MetroLink

Transport Infrastructure Ireland

Note on Plan Level Biodiversity Policy Compliance

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MetroLink

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Introduction

The note below provides some additional discussion and context to those policies and objectives in the *Dublin City Development Plan 2022-2028*, the *Fingal Development Plan 2023–2029* and the *Fingal Biodiversity Action Plan 2023-2030* that the proposed Project is not fully consistent with, as listed in the EIAR Biodiversity Update Report (Section 8).

As noted in Section 8 of the EIAR Biodiversity Update Report, and as discussed below, TII have reached agreement with both Dublin City Council and Fingal County Council to include additional conditions in the Railway Order relating to the mitigation strategy which have the effect of moving the MetroLink project further towards compliance with certain plan level biodiversity protective policies and objectives.

Linear infrastructure projects with above ground works like MetroLink will, by their nature and length, inevitably result in some degree of unavoidable habitat loss and fragmentation of green infrastructure and riparian corridors. Many of the plan policy and objective inconsistency issues discussed below arise as a result of the preliminary design of the MetroLink being finalised before the policy or objective was adopted post the Railway Order application being submitted to An Bord Pleanála, limiting design options and potential solution that can be employed within the proposed Project boundary and what is a very restricted development extent along the scheme.

Dublin City Development Plan 2022-2028

GI16 Habitat Creation and New Development | That new developments (as appropriate) will be required to support local biodiversity and incorporate biodiversity improvements through urban greening and the use of nature-based infrastructural solutions that are of particular relevance and benefit in an urban context. Opportunities should be taken as part of new development to provide a net gain in biodiversity and provide links to the wider Green Infrastructure network. All suitable new buildings will be required to incorporate swift nesting blocks into the building fabric.

The policy requirements for new developments in relation to supporting local biodiversity and incorporating nature-based and urban greening biodiversity improvements are qualified with 'as appropriate' and, therefore, are not required for all developments.

Nevertheless, the MetroLink project is employing nature based solutions, including Sustainable Urban Drainage Systems elements[1], and urban greening throughout DCC. These approaches also contribute to providing access to nature for amenity and community interaction in DCC. In terms of trees, more are being planted than are being removed in DCC which will contribute to urban greening biodiversity improvements and trees act as a nature based solution to dampen noise, slow rainfall runoff, manage airborne pollution and cool the air. Swales, rain gardens, green walls/roofs (at Griffith Park Station and Glasnevin Station), trees and other associated landscape design proposals, SuDs elements, and planting lists are included within the drainage and landscape design across DCC to sustainably manage surface water runoff. The landscape design proposals are shown on the Structures Details Book 2 of 3 drawings with drainage design elements shown on the Utilities Surface Water Book 4 of 4 Dublin City Council drawings.

Equally, new developments taking opportunities to provide a net gain in biodiversity and to provide links to the wider green infrastructure network are qualified with 'should' and, therefore, are also not required for all developments. However, the landscape design proposals for the DCC stations will enhance the biodiversity value of the local environment through introducing greater habitat and structural diversity (i.e. improve green space quality from a biodiversity perspective) and will re-establish green infrastructure links to the wider green infrastructure network that are affected during the construction period.

It is a requirement under this policy for all suitable new buildings to incorporate swift nesting blocks into the building fabric. Although Glasnevin Station is theoretically suitable for erecting swift boxes in terms of height above ground (>5m) and having clear adjacent air space, best practice is not to place swift nest boxes next to plate glass windows as they pose a collision risk hazard[2]. Given the Glasnevin Station is almost entirely constructed of glass, it would not be appropriate to erect swift nest boxes on that structure.

GI29 Protect Character of River Corridors | To protect, maintain, and enhance the watercourses and their river corridors in the city and to ensure that development does not cover or encroach upon rivers and their banks. To maintain natural river banks and restore them as part of any new development. The creation and/or enhancement of river corridors will be required and river restoration opportunities where possible will be supported to help improve water quality, and ecology, provide natural flood relief as well as providing amenity and leisure benefits.

The MetroLink project only interacts directly with two watercourses or river corridors in DCC: the Royal Canal and the River Tolka.

[1] The following conditions related to SuDS provisions will also be included in the Railway Order, as agreed between TII and DCC in their letter of the 15th February 2024 – 17. Item 2 The Project will incorporate Sustainable Drainage Systems in the management of surface water, soft landscaping will be preferred where practicable and the SuDs design will refer to the new Dublin City Council Sustainable Drainage Design and Evaluation Guide published in 2021

[2] https://birdwatchireland.ie/app/uploads/2019/10/Saving-Swifts-Guide_pdf.pdf

At the Royal Canal, the proposed works to construct Glasnevin Station will temporarily encroach upon the channel for a c.30 month period which is not fully consistent with DCC's policy to 'ensure that development does not cover or encroach upon rivers and their banks'. However, as the Royal Canal is an artificial channel and not a river, this element of the policy does not strictly apply. Nevertheless, the canal will be reinstated to its current state following the completion of construction works. As a man made and maintained navigation channel the policy elements related to the restoration or enhancement of natural river banks and river corridors are not relevant.

At the River Tolka, the MetroLink project does not interact directly with the river channel. MetroLink does involve construction works on the north bank of the river (see Alignment Details Book 2 of 2, drawing ML1-JAI-ARD-ROUT_XX-DR-Y-03073 and Structures Details Book 2 of 3, drawing ML1-JAI-SRD-ROUT_XX-DR-Y-02051) and is, therefore, not fully consistent with DCC's policy to 'ensure that development does not cover or encroach upon rivers and their banks'.

It is noted, however, that the north bank of the River Tolka along this stretch of the river is not 'natural' and comprises a retaining wall and railing which separates the river from a narrow amenity grassland strip, paved pathway and linear band of mixed broadleaved woodland beyond. Therefore, the policy element to 'maintain natural river banks and restore them as part of any new development' is not relevant in this case.

As the spatial extent of river corridors, including the River Tolka, are not defined in the Plan it is open to interpretation. Although the MetroLink project will change the overall character of the lands adjacent to the north bank of the River Tolka through the introduction of built infrastructure associated with the proposed station, the creation of extensive wildflower meadow, woodland, swale and feature planting through the landscape design proposals (Structures Details Book 2 of 3, drawing ML1-JAI-SRD-ROUT_XX-DR-Y-02051) will enhance the river corridor from a biodiversity perspective.

River restoration works would not be possible or practical here within the confines of the proposed Project boundary, which does not include the river channel or any natural river bank habitat.

GI41 Protect Existing Trees as Part of New Development | To protect existing trees as part of new development, particularly those that are of visual, biodiversity or amenity quality and significance. There will be a presumption in favour of retaining and safeguarding trees that make a valuable contribution to the environment.

The MetroLink project will result in the loss of 392 trees in DCC. Although the policy, as worded, does not strictly prohibit the felling of trees, it could be interpreted that as a result of the number of trees being felled to facilitate the construction of MetroLink the project is not fully consistent with DCC's policy to protect existing trees as part of new development.

Linear infrastructure projects with above ground works like MetroLink will, by their nature and length, inevitably result in some degree of unavoidable tree loss. However, the landscape design proposals include for replacement tree planting at the station locations in DCC where trees are being felled.

In addition to the landscape design proposals, the following conditions will also be included in the Railway Order, as agreed between TII and DCC in their letter of the 15th February 2024: 25. Item 9. *The number of trees removed shall be minimised and any trees removed shall be replaced with new appropriate tree specimens*. It is proposed to plant 500 semi-mature trees in DCC.

The combination of landscape design proposals and the condition agreed with DCC to replace all trees being felled will ensure the MetroLink project, although it is not fully consistent with DCC's policy GI41 to protect existing trees as part of new development, will result in an overall net gain in tree numbers (108) in DCC.

GIO23 Manage / Protect / Enhance Parks | To continue to manage and protect and/or enhance the city's parks and public open spaces to meet the social, recreational, conservation and ecological needs of the

city and to consider the development of appropriate complementary facilities which do not detract from the amenities of spaces.

This is an objective of, and for, DCC in their parks management role rather than a restriction being imposed specifically on development projects. The MetroLink project is directly impacting on and introducing built infrastructure into St. Stephen's Green, the Mater Park, Griffith Park and Albert College Park. In all locations, the primary and longer term ecological impacts and effects are associated with tree loss which in turn affects fauna species such as bats and birds.

The landscape design proposals include for elements of woodland, tree, shrub, swale, wildflower meadow or feature planting in different combinations across the city's parks, which generally retain or introduce greater habitat and structural diversity. The landscape design proposals are set out in the Railway Order documents as follows, with plant lists provided in the Materials Palette (pages 89 to 105):

- Albert College Park

  The general landscaping arrangement is shown on drawing ML1-JAI-SRD-ROUT_XX-DR-Y-03001 (Structures Details, Book 3, page 81 of 89)

- Griffith Park

  The general landscaping arrangement is shown on drawing ML1-JAI-SRD-ROUT_XX-DR-Y-02051 (Structures Details, Book 2, page 15 of 61)

- Mater Park

  The general landscaping arrangement is shown on drawing ML1-JAI-SRD-ROUT_XX-DR-Y-02065 (Structures Details, Book 2, page 29 of 61)

- St. Stephens Green

  The general landscaping arrangement is shown on drawing ML1-JAI-SRD-ROUT_XX-DR-Y-02084 (Structures Details, Book 2, page 48 of 61)

In addition to the landscape design proposals, the following conditions will also be included in the Railway Order, as agreed between TII and DCC in their letter of the 15th February 2024:

- 17. Item 2: *The Project will incorporate Sustainable Drainage Systems in the management of surface water, soft landscaping will be preferred where practicable and the SuDS design will refer to the new Dublin City Council Sustainable Drainage Design and Evaluation Guide published in 2021*.

- 25. Item 9. *The number of trees removed shall be minimised and any trees removed shall be replaced with new appropriate tree specimens*.

- 27. Item 1: *With regard to 'park' works, the following information shall be submitted to the planning authority for written agreement at detail design stage: (iii) A landscape plan with details indicating the park's landscape reinstatement works, hard and soft works, and boundaries design, prepared by a landscape architect.*

- 27. Item 2: *Details of replacement tree planting and pitch drainage and irrigation details at Griffith Park Station shall be provided to the planning authority prior to the commencement of development*.

- 28. Item 2. *Bats: mitigation through a programme of replacing hedges and trees years in advance of construction allowing for hedgerows and trees to mature and reduce impacts when construction takes place in accordance with the Railway Order. Details to be agreed with the planning authority*.

The combination of the landscape design proposals and the additional conditions agreed with DCC will ensure the ecological functioning of the city's parks is protected and enhanced in line with DCC's objective GIO23 regarding the ecological needs of the city's parks.

Fingal Development Plan 2023–2029

Policy GINHP2 – Protection of Green Infrastructure | Ensure that areas and networks of green infrastructure are identified, protected, enhanced, managed and created to provide a wide range of environmental, social and economic benefits to communities.

Policy GINHP2 is the overarching strategic policy in the Fingal Development Plan 2023–2029 (FDP) relating to FCCs commitment to identify, protect, enhance, manage and create green infrastructure networks.

Green infrastructure in Fingal is defined in the FDP (Section 9.6.1), with reference to the Fingal Ecological Network, as:

- Core Biodiversity Conservation Areas (e.g. European sites and proposed Natural Heritage Areas)
- Ecological Buffer Zones around Core Areas
- Nature Development Areas
- Ecological Corridors and Stepping-Stones including Trees and Hedgerows

As of policy of and for FCC, the 'identification' and 'management' of green infrastructure networks are the responsibility and function of FCC and, therefore, are not directly relevant to the MetroLink project. The landscape design proposals associated with the MetroLink project will enhance and create new green infrastructure, contributing to the existing green infrastructure network in FCC.

However, linear infrastructure projects, like MetroLink, with above ground works and associated built infrastructure will, by their nature and length, inevitably result in some degree of unavoidable green infrastructure loss and fragmentation. Therefore, the MetroLink project is not fully consistent with the policy aims to protect green infrastructure.

The MetroLink project does not have any significant residual effects on the core biodiversity conservation areas or the associated ecological buffer zones defined in the (e.g. associated with European sites and proposed Natural Heritage Areas) and, as such, does not affect FCCs aims under Policy GINHP2 in that regard.

Equally, as the Metrolink does not impact on or result in any significant residual effects on the nature development areas defined in the Fingal CDP (quarries, golf courses or demesnes), the project does not affect FCCs aims under Policy GINHP2 in that regard.

The MetroLink project is not fully consistent with Policy GINHP2 for certain elements of the project with respect to the protection of existing green infrastructure relating to ecological corridors (i.e. river corridors), trees and hedgerows. This is discussed in more detail below under policies GINHP10, GINHP20 and GINHP21, and objectives GINHO2, GINHO4, GINHO21, GINHO30, GINHO41, GINHO44, DMSO125, DMSO140, DMSO154, DMSO155, DMSO156, DMSO159 and DMSO160.

Policy GINHP10 – Green Infrastructure and Development | Seek a net gain in green infrastructure through the protection and enhancement of existing assets, through the provision of new green infrastructure as an integral part of the planning process, and by taking forward priority projects including those indicated on the Development Plan Green Infrastructure maps during the lifetime of the Development Plan.

Linear infrastructure projects, like MetroLink, with above ground works and associated built infrastructure will, by their nature and length, inevitably result in some degree of unavoidable green infrastructure loss and fragmentation. Therefore, the MetroLink project does not achieve a net gain in green infrastructure extent. The

effects of green infrastructure loss are minimised across much of the project where MetroLink is underground and elsewhere are enhanced, in terms of their biodiversity value, via the landscape design proposals set out in the Landscaping Details drawings and planting lists (Materials Palette, pages 89 to 105) submitted with the Railway Order application.

Policy GINHP20 – Mammal Ledges | Protect the ecological corridor function along rivers by including mammal ledges or tunnels in new bridges over any of the main rivers: Liffey, Tolka, Pinkeen, Mayne, Sluice, Ward, Broadmeadow, Ballyboghil, Corduff, Matt and Delvin. New bridge structures will also cater for Dipper boxes and Bats where possible. Where new road infrastructure crosses significant urban ecological corridors, tunnels shall be installed underneath the road to facilitate movement of small mammals and amphibians.

Objective DMSO159 – Inclusion of Mammal Ledges or Tunnels | Protect the ecological corridor function along rivers by including mammal ledges or tunnels in new bridges over any of the main rivers: Liffey, Tolka, Pinkeen, Mayne, Sluice, Ward, Broadmeadow, Ballyboghil, Corduff, Matt and Delvin. New bridge structures will also cater for Dipper boxes and Bats where possible. Where new road infrastructure crosses significant urban ecological corridors, tunnels shall be installed underneath the road to facilitate movement of small mammals and amphibians.

The MetroLink project will require the construction of new watercourse crossings over the following main rivers, as defined in the policy and associated objective: Mayne, Sluice, Ward and Broadmeadow.

The crossing of the Ward and Broadmeadow Rivers consists of an elevated viaduct structure across the floodplain of both watercourses (see Structures Details Book 3 of 3, drawing ML1-JAI-SRD-ROUT_XX-DR-Y-04002). This structure does not include mammal ledges or tunnels and, technically, is not fully consistent with the requirement to provide those facilities for new bridges in Policy GINHP20. However, as an elevated viaduct structure which clear spans both watercourses, the structure does not require a mammal ledge or tunnel to maintain the ecological corridor function associated with the Ward and Broadmeadow Rivers.

The crossing of the Sluice River, and an associated unnamed tributary, include for a mammal ledge (see Section 15.5.2.4.2 of the EIAR) and, therefore, complies with the requirements of Policy GINHP20.

The culvert over the River Mayne, under the North Main Access road (see Alignment Details Book 1 of 2, drawing ML1-JAI-ARD-ROUT_XX-DR-Y-03044) does not include mammal ledges or tunnels and, therefore, is not fully consistent with the requirement to provide those facilities for new bridges in Policy GINHP20. However, this crossing of the River Mayne is at the upper end of the catchment with the watercourse terminating in the grounds of Dublin Airport c.500m upstream (See Figure 18.13 of the EIAR) and, therefore, any impacts on the ecological corridor function in this area are minimal.

The existing culvert at the Santry River does not have mammal passage facilities and none are proposed as part of the culvert extension associated with the MetroLink project. As this is not a new bridge structure, the policy does not apply in this instance.

None of the crossing structures associated with the Mayne, Sluice, Ward or Broadmeadow Rivers incorporate dipper or bat boxes. However, it is not a requirement for new bridge structures to incorporate dipper or bat boxes and, therefore, the MetroLink project is fully consistent with Policy GINHP20 in that regard.

As the MetroLink project is not road infrastructure, the requirement to install tunnels for small mammals and amphibians does not apply.

Policy GINHP21 – Protection of Trees and Hedgerows | Protect existing woodlands, trees and hedgerows which are of amenity or biodiversity value and/ or contribute to landscape character and ensure that

proper provision is made for their protection and management in line with the adopted Forest of Fingal-A Tree Strategy for Fingal.

Objective DMSO125 – Management of Trees and Hedgerows | Protect, preserve and ensure the effective management of trees and groups of trees and hedgerows.

The MetroLink project will result in the loss of 2,753 trees and c.6.43km of hedgerow in FCC and, therefore, is not fully consistent with FCC's policy to protect trees and hedgerows.

Linear infrastructure projects with above ground works like MetroLink will, by their nature and length, inevitably result in some degree of unavoidable tree and hedgerow loss in urban, suburban and countryside areas.

The landscape design proposals include for replacement tree planting across FCC – see the Landscaping Details drawings submitted with the Railway Order application. Measures for the protection of vegetation to be retained is included in Section 15.5.1.2.2 and in Appendix A5.1 (Construction Environmental Management Plan) of the EIAR

In addition to the landscape design proposals, the following conditions will also be included in the Railway Order, as agreed between TII and FCC in their letter of the 1st March 2024:

4 The following conditions shall be applied in respect of landscaping

(a) Prior to the commencement of construction works on site, a meeting with the Site Foremen, the appointed Arborist and the Parks Officer from the Parks & Green Infrastructure Division shall take place on site to discuss tree protection measures with details of the arrangements for the implementation, supervision and monitoring of works in accordance with the EIAR. TII will work collaboratively with Fingal County Council, to agree additional landscaping and planting, sharing of replacement plans and method statements for Fingal County Council approval.

(e) Any trees or hedgerows that require removal to facilitate the development shall be replaced. Full details of all proposed tree and hedgerow planting shall be submitted to and agreed in writing with Fingal County Council prior to commissioning of the proposed development. This shall be quantified through mapping and include planting and maintenance specifications, including cross-section drawings, use of guards or other protective measures and confirmation of location, species and sizes, nursery stock type. All tree planting shall be carried out in accordance with the agreed plans. Any trees that are found to be dead, dying, severely damaged or diseased within five years of the completion of the development, shall be replaced in the next planting season by specimens of similar size and species in the first suitable planting season.

(g) TII shall work collaboratively with Fingal County Council to quantify, through mapping, the tree & hedgerow loss and agree additional landscaping and planting, sharing of replacement plans and method statements for the written agreement of Fingal County Council prior to the commencement of development.

The combination of landscape design proposals and the condition agreed with FCC to protect retained trees and hedgerows and replace all trees and hedgerows being removed (it is proposed to plant 3,500 semi-mature trees in FCC) will ensure the MetroLink project, although it is not fully consistent with FCC's policy GINHP21 or objective DMSO125 to protect, preserve and manage existing trees and hedgerows, will ensure no net loss of hedgerow length and an overall net gain in tree numbers (747) in FCC.

Objective GINHO2 – Fragmentation | Reduce fragmentation and enhance the resilience of Fingal's green infrastructure network by strengthening ecological links between urban areas, Natura 2000 sites, proposed Natural Heritage Areas, parks and open spaces and the wider regional network by connecting all new developments into the wider green infrastructure network.

Objective GINHO4 – Green Infrastructure and Development | Resist development that would fragment or prejudice the County's strategic green infrastructure network.

Objective GINHO21 – Integration of Green Infrastructure | Avoid the fragmentation of green spaces in site design and to link green spaces /greening elements to existing adjacent green infrastructure / the public realm where feasible and to provide for ecological functions.

Linear infrastructure projects, like MetroLink, with above ground works and associated built infrastructure will, by their nature and length, inevitably result in some degree of unavoidable green infrastructure fragmentation. Therefore, the MetroLink project cannot reduce green infrastructure fragmentation.

Despite the green infrastructure fragmentation associated with the above-ground MetroLink sections, the landscape design proposals do introduce new green infrastructure elements along the alignment which enhance and connect the project into the wider green infrastructure network by virtue of the extent of wetland, woodland, grassland and tree planting, along the full extent of the above-ground sections of alignment. Refer to the landscape design proposals set out in the Landscaping Details drawings and planting lists (Materials Palette, pages 89 to 105) submitted with the Railway Order application.

At Lissenhall/Estuary, north of Ennis Lane, the surface section will introduce additional habitat fragmentation. However, the landscape design proposals introduce greater habitat and structural diversity locally through the creation of woodland, wild flower meadow, and wet grassland/swale habitats.

From south of Ennis Lane, through the Broadmeadow and Ward River corridors, to the southern end of Balheary Park, whilst the retained cut and the surface sections introduce additional habitat fragmentation the extensive viaduct section maintains good habitat and green infrastructure connectivity through this area; particularly at the Broadmeadow and Ward Rivers. The landscape design proposals add to the biodiversity value of the green infrastructure along much of this corridor through the wetland, woodland, wet grassland/swale and wild flower meadow habitat, increasing the habitat and structural diversity.

Along the R132 corridor, significant green infrastructure fragmentation along an east-west axis already exists due to the R132 and along a north-south axis due to the R125/R836, R106, Seatown Road and R125 roads. Although the MetroLink projects adds to the east-west fragmentation, it is not significant given the high degree of landscape connectivity preserved by the cut and cover sections and the improved biodiversity value of the green infrastructure along much of this corridor associated with the landscape design proposals; introducing greater habitat and structural diversity locally through the creation of wetland, woodland and wild flower meadow habitats.

Although the surface section will introduce additional habitat fragmentation in the Fosterstown area, the culverts and mammal ledges associated with the two watercourses maintain the functioning of the ecological corridors, as do the tunnel portal and cut and cover sections at the southern end which connect the extensive north-south linear woodland and wildflower meadow planting through this area.

At Dardistown, the surface sections and depot will, due to the extent of new infrastructure here, introduce additional habitat and green infrastructure fragmentation. However, the landscape design proposals do provide for a high degree of reconnection to the surrounding green infrastructure network as a result of the peripheral linear woodland and wildflower meadow planting (introducing additional habitat and structural diversity locally), and the green corridor being maintained over the tunnel portal section, along the realigned River Mayne corridor. The surface section through Santry Lodge and St. Annes will introduce additional local habitat and green infrastructure fragmentation along an east-west axis. However, the landscape design proposals do provide for a high degree of reconnection to the surrounding green infrastructure network as a result of the linear woodland planting along either side of the alignment through this area, in conjunction with the cut-and-cover section at the southern end. The landscape design proposals will introduce additional habitat diversity locally through wildflower meadow planting associated with the attenuation ponds.

The elements included within the landscape design proposals (e.g. wetland, woodland, grassland, tree, shrub and hedgerow planting) provide for a range of ecological function from managing air quality and water quality, regulating surface water runoff and flooding, providing habitat for pollinators, along with amenity and recreational opportunities.

Objective GINHO30 – Infrastructure and Net Biodiversity Gain | All greenway and infrastructure projects are to have a net biodiversity gain and this principle shall be incorporated from the start of the project.

As the Fingal Development Plan 2023–2029 was adopted after the MetroLink project Railway Order application was made, biodiversity net gain principles have not, and could not have, been incorporated from the start of the project and the MetroLink project does not achieve a net biodiversity gain. However, the the landscape design proposals (e.g. wetland, woodland, grassland, tree, shrub and hedgerow planting) will introduce greater habitat and structural diversity locally across FCC (see discussion on GINHO4, GINHO21, GINHP21 and DMSO125).

Objective GINHO41 – Protection of Rivers | Protect rivers, streams and other watercourses and maintain them in an open state capable of providing suitable habitat for fauna and flora, including fish.

The MetroLink project will require the construction/modification of watercourse crossings over the following rivers: Santry, Mayne, Sluice, Ward and Broadmeadow.

The crossing of the Ward and Broadmeadow Rivers consists of an elevated viaduct structure across the floodplain of both watercourses (see Structures Details Book 3 of 3, drawing ML1-JAI-SRD-ROUT_XX-DR-Y-04002) which clear spans the rivers, maintaining them in an open state capable of providing suitable habitat for fauna and flora, including fish.

Sections of the Santry River and River Mayne will be diverted and habitat lost due to culverting and the installation of permanent drainage discharge outfalls, and a section of the Sluice River and an unnamed tributary will be subject to habitat loss due to culverting and the installation of permanent drainage discharge outfalls (see Table 15.17 of the EIAR). Therefore, these elements of the MetroLink project are not fully consistent with the requirement to maintain watercourses in an open state in Objective GINHO41

Despite closing in sections of the Santry, Mayne and Sluice Rivers through introducing or increasing culverting, the crossing structures have been designed in consultation with IFI and in accordance with best practice guidance (see Section 15.5.1.13.1 of the EIAR) and will remain capable of providing suitable habitat for flora, fauna and fish in the context of the wider catchment of affected watercourses.

Objective GINHO44 – Setback of New Surface Water Drainage Outfalls | Set back new surface water drainage outfalls from the main river channel on the landward edge of the floodplain or a designed wetland feature to cater for water quality improvement before the surface discharges into the river.

The new surface water drainage outfalls (for locations see Figures 18.10 to 18.14 of the EIAR) are not set back from the main river channels on the Broadmeadow, Ward, unnamed tributary of the Greenfield, Sluice and unnamed tributary, Mayne and Santry Rivers and, therefore, are not fully consistent with the requirements of Objective GINHO44.

Objective DMSO140 – Protection of Existing Landscape | Protect existing landscape features such as scrub, woodland, large trees, hedgerows, meadows, ponds and wetlands which are of biodiversity or amenity value and/or contribute to landscape character and ensure that proper provision is made for their protection and management.

The MetroLink project will result in the loss of habitat areas in FCC (see Table 8 of the EIAR Biodiversity Update Report) and, therefore, is not fully consistent with FCC's policy to protect landscape features such as scrub, woodland, large trees, hedgerows, meadows, ponds and wetlands.

Tree and hedgerow loss, in terms of consistency with the biodiversity protective policies in the Fingal Development Plan 2023–2029, are covered above under Policy GINHP21 and Objective DMSO125.

Despite those habitat losses, which are not fully consistent with Objective DMSO140, the landscaping design proposed for the MetroLink project ensures it avoids any likely significant effects on all habitats of a local biodiversity value or higher, save for the locally significant residual effect resulting from the loss of c.2.32km of drainage ditch habitat. Linear infrastructure projects with above ground works like MetroLink will, by their nature and length, inevitably result in some degree of unavoidable loss of landscape features and habitat which are of a biodiversity value.

As noted in Section 15.8.1 of the EIAR and in Section 2.6 of the EIAR Biodiversity Update Report, wetland habitats proposed as part of the proposed Project may compensate for the loss of drainage ditch habitat to a degree, however, it is not considered to be a like-for-like compensation in the context of the EIAR assessment. Nevertheless, it is worth noting in a biodiversity value context that creating wetland habitats in the locations proposed in the landscape design (i.e. at Lissenhall, Balheary Park and along the R132 at Ch2+900) will greatly contribute to the biodiversity value of those areas as wetland habitats are currently absent locally (see the Landscaping Details drawings submitted with the Railway Order application, drawings 00001 to 00003).

Objective DMSO154 – Ecological Corridors | Protect and enhance the ecological corridors along the following rivers in the County by ensuring that no development takes place, outside, development boundaries within a minimum distance of 48m from each riverbank along the main channels of following rivers Liffey, Tolka, Pinkeen, Mayne, Sluice, Ward, Broadmeadow, Ballyboghil, Corduff, Matt and Delvin, Bracken River, Daws River, Richardstown River, Turvey River (see Green Infrastructure Maps). A minimum 10m wide riparian buffer strip applies to lands within development boundaries. Additional width may be required to provide for additional protections of sensitive habitats, as appropriate.

The MetroLink project includes mitigation measures which prohibit the storage of chemicals or refuelling locations within 10m of any watercourse (see Table 15.23, Section 18.6.1.1 and Appendix A5.1 Construction Environmental Management Plan of the EIAR).

However, the MetroLink project will require development and clearance along the river banks and within 10m of the Broadmeadow, Ward, Sluice and unnamed tributary and River Mayne and, therefore, are not fully consistent with the requirements of Objective DMSO154.

Despite the development and clearance along the river banks associated with the MetroLink project, the mitigation strategy will protect water quality in those river corridors and the landscape design proposals will enhance the ecological quality and functioning of the river corridors in so far as is possible, acknowledging those plan compliance issues relating to river corridors that remain, as set out under GINHP2, GINHP20, GINHO41, GINHO44, DMSO154, DMSO156, DMSO159 and DMSO160.

Objective DMSO155– Ecological Corridors in Urban Areas | Any redevelopment of existing properties and brownfield sites within 25m from each riverbank along the main channels of following rivers Liffey, Tolka, Pinkeen, Mayne, Sluice, Ward, Broadmeadow, Ballyboghil, Corduff, Matt and Delvin, Bracken River, Daws River, Richardstown River, Turvey River shall provide opportunities for multi-functional green infrastructure, including features which intercept and filter surface water from the site before discharging into the river. These features include, but are not limited to: green roofs, reinforced grass parking bays and water gardens. The use of underground attenuation as part of the redevelopment of existing properties or brownfield sites will not be accepted.

On the interpretation that the MetroLink project falls within the meaning of ‘redevelopment of existing properties’ in urban areas, if even only at locations along the alignment which are located at the fringes of the urban environment, and as set out above under Objective DMSO154, the MetroLink project will require development

and clearance along the river banks and within 25m of the Broadmeadow, Ward, Sluice and Mayne Rivers and, therefore, is not fully consistent with the requirements of Objective DMSO155.

Multi-functional green infrastructure is provided for across FCC in terms of including SuDs features (e.g. swales, rain gardens, infiltration trenches, attenuation ponds and green roofs) to intercept and filter surface water from the site before discharging to the receiving surface water drainage network and watercourses. Green infrastructure elements of the drainage and landscape design, such as wetlands and swales, are shown on the Landscaping Details drawings and drainage design drawings (Utilities Surface Water Book 3 of 4 Fingal County Council) submitted with the Railway Order application. Planting mixes associated with the wetland and swale elements of the landscape design proposals are provided in the Materials Palette (pages 89 to 105) submitted with the Railway Order application.

The MetroLink project does include for underground attenuation of surface water runoff throughout and in the drainage catchments discharging to the Broadmeadow, Ward, Sluice and Mayne Rivers (see Utilities Surface Water Book 3 of 4 Fingal County Council for drainage design).

Objective DMSO156 – Development Along Watercourses | Ensure that no development, including clearance and storage of materials, takes place within 10m as a minimum, measured from each bank of any river tributary or small stream or watercourse in the County (see Green Infrastructure Maps).

See note above regarding DMSO154.

Objective DMSO160 – Riparian Corridors | Require development proposals that are within riparian corridors to demonstrate how the integrity of the riparian corridor can be maintained and enhanced having regard to flood risk management, biodiversity, ecosystem service provision, water quality and hydromorphology.

With respect to biodiversity, and as discussed above in relation to Policy GINHP20 and Objectives DMSO159, GINHO41, GINHO44, DMSO154 and DMSO155, the ecological integrity of the riparian corridors is affected as follows:

- Broadmeadow and Ward Rivers

  The ecological functioning of the river corridor is maintained due to the viaduct and clear span nature of crossing structure and the overall biodiversity value is enhanced as a result of the wetland, woodland, wet grassland/swale and wild flower meadow habitat associated with the landscape design proposals and multi-functional green infrastructure provisions included within the drainage design. However, new surface water drainage outfalls are not set back from the main river channels (GINHO44) and development is taking place within the 10m and 25m riparian buffer zones set out in DMSO154 and DMSO155.

- Sluice River

  The ecological functioning of the river corridor is maintained due to the culvert design and inclusion of mammal passage facilities and the overall biodiversity value of associated green infrastructure is enhanced as a result of the linear woodland and wildflower planting associated with the landscape design proposals. However, a section of the river channel is being closed over (GINHO41) new surface water drainage outfalls are not set back from the main river channels (GINHO44) and development is taking place within the 10m and 25m riparian buffer zones set out in DMSO154 and DMSO155.

- River Mayne

  Although the ecological functioning of the river corridor is maintained along much of its length, mammal passage facilities are not included in the proposed culvert (GINHP20 and DMSO159). A section of the

river channel is being realigned and a section closed over (GINHO41), new surface water drainage outfalls are not set back from the main river channels (GINHO44) and development is taking place within the 10m and 25m riparian buffer zones set out in DMSO154 and DMSO155.

- Santry River

  Although the existing ecological functioning of the river corridor is maintained along much of its length, mammal passage facilities are not included in the proposed culvert extension (GINHP20 and DMSO159). A section of the river channel is being realigned and a section closed over due to extension of an existing culvert (GINHO41), new surface water drainage outfalls are not set back from the main river channels (GINHO44) and development is taking place within the 10m and 25m riparian buffer zones set out in DMSO154 and DMSO155.

Fingal Biodiversity Action Plan 2023-2030: Appendix XIV: Planning Requirements – Corridors

These planning requirements relate to the protection of the ecological functioning of river and urban green corridors and are covered above under Policies GINHP2, GINHP10, GINHP20 and GINHP21, objectives GINHO2, GINHO4, GINHO21, GINHO30, GINHO41 and GINHO44, and development management standards DMSO125, DMSO140, DMSO154, DMSO155, DMSO156, DMSO159 and DMSO160.