

**DART+ WEST - MCA Stage 1
 Porterstown Level Crossing Assessment**

Parameter	Criteria	Sub-Criteria (Quantitative/ Qualitative)	Do Nothing	Do Minimum	Option 1	
			Leave the current level crossings in place.	Closure of the existing crossings with no alternative provided. All traffic would be diverted to alternative routes around the crossing location.	Pedestrian / Cycle Links parallel to canal and rail to ramped access to Diswellstown Viaduct	
1	Economy	1.1 Construction and Land Cost	Assessment of cost of construction of option, land costs and temporary works	Significant comparative advantage over other options	Significant comparative advantage over other options	Significant comparative disadvantage over other options
			The level crossing is currently manned. The ongoing cost associated with this control mechanism on the railway is significant.	Cost of removing crossing is low in comparison to provision of road crossing.	This scheme is similar to other bridge options but it includes an additional 600m of 5.0m wide cycleway and the land acquisition costs associated with it.	
		1.2 Long Term Maintenance costs	Ongoing annual maintenance costs associated with varied options	Significant comparative disadvantage over other options	Significant comparative advantage over other options	Significant comparative advantage over other options
			The do-nothing scenario would maintain the existing maintenance costs of the level crossing.	The closure of the level crossing would remove the maintenance requirement of the level crossing.	The maintenance costs are associated with regular inspection and maintenance of the cycleway and the ramp structures	
		1.3 Traffic Functionality /economic benefit	Benefits to vehicular traffic through reduction in journey time lengths and delays through removal of level crossings. Consideration of potentially longer routes for traffic.	Comparable to other options	Comparable to other options	Comparable to other options
			Existing connectivity maintained, albeit with increased disruption from increased train frequencies. Economic disbenefit to rail.	Displacement of traffic onto alternative routes; increase in journey times for local residents, New Link road already serves for commuter traffic.	Displacement of traffic onto alternative routes; increase in journey times for local residents, New Link road already serves for commuter traffic.	
2	Integration	2.1 Transport Integration	Impact on scope for and ease of interchange between modes. Impact on the operation of other transport services both during construction and in operation. New interchange nodes and facilities; Reduced walking and wait times associated with interchanges. Modal shift figures during construction and operations. Changes to journey times to transport nodes.	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options
			Existing connectivity maintained, albeit with increased disruption from increased train frequencies. There is no cycle route proposed on Porterstown Road in the GDA Cycle Network Plan.	Reduction in local permeability. The provision of the Porterstown Viaduct has reduced the utility of Porterstown Road for anything more than local traffic.	Some indirect access provided for pedestrians and cyclists, but less preferable than other options. No access provided for other transport modes.	
		2.2 Land Use Integration	Impact on land use strategies and local plans. Assessment of support for land use factors local land use and planning. Inclusion of project in relevant local planning documents.	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options
			This option supports local planning policy map based "Objective 137: Preserve the existing pedestrian and vehicular right of way at the level crossing at Porterstown". There is also a Specific Objective on Porterstown Road running north south for an "Indicative Cycle/Pedestrian Route" that would be impacted. However, it is considered that there would be modifications required to the current road widths and narrow bridge over the canal should this objective be realised as it could not be safely implemented in it's current form.	At local level, The Do - Minimum Option goes against Fingal DP map-based Specific Objectives; Specific Objective 137 "Preserve the existing pedestrian and vehicular right of way at the level crossing at Porterstown" and the Specific Objective of "Indicative Cycle/Pedestrian Route".	This Option does not support Fingal DP map-based Specific Objective 137: "Preserve the existing pedestrian and vehicular right of way at the level crossing at Porterstown".	
				The closure of the level crossing with no alternative would sever vehicular and pedestrian/cycle access to lands to the south zoned for "Residential Area", for which the Draft Kellystown LAP will apply (map based objective LAP13.C) - currently at consultation stage. The Draft LAP supports the DART Expansion programme. The LAP includes the potential development of a 'Future train station and/ or Metro West node' on the southern side of the tracks on Porterstown Road.	Option 1 supports pedestrian access to Dr Tory Bridge (Porterstown Viaduct) which would provide a pedestrian link to proposed 'light rail corridor' and a light rail stop at Porterstown (travelling north south along the R121). The surrounding area is zoned for 'Residential Area' for which the Draft Kellystown LAP will apply (map based objective LAP13.C) - currently at consultation stage. The Draft LAP supports the DART Expansion programme. The LAP includes the potential development of a 'Future train station and/ or Metro West node' on the southern side of the tracks on Porterstown Road.	

**DART+ WEST - MCA Stage 1
 Porterstown Level Crossing Assessment**

Parameter	Criteria	Sub-Criteria (Quantitative/ Qualitative)	Do Nothing	Do Minimum	Option 1
2.3	Geographical Integration	Alternative level crossing options are mostly neutral in respect of Geographical Integration due to localised nature of the level crossings. As a consequence all options are rated comparable to one another.	Comparable to other options	Comparable to other options	Comparable to other options
			No impact on Geographical Integration	No impact on Geographical Integration	No impact on Geographical Integration
2.4	Other Government Policy Integration	Integration with the other Government policy such as the NPF and RSES.	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
			This option would not support the delivery of the higher level national and regional planning policies regarding the DART Expansion programme (NPF- (NS04), RSES & GDA Transport Strategy).	This option would support the delivery of the DART Expansion programme in the higher level national and regional planning policies however it would impact on Smarter Travel policy.	This option would support the delivery of the DART Expansion programme in the higher level national and regional planning policy documents.
3.1	Noise and Vibration	Estimated number of sensitive properties within 100m of the works. Options closer to more sensitive locations will have an increased risk of generating a noise impact. However, qualitative criteria are also used where necessary to differentiate between the options.	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
			Retains vehicular traffic which will impact the low number of sensitive receptors in proximity.	Removes vehicular traffic and minimal construction phase.	9 dwelling within 100m. Note that only construction stage impacts expected as this is a pedestrian crossing.
3.2	Air Quality and Climate	Estimated number of number of receptors within 50m reviewed as part of appraisal. Options closer to more sensitive locations will have an increased risk of changes in air quality during construction or operational phases. However, qualitative criteria are also used where necessary to differentiate between the options.	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
			Retains vehicular traffic which will impact the low number of sensitive receptors in proximity.	Removes low level of vehicular traffic onto Diswellstown Viaduct 300m away and the construction phase is minimal. Potential for construction phase dust impact is not significant when mitigation measures are put in place.	3 dwelling within 50m. Note that only construction stage impacts expected as this is a pedestrian crossing. No bridge so lower construction impacts. Potential for construction phase dust impact is not significant when mitigation measures are put in place.
3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Impact on landscape character; Impacts on landscape features, protected landscapes. Key visual characteristics affected; Impacts on properties, amenities, protected views, key views.	Significant comparative advantage over other options	Significant comparative advantage over other options	Some comparative advantage over other options
			No impact on existing landscape or visual characteristics	Loss of local connectivity. Minimal impact on existing landscape or visual characteristics - no likely significant landscape or visual impacts.	Significant impact on trees to north of canal - which provide screening for residential property.
3.4	Biodiversity (flora and fauna)	Potential compliance/conflict with biodiversity objectives; Indirect impacts on protected species, designated sites; Overall effect on nature conservation resource.	Significant comparative advantage over other options	Significant comparative advantage over other options	Some comparative disadvantage over other options
			No likely significant impacts.	No likely significant impacts.	Hydrologically connected to South Dublin Bay and River Tolka Estuary SPA. No risk of LSE. Potential impacts to Royal Canal pNHA. Potential impact to woodland habitat adjacent to canal. Potential impacts to bats foraging and roosting in existing bridge, buildings and trees nearby. Given that that this option will follow existing pedestrian bridge at Porterstown Viaduct there is less impact to canal corridor than option 2 and 3.

**DART+ WEST - MCA Stage 1
 Porterstown Level Crossing Assessment**

Parameter	Criteria	Sub-Criteria (Quantitative/ Qualitative)	Do Nothing	Do Minimum	Option 1
3 Environment	3.5 Cultural, Archaeological and Architectural Heritage	Overall effect on cultural, archaeological and architecture heritage resource. Likely effects on RPS, National Monuments, SMRs, Conservation areas, etc. Number of designated sites/structures (by level of designation) directly impacted by scheme (landtake)	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
			No direct impacts.	No direct impacts.	Potential indirect impacts on Keeper's Cottage (RPS No. 699) and Former Clonsilla School (RPS No. 700) and the Royal Canal (RPS No. 944a). Potential to encounter archaeological deposits that may survive in undeveloped areas.
	3.6 Water Resources	Overall potential significant effects on water resource attributes likely to be affected during construction and operation.	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
			Potential negative impact on surface water quality during operational phase. Has some comparative disadvantage over other options.	Removes vehicular traffic borne pollutants and minimal construction phase. The Do Minimum Option has some comparative advantages over other options.	Option likely to have no significant effect on flood regime. Potential for minor impact on surface water quality during construction though removal of vehicular traffic likely to have a positive impact on water quality of Royal Canal overall. Likely minimal impact on groundwater quality.
	3.7 Agriculture and Non-Agricultural	Overall impact on land take & property. Number of properties to be impacted/acquired. Likely temporary or permanent severance effects, etc.	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options
			No direct impacts.	No direct impacts to property however severance to local land uses in the area.	Option 1 will have a direct impact on non-agricultural lands in use as a car park for St. Mochta's GAA club.
3.8 Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. Soil or topsoil resources to be developed/removed based on cut or fill requirements and potential for soft ground which may also need replaced. Existing information relating to potential to encounter contaminated land. High-level assessment based on the likely structures/ works required and the potential for ground contamination due to historic landfills, pits and quarries.	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	
		No significant direct impacts.	No significant direct impacts.	Comparative disadvantage is considered as construction is proposed, no likely significant impacts.	
3.9 Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	
		No changes from an EMI perspective transverse to the railway therefore advantage over other options.	No changes from an EMI perspective transverse to the railway therefore advantage over other options.	It is assumed that the routing of the cabling, the location of existing substations, hubs etc. along the line will be changed or impacted by the selection of any of the options over the entire project. All Do-Something options are comparable from an EMI perspective at this stage in the assessment.	
4.1 Impact on Vulnerable Groups	Impacts on low income groups, non-car owners, mobility impaired, visually impaired and people with a disability.	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options	
		With the level crossing becoming effectively closed on implementation of the proposed working timetable and with no provision for supplementary infrastructure for vulnerable groups, the majority of users will be diverted onto the adjacent viaduct.	With removal of the level crossing and with no provision for supplementary infrastructure for vulnerable groups, the majority of users will be diverted onto the adjacent viaduct.	The alternative access proposed as part of this option for vulnerable groups includes a diversion of approximately 1.0km. This if not evident for other bridge options	
4.2 Stations Accessibility	Quantification of increased service levels to the vulnerable groups.	Comparable to other options	Comparable to other options	Comparable to other options	
		It is considered that alterations at Porterstown will not significantly affect access to stations in the locality	It is considered that alterations at Porterstown will not significantly affect access to stations in the locality	It is considered that alterations at Porterstown will not significantly affect access to stations in the locality	

DART+ WEST - MCA Stage 1							
Porterstown Level Crossing Assessment							
Parameter	Criteria	Sub-Criteria (Quantitative/ Qualitative)	Do Nothing	Do Minimum	Option 1		
4	Accessibility & Social inclusion	4.3	Social Inclusion Service levels impacts including severance of community groups; Severance from community facilities consequent on an option.	Significant comparative disadvantage over other options	Significant comparative disadvantage over other options	Significant comparative disadvantage over other options	
				Cross Railway journey = nil as crossing remains in place; Inaccessible when crossing is closed. Diversion for cars, pedestrians and cyclists when level crossing closed 1.1km The principal affected amenities in the vicinity of the level crossing include St Mochta's football grounds south of the railway, Scoil Choilm and Luttrellstown Community College and Centre south of the railway, St Mochta's National School and the Healthwell Clinic, north of the railway. Removal of the level crossing require detour for access to each of them.	Cross Railway journey = nil as crossing remains in place; Inaccessible when crossing is closed. Premanent diversion for cars, pedestrians and cyclists 1.1km The principal affected amenities in the vicinity of the level crossing include St Mochta's football grounds south of the railway, Scoil Choilm and Luttrellstown Community College and Centre south of the railway, St Mochta's National School and the Healthwell Clinic, north of the railway. Removal of the level crossing require detour for access to each of them.	Cross Railway journey = nil as crossing remains in place; Full access remains for pedestrians and cyclists on closure of the level crossing. Diversion for cars when level crossing closed 1.1km. Diversion for pedestrians, cyclists and mobility impaired - ~1km The principal affected amenities in the vicinity of the level crossing include St Mochta's football grounds south of the railway, Scoil Choilm and Luttrellstown Community College and Centre south of the railway, St Mochta's National School and the Healthwell Clinic, north of the railway. Removal of the level crossing require detour for access to each of them.	
5	Safety	5.1	Rail Safety Safety for Rail users – removal of Level crossings is considered a significant safety enhancement	Significant comparative disadvantage over other options	Significant comparative advantage over other options	Significant comparative advantage over other options	
		5.2	Vehicular Traffic Safety Quality of Access for these road users, lengths of diversions, removal of interface with rail and other modes of transport	Comparable to other options	Comparable to other options	Comparable to other options	
		5.3	Pedestrian, Cyclist and Vulnerable Road user Safety Quality of Access for these road users. removal of interfaces	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options	
			With the level crossing becoming effectively closed on implementation of the proposed working timetable and with no provision for supplementaty infrastructure for vulnerable road users, the majority of users will be diverted onto the adjacent viaduct.	With removal of the level crossing and with no provision for supplementaty infrastructure for vulnerable road users, the majority of users will be diverted onto the adjacent viaduct.	The alternative access proposed as part of this option for vulnerable road users includes a diversion of approximately 1.0km. This if not evident for other bridge options		

**DART+ WEST - MCA Stage 1
 Porterstown Level Crossing Assessment**

Parameter	Criteria	Sub-Criteria (Quantitative/ Qualitative)	Option 2	Option 3	Option 4
4 Accessibility & Social inclusion	4.3 Social Inclusion	Service levels impacts including severance of community groups; Severance from community facilities consequent on an option.	Significant comparative advantage over other options	Significant comparative advantage over other options	Significant comparative advantage over other options
			Cross Railway journey = nil as crossing remains in place; Full access remains for pedestrians and cyclists on closure of the level crossing. Diversion for cars when level crossing closed 1.1km. Diversion for pedestrians, cyclists and mobility impaired - ~0.35km The principal affected amenities in the vicinity of the level crossing include St Mochta's football grounds south of the railway, Scoil Choilm and Luttrellstown Community College and Centre south of the railway, St Mochta's National School and the Healthwell Clinic, north of the railway. Removal of the level crossing require detour for access to each of them.	Cross Railway journey = nil as crossing remains in place; Full access remains for pedestrians and cyclists on closure of the level crossing. Diversion for cars when level crossing closed 1.1km. Diversion for pedestrians, cyclists and mobility impaired - ~0.35km The principal affected amenities in the vicinity of the level crossing include St Mochta's football grounds south of the railway, Scoil Choilm and Luttrellstown Community College and Centre south of the railway, St Mochta's National School and the Healthwell Clinic, north of the railway. Removal of the level crossing require detour for access to each of them.	Cross Railway journey = nil as crossing remains in place; Full access remains for pedestrians and cyclists on closure of the level crossing. Diversion for cars when level crossing closed 1.1km. Diversion for pedestrians, cyclists and mobility impaired - ~0.35km The principal affected amenities in the vicinity of the level crossing include St Mochta's football grounds south of the railway, Scoil Choilm and Luttrellstown Community College and Centre south of the railway, St Mochta's National School and the Healthwell Clinic, north of the railway. Removal of the level crossing require detour for access to each of them.
5 Safety	5.1 Rail Safety	Safety for Rail users – removal of Level crossings is considered a significant safety enhancement	Significant comparative advantage over other options	Significant comparative advantage over other options	Significant comparative advantage over other options
	5.2 Vehicular Traffic Safety	Quality of Access for these road users, lengths of diversions, removal of interface with rail and other modes of transport	Comparable to other options	Comparable to other options	Comparable to other options
	5.3 Pedestrian, Cyclist and Vulnerable Road user Safety	Quality of Access for these road users. removal of interfaces	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
			High Quality access for vulnerable road users proposed with the inclusion of bridge infrastructure in this option.	High Quality access for vulnerable road users proposed with the inclusion of bridge infrastructure in this option.	High Quality access for vulnerable road users proposed with the inclusion of bridge infrastructure in this option.

