

Area around LE FANU ROAD				
CAF Parameters	Sub-Criteria	Basis for Comparative Analysis	Option 5 Assessment	Option 6 Assessment
1. Economy - The impacts of a transport investment on economic growth and competitiveness.	Capital Expenditure (CAPEX): construction, land acquisition, temporary works.	This sub-criteria considered cost of construction, land cost and temporary works cost of each option. A high-level cost estimate was prepared for each option (including potential land acquisitions (permanent and temporary, zoned or un-zoned land). The lowest cost option was preferable to higher cost options.	<p>Construction Costs - Comparable to the other Option / Neutral</p> <p>Potential for Interference with Property Rights - Commentary</p> <p>The required increase in the no. of tracks does not require permanent works and land take outside of IE's property boundary along the railway corridor east of the bridge.</p> <p>There may be temporary interference of property rights during construction along the rail corridor and around the bridge works however these are comparable for both options, technical and construction related solutions will seek to minimise these.</p>	<p>Construction Costs - Comparable to the other Option / Neutral</p> <p>Potential for Interference with Property Rights - Commentary</p> <p>The required increase in the no. of tracks does not require permanent works and land take outside of IE's property boundary along the railway corridor east of the bridge.</p> <p>There may be temporary interference of property rights during construction along the rail corridor and around the bridge works however these are comparable for both options, technical and construction related solutions will seek to minimise these.</p>
	OPEX: maintenance costs, operational costs (IE or other entities), Technology advancement and future proofing / obsolescence	This sub-criteria considered long term maintenance costs. The option with less risk for long term maintenance issues (and hence cost) was preferable options with greater risk of long-term maintenance issues.	<p>Comparable to the other Option / Neutral</p> <p>Typical maintenance requirements.</p>	<p>Comparable to the other Option / Neutral</p> <p>Typical maintenance requirements.</p>
	Train Operations Functionality/Economic Benefit	The option which resulted in a lower risk of interruption was preferable to options with a higher risk on operations.	<p>Comparable to the other Option / Neutral</p>	<p>Comparable to the other Option / Neutral</p>
	Traffic functionality: Potential impacts for vehicular traffic and associated economic activities and opportunities.	The option with shorter traffic disruption/diversions was preferable to options with longer disruption/diversions.	<p>Comparable to the Other Option / Neutral</p> <p>Both Options 5 and 6 will require full closure of the roadway for construction of the bridge for a period yet to be determined. To avoid an extended impact on economic activity, advance utilities diversions will be carried out and security of supply or water, gas, fibre , electricity will be provided continuously where possible, outages are anticipated to take no more than a few hours during reconnections. Diversion routes would be along Kylemore, Park West and Ballyfermot Roads, when road closures are required, there will be a temporary impact on journey times.</p> <p>The layout has the potential to enhance local economic activity owing to the improved visibility on the approach roads and will enhance traffic flow through the realigned bridge.</p>	<p>Comparable to the Other Option / Neutral</p> <p>Both Options 5 and 6 will require full closure of the roadway for construction of the bridge for a period yet to be determined. To avoid an extended impact on economic activity, advance utilities diversions will be carried out and security of supply or water, gas, fibre , electricity will be provided continuously where possible, outages are anticipated to take no more than a few hours during reconnections. Diversion routes would be along Kylemore, Park West and Ballyfermot Roads, when road closures are required, there will be a temporary impact on journey times.</p> <p>The layout has the potential to enhance local economic activity owing to the improved visibility on the approach roads and will enhance traffic flow through the realigned bridge.</p>
	Urban regeneration	The option with greater potential to contribute to future urban regeneration was preferable.	<p>Comparable to the other Option / Neutral</p> <p>Both options support urban regeneration as improved vehicular, pedestrian and cyclist access, movement and safety across Le Fanu, the replacement bridge will improve integration of lands north of the railway line with lands south of the railway line (which have been identified as having significant regeneration potential and are part of the Naas-Ballymount-Cherry Orchard-Park West URDF Masterplan).</p>	<p>Comparable to the other Option / Neutral</p> <p>Both options support urban regeneration as improved vehicular, pedestrian and cyclist access, movement and safety across Le Fanu, the replacement bridge will improve integration of lands north of the railway line with lands south of the railway line (which have been identified as having significant regeneration potential and are part of the Naas-Ballymount-Cherry Orchard-Park West URDF Masterplan).</p>
	Summary Evaluation		<p>Comparable to the Other Option / Neutral</p>	<p>Comparable to the Other Option / Neutral</p>

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2. Integration - Integration considers the extent to which the options being evaluated promotes integration with other transportation networks and infrastructure and is compatible with Government policies, including national spatial and local planning policy	Transport integration	The option which maximises integration with other existing and proposed transportation networks, infrastructure and services was preferable to other options.	<p>Comparable to the other Option / Neutral</p> <p>There is no difference between Options 5 & 6. The enhancements provide a basis for encouraging greater pedestrian and cycle use of the bridge which in its current state has many hazards for vulnerable user categories.</p> <p>There is currently no bus route across the bridge but the improvement of the geometrics may well lead to the provision or reallocation of 1 or more, as the route serves similar residential communities and industrial areas that Kylemore does. It is almost a certainty that this bridge will proceed prior to Kylemore bridge to assist in providing an improved diversion route when Kylemore bridge is closed.</p> <p>The approach road and bridge crossing lane widths will be comparable and for the most part improved, while cycle and pedestrian facilities will be designated and segregated. There will likely be a model shift to vehicular use during construction. Post construction it is hoped that the enhanced/segregated vulnerable user facilities (footpaths and cycle lanes) will encourage a model shift, with the potential for congestion reduction and improved health benefits.</p> <p>There will undoubtedly be reduced walking times post construction however during construction this would be subject to the provision of a temporary pedestrian bridge. If such a facility was not provided the additional walk time could increase by 35minutes and would likely result in a modal change first.</p> <p>There will be a change to journey times during construction closures periods anticipated for 1-2months. Vehicular Diversion during construction will be the same and will likely add 5minutes to journey time during this phase.</p>	<p>Comparable to the other Option / Neutral</p> <p>There is no difference between Options 5 & 6. The enhancements provide a basis for encouraging greater pedestrian and cycle use of the bridge which in its current state has many hazards for vulnerable user categories.</p> <p>There is currently no bus route across the bridge but the improvement of the geometrics may well lead to the provision or reallocation of 1 or more, as the route serves similar residential communities and industrial areas that Kylemore does. It is almost a certainty that this bridge will proceed prior to Kylemore bridge to assist in providing an improved diversion route when Kylemore bridge is closed.</p> <p>The approach road and bridge crossing lane widths will be comparable and for the most part improved, while cycle and pedestrian facilities will be designated and segregated. There will likely be a model shift to vehicular use during construction. Post construction it is hoped that the enhanced/segregated vulnerable user facilities (footpaths and cycle lanes) will encourage a model shift, with the potential for congestion reduction and improved health benefits.</p> <p>There will undoubtedly be reduced walking times post construction however during construction this would be subject to the provision of a temporary pedestrian bridge. If such a facility was not provided the additional walk time could increase by 35minutes and would likely result in a modal change first.</p> <p>There will be a change to journey times during construction closures periods anticipated for 1-2months. Vehicular Diversion during construction will be the same and will likely add 5minutes to journey time during this phase.</p>
	Land use integration	The option with greater consistency and compliance with planning policy was preferable to others.	<p>Comparable to the other Option / Neutral</p> <p>Both options are supported by the national and regional planning policy context.</p> <ul style="list-style-type: none"> - NPF: National Strategic Outcome - NSO1, NSO4 and NSO8 - EMRA RSES / MASP: Policy Objective RPO8.8 (Table 8.2); Sustainable Transport Objective RPO5.2 <p>At local level, the Dublin City Development Plan 2016 -2022 supports the development of the DART+ Programme project under Objective MT4, MT3, MT6(i) and MT05(i).</p>	<p>Comparable to the other Option / Neutral</p> <p>Both options are supported by the national and regional planning policy context.</p> <ul style="list-style-type: none"> - NPF: National Strategic Outcome - NSO1, NSO4 and NSO8 - EMRA RSES / MASP: Policy Objective RPO8.8 (Table 8.2); Sustainable Transport Objective RPO5.2 <p>At local level, the Dublin City Development Plan 2016 -2022 supports the development of the DART + Programme project under Objective MT4, MT3, MT6(i) and MT05(i).</p>
	Geographical Integration	The option which minimises disruption and accessibility during construction was preferable.	<p>Comparable to the other Option / Neutral</p> <p>Le Fanu Road shares almost equally the peak volume of traffic as Kylemore Road does; but over a full day this is half the value of Kylemore Road. It is speculative at this stage, but it may be currently used at peaks by users owing to the stressed capacity of Kylemore at the peak. The closure of the road for a weekend is unlikely to affect the main link road but for a couple of days over the week it would likely result in exacerbating Kylemore Road issues but then users are likely to shift patterns to Park West, Ballyfermot Road. The latter scenario may put strain on as far afield as Sarsfield Road and Inchicore Bypass. With Le Fanu almost connecting directly to Long Mile road and the N7 there is potentially a huge diversity of end user destinations and any assumptions are highly speculative.</p>	<p>Comparable to the other Option / Neutral</p> <p>Le Fanu Road shares almost equally the peak volume of traffic as Kylemore Road does; but over a full day this is half the value of Kylemore Road. It is speculative at this stage, but it may be currently used at peaks by users owing to the stressed capacity of Kylemore at the peak. The closure of the road for a weekend is unlikely to affect the main link road but for a couple of days over the week it would likely result in exacerbating Kylemore Road issues but then users are likely to shift patterns to Park West, Ballyfermot Road. The latter scenario may put strain on as far afield as Sarsfield Road and Inchicore Bypass. With Le Fanu almost connecting directly to Long Mile road and the N7 there is potentially a huge diversity of end user destinations and any assumptions are highly speculative.</p>
	Other government policy	The option with greater consistency and compliance with other government policy was preferable to others.	<p>Comparable to the other Option / Neutral</p> <p>Both options meet a range of other government policies including:</p> <ul style="list-style-type: none"> - Transport Strategy for the Greater Dublin Area 2016-2035: Section 5.7 (Walking), Section 5.8.2 (Regional and Local Roads) and Section 5.8.3 (Principles of Road Development) 	<p>Comparable to the other Option / Neutral</p> <p>Both options meet a range of other government policies including:</p> <ul style="list-style-type: none"> - Transport Strategy for the Greater Dublin Area 2016-2035: Section 5.7 (Walking), Section 5.8.2 (Regional and Local Roads) and Section 5.8.3 (Principles of Road Development)
	Adaptability in the future (robustness in the solution)	The option with greater adaptability for the future was preferable to others.	<p>Comparable to the other Option / Neutral</p> <p>The existing single lane 'humpback' bridge with on a skew is not compliant with current standards. Replacing the bridge with a modern structure can provide for segregation of vulnerable users from vehicular movement in two directions and meet necessary standards.</p>	<p>Comparable to the other Option / Neutral</p> <p>The existing single lane 'humpback' bridge with on a skew is not compliant with current standards. Replacing the bridge with a modern structure can provide for segregation of vulnerable users from vehicular movement in two directions and meet necessary standards.</p>
	Summary Evaluation		Comparable to the Other Option / Neutral	Comparable to the Other Option / Neutral

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3. Environment - considers impacts, such as emissions to air, noise, and ecological and architectural impacts.	Noise and vibration	The Option which minimises potential impact on the environmental factor under consideration was preferable to other options.	Comparable to the other Option / Neutral 19 dwellings face the proposed construction site for bridge works, subject to night time noise. Bridge abutment piling will result in elevated noise levels. Track lowering may result in lower operating noise levels. Track level marginally lower than Option 6.	Comparable to the other Option / Neutral 19 dwellings face the proposed construction site for bridge works, subject to night time noise. Bridge abutment piling will result in elevated noise levels. Track level marginally higher than Option 5
	Air quality and Climate		Comparable to the other Option / Neutral Construction and operation phase impacts are analogous for both schemes and the variation to track lowering and road raising will not result in any significant variation in impact. Similarly, the number of properties potentially impacted by the construction/operation are not significantly different.	Comparable to the other Option / Neutral Construction and operation phase impacts are analogous for both schemes and the variation to track lowering and road raising will not result in any significant variation in impact. Similarly, the number of properties potentially impacted by the construction/operation are not significantly different.
	Landscape and Visual		Comparable to the other Option / Neutral Size and scale of visual impact similar in both options.	Comparable to the other Option / Neutral Size and scale of visual impact similar in both options.
	Biodiversity (flora and fauna)		Comparable to the other Option / Neutral No specific biodiversity issues	Comparable to the other Option / Neutral No specific biodiversity issues
	Cultural, archaeological and architectural heritage		Comparable to the Other Option / Neutral There is no statutorily designated architectural heritage within this section of the route corridor or within the buffer zones either side of it. Unspecified elements of the track are recorded on the DCIHR with a note that they have 'already been substantially replaced', so the proposed track replacement here would not affect their character or integrity. Though unlisted, Le Fanu Bridge is recorded on the DCIHR as 'being part of the GS&WR which commenced building in 1846. This bridge displays the high quality of design and skilfully executed stonework typical of 19th century railway engineering. Though regrettable, its removal is necessary to accommodate the new railway infrastructure serving the city. The bridge should be carefully recorded before removal and its salvageable masonry saved for appropriate reuse by DCC or IE.	Comparable to the Other Option / Neutral There is no statutorily designated architectural heritage within this section of the route corridor or within the buffer zones either side of it. Unspecified elements of the track are recorded on the DCIHR with a note that they have 'already been substantially replaced', so the proposed track replacement here would not affect their character or integrity. Though unlisted, Le Fanu Bridge is recorded on the DCIHR as 'being part of the GS&WR which commenced building in 1846. This bridge displays the high quality of design and skilfully executed stonework typical of 19th century railway engineering. Though regrettable, its removal is necessary to accommodate the new railway infrastructure serving the city. The bridge should be carefully recorded before removal and its salvageable masonry saved for appropriate reuse by DCC or IE.
	Water resources		Comparable to the other Option / Neutral	Comparable to the other Option / Neutral
	Agricultural and non-agricultural		Comparable to the other Option / Neutral Similar land take and property numbers impacted in both.	Comparable to the other Option / Neutral Similar land take and property numbers impacted in both.
	Geology and soils (include waste)		Comparable to the other Option / Neutral Similar scale of earthworks in both options.	Comparable to the other Option / Neutral Similar scale of earthworks in both options.
	Summary Evaluation			Comparable to the Other Option / Neutral

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4. Accessibility and Social Inclusion - considers social deprivation, geographic isolation and mobility and sensory deprivation	Impact on Vulnerable Groups / Local Residents	The option which provides a higher degree of accessibility and safety for vulnerable groups was preferable.	Comparable with the other Option / Neutral Both options will provide for equivalent enhanced facilities for vulnerable road users introducing segregated paths on both sides of the new bridge.	Comparable with the other Option / Neutral Both options will provide for equivalent enhanced facilities for vulnerable road users introducing segregated paths on both sides of the new bridge.
	Accessibility (stations)	The option which provided the best accessibility to the station was preferable.	Comparable with the other Option / Neutral	Comparable with the other Option / Neutral
	Accessibility (bridge)	The option which minimised severance across bridges was preferable.	Comparable with the other Option / Neutral Both options will provide for equivalent enhanced facilities for vulnerable road users introducing segregated paths on both sides of the new bridge.	Comparable with the other Option / Neutral Both options will provide for equivalent enhanced facilities for vulnerable road users introducing segregated paths on both sides of the new bridge.
	Social inclusion	The option which provided a higher degree of accessibility and connectivity for vulnerable groups was preferable.	Comparable with the other Option / Neutral Both options will provide for equivalent enhanced facilities for vulnerable road users introducing segregated paths on both sides of the new bridge.	Comparable with the other Option / Neutral Both options will provide for equivalent enhanced facilities for vulnerable road users introducing segregated paths on both sides of the new bridge.
	Summary Evaluation		Comparable to the Other Option / Neutral	Comparable to the Other Option / Neutral
5. Safety - Safety is concerned with the impact of the investment on the number of transport related accidents.	Rail Safety	The option which provided the best rail safety solution was preferable.	Comparable to the Other Option / Neutral Both options similar from a rail safety perspective.	Comparable to the Other Option / Neutral Both options similar from a rail safety perspective.
	Vehicular Traffic Safety	The option which provides the best vehicular safety solution was preferable.	Comparable to the Other Option / Neutral Currently the bridge is on a skew with short radius horizontal bend across the bridge. The skew leaves pedestrians, vehicular and vulnerable users unsighted due to the parapets restricting sight distance. It is almost classifiable as a 'hump back' bridge. For all new profile Options, a 5% max approach gradient has been adopted for compliance with the National Cycle Manual and a minimum bridge crossing road level based on the OHLE bridge clearance and structural depth requirements. This gradient is steeper than the current road approaches yet regulated sight distances are compliant and even improved owing to the horizontal realignment of the road. The new road alignment will improve flow of traffic and reduce the safety concerns that comes with uncertainty of navigation through the current bridge/road layout. The parapet containment & modernisation of vehicle restraints criteria on the approach road embankments will also improve the overall safety for vehicle journey through this section.	Comparable to the Other Option / Neutral Currently the bridge is on a skew with short radius horizontal bend across the bridge. The skew leaves pedestrians, vehicular and vulnerable users unsighted due to the parapets restricting sight distance. It is almost classifiable as a 'hump back' bridge. For all new profile Options, a 5% max approach gradient has been adopted for compliance with the National Cycle Manual and a minimum bridge crossing road level based on the OHLE bridge clearance and structural depth requirements. This gradient is steeper than the current road approaches yet regulated sight distances are compliant and even improved owing to the horizontal realignment of the road. The new road alignment will improve flow of traffic and reduce the safety concerns that comes with uncertainty of navigation through the current bridge/road layout. The parapet containment & modernisation of vehicle restraints criteria on the approach road embankments will also improve the overall safety for vehicle journey through this section.
	Pedestrians, cyclists, road users and neighbours safety	The option which provides the best safety solution for different road users was preferable.	Comparable to the Other Option / Neutral Footpaths are not currently compliant with Irish standards or acceptable BP; and do not cross the bridge, pedestrians cross at the same level as vehicles in the carriageway between parapets. All other areas would be enhanced with footpaths being provided in accordance with the Design Manual for Urban Roads and Streets as well as the National Cycle Manual; providing safer widths, user segregation and improved sightlines. Safe transitions from the scheme's enhanced layout to the existing road will be provided at the Option 5 or 6 road tie-in limits including (signage and marking) but currently no marked (let alone segregated) cycle routes exist. There is no intention to provide any such works outside the scope associated with the bridge replacement and its associated approaches. Drop kerbs and tactile paving would be provided at designated crossing points. The wider cross-sectional width of the Northern approach along with the removal of the skew will improve the general visual perspective down the road; with the added potential to enhance the vulnerable user sense of security.	Comparable to the Other Option / Neutral Footpaths are not currently compliant with Irish standards or acceptable BP; and do not cross the bridge, pedestrians cross at the same level as vehicles in the carriageway between parapets. All other areas would be enhanced with footpaths being provided in accordance with the Design Manual for Urban Roads and Streets as well as the National Cycle Manual; providing safer widths, user segregation and improved sightlines. Safe transitions from the scheme's enhanced layout to the existing road will be provided at the Option 5 or 6 road tie-in limits including (signage and marking) but currently no marked (let alone segregated) cycle routes exist. There is no intention to provide any such works outside the scope associated with the bridge replacement and its associated approaches. Drop kerbs and tactile paving would be provided at designated crossing points. The wider cross-sectional width of the Northern approach along with the removal of the skew will improve the general visual perspective down the road; with the added potential to enhance the vulnerable user sense of security.
	Summary Evaluation		Comparable to the Other Option / Neutral	Comparable to the Other Option / Neutral

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6. Physical Activity - (where applicable) This relates to the health benefits derived from using different transport modes	Connectivity to adjoining cycle facilities	The option that provided better connectivity between trip generators (green areas / key attractions) and that promoted physical activity was preferable.	Comparable to the Other Option / Neutral It is understood that DCC are investigating the enhancement of cycle experience along Le Fanu Road. The provision of new realigned bridge accommodating segregated cycle lanes from vehicular traffic will allow for the length of the tie-in works will allow for seamless integration into such future initiatives.	Comparable to the Other Option / Neutral It is understood that DCC are investigating the enhancement of cycle experience along Le Fanu Road. The provision of new realigned bridge accommodating segregated cycle lanes from vehicular traffic will allow for the length of the tie-in works will allow for seamless integration into such future initiatives.
	Permeability and local connectivity	The option that provided better connectivity between trip generators and that promoted physical activity was preferable.	Comparable to the Other Option / Neutral The same enhancements will be provided for both options.	Comparable to the Other Option / Neutral The same enhancements will be provided for both options.
	Summary Evaluation		Comparable to the Other Option / Neutral	Comparable to the Other Option / Neutral

Area around LE FANU Road - CAF Summary Table

CAF Parameters	Option 5 Assessment	Option 6 Assessment
1. Economy	Comparable to the Other Option / Neutral	Comparable to the Other Option / Neutral
2. Integration	Comparable to the Other Option / Neutral	Comparable to the Other Option / Neutral
3. Environment	Comparable to the Other Option / Neutral	Comparable to the Other Option / Neutral
4. Accessibility and Social Inclusion	Comparable to the Other Option / Neutral	Comparable to the Other Option / Neutral
5. Safety	Comparable to the Other Option / Neutral	Comparable to the Other Option / Neutral
6. Physical Activity	Comparable to the Other Option / Neutral	Comparable to the Other Option / Neutral
Conclusion	Comparable to the Other Option / Neutral	Comparable to Other Option / Neutral

Comparison Criteria Legend

Significant Comparative Disadvantage over the Other Option
Some Comparative Disadvantage over the Other Option
Comparable to the Other Option / Neutral
Some Comparative Advantage over the Other Option
Significant Comparative Advantage over the Other Option