MCA SET TECHNICAL BUILDINGS

Maynooth Traction Substation

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Maynooth Traction Substation								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Maynooth Traction Substation**	**Option 2 – Maynooth Traction Substation**	**Option 3 – Maynooth Traction Substation**	**Option 4 – Maynooth Traction Substation**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Some comparative disadvantage over other options** The capital expenditure required for the traction substation is the same for both options. The ESB's MV line cost will depend on ESB studies. No clash with existing utilities. Possible water supply connection. Foul network on the other side of the rail tracks. A septic tank would be installed.	**Some comparative disadvantage over other options** The capital expenditure required for the traction substation is the same for both options. The ESB's MV line cost will depend on ESB studies. No clash with existing utilities. Possible water supply connection. Foul network on the other side of the rail tracks. A septic tank could be installed.	**Significant comparative advantage over other options** The capital expenditure required for the traction substation is the same for both options. The ESB's MV line cost will depend on ESB studies. Possible connection to water supply and foul gravity networks.	**Some comparative disadvantage over other options** The capital expenditure required for the traction substation is the same for both options. The ESB's MV line cost will depend on ESB studies. Clash with Eircom network. Possible connection to water supply and foul gravity networks. Earthworks would be necessary to modify the access road from R406 to the station and to reroute the footway behind the substation, to keep the access to the existing footbridge.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options** The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	**Comparable to other options** The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	**Comparable to other options** The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	**Comparable to other options** The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Significant comparative disadvantage over other options** In this option, part of the existing car park will be required to be taken for this purpose and the proximity of the Canal can cause floods problems. There is no space in front of the substation for accessing and neither to the parking at the left side. This area would be blocked.	**Significant comparative disadvantage over other options** In this option, part of the existing car park will be required to be taken for this purpose and the proximity of the Canal can cause floods problems. There is space for road access, maintaining the walkways located at both sides of the entrance road to Maynooth station.	**Some comparative disadvantage over other options** In this option, part of the existing car park will be required to be taken for this purpose as well as relocation of the existing exit/entry. There is space for maintaining road access and walkway. The walkway clashes with the station entrance.	**Some comparative advantage over other options** In this option the access road from R406 to the station, would have to be completely modified at the substation location, as well as the footway, which would have to be rerouted behind the substation, to keep the access to the existing footbridge. 5 places will be taken from the existing parking area, to locate the substation.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options** There is no difference in integration with parallel projects/contracts for this option in comparison with others.	**Comparable to other options** There is no difference in integration with parallel projects/contracts for this option in comparison with others.	**Comparable to other options** There is no difference in integration with parallel projects/contracts for this option in comparison with others.	**Comparable to other options** There is no difference in integration with parallel projects/contracts for this option in comparison with others.
		2.3	Geographical Integration		**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

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				Square meters of additional land used, or volume required to implement the solution	The proposed location is within the existing IÉ railway boundaries, therefore not major additional land taking is envisaged with this option.	The proposed location is within the existing IÉ railway boundaries, therefore not major additional land taking is envisaged with this option.	The proposed location is within the existing IÉ railway boundaries, therefore not major additional land taking is envisaged with this option.	The proposed location is within the existing IÉ railway boundaries, therefore not major additional land taking is envisaged with this option.
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					It will not require the blockade of the tracks to undertake the works.	It will not require the blockade of the tracks to undertake the works.	It will not require the blockade of the tracks to undertake the works.	It will not require the blockade of the tracks to undertake the works.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihoods of a noise impact on nearby noise sensitive locations	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**
					This option is located in the station grounds. further from residential properties than other options.	This option is located in the station grounds. further from residential properties than other options.	Located close to very residential area. It would also result in loss of some vegetation/screening.	Located very close to a residential area and also the R406 road traffic which could potentially mask any potential noise emissions. This option will also result in some loss of some vegetation and trees along the road verges.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**

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	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Maynooth Traction Substation**	**Option 2 – Maynooth Traction Substation**	**Option 3 – Maynooth Traction Substation**	**Option 4 – Maynooth Traction Substation**
					All options are broadly comparable located in close proximity to each other in an urbanised environment. Direct impacts to landscape character of Royal Canal including view to and from Royal Canal (RC6 Mullen Bridge Railpark/Maynooth) also an RPS Maynooth Station and signal box (B05–60).	All options are broadly comparable located in close proximity to each other in an urbanised environment. Located in urbanised location. Direct impacts to landscape character of Royal Canal including view to and from Royal Canal (RC6 Mullen Bridge Railpark/Maynooth) also an RPS (B05–60). The 'entrance/wayfinding' to station for passengers would also be compromised by this option.	All options are broadly comparable located in close proximity to each other in an urbanised environment. Located in urbanised location. Direct impacts to landscape character of RPS Station House (B05–62) and Royal Canal. Visual impacts to adjacent residential receptors. Indirect impacts to RPS (Station House) which will result in further deterioration of landscape setting of this RPS.	All options are broadly comparable located in close proximity to each other in an urbanised environment. In proximity of Mullen Bridge but set back slightly. Visual impacts to adjacent residential receptors. Indirect impacts to RPS (Station House) which will result in further deterioration of landscape setting of this RPS. Greater potential for screening negative visual impacts at this location than other locations.
		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 disadvantage over other options** This option requires works close to the Royal Canal pNHA and the construction of a septic tank. During operation there may be water quality and noise impacts.	**Significant comparative disadvantage over other options** This option requires works close to Royal Canal pNHA and the construction of a septic tank. During operation there may be water quality and noise impacts.	**Significant comparative advantage over other options** This option will be connected to mains foul water and will be set back from the canal, limiting noise impacts. This option will result in loss of some vegetation and trees.	**Significant comparative advantage over other options** This option will be connected to mains foul water and will be set back from the canal, limiting noise impacts. This option will result in loss of some vegetation and trees in road verge treeline landscaping from the rail line and Straffan Road.
		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 (land take)	**Comparable to other options** Indirect impact to Royal Canal and Maynooth Station and signal box (B05–60)	**Comparable to other options** Indirect impact to Royal Canal and Maynooth Station and signal box (B05–60)	**Comparable to other options** Indirect impact to Royal Canal, context and setting of RPS (Station House) which will result in further deterioration of the setting of this RPS.	**Comparable to other options** Indirect impact to Royal Canal, context and setting of RPS (Station House) which will result in further deterioration of the setting of this RPS.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Significant comparative disadvantage over other options** OPW CFRAMS flood mapping indicates option location as liable to flood in extreme events from fluvial sources.	**Significant comparative disadvantage over other options** OPW CFRAMS flood mapping indicates option location as liable to flood in extreme events from fluvial sources.	**Significant comparative disadvantage over other options** OPW CFRAMS flood mapping indicates option location as liable to flood in extreme events from fluvial sources.	**Significant comparative advantage over other options** Option location on edge of CFRAMS flood extents. Further assessment would be required to confirm flood risk.
		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.	**Some comparative advantage over other options** Options located in the Station grounds.	**Some comparative advantage over other options** Options located in the Station grounds.	**Some comparative advantage over other options** Options located in the Station grounds.	**Some comparative disadvantage over other options** Land acquisition required.
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources and soil resources to be developed/removed.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

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MCA (Multi Criteria Analysis) for Maynooth Traction Substation								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Maynooth Traction Substation**	**Option 2 – Maynooth Traction Substation**	**Option 3 – Maynooth Traction Substation**	**Option 4 – Maynooth Traction Substation**
				Existing information relating to potential to encounter contaminated land.	No significant advantages or disadvantages over other options.	No significant advantages or disadvantages over other options.	No significant advantages or disadvantages over other options.	No significant advantages or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on nearby receptors.	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					Location is more than 10 m from residential area	Location is more than 10 m from residential area	While no significant EMI or EMR impacts are likely this option is located closer to a residential area than the other options.	Location is more than 10 m from residential area
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Reliability, Availability and Maintainability fulfilled in both options.	Reliability, Availability and Maintainability fulfilled in both options.	Reliability, Availability and Maintainability fulfilled in both options.	Reliability, Availability and Maintainability fulfilled in both options.
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

Table 1. Summary of the MCA for Maynooth Traction Substation

	Option 1 – Maynooth Traction Substation	Option 2 – Maynooth Traction Substation	Option 3 – Maynooth Traction Substation	Option 4 – Maynooth Traction Substation
Economy	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Significant comparative advantage over other options	Some comparative disadvantage over other options
Integration	Significant comparative disadvantage over other options	Significant comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
Environment	Significant comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Significant comparative advantage over other options
Accessibility & Social inclusion	Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation of Maynooth Traction Substation option locations is **Option 4.**

All options are broadly comparable under the environment criteria. Option 4 has an advantage over other options because it is located on edge of the CFRAMS flood extents. The OPW CFRAMS flood mapping indicates that Option 1, 2 and 3 are liable to flood in extreme events from fluvial sources. If one of these options is chosen further analysis will be required to inform the next stage of the assessment.

As a result of the MCA, the MDC concludes that Option 3 will not be taken into account, because part of the existing car park will be required for this purpose as well as relocate the existing exit/entry. The walkway clashes with the station entrance.

As a result of the MCA, the MDC concludes that Option 2 will not be taken into account, because part of the existing car park will be required for this purpose and also because the proximity of the Canal.

As a result of the MCA, the MDC concludes that Option 1 will not be taken into account, because part of the existing car park will be required for this purpose, because the proximity of the Canal and also because there is no space in front of the substation for accessing and neither to the parking at the left side. This area would be blocked.

Blakestown Traction Substation

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Blakestown Traction Substation							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Blakestown Traction Substation**	**Option 2 – Blakestown Traction Substation**	**Option 3 – Blakestown Traction Substation**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Significant comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					The capital expenditure required for the traction substation is the same for both options. The ESB's MV line cost will depend on ESB studies. No clashes with utilities. Possible connection to water supply network. Connection to foul gravity would be through the R449 road bridge, probably through a lifting station.	The capital expenditure required for the traction substation is the same for both options. The ESB's MV line cost will depend on ESB studies. No clashes with utilities. Possible connection to water supply. Foul gravity network through the level crossing.	The capital expenditure required for the traction substation is the same for both options. The ESB's MV line cost will depend on ESB studies. No clashes with utilities. Possible connection to water supply. Foul gravity network through the level crossing.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					In this option, it would be necessary create a road access (about 170m) from the overpass of R449.	With this option, the necessity to create an access, can be part of the suppression of the existing railroad crossing works.	With this option, the necessity to create an access, can be part of the suppression of the existing railroad crossing works. However, there is an existing technical building.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The proposed location is not within the existing IÉ railway boundaries; therefore, it will be necessary additional land taking with this option.	The proposed location is not within the existing IÉ railway boundaries; therefore, it will be necessary additional land taking with this option.	The proposed location is not within the existing IÉ railway boundaries; therefore, it will be necessary additional land taking with this option.
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					It will not require the blockade of the tracks to undertake the works.	It will not require the blockade of the tracks to undertake the works.	It will not require the blockade of the tracks to undertake the works.

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MCA (Multi Criteria Analysis) for Blakestown Traction Substation							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Blakestown Traction Substation**	**Option 2 – Blakestown Traction Substation**	**Option 3 – Blakestown Traction Substation**
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Located further from residential properties.	Located next to a residential property.	Located next to a residential property.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	There is no difference in Air Quality or Climate during the operational phase in comparison with others.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					All options are in a rural landscape character with no sensitive receptors in proximity to any of the locations. Located in proximity to Deey Bridge a listed view to and Royal Canal. All options are comparable.	All options are in a rural landscape character with no sensitive receptors in proximity to any of the locations. Located in proximity to Deey Bridge a listed view to and Royal Canal. All options are comparable.	All options are in a rural landscape character with no sensitive receptors in proximity to any of the locations. Located in proximity to the Royal Canal. All options are comparable.
		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.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no advantage or disadvantage over other options.	There is no advantage or disadvantage over other options.	There is no advantage or disadvantage over other options.

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MCA (Multi Criteria Analysis) for Blakestown Traction Substation							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Blakestown Traction Substation**	**Option 2 – Blakestown Traction Substation**	**Option 3 – Blakestown Traction Substation**
		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 (land take)	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					Recorded Monument Fulacht Fia (KD011-053--) NIHA. Potential direct impacts on known and unknown archaeological deposits that may survive in greenfield site. Additional survey work required should this option be selected as the preferred.	In proximity to Deey Bridge (and Lock) - Reg. No. 11900602. Potential direct impacts on unknown archaeological deposits that may survive in greenfield areas.	In proximity to Deey Bridge (and Lock) - Reg. No. 11900602. Potential direct impacts on unknown archaeological deposits that may survive in greenfield areas.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no advantage or disadvantage over other options.	There is no advantage or disadvantage over other options.	There is no advantage or disadvantage over other options.
		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.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no advantage or disadvantage over other options.	There is no advantage or disadvantage over other options.	There is no advantage or disadvantage over other options..
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources and soil resources to be developed/removed. Existing information relating to potential to encounter contaminated land.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no advantage or disadvantage over other options.	There is no advantage or disadvantage over other options.	There is no advantage or disadvantage over other options.
		3.9	Radiation and Stray Current	Overall likely impact on nearby receptors.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.

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	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Blakestown Traction Substation**	**Option 2 – Blakestown Traction Substation**	**Option 3 – Blakestown Traction Substation**
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Reliability, Availability and Maintainability fulfilled in both options.	Reliability, Availability and Maintainability fulfilled in both options.	Reliability, Availability and Maintainability fulfilled in both options.
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

Table 2. Summary of the MCA for Blakestown Traction Substation

	Option 1 – Blakestown Traction Substation	Option 2 – Blakestown Traction Substation	Option 3 – Blakestown Traction Substation
Economy	Significant comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
Integration	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
Environment	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
Accessibility & Social inclusion	Comparable to other options	Comparable to other options	Comparable to other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation of Blakestown Traction Substation option locations is **Option 2.**

All options are broadly comparable under the environment criteria however Option 2 and 3 have some advantages over Option 1 due to potential known heritage constraints contained within option 1.

Option 3 is very similar to Option 2. However, in the Option 3, there is an existing technical building in its area. Both have the necessity to create an access, which can be part of the suppression of the existing railroad crossing works.

As a result of the MCA, the MDC concludes that Option 1 will not be taken into account, because in this option, it would be necessary create a road access (about 170m) from the overpass of R449 and also the connection to foul gravity would be through a lifting station.

Leixlip Confey Traction Substation

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters						
MCA (Multi Criteria Analysis) for Leixlip Confey Traction Substation						
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Leixlip Confey Traction Substation**	**Option 2 – Leixlip Confey Traction Substation**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options** The capital expenditure required for the traction substation is the same for both options. The ESB's MV line cost will depend on ESB studies. There is no utilities clash. Possible connection to foul drainage and water supply networks.	**Comparable to other options** The capital expenditure required for the traction substation is the same for both options. The ESB's MV line cost will depend on ESB studies. There is no utilities clash. Possible connection to foul drainage and water supply networks.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options** The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	**Comparable to other options** The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Some comparative advantage over other options** In this option, the entire existing parking (west of the existing station) area would be required and also would require undertaking works to accommodate road access from R149.	**Some comparative disadvantage over other options** In this option, it would be necessary create an access from the existing R149.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options** There is no difference in integration with parallel projects/contracts for this option in comparison with others.	**Comparable to other options** There is no difference in integration with parallel projects/contracts for this option in comparison with others.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Significant comparative advantage over other options** The proposed location is within the existing IÉ railway boundaries, therefore not major additional land taking it is envisaged with this option.	**Significant comparative disadvantage over other options** The proposed location is partially within the existing IÉ railway boundaries, therefore some additional land taking is envisaged with this option.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters						
MCA (Multi Criteria Analysis) for Leixlip Confey Traction Substation						
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Leixlip Confey Traction Substation**	**Option 2 – Leixlip Confey Traction Substation**
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**
					It will not require the blockade of the tracks to undertake the works.	It will not require the blockade of the tracks to undertake the works.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					Broadly comparable however located closer to a residential property than option 2.	Broadly comparable however located slight further from residential properties than the other option.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					This option is located on existing made ground in the carpark of the train station, It is likely to have landscape and visual impact to the neighbouring residential receptors.	Located in open space area which will have a direct impact on landscape character and amenity lands that area also located adjacent to sensitive residential receptors.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters						
MCA (Multi Criteria Analysis) for Leixlip Confey Traction Substation						
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Leixlip Confey Traction Substation**	**Option 2 – Leixlip Confey Traction Substation**
		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**
					This option is on built ground and will not require vegetation removal or the loss of habitat.	This option is on the vegetated railway embankment and will lead to some habitat loss.
		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 (land take)	**Comparable to other options**	**Comparable to other options**
					No known heritage resources recorded. The option does not present any advantage or disadvantages over other options.	No known heritage resources recorded. Potential of unknown archaeological resources on greenfield sites. However, this option does not present any significant advantage or disadvantages over other options.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options**	**Comparable to other options**
					Location may be liable to flood from fluvial sources. Flood Risk is comparable to other options. Risk to surface water quality is comparable to other options	Location may be liable to flood from fluvial sources. Flood Risk is comparable to other options. Risk to surface water quality is comparable to other options
		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.	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					Located in car park of station grounds. Severance of carpark likely.	Located in an open green area
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources and soil resources to be developed/removed. Existing information relating to potential to encounter contaminated land.	**Comparable to other options**	**Comparable to other options**
					Developing on paved area. - Soils and geology not considered to be a differentiator.	Developing on existing amenity group will result in loss of soil resources.
		3.9	Radiation and Stray Current	Overall likely impact on nearby receptors.	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters						
MCA (Multi Criteria Analysis) for Leixlip Confey Traction Substation						
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Leixlip Confey Traction Substation**	**Option 2 – Leixlip Confey Traction Substation**
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**
					Reliability, Availability and Maintainability fulfilled in both options.	Reliability, Availability and Maintainability fulfilled in both options.
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

Table 3. Summary of the MCA for Leixlip Confey Traction Substation

	Option 1 – Leixlip Confey Traction Substation	Option 2 – Leixlip Confey Traction Substation
Economy	Comparable to other options	Comparable to other options
Integration	Significant comparative advantage over other options	Significant comparative disadvantage over other options
Environment	Some comparative advantage over other options	Some comparative disadvantage over other options
Accessibility & Social inclusion	Comparable to other options	Comparable to other options
Safety	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation of Leixlip Confey Traction Substation option locations is **Option 1.**

As a result of the MCA, the MDC concludes that Option 2 is not the preferred option, because it would be necessary create an access from the existing R149 and the proposed location is not within the existing IÉ railway boundaries; therefore, it will be necessary additional land taking with this option.

Coolmine Traction Substation

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Coolmine Traction Substation								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Coolmine Traction Substation**	**Option 2 – Coolmine Traction Substation**	**Option 3 – Coolmine Traction Substation**	**Option 4 – Coolmine Traction Substation**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Significant comparative disadvantage over other options**
					The capital expenditure required for the traction substation is the same for both options. The ESB's MV line will depend on ESB studies. Clash with an ESB underground network. Possible connection to foul drainage and water supply networks.	The capital expenditure required for the traction substation is the same for both options. The ESB's MV line will depend on ESB studies. There is no utilities clash. Possible connection to foul drainage and water supply networks.	The capital expenditure required for the traction substation is the same for both options. The ESB's MV line will depend on ESB studies. There is no utilities clash. Possible connection to foul drainage and water supply networks.	The capital expenditure required for the traction substation is the same for both options. The ESB's MV line will depend on ESB studies. Clash with two Gas networks and a gravity foul network. Possible connection to foul drainage and water supply networks.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX	The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					In this option, part of the existing car park will be required to be taken for this purpose. It can be part of the suppression of the existing railroad crossing works. However, there is an existing technical building.	In this option, part of the existing car park will be required to be taken for this purpose. It can be part of the suppression of the existing railroad crossing works.	With this option, the Power Study must be updated.	In this option, part of the existing car park will be required to be taken for this purpose.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Significant comparative advantage over other options**	**Significant comparative advantage over other options**
					Road access would not be possible due to the clash with the emerging preferred option for Coolmine Level crossing.	Road access would not be possible due to the clash with the emerging preferred option for Coolmine Level crossing.	There is no clash in integration with parallel projects/contracts for this option.	There is no clash in integration with parallel projects/contracts for this option.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Significant comparative advantage over other options**	**Significant comparative advantage over other options**	**Significant comparative disadvantage over other options**	**Significant comparative advantage over other options**
					The proposed location is within the existing IÉ railway boundaries, therefore not major additional land taking is envisaged with this option.	The proposed location is within the existing IÉ railway boundaries, therefore not major additional land taking is envisaged with this option.	The proposed location is out the existing IÉ railway boundaries, therefore additional land taking is envisaged with this option.	The proposed location is within the existing IÉ railway boundaries, therefore not major additional land taking is envisaged with this option.
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					It will not require the blockade of the tracks to undertake the works.	It will not require the blockade of the tracks to undertake the works.	It will not require the blockade of the tracks to undertake the works.	It will not require the blockade of the tracks to undertake the works.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Coolmine Traction Substation								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Coolmine Traction Substation**	**Option 2 – Coolmine Traction Substation**	**Option 3 – Coolmine Traction Substation**	**Option 4 – Coolmine Traction Substation**
3	**Environment**	**2.5**	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options** There is no difference in obsolesce in a long-term basis for this option in comparison with others.	**Comparable to other options** There is no difference in obsolesce in a long-term basis for this option in comparison with others.	**Comparable to other options** There is no difference in obsolesce in a long-term basis for this option in comparison with others.	**Comparable to other options** There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options** This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	**Comparable to other options** This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	**Comparable to other options** This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	**Comparable to other options** This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
		3.1	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options** All options are located a similar distance from residential dwellings and therefore have the same potential for noise impacts.	**Comparable to other options** All options are located a similar distance from residential dwellings and therefore have the same potential for noise impacts.	**Comparable to other options** All options are located a similar distance from residential dwellings and therefore have the same potential for noise impacts.	**Comparable to other options** All options are located a similar distance from residential dwellings and therefore have the same potential for noise impacts.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options** No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	**Comparable to other options** No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	**Comparable to other options** No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	**Comparable to other options** No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative advantage over other options** All options are broadly comparable and will have potential to impact on the landscape character of the area. Landscape and amenity impact due to loss of trees and walkway associated with this option and visual impacts on neighbouring residential receptors.	**Some comparative advantage over other options** All options are broadly comparable and will have potential to impact on the landscape character of the area. Landscape and amenity impact due to loss of trees and walkway associated with this option and visual impacts on neighbouring residential receptors.	**Some comparative disadvantage over other options** All options are broadly comparable and will have potential to impact on the landscape character of the area. Option 3 is located on the edge of Sycamore Green a local park which will result in direct landscape and visual impacts on park and neighbouring residential receptors.	**Some comparative advantage over other options** Option 4 is located within the confines of the Coolmine parking lot directly adjacent to residential properties therefore likely to cause visual impacts on neighbouring residential receptors. However, landscape and amenity impact comparable with other options.
		3.4	Biodiversity (flora and fauna)	Potential compliance/conflict with biodiversity objectives; Indirect impacts on protected species, designated sites; Overall effect on nature conservation resource.	**Some comparative advantage over other options** This option is located on a mixture of built ground and will also have direct impacts on existing tree lines which will result in loss of habitat and fragmentation of the ecological corridor.	**Some comparative advantage over other options** This option is on a mixture of built ground and will also have direct impacts on existing tree lines which will result in loss of habitat and fragmentation of the ecological corridor.	**Some comparative disadvantage over other options** This option is located on a vegetated area. It will result in loss of some mature trees resulting in some habitat loss.	**Some comparative advantage over other options** Option located on paved area within Coolmine parking lot. No direct impacts to biodiversity envisaged.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Coolmine Traction Substation								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Coolmine Traction Substation**	**Option 2 – Coolmine Traction Substation**	**Option 3 – Coolmine Traction Substation**	**Option 4 – Coolmine Traction Substation**
		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 (land take)	**Comparable to other options** This option does not present any advantage or disadvantages over other options.	**Comparable to other options** This option does not present any advantage or disadvantages over other options.	**Comparable to other options** This option does not present any advantage or disadvantages over other options. Potential for direct impacts on unknown archaeological deposits that may survive in greenfield area.	**Comparable to other options** This option does not present any advantage or disadvantages over other options.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options** This option does not present any disadvantage or advantage in regard to water resources.	**Comparable to other options** This option does not present any disadvantage or advantage in regard to water resources.	**Comparable to other options** This option does not present any disadvantage or advantage in regard to water resources.	**Comparable to other options** This option does not present any disadvantage or advantage in regard to water resources.
		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.	**Significant comparative advantage over other options** Located in the carpark and entrance to Coolmine Station. P	**Significant comparative advantage over other options** Located in the carpark and entrance to Coolmine Station.	**Significant comparative disadvantage over other options** Located outside of CIE boundary. Land take required.	**Significant comparative advantage over other options** Located in CIE property. No land take required.
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources and soil resources to be developed/removed. Existing information relating to potential to encounter contaminated land.	**Comparable to other options** This option does not present any advantage or disadvantages over other options.	**Comparable to other options** This option does not present any advantage or disadvantages over other options.	**Comparable to other options** This option will result in loss of some soil resources and soil sealing. However, it does not represent a significant advantage or disadvantages over other options.	**Comparable to other options** This option does not present any advantage or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage regarding in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage regarding in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage regarding in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage regarding in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options** This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	**Comparable to other options** This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	**Comparable to other options** This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	**Comparable to other options** This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Coolmine Traction Substation								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Coolmine Traction Substation**	**Option 2 – Coolmine Traction Substation**	**Option 3 – Coolmine Traction Substation**	**Option 4 – Coolmine Traction Substation**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Reliability, Availability and Maintainability fulfilled in both options.	Reliability, Availability and Maintainability fulfilled in both options.	Reliability, Availability and Maintainability fulfilled in both options.	Reliability, Availability and Maintainability fulfilled in both options.
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

Table 4. Summary of the MCA for Coolmine Traction Substation

	Option 1 – Coolmine Substation	Option 2 – Coolmine Traction Substation	Option 3 – Coolmine Traction Substation	Option 4 – Coolmine Traction Substation
Economy	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options	Significant comparative disadvantage over other options
Integration	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
Environment	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
Accessibility & Social inclusion	Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation of Coolmine Traction Substation option locations is Option 3.

Option 1 is very similar to Option 2. Both have the necessity to create a road access, that would not be possible due to the clash with the emerging preferred option for Coolmine Level crossing. However, in the Option 1, there is an existing technical building in its area.

As a result of the MCA, the MDC concludes that Option 1 and Option 2 will not be taken into account, because that would not be possible due to the clash with the emerging preferred option for Coolmine Level crossing.

Option 4 will not be taken into account, because it has clashes with two Gas networks and a Gravity foul network.

Castleknock Traction Substation

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Castleknock Traction Substation							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Castleknock Traction Substation**	**Option 2 – Castleknock Traction Substation**	**Option 3 – Castleknock Traction Substation**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The capital expenditure required for the traction substation is the same for both options. The ESB's MV line will depend on ESB studies. There is no utilities clash.	The capital expenditure required for the traction substation is the same for both options. The ESB's MV line will depend on ESB studies.	The capital expenditure required for the traction substation is the same for both options. The ESB's MV line will depend on ESB studies.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Significant comparative advantage over other options**
					In this option, part of the existing bicycle park will be required to be taken for this purpose. The proximity of the Canal may cause floods problems. It would not require undertaking major works to accommodate road access from R806 as well as relocate the existing exit/entry. However, there is no space for continuing the road in front of the substation due to the Royal Canal.	In this option, it would not be required undertaking major works to accommodate road access from R806 as well as relocate the existing exit/entry. However, there is no space for continuing the road in front of the substation due to the Royal Canal. The proximity of the Canal may cause floods problems.	In this option, it would be necessary create an access from the existing road R806.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Significant comparative advantage over other options**
					Local accessibility would be constrained because of the substation, as there is lack of space in this area.	Local accessibility would be constrained because of the substation, as there is lack of space in this area.	It would not affect local accessibility. The pedestrian walkway connecting to the station in the south side has been respected.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Significant comparative advantage over other options**	**Significant comparative advantage over other options**	**Significant comparative disadvantage over other options**
					The proposed location is partially within the existing IÉ railway boundaries, therefore some additional land taking is envisaged with this option.	The proposed location is partially within the existing IÉ railway boundaries, therefore some additional land taking is envisaged with this option.	The proposed location is not within the existing IÉ railway boundaries; therefore, it will be necessary additional land taking with this option.
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					It will not require the blockade of the tracks to undertake the works.	It will not require the blockade of the tracks to undertake the works.	It will not require the blockade of the tracks to undertake the works.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Castleknock Traction Substation							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Castleknock Traction Substation**	**Option 2 – Castleknock Traction Substation**	**Option 3 – Castleknock Traction Substation**
3	**Environment**	**2.5**	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
		3.1	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					All options are located a similar distance from residential dwellings and therefore have the same potential for noise impacts.	All options are located a similar distance from residential dwellings and therefore have the same potential for noise impacts.	All options are located a similar distance from residential dwellings and therefore have the same potential for noise impacts.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Significant comparative advantage over other options**
					Significant impact on landscape character of the Royal Canal Way.	Significant impact on landscape character of the Royal Canal Way.	This option will result direct impacts to Laurel Lodge Park an established local parkland area. It is recognised that this option will impact on the local landscape character of the park also zoned as open space in the Fingal County Development Plan. However, in comparison with the other options this location has a greater capacity to absorb and screen potential negative impacts over the other options.
		3.4	Biodiversity (flora and fauna)	Potential compliance/conflict with biodiversity objectives; Indirect impacts on protected species, designated sites; Overall effect on nature conservation resource.	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Significant comparative advantage over other options**
					This option requires works close to the canal. During operation there may be noise impacts.	This option requires works close to the canal. During operation there may be noise impacts.	This option is set back from the canal, limiting potential noise impacts.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Castleknock Traction Substation							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Castleknock Traction Substation**	**Option 2 – Castleknock Traction Substation**	**Option 3 – Castleknock Traction Substation**
		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 (land take)	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Significant comparative advantage over other options**
					This option is located closest to Granard Bridge (RPS 696) and Royal Canal (RPS).. Potential indirect impacts on setting of RPSs.	This option is located closest to Granard Bridge (RPS 696) and Royal Canal (RPS).. Potential indirect impacts on setting of RPSs.	This option is located Laural Lodge park. Potential direct impacts on unknown archaeological deposits that may survive in greenfield areas.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					Low Risk of flooding comparable across all options. Increased risk to water quality of Royal Canal during construction due to very close proximity.	Low Risk of flooding comparable across all options. Increased risk to water quality of Royal Canal during construction due to very close proximity.	Low Risk of flooding comparable across all options. Comparatively low risk to water quality of Royal canal.
		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.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Property likely to be required to be acquired.	Property likely to be required to be acquired.	Property likely to be required to be acquired.
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources and soil resources to be developed/removed. Existing information relating to potential to encounter contaminated land.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on nearby receptors.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Castleknock Traction Substation							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Castleknock Traction Substation**	**Option 2 – Castleknock Traction Substation**	**Option 3 – Castleknock Traction Substation**
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Reliability, Availability and Maintainability fulfilled in both options.	Reliability, Availability and Maintainability fulfilled in both options.	Reliability, Availability and Maintainability fulfilled in both options.
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

Table 5. Summary of the MCA for Castleknock Traction Substation

	Option 1 – Castleknock Traction Substation	Option 2 – Castleknock Traction Substation	Option 3 – Castleknock Traction Substation
Economy	Comparable to other options	Comparable to other options	Comparable to other options
Integration	Significant comparative disadvantage over other options	Significant comparative disadvantage over other options	Significant comparative advantage over other options
Environment	Significant comparative disadvantage over other options	Significant comparative disadvantage over other options	Significant comparative advantage over other options
Accessibility & Social inclusion	Comparable to other options	Comparable to other options	Comparable to other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation of Castleknock Traction Substation option locations is **Option 3.**

As a result of the MCA, the MDC concludes that Option 1 and Option 2 are very similar and they will not be taken into account, because part of the existing car park will be required for this purpose as well as relocate the existing exit/entry and the proximity of the Canal. Also, there is no space for continuing the road in front of the substation due to the Royal Canal.

Ashtown Traction Substation

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters						
MCA (Multi Criteria Analysis) for Ashtown Traction Substation						
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Ashtown Traction Substation**	**Option 2 – Ashtown Traction Substation**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					The capital expenditure required for the traction substation is the same for both options. The ESB's MV line will depend on ESB studies. No clashes with utilities. Possible connections to water supply and foul gravity network.	The capital expenditure required for the traction substation is the same for both options. The ESB's MV line will depend on ESB studies. Slight clash with ESB underground network. Possible connections to water supply and foul gravity network.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**
					The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					In this option, it would be necessary create a road access through the existing one for the industrial area.	It would not require undertaking major works to accommodate the road access.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Significant comparative disadvantage over other options**	**Significant comparative advantage over other options**
					The proposed location is not within the existing IÉ railway boundaries; therefore, it will be necessary additional land taking with this option.	The proposed location is almost within the existing IÉ railway boundaries, therefore not major additional land taking is envisaged with this option.
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**
					It will not require the blockade of the tracks to undertake the works.	It will not require the blockade of the tracks to undertake the works.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters						
MCA (Multi Criteria Analysis) for Ashtown Traction Substation						
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Ashtown Traction Substation**	**Option 2 – Ashtown Traction Substation**
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Significant comparative advantage over other options**	**Significant comparative disadvantage over other options**
					Located away from residential areas.	Located next to a residential property.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Significant comparative advantage over other options**	**Significant comparative disadvantage over other options**
					Located on made ground in an industrial area with no sensitive residential receptors. In proximity to Mill building but screened by existing vegetation.	Option located adjacent to residential area in amenity walkway area. Likely visual impacts and change in landscape character significant disadvantage over the other option.
		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**
					This option is on built ground and will not require vegetation removal or the loss of habitat.	This option is on the vegetated railway embankment and will lead to some habitat loss.
		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 (land take)	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					Option located on made ground in an industrial area. In proximity to Mill building (NIAH: 11362067). While the site is screened by existing vegetation there is potential for indirect impacts on mill and outbuildings (RPS 691).	No recorded cultural, archaeological and architecture heritage resources present on site. Potential direct impacts on unknown archaeological deposits that may survive in greenfield areas.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters						
MCA (Multi Criteria Analysis) for Ashtown Traction Substation						
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Ashtown Traction Substation**	**Option 2 – Ashtown Traction Substation**
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards to water resources.	This option does not present any disadvantage or advantage in regards to water resources.
		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.	**Comparable to other options**	**Comparable to other options**
					This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources and soil resources to be developed/removed. Existing information relating to potential to encounter contaminated land.	**Comparable to other options**	**Comparable to other options**
					Located on made ground. This option does not present any advantage or disadvantages over other options.	Will result in paving a vegetation area (removal of soil resources). But does not present any significant advantage or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on nearby receptors.	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**
					Reliability, Availability and Maintainability fulfilled in both options.	Reliability, Availability and Maintainability fulfilled in both options.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters						
MCA (Multi Criteria Analysis) for Ashtown Traction Substation						
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Ashtown Traction Substation**	**Option 2 – Ashtown Traction Substation**
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

Table 6. Summary of the MCA for Ashtown Traction Substation

	Option 1 – Ashtown Traction Substation	Option 2 – Ashtown Traction Substation
Economy	Some comparative advantage over other options	Some comparative disadvantage over other options
Integration	Significant comparative disadvantage over other options	Significant comparative advantage over other options
Environment	Significant comparative advantage over other options	Significant comparative disadvantage over other options
Accessibility & Social inclusion	Comparable to other options	Comparable to other options
Safety	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation of Ashtown Traction Substation option locations is **Option 2.**

As a result of the MCA, the MDC concludes that Option 1 will not be taken into account because it is not within the existing IÉ railway boundaries and it would be necessary create a road access through the existing one for the industrial area.

M3 Parkway Traction Substation

NOTE: An IÉ's CWSET compound, limits the Substation location options. Only one option is presented, in this case. No other option cannot be taken into account, because there is a clash with an IÉ's CWSET compound.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters					
MCA (Multi Criteria Analysis) for M3 Parkway Traction Substation					
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – M3 Parkway Traction Substation**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options** The capital expenditure required for the traction substation is the same for both options. The ESB's MV line will depend on ESB studies. No clash with existing utilities. No foul drainage and water supply networks near.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options** The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Some comparative advantage over other options** It would not require undertaking major works to accommodate road access from R157; however, part of existing bicycle park will be required to be taken for this purpose.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Significant comparative advantage over other options** There is no difference in integration with parallel projects/contracts for this option in comparison with others.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Comparable to other options** The proposed location is within the existing IÉ railway boundaries, therefore not major additional land taking is envisaged with this option.
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options** It will not require the blockade of the tracks to undertake the works.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options** There is no difference in obsolesce in a long-term basis for this option in comparison with others.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters					
MCA (Multi Criteria Analysis) for M3 Parkway Traction Substation					
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – M3 Parkway Traction Substation**
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Some comparative advantage over other options**
					Located away from residential areas.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative advantage over other options**
					Located away from residential receptors.
		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.	**Comparable to other options**
					This option does not present any advantage or disadvantages over other options.
		3.5	Cultural, Archaeological and Architectural Heritage	Overall effect on cultural, archaeological and architecture heritage resource. Likely effects on RPS, National Monuments, SMRs, Conservation areas, etc. Number of designated sites/structures (by level of designation) directly impacted by scheme (land take)	**Comparable to other options**
					Located on made ground in M3 Parkway Station site. This option does not present any advantage or disadvantages over other options.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Some comparative disadvantage over other options**
					Option 1 is closest to floodplain of Tolka. May be liable to flood in extreme events.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters					
MCA (Multi Criteria Analysis) for M3 Parkway Traction Substation					
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – M3 Parkway Traction Substation**
		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.	**Comparable to other options** Located on made ground in M3 Parkway Station site. This option does not present any advantage or disadvantages over other options.
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources and soil resources to be developed/removed. Existing information relating to potential to encounter contaminated land.	**Comparable to other options** Located on made ground in M3 Parkway Station site. This option does not present any advantage or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options** This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options** Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options** User's / People's safety is fulfilled in both options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options** Reliability, Availability and Maintainability fulfilled in both options.
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

Table 7. Summary of the MCA for M3 Parkway Traction Substation

	Option 1 – M3 Parkway Traction Substation
Economy	Comparable to other options
Integration	Significant comparative advantage over other options
Environment	Some comparative disadvantage over other options
Accessibility & Social inclusion	Comparable to other options
Safety	Comparable to other options
Physical Activity	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation of M3 Parkway Traction Substation option locations is **Option 1**.

NOTE: An IÉ's CWSET compound, limits the Substation location options. Only one option is presented, in this case. No other option cannot be taken into account, because there is a clash with an IÉ's CWSET compound.

Dunboyne Traction Substation

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Dunboyne Traction Substation							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Dunboyne Traction Substation**	**Option 2 – Dunboyne Traction Substation**	**Option 3 – Dunboyne Traction Substation**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**
					The capital expenditure required for the traction substation is the same for both options. The ESB's MV line cost will depend on ESB studies. No clashes with existing utilities. Possible connection to foul drainage and water supply networks.	The capital expenditure required for the traction substation is the same for both options. The ESB's MV line cost will depend on ESB studies. Clash with ESB underground network. Possible connection to foul drainage and water supply networks.	The capital expenditure required for the traction substation is the same for both options. The ESB's MV line cost will depend on ESB studies. Clash with ESB underground network. Possible connection to foul drainage and water supply networks.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Significant comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**
					In this option, it would not require undertaking major works to accommodate road access from L228.	In this option, it would not require undertaking major works to accommodate road access from L228; however, part of the existing bicycle park will be required to be taken for this purpose as well as relocate the existing overpass exit/entry.	In this option, It would not require undertaking major works to accommodate road access from L228; however, part of the existing bus stop will be required to be taken for this purpose.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The proposed location is within the existing IÉ railway boundaries, therefore not major additional land taking is envisaged with this option.	The proposed location is within the existing IÉ railway boundaries, therefore not major additional land taking is envisaged with this option.	The proposed location is within the existing IÉ railway boundaries, therefore not major additional land taking is envisaged with this option.
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					It will not require the blockade of the tracks to undertake the works.	It will not require the blockade of the tracks to undertake the works.	It will not require the blockade of the tracks to undertake the works.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Dunboyne Traction Substation							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Dunboyne Traction Substation**	**Option 2 – Dunboyne Traction Substation**	**Option 3 – Dunboyne Traction Substation**
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					All options are located a similar distance from residential dwellings and therefore have the same potential for noise impacts.	All options are located a similar distance from residential dwellings and therefore have the same potential for noise impacts.	All options are located a similar distance from residential dwellings and therefore have the same potential for noise impacts.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**
					All options in urbanised location in proximity to residential receptors – potential for visual impact.	All options in urbanised location in proximity to residential receptors – potential for visual impacts. This option is closer to cultural heritage feature RPS bridge Dunboyne bridge likely to affect is setting/landscape character.	All options in urbanised location in proximity to residential receptors – potential for visual impacts. This option is closer to cultural heritage feature RPS bridge Dunboyne bridge likely to affect is setting/landscape character.
		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.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.
		3.5	Cultural, Archaeological and Architectural Heritage	Overall effect on cultural, archaeological and architecture heritage resource. Likely effects on RPS, National Monuments, SMRs, Conservation areas, etc. Number of designated sites/structures (by level of designation) directly impacted by scheme (land take)	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**
					Some greenfield area likely to be affected, potential to uncover previously unrecorded heritage features. The Option is located further away from RPS Dunboyne Bridge therefore has an advantage over other options.	Potential indirect impacts to setting of RPS Dunboyne Bridge.	Potential indirect impacts to setting of RPS Dunboyne Bridge.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Dunboyne Traction Substation							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Dunboyne Traction Substation**	**Option 2 – Dunboyne Traction Substation**	**Option 3 – Dunboyne Traction Substation**
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regard to water resources.	This option does not present any disadvantage or advantage in regard to water resources.	This option does not present any disadvantage or advantage in regard to water resources.
		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.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Located in Car park of Station	Located in Car park of Station	Located in Car park of Station
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources and soil resources to be developed/removed. Existing information relating to potential to encounter contaminated land.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on nearby receptors.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Located in an urbanised location with residential receptors in proximity to all options. This option does not present any disadvantage or advantage in relation to nearby receptors.	Located in an urbanised location with residential receptors in proximity to all options. This option does not present any disadvantage or advantage in relation to nearby receptors.	Located in an urbanised location with residential receptors in proximity to all options. This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Dunboyne Traction Substation							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Dunboyne Traction Substation**	**Option 2 – Dunboyne Traction Substation**	**Option 3 – Dunboyne Traction Substation**
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Reliability, Availability and Maintainability fulfilled in both options.	Reliability, Availability and Maintainability fulfilled in both options.	Reliability, Availability and Maintainability fulfilled in both options.
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

Table 8. Summary of the MCA for Dunboyne Traction Substation

	Option 1 – Dunboyne Traction Substation	Option 2 – Dunboyne Traction Substation	Option 3 – Dunboyne Traction Substation
Economy	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options
Integration	Significant comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options
Environment	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options
Accessibility & Social inclusion	Comparable to other options	Comparable to other options	Comparable to other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation of Dunboyne Traction Substation option locations is **Option 1**.

As a result of the MCA, the MDC concludes that Option 2 will not be taken into account, because part of the existing bicycle park will be required to be taken for this purpose as well as relocate the existing overpass exit/entry.

As a result of the MCA, the MDC concludes that Option 3 will not be taken into account, because part of the existing bus stop will be required to be taken for this purpose.

Hansfield Traction Substation

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Hansfield Traction Substation							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Hansfield Traction Substation**	**Option 2 – Hansfield Traction Substation**	**Option 3 – Hansfield Traction Substation**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The capital expenditure required for the traction substation is the same for both options. The ESB's MV line will depend on ESB studies. No clash with existing utilities. No water main and foul drainage networks near.	The capital expenditure required for the traction substation is the same for both options. The ESB's MV line will depend on ESB studies. No clash with existing utilities. No water main and foul drainage networks near.	The capital expenditure required for the traction substation is the same for both options. The ESB's MV line will depend on ESB studies. No clash with existing utilities. No water main and foul drainage networks near.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					In this option, it would not require undertaking major works to accommodate road access from Station Rd; however, part of the existing car park will be required to be taken for this purpose.	In this option, it would not require undertaking major works to accommodate road access from Station Rd; however, part of the existing car park will be required to be taken for this purpose.	In this option, it would be necessary create an access from the existing road Barberstown Lane North.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Significant comparative advantage over other options**
					The proposed location is not within the existing IÉ railway boundaries; therefore, it will be necessary additional land taking with this option.	The proposed location is not within the existing IÉ railway boundaries; therefore, it will be necessary additional land taking with this option.	The proposed location is within the existing IÉ railway boundaries, therefore not major additional land taking is envisaged with this option.
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					It will not require the blockade of the tracks to undertake the works.	It will not require the blockade of the tracks to undertake the works.	It will not require the blockade of the tracks to undertake the works.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Hansfield Traction Substation							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Hansfield Traction Substation**	**Option 2 – Hansfield Traction Substation**	**Option 3 – Hansfield Traction Substation**
3	**Environment**	**2.5**	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
		3.1	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					All options are located a similar distance from residential dwellings and therefore have the same potential for noise impacts.	All options are located a similar distance from residential dwellings and therefore have the same potential for noise impacts.	All options are located a similar distance from residential dwellings and therefore have the same potential for noise impacts.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Developing area that will be subject to change. This option does not present any advantages or disadvantages over other options.	Developing area that will be subject to change. This option does not present any advantages or disadvantages over other options.	Developing area that will be subject to change. This option does not present any advantages or disadvantages over other options.
		3.4	Biodiversity (flora and fauna)	Potential compliance/conflict with biodiversity objectives; Indirect impacts on protected species, designated sites; Overall effect on nature conservation resource.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.
		3.5	Cultural, Archaeological and Architectural Heritage	Overall effect on cultural, archaeological and architecture heritage resource. Likely effects on RPS, National Monuments, SMRs, Conservation areas, etc. Number of designated sites/structures (by level of designation) directly impacted by scheme (land take)	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No known heritage resources recorded. The option does not present any advantage or disadvantages over other options.	No known heritage resources recorded. The option does not present any advantage or disadvantages over other options.	No known heritage resources recorded. Site on greenfield site. The option does not present any advantage or disadvantages over other options.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Hansfield Traction Substation							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Hansfield Traction Substation**	**Option 2 – Hansfield Traction Substation**	**Option 3 – Hansfield Traction Substation**
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards to water resources.	This option does not present any disadvantage or advantage in regards to water resources.	This option does not present any disadvantage or advantage in regards to water resources.
		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.	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					No additional lands required.	No additional lands required.	Private property will be required.
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources and soil resources to be developed/removed. Existing information relating to potential to encounter contaminated land.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on nearby receptors.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Reliability, Availability and Maintainability fulfilled in both options.	Reliability, Availability and Maintainability fulfilled in both options.	Reliability, Availability and Maintainability fulfilled in both options.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Hansfield Traction Substation							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Hansfield Traction Substation**	**Option 2 – Hansfield Traction Substation**	**Option 3 – Hansfield Traction Substation**
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

Table 9. Summary of the MCA for Hansfield Traction Substation

	Option 1 – Hansfield Traction Substation	Option 2 – Hansfield Traction Substation	Option 3 – Hansfield Traction Substation
Economy	Comparable to other options	Comparable to other options	Comparable to other options
Integration	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
Environment	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
Accessibility & Social inclusion	Comparable to other options	Comparable to other options	Comparable to other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation of Hansfield Traction Substation option locations is **Option 3.**

As a result of the MCA, the MDC concludes that Option 1 will not be taken into account, because part of the existing car park will be required to be taken for this purpose and also the proposed location is not within the existing IÉ railway boundaries; it will be necessary additional land taking with this option.

As a result of the MCA, the MDC concludes that Option 2 will not be taken into account, because part of the existing car park will be required to be taken for this purpose and also the proposed location is not within the existing IÉ railway boundaries; it will be necessary additional land taking with this option.

Glasnevin Traction Substation

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters									
MCA (Multi Criteria Analysis) for Glasnevin Traction Substation									
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 2 – Glasnevin Traction Substation**	**Option 3 – Glasnevin Traction Substation**	**Option 4 – Glasnevin Traction Substation**	**Option 5 – Glasnevin Traction Substation**	**Option 6 – Glasnevin Traction Substation**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Some comparative disadvantage over other options** The capital expenditure required for the traction substation is lower as the substation is above ground; the Royal Canal way needs to be widening in a small stretch. Preventive measures will have to be undertaking in order to avoid potential water damage due to its proximity to the canal. The ESB's MV line will depend on ESB studies.	**Significant comparative disadvantage over other options** The capital expenditure required for the traction substation is lower as the substation is above ground; the Royal Canal way needs to be widening in a long stretch. Preventive measures will have to be undertaking in order to avoid potential water damage due to its proximity to the canal. The ESB's MV line will depend on ESB studies.	**Some comparative advantage over other options** The capital expenditure required for the traction substation is significant lower as the substation is above ground. Retaining wall needed. The ESB's MV line will depend on ESB studies.	**Significant comparative advantage over other options** The capital expenditure required for the traction substation is significant lower as the substation is far from the Royal Canal and the access is easy to provide. The ESB's MV line will depend on ESB studies.	**Significant comparative advantage over other options** The capital expenditure required for the traction substation is significant lower as the substation is far from the Royal Canal and the access is easy to provide. The ESB's MV line will depend on ESB studies.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options** The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	**Comparable to other options** The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	**Comparable to other options** The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	**Comparable to other options** The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	**Comparable to other options** The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Significant comparative disadvantage over other options** In this option, it would be necessary to widen the Royal Canal Way to allow road access from R108.	**Significant comparative disadvantage over other options** In this option, it would be necessary to widen the Royal Canal Way to allow road access from R108, which is 530m approximately distant from R108, on its east side.	**Some comparative disadvantage over other options** In this option, the Gaelic football pitch limits (layout) would have to be adjusted to allow the substation construction. It would be necessary accommodate the road access provided from Clareville Court to the existing Gaelic football pitch area A retaining wall is required	**Some comparative advantage over other options** In this option, the Gaelic football pitch limits (layout) would have to be adjusted to allow the substation construction. It would be necessary accommodate the road access provided from Clareville Court to the existing Gaelic football pitch area.	**Significant comparative advantage over other options** In this option, the Gaelic football pitch limits (layout) would have to be adjusted to allow the substation construction. Compared to options (4 and 5) also located in the existing Gaelic football pitch, this one has less land take from the Gaelic football pitch, than the others. It would be necessary accommodate the road access provided from Clareville Court to the

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters									
MCA (Multi Criteria Analysis) for Glasnevin Traction Substation									
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 2 – Glasnevin Traction Substation**	**Option 3 – Glasnevin Traction Substation**	**Option 4 – Glasnevin Traction Substation**	**Option 5 – Glasnevin Traction Substation**	**Option 6 – Glasnevin Traction Substation**
									existing Gaelic football pitch area.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Significant comparative disadvantage over other options** Due to its location next to the Royal Canal, it can interfere in the future development of this area.	**Significant comparative disadvantage over other options** Due to its location next to the Royal Canal, it can interfere in the future development of this area. The MDC are aware that DCC are proposing to expand the Royal Canal greenway. The location of the substation at this location may impact the options available to DC however there is no approved planning application details provided at this stage. Consultation required with DCC if identified as the preferred option.	**Significant comparative advantage over other options** This option is not integrated in parallel projects/contracts.	**Significant comparative advantage over other options** This option is not integrated in parallel projects/contracts.	**Significant comparative advantage over other options** This option is not integrated in parallel projects/contracts.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Comparable to other options** The proposed location is not within the existing IÉ railway boundaries; therefore, land take will be required.	**Comparable to other options** The proposed location is not within the existing IÉ railway boundaries; therefore, land take will be required.	**Comparable to other options** The proposed location is not within the existing IÉ railway boundaries; therefore, land take will be required.	**Comparable to other options** The proposed location is not within the existing IÉ railway boundaries; therefore, land take will be required.	**Comparable to other options** The proposed location is not within the existing IÉ railway boundaries; therefore, land take will be required.
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options** It will not require the blockade of the tracks to undertake the works.	**Comparable to other options** It will not require the blockade of the tracks to undertake the works.	**Comparable to other options** It will not require the blockade of the tracks to undertake the works.	**Comparable to other options** It will not require the blockade of the tracks to undertake the works.	**Comparable to other options** It will not require the blockade of the tracks to undertake the works.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options** There is no difference in obsolesce in a long-term basis for this option in comparison with others.	**Comparable to other options** There is no difference in obsolesce in a long-term basis for this option in comparison with others.	**Comparable to other options** There is no difference in obsolesce in a long-term basis for this option in comparison with others.	**Comparable to other options** There is no difference in obsolesce in a long-term basis for this option in comparison with others.	**Comparable to other options** There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters									
MCA (Multi Criteria Analysis) for Glasnevin Traction Substation									
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 2 – Glasnevin Traction Substation**	**Option 3 – Glasnevin Traction Substation**	**Option 4 – Glasnevin Traction Substation**	**Option 5 – Glasnevin Traction Substation**	**Option 6 – Glasnevin Traction Substation**
				of providers or open technology	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**
					Partly located on Cabra Kayak Club and on a brownfield sites. Located in proximity to residential dwellings on other side of Canal. Located a similar distance from residential dwellings than some of the other options.	Located at a greater distance from sensitive receptors than some of the other options.	Located in a recreational area. Located at a greater distance from residential uses than other options.	Located in a recreational area and close to residential land uses. Located a similar distance from sensitive receptors as some of the other options.	Located in a recreational area and close to residential land uses. Located a similar distance from sensitive receptors as some of the other options.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**
					Located on site of Lock House (derelict) Cabra Kayak Club, in proximity to the Royal Canal 6th Lock (RPS), the Royal Canal (RPS) and Royal Canal Way, a sensitive landscape and amenity area. This option is likely to have an impact to the landscape character and the views to and from the Royal Canal.	Located adjacent to the Royal Canal RPS and Royal Canal way, a sensitive landscape and amenity area. Potential impacts to the landscape character and setting of the area. Replacement screening would help reduce impact.	Located adjacent to the railway line on the edge of the active playing pitch. Direct landscape impacts to the recreational and education amenities. Local landscape impacts and visual impacts.	Located on the edge of the active playing pitch. Direct landscape impacts to the recreational and education amenities. Local landscape impacts and visual impacts to dwelling houses on Clareville Court. Replacement screening could reduce impact.	Located away from the Royal Canal sensitive landscape area. Direct landscape impacts to the recreational and education amenities. Local landscape impacts and visual impacts to dwelling houses on Clareville Court. Replacement screening could reduce impact.
		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 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 located on made ground and parts include areas of dry grassland and scrub between the canal and railway. This option requires	This option is located in an area of dry grassland and trees between the canal towpath and railway. This option requires works directly adjacent to the	The option is located adjacent to the railway corridor on the sports field. This option will result in loss of amenity grassland and tree loss.	Located on playing pitches, this option will result in loss of amenity grassland and trees. The pitch has been identified as an important (Major) feeding ground for	Located on playing pitches, this option will result in loss of amenity grassland and possibly trees. The pitch has been identified as

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters									
MCA (Multi Criteria Analysis) for Glasnevin Traction Substation									
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 2 – Glasnevin Traction Substation**	**Option 3 – Glasnevin Traction Substation**	**Option 4 – Glasnevin Traction Substation**	**Option 5 – Glasnevin Traction Substation**	**Option 6 – Glasnevin Traction Substation**
					works adjacent to the Royal Canal pNHA and will likely result in the loss of grassland and scrub habitat. Japanese Knotweed has been recorded within the rail corridor approx. 100m northeast of the site. During operation there may be water quality and noise impacts which requires further assessment.	Royal Canal pNHA and will likely result in the loss of grassland and trees. Japanese Knotweed has been recorded within the rail corridor approx. 120m northwest of the site. During operation there may be water quality and noise impacts which requires further assessment.	The pitch has been identified as an important (Major) feeding ground for Brent Geese, a qualifying interest of a number of Special Areas of Conservation in the Dublin area. Construction stage impacts are likely as the site is located on the edge of the pitch however this could be mitigated by avoiding works during winter periods. No significant impacts are expected to the feeding grounds during the operational stage.	Brent Geese, a qualifying interest of a number of Special Areas of Conservation in the Dublin area. Construction stage impacts are likely as the site is located on the edge of the pitch however this could be mitigated by avoiding works during winter periods. No significant impacts are expected to the feeding grounds during the operational stage.	an important (Major) feeding ground for Brent Geese, a qualifying interest of a number of Special Areas of Conservation in the Dublin area. Construction stage impacts are likely as the site is located on the edge of the pitch however this could be mitigated by avoiding works during winter periods. No significant impacts are expected to the feeding grounds during the operational stage.
		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 (land take)	**Significant comparative disadvantage over other options** Option 2 is likely to have a direct impact on Former Lock House (derelict). Indirect impacts on the Royal Canal (RPS), Royal Canal 6th Lock (RPS) context and setting. There is potential for unknown archaeological resources to be encountered.	**Some comparative disadvantage over other options** Option 3 is located in proximity of the Royal Canal RPS, works are likely to have an indirect impact on its setting. There is potential for unknown archaeological resources to be encountered.	**Significant comparative advantage over other options** There are no RPS, National Monuments, SMRs and Conservation areas located within Option 4. No known heritage resources recorded. There is potential for unknown archaeological resources to be encountered.	**Significant comparative advantage over other options** There are no RPS, National Monuments, SMRs and Conservation areas located within Option 4. No known heritage resources recorded. There is potential unknown archaeological resources to be encountered.	**Significant comparative advantage over other options** There are no RPS, National Monuments, SMRs and Conservation areas located within Option 4. No known heritage resources recorded. There is potential unknown archaeological resources to be encountered.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options** No record of historical or predicted flooding within the vicinity of the site. This option does not present any disadvantage or advantage with regards to water resources.	**Comparable to other options** No record of historical or predicted flooding within the vicinity of the site. This option does not present any disadvantage or advantage with regards to water resources.	**Comparable to other options** No record of historical or predicted flooding within the vicinity of the site. This option does not present any disadvantage or advantage with regards to water resources.	**Comparable to other options** No record of historical or predicted flooding within the vicinity of the site. This option does not present any disadvantage or advantage with regards to water resources	**Comparable to other options** No record of historical or predicted flooding within the vicinity of the site. This option does not present any disadvantage or advantage with regards to water resources
		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.	**Some comparative disadvantage over other options** Partly located on Cabra Kayak Club impacts to the club. All land-take is in private ownership. Temporary Construction impact to the Royal Canal Way	**Some comparative advantage over other options** Located on IE lands and also private lands. Temporary Construction impact to the Royal Canal Way.	**Some comparative disadvantage over other options** All land- take is in private ownership. Impacts to educational and recreational facilities.	**Some comparative disadvantage over other options** All land- take is in private ownership. Likely impacts to educational and recreational facilities.	**Some comparative disadvantage over other options** All land- take is in private ownership. Likely impacts to educational and recreational facilities.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters									
MCA (Multi Criteria Analysis) for Glasnevin Traction Substation									
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 2 – Glasnevin Traction Substation**	**Option 3 – Glasnevin Traction Substation**	**Option 4 – Glasnevin Traction Substation**	**Option 5 – Glasnevin Traction Substation**	**Option 6 – Glasnevin Traction Substation**
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources and soil resources to be developed/removed. Existing information relating to potential to encounter contaminated land.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage over other options. Contaminated land unknown.	This option does not present any disadvantage or advantage over other options. Contaminated land unknown.	This option does not present any disadvantage or advantage over other options. Contaminated land unknown.	This option does not present any disadvantage or advantage over other options. Contaminated land unknown.	This option does not present any disadvantage or advantage over other options. Contaminated land unknown.
		3.9	Radiation and Stray Current	Overall likely impact on nearby receptors.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Local accessibility	In case the location of the buildings could cause any impact on the access to adjacent dwellings	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					The works of the Metrolink project in the area may disrupt the whole area	The works of the Metrolink project in the area may disrupt the whole area	No accessibility issues are foreseen	No accessibility issues are foreseen	No accessibility issues are foreseen
		4.2	Vulnerable groups	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in this option, as the area is not linked to any particular safety sensitive environment	User's / People's safety is fulfilled in this option, as the area is not linked to any particular safety sensitive environment	User's / People's safety is fulfilled in this option, as the substation is designed to be safe and not allow public to enter the site. Netting will be put up to stop balls from entering the property	User's / People's safety is fulfilled in this option, as the substation is designed to be safe and not allow public to enter the site. Netting will be put up to stop balls from entering the property	User's / People's safety is fulfilled in this option, as the substation is designed to be safe and not allow public to enter the site. Netting will be put up to stop balls from entering the property
		5.3	RAM	Assessment of Reliability, Availability and	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters									
MCA (Multi Criteria Analysis) for Glasnevin Traction Substation									
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 2 – Glasnevin Traction Substation**	**Option 3 – Glasnevin Traction Substation**	**Option 4 – Glasnevin Traction Substation**	**Option 5 – Glasnevin Traction Substation**	**Option 6 – Glasnevin Traction Substation**
				Maintainability of the solution	Potential unavailability due to inherent risks due to the location next to the Royal Canal	Potential unavailability due to inherent risks due to the location next to the Royal Canal	Reliability, Availability and Maintainability fulfilled in this option.	Reliability, Availability and Maintainability fulfilled in this option.	Reliability, Availability and Maintainability fulfilled in this option.
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Some comparative advantage over other options** This option does not impact physical activity and therefore has some advantage over other options.	**Some comparative advantage over other options** This option does not impact physical activity and therefore has some advantage over other options.	**Some comparative disadvantage over other options** This option presents some disadvantage over other options as it is located on a sports area.	**Some comparative disadvantage over other options** This option presents some disadvantage over other options as it is located on a sports area.	**Some comparative disadvantage over other options** This option presents some disadvantage over other options as it is located on a sports area.

Comparison of Options and Recommendation

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

Table 10. Summary of the MCA for Glasnevin Traction Substation

	Option 2 – Glasnevin Traction Substation	Option 3 – Glasnevin Traction Substation	Option 4 – Glasnevin Traction Substation	Option 5 – Glasnevin Traction Substation	Option 6 – Glasnevin Traction Substation
Economy	Some comparative disadvantage over other options	**Significant comparative disadvantage over other options**	Some comparative advantage over other options	**Significant comparative advantage over other options**	**Significant comparative advantage over other options**
Integration	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	Some comparative advantage over other options	Some comparative advantage over other options	**Significant comparative advantage over other options**
Environment	Some comparative disadvantage over other options	Significant comparative advantage over other options	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**
Accessibility & Social inclusion	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
Safety	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
Physical Activity	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation of Glasnevin Traction Substation option locations is **Option 6.**

Spencer Dock Traction Substation

	Parameter		Criteria	Sub-Criteria (Quantitative Qualitative)	Option 1 – Spencer Dock Traction Substation	Option 2 – Spencer Dock Traction Substation	Option 3 – Spencer Dock Traction Substation
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The capital expenditure required for the traction substation is the same for both options. The ESB's MV line cost will depend on ESB studies.	The capital expenditure required for the traction substation is the same for both options. The ESB's MV line cost will depend on ESB studies.	The capital expenditure required for the traction substation is the same for both options. The ESB's MV line cost will depend on ESB studies.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.	The traction substation operating expenditure is the same for both options. The connection to ESB is maintained by ESB. It does not incur in an increment of OPEX.
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Significant comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					In this option, it would not require undertaking major works to accommodate road access from Park Lane; however, part of existing car park will be required to be taken for this purpose.	In this option, it would not require undertaking major works to accommodate road access from Park Lane.	In this option, it would be necessary accommodate the road access from Abercorn Rd or from Park Lane.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The proposed location is within the existing IÉ railway boundaries, therefore not major additional land taking is envisaged with this option.	The proposed location is within the existing IÉ railway boundaries, therefore not major additional land taking is envisaged with this option.	The proposed location is within the existing IÉ railway boundaries, therefore not major additional land taking is envisaged with this option.
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					It will not require the blockade of the tracks to undertake the works.	It will not require the blockade of the tracks to undertake the works.	It will not require the blockade of the tracks to undertake the works.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

	Parameter		Criteria	Sub-Criteria (Quantitative Qualitative)	Option 1 – Spencer Dock Traction Substation	Option 2 – Spencer Dock Traction Substation	Option 3 – Spencer Dock Traction Substation
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					Nearest sensitive receptor located approx. 20m away.	Nearest sensitive receptors located approx. 30m.	Located on/ at the rear of low-density residential properties 0m distance.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					Located beside existing Docklands Station. Indirect effects to NIAH Sheriff Street lifting bridge. Users of Royal Canal Greenway are likely to experience landscape change.	Located beside existing Docklands Station building in traffic area. Landscape has the capacity to absorb changes.	Located along existing railway line. Landscape and visual impacts to the rear of residential properties.
		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 disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					This option requires works adjoining the Royal Canal pNHA. During operation there may be water quality and noise impacts.	This option is located on made ground adjoining the Docklands station. No likely significant effects on biodiversity resources.	This option is located on made ground. . No likely significant effects on biodiversity resources.
		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 (land take)	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					Option 1 located in proximity to Sheriff Street Lifting Bridge a NIAH (Reg. No. 50010016). Potential for indirect impacts to heritage features setting.	Located beside existing Docklands Station on made ground. No recorded structures or monuments on site.	Located along existing railway line. No recorded structures or monuments on site.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option is identified as being within Flood Zone A. The area is defended against flooding, nonetheless, there is a residual risk of flooding where extreme events exceed the design standard of protection of the flood defences. The residual risk is comparable across all options. Options are comparable with regards to flood risk and water quality.	This option is identified as being within Flood Zone A. The area is defended against flooding, nonetheless, there is a residual risk of flooding where extreme events exceed the design standard of protection of the flood defences. The residual risk is comparable across all options. Options are comparable with regards to flood risk and water quality.	This option is identified as being within Flood Zone A. The area is defended against flooding, nonetheless, there is a residual risk of flooding where extreme events exceed the design standard of protection of the flood defences. The residual risk is comparable across all options. Options are comparable with regards to flood risk and water quality.
		3.7	Agriculture and Non-Agricultural	Overall impact on land take & property. Number of properties to be	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**

	Parameter		Criteria	Sub-Criteria (Quantitative Qualitative)	Option 1 – Spencer Dock Traction Substation	Option 2 – Spencer Dock Traction Substation	Option 3 – Spencer Dock Traction Substation
				impacted/acquired. Likely temporary or permanent severance effects.	No land-take required	No land-take required	Land-take required
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources and soil resources to be developed/removed. Existing information relating to potential to encounter contaminated land.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any advantage or disadvantages over other options. Contaminated land unknown.	This option does not present any advantage or disadvantages over other options. Contaminated land unknown.	This option does not present any advantage or disadvantages over other options. Contaminated land unknown.
		3.9	Radiation and Stray Current	Overall likely impact on nearby receptors.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Reliability, Availability and Maintainability fulfilled in both options.	Reliability, Availability and Maintainability fulfilled in both options.	Reliability, Availability and Maintainability fulfilled in both options.
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

Table 11. Summary of the MCA for Spencer Dock Traction Substation

	Option 1 – Spencer Dock Traction Substation	Option 2 – Spencer Dock Traction Substation	Option 3 – Spencer Dock traction Substation
Economy	Comparable to other options	Comparable to other options	Comparable to other options
Integration	Significant comparative disadvantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
Environment	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
Accessibility & Social inclusion	Comparable to other options	Comparable to other options	Comparable to other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation of Spencer Dock Traction Substation option locations is **Option 3.**

As a result of the MCA, the MDC concludes that Option 1 will not be taken into account, because part of the existing car park will be required for this purpose.

As a result of the MCA, the MDC concludes that Option 2 will not be taken into account, because it would be necessary accommodate the road access from Park Lane.

9.5.6 Signalling buildings (SEB) Location MCA

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Millerstown SEB							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Millerstown SEB**	**Option 2 – Millerstown SEB**	**Option 3 – Millerstown SEB**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options** There is no difference in the cost of installing and building the SEB, the three locations would be very similar	**Comparable to other options** There is no difference in the cost of installing and building the SEB, the three locations would be very similar	**Comparable to other options** There is no difference in the cost of installing and building the SEB, the three locations would be very similar
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options** There is no difference in the operating costs in comparison with others.	**Comparable to other options** There is no difference in the operating costs in comparison with others.	**Comparable to other options** There is no difference in the operating costs in comparison with others.
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Some comparative advantage over other options** It would not require undertaking major works to accommodate road access. The terrain would have to be prepared as nowadays is a grassed area.	**Some comparative disadvantage over other options** It would require undertaking works to accommodate road access. The terrain would have to be prepared as nowadays is a grass area.	**Some comparative advantage over other options** It would not require undertaking major works to accommodate road access, as it would be through the existing road and then through rail tracks crossing. The terrain would have to be prepared as nowadays is a grassed area.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Significant comparative disadvantage over other options** The proposed location is in a New Residential area	**Some comparative advantage over other options** The solution is integrated with the construction project of the new Depot.	**Some comparative advantage over other options** There is no parallel project under construction near this option
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Some comparative advantage over other options** The building will have the same dimensions regardless of the area where it is located.	**Some comparative advantage over other options** The building will have the same dimensions regardless of the area where it is located.	**Some comparative disadvantage over other options** The building will have the same dimensions regardless of the area where it is located. However, in this option the risk of flooding would have to be assessed due to the proximity to the Royal Canal
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options** There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.	**Comparable to other options** There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.	**Comparable to other options** There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options** There is no difference in obsolesce in a long-term basis for this option in comparison with others.	**Comparable to other options** There is no difference in obsolesce in a long-term basis for this option in comparison with others.	**Comparable to other options** There is no difference in obsolesce in a long-term basis for this option in comparison with others.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Millerstown SEB							
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The SEB building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The SEB building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The SEB building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option 1 is located within greenfield lands adjacent to the existing Dublin to Maynooth rail line. Indirect impact to Royal Canal a sensitive landscape. Visual impacts may be likely to the rear of dwellings located	Option 2 is located within greenfield lands Indirect impact to Royal Canal. Visual impact may be likely to rear of one dwelling	Option 3 is a sensitive landscape area. Direct impacts to the views to and from the Royal Canal are likely.
		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 advantage over other options**	**Some comparative disadvantage over other options**
					This option will require the removal of some vegetation along the Connaught road.	This option will require the removal of some scrub along the railway embankment.	This option requires works close to the canal and will require the removal of riparian vegetation. During operation there may be water quality and lighting impacts
		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 (land take)	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option 1 is located in proximity of the Royal Canal and is likely to have an indirect impact on its setting. There is potential to encounter unknown archaeological resources on undeveloped land.	Potential for indirect impacts on two recorded monuments (ring ditch and barrow) along with previously unrecorded archaeological sites.	Option 3 is located in proximity of the Royal Canal and is likely to have an indirect impact on its setting. There is potential to encounter unknown archaeological resources on undeveloped land.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Significant comparative advantage over other options**	**Significant comparative advantage over other options**	**Significant comparative disadvantage over other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Millerstown SEB							
					OPW CFRAMS flood mapping indicates low risk of flooding. Comparably lower risk to water quality than Option 3	OPW CFRAMS flood mapping indicates low risk of flooding. Comparably lower risk to water quality than Option 3	OPW CFRAMS flood mapping indicates option location as liable to flood in extreme events from fluvial sources. Comparable flood risk across all options Increased risk to water quality of Royal Canal during construction due to proximity.
		3.7	Agriculture and Non-Agricultural	Overall impact on land take & property. Likely temporary or permanent severance effects, etc.	**Significant comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Significant comparative advantage over other options**
					Option located outside of CIE land boundary, acquisition of land is required. Future residential development	Option located outside of CIE land boundary, acquisition of land is required. Direct impact on agricultural property	Option located within the CIE land boundary. No landtake required
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources and soil resources to be developed/removed. Existing information relating to potential to encounter contaminated land.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No significant advantages or disadvantages over other options.	No significant advantages or disadvantages over other options.	No significant advantages or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Significant comparative disadvantage over other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas. Although the quality of access in the area would remain the same today, as a residential development is envisaged, it would have an impact.	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas, but the quality of access in the area would be maintained the same.	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas. But, the quality of access would be worse comparing to other options, as it would be necessary to cross the rail tracks
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Millerstown SEB							
					This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

Table 12. Summary of the MCA Assessment Parameters

	Option 1 – Millerstown SEB	Option 2 – Millerstown SEB	Option 3 – Millerstown SEB
Economy	Comparable to other options	Comparable to other options	Comparable to other options
Integration	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
Environment	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
Accessibility & Social inclusion	Some comparative disadvantage over other options	Some comparative advantage over other options	Significant comparative disadvantage over other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new SEB in Millerstown is **Option 2**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Maynooth SEB							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Maynooth SEB**	**Option 2 – Maynooth SEB**	**Option 3 – Maynooth SEB**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options** There is no difference in the cost of installing and building the SEB, the three locations would be very similar	**Comparable to other options** There is no difference in the cost of installing and building the SEB, the three locations would be very similar	**Comparable to other options** There is no difference in the cost of installing and building the SEB, the three locations would be very similar
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options** There is no difference in the operating costs in comparison with others.	**Comparable to other options** There is no difference in the operating costs in comparison with others.	**Comparable to other options** There is no difference in the operating costs in comparison with others.
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Some comparative advantage over other options** The new SEB would be further away from the current technical building than option 3 to carry out the migration.	**Some comparative disadvantage over other options** The new SEB would be further away from the current technical building than option 3 to carry out the migration.	**Some comparative advantage over other options** The new SEB would be right next to the current technical building, so the migration would be very advantageous.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options** There is no difference in integration with parallel projects/contracts for this option in comparison with others.	**Comparable to other options** There is no difference in integration with parallel projects/contracts for this option in comparison with others.	**Comparable to other options** There is no difference in integration with parallel projects/contracts for this option in comparison with others.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Some comparative disadvantage over other options** The building will have the same dimensions regardless of the area where it is located. However, this option means taking space away from the current station car park.	**Some comparative disadvantage over other options** The building will have the same dimensions regardless of the area where it is located. However, this option involves constructing a new building in an area that is currently unbuilt.	**Some comparative advantage over other options** The building will have the same dimensions regardless of the area where it is located. However, this option is more advantageous because there will be no need to take up space in the station car park, access will be able to be used in the same way as it is today to access the current technical building and the land adjacent to it will be available for use. The neighbours would not have to be inconvenienced by a new low building next to the existing one.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Maynooth SEB							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Maynooth SEB**	**Option 2 – Maynooth SEB**	**Option 3 – Maynooth SEB**
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options** There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.	**Comparable to other options** There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.	**Comparable to other options** There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options** There is no difference in obsolesce in a long-term basis for this option in comparison with others.	**Comparable to other options** There is no difference in obsolesce in a long-term basis for this option in comparison with others.	**Comparable to other options** There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options** This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	**Comparable to other options** This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	**Comparable to other options** This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options** The SEB building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	**Comparable to other options** The SEB building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	**Comparable to other options** The SEB building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases.	**Comparable to other options** No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	**Comparable to other options** No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	**Comparable to other options** No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Maynooth SEB							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Maynooth SEB**	**Option 2 – Maynooth SEB**	**Option 3 – Maynooth SEB**
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative disadvantage over other options** Option 1 is located on an existing car park area at the Maynooth Train Station, adjacent to the Royal Canal Corridor, a sensitive landscape area. Direct impacts to the views to and from the Royal Canal are likely.	**Some comparative disadvantage over other options** Option 2 is located in a vegetated area between the train tracks and entrance road to the station. Indirect impact to Royal Canal, context and setting of RPS (Station House) which will result in further deterioration of the setting of this RPS. Visual impacts may be likely to the rear of dwellings located along Silken Vale.	**Some comparative advantage over other options** Option 3 is located within a vegetated area a site. There could be visual impacts to the rear of residential properties located along Silken Vale.
		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 disadvantage over other options** This option requires works close to the canal. During operation there may be water quality, lighting and noise impacts.	**Some comparative disadvantage over other options** This option is set back from the canal, limiting any potential noise, lighting and visual impacts.	**Some comparative advantage over other options** This option is set back from the canal, limiting any potential noise, lighting and visual impacts.
		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 (land take)	**Some comparative advantage over other options** There are no RPS, National Monuments, SMRs and Conservation areas located within Option 1. Indirect impacts to Royal Canal are likely.	**Some comparative disadvantage over other options** Indirect impact to Royal Canal, context and setting of RPS (Station House) which will result in further deterioration of the setting of this RPS. Potential of unknown archaeological resources on greenfield sites.	**Some comparative advantage over other options** Indirect impacts to Royal Canal. There is potential to encounter unknown archaeological resources on undeveloped land.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Some comparative disadvantage over other options** OPW CFRAMS flood mapping indicates option location as liable to flood in extreme events from fluvial sources. Comparable flood risk across all options Increased risk to water quality of Royal Canal during construction due to proximity.	**Some comparative advantage over other options** OPW CFRAMS flood mapping indicates option location as liable to flood in extreme events from fluvial sources. Comparable flood risk across all options Comparatively low risk to water quality of Royal canal.	**Some comparative advantage over other options** OPW CFRAMS flood mapping indicates option location as liable to flood in extreme events from fluvial sources.. Comparable flood risk across all options Comparatively low risk to water quality of Royal canal.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Maynooth SEB							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Maynooth SEB**	**Option 2 – Maynooth SEB**	**Option 3 – Maynooth SEB**
		3.7	Agriculture and Non-Agricultural	Overall impact on land take & property. Likely temporary or permanent severance effects, etc.	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					There are no direct impacts on non - agricultural property. Option located outside of CIE land boundary, acquisition of land is required.	There are no direct impacts on non - agricultural property. Option located on Maynooth Train Station grounds, within the CIE land boundary.	There are no direct impacts on non - agricultural property. Option located on Maynooth Train Station grounds, within the CIE land boundary.
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources and soil resources to be developed/removed. Existing information relating to potential to encounter contaminated land.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No significant advantages or disadvantages over other options.	No significant advantages or disadvantages over other options.	No significant advantages or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Maynooth SEB							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Maynooth SEB**	**Option 2 – Maynooth SEB**	**Option 3 – Maynooth SEB**
					This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

Table 13. Summary of the MCA Assessment Parameters

	Option 1 – Maynooth SEB	Option 2 – Maynooth SEB	Option 3 – Maynooth SEB
Economy	Comparable to other options	Comparable to other options	Comparable to other options
Integration	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
Environment	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
Accessibility & Social inclusion	Comparable to other options	Comparable to other options	Comparable to other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new SEB in Maynooth is **Option 3**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for M3 Parkway SEB								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – M3 Parkway SEB**	**Option 2 – M3 Parkway SEB**	**Option 3 – M3 Parkway SEB**	**Option 4 – M3 Parkway SEB**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the cost of installing and building the SEB, the three locations would be very similar	There is no difference in the cost of installing and building the SEB, the three locations would be very similar	There is no difference in the cost of installing and building the SEB, the three locations would be very similar	There is no difference in the cost of installing and building the SEB, the three locations would be very similar
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**
					The new SEB would be close to the current technical building, so the migration would be very advantageous	The new SEB would be very close to the current technical building, so the migration would be very advantageous, but would coincide with the space reserved for the Proposed workshop structure, so this option is ruled out	The new SEB would be further away from the current technical building than option 1 to carry out the migration.	The new SEB would be further away from the current technical building than option 1 to carry out the migration. This option is incompatible with the possible location of the substation (Option 3)
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**
					The building will have the same dimensions regardless of the area where it is located. However, this option means taking space away from the current station car par (8 parking places)	The building will have the same dimensions regardless of the area where it is located. However, this option is ruled out because its location would coincide with the space reserved for the Proposed workshop structure.	The building will have the same dimensions regardless of the area where it is located. However, this option means taking space away from the current station car park (16 parking places).	The building will have the same dimensions regardless of the area where it is located. However, this option is more advantageous because there will be no need to take up space in the station car park, access will be able to be used in the same way as it is today to access the current technical building. This option is incompatible with the possible location of the substation (Option 3)
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for M3 Parkway SEB								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – M3 Parkway SEB**	**Option 2 – M3 Parkway SEB**	**Option 3 – M3 Parkway SEB**	**Option 4 – M3 Parkway SEB**
					There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The SEB building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The SEB building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The SEB building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The SEB building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for M3 Parkway SEB								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – M3 Parkway SEB**	**Option 2 – M3 Parkway SEB**	**Option 3 – M3 Parkway SEB**	**Option 4 – M3 Parkway SEB**
					Option 1 is located within the confines of an existing car parking area. There are no sensitive landscape and visual characteristics in vicinity of this option and as such, no impacts are likely.	Option 2 is located within the confines of an existing car parking area. There are no sensitive landscape and visual characteristics in vicinity of this option and as such, no impacts are likely.	Option 3 is located within the confines of an existing car parking area. There are no sensitive landscape and visual characteristics in vicinity of this option and as such, no impacts are likely.	Option 4 would be built in an area with a similar sort of building that is already screened to some extent from a residential dwelling that is located in close proximity. It is likely to have a direct visual impact to the rear of this property.
		3.4	Biodiversity (flora and fauna)	Potential compliance/conflict with biodiversity objectives; Indirect impacts on protected species, designated sites; Overall effect on nature conservation resource.	**Comparable to other options** This option does not present any disadvantage or advantage regarding biodiversity.	**Comparable to other options** This option does not present any disadvantage or advantage regarding biodiversity.	**Comparable to other options** This option does not present any disadvantage or advantage regarding biodiversity.	**Comparable to other options** This option does not present any disadvantage or advantage regarding biodiversity.
		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 (land take)	**Comparable to other options** Located on made ground in M3 Parkway Station site. This option does not present any advantage or disadvantages over other options.	**Comparable to other options** Located on made ground in M3 Parkway Station site. This option does not present any advantage or disadvantages over other options.	**Comparable to other options** Located on made ground in M3 Parkway Station site. This option does not present any advantage or disadvantages over other options.	**Comparable to other options** Located on made ground in M3 Parkway Station site. This option does not present any advantage or disadvantages over other options.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options** This option does not present any disadvantage or advantage in regards to water resources.	**Comparable to other options** This option does not present any disadvantage or advantage in regards to water resources.	**Comparable to other options** This option does not present any disadvantage or advantage in regards to water resources.	**Comparable to other options** This option does not present any disadvantage or advantage in regards to water resources.
		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.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option located on the grounds of M3 Parkway., within CIE land boundary.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option located on the grounds of M3 Parkway., within CIE land boundary.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option located on the grounds of M3 Parkway., within CIE land boundary.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option located on the grounds of M3 Parkway., within CIE land boundary.
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. % of soil resources to be	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for M3 Parkway SEB								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – M3 Parkway SEB**	**Option 2 – M3 Parkway SEB**	**Option 3 – M3 Parkway SEB**	**Option 4 – M3 Parkway SEB**
				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.	Developing on paved area in M3 Parkway. This option does not present any advantage or disadvantages over other options.	Developing on paved area in M3 Parkway. This option does not present any advantage or disadvantages over other options.	Developing on paved area in M3 Parkway. This option does not present any advantage or disadvantages over other options.	Developing on paved area in M3 Parkway. This option does not present any advantage or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

Table 14. Summary of the MCA Assessment Parameters

	Option 1 – M3 Parkway SEB	Option 2 – M3 Parkway SEB	Option 3 – M3 Parkway SEB	Option 4 – M3 Parkway SEB
Economy	Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options
Integration	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options
Environment	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
Accessibility & Social inclusion	Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new SEB in M3 Parkway is **Option 1**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Clonsilla SEB							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Clonsilla SEB**	**Option 2 – Clonsilla SEB**	**Option 3 – Clonsilla SEB**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options** There is no difference in the cost of installing and building the SEB, the three locations would be very similar	**Comparable to other options** There is no difference in the cost of installing and building the SEB, the three locations would be very similar	**Comparable to other options** There is no difference in the cost of installing and building the SEB, the three locations would be very similar
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options** There is no difference in the operating costs in comparison with others.	**Comparable to other options** There is no difference in the operating costs in comparison with others.	**Comparable to other options** There is no difference in the operating costs in comparison with others.
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Some comparative disadvantage over other options** The new SEB would be further away from the current technical building than option 3 to carry out the migration.	**Some comparative disadvantage over other options** The new SEB would be further away from the current technical building than option 3 to carry out the migration.	**Some comparative advantage over other options** The new SEB would be right next to the current technical building, so the migration would be very advantageous.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options** There is no difference in integration with parallel projects/contracts for this option in comparison with others.	**Comparable to other options** There is no difference in integration with parallel projects/contracts for this option in comparison with others.	**Comparable to other options** There is no difference in integration with parallel projects/contracts for this option in comparison with others.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Some comparative disadvantage over other options** The building will have the same dimensions regardless of the area where it is located. However, this option means taking space away from the current station car park.	**Some comparative disadvantage over other options** The building will have the same dimensions regardless of the area where it is located. However, this option involves constructing a new building in an area that is currently unbuilt.	**Some comparative advantage over other options** The building will have the same dimensions regardless of the area where it is located. However, this option is more advantageous because there will be no need to take up space in the station car park, access will be able to be used in the same way as it is today to access the current technical building and the land adjacent to it will be available for use. The neighbours would not have to be inconvenienced by a new low building next to the existing one.
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options** There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.	**Comparable to other options** There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.	**Comparable to other options** There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Clonsilla SEB							
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The SEB building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The SEB building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The SEB building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					Option 1 is located within greenfield lands adjacent to the existing Dublin to Maynooth rail line. No sensitive receptors are likely to be visually impacted by Option 1.	Option 2 is located the adjacent to the existing Dublin to Maynooth rail line, adjacent to the Royal Canal Corridor, a sensitive landscape area. It is likely that some vegetation will be removed as part of Option 2, and will likely have a direct impact on the landscape character of the Royal Canal.	Option 3 is located adjacent to the existing Dublin to Maynooth rail line in proximity to the Royal Canal. Due to the existing natural screening along the Royal Canal, no impacts to its landscape setting are likely. No sensitive receptors are likely to be visually impacted by Option 3.
		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 advantage over other options**
					This option will require the removal of some scrub along the railway embankment.	This option will require the removal of mature trees and riparian vegetation along the Royal Canal. This will lead to operational impacts associated with light spill onto the canal, potential noise and visual disturbance to species.	This option will require the removal of a treeline along the railway corridor.
		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 (land take)	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					There are no RPS, National Monuments, SMRs and Conservation areas located within Option 1. No known heritage resources recorded. Potential of unknown archaeological resources on greenfield sites.	There are no RPS, National Monuments, SMRs and Conservation areas located within Option 2. Option 2 is likely to have an indirect impact on Clonsilla Railway Station (NIAH No. 11353004) and the Royal Canal.	There are no RPS, National Monuments, SMRs and Conservation areas located within Option 1.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Clonsilla SEB							
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					Low risk of flooding comparable across all options. Comparably lower risk to water quality than option 2.	Low risk of flooding comparable across all options. Increased risk to water quality of Royal Canal during construction due to very close proximity.	Low risk of flooding comparable across all options. Comparably lower risk to water quality than option 2.
		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.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There are no direct impacts on non - agricultural property. Option is located within the confines of the existing railway corridor.	There are no direct impacts on non - agricultural property. Option is located within the confines of the existing railway corridor.	There are no direct impacts on non - agricultural property. Option is located within the confines of the existing railway corridor.
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. % of 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.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option will result in loss of some soil resources and soil sealing. However, it does not represent a significant advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Clonsilla SEB							
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

Table 15. Summary of the MCA Assessment Parameters

	Option 1 – Clonsilla SEB	Option 2 – Clonsilla SEB	Option 3 – Clonsilla SEB
Economy	Comparable to other options	Comparable to other options	Comparable to other options
Integration	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
Environment	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
Accessibility & Social inclusion	Comparable to other options	Comparable to other options	Comparable to other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new SEB in Clonsilla is **Option 3**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Glasnevin SEB								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 2 – Glasnevin SEB**	**Option 3 – Glasnevin SEB**	**Option 4 – Glasnevin SEB**	**Option 6 – Glasnevin SEB**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Some comparative disadvantage over other options** The capital expenditure required for the SEB is lower as the SEB is above ground; the Royal Canal way needs to be widening in a small stretch. Preventive measures will have to be undertaking in order to avoid potential water damage due to its proximity to the canal.	**Significant comparative disadvantage over other options** The capital expenditure required for the SEB is lower as the SEB is above ground; the Royal Canal way needs to be widening in a long stretch. Preventive measures will have to be undertaking in order to avoid potential water damage due to its proximity to the canal.	**Significant comparative advantage over other options** The capital expenditure required for the traction substation is significant lower as the substation is far from the Royal Canal and the access is easy to provide.	**Significant comparative advantage over other options** The capital expenditure required for the traction substation is significant lower as the substation is far from the Royal Canal and the access is easy to provide.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options** There is no difference in the operating costs in comparison with others.	**Comparable to other options** There is no difference in the operating costs in comparison with others.	**Comparable to other options** There is no difference in the operating costs in comparison with others.	**Comparable to other options** There is no difference in the operating costs in comparison with others.
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Significant comparative disadvantage over other options** In this option, it would be necessary to widen the Royal Canal Way to allow road access from R108.	**Significant comparative disadvantage over other options** In this option, it would be necessary to widen the Royal Canal Way to allow road access from R108, which is 530m approximately distant from R108, on its east side.	**Some comparative advantage over other options** In this option, the Gaelic football pitch limits (layout) would have to be adjusted to allow the SEB construction. It would be necessary accommodate the road access provided from Clareville Court to the existing Gaelic football pitch area.	**Significant comparative advantage over other options** In this option, the Gaelic football pitch limits (layout) would have to be adjusted to allow the SEB construction. Compared to option 4 also located in the existing Gaelic football pitch, this one has less land take from the Gaelic football pitch, than the others. It would be necessary accommodate the road access provided from Clareville Court to the existing Gaelic football pitch area.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Significant comparative disadvantage over other options** Due to its location next to the Royal Canal, it can interfere in the future development of this area.	**Significant comparative disadvantage over other options** Due to its location next to the Royal Canal, it can interfere in the future development of this area. The MDC are aware that DCC are proposing to expand the Royal Canal greenway. The location of the SEB at this location may impact the options available to DC however there is no approved planning application details provided at this stage. Consultation required with DCC if identified as the preferred option.	**Significant comparative advantage over other options** This option is not integrated in parallel projects/contracts.	**Significant comparative advantage over other options** This option is not integrated in parallel projects/contracts.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Glasnevin SEB							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 2 – Glasnevin SEB**	**Option 3 – Glasnevin SEB**	**Option 4 – Glasnevin SEB**	**Option 6 – Glasnevin SEB**
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The building will have the same dimensions regardless of the area where it is located. The proposed location is not within the existing IÉ railway boundaries; therefore, land take will be required	The building will have the same dimensions regardless of the area where it is located. The proposed location is not within the existing IÉ railway boundaries; therefore, land take will be required	The building will have the same dimensions regardless of the area where it is located. The proposed location is not within the existing IÉ railway boundaries; therefore, land take will be required	The building will have the same dimensions regardless of the area where it is located. The proposed location is not within the existing IÉ railway boundaries; therefore, land take will be required
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration		**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Glasnevin SEB							
	Parameter		Criteria	Sub-Criteria (Quantitative Qualitative)	Option 2 – Glasnevin SEB	Option 3 – Glasnevin SEB	Option 4 – Glasnevin SEB	Option 6 – Glasnevin SEB
				Likelihood of a noise impact on nearby noise sensitive locations	The SEB building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The SEB building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The SEB building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The SEB building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options** No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	**Comparable to other options** No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	**Comparable to other options** No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	**Comparable to other options** No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative disadvantage over other options** Option 2 is located on a vegetated area, adjacent to the Royal Canal Way and the Royal Canal oNHA, a sensitive landscape area. This option is likely to have an impact to the landscape character and amenity of the area. The views to and from the Royal Canal are also likely to be impacted. This option is also located in proximity to the Royal Canal 6th Lock, a RPS cultural heritage feature and is likely to have an indirect impact on its setting/landscape character.	**Some comparative advantage over other options** Option 3 is located on a vegetated area, adjacent to the Royal Canal Way and the Royal Canal, a sensitive landscape area. This option is likely to have an impact to the landscape character and amenity of the area. The views to and from the Royal Canal are also likely to be impacted.	**Some comparative advantage over other options** Option 4 is located on the boundary of Saint Vincent's school sports field. Vegetation will be removed and therefore screening to the residential properties will be impacted. Local landscape impacts and visual impacts to dwelling houses on Clareville Court. Replacement screening could reduce impacts.	**Some comparative advantage over other options** Option 6 is located on the boundary of Saint Vincent's school sports field. Vegetation will be removed and therefore screening to the residential properties will be impacted. Local landscape impacts and visual impacts to dwelling houses on Clareville Court. Replacement screening could reduce impacts.
		3.4	Biodiversity (flora and fauna)	Potential compliance/conflict with biodiversity objectives; Indirect impacts on protected species,	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Glasnevin SEB							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 2 – Glasnevin SEB**	**Option 3 – Glasnevin SEB**	**Option 4 – Glasnevin SEB**	**Option 6 – Glasnevin SEB**
				designated sites; Overall effect on nature conservation resource.	This option is located on dry grassland and scrub between the canal and railway. This option requires works adjacent to the Royal Canal pNHA and will likely result in the loss of grassland and scrub habitat. Japanese Knotweed has been recorded within the rail corridor approx. 100m northeast of the site. During operation there may be water quality which requires further assessment.	This option is located in an area of dry grassland and trees between the canal towpath and railway. This option requires works directly adjacent to the Royal Canal pNHA and will likely result in the loss of grassland and trees. Japanese Knotweed has been recorded within the rail corridor approx. 120m northwest of the site. During operation there may be water quality which requires further assessment.	The option is located adjacent to the railway corridor on the sports field. This option will result in loss of amenity grassland and tree loss. The pitch has been identified as an important (Major) feeding ground for Brent Geese. Construction stage impacts are likely as the site is located on the edge of the pitch however this could be mitigated by avoiding works during winter periods. No significant impacts are expected to the feeding grounds during the operational stage.	Located on playing pitches, this option will result in loss of amenity grassland and possibly some trees. The pitch has been identified as an important (Major) feeding ground for Brent Geese. Construction stage impacts are likely as the site is located on the edge of the pitch however this could be mitigated by avoiding works during winter periods. No significant impacts are expected to the feeding grounds during the operational stage.
		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 (land take)	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					Indirect impacts on the Royal Canal (RPS), Royal Canal 6th Lock (RPS) context and setting. There is potential for unknown archaeological resources to be encountered. There is potential unknown archaeological resources to be encountered	Option 3 is located in proximity of the Royal Canal and is likely to have an indirect impact on its setting. Potential to encounter unknown archaeological resources. .	There are no RPS, National Monuments, SMRs and Conservation areas located within Option 4. There is potential unknown archaeological resources to be encountered.	There are no RPS, National Monuments, SMRs and Conservation areas located within Option 5. There is potential unknown archaeological resources to be encountered.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No record of historical or predicted flooding within the vicinity of the site. This option does not present any disadvantage or advantage with regards to water resources.	No record of historical or predicted flooding within the vicinity of the site. This option does not present any disadvantage or advantage with regards to water resources.	No record of historical or predicted flooding within the vicinity of the site. This option does not present any disadvantage or advantage with regards to water resources.	No record of historical or predicted flooding within the vicinity of the site. This option does not present any disadvantage or advantage with regards to water resources.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Glasnevin SEB							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 2 – Glasnevin SEB**	**Option 3 – Glasnevin SEB**	**Option 4 – Glasnevin SEB**	**Option 6 – Glasnevin SEB**
		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.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option is not located within CIE land boundary, acquisition of land	Option is not located within CIE land boundary, acquisition of land	Option is not located within CIE land boundary, acquisition of land	Option is not located within CIE land boundary, acquisition of land
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. % of 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.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any significant advantage or disadvantages over other options.	This option does not present any significant advantage or disadvantages over other options.	This option does not present any significant advantage or disadvantages over other options	This option does not present any significant advantage or disadvantages over other options
		3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors	This option does not present any disadvantage or advantage in relation to nearby receptors
4	**Accessibility and Social inclusion**	**4.1**	Local accessibility	In case the location of the buildings could cause any impact on the access to adjacent dwellings	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					The works of the Metrolink project in the area may disrupt the whole area	The works of the Metrolink project in the area may disrupt the whole area	No accessibility issues are foreseen	No accessibility issues are foreseen
		4.2	Vulnerable groups	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Glasnevin SEB							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 2 – Glasnevin SEB**	**Option 3 – Glasnevin SEB**	**Option 4 – Glasnevin SEB**	**Option 6 – Glasnevin SEB**
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in this option, as the area is not linked to any particular safety sensitive environment	User's / People's safety is fulfilled in this option, as the area is not linked to any particular safety sensitive environment	User's / People's safety is fulfilled in this option, as the SEB is designed to be safe and not allow public to enter the site. Netting will be put up to stop balls from entering the property	User's / People's safety is fulfilled in this option, as the SEB is designed to be safe and not allow public to enter the site. Netting will be put up to stop balls from entering the property
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					Potential unavailability due to inherent risks due to the location next to the Royal Canal	Potential unavailability due to inherent risks due to the location next to the Royal Canal	Reliability, Availability and Maintainability fulfilled in this option.	Reliability, Availability and Maintainability fulfilled in this option.
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**
					This option provides health benefits, as it does not affect sport areas	This option provides health benefits, as it does not affect sport areas	This option presents a disadvantage regarding health benefits, as it affects sports areas	This option presents a disadvantage regarding health benefits, as it affects sports areas

Comparison of Options and Recommendation

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

Table 16. Summary of the MCA Assessment Parameters for SEB

	Option 2 Glasnevin SEB	Option 3 Glasnevin SEB	Option 4 Glasnevin SEB	Option 6 Glasnevin SEB
Economy	Some comparative disadvantage over other options	**Significant comparative disadvantage over other options**	**Significant comparative advantage over other options**	**Significant comparative advantage over other options**
Integration	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	Some comparative advantage over other options	**Significant comparative advantage over other options**
Environment	Some comparative advantage over other options	Some comparative advantage over other options	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**
Accessibility & Social inclusion	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
Safety	Some comparative disadvantage over other options	Some comparative disadvantage over other options	**Significant comparative advantage over other options**	**Significant comparative advantage over other options**
Physical Activity	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new SEB in Glasnevin is **Option 6.**

Spencer Dock SEB

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Spencer Dock SEB							
	Parameter		Criteria	Sub-Criteria (Quantitative Qualitative)	Options		
					Option 1 – Spencer Dock SEB	Option 2 – Spencer Dock SEB	Option 3 – Spencer Dock SEB
1	Economy	1.1	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the cost of installing and building the SEB, the three locations would be very similar	There is no difference in the cost of installing and building the SEB, the three locations would be very similar	There is no difference in the cost of installing and building the SEB, the three locations would be very similar
				Road access, utilities clash and earthworks, depending on the unevenness	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					It would not require undertaking major works to accommodate road access from Park Lane; however, part of existing car park will be required to be taken for this purpose.	It would not require undertaking major works to accommodate road access from Park Lane; however, part of existing car park will be required to be taken for this purpose.	For this option, it would be necessary accommodate the road access from Abercorn Rd or from Park Lane.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in long maintenance cost in comparison with other options	There is no difference in long maintenance cost in comparison with other options	There is no difference in long maintenance cost in comparison with other options
2	Integration	2.1	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The new SEB would be right next to the current technical building, so the migration would be very advantageous.	The new SEB would be right next to the current technical building, so the migration would be very advantageous.	The new SEB would be right next to the current technical building, so the migration would be very advantageous.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with parallel projects/contracts for this option in comparison with others	There is no difference in integration with parallel projects/contracts for this option in comparison with others	There is no difference in integration with parallel projects/contracts for this option in comparison with others
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Spencer Dock SEB							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Options**		
					Option 1 – Spencer Dock SEB	**Option 2 – Spencer Dock SEB**	**Option 3 – Spencer Dock SEB**
					The building will have the same dimensions regardless of the area where it is located and its location would not coincide with any other, but location is out of the existing IÉ railway boundaries. This location could affect the future urban development of the area	The building will have the same dimensions regardless of the area where it is located. However, this option means taking space away from the current station car park. Also the proposed location is outside the existing IÉ railway boundaries. This location could affect the future urban development of the area	The building will have the same dimensions regardless of the area where it is located.
				Space for road access and walkways	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					There is space for using the current road access to the station.	There is space for using the current road access to the station.	There is space for road access, but removing some existing buildings and facilities.
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The SEB does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The SEB does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The SEB does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option is located on made ground paved area within the grounds of Docklands Train Station. There are no sensitive landscape and visual characteristics in vicinity of this option and as such, no impacts are likely.	This option is located on paved area within the grounds of Docklands Train Station. There are no sensitive landscape and visual characteristics in vicinity of this option and as such, no impacts are likely.	This option is located on a paved area within the railway corridor in vicinity of residential area. The existing fence on the boundary of the railway corridor will provide a screen for the residential properties.
		3.4			**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Spencer Dock SEB							
	Parameter		Criteria	Sub-Criteria (Quantitative Qualitative)	Options		
					Option 1 – Spencer Dock SEB	Option 2 – Spencer Dock SEB	Option 3 – Spencer Dock SEB
			Biodiversity (flora and fauna)	Potential compliance/conflict with biodiversity objectives; Indirect impacts on protected species, designated sites; Overall effect on nature conservation resource.	This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.
		3.5	Cultural, Archaeological and Architectural Heritage	Overall effect on cultural, archaeological and architecture heritage resource. Likely effects on RPS, National Monuments, SMRs, Conservation areas, etc. Number of designated sites/structures (by level of designation) directly impacted by scheme (land take)	**Comparable to other options** There are no RPS, National Monuments, SMRs and Conservation areas located within this Option.	**Comparable to other options** There are no RPS, National Monuments, SMRs and Conservation areas located within this Option.	**Comparable to other options** There are no RPS, National Monuments, SMRs and Conservation areas located within this Option.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options** There is low risk flooding this Option due to a greater distance from a floodplain.	**Comparable to other options** There is low risk flooding this Option due to a greater distance from a floodplain.	**Comparable to other options** There is low risk flooding this Option due to a greater distance from a floodplain.
		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.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option is not located within CIE land boundary, acquisition of land is required.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option is not located within CIE land boundary, acquisition of land is required.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option is not located within CIE land boundary, acquisition of land is required.
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. % of 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.	**Comparable to other options** This option does not present any advantage or disadvantages over other options.	**Comparable to other options** This option does not present any advantage or disadvantages over other options.	**Comparable to other options** This option does not present any advantage or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options** This option does not present any disadvantage or advantage regarding in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage regarding in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage regarding in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options** This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	**Comparable to other options** This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	**Comparable to other options** This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
			Local accessibility	Quality of access in the area	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Spencer Dock SEB							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Options**		
					Option 1 – Spencer Dock SEB	**Option 2 – Spencer Dock SEB**	**Option 3 – Spencer Dock SEB**
					The quality of access would be impacted as some walkway would have to be removed	The quality of access would be impacted as some walkway would have to be removed	The quality of access in the area will be maintained the same
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

	Option 1 – Spencer Dock SEB	Option 2 – Spencer Dock SEB	Option 3 – Spencer Dock SEB
Economy	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
Integration	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantages over other options
Environment	Comparable to other options	Comparable to other options	Comparable to other options
Accessibility & Social inclusion	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options

Table 17. Summary of the MCA Assessment Parameters

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new SEB in Spencer Dock is **Option 3**

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DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Connolly SEB								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Connolly SEB**	**Option 2 – Connolly SEB**	**Option 3 – Connolly SEB**	**Option 4 – Connolly SEB**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					The cost of installing and building the SEB is lower.	This solution is more expensive since you have to prepare the installation of the SEB next to it in the vias area.	The cost of installing and building the SEB is lower.	The cost of installing and building the SEB is lower.
				Road access, utilities clash and earthworks, depending on the unevenness	**Some comparative advantage over other options**	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Some comparative advantage over other options**
					No new road is required for accessing from R105. No utilities clash. The terrain at this location is plain.	There is no road access because SEB is in the viaduct next to the railways. No utilities clash. The terrain at this location is plain.	No new road is required for accessing from R105. Clash with existing utilities that would need diversion. The terrain at this location is plain. Access to be provided by Failte Ireland	No new road is required for accessing from Oriel Street Lower. No utilities clash. The terrain at this location is plain. Paving for parking area is required
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					There is no difference in long maintenance cost in comparison with other options	It is more difficult because all maintenance operations have to be made at night after finishing railway service.	There is no difference in long maintenance cost in comparison with other options	There is no difference in long maintenance cost in comparison with other options
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration of any option.	There is no difference in integration of any option.	There is no difference in integration of any option.	There is no difference in integration of any option.
		2.2			**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Connolly SEB								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Connolly SEB**	**Option 2 – Connolly SEB**	**Option 3 – Connolly SEB**	**Option 4 – Connolly SEB**
			Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					The building will have the same dimensions regardless of the area where it is located. However, this option means taking space away from the current station car park. The SEB is in front of an existing building. Finally, the proposed location is outside the existing IÉ railway boundaries.	The building will have the same dimensions regardless of the area where it is located. However, this option is more advantageous because there will be no need to take up space in the station car park and SPS is next to the railway.	The building will have the same dimensions regardless of the area where it is located. However, this option means taking space away from the current station car park. Also the proposed location is outside the existing IÉ railway boundaries	The building will have the same dimensions regardless of the area where it is located. However, this option is more advantageous because there will be no need to take up space in the station car park and SPS is next to the railway.
				Space for road access and walkways	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					There is space for using the current road access to the station.	The road access nowadays is through tracks crossing. There is not enough space for a new access road due to private properties next to the viaduct.	There is space for using the current road access to the station.	There is space for using the current road access to the station
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the SEB will not disturb in the normal operation of the line.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6			**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Connolly SEB								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Connolly SEB**	**Option 2 – Connolly SEB**	**Option 3 – Connolly SEB**	**Option 4 – Connolly SEB**
			Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The SEB building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The SEB building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The SEB building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The SEB building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					Option 1 is located on made ground in vicinity of the Connolly Station. The existing building structures are similar in character within the area to the proposed SEB building. No impacts to the landscape character are likely. This option is likely to have an indirect impact on the setting Irish Rail Head Office, Connolly Station, a RPS cultural heritage feature (ref no. 130).	Option 2 is located on made ground in vicinity of the Connolly Station. The existing building structures are similar in character within the area to the proposed SEB building. No impacts to the landscape character are likely. This option is likely to have an indirect impact on the setting of the Water Tower, (NIAH Reg. No. 50010041) a cultural heritage feature.	Option 3 is located on made ground in vicinity of the Connolly Station and is not likely to have an impact on the landscape character of the area.	Option 4 is located on made ground in vicinity of the Connolly Station and is not likely to have an impact on the landscape character of the area.
		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.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards to biodiversity.	This option does not present any disadvantage or advantage in regards to biodiversity.	This option does not present any disadvantage or advantage in regards to biodiversity.	This option does not present any disadvantage or advantage in regards to biodiversity.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Connolly SEB								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Connolly SEB**	**Option 2 – Connolly SEB**	**Option 3 – Connolly SEB**	**Option 4 – Connolly SEB**
		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 (land take)	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					Option 1 is located on made ground in vicinity of Irish Rail Head Office, Connolly Station, a RPS cultural heritage feature (ref no. 130). This option is likely to have an indirect impact on the setting of this cultural heritage site.	Option 2 is located on made ground in vicinity of Water Tower at Connolly Station, a RPS cultural heritage feature (NIAH Reg. No. 50010041) . This option is likely to have an indirect impact on the setting of the Water Tower.	There are no RPS, National Monuments, SMRs and Conservation areas located within Option 3	There are no RPS, National Monuments, SMRs and Conservation areas located within Option 4
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards to water resources.	This option does not present any disadvantage or advantage in regards to water resources.	This option does not present any disadvantage or advantage in regards to water resources.	This option does not present any disadvantage or advantage in regards to water resources
		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 disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					There are no direct impacts on non - agricultural property. Option is not located within CIE land boundary, acquisition of land is required	There are no direct impacts on non - agricultural property. Option is located within CIE land boundary, acquisition of land is not required.	There are no direct impacts on non - agricultural property. Option is not located within CIE land boundary, acquisition of land is required.	There are no direct impacts on non - agricultural property. Option is located within CIE land boundary, acquisition of land is not required.
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. % of 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.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Connolly SEB								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Connolly SEB**	**Option 2 – Connolly SEB**	**Option 3 – Connolly SEB**	**Option 4 – Connolly SEB**
		3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding in relation to nearby receptors.	This option does not present any disadvantage or advantage regarding in relation to nearby receptors.	This option does not present any disadvantage or advantage regarding in relation to nearby receptors.	This option does not present any disadvantage or advantage regarding in relation to nearby receptors.
4	**Accessibility & Social inclusion**		Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
		4.1	Local accessibility	Quality of access in the area	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					The quality of access in the area will be affected to access into the parking	The quality of access in the area will be maintained the same	The quality of access in the area will be affected to access into the parking	The quality of access in the area will be maintained the same
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Connolly SEB								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Connolly SEB**	**Option 2 – Connolly SEB**	**Option 3 – Connolly SEB**	**Option 4 – Connolly SEB**
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

Table 18. Summary of the MCA Assessment Parameters

	Option Connolly SEB	Option 2 Connolly SEB	Option 3 Connolly SEB	Option 4 Connolly SEB
Economy	Some comparative advantage over other options	Significant comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
Integration	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
Environment	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
Accessibility & Social inclusion	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new SEB in Connolly is **Option 4**

9.5.7 Low-voltage PSP&ASP Location MCA

Millerstown PSP

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Millerstown PSP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option1.- Millerstown PSP**	**Option 2- Millerstown PSP**	**Option 3 – Millerstown PSP**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the cost of installing and building the PSP, the three locations would be very similar	There is no difference in the cost of installing and building the PSP, the three locations would be very similar	There is no difference in the cost of installing and building the PSP, the three locations would be very similar
				Road access, utilities clash and earthworks, depending on the unevenness	**Significant comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					It would not require undertaking major works to accommodate road access. The terrain would have to be prepared as nowadays is a grassed area. The proposed location is in a New Residential area	It would require undertaking works to accommodate road access. The terrain would have to be prepared as nowadays is a grass area.	It would not require undertaking major works to accommodate road access, as it would be through the existing road and then through rail tracks crossing. The terrain would have to be prepared as nowadays is a grassed area.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the operating cost in comparison with the others.	There is no difference in the operating cost in comparison with the others.	There is no difference in the operating cost in comparison with the others.
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					There is no difference in the long term maintenance costs in comparison with other options.	The maintenance of the new road access involves more long term maintenance cost.	There is no difference in the long term maintenance costs in comparison with other options.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Millerstown PSP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option1.- Millerstown PSP**	**Option 2- Millerstown PSP**	**Option 3 – Millerstown PSP**
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Some comparative advantage over other options** It would not require undertaking major works to accommodate road access. The terrain would have to be prepared as nowadays is a grassed area. The proposed location is in a New Residential area	**Some comparative disadvantage over other options** It would not require undertaking major works to accommodate road access. The terrain would have to be prepared as nowadays is a grassed area.	**Some comparative advantage over other options** It would not require undertaking major works to accommodate road access, as it would be through the existing road and then through rail tracks crossing. The terrain would have to be prepared as nowadays is a grassed area.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Significant comparative disadvantage over other options** The proposed location is in a New Residential area	**Some comparative advantage over other options** The solution is integrated with the construction project of the new Depot	**Some comparative advantage over other options** There is not parallel project under construction near this option
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Some comparative advantage over other options** The building will have the same dimensions regardless of the area where is located	**Some comparative advantage over other options** The building will have the same dimensions regardless of the area where is located	**Some comparative disadvantage over other options** The building will have the same dimensions regardless of the area where is located . However, in this option the risk of the flooding would have to be assessed due to the proximity to the Royal Canal.
				Space for road access and walkways	**Some comparative advantage over other options** There is space for road access to the PSP.	**Some comparative advantage over other options** There is space for a new road access to the PSP.	**Some comparative disadvantage over other options** There is no space for a new road access for avoiding the rail tracks crossing.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Millerstown PSP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option1.- Millerstown PSP**	**Option 2- Millerstown PSP**	**Option 3 – Millerstown PSP**
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line	There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line	There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolescence in a long a term basis for this option in comparison with others	There is no difference in obsolescence in a long a term basis for this option in comparison with others	There is no difference in obsolescence in a long a term basis for this option in comparison with others
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range and providers	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range and providers	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range and providers
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The PSP building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The PSP building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The PSP building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate		**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Millerstown PSP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option1.- Millerstown PSP**	**Option 2- Millerstown PSP**	**Option 3 – Millerstown PSP**
				Assessment of local air quality effects based on potential air emissions during construction and operational phases	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Comparable to other options** Option 1 is located within greenfield lands adjacent to the existing Dublin to Maynooth rail line. Indirect impact to Royal Canal a sensitive landscape. Visual impacts may be likely to the rear of dwellings located	**Comparable to other options** Option 2 is located within greenfield lands Indirect impact to Royal Canal. Visual impact may be likely to rear of one dwelling	**Comparable to other options** Option 3 is a sensitive landscape area. Direct impacts to the views to and from the Royal Canal are likely.
		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** This option will require the removal of some vegetation along the Connaught road.	**Some comparative advantage over other options** This option will require the removal of some scrub along the railway embankment.	**Some comparative disadvantage over other options** This option requires works close to the canal and will require the removal of riparian vegetation. During operation there may be water quality and lighting impacts
		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 (land take)	**Comparable to other options** Option 1 is located in proximity of the Royal Canal and is likely to have an indirect impact on its setting. There is potential to encounter unknown archaeological resources on undeveloped land.	**Comparable to other options** Potential for indirect impacts on two recorded monuments (ring ditch and barrow) along with previously unrecorded archaeological sites.	**Comparable to other options** Option 3 is located in proximity of the Royal Canal and is likely to have an indirect impact on its setting. There is potential to encounter unknown archaeological resources on undeveloped land.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Significant comparative advantage over other options**	**Significant comparative advantage over other options**	**Significant comparative disadvantage over other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Millerstown PSP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option1.- Millerstown PSP**	**Option 2- Millerstown PSP**	**Option 3 – Millerstown PSP**
					OPW CFRAMS flood mapping indicates low risk of flooding. Comparably lower risk to water quality than Option 3	OPW CFRAMS flood mapping indicates low risk of flooding. Comparably lower risk to water quality than Option 3	OPW CFRAMS flood mapping indicates option location as liable to flood in extreme events from fluvial sources. Comparable flood risk across all options Increased risk to water quality of Royal Canal during construction due to proximity.
		3.7	Agriculture and Non-Agricultural	Overall impact on land take & property. Likely temporary or permanent severance effects, etc.	**Significant comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Significant comparative advantage over other options**
					Option located outside of CIE land boundary, acquisition of land is required. Future residential development	Option located outside of CIE land boundary, acquisition of land is required. Direct impact on agricultural property	Option located within the CIE land boundary. No landtake required
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources and soil resources to be developed/removed. Existing information relating to potential to encounter contaminated land.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No significant advantages or disadvantages over other options.	No significant advantages or disadvantages over other options.	No significant advantages or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Significant comparative disadvantage over other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas. Although the quality of access in the area would remain the same today, as a residential development is envisaged, it would have an impact.	This option does not present any disadvantage e or advantage regarding vulnerable groups and deprived geographic areas, but the quality of access in the area would be maintained the same	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas, but the quality of access in the area would be worse comparing to other options, as it would be necessary to cross the rail tracks..

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Millerstown PSP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option1.- Millerstown PSP**	**Option 2- Millerstown PSP**	**Option 3 – Millerstown PSP**
5	**Safety**		Local accessibility	Quality of access in the area	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					The quality of access in the area would be maintained the same nowadays, but as a residential development is foreseen, it would impact.	The quality of access in the area would be maintained the same.	The quality of access would be worse comparing to other options, as it would be necessary to cross the rail tracks
		5.1	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail´s safety is fulfilled in three options	Rail´s safety is fulfilled in three options	Rail´s safety is fulfilled in three options
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Users /People safety is fulfilled in the three options	User's /People safety is fulfilled in the three options	User's /People safety is fulfilled in the three options
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarises the averaged results of the MCA assessment per parameter for comparison purposes.

Table 19. Summary of the MCA Assessment Parameters

Millerstown PSP

	Option 1 Millerstown PSP	Option 2 Millerstown PSP	Option 3 Millerstown PSP
Economy	Comparable to other options	Comparable to other options	Comparable to other options
Integration	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
Environment	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
Accessibility & Social inclusion	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new PSP in Millerstown is **Option 2,** because compared with the others, this option could be integrated with the Depot layout.

Maynooth PSP

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Maynooth PSP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Maynooth PSP**	**Option 2 – Maynooth PSP Incompatible with substations option 3**	**Option 3 – Maynooth PSP**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the cost of installing and building the PSP, the three locations would be very similar	There is no difference in the cost of installing and building the PSP, the three locations would be very similar	There is no difference in the cost of installing and building the PSP, the three locations would be very similar
				Road access, utilities clash and earthworks, depending on the unevenness	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					No new road is required for accessing from R406. No utilities clash. The terrain at this location is plain.	No new road is required for accessing from R406. No utilities clash. The terrain at this location is plain, but it would have to be prepared as nowadays is a grass area. There is also a private property access to be maintained.	No new road is required for accessing from R406, but the access they have nowadays is via crossing the tracks. No utilities clash. The terrain at this location is plain.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in long maintenance cost in comparison with other options	There is no difference in long maintenance cost in comparison with other options	There is no difference in long maintenance cost in comparison with other options
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					The new PSP would be further away from the current technical building than option 3 to carry out the migration.	The new PSP would be further away from the current technical building than option 3 to carry out the migration.	The new PSP would be right next to the current technical building, so the migration would be very advantageous.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					There is no difference in integration with parallel projects/contracts for this option in comparison with others.	The new PSP would be closer from some Traction Substation options.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Maynooth PSP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Maynooth PSP**	**Option 2 – Maynooth PSP Incompatible with substations option 3**	**Option 3 – Maynooth PSP**
					The building will have the same dimensions regardless of the area where it is located. However, this option means taking space away from the current station car park. Also the proposed location is outside the existing IÉ railway boundaries	The building will have the same dimensions regardless of the area where it is located. However, this option involves constructing a new building in an area that is currently unbuilt.	The building will have the same dimensions regardless of the area where it is located. However, this option is more advantageous because there will be no need to take up space in the station car park, access will be able to be used in the same way as it is today to access the current technical building and the land adjacent to it will be available for use. The neighbours would not have to be inconvenienced by a new low building next to the existing one.
				Space for road access and walkways	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					There is space for using the current road access to the station.	There is space for using the current road access to the station.	The road access nowadays is through tracks crossing. There is not enough space for a new access road due to private properties next to the substation location.
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The PSP building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The PSP building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The PSP building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Maynooth PSP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Maynooth PSP**	**Option 2 – Maynooth PSP Incompatible with substations option 3**	**Option 3 – Maynooth PSP**
					Option 1 is located on an existing car park area at the Maynooth Train Station, adjacent to the Royal Canal Corridor, a sensitive landscape area. Direct impacts to the views to and from the Royal Canal are likely.	Option 2 is located in a vegetated area between the train tracks and entrance road to the station. Indirect impact to Royal Canal, context and setting of RPS (Station House) which will result in further deterioration of the setting of this RPS. Visual impacts may be likely to the rear of dwellings located along Silken Vale.	Option 3 is located within a vegetated area a site. There could be visual impacts to the rear of residential properties located along Silken Vale.
		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 disadvantage over other options** This option requires works close to the canal. During operation there may be water quality, lighting and noise impacts.	**Some comparative disadvantage over other options** This option is set back from the canal, limiting any potential noise, lighting and visual impacts.	**Some comparative advantage over other options** This option is set back from the canal, limiting any potential noise, lighting and visual impacts.
		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 (land take)	**Some comparative advantage over other options** There are no RPS, National Monuments, SMRs and Conservation areas located within Option 1. Indirect impacts to Royal Canal are likely.	**Some comparative disadvantage over other options** Indirect impact to Royal Canal, context and setting of RPS (Station House) which will result in further deterioration of the setting of this RPS. Potential of unknown archaeological resources on greenfield sites.	**Some comparative advantage over other options** Indirect impacts to Royal Canal. There is potential to encounter unknown archaeological resources on undeveloped land.
		3.6	Water resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Some comparative disadvantage over other options** OPW CFRAMS flood mapping indicates option location as liable to flood in extreme events from fluvial sources. Comparable flood risk across all options Increased risk to water quality of Royal Canal during construction due to proximity.	**Some comparative advantage over other options** OPW CFRAMS flood mapping indicates option location as liable to flood in extreme events from fluvial sources. Comparable flood risk across all options Comparatively low risk to water quality of Royal canal.	**Some comparative advantage over other options** OPW CFRAMS flood mapping indicates option location as liable to flood in extreme events from fluvial sources.. Comparable flood risk across all options Comparatively low risk to water quality of Royal canal.
		3.7	Agriculture and Non-Agricultural	Overall impact on land take & property. Likely temporary or permanent severance effects, etc.	**Some comparative disadvantage over other options** There are no direct impacts on non - agricultural property. Option located outside of CIE land boundary, acquisition of land is required.	**Some comparative advantage over other options** There are no direct impacts on non - agricultural property. Option located on Maynooth Train Station grounds, within the CIE land boundary.	**Some comparative advantage over other options** There are no direct impacts on non - agricultural property. Option located on Maynooth Train Station grounds, within the CIE land boundary.
		3.8	Geology and Soils (including waste)	Soils and Geology and likely impact on geological resources and soil resources to be developed/removed. Existing information relating to potential to encounter contaminated land.	**Comparable to other options** No significant advantages or disadvantages over other options.	**Comparable to other options** No significant advantages or disadvantages over other options.	**Comparable to other options** No significant advantages or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options** This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	**Comparable to other options** This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	**Comparable to other options** This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Maynooth PSP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Maynooth PSP**	**Option 2 – Maynooth PSP Incompatible with substations option 3**	**Option 3 – Maynooth PSP**
			Local accessibility	Quality of access in the area	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The quality of access in the area will be maintained the same	The quality of access in the area will be maintained the same	The quality of access in the area will be maintained the same
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

Table 20. Summary of the MCA Assessment Parameters

	Option 1 – Maynooth PSP	Option 2 – Maynooth PSP	Option 3 – Maynooth PSP
Economy	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
Integration	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
Environment	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
Accessibility & Social inclusion	Comparable to other options	Comparable to other options	Comparable to other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, option 2 and 3 are similar and better than option 1, but in order to have technical consistency with the proximity of SEB buildings, the MDC's recommendation for the location of the new PSP in Maynooth is **Option 3**.

Leixlip Confey ASP

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Leixlip Confey ASP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Leixlip Confey ASP Incompatible with substations option 1**	**Option 2 – Leixlip Confey ASP**	**Option 3 – Leixlip Confey ASP Incompatible with substations option 1**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options** There is no difference in the cost of installing and building the ASP, the three locations would be very similar	**Comparable to other options** There is no difference in the cost of installing and building the ASP, the three locations would be very similar	**Comparable to other options** There is no difference in the cost of installing and building the ASP, the three locations would be very similar
				Road access, utilities clash and earthworks, depending on the unevenness	**Some comparative advantage over other options** It would not require works to accommodate road access from R149. No utilities clash. The terrain at this location is plain.	**Some comparative disadvantage over other options** It would require undertaking works to accommodate road access from R149. No utilities clash. The terrain at this location is plain.	**Some comparative disadvantage over other options** It would require works to accommodate road access from R149. No utilities clash. The terrain at this location is plain.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options** There is no difference in the operating costs in comparison with others.	**Comparable to other options** There is no difference in the operating costs in comparison with others.	**Comparable to other options** There is no difference in the operating costs in comparison with others.
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Some comparative advantage over other options** There is no difference in long maintenance cost in comparison with other options	**Some comparative advantage over other options** There is no difference in long maintenance cost in comparison with other options	**Some comparative disadvantage over other options** More long term maintenance cost a per the new access road
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Some comparative advantage over other options** The new ASP would be next to the technical building, so the migration would be very advantageous.	**Some comparative disadvantage over other options** The new ASP would be further away from the current technical building than option 1 to carry out the migration.	**Some comparative disadvantage over other options** The new ASP would be further away from the current technical building than option 1 to carry out the migration.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Some comparative advantage over other options** The new ASP would be closer from some new technical buildings options.	**Some comparative advantage over other options** The new ASP would not be close from other buildings but it would be next to the railway track.	**Some comparative disadvantage over other options** The new ASP would be closer from some new technical buildings options, but not next to the railway track.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Leixlip Confey ASP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Leixlip Confey ASP Incompatible with substations option 1**	**Option 2 – Leixlip Confey ASP**	**Option 3 – Leixlip Confey ASP Incompatible with substations option 1**
					The building will have the same dimensions regardless of the area where it is located. However, this option means taking space away from the current station car park.	There is no need to take space to current parking or any other facility.	The building will have the same dimensions regardless of the area where it is located. However, this option means taking space with the new road access.
				Space for road access and walkways	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Significant comparative disadvantage over the other options**
					There is space for using the current road access to the station.	An area of bushes has to be prepared and a path is left partially blocked	A grass and trees area would have to be prepared for the road access.
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in terms of buildability during operation. The construction of the ASP will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the ASP will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the ASP will not disturb in the normal operation of the line.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The ASP does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The ASP does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The ASP does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3			**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Leixlip Confey ASP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Leixlip Confey ASP Incompatible with substations option 1**	**Option 2 – Leixlip Confey ASP**	**Option 3 – Leixlip Confey ASP Incompatible with substations option 1**
			Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	This option is located on existing made ground in the carpark of the train station, It is likely to have landscape and visual impact to the neighbouring residential receptors	This option is located on existing made ground in the carpark of the train station, It is likely to have landscape and visual impact to the neighbouring residential receptors	Located in open space area which will have a direct impact on landscape character and amenity lands that area also located adjacent to sensitive residential receptors.
		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 advantage over other options**	**Some comparative disadvantage over other options**
					This option will require the removal of some vegetation along the boundary of the railway line	This option will require the removal of some vegetation along the boundary of the rail way line	This option is on the vegetated railway embankment and will lead to some habitat loss.
		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 (land take)	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No known heritage resources recorded. The option does not present any advantage or disadvantages over other options.	No known heritage resources recorded. The option does not present any advantage or disadvantages over other options.	No known heritage resources recorded. Potential of unknown archaeological resources on undeveloped lands. However, this option does not present any significant advantage or disadvantages over other options.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Location may be liable to flood from fluvial sources. Flood Risk is comparable to other options. Risk to surface water quality is comparable to other options.	Location may be liable to flood from fluvial sources. Flood Risk is comparable to other options. Risk to surface water quality is comparable to other options.	Location may be liable to flood from fluvial sources. Flood Risk is comparable to other options. Risk to surface water quality is comparable to other options.
		3.7	Agriculture and Non-Agricultural	Overall impact on land take & property. Likely temporary or permanent severance effects, etc.	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					There are no direct impacts on non - agricultural property Option located on Leixlip train station grounds, within CIE boundary	There are no direct impacts on non - agricultural property Option located on Leixlip train station grounds, within CIE boundary	There are no direct impacts on non - agricultural property. Option 3 is located outside of the CIE land boundary; land acquisition is required
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources and soil resources to be developed/removed. Existing information relating to potential to encounter contaminated land.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No significant advantages or disadvantages over other options.	No significant advantages or disadvantages over other options.	No significant advantages or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
			Local accessibility	Quality of access in the area	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					The quality of access in the area will be maintained the same	The quality of access in the area will be maintained the same, but it impacts less than the other options as it is not in the parking area	The quality of access in the area will be maintained the same
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Leixlip Confey ASP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Leixlip Confey ASP Incompatible with substations option 1**	**Option 2 – Leixlip Confey ASP**	**Option 3 – Leixlip Confey ASP Incompatible with substations option 1**
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarises the averaged results of the MCA assessment per parameter for comparison purposes.

Table 21. Summary of the MCA Assessment Parameters

	Option 1 – Leixlip Confey ASP	Option 2 – Leixlip Confey ASP	Option 3 – Leixlip Confey ASP
Economy	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
Integration	Some comparative advantage over other options	Some comparative disadvantage over other options	Significant comparative disadvantage over the other options
Environment	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
Accessibility & Social inclusion	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new ASP in Leixlip Confey is **Option 2**, because in compared with option 1 wouldn´t use parking space and it would be better the entrance in the current park.

M3 Parkway PSP

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for M3 Parkway PSP								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – M3 Parkway PSP**	**Option 2 – M3 Parkway PSP Incompatible with substations option 2 and interference with CWSET Compound**	**Option 3 – M3 Parkway PSP**	**Option 4 – M3 Parkway PSP Incompatible with substations option 3**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the cost of installing and building the PSP, the three locations would be very similar	There is no difference in the cost of installing and building the PSP, the three locations would be very similar	There is no difference in the cost of installing and building the PSP, the three locations would be very similar	There is no difference in the cost of installing and building the PSP, the three locations would be very similar
				Road access, utilities clash and earthworks, depending on the unevenness	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No new road is required. The existing one for car park can be used.	No new road is required. The existing one for car park can be used.	No new road is required. The existing one for car park can be used.	No new road is required. The existing one for car park can be used.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the long term maintenance costs in comparison with other options.	There is no difference in the long term maintenance costs in comparison with other options.	There is no difference in the long term maintenance costs in comparison with other options.	There is no difference in the long term maintenance costs in comparison with other options.
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**
					The new PSP would be further away from the current technical building than option 2 to carry out the migration.	The new PSP would be very close to the current technical building, so the migration would be very advantageous.	The new PSP would be further away from the current technical building than option 2 to carry out the migration.	The new PSP would be further away from the current technical building than option 2 to carry out the migration.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**
					There is no difference in integration with parallel projects/contracts for this option in comparison with others and it is not expected to have interferences with project developments in the future	There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for M3 Parkway PSP								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – M3 Parkway PSP**	**Option 2 – M3 Parkway PSP Incompatible with substations option 2 and interference with CWSET Compound**	**Option 3 – M3 Parkway PSP**	**Option 4 – M3 Parkway PSP Incompatible with substations option 3**
					The building will have the same dimensions regardless of the area where it is located. However, this option means taking space away from the current station car park, especially places reserved for people with reduced mobility.	The building will have the same dimensions regardless of the area where it is located. However, this option is more advantageous because there will be no need to take up space in the station car park, access will be able to be used in the same way as it is today to access the current technical building.	The building will have the same dimensions regardless of the area where it is located. However, this option means taking space away from the current station car park.	The building will have the same dimensions regardless of the area where it is located. However, this option is more advantageous because there will be no need to take up space in the station car park, access will be able to be used in the same way as it is today to access the current technical building.
				Space for road access and walkways	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					There is space for road access, but removing some parking spaces	There is space for road access without affecting the area	There is space for road access, but removing some parking spaces	There is space for road access without affecting the area
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The PSP building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The PSP building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The PSP building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The PSP building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for M3 Parkway PSP								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – M3 Parkway PSP**	**Option 2 – M3 Parkway PSP Incompatible with substations option 2 and interference with CWSET Compound**	**Option 3 – M3 Parkway PSP**	**Option 4 – M3 Parkway PSP Incompatible with substations option 3**
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative advantage over other options** Option 1 is located within the confines of an existing car parking area. There are no sensitive landscape and visual characteristics in vicinity of this option and as such, no impacts are likely.	**Some comparative advantage over other options** Option 2 is located within the confines of an existing car parking area. There are no sensitive landscape and visual characteristics in vicinity of this option and as such, no impacts are likely.	**Some comparative advantage over other options** Option 3 is located within the confines of an existing car parking area. There are no sensitive landscape and visual characteristics in vicinity of this option and as such, no impacts are likely.	**Some comparative disadvantage over other options** Option 4 would be built in an area with a similar sort of building that is already screened to some extent from a residential dwelling that is located in close proximity. It is likely to have a direct visual impact to the rear of this property.
		3.4	Biodiversity (flora and fauna)	Potential compliance/conflict with biodiversity objectives; Indirect impacts on protected species, designated sites; Overall effect on nature conservation resource.	**Comparable to other options** This option does not present any disadvantage or advantage regarding biodiversity.	**Comparable to other options** This option does not present any disadvantage or advantage regarding biodiversity.	**Comparable to other options** This option does not present any disadvantage or advantage regarding biodiversity.	**Comparable to other options** This option does not present any disadvantage or advantage regarding biodiversity.
		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 (land take)	**Comparable to other options** Located on made ground in M3 Parkway Station site. This option does not present any advantage or disadvantages over other options.	**Comparable to other options** Located on made ground in M3 Parkway Station site. This option does not present any advantage or disadvantages over other options.	**Comparable to other options** Located on made ground in M3 Parkway Station site. This option does not present any advantage or disadvantages over other options.	**Comparable to other options** Located on made ground in M3 Parkway Station site. This option does not present any advantage or disadvantages over other options.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options** This option does not present any disadvantage or advantage in regards to water resources.	**Comparable to other options** This option does not present any disadvantage or advantage in regards to water resources.	**Comparable to other options** This option does not present any disadvantage or advantage in regards to water resources.	**Comparable to other options** This option does not present any disadvantage or advantage in regards to water resources.
		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.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option located on the grounds of M3 Parkway., within CIE land boundary.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option located on the grounds of M3 Parkway., within CIE land boundary.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option located on the grounds of M3 Parkway., within CIE land boundary.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option located on the grounds of M3 Parkway., within CIE land boundary.
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. % of 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.	**Comparable to other options** Developing on paved area in M3 Parkway. This option does not present any advantage or disadvantages over other options.	**Comparable to other options** Developing on paved area in M3 Parkway. This option does not present any advantage or disadvantages over other options.	**Comparable to other options** Developing on paved area in M3 Parkway. This option does not present any advantage or disadvantages over other options.	**Comparable to other options** Developing on paved area in M3 Parkway. This option does not present any advantage or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**		Benefits that accrue to those suffering from social deprivation,	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for M3 Parkway PSP								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – M3 Parkway PSP**	**Option 2 – M3 Parkway PSP Incompatible with substations option 2 and interference with CWSET Compound**	**Option 3 – M3 Parkway PSP**	**Option 4 – M3 Parkway PSP Incompatible with substations option 3**
			Vulnerable groups and deprived geographic areas	geographic isolation and mobility and sensory deprivation	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
			Local accessibility	Quality of access in the area	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					The quality of access in the area will be maintained the same, but PRM parking spaces would have to be removed.	The quality of access in the area will be maintained the same	The quality of access in the area will be affected to access into the parking	The quality of access in the area will be maintained the same
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarises the averaged results of the MCA assessment per parameter for comparison purposes.

Table 22. Summary of the MCA Assessment Parameters

	Option 1 M3 Parkway PSP	Option 2 M3 Parkway PSP	Option 3 M3 Parkway PSP	Option 4 M3 Parkway PSP
Economy	Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options
Integration	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options
Environment	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
Accessibility & Social inclusion	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new PSP in M3 Parkway is **Option 1** because it is not expected to have interferences with project developments in the future, **in opposite in option 2 that incompatibilities with electrical substation 2 and interference with CWSET Compound.**

Dunboyne ASP

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Dunboyne ASP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Dunboyne ASP Incompatible with substations option 1**	**Option 2 – Dunboyne ASP**	**Option 3 – Dunboyne ASP Incompatible with substations Option 3**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the cost of installing and building the ASP, the three locations would be very similar	There is no difference in the cost of installing and building the ASP, the three locations would be very similar	There is no difference in the cost of installing and building the ASP, the three locations would be very similar
				Road access, utilities clash and earthworks, depending on the unevenness	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					It would not require undertaking major works to accommodate road access from L228.	It would not require undertaking major works to accommodate road access from L228.	It would not require undertaking major works to accommodate road access from L228; but some facilities could be affected in this option such as bicycle parking.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the long term maintenance costs in comparison with other options.	There is no difference in the long term maintenance costs in comparison with other options.	There is no difference in the long term maintenance costs in comparison with other options.
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					The new ASP would be right next to the current technical building, so the migration would be very advantageous.	The new ASP would be right next to the current technical building, so the migration would be very advantageous.	The new ASP would be further away from the current technical building than other options.
		2.2			**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Dunboyne ASP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Dunboyne ASP Incompatible with substations option 1**	**Option 2 – Dunboyne ASP**	**Option 3 – Dunboyne ASP Incompatible with substations Option 3**
			Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The terrain at his location is plain, therefore no major earthworks are envisaged, and there are no clashes with existing utilities networks.	The terrain at his location is plain, therefore no major earthworks are envisaged, and there are no clashes with existing utilities networks.	The terrain at his location is plain, therefore no major earthworks are envisaged, and there are no clashes with existing utilities networks.
				Space for road access and walkways	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is space for road access and walkways	There is space for road access and walkaways	There is space for road access and walkways
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in terms of buildability during operation. The construction of the ASP will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the ASP will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the ASP will not disturb in the normal operation of the line.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration		**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Dunboyne ASP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Dunboyne ASP Incompatible with substations option 1**	**Option 2 – Dunboyne ASP**	**Option 3 – Dunboyne ASP Incompatible with substations Option 3**
				Likelihood of a noise impact on nearby noise sensitive locations	The ASP does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The ASP does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The SEB does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option is located next to the paved area within the grounds of Dunboyne Train Station. There are no sensitive landscape and visual characteristics in vicinity of this option and as such, no impacts are likely.	This option is located on paved area within the grounds of Dunboyne Train Station. There are no sensitive landscape and visual characteristics in vicinity of this option and as such, no impacts are likely.	This option is located on a paved area within the railway corridor in vicinity of residential area. The vegetation on the boundary of the railway corridor will provide a screen for the residential properties.
		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.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.
		3.5	Cultural, Archaeological and Architectural Heritage	Overall effect on cultural, archaeological and architecture heritage resource. Likely effects on RPS, National Monuments, SMRs, Conservation areas, etc. Number of designated sites/structures (by level of designation) directly impacted by scheme (land take)	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There are no RPS, National Monuments, SMRs and Conservation areas located within this Option.	There are no RPS, National Monuments, SMRs and Conservation areas located within this Option.	There are no RPS, National Monuments, SMRs and Conservation areas located within this Option.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is low risk flooding this Option due to a greater distance from a floodplain.	There is low risk flooding this Option due to a greater distance from a floodplain.	There is low risk flooding this Option due to a greater distance from a floodplain.
		3.7		Overall impact on land take & property. Number of properties to be	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Dunboyne ASP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Dunboyne ASP Incompatible with substations option 1**	**Option 2 – Dunboyne ASP**	**Option 3 – Dunboyne ASP Incompatible with substations Option 3**
			Agriculture and Non-Agricultural	impacted/acquired. Likely temporary or permanent severance effects, etc.	There are no direct impacts on non - agricultural property. Option is located within CIE land boundary, acquisition of land is not required.	There are no direct impacts on non - agricultural property. Option is located within CIE land boundary, acquisition of land is not required.	There are no direct impacts on non - agricultural property. Option is located within CIE land boundary, acquisition of land is not required.
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. % of 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.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding in relation to nearby receptors.	This option does not present any disadvantage or advantage regarding in relation to nearby receptors.	This option does not present any disadvantage or advantage regarding in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
			Local accessibility	Quality of access in the area	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Significant comparative disadvantage over other options**
					The quality of access in the area will be maintained the same	It would take part of the existing walkway	Walkway and bicycle parking would have to be removed
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2			**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Dunboyne ASP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Dunboyne ASP Incompatible with substations option 1**	**Option 2 – Dunboyne ASP**	**Option 3 – Dunboyne ASP Incompatible with substations Option 3**
			User's / People's Safety	Assessment of safety from User's / People's Safety point of view	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarises the averaged results of the MCA assessment per parameter for comparison purposes.

Table 23. Summary of the MCA Assessment Parameters

	Option 1 Dunboyne ASP	Option 2 Dunboyne ASP	Option 3 Dunboyne ASP
Economy	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
Integration	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
Environment	Comparable to other options	Comparable to other options	Comparable to other options
Accessibility & Social inclusion	Some comparative advantage over other options	Some comparative disadvantage over other options	Significant comparative disadvantage over other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new ASP in Dunboyne is **Option 1**

Clonsilla PSP

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Clonsilla PSP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Clonsilla PSP**	**Option 2 – Clonsilla PSP**	**Option 3 – Clonsilla PSP**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the cost of installing and building the PSP, the three locations would be very similar	There is no difference in the cost of installing and building the PSP, the three locations would be very similar	There is no difference in the cost of installing and building the PSP, the three locations would be very similar
				Road access, utilities clash and earthworks, depending on the unevenness	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					A new access road would be necessary, to connect the PSP with R121 road.	A new access road would be necessary, to connect the PSP with R121 road.	A new access road would be necessary, to connect the PSP with R121 road.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					The new road will be longer than other options to access the new site.	PSP building is close to the existing road.	PSP building is close to the existing road.
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					The new PSP would be further away from the current technical building than option 2 to carry out the migration.	The new PSP would be very close to the current technical building, so the migration would be very advantageous.	The new PSP would be very close to the current technical building, so the migration would be very advantageous.
		2.2			**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Clonsilla PSP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Clonsilla PSP**	**Option 2 – Clonsilla PSP**	**Option 3 – Clonsilla PSP**
			Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					The building will have the same dimensions regardless of the area where it is located. However, this option involves constructing a new building in an area that is currently unbuilt.	The building will have the same dimensions regardless of the area where it is located. However, this option is more advantageous because access will be able to be used in the same way as it is today to access the current technical building.	The building will have the same dimensions regardless of the area where it is located. However, this option is more advantageous because access will be able to be used in the same way as it is today to access the current technical building.
				Space for road access and walkways	**Some comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Some comparative advantage over other options**
					There is space for a new road access.	There is no space for road access due to the Royal Canal	There is space for using the current road access.
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6			**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Clonsilla PSP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Clonsilla PSP**	**Option 2 – Clonsilla PSP**	**Option 3 – Clonsilla PSP**
			Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The PSP building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The PSP building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The PSP building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					Option 1 is located within greenfield lands adjacent to the existing Dublin to Maynooth rail line. No sensitive receptors are likely to be visually impacted by Option 1.	Option 2 is located the adjacent to the existing Dublin to Maynooth rail line, adjacent to the Royal Canal Corridor, a sensitive landscape area. It is likely that some vegetation will be removed as part of Option 2, and will likely have a direct impact on the landscape character of the Royal Canal.	Option 3 is located adjacent to the existing Dublin to Maynooth rail line in proximity to the Royal Canal. Due to the existing natural screening along the Royal Canal, no impacts to its landscape setting are likely. No sensitive receptors are likely to be visually impacted by Option 3.
		3.4	Biodiversity (flora and fauna)	Potential compliance/conflict with biodiversity objectives; Indirect impacts on protected species, designated sites;	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Clonsilla PSP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Clonsilla PSP**	**Option 2 – Clonsilla PSP**	**Option 3 – Clonsilla PSP**
				Overall effect on nature conservation resource.	This option will require the removal of some scrub along the railway embankment.	This option will require the removal of mature trees and riparian vegetation along the Royal Canal. This will lead to operational impacts associated with light spill onto the canal, potential noise and visual disturbance to species.	This option will require the removal of a treeline along the railway corridor.
		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 (land take)	**Some comparative advantage over other options** There are no RPS, National Monuments, SMRs and Conservation areas located within Option 1. No known heritage resources recorded. Potential of unknown archaeological resources on greenfield sites.	**Some comparative disadvantage over other options** There are no RPS, National Monuments, SMRs and Conservation areas located within Option 2. Option 2 is likely to have an indirect impact on Clonsilla Railway Station (NIAH No. 11353004) and the Royal Canal.	**Some comparative advantage over other options** There are no RPS, National Monuments, SMRs and Conservation areas located within Option 1.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Some comparative advantage over other options** Low risk of flooding comparable across all options. Comparably lower risk to water quality than option 2.	**Some comparative disadvantage over other options** Low risk of flooding comparable across all options. Increased risk to water quality of Royal Canal during construction due to very close proximity.	**Some comparative advantage over other options** Low risk of flooding comparable across all options. Comparably lower risk to water quality than option 2.
		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.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option is located within the confines of the existing railway corridor.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option is located within the confines of the existing railway corridor.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option is located within the confines of the existing railway corridor.
		3.8			**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Clonsilla PSP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Clonsilla PSP**	**Option 2 – Clonsilla PSP**	**Option 3 – Clonsilla PSP**
			Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. % of 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.	This option will result in loss of some soil resources and soil sealing. However, it does not represent a significant advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
			Local accessibility	Quality of access in the area	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The quality of access in the area will be maintained the same	The quality of access in the area will be maintained the same	The quality of access in the area will be maintained the same
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.
		5.3	RAM		**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Clonsilla PSP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Clonsilla PSP**	**Option 2 – Clonsilla PSP**	**Option 3 – Clonsilla PSP**
				Assessment of Reliability, Availability and Maintainability of the solution	This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarises the averaged results of the MCA assessment per parameter for comparison purposes.

Table 24. Summary of the MCA Assessment Parameters

	Option 1 – Clonsilla PSP	Option 2 – Clonsilla PSP	Option 3 – Clonsilla PSP
Economy	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
Integration	Some comparative disadvantage over other options	Significant comparative disadvantage over other options	Some comparative advantage over other options
Environment	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
Accessibility & Social inclusion	Comparable to other options	Comparable to other options	Comparable to other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new PSP in Clonsilla is **Option 3**

Ashtown ASP

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Ashtown ASP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Ashtown ASP**	**Option 2 – Ashtown ASP**	**Option 3 – Ashtown ASP**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the cost of installing and building the ASP, the three locations would be very similar	There is no difference in the cost of installing and building the ASP, the three locations would be very similar	There is no difference in the cost of installing and building the ASP, the three locations would be very similar
				Road access, utilities clash and earthworks, depending on the unevenness	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					There are no accessibility problems from the road so it would not require undertaking major works to accommodate road access.	No new road is required. The existing one can be used.	It would not require undertaking major works to accommodate road access from Ashtown Road.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the long term maintenance costs in comparison with other options.	There is no difference in the long term maintenance costs in comparison with other options.	There is no difference in the long term maintenance costs in comparison with other options.
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					The new ASP would be further away from the current technical building than option 2 to carry out the migration.	The new ASP would be right next to the current technical building, so the migration would be very advantageous.	The new ASP would be further away from the current technical building than option 2 to carry out the migration.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Ashtown ASP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Ashtown ASP**	**Option 2 – Ashtown ASP**	**Option 3 – Ashtown ASP**
					The building will have the same dimensions regardless of the area where it is located. However, this option means taking space away from the current place far from the station. Also the proposed location is outside the existing IÉ railway boundaries	The building will have the same dimensions regardless of the area where it is located. However, this option is more advantageous because access will be able to be used in the same way as it is today to access the current technical building.	It would not require relocate the existing exit/entry; However, it can be part of the suppression of the existing railroad crossing works.
				Space for road access and walkways	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					There is space for road access but it would be through an industrial property	There is space for using the current road access to the station.	There is space for using the current road access
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Ashtown ASP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Ashtown ASP**	**Option 2 – Ashtown ASP**	**Option 3 – Ashtown ASP**
					The ASP does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The ASP does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The ASP does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					Option located in a vegetated area in proximity to the Mill building (NIAH: 11362067). Likely to have an impact to the landscape character and amenity of the area.	Option located adjacent to residential area in amenity walkway area right next to existing Ashtown station. Therefore no significant change in landscape character.	Option is adjacent to the Royal Canal Corridor, and the 10th lock (NIAH: 50060121), a sensitive landscape area. It is likely to have direct visual impact to the property located adjacent to 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.	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					This option will require the removal of vegetation and mature trees and will lead to some habitat loss	This option is on the vegetated railway embankment and will lead to some habitat loss.	The option will require removal of vegetation scrub from the rail way embankment
		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 (land take)	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Ashtown ASP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Ashtown ASP**	**Option 2 – Ashtown ASP**	**Option 3 – Ashtown ASP**
					In proximity to Mill building (NIAH: 11362067). While the site is screened by existing vegetation there is potential for indirect impacts on mill and outbuildings (RPS 691).	No recorded cultural, archaeological and architecture heritage resources present on site.	Indirect impacts on the Royal Canal, 10th lock (NIAH:50060121)
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards to water resources.	This option does not present any disadvantage or advantage in regards to water resources.	This option does not present any disadvantage or advantage in regards to water resources.
		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.	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					There are no direct impacts on non - agricultural property. Option located outside of CIE land boundary, acquisition of land is required.	There are no direct impacts on non - agricultural property. Option located within CIE land boundary, no land acquisition required	There are no direct impacts on non - agricultural property. Option located within CIE land boundary, no land acquisition required
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources and soil resources to be developed/removed. Existing information relating to potential to encounter contaminated land.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No significant advantages or disadvantages over other options.	No significant advantages or disadvantages over other options.	No significant advantages or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on nearby receptors.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.
4		**4.1**			**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Ashtown ASP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Ashtown ASP**	**Option 2 – Ashtown ASP**	**Option 3 – Ashtown ASP**
	Accessibility & Social inclusion		Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
			Local accessibility	Quality of access in the area	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The quality of access in the area will be maintained the same	The quality of access in the area will be maintained the same	The quality of access in the area will be maintained the same
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarises the averaged results of the MCA assessment per parameter for comparison purposes.

Table 25. Summary of the MCA Assessment Parameters

	Option 1 – Ashtown ASP	Option 2 – Ashtown ASP	Option 3 –Ashtown ASP
Economy	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
Integration	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options
Environment	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
Accessibility & Social inclusion	Comparable to other options	Comparable to other options	Comparable to other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new ASP in Ashtown is **Option 2**

Glasnevin PSP

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Glasnevin PSP								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 2 – Glasnevin PSP**	**Option 3 – Glasnevin PSP**	**Option 4 – Glasnevin PSP**	**Option 6 – Glasnevin PSP**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Some comparative disadvantage over other options** The capital expenditure required for the PSP is lower as the PSP is above ground; the Royal Canal way needs to be widening in a small stretch. Preventive measures will have to be undertaking in order to avoid potential water damage due to its proximity to the canal.	**Significant comparative disadvantage over other options** The capital expenditure required for the PSP is lower as the PSP is above ground; the Royal Canal way needs to be widening in a long stretch. Preventive measures will have to be undertaking in order to avoid potential water damage due to its proximity to the canal.	**Significant comparative advantage over other options** The capital expenditure required for the traction substation is significant lower as the substation is far from the Royal Canal and the access is easy to provide.	**Significant comparative advantage over other options** The capital expenditure required for the traction substation is significant lower as the substation is far from the Royal Canal and the access is easy to provide.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options** There is no difference in the operating costs in comparison with others.	**Comparable to other options** There is no difference in the operating costs in comparison with others.	**Comparable to other options** There is no difference in the operating costs in comparison with others.	**Comparable to other options** There is no difference in the operating costs in comparison with others.
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Significant comparative disadvantage over other options** In this option, it would be necessary to widen the Royal Canal Way to allow road access from R108.	**Significant comparative disadvantage over other options** In this option, it would be necessary to widen the Royal Canal Way to allow road access from R108, which is 530m approximately distant from R108, on its east side.	**Some comparative advantage over other options** In this option, the Gaelic football pitch limits (layout) would have to be adjusted to allow the PSP construction. It would be necessary accommodate the road access provided from Clareville Court to the existing Gaelic football pitch area.	**Significant comparative advantage over other options** In this option, the Gaelic football pitch limits (layout) would have to be adjusted to allow the PSP construction. Compared to option 4 also located in the existing Gaelic football pitch, this one has less land take from the Gaelic football pitch, than the others. It would be necessary accommodate the road access provided from Clareville Court to the existing Gaelic football pitch area.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Significant comparative advantage over other options**	**Significant comparative advantage over other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Glasnevin PSP								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 2 – Glasnevin PSP**	**Option 3 – Glasnevin PSP**	**Option 4 – Glasnevin PSP**	**Option 6 – Glasnevin PSP**
					Due to its location next to the Royal Canal, it can interfere in the future development of this area.	Due to its location next to the Royal Canal, it can interfere in the future development of this area. The MDC are aware that DCC are proposing to expand the Royal Canal greenway. The location of the PSP at this location may impact the options available to DC however there is no approved planning application details provided at this stage. Consultation required with DCC if identified as the preferred option.	This option is not integrated in parallel projects/contracts	This option is not integrated in parallel projects/contracts
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Comparable to other options** The building will have the same dimensions regardless of the area where it is located. The proposed location is not within the existing IÉ railway boundaries; therefore, land take will be required	**Comparable to other options** The building will have the same dimensions regardless of the area where it is located. The proposed location is not within the existing IÉ railway boundaries; therefore, land take will be required	**Comparable to other options** The building will have the same dimensions regardless of the area where it is located. The proposed location is not within the existing IÉ railway boundaries; therefore, land take will be required	**Comparable to other options** The building will have the same dimensions regardless of the area where it is located. The proposed location is not within the existing IÉ railway boundaries; therefore, land take will be required
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options** There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.	**Comparable to other options** There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.	**Comparable to other options** There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.	**Comparable to other options** There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options** There is no difference in obsolesce in a long-term basis for this option in comparison with others.	**Comparable to other options** There is no difference in obsolesce in a long-term basis for this option in comparison with others.	**Comparable to other options** There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.	**Comparable to other options** There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Glasnevin PSP								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 2 – Glasnevin PSP**	**Option 3 – Glasnevin PSP**	**Option 4 – Glasnevin PSP**	**Option 6 – Glasnevin PSP**
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options** This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	**Comparable to other options** This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	**Comparable to other options** This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	**Comparable to other options** This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options** The PSP building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	**Comparable to other options** The PSP building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	**Comparable to other options** The PSP building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	**Comparable to other options** The PSP building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options** No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	**Comparable to other options** No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	**Comparable to other options** No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	**Comparable to other options** No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Significant comparative disadvantage over other options** Option 2 is located on a vegetated area, adjacent to the Royal Canal Way and the Royal Canal oNHA, a sensitive landscape area. This option is likely to have an impact to the landscape character and amenity of the area. The views to and from the Royal Canal are also likely to be impacted. This option is also located in proximity to the Royal Canal 6th Lock, a RPS cultural heritage feature and is likely to have an indirect	**Some comparative advantage over other options** Option 3 is located on a vegetated area, adjacent to the Royal Canal Way and the Royal Canal, a sensitive landscape area. This option is likely to have an impact to the landscape character and amenity of the area. The views to and from the Royal Canal are also likely to be impacted.	**Some comparative advantage over other options** Option 4 is located on the boundary of Saint Vincent's school sports field. Vegetation will be removed and therefore screening to the residential properties will be impacted. Local landscape impacts and visual impacts to dwelling houses on Clareville Court. Replacement screening could reduce impacts.	**Some comparative advantage over other options** Option 6 is located on the boundary of Saint Vincent's school sports field. Vegetation will be removed and therefore screening to the residential properties will be impacted. Local landscape impacts and visual impacts to dwelling houses on Clareville Court. Replacement screening could reduce impacts.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Glasnevin PSP								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 2 – Glasnevin PSP**	**Option 3 – Glasnevin PSP**	**Option 4 – Glasnevin PSP**	**Option 6 – Glasnevin PSP**
					impact on its setting/landscape character.			
		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** This option is located on dry grassland and scrub between the canal and railway. This option requires works adjacent to the Royal Canal pNHA and will likely result in the loss of grassland and scrub habitat. Japanese Knotweed has been recorded within the rail corridor approx. 100m northeast of the site. During operation there may be water quality which requires further assessment.	**Some comparative advantage over other options** This option is located in an area of dry grassland and trees between the canal towpath and railway. This option requires works directly adjacent to the Royal Canal pNHA and will likely result in the loss of grassland and trees. Japanese Knotweed has been recorded within the rail corridor approx. 120m northwest of the site. During operation there may be water quality which requires further assessment.	**Some comparative disadvantage over other options** The option is located adjacent to the railway corridor on the sports field. This option will result in loss of amenity grassland and tree loss. The pitch has been identified as an important (Major) feeding ground for Brent Geese. Construction stage impacts are likely as the site is located on the edge of the pitch however this could be mitigated by avoiding works during winter periods. No significant impacts are expected to the feeding grounds during the operational stage.	**Some comparative disadvantage over other options** Located on playing pitches, this option will result in loss of amenity grassland and possibly some trees. The pitch has been identified as an important (Major) feeding ground for Brent Geese. Construction stage impacts are likely as the site is located on the edge of the pitch however this could be mitigated by avoiding works during winter periods. No significant impacts are expected to the feeding grounds during the operational stage.
		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 (land take)	**Some comparative disadvantage over other options** Indirect impacts on the Royal Canal (RPS), Royal Canal 6th Lock (RPS) context and setting. There is potential for unknown archaeological resources to be encountered. There is potential unknown archaeological resources to be encountered	**Some comparative disadvantage over other options** Option 3 is located in proximity of the Royal Canal and is likely to have an indirect impact on its setting. Potential to encounter unknown archaeological resources. .	**Some comparative advantage over other options** There are no RPS, National Monuments, SMRs and Conservation areas located within Option 4. There is potential unknown archaeological resources to be encountered.	**Some comparative advantage over other options** There are no RPS, National Monuments, SMRs and Conservation areas located within Option 5. There is potential unknown archaeological resources to be encountered.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options** No record of historical or predicted flooding within the vicinity of the site. This option does not present any disadvantage or advantage with regards to water resources.	**Comparable to other options** No record of historical or predicted flooding within the vicinity of the site. This option does not present any disadvantage or advantage with regards to water resources.	**Comparable to other options** No record of historical or predicted flooding within the vicinity of the site. This option does not present any disadvantage or advantage with regards to water resources.	**Comparable to other options** No record of historical or predicted flooding within the vicinity of the site. This option does not present any disadvantage or advantage with regards to water resources.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Glasnevin PSP								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 2 – Glasnevin PSP**	**Option 3 – Glasnevin PSP**	**Option 4 – Glasnevin PSP**	**Option 6 – Glasnevin PSP**
		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.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option is not located within CIE land boundary - acquisition of Land	Option is not located within CIE land boundary - acquisition of land.	Option is not located within CIE land boundary - acquisition of land.	Option is not located within CIE land boundary - acquisition of land.
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. % of 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.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage over other options.	This option does not present any disadvantage or advantage over other options.	This option does not present any disadvantage or advantage over other options.	This option does not present any disadvantage or advantage over other options.
		3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					The works of the Metrolink project in the area may disrupt the whole area	The works of the Metrolink project in the area may disrupt the whole area	No accessibility issues are foreseen	No accessibility issues are foreseen
		4.2	Vulnerable groups	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
5	**Safety**	**5.1**	Rail's Safety		**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Glasnevin PSP								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 2 – Glasnevin PSP**	**Option 3 – Glasnevin PSP**	**Option 4 – Glasnevin PSP**	**Option 6 – Glasnevin PSP**
				Assessment of safety from an operational point of view	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in this option, as the area is not linked to any particular safety sensitive environment	User's / People's safety is fulfilled in this option, as the area is not linked to any particular safety sensitive environment	User's / People's safety is fulfilled in this option, as the PSP is designed to be safe and not allow public to enter the site. Netting will be put up to stop balls from entering the property	User's / People's safety is fulfilled in this option, as the PSP is designed to be safe and not allow public to enter the site. Netting will be put up to stop balls from entering the property
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					Potential unavailability due to inherent risks due to the location next to the Royal Canal	Potential unavailability due to inherent risks due to the location next to the Royal Canal	Reliability, Availability and Maintainability fulfilled in this option.	Reliability, Availability and Maintainability fulfilled in this option.
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**
					This option provides health benefits, as it does not affect sport areas	This option provides health benefits, as it does not affect sport areas	This option presents a disadvantage regarding health benefits, as it affects sports areas	This option presents a disadvantage regarding health benefits, as it affects sports areas

Comparison of Options and Recommendation

The following table summarises the averaged results of the MCA assessment per parameter for comparison purposes.

Table 26. Summary of the MCA Assessment Parameters

	Option 2 Glasnevin PSP	Option 3 Glasnevin PSP	Option 4 Glasnevin PSP	Option 6 Glasnevin PSP
Economy	Some comparative disadvantage over other options	Significant comparative disadvantage over other options	Significant comparative advantage over other options	Significant comparative advantage over other options
Integration	Significant comparative disadvantage over other options	Significant comparative disadvantage over other options	Some comparative advantage over other options	Significant comparative advantage over other options
Environment	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options
Accessibility & Social inclusion	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Significant comparative advantage over other options	Significant comparative advantage over other options
Safety	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Significant comparative advantage over other options	Significant comparative advantage over other options
Physical Activity	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative disadvantage over other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new PSP in Glasnevin is **Option 6.**

Connolly PSP

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Connolly PSP								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Connolly PSP**	**Option 2 – Connolly PSP**	**Option 3 – Connolly PSP**	**Option 4 – Connolly PSP**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					The cost of installing and building the PSP is lower.	This solution is more expensive since you have to prepare the installation of the PSP next to it in the vias area.	The cost of installing and building the PSP is lower.	The cost of installing and building the PSP is lower.
				Road access, utilities clash and earthworks, depending on the unevenness	**Some comparative advantage over other options**	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Some comparative advantage over other options**
					No new road is required for accessing from R105. No utilities clash. The terrain at this location is plain.	There is no road access because PSP is in the viaduct next to the railways. No utilities clash. The terrain at this location is plain.	No new road is required for accessing from R105. Clash with existing utilities that would need diversion. The terrain at this location is plain. Access to be provided by Failte Ireland	No new road is required for accessing from Oriel Street Lower. No utilities clash. The terrain at this location is plain. Paving for parking area is required
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					There is no difference in long maintenance cost in comparison with other options	It is more difficult because all maintenance operations have to be made at night after finishing railway service.	There is no difference in long maintenance cost in comparison with other options	There is no difference in long maintenance cost in comparison with other options
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration of any option.	There is no difference in integration of any option.	There is no difference in integration of any option.	There is no difference in integration of any option.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Connolly PSP								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Connolly PSP**	**Option 2 – Connolly PSP**	**Option 3 – Connolly PSP**	**Option 4 – Connolly PSP**
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others.	There is no difference in integration with parallel projects/contracts for this option in comparison with others
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					The building will have the same dimensions regardless of the area where it is located. However, this option means taking space away from the current station car park. The PSP is in front of an existing building. Finally, the proposed location is outside the existing IÉ railway boundaries.	The building will have the same dimensions regardless of the area where it is located. However, this option is more advantageous because there will be no need to take up space in the station car park and SPS is next to the railway.	The building will have the same dimensions regardless of the area where it is located. However, this option means taking space away from the current station car park. Also the proposed location is outside the existing IÉ railway boundaries	The building will have the same dimensions regardless of the area where it is located. However, this option is more advantageous because there will be no need to take up space in the station car park and SPS is next to the railway.
				Space for road access and walkways	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					There is space for using the current road access to the station.	The road access nowadays is through tracks crossing. There is not enough space for a new access road due to private properties next to the viaduct.	There is space for using the current road access to the station.	There is space for using the current road access to the station
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Connolly PSP								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Connolly PSP**	**Option 2 – Connolly PSP**	**Option 3 – Connolly PSP**	**Option 4 – Connolly PSP**
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options** This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	**Comparable to other options** This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	**Comparable to other options** This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	**Comparable to other options** This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options** The PSP building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	**Comparable to other options** The PSP building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	**Comparable to other options** The PSP building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	**Comparable to other options** The PSP building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options** No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	**Comparable to other options** No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	**Comparable to other options** No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	**Comparable to other options** No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative disadvantage over other options** Option 1 is located on made ground in vicinity of the Connolly Station. The existing building structures are similar in character within the area to the proposed PSP building. No impacts to the landscape character are likely. This option is likely to have an indirect impact on the setting Irish Rail Head Office, Connolly Station, a RPS cultural heritage feature (ref no. 130).	**Some comparative disadvantage over other options** Option 2 is located on made ground in vicinity of the Connolly Station. The existing building structures are similar in character within the area to the proposed PSP building. No impacts to the landscape character are likely. This option is likely to have an indirect impact on the setting of the Water Tower, (NIAH Reg. No. 50010041) a cultural heritage feature.	**Some comparative advantage over other options** Option 3 is located on made ground in vicinity of the Connolly Station and is not likely to have an impact on the landscape character of the area.	**Some comparative advantage over other options** Option 4 is located on made ground in vicinity of the Connolly Station and is not likely to have an impact on the landscape character of the area.
		3.4			**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Connolly PSP								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Connolly PSP**	**Option 2 – Connolly PSP**	**Option 3 – Connolly PSP**	**Option 4 – Connolly PSP**
			Biodiversity (flora and fauna)	Potential compliance/conflict with biodiversity objectives; Indirect impacts on protected species, designated sites; Overall effect on nature conservation resource.	This option does not present any disadvantage or advantage in regards to biodiversity.	This option does not present any disadvantage or advantage in regards to biodiversity.	This option does not present any disadvantage or advantage in regards to biodiversity.	This option does not present any disadvantage or advantage in regards to biodiversity.
		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 (land take)	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative advantage over other options**
					Option 1 is located on made ground in vicinity of Irish Rail Head Office, Connolly Station, a RPS cultural heritage feature (ref no. 130). This option is likely to have an indirect impact on the setting of this cultural heritage site.	Option 2 is located on made ground in vicinity of Water Tower at Connolly Station, a RPS cultural heritage feature (NIAH Reg. No. 50010041) . This option is likely to have an indirect impact on the setting of the Water Tower.	There are no RPS, National Monuments, SMRs and Conservation areas located within Option 3	There are no RPS, National Monuments, SMRs and Conservation areas located within Option 4
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards to water resources.	This option does not present any disadvantage or advantage in regards to water resources.	This option does not present any disadvantage or advantage in regards to water resources.	This option does not present any disadvantage or advantage in regards to water resources
		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 disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					There are no direct impacts on non - agricultural property. Option is not located within CIE land boundary, acquisition of land is required	There are no direct impacts on non - agricultural property. Option is located within CIE land boundary, acquisition of land is not required.	There are no direct impacts on non - agricultural property. Option is not located within CIE land boundary, acquisition of land is required.	There are no direct impacts on non - agricultural property. Option is located within CIE land boundary, acquisition of land is not required.
		3.8			**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Connolly PSP								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Connolly PSP**	**Option 2 – Connolly PSP**	**Option 3 – Connolly PSP**	**Option 4 – Connolly PSP**
			Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. % of 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.	This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.	This option does not present any advantage or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding in relation to nearby receptors.	This option does not present any disadvantage or advantage regarding in relation to nearby receptors.	This option does not present any disadvantage or advantage regarding in relation to nearby receptors.	This option does not present any disadvantage or advantage regarding in relation to nearby receptors.
4	**Accessibility & Social inclusion**		Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
		4.1	Local accessibility	Quality of access in the area	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					The quality of access in the area will be affected to access into the parking	The quality of access in the area will be maintained the same	The quality of access in the area will be affected to access into the parking	The quality of access in the area will be maintained the same
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters								
MCA (Multi Criteria Analysis) for Connolly PSP								
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Connolly PSP**	**Option 2 – Connolly PSP**	**Option 3 – Connolly PSP**	**Option 4 – Connolly PSP**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarises the averaged results of the MCA assessment per parameter for comparison purposes.

Table 27. Summary of the MCA Assessment Parameters

	Option Connolly PSP	Option 2 Connolly PSP	Option 3 Connolly PSP	Option 4 Connolly PSP
Economy	Some comparative advantage over other options	Significant comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
Integration	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
Environment	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
Accessibility & Social inclusion	Some comparative disadvantage over other options	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new PSP in Connolly is **Option 4**

Spencer Dock PSP

Spencer Dock PSP with Architectural Option 3

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Spencer Dock PSP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Spencer Dock PSP**	**Option 2 – Spencer Dock PSP**	**Option- 3**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					There is no difference in the cost of installing and building the PSP, the three locations would be very similar	The cost of installing the PSP is lower because Substation 2 is near.	There is no difference in the cost of installing and building the PSP, the three locations would be very similar
				Road access, utilities clash and earthworks, depending on the unevenness	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					It would not require undertaking major works to accommodate road access from Park Lane; however, part of existing car park will be required to be taken for this purpose.	It would not require undertaking major works to accommodate road access from Park Lane; however, part of existing car park will be required to be taken for this purpose.	For this option, it would be necessary accommodate the road access from Abercorn Rd or from Park Lane.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.	There is no difference in the operating costs in comparison with others.
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in long maintenance cost in comparison with other options	There is no difference in long maintenance cost in comparison with other options	There is no difference in long maintenance cost in comparison with other options
2	**Integration**	**2.1**	Integration with existing equipment		**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Spencer Dock PSP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Spencer Dock PSP**	**Option 2 – Spencer Dock PSP**	**Option- 3**
				Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	The new PSP would be right next to the current technical building, so the migration would be very advantageous.	The new PSP would be right next to the current technical building, so the migration would be very advantageous.	The new PSP would be further away from the current technical building than options 1, 2, 3 or 9 to carry out the migration.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					The new PSP would be closer from some Traction Substation options.	This option could interfere with future urbanistic development in the aera	The new PSP would be closer from some Traction Substation options and New Spencer Dock station.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**
					The building will have the same dimensions regardless of the area where it is located. However, this option means taking space away from the current station car park. Also the proposed location is outside the existing IÉ railway boundaries. PSP would be close to the Canal.	The building will have the same dimensions regardless of the area where it is located. However, this option means taking space away from the current station car park. Also the proposed location is outside the existing IÉ railway boundaries	The building will have the same dimensions regardless of the area where it is located. However, this option is outside the existing IÉ railway boundaries
				Space for road access and walkways	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					There is space for using the current road access to the station.	There is space for using the current road access to the station.	There is space for road access, but removing some existing buildings and facilities.
		2.4	Buildability during operation		**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters						
MCA (Multi Criteria Analysis) for Spencer Dock PSP						
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Spencer Dock PSP**	**Option 2 – Spencer Dock PSP**	**Option- 3**
				Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.	There is no difference in terms of buildability during operation. The construction of the PSP will not disturb in the normal operation of the line.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.	There is no difference in obsolesce in a long-term basis for this option in comparison with others.
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.	This option does not present any disadvantage or advantage in regards the use of registered product/technology and range of providers.
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The PSP does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The PSP does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The PSP does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational	No likely significant air quality or climate emission sources during the construction and/or	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters						
MCA (Multi Criteria Analysis) for Spencer Dock PSP						
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Spencer Dock PSP**	**Option 2 – Spencer Dock PSP**	**Option- 3**
					phases therefore all options are comparable.	operational phases therefore all options are comparable.	
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Comparable to other options** This option is located on made ground paved area within the grounds of Docklands Train Station. There are no sensitive landscape and visual characteristics in vicinity of this option and as such, no impacts are likely.	**Comparable to other options** This option is located on paved area within the grounds of Docklands Train Station. There are no sensitive landscape and visual characteristics in vicinity of this option and as such, no impacts are likely.	**Comparable to other options** This option is located on a paved area within the railway corridor in vicinity of residential area. The existing fence on the boundary of the railway corridor will provide a screen for the residential properties.
		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.	**Comparable to other options** This option does not present any advantage or disadvantages over other options.	**Comparable to other options** This option does not present any advantage or disadvantages over other options.	**Comparable to other options** This option does not present any advantage or disadvantages over other options.
		3.5	Cultural, Archaeological and Architectural Heritage	Overall effect on cultural, archaeological and architecture heritage resource. Likely effects on RPS, National Monuments, SMRs, Conservation areas, etc. Number of designated sites/structures (by level of designation) directly impacted by scheme (land take)	**Comparable to other options** There are no RPS, National Monuments, SMRs and Conservation areas located within this Option.	**Comparable to other options** There are no RPS, National Monuments, SMRs and Conservation areas located within this Option.	**Comparable to other options** There are no RPS, National Monuments, SMRs and Conservation areas located within this Option.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options** There is low risk flooding this Option due to a greater distance from a floodplain.	**Comparable to other options** There is low risk flooding this Option due to a greater distance from a floodplain.	**Comparable to other options** There is low risk flooding this Option due to a greater distance from a floodplain.
		3.7	Agriculture and Non-Agricultural		**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters						
MCA (Multi Criteria Analysis) for Spencer Dock PSP						
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Spencer Dock PSP**	**Option 2 – Spencer Dock PSP**	**Option- 3**
				Overall impact on land take & property. Number of properties to be impacted/acquired. Likely temporary or permanent severance effects, etc.	There are no direct impacts on non - agricultural property. Option is not located within CIE land boundary, acquisition of land is required.	There are no direct impacts on non - agricultural property. Option is not located within CIE land boundary, acquisition of land is required.	There are no direct impacts on non - agricultural property. Option is not located within CIE land boundary, acquisition of land is required.
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. % of 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.	**Comparable to other options** This option does not present any advantage or disadvantages over other options.	**Comparable to other options** This option does not present any advantage or disadvantages over other options.	**Comparable to other options** This option does not present any advantage or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options** This option does not present any disadvantage or advantage regarding in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage regarding in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage regarding in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options** This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	**Comparable to other options** This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas	**Comparable to other options** This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
			Local accessibility	Quality of access in the area	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) for Spencer Dock PSP							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Spencer Dock PSP**	**Option 2 – Spencer Dock PSP**	**Option- 3**
					The quality of access would be impacted as some walkway would have to be removed	The quality of access would be impacted as some walkway would have to be removed	The quality of access in the area will be maintained the same
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.	Rail's safety is fulfilled in both options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.	User's / People's safety is fulfilled in both options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM	This option does not present any disadvantage or advantage regarding RAM
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

Comparison of Options and Recommendation

The following table summarises the averaged results of the MCA assessment per parameter for comparison purposes.

Table 28. Summary of the MCA Assessment Parameters

Spencer Dock PSP Scenery with Architectural option 3

	Option Spencer Dock PSP	Option 2 Spencer Dock PSP	Option 3 Spencer Dock PSP
Economy	Some comparative advantage over other options	Some comparative advantage over other options	Some comparative advantage over other options
Integration	Some comparative disadvantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
Environment	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
Accessibility & Social inclusion	Some comparative advantage over other options	Some comparative disadvantage over other options	Some comparative advantage over other options
Safety	Comparable to other options	Comparable to other options	Comparable to other options
Physical Activity	Comparable to other options	Comparable to other options	Comparable to other options

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new PSP in Docklands is **Option 3.**

9.5.8 Telecoms Location MCA

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of MAYNOOTH STATION							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – External pavement close to Station**	**Option 2 –Parking area after auxiliary buildings**	**Option 3 – Parking area at the access road before station building**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
				Assessment of cost of installation and investment to construct/install/use the solution.	The equipment is installed outdoor, on a paved area, a prefabricated building is foreseen	The equipment is installed outdoor, on a paved space, a prefabricated building is foreseen	The equipment is installed outdoor, on a paved space, a prefabricated building is foreseen
				Access and earthworks	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No new access is required.	No new access is required.	No new access is required.
					On a paved surface	On a paved surface	On a paved surface
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option is accessible from the access road, modular and independent.	Option is accessible from the access road, modular and independent	Option is accessible from the access road, modular and independent
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of MAYNOOTH STATION							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – External pavement close to Station**	**Option 2 –Parking area after auxiliary buildings**	**Option 3 – Parking area at the access road before station building**
					There is no difference in long term maintenance cost regarding access roads	There is no difference in long term maintenance cost regarding access roads	There is no difference in long term maintenance cost regarding access roads
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The option is outside of existing IÉ boundary, and a standard surface is being considered for the new TER	The option is outside of existing IÉ boundary, and a standard surface is being considered for the new TER	The option is outside of existing IÉ boundary, and a standard surface is being considered for the new TER
				Space for access and walkways	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Both road and pedestrian access	Both road and pedestrian access	Both road and pedestrian access

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of MAYNOOTH STATION							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – External pavement close to Station**	**Option 2 –Parking area after auxiliary buildings**	**Option 3 – Parking area at the access road before station building**
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Construction is located outdoor. A prefabricated building is being considered	Construction is located outdoors. A prefabricated building is being considered	Construction is located outdoors. A prefabricated building is being considered.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure
3	**Environment**	**3.1**	Noise and Vibration	Likelihoods of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of MAYNOOTH STATION							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – External pavement close to Station**	**Option 2 –Parking area after auxiliary buildings**	**Option 3 – Parking area at the access road before station building**
					The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					All options are broadly comparable located in close proximity to each other in an urbanised environment. Located in urbanised location. Direct impacts to landscape character of Royal Canal including view to and from Royal Canal (RC6	All options are broadly comparable located in close proximity to each other in an urbanised environment. Direct impacts to landscape character of Royal Canal including view to and from Royal Canal (RC6 Mullen Bridge	All options are broadly comparable located in close proximity to each other in an urbanised environment. Located in urbanised location. Direct impacts to landscape character of Royal Canal including view to and from Royal Canal (RC6

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of MAYNOOTH STATION							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – External pavement close to Station**	**Option 2 –Parking area after auxiliary buildings**	**Option 3 – Parking area at the access road before station building**
					Mullen Bridge Railpark/Maynooth) also an RPS (B05–60). The 'entrance/wayfinding' to station for passengers would also be compromised by this option.	Railpark/Maynooth) also an RPS Maynooth Station and signal box (B05–60)	Mullen Bridge Railpark/Maynooth) also an RPS (B05–60). The 'entrance/wayfinding' to station for passengers would also be compromised by this option.
		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.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option requires works close to Royal Canal pNHA	This option requires works close to Royal Canal pNHA	This option requires works close to Royal Canal pNHA
		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 (land take)	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Indirect impact to Royal Canal and Maynooth Station and signal box (B05–60)	Indirect impact to Royal Canal and Maynooth Station and signal box (B05–60)	Indirect impact to Royal Canal and Maynooth Station and signal box (B05–60)
		3.6	Water Resources	Overall potential significant effects on water resource attribute	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of MAYNOOTH STATION							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – External pavement close to Station**	**Option 2 –Parking area after auxiliary buildings**	**Option 3 – Parking area at the access road before station building**
				likely to be affected during construction and operation.	OPW CFRAMS flood mapping indicates option location as liable to flood in extreme events from fluvial sources.	OPW CFRAMS flood mapping indicates option location as liable to flood in extreme events from fluvial sources.	OPW CFRAMS flood mapping indicates option location as liable to flood in extreme events from fluvial sources.
		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.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Options located in the Station grounds.	Options located in the Station grounds.	Options located in the Station grounds.
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources and soil resources to be developed/removed. Existing information relating to potential to encounter contaminated land.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No significant advantages or disadvantages over other options.	No significant advantages or disadvantages over other options.	No significant advantages or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on nearby receptors.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of MAYNOOTH STATION							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – External pavement close to Station**	**Option 2 –Parking area after auxiliary buildings**	**Option 3 – Parking area at the access road before station building**
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No impact	No impact	No impact
			Local accessibility	Quality of access in the area	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**
					It does not impact on local accessibility	It impacts on the reduction of two parking areas	It impacts on the reduction of two parking areas
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in all options.	User's / People's safety is fulfilled in all options.	User's / People's safety is fulfilled in all options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution	Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution	Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of MAYNOOTH STATION							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – External pavement close to Station**	**Option 2 –Parking area after auxiliary buildings**	**Option 3 – Parking area at the access road before station building**
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes:

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters				
MCA (Multi Criteria Analysis) of MAYNOOTH STATION				
Parameter		**Option 1 –External pavement close to Station**	**Option 2 –Parking area after auxiliary buildings**	**Option 3 – Parking area at the access road before station building**
Economy		**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
Integration		**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
Environment		**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
Accessibility & Social inclusion		**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**
Safety		**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters				
MCA (Multi Criteria Analysis) of MAYNOOTH STATION				
Physical Activity		**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new TER in Maynooth Station is Option 1.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of Leixlip Louisa Bridge Station							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Parking area**	**Option 2 –Area close to the station between parking places**	**Option 3 – Area adjacent to an existing building**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The equipment is installed outdoor, on a paved space, a prefabricated building is foreseen	The equipment is installed outdoor, on a paved space, a prefabricated building is foreseen	The equipment is installed outdoor, on a paved space, a prefabricated building is foreseen
				Access and earthwork	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No new road access is required. Access through the existing road. On a paved area.	No new road access is required. Access through the existing road. On a paved area.	No new road access is required. Access through the existing road. On a paved area.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option is accessible from the road, modular and independent	Option is accessible from the parking road, modular and independent	Option is accessible from the trackside, modular and independent
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Same in comparison with other options	Same in comparison with other options	Same in comparison with other options
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.
		2.3			**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of Leixlip Louisa Bridge Station							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Parking area**	**Option 2 –Area close to the station between parking places**	**Option 3 – Area adjacent to an existing building**
			Geographical Integration	Square meters of additional land used, or volume required to implement the solution	The option is inside exiting IÉ boundary, and a standard surface is being considered for the new TER	The option is inside exiting IÉ boundary, and a standard surface is being considered for the new TER	The option is inside exiting IÉ boundary, and a standard surface is being considered for the new TER
				Space for access and walkways	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is space for accessing through road	There is space for accessing through road	There is space for accessing through road
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Construction is located outdoors. A prefabricated building is being considered	Construction is located outdoors. A prefabricated building is being considered	Construction is located outdoors. A prefabricated building is being considered
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2			**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of Leixlip Louisa Bridge Station							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Parking area**	**Option 2 –Area close to the station between parking places**	**Option 3 – Area adjacent to an existing building**
			Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative advantage over other options** This Option is located within the confines of an existing car parking area at Louisa Bridge Train Station. This Option is located at a greater distance to the residential apartments facing the existing station but will still be visible to a number of higher apartments.	**Some comparative advantage over other options** This Option is located within the confines of an existing car parking area at Louisa Bridge Train Station. This Option is located at a greater distance to the residential apartments facing the existing station but will still be visible to a number of higher apartments.	**Some comparative disadvantage over other options** This Option is located within the confines of an existing car parking area at Louisa Bridge Train Station. This Option is the closest to residential apartments facing the existing station and will be visible to a larger number of apartments when compared to Options 1 and 2.
		3.4	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 (land take)	**Comparable to other options** This Option is located on made ground within the confines of an existing car parking area at Louisa Bridge Train Station. This option does not present any advantage or disadvantages over other options.	**Comparable to other options** This Option is located on made ground within the confines of an existing car parking area at Louisa Bridge Train Station. This option does not present any advantage or disadvantages over other options.	**Comparable to other options** This Option is located on made ground within the confines of an existing car parking area at Louisa Bridge Train Station. This option does not present any advantage or disadvantages over other options.
		3.5	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options** This option does not present any disadvantage or advantage in regard to water resources.	**Comparable to other options** This option does not present any disadvantage or advantage in regard to water resources.	**Comparable to other options** This option does not present any disadvantage or advantage in regard to water resources.
		3.6	Agriculture and Non-Agricultural	Overall impact on land take & property. Number of properties to be	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of Leixlip Louisa Bridge Station							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Parking area**	**Option 2 –Area close to the station between parking places**	**Option 3 – Area adjacent to an existing building**
				impacted/acquired. Likely temporary or permanent severance effects, etc.	There are no direct impacts on non - agricultural property. Option located on Louisa Bridge Train Station grounds, within CIE land boundary.	There are no direct impacts on non - agricultural property. Option located on Louisa Bridge Train Station grounds, within CIE land boundary.	There are no direct impacts on non - agricultural property. Option located on Louisa Bridge Train Station grounds, within CIE land boundary.
4	**Accessibility & Social inclusion**	**3.7**	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. % of 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.	**Comparable to other options** No significant advantages or disadvantages over other options.	**Comparable to other options** No significant advantages or disadvantages over other options.	**Comparable to other options** No significant advantages or disadvantages over other options.
		3.8	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.
		4.1	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Significant comparative disadvantage over other options** This option reduces 2 PMR places in the parking area	**Some comparative disadvantage over other options** This option reduces 1 parking place and might impact PMR at construction phase	**Some comparative advantage over other options** This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas
		4.2	Local accessibility	Quality of access in the area	**Some comparative disadvantage over other options** This option impacts on the parking area.	**Some comparative disadvantage over other options** This option impacts on the parking area.	**Some comparative advantage over other options** It does not impact on the quality of access in the area
5	**Safety**	**5.1**	Rail's Safety		**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of Leixlip Louisa Bridge Station							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Parking area**	**Option 2 –Area close to the station between parking places**	**Option 3 – Area adjacent to an existing building**
				Assessment of safety from an operational point of view	Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in all options.	User's / People's safety is fulfilled in all options.	User's / People's safety is fulfilled in all options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution	Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution	Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters				
MCA (Multi Criteria Analysis) of Leixlip Louisa Bridge Station				
	Parameter	**Option 1 – East parking area**	**Option 2 –Area to the east of the station between parking places**	**Option 3 – Area adjacent to an existing building east of the station**
1	**Economy**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
		Comparable to other options	**Comparable to other options**	**Comparable to other options**
2	**Integration**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
3	**Environment**	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
4	**Accessibility & Social inclusion**	**Significant comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
5	**Safety**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
6	**Physical Activity**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new TER in Leixlip Louisa Bridge Stations Option 2.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of Leixlip Confey							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – End of parking area**	**Option 2 –Parking place booked for staff**	**Option 3 – South of the railway**
1	**Economy**	**1.1**	CAPEX	Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options**	**Comparable to other options**	**Significant comparative disadvantage over other options**
					The equipment is installed outdoor, on a paved space, a prefabricated building is foreseen	The equipment is installed outdoor, on a paved space, a prefabricated building is foreseen	The equipment is installed outdoor, but on a gardened place without a direct road access
				Access and earthworks	**Significant comparative advantage over other options**	**Significant comparative advantage over other options**	**Significant comparative disadvantage over other options**
					Road access through the existing parking area. On a paved area.	Road access through the existing parking area. On a paved area.	New access to be provided On a green area (If Substations option 2 is chosen, this TER location could be integrated)
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option is accessible from the parking road, modular and independent	Option is accessible from the parking road, modular and independent	Option is accessible from the trackside (once the access is constructed), modular and independent
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Significant comparative advantage over other options**	**Significant comparative advantage over other options**	**Significant comparative disadvantage over other options**
					No long-term maintenance cost regarding access.	No long-term maintenance cost regarding access.	More long-term maintenance cost as a new access is required
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of Leixlip Confey							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – End of parking area**	**Option 2 –Parking place booked for staff**	**Option 3 – South of the railway**
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Comparable to other options**	**Comparable to other options**	**Significant comparative disadvantage over other options**
					The option is inside exiting IÉ boundary, and a standard surface is being considered for the new TER	The option is inside exiting IÉ boundary, and a standard surface is being considered for the new TER	The option is outside of exiting IÉ boundary, and a standard surface is being considered for the new TER
				Space for access and walkways	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is space for road and pedestrian access	There is space for road and pedestrian access	There is space for road and pedestrian access
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Construction is located outdoors. A prefabricated building is being considered	Construction is located outdoors. A prefabricated building is being considered	Construction is located outdoors. A prefabricated building is being considered.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of Leixlip Confey							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – End of parking area**	**Option 2 –Parking place booked for staff**	**Option 3 – South of the railway**
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					Option 1 is located within the confines of an existing car parking area at Leixlip Train Station. It is likely to have landscape and visual impact to the neighbouring residential receptors.	Option 2 is located within the confines of an existing car parking area at Leixlip Train Station. It is likely to have landscape and visual impact to the neighbouring residential receptors.	Option 3 is located in open space area which will have a direct impact on landscape character and amenity lands that area also located adjacent to sensitive residential receptors.
		3.4	Cultural, Archaeological	Overall effect on cultural, archaeological and architecture heritage resource. Likely effects on RPS, National Monuments, SMRs,	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of Leixlip Confey							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – End of parking area**	**Option 2 –Parking place booked for staff**	**Option 3 – South of the railway**
			and Architectural Heritage	Conservation areas, etc. Number of designated sites/structures (by level of designation) directly impacted by scheme (land take)	This Option is located on made ground within the confines of an existing car parking area at Leixlip Train Station. This option does not present any advantage or disadvantages over other options.	This Option is located on made ground within the confines of an existing car parking area at Leixlip Train Station. This option does not present any advantage or disadvantages over other options.	No known heritage resources recorded. Potential of unknown archaeological resources on undeveloped lands. However, this option does not present any significant advantage or disadvantages over other options.
		3.5	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options** Location may be liable to flood from fluvial sources. Flood Risk is comparable to other options. Risk to surface water quality is comparable to other options.	**Comparable to other options** Location may be liable to flood from fluvial sources. Flood Risk is comparable to other options. Risk to surface water quality is comparable to other options.	**Comparable to other options** Location may be liable to flood from fluvial sources. Flood Risk is comparable to other options. Risk to surface water quality is comparable to other options.
		3.6	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** There are no direct impacts on non - agricultural property. Option located on Leixlip Train Station grounds, within CIE land boundary.	**Some comparative advantage over other options** There are no direct impacts on non - agricultural property. Option located on Leixlip Train Station grounds, within CIE land boundary.	**Some comparative disadvantage over other options** There are no direct impacts on non - agricultural property. Option 3 is located outside of the CIE land boundary; land acquisition is required.
		3.7	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. % of 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.	**Comparable to other options** No significant advantages or disadvantages over other options.	**Comparable to other options** No significant advantages or disadvantages over other options.	**Comparable to other options** This option will result in loss of some soil resources and soil sealing. However, it does not represent a significant advantage or disadvantages over other options.
		3.8	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options** The option is located in one of the corners of the parking area, with little impact.	**Comparable to other options** The option is located in one of the corners of the parking area, with little impact.	**Comparable to other options** This option does not present any disadvantage or advantage regarding vulnerable groups and deprived geographic areas.
			Local accessibility	Quality of access in the area	**Some comparative disadvantage over other options** It would impact on the parking area.	**Some comparative disadvantage over other options** It would impact the parking place booked for staff, requiring a new one	**Some comparative advantage over other options** It would have no impacts on the access in the area.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of Leixlip Confey							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – End of parking area**	**Option 2 –Parking place booked for staff**	**Option 3 – South of the railway**
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in all options.	User's / People's safety is fulfilled in all options.	User's / People's safety is fulfilled in all options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution	Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution	Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters				
MCA (Multi Criteria Analysis) of Leixlip Confey				
	Parameter	**Option 1 – End of parking area**	**Option 2 –Parking Area (Staff)**	**Option 3 – South of the railway**
1	**Economy**	**Significant comparative advantage over other options**	**Significant comparative advantage over other options**	**Significant comparative disadvantage over other options**
2	**Integration**	**Comparable to other options**	**Comparable to other options**	**Significant comparative disadvantage over other options**
3	**Environment**	**Some comparative advantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
4	**Accessibility & Social inclusion**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
5	**Safety**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
6	**Physical Activity**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new TER in Leixlip Confey Station is Option 2, being the one closest to the station building.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters						
MCA (Multi Criteria Analysis) of PORTERSTOWN						
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Close to the existing technical buildings(preferred)**	**Option 2 – Close to the other side of the Level Crossing**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option.	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
				Assessment of cost of installation and investment to construct/install/use the solution.	The equipment is installed outdoor, on a paved area, a prefabricated building is foreseen	The equipment is installed outdoor, on a paved space, a prefabricated building is foreseen, but currently there is an existing LOC (presumably for level crossing functionality), that would need to be removed
				Access and earthworks	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					There is access through the existing road at the level crossing	There is access from the trackside, and it is not close from the existing road
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**
					Option is accessible from the road, modular and independent	Option is accessible from the trackside, modular and independent
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Comparable to other options**	**Comparable to other options**
					Same long maintenance cost in comparison with other options regarding roads maintenance	Same long maintenance cost in comparison with other options regarding roads maintenance
C	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					The TER will be built on an empty space, so there is no impact on existing equipment	There TER would require removing an existing LOC , and a small yellow fence

		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options** This would be a new TER, so no migration is required	**Comparable to other options** This would be a new TER, so no migration is required
		2.3		Square meters of additional land used, or volume required to implement the solution	**Comparable to other options** The option is in the limit of exiting IÉ boundary	**Comparable to other options** The option is in the limit of exiting IÉ boundary
				Space for access and walkways	**Comparable to other options** There is no impact on walkways	**Comparable to other options** There is no impact on walkways
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options** Option is located close to the trackside, but with a separation same as for existing technical buildings, no impact	**Comparable to other options** Option is located close to the trackside, but with a separation same as for existing technical buildings, no impact
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options** Not applicable, Civil Works and Infrastructure	**Comparable to other options** Not applicable, Civil Works and Infrastructure
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options** Not applicable, Civil Works and Infrastructure	**Comparable to other options** Not applicable, Civil Works and Infrastructure
3	**Environment**	**3.1**	Noise and Vibration	Estimated number of people likely to be affected by transport-related noise with the scheme within 50m.	**Comparable to other options** The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	**Comparable to other options** The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2			**Comparable to other options**	**Comparable to other options**

			Air Quality and Climate	Local air quality effects. Number of receptors within 50m.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					Option 1 location would consolidate all buildings in one place.	This location would extend the impacts across a larger area.
		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.	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage over other options.	This option does not present any disadvantage or advantage over other options.
		3.5	Cultural, Archaeological and Architectural Heritage	Overall effect on cultural, archaeological and architecture heritage resource. Likely effects on RPS, National Monuments, SMRs, Conservation areas, etc. Number of designated sites/structures (by level of designation) directly impacted by scheme (land take)	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
					TER building would be located in proximity to existing buildings which are located in proximity to Kennan Bridge option 1 has some comparative advantage as it would result in consolidating any potential impacts rather than dispersing impacts. (NIAH 11361004).	TER building would be located in proximity to existing buildings which are also located in proximity to Kennan Bridge (NIAH NIAH 11361004)
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected	**Comparable to other options**	**Comparable to other options**

				during construction and operation.	This option does not present any disadvantage or advantage in regards to water resources.	This option does not present any disadvantage or advantage in regards to water resources.
		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.	**Comparable to other options** This option does not present any disadvantage or advantage over other options.	**Comparable to other options** This option does not present any disadvantage or advantage over other options.
		3.7	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. % of 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.	Comparable to other options No significant advantages or disadvantages over other options.	Comparable to other options No significant advantages or disadvantages over other options.
		3.8	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options** No impact	**Comparable to other options** No impact
			Local accessibility	Quality of access in the area	**Comparable to other options** Access for pedestrians nor vehicles impacted	**Comparable to other options** Access for pedestrians nor vehicles impacted
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options** Rail's safety is fulfilled in all options.	**Comparable to other options** Rail's safety is fulfilled in all options.
		5.2			**Comparable to other options**	**Comparable to other options**

			User's / People's Safety	Assessment of safety from User's / People's Safety point of view	User's / People's safety is fulfilled in all options.	User's / People's safety is fulfilled in all options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options** Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution	**Comparable to other options** Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes:

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters			
MCA (Multi Criteria Analysis) of PORTERSTOWN STATION			
	Parameter	**Option 1 – Close to the existing technical buildings**	**Option 2 – Close to the other side of the Level Crossing**
1	**Economy**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
2	**Integration**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
3	**Environment**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
4	**Accessibility & Social inclusion**	**Comparable to other options**	**Comparable to other options**
5	**Safety**	**Comparable to other options**	**Comparable to other options**
6	**Physical Activity**	**Comparable to other options**	**Comparable to other options**

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new TER in Porterstown is Option 1, close to the existing technical buildings.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of COOLMINE							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Cark place in the middle of the parking area**	**Option 2 – Parking place in front of the station building**	**Option 3 – Garden area by the trackside close to existing TER**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
				Assessment of cost of installation and investment to construct/install/use the solution.	The equipment is installed outdoor, on a paved area, a prefabricated building is foreseen	The equipment is installed outdoor, on a paved space, a prefabricated building is foreseen	The equipment is installed outdoor, on a garden area, a prefabricated building is foreseen
				Access and earthworks	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No new access is needed. The one for the station entrance can be used.	No new access is needed. The one for the parking can be used.	No new access is needed. The TER is accessible from the trackside.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option is accessible from the parking road, modular and independent	Option is accessible from the parking road, modular and independent	Option is accessible from the trackside, modular and independent
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Same long maintenance cost in comparison with other options regarding access maintenance	Same long maintenance cost in comparison with other options regarding access maintenance	Same long maintenance cost in comparison with other options regarding access maintenance
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Comparable to other options**	**Comparable to other options**	**Some comparative advantage over other options**
					There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	Integration with existing equipment would be easier as new TER is adjacent to existing one, improving migration process. .

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of COOLMINE							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Cark place in the middle of the parking area**	**Option 2 – Parking place in front of the station building**	**Option 3 – Garden area by the trackside close to existing TER**
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Significant comparative advantage over other options**
					There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	The existing TER does not have enough capacity for future service, this option is quite close to the existing TER, providing an easy migration of the equipment	The existing TER does not have enough capacity for future service, this option is the closest to the existing TER, providing an easy migration of the equipment
		2.3		Square meters of additional land used, or volume required to implement the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The option is in the limit of exiting IÉ boundary	The option is in the limit of exiting IÉ boundary	The option is in the limit of exiting IÉ boundary
				Space for access and walkways	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is space for both road access and walkways	There is space for both road access and walkways	There is space for both road access and walkways
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option is located in a paved area	Option is located in a paved area	Option is located in a garden area
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of COOLMINE							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Cark place in the middle of the parking area**	**Option 2 – Parking place in front of the station building**	**Option 3 – Garden area by the trackside close to existing TER**
					Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure
3	**Environment**	**3.1**	Noise and Vibration	Estimated number of people likely to be affected by transport-related noise with the scheme within 50m.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The TER building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The TER building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The TER building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Local air quality effects. Number of receptors within 50m.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This Option is located within the confines of an existing car parking area at Coolmine Train Station. There are no sensitive landscape and visual characteristics in vicinity of this option and as such, no impacts are likely.	This Option is located within the confines of an existing car parking area at Coolmine Train Station. There are no sensitive landscape and visual characteristics in vicinity of this option and as such, no impacts are likely.	This Option is located within the station trackside area at Coolmine Train Station. There are no sensitive landscape and visual characteristics in vicinity of this option and as such, no impacts are likely.
		3.4	Biodiversity	Potential compliance/conflict with biodiversity objectives; Indirect impacts on protected species, designated sites; Overall effect on nature conservation resource.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards to biodiversity.	This option does not present any disadvantage or advantage in regards to biodiversity.	This option does not present any disadvantage or advantage in regards to biodiversity.
		3.5	Cultural, Archaeological and	Overall effect on cultural, archaeological and architecture heritage resource. Likely effects on	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of COOLMINE							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Cark place in the middle of the parking area**	**Option 2 – Parking place in front of the station building**	**Option 3 – Garden area by the trackside close to existing TER**
			Architectural Heritage	RPS, National Monuments, SMRs, Conservation areas, etc. Number of designated sites/structures (by level of designation) directly impacted by scheme (land take)	No direct impacts identified. This option does not present any advantage or disadvantages over other options.	No direct impacts identified. This option does not present any advantage or disadvantages over other options.	No direct impacts identified. This option does not present any advantage or disadvantages over other options.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards to water resources.	This option does not present any disadvantage or advantage in regards to water resources.	This option does not present any disadvantage or advantage in regards to water resources.
		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.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There are no direct impacts on non - agricultural property. Option located on Coolmine Train Station parking grounds within CIE land boundary.	There are no direct impacts on non - agricultural property. Option located on Coolmine Train Station parking grounds within CIE land boundary.	There are no direct impacts on non - agricultural property. Option located on Coolmine Train Station parking grounds within CIE land boundary.
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. % of 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.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No significant advantages or disadvantages over other options.	No significant advantages or disadvantages over other options.	No significant advantages or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of COOLMINE							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Cark place in the middle of the parking area**	**Option 2 – Parking place in front of the station building**	**Option 3 – Garden area by the trackside close to existing TER**
					No impact	No impact	No impact
			Local accessibility	Quality of access in the area	**Comparable to other options**	**Comparable to other options**	**Some comparative advantage over other options**
					A couple of parking places are required for the location of this TER option	A couple of parking places are required for the location of this TER option	No parking places required
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in all options.	User's / People's safety is fulfilled in all options.	User's / People's safety is fulfilled in all options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution	Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution	Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes:

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters				
MCA (Multi Criteria Analysis) of COOLMINE				
	Parameter	**Option 1 – Cark place in the middle of the parking area**	**Option 2 – Parking place in front of the station building**	**Option 3 –Garden area by the trackside close to the existing TER**
1	**Economy**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
2	**Integration**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Significant comparative advantage over other options**
3	**Environment**	**Comparable to other options**	**Comparable to other options**	**Some comparative advantage over other options**
4	**Accessibility & Social inclusion**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
5	**Safety**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
6	**Physical Activity**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new TER in Coolmine is Option 3, garden area by the trackside close to the existing TER.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of CASTLEKNOCK							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Station building, close to ticketing machine**	**Option 2 –Garden entrance of access road Close to substations option 2**	**Option 3 – End of Access Road after substation option 1**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The equipment is installed outdoor, on a paved area, a prefabricated building is foreseen	The equipment is installed outdoor, on a garden space, a prefabricated building is foreseen	The equipment is installed outdoor, on a garden space, a prefabricated building is foreseen
				Access and earthworks	**Some comparative advantage over other options**	**Significant comparative disadvantage over other options**	**Some comparative disadvantage over other options**
					No new access is needed. The one for the station entrance can be used.	Extension of the existing access would be needed	No new access is needed. The one for the station entrance can be used. Earthworks would be needed.
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Significant comparative disadvantage over other options**	**Comparable to other options**
					Option is accessible from the access road, modular and independent	Option would need additional extension of existing access road	Option is accessible from the access road, modular and independent
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Same long maintenance cost in comparison with other options regarding roads maintenance	Same long maintenance cost in comparison with other options regarding roads maintenance	Same long maintenance cost in comparison with other options regarding roads maintenance
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Significant comparative advantage over other options**	**Comparable to other options**	**Comparable to other options**
					This option is the closest one to the centre of the station building.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.

					Comparable to other options	**Comparable to other options**	**Some comparative disadvantage over other options**
					The option is in the limit of exiting IÉ boundary	The option is in the limit of exiting IÉ boundary	The option is in the frontier of exiting IÉ boundary, but part of the TER would be outside existing boundary
				Space for access and walkways	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is space for both road access and walkways	There is space for both road access and walkways	There is space for both road access and walkways
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Some comparative disadvantage over other options**	**Significant comparative disadvantage over other options**
					Option is located in a paved area close to the station building	Impact can be foreseen with access road during construction	The is impact on the road access and the distance to the station might be excessive
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3			**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

			Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	All options are located within the confines of the existing car parking area at Castleknock Train station and are directly facing the Royal Canal, a sensitive landscape feature. All Options are likely to have an impact on the landscape character as well as the views to and from the Royal Canal.	All options are located within the confines of the existing car parking area at Castleknock Train station and are directly facing the Royal Canal, a sensitive landscape feature. All Options are likely to have an impact on the landscape character as well as the views to and from the Royal Canal.	All options are located within the confines of the existing car parking area at Castleknock Train station and are directly facing the Royal Canal, a sensitive landscape feature. All Options are likely to have an impact on the landscape character as well as the views to and from the Royal Canal.
		3.4	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 (land take)	**Comparable to other options** All options are adjacent to the Royal Canal (RPS) and are likely to have an indirect impact on the RPS.	**Comparable to other options** All options are adjacent to the Royal Canal (RPS) and are likely to have an indirect impact on the RPS.	**Comparable to other options** All options are adjacent to the Royal Canal (RPS) and are likely to have an indirect impact on the RPS.
		3.5	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options** This option does not present any disadvantage or advantage in regard to water resources.	**Comparable to other options** This option does not present any disadvantage or advantage in regard to water resources.	**Comparable to other options** This option does not present any disadvantage or advantage in regard to water resources.
		3.6	Agriculture and Non-Agricultural	Overall impact on land take & property. Number of properties to be impacted/acquired. Likely temporary or permanent severance effects, etc.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option located on Castleknock Train Station grounds, within CIE land boundary.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option located on Castleknock Train Station grounds, within CIE land boundary.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option located on Castleknock Train Station grounds, within CIE land boundary.
		3.7	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. % of 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.	**Comparable to other options** No significant advantages or disadvantages over other options.	**Comparable to other options** No significant advantages or disadvantages over other options.	**Comparable to other options** No significant advantages or disadvantages over other options.
		3.8	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options** No impact	**Comparable to other options** No impact	**Comparable to other options** No impact

			Local accessibility	Quality of access in the area	**Some comparative disadvantage over other options**	**Comparable to other options**	**Comparable to other options**
					It takes some walkway space in front of the station entrance.	No impact on local accessibility	No impact on local accessibility
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in all options.	User's / People's safety is fulfilled in all options.	User's / People's safety is fulfilled in all options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution	Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution	Rail´s safety if fulfilled in all options
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters				
MCA (Multi Criteria Analysis) of CASTLEKNOCK				
	Parameter	**Option 1 – Station building, close to ticketing machine**	**Option 2 –Garden entrance of access road**	**Option 3 – End of Access Road after substation option 1**
1	**Economy**	**Some comparative advantage over other options**	**Significant comparative disadvantage over other options**	**Some comparative disadvantage over other options**
2	**Integration**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Significant comparative disadvantage over other options**
3	**Environment**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
4	**Accessibility & Social inclusion**	**Some comparative disadvantage over other options**	**Comparable to other options**	**Comparable to other options**
5	**Safety**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
6	**Physical Activity**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new TER in Castleknock Station is Option 1.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of NAVAN ROAD PARKWAY STATION							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – TER located in the platform**	**Option 2 – At the entrance of the parking area**	**Option 3 – Close to the existing GSM-R tower**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
				Assessment of cost of installation and investment to construct/install/use the solution.	The equipment is installed outdoor, on a paved area, a prefabricated building is foreseen	The equipment is installed outdoor, on a paved space, a prefabricated building is foreseen	The equipment is installed outdoor, on a paved area, a prefabricated building is foreseen
				Access and earthworks	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No new access is needed. The TER would be accessible from the trackside	No new access is needed. The TER would be accessible from the road	No new access is needed. The TER would be accessible from an unpaved road already existing to access the GSM-R tower
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option is accessible from the trackside, modular and independent	Option is accessible from the road, modular and independent	Option is accessible from the access road , modular and independent
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Same long maintenance cost regarding roads maintenance	Same long maintenance cost regarding roads maintenance	Same long maintenance cost regarding roads maintenance
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Comparable to other options**	**Comparable to other options**	**Some comparative advantage over other options**
					There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	The TER would be located together with the existing GSM-R equipment, so integration with existing equipment is better and maintenance optimized

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters						
MCA (Multi Criteria Analysis) of NAVAN ROAD PARKWAY STATION						
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – TER located in the platform**	**Option 2 – At the entrance of the parking area**	**Option 3 – Close to the existing GSM-R tower**
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**
					The existing TER does not have enough capacity for future service, this option is the closest to the centre of the station, providing an easy migration of the equipment	Integration for a new TER is feasible, but not as easy as in the option close to the existing TER	This option is a little too far from the station building
		2.3		Square meters of additional land used, or volume required to implement the solution	**Comparable to other options**	**Significant comparative disadvantage over other options**	**Comparable to other options**
					The option is in the limit of exiting IÉ boundary	The option is out of the limit of exiting IÉ boundary	The option is in the limit of exiting IÉ boundary
				Space for access and walkways	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					This option reduces the space for pedestrians at the station platform	This option would reduce the space for pedestrian at the parking entrance	This option does not have any impact for access and walkways
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					Option is located in the trackside; some impact is foreseen on passengers at construction phase	Option is located in a paved area at the entrance of the parking, some impact on pedestrians 'access to the parking lot at construction phase	Option is located far from the station, no impact on passengers nor pedestrians
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of NAVAN ROAD PARKWAY STATION							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – TER located in the platform**	**Option 2 – At the entrance of the parking area**	**Option 3 – Close to the existing GSM-R tower**
3	**Environment**	**3.1**	Noise and Vibration	Estimated number of people likely to be affected by transport-related noise with the scheme within 50m.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Local air quality effects. Number of receptors within 50m.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option 1 is located within the confines of the Navan Parkway Station. There are no sensitive visual receptors in vicinity of this option.	Option 2 is located within the parking area just outside the Navan Parkway Station. There are no sensitive visual receptors in vicinity of this option.	Option 3 is located within the confines of the Navan Parkway Station. There are no sensitive visual receptors in vicinity of this option.
		3.4	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 (land take)	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					All options are located on made ground. No known heritage resources recorded. This option does not present any advantage or disadvantages over other options.	All options are located on made ground. No known heritage resources recorded. This option does not present any advantage or disadvantages over other options.	All options are located on made ground. No known heritage resources recorded. This option does not present any advantage or disadvantages over other options.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters						
MCA (Multi Criteria Analysis) of NAVAN ROAD PARKWAY STATION						
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – TER located in the platform**	**Option 2 – At the entrance of the parking area**	**Option 3 – Close to the existing GSM-R tower**
		3.5	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options** This option does not present any disadvantage or advantage in regards to water resources.	**Comparable to other options** This option does not present any disadvantage or advantage in regards to water resources.	**Comparable to other options** This option does not present any disadvantage or advantage in regards to water resources.
		3.6	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** There are no direct impacts on non - agricultural property. Option is located on Navan Parkway Station grounds, within CIE land boundary.	**Some comparative disadvantage over other options** There are no direct impacts on non - agricultural property. Option is located outside of CIE land boundary, acquisition of land is required.	**Some comparative advantage over other options** There are no direct impacts on non - agricultural property. Option is located on Navan Parkway Station grounds, within CIE land boundary.
		3.7	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. % of 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.	**Comparable to other options** No significant advantages or disadvantages over other options.	**Comparable to other options** No significant advantages or disadvantages over other options.	**Comparable to other options** No significant advantages or disadvantages over other options.
		3.8	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options** No impact	**Comparable to other options** No impact	**Comparable to other options** No impact

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of NAVAN ROAD PARKWAY STATION							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – TER located in the platform**	**Option 2 – At the entrance of the parking area**	**Option 3 – Close to the existing GSM-R tower**
			Local accessibility	Quality of access in the area	**Some comparative disadvantage over other options** This option would impact in the accessibility of the platform	**Some comparative disadvantage over other options** This option would impact in the accessibility of the parking area	**Some comparative advantage over other options** This option does not have any impact on quality of access
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options** Rail's safety is fulfilled in all options.	**Comparable to other options** Rail's safety is fulfilled in all options.	**Comparable to other options** Rail's safety is fulfilled in all options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options** User's / People's safety is fulfilled in all options.	**Comparable to other options** User's / People's safety is fulfilled in all options.	**Comparable to other options** User's / People's safety is fulfilled in all options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options** Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution	**Comparable to other options** Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution	**Comparable to other options** Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters				
MCA (Multi Criteria Analysis) of NAVAN ROAD PARKWAY STATION				
	Parameter	**Option 1 – TER located in the platform**	**Option 2 – At the entrance of the parking area**	**Option 3 – Close to the existing GSM-R tower**
1	**Economy**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
2	**Integration**	**Some comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Some comparative advantage over other options**
3	**Environment**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
4	**Accessibility & Social inclusion**	**Some comparative disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
5	**Safety**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
6	**Physical Activity**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new TER in Navan Road Parkway Station is Option 3, close to the existing GSM-R tower.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of ASHTOWN							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Close to the bicycle parking**	**Option 2 – Garden at the entrance road of the station**	**Option 3 – In the fenced area close to the station building where current TER is located**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
				Assessment of cost of installation and investment to construct/install/use the solution.	The equipment is installed outdoor, on a paved space, a prefabricated building is foreseen	The equipment is installed outdoor, on a garden area, a prefabricated building is foreseen	The equipment is installed outdoor, on a garden area space, a prefabricated building is foreseen
				Access and earthworks	**Comparable to other options**	**Significant comparative disadvantage over other options**	**Comparable to other options**
					No new access is required. On a paved surface	An extension of the existing access road is needed to reach the garden area	No new access is required
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Significant comparative disadvantage over other options**	**Comparable to other options**
					Option is accessible from the access road , modular and independent.	Option requires an extension to the existing access road	Option is accessible from the access road, modular and independent
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option is accessible from the access road and from the trackside in the station, modular and independent.	Option is accessible from the access road, modular and independent	Option is accessible from the access road, modular and independent
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Comparable to other options**	**Comparable to other options**	**Significant comparative advantage over other options**
					There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	The new TER would be located close to the existing one, migration and integration processes are easier.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with parallel projects in comparison with other options since all TERs are being renewed.	There is no difference in integration with parallel projects in comparison with other options since all TERs are being renewed.	There is no difference in integration with parallel projects in comparison with other options since all TERs are being renewed.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of ASHTOWN							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Close to the bicycle parking**	**Option 2 – Garden at the entrance road of the station**	**Option 3 – In the fenced area close to the station building where current TER is located**
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The option is inside existing IÉ boundary, and a standard surface is being considered for the new TER	The option is inside existing IÉ boundary, and a standard surface is being considered for the new TER	The option is inside existing IÉ boundary, and a standard surface is being considered for the new TER
				Space for access and walkways	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Some comparative advantage over other options**
					Road access but limiting free space to the bicycle parking and the stairs	Need for an extension of the access	Good access from access road
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Construction is located outdoor. A prefabricated building is being considered	Construction is located outdoors. A prefabricated building is being considered	Construction is located outdoors. A prefabricated building is being considered.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure
3	**Environment**	**3.1**	Noise and Vibration	Estimated number of people likely to be affected by transport-related noise with the scheme within 50m.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The TER building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of ASHTOWN							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Close to the bicycle parking**	**Option 2 – Garden at the entrance road of the station**	**Option 3 – In the fenced area close to the station building where current TER is located**
		3.2	Air Quality and Climate	Local air quality effects. Number of receptors within 50m.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option 1 is located within the confines of Ashtown Train Station. It is located at a distance to residential receptors but is likely to be visible from the main road, however it would not be a significant impact on the setting.	Option 2 is located within the confines of Ashtown Train Station on small portion of grass area. It is located at a distance to residential receptors and tree line provides adequate screening.	Option 3 is located within the confines of Ashtown Train Station. It is located at a distance to residential receptors.
		3.4.	Biodiversity	Potential compliance/conflict with biodiversity objectives; Indirect impacts on protected species, designated sites; Overall effect on nature conservation resource.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards to biodiversity.	This option does not present any disadvantage or advantage in regards to biodiversity. Will require the removal of some green space (grass)- but not a significant impact	This option does not present any disadvantage or advantage in regards to biodiversity.
		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 (land take)	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No direct impacts identified. This option does not present any advantage or disadvantages over other options.	No direct impacts identified. This option does not present any advantage or disadvantages over other options.	No direct impacts identified. This option does not present any advantage or disadvantages over other options.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of ASHTOWN							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Close to the bicycle parking**	**Option 2 – Garden at the entrance road of the station**	**Option 3 – In the fenced area close to the station building where current TER is located**
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options** This option does not present any disadvantage or advantage in regards to water resources.	**Comparable to other options** This option does not present any disadvantage or advantage in regards to water resources.	**Comparable to other options** This option does not present any disadvantage or advantage in regards to water resources.
		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.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option located on Ashtown Train Station grounds within CIE land boundary.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option located on Ashtown Train Station grounds within CIE land boundary.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option located on Ashtown Train Station grounds within CIE land boundary.
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. % of 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.	**Comparable to other options** No significant advantages or disadvantages over other options.	**Comparable to other options** No significant advantages or disadvantages over other options.	**Comparable to other options** No significant advantages or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of ASHTOWN							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Close to the bicycle parking**	**Option 2 – Garden at the entrance road of the station**	**Option 3 – In the fenced area close to the station building where current TER is located**
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Some** comparative advantage **over other options**
					These options might impact at construction site, both bicycle parking space and the gateway stairs	A small extension of the access road is needed to reach the location as it is in the garden	There is an existing access from the trackside
		4.2	Local accessibility	Quality of access in the area	**Some comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Some comparative advantage over other options**
					There is access from the entrance road but limiting available space	An extension of the entrance road is needed.	There is access from the trackside
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in all options.	User's / People's safety is fulfilled in all options.	User's / People's safety is fulfilled in all options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution	Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution	Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits	This option does not present any disadvantage or advantage regarding health benefits

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters				
MCA (Multi Criteria Analysis) of ASHTOWN				
	Parameter	**Option 1 – Close to the bicycle parking**	**Option 2 – Garden at the entrance road of the station**	**Option 3 – In the fenced area close to the station building where current TER is located**
1	**Economy**	**Comparable to other options**	**Significant comparative disadvantage over other options**	**Comparable to other options**
2	**Integration**	**Comparable to other options**	**Comparable to other options**	**Significant comparative advantage over other options**
3	**Environment**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
4	**Accessibility & Social inclusion**	**Some comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Some comparative advantage over other options**
5	**Safety**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
6	**Physical Activity**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new TER in Ashtown Station is Option 3, in the fenced area close to the station building where current TER is located.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of BROOMBRIDGE STATION							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – External pavement close to Station**	**Option 2 –Aisle in the parking space**	**Option 3 – Close to bus stop at the entrance of station**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option. Assessment of cost of installation and investment to construct/install/use the solution.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The equipment is installed outdoor, on a paved space, a prefabricated building is foreseen	The equipment is installed outdoor, on a pave space in the parking, a prefabricated building is foreseen	The equipment is installed outdoor, on a paved space, a prefabricated building is foreseen
				Access and earthworks	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No new access is required. On a paved surface	No new access is required. On a paved surface	No new access is required. On a paved surface
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option is accessible from the access road, modular and independent.	Option is accessible from the parking road, modular and independent	Option is accessible from the parking road, modular and independent
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option is accessible from the access road and from the trackside in the station, modular and independent.	Option is accessible from the parking road, modular and independent	Option is accessible from the parking road, modular and independent
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.
		2.3	Geographical Integration	Square meters of additional land used, or volume required to implement the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The option is outside of existing IÉ boundary, and a standard surface is being considered for the new TER	The option is outside of existing IÉ boundary, and a standard surface is being considered for the new TER	The option is outside of existing IÉ boundary, and a standard surface is being considered for the new TER

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of BROOMBRIDGE STATION							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – External pavement close to Station**	**Option 2 –Aisle in the parking space**	**Option 3 – Close to bus stop at the entrance of station**
				Space for access and walkways	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Both road and pedestrian access	Both road and pedestrian access	Both road and pedestrian access
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Construction is located outdoor. A prefabricated building is being considered	Construction is located outdoors. A prefabricated building is being considered	Construction is located outdoors. A prefabricated building is being considered.
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure
3	**Environment**	**3.1**	Noise and Vibration	Likelihood of a noise impact on nearby noise sensitive locations	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The TER building does not emit noise or vibration while in operation. Therefore, there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Assessment of local air quality effects based on potential air emissions during construction and operational phases	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This Option is located within the confines of an existing car parking area at Broombridge Train Station. There are no sensitive landscape and visual characteristics in vicinity of this option and as such, no impacts are likely.	This Option is located within the confines of an existing car parking area at Broombridge Train Station. There are no sensitive landscape and visual characteristics in vicinity of this option and as such, no impacts are likely.	This Option is located within the confines of an existing car parking area at Broombridge Train Station. There are no sensitive landscape and visual characteristics in vicinity of this option and as such, no impacts are likely.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of BROOMBRIDGE STATION							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – External pavement close to Station**	**Option 2 –Aisle in the parking space**	**Option 3 – Close to bus stop at the entrance of station**
		3.4	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 (land take)	**Comparable to other options** This Option is located within the confines of an existing car parking area at Broombridge Train Station. This option does not present any advantage or disadvantages over other options.	**Comparable to other options** This Option is located within the confines of an existing car parking area at Broombridge Train Station. This option does not present any advantage or disadvantages over other options.	**Comparable to other options** This Option is located within the confines of an existing car parking area at Broombridge Train Station. This option does not present any advantage or disadvantages over other options.
		3.5	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options** Location may be liable to flood from pluvial sources. Flood Risk is comparable to other options,	**Comparable to other options** Location may be liable to flood from pluvial sources. Flood Risk is comparable to other options,	**Comparable to other options** Location may be liable to flood from pluvial sources. Flood Risk is comparable to other options,
		3.6	Agriculture and Non-Agricultural	Overall impact on land take & property. Number of properties to be impacted/acquired. Likely temporary or permanent severance effects, etc.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option is located outside of CIE land boundary; acquisition of land is required.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option is located outside of CIE land boundary; acquisition of land is required.	**Comparable to other options** There are no direct impacts on non - agricultural property. Option is located outside of CIE land boundary; acquisition of land is required.
		3.7	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. % of 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.	**Comparable to other options** No significant advantages or disadvantages over other options.	**Comparable to other options** No significant advantages or disadvantages over other options.	**Comparable to other options** No significant advantages or disadvantages over other options.
		3.8	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.	**Comparable to other options** This option does not present any disadvantage or advantage in relation to nearby receptors.
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options** No impact	**Comparable to other options** No impact	**Significant comparative disadvantage over other options** The option reduces space for circulation at it is close to the bus stop

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of BROOMBRIDGE STATION							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – External pavement close to Station**	**Option 2 –Aisle in the parking space**	**Option 3 – Close to bus stop at the entrance of station**
		4.2	Local accessibility	Quality of access in the area	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Significant comparative disadvantage over other options**
					It does not impact on local accessibility.	It does not impact on local accessibility, but on construction phase it will impact traffic in the parking road.	It occupies all the walkway next to the bus stop.
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in all options.	User's / People's safety is fulfilled in all options.	User's / People's safety is fulfilled in all options.
		5.3	RAM	Assessment of Reliability, Availability and Maintainability of the solution	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution.	Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution.	Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution.
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage regarding health benefits.	This option does not present any disadvantage or advantage regarding health benefits.	This option does not present any disadvantage or advantage regarding health benefits.

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters				
MCA (Multi Criteria Analysis) of BROOMBRIDGE STATION				
	Parameter	**Option 1 – External pavement close to Station**	**Option 2 –Aisle in the parking space**	**Option 3 – Close to bus stop at the entrance of station**
1	**Economy**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
2	**Integration**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
3	**Environment**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
4	**Accessibility & Social inclusion**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**	**Significant comparative disadvantage over other options**
5	**Safety**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
6	**Physical Activity**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new TER in Broombridge Station is Option 1.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of CONNOLLY							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Garden in Amiens St close to Service Station**	**Option 2 –Parking close to the trackside**	**Option 3 – Close to the round garden on the trackside**
1	**Economy**	**1.1**	CAPEX	Capital expenditure (CAPEX) required to implement the option.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
				Assessment of cost of installation and investment to construct/install/use the solution.	The equipment is installed outdoor, on a garden area, a prefabricated building is foreseen	The equipment is installed outdoor, on a paved space, a prefabricated building is foreseen	The equipment is installed outdoor, on a paved area, a prefabricated building is foreseen
				Access and earthworks	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Significant comparative advantage over other option**
					An new access is required from the trackside	A new access is required from the trackside	There is access to the trackside
		1.2	OPEX	Operating expenditure (OPEX) of the day-to-day expenses that Irish Rail would incur to keep maintain the system/solution/option operational.	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Significant comparative advantage over other option**
					Option is not accessible from the station, new access	Option is not accessible from the station, new access	Option is accessible from the trackside

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of CONNOLLY							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Garden in Amiens St close to Service Station**	**Option 2 –Parking close to the trackside**	**Option 3 – Close to the round garden on the trackside**
				Long term maintenance cost depending on maintenance and inspection of the new roads	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Same long maintenance cost in comparison with other options regarding roads maintenance	Same long maintenance cost in comparison with other options regarding roads maintenance	Same long maintenance cost in comparison with other options regarding roads maintenance
2	**Integration**	**2.1**	Integration with existing equipment	Qualitative Assessment of how this option/solution/technology can be integrated with the existing equipment.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.
		2.2	Integration with parallel projects/contracts	Qualitative Assessment of how this option/solution/technology can be integrated with the existing and current parallel projects/contracts	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.	There is no difference in integration with existing equipment in comparison with other options since all TERs are being renewed.
		2.3		Square meters of additional land used, or volume required to implement the solution	**Comparable to other options**	**Comparable to other options**	**Significant comparative advantage over other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of CONNOLLY							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Garden in Amiens St close to Service Station**	**Option 2 –Parking close to the trackside**	**Option 3 – Close to the round garden on the trackside**
					The option is out of the limit of exiting IÉ boundary	The option is out of the limit of exiting IÉ boundary	The option is in the limit of exiting IÉ boundary (as currently the rounded place close to it is being used by Signalling and abandoned)
				Space for access and walkways	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					There is space for both road access and walkways	There is space for both road access and walkways	There is space for both road access and walkways
		2.4	Buildability during operation	Qualitative Assessment of the buildability of the solution during operation. Impact in operation and disruptions.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Option is located in a paved area	Option is located in a paved area	Option is located in a paved area
		2.5	Obsolescence	Assessment the obsolescence of the solution/technology in a long-term basis	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of CONNOLLY							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Garden in Amiens St close to Service Station**	**Option 2 –Parking close to the trackside**	**Option 3 – Close to the round garden on the trackside**
		2.6	Ownership or open technology	Considerations of whether the solution is a registered product/technology, range of providers or open technology	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure	Not applicable, Civil Works and Infrastructure
3	**Environment**	**3.1**	Noise and Vibration	Estimated number of people likely to be affected by transport-related noise with the scheme within 50m.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					The TER building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The TER building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.	The TER building does not emit noise or vibration while in operation. Therefore there is no difference in the noise or vibration impacts on a long-term basis for this option in comparison with others.
		3.2	Air Quality and Climate	Local air quality effects. Number of receptors within 50m.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.	No likely significant air quality or climate emission sources during the construction and/or operational phases therefore all options are comparable.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of CONNOLLY							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Garden in Amiens St close to Service Station**	**Option 2 –Parking close to the trackside**	**Option 3 – Close to the round garden on the trackside**
		3.3	Landscape and Visual (including light)	Key landscape characteristics affected; Effects on listed/ key views; Impact on landscape character.	**Some comparative disadvantage over other options**	**Some comparative advantage**	**Some comparative disadvantage over other options**
					Option 1 will have indirect impacts on the setting of the Former Railway's Parcel Office, a protected structure (RPS 126) and a cultural heritage feature (Reg no. 50010042).	Option 2 is located on made ground in vicinity of the Connolly Station and is not likely to have an impact on the landscape character of the area.	Option 3 is located on made ground in vicinity of the Connolly Station. The existing building structures are similar in character within the area to the proposed TER building. No impacts to the landscape character are likely. This option is likely to have an indirect impact on the setting of the Water Tower, (NIAH Reg. No. 50010041) a cultural heritage feature.
		3.4	Biodiversity	Potential compliance/conflict with biodiversity objectives; Indirect impacts on protected species, designated sites; Overall effect on nature conservation resource.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards to biodiversity.	This option does not present any disadvantage or advantage in regards to biodiversity.	This option does not present any disadvantage or advantage in regards to biodiversity.
		3.5	Cultural, Archaeological and Architectural Heritage	Overall effect on cultural, archaeological and architecture heritage resource. Likely effects on RPS, National	**Some comparative disadvantage over other options**	**Some comparative advantage**	**Some comparative disadvantage over other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of CONNOLLY							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Garden in Amiens St close to Service Station**	**Option 2 –Parking close to the trackside**	**Option 3 – Close to the round garden on the trackside**
				Monuments, SMRs, Conservation areas, etc. Number of designated sites/structures (by level of designation) directly impacted by scheme (land take)	Option 1 is located next to Former Railway's Parcel Office, a protected structure (RPS 126) and a cultural heritage feature (Reg no. 50010042). Option is likely to have an indirect impact on this structure.	There are no RPS, National Monuments, SMRs and Conservation areas located within Option 2.	Option 3 is located in vicinity of Water Tower at Connolly Station, a RPS cultural heritage feature (NIAH Reg. No. 50010041) . This option is likely to have an indirect impact on the setting of the Water Tower.
		3.6	Water Resources	Overall potential significant effects on water resource attribute likely to be affected during construction and operation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in regards to water resources.	This option does not present any disadvantage or advantage in regards to water resources.	This option does not present any disadvantage or advantage in regards to water resources.
		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 disadvantage over other options**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**
					There are no direct impacts on non - agricultural property. Option is not located within CIE	There are no direct impacts on non - agricultural property. Option is not located within CIE	There are no direct impacts on non - agricultural property. Option is located within CIE land

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of CONNOLLY							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Garden in Amiens St close to Service Station**	**Option 2 –Parking close to the trackside**	**Option 3 – Close to the round garden on the trackside**
					land boundary, acquisition of land is required.	land boundary, acquisition of land is required.	boundary, acquisition of land is not required.
		3.8	Geology and Soils (including Waste)	Soils and Geology and likely impact on geological resources based on preliminary/likely construction details. % of 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.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No significant advantages or disadvantages over other options.	No significant advantages or disadvantages over other options.	No significant advantages or disadvantages over other options.
		3.9	Radiation and Stray Current	Overall likely impact on existing sources of electromagnetic radiation.	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.	This option does not present any disadvantage or advantage in relation to nearby receptors.

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of CONNOLLY							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Garden in Amiens St close to Service Station**	**Option 2 –Parking close to the trackside**	**Option 3 – Close to the round garden on the trackside**
4	**Accessibility & Social inclusion**	**4.1**	Vulnerable groups and deprived geographic areas	Benefits that accrue to those suffering from social deprivation, geographic isolation and mobility and sensory deprivation	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					No impact	No impact	No impact
			Local accessibility	Quality of access in the area	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Significant comparative advantage over other options**
					The option requires a connection access to the trackside	The option requires a connection access to the trackside (parking separated by a wall)	The option has access from the trackside
5	**Safety**	**5.1**	Rail's Safety	Assessment of safety from an operational point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.	Rail's safety is fulfilled in all options.
		5.2	User's / People's Safety	Assessment of safety from User's / People's Safety point of view	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
					User's / People's safety is fulfilled in all options.	User's / People's safety is fulfilled in all options.	User's / People's safety is fulfilled in all options.
		5.3	RAM		**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters							
MCA (Multi Criteria Analysis) of CONNOLLY							
	Parameter		**Criteria**	**Sub-Criteria (Quantitative Qualitative)**	**Option 1 – Garden in Amiens St close to Service Station**	**Option 2 –Parking close to the trackside**	**Option 3 – Close to the round garden on the trackside**
				Assessment of Reliability, Availability and Maintainability of the solution	Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution	Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution	Option is an external allocation, with easy access for maintenance, but not as protected as an indoor solution
6	**Physical Activity**	**6.1**	Health benefits	Health benefits derived from using a specific option	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits	**Comparable to other options** This option does not present any disadvantage or advantage regarding health benefits

The following table summarizes the averaged results of the MCA assessment per parameter for comparison purposes:

DART Maynooth & City Centre Enhancements. MCA Criteria and parameters MCA (Multi Criteria Analysis) of CONNOLLY				
	Parameter	**Option 1 – Garden in Amiens St close to Service Station**	**Option 2 – Parking close to the trackside**	**Option 3 – Close to the round garden on the trackside**
1	**Economy**	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Significant comparative advantage over other options**
2	**Integration**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
3	**Environment**	**Some comparative disadvantage over other options**	**Some comparative advantage over other options**	**Some comparative disadvantage over other options**
4	**Accessibility & Social inclusion**	**Significant comparative disadvantage over other options**	**Significant comparative disadvantage over other options**	**Significant comparative advantage over other options**
5	**Safety**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**
6	**Physical Activity**	**Comparable to other options**	**Comparable to other options**	**Comparable to other options**

Based on the MCA assessment performed, and the results obtained, the MDC's recommendation for the location of the new TER in Connolly Station is Option 3.