

Area around Inchicore Works				
CAF Parameters	Sub-Criteria	Basis for Comparative Analysis	Option 3	Option 4
1. Economy - The impacts of a transport investment on economic growth and competitiveness.	Capital Expenditure (CAPEX): construction, land acquisition, temporary works.	<p>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>	<p><b>Construction Costs - Some Comparative Disadvantage over the Other Option - More Expensive</b></p> <p><b>Higher costs associated with temporary and permanent land take</b></p> <p>Potential Interference with Property Rights - Commentary</p> <p>This option seeks to increase the no. of tracks towards the northern boundary of the existing rail corridor where the back gardens / outbuildings of properties are close to the existing tracks. This option will extend permanent works beyond the existing rail corridor into: the 3m strip to the rear of properties along Landen Road (west); the rear gardens of properties along Landen Road (from opposite the Maintenance Shed (mid-point) to Khyber Pass Footbridge; and the grounds of the Seven Oaks Apartment complex.</p> <p>To the south, outside of Inchicore Works (main), the extent of permanent works may impact the industrial properties along Jamestown Road and in the WestLink Business Park, including the rear yard and some plant / attachments to the buildings. Further to the west, No. 4 George's Villas may also be impacted.</p> <p>There may also be temporary interference of other property rights during construction of the permanent works along the rail corridor however technical and construction related solutions will seek to minimise these.</p>	<p><b>Construction Costs - Some Comparative Advantage over the Other Option - Less Expensive</b></p> <p><b>Lower costs associated with temporary and permanent land take</b></p> <p>Potential Interference with Property Rights - Commentary</p> <p>This option seeks to increase the no. of tracks towards the southern boundary of the existing rail corridor closer to Inchicore Works. It will impact on the 3m strip to the rear of the properties along Landen Road (west).</p> <p>To the south, like Option 3, the industrial buildings and properties along Jamestown Road and West Link Business Park may be impacted to facilitate the proposed headshunt sidings into Inchicore Works, including some plant / attachments to the buildings. Further to the west, the grounds of No. 4 George's Villas will be impacted by the focus of the rail corridor widening being to the south.</p> <p>There may also be temporary interference of other property rights during construction of the permanent works along the rail corridor however 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>Both options require the same type of solutions for OHLE, track, drainage and structures, therefore the impact in OPEX is considered neutral</p>	<p>Comparable to the Other Option / Neutral</p> <p>Both options require the same type of solutions for OHLE, track, drainage and structures, therefore the impact in OPEX is considered neutral</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>Both Options will have some impact on operations during the construction phase, as work in this area is focused on adding additional tracks.</p>	<p>Comparable to the Other Option / Neutral</p> <p>Both Options will have some impact on operations during the construction phase, as work in this area is focused on adding additional tracks.</p>

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	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.	Comparable to the Other Option / Neutral  This criteria is not relevant for this area, as neither option is expected to require traffic disruption	Comparable to the Other Option / Neutral  This criteria is not relevant for this area, as neither option is expected to require traffic disruption
	Urban regeneration	The option with greater potential to contribute to future urban regeneration was preferable.	Comparable to the Other Option / Neutral  Lands to the north are established built up residential areas. All the lands to the south of the railway line including Inchicore Works which have been identified as having significant regeneration potential and are part of the Naas-Ballymount-Cherry Orchard-Park West URDF Masterplan, currently being prepared by Dublin City Council and South Dublin County Council. It is anticipated in the long term that low density industrial units will give way to more sustainable high-density development adjacent to the railway. The delivery of the DART+ South West Project is a key enabling factor in this.	Comparable to the Other Option / Neutral  Lands to the north are established built up residential areas. All the lands to the south of the railway line including Inchicore Works which have been identified as having significant regeneration potential and are part of the Naas-Ballymount-Cherry Orchard-Park West URDF Masterplan, currently being prepared by Dublin City Council and South Dublin County Council. It is anticipated in the long term that low density industrial units will give way to more sustainable high-density development adjacent to the railway. The delivery of the South West Project is a key enabling factor in this.
	<b>Summary Evaluation</b>		<b>Some Comparative Disadvantage over the Other Option</b>	<b>Some Comparative Advantage over the Other Option</b>
	Transport integration	The option which maximises integration with other existing and proposed transportation networks, infrastructure and services was preferable to other options.	Comparable to the Other Option / Neutral  The criteria is not relevant for this area as it is focused on the railway corridor and self-contained from external links (roads, bridges etc).	Comparable to the Other Option / Neutral  The criteria is not relevant for this area as it is focused on the railway corridor and self-contained from external links (roads, bridges etc).

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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	Land use integration	The option with greater consistency and compliance with planning policy was preferable to others.	<p>Some Comparative Disadvantage over the Other Option</p> <p>Both options are supported by the national and regional planning policy context.</p> <ul style="list-style-type: none"> <li>- NPF: National Strategic Outcome - NSO1, NSO4 and NSO8</li> <li>- EMRA RSES / MASP: Policy Objective RPO8.8 (Table 8.2); Sustainable Transport Objective RPO5.2</li> </ul> <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 MTO5(i).</p> <p>Land to the north of the line are zoned Z1 – comprising the residential properties along Landen Road, and the Seven Oaks apartment complex. This option would require potential interference with residential property rights to the north relating to both permanent works and construction activities. It is this aspect of the Option which results in the Some Disadvantage compared to the other option.</p> <p>This option would also require potential interference with property rights to the south. However, the majority of this land is identified as having significant regeneration potential and are part of the Naas-Ballymount-Cherry Orchard-Park West URDF Masterplan, currently being prepared by Dublin City Council and South Dublin County Council. It is anticipated in the long term that low density industrial units will give way to more sustainable high-density development adjacent to the railway.</p>	<p>Some Comparative Advantage over the Other Option</p> <p>Both options are supported by the national and regional planning policy context.</p> <ul style="list-style-type: none"> <li>- NPF: National Strategic Outcome - NSO1, NSO4 and NSO8</li> <li>- EMRA RSES / MASP: Policy Objective RPO8.8 (Table 8.2); Sustainable Transport Objective RPO5.2</li> </ul> <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 MTO5(i).</p> <p>This option would also require potential interference with property rights to the south. However, land is identified as having significant regeneration potential and are part of the Naas-Ballymount-Cherry Orchard-Park West URDF Masterplan, currently being prepared by Dublin City Council and South Dublin County Council. It is anticipated in the long term that low density industrial units will give way to more sustainable high-density development adjacent to the railway.</p> <p>This option is preferred as it has less long term impact on residential properties and residentially zoned land.</p>
	Geographical Integration	The option which minimises disruption and accessibility during construction was preferable.	<p>Comparable to the Other Option / Neutral</p> <p>The criteria is not relevant for this area as is focused on the railway corridor and self-contained from external links (roads, bridges etc).</p>	<p>Comparable to the Other Option / Neutral</p> <p>The criteria is not relevant for this area as is focused on the railway corridor and self-contained from external links (roads, bridges etc).</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 policy relating to investment in rail, electrification etc.</p>	<p>Comparable to the Other Option / Neutral</p> <p>Both options meet a range of other government policy relating to investment in rail, electrification etc.</p>
	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 railway corridor provides for the future provision of Kylemore Station, which is addressed in the analysis of the area adjacent to the East</p>	<p>Comparable to the Other Option / Neutral</p> <p>The railway corridor provides for the future provision of Kylemore Station, which is addressed in the analysis of the area adjacent to the East</p>
	<b>Summary Evaluation</b>			<b>Some Comparative Disadvantage over the Other Option</b>

CAF Parameters	Sub-Criteria	Basis for Comparative Analysis	Option 3	Option 4
	Noise and vibration		<p>Some Comparative Disadvantage over the Other Option</p> <p>Noise and vibration impacts, including those from piling to reconstruct retaining walls and provide foundation to support for OHLE, will be similar for both options. Other construction related activity with potential for noise/vibration impact is similar for both options and the temporary land take are largely aligned. As such, there is a neutral preference for noise and vibration for construction impacts within this area.</p> <p>During the operation phase, Option 3 will move the overall track alignment circa 3 metres closer to the residential properties on Landen Road. It is noted that the tracks to the north will be light rail electrified tracks with a lower noise impact. However, relative to Option 4, Option 3 represents a Some comparative disadvantage by moving the overall noise and vibration source (i.e. the rail cars) closer to the properties on Landen Road.</p> <p>Hence, the combination of both construction phase (neutral) and operational phase (Some disadvantage for Option 3), results in an overall Some disadvantage for Option 3 regarding Noise and Vibration.</p>	<p>Some Comparative Advantage over the Other Option</p> <p>As noted, there is no significant variance between the construction phases of each option as far as the estimated number of people within 50m of vibro-piling works is concerned, so the impact for construction phase are considered neutral.</p> <p>During operations, the Option 4 design moves the track alignment circa 1-1.5 metres away from the residential properties on Landen Road which presents a comparative advantage relative to Option 3. While, Option 4 moves the track alignment closer to the commercial properties, these are not considered as sensitive to noise and vibration relative to the residential properties.</p> <p>Hence, the combination of both construction phase (neutral) and operational phase (Some advantage for Option 4), results in an overall Some advantage for Option 4 regarding Noise and Vibration.</p>
	Air quality and Climate		<p>Some Comparative Disadvantage over the Other Option</p> <p>Construction phase impact such as dust are largely analogous for both options and these are classed as neutral for both Options in this area.</p> <p>Option 3 is considered a Some comparative disadvantage compared to Option 4 based on the increased proximity of the residential properties on Landen Road which are impacted by the extension of the rail corridor to the north thereby moving the rail cars closer to the properties. While the rail cars closest to the properties are electrified which may offer some benefit over baseline, relative to Option 4, Option 3 presents a Some comparative disadvantage for air and climate.</p>	<p>Some Comparative Advantage over the Other Option</p> <p>Construction phase impact such as dust are largely analogous for both options and these are classed as neutral for both Options in this area.</p> <p>During operation, Option 4 moves the track alignments and rail cars circa 1-1.5 metres away from the residential properties to the south and closer to the commercial properties to the south. Relative to Option 3, this represents a reduction in potential community exposure to rail car emissions from the proposed development. Therefore Option 4 is classed as a Some comparative advantage compared to Option 3.</p>

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3. Environment - considers impacts, such as emissions to air, noise, and ecological and architectural impacts.	Landscape and Visual	The Option which minimises potential impact on the environmental factor under consideration was preferable to other options.	<p>Significant Comparative Disadvantage over the Other Option</p> <p>Due to the permanent land take required, impacting a number of properties to the north, Permanent Direct impacts will arise to residents of dwellings to the north due to the proposed permanent boundary wall which will be located within their gardens. The proposed boundary wall will encroach on the rear gardens of these properties resulting in permanent loss of land (garden) and woody vegetation including garden planting. The boundary wall, being located within the garden of each property will be closer to the viewer (resident of dwelling) than the existing boundary and this along with the vegetation losses and introduction of OHLE close to the viewer will result in significant adverse visual impacts.</p> <p>A new retaining wall west of Sarsfield Road will result in potentially significant visual impacts to residents of dwellings to the north.</p> <p>Passing trains will be closer to a larger number of residents of dwellings to the north.</p>	<p>Significant Comparative Advantage over the Other Option</p> <p>Less permanent land take required, which would affect properties including residents of dwellings. Some temporary land take will affect a limited number of properties. The permanent direct impacts on residents to the north of dwellings expected in option 3 will not arise in option 4 and as a consequence, the size and scale of the visual change will be considerably less for these same residents as the proposed boundary wall and OHLE will be further from the viewer.</p> <p>A new retaining wall west of Sarsfield Road will not be required and changes to existing views for residents of dwellings to the north will be of a lesser scale than in Option 3. Passing trains will be further away for a larger number of residents of dwellings to the north.</p>
	Biodiversity (flora and fauna)		<p>Some Comparative Advantage over the other Option.</p> <p>Potential direct effects due to impact on signal box structure which has been identified as a potential bat roost feature, but the turret, also potential bat roost remains. Comparatively more areas of rough grasslands, amenity grassland, scrub, treeline, trees, and hedgerow to be directly impacted.</p>	<p>Some Comparative Disadvantage over the Other Option</p> <p>Potential direct effects due to impact on signal box structure which has been identified as a potential bat roost feature, but the turret, also potential bat roost remains. Comparatively less areas of rough grasslands, amenity grassland, scrub, treeline, trees, and hedgerow to be directly impacted.</p>
	Cultural, archaeological and architectural heritage		<p>Comparable to the Other Option / Neutral</p> <p>This option requires the 'regionally' rated Signal box (NIAH 50080417) to be relocated; the masonry retaining wall (NIAH 50080417) north of the Inchicore Works Maintenance Shed - the extent of which is unclear - needs a greater degree of reconstruction than in Option 4, and the iconic turret on the former locomotive shed can be retained.</p>	<p>Comparable to the Other Option / Neutral</p> <p>This option requires the 'regionally' rated Signal box (NIAH 50080417) to be relocated; the masonry retaining wall (NIAH 50080417) north of the Inchicore Works Maintenance Shed - the extent of which is unclear, and the iconic turret on the former locomotive shed can be retained.</p>
	Water resources		<p>Some Comparative Disadvantage over the other option</p> <p>Option will likely have a neutral / negligible impact on flood risk during operation          -Water quality risk during construction phase as runoff pollutants may enter the receiving waterbodies i.e. Rivers Liffey          -Works will alter the existing drainage regime and increase risk of pluvial flooding to the site itself</p> <p>Some comparative disadvantage for this option as it creates additional impervious area and hence Somely larger attenuation volume.</p>	<p>Some Comparative Advantage over the other option</p> <p>Option will likely have a neutral / negligible impact on flood risk during operation          - Water quality risk during construction phase as runoff pollutants may enter the receiving waterbodies i.e. Rivers Liffey          - Works will alter the existing drainage regime and increase risk of pluvial flooding to the site itself</p> <p>Some comparative advantage for this option as it creates less impervious area and hence Somely less attenuation volume.</p>

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	Agricultural and non-agricultural		Some Comparative Disadvantage over the other option. Greater number of residential properties to the north impacted through permeant land take compared to the other option.	Some Comparative Advantage over the other option. Fewer residential properties to the north effected by permeant land take.
	Geology and soils (include waste)		Some Comparative Disadvantage over the other option. Greater volume of soil to be sent to landfill compared to other option. Soil is likely to be contaminated.	Some Comparative Advantage over the other option Lower volume of soil to be sent to landfill compared to other option. Soil is likely to be contaminated.
	<b>Summary Evaluation</b>		<b>Some Comparative Disadvantage over the Other Option</b>	<b>Some Comparative Advantage over the Other Option</b>
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 to the Other Option / Neutral This criteria is not relevant for this area. Both options are focused on widening the existing rail corridor for four tracking where there is no access to the public.	Comparable to the Other Option / Neutral This criteria is not relevant for this area. Both options are focused on widening the existing rail corridor for four tracking where there is no access to the public.
	Accessibility (stations)	The option which provided the best accessibility to the station was preferable.	Comparable to the Other Option / Neutral This criteria is not relevant to this area, as no stations are involved	Comparable to the Other Option / Neutral This criteria is not relevant to this area, as no stations are involved
	Accessibility (bridge)	The option which minimised severance across bridges was preferable.	Comparable to the Other Option / Neutral This criteria is not relevant to this area, as no bridges are involved (only Khyber Pass, which is only for IE staff)	Comparable to the Other Option / Neutral This criteria is not relevant to this area, as no bridges are involved (only Khyber Pass, which is only for IE staff)
	Social inclusion	The option which provided a higher degree of accessibility and connectivity for vulnerable groups was preferable.	Comparable to the Other Option / Neutral This criteria is not relevant to this area	Comparable to the Other Option / Neutral This criteria is not relevant to this area
	<b>Summary Evaluation</b>		<b>Comparable to the Other Option / Neutral</b>	<b>Comparable to the Other Option / Neutral</b>
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, as both options have equivalent track alignments and impacts to nearby structures	Comparable to the Other Option / Neutral, as both options have equivalent track alignments and impacts to nearby structures
	Vehicular Traffic Safety	The option which provides the best vehicular safety solution was preferable.	Comparable to the Other Option / Neutral Sub-criteria not relevant for this area, as there's no change to the existing road network	Comparable to the Other Option / Neutral Sub-criteria not relevant for this area, as there's no change to the existing road network
	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 Sub-criteria not relevant for this area, as there's no change to the existing road network	Comparable to the Other Option / Neutral Sub-criteria not relevant for this area, as there's no change to the existing road network
	<b>Summary Evaluation</b>		<b>Comparable to the Other Option / Neutral</b>	<b>Comparable to the Other Option / Neutral</b>

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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 Other Option/ Neutral  This criteria is not relevant for this area. Both options are focused on widening the existing rail corridor for four tracking where there is no access to the public.	Comparable to Other Option/ Neutral  This criteria is not relevant for this area. Both options are focused on widening the existing rail corridor for four tracking where there is no access to the public.
	Permeability and local connectivity	The option that provided better connectivity between trip generators and that promoted physical activity was preferable.	Comparable to Other Option/ Neutral  This criteria is not relevant for this area. Both options are focused on widening the existing rail corridor for four tracking where there is no access to the public.	Comparable to Other Option/ Neutral  This criteria is not relevant for this area. Both options are focused on widening the existing rail corridor for four tracking where there is no access to the public.
	<b>Summary Evaluation</b>		<b>Comparable to the Other Option / Neutral</b>	<b>Comparable to the Other Option / Neutral</b>

**Area around Inchicore Works - CAF Summary Table**

CAF Parameters	Option 3	Option 4
<b>1. Economy</b>	Some Comparative Disadvantage over the Other Option	Some Comparative Advantage over the Other Option
<b>2. Integration</b>	Some Comparative Disadvantage over the Other Option	Some Comparative Advantage over the Other Option
<b>3. Environment</b>	Some Comparative Disadvantage over the Other Option	Some Comparative Advantage over the Other Option
<b>4. Accessibility and Social Inclusion</b>	Comparable to the Other Option / Neutral	Comparable to the Other Option / Neutral
<b>5. Safety</b>	Comparable to the Other Option / Neutral	Comparable to the Other Option / Neutral
<b>6. Physical Activity</b>	Comparable to the Other Option / Neutral	Comparable to the Other Option / Neutral
<b>Conclusion</b>		<b>Preferred Option</b>

**Comparison Criteria Legend**

Significant Comparative Advantage over the Other Option
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