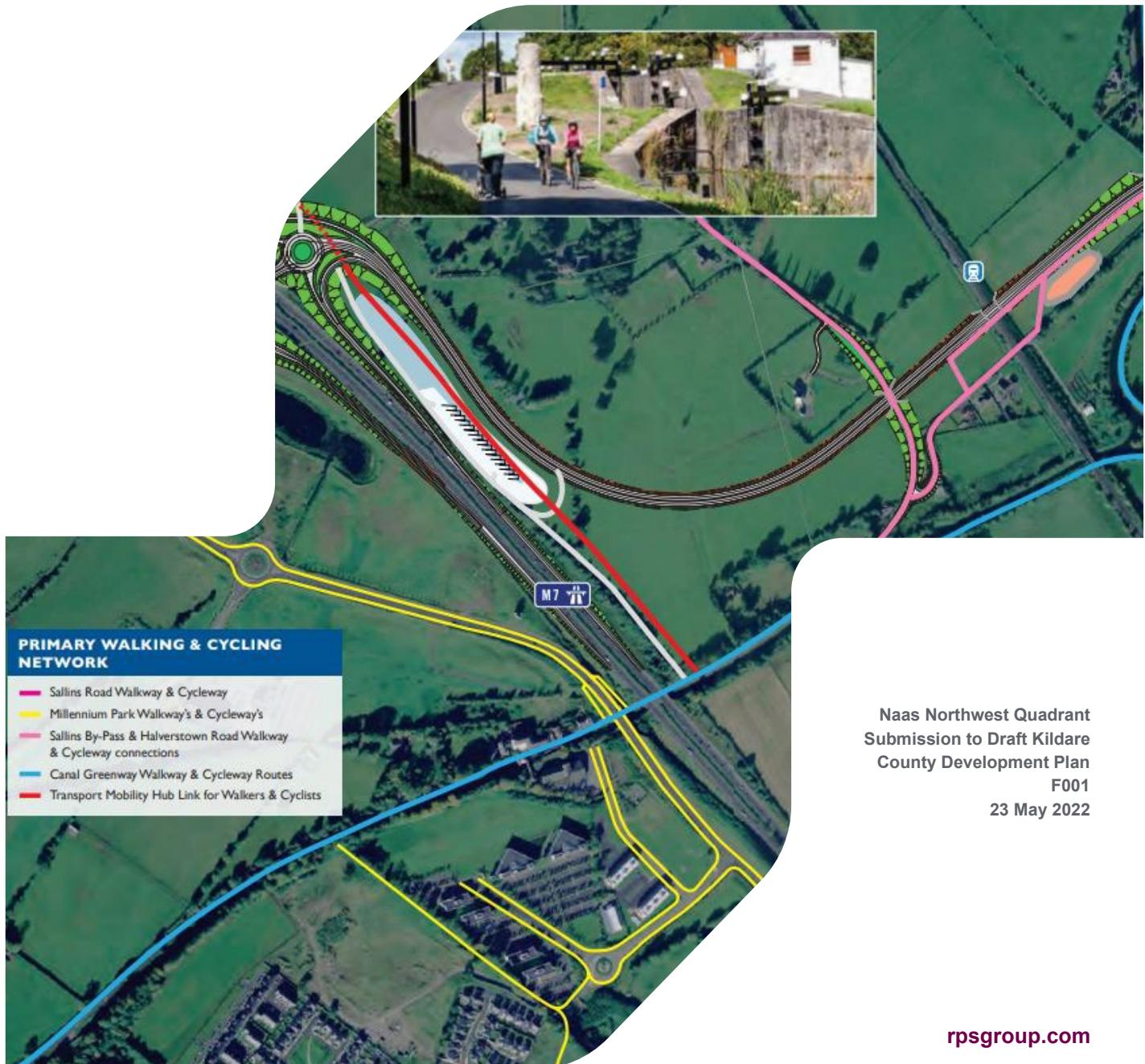


DRAFT KILDARE COUNTY DEVELOPMENT PLAN 2023 – 2029 SUBMISSION

Naas Northwest Quadrant



REPORT

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Prepared for:

RPS

Millennium Falcon Holdings Ltd.

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A Unique Opportunity for Creating an Integrated and Sustainable Transport Mobility Hub.....28

“Naas is dominated by car-based movement patterns as a result of how the town has evolved over the last number of decades. The dispersed and disconnected nature of development that has taken place, has placed limitations on the movement throughout the town.”

Naas Local Area Plan 2021-2027

EXECUTIVE SUMMARY

Our client, Millennium Falcon Holdings Ltd, [REDACTED] who is responsible for the strategically sustainable development of lands within the Naas Northwest Quadrant, Naas, County Kildare welcomes this opportunity to make written submissions to Kildare County Council for consideration between the 14th March 2022 and 24th May 2022 inclusive, following the publication of the *Draft Kildare County Development Plan 2023 – 2029 Issues Paper* by the Council.

The development of Naas and the NWQ as a centre of employment and residential is now being delivered supported by significant private and public investment. All necessary major infrastructure to serve the growth of Naas and development of the NWQ is now in place.

There will be very significant growth in Naas / Sallins in the coming decades. It is imperative that such growth is not reliant on the private car. Instead the requirement to deliver sustainable growth, based on walking, cycling and clean public transport must be key to all land use and transport planning.

It is vital that the *Kildare County Development Plan 2023 – 2029* sets out ambitious sustainable transport projects which will transform public transport within Naas / Sallins.

It is recommended that the following text or objectives be included in the Development Plan:

Recommendation 1

Proposed Objective -Seek to address urban congestion with particular emphasis on facilitating improved bus transport movement and reliability and improved links to bus and railway stations.

Recommendation 2

Proposed Objective - Examine existing public transport links within the county with a view to promoting and facilitating improvements where feasible.

Recommendation 3

Proposed Objective – Support the electrification of rail services within County Kildare, thereby delivering enhanced services and reducing air and noise emissions.

Recommendation 4.1

Proposed Objective -Seek to provide an electric powered BRT service in Naas / Sallins, linking Naas town centre, the Northwest Quadrant, Naas Bus Transport Interchange, Naas and Sallins train station, and Sallins Town Centre.

Recommendation 4.2

Proposed Objective – Seek to provide a bus interchange facility adjacent to the M7 Junction 9A serving local, regional and intercity bus services.

Recommendation 4.3

Proposed Objective – Promote the use of electric buses and BRT within the county and region through the provision of necessary supporting infrastructure.

Recommendation 4.4

Proposed Objective – Provide Park & Ride facilities for those accessing regional / national train services and also those accessing BRT / bus services at Naas / Sallins.

Recommendation 4.5

Proposed Objective – Provide dedicated cycle and pedestrian linkages to Naas / Sallins bus interchange.

Recommendation 4.6

Proposed Objective – Provide a shared and micromobility hub within the Transport Hub including high quality bicycle parking and car share facilities.

1 INTRODUCTION

RPS Group Ltd, West Pier, Business Campus, Dún Laoghaire, County Dublin has been instructed by our client, Millennium Falcon Holdings Ltd, 4C Sycamore House, Millennium Park, Naas, County Kildare, to prepare this submission on the *Draft Kildare County Development Plan 2023 – 2029*.

Our client is responsible for the management and development of extensive lands within Millennium Park, Naas, County Kildare. These lands are located within the Naas Northwest Quadrant, to the north of the town centre, as shown in **Figure 1-1** below.

All the necessary major infrastructure to serve the growth of Naas and the development of these lands is now in place:

- Planning and subsequent funding (through a combination of public and private contributions) for the M7 Osberstown Interchange (directly serving the Naas Northwest Quadrant) and the R407 Sallins Bypass has been secured and construction is now complete;
- M7 Naas to Newbridge Motorway Widening Scheme, is now completed - (total cost of all M7 and Sallins Bypass works c. €110million);
- Upgrade of Osberstown Wastewater Treatment Plant from 80,000PE to 130,000PE (total cost in excess of €80million); and
- Enabling infrastructure (roads and services) within the Northwest Quadrant (total cost c.€53m).

Our client has played a key role in the delivery of transport infrastructure upgrades which have significantly enhanced connectivity within and to / from Naas / Sallins and has secured significant funding for the delivery of the NWQ infrastructure. This includes in excess of €16 million for the design and planning phases and towards the construction of the M7 Osberstown Interchange and the Sallins By-pass. Our client was also instrumental in the provision of the Distributor Road and drainage works within the NWQ.

There is now an opportunity for significant growth within Naas. It is vital that such growth is in accordance with the central tenets of national, regional and local land use and transport policy and that the necessary public transport infrastructure and services be put in place to ensure there is an accelerated shift to sustainable transport modes within Naas.

The acknowledged dependence upon the private motor car must be reduced for now well understood social, economic and environmental reasons.

Such a change can only be delivered by decisive initiatives which fundamentally re-order transport provision and behaviours.

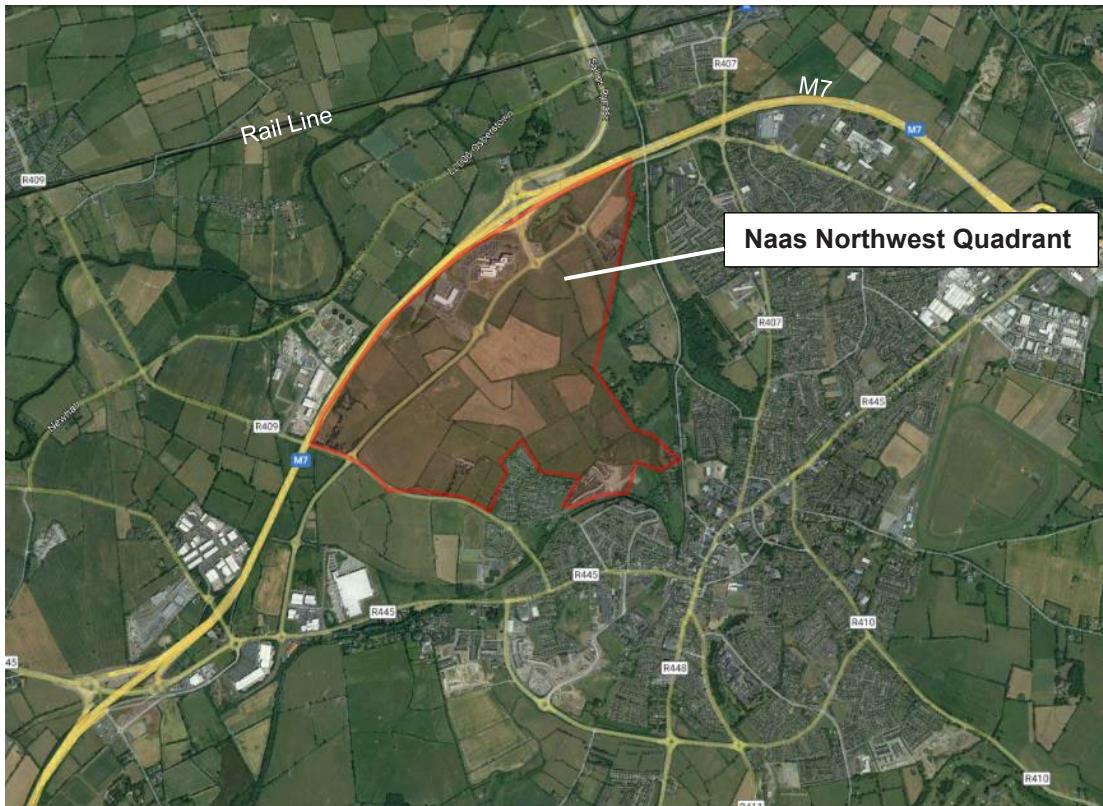


Figure 1-1 Location of Northwest Quadrant Lands within Naas, County Kildare

Our client sought such an approach when engaging in the Issues Paper consultation process and recommended the following objectives *inter alia* should be included in the Draft Development Plan:

Proposed Objective -Seek to address urban congestion with particular emphasis on facilitating improved bus transport movement and reliability and improved links to bus and railway stations.

Proposed Objective - Examine existing public transport links within the county with a view to promoting and facilitating improvements where feasible.

Our client now wishes to bring forward more detailed recommendations for inclusion in the Development Plan. Please find enclosed the document entitled “*A Unique Opportunity for Creating an Integrated and Sustainable Transport Mobility Hub*”. This describes a transport mobility hub including:

- BRT Service linking Naas town centre, the Northwest Quadrant and Sallins and Naas Train Station;
- Bus Transport Interchange (BRT services, Regional and National bus services);
- Park and Ride –rail and bus services; and
- Enhanced cycle and bus linkages.

It is recommended that the provision of the mobility hub as described in the enclosed document be included as an objective in the Development Plan.

1.1 Format of Submission

This submission is set out in five sections:

Section 1 (this section) provides a general introduction and outlines the format of submission.

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Section 2 provides an overview of the national, regional and local land use and transport planning policy pertaining to Naas. This review identifies the strong support for significantly enhanced public transport within Naas.

Section 3 considers the *Draft Kildare County Development Plan 2023 – 2029*;

Section 4 describes more fully the proposed inclusion of an objective for the provision of a mobility hub with integrated bus rapid transit (BRT) services and associated public transport enhancements within Naas / Sallins.

Section 5 provides a summary of the analysis and sets out a number of recommendations.

Our client considers it is vital that the *Kildare County Development Plan 2023 -2029* provides appropriately for the future growth of Naas. Large scale infrastructure is now in place to support this growth, and it must be underpinned by the necessary public transport infrastructure and services to transform Naas and Sallins into a connected, sustainable urban centre.

2 LAND USE AND TRANSPORT NAAS – POLICY CONTEXT

2.1 Introduction

Land use and transport planning policy within Ireland at all levels now wholly supports the concept of sustainable development, which is underpinned by integrated land use and transport, promoting high levels of walking, cycling and public transport.

These policy imperatives have informed the transport and land use policy framework in Naas for close to twenty years. However, public transport linkages between Naas town centre and the Naas and Sallins train station, identified as being required as far back as the *Naas Integrated Framework Plan for Land and Transport Use* (IFPLUT) in 2003, have not yet been fully realised. There is now a need to deliver the public transport infrastructure necessary to transform Naas for the better.

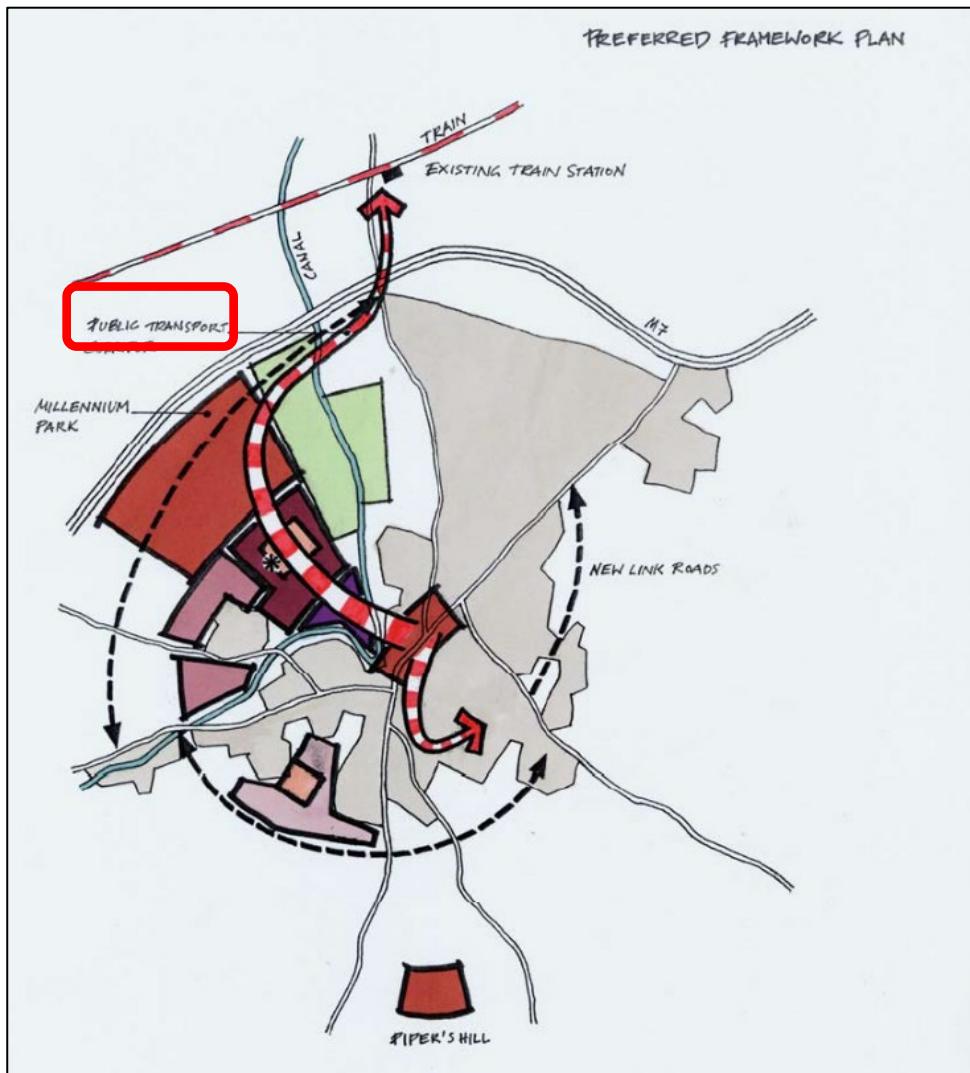


Figure 2-1: Preferred Development of Naas¹

Set out below is a brief consideration of current land use and transport planning policy, particularly as to how it pertains to the provision of public transport services within Naas in the following policy documents:

¹ Source: Figure 8.1 The Preferred Framework Plan, *Naas Integrated Framework Plan for Land Use and Transportation*

- Project Ireland 2040: National Planning Framework (NPF);
- Eastern & Midland Regional Assembly Regional Spatial and Economic Strategy 2019 -2031 (RSES);
- Transport Strategy for the Greater Dublin Area 2016 – 2035 (GDA Transport Strategy);
- Draft Transport Strategy for the Greater Dublin Area 2022 – 2042 (Draft GDA Transport Strategy);
- Naas Local Area Plan 2021 – 2027 (Naas LAP); and
- Naas / Sallins Transport Strategy (Transport Strategy).

2.2 Project Ireland 2040 National Planning Framework (NPF)

The NPF (2018) is the overarching policy and planning framework for the social, economic and cultural development of Ireland. The key factor shaping the NPF is, that by 2040, there will be an additional one million people living and an additional 660,000 people working in Ireland.

The NPF states that the *“Eastern and Midland part of Ireland will, by 2040, be a Region of around 2.85 million people, at least half a million more than today.”*

The NPF sets out guiding principles to cater for such future growth and how transport needs may be met.

“NPO 3a: At least 40% of all new housing to be delivered nationally within the existing built-up areas of cities, towns and villages on infill and/or brownfield sites;

NPO 9: Settlements outside of ‘City and Suburbs’ may be identified for significant (i.e. 30% or more) rates of population growth at regional and local planning stages. The NPF makes reference to the fact that these settlements may lie within the commuter catchment of the City or in areas that have potential for high sustainable mode shares. This would align with settlements along the existing rail lines and future high capacity transport corridors in the GDA;

NPO 27: Ensure the integration of safe and convenient alternatives to the car into the design of our communities, by prioritising walking and cycling accessibility to both existing and proposed developments, and integrating physical activity facilities for all ages;”

These principles require there to be an integrated approach which exploits local strengths and provides the necessary sustainable transport infrastructure in parallel with population growth.

The NPF also identifies “Sustainable Mobility” as being a national strategic outcome, stating:

*“In line with Ireland’s Climate Change mitigation plan, we need to progressively electrify our mobility systems moving away from polluting and carbon intensive propulsion systems to new technologies such as electric vehicles **and introduction of electric and hybrid traction systems for public transport fleets**, such that by 2040 our cities and towns will enjoy a cleaner, quieter environment free of combustion engine driven transport systems.”*

**Our Emphasis*

The NPF explicitly supports the expansion of the DART and an improved bus-based system. The NPF provides for the growth of towns, such as Naas, which have supporting infrastructure in place as sustainable centres with a balanced growth of employment and population.

In short, the NPF provides for significant population growth in the eastern and midland region, much of this will be within towns such as Naas and there is an urgent need to ensure that public transport within such towns is non-polluting and has sufficient capacity to drive real modal change.

2.3 Eastern & Midland Regional Assembly Regional Spatial and Economic Strategy 2019 - 2031

The RSES (2019) supports the implementation of the NPF. The RSES provides a long-term strategic planning and economic framework for the development of the Region.

The RSES sets out a settlement strategy as shown in **Figure 2-2**. Naas is designated a 'Key Town'. Key Towns are described as:

"Large economically active service and/or county towns that provide employment for their surrounding areas and with high-quality transport links and the capacity to act as growth drivers to complement the Regional Growth Centres."

The specified policy response for such towns is clearly set out in the RSES:

"Commensurate population and employment growth, on high quality public transport corridors coupled with investment in services, amenities and sustainable transport."

In considering the future development of Naas RSES objective **RPO 4.2** is key:

"Infrastructure investment and priorities shall be aligned with the spatial planning strategy of the RSES. All residential and employment developments should be planned on a phased basis in collaboration with infrastructure providers so as to ensure adequate capacity for services (e.g. water supply, wastewater, transport, broadband) is available to match projected demand for services and that the assimilative capacity of the receiving environment is not exceeded."

The RSES seeks to ensure Naas grows in a way which is planned and utilises infrastructural investment and the assimilative capacity of the receiving environment. In accordance with this overall imperative, more explicit policy guidance pertaining to Naas is provided in the RSES.

The need to align population, employment and transport provisions and promote sustainable growth in the right locations is clearly recognised in the RSES and the requirement for this principle to be reflected in core strategies and settlement hierarchies prepared by local authorities is explicitly stated.



Figure 2-2: Regional Growth Strategy²

The are 6 no. Regional Policy Objectives pertaining directly to Naas within the RSES. These objectives provide for the development of Naas and strongly support the delivery of an Improved transport network within and serving Naas town.

Three of the Regional Policy Objectives are particularly pertinent to the provision of enhanced public transport within the town, indicating the importance of transport upgrades to the development of the town:

"RPO 4.48: Promote the improvement of the transport network within and serving Naas town, including delivery of a robust and efficient walking, cycling and bus network with strong links to Sallins Railway Station, key destinations within the town and to the North West Quadrant and town centre area*.

RPO 4.49: Support the development of the Grand Canal for amenity, recreation and sustainable transport purposes including the Naas to Sallins and Naas to Corbally harbour greenways and linking these to the national Grand Canal Greenway.

RPO 4.50: Regeneration and consolidation of the historic centre to improve the retail and commercial functions of the town core, with enhanced permeability and sustainable

² Source Basemap: RSES

mobility within the town centre and improve links between the core and surrounding residential and employment areas through the further development of walking and cycling routes and improved public transport.*

RPO 4.51: Strengthen the local employment base including through the development of MERITS, Millennium Park in the North West Quadrant and the regeneration of underutilised lands including industrial lands in the north east of the town.

RPO 4.52: Support the delivery of new and enhanced public transport infrastructure in Naas and Sallins, including Park and Ride and interchange facilities as identified by the NTA and Kildare County Council;*

RPO 4.53: Support an enhanced role and function of Naas as the County town of Kildare, particularly as a hub for high quality employment, residential and amenities.”

**Our Emphasis*

The RSES also includes a number of objectives and projects which will support transport to / from and within Naas. The provision of Dart services on the Kildare rail line will enhance connectivity to Naas.

“RPO 5.2: Support the delivery of key sustainable transport projects including Metrolink, DART and LUAS expansion programmes, Bus Connects and the Greater Dublin Metropolitan Cycle Network and ensure that future development maximises the efficiency and protects the strategic capacity of the metropolitan area transport network, existing and planned.”

The RSES provides for significant population growth in Naas and the delivery of much enhanced public transport.

2.4 Transport Strategy for the Greater Dublin Area 2016 – 2035

The *Transport Strategy for the Greater Dublin Area 2016 – 2035* (the GDA Strategy) provides a framework for the planning and delivery of transport infrastructure and services in the GDA. The Strategy includes a number of specific transport upgrades which improve connectivity and support the growth of Naas, including:

- Reconfiguration of N7 from M50 to Naas to rationalise junctions and accesses to provide a higher level of service;
- Widening of the M7 between Junction 9 (Naas North) and junction 11 (M7/M9) to provide an additional lane in each direction (now complete); and
- Core Bus Network Regional Corridor on N7 / M7.

In addition the Strategy includes rail upgrades in the city centre which will benefit rail connectivity between Naas and Dublin City Centre including:

- Phoenix Park Tunnel Link (now operational);
- Dart Expansion Scheme (Preparation of the DART+ Southwest scheme now underway); and
- Dart Underground Project.

A significant number of these transport infrastructure upgrades have been provided or are being progressed and provide for the growth of Naas.

The Strategy also supports the further provision of local park and ride facilities at appropriate locations on the rail network in the outer parts of the Metropolitan Area and in the Hinterland area.

2.5 Draft Transport Strategy for the Greater Dublin Area 2022 – 2042

The Draft Transport Strategy was published in November 2021 and public consultation on the document was completed in January 2022. While not yet finalised or adopted, the Draft Transport Strategy provides a clear indication of an even greater emphasis on sustainable transport.

With reference to Naas, Measure RAIL3 – DART Extension is extremely significant:

“The NTA and Irish Rail will, over the lifetime of the Strategy, extend the DART to deliver electrified rail services to the following towns: Sallins / Naas; Kilcock; and Wicklow”

The planned 2042 DART and commuter rail network including connectivity to Sallins / Naas is shown in **Figure 2-3** taken from the Draft Transport Strategy.

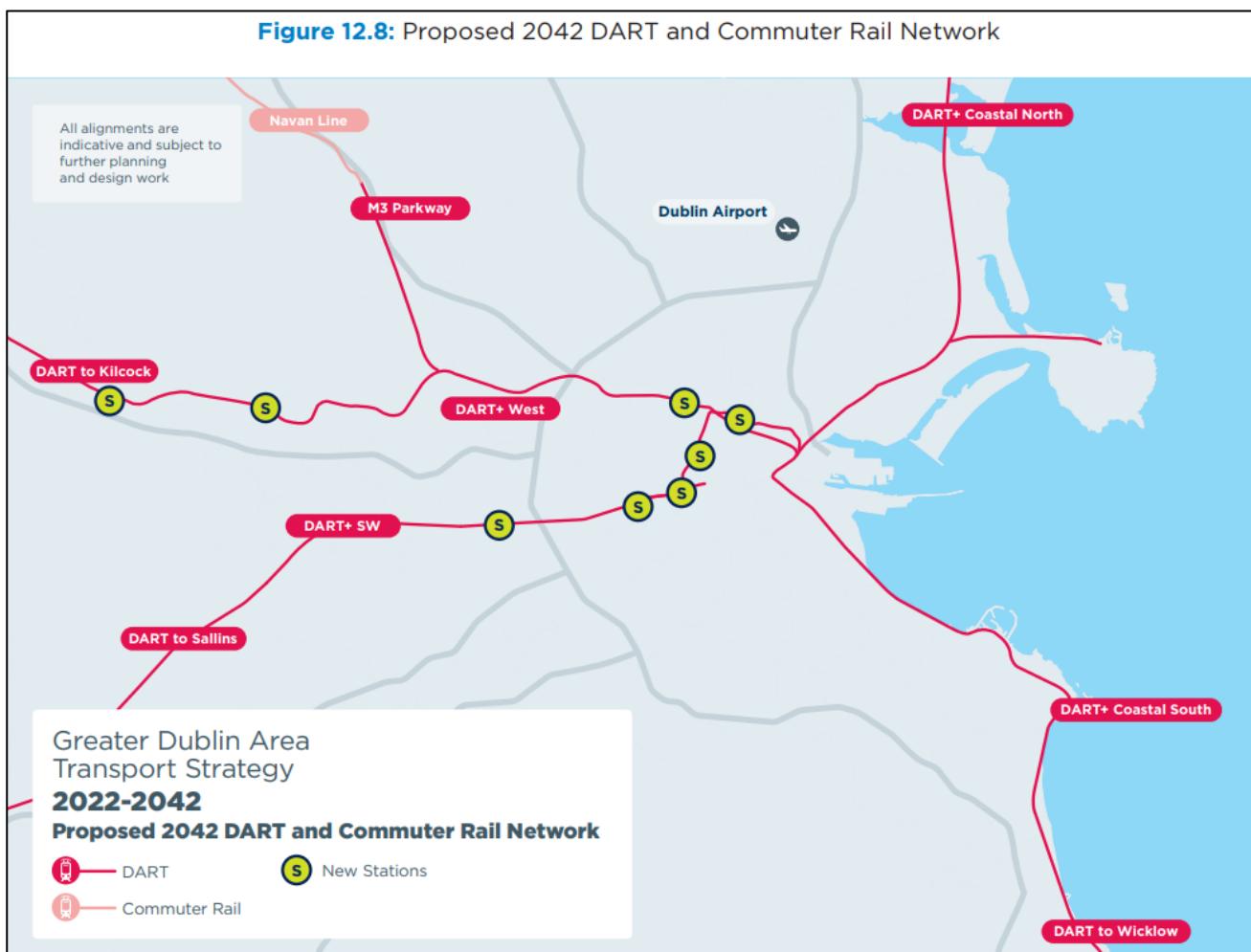


Figure 2-3: 2042 DART and Commuter Rail Network

The Draft Transport Strategy recognises the need for transport interchanges or hubs.

“Measure INT4 - Major Interchanges and Mobility Hubs

It is the intention of the NTA, in conjunction with TII, Irish Rail and the local authorities, to deliver high quality major interchange facilities or Mobility Hubs at appropriate locations served by high capacity public transport services. These will be designed to be as seamless as possible and will incorporate a wide range of facilities as appropriate, such as cycle parking, seating, shelter, kiosks selling refreshments plus the provision of travel information in printed and digital formats.”

In addition there are planned enhancements to bus services and the provision of large scale park and ride facilities.

"Measure BUS11 – Regional Core Bus Corridors

It is the intention of the NTA, in collaboration with TII and the relevant local authorities, to continue to provide enhanced levels of bus priority on the Regional Core Bus Corridors, in particular addressing sections where bus delays are caused, or will be caused in the future, by traffic congestion."

"Measure INT3 – Park & Ride

It is the intention of the NTA to secure the development of a network of regional level bus and rail based Park and Ride facilities in the GDA at appropriate locations where the national road network meets, or is in close proximity to, high capacity bus and rail services."

A park and ride facility with an indicative capacity of 1000 no. spaces is located at Naas in the Park and Ride Strategy Map as shown in **Figure 2-4**.

Figure 9.1: Park and Ride Strategy for the GDA

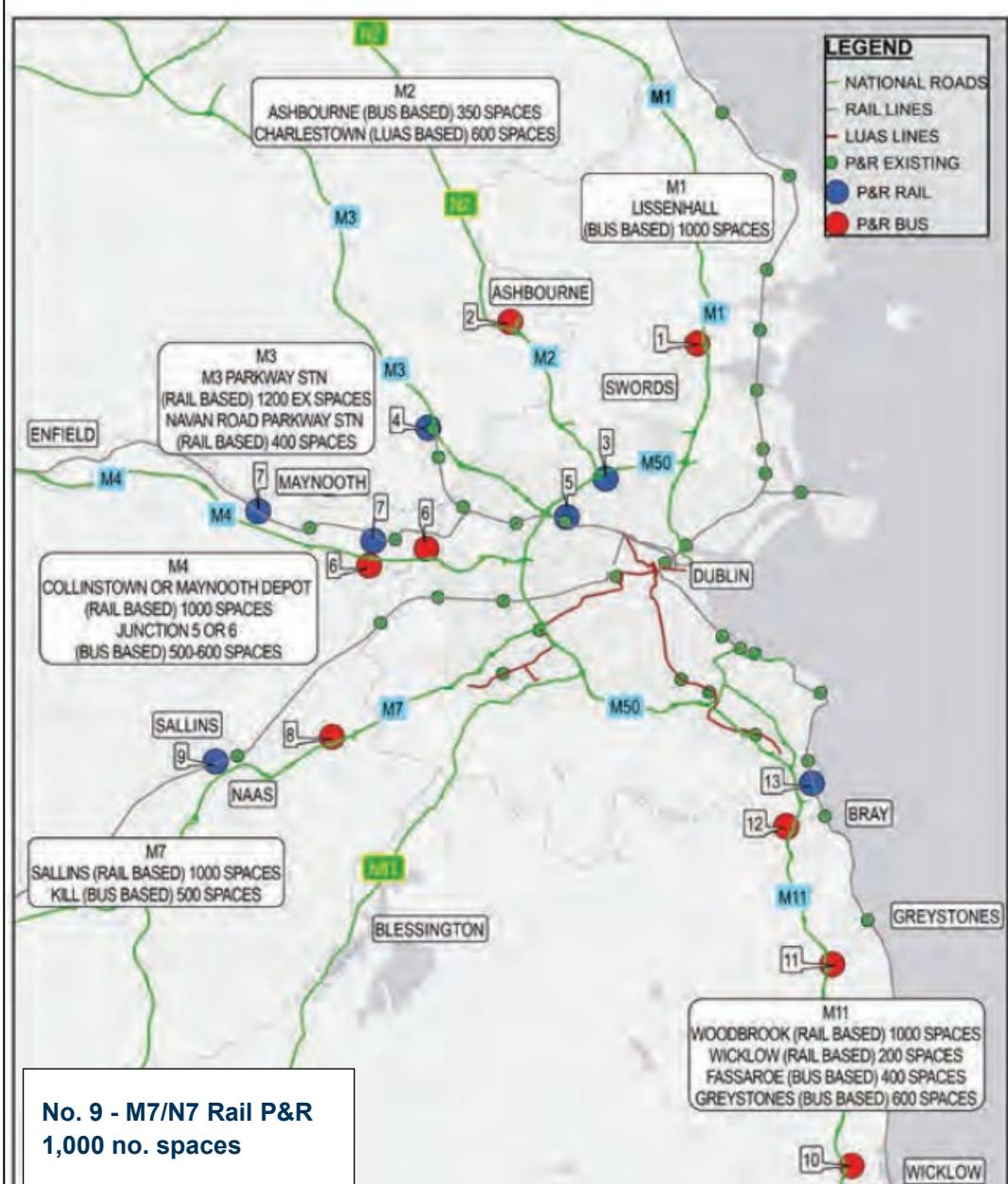


Figure 2-4: Park and Ride Strategy for the GDA 2022- 2042

Source: Draft Greater Dublin Area Transport Strategy

The Draft Transport Strategy supports a transition to electric vehicles, including bus transport

“Measure BUS7 – Zero Emission Bus Fleet for Dublin

It is the intention of the NTA to deliver a fully low emission vehicle Bus Fleet for the Dublin Area by 2030 and a Zero Emission fleet by 2035.

Measure BUS8 – Regional and Intercity Coach Fleet

The NTA will monitor emerging fuel technologies for adoption into the regional and intercity services, in order that a low or zero emission coach fleet, in line with available vehicle types, for the GDA is achieved.”

The *Draft Greater Dublin Area Cycle Network - Naas, Sallins & Kill* published as a supporting document of the Draft Transport Strategy provides for enhanced cycling routes in and around Naas as shown in **Figure 2-5**.

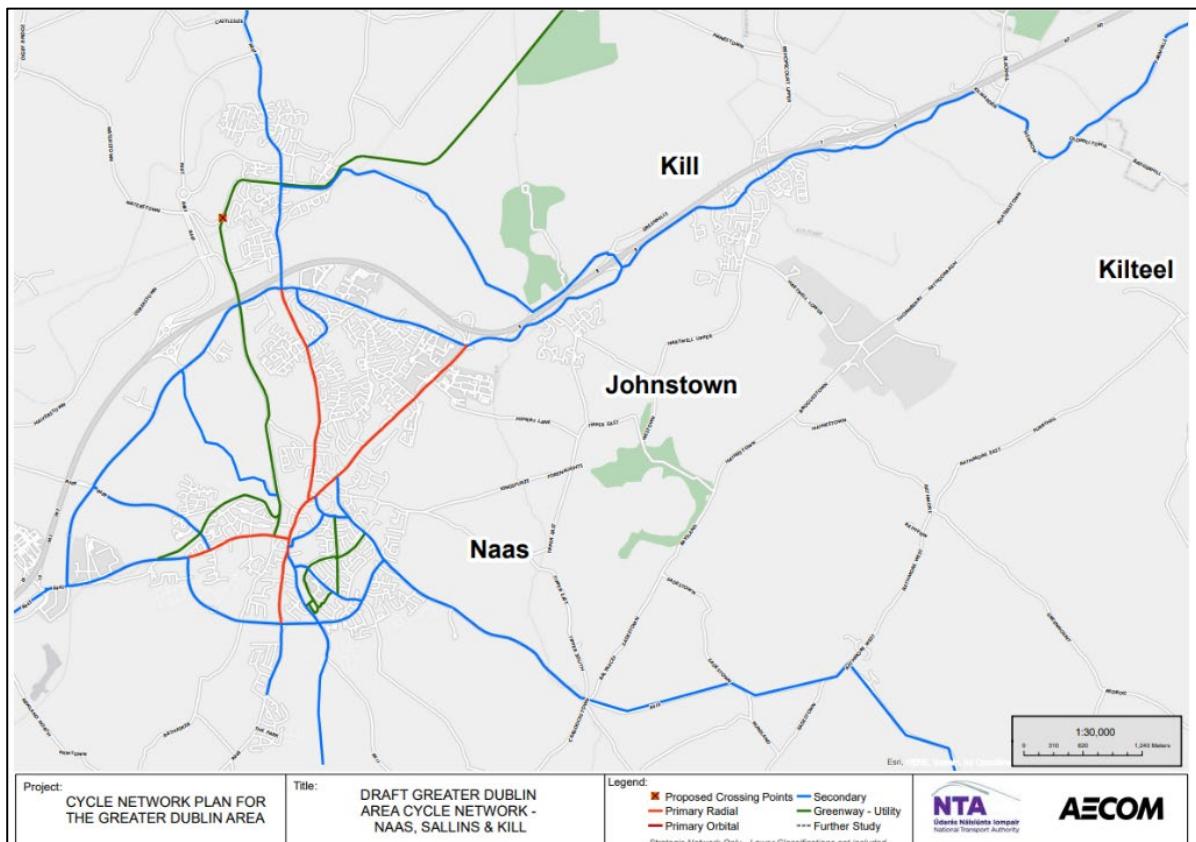


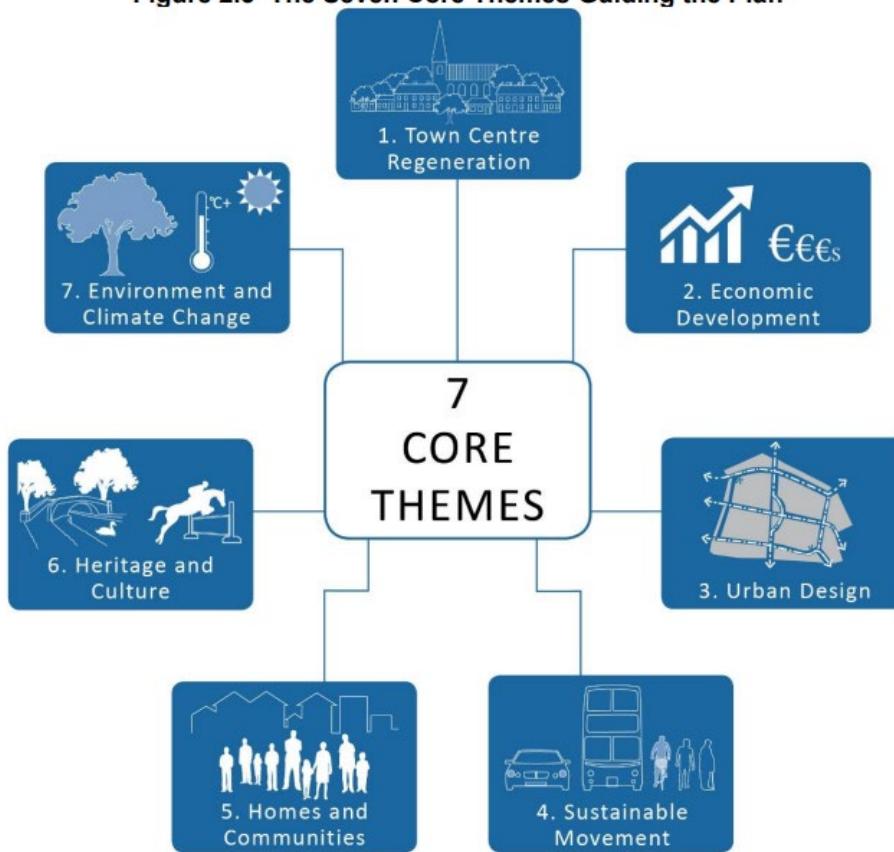
Figure 2-5: Naas, Sallins and Kill Cycle Network

Source: *Draft Greater Dublin Area Cycle Network - Naas, Sallins & Kill*

2.6 Naas Local Area Plan 2021 – 2027

The Naas LAP was adopted in October 2021 and came into effect in December 2021.

The guiding themes are illustrated in **Figure 2-6** taken from the Naas LAP.

Figure 2.3 The Seven Core Themes Guiding the Plan**Figure 2-6: Naas LAP Core Themes**

Theme 4, Sustainable Movement is explained as being about, “Developing an improved and permeable sustainable network of cycling and pedestrian routes to encourage alternatives options, improving the permeability of the town centre, providing for an improved public transport network and alleviating traffic congestion in the town centre are priorities of the Plan.”

The need for enhanced bus services is acknowledged in the LAP and a number of objectives address this:

“MTO 2.3 Support and facilitate the implementation of the following bus priority measures, subject to the availability of funding and appropriate environmental assessment and where necessary to preserve the identified routes free from development:

- Sustainable Travel Bridge over the M7 linking Sallins and Naas.
- Morell Way bus gate to facilitate a new bus-only street.
- Left turn ban on to Main Street (from R445 towards Main Street).
- Bus priority entrance to Piper’s Hill schools.
- Bus-only link to Sallins Bypass through the Northwest Quadrant.

MTO 2.4 Engage and co-operate with the Department of Transport, National Transport Authority (NTA), Transport Infrastructure Ireland, Irish Rail, Local Link and other stakeholders to improve the provision of public transport in Naas including the delivery of a sustainable bus-only link between Naas and Sallins Railway Station, a local bus route, additional bus stops and the provision of bus priority measures to ensure the improved movement of bus services through the town centre and local neighbourhoods.

MTO 2.5 Support and promote in conjunction with the National Transport Authority and Irish Rail, the upgrade and expanded Park & Ride facility at the Sallins Railway Station and the electrification of the rail line to Sallins with DART Services thus providing a 10-minute peak commuter rail frequency.

MTO 2.6 Investigate the merits of a second station with a Park & Ride to the west of Sallins to serve the population of Naas and the wider region."

Bus route proposals are shown in the Movement & Transport Public Transport Measures Map in the Naas LAP

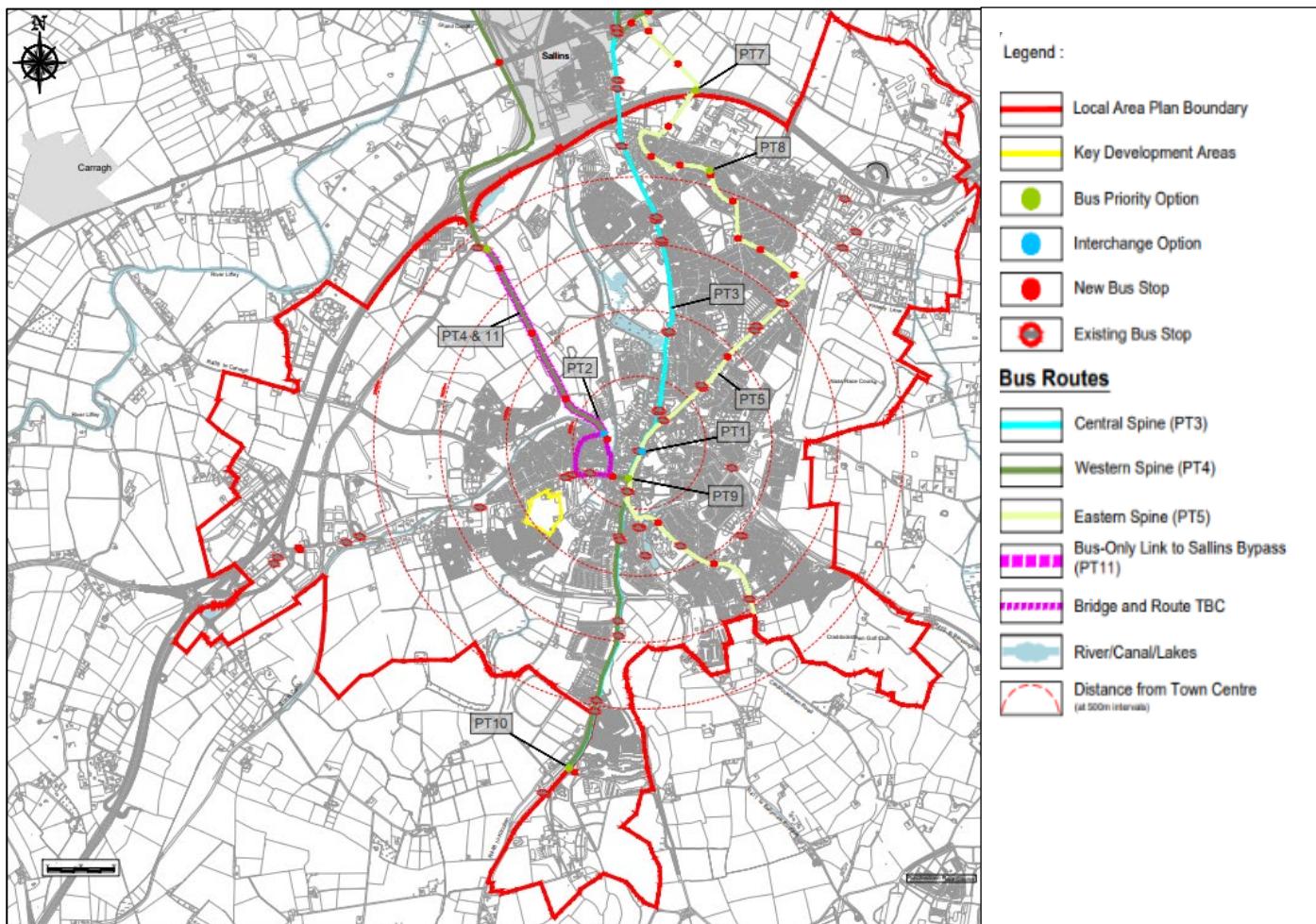


Figure 2-7: Movement & Transport Public Transport Measures Map in the Naas LAP

2.7 Naas / Sallins Transport Strategy

The *Naas / Sallins Transport Strategy* (the Transport Strategy) supports very significant upgrades to public transport services including:

- Bus interchange;
- Local bus services;
- Enhanced rail services; and
- A park & ride facility.

2.7.1 Bus Interchange

The Transport Strategy supports the provision of a bus interchange in Naas. Key factors influencing the location of such services include:

"The location should be able to serve inter-city coaches and local bus routes

The location should allow for supporting bus priority measures

The location should have sufficient space for multiple bus bays

The land should be free from development or suitable for a change of use”

2.7.2 Local Bus Services

The Transport Strategy supports the provision of local bus services in Naas as shown in **Figure 2-8**. The preferred routes are Option 1: Central Spine and Option 3: Eastern Spine. Option 2: Western Spine (indicative route) has been selected as a long term measure to provide public transport to this area once there are sufficient homes and jobs to justify a local bus service

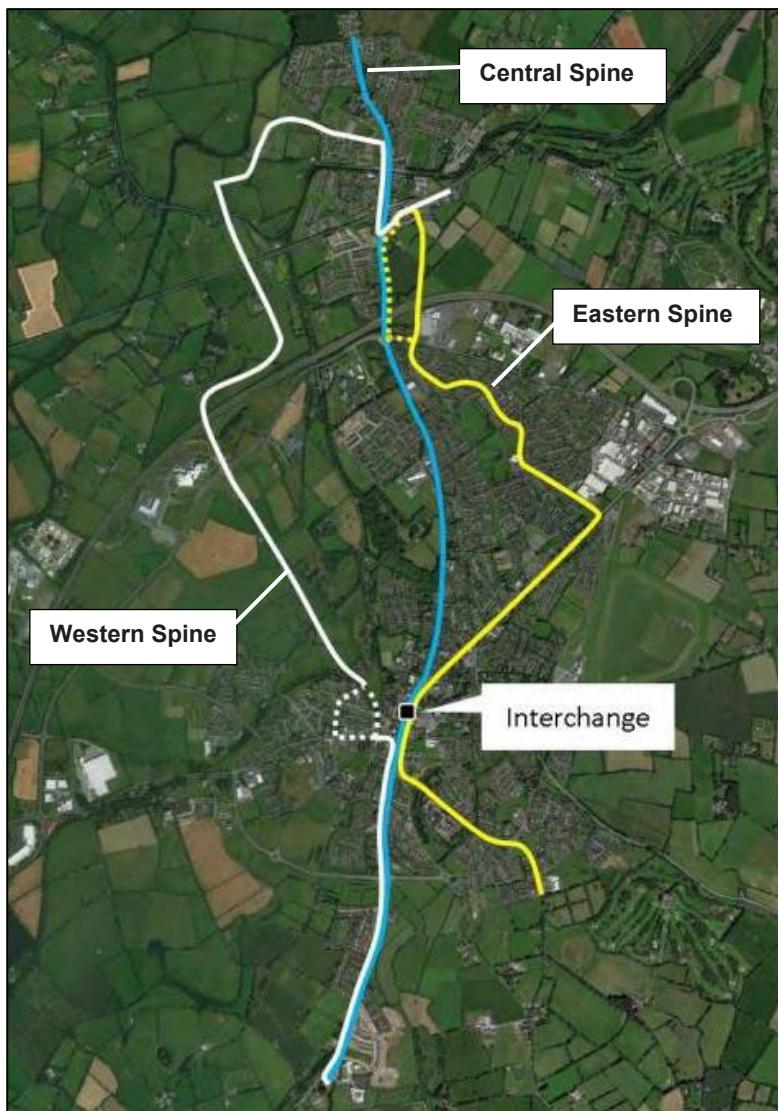


Figure 2-8: Local Bus Services Strategy

Source: Naas / Sallins Transport Strategy

2.7.3 Enhanced Rail Services and Park & Ride

The Transport Strategy supports the provision of 10 minute peak commuter rail frequency (PT15) and lobbying for a second station with park & ride to the west (PT12).

2.8 Sallins Local Area Plan 2016 – 2022

The *Sallins Local Area Plan 2016* (herein referenced the Sallins LAP) provides for the development of Sallins and sets out a number of policies which support the co-ordinated development of the NWQ, including:

“PT 2: To support the extension of the Kildare Route Project to Sallins, subject to planning and environmental considerations, including Appropriate Assessment in accordance with the Habitats Directive.

PT 4: To provide a priority bus route (in conjunction with statutory providers) between Sallins train station, Millennium Park and Naas Town Centre.

PT 5: To review the connectivity between Sallins Train Station and the permitted Sallins Bypass, and facilitate improved connections (as necessary) in the form of a station redesign and/or the provision of strategic park and ride facilities, and to consult with the appropriate statutory bodies in relation to same.”

2.9 Current Regional and Local Planning: Summary

Naas is identified as a town of regional importance, and designated a ‘Key Town’ in which significant residential and employment growth should be focussed. Such growth requires integrated land use and transport planning that will ensure sustainable communities and transport patterns.

There is explicit policy support for:

- Electrification of the rail line and extension of DART services on the Kildare line to Naas / Sallins (pre-planning of the provision of DART services to Hazelhatch is currently ongoing);
- Provision of a public transport hub near Naas which will connect road, rail transport and public bus transport;
- Provision of enhanced local bus services connecting Naas, the Northwest Quadrant and Naas / Sallins Train Station;
- Enhance regional / national bus services on the M7 through Naas / Sallins;
- Provision of enhanced park and ride facilities; and
- Support for new technologies such as electric and hybrid traction systems for our public transport fleets.

The NWQ continues to be identified as the logical location for the future growth of the town as a centre for employment and new residential development. This vision is supported at local level by specific policies including:

- Bus route between Naas and Sallins train station, Millennium Park and Naas Town Centre;
- Dedicated cycle and pedestrian connections from Naas town centre to Naas and Sallins train station via Millennium Park;
- The provision of a greenway along the Grand Canal.

It is vital that the new County Development Plan brings all of these forward in a coherent way which wins support locally and delivers sustainable transport options for the existing and future population of Naas.

3 DRAFT KILDARE COUNTY DEVELOPMENT PLAN 2023 – 2029 – REVIEW

The *Draft Kildare County Development Plan 2023 – 2029* supports the continued growth of Naas and Sallins. Population growth of 3,747 in Naas and 478 in Sallins is provided for in the period 2023 - 2028.

The Draft County Development Plan also provides for a significant increase in employment within Naas:

“The primary focus for employment growth in Kildare will be towards the Key Towns of Naas and Maynooth. In Naas, key employment opportunities will arise within Millennium Park and the North West Quadrant”

The *Draft Kildare County Development Plan 2023 – 2029* recognises in the overall Strategic Vision that a “high-quality sustainable transport network” is central to improving the quality of life of all residents.

3.1 Sustainable Mobility and Transport

Chapter 5 of the Draft Plan is concerned with sustainable mobility and transport. The stated overarching aim is:

“To promote and facilitate ease of movement within and access to County Kildare, by integrating sustainable land use planning and a high-quality integrated transport system; and to support and prioritise investment in more sustainable modes of travel, the transition to a lower carbon transport system, and the development of a safer, efficient, inclusive, and connected transport system.”

It is a policy of the Council to promote electric vehicles

“EP P15 - Promote the necessary infrastructure to support the continued roll out of electric vehicles.”

Allied to this are extremely ambitious mode share targets:

“TM T1 - As a minimum, reduce the current car-based trips to work from 74% to 50% and the car-based trips to education from 50% to 40% by the end of this Plan period.”

“TM T4 As a minimum, increase the current modal shares of work trips by bus to 13% and train to 14% during the lifetime of this Plan.” (Currently bus and train mode share each stand at 5%)

The achievement of such targets, almost trebling bus and rail passenger numbers, will require profound behavioural changes and will only be achieved if there is very significant enhancement of public transport infrastructure and services.

There are a number of objectives and policies supporting enhanced public transport provisions.

“TM O9 - Facilitate and secure the delivery/implementation of the public transport projects that relate to County Kildare as identified within the Integrated Implementation Plan (2019-2024), (or any superseding document), including the DART+ programme (Including DART+ West and DART+ South West), BusConnects and the light rail investments.

*TM O12 - Promote and facilitate the implementation of public transport projects (bus and rail) and encourage transport providers and other agencies (e.g. NTA, developers etc.) to improve public transport (bus and rail) and to have regard to and support recently implemented and/or planned routes under NTA’s Bus Connects and proposed / planned routes under NTA’s Connecting Ireland Rural Mobility Plan; Including: 1. Kilcock, Maynooth and Leixlip into Dublin; 2. Celbridge into Dublin; 3. **Maynooth to Naas**; 4. **Celbridge to Naas**; 5. **Naas to Caragh***. in addition to a range of rural transport routes.*

TM O13 - Support the implementation of the Bus Connects projects in County Kildare and those that connect towns in Kildare with towns in adjoining counties.”

TM O35 Seek to address urban congestion with *particular emphasis on facilitating the development of town bus services for the Key Towns within the County ensuring connectivity to and from residential areas, key employers, and public transport hubs such as train stations, along with retail and amenity sites.**

TM O37 *Liaise with and encourage transport providers and other agencies (e.g. NTA, developers etc.) to improve bus transport movement and reliability, to ensure pick up points are clearly identifiable (particularly in rural areas), to provide appropriate bus shelters, to provide real time information panels at bus stops and to integrate the timetabling of bus and rail services.**

TM O38 Work with statutory agencies and stakeholders to promote and facilitate the *development of a public transport hub in Naas and Sallins with new and enhanced public transport infrastructure to connect road, rail and public bus transport, including Park and Ride and interchange facilities. Ensure the bus network in Naas improves linkages between Naas Town Centre, surrounding residential and employment areas, Sallins Railway Station and the Northwest Quadrant.**

TM O39 Support and facilitate investigations into the feasibility of a *bus priority route through the North West Quadrant in Naas to Sallins Bypass Junction 9A on the M7. This route will provide a new higher density corridor leading into Naas, with a priority bus corridor that will provide a direct service to Sallins Railway Station from the town centre.**

TM O43 Facilitate and support the extension of the DART+ line to Kilcock, *the extension of the DART+ Southwest line to Naas/Sallins and Newbridge and the extension of the LUAS network, in co-operation with Irish Rail, the Department of Transport and the National Transport Authority.**

TM O46 Support and facilitate, in co-operation with Irish Rail and the National Transport Authority the delivery of the following proposed new facilities to connect to the existing and proposed rail network including DART+:

- *New Sallins & Naas railway station, including park and ride facility (1 000 spaces)*.***

**Our Emphasis*

While the tenor of these policies and objectives is positive and supports enhancement to sustainable transport infrastructure it is considered that the objectives lack sufficient ambition and urgency.

The objective to “*Support and facilitate investigations into the feasibility* of a bus priority route through the North West Quadrant in Naas to Sallins Bypass Junction 9A on the M7*”, coming a full twenty years after IFPLUT recommended such a provision is wholly unsatisfactory.

**Our emphasis*

Only a wholescale transformation of travel behaviours and the infrastructure and services underpinning such behaviour will, in line with Draft Development Plan targets, increase bus work trips by 160% and rail works trips by 180%.

4 RECOMMENDED - NAAS / SALLINS TRANSPORT MOBILITY HUB

4.1 Introduction

There is consistent policy support in statutory local, regional and national land use and transport planning policy documents for the provision of significantly enhanced, clearer, public transport in Naas / Sallins. While the initiatives set out in local planning policy documents for Naas will improve transport provision, they are not of a scale necessary to meet the targets set out in the Draft Development Plan for increased bus and rail usage. Neither are the local, regional and national interventions sufficiently co-ordinated to deliver the integrated public transport service to deliver large scale modal switch.

Our client has engaged RPS and Arup to undertake a study of the potential for a transformative provision of public transport infrastructure and services within Naas. This study identified the key need for connectivity between Naas town centre, the NWQ, Sallins and Naas Train Station and the N/M7 bus corridor. Such integration and the enhancement of regional / national bus and train services had the potential to re-shape Naas and Sallins, reducing car dependency and creating sustainably connected towns linked to the wider region.

The transport mobility hub encompassing the provision of a BRT, bus transport interchange, park and ride and other facilities is considered to be crucial in that it is a highly visible and permanent marker of this change.

Please find enclosed *A Unique Opportunity for Creating an Integrated and Sustainable Transport Mobility Hub* prepared for Millennium Park fully describing all proposals. Set out below is a brief description of the Naas / Sallins Transport Mobility Hub. It is considered that the delivery of the Naas / Sallins Transport Mobility Hub should be a key objective of the Development Plan. The mobility hub includes:

- Electric powered BRT Service linking Naas town centre, the Northwest Quadrant and Sallins and Naas Train Station;
- Bus Transport Interchange (BRT services, Regional and National bus services);
- Park and Ride –rail and bus services;
- Enhanced cycle and bus linkages;
- Car Charging facilities;
- Car Share Facilities; and
- Bicycle maintenance stand.

The integrated delivery of a large scale Transport Mobility Hub will deliver modal change and act as an exemplar in the county and beyond of what can be achieved.

4.2 Bus Rapid Transit

BRT is a high-quality bus-based transit system that delivers fast, comfortable, and cost-effective services with high level capacities. It does this through the provision of dedicated lanes, with busways and iconic stations, off-board fare collection, and fast and frequent operations.

Because BRT contains features similar to a light rail it is much more reliable, convenient and faster than regular bus services. Appropriately designed, BRT is able to avoid delays caused by traffic and queuing to pay on board. The key features of a BRT are:

- Dedicated lanes and alignment
- Off-board fare collection
- Platform level boarding
- High capacity / frequency vehicles

- Quality stops / stations
- Distinct branding
- Can be electric powered.

4.2.1 BRT Exemplar

- A typical BRT stop / station showing they key benefits (off-board fare collection and platform level boarding etc) is shown in **Figure 4-1**.



Figure 4-1: BRT Stop / Station Exemplar

The 'Glider' BRT system in Belfast opened in late 2018. The BRT spans the city on a 22km east-west corridor with an additional spur running north from the centre to the Titanic Quarter. The 18-metre Glider can accommodate 105 passengers, 63 of them standing. On-street ticketing machines allows passengers to pay for their journeys in advance with cash or cards.



Figure 4-2: Bus Rapid Transit Belfast - Glider

An additional 40,000 passenger journeys a week compared to standard bus patronage along the route in 2017 were recorded shortly after the service commenced operation.

On 26th July 2021, the Department for Infrastructure opened public consultation on "*Belfast Rapid Transit Phase 2*", an expansion of the Glider network. Plans were unveiled for an extension of G2; and two entirely new lines: one to the south and one to the north.

The success of the Belfast Glider, delivered at a fraction of the cost of light rail, is indicative of the potential for enhanced public transport services to deliver a significant increase in public transport patronage.

The use of electric, battery powered BRT has additional advantages in terms of passenger comfort through reduced engine noise while more broadly delivering reduced reliance on fossil fuels and reduced air and noise emissions.



Figure 4-3: Electric Bus Rapid Transit – Chronoplus Network, France

There is now an opportunity for other Irish large towns and cities to transform their public transport network and deliver modal change.

4.2.2 BRT in Naas / Sallins

It is proposed that a BRT service should be provided for Naas / Sallins, running in a clockwise loop and connecting

- Naas Town Centre, Northwest Quadrant, Naas / Sallins Mobility Hub, Sallins and Naas train station

Such a service could in the early years operate with a lower capacity, increasing in line with demand in the medium term.



Figure 4-4: Proposed BRT

Source: *A Unique Opportunity for Creating an Integrated and Sustainable Transport Mobility Hub*

The provision of a BRT service in Naas has a number of key advantages:

- The visibility, reliability and permanence of a BRT service instils confidence and certainty for commuters, residents and those making investments in the town that the service will be maintained and can be relied upon;
- The provision of high quality public transport services in parallel or in advance of the full development of the NWQ means sustainable transport behaviours will be fostered by the residential and working population from the outset;
- The services can be expanded incrementally in line with demand;
- The BRT will be in place and promote the use of DART services when these are extended to Naas / Sallins in accordance with the Draft Transport Strategy;
- Early provision of BRT services avoids retrofitting of bus priority measures onto busy roads and provoking significant opposition to road space re-allocation;
- Powered by electricity, the BRT will have reduced noise and air emissions and provide a more comfortable passenger experience.
- Acts as a high profile exemplar of a change to more sustainable transport modes for the whole of Naas and the wider county; and
- Help to achieve the modal shift targets set out in the Draft County Development Plan.

Recommendation 4.1

Proposed Objective -Seek to provide an electric powered BRT service in Naas / Sallins, linking Naas town centre, the Northwest Quadrant, Naas Bus Transport Interchange, Naas and Sallins train station, and Sallins Town Centre.

4.3 Bus Transport Interchange

Naas / Sallins is located on a key transport corridor. High frequency regional and national bus services route along the M7. Objectives in the Draft Transport Strategy and the Draft County Development Plan provide for:

- Enhanced Services on the M7 corridor;
- Local bus services including:
 - Maynooth to Naas;
 - Celbridge to Naas;
 - Naas to Caragh; and
- Bus services within Naas / Sallins

To maximise the efficiencies and integration between all these existing and planned services it is vital that there is a high quality, safe and comfortable interchange facility. The location of such a facility in the centre of town is not practicable. Intercity bus service providers and passengers will not accept the time delay incurred in diverting to the centre of Naas. A town centre location also compromises interchange between bus and rail services.

As shown in **Figure 4-5** a bus interchange facility can logically be located between the M7 and the Naas Sallins train station. A bus interchange at this location within the GDA, c. 30km from Dublin City Centre, with electric charging facilities will promote and facilitate the use of electric buses / BRT within the region.

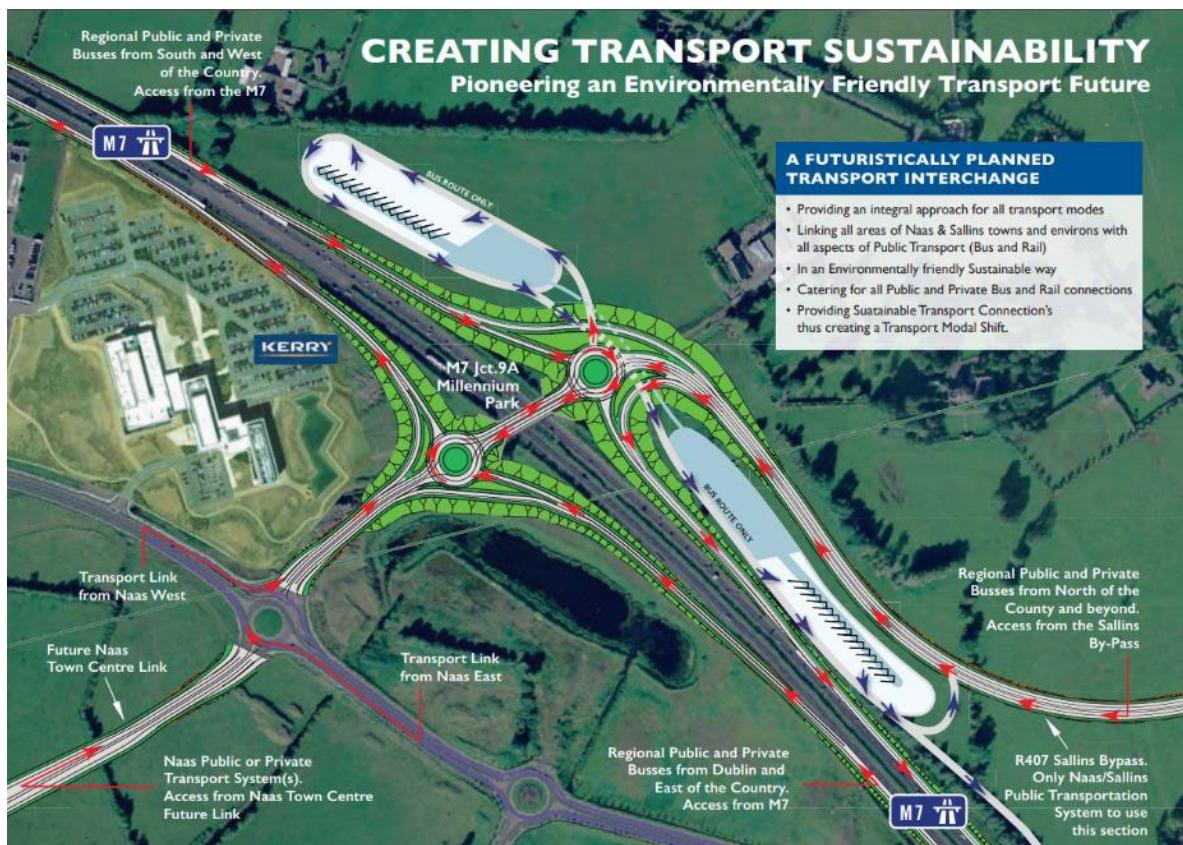


Figure 4-5: Proposed Bus Interchange

Source: *A Unique Opportunity for Creating an Integrated and Sustainable Transport Mobility Hub*

A bus interchange in this location will;

- Serve inter-city coaches bus routes with minimal increase in journey time;

- Provide high quality public transport facilities, important in driving a modal shift;
- Allow sufficient space for multiple bus bays;
- Provide for the charging of electric buses and the increased use of electric buses within the GDA;
- Allow for convenient access to the town centre and Naas and Sallins train station, via local bus services; and
- Promote connectivity between bus and rail services and usage of planned park & ride.

Recommendation 4.2

Proposed Objective – Seek to provide a bus interchange facility adjacent to the M7 Junction 9A serving local, regional and intercity bus services.

Recommendation 4.3

Proposed Objective – Promote the use of electric buses and BRT within the county and region through the provision of necessary supporting infrastructure.

4.4 Park and Ride – Rail and Bus services

The provision of a park and ride facility at Naas is a policy objective in local and regional statutory planning policy. A park and ride facility with an indicative capacity of 1000 no. spaces is located at Naas in the *Park and Ride Strategy Map* of the *Draft GDA Transport Strategy*.

However, the scale of the proposals is insufficient to meet the opportunity that Naas provides. There is major potential for Naas to be a gateway for the GDA where there is a shift from the private car to more sustainable transport modes.

As shown in **Figure 4-6** it is recommended that park and ride facilities be provided to serve both the Naas and Sallins train station and adjacent to the bus interchange.

Such facilities would serve those accessing regional / national train services and also those accessing Naas on the local BRT services. The park and ride facilities could be delivered on a phased incremental basis in line with demand.



Figure 4-6: Proposed Park & Ride Facilities

Source: *A Unique Opportunity for Creating an Integrated and Sustainable Transport Mobility Hub*

Recommendation 4.4

Proposed Objective – Provide Park & Ride facilities for those accessing regional / national train services and also those accessing BRT / bus services at Naas / Sallins.

4.5 Enhanced Cycle and Pedestrian Linkages

The transport hub should be served by dedicated cycle / pedestrian linkages. As shown in **Figure 4-7** a dedicated cycle and pedestrian link from the transport hub shall connect with the Canal Greenway as provided for in the *Draft Greater Dublin Area Cycle Network - Naas, Sallins & Kill*.



Figure 4-7: Proposed Pedestrian and Cycle Linkages

Source: *A Unique Opportunity for Creating an Integrated and Sustainable Transport Mobility Hub*

Recommendation 4.5

Proposed Objective – Provide dedicated cycle and pedestrian linkages to Naas / Sallins bus interchange.

4.5.1 Shared and Micromobility hub

Micromobility hubs are highly visible, safe and accessible spaces where public, shared and active travel modes are co-located alongside improvements to public realm and with appropriate enhanced community facilities.

The hub provides a convenient, comfortable and safer environment to access a range of sustainable modes. Micromobility hubs also help to raise the profile of shared mobility services to boost utilisation and viability.

A mobility hub on Main Street Blanchardstown was launched in 2020 with electric vehicle charging, bike rack (bike share and public), car sharing and disabled parking.

The provision of a transport mobility hub should also incorporate some /all the following:

- Car Share Facilities;
- Secure and sheltered bicycle parking;
- Bicycle repair/maintenance stand;
- E-scooter sharing (following implementation of legislation regarding their use); and
- Charging facility for e-scooters (following implementation of legislation regarding their use).

Recommendation 4.6

Proposed Objective – Provide a shared and micromobility hub within the Transport Hub including high quality bicycle parking and car share facilities.

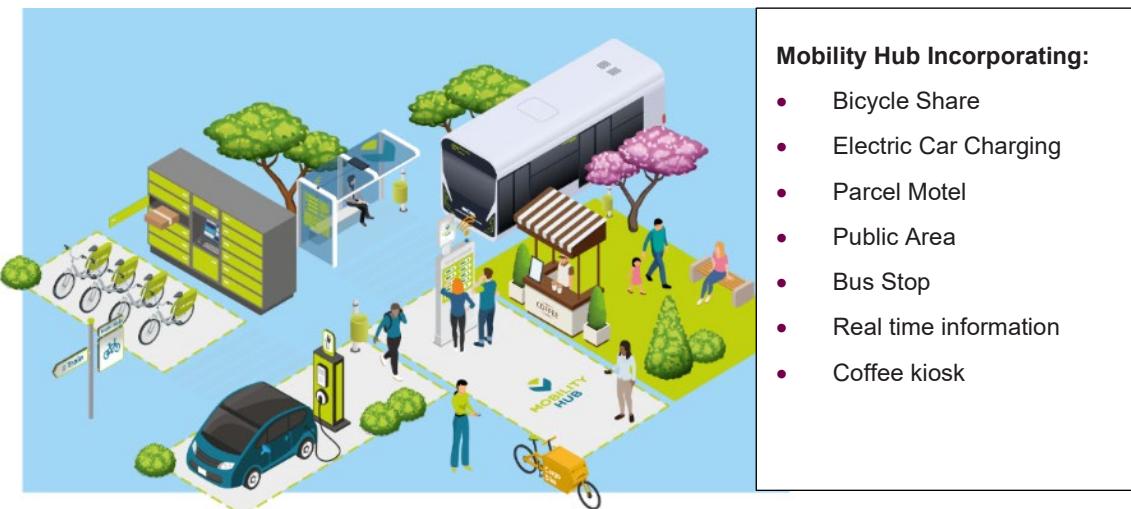


Figure 4-8: Micromobility Hub

Source: <https://como.org.uk/>

5 CONCLUSION AND RECOMMENDATIONS

Current and historic national and regional planning policy has designated Naas a town of regional importance in which significant population and employment growth is to be focussed.

The provision of the necessary major infrastructure to serve the development of Naas is now in place:

- The M7 Osberstown Interchange (directly serving the Naas Northwest Quadrant) and the R407 Sallins Bypass;
- M7 Naas to Newbridge Motorway Widening Scheme;
- Upgrade of Osberstown Wastewater Treatment Plant from 80,000PE to 130,000PE; and
- Enabling infrastructure (roads and services) within the Northwest Quadrant .

The need for enhanced public transport services within and connecting to Naas / Sallins has been identified as far back as the 2003 IFPLUT. With key enabling infrastructure now in place to serve the growth of Naas there is now a need to ensure that such growth is underpinned by sustainable transport options.

Ambitious public transport provision is necessary to deliver the wholesale increase in bus and rail transport as targeted in the Draft Development Plan.

It is vital that the new County Development Plan provides a sustainable and integrated land use and transport policy framework for the development of the county and Naas.

It is recommended that the following be included in the Development Plan.

Recommendation 1

Proposed Objective -Seek to address urban congestion with particular emphasis on facilitating improved bus transport movement and reliability and improved links to bus and railway stations.

Recommendation 2

Proposed Objective - Examine existing public transport links within the county with a view to promoting and facilitating improvements where feasible.

Recommendation 3

Proposed Objective – Support the electrification of rail services within County Kildare, thereby delivering enhanced services and reducing air and noise emissions.

Recommendation 4.1

Proposed Objective -Seek to provide an electric powered BRT service in Naas / Sallins, linking Naas town centre, the Northwest Quadrant, Naas Bus Transport Interchange, Naas and Sallins train station, and Sallins Town Centre.

Recommendation 4.2

Proposed Objective – Seek to provide a bus interchange facility adjacent to the M7 Junction 9A serving local, regional and intercity bus services.

Recommendation 4.3

Proposed Objective – Promote the use of electric buses and BRT within the county and region through the provision of necessary supporting infrastructure.

Recommendation 4.4

Proposed Objective – Provide Park & Ride facilities for those accessing regional / national train services and also those accessing BRT / bus services at Naas / Sallins.

Recommendation 4.5

Proposed Objective – Provide dedicated cycle and pedestrian linkages to Naas / Sallins bus interchange.

Recommendation 4.6

Proposed Objective – Provide a shared and micromobility hub within the Transport Hub including high quality bicycle parking and car share facilities.

Having regard to the above, we therefore request Kildare County Council to take into account the content and recommendations outlined in this submission prior to the preparation of the new *Kildare County Plan 2023 – 2029*.

We confirm that Millennium Falcon Holdings Ltd, welcomes the opportunity to continue to engage with Kildare County Council during the course of the on-going review process for the preparation of the *2023-2029 Kildare County Development Plan*.

Appendix A

A Unique Opportunity for Creating an Integrated and Sustainable Transport Mobility Hub

A UNIQUE OPPORTUNITY

for Creating an Integrated and Sustainable Transport Mobility Hub



CREATING AN INTEGRATED TRANSPORT MOBILITY HUB

- A Mobility Hub integrating different transport modes in a recognisable & easily accessible place.
- This is supplemented with enhanced facilities, services & information.
- It aims to encourage more sustainable travel, create vibrant places & improve journeys & travel choices.

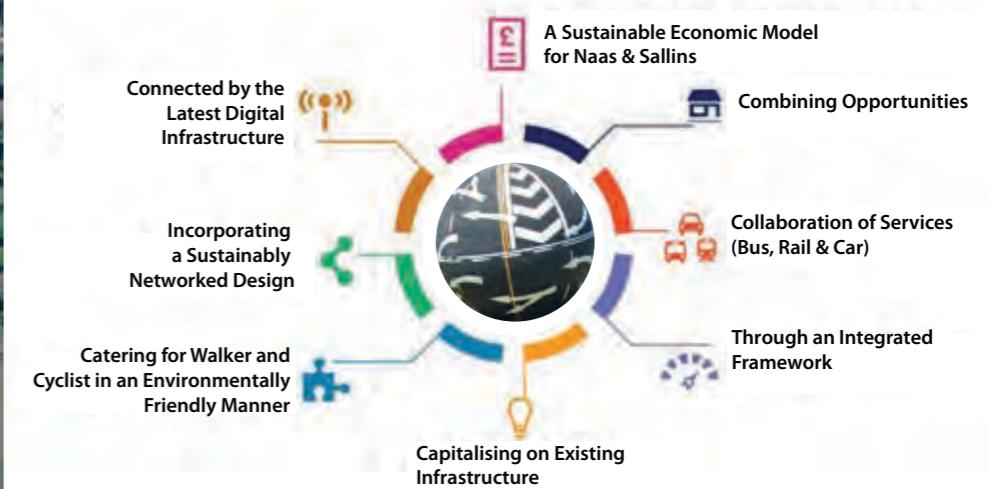
Existing View

A Move Toward Sustainability

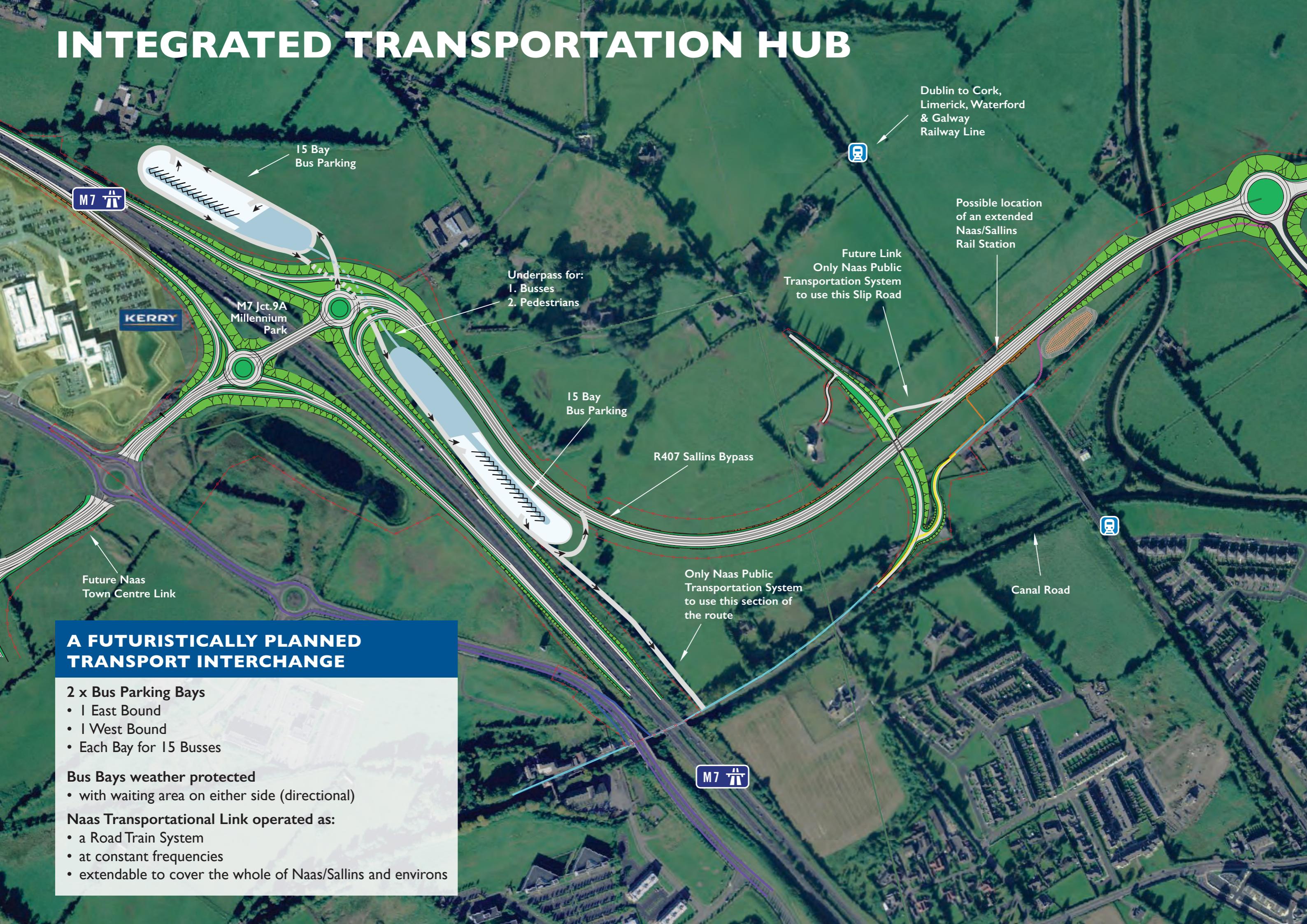
THIS IS NOW POSSIBLE

- As the Primary Infrastructure for this project is now in place
- As a result of the M7 Junction 9A and Sallins By-Pass now operating

A Mobility Transport Hub Framework with a Difference:



INTEGRATED TRANSPORTATION HUB



Regional Public and Private
Busses from South and West
of the Country.
Access from the M7

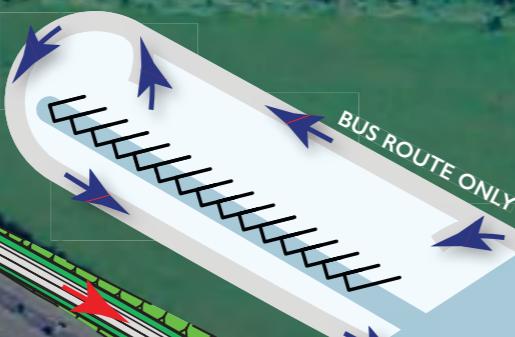
CREATING TRANSPORT SUSTAINABILITY

Pioneering an Environmentally Friendly Transport Future

A FUTURISTICALLY PLANNED TRANSPORT INTERCHANGE

- Providing an integral approach for all transport modes
- Linking all areas of Naas & Sallins towns and environs with all aspects of Public Transport (Bus and Rail)
- In an Environmentally friendly Sustainable way
- Catering for all Public and Private Bus and Rail connections
- Providing Sustainable Transport Connection's thus creating a Transport Modal Shift.

M 7



KERRY

M7 Jct.9A
Millennium
Park

Transport Link
from Naas West

Future Naas
Town Centre Link

Transport Link
from Naas East

Naas Public or Private
Transport System(s).
Access from Naas Town Centre
Future Link

Regional Public and Private
Busses from Dublin and
East of the Country.
Access from M7

M 7

Regional Public and Private
Busses from North of the
County and beyond.
Access from the Sallins
By-Pass

R407 Sallins Bypass.
Only Naas/Sallins
Public Transportation
System to use
this section

Effective Planning for a Sustainable Transport Environment

Planning for effective public transit in an environmentally sustainable way is central for the Naas / Sallins Area. For the vast majority of developing town and city residents, public transit is the most practical means to access employment, education and public services, especially when such services are beyond the viable distance of walking or cycling. Unfortunately, up to now, the current state of public transit services in developing towns and cities especially in Ireland, does little to serve the actual mobility needs of the population. Bus services here are too often unreliable, inconvenient and sometimes dangerous.

In response, transport planners and public officials often have to turn retrospectively to extremely costly mass transit alternatives such as rail-based metros. Due to the high cost of rail infrastructure, they are usually constructed in a retrospective manner over a few kilometers in limited corridors. Resulting in a system that does not meet the broader transport needs of the growing population.

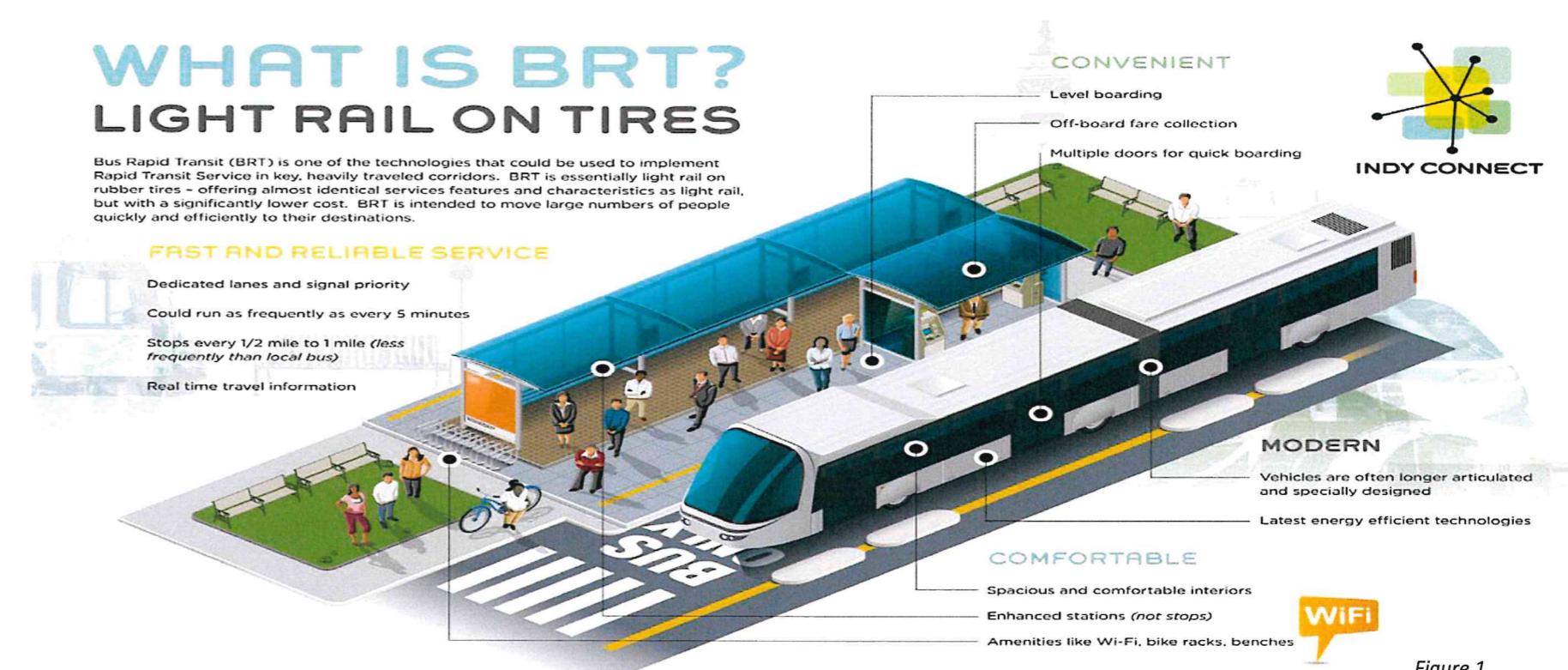
However, there is an alternative between poor public transit services and high municipal debt, especially regarding the Naas / Sallins Area. Because in the Naas / Sallins Area we can proactively pioneer this initiative as opposed to what normally takes place where these fundamental services are retrospectively added when they are most expensive to retrofit. Also, as this area is on the outskirts of Dublin City, links can viably be created to all the essential areas of the city. Bus Rapid Transit (BRT) (Figure 1) can provide high-quality, metro -like transit services at a fraction of the cost of other options.

Defining Bus Rapid Transit for the Naas / Sallins Connections:

BRT is a bus-based mass transit system that delivers fast, comfortable, and cost-effective urban mobility. Through the provision of exclusive right-of-way lanes and excellence in customer service, BRT essentially emulates the performance and amenity characteristics of a modern rail-based transit system but at a fraction of the cost. BRT has emerged in recent years as an effective, cost efficient and high-quality public transport system, which offers fast, reliable, predictable and comfortable commuter journeys in modern, high quality vehicles. Key features of a BRT system are frequency of service and fast, reliable journey times. The introduction of a BRT for Naas & Sallins would deliver overall benefits to the existing bus and rail networks in terms of efficiency and capacity.

Benefits of BRT as a Public Transport Solution includes:

- Exclusive right-of-way lanes
- Rapid boarding and alighting
- Free transfers between lines
- Pre-board fare collection and fare verification
- Enclosed stations that are safe and comfortable
- Clear route maps, signage, and real-time information displays
- Automatic vehicle location technology to manage vehicle movements
- Modal integration at stations and terminals
- Competitively-bid concessions for operations
- Effective reform of the existing institutional structures for public transit
- Clean vehicle technologies
- Excellence in marketing and customer service

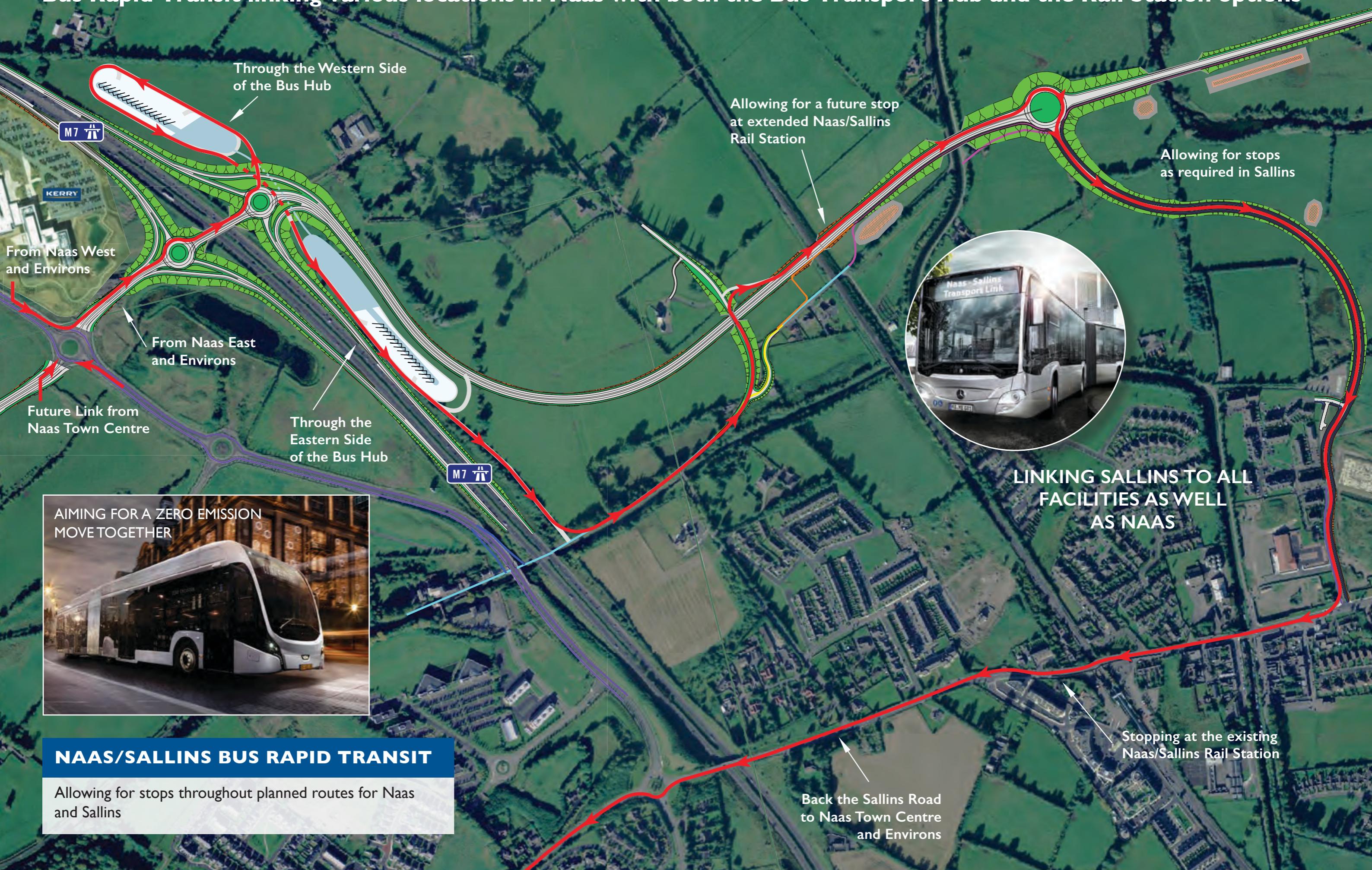


Local circumstances in Naas / Sallins may initially dictate the extent to which the above characteristics are actually utilised within a system such as this, as small and medium-size population areas such as Naas / Sallins may find that not all of these features are feasible initially to achieve within cost and capacity constraints. Nevertheless, serving the transit customers first is a premise that we must prioritise for this Naas / Sallins Area, regardless of local circumstances, as we need to follow a proactive pioneering standard in the development of a successful transit for this region.

Figure 1

PUBLIC TRANSPORT LINKING ALL NAAS & SALLINS LOCATIONS

Bus Rapid Transit linking various locations in Naas with both the Bus Transport Hub and the Rail Station options



Together we can Pioneer the Best Zero Emissions Operation for the Naas/Sallins *Swiftway* BRT Connection

There are a variety of bus ranges based on modular concepts. This means that there are systems that make it possible for us to consider the zero emissions operation we propose designing for this Naas / Sallins connection. Bus and Coach manufacturers support customer choices throughout the entire process and also in regard to the operator choices involved. From choosing the battery technology to the charging system and the implementation management and connectivity to monitoring and repair and maintenance.

Bus & Coach Manufacturers can be Our Transition Partners:

Certain Bus & Coach manufacturers become transition partners for many operators and local governments throughout Europe. Whether focusing on transitioning a complete operation from diesel to electric, or on making step-by-step improvements to renew the fleet with a number of electric buses. These manufacturers partner with operators and local governments. Always focused on minimising the impact on the environment and improving efficiency, they work closely together with their partners and lead the transition to zero emission. To achieve zero emission, Bus & Coach manufacturers have developed special transition processes to help their customers. From analysis, project definition and calculation, to implementation, testing and daily operation. They support their partners in every way, to ensure a process such as this is brought to fruition.

Advanced Technology:

Electric Bus & Coach ranges provide the solution for electric public transport on bus lines with high passenger flows. The innovative character of the Bus ranges is also visible on the outside, due to the BRT design of these articulated buses. This makes these vehicles valuable contributors to modern town and city images. At the same time, their unique design also focuses on the experience of the passengers with a fluent destination display, special designed LED lighting and closed wheelhouses. The interior design and configuration has also luxurious standing areas and special interior lighting for different ambiances. Some BRT variants can be custom made at several aspects, with everything centred around passenger convenience. Making these models the perfect solution for towns and cities to take their public transport to the next level. These Electric BRT Buses have an innovative, low weight concept for a low entry bus especially designed for the demanding conditions of urban and regional transport. Their well-thought-out method of construction results in a very low weight with major benefits such as class-leading energy consumption and low maintenance costs. These BRT Electric Buses are equipped with a battery pack that provides a large action radius. With the optional pantograph, faster charging becomes possible, which can even enlarge the action radius.

Battery Technology:

Battery technology is developing rapidly, giving rise to many different options. Aspects such as weight, price, energy density, composition and life expectancy are factors that are advancing rapidly at present. Another very important factor for consideration is how quickly the battery can be charged. Specific Bus & Coach manufacturers focus on being able to achieve operating ranges in excess of 500 km per day, rapid charging solutions such as a pantograph are used. Such solutions are noted for their flexibility and make it possible to charge a battery in just 75 minutes. The total energy level of the battery packs varies between 215 and 420 kWh.

Charging System:

Some Electric Bus & Coach ranges can be charged with several charging systems based on forthcoming European standards. The charging can take place with a capacity of 30 kW to 450 kW, with a difference between slow and fast charging.

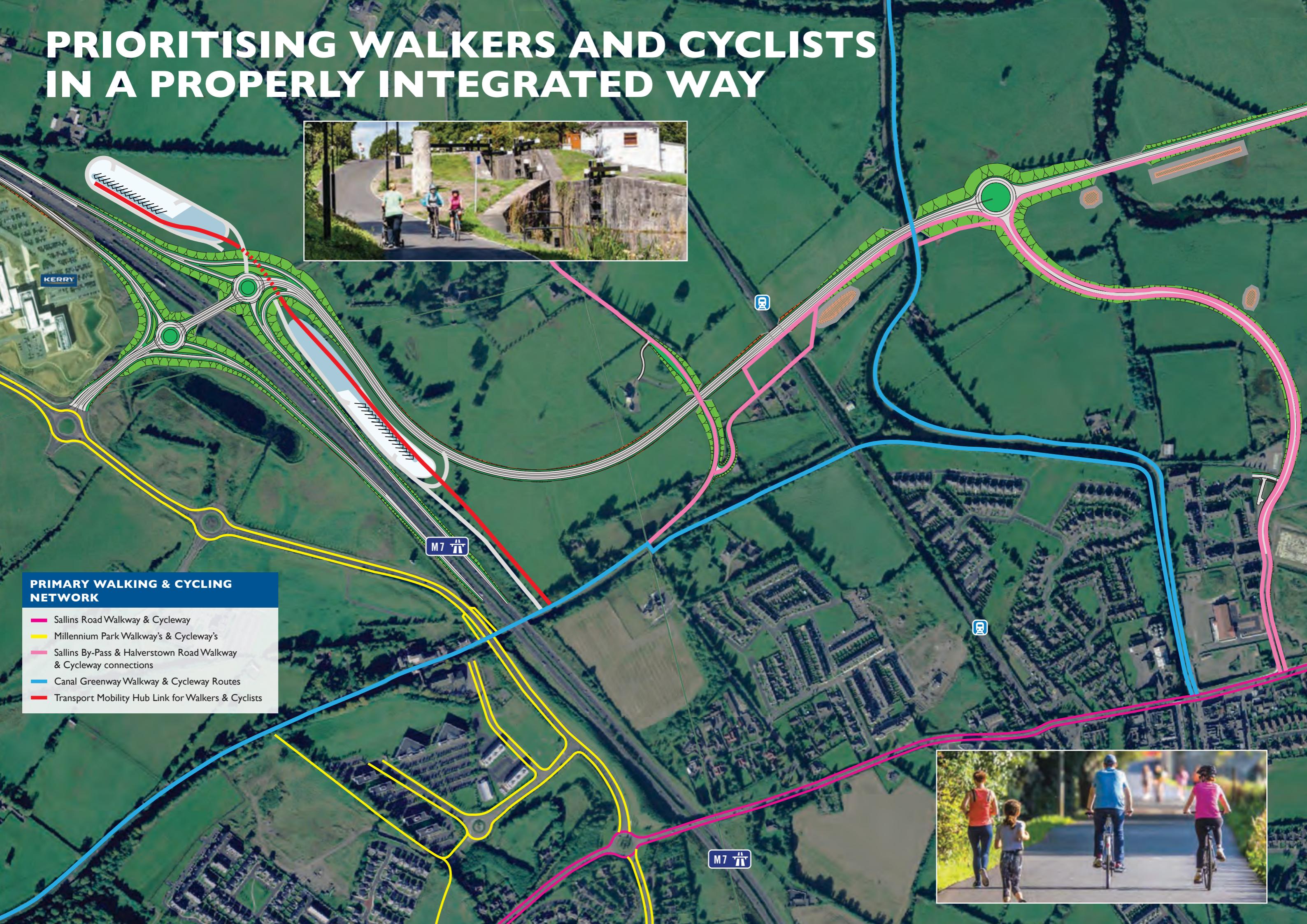


Naas/Sallins *Swiftway* Connection - the way forward

- **Completely flat floor;** Perfect for large passenger flows and optimal accessibility.
- **Driving comfort;** Great maneuverability.
- **100% Zero Emission;** Full electric climate system available.
- **Fast charging;** Roof and infrastructure mounted pantograph.
- **Flexibility;** Different length variants available, flexible door configurations including a 3rd door for both town, city and regional transport operation.
- **Full size low entry electric;** 12 and 12.9 metre length variants.
- **Greater comfort;** Clever interior concepts for optimised passenger comfort.
- **Reliable;** Proven, innovative low-weight concept.
- **Greater convenience;** Excellent accessibility.
- **Modular technology;** Design efficient; Improved new aerodynamic design efficiencies.



PRIORITISING WALKERS AND CYCLISTS IN A PROPERLY INTEGRATED WAY



FACILITATING PARKING - IF REQUIRED

