

# **Environmental Impact Assessment Screening Report**

**for proposed**

## **Strand Road Trial Cycle Route**

**for: Dublin City Council**

Civic Offices  
Wood Quay  
Dublin 8  
D08 RF3F



Comhairle Cathrach  
Bhaile Átha Cliath  
**Dublin City Council**

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## Document Control

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## 1. Introduction

CAAS has been appointed by Dublin City Council (DCC) to prepare this Environmental Impact Assessment Screening Report for the proposed Strand Road Trial Cycle Route. This report has been prepared to form an opinion as to whether or not the proposed development should be subject to Environmental Impact Assessment (EIA) and if so, whether an Environmental Impact Assessment Report (EIAR) should be prepared in respect of it.

The screening assesses the proposed scheme with reference to the relevant EIA legislation<sup>1</sup> including the EIA Directive, and Planning and Development and Roads legislation. It also has regard to relevant parts of *EIA Guidance for Consent Authorities regarding sub-threshold development*, 2003, Department of the Environment, Heritage and Local Government and *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment*, 2018, Department of Housing, Planning and Local Government. and relevant EU Guidance including *Interpretation of definitions of project categories of annex I and II of the EIA Directive*, 2015, EU and *Guidance on EIA Screening*, 2001, EC

The consideration of potential impacts covers all significant direct, indirect and secondary impacts as relevant, with reference to the guidance and in compliance with the legislation, including the specified criteria for determining whether certain development types should be subject to EIA, :

- (i) Characteristics of the proposal
- (ii) Location of the proposal
- (iii) Characteristics of potential impacts

Descriptions of impacts follow the statutory EPA (draft) *Guidelines on the information to be contained in Environmental Impact Assessment Reports* (2017). For ease of reference, these standardised descriptions are reproduced in Appendix II of this report.

Information on the scheme has been obtained from Dublin City Council, including: scheme drawings (plans and sections) and a written description.

The following sections of this report cover:

- Description of the proposed scheme (s2)
- The legislative basis for EIA (s3)
- Screening considerations (s4)
- Conclusion (s5)

An overview of the author's competency is provided in Appendix III.

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<sup>1</sup> see section 3 for details

## 2. The Proposed Scheme

### 2.1 Overview of the Scheme

In light of the impacts of the Covid-19 pandemic on transport systems and the way in which we work, socialise and communicate, DCC seek to provide more space for the community to allow for social distancing and to support shops and business to operate in this new environment. The proposed development seeks to achieve this by re-allocating road space by implementing a one-way traffic system and introducing a two-way cycle route along Strand Road.

The scheme is currently proposed to be put in place for a temporary 6-month period.

### 2.2 Scheme Details

The proposed scheme includes:

- Provision of a two-way separated cycle track from Sean Moore Road to Merrion Gates and continuing southwards for approximately (approx.) 700 m along Merrion Road to the junction with Trimlestown Avenue.
- Removal of inbound traffic lane on Strand Road to provide for a one-way outbound traffic system to facilitate the proposed two-way cycle track.
- Minimal civil works including localised alterations with minimal alterations to existing road surface and kerbs. Locations of such works include Merrion Gates, a number of mini roundabouts on the route and at the Beach Road and Sean Moore junction.
- Provision of bollards and orcas along the proposed cycle track.
- Installation of traffic signals equipped with Smart Micro technology to monitor cyclist numbers and vehicle classification.

The total scheme extent is approx. 3.3 km in length and 3.4 ha in area. This area includes the whole road width, including the western road carriageway, the use of which will be unchanged in the proposed scheme. The area subject to change of use can thus be taken to be approx. half of the total scheme area, approx. 1.7 ha.

The anticipated duration of the works to implement the scheme is 8-10 weeks.

During operation of the scheme, emerging road use patterns will be monitored and reviewed. Its benefits and impacts will be monitored and evaluated by DCC. Any adjustments will be subject to review and, if there is any real likelihood of them causing significant effects on the environment, they will be subject to separate EIA screening.

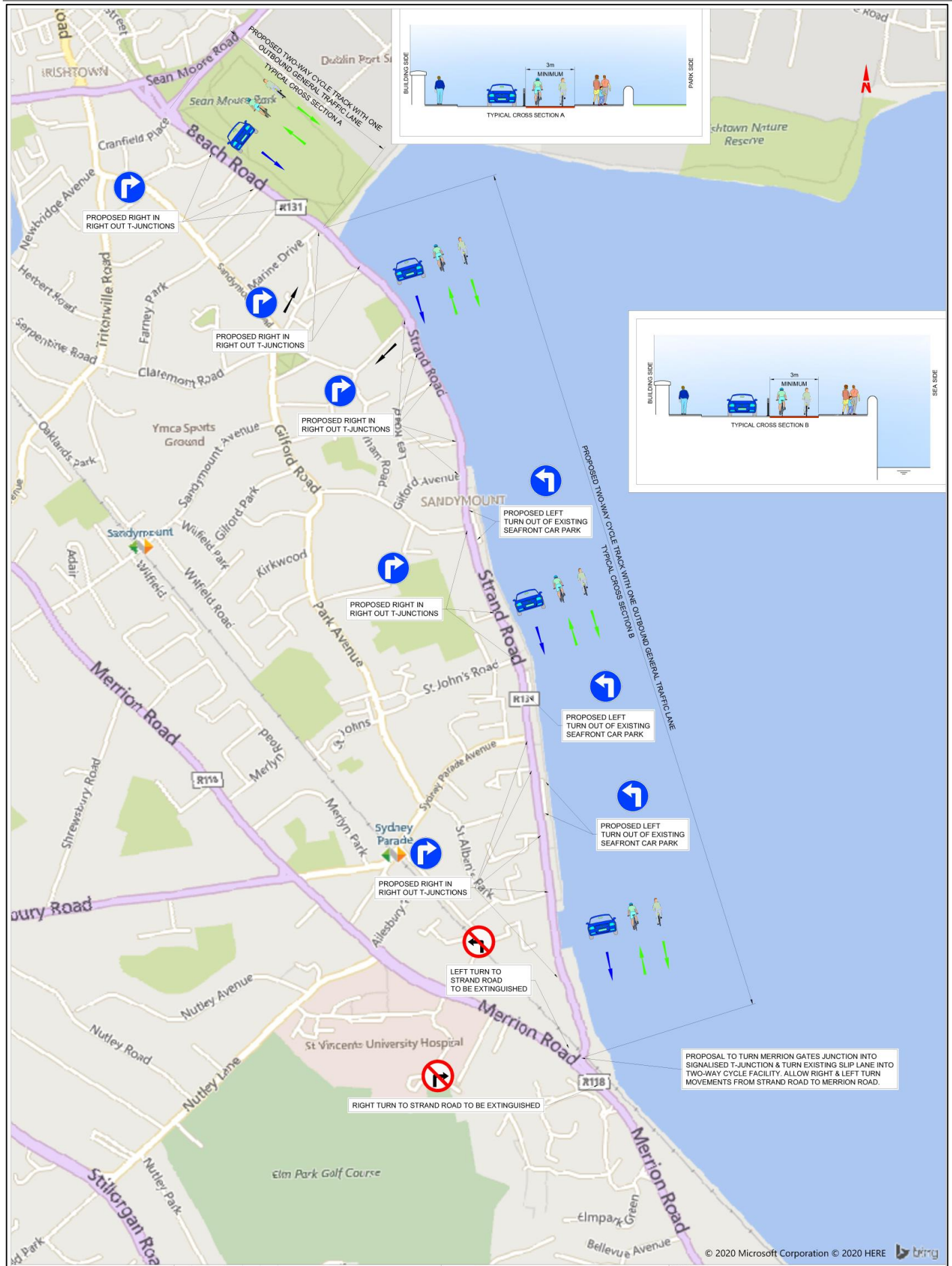


Figure 1 Map of Scheme



**Figure 2 Extent of proposed development**

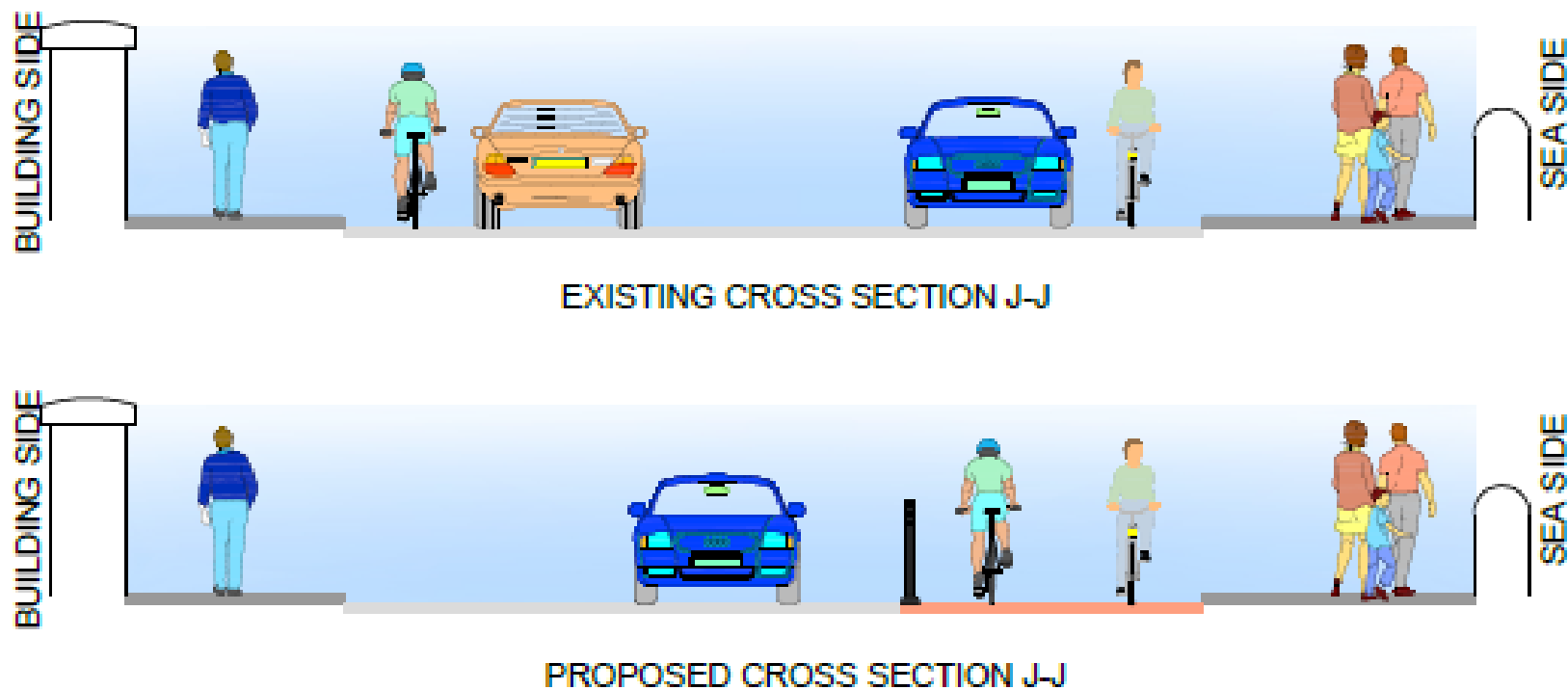


Figure 3 Typical cross section at Strand Road – existing and proposed



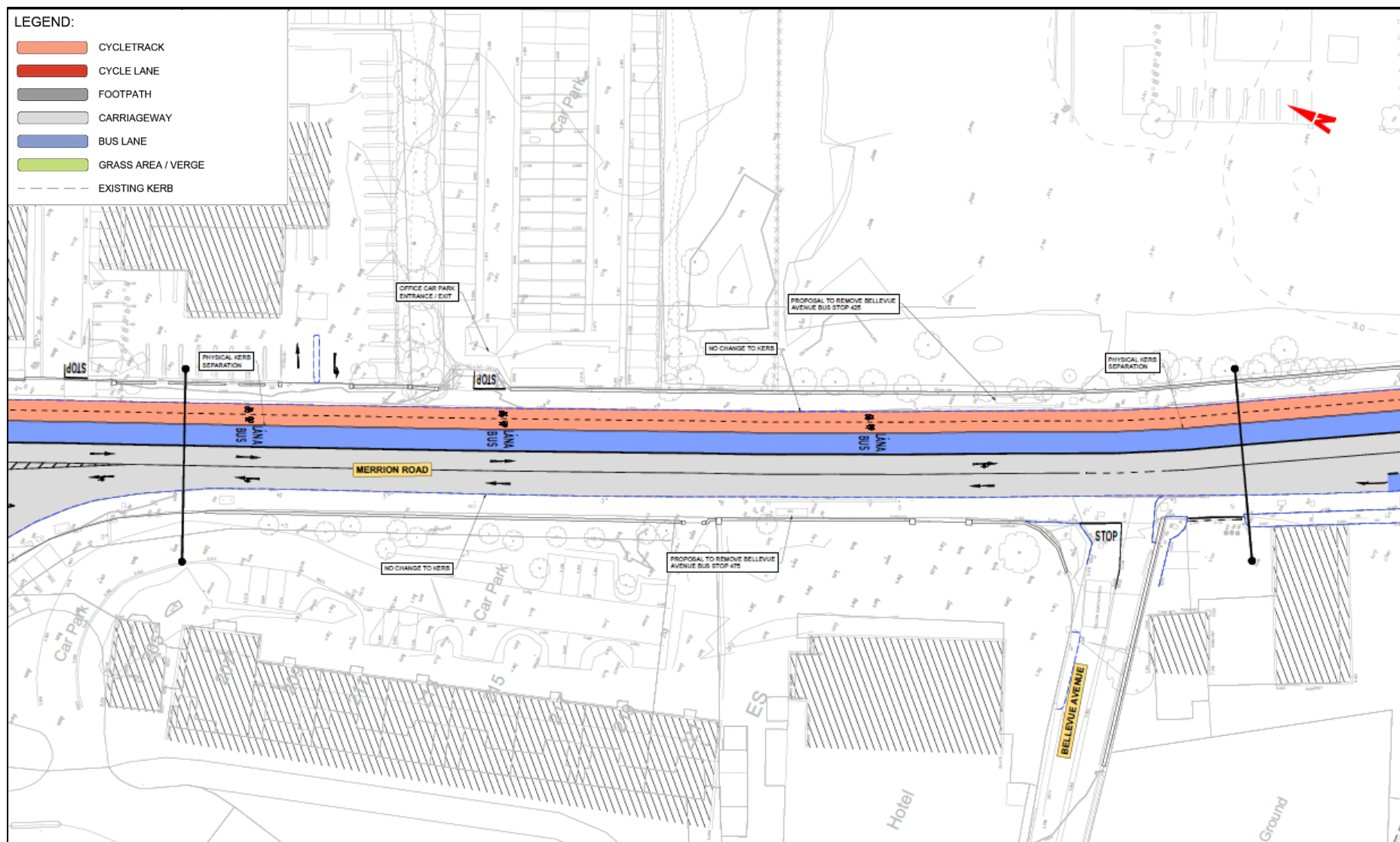


Figure 4 Proposed layout - Merrion Road



Figure 5 Artist's impression of proposed scheme - Strand Road

### 3. Legislative Basis for EIA

EIA requirements derive from EU Directive 2011/92/EU (as amended by Directive 2014/52/EU) on the assessment of the effects of certain public and private projects on the environment. The Directive has been transposed into the following Irish legislation.

- The Roads Act 1993, as amended by, *inter alia*, the:
  - Roads Regulations, 1994 (S.I. 119/1994)
  - European Union (Roads Act 1993) (Environmental Impact Assessment) (Amendment) Regulations, 2019 (S.I. 279/2019)

Section 50 of the Act specifies the types of roads projects that automatically require EIA and sets out criteria for determining whether or not other roads projects should be subject to EIA.

- The Planning and Development Acts 2000-2020 (Part X), as amended by, *inter alia*, the:
  - Planning and Development Regulations 2001 (S.I. 600/2001)
  - European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018) (S.I. 296/2018)

Part 1 of Schedule 5 of these regulations lists projects included in Annex I of the Directive which automatically require EIA.

For projects included in Annex II of the Directive, Part 2 of Schedule 5 provides thresholds, above which EIA is required.

## 4. Screening Considerations

### 4.1 Project type

In the first instance it is necessary to determine whether the project is of a type that requires EIA.

The project types prescribed for EIA purposes in the Roads and Planning and Development legislation are listed in this table with commentaries of their applicability to the proposed scheme.

Criteria prescribed in the legislation for determining whether or not projects which do not clearly fall into any prescribed project type are also listed and commented upon.

Project type / criteria	Comment	Is EIA required on this basis?
<b>Roads legislation</b>		
SI 279/2019 (s.5, amending section 50 of the Roads Act, 1993)		
<i>(1) (a) A road development that is proposed that comprises any of the following shall be subject to an environmental impact assessment:</i>		
<i>(i) the construction of a motorway</i>	The proposed scheme does not provide for construction of a motorway.	No
<i>(ii) the construction of a busway</i>	The proposed scheme does not include construction of a busway.	No
<i>(iii) the construction of a service area</i>	The proposed scheme does not include a service area.	No
<i>(iv) any prescribed type of road development consisting of the construction of a proposed public road or the improvement of an existing public road</i>		
The prescribed types are given in section 8 of S.I. 119/1994 as:		

Project type / criteria	Comment	Is EIA required on this basis?
<i>(a) The construction of a new road of four or more lanes, or the realignment or widening of an existing road so as to provide four or more lanes, where such new, realigned or widened road would be eight kilometres or more in length in a rural area, or 500 metres or more in length in an urban area:</i>	The proposed scheme does not include construction, realignment or widening of a road to provide for four or more lanes.	No
<i>(b) the construction of a new bridge or tunnel which would be 100 metres or more in length.</i>	The proposed scheme does not include construction of any new bridge or tunnel.	No
(1) (b) to (d) of S.I. 279/2019 require that any road development or road improvement project which would be likely to have significant effects on the environment, including projects located on ecologically protected sites, shall be subject to EIA.	<p>The measures included in the scheme are restricted to existing road surfaces and kerbing. It is considered unlikely to have significant effects on the environment, within the meaning of the EIA Directive (ref. review against Annex III Criteria in s4.2 below).</p> <p>The scheme is located adjacent to three designated ecological sites; South Dublin Bay which is designated as both a Special Area of Conservation (SAC) and a proposed Natural Heritage Area (pNHA) and South Dublin Bay and River Tolka Estuary which is designated as a Special Protection Area (SPA). However, no part of the scheme is located on any of these designated sites. The review against Annex III criteria below finds that the scheme can be considered unlikely to have significant effects on these sites, within the meaning of the EIA Directive.</p> <p>The potential for effects on the SAC and SPA, which are both European (Natura 2000) sites, is considered in detail in the separate Appropriate Assessment (AA) screening report. That report finds that the scheme is unlikely to have significant effects on those sites.</p>	No

Project type / criteria	Comment	Is EIA required on this basis?
<b>Planning and Development legislation</b> S.I. 600/2001, Schedule 5, Pt 2		
project type 10. <i>Infrastructure projects (b) (iv)</i>		
<p><i>Urban development which would involve an area greater than 2 hectares in the case of a business district, 10 hectares in the case of other parts of a built-up area and 20 hectares elsewhere.</i></p> <p><i>(In this paragraph, “business district” means a district within a city or town in which the predominant land use is retail or commercial use.)</i></p>	<p>Commission guidance<sup>2</sup> lists a range of projects, stating that these or other projects with similar characteristics can be considered to be ‘urban development’. These include:</p> <ul style="list-style-type: none"> <li>• Shopping centres</li> <li>• Bus garages</li> <li>• Train depots</li> <li>• Hospitals</li> <li>• Universities</li> <li>• Sports stadiums</li> <li>• Cinemas</li> <li>• Theatres</li> <li>• Concert halls</li> <li>• Other cultural centres</li> <li>• Sewerage or water supply networks</li> </ul> <p>The proposed scheme does not correspond to or have similar characteristics to any of these types of projects.</p> <p>Notwithstanding, the area covered by the scheme is approx. 3.4 ha which is well below (approx. 34% of) the 10 ha threshold which would apply if this project type were considered applicable.</p>	No

<sup>2</sup> Interpretation of definitions of project categories of annex I and II of the EIA Directive, 2015, EU

Project type / criteria	Comment	Is EIA required on this basis?
<i>Project type 13. Changes, extensions, development and testing</i>		
<p><i>(a) Any change or extension of development which would:-</i></p> <p><i>(i) result in the development being of a class listed in Part 1 or paragraphs 1 to 12 of Part 2 of this Schedule, and</i></p> <p><i>(ii) result in an increase in size greater than-</i></p> <ul style="list-style-type: none"> <li>- 25 per cent, or</li> <li>- an amount equal to 50 per cent of the appropriate threshold, whichever is the greater.</li> </ul>	<p>The changes covered by the proposed scheme will not result in the affected area being of a listed class.</p> <p>Also; no new hard surfaced areas will be created.</p> <p>This the proposed scheme meets neither of the prescribed criteria for Project Type 13.</p>	No

#### 4.1 Subthreshold Development

Schedule 7 of the Planning and Development Regulations specifies the criteria for determining whether or not a sub-threshold development is required to be subject to EIA. **As the project does not correspond to any project type in the Roads or Planning and Development legislation, as listed above, it is not considered to be 'sub-threshold development'.**

Notwithstanding, given the wide ranging requirement of 50 (1) (b) to (d) of the Roads Act (as above) that any road development or road improvement project which would be likely to have significant effects on the environment should be subject to EIA, for the avoidance of any doubt, the next section of this report provides a review of the project against prescribed criteria for determining whether or not a sub-threshold development is required to be subject to EIA.

These criteria are given in Annex III of the EIA Directive as transcribed into Schedule 7 of the Planning and Development Regulations.

## 4.2 Review against Schedule 7 criteria

These criteria cover:

1. Characteristics of the proposed development
2. Location of the proposed development
3. Types and characteristics of potential impacts

The criteria are listed in the table below. The comments provided in relation to the category 1 and 2 criteria are factual and do not comment on the types or characteristics of impacts. In keeping with the intent of Schedule 7, commentary on impacts is provided in response to the items covered by category 3 (in the third part of the table below). All comments, particularly regarding 'significance', are made in the context of the Directive and guidance. Cross references are included where useful. The review against the Schedule 7 criteria refers to and takes account of the environmental factors set out in of Schedule 6 (2(d)), as relevant.

Schedule 7A of the Planning and Development Regulations sets out 'Information to be provided by the Applicant or Developer for the Purposes of Screening Sub-threshold Development for Environmental Impact Assessment'. This information includes:

1. A description of the proposed development
2. A description of the aspects of the environment likely to be significantly affected by the proposed development.
3. A description of any likely significant effects, to the extent of the information available on such effects, of the proposed development on the environment
4. The compilation of the information at paragraphs 1 to 3 shall take into account, where relevant, the criteria set out in Schedule 7.

This screening report includes the relevant Schedule 7A information. This is contained in s2 above and in the commentary provided in the table below.

Schedule 7 Criteria	Commentary
<b>1. Characteristics of Proposed Development</b> The characteristics of proposed development, in particular:	
(a) the size and design of the whole of the proposed development	The project is approx. 3.4 ha in area and approx. 3.3 km in length.
(b) cumulation with other existing development and/or development the subject of a consent for proposed development for the purposes of section 172(1A)(b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment	The proposed project will be part of and will interact with the wider transportation network. This network is subject to ongoing management including monitoring, review, and interventions by Dublin City Council. The measures with the most potential to have cumulative effects, when considered in-combination with the Strand Road scheme, are the installation of two new pedestrian crossings at Sandymount Green (approximately 280 m west of Strand Road). These crossings can be expected help manage



	<p>the effects of traffic displaced by the temporary Strand Road scheme.</p> <p>A number of other developments which are directly adjacent to the site area have been permitted in the last 5 years<sup>3</sup>.</p>
(c) the nature of any associated demolition works	No demolition works are required.
(d) the use of natural resources, in particular land, soil, water and biodiversity	No significant natural resources will be used.
(e) the production of waste,	No significant waste streams will be generated.
(f) pollution and nuisances,	<p>The proposed scheme is likely to temporarily reduce air pollution, noise and other temporarily traffic related nuisances along the length of the scheme. It will temporarily affect traffic levels elsewhere due to displacement of northbound traffic from Strand Road.</p> <p>Temporary effects of displaced traffic are considered further below.</p>
(g) the risk of major accidents, and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge	<p>The proposal is likely to have a temporary calming effect on traffic in the scheme area and will provide improved and separated facilities for cyclists and reduce the risk of major accidents, and/or disasters in the area.</p> <p>Temporary effects of displaced traffic are considered further below.</p>

<b>2. Location of proposed development</b> The environmental sensitivity of geographical areas likely to be affected by the proposed development, with particular regard to—	
(a) the existing and approved land use	The land-uses of the surrounding area are mainly residential, amenity/open space, biodiversity and transportation (DART) with some educational and office facilities.

<sup>3</sup> 3346/20 – Carpark extension at the Tara Towers Hotel; 3708/20 – Domestic 2 story extension; 3262/20 – Development of a car wash facility; WEB1774/20 – Domestic entranceway reconfiguration; and WEB 1674/20 – Domestic roof works and extension.

(b) the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground	Sandymount Strand and Dublin Bay are adjacent and include a large expanse of intertidal beach area. The area is covered by three formal ecological designations as discussed in s4.1. The central section of the scheme, over a length of approx. 1.1 km, is separated from the beach area by a strip of amenity/grassland which varies from approx. 25 to 30 m in width. A section approx. 500 m long is separated by the footpath and wall which is also the high-water mark.
(c) the absorption capacity of the natural environment, paying particular attention to the following areas:	
(i) wetlands, riparian areas, river mouths	-
(ii) coastal zones and the marine environment	Sandymount Strand and Dublin Bay are adjacent to the scheme area
(iii) mountain and forest areas	-
(iv) nature reserves and parks	South Dublin Bay SAC and pNHA and South Dublin Bay and River Tolka Estuary SPA are adjacent to the scheme area, separated from it by the features described at (b) above.  Sean Moore Park adjoins the northernmost 460 m of the scheme area. The 1.1 km strip of amenity/grassland described above is a well-used recreational amenity area.
(v) areas classified or protected under legislation, including Natura 2000 areas designated pursuant to the Habitats Directive and the Birds Directive	South Dublin Bay SAC and pNHA and South Dublin Bay and River Tolka Estuary SPA are adjacent to the scheme area.
(vi) areas in which there has already been a failure to meet the environmental quality standards laid down in legislation of the European Union and relevant to the project, or in which it is considered that there is such a failure.	None relevant to the characteristics of the scheme.
(vii) densely populated areas	The western side of the scheme area is predominantly residential.

(viii) landscapes and sites of historical, cultural or archaeological significance	<p>Between Sean Moore Park and a point approx. 250 m North of Merrion Gates (a length of approx. 2 km) there are open and largely uninterrupted views from the Road looking Eastwards across Dublin Bay. Residences along the western side of this section of the Road generally enjoy a similar view.</p> <p>A stretch of approx. 140 m, just South of Sean Moore Park, between Marine Drive and Seafort Avenue, abuts an architectural conservation area.</p> <p>There is a Martello Tower adjacent to the road which is a protected structure.</p>
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<p><b>3. Types and characteristics of potential impacts</b></p> <p>The likely significant effects on the environment of proposed development in relation to criteria set out under paragraphs 1 and 2, with regard to the impact of the project on the factors specified in paragraph (b)(i)(I) to (V) of the definition of 'environmental impact assessment report' in section 171A of the Act, taking into account—</p>	
(a) the magnitude and spatial extent of the impact (for example, geographical area and size of the population likely to be affected)	The project will directly affect an area of 3.4 ha of existing roadway.
(b) the nature of the impact	<p>All work for implementation of the scheme will be undertaken on existing built surfaces as all of the site area is a built urban landscape. All works are identified as small scale temporary, and are expected to be negligible in source emissions due to the characteristics of the scheme; minor screw down fixtures, painting of lines, placing of signs etc.</p> <p>DCC have stated that the level of potential noise, dust and surface water effects during of construction of the trial scheme will be less than the normal range of such effects that would be expected during routine maintenance works for roads and traffic management. This can be seen as a reasonable statement given the low level of works that will be required for example to fix temporary bollards to road surfaces and to change road markings, when compared with routine maintenance works such as road resurfacing.</p> <p>General impacts on landscape and amenity are likely to be largely positive, due to reduction in</p>

	<p>vehicular traffic. The environmental impacts of specific changes to road markings and introduction of bollards are likely to be limited to temporary localised and insignificant effects.</p> <p>According to modelling carried out by the NTA in October 2020 (ref Appendix I), removal of northbound traffic will reduce traffic volumes by approximately 40%. During the trial operational period, it can be anticipated that traffic, noise and air quality impacts the scheme area will be less than at present.</p> <p>The NTA traffic modelling predicts that the displaced northbound traffic will disperse through a number of alternative routes for the duration of the scheme. During the a.m. peak (the 'worst case') the changes in traffic on alternate routes are estimated to range from -9% to +63% (ref Appendix I). This displaced traffic will be monitored and managed by DCC Transportation and Environment section in accordance with their normal remit to manage City traffic efficiently and sustainably.</p> <p>Impacts will be temporary and are not likely to be significant, within the meaning of the Directive.</p>
(c) the transboundary nature of the impact	-
(d) the intensity and complexity of the impact	Construction impacts will be temporary and of low intensity and complexity.
(e) the probability of the impact	Temporary environmental impacts will occur. These are not likely to be significant, within the meaning of the Directive.
(f) the expected onset, duration, frequency and reversibility of the impact	Impacts will last the duration of the trial scheme and will be reversible.
(g) the cumulation of the impact with the impact of other existing and/or development the subject of a consent for proposed development for the purposes of section 172(1A)(b) of the Act and/or development the subject of any development consent for the purposes of the Environmental Impact Assessment Directive by or under any other enactment	As noted at 1(b) earlier in this table, there are a number of other permitted and proposed projects in the locality however none of these have potential to contribute to significant effects within the meaning of the Directive when considered in-combination with the effects of the proposed scheme.
(h) the possibility of effectively reducing the impact	During operation of the scheme, its benefits and impacts will be monitored and managed by DCC Transportation and Environment section in accordance with their normal remit to manage City traffic efficiently and sustainably.

	<p>As noted above, two new pedestrian crossings are to be installed at Sandymount Green and these can be expected to help reduce potential effects due to displaced traffic.</p> <p>Should monitoring indicate a need, further standard traffic management interventions can be implemented to ameliorate effects of traffic displacement due to the Strand Road scheme, particularly in the local Sandymount area. Such intervention would be within the normal remit of DCC.</p>
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Based on review against the Schedule 7 criteria, the environmental impacts of the scheme can be anticipated to be temporary and not likely to be significant within the meaning of the Directive.

A screening for Appropriate Assessment has been carried out in parallel with this EIA screening. The AA screening is carried out pursuant to the requirements of the Habitats Directive. It finds that a Stage Two Appropriate Assessment is not required for the scheme.

### 4.3 Potential future adjustments

Any adjustments to the scheme will be subject to review to ascertain whether or not the changes or their likely environmental effects affect the EIA screening outcome.

## 5. Conclusions

The scheme does not correspond to any project type in the relevant Roads or Planning and Development legislation. It can be considered not to comprise 'sub-threshold development' and it can be 'screened out' for Environmental Impact Assessment purposes on this basis.

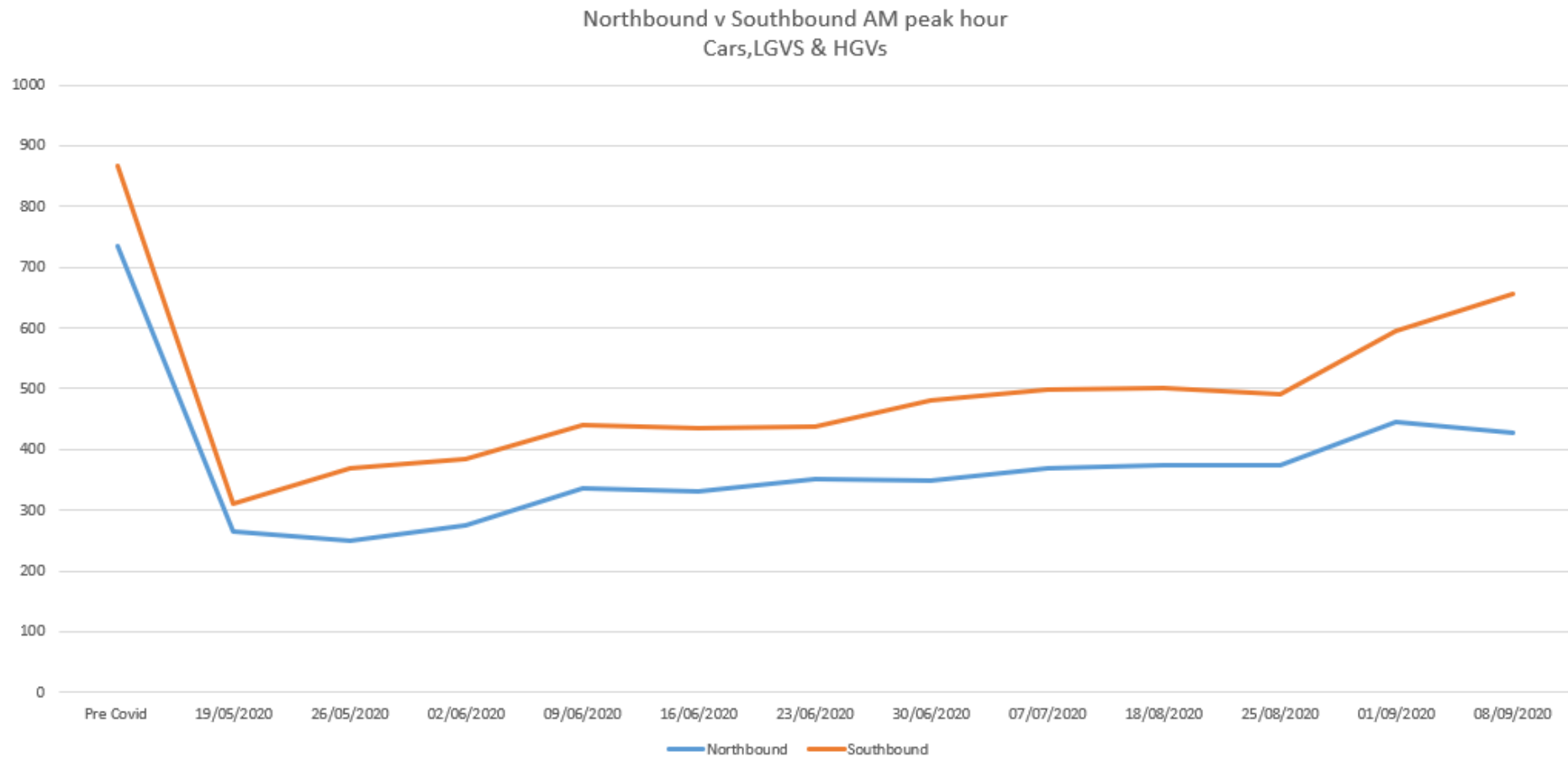
For the avoidance of doubt, the scheme has nonetheless been reviewed against prescribed criteria for determining whether or not a sub-threshold development is required to be subject to EIA. A global consideration against all of the criteria, as set out in s4 above and taking account of measures to avoid or prevent what might otherwise have been significant adverse effects on the environment, finds that the environmental effects of the scheme will be temporary and are not likely to be significant within the meaning of the Directive. It is therefore concluded that there is no real likelihood of significant effects on the environment arising from the proposed scheme.

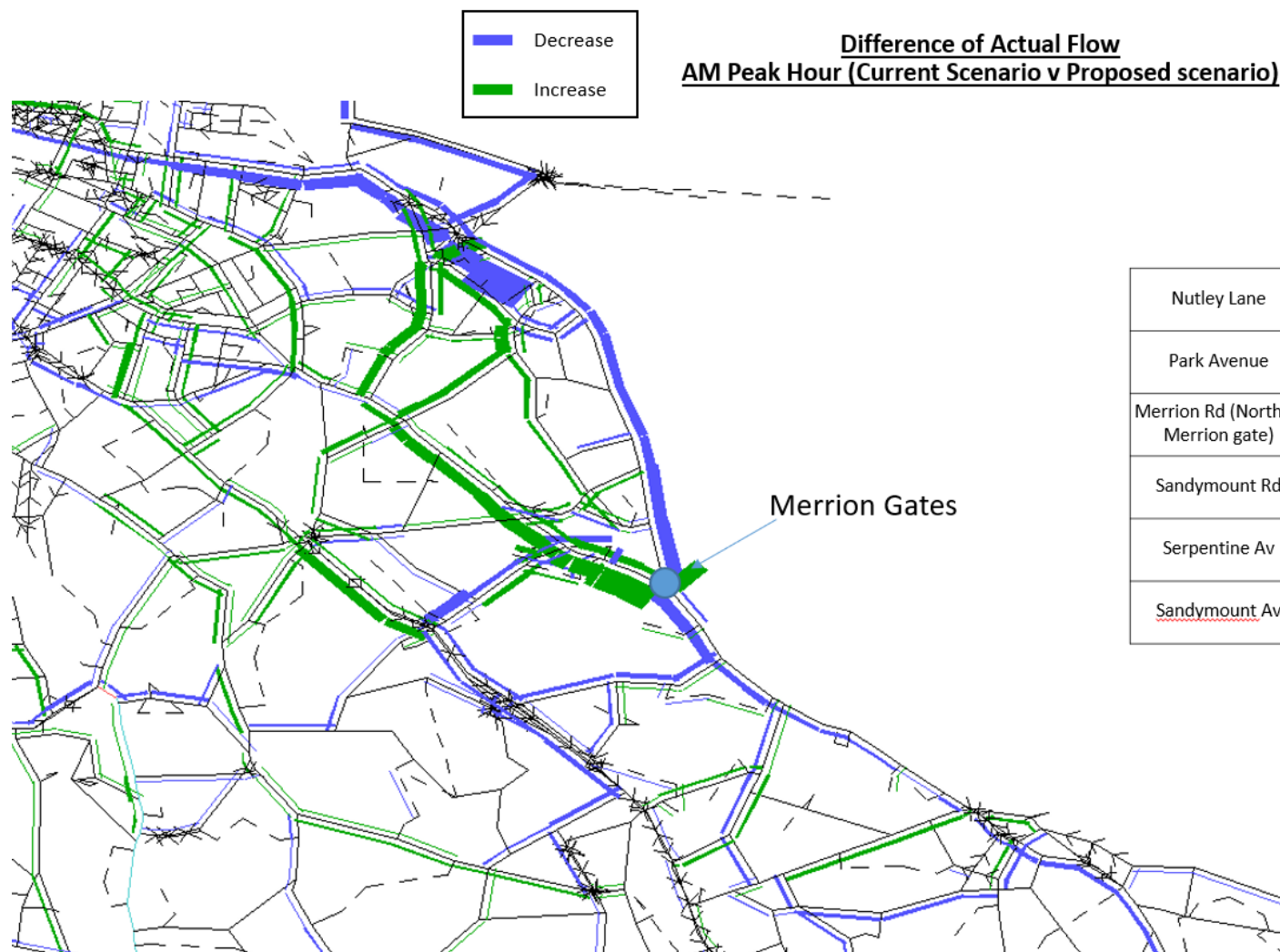
It is considered that the proposed Trial Cycle Route does not need to be subject to Environmental Impact Assessment and no Environmental Impact Assessment Report is required for it.

This conclusion is based on an objective review of the Scheme, including its characteristics, location and the likelihood of it causing significant environmental impacts. The screening has followed the relevant legislation and has had regard to the relevant guidance.

## Appendix I – Traffic Modelling Results, NTA, October 2020

### Northbound/Southbound comparison





# NTA ERM

		2020 AM flows (pcu/h)		
		Reference	Do Something	%Diff
Nutley Lane	Northbound	766	699	-9%
	Southbound	562	641	14%
Park Avenue	Northbound	162	198	22%
	Southbound	409	406	-1%
Merrion Rd (North of Merrion gate)	Northbound	371	795	114%
	Southbound	384	466	21%
Sandymount Rd	Northbound	488	597	22%
	Southbound	488	467	-4%
Serpentine Av	Northbound	359	490	36%
	Southbound	208	208	0%
Sandymount Av	Northbound	162	264	63%
	Southbound	174	183	5%

Pre Covid Volumes

## Appendix II - Descriptions of Effects

(from *Guidelines on the information to be contained in Environmental Impact Assessment Reports*, 2018 draft, EPA)

<b>Quality of Effects</b> It is important to inform the non-specialist reader whether an effect is positive, negative or neutral	<b>Positive Effects</b> A change which improves the quality of the environment (for example, by increasing species diversity; or the improving reproductive capacity of an ecosystem, or by removing nuisances or improving amenities).
	<b>Neutral Effects</b> No effects or effects that are imperceptible, within normal bounds of variation or within the margin of forecasting error.
	<b>Negative/adverse Effects</b> A change which reduces the quality of the environment (for example, lessening species diversity or diminishing the reproductive capacity of an ecosystem; or damaging health or property or by causing nuisance).
<b>Describing the Significance of Effects</b> "Significance" is a concept that can have different meanings for different topics – in the absence of specific definitions for different topics the following definitions may be useful (also see <i>Determining Significance</i> below.).	<b>Imperceptible</b> An effect capable of measurement but without significant consequences.
	<b>Not significant</b> An effect which causes noticeable <sup>2</sup> changes in the character of the environment but without significant consequences.
	<b>Slight Effects</b> An effect which causes noticeable changes in the character of the environment without affecting its sensitivities.
	<b>Moderate Effects</b> An effect that alters the character of the environment in a manner that is consistent with existing and emerging baseline trends.
	<b>Significant Effects</b> An effect which, by its character, magnitude, duration or intensity alters a sensitive aspect of the environment.
	<b>Very Significant</b> An effect which, by its character, magnitude, duration or intensity significantly alters most of a sensitive aspect of the environment.
	<b>Profound Effects</b> An effect which obliterates sensitive characteristics
<b>Describing the Extent and Context of Effects</b> Context can affect the perception of significance. It is important to establish if the effect is unique or, perhaps, commonly or increasingly experienced.	<b>Extent</b> Describe the size of the area, the number of sites, and the proportion of a population affected by an effect.
	<b>Context</b> Describe whether the extent, duration, or frequency will conform or contrast with established (baseline) conditions (is it the biggest, longest effect ever?)



<b>Describing the Probability of Effects</b> Descriptions of effects should establish how likely it is that the predicted effects will occur – so that the CA can take a view of the balance of risk over advantage when making a decision.	<b>Likely Effects</b> The effects that can reasonably be expected to occur because of the planned project if all mitigation measures are properly implemented.
<b>Describing the Duration and Frequency of Effects</b> 'Duration' is a concept that can have different meanings for different topics – in the absence of specific definitions for different topics the following definitions may be useful.	<b>Unlikely Effects</b> The effects that can reasonably be expected not to occur because of the planned project if all mitigation measures are properly implemented.
	<b>Momentary Effects</b> Effects lasting from seconds to minutes
	<b>Brief Effects</b> Effects lasting less than a day
	<b>Temporary Effects</b> Effects lasting less than a year
	<b>Short-term Effects</b> Effects lasting one to seven years.
	<b>Medium-term Effects</b> Effects lasting seven to fifteen years.
	<b>Long-term Effects</b> Effects lasting fifteen to sixty years.
	<b>Permanent Effects</b> Effects lasting over sixty years
	<b>Reversible Effects</b> Effects that can be undone, for example through remediation or restoration
	<b>Frequency of Effects</b> Describe how often the effect will occur. (once, rarely, occasionally, frequently, constantly – or hourly, daily, weekly, monthly, annually)

<b>Describing the Types of Effects</b>	<b>Indirect Effects (a.k.a. Secondary Effects)</b> Impacts on the environment, which are not a direct result of the project, often produced away from the project site or because of a complex pathway.
	<b>Cumulative Effects</b> The addition of many minor or significant effects, including effects of other projects, to create larger, more significant effects.
	<b>'Do-Nothing Effects'</b> The environment as it would be in the future should the subject project not be carried out.
	<b>'Worst case' Effects</b> The effects arising from a project in the case where mitigation measures substantially fail.
	<b>Indeterminable Effects</b> When the full consequences of a change in the environment cannot be described.
	<b>Irreversible Effects</b> When the character, distinctiveness, diversity or reproductive capacity of an environment is permanently lost.
	<b>Residual Effects</b> The degree of environmental change that will occur after the proposed mitigation measures have taken effect.
	<b>Synergistic Effects</b> Where the resultant effect is of greater significance than the sum of its constituents, (e.g. combination of SO <sub>x</sub> and NO <sub>x</sub> to produce smog).

## Appendix III - Competency of Author

The author, Paul Fingleton, has an MSc in Rural and Regional Resources Planning (with specialisation in EIA) from the University of Aberdeen. Paul is a member of the International Association for Impact Assessment as well as the Institute of Environmental Management and Assessment. He has over twenty-five years' experience working in the area of Environmental Assessment. Over this period, he has been involved in a diverse range of projects including contributions to, and co-ordination of, numerous complex EIARs and EIA screening reports. He has also contributed to and supervised the preparation of numerous AAs and AA screenings.

Paul is the lead author of the current EPA Guidelines<sup>4</sup> and accompanying Advice Notes<sup>5</sup> on EIARs. He has been involved in all previous editions of these statutory guidelines. He also provides a range of other EIA related consultancy services to the EPA. Paul is regularly engaged by various planning authorities and other consent authorities to provide specialised EIA advice.

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<sup>4</sup> *Guidelines on the information to be contained in Environmental Impact Assessment Reports*, EPA, 2017 (Draft)

<sup>5</sup> *Advice notes on current practice in the preparation of Environmental Impact Assessment Reports*, EPA, 2003