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Subject: DART+ West Railway Order Application

Dear Sir/Madam

I live with my family in Rathborne Village, overlooking the canal, Ashtown station and level crossing and Ashtown road. Rathborne Village is a mixed use development comprising 257 apartment homes and 15 businesses in three buildings – The Chandler, The Waxworks and The Tallow. It is situated immediately to the north of the railway and Royal Canal. Ashtown road goes through the centre of the development, while the Mill Lane is situated alongside the western-most building, the Chandler.

Given our proximity to the railway, Ashtown level crossing and the proposed underbridge along Mill Lane, the DART+ West Railway project will have significant positive and negative impacts on our quality of life and that of those living in the area during the construction phase and the operational phase.

I welcome the service enhancements and reduction in noise and pollution from the introduction of electric trains and the removal of cars queuing at the level crossing that will arise from the DART+ West project.

This submission bears similarities to the submission on behalf of Rathborne Village residents, with which I have been actively involved. This document on my own behalf addresses similar issues, but also a wider range of topics.

I have a number of observations related to the DART+ West railway order application within this submission which relate to:

- Safe and reliable access to local amenities for the community
- The potential for anti-social behaviour around the proposed pedestrian/cycle bridge and underbridge
- The need for additional photomontages of the proposed pedestrian/cycle bridge at Ashtown
- Integration of the proposed design into the local area
- Land ownership
- The environmental impact of the project

I wish to request an oral hearing as part of the Railway Order Application process.

Safe and reliable access to local amenities for the community

While I would prefer no change to the visual amenity at Ashtown, I appreciate that the proposed pedestrian/cycle bridge provides reasonable alternate access for pedestrians and cyclists over the railway when the level crossings are permanently shut.

In the absence of this bridge, the plans as set out in the first consultation by Irish Rail would have left those with impaired mobility, wheelchair users, buggies or bicycles reliant on an isolated underbridge and road to go between the north of the railway (Rathborne/Pelletstown) and the Navan Road, Phoenix Park and beyond in the event that the proposed lift was out of order. Many would have felt unsafe and would have been at greater risk of experiencing crime or anti-social behaviour.

This route alone would not have met a range of government policy ambitions including the NTA's Greater Dublin Area (GDA) Transport Strategy 2016-2035 (see annex 1) and the NTA's 'Permeability – A best practice guide' that permeable neighbourhoods have "Secure, well-lit, overlooked pedestrian and cycle links between housing areas and between housing and local/district centres."

In addition movement and access policy MA07 of the Pelletstown-Ashtown LAP expects Dublin City Council^{1 2}:

*"To encourage and facilitate, in cooperation with Fingal County Council and Iarnród Éireann, the replacement of the existing manually operated rail level crossing at Ashtown Road, with a suitably designed alternative. **The eventual design shall have regard to both existing and proposed developments in the immediate vicinity of the plan area and provide for high quality pedestrian and cycle facilities linking with existing and proposed pedestrian and cycle networks both within and surrounding the LAP area.**"*

At points during the consultation period it was set out by Irish Rail that the bridge crossing the railway would only be available during station operating hours.

I propose that any approval of the railway order application is subject to the condition that Irish Rail make the pedestrian and cycle bridge permanently available to the public, not just rail users, at all times, day and night 365 days a year.

As mentioned above, the initial proposal did include a stairway only for pedestrian's crossing the railway and a lift. There was significant concern that those who could not take the stairs to cross the railway either as rail passengers or for local travel would have to use an isolated underpass whenever the lifts were out of order. The current proposal does not include any lifts, albeit that lifts were not the issue in the above concerns, but the alternative route through the underbridge in the event they were out of order.

It is not clear that the current proposal ensures reasonable access for all - see for instance this [link](#)³ from Access for All in relation the ramp at Pelletstown station. If not, **it may be necessary to incorporate a lift into the design**, with the pedestrian/ramp still offering safe access to

¹ https://www.dublincity.ie/sites/default/files/media/file-uploads/2018-05/Pelletstown_Full_Doc_January_2013_Part2.pdf

² The LAP refers Pelletstown-Ashtown, which comprises Rathborne and Royal Canal Park. Elsewhere in this submission, I have used the name Rathborne to refer to the area to the north of the canal, starting at Rathborne Village to the west and ending just past Crescent Park to the West.

³ https://twitter.com/accessforall7/status/1450488849893831753?s=46&t=WMn1XsyVDWFkc3RPxLki_g

most pedestrians and cyclists and those with impaired mobility in the event that the lifts are out of order. While this may increase the visual impact of the bridge, it is important that accessibility objectives as set out in the GDA transport strategy excerpt in annex 1 are met.

I propose that any approval of the railway order application is subject to the condition that Irish Rail further engage with bodies representing both wheelchair users and the elderly to understand whether the current approach meets accessibility and inclusion objectives satisfactorily. If not, a lift should be installed.

Anti-social behaviour

Pelletstown station, which includes a pedestrian and cycle bridge, has experienced significant anti-social behaviour since it was opened one year ago. Just recently the coverings over the bike parking area have been removed as they were damaged soon after their installation. Measures aiming to prevent the pedestrian/cycle bridge, underbridge and associated access from becoming focal points for anti-social behaviour would be welcome.

I propose that any approval of the railway order application is subject to the condition that Irish Rail take steps, including engagement with local Gardai, Dublin City / Fingal County Council/ and Councillors and the local community (1) to find solutions to minimise the risk of anti-social behaviour around new infrastructure and (2) engage proactively where issues of anti-social behaviour arise during the operational phase.

Photomontages

At the third pre-application consultation meeting with An Bord Pleanála on the 8th October 2020 a discussion was had regarding the provision of photomontages.

"The Board queried the proposed use of photomontages for the proposals at the different level crossings and considered same would be very useful particularly from public open spaces or sensitive locations in terms of visual/residential amenity. The prospective applicant outlined that the proposal is currently at early design stage and is evolving with ongoing public consultation with the provision of photomontages not considered necessary at this stage". (Meeting minutes accessed on line)

The photomontage methodology was outlined at the meeting of the 21 January 2021 ABP was informed that they would be included in volume 4 of EIAR.

The photomontages provided for the proposed pedestrian and cycle bridge at Ashtown, although many, do not provide sufficient perspective of the visual impact for the two closest residential developments, Rathborne Village and Martin Savage Park, as well as other nearby houses. In addition, a request had been made to Irish Rail to provide some context by providing photomontages of the proposed bridge overlayed on the current pedestrian bridge. I do not believe that the photomontages provided have provided sufficient insight to the visual impact of the bridge on both developments, in line with pre-application engagement with An Bord Pleanála.

I propose that any approval of the railway order application is subject to the condition that Irish Rail provide An Bord Pleanála, local residents in Rathborne Village, Martin Savage Park and other nearby homes with additional photomontages to better demonstrate the visual impact of the proposed pedestrian / cycle bridge on the area.

Integration of the proposed design into the local area

The closure of Ashtown level crossing will sever the existing connect along Ashtown road and significantly change the function of the road and the nature of the public realm, in what is an area with significant built heritage (the mill, Ashton House, Longford Bridge and the canal itself) and biodiversity (serving as a link between the Tolka Valley, the Canal and the Phoenix Park⁴).

Chapter 16 of Dublin City Council's 2016-2022 development plan⁵ sets out design principals for new development. It is not clear the extent to which they apply to infrastructure projects, but they still provide an important reference when seeking to achieve balance between DART+ West objectives and the impact it has on the local area. It states that:

*"... the philosophy of Dublin City Council is to develop a planning approach that values urbanism and the creation of **vibrant, safe, comfortable and attractive urban places** where people want to live, work, meet and enjoy their leisure time. **Legibility, connectiveness, identity, diversity and quality in the public domain** are key objectives underpinning this approach and will be sought in all planning applications. The relationship between the street/public space/square, the buildings and their use will be of paramount importance. **The City Council will expect applicants to demonstrate a comprehensive and integrated approach to design of all development.**"*

As a reminder this is also specifically addressed in movement and access policy MA07 of the Pelletstown-Ashtown LAP for Dublin City Council:

*To encourage and facilitate, in cooperation with Fingal County Council and Iarnrod Eireann, the replacement of the existing manually operated rail level crossing at Ashtown Road, with a suitably designed alternative. **The eventual design shall have regard to both existing and proposed developments in the immediate vicinity of the plan area** and provide for high quality pedestrian and cycle facilities linking with existing and proposed pedestrian and cycle networks both within and surrounding the LAP area.*

In addition, the Cultural Heritage Policies and objectives include:

CH1: *To promote awareness, appreciation and protection of the cultural and built heritage of the Ashtown-Pelletstown plan area and environs in order to sustain its unique significance, fabric and character and to ensure its survival as a unique resource to be handed over to future generations*

CHO1: *To protect and conserve the special character of all built heritage features both within the plan area as well as those within the surrounding areas*

I am concerned that the planning focus in relation to DART+ West has been almost completely on functional aspects relating transport and supporting infrastructure, with limited consideration for how to best integrate it into the communities through which the railway passes, serves and affects. This has been reflected by limited to no visible involvement by urban designers within the project team.

In the above project and policy context I have the following observations:

⁴ Proposed as a cycle link also in the Greater Dublin Area Transport Strategy

⁵ <https://www.dublincity.ie/sites/default/files/2020-08/written-statement-volume-1.pdf>

Bridge appearance

While the use of corten steel is preferable to concrete in terms of visual effect and carbon emissions, further efforts could be made to soften it and better integrate it into the local area. Suggestions include:

- **Laser cutting of designs** reflecting the biodiversity (flora and fauna) of the canal and the industrial heritage of the area, perhaps with involvement of the local community and school in selecting relevant images or themes. See annex 2 for examples. At a minimum some level of texture or design could soften the visual impact.
- **Living walls** which would soften the appearance of some of the new infrastructure and also mitigate some of the effect of vegetation removal. This could only go on sides not overhanging the railway to avoid any safety risks. In the event that a lift is installed, if it were concrete, these may help minimise the visual impact.⁶

Also consideration will need to be given to the ongoing maintenance of the bridge, particularly how graffiti will be removed and its impact on the rusty appearance of the steel.

I propose that any approval of the railway order application is subject to the condition that Irish Rail budget for and consider approaches to soften the appearance of the bridge at Ashtown (and potentially other locations) and engage with the local community at the design phase.

Ashtown Road alternative uses

Ashtown road will effectively become a cul de sac both sides of the canal. To the north, the road runs through Rathborne Village. The current Irish Rail proposals have a turning/drop-off point just before Longford Bridge where the road ends⁷ (see map below). Given the significant change of function to Ashtown Road arising from the closure of the level crossing greater attention needs to be paid to the public realm. I propose that changes to the road and the public realm in Rathborne Village need to be considered as part of the Irish Rail plans, including allowance to amend for change of use in the area, such as softer landscaping, etc. In addition, to the west of Rathborne Village, Mill Lane will become the main thoroughfare which may require changes to the roadside to reflect this.

An alternative option is to facilitate drop-off/turning at the existing round-about just north of the development at the junction with Rathborne Avenue, which would allow for the pedestrianisation of Ashtown Road through Rathborne Village (still allowing for commercial deliveries).

I propose that any approval of the railway order application is subject to the condition that Irish Rail make allowance for a change of use in the area of Rathborne Village and proactively engage with Rathborne Village Owners Management Company Limited by Guarantee, Castlethorn Construction and Dublin City Council in order to agree on the appropriate use of Ashtown Road once the level crossing is closed and appropriate enhancements to the public realm, reflecting the change of use.

⁶ See for instance <https://livingwalls.ie/projects/trinity-college-business-school/>

⁷ <https://www.dartplus.ie/S3myc/media/DART-West-Railway-Order/3%20Railway%20Order%20Drawings/Book%203%20Structures%20Plans/Specific%20Locations/06-Ashtown.pdf> - MAY MDC HRW LC01 DR C 0104 D



Fencing

Irish Rail propose to replace the closed level crossings with palisade fencing (see section 4.5.15.2 Level crossing removals of chapter 4 of the EIAR and picture below)⁸. This fencing would be completely out of keeping with the local area. While we understand the need to secure the railway an additional wall or other more aesthetically pleasing barrier could be installed, perhaps with (artistic) reference to the manned level crossing currently in place.

I propose that any approval of the railway order application is subject to the condition that Irish Rail consider and budget for appropriate fencing or coverage of palisade fencing where it is located in more sensitive areas, such as at the location of the current level crossing adjacent to Longford bridge and engage with the local community in arriving at solutions that complement the existing public realm.

⁸ <https://www.dartplus.ie/S3mvc/media/DART-West-Railway-Order/4%20EIAR/Volume%202%20Main%20Text/Chapter-04-Description-of-the-Proposed-Development.pdf>



Figure 4-27 Palisade fence example

Environmental impact

On the basis of the EIAR I have a number of concerns or areas where I believe the information provided raises questions or could be incomplete. Given the volume of material within the EIAR I have largely focused on Ashtown, but it is possible that issues raised in relation to Ashtown are applicable elsewhere.

In addition, I could not see any reference to the European Commission's Notice — Technical guidance on the climate proofing of infrastructure in the period 2021-2027 (C/2021/5430)⁹ within the EIAR documentation. That guidance states that:

"From the date of its initial publication by the European Commission, this guidance should be integrated in the preparation and climate proofing of infrastructure projects for the period 2021-2027."

The guidance incorporates recent policy actions at an EU level in relation to climate change mitigation and adaptation and is based on lessons learnt from climate proofing major projects over the period 2014-2020. Given both the fiscal and green house gas (GHG) emission costs associated with this project, it is vitally important that this guidance has been incorporated into the EIAR for this project.

I propose that any approval of the railway order application is subject to the condition that Irish Rail demonstrate how the EIAR has fulfilled the European Commission's Technical guidance on the climate proofing of infrastructure in the period 2021-2027 (C/2021/5430). Where this cannot be demonstrated, Irish Rail are to complete the relevant assessment and share it with An Bord Pleanála and the public prior to the granting of permission to proceed with DART+ West works.¹⁰

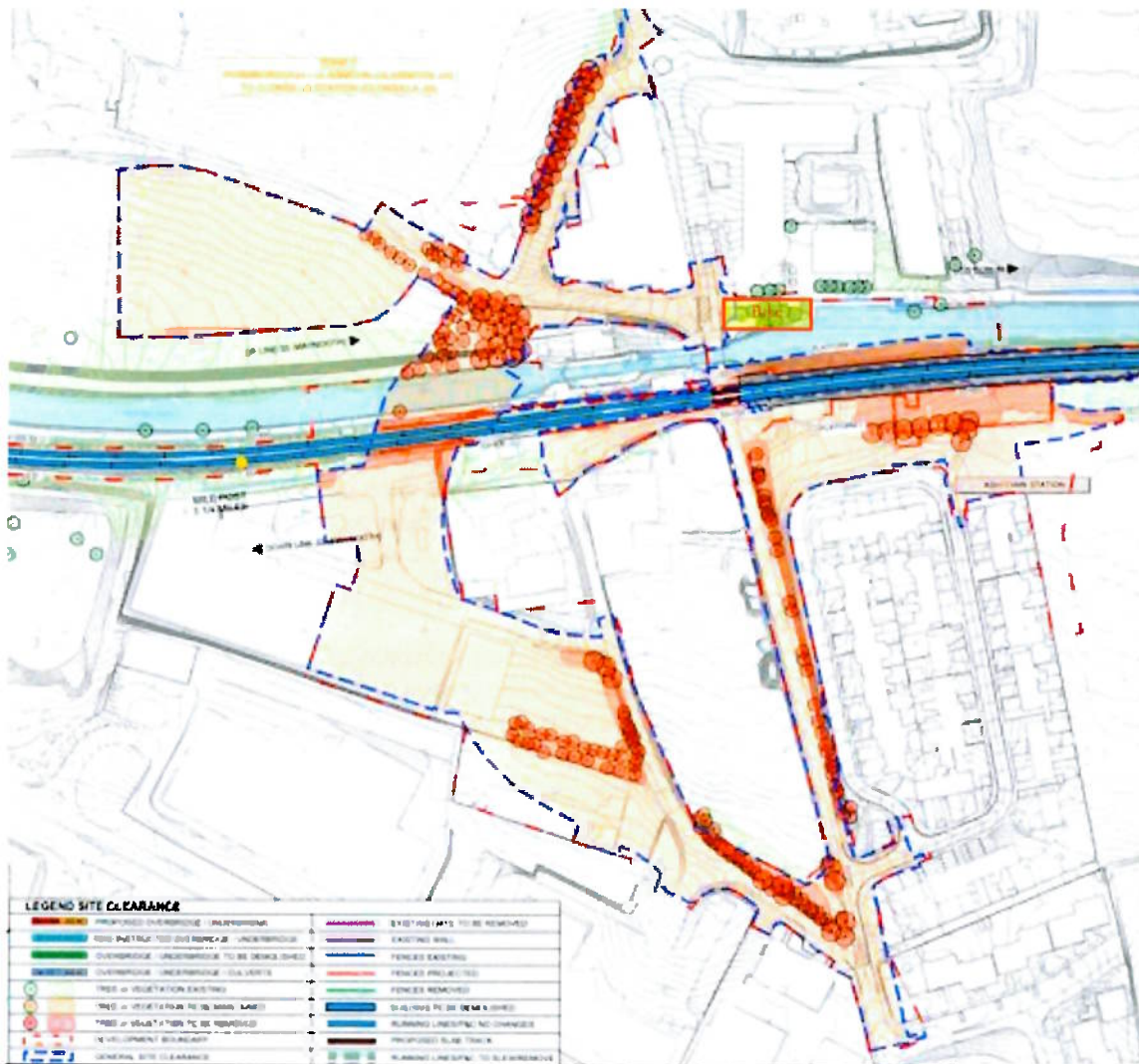
Extent of tree removal in Ashtown

The level of tree and vegetation removal in the Ashtown area will have a substantial impact on the bio-diversity and well-being of those living in the area. We are currently fortunate to be surrounded by a significant amount of mature trees (see annex 3), but it would appear that as part of this project, including the construction phase, Irish Rail plans on removing a significant

⁹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.C..2021.373.01.0001.01.ENG>

¹⁰ In this regard, where there is new information we believe that those who have already made a submission in relation to the Railway Order Application should not have to pay an additional €50 to make further observations.

amount of trees, hedgerows and other vegetation. The original clearance map below does also not make clear that at least some vegetation and possibly some trees (highlighted in yellow as an addition to the map) will be removed to facilitate bicycle parking.



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While there are mitigation plans to plant new trees and vegetation, which is welcome, the impact of removal of mature trees cannot be underestimated from bio-diversity, human health and climate resilience perspectives. In this context I struggle to understand why Irish Rail has put the landscape/visual impacts as being slightly negative with a moderate-neutral localised impact for the Ashtown area¹².

¹¹ <https://www.dartplus.ie/getmedia/0fe2655d-321c-4827-8ba4-12ebf733ebe7/Site-Clearance-Zone-C-Part-1.pdf?ext=.pdf> – MAY MDC LMA SC05 DR Y 0001 D, with own addition regarding bike parking which has been omitted from the drawing but is mentioned in the documentation and correspondence from Irish Rail.

¹² <https://www.dartplus.ie/S3mvc/media/DART-West-Railway-Order/4%20EIAR/Volume%203A%20Technical%20Figures/Chapter%2015%20Landscape%20and%20Visual%20Amenity/Landscape-and-Visual-Impacts-Part-1.pdf> - MAY MDC LAN ROUT DR U 15008 D

The Dublin City Tree strategy 2016-2020¹³ also highlights the importance of trees in the city where they provide the following eco-system services, including:

- Shading and cooling
- Storm water attenuation, where they help to reduce localised flooding;
- Improving air quality
- Biodiversity and habitat
- Storing carbon
- Physical and mental wellbeing
- Aesthetic and improved property values
- Energy saving for adjacent buildings”

Irish Rail has said as part of it’s mitigating measures that an Arboricultural Impact Assessment will be produced for the area of the proposed development, as well as for any adjoining areas where trees are likely to be impacted by the works, in accordance with British Standard Institution (BSI) British Standard (BS) 5837:2012 ‘Trees in relation to in relation to design, demolition and construction - Recommendations’ (BSI 2012). Given the extent of tree removal at Ashtown and elsewhere, I would have expected such an assessment to have been included as part of the Railway Order Application.

It is unclear why some trees need to be removed, such as along Ashtown road to the South, while I believe that a number of changes to the plans and more careful consideration of design at Ashtown could reduce tree and vegetation loss as well as the carbon footprint of the scheme. While I hope that a more in depth assessment of the need for the scale of tree and vegetation removal across the whole project area and in Ashtown would be conducted, two non-exhaustive suggestions and queries in relation to Ashtown are included below.

I propose that any approval of the railway order application is subject to the condition that Irish Rail (1) conduct an Arboricultural Impact Assessment and share it with An Bord Pleanála and the public prior to approval to proceed with DART+ West works; and (2) evaluate how the level of tree and vegetation loss can be minimised from the DART+ West project compared to current proposals. ¹⁴

1) Unclear impact of cycle parking on trees north of the canal

While tree removal is not shown in the diagram MAY MDC LMA SC05 DR Y 0001 D at the location of bicycle parking¹⁵ the description of the proposed development makes it clear that existing vegetation will be removed¹⁶, while a response from Irish Rail in relation to queries indicates that “the existing trees will be preserved as much as possible” (see annex 4).

The analysis in table 4-17 indicates that 37 bicycle parking spaces are needed requiring 61m² of space. However, 230m² is being allocated to the north of the canal (area mentioned above) with a further 70m² at the south of the railway. It is not clear why the areas each side of the canal are so unevenly distributed, or why such a large area is needed relative to Irish Rail’s own analysis.

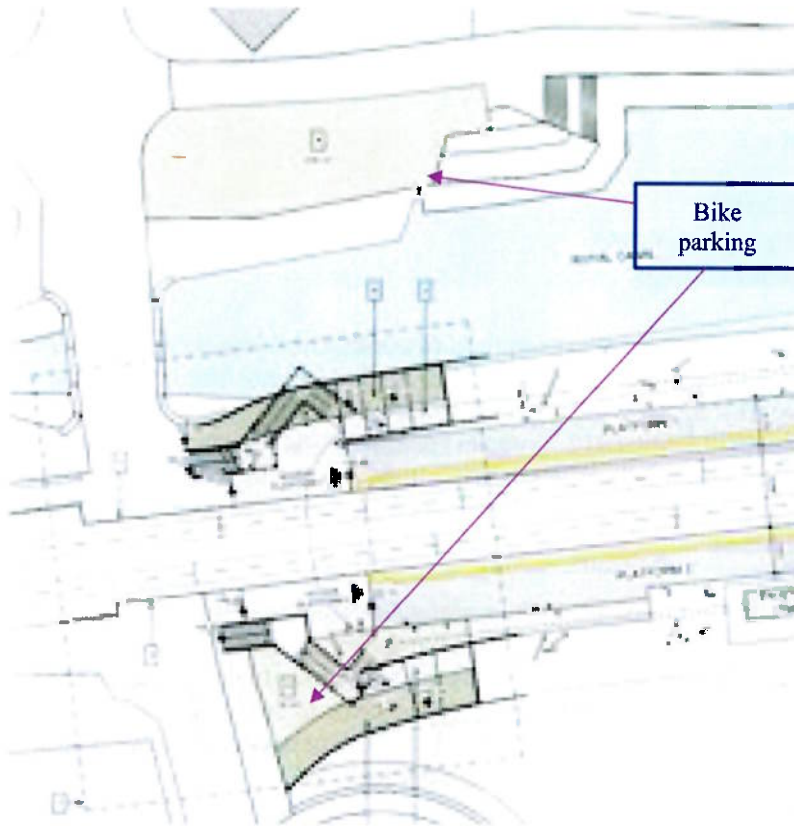
¹³ https://www.dublincity.ie/sites/default/files/media/file-uploads/2018-08/Dublin_City_Tree_Strategy_2016-2020.pdf

¹⁴ In this regard, where there is new information we believe that those who have already made a submission in relation to the Railway Order Application should not have to pay an additional €50 to make further observations.

¹⁵ <https://www.dartplus.ie/S3mvc/media/DART-West-Railway-Order/4%20EIAR/Volume%20Main%20Text/Chapter-04-Description-of-the-Proposed-Development.pdf>- section 4.8.5.3 and Figure 4-127

¹⁶ Table 4-15 and Figure 4-121

Greater dispersion of bicycle parking could minimise the impact on vegetation and trees north of the canal.



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I propose that any approval of the railway order application is subject to the condition that Irish Rail (1) re-assess the distribution of bicycle parking north and south of the canal and railway at Ashtown, making changes as relevant; (2) re-assess the area being taken for bicycle parking at Ashtown compared to the area determined by its own assessment¹⁸; and (3) minimise the extent of removal of vegetation and oak trees located in the proposed bicycle parking location north of the canal.

2) Substation location

The current substation location and construction site on the green to the north of Martin Savage Park estate will see a most of the semi-mature trees there removed from that green alongside the trees within the Irish Rail boundary. This will remove some of the potential shielding of the new bridge for residents of that estate. While some tree removal is inevitable with the installation of the bridge, I believe that the extent of removal can be reduced, while also reducing the impact on residents of Martin Savage Park.

Irish Rail own land to the west of Ashtown Road and north of the stables beside the railway. It is currently used for materials storage for maintenance, but Irish Rail also has a similar site at

¹⁷ <https://www.dartplus.ie/S3myc/media/DART-West-Railway-Order/3%20Railway%20Order%20Drawings/Book%203%20Structures%20Plans/Specific%20Locations/06-Ashtown.pdf> - MAY MDC ARC RS07 DR A 0003 D – with own additions marking bike parking and red dotted line arrows

¹⁸ 300m² compared to the amount determined as need in its own assessment – 61m²

Reilly's bridge (8th lock), so the current space could be used as an alternative location for the substation and construction activity – see the diagram below.



I propose that any approval of the railway order application is subject to the condition that Irish Rail re-assess the plausibility of moving the proposed substation and construction site at Ashtown to its own lands to the west of Ashtown Road.

Carbon emissions and climate action plan

The EIAR highlights that “the purpose of the Climate Action and Low Carbon Development (Amendment) Act is to provide for the approval of plans ‘for the purpose of **pursuing the transition to a climate resilient, biodiversity rich¹⁹ and climate neutral economy** by no later than the end of the year 2050’. The 2021 Climate Act will ‘provide for carbon budgets and a sectoral emissions ceiling to apply to different sectors of the economy’. The 2021 Climate Act defines the carbon budget as ‘the total amount of greenhouse gas emissions that are permitted during the budget period’.”²⁰

The DART+ West project is part of the climate action plan. I am convinced of the urgency of Ireland and the world taking significant action now to reduce carbon emissions. I am also very supportive of public transport use and make concerted efforts to use public transport and active modes of travel as much as possible. If we view the project in the context of sectoral emissions, it will contribute to a reduction in transport emissions, with a focus on operational emissions. However, I have struggled with how the project, when including the emissions created at the construction phase, will contribute meaningfully to a reduction in emissions on a holistic or non-sectoral basis. I believe, but am coming from a position of limited knowledge of this area, that many of the construction related emissions will be attributable to firms that are part of the EUs emissions trading scheme (ETS), and so not captured within national targets, or will relate to land use classifications, yet these still matter in terms of the global emissions budget to limit global warming to 1.5°C.

The table below is based on table 13.11 of the EIAR, with some additional analysis to show the share of emissions. The before use emissions of 114,103 tonnes of CO₂ equivalent GHG emissions amount to 0.43% of the Irish 2030 emissions target and 0.60% of the 2050 target. It

¹⁹ Relevant as well to the above section on tree removal

²⁰ <https://www.dartplus.ie/S3mve/media/DART-West-Railway-Order/4%20EIAR/Volume%202%20Main%20Text/Chapter-13-Climate.pdf> - section 13.2.1

also amounts to 0.07% of the Ireland's 2026-2030 carbon budget²¹. The annual change in rail emissions less the annual maintenance based emissions amount to a reduction in 1,421 tonnes of CO₂ equivalent GHG per annum, or 85,250 tonnes of CO₂ equivalent GHG over the 60 years estimated life of the project.

Project element	Before use (kgCO ₂ e)				Use including maintenance (kgCO ₂ e)	Total
	Pre-construction	Embodied carbon	Construction activities	Construction waste		
Ashtown footbridge	22	806,439	213		1,012	807,686
Coolmine footbridge		728,498	2,804		457	731,759
Connolly station		2,125,559	4,001		1,481,038	3,610,598
Depot		15,184,209	99,929		2,004,103	17,288,241
OHLE		3,050,009	24,758		8,655,967	11,730,734
Permanent way		16,680,385	141,068		61,874,417	78,695,870
Spencer dock station		24,376,266	168,346		1,704,245	26,248,857
Substations	453	991,917	9,014		92,153	1,093,537
Level crossings	6,349	17,478,948	43,405		1,763,296	19,291,998
General	293,018		35,525,492	26,361,826		62,180,336
Total	299,842	81,422,230	36,019,030	26,361,826	77,576,688	221,679,616
% total						
Ashtown footbridge	0.0%	0.4%	0.0%	0.0%	0.0%	0.4%
Coolmine footbridge	0.0%	0.3%	0.0%	0.0%	0.0%	0.3%
Connolly station	0.0%	1.0%	0.0%	0.0%	0.7%	1.6%
Depot	0.0%	6.8%	0.0%	0.0%	0.9%	7.8%
OHLE	0.0%	1.4%	0.0%	0.0%	3.9%	5.3%
Permanent way	0.0%	7.5%	0.1%	0.0%	27.9%	35.5%
Spencer dock station	0.0%	11.0%	0.1%	0.0%	0.8%	11.8%
Substations	0.0%	0.4%	0.0%	0.0%	0.0%	0.5%
Level crossings	0.0%	7.9%	0.0%	0.0%	0.8%	8.7%
General	0.1%	0.0%	16.0%	11.9%	0.0%	28.0%
Total	0.1%	36.7%	16.2%	11.9%	35.0%	100.0%

The reduction in emissions does not appear to factor in reduced car use by those opting to use rail/public transport instead of car, which would only reduce emissions as long as there were non-EVs being used and/or a large proportion of electricity generation from non-renewable sources. This could tip the project into a net reducer of emissions, although quantification has not been provided.

I am a little concerned that this project, and many similar infrastructure projects globally, focus on the operational reduction in emissions, without adequately factoring in the impact of

²¹ <https://assets.gov.ie/222806/dbbbd202-faab-485f-a370-253e944e461e.pdf> - noting that some emissions may be captured within ETS firms not within the carbon budget

embodied carbon and construction activities (including change in land use) from these infrastructure investments on the global carbon budget. While these investments are necessary for our transition to a low carbon economy, the extent of infrastructure based emissions deserve greater attention and efforts to minimise.

I believe that a re-examination to determine how emissions from the project can be reduced would be appropriate, including that the footprint of key infrastructure is justified by plausible capacity forecasts. Efforts to reduce the footprint of the project and land (and tree) clearance would lower emissions, while also reducing the negative impact on biodiversity.

Outside of on-going maintenance the biggest generators of emissions are 'general'²² and Spencer Dock Station. In particular, in relation to Spencer Dock, the area is vulnerable to coastal flooding (see later section on climate resilience). Should we be concentrating so much of the emission from the project in an area where the probability of it becoming a stranded asset is highest?

Is there also room to reduce the footprint of the depot in the event that capacity projections are considered too high, as covered in the point 1 below, with a further suggestion in relation to Ashtown in point 2?

1) Capacity justification

A change in daily boarding of rail estimated by 2028 is 24,630 within the EIAR, of which 12,860 is cannibalisation from other modes of public transport²³. By 2043 it is estimated that rail usage will rise by 30,937 with 16,904 a move from other public transport. This compares to over 16,000 increase in capacity at peak times alone, not all day, of which an increase in usage of under 3,000 at peak times is assumed by 2028 and under 3,700 by 2043. Hourly capacity is said to almost triple from 5,000 to 13,200.

Daily boardings (all day) in 2019 were less than the peak AM and PM capacity proposed under DART+ West²⁴. In 2019 daily southbound boardings on the Maynooth-Connolly and M3 Parkway-Docklands amounted to 10,775, with northbound boardings of 12,208.

It is not clear on what basis such a significant increase in capacity is justified from the documentation available, with the peak time capacity increase greater than the total daily boardings each way for the Maynooth line pre-covid and pre-hybrid working.

In relation to post-Covid travel and working behaviours, Google Mobility data²⁵ for Dublin up to mid-October compares trends in economic activity and travel compared to a pre-Covid baseline, with the 30 day moving average and 30 day peak day²⁶ to 15 October set out in the table below.

²² General Quantities accounts for all; fuel usage, water usage, site clearance, travel to site, and waste. When a material cannot be produced in Ireland (i.e. steel) boat freight emissions have also been applied. The construction phase of the proposed development is predicted to result in the temporary removal of grassland to facilitate the construction compounds, where appropriate and the permanent change of land use at the depot. However, overall, there will be a negligible impact on carbon sequestration as a result of the construction phase of the proposed development. The landscaping plan includes the widespread planting of native Irish species of trees and shrubs and wildflower planting. It is predicted that 11 Ha of replanting will be completed in association with the construction phase of the proposed development. 9.05 ha of grassland will have a change in land use due to the proposed development with the loss of a carbon sink. These have been included in the embodied carbon calculations under "general" within Table 13.12.

²³ <https://www.dartplus.ie/S3mvc/media/DART-West-Railway-Order/4%20EIAR/Volume%202%20Main%20Text/Chapter-06-Traffic-and-Transportation.pdf> projections using the NTA's East Regional Model (ERM) in section 6.5.2.1

²⁴ https://www.nationaltransport.ie/wp-content/uploads/2020/08/NTA_Heavy_Rail_Census_Report_2019_.pdf

²⁵ <https://www.google.com/covid19/mobility/> See timeseries for Dublin in annex 5

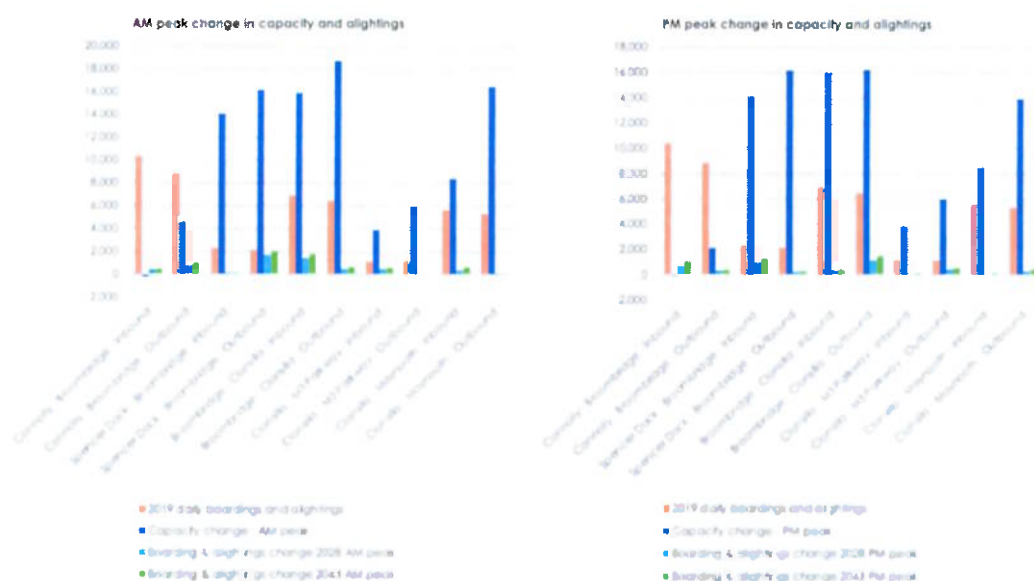
²⁶ 3rd quartile

While attendance at workplaces is down over 26% on average, with hybrid working concentrated to a greater extent on certain weekdays, peak day workplace attendance appears to be almost 9% lower than pre-covid levels. This is despite 11% higher employment in Q222 versus Q219, or 8% employment growth in Dublin.²⁷

Activity	% change from pre-Covid base line – 15 October 2022	
	30 day average	30 day rolling peak day
Transit stations	-11.7%	-7.8%
Workplace	-26.4%	-8.8%
Residential	+5.2%	+7.3%

With significant uncertainty over the movement of people with the move to hybrid working, is a somewhat scaled back DART+ West option preferable, with the option to expand the depot and fleet in the future²⁸ if demand is expected to rise?

While a 'turn up and ride' facility for the DART is desirable in order to increase preference for this as a mode of travel, it is possible that this could be achieved with slightly less capacity increase – e.g. frequency of every 12-13 minutes versus every 10 minutes and slightly shorter trains. Reducing frequency to every 13 minute from 10 minutes could potentially reduce the depot capacity requirement by 23%²⁹, while moving from a 10 to 8 car standard train could potentially reduce storage capacity needs by a further 20%.



²⁷ <https://www.cso.ie/en/releasesandpublications/ep/p-lfs/labourforcesurveyquarter22022/employment/>

²⁸ At which point lower carbon technologies for both construction and rail carriages will probably have improved, reducing the embodied carbon from any such expansion.

²⁹ Allowing 2 hours for a round trip.

I propose that any approval of the railway order application is subject to the condition that Irish Rail provide a stronger explanation for the planned capacity increase as part of DART+ West in terms of frequency and carriages. Where a plausible explanation cannot be provided, Irish Rail should provide proposals on how the footprint of the project in terms of depot size and change of land use can be minimised, incorporating the capability to expand the depot if required in the future.

2) Potential to reduce the footprint of Mill Lane and the underbridge

A requirement to have both cycle and pedestrian access through an underbridge at Ashtown seems unnecessary when the pedestrian and cycle bridge will be available. Removal of the cycle and pedestrian access (save for a minimum amount to enable exit from the area in the event of an accident or breakdown) would reduce the carbon and bio-diversity impact of the underbridge and approach road via Mill Lane.

In the current plans, the road, with paths and cycle lane is 12.3 metres wide³⁰, while embankments³¹ are provided for to improve visibility of the road and openness for pedestrians and cyclists using the road (although it would still not be overlooked as set out in NTA permeability guidance).

If pedestrians and cyclists were routed towards the pedestrian and cycle bridge the road could be reduced to 9 metres with a similar road width and two 1 metre rubbing strips, resulting in a 27% reduction of the footprint of the road and underbridge. The need for visibility of the road and openness of the space and the associated embankments would be removed, reducing tree and vegetation removal, soil movement and potentially the extent of the impact on the nearby business, Burke Brothers.

I propose that any approval of the railway order application is subject to the condition that Irish Rail change the function of Mill Lane on the south of the railway and the underbridge, with it designated for vehicular traffic only, with relevant redesign of the layout of the road and surrounding area (such as removed need for embankments). Pedestrians and cyclists will utilise the pedestrian/cycle bridge as their preferred route over the railway and canal.

Climate resilience – heat, flooding – relevant EU regs

While there is some mention of the impact of climate change on the proposed development³² I could not see any reference to the European Commission's Notice — Technical guidance on the climate proofing of infrastructure in the period 2021-2027 (C/2021/5430)³³.

This guidance notes that “the timescale for the climate vulnerability and risk assessment should correspond to the intended lifespan of the investment being financed under the project. The lifespan is often (considerably) longer than the reference period used in the cost-benefit analysis, for example.” For instance bridges and other civil engineering structures have a design working life of 100 years.

³⁰ <https://www.dartplus.ie/S3mvc/media/DART-West-Railway-Order/3%20Railway%20Order%20Drawings/Book%203%20Structures%20Plans/Specific%20Locations/06-Ashtown.pdf> MAY MDC HRW LC01 DR C 0106 D – see cross section E-E and F-F

³¹ MAY MDC HRW LC01 DR C 0102 D, MAY MDC STR LC01 DR C 0201 D (section D), MAY MDC STR LC01 DR C 0206 D

³² <https://www.dartplus.ie/S3mvc/media/DART-West-Railway-Order/4%20EIAR/Volume%202%20Main%20Text/Chapter-13-Climate.pdf> section 13.5.4

³³ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.C.2021.373.01.0001.01.ENG>

It highlights that “for practical applications in climate proofing, RCP 4.5 may be usable for climate projections until about 2060. However, for subsequent years, RCP 4.5 may begin to underestimate the changes – in particular if GHG emissions prove higher than anticipated. Hence, it could be more relevant to use RCP 6.0 and RCP 8.5 for current projections until 2100.”

My main concerns in relation climate vulnerability and adaptation relate to the proposed Spencer Dock station and the potential for impacts on railway infrastructure from extreme heat.

In relation to Spencer Dock, the area is vulnerable to coastal flooding (see annex 6) as noted in the Site Specific Flood Risk Assessment report³⁴. The Spencer Dock Flood Relief Scheme does provide protection against a 1 in 200 year coastal flooding event³⁵. However, putting this flood relief scheme in the context of rising sea levels where we will see increased frequency of flooding events: a 50cm sea level rise³⁶ would see a 1 in 200 year event move to a 1 in 7 year event³⁷. The IPCC also highlights this point that “due to projected global mean sea level (GMSL) rise, local sea levels that historically occurred once per century (historical centennial events, HCEs) are projected to become at least annual events at most locations during the 21st century. [...]”. Therefore, I would question the extent to which adaptation criteria have been fully met for the Spencer Dock station site in the context of the expected life of the station.

The above flood risk report does note that “the Docklands / Newcomen area is liable to flood in extreme events with increased flooding likely due to future effects of climate change”. The report highlights how “on receipt of a flood warning, the Docklands Station flood emergency response plan will be enacted, which should include; preparatory actions (e.g. suspension of services from dockland station), post-flood clean up and reopening procedures. Due to the nature of the flooding (tidal), the impact of flood water displacement is envisaged to be negligible and no compensation is required.” However, if such events are to become much more frequent, what impact will this have both on the provision of rail services over the lifespan of the risk of the station becoming a stranded asset?

The impact of extreme heat does not appear to have been given sufficient consideration in the EIAR, with a view that “based on an increase in temperature of between 1 to 3 degrees Celsius under RCP4.5, it is considered that the impact of increased temperatures on materials will not be significant.” However, this does not consider heat waves or periods of extreme heat which are expected to become more frequent. It is projected that over, the relatively near term period of, 2040 to 2061 under the RCP4.5 scenario that the area incorporating DART+ West could experience 4-6 heatwaves a year. This would almost double to 8-10 under the RCP8.5 scenario³⁸. Temperature extremes in heat waves could impact services both in terms of track and electrical cables. The effects of extreme heat on railways were evident in the UK and the continent this summer and as a result are an area of focus for rail providers.³⁹

³⁴ <https://www.dartplus.ie/S3mvc/media/DART-West-Railway-Order/7%20Site%20Specific%20Flood%20Risk%20Assessment/Site-Specific-Flood-Risk-Assessment.pdf>

³⁵ <https://www.floodinfo.ie/map/floodmaps/>

³⁶ <https://www.ipcc.ch/srocc/chapter/technical-summary/> - The IPCC estimates 43cm sea level rise by 2100 in a low emission scenario (RCP2.6) and 84cm in a high emissions scenario (RCP8.5).

³⁷ http://iae.ie/wp-content/uploads/2017/07/Coastal_Areas.pdf

³⁸ <https://www.climateireland.ie/#/tools/climateDataExplorer>

³⁹ <https://www.networkrail.co.uk/campaigns/hot-weather-and-the-railway/>
<https://www.railtech.com/infrastructure/2022/08/05/are-railways-prepared-for-more-frequent-heat-waves/?gdpr=accept>

I propose that any approval of the railway order application is subject to the condition that Irish Rail (1) review its assessment of climate resilience in the context of the European Commission's Notice — Technical guidance on the climate proofing of infrastructure in the period 2021-2027 (C/2021/5430); (2) reconsider the scale of investment and infrastructure in Spencer Dock/Docklands, while still meeting rail traffic objectives in the context of flood risk arising from rising sea levels over the lifespan of the stations; and (3) consider how it can best mitigate the risk of extreme heat events on track and electrical infrastructure and cables.

Lighting

I am unclear from the information provided how lighting used will minimise the impact on local biodiversity, in particular given the proximity to the canal and rural areas.

Construction impacts

I have had current experience of living in close proximity to a building site with a significant increase of dust within our home, but also dirt on the street and cars parked outside. The latter is despite some street cleaning efforts by the developer in question.

Particulate matter is associated with negative health outcomes, particularly respiratory illnesses. For instance, multiple studies demonstrated a link between increased incidence of Covid 19 and increased mortality where people were exposed to particulate matter (PM 2.5 and PM 10)⁴⁰.

I note that most works will be conducted by Irish Rail at night in Ashtown. My experience of night time works on the railway is that noise levels can be high but also the type of noise is particularly disturbing/high pitched during track works. The impact on local residents and their families has the potential to be significant.

Finally, I am concerned about the risk of odours and higher level of rodent activity when the canal is drained at Ashtown.

I ask that every effort is taken to minimise the construction impacts on the local community, and in particular those living in close proximity to the railway and key construction works.

I propose that any approval of the railway order application is subject to the condition that Irish Rail (1) rigorously apply the mitigation measures proposed during the construction phase at Ashtown; (2) proactively engage with residents where issues arise; and (3) identify opportunities, including temporary line closures at weekends to complete more extensive works, in order to reduce the significant impact of construction works on local residents, particularly at night.

Cumulative impacts

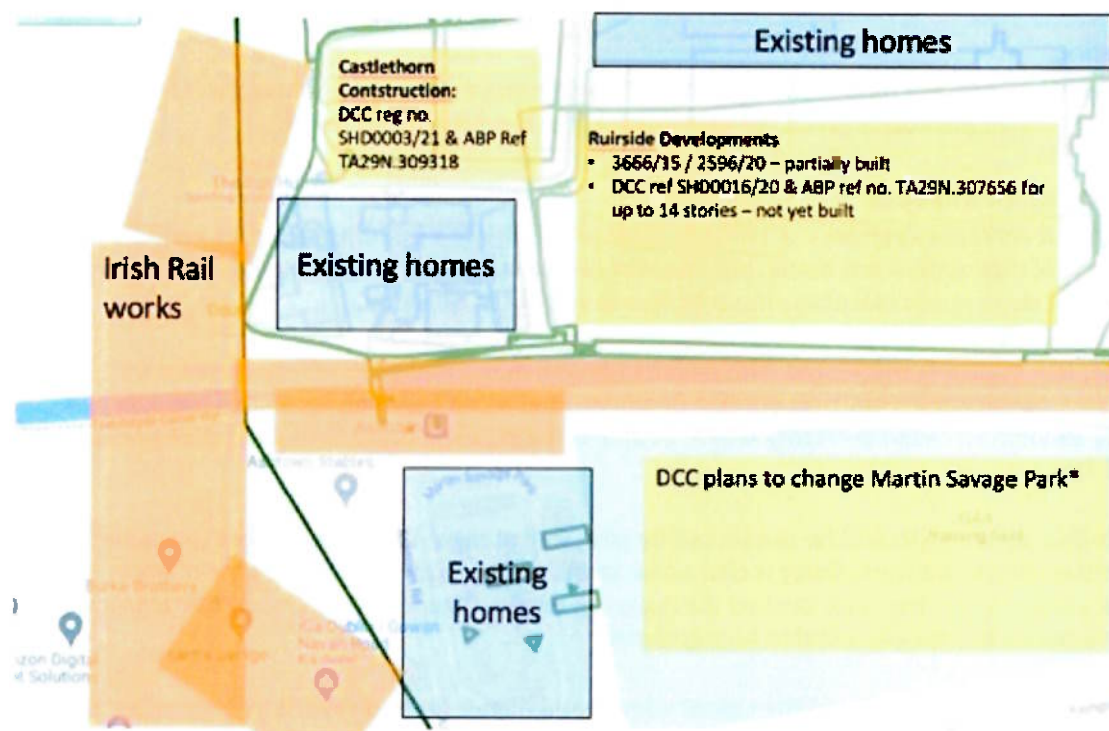
It is likely that the main works at Ashtown will coincide with works on two large developments either side of Rathborne Village (as confirmed by the developer - Castlethorn). In effect Rathborne Village is likely to be surrounded by construction sites (see diagram over the page). This further amplifies concerns raised in the section above.

What steps can be taken by Irish Rail and Dublin City Council to work with the developer to mitigate the impacts on local residents, in particular residents of Rathborne Village? For

⁴⁰ <https://www.europeanreview.org/article/27455>

example, could the developer to minimise the impact on local residents, akin to those proposed by Irish Rail in its mitigation actions to reduce dust, etc.

Similarly, the cumulative impacts on biodiversity in the area will be even more severe, with greater land clearance than that envisaged in the Irish Rail plans. This comes on top of recent land clearance for phase one of the Ruirside developments building (also Castlethorn) and planned upgrades to the St Oliver Plunkett and Pheonix Football club pitches in Martin Savage Park.



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I propose that any approval of the railway order application is subject to the condition that Irish Rail engage with Castlethorn construction and, if necessary, Dublin City Council, where there is contemporaneous development of sites surrounding Rathborne Village and DART+ West construction to: (1) assist in the application of similar mitigating actions in terms of dust and pollution for residents of the area; and (2) coordinate activities to minimise the impact on the area.

Thank you for taking the time to review this submission. Please contact me at anna.lalor@gmail.com in the event that you have any questions in relation to its content.

⁴¹ Source: <https://mapzone.dublincity.ie/MapZonePlanning/MapZone.aspx> - Planning granted layer
<https://councilmeetings.dublincity.ie/mgConvert2PDF.aspx?ID=37718>

Yours faithfully

A handwritten signature in cursive script, reading "Anna Lalor". The ink is a light grey or blue, and the signature is fluid and elegant.

Anna Lalor

Annex 1 – Relevant policy

NTA's Greater Dublin Area (GDA) Transport Strategy 2016-2035⁴² –

- The enhancement of the pedestrian environment, including measures to overcome severance and to increase permeability, is a priority;
- The GDA's transport infrastructure and services must be planned for and invested in on the basis of a number of aspects including:
 - That no one is excluded from society, by virtue of the design and layout of transport infrastructure and services or by the cost of public transport use; and
 - That the environment in the GDA is protected and enhanced
- To address the issues raised in Section 3.2.5 relating to provision for pedestrians, it is intended to:
 - Provide a safer, more comfortable and more convenient walking environment for those with mobility, visual and hearing impairments, and for those using buggies and prams;
 - Support pedestrian permeability provision in new developments, and the maintenance, plus enhancement where appropriate, of such arrangements in existing developments; and
 - Ensure that permeability and accessibility of public transport stops and stations for local communities is maintained and enhanced.

National Planning Framework (NPF)⁴³:

- In relation to securing compact and sustainable growth, the framework focuses on four key areas, one of which is:
- The 'liveability' or quality of life of urban places – how people experience living in cities, towns and villages. This includes the quality of the built environment, including the public realm, traffic and parking issues, access to amenities and public transport and a sense of personal safety and well-being.
- For Dublin, the NPF, sets out key future growth enablers for Dublin, which as well as the DART expansion include:
 - The development of an improved bus-based system, with better orbital connectivity and integration with other transport networks;

⁴² https://www.nationaltransport.ie/wp-content/uploads/2016/08/Transport_Strategy_for_the_Greater_Dublin_Area_2016-2035.pdf

⁴³ <https://www.gov.ie/pdf?file=https://assets.gov.ie/166310/818095340-Project-Ireland-2040-NPF.pdf#page=1>

- Measures to enhance and better link the existing network of green spaces, including the Phoenix Park and other parks, Dublin Bay and the canals, subject to carrying out a routing study and any necessary environmental assessments;
 - Delivery of the metropolitan cycle network set out in the Greater Dublin Area Cycle Network Plan inclusive of key commuter routes and urban greenways on the canal, river and coastal corridors;
 - Public realm and urban amenity projects, focused on streets and public spaces, especially in the area between the canals and where linked to social generation projects.
- In relation to people, homes and communities the NPF states that “While the National Planning Framework cannot effect change in all of the dimensions that contribute to quality of life, there are some key elements that it will directly impact on, most importantly ‘the natural and living environment’. This is why place is intrinsic to achieving good quality of life - the quality of our immediate environment, our ability to access services and amenities, such as education and healthcare, shops and parks, the leisure and social interactions available to us and the prospect of securing employment, all combine to make a real difference to people’s lives.”
 - A number of the national policy objectives are also very relevant.
 - **National Policy Objective 27:**

Ensure the integration of safe and convenient alternatives to the car into the design of our communities, by prioritising walking and cycling accessibility to both existing and proposed developments, and integrating physical activity facilities for all ages.
 - **National Policy Objective 28:**

Plan for a more diverse and socially inclusive society that targets equality of opportunity and a better quality of life for all citizens, through improved integration and greater accessibility in the delivery of sustainable communities and the provision of associated services.
 - **National Policy Objective 30:**

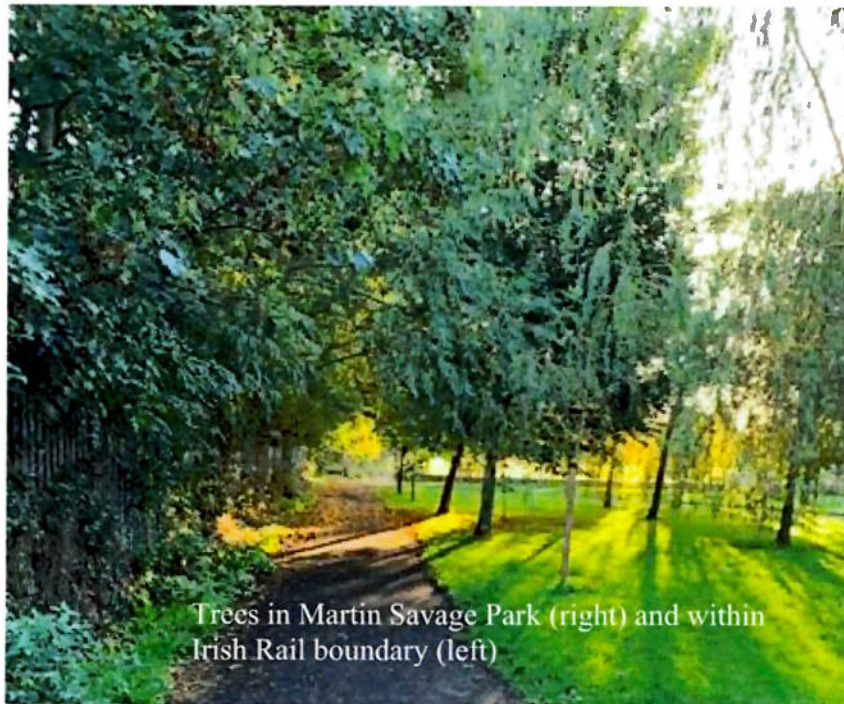
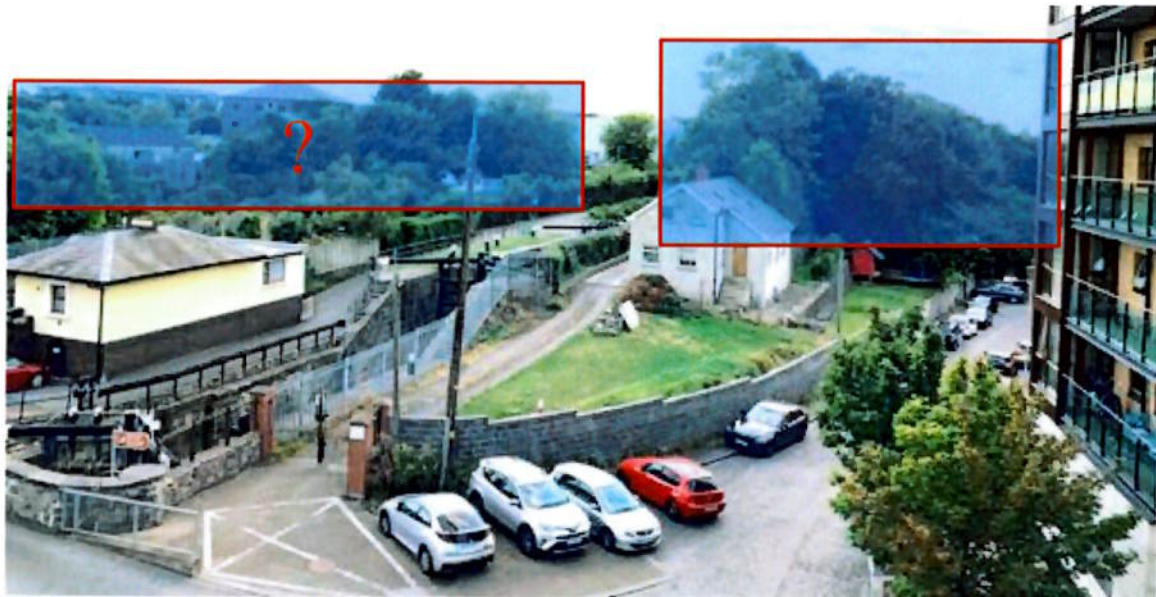
Local planning, housing, transport/accessibility and leisure policies will be developed with a focus on meeting the needs and opportunities of an ageing population along with the inclusion of specific projections, supported by clear proposals in respect of ageing communities as part of the core strategy of city and county development plans.

Annex 2 - Corten steel laser cutting examples



Annex 3 – visual and impact of tree removal, with associated biodiversity and carbon capture loss





Location of proposed bike parking - level of tree and vegetation removal unclear



Annex 4 – Excerpt of email response from Irish Rail



Anna Lalor [REDACTED]

Queries and community engagement

DARTWest <DARTwest@irishrail.ie>
To: Anna Lalor [REDACTED]
Cc: DARTWest <DARTwest@irishrail.ie>

6 October 2022 at 12:19

Dear Anna,
Responses are as follows.
Kind regards,
Garry

Bicycle parking

Chapter 4 – Description of Proposed Development figure 4-127 shows bike parking as being along the canal outside Doughter and Kaldi café. How many of the 61 bike parking spaces will be allocated here? Is this where all bike parking is expected to be allocated or will there be some on the south side of the canal and railway?

As set out in Chapter 4, Section 4.8.5.3 bicycle parking provided is based on guidance from the National Cycle Manual. As per the calculation shown on page 4/101 of Chapter 4 of the EIAR, provision for 37 bike parking spaces will be provided in a 61m² footprint. Bicycle parking is not envisaged on the southside of the canal.

It is not clear exactly what changes are going to be made to this area. Figure 4-121 of chapter 4 indicates vegetation removal, while the site clearance map for zone C part 1 shows no tree or vegetation removal. Is the intention that vegetation and/or existing trees would be removed?

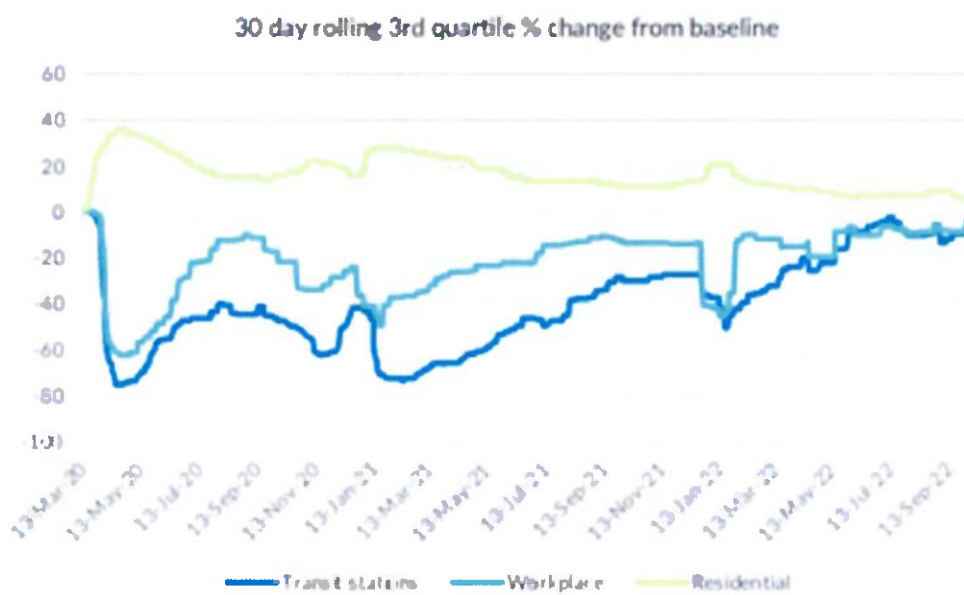
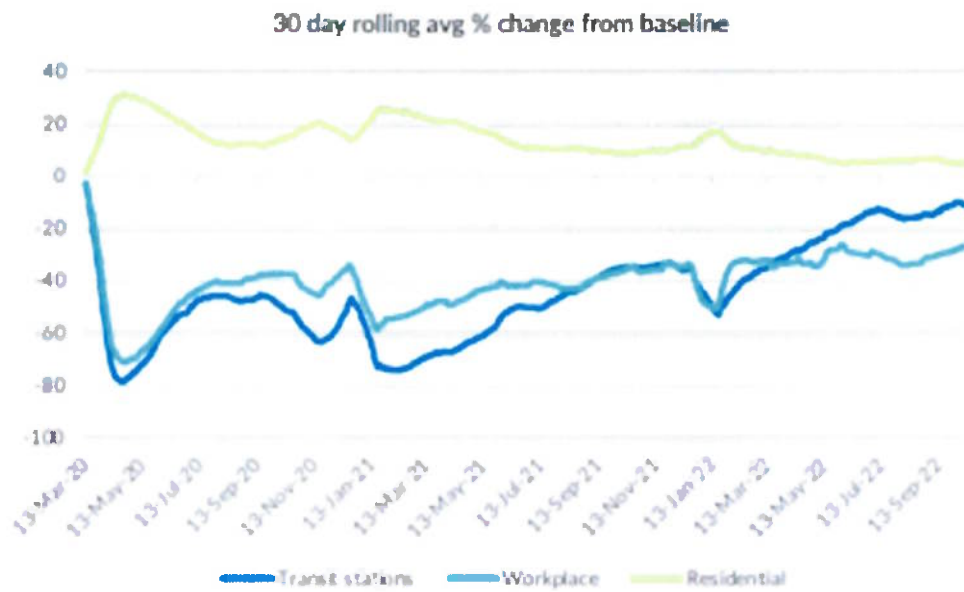
The vegetation clearance drawings, specifically MAY MDC LMA SC05 DR Y 0001 D Sheet 6 of 17 in Volume 3A of the EIAR provides the extent of vegetation removal anticipated at this stage of the project. See link below. In order to facilitate the 37 bicycle spaces listed above some vegetation will be required to be removed however trees will be preserved as much as possible.

<https://www.dartphs.ie/getmedia/0fc2655d-321c-1827-8ba4-12ebcf733ebe7/Site-Clearance-Zone-C-Part-1.pdf?ext=.pdf>

Are there plans for bike parking coverings (similar to that at Pottstown station, where roof coverings have since been removed) or would this area be left open (or under existing tree cover)?

Bicycle parking covers/shelter is not envisaged, and the existing trees will be preserved as much as possible.

Annex 5 – Google Mobility Data – Dublin



Annex 6 – Docklands flood profile – OPW Flood maps

Table 2: Allowances in Flood Parameters for the Mid-Range and High-End Future Scenarios

Parameter	MRFS	HEFS
Extreme Rainfall	+ 20%	+ 30%
Depths		
Peak Flood Flows	+ 20%	+ 30%
Mean Sea Level Rise	+ 500 mm	+ 1000 mm
Land Movement	- 0.5 mm / year ¹	- 0.5 mm / year ¹
Urbanisation	No General Allowance – Reviewed on Case-by-Case Basis	No General Allowance – Reviewed on Case-by-Case Basis
Forestation	- 1/6 Tp ²	- 1/3 Tp ² + 10% SPR ³

Note 1: Applicable to the southern part of the country only (Dublin – Galway and south of this)

Note 2: Reduction in the time to peak (Tp) to allow for potential accelerated runoff that may arise as a result of drainage of afforested land

Note 3: Add 10% to the Standard Percentage Runoff (SPR) rate: This allows for temporary increased runoff rates that may arise following felling of forestry.

Table 1 - Flood Event Probabilities:

Annual Exceedance Probability (%)	Odds of Occurrence in an Given Year	Return Period (Years)
10 (High Probability)	10 : 1	10
1 (Medium Probability)	100 : 1	100
0.1 (Low probability)	1000 : 1	1000

X marks estimated location of Spencer Dock site

