

APPENDIX 4

INFRASTRUCTURE CAPACITY ASSESSMENT



Appendix 4 – Infrastructure Capacity Assessment

1.0 Introduction

Project Ireland (National Planning Framework (NPF) and the National Development Plan (NDP) seeks the alignment of spatial planning and capital investment. The NPF requires the capacity of Fingal’s infrastructure to be assessed in accordance with National Policy Objective (NPO) 72a. This NPO requires Planning Authorities to apply a standardised, two-tier approach to differentiate between land that is serviced (Tier 1 lands) and land that is serviceable within the lifetime of the Development Plan (Tier 2 lands). This Infrastructure Capacity Assessment allows an informed decision to be made as to whether or not to zone land for residential development as part of the Core Strategy. This has been discussed in more detail in Chapter 2 Planning for Growth, Core Strategy and Settlement Strategy.

This Infrastructure Capacity Assessment has been prepared in accordance with the methodology provided in the NPF and the draft Development Plan Guidelines for Planning Authorities (2021) and has been used to inform the approach to land-use zoning taken in the Core Strategy.

This assessment does not comprise an exhaustive list of requisite infrastructures across the County and is not to be relied upon for Development Management purposes.

2.0 Methodology

The following sections set out an assessment of the capacity of the County’s strategic enabling infrastructure, together with more localised infrastructure provided by Fingal County Council. The assessment focuses predominantly on the provision of infrastructure that is considered to be strategic in nature, as it is considered that the delivery of minor and/or local level infrastructure will be facilitated through the Council’s capital investment works or Development Management process as part of standard developer/ service provider operational works.

This assessment has considered the approved delivery programmes of relevant infrastructure providers in accordance with NPO 73c and Regional Policy Objective (RPO) 5.1.

3.0 Challenges

The strategic infrastructure projects identified in the Eastern and Midlands Region Spatial and Economic Strategy (RSES) are of significance to the future growth of Dublin City and the wider region. The overall water supply and wastewater situation for the Greater Dublin Area (GDA) is critical and urgently requires significant infrastructure investment. The timely provision of integrated region wide public transport projects are also crucial to meeting the prescribed growth targets for Fingal and the wider Dublin City and region.

The delivery of strategic infrastructure in the areas of transport and water services is ultimately dependent upon government policy, the macro-economic environment and the availability of capital, with such projects being within the remit of external infrastructure providers such as Irish Water and the National Transport Authority. In some instances, the timeframe of these provider’s strategic infrastructure capital investment plans and projects is not aligned with the fixed statutory timeframe of the Development Plan.

Most of the land targeted for new housing in Fingal is zoned for residential or mixed-use development. These zonings are aligned to existing and planned public transport corridors and guided by National

policy set out in the NPF and RSES. The full build-out of these areas will accord with the timeframes of the RSES until 2031 and the NPF until 2040, with many running across two or more Development Plan cycles to reach completion. To achieve this high quality, integrated approach to regeneration, it is critical that all of the envelope of these lands are zoned for development and subject to detailed master planning or local statutory plans that address how they will be delivered over time.

This assessment reflects a point-in-time and it is acknowledged that infrastructure requirements may change. The full extent of requisite enabling infrastructure will continue to be assessed through the development management process whereupon detailed assessment will be undertaken. All reasonable efforts have been made to include infrastructure delivery costings where a verifiable source for same has been identified.

4.0 Strategic Infrastructure

4.1 Water Services Infrastructure

Fingal County Council has engaged with Irish Water (IW) during the plan-making process in order to understand the status and capacity of the County's water service infrastructure in accordance with the requirements of the draft *Water Service Guidelines for Planning Authorities (2018)* and draft *Development Plan Guidelines (2021)*.

The *Irish Water Services Strategic Plan (2015)* sets out a number of key projects to maintain and improve existing water services and service further growth. The following infrastructural investments programmed by IW in its Investment Plan are of particular importance in the context of the strategic growth areas identified in the Core Strategy.

4.1.1 Water Supply

The majority of Fingal County Council falls within the water supply zone for the Greater Dublin Area (GDA) and supply in the region is currently limited. IW are currently progressing a number of projects in order to increase supply and improve water quality standards. The long-term development of the Region will require a Water Supply Project.

Table 1 – Strategic Water Supply

Project Name	Project Delivery	Tier
<p>Eastern Midlands Water Supply Scheme</p> <p>The long-term development of the Eastern and Midland Region (EMR) will be dependent on this project. The NPF provides that a new long-term water supply source for the EMR, which includes Fingal, is needed by the mid 2020's, to provide for projected growth up to 2050 and contribute to resilience and security of supply.</p> <p>The project involves a 170km pipeline with supporting infrastructure (water treatment plant, pumping stations and terminal point reservoir) to ensure that the long-term water supply needs of the Region are met in a sustainable manner.</p> <p>IW has concluded a four-phase public consultation process and identified the preferred scheme:</p> <ul style="list-style-type: none"> • Abstraction of water from the Lower Shannon at Parteen Basin. • Water treatment at Birdhill. • Treated water piped to a termination point reservoir at Peamount in south County Dublin, with supplies of treated water available to Midland communities along the route. 	<p>Identified in the NDP 'Strategic Investment Priorities 2018- 2027'. Estimated cost of €1.2 to €1.3 billion (source: NDP).</p> <p>IW are in the process of preparing a SID planning application to An Bord Pleanála for the scheme.</p>	<p>Tier 1 - All sites subject to connection agreement with Irish Water (in line with existing standard practice).</p>

Figure 1 – EMR Water Supply Project (Source: Irish Water)



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4.1.2 Wastewater Infrastructure

A significant part of the City and Suburbs area and the MASP are served by Ringsend Waste Water Treatment Plant which is currently undergoing significant upgrades which will allow the plant to treat increasing volumes of wastewater. In the longer term, the GDA will be dependent on the Greater Dublin Drainage Project to free up capacity at the Ringsend plant.

Table 11.1 in Chapter 11 (Infrastructure and Utilities) highlights Irish Water's 'Statement of Capacity' which contains the broad strategic water and wastewater capacities at present and the relevant infrastructural investments programmed by Irish Water in its Investment Plan.

Swords Wastewater Treatment Works and Portrane Treatment Works have sufficient capacity.

In the Core Area, Portrane and Barnageeragh have capacity and issues in Naul are being addressed under the Small Towns and Villages Growth Programme.

In relation to the wastewater network, Drainage Area Plans are underway for the Metropolitan area settlements with Balbriggan and Skerries due to start in 2022. These will address any outstanding issues.

Localised pressures are also being addressed through the proactive management of surface water inflows all facilitated through proactive Council policy.

Table 2 – Strategic Wastewater Infrastructure

Project Name	Project Delivery	Tier
<p>Ringsend Wastewater Treatment Plant Upgrade Project</p> <p>The Ringsend Waste Water Treatment Plant which, whilst currently overcapacity, is undergoing significant upgrades in response to capacity issues which will allow the plant to treat increasing volumes of wastewater by 2025. This upgrade project will increase the capacity of the Ringsend plant from c. 1.64m population equivalent (Pe) to c. 2.4m PE. This will provide for both existing population and future growth, and bring benefits in terms of health, environmental protection and improved water quality. The project includes:</p> <ul style="list-style-type: none"> • Additional secondary treatment capacity. • Works to facilitate the use of aerobic granular sludge technology in the existing secondary treatment tanks. • expansion of the plant’s sludge treatment facilities. 	<p>Identified in the NDP. Currently under construction and due for completion in 2025. Phased increase in capacity (2.1m Pe in 2022 and 2.4m Pe in 2025). Estimated cost of c. €400m (source: Irish Water).</p>	<p>Tier 1 - All sites subject to connection agreement with Irish Water (in line with existing standard practice).</p>
<p>Greater Dublin Drainage Project (GDDP)</p> <p>The GDDP aims to provide long-term sustainable wastewater drainage and treatment to facilitate the continued social and economic development of the Region. The project involves the provision of new wastewater treatment works, a marine outfall and a new drainage network in the northern part of the GDA. Together, with the upgrade of the Ringsend Wastewater Treatment Plant, these projects are intended to provide adequate wastewater treatment to serve the GDA to 2050. It is anticipated that the GDDP will provide the additional treatment capacity required from the mid-2020s.</p>	<p>Identified in the NDP within the category ‘Strategic Investment Priorities 2018 – 2027’. Planning application is under determination. Construction scheduled for 2022-2026. Estimated cost of c. €500m (source: NDP).</p>	<p>Tier 1 - All sites subject to connection agreement with Irish Water (in line with existing standard practice).</p>

Source: Irish Water

4.2 Transportation Infrastructure

4.2.1 Key Public Transport Projects

The Transport Strategy for the Greater Dublin Area (GDA) 2016-2035 prepared by the National Transportation Authority (NTA), provides for a number of key transport projects of strategic importance which will improve public transport provision across the County, and support ongoing sustainable growth focussed on the integration of land use and transportation. The National Transport Authority (NTA) has published for public consultation a draft Transport Strategy for the Greater Dublin Area 2022-2042 which seeks to update the current strategy and sets out various proposals for future transport investment for the next 20 years. The new strategy commits fully to the existing transformative public transport projects including BusConnects, DART+ and MetroLink as well as LUAS Finglas. The draft strategy also proposes a range of investments across active travel measures

including a revised Cycle Network for the GDA. The following projects are of particular importance in the content of the strategic growth areas identified in the Core Strategy.

Table 3: Key Public Transport Projects (Source: NDP and NTA/TII)

Project Name	Project Delivery	Tier
<p>MetroLink: Metro to Swords</p> <p>MetroLink is the proposed high-capacity, high-frequency, automated rail line running from Swords to Charlemont, linking Dublin Airport, Irish Rail, DART, Dublin Bus and LUAS services, creating fully integrated public transport in the Greater Dublin Area. As well as linking major transport hubs, MetroLink will connect key destinations including Swords and the Airport to the City Centre.</p>	<p>Identified in the NDP and fully supported in the NTA's Draft Transport Strategy 2022-2042. TII due to apply for Railway Order in 2022. 12-18month planning process and project will subsequently be constructed in the years after. It is anticipated that it will take between 6-8 years to complete. Cost estimate not currently available.</p>	<p>Tier 1 - Subject to assessment on site-by-site basis.</p>
<p>BusConnects</p> <p>BusConnects Dublin aims to overhaul the current bus system in Dublin through a 10-year programme of integrated actions to deliver a more efficient, reliable and better bus system. BusConnects includes:</p> <ul style="list-style-type: none"> • Redesign of the bus network with high frequency spines, orbital and regional routes and increased bus services. • New cycle network. • New ticketing and cashless payment system. • New bus stops and shelters with better signage and information. • Bus-based park and rides in strategic locations. • New bus livery and transitioning to a new bus fleet with low emission vehicle technologies.. 	<p>The NDP commits to the substantial delivery of the full BusConnects programme by 2030. Fully supported in the NTA's Draft Transport Strategy 2022-2042. Project is being rolled out on an incremental basis relating to Dublin BusConnects project. Cost estimate not currently available..</p>	<p>Tier 1 - Subject to assessment on site-by site basis.</p>
<p>Luas to Finglas</p> <p>Luas Finglas will create a new public transport connection between the communities of Charlestown, Finglas Village, Finglas west, St. Helena's, Tolka Valley and the city centre and will include the delivery of new cycle and pedestrian infrastructure.</p>	<p>Identified in the NDP and fully supported in the NTA's Draft Transport Strategy for the GDA 2022 - 2042. LUAS Finglas scheduled to go to planning in 2024 and will subsequently be constructed in the years after. Cost estimate not currently available.</p>	<p>Tier 1 - Subject to assessment on site-by site basis.</p>
<p>DART + West</p> <p>Implementation of the DART Expansion Programme which proposes the provision of high frequency DART services including the electrification of the existing Maynooth and M3 Parkway. DART+ West includes the following:</p> <ul style="list-style-type: none"> • Electrification of the Maynooth line from City Centre to Maynooth (40km approx.); • City Centre enhancements at Connolly; • Construction of a new DART depot facility west of Maynooth Station; 	<p>Identified in the NDP and fully supported in the NTA's Draft Transport Strategy for the GDA 2022 - 2042. DART + West currently at public consultation stage. Scheduled to go to planning in 2022 and will be subsequently constructed in the years after subject to obtaining the required Railway Order. Cost estimate not currently available.</p>	<p>Tier 1 - Subject to assessment on site-by site basis.</p>

<ul style="list-style-type: none"> • Integration with a combined metro / rail station to be developed at Glasnevin under the MetroLink project to serve both the Maynooth Line and Kildare Line; • Elimination of level crossings; • Relocation of Docklands Station to integrate with Luas and better serve routes entering the City Centre; and • New grade-separated pedestrian, cycle and vehicle • Crossings as required. 		
<p>DART+ Coastal North Implementation of the DART Expansion Programme which proposes the provision of high frequency DART services including the electrification of the northern rail line to Drogheda. DART+ Coastal North includes the following:</p> <ul style="list-style-type: none"> • Electrification and re-signalling from Malahide to Drogheda; • Subject to modelling and assessment, station modifications to enhance train service capacity (Howth Junction, Clongriffin, Malahide and Drogheda); and • Re-configuration and upgrading of existing rail depots at Drogheda and Fairview. 	<p>Identified in the NDP and fully supported in the NTA's Draft Transport Strategy for the GDA 2022 - 2042. DART + Coastal North due to go to public consultation in early 2022. Cost estimate currently not available.</p>	<p>Tier 1 - Subject to assessment on site-by site basis.</p>

5.0 County Wide Infrastructure

5.1 Roads

It is acknowledged that new street/ road infrastructure and improvements to existing streets/ roads will be required over the period of the Development Plan and in some instances, the development of new areas is predicated on the delivery of new street/ road connections such as the new networks in Kellystown, Castlelands and Barnhill.

5.2 Active Travel – Walking and Cycling

To make active travel an attractive alternative choice to car-based transport on the existing public road network, and to facilitate the provision of well connected, well serviced communities, to create active, healthy communities with ease of access to amenities and services, certain critical factors are required.

A significant allocation of Government funding was announced in 2021 for investment in walking and cycling and Fingal County Council is committed to supporting the roll out of the relevant infrastructure within the lifetime of this Plan.

Fingal County Council will encourage varied and sustainable mobility options in areas that are close to existing public transport links with high concentrations of employment, housing, shopping, amenities and recreation. Fingal County Council supports the development of mobility hubs as places of connectivity where different travel options such as walking, cycling, public transport and shared mobility services, are located together to facilitate ease of access and transition between transport modes. Together with quality public realm and place making, mobility hubs can help create vibrant and liveable places to support the transportation experience.

Fingal County Council seeks to increase the mode share of cycling and to support a cycling culture in the County by continuing to expand the cycle network, bike share schemes, cycling promotion campaigns, speed calming measures and increased publicly accessible cycle parking. Fingal County Council will continue to work with the NTA's revised 'Cycle Network Plan for the Greater Dublin Area' in order to develop a more comprehensive cycle network.

The Council are also committed to providing accessibility for all and to improving the County's pedestrian infrastructure through the Development Management process. The policies and objectives of the Plan seek to deliver on the protection, improvement and expansion of the pedestrian network inclusive of facilities for people with mobility impairment and/ or disabilities linking key public buildings, shopping streets, public transport points and tourist and recreational attractions.

5.3 Surface Water Drainage Infrastructure

Fingal County Council is actively working with IW to rehabilitate and upgrade the water main infrastructure through the roll out of Drainage Action Plans, higher drainage infrastructure design standards and by requiring the separation of foul and surface water drains as part of all new developments. The Council have also implemented a range of new Surface Water Management and Sustainable Drainage Systems (SuDS) development management policies which seek to encourage nature-based solutions to managing surface water at local level in order to reduce the overall volume of surface water run-off and improve water quality of our rivers in line with the requirements of the Water Framework Directive. Fingal County Council has recently prepared a SuDS Guidance Document - '*Green/ Blue Infrastructure for Development*' (Appendix 11), which will guide applicants in the provision of SuDS for new development through the planning process and will promote and support the strategic planning of surface water management in Fingal.

5.4 Community Infrastructure

The NPF tiered approach to zoning does not focus on the community infrastructure element but it is considered of importance in creating sustainable neighbourhoods. Fingal County Council is responsible for the provision of local community infrastructure such as sports facilities and public realm, with capital investment in the County governed by the Council's rolling three-year Capital Programme. The programme is informed by the objectives of the Development Plan and supported by a number of associated development contribution schemes designed to use the development management process to fund its capital projects to deliver greater community amenities and placemaking in line with vision of the draft Development Plan. The Development Plan has also introduced the requirement for a community and social infrastructure audit to be undertaken in support of all residential applications comprising **50 or more units in order** to identify whether there is a need to provide additional facilities to cater for the proposed development.

The Council has also undertaken consultation with the Department of Education as part of the plan-making process to ensure that sufficient land is provided to meet the need for new schools and/ or expansion of existing schools, in line with the requirements of anticipated population growth.

6.0 Core Strategy

6.1 Metropolitan Area Strategic Plan (MASP)

The RSES Metropolitan Area Strategic Plan (MASP) for Dublin identifies a regional framework which aligns population and employment growth in designated Strategic Development Areas (SDAs) with associated transport and infrastructure investment priorities. A key aim of the MASP is to unlock the development capacity of the SDAs by identifying the sequencing of enabling infrastructure. A phased

sequence of infrastructure investment is identified to enable the accelerated delivery of strategic development corridors; within the short term to 2026; the medium term to 2031; and in the long term to 2040.

MASP identifies a number of large-scale strategic sites (strategic development lands) based on key corridors that will deliver significant development (housing and employment development) up to the year 2031. The strategic housing development lands within the Fingal County Council area identified in the RSES are as follows:

Table 4 – MASP Strategic Development Areas (Residential) – Relevant to Fingal County Council

Corridor	Residential Area	Phasing/Enabling infrastructure
City Centre Within the M50 (Multi Modal)	Dunsink – major greenfield landbank with long term potential to develop a new district centre	Long term LUAS extension to Finglas, access, site conditions, feasibility
North – South corridor (DART)	North Fringe – large scale urban expansion creating new communities at Clongriffin-Belmayne (Dublin City) and Baldoyle-Stapolin (Fingal)	Short to Medium term Access to rail station, bus upgrades, new road connections, drainage, parks and social infrastructure
	Donabate – significant residential capacity in this strategically located rapidly growing coastal village	Short term DART expansion, distributor road and railway bridge, social infrastructure, local area water network and storage upgrades
North – West corridor ((Maynooth/ Dunboyne commuter line /DART)	Dublin 15 lands – continued development of Hansfield linked to the future development of Barnhill and Kellytown landbanks to the south and east	Short term Public transport, Clonsilla Station, water network and waste water upgrades.
Metrolink / LUAS Greenline Corridor (Metrolink/ LUAS)	Swords – sequential development of strategic residential sites within Swords and development of Oldtown-Mooretown lands	Short to Medium term Public realm, pedestrian and cyclist provision. Road improvements, BusConnects. Additional runway and improved access (Airport). Waste water upgrades. Local and wider area water network upgrades
	Swords – Lissenhall – new mixed-use urban district on the northern side of Swords linked to delivery of Metrolink	Medium to Long term Improved bus connections, Metrolink, roads improvements and expanded internal road network and waste water upgrades

The LAP's, Masterplans and Framework Plans proposed in the Development Plan are aligned with the MASP SDAs and are, for the most part, informed by short to medium term phasing schedules capable of being implemented over the lifetime of the Development Plan.

6.2 Other Lands

National and regional policy places an emphasis on compact growth and supports the sustainable development of brownfield and infill lands, through consolidation to support the optimal use of the finite resource of land.

The Core Region of the RSES contains a strong network of county and market towns that have a good level of local employment, services and amenities, which serve not just their resident populations but a wider catchment area. The RSES identifies Growth Enablers for the Core Region. Of relevance to Fingal are:

- To promote continued growth at more sustainable rates, while providing for increased employment and improved local economies, services and functions to allow towns become more self-sustaining and to create the quality of life to attract investment.
- Commensurate population and employment growth in Key towns, coupled with investment in enabling transport, infrastructure and services to facilitate the achievement of compact growth targets of at least 30% of all new homes to be within the existing built up area of settlements.
- ‘Catch up’ investment to promote consolidation and improvement in the sustainability of those areas that have experienced significant population growth but have a weak level of services and employment for their residents.
- Diversification and specialisation of local economies with a focus on clustering, smart specialisation, place making and urban regeneration to create the quality of life to attract FDI and indigenous investment and increase high value knowledge-based employment including second site and relocation opportunities.
- Promote the Region for tourism, leisure and recreational activities including development of an integrated greenway network while ensuring that high value assets and amenities are protected and enhanced.

The policies and objectives proposed in the Development Plan are aligned with the Core Region Growth Enablers and are informed by short to medium term phasing schedules capable of being implemented over the lifetime of the development plan.

6.2 Future Development Areas

The RSES applies a medium to long term phasing schedule to the Lissenhall and Dunsink lands in response to their large scale and requirement for significant transport and water services infrastructural investment and further statutory planning.

The Development Plan has responded by identifying these lands, as the ‘long term strategic reserve’. It is the intent of the Council that statutory plans (Local Area Plan or, if designated, a Strategic Development Zone) will be prepared for these lands. In line with the NPF and draft Development Plan Guidelines (2021), any plans carried out on these lands over the course of the development plan period will include an infrastructure capacity assessment.

7.0 Assessment Conclusion

Fingal County Council is exceptional in that the entire development plan area is serviced and no fundamental constraints have been identified. While there may be local infrastructural needs and upgrades needed for certain sites, all lands within the County are serviced and are connected to the public water systems. Furthermore, almost all lands are located proximate to existing and planned public transport corridors. All lands are located alongside existing public road routes and an extensive network of pedestrian and cycle routes are underway.

Table 5: Settlement Capacity Audit – Summary Table

Tier	Settlement	Existing Population	Potential Estimate	Housing
Tier 1 – Serviced Lands	Fingal County Council lands	296,214 (CSO, 2016)	27,957	