WCAR ASSESSMENT**

### **4.1 WCAR Methodology**

The WCAR is a way to assess the quality of the walking and cycling environment. This WCAR comprises the following stages:

- Definition of the Study Area
- On-Street Evaluation
- Display and Review of Outputs

The study area can be sub-divided and assessed on different aspects of each route. Mainly, any footpath, shared surface or footway along a perceived desire route. In addition, as any designated or undesignated crossing in which pedestrians or cyclists interact with a trafficked roadway.

This WCAR shall specifically consider key routes to commercial/leisure/school areas within the vicinity of the site. Although links and crossings shall not be assessed individually, all of the criteria shall be taken account of as part of the routes.

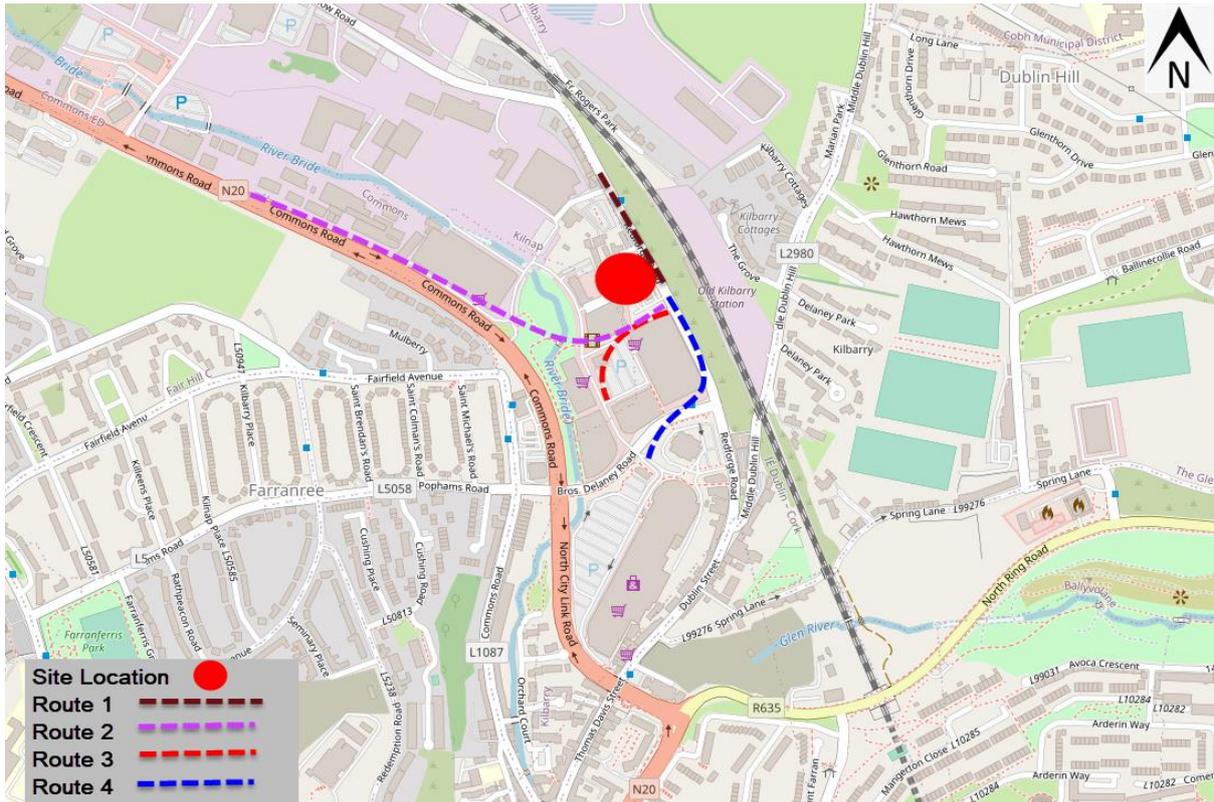
### **4.2 Assessment Parameters**

The assessment was carried out on the basis of pedestrian and cyclists in mind and the following parameters were taken into account when assessing each route individually.

- Directness
- Road Safety
- Personal Security
- Quality of Environment
- Legibility
- Rest Points

### **4.3 WCAR Routes**

The assessment was carried out on four different routes which are deemed to be desire lines to/from local amenities for residents within the development. The assessed routes are provided in Figure 4.1. The chosen routes were:



**Figure 4.1 WCAR Assessment Routes.**

**4.3.1 Route 1: Applicants’ Site to Existing Bus Stops. Redforge Road**

Access from the proposed development to the north along the Redforge Road provides connectivity to the 2no. existing bus stops located in very close proximity with the site.

**4.3.2 Route 2: Applicants’ Site to Commons Road**

Access from the proposed development to the northwest along the N20/Commons Road will provide connectivity to a range of different destinations, including the adjoining residential estates, business locations and restaurants/take aways.

**4.3.3 Route 3: Applicants’ Site to Blackpool Retail Centre**

Access from the proposed development through the nearby laneway will provide connectivity to the nearby newsagent, supermarket, coffee shop, clothing stores and pharmacy, with banking services available.

**4.3.4 Route 4: Applicants’ Site to Blackpool**

Access from the proposed development to Blackpool will provide connectivity to Blackpool Shopping centre, Spring Lane Park as well as onwards towards the city centre.

## 5 WALKING, CYCLING, ACCESS ASSESSMENT & REVIEW

### 5.1 Assessed Streets

For the purposes of this audit, the audit team assessed the existing walking, cycling and access arrangements from the development site via a desire paths as indicated.

Each route, as listed, in proximity to the site extents were assessed.

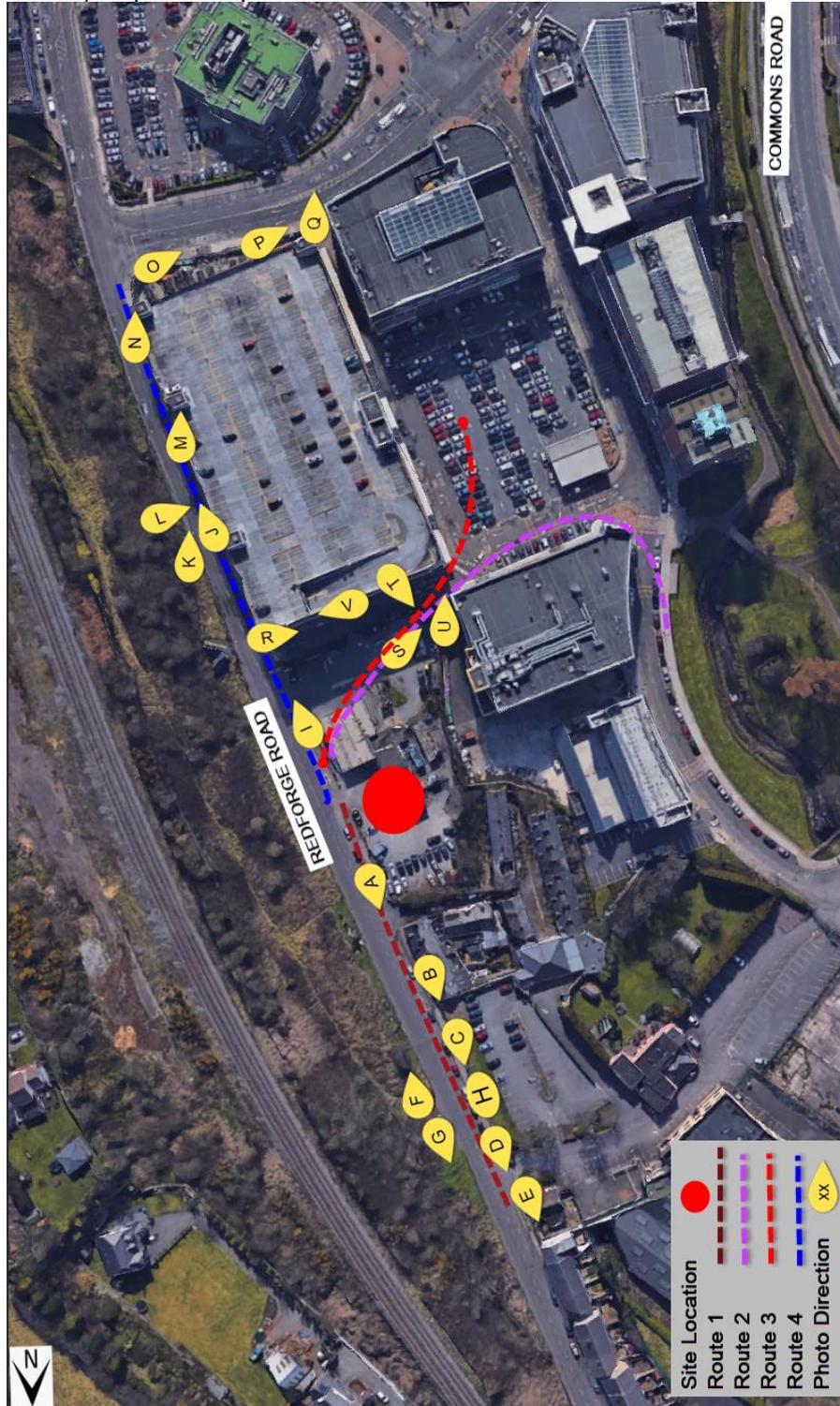


Figure 5.1 Problem Location Map

## 6 ROUTE 1: APPLICANT'S SITE TO BUS SERVICES- REDFORGE ROAD

The existing Redforge Road is a wide car dominated carriageway with a single pedestrian footpath along one side of its extents. The roadway experiences urban traffic volumes in keeping with the Blackpool area, with Redforge Road acting as an important transport corridor for local communities.

Route 1 begins at the development's site, connecting to the local footpath network adjoining site proceeding before turning north along Redforge Road. The desire lines for this route are appropriate with respect to safety, security and quality of environment for most of the route.

Demand from the proposed development to the north of the site will mainly be driven by commuter traffic to/from the nearby bus stop infrastructure. The bus stops are ideally located near the site but have deteriorated since being installed. Pedestrian facilities to the far side bus stop are non-existent. The route is serviced at the Mahon Point stop by the 203, 215, 243, 248 bus services. Existing Public Lighting is located along the Redforge Road.

### 6.1.1 QAR Problem Route 1 Ref No.1



**Figure 6.1 Photo Direction A**

**Issue:** The wide entrance between the applicant's site boundary and nearby cottages, is a discontinuity in the pedestrian facilities at this location. The pedestrian priority is not evident with no appropriate signage present. The footpath is at grade with the nearby carriageway, such that vulnerable road users are at higher risk from collision potentially due to the lack of vehicle separation.

**Recommendation:** Provide appropriate signage, uncontrolled tactile paving/dropped kerbing and pedestrian crossing facilities at this location to ensure continuity of the footpath network.

### 6.1.2 QAR Problem Route 1 Ref No.2



Figure 6.2 Photo Direction A

**Issue:** The carriageway between the applicant's site boundary and nearby bus stops along Redforge Road is very wide, leading to ambient traffic speeds higher than what is appropriate for the residential area.

**Recommendation:** Provide appropriate signage, raised tables, narrowed carriageway in line with DMURs requirements.

### 6.1.3 QAR Problem Route 1 Ref No.3



Figure 6.3 Photo Direction B

**Issue:** Pedestrian connectivity to the north is provided by public steps. These steps have been installed to account for the inclined gradient of the nearby Redforge Road. This is an issue for mobility impaired users.

**Recommendation:** Appropriate ramp facilities and tactile paving (top and bottom of steps) to be employed to allow for disabled connectivity access to the bus stops located north of this location. If these ramp facilities cannot be delivered at this location, appropriate tactile paving and accessible hand rail should be provided.

#### 6.1.4 QAR Problem Route 1 Ref No.4



Figure 6.4 Photo Direction C

**Issue:** Pedestrian connectivity to the far side bus stop is not present. Unregulated pedestrian crossings could lead to collision, injury with passing traffic.

**Recommendation:** Appropriate pedestrian crossing facilities to be provided at this location, linking the far side bus stop to the existing public footpath network.

#### 6.1.5 QAR Problem Route 1 Ref No.5



Figure 6.5 Photo Direction D

**Issue:** The wide entrance just south of the nearside bus stop is in poor condition and is a discontinuity in the pedestrian facilities at this location. The pedestrian priority is not evident with no appropriate signage present. The footpath is at grade with the nearby carriageway, such that vulnerable road users are at higher risk from collision potentially due to the lack of vehicle separation.

**Recommendation:** Provide appropriate signage, uncontrolled tactile paving/dropped kerbing and pedestrian crossing facilities at this location to ensure continuity of the footpath network. Review the intended improvements at the junction related to the adjoining development which may address this issue.

**6.1.6 QAR Problem Route 1 Ref No.6**



**Figure 6.6 Photo Direction E**

**Issue:** The existing bus stop does not provide a shelter for commuters. The existing footpath is broken, in a state of deterioration.

**Recommendation:** The possibility of providing appropriate bus stop shelter to be evaluated at this location and provided if feasible. The existing footpath should be reinstated to avoid/ minimise potential trip hazards to users. Review the intended improvements at the junction related to the adjoining development which may address this issue.

**6.1.7 QAR Problem Route 1 Ref No.7**



**Figure 6.7 Photo Direction F**

**Issue:** Forward visibility from the existing bus stop is blocked by nearby hedge overgrowth. The bus shelter offset should be setback to ensure visibility is not impeded.

**Recommendation:** Ensure appropriate forward visibility is provided to waiting commuters and pedestrians crossing the road at this location. Ensure kassel kerbing is employed at the new bus stop kerb edge.

**6.1.8 QAR Problem Route 1 Ref No.8**



**Figure 6.8 Photo Direction G**

**Issue:** Forward visibility from the existing bus stop is blocked by nearby hedge overgrowth. The bus shelter offset should be setback to ensure visibility is not impeded.

**Recommendation:** Ensure appropriate forward visibility is provided to waiting commuters and pedestrians crossing the road at this location. Ensure kassel kerbing is employed at the new bus stop kerb edge.

**6.1.9 QAR Problem Route 1 Ref No.9**



**Figure 6.9 Photo Direction G**

**Issue:** Forward visibility from the nearside footpath, opposite the far side existing bus stop is blocked by nearby street parking.

**Recommendation:** Ensure appropriate forward visibility is provided to waiting commuters and pedestrians crossing the road at this location. Ensure appropriate crossing facilities in the form of build outs and controlled crossing facilities are provided.

**6.1.10 QAR Problem Route 1Ref No.10**



**Figure 6.10 Photo Direction H**

**Issue:** Forward visibility from the nearside footpath, opposite the far side existing bus stop is blocked by nearby street parking.

**Recommendation:** Ensure appropriate forward visibility is provided to waiting commuters and pedestrians crossing the road at this location. Ensure appropriate crossing facilities in the form of build outs and controlled crossing facilities are provided.

## 7 ROUTE 2 AND ROUTE 3: APPLICANT'S SITE TO COMMONS ROAD/ BLACK POOL SHOPPING CENTRE

Route 2 & 3 begins at the development's site, connecting to the local footpath network adjoining site proceeding before turning into the nearby Blackpool Retail Park laneway, which abounds the southern boundary of the applicant's site. The desire lines for this route are poor with safety, security and quality of environment not available for most of the route along the Retail Shopping Centre Laneway.

Although the retail park is in very close proximity to the applicant's site, the existing pedestrian facilities through the Retail Park Laneway are sub optimal, having poor pedestrian facilities and high entry/exit vehicle traffic from the retails outlets.

Audit issues relevant to the laneway are evident as follows:

- This crossing may not be adequately lit.
- Poorly formed crossing across the entrance to the Grove estate on Orchard Road. No appropriate crossing facilities are available.
- Lack of tactile paving.
- Sections of Blackpool Retail Park laneway are narrow, particularly given the volume of traffic/ future pedestrians traversing the route.

### 7.1.1 QAR Problem Route 2 & Route 3 Ref No.1



**Figure 7.1 Photo Direction I**

**Issue:** The wide entrance between the applicant's site boundary and nearby retail park, is a discontinuity in the pedestrian facilities at this location. The pedestrian priority is not evident with no appropriate signage present. The footpath is at grade with the nearby carriageway, such that vulnerable road users are at higher risk from collision potentially due to the lack of vehicle separation.

**Recommendation:** Provide appropriate signage, uncontrolled tactile paving/dropped kerbing and pedestrian crossing facilities at this location to ensure continuity of the footpath network.

7.1.2 QAR Problem Route 2 & Route 3 Ref No.2



Figure 7.2 Photo Direction R

**Issue:** The existing pedestrian footpath facilities along the Retail Park Laneway are poor, with a very narrow footpath available on one side of the lane. The existing laneway is a single carriageway with entry/exit traffic from the nearby retail area. Vulnerable road users are at higher risk from collision potentially due to the lack of vehicle separation.

**Recommendation:** Provide appropriate footpath widths to facilitate the passing footfall along this section of roadway, insuring nearby loading areas are prevented from blocking pedestrian along this desire line, which could lead to pedestrians being forced to enter the vehicle trafficked area.

7.1.3 QAR Problem Route 2 & Route 3 Ref No.3



Figure 7.3 Photo Direction S

**Issue:** Narrow footpaths on the Retail Park laneway may present difficulties for vulnerable road users.

**Recommendation:** The footpath on the applicant side should be designed to an appropriate standard to safely accommodate pedestrians along this route.

7.1.4 QAR Problem Route 2 & Route 3 Ref No.5



Figure 7.4 Photo Direction U

**Issue:** Pedestrian footpath widths to the retail park from the applicant’s back site access are restricted. Unregulated pedestrian crossings could lead to collision, injury with passing traffic.

**Recommendation:** This is outside the control of the applicant and that the retail park should improve connectivity at the location.

7.1.5 QAR Problem Route 2 & Route 3 Ref No.6



Figure 7.5 Photo Direction V

**Issue:** Narrow footpaths on the Retail Park laneway may present difficulties for vulnerable road users.

**Recommendation:** This is outside the control of the applicant and that the retail park should improve connectivity at the location. The footpath on the applicant side should be designed to an appropriate standard to safely accommodate pedestrians along this route. Ensure appropriate footpaths width are developed to provide adequate mobility and protection for vulnerable road users to the nearby retail park.

## 8 ROUTE 4: APPLICANT'S SITE TO BLACKPOOL SHOPPING CENTRE

The desire lines for this route are very good with safety, security and quality of environment good for most of the route.

Route 4 begins at the development site, connecting to the local footpath network adjoining site proceeding before turning south along Redforge Road to the exiting pedestrian crossing facilities to Blackpool Shopping Centre.

The existing streetscape in this direction is very utilitarian to the south of the applicant's site along Redforge Road. Although the footpath facilities conform with appropriate width/ dimension required, the streetscape is very exposed to the passing traffic volumes, providing an unpleasant environment for vulnerable road users.

- Poorly formed crossing across the access locations of the Blackpool Retail Park. The retail park accesses are inadequate and do not incorporate tactile paving.
- Proposed footpath landscaping will provide significant improvements for all footpath users, accommodating future levels of pedestrian traffic.
- The nearside signal pole at the Redforge junction encroaches into the footpath limiting the available space at the location.

### 8.1.1 QAR Problem Route 4 Ref No.1



**Figure 8.1 Photo Direction J , K**

**Issue:** The existing wide carriageway of Redforge Road is a vehicle dominated design, with the nearby multi storey carpark imposing on the roadway. This section of roadway is a pleasant streetscape, with vulnerable road users exposed to passing traffic.

**Recommendation:** Provide streetscape improvement measures compliant to DMURs standards to ensure this link is a pedestrian friendly one, enhancing the desire line for existing and future residents/ pedestrian of the area.

### 8.1.2 QAR Problem Route 4 Ref No.2



**Figure 8.2 Photo Direction L**

**Issue:** The rear of the retail park has numerous access ways along this section of the desire line. These should be accommodated in any street improvement works to ensure pedestrian safety as well as providing access for maintenance of the retail park.

**Recommendation:** Provide streetscape improvement measures compliant to DMURs standards to ensure this link is a pedestrian friendly one, ensuring the Blackpool Retail Park access is maintained.

### 8.1.3 QAR Problem Route 4 Ref No.3



**Figure 8.3 Photo Direction M**

**Issue:** The wide access entrances to the back of nearby retail park are hazards, presenting a discontinuity in the pedestrian facilities at these locations. The pedestrian priority is not evident with no appropriate signage present. The footpath is at grade with the nearby carriageway, such that vulnerable road users are at higher risk from collision potentially due to the lack of vehicle separation.

**Recommendation:** Provide appropriate signage, uncontrolled tactile paving/dropped kerbing and pedestrian crossing facilities at this location to ensure continuity of the footpath network.

#### 8.1.4 QAR Problem Route 4 Ref No.4



**Figure 8.4 Photo Direction N**

**Issue:** The pedestrian protection at this crossing location is poor. At the crossing, the existing traffic junction's poles narrow the available footpath space available for passing footpath and pedestrian waiting to cross the road at this location.

**Recommendation:** The poor footpath surface should be replaced at this location, with appropriate signalised red tactile paving installed. The exiting poles should be repositioned to provide appropriate pedestrian footpath widths.

#### 8.1.5 QAR Problem Route 4 Ref No.5



**Figure 8.5 Photo Direction O**

**Issue:** The existing footpath has deteriorated in certain locations, which the existing bus stop shelter confining the available footpath widths for passing pedestrians. These confined dimensions can lead to mobility issues for wheelchair access and lead to pedestrian / vulnerable road users entering into the road carriageway at this location, leading to potential collisions.

**Recommendation:** Poor footpath surface should be replaced. The bus shelter positioning should reflect the passing of pedestrian traffic / wheelchair and child buggy footfall.

**8.1.6 QAR Problem Route 4 Ref No.6**



**Figure 8.6 Photo Direction P**

**Issue:** The existing footpath at the drop kerb location as shown has no pedestrian protection/ vehicle restraint to protect vulnerable road users at this location. Protection measures in the form of bollards, planters, etc should be provided.

**Recommendation:** Provide appropriate pedestrian protection at this location.

**8.1.7 QAR Problem Route 4 Ref No.7**



**Figure 8.7 Photo Direction Q**

**Issue:** The existing uncontrolled crossing location is poorly defined, with sub optimal pedestrian protection/ vehicle restraint provided.

**Recommendation:** Provide appropriate pedestrian crossing facilities at this this location.

Ref	Feature	Conforms	Comment
All routes	Are the footways a minimum width of 1.5m (1.8-2.0m in high volume areas)	Yes	New footpath along site boundary to be increased to 2.0m minimum.
All routes	Is the main footway clear of obstructions that would impede wheelchair users or be a trip hazard to sight impaired users?	No	The existing street steps impede wheelchair access.
All routes	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	No obstacles indicated on the drawings
All routes	Are all paving materials suitable for the passage of sight impaired and arthritic and wheelchair users.	Unknown	No materials indicated on the drawings
All routes	Is the footpath clear of obstacles mounted more than 300mm above ground and protruding into the footpath by more than 100mm	Yes	No obstacles indicated on the drawings
All routes	Is the footway route to an acceptable gradient of less than 1:20	Yes	No gradients shown on drawings but site observations indicate compliance.
All routes	Is the footway route clear of abrupt changes in level with crossfalls less than 2.5%	Unknown	No gradients shown on the drawings
All routes	Is the footway clear of physical obstructions or windows, doors, and gates that open onto the access route?	Yes	No obstacles indicated on the drawings
All routes	Are the footway routes clear of headroom hazards (2.1m or 2.3m if shared with cyclists)	Unknown	No signage or lighting shown on the drawings
All routes	Is the footway route clear of any slip, trip hazards for sight impaired users?	Yes	
All routes	Is the footpath clear of and advertising 'A' boards	Yes	
All routes	Is the footway shared with cyclists or abutting a cycle lane where cyclists may encroach?	No	CCC proposed upgrades to address this in future scheme.
All routes	Is the footway or public area adequately illuminated for night time use?	Unknown	Upgraded lighting
All routes	Is suitable tactile surfacing provided at all pedestrian crossing locations	Unknown	Ensure adequate tactile paving at crossings and at ramps/steps in accordance with relevant design standards. Kassel kerbing required at new bus stop.

**Figure 8.8 Assessment Schedule**

## 9 SUMMARY

The proposed application will deliver significant improvements to the local pedestrian and bus infrastructure by improving the geometry of the existing Redforge Road, making it a more pedestrian friendly environment for residents of the development and neighbouring third party occupants. The existing pedestrian and bus facilities at the location are substandard in locations and do not present enticing sustainable transport modes of travel within the area due to the existing car dominant design of the Redforge Road. Providing a DMURS compliant design with upgrades to the footpath and road space will result in a significant improvement to road safety conditions at the location, leading to enhanced connectivity to nearby bus stop infrastructure.

Some minor audit issues are highlighted in this audit, predominately related to footpath space. A lack of bicycle facilities along the Redforge Road is also referenced.

The site is very well located in terms of connectivity to the wider commuter network. Its close proximity to services and the city centre means that sustainable travel modes are viable and offer significant advantages to prospective residents compared to private car travel.

Photo Ref	Route	Item	Mitigation	Reason/ Proposal
A	Route 1	Pedestrian crossing facilities / footpath discontinuity	Yes	Provide appropriate signage, uncontrolled tactile paving/dropped kerbing and pedestrian crossing facilities at this location to ensure continuity of the footpath network.
A	Route 1	Existing Carriageway widths	Yes	Provide appropriate signage, raised tables, narrowed carriageway in line with DMURs requirements.
B	Route 1	Existing pedestrian steps	Yes	Appropriate ramp facilities and tactile paving (top and bottom of steps) to be employed to allow for disabled connectivity access to the bus stops located north of this location. If these ramp facilities cannot be delivered at this location, appropriate tactile paving and accessible hand rail should be provided.
C	Route 1	Connection to farside bus stop (north of applicant's site)	Yes	Appropriate pedestrian crossing facilities to be provided at this location, linking the far side bus stop to the existing public footpath network.
D	Route 1	Pedestrian crossing facilities / footpath discontinuity	Yes	Provide appropriate signage, uncontrolled tactile paving/dropped kerbing and pedestrian crossing facilities at this location to ensure continuity of the footpath network. Review the intended improvements at the junction related to the adjoining development which may address this issue.
E	Route 1	Deteriorated footpaths, poor bus stop facilities, nearby private access location	Yes	The possibility of providing appropriate bus stop shelter to be evaluated at this location and provided if feasible. The existing footpath should be reinstated to avoid/ minimise potential trip hazards to users. Review the intended improvements at the junction related to the adjoining development which may address this issue.
F	Route 1	Sightlines from bus stop, hedge growth deteriorated bus stop facilities.	Yes	Ensure appropriate forward visibility is provided to waiting commuters and pedestrians crossing the road at this location. Ensure kassel kerbing is employed at the new bus stop kerb edge.
G	Route 1	No pedestrian crossing /bus stop	Yes	Ensure appropriate forward visibility is provided to waiting commuters and pedestrians crossing the road at this location. Ensure kassel kerbing is employed at the new bus stop kerb edge.
H	Route 1	Existing sightlines	Yes	Ensure appropriate forward visibility is provided to waiting commuters and pedestrians crossing the road at this location. Ensure kassel kerbing is employed at the new bus stop kerb edge.
R	Route 2 & 3	Pedestrian crossing facilities / footpath discontinuity	Yes	Provide appropriate signage, uncontrolled tactile paving/dropped kerbing and pedestrian crossing facilities at this location to ensure continuity of the footpath network.
S	Route 2 & 3	Narrow footpaths	Yes	Provide appropriate footpath widths to facilitate the passing footfall along this section of roadway, insuring nearby loading areas are prevented from blocking pedestrian along this desire line, which could lead to pedestrians being forced to enter the vehicle trafficked area.
T	Route 2 & 3	Existing footpaths	Yes	Ensure appropriate footpaths width on the Retail Park laneway are developed to provide adequate mobility and protection for vulnerable road users to the nearby retail park.

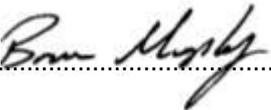
U	Route 2 &3	Pedestrian crossing facilities / footpath discontinuity	Yes	Appropriate pedestrian crossing facilities to be provided at this location, linking the far side bus stop to the existing public footpath network.
V	Route 2 &3	Pedestrian facilities	Yes	Appropriate pedestrian crossing facilities to be provided at this location, linking the far side bus stop to the existing public footpath network.
			Yes	
J	Route 4	Existing streetscape uninviting	Yes	Provide streetscape improvement measures compliant to DMURs standards to ensure this link is a pedestrian friendly one, enhancing the desire line for existing and future residents/ pedestrian of the area.
K	Route 4	Existing streetscape uninviting	Yes	Provide streetscape improvement measures compliant to DMURs standards to ensure this link is a pedestrian friendly one, enhancing the desire line for existing and future residents/ pedestrian of the area.
L	Route 4	Existing streetscape uninviting	Yes	Provide streetscape improvement measures compliant to DMURs standards to ensure this link is a pedestrian friendly one, ensuring the Blackpool Retail Park access is maintained.
M	Route 4	Pedestrian facilities	Yes	Provide appropriate signage, uncontrolled tactile paving/dropped kerbing and pedestrian crossing facilities at this location to ensure continuity of the footpath network.
N	Route 4	Existing footpath	Yes	The poor footpath surface should be replaced at this location, with appropriate signalised red tactile paving installed. The exiting poles should be repositioned to provide appropriate pedestrian footpath widths.
O	Route 4	Bus shelter location	Yes	Poor footpath surface should be replaced. The bus shelter positioning should reflect the passing of pedestrian traffic / wheelchair and child buggy footfall.
P	Route 4	Pedestrian protection	Yes	Provide appropriate pedestrian protection at this location.
Q	Route 4	Pedestrian facilities	Yes	Provide appropriate pedestrian crossing facilities at this this location.

**Figure 9.1 Summary Assessment**

## 10 QUALITY AUDIT TEAM STATEMENT

I certify that I have examined the drawings and other information listed in this report. This Audit 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 development proposals. The problems that I have identified have been noted in the report, together with suggestions for improvement which we recommend should be studied for implementation.

Mr Brian Murphy, BE CEng MIEI

Signed: 

Date: 29/06/2021

Mr David Murphy, B Eng (Hons) MA MIEI

Signed: 

Date: 29/06/2021

## 11 REFERENCES

- The Disability Act 2005 and related Sectoral Plans
- British Standards Institute BS8300:2001 and BS5588
- 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)
- Traffic Management Guidelines (Irish Government Publications 2003)
- Design Manual for Urban Road and Streets (Department of Transport, Tourism and Sport)
- Access Auditing of the Built Environment guidelines (National Disability Authority)
- 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
- CSO data
- CCC Bus Connects
- CMATS
- The Department for Transport (UK) Traffic Advisory Leaflet 5/11 "Quality Audit
- DMRB (UK) Section 5 Part 2 HD45/02 Non-Motorised User Audits



OFFICES:

**CORK**

Carraig Mór House,  
10 High Street,  
Douglas Road,  
Cork.

**KERRY**

HQ Tralee,  
Abbey Street,  
Tralee,  
Kerry

Tel: +353 (0) 214840214

E: [info@mhl.ie](mailto:info@mhl.ie)

MHL & Associates Consulting Engineers  
Registration Number  
311279

Visit us at:  
[www.mhl.ie](http://www.mhl.ie)