

DART+ West - MCA Stage 2							
Porterstown Level Crossing Assessment							
Parameter	Criteria	Sub-Criteria (Quantitative/Qualitative)	Option 2	Option 3	Option 4		
			Pedestrian / Cycle Bridge with Nested Ramps in Sports Grounds and Grounds of Disused School	Pedestrian / Cycle Bridge with Ramps extending along Porterstown Road; realignment of Porterstown Road South to Accommodate this.	Pedestrian / Cycle Bridge with Nested Ramps (Same as Option 2 except the northern ramps and abutment are to the east of the Porterstown Road)		
1	Economy	1.1	Construction and Land Cost	Assessment of cost of construction of option, land costs and temporary works	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
				The costs presented here are the capital costs for the proposed bridge structure and those of turnign facilities to be provided on closure of the proposed road. An estimated of land acquisition costs is also included.	The costs presented here are the capital costs for the proposed bridge structure and those of turnign facilities to be provided on closure of the proposed road. An estimated of land acquisition costs is also included.	The costs presented here are the capital costs for the proposed bridge structure and those of turnign facilities to be provided on closure of the proposed road. An estimated of land acquisition costs is also included.	
		1.2	Long Term Maintenance costs	Ongoing annual maintenance costs associated with varied options	Comparable to other options	Comparable to other options	Comparable to other options
			The maintenance costs are associated with regular inspection and maintenance of the bridge structure.	The maintenance costs are associated with regular inspection and maintenance of the bridge structure.	The maintenance costs are associated with regular inspection and maintenance of the bridge structure.		
		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
				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.	Displacement of traffic onto alternative routes; increase in journey times for local residents, New Link road already serves for commuter traffic.	
		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.	Comparable to other options	Comparable to other options	Comparable to other options
				Reasonable access provided for pedestrians and cyclists. No access provided for other transport modes. Integration with the Fingal Royal Canal greenway is supported.	Reasonable access provided for pedestrians and cyclists. No access provided for other transport modes. Integration with the Fingal Royal Canal greenway is supported.	Reasonable access provided for pedestrians and cyclists. No access provided for other transport modes. Integration with the Fingal Royal Canal greenway is supported.	

DART+ West - MCA Stage 2						
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2	Integration	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.	Comparable to other options 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". However, an alternative right of way for pedestrians is being provided as part of this option at the existing level crossing location.	Comparable to other options 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". However, an alternative right of way for pedestrians and also the development of cycling infrastructure is provided therefore would support the 'indicative-Cycle/Pedestrian access' at the existing level crossing location (gradients & length not taken into consideration).	Comparable to other options 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". However, an alternative right of way for pedestrians is being provided as part of this option at the existing level crossing location.
				This option supports the future development of lands zoned for "Residential Area" as part of the future Kellystown LAP by maintaining pedestrian and cycle access at this location. 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.	This option supports the future development of lands zoned for "Residential Area" as part of the future Kellystown LAP by maintaining pedestrian and cycle access at this location. he 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.	This option supports the future development of lands zoned for "Residential Area" as part of the future Kellystown LAP by maintaining pedestrian and cycle access at this location. 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.
				Comparable to other options	Comparable to other options	Comparable to other options
		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 No significant effect on geographical integration.	Comparable to other options No significant effect on geographical integration.	Comparable to other options No significant effect on geographical integration.
				Comparable to other options	Comparable to other options	Comparable to other options
		2.4	Other Government Policy Integration Integration with Government Policy, Smarter Travel, Investment Programmes, rail safety, electrification etc	Comparable to other options This option would support the delivery of the DART Expansion programme in the higher level national and regional planning policy documents.	Comparable to other options This option would support the delivery of the DART Expansion programme in the higher level national and regional planning policy documents.	Comparable to other options This option would support the delivery of the DART Expansion programme in the higher level national and regional planning policy documents.
				Comparable to other options	Comparable to other options	Comparable to other options
		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.	Comparable to other options 27 dwelling within 100m. Note that only construction stage impacts expected as this is a pedestrian crossing.	Comparable to other options 13 dwelling within 100m. Note that only construction stage impacts expected as this is a pedestrian crossing.	Comparable to other options 8 dwelling within 100m. Note that only construction stage impacts expected as this is a pedestrian crossing.
				Comparable to other options	Comparable to other options	Comparable to other options

DART+ West - MCA Stage 2						
Porterstown Level Crossing Assessment						
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3 Environment	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.	Comparable to other options	Comparable to other options	Comparable to other options	
			4 dwelling within 50m. Note that only construction stage impacts expected as this is a pedestrian crossing. Potential for construction phase dust impact is not significant when mitigation measures are put in place. No traffic distribution data available to assess impact on new receptors therefore assessment only considers current receptors close to the level crossing.	5 dwelling within 50m. Note that only construction stage impacts expected as this is a pedestrian crossing. Potentially more embodied carbon due to additional construction material required. Potential for construction phase dust impact is not significant when mitigation measures are put in place. No traffic distribution data available to assess impact on new receptors therefore assessment only considers current receptors close to the level crossing.	4 dwelling within 50m. Note that only construction stage impacts expected as this is a pedestrian crossing. Potential for construction phase dust impact is not significant when mitigation measures are put in place. No traffic distribution data available to assess impact on new receptors therefore assessment only considers current receptors close to the level crossing.	
			Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options	
			Significant impact on trees to north of canal - which provide screening for residential property. Significant visual impact for old cottages at level crossing. Visual impact on setting of Keenan bridge, with proposed bridge elevated directly over pNHA also an RPS.	Significant structure resulting in significant landscape and visual impact on roadside trees and hedgerows. Significant visual impact for old cottages at level crossing and for properties on Porterstown Road, north of the canal. Visual impact on setting of Keenan bridge, with proposed bridge elevated directly over pNHA also an RPS.	Significant impact on trees to north of canal - which provide screening for residential property. Significant visual impact for old cottages at level crossing. Visual impact on setting of Keenan bridge, with proposed bridge elevated directly over pNHA also an RPS.	
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.	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.	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options	
			Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	
			Hydrologically connected to South Dublin Bay and River Tolka Estuary SPA. No risk of LSE. Potential impacts to Royal Canal pNHA. Potential impacts to bats foraging and roosting in existing bridge, buildings and trees nearby. Loss of trees and vegetation at new bridge crossing and adjacent to canal and railway. As this option involves work over and adjacent to canal there is potential for impact on the canal.	Hydrologically connected to South Dublin Bay and River Tolka Estuary SPA. No risk of LSE. Potential impacts to Royal Canal pNHA. Potential impacts to bats foraging and roosting in existing bridge, buildings and trees nearby. Loss of trees at new bridge crossing. As this option involves work over and adjacent to canal there is potential for impact on the canal.	Potential indirect impacts on the setting of the Crossing keeper's cottage (RPS 699). This is due to proximity of proposed ramp. The option will also cross the canal (RPS 944a) and is adjacent to Kennan Bridge (RPS 698), so the potential remains that the new structure will have indirect negative impacts on same.	
			Comparable to other options	Comparable to other options	Comparable to other options	
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.	Potential compliance/conflict with biodiversity objectives; Indirect impacts on protected species, designated sites; Overall effect on nature conservation resource.	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	
			Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	
			Hydrologically connected to South Dublin Bay and River Tolka Estuary SPA. No risk of LSE. Potential impacts to Royal Canal pNHA. Potential impacts to bats foraging and roosting in existing bridge, buildings and trees nearby. Loss of trees and vegetation at new bridge crossing and adjacent to canal and railway. As this option involves work over and adjacent to canal there is potential for impact on the canal.	Hydrologically connected to South Dublin Bay and River Tolka Estuary SPA. No risk of LSE. Potential impacts to Royal Canal pNHA. Potential impacts to bats foraging and roosting in existing bridge, buildings and trees nearby. Loss of trees at new bridge crossing. As this option involves work over and adjacent to canal there is potential for impact on the canal.	Potential indirect impacts on the setting of the Crossing keeper's cottage (RPS 699). This is due to proximity of proposed ramp. The option will also cross the canal (RPS 944a) and is adjacent to Kennan Bridge (RPS 698), so the potential remains that the new structure will have indirect negative impacts on same.	
			Comparable to other options	Comparable to other options	Comparable to other options	
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)	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)	Comparable to other options	Comparable to other options	Comparable to other options	
			Potential indirect impacts on the setting of the school house (RPS 700), the crossing keeper's cottage (RPS 699), the Royal Canal (RPS 944a) and Kennan's Bridge (RPS 698), so the potential remains that the new structure will have indirect negative impacts on same. Potential for direct impacts on previously unrecorded archaeological deposits that have the potential to survive within the greenfield areas. The impacts relate to the main spans crossing the canal and railway and the nested ramps to north west and south east. Due to the height of the school house (RPS 700) it is considered that there is insufficient variation in impact of the proposed options on the protected structure to warrant rating them differently.	Potential indirect impacts on the setting of the school house (RPS 700), the crossing keeper's cottage (RPS 699), the Royal Canal (RPS 944a) and Kennan's Bridge (RPS 698), so the potential remains that the new structure will have indirect negative impacts on same. Potential for direct impacts on previously unrecorded archaeological deposits that have the potential to survive within the greenfield areas. The impacts relate to the main spans crossing the canal and railway and the linear approach ramps to north and south. Due to the height of the school house (RPS 700) it is considered that there is insufficient variation in impact of the proposed options on the protected structure to warrant rating them differently.	Potential indirect impacts on the setting of the school house (RPS 700), the crossing keeper's cottage (RPS 699), the Royal Canal (RPS 944a) and Kennan's Bridge (RPS 698), so the potential remains that the new structure will have indirect negative impacts on same. Potential for direct impacts on previously unrecorded archaeological deposits that have the potential to survive within the greenfield areas. The impacts relate to the main spans crossing the canal and railway and the nested ramps to north east and south east. Due to the height of the school house (RPS 700) it is considered that there is insufficient variation in impact of the proposed options on the protected structure to warrant rating them differently.	
			Comparable to other options	Comparable to other options	Comparable to other options	
			Comparable to other options	Comparable to other options	Comparable to other options	

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	3.6	Water Resources	Overall potential significant effects on water resource attributes likely to be affected during construction and operation.	Comparable to other options	Comparable to other options	Comparable to other options
				Option likely to have minimal impact 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.	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.	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 advantage over other options
				Option 2 will have a direct impact on non-agricultural lands in use as a car park for St. Mochta's GAA club.	Option 3 will impact on lands used by St. Mochta's GAA club, St. Mochta's FC and St. Mochta's National School	Option 4 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.	Comparable to other options	Comparable to other options	Comparable to other options	
			No significant effects.	No significant effects.	No significant effects.	
3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	Comparable to other options	Comparable to other options	Comparable to 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.	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.	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.	Comparable to other options	Comparable to other options	Comparable to other options	
			High Quality access for vulnerable groups proposed with the inclusion of bridge infrastructure in this option.	High Quality access for vulnerable groups proposed with the inclusion of bridge infrastructure in this option.	High Quality access for vulnerable groups proposed with the inclusion of bridge infrastructure in this option.	
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	

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4	Accessibility & Social inclusion	4.3	Social Inclusion	<p>Service levels impacts including severance of community groups; Severance from community facilities consequent on an option.</p>	Comparable to other options	Comparable to other options	Comparable to other options
					<p>Cross Railway journey = nil as crossing remains in place; Full access remains for pedestrians and cyclists on closure of the level crossing.</p> <p>Diversion for cars when level crossing closed 1.1km. Diversion for pedestrians, cyclists and mobility impaired - ~0.35km</p> <p>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.</p>	<p>Cross Railway journey = nil as crossing remains in place; Full access remains for pedestrians and cyclists on closure of the level crossing.</p> <p>Diversion for cars when level crossing closed 1.1km. Diversion for pedestrians, cyclists and mobility impaired - ~0.35km</p> <p>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.</p>	<p>Cross Railway journey = nil as crossing remains in place; Full access remains for pedestrians and cyclists on closure of the level crossing.</p> <p>Diversion for cars when level crossing closed 1.1km. Diversion for pedestrians, cyclists and mobility impaired - ~0.35km</p> <p>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.</p>
5	Safety	5.1	Rail Safety	<p>Safety for Rail users – removal of Level crossings is considered a significant safety enhancement</p>	Comparable to other options	Comparable to other options	Comparable to other options
		5.2	Vehicular Traffic Safety	<p>Quality of Access for these road users, lengths of diversions, removal of interface with rail and other modes of transport</p>	<p>All overbridges have a significant advantage as they are a great crossing alternative</p>	<p>All overbridges have a significant advantage as they are a great crossing alternative</p>	<p>All overbridges have a significant advantage as they are a great crossing alternative</p>
		5.3	Pedestrian, Cyclist and Vulnerable Road user Safety	<p>Quality of Access for these road users. removal of interfaces</p>	<p>Closure of the level crossing with no additional road access proposed, traffic will be diverted onto the adjacent viaduct resulting a slight increase in traffic.</p>	<p>Closure of the level crossing with no additional road access proposed, traffic will be diverted onto the adjacent viaduct resulting a slight increase in traffic.</p>	<p>Closure of the level crossing with no additional road access proposed, traffic will be diverted onto the adjacent viaduct resulting a slight increase in traffic.</p>
				Comparable to other options	Comparable to other options	Comparable to other options	
				<p>High Quality access for vulnerable road users proposed with the inclusion of bridge infrastructure in this option.</p>	<p>High Quality access for vulnerable road users proposed with the inclusion of bridge infrastructure in this option.</p>	<p>High Quality access for vulnerable road users proposed with the inclusion of bridge infrastructure in this option.</p>	

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6	Physical Activity	6.1	Connectivity to adjoining cycling facilities	Analysis of the extent that the scheme connects with cycle tracks.	Comparable to other options Severance overcome by provision of direct replacement.	Comparable to other options Severance overcome by provision of direct replacement.	Comparable to other options Severance overcome by provision of direct replacement.
		6.2	Permeability and local access opportunity	Journey Time and lengths of diversions for active modes and numbers affected. Analysis of the connectivity between level crossing and green areas/key attractions related to active mode	Comparable to other options	Comparable to other options	Comparable to 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	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	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 the Royal canal, and the amenity zoned lands south west of the level crossing. Removal of the level crossing require detour for access to each of them.	The principal affected amenities in the vicinity of the level crossing include the Royal canal, and the amenity zoned lands south west of the level crossing. Removal of the level crossing require detour for access to each of them.	The principal affected amenities in the vicinity of the level crossing include the Royal canal, and the amenity zoned lands south west of the level crossing. Removal of the level crossing require detour for access to each of them.
Criteria		Option 2		Option 3		Option 4	
1	Economy		Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options		
2	Integration		Comparable to other options	Comparable to other options	Comparable to other options		
3	Environment		Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options		
4	Accessibility and social inclusion		Comparable to other options	Comparable to other options	Comparable to other options		
5	Safety		Comparable to other options	Comparable to other options	Comparable to other options		
6	Physical Activity		Comparable to other options	Comparable to other options	Comparable to other options		
	Preferred		Yes	No	No		