DLR COVID-19 MOBILITY REVIEW

Report on CMR
Economic
Development &
Business Community
Feedback

Evaluation and Review of the Phase 2a Covid-19 Mobility and Public Realm Works undertaken by Dún Laoghaire-Rathdown County Council



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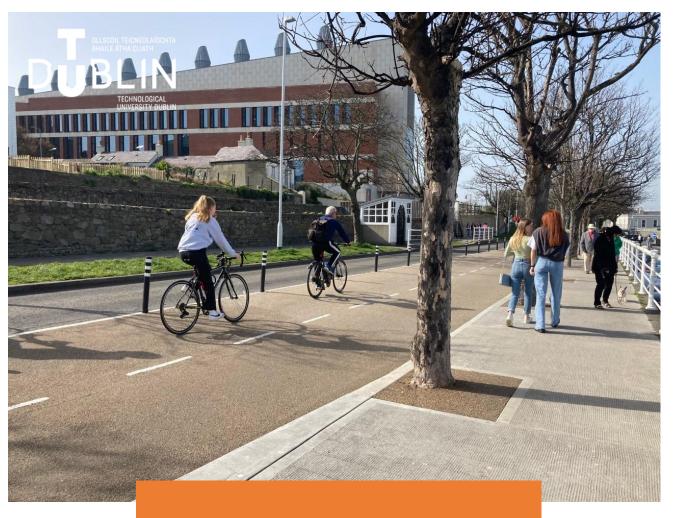
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1. INTRODUCTION

1.1 Introduction

This research reports on the findings from an area focused economic development and business-community focused study of the Costal Mobility Route (CMR), which is intended to complement and extend research previously conducted in Phase 1 of Dún Laoghaire-Rathdown County Council's (DLR's) 'Covid-19 Mobility & Public Realm Works' project. This study is based on participant interviews, and is limited to businesses located directly along the CMR, as well as a number of business groups representing a wider area and a Local Enterprise Office (see further details in Section 2).

Phase 1 of the study focused on an interim mobility-based analysis of the Coastal Mobility Route only (as well as a socio-economic study of Blackrock Village) and did not include a wider socio-economic or environmental analysis of the CMR. Phase 2 of the research is intended to include a wider socio-economic review of the CMR, of which this study is a component part. The wider assessment, will feed into a developing knowledge base of the impacts of urban cycleways/greenways within Ireland; as well as temporary active travel interventions. This is a key aim of the research. The study may also feed into DLR's determination as to the viability of retaining the infrastructure on a permanent basis and moving to a design optimised for permanency.

The overall findings indicate that the business community that contributed to this study are broadly either predominantly accepting, or supporting, of the CMR and its retention. However, the majority of respondents expressed the opinion that issues associated with the route's current design and use should be addressed if the infrastructure is to be made permanent.

In terms of structure, the report provides an overview of the methodology (Section 2) used to support the research and then presents key findings. Section 3 outlines the key affirmative findings, and Section 4 addresses the key themes of concern raised by the participants. The report concludes with a summary of the study and offers some recommendations for consideration by DLR.

1.2 Background and Context

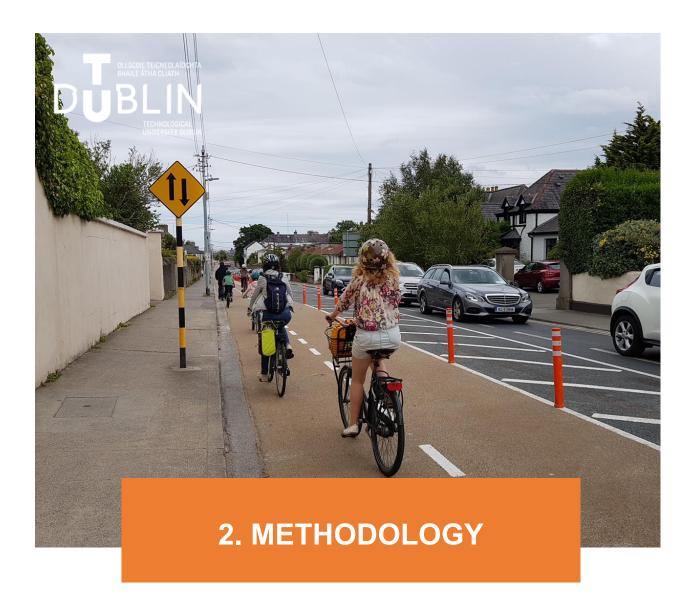
The CMR was designed and implemented as a rapid-build and temporary intervention in the summer of 2020 as part of Dún Laoghaire-Rathdown County Council's (DLR's) 'Covid-19 Mobility & Public Realm Works' project. The project was as an immediate response to some of the challenges the Covid-19 pandemic brought to local economies/villages and the transport network. The scope of Phase 1 focused on the social, economic and mobility impacts of the road space reallocation and associated public realm works in Blackrock Main Street, and on the mobility impacts of the Coastal Mobility Route (CMR). As noted previously, this study extends that research to include an area focused economic development and business-focused review of the CMR.

The CMR involved the reallocation of one direction of vehicular traffic away from vehicles and towards cyclists (and to a lesser extent other micro-mobility such as scooters) through the implementation of a two-way segregated and dedicated cycle-lane. The route runs along the coast road for 3.6km with segregated cycle facilities, and 4.5km in total from Seapoint to Sandycove via Dún Laoghaire. There is a

portion of the route from Old Dunleary Road/Coal Quay Bridge through Harbour Road to Queen's Road in Dún Laoghaire that is shared with vehicular traffic and not segregated (see figure 1).

Figure 1 Simplified diagram illustrating the Coastal Mobility Route running from Seapoint to Sandycove (source map from Openstreetmap.org and adapted by author)





2.1 Methodology - Interviews

This economic development and business community feedback study was conducted through September and October of 2022. The scope of this phase of the research focused on businesses located along the Coastal Mobility Route. This was due primarily to two factors: firstly, businesses and commercial entities on the route are most likely to be directly impacted by the implementation of the CMR; and, secondly, the economic effects of the route on the broader environs of Dún Laoghaire would be difficult to isolate, especially given the constraints on time, cost and human resources, and given the various independent initiatives such as the DLR Summer Streets¹ programme. However, as detailed further below, a wider understanding of the economic impact of the CMR was sought through interviews with organisations that represent or have a broader understanding of the wider business community in the area.

Once the parameters of the study had been established with DLR, an audit of the route was conducted to catalogue all of the businesses in scope. These businesses were then contacted and invited to participate in an interview. Businesses were contacted where a street or building presence was detected, thus it is possible that the list of businesses contacted along the route is not exhaustive. In addition, and to capture a broader or more holistic view of economic activity along the CMR, the invitation was extended to a number of business associations and enterprise and development organisations - the Dún Laoghaire Chamber of Commerce², The Dún Laoghaire Business Association³ and The Dún Laoghaire-Rathdown Local Enterprise Office⁴. Of the 24 stakeholders contacted, 16 agreed to take part in the research. It should be noted that business activity along the route is predominantly located at the Dún Laoghaire end of the CMR. This is reflected in the interview responses. A range of business sectors participated including business and development organisations, hospitality and retail services, financial and other consultants and companies from the cycling sector (See Table 1). The cycling sector included the social enterprise, The Bike Hub, that operates along the CMR, and the two main bike share companies that operate along the route: Bleeper and Moby.

Table 1 Showing the number and composition of research participants

Business Sector	Number	Interviewee Role
Business & Development Organisations	3	Senior Managers
Hospitality	4	Owners
Retail	2	Senior Managers
Financial and other Services	4	Owners, Senior Managers
Cycling Sector	3	Owner, Senior Managers

¹ This involved the temporary/trial pedestrianisation of George's Street Lower in Dún Laoghaire Town Centre from July-September 2021. For more information, see www.dlrcoco.ie/en/road-schemes/summer-streets

² The Dún Laoghaire Chamber of Commerce is a business representative body that operates throughout the DLR County area. For more information, see www.dlrchamber.ie

³ The Dún Laoghaire Business Association is an umbrella business group made up from volunteers from variety of businesses throughout Dún Laoghaire Town Centre. For more information see www.dunlaoghairetown.ie/dlba/dun-laoghaire-business-association/

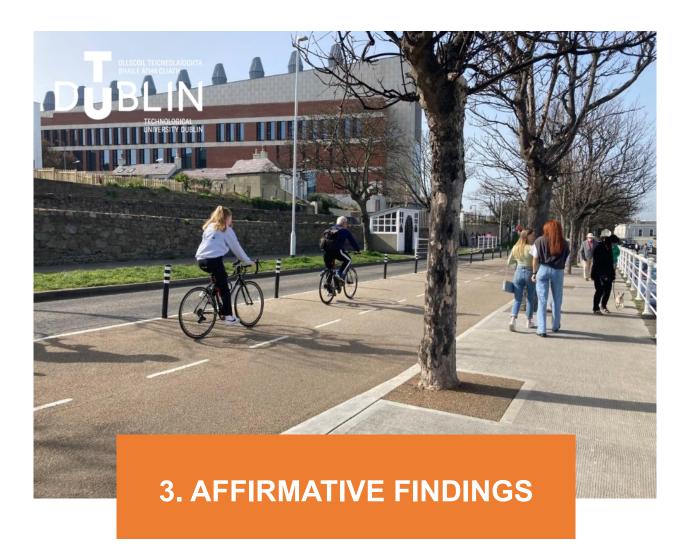
⁴ The Dún Laoghaire-Rathdown Local Enterprise Office is a Local Authority team dedicated to economic development, under the 'Business and Economic Development' directorate of DLR. The office supports people who are interested in starting up a new business or who are already in business and looking to expand. For more information, see www.localenterprise.ie/DLR/About-Us/Page 8 - TU Dublin DLR Covid Mobility Review – Economic Development & Business Feedback February 2023

A semi-structured interview format was chosen as the appropriate data collection method in this instance because it offered the opportunity to investigate specific themes or questions in detail while allowing the flexibility to modify questions as necessary. This was an important consideration in the context of the study, given the diversity of businesses and groups involved. In addition, the semi-structured format tends to have more probative value and supports open and interactive dialogue.

The interview questions were designed to (a), assess the impacts of the CMR on the business community, (b), explore the nature of the engagement approach or process deployed by DLR to deliver the infrastructure, and, (c), gauge participant views on the CMR and inform recommendations related to the Coastal Mobility Route and future projects of a similar nature, where relevant. Although there was some variety permissible due to the semi-structured nature of the interview approach, general question themes included:

- the implementation of the CMR and whether the participant found it helpful, unhelpful or neutral to their (or members') business and trading environment during the various phases of Covid-19, including the current period with restrictions largely removed;
- the implementation of the Coastal Mobility Route and whether it resulted in any changes to how their business now operates, including any potential adaptations that were made;
- feedback (positive or negative) from colleagues, members, customers or clients as to the experiences regarding the Coastal Mobility Route;
- participants' views on the future of the Coastal Mobility Route in terms of retaining it in its current form, a modified form (including a discussion of any desired changes), or returning to the way the coastal road was laid out pre-Covid;
- participants' experiences around stakeholder engagement with DLR regarding the implementation and on-going operation of the Coastal Mobility Route;
- open question(s) seeking any additional relevant information or feedback.

In keeping with the explorative nature of the study, the findings are largely based on a thematic analysis methodology, whereby commonly recurrent themes or patterns were identified and extracted (Bryman, 2012).



3.1 Introduction

The overall findings indicate that the business and business representative community adjacent to the CMR (that contributed to this study) are predominantly either, largely accepting, or supporting of the CMR and its retention (most with suggestions for design improvements). In particular, respondents noted the improved impact on footfall, better working conditions, enhanced environmental health, greater tourism and improved links with Dublin, and significant reputational benefits to Dún Laoghaire, as among the positives associated with the implementation of the route.

3.2 Business Development, Footfall & Turnover

Most of the interview respondents reported that the CMR has been either positive or value neutral in terms of its impact on business turnover. As one might anticipate, the cycling sector in particular reported noticeable improvements in revenue. Bike share companies, Bleeper and Moby Bikes, have stations located throughout Dun Laoghaire/Blackrock and they noted that the core of their business in the area runs along the CMR corridor. While the economic benefits to-date have been modest, both felt this would increase with time, as mobility behaviour changed. The Bike Hub, which fosters social and business activities by engaging with the local community through bike-related projects, also noted that the creation of their business was, in large part, incentivised by the presence of the CMR. Many of their social initiatives, which involve the use of trishaws and tandems with vulnerable groups for example, could only operate within a secure, segregated cycling space.

"The business would not exist as it is without the Coastal Mobility Route, that's definite." (The Bike Hub)

A number of other respondents in the hospitality sector also reported increases in revenue. Businesses located at the East Pier and the Windsor Terrace area, in particular, have experienced noticeable improvements to both footfall and cycling traffic, with more cyclists now willing to travel to the area from across the greater Dublin area.

"It has actually had a positive impact on my business.... It's more welcoming along the seafront for families with buggies and kids. It also invites a lot more people to come into the area. People from Clontarf for example.... or even further afield. We get people coming out [now] from the Phoenix Park...So we're getting the extra trade from them." (Business, Queen's Road area)

This aligns with data, courtesy of Bleeper, which shows the diversity of starting locations for trips ending in Dun Laoghaire (see figure 2). These trip patterns may act as a useful proxy for general cycling traffic on the route, in lieu of a CMR user survey intended to be undertaken in later stages of this research. Figure 2 shows that the CMR attracts trips from a wider range of Dublin City and County locations.

For the most part, the remaining businesses noted no detectable negative impact on trade and turnover. Despite this, many expressed concern that wayfinding issues in the wake of the CMR had posed significant problems for customers navigating sections of the new road layout. It should be noted, however, that one business located in the Old Dunleary Road area did report a significant decline in revenue, which they

attributed directly to the rollout of the Coastal Mobility Route and the associated reduction in passing vehicular traffic. There was also concern raised that, unlike Blackrock Main Street which has experienced the direct benefit of increased footfall and vitality from the recent public realm and cycle infrastructure improvements there, these similar benefits have not been felt to the same extent to the traders in the main shopping streets of Dún Laoghaire (George's Street area). Reasons given include the peripheral location of the CMR and the associated reduction in vehicular accessibility, particularly during weekdays when the CMR is less utilised.

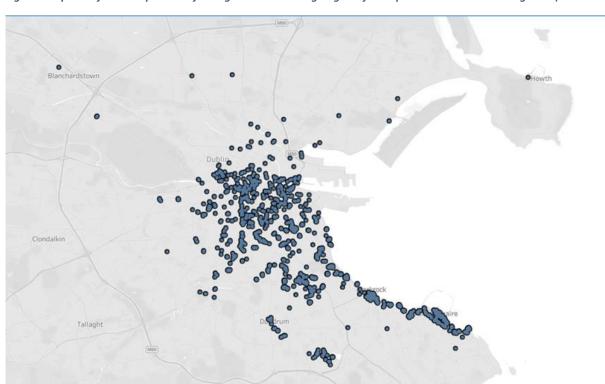


Figure 2 Trip Data from Bleeper Bikes for August 2022 showing origins of all trips that ended in Dún Laoghaire (source Bleeper).

3.3 Improved Working Conditions

In addition to the near universal agreement that cycling was of benefit to both physical and environmental health, many of the businesses noted the reduction of traffic, noise and air pollutants as contributing to an improved working environment for staff.

"In terms of our working environment, it's a significant improvement. It's a better environment for us because my office is right on the coastal road and my front door opens out ... on to the CMR. So for my daily working environment there's far less traffic than would be the case if it was two lanes of cars. So it's much quieter and creates a much happier, better working environment. Much less noise etc." (Business, Old Dunleary Road)

"Obviously road traffic has been cut in half....so that has had a positive impact on staff and myself cause we're not breathing in heavy fumes as we would have been before." (Business, Queen's Road area)

Similar benefits were cited by other companies, with one, suggesting that the CMR was positive in term of attracting new staff.

"Well it's a bit of a selling point that we're trying to use now in terms of [staff] recruitment. You know, we're in a good place, we have a cycling lane outside. So that's a positive." (Business, West Pier Business Park)

3.4 Tourism and Improved Links with Dublin

While supportive of the CMR as an initial first step, many interviewees expressed the view that developing the CMR to create a more integrated network would bring additional economic activity. The DLR Local Enterprise Office, for example, noted the activity, footfall and interest generated in Blackrock village by extending their cycle lanes through the village and suggested a similar effect could be achieved in Dún Laoghaire.

"It would be great to get the route into the town a little bit more, so cyclists could go up the town rather than just along the coast. There could be some sort of benefit to the traders. And of course, all the infrastructure that needs to go with it in terms of cycle parking, maybe overnight cycling parking [...] and maybe allow a night time economy to benefit from people coming on their bikes." (DLR Local Enterprise Office)

The Chamber of Commerce echoed this point and added that initiatives to support electric bike use, such as the provision of charging stations and battery exchange facilities, would add value to the CMR through increased tourism and improved economic activity. They also noted the potential of enhanced links with Dublin.

"It's really good for Dún Laoghaire, the Dún Laoghaire area, to be seen as part of Dublin. Because we are part of the lungs of Dublin, us one side and Howth and Malahide on the other side. We're

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part of that extension of the lungs and arms of Dublin and that's why I think it's a great story to have this cycle route." (DLR Chamber of Commerce)

Other respondents, while acknowledging that it may be beyond the remit of DLR to deliver, spoke of additional benefits to safety and bike usage that a more integrated and segregated network connecting with Dublin would create.

3.5 Reputational Benefit to Dún Laoghaire

A recurring theme in the interviews was the recognition that active travel policies were innovative, progressive and aligned with international best practice. Despite reservations regarding some design elements of the CMR, most respondents agreed that a shift to more sustainable forms of mobility was inevitable or how Ireland needs to move towards. They also felt that being early adopters reflected positively on the area as a whole. Both bike share companies also felt that, while the CMR is still in its infancy, it was pivotal in terms of changing attitudes and the culture of cycling nationally.

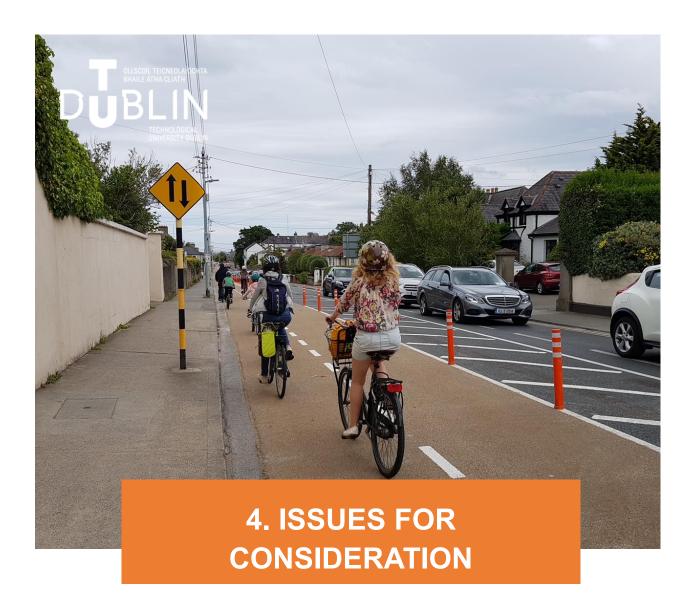
Though an issue for many of the respondents (see Section 4.6), some cited the speed of implementation as being a positive, crediting the leadership of DLR as being key.

"I think the council was adventurous in pushing it, in asking for forgiveness rather than asking for permission....Because they had a clear vision, I think they were bold, and they were brave."
(Business, Queens Road area)

"Sometimes you need to do the lateral thing to get things in place. And in this particular case I actually support it." (Business representative group)

"Sometimes these things take years of consultation and if you listen to what everybody has to say you'd never do anything. And I think they tried it and you learn from trying." (Business representative group)

Other respondents suggested that, while the pandemic was the primary catalyst for the CMR, Dun Laoghaire's success might now make the implementation of cycling infrastructure elsewhere considerably easier.



4.1 Introduction

While the majority of participants expressed an overall preference to retain the route, some did not with one in particular expressing a negative impact on their trading environment and associated turnover; and others remained quite neutral about it. Though the broad thrust of opinion from the interviews is that the CMR is largely viewed as an asset to the area, a number of issues emerged relating to its design and implementation that should be highlighted – many of which have the potential to be ameliorated. These include wayfinding and driver signage, safety concerns, an absence of loading bay facilities at key locations, and a perceived lack of proper engagement from DLR, both before and after implementation.

While some of the problems noted are of a general nature – wayfinding and signage are examples - others emerged as more acute in specific locations. Windsor Terrace, on the south side of the CMR, for example, represents a 'pinch point' where pedestrian safety and a lack of loading bay facilities have been reported as especially problematic. Likewise, businesses located within the vicinity of the Queen's Road and Old Dunleary Road noted particular problems in relation to traffic calming and road markings.

4.2 Wayfinding and Signage

Almost all of the participants in the study highlighted wayfinding and the lack of driver signage as being areas of major concern. Interviewees reported that many visitors approaching Dún Laoghaire, unfamiliar with the new one-way road systems, struggled to access the town and to navigate their way through the town centre. The confusion is compounded by the fact that two one-way vehicular road sections at the South end of the town run in opposite directions, starting at The People's Park. The intersection of Crofton Road, Marine Road and Queens's Road was highlighted as particularly troublesome, as drivers travelling from the Blackrock end of the town can no longer continue south via Queen's Road. Instead, southbound traffic must go right onto Marine Road and then left onto George's Street (see figure 3). Similarly, drivers travelling north from Sandycove or Glasthule were reported as experiencing difficulties negotiating the one-way system at Newtownsmith/Windsor Terrace, which carries southbound traffic only (see figure 4). The following is a sample of comments from respondents, which illustrates the difficulties.

'If you come along the seafront from Blackrock, you have to turn right to up to Marine Road. Now a lot of people don't know that they go left around the roundabout at the old terminal and can come down along the seafront that way in front of the yacht club and to us. It's so poorly signed. It's terribly confusing. The traffic is funneled up Marine Road and you are stuck in Dún Laoghaire in traffic going south. It's the only way to get to Sandycove or Dalkey, is to go through the centre of Dún Laoghaire and that is so frustrating for older customers." (Business, Queen's Road area)

'If I'm driving out from Blackrock, I used to be able to turn left and go out the coastal route. And that took me out by Seapoint. You can't do that anymore. You've got to come out through Monkstown and nobody knows which turn to take in Monkstown - which turn to take to get back in to Dun Laoghaire" (DLR Chamber of Commerce)

"People have found it difficult to get down to us because they weren't used to that whole one-way system. So we constantly get phone calls...'I can't get down to you, what way can I get down to you now? (Business, Windsor Terrace)

"Clients don't want to come in anymore because they find it so awkward to get here." (Business, Windsor Terrace)

Figure 3 Showing a detour around Queen's Road for southbound vehicular traffic since the implementation of the CMR. CMR indicated by broken red line (base map source: Openstreetmap.org and adapted by author)



Figure 4 Showing a detour around Windsor Terrace/Newtownsmith for northbound vehicular traffic. CMR indicated by broken red line (base map source: Openstreetmap.org and adapted by author)



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The vehicular routing shown in figures 3 and 4 might be unfamiliar to drivers visiting the area and, as noted by a number of respondents, not all drivers have the benefit of online navigational tools. An additional wayfinding issue, which affects the West Pier Business Park, was also highlighted in the interviewees.

"Every time I look out my window I see cars that have come down [Old Dunleary Road] by accident and are reversing out back onto the road. They come down trying to go to Dun Laoghaire but find then that it only comes to [the] Business Park and they have to turn around to get out." (West Pier Business Park)

TU Dublin researchers observed this issue when the area was audited in early October, 2022. Cars were seen to approach the Business Park from the Wallace's Hill/Old Dunleary Road junction, then turn and leave once it became clear they had entered a dedicated access road provided for the Business Park and adjacent apartment blocks (see figures 5 and 6). Recent signage now exists at Old Dunleary Road, opposite Wallace's Hill, however, there is further scope to make it clearer to drivers that there is no eastbound vehicular access to Dún Laoghaire town centre via Old Dunleary Road (see figures 7 and 8). Similarly, appropriate wayfinding at key locations within the town centre, and on the approach roads, would improve driver navigation and reduce friction.

Figure 5 The vehicular cul-de-sac serving the Business Park



Figure 6 Vehicular access point to Business Park



Figure 7 Signage on the Old Dunleary Road



Figure 8 Signage seen from south end of Wallace's Hill



Figure 9 Showing the route taken by some vehicular traffic attempting to access Dún Laoghaire town centre Sandycove (source map from Openstreetmap.org and adapted by author)



Also in relation to signage, the DLR Chamber of Commerce, the Dún Laoghaire Business Association and the DLR Enterprise Office all raised the issue of car parking facilities.

"I would think a lot of people talk about there being nowhere to park in Dun Laoghaire. There are about 4000 spaces in Dún Laoghaire between public and private spaces. But these are not well sign posted and that would be something that I would love to see as a recommendation coming out of this – that there would be advanced notice of where people can park ... and where the accessible points on the fringes of the town are. Because we don't really want it blocked up with cars looking for spots all over the place." (DLR Enterprise Office)

Along with any signage and wayfinding plan for the area, there is also an opportunity to improve carparking management within the area, particularly using smart technology.

4.3 Safety Concerns

Pedestrian safety was noted as a concern by respondents throughout the study. Cyclist behaviour, which included excessive speed, a failure to stop at traffic signals and a lack of restraint at busy crossing points, prompted most of the concern. Locations of note include the area around Old Dunleary Road and Wallace's Hill; the junction of Crofton Road, Old Dunleary Road and Coal Quay Bridge; and the area around the East Pier and People's Park/Baths.

"I think the businesses feel that cyclists are going so fast and there's very little restriction being placed on them. Especially on a Sunday when they can travel in groups. Sunday is market day in

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Dun Laoghaire and it's a really popular event. There are a lot of people there and huge footfall on a Sunday afternoon around the Lexicon and People's Park and these cyclists can be very fast." (DLR Enterprise Office)

"More effective pedestrian crossings [...] properly managed or with the appropriate lights to ensure they stop when they're supposed to. Family cyclists tend to be more conscientious but a lot of the more energetic cyclists don't adhere to the rules." (Business, Windsor Terrace)

"In my opinion, there's an accident waiting to happen at the traffic lights [at the East Pier]. It's a very short traffic light and because traffic has been cut in half people tend to be a bit docile. You're not hearing heavy noise, it's actually relatively quiet there. Sometimes they'll cross out into the cycle path without really paying too much attention. And there's nothing there to indicate to a cyclist that they have to slow down at the junction, there where the lights are." (Business, Queen's Road area)

"I would be extremely concerned that someone is going to get hit by a bike travelling at speed coming from the Blackrock direction down the hill passed the Purty Kitchen and towards Dun Laoghaire." (Business, Old Dunleary Road)

Some context to these concerns is available from an observation study of the user groups of the Coastal Mobility Route undertaken by TU Dublin in October 2022. This was carried out over seven time periods (with a sample of over 1,000 users) including: Sunday afternoon; weekday mornings; weekdays lunchtimes and weekdays evenings. It was noted that the 'biking as sport'⁵ category of user made up 5.8% of the observed users over the course of the seven time periods studied. This 'sporty' user would be typically associated with being a fast cyclist. During the sample weekdays, this was lower at 3%, however over the sample weekend, this was higher at 14.9%. The 'sporty commuter'⁶ style of cyclist made up another 15.6% of users. A growth in electric bikes and e-scooters was also observed, which tend to be faster (typically, up to 25km/hr). Although, a significant majority of the overall users are more 'casual'⁷ in their nature, the minority of the faster style of cyclists can be perceived to be dominant; and speed, regardless of mode, has an impact on both the perception and reality of pedestrian comfort and safety, and is particularly important for pedestrians being able to cross the street in comfort. Potential suggested ameliorative measures are discussed further below in Section 5.

⁵ For the purposes of this observation study, the 'biking as sport' style of sporty cyclist typically includes a racer style bike with clipon shoes, and exercise focused lycra-style bike clothing. This biker as sport would not typically carry a pannier bag.

⁶ For the purposes of this observation study, the 'sporty commuter' style of sporty cyclist refers to a cyclists who clearly appears to be using their cycle as a form of exercise but are likely to have another purpose/destination too such as a commuter heading to work. Clothing is that typically worn for exercise/fitness but may also carry a panier bag or similar. This type of cyclist does not typically ride a racer style bike with clip-on shoes.

⁷ For the purposes of this observation study, a 'casual cyclist' refers to a cyclist with more casual everyday/work clothing and bicycle, where strong exercise does not appear to be the/a key purpose of their journey.

The busy pedestrian area around the People's Park and the DLR Baths area are noted as a place of potential conflict between drivers, cyclists and pedestrians. Some businesses also noted that vehicular traffic on Windsor Terrace is now being routed south, on the right hand side of the road, which could be confusing for some pedestrians:

"I think this is very dangerous if you're a pedestrian. If you're crossing the road you're looking the wrong way when crossing the road." (Business, Windsor Terrace)

It was suggested that providing warning signs and road markings at busy crossing points along this section might help alert pedestrians to potential danger and reduce the risk of accidents. Having traffic routed on the right hand side of the road was also reported as posing a danger to cyclists because of the blind spot it creates for drivers when crossing the CMR to enter the public car park. Cyclists approaching from south are clearly visible, but southbound cyclists are not (see figure 10).

Another safety issue related to the lane dividers used to segregate the cycle track from traffic. Some respondents felt they were a potential hazard, especially for vulnerable groups, such as the elderly and those with mobility impairment.

"Particularly for older people, the border that demarks the cycle lanes and the road carriageway can sometimes trip people up." (Business, Old Dunleary Road)

From an urban design, aesthetic and tourism perspective, the proliferation of bollards were also described as being unsightly and not contributing to the visual or architectural landscape.



Figure 10 The entrance to the public car park on Windsor Terrace (before Baths construction hoarding was removed)

4.4 Loading Bay Facilities

All of the businesses interviewed on Windsor Terrace expressed concern at the lack of loading bays. The problem has implications not only for the trading environment but also for safety. As previously noted, Windsor Terrace is a pinch point, an issue exacerbated by the recent construction work being carried out at the Baths site and adjacent car park (see figure 10 and 11). It should be noted that at the time of writing the car park adjacent to the Baths site has reopened after being closed for a number of years to facilitate the Baths redevelopment. Prior to the implementation of the CMR, deliveries and loading would have also been an issue as there was no dedicated loading facilities, and Windsor Terrace contained double-yellow lines and a solid painted centre-line meaning that legal loading would not have been possible. However, despite the road markings designed to prevent vehicles stopping on the carriageway, the previous two-way roadway and adjacent car-park facilitated informal deliveries. This was no longer as easy to undertake when the car-park was closed for a lengthy period (since pre-Covid-19 until late October 2022), and with the reduction of the vehicle lane to one-way.

Interviewees also expressed concern that delivery vans blocking the road may have consequences for emergency vehicles accessing the Terrace. It should be noted, however according to the Local Authority, that emergency vehicles, if needed, have full access to the carriageway that currently contains the cycle facilities. The following is a sample of responses, which describes the difficulties, as expressed by the interviewees.

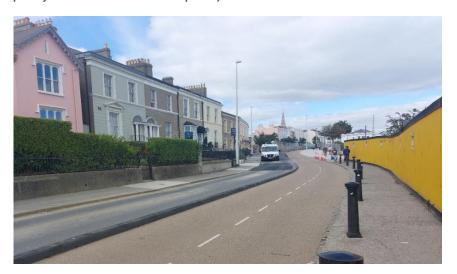
"Businesses on Windsor terrace back on to the railway so they have no rear access. They need a loading bay. Even if it's a UPS delivery, they have to stop on the pavement and they're blocking the one piece of road available. And that situation will continue. It may even get worse once the baths open." (Business, Windsor Terrace)

"Well what we've discovered that they're doing now, and I'm not just talking about restaurants, I mean the courier firms, they now park in the bicycle lane and deliver across the road because they've copped on if they try to stop outside they're going to get 5 cars behind them and very angry drivers." (Business, Windsor Terrace)

"Well, they have to pull up on the path, which is dangerous. And for people walking with buggies and stuff like that it's terrible." (Business, Windsor Terrace)

It was also noted that the problem would negatively affect residents on the Terrace undertaking home renovations or other works that would require parking at premises for lengthy periods. Respondents suggested that allocating spaces in the car park for delivery and other service vehicles could resolve this issue. Access to the car park is also height restricted and it was proposed that providing businesses with a key to operate the barrier would overcome this issue. It was acknowledged that such an arrangement would require careful management and supervision.

Figure 11 Informal loading on Windsor Terrace (at the time of the photo taken, October 2022, the car-park remained closed as part of the Baths construction compound)



4.5 Stakeholder Engagement

The absence of engagement by DLR as part of the CMR implementation process was a recurring theme from the interviews. As previously noted, while a number of businesses were sympathetic to the time pressures imposed on the council by Covid-19, the majority expressed the view that greater communication, both before and after implementation, would have been preferable.

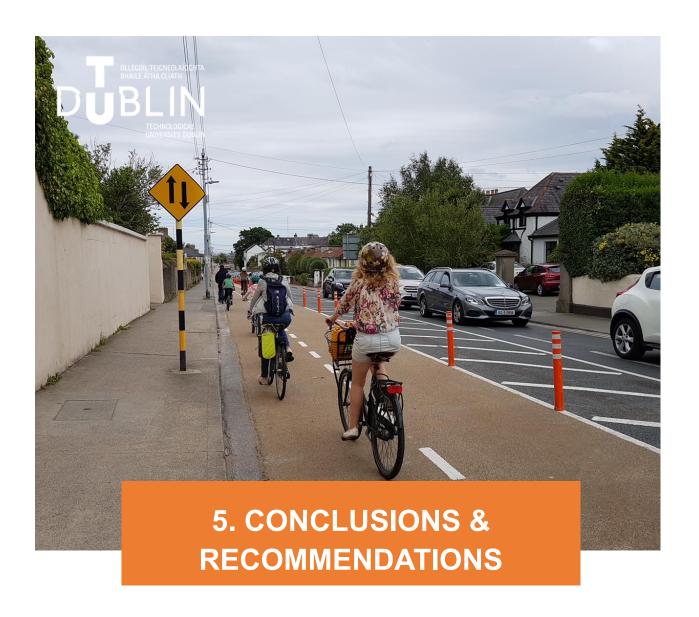
"They never ever approached me about it coming in. One week they came with the trucks, did their tarmacking and it was there and that was that. No communication whatsoever. I'm a local business. It would have been nice to get the courtesy. It wouldn't have taken much." (Business, Queen's Road area)

"I mean I can understand the need for rapid deployment given the circumstances, but the post engagement point in a way goes back to the safety thing. Maybe there wasn't enough of an assessment of how it was implemented in the real world because it was fine, what was done at the time, given that it was going to be temporary. But those temporary road markings were still here 18 months later." (West Pier Business Park)

"We heard nothing. Absolutely nothing. We were just opened up after being in lockdown and they just started digging outside, and we only had outdoor trading. That was all we could do – outdoor dining. And they started digging up right in front of us. We got no heads-up, nothing. So a very negative experience." (Business, Windsor Terrace)

While respondents often appeared to be encouraged that the evaluation by TU Dublin offered them their first opportunity to provide feedback, most also felt that a proper process of direct engagement with the council would be appropriate were the route to be made permanent.

The engagement experiences of many of the businesses along the CMR stand in contrast with the largely positive engagement experiences, recorded as part of the research project, of many of the businesses in Blackrock Main Street with the 'Covid Mobility & Public Realm Works' that were also implemented there during a similar timeframe (as outlined in the TU Dublin Ph1 Interim Findings Report, 2021). Many businesses were closed during this early phase of Covid-19 and its associated restrictions, thus engagement opportunities would have been more limited than might be normally expected and at the time there was a sense of urgency of action required. However, the businesses in Blackrock had a representative body (the Blackrock Business Network) that was noted as being highly active and engaged with the process of temporarily reorganising the Blackrock Main Street layout. The Blackrock Business Network actively sought road space reallocation and public realm improvements (and directly engaged with DLR on these issues) in order to help address some of the challenges associated with Covid-19 and its impact on their trading environment (such as facilitating social distancing, queuing outdoors, and outdoor dining).



5.1 Conclusions & Recommendations

While one company reported a significant decline in revenue that they attribute to the CMR, the remainder felt that the route was either positive, or value neutral, in terms of its economic impact. The fact that the majority of respondents could detect no adverse effects on turnover has made it easier for the business community, in general, to embrace the 'softer' or non-monetary benefits of cycling, active travel and road-space reallocation. These include enhanced human and environmental health, greater mobility choice, better staff recruitment and retention, and the longer-term advantages that may accrue from improved tourism and links with Dublin. This contributed to the majority of participants either being largely accepting, or supporting of the CMR and its retention (most with suggestions for design improvements). Of the problems noted by businesses, wayfinding, pedestrian safety and an absence of loading bay facilities were the most pressing.

Should DLR decide to retain the route, an engagement process could afford the opportunity to address these issues in cooperation with the business sector, and other community stakeholders. The following observation summarised the feelings of many of the respondents:

"On the whole it's been a really positive thing. But it's important that we get it right. That's the only reason I'd make any kind of a negative observation. It's how you improve designs - by honest critique." (Business, West Pier Business Park)

To conclude, and leveraging the findings from both this study and the CMR Ph1b Mobility Update study (July 2022), the key recommendations we propose, on the basis of this business community feedback, are:

1. Wayfinding and Signage

- A wayfinding plan for all modes, including those arriving by private vehicle should be implemented in Dun Laoghaire town and its environs.
- It is further considered that this can and should be supported by the provision of a legible and clear network of public transport routes, free of congestion and with good priority to ensure a very high level of service.

2. Car Parking Management

A car-parking management strategy, employing the use of smart technologies, would address
both wayfinding issues and encourage a more optimal use of the car parking spaces available.
Technologies such as sensors and cameras might be considered which could monitor free
parking spaces and direct drivers to the most appropriate locations via digital signage such as
LED-displays. This would help discourage unnecessary vehicle movement into/through the
heart of the town centre and encourage park 'n' stride at the peripheries of the town.

3. Pedestrian and Cyclist Safety

There is an opportunity to further improve the pedestrian environment along the CMR and its
environs. It is recommended that universal design principles are incorporated into any future
design improvements or permanent plan for the CMR. As part of this, the early prioritisation of
additional pedestrian crossing facilities (including step-free/raised courtesy crossings and zebra

- crossings) at strategic points along the CMR is recommended, as also discussed in the point below.
- The introduction of traffic calming measures (both in-line and on the carriageway adjacent to the CMR) at strategic points along the CMR would reduce excessive vehicular and cycling speeds, and support pedestrian crossing movements. The key locations identified as part of this study, i.e., Old Dunleary Road; junction of Crofton Rd/Old Dunleary Rd/Coal Quay Bridge; the pedestrian junction with the East Pier and the People's Park/Baths area, largely complement the areas identified in the CMR Phase 1b Mobility Update Report (2022) which also include the Seapoint Ave/Albany Ave junction.
- Consideration should be given to a 30-40km/hr traffic speed limit along the Coastal Mobility Route, with a 30km/hr maximum speed limit for all modes in areas of high levels of pedestrian movement.
- Concerns were raised about the direction of vehicular traffic on Windsor Terrace. As currently configured, many respondents found the traffic direction counter-intuitive and it may be prudent to review this.

4. Loading and Delivery

• A delivery and loading plan should be considered which addresses issues being experienced by traders and other stakeholders. This is especially important for stakeholders on Windsor Terrace where the problem is most acute. As proposed by interview respondents, there may be an opportunity to make dedicated/time-restricted parking spaces available to delivery and other commercial vehicles in the public car park. The issue of height restrictions, which currently applies, might be overcome by providing managed access to a key to operate the barrier, for example. Given the additional road space at this location when including the carpark, an alternative solution may be a redesign of the south-western edge of the car-park, footpath and cycle-path opposite Windsor Terrace to incorporate loading facilities on the main adjacent carriageway.

5. Tourism and Placemaking

The quality and quantity of materials and paraphernalia utilised as part of active travel
infrastructure, even rapid-build/temporary infrastructure, should take due cognisance of the
impact (including cumulative impact) on placemaking, and should contribute rather than
detract from the area's urban design. This is particularly important in areas of high amenity,
urban heritage and architectural merit, such as Dun Laoghaire and its surrounding historic
urban villages.

6. Engagement and Consultation

A public engagement process, which affords all stakeholders the opportunity to express
concerns and feedback, should be considered as part of commissioning the CMR on a
permanent basis, should it proceed as such. As shown through this study's findings, mobilising
stakeholders as an external form of innovation would assist in optimising the design of the
infrastructure, and future similar infrastructure, and also enhance public confidence in Local
Authority decision-making.

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