

**DART+ West - MCA Stage 2**  
**Ashtown Level Crossing Assessment**

	Parameter	Criteria	Sub-Criteria (Quantitative/Qualitative)	Option 2	Option 3	Option 4 & 4b	Option 6
				<p><b>Under Rail and Canal Mill Lane:</b> This option would entail re-routing Ashtown Road along its old alignment (pre Royal Canal) on Mill Lane and passing under both the railway and the Royal Canal. The option can accommodate a cross-section of a 6.5m carriageway with 2m footpaths on both sides and 2.5m two-way cycle track on the eastern side. An at-grade turning head and drop-off will be provided to the south of Ashtown Station.</p> <p>The length of the option is approximately 150m on the northern side and 300m south of the rail line. The option would drop to an approximate level of 37.5m above MSL under the rail which is at a level of 45.6m above MSL at the crossing point. On the southern side a separate pedestrian and cyclist link and link to the riding school are proposed to maintain access for non-motorised use these would have cross section of 4.0m.</p> <p>It is feasible to cross at this location, as it is upstream of the double lock on the canal and the canal is at the same approximate level as the adjacent railway. This option would require some property acquisition and modifications to existing accesses.</p>	<p><b>Overbridge on Mill Lane</b> This option would entail re-routing Ashtown Road along its old alignment (pre Royal Canal) on Mill Lane and passing over both the railway and the Royal Canal. The option can accommodate a cross section of a 6.5m carriageway with 2m footpaths on both sides and 2.5m two-way cycle track on the eastern side. An at-grade turning head and drop-off will be provided to the south of Ashtown Station.</p> <p>The length of the option is approximately 300m each side of the rail line and canal. The option would rise to an approximate deck level of 52.9m OD which is at a level of 45.6m OD at the crossing point. On the southern side a separate pedestrian and cyclist link and link to the riding school are proposed to maintain access for non-motorised use these would have cross section of 4.0m.</p> <p>It is feasible to cross at this location, as it is upstream of the double lock on the canal and the canal is at the same approximate level as the adjacent railway. This option would require some property acquisition and modifications to existing accesses. It would pass through the grounds of the listed Ashtown House.</p>	<p>This option is considered in combination with Option 4 described with 4 a, and also includes a pedestrian cycle overbridge structure with a 4m wide cross section (Option 4B) over the canal and railway. It includes the demolition of the existing cable stayed footbridge at the level crossing and the station footbridge to provide space for the proposed bridge.</p> <p>The proposed bridge would cross the rail and Canal at a level of approximately 50.0m above MSL where the rail is at a level of 44.8m above MSL and the canal at a level of 39.4m above MSL.</p>	<p>This option would cross the railway and canal approximately 250m east of the existing level crossing. It incorporates a tightly curved plan layout which facilitates a link to the existing Ashtown road at the train station. The link would traverse the green area between Ashtown Station and Martin Savage Park and would climb to cross over the railway and canal to tie into the new circulation roads through the Peleletstown Development. The option can accommodate a cross section of a 6.5m carriageway with 2m footpaths and 1.75m cycle tracks on both sides.</p> <p>The option would bridge over the railway and canal with approach gradients of 6% either side. The rail level at the crossing is approximately 42.1m above MSL and the canal at 39.3m above MSL with the bridge level over the railway at 50.0m above MSL. The road level crests to a height of 52.0m above MSL, 60m south of the rail line before descending over the rail and canal. The option can be walled or can be constructed with open embankments to provide a softer texture to the scheme. The provision of landscaped embankments would result in a need for more land acquisition.</p> <p>There would also be impacts on Martin Savage park home to St Oliver Plunket's GAA club to the south and would be located within zoned housing development land within the Ashtown - Peleletstown SDZ to the north of the rail line and canal.</p>
1	Economy	1.1	Construction and Land Cost	Assessment of cost of construction of option, land costs, acquisition costs and temporary works	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
		1.2	Long Term Maintenance costs	Ongoing annual maintenance costs associated with varied options	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
		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.	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
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 advantage over other options	Some comparative advantage over other options
		2.2	Land Use Integration	Impact on land use strategies and regional 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 advantage over other options	Some comparative disadvantage over other options

3	Environment	2.3	Geographical Integration	Alternative level crossing options are mostly neutral in respect of Geographical Integration due to localised nature of the level crossings.	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 No significant effect on geographical integration.
		2.4	Other Government Policy Integration	Integration with the other Government policy such as the NPF and RSES.	Comparable to other options This option supports the delivery of the higher level national and regional planning policies regarding the DART Expansion programme (NPF, RSES, GDA Transport Strategy).	Comparable to other options This option supports the delivery of the higher level national and regional planning policies regarding the DART Expansion programme (NPF, RSES, GDA Transport Strategy).	Comparable to other options This option supports the delivery of the higher level national and regional planning policies regarding the DART Expansion programme (NPF, RSES, GDA Transport Strategy).	Comparable to other options This option supports the delivery of the higher level national and regional planning policies regarding the DART Expansion programme (NPF, RSES, GDA Transport Strategy).
		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 Moves traffic to rear of apt block from current road layout. This option will introduce additional noise to the rear apartments while also decreasing road traffic noise levels to the apartments currently facing the front of the apartment block. Construction phase of this option will be more significant due to the excavation required. 198 dwellings within 100m.	Some comparative disadvantage over other options Moves traffic to rear of apt block from current road layout. This option will introduce additional noise to the rear apartments while also decreasing road traffic noise levels to the apartments currently facing the front of the apartment block. Construction phase of this option will be less significant than Option 2 due to less excavation required. 150 dwellings within 100m.	Some comparative advantage over other options Operational traffic impacts will affect 2 dwellings. Pedestrian crossing will have impacts during construction. 148 dwellings within 100m of both vehicular route and pedestrian crossing. Only 2 properties within 100m of the vehicular route.	Some comparative disadvantage over other options Moves traffic to rear of apt block from current road layout. This option will introduce additional noise to the rear apartments while also decreasing road traffic noise levels to the apartments currently facing the front of the apartment block. 220 dwellings within 100m.
		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 Moves traffic to rear of apt block from current road layout. 130 dwellings within 50m where traffic has been moved from front to back. Embodied carbon for new bridge. Potential for construction phase dust impact is not significant when mitigation measures are put in place.	Some comparative disadvantage over other options Pedestrian crossing will have impacts during construction. 52 dwellings within 50m of both vehicular route and pedestrian crossing. Potential for construction phase dust impact is not significant when mitigation measures are put in place.	Some comparative advantage over other options Pedestrian crossing will have impacts during construction. 31 dwellings within 50m of pedestrian crossing. Pedestrian crossing will have impacts during construction. Only 1 property within 50m of the vehicular route of operational traffic. Two separate bridges will increase embodied carbon for this option. Potential for construction phase dust impact is not significant when mitigation measures are put in place.	Some comparative disadvantage over other options Moves traffic to new route away from current route and therefore impacts on properties 91 dwellings within 50m. This option also brings additional traffic to proximity of a school (highly sensitive receptor). 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.	Some comparative disadvantage over other options Option will have a very significant impact on boundary trees/woodlands, entrance gates and lodge at Ashton (Ashtown) House, a protected structure (No. 690). Lands of Ashton House and the corridor of the Royal Canal west of Longford Bridge are zoned High Amenity and identified as a Nature Development Area in the Fingal Development Plan. Very significant visual impact for setting of 10th Lock on Royal Canal. Significant impact due to removal of roadside tree-lined hedgerows leading to railway - significant impact for Ashton Stables. Further detail required for full assessment of likely significant impacts.	Some comparative disadvantage over other options Option will have a very significant impact on boundary trees/woodlands, entrance gates and lodge at Ashton (Ashtown) House, a protected structure (No. 690). Lands of Ashton House and the corridor of the Royal Canal west of Longford Bridge are zoned High Amenity and identified as a Nature Development Area in the Fingal Development Plan. Very significant visual impact for setting of 10th Lock on Royal Canal. Significant impact due to removal of roadside tree-lined hedgerows leading to railway - significant impact for Ashton Stables. Further design detail required for further detailed assessment.	Some comparative disadvantage over other options Alignment will have a very significant impact on the landscape character and structure, trees and woodlands of lands between Ashtown Lodge (and its associated lodge) and Coolmine Rugby Club. Alignment will impact existing landscape character of River Road and lands north to the Tolka River. The majority of the lands are laid out in mature parkland with trees, walks, and boundary woodland - all of which will be impacted by the alignment. The lands and the corridor of the Royal Canal are zoned High Amenity and identified as a Nature Development Area in the Fingal Development Plan. Tree and Woodland preservation objectives in Fingal Development Plan apply to the lands. Pedestrian/cycle bridge will have a significant impact on trees/hedgerows along the royal canal and on open space north of Martin Savage Park. The bridge overwings the canal in a visually incongruous manner. Royal canal corridor is a conservation area in the Dublin City Development Plan. Lands south of the canal are zoned open space (Z9) for the protection, provision and improvement of recreational amenity, open space and green networks.	Some comparative advantage over other options Option will have a significant impact on boundary trees/hedgerows along the railway / canal corridor (a conservation area in the Dublin City Development Plan). Option will have a very significant impact on open space and Oliver Plunket's GAA club/pitches at Martin Savage Park. Options would have a very significant impact on mature tree-lined hedgerow and linear open space between the established residential developments of Kempton Green and Ashbrook. NOTE: Option cuts through a permitted residential development on north side of canal - with very significant implications for the permitted layout (DCC Ref. 366615, ABP ref. PL29N.246373 - Active planning application 2596/20) Option will have very significant visual impact for properties at Ashbrook, Kempton Green, and for users of Martin Savage Open Space and the Royal Canal.
		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 This option is hydrologically connected to European sites downstream in the Tolka Estuary and Dublin Bay. There is no risk of Likely Significant Effects to this or any other European site. There is potential for impacts to Royal Canal pNHA arising from noise, artificial lighting and impacts to water quality during construction. Demolition of old Mill lane buildings may impact bats.	Significant comparative advantage over other options This option is hydrologically connected to European sites downstream in the Tolka Estuary and Dublin Bay. There is no risk of Likely Significant Effects to this or any other European site. There is potential for impacts to Royal Canal pNHA arising from noise, artificial lighting and impacts to water quality during construction. Demolition of old Mill lane buildings may impact bats. Loss of woodland habitat is anticipated.	Significant comparative advantage over other options This option is hydrologically connected to European sites downstream in the Tolka Estuary and Dublin Bay. There is no risk of Likely Significant Effects to this or any other European site. There is potential for impacts to Royal Canal pNHA arising from noise, artificial lighting and impacts to water quality during construction. Loss of woodlands, marsh, tree line and hedgerow habitat is anticipated.	Significant comparative disadvantage over other options This option is hydrologically connected to European sites downstream in the Tolka Estuary and Dublin Bay. There is potential for impacts to Royal Canal pNHA arising from noise, artificial lighting and impacts to water quality during construction. Permanent loss of habitat and disturbance to Light-bellied Brent Goose (Qualifying Interest of SPA) which are known forage in significant numbers at Ashtown Playing Pitches.
		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 disadvantage over other options Direct impacts on gate lodge, entrance and demesne associated with Ashtown House (RPS No. 0690). Indirect impacts on mill and outbuildings (RPS No. 691) and Peletstown House (structure of architectural merit). Potential indirect impacts on Royal Canal (RPS No. 944a) and the Royal Canal 10th Lock (RPS No. 944b). Potential to encounter archaeological deposits that may survive in undeveloped areas and path of former road way.	Some comparative disadvantage over other options Direct impacts on gate lodge, entrance and demesne associated with Ashtown House (RPS No. 0690). Indirect impacts on mill and outbuildings (RPS No. 691) and Peletstown House (structure of architectural merit). Potential indirect impacts on Royal Canal (RPS No. 944a) and the Royal Canal 10th Lock (RPS No. 944b). Potential to encounter archaeological deposits that may survive in undeveloped areas and path of former road way.	Some comparative disadvantage over other options Direct impacts on River Tolka and former demesne landscapes associated with Ashbrook (RPS No. 941) & Ashtown Lodge. Potential for indirect impacts on the Royal Canal (RPS No. 944a). Potential to encounter on archaeological deposits that may survive in undeveloped areas.	Some comparative advantage over other options No direct impacts predicted upon sites/structures subject to statutory protection. Potential for indirect impacts on the Royal Canal (RPS No. 944a). Potential to encounter archaeological deposits that may survive within undeveloped areas.

			Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
3.6	<b>Water Resources</b>	Overall potential significant effects on water resource attributes likely to be affected during construction and operation.	Underpass excavations pose potential risk to Groundwater quality.	This option has the potential to impact on water quality of the Royal Canal during the construction phase of the overbridge. Has some comparative advantage over other options.	Works in the vicinity of the river Tolka are within floodplain creating potential increase in flood risk to neighbouring lands. Creates potential pathway for pollutants to Tolka River resulting in negative impacts to Water Quality. This option has the potential to impact on water quality of the Royal Canal during the construction phase of the overbridge.	This option has the potential to impact on water quality of the Royal Canal during the construction phase of the overbridge. Has some comparative advantage over other options.
			<b>Significant comparative disadvantage over other options</b>	<b>Significant comparative disadvantage over other options</b>	<b>Significant comparative advantage over other options</b>	<b>Significant comparative disadvantage over other options</b>
			The non-agricultural impact will involve the acquisition of one residential property and a commercial property. The agricultural impact will have a profound impact on an equine holding (Ashtown Riding Stables).	The non-agricultural impact will involve the acquisition of one residential property and a commercial property. The agricultural impact will have a profound impact on an equine holding (Ashtown Riding Stables).	Direct impacts on non-agricultural property include impacts to property curtilage (garden) and community / amenity lands. Minor direct impact on agricultural property.	Option 6 will have direct impacts on amenity lands with a significant impact on the use of one sports pitch (St. Oliver Plunkett GAA club) and permitted planning permission which is yet to be developed. (DCC Ref. 3668/15, ABP ref. PL29N.246373 - Active planning application 2596/20))
			<b>Some comparative disadvantage over other options</b>	<b>Some comparative advantage over other options</b>	<b>Some comparative advantage over other options</b>	<b>Some comparative advantage over other options</b>
			Underbridge option means that some materials may arise, which could possibly be suitable for reuse elsewhere on the project (Minor positive). This is balanced by an associated impact of interfering with the canal and existing railway, which may require specific materials be imported. Involves other geotechnical risks to design and construction which would require further studies and design information.	Overbridge options require increased fill import to the site (Minor negative).	Overbridge options require increased fill import to the site (Minor negative). Chance of additional earthworks requirements on approach to river to the Tolka River (Minor negative).	Some made ground on-site. Overbridge options require increased fill import to the site (Minor negative).
3.7	<b>Agriculture and Non-Agricultural</b>	Overall impact on land take & property. Number of properties to be impacted/acquired. Likely temporary or permanent severance effects, etc.	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>
			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.	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.
			<b>Some comparative advantage over other options</b>	<b>Some comparative disadvantage over other options</b>	<b>Some comparative advantage over other options</b>	<b>Some comparative disadvantage over other options</b>
			Road traffic diverted distance route is 572m (1.1x diversion route). Local ped/cycle access maintained along ramped access through underpass, ~340m diversion.	Road traffic diverted distance route is 750m (1.4 x diversion route) steep gradients on north side of option will be a disadvantage to vulnerable road users. Local ped/cycle access maintained along ramped access over proposed bridge - ~400m diversion	Road traffic diverted distance route is 2.5km (1.4 x diversion route) steep gradients on north side of option will be a disadvantage to vulnerable road users. Local ped/cycle access maintained along ramped access over proposed bridge - ~400m diversion	Diverted distance route is 650m (1.4 x diversion route).
			<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>
4	<b>Accessibility &amp; Social Inclusion</b>	Impacts on low income groups, non-car owners, mobility impaired, visually impaired and people with a disability.	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>
			Station Accessibility is addressed for all level crossing options in proximity to a station. This option does not significantly affect access to the station.	Station Accessibility is addressed for all level crossing options in proximity to a station. This option does not significantly affect access to the station.	Station Accessibility is addressed for all level crossing options in proximity to a station. This option does not significantly affect access to the station.	Station Accessibility is addressed for all level crossing options in proximity to a station. This option does not significantly affect access to the station.
			<b>Some comparative advantage over other options</b>	<b>Some comparative disadvantage over other options</b>	<b>Some comparative disadvantage over other options</b>	<b>Some comparative disadvantage over other options</b>
			This option does not cause community severance. This option does not curtail access to community amenities. Diverted distance route is 572m (1.1x diversion route). Option slightly better than other options as the diversions for non motorised users are shorter.	This option does not cause community severance. This option does not significantly affect access to community amenities. Diverted distance route is 750m (1.4 x diversion route).	Diverted distance route 2.5km (4.8x diversion route) but existing vehicular route severed. Local access is maintained for non motorised users. Community facilities affected by reduced access include Shopping facilities, Giraffe Childcare, Pallestown Educate Together National School North of the railway and Halfway House, Ashtown Post Office St Dominics College, Meaghers Pharmacy, Daughters of Charity - south of the railway.	This option does not cause community severance. This option does not curtail access to community amenities. Diverted distance route is 650m (1.3 x diversion route).
			<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>
4.2	<b>Stations Accessibility</b>	Quantification of increased service levels to the vulnerable groups.	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>
			Station Accessibility is addressed for all level crossing options in proximity to a station. This option does not significantly affect access to the station.	Station Accessibility is addressed for all level crossing options in proximity to a station. This option does not significantly affect access to the station.	Station Accessibility is addressed for all level crossing options in proximity to a station. This option does not significantly affect access to the station.	Station Accessibility is addressed for all level crossing options in proximity to a station. This option does not significantly affect access to the station.
			<b>Some comparative advantage over other options</b>	<b>Some comparative disadvantage over other options</b>	<b>Some comparative disadvantage over other options</b>	<b>Some comparative disadvantage over other options</b>
			<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>
			<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>
4.3	<b>Social Inclusion</b>	Service levels impacts including severance of community groups; Severance from community facilities consequent on an option.	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>
			Station Accessibility is addressed for all level crossing options in proximity to a station. This option does not significantly affect access to the station.	Station Accessibility is addressed for all level crossing options in proximity to a station. This option does not significantly affect access to the station.	Station Accessibility is addressed for all level crossing options in proximity to a station. This option does not significantly affect access to the station.	Station Accessibility is addressed for all level crossing options in proximity to a station. This option does not significantly affect access to the station.
			<b>Some comparative advantage over other options</b>	<b>Some comparative disadvantage over other options</b>	<b>Some comparative disadvantage over other options</b>	<b>Some comparative disadvantage over other options</b>
			<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>
			<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>
5.1	<b>Rail Safety</b>	Safety for Rail users – removal of Level crossings is considered a significant safety enhancement	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>
			This option removes the railway level crossing, a characteristic which is considered positive from the perspective of railway safety.	This option removes the railway level crossing, a characteristic which is considered positive from the perspective of railway safety.	This option removes the railway level crossing, a characteristic which is considered positive from the perspective of railway safety.	This option removes the railway level crossing, a characteristic which is considered positive from the perspective of railway safety.
			<b>Some comparative advantage over other options</b>	<b>Some comparative disadvantage over other options</b>	<b>Some comparative disadvantage over other options</b>	<b>Some comparative disadvantage over other options</b>
			There is no significant construction activity along the railway associated with the level crossing removal.	There is no significant construction activity along the railway associated with the level crossing removal.	There is no significant construction activity along the railway associated with the level crossing removal.	There is no significant construction activity along the railway associated with the level crossing removal.
			<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>

5	Safety	5.2	<b>Vehicular Traffic Safety</b>	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	Comparable to other options
		5.3	<b>Pedestrian, Cyclist and Vulnerable Road user Safety</b>	Quality of Access for these road users, removal of interfaces	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
6	Physical Activity	6.1	<b>Connectivity to adjoining cycling facilities</b>	Analysis of the extent that the scheme connects with cycle tracks.	Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options
		6.2	<b>Permeability and local access opportunity</b>	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	Comparable to other options
<b>Criteria</b>				<b>Option 2</b>	<b>Option 3</b>	<b>Option 4 &amp; 4b</b>	<b>Option 5</b>	
1	<b>Economy</b>			Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options	
2	<b>Integration</b>			Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options	
3	<b>Environment</b>			Significant comparative disadvantage over other options	Significant comparative disadvantage over other options	Significant comparative advantage over other options	Significant comparative disadvantage over other options	
4	<b>Accessibility and social inclusion</b>			Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options	
5	<b>Safety</b>			Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	
6	<b>Physical Activity</b>			Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options	
<b>Preferred</b>				<b>Yes</b>	<b>No</b>	<b>No</b>	<b>No</b>	

DART+ West - MCA Stage 2 Coolmine Level Crossing Assessment							
Parameter	Criteria	Sub-Criteria (Quantitative/Qualitative)	Option 1	Option 3	Option 6	Option 9	
			<p>This online option is proposed along the existing Coolmine Road north of the rail line and canal and along Carpenterstown Road to the south. The option extends for 245m to the north and 210m to the south, accommodating a cross section of a 0.5m carriageway with 2m wide footpaths on both sides. There is insufficient room for with this option to accommodate dedicated cycle tracks without increasing the overall road footprint and impact on the adjacent properties further.</p> <p>The high side of railway is currently at a level of 65.3m above MSL at the existing level crossing with the proposed overbridge structure being at a minimum road level of 72.6m above MSL to provide the minimum clearance required for the electrification of the rail line. Embankment heights adjacent to properties north of the railway would be up to 6.6 metres while houses immediately south west of the railway would have embankments in the order of 6.4 metres high adjacent to them.</p> <p>A structure approximately 30m in length and at an elevation of approximately 7.3m would be required to span the railway and canal. The option would involve the construction of walled approaches to the bridge as there is insufficient space available for the construction of embankments. Initial examination suggests that the works would extend approximately 150m along Coolmine Road on each approach to the bridge, construction is likely to require the provision of noise abatement measures approximately 2.0 metres high above to the embankment.</p> <p>This option would also potentially require the demolition of the listed Kirkpatrick Bridge if not fully spanned.</p>	New Overbridge Connecting St. Mochta's Grove to Luttrellpark Road.	Overbridge to East of Coolmine Road.	Option 9 provides for the closure of Coolmine Level Crossing and construction of a pedestrian and cyclist bridge in the vicinity of the level crossing (OPTION 7). Options 9 proposes local road upgrades to accommodate diverted traffic along existing road network. The proposed upgrades include - Diswellstown Road Junction; Diswellstown Road /Coolmine Road Junction; Park Lodge /Castleknock Road Junction; and Porterstown Road /Diswellstown Road Junction.	
1	Economy	1.1 Construction and Land Cost	Assessment of cost of construction of option, land costs and temporary works	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Significant comparative disadvantage over other options	Significant comparative advantage over other options
			The capital cost of this option is negatively affected by the need to construct the works while maintaining traffic on the Coolmine Road and by the need to provide nested ramps for cyclists and vulnerable road users	The capital cost of this option is negatively affected by the need to construct a pedestrian cycle bridge on Coolmine Road in addition to the offline road bridge	- The capital cost of this option is negatively affected by : - the need to construct the works while maintaining traffic on the Coolmine Road; - the incorporation of significant curvature in the plan alignment which results in wider road construction; - the construction of a wide bridge over the station and the canal; - the construction of an elevated structure over the train station carpark; - the likely acquisition of 6No. house private dwellings.	Additional cost is incurred for this option due to the need to upgrade the local road network to accommodate diverted traffic consequent on closure of the level crossing.	
		1.2 Long Term Maintenance costs	Ongoing annual maintenance costs associated with varied options	Significant comparative disadvantage over other options	Significant comparative disadvantage over other options	Significant comparative disadvantage over other options	Significant comparative advantage over other options
			An overbridge would reduce maintenance requirements over a level crossing. Bridge option would determine overall maintenance costs.	An overbridge would reduce maintenance requirements over a level crossing. Bridge option would determine overall maintenance costs .	An overbridge likely to be Steel bridge to reduce deck thickness to allow for approach gradients .	Maintenance costs low - 15k ex VAT per year	
		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.	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
			Improvement in journey times; potential for induced trips; potential to increase congestion on surrounding road network as a result of induced traffic.	Improvement in journey times; potential for induced trips; potential to increase congestion on surrounding road network as a result of induced traffic.	Improvement in journey times; potential for induced trips; potential to increase congestion on surrounding road network as a result of induced traffic.	64% reduction in traffic volumes @ Junction North of Level Crossing; 1% increase in traffic at Junction south of level crossing; Junctions upgraded to address delays Diversion 2km for road traffic from Junction North to Junction South	
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 advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options	
			Improved interchange between modes, subject to satisfactory access to train station platforms. General reduction in journey times. There may be severance to existing connectivity on the approaches to the bridge over the canal and railway as a result of the construction of the required approach ramps. Access to the train station car park will be difficult. Primary cycle route, according to GDA Cycle Network Plan, but no room for cycle facilities on new bridge.	Rerouted access to train station car park. General improvement in connectivity and journey times. No severance to existing connectivity as a result of the construction of the required approach ramps. Coolmine Road is primary cycle route in GDA Cycle Network Plan - re-routing of traffic to new crossing point a benefit to cycling.	Improved interchange between modes, subject to satisfactory access to train station platforms. General reduction in journey times. There may be severance to existing connectivity on the approaches to the bridge over the canal and railway as a result of the construction of the required approach ramps. Access to the train station car park will be difficult and the capacity of the existing car park will be significantly reduced. Coolmine Road is primary cycle route in GDA Cycle Network Plan - Cycle track provided on overbridge	General improvement in connectivity and journey times for pedestrians & cyclists; Disimprovements to interchange caused by reduced access to the train station car park from the north.	

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.	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options
					Direct impacts the FCDP Objective 142: "Preserve the existing pedestrian and vehicular right of way at the Coolmine Level Crossing". A major negative in terms of the local policy context. Alternative pedestrian and cycle infrastructure provided therefore it meets the 'indicative/cycle/walking' network at this location (FDP). Land use factors: The area is a low-density suburban, well established residential area, there are no LAPs, Masterplans for the area.	Direct impacts the FCDP Objective 142: "Preserve the existing pedestrian and vehicular right of way at the Coolmine Level Crossing". A major negative in terms of the local policy context. Alternative pedestrian and cycle infrastructure provided therefore it meets the 'indicative/cycle/walking' network at this location (FDP). Direct impact to the FDP may be based 'Specific Objective 141 Prohibit any road bridge at this location'. It would bring traffic through an established residential area connecting to existing road network associated with Rivewood Court, Station Court way and St. Mochas Grove - depending on traffic flow this could impact negatively on the residential amenity of these zoned areas. Land use factors: The area is a low-density suburban, well established residential area, there are no LAPs, Masterplans for the area.	Direct impacts the FCDP Objective 142: "Preserve the existing pedestrian and vehicular right of way at the Coolmine Level Crossing". A major negative in terms of the local policy context. Alternative pedestrian and cycle infrastructure provided therefore it meets the 'indicative/cycle/walking' network at this location (FDP). Option 6 travels through the existing Coolmine Train Station carpark that has a 'Specific Objective 143 Car parking provision associated with the train station shall be two storeys or less'. This option may impact the future capacity to achieve this objective while also reducing the current capacity of the carpark that would be required for the likely increase of train passengers therefore affecting planning and transport integration. Land use factors: The area is a low-density suburban, well established residential area, there are no LAPs, Masterplans for the area.	Direct impacts the FCDP Objective 142: "Preserve the existing pedestrian and vehicular right of way at the Coolmine Level Crossing". A major negative in terms of the local policy context. Alternative pedestrian and cycle infrastructure provided therefore it meets the 'indicative/cycle/walking' network at this location (FDP). The wider road network improvements are likely to change transport and integration patterns in the area. Land use factors: The area is a low-density suburban, well established residential area, there are no LAPs, Masterplans that will be impacted.
					Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options
					No significant effect on geographical integration.	No significant effect on geographical integration.	No significant effect on geographical integration.	No significant effect on geographical integration.
2	Integration	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.	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
					Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options
					No significant effect on geographical integration.	No significant effect on geographical integration.	No significant effect on geographical integration.	No significant effect on geographical integration.
					Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
2	Integration	2.4	Other Government Policy Integration	Integration with the other Government policy such as the NPF and RSES.	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
					Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options
					No significant effect on geographical integration.	No significant effect on geographical integration.	No significant effect on geographical integration.	No significant effect on geographical integration.
					Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
2	Integration	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 advantage over other options	Significant comparative disadvantage over other options	Some comparative disadvantage over other options	Significant comparative advantage over other options
					Online option will have no additional impacts to the current situation. 316 dwellings within 100m.	Moves traffic to new location and will impact different properties to the current crossing. 434 dwellings within 100m.	Moves traffic to new location and will impact different properties to the current crossing. 159 dwellings within 100m.	Removes vehicular traffic from the crossing and will therefore reduce noise impacts on the local environment. 171 dwellings within 100m. Traffic levels increase on the diversion routes when road widening and junction reconfiguration is proposed.
		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	Significant comparative disadvantage over other options	Some comparative advantage over other options	Significant comparative advantage over other options
					On line option. 166 dwellings within 50m potentially impacted during operational phase. Potential for construction phase dust impact is not significant when mitigation measures are put in place.	Moves traffic to new location and will impact different properties to the current crossing. 216 dwellings within 50m. Potential for construction phase dust impact is not significant when mitigation measures are put in place.	Moves traffic to new location and will impact different properties to the current crossing. 49 dwellings within 50m.	Removes vehicular traffic and the construction phase is minimal. No traffic distribution data available to assess impact on new receptors therefore assessment only considers current receptors close to the level crossing. 42 dwellings within 50m. 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.	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
					Online overbridge option is likely to have significant impact on visual setting of adjoining residential properties at Kirkpatrick Drive, Sheepmoor Lane, Delwood Grove and Riverwood Hall. Significant visual impact for setting of Kirkpatrick Bridge - a protected structure and hence for Objective CH43 of Fingal Development Plan. Likely significant impact due to removal of roadside tree-lined hedgerows leading to railway / canal. Further information required regarding junction proposal/arrangement for Sheepmoor Lane and Kirkpatrick Drive.	Overbridge option will have very significant landscape and visual impact on open space zoned lands between St. Mochta's/Rockfield, Stationcourt Way/Kirkpatrick and through Riverwood. Very significant visual impact for residential properties at St. Mochta's, Rockfield, Stationcourt Way/Hall, Kirkpatrick and Riverwood. Demolition of residential property at Sheepmoor Lane. Tree and vegetation loss and significant visual impact in crossing the Royal Canal and hence for Objective CH43 of Fingal Development Plan.	Overbridge option will have very significant visual impact on residential properties at Delwood, Cherry Drive and Rosahaven. Very significant landscape and visual impact on corridor of Royal Canal, setting of Kirkpatrick Bridge and hence for Objective CH43 of Fingal Development Plan. Demolition of residential properties at Delwood Grove.	Some loss of trees and vegetation. Visual impact for nearest properties at Delwood Grove, Sheepmoor Lane and Cherry Drive and along Royal Canal. Some impact on trees and open spaces in vicinity of road works at Diswellstown Road / Clonsilla Road Junction; Diswellstown Road Junction; Diswellstown Road / Porterstown Road Junction; and Park Lodge / Castleknock Road Junction.
		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.	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options
					This option is hydrologically connected to European sites downstream in the Tolka Estuary and Dublin Bay. There is no risk of Likely Significant Effects to this or any other European site. There is potential for impacts to Royal Canal pNHA arising from noise, artificial lighting and impacts to water quality during construction. Widening of Coolmine Road on north side could result in loss of mature ash trees on the west side of road next to canal. This could be avoided if road is widened at eastern side. Demolition of Kirkpatrick Bridge could cause disturbance to and displacement of fauna as well as impact water quality in the canal. As the new structure over the railway and canal is aligned with the existing crossing there will be minimal habitat loss and less impact on the overall integrity of the pNHA.	This option is hydrologically connected to European sites downstream in the Tolka Estuary and Dublin Bay. There is no risk of Likely Significant Effects to this or any other European site. There is potential for impacts to Royal Canal pNHA arising from noise, artificial lighting and impacts to water quality during construction. New structure over the canal will fragment the ecological corridor. The construction of the pedestrian and cyclist bridge could result in tree loss north and south of the canal. Loss of woodland, scrub, amenity grassland, scattered trees and parkland is anticipated. Demolition of property on the north side of the canal on Sheepmoor Lane could disturb and displace fauna	This option is hydrologically connected to European sites downstream in the Tolka Estuary and Dublin Bay. There is no risk of Likely Significant Effects to this or any other European site. There is potential for impacts to Royal Canal pNHA arising from noise, artificial lighting and impacts to water quality during construction. Large new structure over the canal which will fragment the ecological corridor. Loss of woodland and scrub habitat is anticipated.	This option is hydrologically connected to European sites downstream in the Tolka Estuary and Dublin Bay. There is no risk of Likely Significant Effects to this or any other European site. There is potential for impacts to Royal Canal pNHA arising from noise, artificial lighting and impacts to water quality during construction. The construction of the pedestrian and cyclist bridge will result in tree loss north of the canal and potentially south of the railway at Coolmine Station. New structure over the canal will fragment the ecological corridor. Road improvements will result in minor loss of trees, shrubs and grassy verges along existing roads.

3	Environment	3.5	<b>Cultural, Archaeological and Architectural Heritage</b>	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)	Significant comparative disadvantage over other options	Significant comparative advantage over other options	Significant comparative advantage over other options	Significant comparative advantage over other options
					Potential direct impact on Kirkpatrick Bridge (RPS 0697) that spans over the Royal Canal. Potential indirect impact to the Royal Canal (RPS No. 0994a), indirect impact to the Royal Canal (RPS No. 0994a).	Indirect impact to the Royal Canal (RPS No. 994a).	Potential indirect impact to the Royal Canal (RPS No. 994a).	Potential indirect impact to the Royal Canal (RPS No. 994a).
					Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options
		3.6	<b>Water Resources</b>	Overall potential significant effects on water resource attributes likely to be affected during construction and operation.	Option likely have minimal impact on flood regime. Potential for minor impact on surface water quality during construction. Likely minimal impact on groundwater quality.	Option likely to have minimal impact on flood regime. Potential for minor impact on surface water quality during construction. Likely minimal impact on groundwater quality.	Option likely have minimal impact on flood regime. Potential for minor impact on surface water quality during construction. Likely minimal impact on groundwater quality.	Option likely 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.
					Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options
		3.7	<b>Agriculture and Non-Agricultural</b>	Overall impact on land take & property. Number of properties to be impacted/acquired. Likely temporary or permanent severance effects, etc.	Significant comparative advantage over other options	Some comparative disadvantage over other options	Significant comparative disadvantage over other options	Some comparative advantage over other options
					This option will reconfigure local access onto Coolmine / Carpenterstown Road. Direct impacts will include impacts to existing boundary and green areas.	This option will reconfigure local access for Riverwood Court and St. Mochta's Green/ Stationcourt Way. The non-agricultural impact will involve the acquisition of one residential property under Option 3	This option will involve the acquisition of four residential properties on the north side of the rail line. There will be a significant impact on the Coolmine Station car park.	This option will impact on Coolmine Station car park resulting in a reduction in car spaces. The proposed local road upgrades will involve minor landtake of private lands resulting in loss of car parking and boundary impacts at Woodbrook Court and properties on the Castleknock Road. Boundary impacts and loss of mature trees, hedgerow and grassed area are proposed at Laurel Lodge Park, Porterstown Road and Diswellstown Road.
					Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options
		3.8	<b>Geology and Soils (including Waste)</b>	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 disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
			Overbridge options require fill import to the site for construction over existing roadway (Minor negative). Potential for ground contamination is considered low, subject to further investigation. No pits or quarries are present. Comparative advantage is considered as construction is proposed on existing route and unlikely to encounter new areas of soft ground or contamination.	Overbridge options require fill import to the site for construction in open ground (Minor negative). Potential for ground contamination is considered low, subject to further investigation. No pits or quarries are present.	Some existing made ground cover on-site (requires walkover survey / investigation). This overbridge option requires increased fill import to the site, more than other options and yet fill would be onto ground that has been built on already (Minor negative). Potential for ground contamination is considered low, subject to further investigation. No pits or quarries are present.	Cycle/pedestrian overbridge option requires less fill import to the site. Also provides for construction over existing roadway (Minor negative). Potential for ground contamination is considered low, subject to further investigation. No pits or quarries are present. Comparative advantage is considered as construction is proposed on existing route and unlikely to encounter new areas of soft ground or contamination.		
			Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options		
3.9	<b>Radiation and Stray Current</b>	Overall likely impact on existing sources of electromagnetic radiation.	Comparable to other options	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.	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	Accessibility & Social Inclusion	4.1	<b>Impact on Vulnerable Groups</b>	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	Comparable to other options
					No significant diversion for traffic. Options enhances access, particularly for vulnerable groups through the incorporation of shallow rises and gradients, enhancement of pedestrian, cycle and mobility impaired access.	No significant diversion for traffic. Options enhances access, particularly for vulnerable groups through the incorporation of shallow rises and gradients, enhancement of pedestrian, cycle and mobility impaired access.	No significant diversion for traffic. Options enhances access, particularly for vulnerable groups through the incorporation of shallow rises and gradients, enhancement of pedestrian, cycle and mobility impaired access.	No significant diversion for traffic. Options enhances access, particularly for vulnerable groups through the incorporation of shallow rises and gradients, enhancement of pedestrian, cycle and mobility impaired access.
					Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options
		4.2	<b>Stations Accessibility</b>	Quantification of increased service levels to the vulnerable groups.	Station Accessibility is addressed for all level crossing options in proximity to a station This option does not significantly affect access to the station	Station Accessibility is addressed for all level crossing options in proximity to a station This option does not significantly affect access to the station	Station Accessibility is addressed for all level crossing options in proximity to a station This option does not significantly affect access to the station	Station Accessibility is addressed for all level crossing options in proximity to a station This option does not significantly affect access to the station
					Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options
		4.3	<b>Social Inclusion</b>	Service levels impacts including severance of community groups; Severance from community facilities consequent on an option.	This option does not cause community severance. This option does not affect access to community amenities	This option does not cause community severance. This option does not curtail access to community amenities Diverted distance route 1.5km (3.3x diversion route)	This option does not cause community severance. This option does not curtail access to community amenities Diverted distance route 821m (1.2x diversion route).	The enhancement of the local road network to address traffic delays due to diverted traffic diversions curtails diversions to 2km for cars. Pedestrians and cyclists have good access







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.
					Comparable to other options	Comparable to other options	Comparable to other options
		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. No additional maintenance cost is allocated to the realigned section of Porterstown Road as this is currently in the charge of Fingal county Council and it is likely to remain so.	The maintenance costs are associated with regular inspection and maintenance of the bridge structure.
					Comparable to other options	Comparable to other options	Comparable to other options
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	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.	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.
		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	Comparable to other options	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 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).	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	Comparable to other options	Comparable to other options		
			No significant effect on geographical integration.	No significant effect on geographical integration.	No significant effect on geographical integration.		

3	Environment	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.
		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.
		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 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.	Comparable to other options 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.	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.
		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.	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.	Some comparative disadvantage over other options 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.	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.
		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.	Some comparative advantage 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.	Some comparative advantage 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 at new bridge crossing. As this option involves work over and adjacent to canal there is potential for impact on the canal.	Some comparative disadvantage over other options 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.
		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)	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.	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 linear approach ramps to north 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 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.
		3.6	Water Resources	Overall potential significant effects on water resource attributes likely to be affected during construction and operation.	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.	Comparable to 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.	Comparable to 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 Option 2 will have a direct impact on non-agricultural lands in use as a car park for St. Mochta's GAA club.	Some comparative disadvantage over other options Option 3 will impact on lands used by St. Mochta's GAA club, St. Mochta's FC and St. Mochta's National School	Some comparative advantage over other options 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	<b>Geology and Soils (including Waste)</b>	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	<b>Radiation and Stray Current</b>	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	<b>Accessibility &amp; Social Inclusion</b>	4.1	<b>Impact on Vulnerable Groups</b>	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	<b>Stations Accessibility</b>	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	
		4.3	<b>Social Inclusion</b>	Service levels impacts including severance of community groups; Severance from community facilities consequent on an option.	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.	Cross Railway journey = nil as crossing remains in place; Full access remains for pedestrians and cyclists on closure of the level crossing.	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	Diversion for cars when level crossing closed 1.1km. Diversion for pedestrians, cyclists and mobility impaired - ~0.35km	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 Cholm 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.	The principal affected amenities in the vicinity of the level crossing include St Mochta's football grounds south of the railway, Scoil Cholm 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.	The principal affected amenities in the vicinity of the level crossing include St Mochta's football grounds south of the railway, Scoil Cholm 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	<b>Safety</b>	5.1	<b>Rail Safety</b>	Safety for Rail users – removal of Level crossings is considered a significant safety enhancement	Comparable to other options	Comparable to other options	Comparable to other options
					All overbridges have a significant advantage as they are a great crossing alternative	All overbridges have a significant advantage as they are a great crossing alternative	All overbridges have a significant advantage as they are a great crossing alternative
		5.2	<b>Vehicular Traffic Safety</b>	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
				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.	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.	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.	
		5.3	<b>Pedestrian, Cyclist and Vulnerable Road user Safety</b>	Quality of Access for these road users. removal of interfaces	Comparable to other options	Comparable to other options	Comparable to 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.



DART+ West - MCA Stage 2							
Clonsilla Level Crossing Assessment							
	Parameter	Criteria	Sub-Criteria (Quantitative/ Qualitative)	Option 1	Option 2	Option 4	
				Pedestrian Cycle Bridge only at Level Crossing / Station (delivered contingent on road bridge crossing at Barberstown)	Overbridge with approach roadworks 200m to the east of crossing	Overbridge 210m to the west of crossing	
1	Economy	1.1	Construction and Land Cost	Assessment of cost of construction of option, land costs and temporary works	<p><b>Significant comparative advantage over other options</b></p> <p>The provisions here include low key works to close the level crossing and the construction of a new pedestrian / cycle bridge</p>	<p><b>Significant comparative disadvantage over other options</b></p> <p>This option includes the costs of urban roadworks across green fieldsto cross the railway and canal via raised embankment and single span bridge. Includes 2No. Junctions and the acquisition of 6No houses.</p>	<p><b>Significant comparative disadvantage over other options</b></p> <p>This option includes costs above Option 2 for additional at grade roadworks and a longer bridge structure and land acquisition associated with same. It also includes a premium for the cost of online construction which applies to the works North of the canal. This option does not require the acquisition of any houses.</p>
		1.2	Long Term Maintenance costs	Ongoing annual maintenance costs associated with varied options	<p><b>Some comparative advantage over other options</b></p> <p>Maintenance costs low - 15k ex VAT per year for bridge structure</p>	<p><b>Some comparative disadvantage over other options</b></p> <p>The inspection and maintenance costs are associated with the roadworks and the bridge</p>	<p><b>Some comparative disadvantage over other options</b></p> <p>An overbridge would increase the maintenance requirements over a level crossing, though it would not be significantly more so than other options.</p>
		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.	<p><b>Some comparative disadvantage over other options</b></p> <p>Displacement of mobility impaired and cycle traffic onto ramped alternative routes; increase in journey times for local residents.</p> <p>Removal of vehicular access over the level crossing results in displaced flows - 680 vehicles AM peak hour and 704 vehicles PM peak hour.</p> <p>Additional traffic delay will result along adjacent access routes - 1% AM peak hour and 1% PM peak hour.</p> <p>Benchmark journey times will increase by up to 3%.</p>	<p><b>Some comparative advantage over other options</b></p> <p>Some improvement in journey time; potential for induced trips; diversion required for local residents.</p>	<p><b>Some comparative advantage over other options</b></p> <p>Some improvement in journey time; potential for induced trips; diversion required for local residents.</p>
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.	<p><b>Some comparative disadvantage over other options</b></p> <p>Severance of access to train station car parking from south of the railway. Would require significant re-routing of proposed L52 bus route (BusConnects). Diversion of vehicular access to Royal Canal greenway along a more circuitous route.</p>	<p><b>Some comparative advantage over other options</b></p> <p>Improved facilities for pedestrians and cyclists on new road link. Diversion of vehicular access to Royal Canal greenway along a more circuitous route. Slightly more circuitous route for cyclists to access station from the south. Would require slight re-routing of proposed L52 bus route (BusConnects), and a looped route back to continue to directly serve Coolmine Station, as per existing plan.</p>	<p><b>Some comparative advantage over other options</b></p> <p>Improved facilities for pedestrians and cyclists on new road link, although less extensive than other options. Slightly more circuitous route for cyclists to access station from the south. Removal of direct local access to Royal Canal greenway, although alternative access provided via slightly circuitous route. Would require slight re-routing of proposed L52 bus route (BusConnects), although it would still directly serve Coolmine Station, as per existing plan</p>
		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.	<p><b>Some comparative advantage over other options</b></p> <p>The option is located in lands zoned "High Amenity" and "Open Space". The construction of a pedestrian and cycle bridge would impact negatively on this land use objective which crosses over the Royal Canal. It would prevent continued vehicular access at this location. However, when compared with other options it is more discrete and impacts less HA and OS zoned lands when compared with Option 2 and 4 and for this reason would have some advantages over other options. The Draft Kellystown LAP 2020 is currently being developed on the opposite side of the road and would need to be taken account of this as part of the movement strategy. Further consultation would be required with FCC if this is chosen as the preferred option.</p>	<p><b>Some comparative disadvantage over other options</b></p> <p>This Option would impact lands zoned LAP13.C Kellystown LAP which is also zoned as a Strategic Development Zone (SDZ) Other relevant zonings that apply include Open Space, established residential, town centre and district. It is also within a wider 'urban Framework Plan' area as per the Fingal DP map-based Zoning Objectives. The Draft Kellystown LAP 2020 (south of the railway) indicates that this Option would be located in an area identified for development on the opposite side of the road and would need to be taken account of this as part of the movement strategy. Further consultation would be required with FCC if this is chosen as the preferred option.</p>	<p><b>Some comparative advantage over other options</b></p> <p>Options 4 impacts zoned 'High Amenity' and 'Open Space' and would include vehicular, pedestrian and cycle access. The Draft Kellystown LAP 2020 is currently being developed on the opposite side of the road and would need to be taken account of this as part of the movement strategy. Further consultation would be required with FCC if this is chosen as the preferred option.</p>

	2.3	<b>Geographical Integration</b>	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.	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>	
				No significant effect on geographical integration.	No significant effect on geographical integration.	No significant effect on geographical integration.	
	2.4	<b>Other Government Policy Integration</b>	Integration with the other Government policy such as the NPF and RSES.	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>	
				This option would 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 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 higher level national and regional planning policies regarding the DART Expansion programme (NPF- (NS04), RSES & GDA Transport Strategy).	
3	Environment	3.1	<b>Noise and Vibration</b>	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.	<b>Some comparative advantage over other options</b>	<b>Some comparative disadvantage over other options</b>	<b>Some comparative disadvantage over other options</b>
					Pedestrian crossing only will have no operational noise impact. 27 properties within 100m.	This option constructs a new crossing point and therefore moves vehicular traffic closer to dwellings not currently exposed to vehicular traffic. 86 dwellings within 100m.	38 dwellings within 100m. Slightly preferred over option 2 due to lower number of properties within 100m
		3.2	<b>Air Quality and Climate</b>	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.	<b>Some comparative advantage over other options</b>	<b>Some comparative disadvantage over other options</b>	<b>Some comparative disadvantage over other options</b>
					Pedestrian crossing only will have no operational impact locally. Traffic redistribution not considered. 8 property within 50m. Potential for construction phase dust impact is not significant when mitigation measures are put in place.	25 dwellings within 50m. Due to longer length and overbridge there would be a higher volume of embodied carbon in this option. Potential for construction phase dust impact is not significant when mitigation measures are put in place. Potential for construction phase dust impact is not significant when mitigation measures are put in place.	5 dwellings within 50m. Slightly preferred over option 2 due to lower number of properties within 50m and lower construction materials (embodied carbon). Potential for construction phase dust impact is not significant when mitigation measures are put in place.
		3.3	<b>Landscape and Visual (including light)</b>	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.	<b>Some comparative advantage over other options</b>	<b>Some comparative disadvantage over other options</b>	<b>Some comparative disadvantage over other options</b>
					Proposed structure will impact some trees at entrance to Beech Park. Significant impact on residential properties on Clonsilla Road/ Larch Grove and Weaver's Walk north of the canal, and along the east side of Clonsilla Road south of canal (including Greenmount House). Impact on tree-lined corridor on northern side canal where structure will overpass the canal.	Overbridge option will remove a number of residential properties at Larch Grove. Very significant impact on residential properties on Clonsilla Road/ Larch Grove and Weaver's Walk north of the canal, and along the east side of Clonsilla Road south of canal (including Greenmount House). Significant impact on tree-lined corridor of canal/railway Junction with Porterstown Road may impact boundary of Luttrellstown Castle estate (an architectural conservation area, and a protected structure). Tree Preservation Objectives within Luttrellstown estate. Note also impacts for Option 1.	Impact on trees north of the canal - which are subject to Tree Preservation Objectives. Passes through Beech Park. Lands south of the railway are zoned High Amenity. Very significant impact on tree-lined corridor of canal and entrance to Porter's Gate. Visual impact on canal side properties at end of western ramp.
		3.4	<b>Biodiversity (flora and fauna)</b>	Potential compliance/conflict with biodiversity objectives; Indirect impacts on protected species, designated sites; Overall effect on nature conservation resource.	<b>Some comparative advantage over other options</b>	<b>Some comparative disadvantage over other options</b>	<b>Some comparative advantage over other options</b>
3.5	<b>Cultural, Archaeological and Architectural Heritage</b>	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)	<b>Significant comparative disadvantage over other options</b>	<b>Significant comparative advantage over other options</b>	<b>Significant comparative disadvantage over other options</b>		
			Potential indirect impacts on Callaghan Bridge (RPS No. 706), the Royal Canal (RPS No. 944a) and Clonsilla Overbridge and Signal Box (RPS No. 707). Requires the construction within the footprint of the royal canal and localised narrowing of the canal.	Direct impacts on demesne landscapes associated with Greenmount and Kellystown. Potential indirect impact on the Royal Canal (RPS No. 944a). Potential to encounter archaeological deposits that may survive within undeveloped areas.	Direct impact on demesne landscape associated with Courtyard, Beech Park House (RPS No. 709). Potential indirect impact on the Royal Canal (RPS No. 944a). Potential to encounter archaeological deposits that may survive within greenfield areas.		
3.6	<b>Water Resources</b>	Overall potential significant effects on water resource attributes likely to be affected during construction and operation.	<b>Some comparative advantage over other options</b>	<b>Some comparative disadvantage over other options</b>	<b>Some comparative disadvantage over other options</b>		
			Potential Positive impact on surface water quality during operation by removing <b>vehicular traffic borne pollutants</b> . Potential negative impact on surface water quality during construction phase. Option has some comparative advantages over other options.	Potential negative impact on surface water quality during operational phase. Potential negative impact on surface and groundwater quality during construction phase. Has some comparative disadvantage over other options.	Proposed route indicated to have increased flood risk compared to other options. Potential negative impacts to surface water quality during operational phase. Potential negative impact on surface and groundwater quality during construction phase. Has some comparative disadvantage over other options.		

			Significant comparative advantage over other options	Significant comparative disadvantage over other options	Significant comparative advantage over other options			
	3.7	<b>Agriculture and Non-Agricultural</b>	Overall impact on land take & property. Number of properties to be impacted/acquired. Likely temporary or permanent severance effects, etc.	Options 1 will have a direct impact involving a small area of amenity lands in Beech Park.	Under Options 2, the non-agricultural impact will involve the acquisition of five residential properties. The agricultural impact will result in landtake and land severance on a livestock farm holding.	Option 4 will have direct impact on amenity lands in Beech Park.		
	3.8	<b>Geology and Soils (including Waste)</b>	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 disadvantage over other options	Some comparative disadvantage over other options		
	3.9	<b>Radiation and Stray Current</b>	Overall likely impact on existing sources of electromagnetic radiation.	Comparable to other options	Comparable to other options	Comparable to other options		
4	Accessibility & Social inclusion	4.1	<b>Impact on Vulnerable Groups</b>	Impacts on low income groups, non-car owners, mobility impaired, visually impaired and people with a disability.	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options	
					Road traffic diverted distance route is 5.5km (12 x diversion route) steep gradients on north side of option will be a disadvantage to vulnerable road users. Local ped/cycle access maintained along ramped access over proposed bridge - ~340m diversion	Local ped/cycle access maintained along ramped access over proposed bridge.	Road traffic diverted distance route is 572m (1.1x diversion route).	Road traffic diverted distance route 894m (2.0x diversion route)
					Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options	
	4.2	<b>Stations Accessibility</b>	Quantification of increased service levels to the vulnerable groups.	Station Accessibility is addressed for all level crossing options in proximity to a station This option does not significantly affect access to the station	Station Accessibility is addressed for all level crossing options in proximity to a station This option does not significantly affect access to the station	Station Accessibility is addressed for all level crossing options in proximity to a station Shortest diversion route 894m (2.0x diversion route)		
				Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options		
				Diverted distance for vehicular traffic 5.5km (12 x diversion route), proposed pedestrian / cycle bridge maintains local non vehicular access. Community facilities affected by reduced access include Shopping facilities, St Josephs Medical Centre, St Mary's Church, 2No.Montessori School - north of the railway andThe Coartyard Beechpark, Westmansdown Sports and Conference Centre, Dublin Falconry and Luttrellstown Castle Resort - south of the railway.	This option does not cause community severance. This option does not curtail access to community amenities Diverted distance route is 572m (1.1x diversion route).	This option does not cause community severance. This option does not curtail access to community amenities Diverted distance route 894m (2.0x diversion route)		
4.3	<b>Social Inclusion</b>	Service levels impacts including severance of community groups; Severance from community facilities consequent on an option.	Comparable to other options	Comparable to other options	Comparable to other options			
			Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options			
5.1	<b>Rail Safety</b>	Safety for Rail users – removal of Level crossings is considered a significant safety enhancement	Comparable to other options	Comparable to other options	Comparable to other options			
			This option removes the railway level crossing, a characteristic which is considered positive from the perspective of railway safety. There is no significant construction activity along the railway associated with the level crossing	This option removes the railway level crossing, a characteristic which is considered positive from the perspective of railway safety. There is no significant construction activity along the railway associated with the level crossing	This option removes the railway level crossing, a characteristic which is considered positive from the perspective of railway safety. There is no significant construction activity along the railway associated with the level crossing			



5	Safety	5.2	<b>Vehicular Traffic Safety</b>	Quality of Access for these road users, lengths of diversions, removal of interface with rail and other modes of transport	Significant comparative disadvantage over other options Closing the crossing with no alternative would result in diversion of road traffic onto longer routes but would avoid congestion at the level crossing.	Significant comparative advantage over other options Providing a segregated crossing would have a significant advantage as vehicular traffic is not crossing the live rail.	Significant comparative advantage over other options Providing a segregated crossing would have a significant advantage as vehicular traffic is not crossing the live rail.
		5.3	<b>Pedestrian, Cyclist and Vulnerable Road user Safety</b>	Quality of Access for these road users. removal of interfaces	Some comparative advantage over other options This option closes the level crossing - removes a significant hazard to transport users; Pedestrians, Cyclists and vulnerable road users are, however, accommodated at the level crossing by the proposed bridge.	Some comparative disadvantage over other options This option replaces access for pedestrians, cyclists and vulnerable road users via the proposed bridge but at more remote location than Option 1. Diverted distance route 758m (1.6x diversion route).	Some comparative disadvantage over other options This option replaces access for pedestrians, cyclists and vulnerable road users via the proposed bridge but at more remote location than Option 1. Diverted distance route 894m (2.0x diversion route).
6	Physical Activity	6.1	<b>Connectivity to adjoining cycling facilities</b>	Analysis of the extent that the scheme connects with cycle tracks.	Some comparative advantage over other options This option supports good linkage between existing and proposed cycle facilities The quality of access to the train station for pedestrians and cyclists is good in respect of this option.	Some comparative disadvantage over other options This option provides replacement pedestrian and cycle access with associated linkage to existing and proposed facilities along a diverted route - diversion - 500m	Some comparative disadvantage over other options This option provides replacement pedestrian and cycle access with associated linkage to existing and proposed facilities along a diverted route - diversion - 600m
		6.2	<b>Permeability and local access opportunity</b>	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	Some comparative advantage over other options Cross Railway journey = nil as the proposed option is along the plan alignment of the existing Clonsilla Road. Diversion for cyclists when level crossing closed is 0.35km. The principal high amenity greenspaces in the vicinity of the existing train station include the Royal canal, the amenity zoned lands and golf courses south of the level crossing. This option retains access to the amenities effectively	Some comparative disadvantage over other options This option provides replacement pedestrian and cycle access with associated linkage to existing and proposed facilities along a diverted route - diversion - 500m The principal high amenity greenspaces in the vicinity of the existing train station include the Royal canal, the amenity zoned lands and golf courses south of the level crossing. This option retains access to the amenities	Some comparative disadvantage over other options This option provides replacement pedestrian and cycle access with associated linkage to existing and proposed facilities along a diverted route - diversion - 600m The principal high amenity greenspaces in the vicinity of the existing train station include the Royal canal, the amenity zoned lands and golf courses south of the level crossing. This option retains access to the amenities

	Criteria		Option 1	Option 2	Option 4
1	<b>Economy</b>		Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options
2	<b>Integration</b>		Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
3	<b>Environment</b>		Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options
4	<b>Accessibility and social inclusion</b>		Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options
5	<b>Safety</b>		Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
6	<b>Physical Activity</b>		Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options
	<b>Preferred</b>		<b>Yes</b>	<b>No</b>	<b>No</b>

DART+ West - MCA Stage 2							
Barberstown Level Crossing Assessment							
	Parameter		Criteria	Sub-Criteria (Quantitative/Qualitative)	Option 2	Option 4	Option 5
					Road realignment with skewed roadbridge over canal and railway circa 130m southwest of level crossing. Pedestrian / Cycle facilities provided for along diverted road. Level Crossing closed. Turnback facilities provided at railway	Road realignment with square roadbridge over canal and railway circa 180m southwest of level crossing. Pedestrian / Cycle facilities provided for along diverted road. Level Crossing closed. Turnback facilities provided at railway	Pedestrian / cycle Bridge at Crossing, Turnback facilities at railway, Level Crossing Closed, No replacement road access
1	Economy	1.1	Construction and Land Cost	Assessment of cost of construction of option, land costs and temporary works	Significant comparative disadvantage over other options	Significant comparative disadvantage over other options	Significant comparative advantage over other options
					This option includes the costs of urban roadworks across green fields to cross the railway and canal via raised embankment and a single span bridge. Includes 2No, roundabouts.	This option includes the costs of urban roadworks across green fields to cross the railway and canal via raised embankment and a single span bridge. Includes 2No, roundabouts.	Construction costs of this option will be comparative to other options as the provision of a pedestrian cycle bridge within the canal environs will require significant temporary and permanent works. The cost to acquire land will be lower than other options providing full access
		1.2	Long Term Maintenance costs	Ongoing annual maintenance costs associated with varied options	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
					An overbridge would reduce maintenance requirements over a level crossing. Bridge option would determine overall maintenance costs.	An overbridge would reduce maintenance requirements over a level crossing. Bridge option would determine overall maintenance costs.	A pedestrian/cyclist overbridge would require minimal maintenance in short term with regular inspections and remedial works in the long term. The long term maintenance low compared to other options.
		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.	Significant comparative advantage over other options	Significant comparative advantage over other options	Significant comparative disadvantage over other options
					Some improvement in journey time; potential for induced trips; diversion required for local residents.	Some improvement in journey time; potential for induced trips; diversion required for local residents.	Displacement of mobility impaired and cycle traffic onto ramped alternative routes; increase in journey times for local residents. Removal of vehicular access over the level crossing results in displaced flows - 1218 vehicles AM peak hour and 1110 vehicles PM peak hour. Additional traffic delay will result along adjacent access routes - 7% AM peak hour and 5% PM peak hour. Benchmark journey times will increase by up to 8%.
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 advantage over other options	Some comparative disadvantage over other options		
			Some improvement in journey time; Shared pedestrian & cycle facility; Access to Royal Canal Cycle Route retained, albeit via slightly more circuitous route.	Some improvement in journey time; Shared pedestrian & cycle facility; Access to Royal Canal Cycle Route retained, albeit via slightly more circuitous route.	Reduction in local permeability.		

2	Integration	2.2	<b>Land Use Integration</b>	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.	<b>Significant comparative advantage over other options</b>	Option 2 is located within a section of land zoned for "High Amenity" by the Fingal DP, the option also travels across Open Space zoned land and the GDA Cycle Network (along the Royal Canal). It then travels north west into an areas designated (map based zoning objective LAP 13.A) for the Barnhill LAP 2019. The introduction of a new road infrastructure into a High Amenity area is considered to be a major negative impact and would be inconsistent with this landuse zoning. However, it travels on the edge of this zoning and in proximity to the existing road network and could provide a direct connection into the LAP lands. Subject to further studies this option could have the potential to facilitate land use and transport planning integration.	<b>Significant comparative advantage over other options</b>	Option 4 is located within a section of land zoned for "High Amenity" by the Fingal DP. This option travels into the LAP 13.A Barnhill LAP through zoned open space lands as part of the Barnhill LAP. This option links to the Barnhill - Ongar road network and could support overall land use and transport planning integration over the long-term.	<b>Significant comparative disadvantage over other options</b>	Option 5 is located within a small section of land zoned for "Open Space" by the Fingal DP. The introduction of a new infrastructure into an Open Space area is inconsistent with the 'Open Space' landuse zoning objective. Subject to further transport studies, this option could have the potential to support sustainable transport planning integration.	
		2.3	<b>Geographical Integration</b>	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.	<b>Comparable to other options</b>	No significant effect on geographical integration.	<b>Comparable to other options</b>	No significant effect on geographical integration.	<b>Comparable to other options</b>	No impact on Geographical Integration	
		2.4	<b>Other Government Policy Integration</b>	Integration with the other Government policy such as the NPF and RSES.	<b>Comparable to other options</b>	This option would support the delivery of the higher level national and regional planning policies regarding the DART Expansion programme (NPF- (NS04), RSES & GDA Transport Strategy).	<b>Comparable to other options</b>	This option would support the delivery of the higher level national and regional planning policies regarding the DART Expansion programme (NPF- (NS04), RSES & GDA Transport Strategy).	<b>Comparable to other options</b>	<b>Comparable to other options</b>	This option would support the delivery of the higher level national and regional planning policies regarding the DART Expansion programme (NPF- (NS04), RSES & GDA Transport Strategy).
		3.1	<b>Noise and Vibration</b>	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.	<b>Some comparative disadvantage over other options</b>	New overbridge will have some construction phase impacts, however, only 1 dwelling within 100m.	<b>Some comparative disadvantage over other options</b>	New overbridge will have some construction phase impacts, however, 8 dwellings within 100m.	<b>Some comparative advantage over other options</b>	Removes vehicular traffic which will reduce the noise levels in the locality. 2 dwellings within 100m	
		3.2	<b>Air Quality and Climate</b>	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.	<b>Some comparative disadvantage over other options</b>	One dwelling within 50m. Potential for construction phase dust impact is not significant when mitigation measures are put in place.	<b>Some comparative disadvantage over other options</b>	4 dwellings within 50m. Longer route means potentially more embodied energy with respect to construction materials. Potential for construction phase dust impact is not significant when mitigation measures are put in place.	<b>Some comparative advantage over other options</b>	1 dwelling within 50m. Removes vehicle traffic locally therefore reducing local impact. Traffic data not available at time of assessment therefore no assessment of traffic redistribution has been undertaken. Potential for construction phase dust impact is not significant when mitigation measures are put in place.	
		3.3	<b>Landscape and Visual (including light)</b>	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.	<b>Comparable to other options</b>	Option to avoid potential impact on boundary to Luttrellstown Castle estate (the latter is an architectural conservation area, and a protected structure). Tree Preservation Objectives for lands north of Luttrellstown estate. Significant landscape and visual impact on Royal Canal corridor. Significant visual impact for two residential properties to north/northwest of eastern roundabout.	<b>Comparable to other options</b>	Significant landscape and visual impact for boundary to Luttrellstown Castle estate (the latter is an architectural conservation area, and a protected structure). Tree Preservation Objectives within Luttrellstown estate. Significant landscape and visual impact on Royal Canal corridor. Significant visual impact for residential properties, one to northwest of eastern roundabout, and one southwest of western roundabout.	<b>Comparable to other options</b>	Significant visual impact for three dwellings (including canal-side cottage) in close proximity. Potential significant impact on Royal Canal and on associated trees and vegetation.	
		3.4	<b>Biodiversity (flora and fauna)</b>	Potential compliance/conflict with biodiversity objectives; Indirect impacts on protected species, designated sites; Overall effect on nature conservation resource.	<b>Comparable to other options</b>	Hydrologically connected to South Dublin Bay and River Tolka Estuary SPA. No risk of LSE. Potential impacts to Royal Canal pNHA. Loss of treeline, hedgerow and agricultural grassland habitats.	<b>Comparable to other options</b>	Hydrologically connected to South Dublin Bay and River Tolka Estuary SPA. No risk of LSE. Potential impacts to Royal Canal pNHA. Loss of treeline, hedgerow and agricultural grassland habitats.	<b>Comparable to other options</b>	Hydrologically connected to South Dublin Bay and River Tolka Estuary SPA. No risk of LSE. Potential impacts to Royal Canal pNHA. Loss of hedgerow and agricultural grassland habitats.	

3	Environment	3.5	<b>Cultural, Archaeological and Architectural Heritage</b>	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)	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>
					Potential indirect impacts on the Royal Canal (RPS No. 944a) and Peckenhams bridge (RPS 0711) and Luttrellstown ACA. Potential to encounter archaeological deposits that may survive in undeveloped areas.	Indirect impacts on the Royal Canal (RPS No. 944a) and Luttrellstown ACA. Potential to encounter archaeological deposits that may survive in undeveloped areas.	Potential indirect impacts on Royal Canal (RPS 944a). Potential to encounter archaeological deposits that may survive in undeveloped areas.
		3.6	<b>Water Resources</b>	Overall potential significant effects on water resource attributes likely to be affected during construction and operation.	<b>Some comparative disadvantage over other options</b>	<b>Some comparative disadvantage over other options</b>	<b>Some comparative advantage over other options</b>
					Proposed route indicated to have increased flood risk compared to other options. Potential negative impact on surface and groundwater quality during operational phase. Potential negative impact on groundwater quality during construction phase.	Proposed route indicated to have increased flood risk compared to other options. Potential negative impact on surface and groundwater quality during operational phase. Potential negative impact on groundwater quality during construction phase.	Potential negative minor impact on surface and groundwater quality during construction phase. Potential positive impact on surface water quality during operational phase due to removal of traffic-related pollutants.
		3.7	<b>Agriculture and Non-Agricultural</b>	Overall impact on land take & property. Number of properties to be impacted/acquired. Likely temporary or permanent severance effects, etc.	<b>Some comparative disadvantage over other options</b>	<b>Some comparative advantage over other options</b>	<b>Some comparative advantage over other options</b>
					Under Option 2, there will be a direct impact on agricultural lands used for equine stock resulting in landtake and severance.	Under Option 4, there will be a direct impact on agricultural lands used for equine stock resulting in landtake and severance. There is a lower impact on agriculture than Option 2	Option 5 will involve minor landtake of agricultural lands on one property.
		3.8	<b>Geology and Soils (including Waste)</b>	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.	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>
					This option includes for the importation of fill for the construction of embankments. Topsoil is likely to be reused. There is no evidence of contamination in the site.	This option includes for the importation of fill for the construction of embankments. Topsoil is likely to be reused. There is no evidence of contamination in the site.	This option includes for the importation of fill for the construction of embankments. Topsoil is likely to be reused. There is no evidence of contamination in the site.
		3.9	<b>Radiation and Stray Current</b>	Overall likely impact on existing sources of electromagnetic radiation.	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>
			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. Both 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. Both 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. Both Options are comparable from an EMI perspective at this stage in the assessment.		
4	Accessibility & Social inclusion	4.1	<b>Impact on Vulnerable Groups</b>	Impacts on low income groups, non-car owners, mobility impaired, visually impaired and people with a disability.	<b>Some comparative advantage over other options</b>	<b>Some comparative advantage over other options</b>	<b>Some comparative disadvantage over other options</b>
					Diverted distance route 587m (2.0x diversion route).	Diverted distance route 948m (3.3x diversion route).	Shortest diversion route 4.8km (16x diversion route).
		4.2	<b>Stations Accessibility</b>	Quantification of increased service levels to the vulnerable groups.	<b>Comparable to other options</b>	<b>Comparable to other options</b>	<b>Comparable to other options</b>
				It is considered that alterations at Barberstown will not significantly affect access to stations in the locality	It is considered that alterations at Barberstown will not significantly affect access to stations in the locality	It is considered that alterations at Barberstown will not significantly affect access to stations in the locality	

				Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	
		4.3	<b>Social Inclusion</b>	Service levels impacts including severance of community groups; Severance from community facilities consequent on an option.	Diverted distance route 587m (2.0x diversion route).	Diverted distance route 948m (3.1x diversion route)	Pedestrian, and cyclist and non motorised road users catered for. Community facilities affected by reduced access include Shopping facilities, Ongar Community Centre, Stone Ideas, 2No. Educate Together Schools - northwest of the railway and Shackleton Gardens, Westmanstown Sports and Conference Centre, Dublin Falconry and Luttrellstown Castle Resort - south of the railway.
5	Safety	5.1	<b>Rail Safety</b>	Safety for Rail users – removal of Level crossings is considered a significant safety enhancement	Comparable to other options	Comparable to other options	Comparable to other options
		5.2	<b>Vehicular Traffic Safety</b>	Quality of Access for these road users, lengths of diversions, removal of interface with rail and other modes of transport	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
		5.3	<b>Pedestrian, Cyclist and Vulnerable Road user Safety</b>	Quality of Access for these road users. removal of interfaces	Comparable to other options	Comparable to other options	Comparable to other options
6	Physical Activity	6.1	<b>Connectivity to adjoining cycling facilities</b>	Analysis of the extent that the scheme connects with cycle tracks.	Comparable to other options	Comparable to other options	Comparable to other options
		6.2	<b>Permeability and local access opportunity</b>	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

	Criteria		Option 2	Option 4	Option 5
1	Economy		Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
2	Integration		Significant comparative advantage over other options	Significant comparative advantage over other options	Significant comparative disadvantage over other options
3	Environment		Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
4	Accessibility and social inclusion		Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
5	Safety		Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
6	Physical Activity		Comparable to other options	Comparable to other options	Comparable to other options
	Preferred		No	Yes	No

DART+ West - MCA Stage 2						
Blakestown Level Crossing Assessment						
	Parameter		Criteria	Sub-Criteria (Quantitative/ Qualitative)	Do Minimum	Option 1
					Closure of the existing crossings with no alternative provided. All traffic would be diverted to alternative routes around the crossing location.	Pedestrian Cycle Bridge with Nested Ramps at the Level Crossing location.
1	Economy	1.1	Construction and Land Cost	Assessment of cost of construction of option, land costs, acquisition costs and temporary works	<p><b>Significant comparative advantage over other options</b></p> <p>This option includes the costs of urban roadworks across green fields to cross the railway and canal via raised embankment and two single span bridges. Includes 2No. roundabouts and the acquisition of two houses.</p>	<p><b>Significant comparative disadvantage over other options</b></p> <p>Construction costs of this option will be comparative to other options as the provision of a pedestrian cycle bridge within the canal environs will require significant temporary and permanent works. The cost to acquire land will be lower than other options providing full access</p>
		1.2	Long Term Maintenance costs	Ongoing annual maintenance costs associated with varied options moving them	<p><b>Some comparative advantage over other options</b></p> <p>The closure of the level crossing would remove the maintenance requirement of the level crossing.</p>	<p><b>Some comparative disadvantage over other options</b></p> <p>An overbridge would increase decrease maintenance requirements and operating costs over a level crossing.</p>
		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.	<p><b>Comparable to other options</b></p> <p>Displacement of traffic onto alternative routes; increase in journey times for local residents.</p>	<p><b>Comparable to other options</b></p> <p>Displacement of traffic onto alternative routes; increase in journey times for local residents.</p>
		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.	<p><b>Some comparative disadvantage over other options</b></p> <p>Reduction in local permeability. Reduced access to Royal Canal Cycle Route.</p>	<p><b>Some comparative advantage over other options</b></p> <p>Reduction in local permeability. Access to Royal Canal Cycle Route maintained</p>



2	Integration	2.2	<b>Land Use Integration</b>	Impact on land use strategies and regional and local plans. Assessment of support for land use factors local land use and planning. Inclusion of project in relevant local and regional planning documents.	Comparable to other options	Comparable to other options
		2.3	<b>Geographical Integration</b>	Impact on improvement of external links. Desire to link various geographical – mostly neutral due to localised nature of the level crossings. Overall electrification scheme would be highly positive.	Comparable to other options	Comparable to other options
		2.4	<b>Other Government Policy Integration</b>	Integration with the other Government policy such as the NPF and RSES.	Comparable to other options	Comparable to other options
		3.1	<b>Noise and Vibration</b>	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	Comparable to other options
		3.2	<b>Air Quality and Climate</b>	Local air quality effects. No of number of receptors within 50m.	Comparable to other options	Comparable to other options
		3.3	<b>Landscape and Visual (including light)</b>	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 disadvantage over other options
					Removes vehicle traffic emissions. Likely to have some short-term construction impacts.	Removes vehicle traffic emissions. Likely to have some short-term construction impacts.
					Removes vehicle traffic therefore requiring longer trips on alternative routes for some traffic, however removes localised traffic impacts. Some short-term construction impacts.	Removes vehicle traffic therefore requiring longer trips on alternative routes for some traffic, however removes localised traffic impacts. Some short-term construction impacts.
					Loss of local connectivity. Minimal impact on existing landscape or visual characteristics - no likely significant landscape or visual impacts.	Significant visual impact on setting of 13th Lock / Deey Bridge (a protected structure and protected view in Kildare Development Plan) and one residential property north of lock.

3	Environment	3.4	<b>Biodiversity (flora and fauna)</b>	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 disadvantage over other options
				No direct impacts.		Hydrologically connected to South Dublin Bay and River Tolka Estuary SPA. No risk of LSE. Potential impacts to Royal Canal pNHA arising from the construction of new pedestrian bridge.
		3.5	<b>Cultural, Archaeological and Architectural Heritage</b>	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 disadvantage over other options
				No direct impacts likely positive effects to Deey bridge and 13th Lock due to removal of traffic.		Potential indirect impacts on Deey Bridge (and Lock) (RPS No. B06-14). Potential to encounter unknown archaeological deposits that may survive in undeveloped areas.
		3.6	<b>Water Resources</b>	Overall potential significant effects on water resource attributes likely to be affected during construction and operation.	Some comparative advantage over other options	Some comparative disadvantage over other options
				Removes vehicular traffic borne pollutants. Minimal construction phase impacts are likely. Some comparative advantages over other options.		Potential negative impact on surface and groundwater quality during construction phase.
		3.7	<b>Agriculture and Non-Agricultural</b>	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
				There is no impact on agricultural or non-agricultural property.	There will be a limited direct impact on both agricultural and non-agricultural property. There is no impact on access to lands though there will be increased travel for vehicular journeys to / from R148.	
3.8	<b>Geology and Soils (including Waste)</b>	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. Soil resources to be developed/removed. 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 disadvantage over other options		
				No significant direct impacts.	No significant direct impacts as minimal earthworks are required.	
3.9	<b>Radiation and Stray Current</b>	Overall likely impact on existing sources of electromagnetic radiation.	Some comparative advantage over other options	Some comparative disadvantage over other options		
				No change from an EMI perspective 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	<b>Impact on Vulnerable Groups</b>	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 advantage over other options		
				With the level crossing 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 road network.  This relates to a small number of uses of the level crossing  The principal affected amenities in the vicinity of the level crossing include JM Motors south of the railway, the Business Barn, Intel and Jones Engineering Group, north of the railway	Provision of a pedestrian / cycle bridge addresses any local disruption caused by closing the level crossing.  Usage is, however low.	

4	Accessibility & Social inclusion	4.2	Stations Accessibility	Quantification of increased service levels to the vulnerable groups.	Comparable to other options	Comparable to other options
					It is considered that alterations at Blakestown will not significantly affect access to stations in the locality	It is considered that alterations at Blakestown will not significantly affect access to stations in the locality
4.3	Social Inclusion			Quantification of service levels impacts including severance to all groups (Severance of local communities through removal of level crossings without connection would fair worst under this heading).	Comparable to other options	Comparable to other options
5	Safety	5.1	Rail Safety	Safety for Rail users – removal of LC positive in this respect	Comparable to other options	Comparable to other options
					This option removes the railway level crossing, a characteristic which is considered positive from the perspective of railway safety. There is no significant construction activity along the railway associated with the level crossing	This option removes the railway level crossing, a characteristic which is considered positive from the perspective of railway safety. There is no significant construction activity along the railway associated with the level crossing
		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
					Closing the level crossing with no replacement infrastructure will divert traffic onto the local road network resulting in diversions of between 0.7km and 1.6km. These are considered incidental for road traffic	Closing the level crossing with no replacement infrastructure will divert traffic onto the local road network resulting in diversions of between 0.7km and 1.6km. These are considered incidental for road traffic
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 advantage over other options	
					No cycle tracks on the immediately surrounding road network, but the closure of the level crossing would reduce access to the Royal Canal Greenway. See also Transport Integration above.	Original Distance from access to farm to R148 junction 270m retained.
6	Physical Activity	6.1	Connectivity to adjoining cycling facilities	Analysis of the extent that the scheme connects with cycle tracks.	Some comparative disadvantage over other options	Some comparative advantage over other options
					No cycle tracks on the immediately surrounding road network, but the closure of the level crossing would reduce access to the Royal Canal Greenway. See also Transport Integration above.	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	Some comparative disadvantage over other options	Some comparative advantage 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 0.6km East and 1.6km West The principal affected amenities in the vicinity of the level crossing include the Royal canal north of the level crossing. Removal of the level crossing will require detour for access.	Severance overcome by provision of direct replacement.

	Criteria		Do Minimum	Option 1
1	<b>Economy</b>		Significant comparative advantage over other options	Significant comparative disadvantage over other options
2	<b>Integration</b>		Significant comparative disadvantage over other options	Significant comparative advantage over other options
3	<b>Environment</b>		Some comparative advantage over other options	Some comparative disadvantage over other options
i	<b>Accessibility and social inclusion</b>		Some comparative disadvantage over other options	Some comparative advantage over other options
5	<b>Safety</b>		Some comparative disadvantage over other options	Some comparative advantage over other options
6	<b>Physical Activity</b>		Some comparative disadvantage over other options	Some comparative advantage over other options
	<b>Preferred</b>		<b>Yes</b>	<b>No</b>