# DRAFT - Newbridge Area Based Transport Assessment

Area Based Transport Assessment

Kildare County Council

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Delivering a better world

**Prepared for:**

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# I. Introduction

AECOM have been appointed by Kildare County Council (KCC) to prepare an Area Based Transport Assessment for Newbridge, known as the NABTA. The Newbridge Area Based Transport Assessment (NABTA) provides a multimodal framework for future transport infrastructure planning, investment, and implementation as well as the integration of land-use-transport planning.

The NABTA is focused on sustainable travel, which in practice means supporting compact urban growth, encouraging modal shift away from the car to more sustainable transport modes and improving access to key destinations within Newbridge by non-car alternatives. There is a particular focus within Newbridge on providing safe and attractive active travel links between residential areas, schools, employment areas, the town centre, and the train station. For external trips outside Newbridge, the priority is placed on improving the effectiveness and range of public transport alternatives to key destinations to provide a competitive alternative to the private car.

In line with government policy, which places a strong emphasis on decarbonising transport and encouraging a shift away from private cars, the NABTA has built on these principles to develop a multimodal local transport plan for Newbridge.

National, regional, and county level growth targets require that KCC allocates moderate future population growth to Newbridge up to 2040. The NABTA provides a roadmap for the delivery of future transport infrastructure to service the new development areas in a way which will maximise the potential for sustainable travel and deliver modal shift in the existing residential areas of Newbridge.

The NABTA presents a comprehensive analysis of the current transport situation in Newbridge and presents measures to improve conditions for users of active modes, public transport, and private motorised vehicles. The NABTA will inform the development of the Draft Newbridge Local Area Plan 2024-2030 which will be prepared by the KCC Planning Department. In line with the proposals in the Kildare County Development Plan 2023-2029 and relevant national and regional policy.

# II. Newbridge Transport Context

Newbridge has experienced significant population growth in recent years.

The population was 22,742 in Census 2016, which was an increase of 5,615 people or 25% on the 2011 Census period and in the 2022 Census period the population was recorded as 24,366 people, equating to a 7% increase from 2016. It should be noted that at the time of the 2022 census there were a number of large residential developments within Newbridge which were under construction and have since been occupied, so the current population of Newbridge is likely higher than that which was reported in Census 2022. This shows that from 2011 to now Newbridge has seen a significant increase in its population.

In recent decades, the population growth has been accommodated largely on the periphery of the town with growth taking place in the Walshestown area to the south and Morristown and Rickardstown areas to the North of the town centre. This has resulted in increased internal trip distances from the new suburbs to the town centre and schools; making it harder / longer to walk to key destinations within Newbridge. At present, there are substantial levels of car dependency among Newbridge residents. With 58% of work trips and 27% of

education trips taking place by private motor vehicle this may reflect a lack of quality alternative sustainable travel means for some of these trips. An analysis of the 2016 trip lengths for internal travel to work and education, i.e. those living and working or studying in Newbridge, highlighted that that 74% of work trips and 75% of education trips are less than 2 km which are ideal trip lengths for walking or cycling. Reducing this level of car dependency and the emissions associated with car travel will be an essential component of the NABTA.

Newbridge is part of the Outer Dublin Metropolitan Area commuter bus network benefiting from the 126 service and a number of privately operated bus services. The train station lies to the north of the town centre and benefits from both commuter and intercity services connecting Newbridge to Heuston station and Connolly through Pheonix Park Tunnell Line Commuter services. However, the location of the train station to the north of the town centre makes it difficult to access by walking for those living south of the town centre. From an active travel perspective severance is a big issue within Newbridge with the train line, River Liffey and M7 Motorway and the limited crossing of each making walking and cycling journeys long and indirect. There is also limited existing cycling infrastructure within Newbridge making cycling a less desirable means of travel around the town, with only 2% of people recorded as cycling within Newbridge for travel to work or school in the 2022 census.

## III. Area Based Transport Assessments

Area Based Transport Assessments are a structured transport assessment process which take place to inform the development of Local Area Plans (LAP). Conducting an ABTA ensures that the transport measures in the LAP are evidence based and informed by specialist transport analysis. The ABTA process is defined by Transport Infrastructure Ireland (TII) in the 2018 'ABTA Advice Note' and the joint TII and National Transport Authority (NTA) 2021 'ABTA How to Guide'. The 2021 guidance describes the role of the ABTA in the LAP process as follows:

> *"An ABTA is recommended as the preferred form of technical assessment, which can be used to appraise and guide the formulation of transport policies within the LAP and, more generally, the integration of land use and transport planning in the form of the LAP's accompanying Local Transport Plan (LTP). The ABTA will appraise transport demand and opportunities in a manner which typically results in firm proposals for transport infrastructure and accompanying transport demand management, including non-infrastructural measures to encourage sustainable travel behaviour that can be incorporated into the LAP. Applying the ABTA principles to LTPs and related studies will enable the identification and selection of transport measures that are compatible with the policy objectives set out in the relevant Development Plan and emerging as part of the LAP."*

An ABTA is a structured process which takes place across six stages from the Baseline Assessment in Part 1 to the Monitoring and Review in Part 6 as shown in Figure 1-1. The ABTA approach is structured to describe the process from evidence collection, through option creation, option assessment, refinement and finalisation of the local transport plan recommended for the LAP.

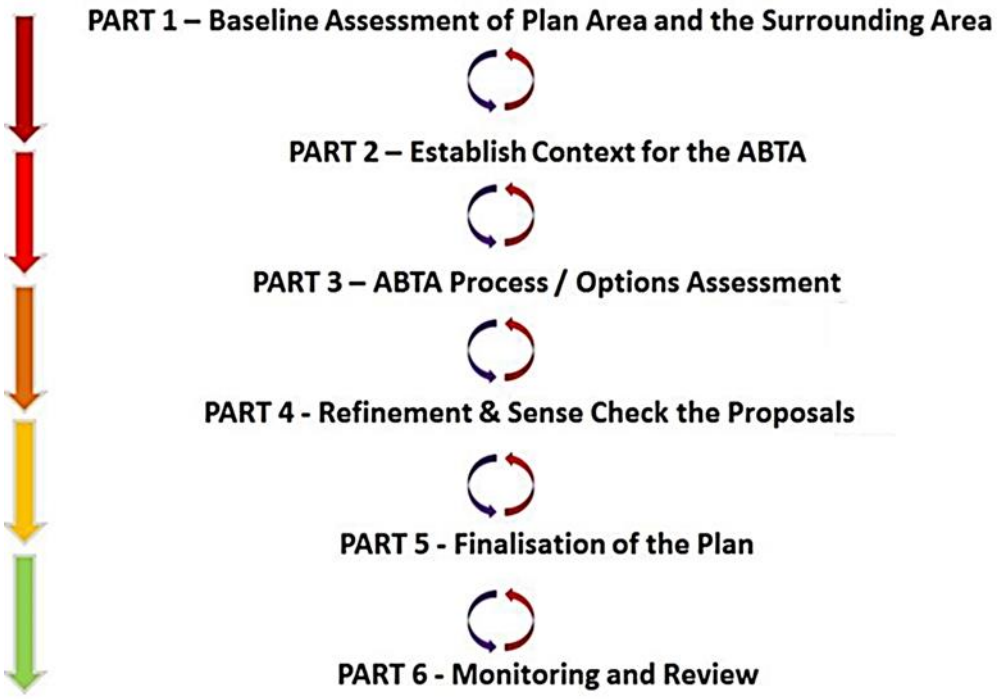


**Figure 1-1 – ABTA Stages (Source 2018 ABTA Guidance)**

## IV. NABTA Report Structure

The NABTA is based on the requirements of the 2018 ABTA guidance, and structured in the typical six-part ABTA format:

- Part 1: Baseline Assessment - The Baseline Assessment provides a comprehensive review of the urban structure of the town, transport infrastructure and environmental conditions to understand the strengths and weaknesses of Newbridge. It also contains a summary of the Phase 1 consultation results. In order to reduce the length of the Volume 1 NABTA report, the baseline assessment is provided in Volume 2, Appendix A rather than the main document.
- Part 2A: Establish the Context for the ABTA - Identifies principles and objectives for the NABTA and provides high level information on future development growth in Newbridge.
- Part 2B: Option Development and Description – Outlines the option development process, the relationship with integrated land-use planning and describes the options.
- Part 3: Option Assessment – Outlines the option scoring methodology and the assessment of the options to identify the preferred measures.
- Part 4: Refinement and Sense Check Proposals – This section contains a sense check of the NABTA to check it fulfils the requirements of the 2018 ABTA Guidance. It also outlines the changes made in response to Phase 2 consultation and the modal split targets.
- Part 5: Finalisation of the NABTA – Presents the final strategies for each mode of transport, the phasing of measures and the future planning principles.
- Part 6: Monitoring and Review – Outlines proposals for future monitoring in respect to modal shift, implementation and the NABTA review process.

Volume 1 of the NABTA contains the main body of NABTA report, Parts 2-6. The appendices are located in a separate document, Volume 2, with Appendix A containing Part 1 (Baseline Assessment) and the other appendices containing other supporting reports.

## V. Approach to NABTA Development

### Prioritising Modal Shift and Transport Decarbonisation

People choose their preferred mode of transport by weighing the benefits and costs of each mode for their trip purpose and requirements. Where a car is available, driving often has an advantage over sustainable modes of transport as it provides door-to-door access to any location, whereas public transport is restricted to particular routes and active modes are limited by distance. However, policy and infrastructure interventions such as bus priority measures and permeability improvements which ensure that sustainable travel is faster and more convenient than driving can help to increase the benefits of using sustainable travel modes. By increasing the benefits of using sustainable travel modes, this influences decisions by residents and encourages modal shift away from private motor vehicles.

The NABTA roads strategy is focused on reducing traffic in the town centre to facilitate improvements to walking, cycling and bus infrastructure. The NABTA proposes a comprehensive network for active travel which will make walking/cycling safer and more convenient, particularly for internal trips. For longer distance travel, the public transport strategy proposes improvements which will make it easier to travel further afield by bus or rail.

### Delivering Sustainable Transport Policy in Newbridge

A sustainable travel focused local transport plan is in line with national transport policy which emphasises the importance of promoting sustainable travel and reducing the negative environmental, health and social impacts of private motorised transport. The Department of Transport (DoT) published the National Investment Framework for Transport in Ireland (NIFTI) in December 2021. NIFTI seeks to ensure that transport investment is aligned with four investment priorities:

- Protection and renewal
- Decarbonisation
- Mobility of people and goods in urban areas
- Enhanced regional and rural connectivity.

The NIFTI investment priorities are supplemented by Modal and Intervention Hierarchies. Under the Modal Hierarchy, sustainable modes, starting with active travel (walking, wheeling, and cycling) and public transport should be considered first for investment before the private car. Under the NIFTI Intervention Hierarchy, protecting and renewing the existing transport network should, where possible, be the first solution considered, followed by maximising the value of the network through optimising or improving it, with investing in new infrastructure as the last option.

The DoT also published a new National Sustainable Mobility Policy in April 2022 which sets out a strategic framework to 2030 for active travel and public transport. The policy aims to deliver at least 500,000 additional daily active travel and public transport journeys by 2030 and a 10% reduction in the number of kilometres driven by fossil fuelled cars. The overall approach set out in the policy to achieving a more sustainable transport sector is based on the 'Avoid-Shift-Improve' principle and implementing measures to:

- Avoid: Reduce the frequency and distance of trips.
- Shift: Move towards more environmentally friendly modes of transport, such as walking, cycling, or using public transport.
- Improve: Promoting efficient fuel and vehicle technologies.

The NABTA seeks to meet the requirements set out in NIFTI and the National Sustainable Mobility Policy to achieve modal shift by creating a strategy which will transform travel by active modes within the town and enhance public transport connectivity within the study area and across the region.

### Integrated Land-Use-Transport Planning

Land-use and transport are highly related in a process known as the land-use transport feedback cycle, which is shown in Figure 1-2. This cycle means that when transport improvements promote growth, the development results in the need for more transport improvements to cater for extra demand, which leads to additional transport capacity promoting growth again as the cycle repeats.

Appreciating the importance of the land-use-transport feedback cycle is a vital part of understanding the need for an integrated approach to land-use-transport planning as part of Area Based Transport Assessments. ABTAs and Local Area Plans can be used to strategically locate new transport infrastructure in areas where the promotion of development growth will have the best chance of encouraging modal shift and sustainable travel models.

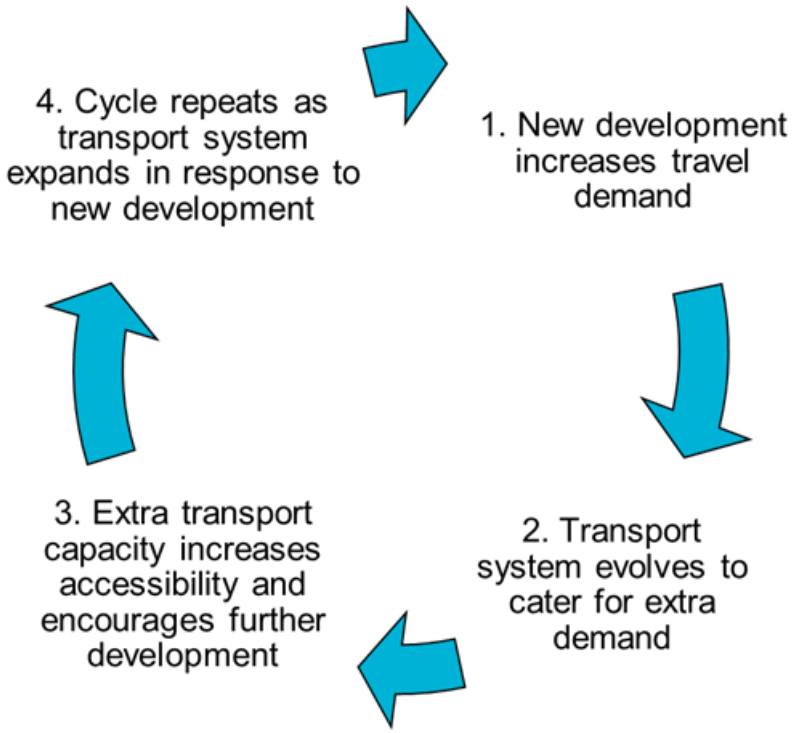


**Figure 1-2 - Land Use Transport Feedback Cycle**

Newbridge is expected to undergo a modest increase in population over the next twenty years in order to meet the growth targets defined in National, Regional and County level planning policies. The high levels of growth already experienced by Newbridge in recent years and the allocated future growth for Newbridge will see the existing transport infrastructure come under increased pressure. This will require careful future land-use-transport planning to

ensure this growth is accommodated as part of a strategic plan which will promote sustainable travel and limit car dependency as much as possible.

As part of the NABTA development process, a detailed land-use modelling assessment took place to identify the preferred land-use scenario which has the best potential to promote sustainable travel. In the NABTA assumptions, future population and employment growth are located in areas which are most likely to facilitate sustainable travel, which the NABTA capitalises on by proposing integrated walking, cycling, public transport and road measures to connect these growth areas to retail, education, service, and employment trip destinations. An integrated approach to land-use and transport such as this will ensure that the land-use-transport feedback cycle is utilised to a positive end to encourage modal shift, rather than older planning approaches which were more reactive to traffic problems associated with growth (e.g. increasing road capacity to 'solve' congestion) and inadvertently encouraged induced demand and urban sprawl.

## VI. NABTA Study Area

The study area boundary for the NABTA is shown in Figure 1-3 as a red line. The study area encompasses the built-up urban area of Newbridge and some of the rural periphery which may accommodate new development areas in the future.

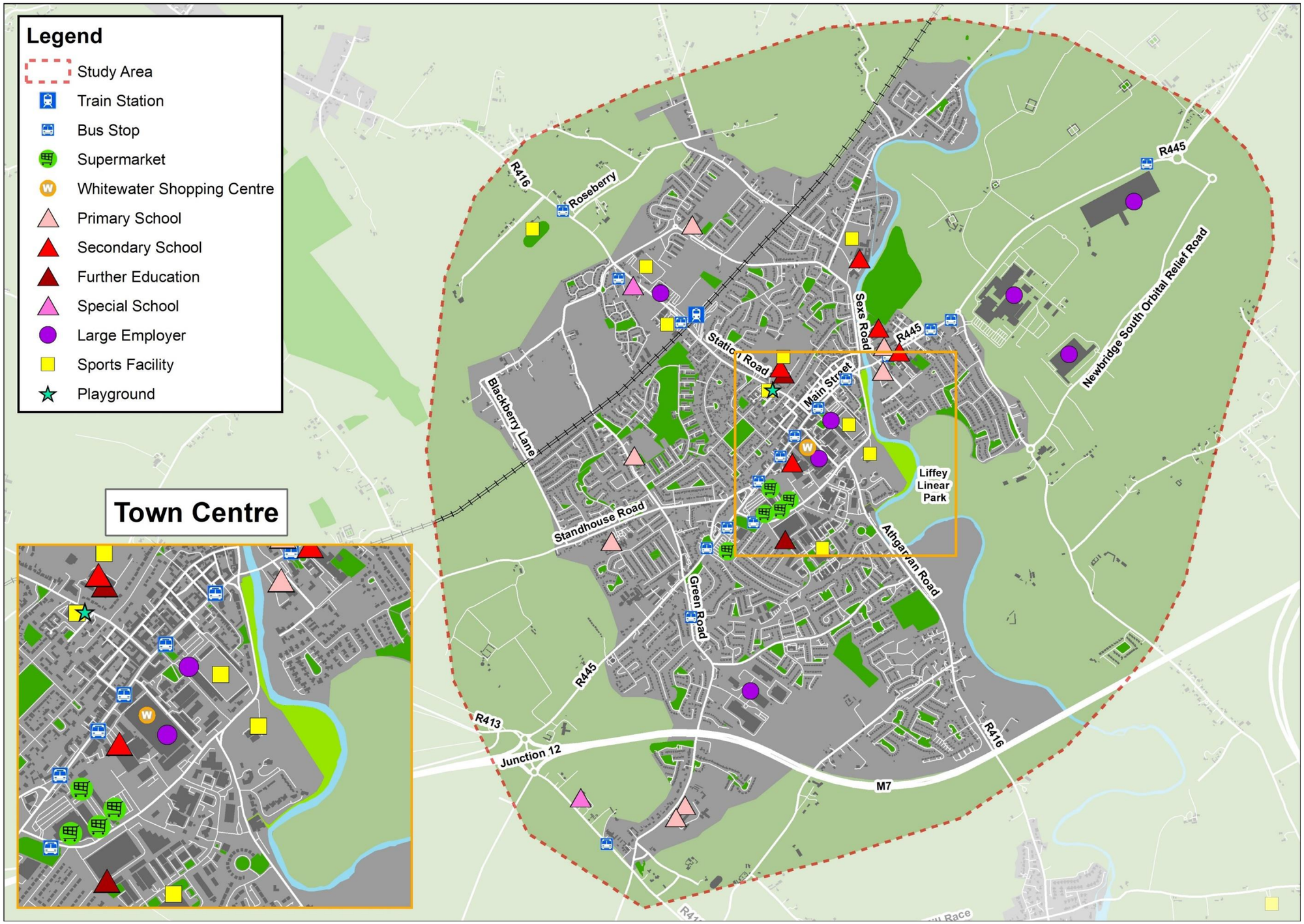


**Figure 1-3 – Newbridge Area Based Transport Assessment Study Area**

# VII. Analysis Tools

This section describes the analysis tools used to anticipate issues and develop solutions for the NLPT. The following analysis tools were used in the creation of the report:

- VISUM Model – Strategic transport model used to inform the development of the roads strategy for Newbridge and to assess the performance of the road network in future years.
- ArcGIS Network Analyst – GIS tools used to assess the impact of the permeability strategy on the walking catchments to key services and locations.
- ArcGIS Closest Facility Analysis – this GIS analysis tool was used extensively in the NABTA Land Use Assessment Report to assess which potential future development sites were closest to a public transport infrastructure such as bus stops and the train station and also a range of key trip generators such as schools, supermarkets, neighbourhood centres and the town centre.

## VISUM Model

A VISUM local area model (LAM) was developed to study the transport network in Newbridge and its environs in the present day and in future years during the AM and PM peaks. The Newbridge transport model has a base year of 2023 and the future years under assessment are 2030 and 2040. The zone structure of the transport model is based on different land-use category areas, as well as boundaries such as canals or roads. Figure 1-4 shows the model zone structure used in the Newbridge LAM for the internal zones near the town. A full document describing the development of the Newbridge LAM can be found in the VISUM Model Development Report and Traffic Modelling Report located in Appendix C, Volume 2 of the NABTA.

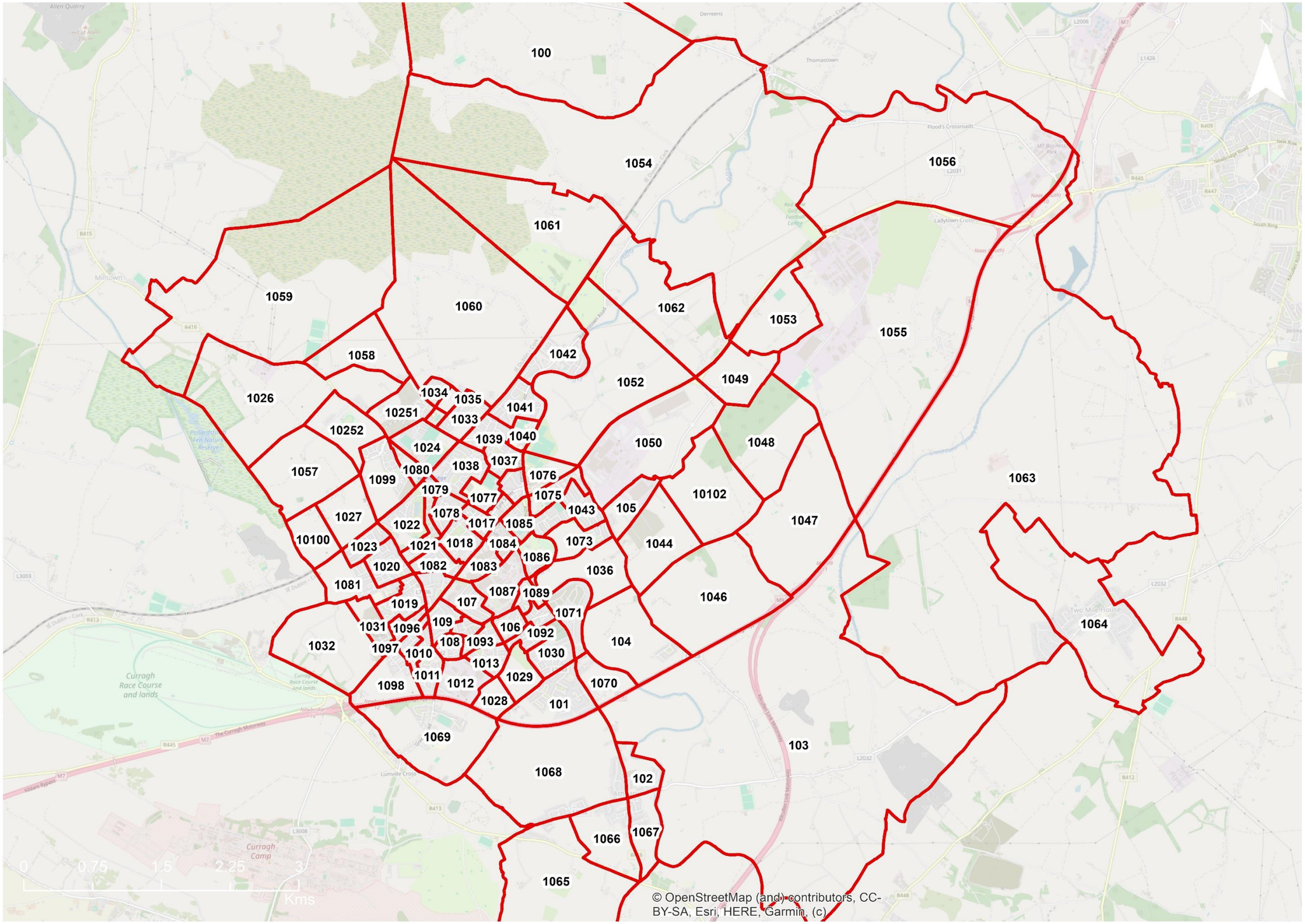


**Figure 1-4 – Newbridge VISUM Base Model Internal Zone Structure**

## ArcGIS Network Analyst

In order to assess the walking catchments for key destinations in Newbridge, an accurate path network was developed which included: roads with footpaths, pedestrian paths, reasonably surfaced tracks, clearly established informal paths, and cut throughs. The path network excluded: gated paths, muddy tracks, and very informal paths. The objective of this path network is to accurately assess the walking distance to key destinations for most walkers or wheelchair users via established and maintained routes. It does not consider issues such as the quality of the surface, barriers, the level of lighting or other issues which affect people using active modes travel.

The baseline path network is shown in Figure 1-5. The advantage of this path network is that it can accurately assess real pedestrian movement, rather than simply representing walking distances on the road network. The path network covers the NABTA study area and extends further south to include Athgarvan. In general, the baseline path network ends where footpaths cease on the approach roads in the study area. The network was originally extracted from Open Street Map and then extensively modified using aerial photography, Google Street View and a site visit to identify paths, cut throughs and public tracks.

The resulting path network was used in the ArcGIS tool 'Network Analyst' to create walking distance service areas for key destinations in Newbridge. To assess the impact of the new links proposed in the walking strategy, a future Do-Something path network was developed which compares the existing situation to the proposed strategy path network. This allows for the benefits of the permeability strategy to be quantified by counting the number of GeoDirectory buildings within the 500m or 1km walking distance catchments of key destinations.

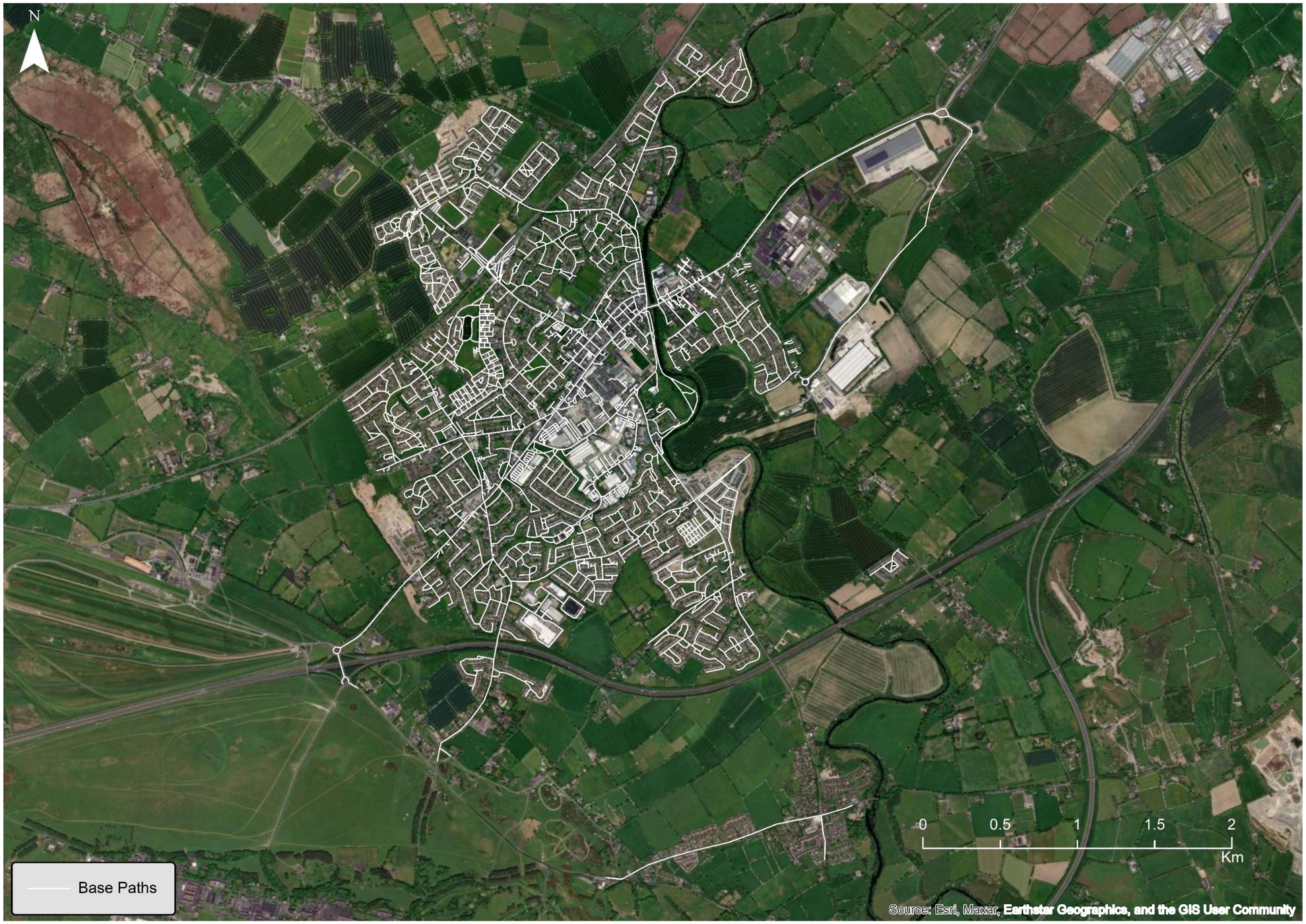


**Figure 1-5 – Baseline Network of Paths in Newbridge**

## ArcGIS Closest Facility Analysis

The Closest Facility Analysis developed a methodology to provide a sustainable travel score to each growth assessment zone in Newbridge. The Methodology used a GIS spatial method based predominantly on a 'through the network' distance to services - a 'through the network' path is that path distance calculated on the available path network, in contrast to an 'as the crow flies' path distance. In order to generate a future walking / permeability network the base network shown in the previous section was enhanced with planned and proposed future walking links.

The services assessed were bus stops and the frequency of services at the stop, train station, town centre, neighbourhood centres and schools. These locations were chosen as the proximity of houses to public transport services, such as frequent bus services and train services, can encourage residents to use these services to undertake journeys, thus maximising the use of sustainable transport for a range of trip types. Similarly, the proximity of housing to the town centre, a neighbourhood centre, or schools can help localise a number of trips purposes and may encourage residents to undertake a variety of journeys by active modes.

# 1. Part 1 – Baseline Assessment

The Baseline Assessment is provided in a separate standalone document located in Appendix A in Volume 2 of the ABTA to reduce the length of the main report.

At the end of the Baseline Assessment, a summary of the strengths, weaknesses, opportunities, and threats (SWOT) analysis was conducted for the NABTA study area to inform the development of the options. The SWOT in Error! Reference source not found. provides useful context for the options which are developed in Part 2 and the issues they seek to resolve.

## Table 1-1 – SWOT Analysis for Newbridge Area Based Transport Assessment

| Strengths | Weakness |
|---|---|
| • Central retail areas (Supermarkets and Whitewater Centre)<br>• Vibrancy of the town centre/Main Street<br>• Location of regional attractions such as Whitewater Centre, St. Conleth's Park, and the Curragh Racecourse<br>• Quick rail connection to Dublin via intercity rail services<br>• Access to the Curragh Recreational Area<br>• Local employment opportunities at Newbridge Business Park and industrial lands located at Little and Great Connell<br>• Proximity to the M7 and Junction 12<br>• Relatively flat topography<br>• Growing population with a high percentage of young people | • Severance caused by rail line, River Liffey, and M7 Motorway<br>• High level of car dependency and congestion<br>• Unsafe conditions for active modes (e.g., poor infrastructure, dangerous driving, and other issues)<br>• Large number of schools located at the only crossing over the River Liffey<br>• Low housing densities and sprawl<br>• Cul-de-sac design of housing estates and impermeable development<br>• Lack of bus routes serving residential areas and schools to the north of the town<br>• High frequency public transport network focused on radial trips towards Dublin.<br>• Lack of inter-urban walking/cycling connections to surrounding towns<br>• No town centre bypass for vehicular or bus traffic<br>• No bus priority measures in the town |
| **Opportunities** | **Threats** |
| • Improving safety and connectivity for active modes of travel<br>• Improving public transport and active mode connections with nearby towns<br>• Improving accessibility for people with mobility difficulties<br>• New connecting Ireland bus service to provide connection to Milltown and Naas<br>• Reduction in on-street parking for improvements to public realm/active modes<br>• Delivery of compact growth including in-fill development close to the town centre<br>• Provision of orbital traffic routes to take traffic out of the town centre.<br>• Rising fuel costs promote shift to electric vehicles and sustainable travel modes | • Objections from residents or businesses to reallocation of road space to active modes and public transport and/or to measures to improve permeability.<br>• Insufficient co-ordination of the land use and transport plans<br>• Further construction of low-density, single use, impermeable developments<br>• Future peripheral employment developments<br>• New orbital roads may increase appeal of car travel and contribute to induced demand.<br>• Increased transport demand linked to population growth.<br>• Insufficient funding for transport infrastructure<br>• High level of commuting by car for trips to school<br>• Inflation and rising costs make the provision of public transport more expensive |

# 2. Part 2 - Establish the Context and Option Development

## 2.1 Part 2A – Establish the Context for the ATBA

### 2.1.1 ABTA Principles

Following the completion of the Baseline Assessment and SWOT analysis, a set of ABTA Principles were developed and agreed in collaboration with KCC to help inform the option development process for the ABTA as well as future monitoring. There are six overall strategy principles as well as mode specific principles for public transport, cycling, walking, roads, and parking.

Later in the ABTA, Part 6 sets out recommendations for ongoing monitoring of the delivery and impact of the ABTA measures. A wide range of suggested indicators are put forward which will help KCC and key stakeholders to understand the extent to which the principles set out in this section are being met.

#### 2.1.1.1 Overall Strategy Principles

The following principles are objectives to guide the overall development of the NABTA:

- Promote Newbridge Town Centre as the core of activity and prioritise the improvement of its sustainable transport functionality, thus making Newbridge a more attractive place to live, work, visit, study and socialise.
- Improve sustainable travel infrastructure to connect Newbridge with neighbouring settlements in Kildare and the Greater Dublin Area.
- Provide sufficient transport infrastructure, in line with the modal hierarchy, to facilitate population and employment growth targets for Newbridge by enabling development in the areas most likely to promote compact growth and sustainable travel.
- Ensure sustainable development and compact growth in Newbridge through integrated land-use-transport planning.
- Promote modal shift from private motor vehicles to sustainable travel modes through the improvement of walking, cycling and public transport infrastructure to provide a viable alternative to the private car.
- Support the aims of the NIFTI modal and intervention hierarchies, to prioritise sustainable travel modes and upgrade existing infrastructure where possible.
- Improve public health and well-being by promoting active travel.

#### 2.1.1.2 Walking Principles

In respect to walking, the guiding principles of the ABTA are:

- Create an integrated walking network for Newbridge which allows for convenient, safe, and efficient travel across the town as well as facilitating recreational walking.
- Improve permeability to enhance access to homes, jobs, schools, supermarkets, the university, and public transport.
- Improve safety for pedestrians, particularly for vulnerable road users, through the creation of new crossing points and footpaths.

- Provide walking links between Newbridge, Athgravan, Milltown, Kildare Town, and Naas.
- Promote modal shift from the private car to walking, particularly for short-medium distance trips.

#### 2.1.1.3 Cycling Principles

In respect to cycling, the guiding principles of the ABTA are:

- Provide an integrated, inclusive cycle network for Newbridge in accordance with the National Transport Authority's Cycle Network Plan for the Greater Dublin Area.
- Improve safety for cyclists in Newbridge.
- Improve cycling connections between homes and key trip attractors such as the town centre, train station, supermarkets, and schools.
- Enhance inter-urban cycling links between Newbridge and nearby settlements or employment locations.
- Promote modal shift from the private car to cycling, particularly for short-medium distance trips.

#### 2.1.1.4 Public Transport Principles

In respect to public transport, the guiding principles of the ABTA are:

- Improve access from residential, employment, education, healthcare, and retail facilities to public transport stops, particularly those with higher frequency services.
- Improve the coverage, frequency and capacity of bus and rail services.
- Provide bus priority infrastructure where it is necessary to improve journey times and reliability.
- Improve public transport stops/stations in respect to location, information, accessibility, infrastructure, and visibility.
- Improve interchange experience for passengers changing between different modes of public transport or routes.
- Promote modal shift from the private car to bus or rail, particularly for medium/long distance trips.

#### 2.1.1.5 Road Principles

In respect to road transport, the guiding principles of the ABTA are:

- Reduce car dependency by promoting mode transfer to walking, cycling and public transport.
- Reduce unnecessary vehicular trips through Newbridge town centre.
- Improve road safety and eliminate collision hot spots.
- Identify the transport corridors required to support the movement of people and goods to enable the growth of Newbridge.
- Provide efficient access to existing or proposed park and ride facilities.

#### 2.1.1.6 Parking Principles

In respect to parking, the guiding principles of the ABTA are:

- Manage the provision of car parking to support and improve the economic vitality of the town centre.
- To ensure car parking provision encourages sustainable commuter travel, especially for journeys into Dublin City Centre and supports access by public transport, cycling and walking.
- To reduce on-street parking, where appropriate, in the town centre to facilitate public realm and walking/cycling/public transport infrastructure improvements.
- Improve the quality of parking information with new parking signage and technology.
- Introduce parking demand management measures to reduce car dependency and enhance the attractiveness of sustainable travel.
- Make high-level recommendations regarding suitable locations for electric vehicle charging hubs.

### 2.1.2 Future Population and Jobs Growth in Newbridge

The integration of land-use and transport planning is key to promoting compact growth and travel by sustainable modes. In Newbridge, a bespoke land-use-transport assessment process was completed to identify the preferred scenario for growth, which would inform the development of options in the ABTA to serve the new development areas with infrastructure. This section summarises the land-use-transport assessment process which was conducted prior to the creation of the NLPT report and provides a high-level overview of assumptions in the preferred land-use scenario to guide growth in the years leading up to 2030 and 2040.

#### 2.1.2.1 Land-Use Scenario Assessment Process

The population of Newbridge is expected to experience moderate growth based on population targets defined in National, Regional and County level planning policies. This will put additional pressure on the transport network, requiring careful land-use-transport planning to ensure this growth can be accommodated as part of a strategic plan which will promote sustainable travel and limit car dependency. There were five proposed land-use scenarios assessed as part of this process and the results allowed for the unique implications of each different development scenario to be understood. The purpose of this exercise was to assess the relative merit of five alternative land-use scenarios to identify the preferred land-use approach for future growth in Newbridge in the years leading up to 2040. This process is documented in the Land Use Assessment Report located in Appendix B in Volume 2 of the NABTA.

#### 2.1.2.2 Land-Use Assessment Objectives

The land-use assessment objectives for Newbridge are as follows:

1. Support consolidation of the existing urban area through compact growth and discourage urban sprawl.
2. Encourage rail-oriented development by locating future population in close proximity to the train station.
3. Diversify land-use types to encourage shorter trip distances and modal shift from car transport to sustainable travel modes.
4. Provide development in locations which allow for the efficient operation of the road network for passenger vehicles and freight.

#### 2.1.2.3 Land-Use Scenarios Assessment

KCC planning department put together five possible land-use scenarios considering all eventualities for the future spatial development of Newbridge. The five scenarios are made of the following:

- A Central Growth Scenario covering potential future growth sites in the centre of Newbridge.
- An Eastern Growth Scenario covering potential future growth sites to the East of Newbridge Town Centre and the River Liffey.
- A North-eastern Growth Scenario covering potential future growth sites to the north-east of Newbridge Town Centre and the River Liffey.
- A Northern Growth Scenario covering potential future growth sites to the north of Newbridge Town Centre and the Train Line.
- A Southern Growth Scenario covering potential future growth sites to the south of Newbridge Town Centre and the M7.

A bespoke methodology was developed in GIS for this land use assessment which builds on similar work carried out for KCC during the Maynooth and Environs ABTA. The GIS Assessment provides each future growth assessment zone with a score. The growth assessment zones are those which were assigned a future level of growth within each of the various land use scenarios developed by the KCC planners. The growth assessment zones align with the Newbridge Local Area Model (LAM) zoning structure. This allows the preferred land use scenario to be easily accounted for within the Newbridge LAM.

The GIS assessment determined the score based on the distance of each of the growth assessment zones to the to five types of assessment location – bus stops, the train station, town centre, neighbourhood centres and schools. Access to these destinations was determined based on a 'through the network' distance using the future permeability network developed for the Newbridge ABTA to the nearest location of the destination. The future Newbridge path network is shown in Error! Reference source not found..

#### 2.1.2.4 Preferred Land-Use Scenario

Having regard to the housing numbers allocated by the KCC planning department to the existing 5 scenarios, it was determined that roughly 1,461 new additional households would be required to meet the need up to 2030 and 3,372 new additional households by 2040. These numbers were derived having regard to the average number of households included within each of the scenarios.

Having analysed the performance of each of the growth assessment zones to create a hybrid scenario, as shown in Table 2-1, and having regard to the complexity of developing the central zone, it was decided to formulate the hybrid scenario using all zones that score over five. This allows for the northern and north-eastern zones listed below to provide the required units up to 2030 and the central zone to meet the development needs up to 2040.

### Table 2-1 – Hybrid scenario

| Scenario | Zone | Total Score out of 11 | No. of Units 2030 | No. of Units 2040 |
|---|---|---|---|---|
| Central | 1016 | 8 | 20 | 40 |
| Central | 1078 | 7 | - | 50 |
| Central | 1085 | 7 | 100 | 100 |
| Northern | 1080 | 7 | 150 | 150 |
| Northern | 1099 | 7 | 800 | 800 |
| Central | 1021 | 6 | - | 50 |
| Central | 1074 | 6 | - | 50 |
| Central | 1082 | 6 | 40 | 100 |
| Central | 1083 | 6 | 200 | 400 |
| Central | 1020 | 5 | - | 50 |
| Central | 1084 | 5 | 400 | 1,000 |
| Central | 1094 | 5 | - | 50 |
| Northern | 1033 | 5 | 400 | 400 |
| Northern | 1035 | 5 | 400 | 400 |
| North-Eastern | 1076 | 5 | 162 | 162 |
| **Sum of Units >= 8** | | | **20** | **40** |
| **Sum of Units >= 7** | | | **1,070** | **1,140** |
| **Sum of Units >= 6** | | | **1,310** | **1,740** |
| **Sum of Units >= 5** | | | **2,672** | **3,802** |

The table shows a summing of units included within each of the scoring bands. It should be noted that these are cumulative e.g., anything equal to or over five is included in the Sum of Units >= 5 calculation.

The zones that make up the hybrid scenario are shown in Figure 2-1 below, which highlights that these zones represent the densification of the centre of Newbridge and the sequential development of zones closest to the existing urban centre. As demonstrated by the assessment these zones have a high level of potential to deliver new communities within Newbridge where sustainable travel is feasible for lots of different trip purposes.

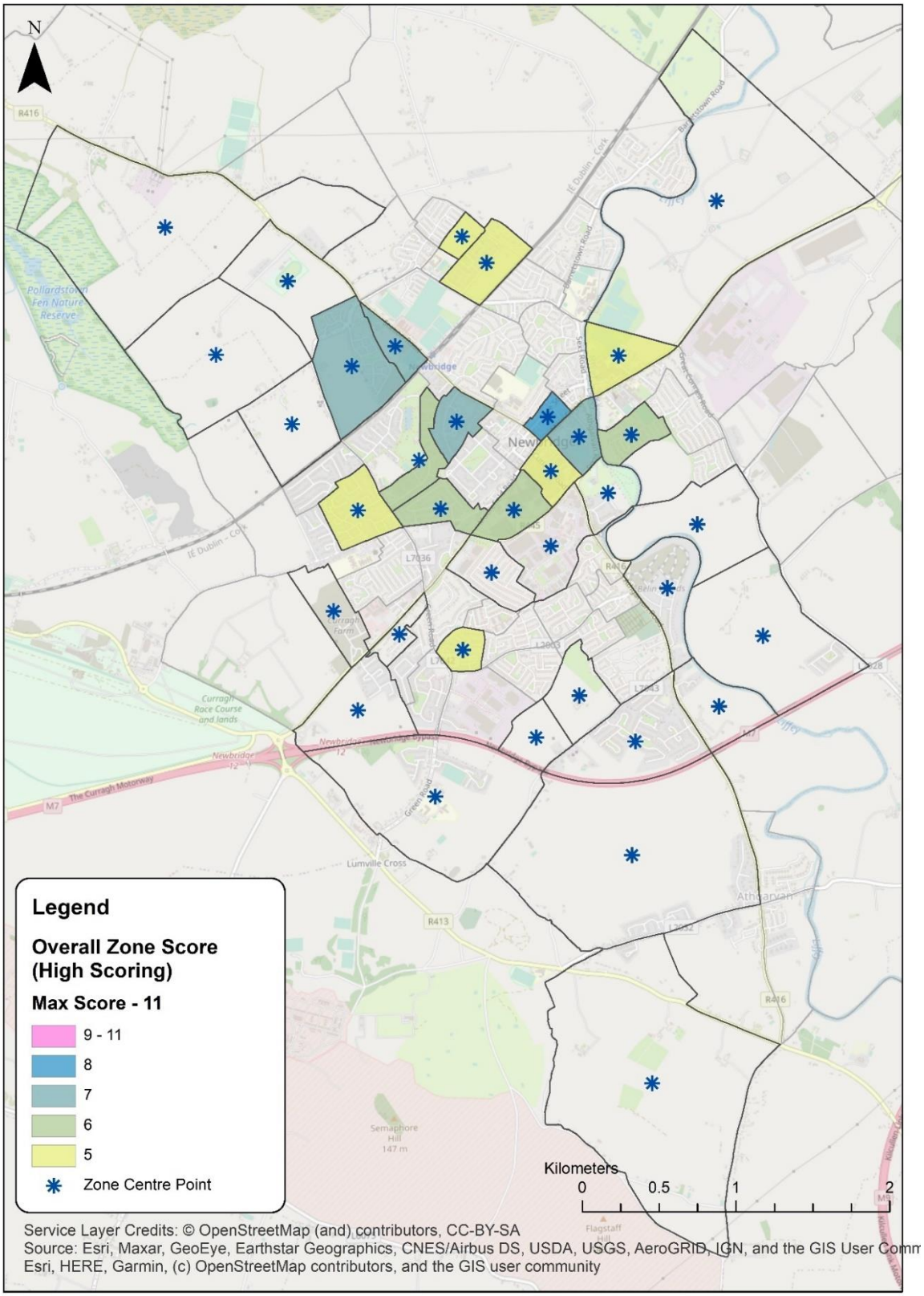


**Figure 2-1 - Growth Assessment Zones that make up the hybrid growth scenario**

Conversely Figure 2-2 show all the zones discounted from forming part of the hybrid scenario. It is clear from the map that most of these zones lie on the periphery of Newbridge and would likely result in an unsustainable future development trend for Newbridge if they were developed. However, it should be noted that the growth assessment zones that score

three and four below could from part of future development proposals post 2040 if public transport access improved.

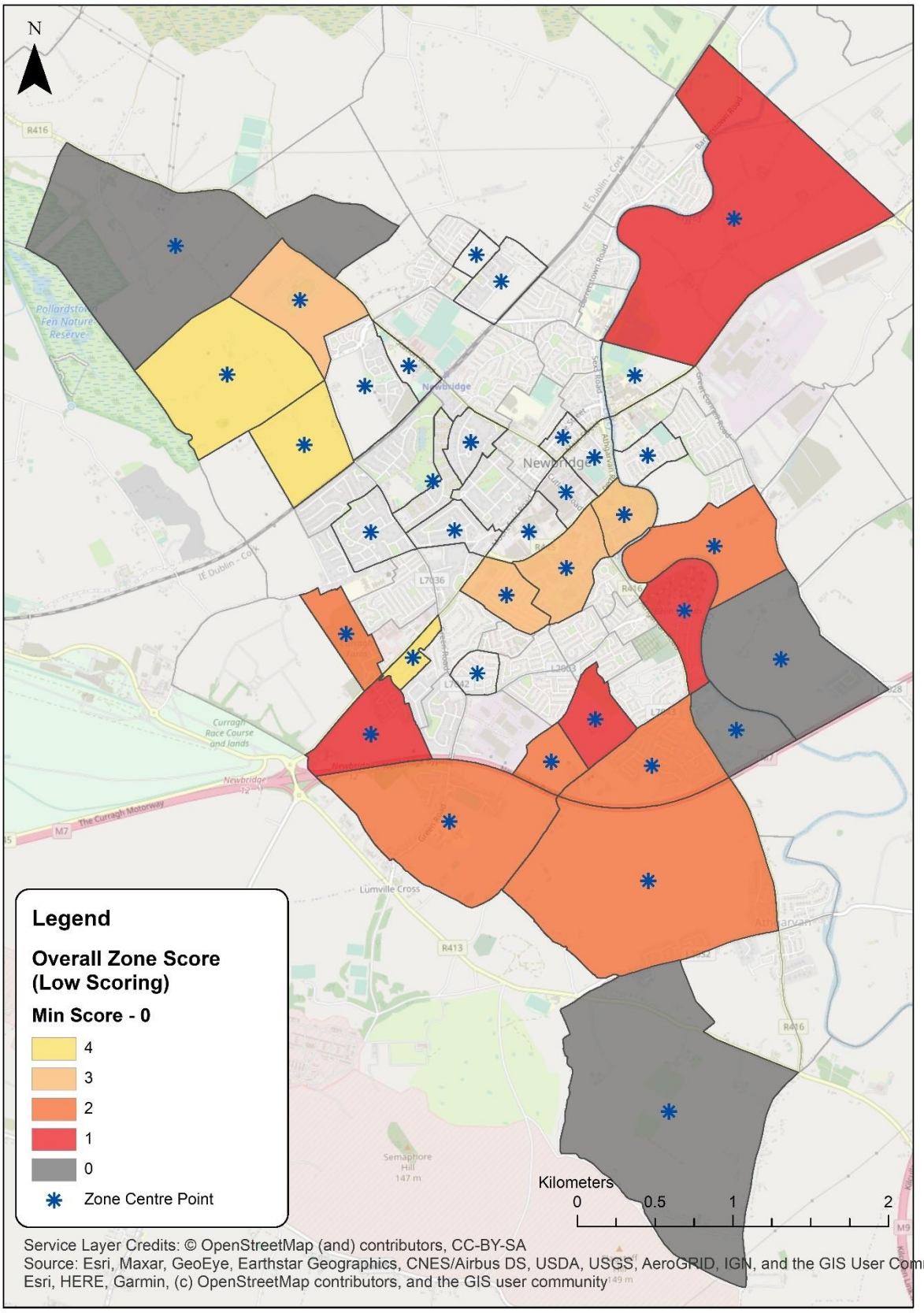


**Figure 2-2 – Growth Assessment Zones excluded from the hybrid scenario**

## 2.2 Part 2B – Option Development and Description

### 2.2.1 Option Development Process

The first version of the NABTA strategy options were developed on the basis of the baseline assessment and Phase 1 consultation, which consisted of stakeholder meetings (e.g. Cllrs, schools) and an online public survey. This information provided was the focus for the creation of options to solve transport issues in the existing urban areas for all modes of transport. In relation to future growth areas, the land designated for development in the preferred land-use scenario was the guide for the creation of expanded walking and cycling connections, additional bus routes and road infrastructure. Later in the option development process, Phase 2 consultation was held on a set of draft strategy options for stakeholders and the public to comment. On the basis of this feedback, a number of additional options were developed to respond to issues, while a number of options were discounted on the basis of the strong negative reception they received, and this fed into the multi-criteria analysis assessment located in Part 3.

The inputs to the option development process are summarised in Figure 2-3.

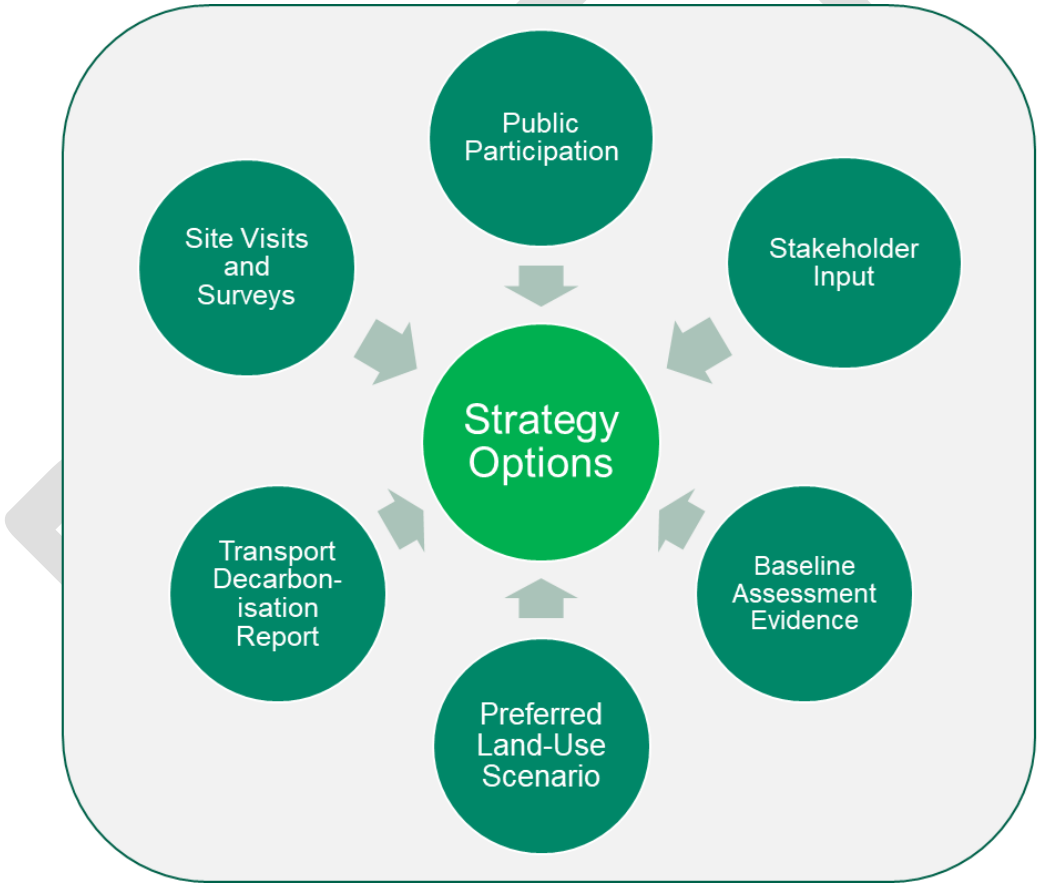


**Figure 2-3 Inputs for Strategy Option Development**

### 2.2.2 Preferred Land-Use Scenario

The preferred land-use scenario outlined in Section 2.1.2.4 provided a clear guide for the development of options to service future growth areas. In general, option development sought to ensure that plans were in place to service future development areas with strong sustainable travel infrastructure, while the approach for the road strategy was to provide basic access and the parking strategy focused on demand management measures.

### 2.2.3 Options Description

This section describes the options for each transport mode: active modes, public transport, roads, and parking. The options; are described in Part 2B, assessed in Part 3, and will be presented as a final strategy in Part 5 following the completion of phase two public consultation and the revision of the strategy based on the consultation feedback received which will be outline in Part 4 of this document.

For walking and cycling, a slightly different approach is taken in the NABTA where the measures are presented in Part 2B but are not assessed using an MCA in Part 3. This is because of the network wide benefits of the walking and cycling strategies which is unique to these strategies. Other options have a more localised impact within Newbridge and are more suited to being assessed using an MCA.

#### 2.2.3.1 Active Modes Options Description

This section outlines the development of the active mode measures and sets out the walking/permeability and cycling strategies.

Separate objectives, tables of measures and maps are set out in this section for walking/permeability measures and cycling measures. However, the walking/permeability strategy and cycling strategy are very interdependent, as a very large proportion of the measures which are set out in the walking/permeability strategy will also form part of the future cycle network and are shown on the cycle strategy map for this reason. Complementary active mode measures are set out in the final part of this section.

##### 2.2.3.1.1 Walking / Permeability Objectives

The permeability strategy seeks to achieve the following objectives:

1. Create an integrated walking network for Newbridge which allows for convenient, safe, and efficient travel across the town, as well as facilitating recreational walking.
2. Improve permeability to enhance access to homes, jobs, schools, supermarkets, and public transport.
3. Improve safety for pedestrians, particularly for vulnerable road users, through the creation of new footpaths and crossing points.
4. Provide walking links between Newbridge, Athgarvan and the Curragh.
5. Promote modal shift from the private car to walking, particularly for short-medium distance trips.

##### 2.2.3.1.2 Walking / Permeability Options Development

The walking strategy seeks to create convenient, efficient, and safe routes between homes and key trip attractors. The strategy also seeks to reduce walking trip distances through the implementation of permeability measures which give active modes of travel a competitive advantage over private cars. The strategy facilitates recreational walking through the delivery of new and improved greenway links and amenity walking links as well as through improving access to existing facilities which are attractive to recreational walkers such as Pollards Town Fen and Corbally Harbour. Figure 2-4 show the concept diagram for the development of the Newbridge permeability network.

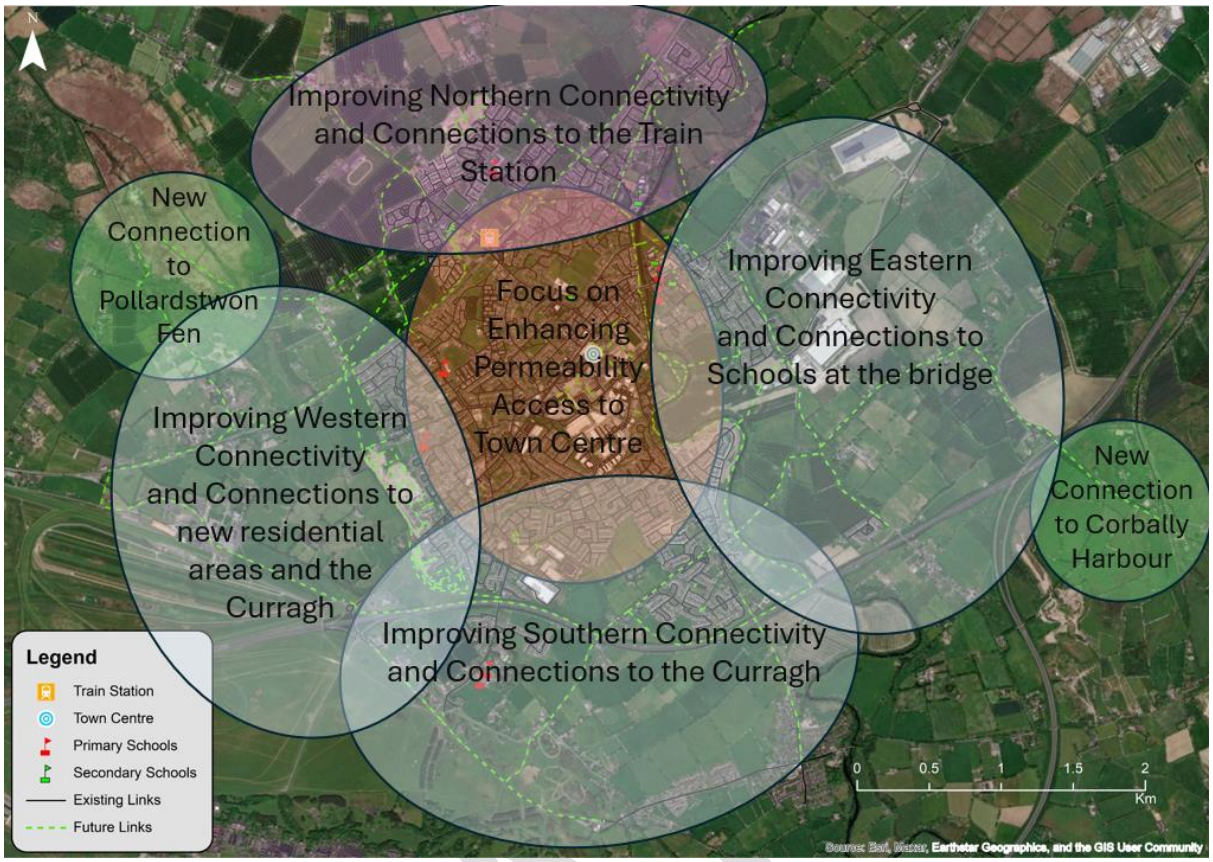


**Figure 2-4 – Concept Diagram of Newbridge Permeability Strategy**

There are numerous issues impacting permeability in Newbridge as documented in the Baseline Report. Key linear barriers include the River Liffey, the rail line, and the M7 Motorway. The permeability strategy seeks to address linear barriers by improving connections across them as well as by providing or improving links which run parallel to the features and improving the connections to them from the surrounding area. In addition to linear barriers, there are also some relatively impermeable blocks within the study area which can cause longer indirect trips for people walking and cycling. Examples of this include area surrounding the Whitewater Centre and cul-de-sac housing estates. The permeability strategy also seeks to improve permeability through these areas.

To develop options for the strategy, the baseline catchments were assessed to identify barriers which lengthen walking distances to key trip attractors such as schools, bus stops and the train station. Particular focus was placed on facilitating direct routes along desire lines between homes and key destinations for work (town centre and Newbridge Business Park), retail (supermarkets, local shops), and education (schools). In addition to considering the existing built-up area of Newbridge, consideration was also given to providing connectivity to and through future development areas. As there are existing plans in place for many future development areas, a large number of site layout plans were collected and reviewed where available, in an effort to reflect existing plans and proposals for new connections in the development of active mode measures and the future path network.

#### 2.2.3.1.3 Walking / Permeability Measures Description

There are eight different categories of walking/permeability measures shown on the permeability strategy measures map (Figure 2 3). These different categories are described below.

- Greenways: greenways are trails built to be used exclusively by cyclists, pedestrians, and other non-motorised transport. They are generally traffic-free routes. With no traffic, the routes are safe and can be enjoyed by most members of society. Greenways are also typically built along linear features such as natural features like rivers or manmade features such as rail lines, roads, and canals.
- New path on existing road: Proposed provision of a footpath adjacent to an existing road carriageway
- Active modes link (proposed or planned for specific location): Proposed measures within this category include short new connections such as new links between adjacent residential areas as well as longer sections of new path. The default assumption is that these links should also be available to cyclists wherever possible (either shared surface, or through construction of adjacent separate paths depending on the available space and likely demand/use).
- Path on road option or planned road: A road option from the road strategy or a planned new road (e.g., Ballymany to Standhouse Link Road and planned / under construction residential estate roads) which will include footpaths.
- New active modes bridge: Proposed new bridges which should ideally be designed to be accessible for cycling and for use by people with mobility issues.
- Link to / through future development area: Proposed link to / through a likely future development area. The locations shown for these links are indicative only but serve to illustrate the need to cater for future desire lines through these areas and the connectivity benefits to the wider network of increasing permeability in these areas. Actual future links in these areas will be dependent on the layout of new developments and the transport links provided for other modes. These links will encompass a mix of infrastructure types.
- Additional proposed link not in assessed Do Something (DS) network: This category encompasses links added when the NLPT was being finalised which have not been included in the future network GIS assessment.

#### 2.2.3.1.4 Permeability Network Development

The development of the permeability / walking network involves a number of steps beginning with the mapping of the base network of footpaths and any formal path that can be used by the public for walking. Once this base network is mapped any committed roads projects and residential areas with planning permission or under construction are added to the base. The result is a complete network of existing and committed walking paths within Newbridge. This is shown in Figure 2-5.

Following the mapping of the base and committed network, a review of the network is undertaken. This is a mix of desk exercises and site visits. The purpose of this review is to assess whether improvements are needed to the existing paths and to also identify where the network can be extended, particularly on the outskirts of Newbridge, to ensure more people have access to a network of safe walking routes. The result of this exercise is shown in Figure 2-6. By extending existing paths the network will now provide walking connections to Athgarvan, St. Anne's Special School, Old Abbey Manor, and Hawkfield GAA Pitches.

Having extended and improved part of the existing network a review was undertaken to determine how best to incorporate greenways and Quietways into the network. These types of links provide safe walking and cycling connections and also provide for leisure walking facilities. Through the Corbally Harbour Quietway, Newbridge will have a safe walking / cycling

link to Corbally Harbour and the Grand Canal Greenway through the Corbally spur greenway. A new Greenway connection to Pollardstown Fen will also create another link to the Grand Canal Greenway and also create a 50km loop through Newbridge and Naas and along the Grand Canal. The Greenway and Quietways in addition to the other interventions are shown in Figure 2-7.

The final element in completing the walking and permeability network was to examine the existing network to see where the network could be made more permeable which is defined as:

> *"the extent to which an urban area permits the movement of people by walking or cycling"*[1]



[1] NTA – Permeability Best Practice Guide (https://www.nationaltransport.ie/wp-content/uploads/2011/12/Permeability_Best_Practice_Guide_NTA_20151.pdf)

Common barriers to permeability include:

- Boundary walls around estates and within residential areas that prevent movement, the shortest and most direct route connecting two points.
- Cul-de-sacs which prohibit through movement.
- Poorly designed links that are difficult or unattractive to use.
- Natural or manmade barriers such as the River Liffey or the M7 Motorway.
- Connections which require much longer travel distances than direct linkages.

To overcome these issues a series of active mode links and new active mode bridges were added to the network, the purpose of which are to make walking quicker and more direct in Newbridge and therefore easier to use for short trips. These interventions along with the entire walking / permeability network is shown in Figure 2-8. All of the proposed network links are contained in Table 2-2.

**Table 2-2 – Walking / Permeability Network Links**

| Link No. | Description |
|---|---|
| 1 | New footpath on Great Connell Road connecting to Old Abbey Manor |
| 2 | New footpath on Ring of Roseberry extending as far as Roseberry Hill |
| 3 | New footpath on Milltown Road extending as far as Hawkfield GAA Pitches |
| 4 | New footpath on Morristown and Meadows Road |
| 5 | New footpath along Athgarvan Road providing new connection to Athgarvan |
| 6 | New footpath along the R413 providing a new connection to St. Anne's Special School |
| 7 | New footpath along Old Connell Weir |
| 8 | New footpath along Standhouse Road connecting to Curragh Farm Estate |
| 9 | New footpath along Morristown Road south of the Morristown Bridge |
| 10 | New pedestrian paths better connecting St. Conleth's GAA Park and the Whitewater Centre |
| 15 | New pedestrian connection from Ailesbury Park to Ring of Roseberry |

| Link No. | Description |
|---|---|
| 18 | New pedestrian path connecting The Rise to Sarsfield Drive |
| 19 | New pedestrian path connecting Rathcurragh to New Ballymany to Green Road |
| 20 | New pedestrian path connecting The Square Walshestown Park to Walshestown Abbey |
| 21 | New pedestrian path connecting The Lawn Walshestown Park to Belmont Green |
| 22 | New pedestrian path connecting to Rosconnell to Ring of Roseberry |
| 23 | New pedestrian path connecting The Close to L2003 Newbridge Southern Relief Road. This measure is formalising an existing informal path. |
| 24 | New pedestrian path connecting The Hall to L2003 Newbridge Southern Relief Road |
| 25 | New pedestrian path connecting Ryston Close to Liffey Greenway |
| 27 | New pedestrian path connecting Roseberry Hill to Ring of Roseberry |
| 28 | New pedestrian paths included in the redevelopment of this site |
| 31 | New pedestrian path connecting Newbridge Business Park to L2003 Newbridge Southern Relief Road |
| 36 | New pedestrian path connecting Baroda Court and Wellesley Manor to each other and new pedestrian path (link 88) and new bridge (link 87) connecting to the Liffey Greenway |
| 38 | New pedestrian path connecting Wellesley Manor to proposed Great Connel Quietway |
| 39 | New pedestrian path connecting Baroda Court to proposed Great Connel Quietway |
| 40 | New pedestrian path connecting Langton Park to Rathcurragh |
| 44 | New pedestrian path connecting L2003 Newbridge Southern Relief Road |

| Link No. | Description |
|---|---|
| 45 | New pedestrian path connecting Wellesley Manor to proposed section of the L2003 Newbridge Southern Relief Road |
| 46 | New pedestrian path connecting The Close to L2003 Newbridge Southern Relief Road. This measure is formalising an existing informal path. |
| 49 - A | Option for a new pedestrian path connecting Moorefield Park to Newbridge Industrial Estate |
| 49 - B | Option for a new pedestrian path connecting Moorefield Park to Newbridge Industrial Estate |
| 49 - C | Option for a new pedestrian path connecting Moorefield Park to Newbridge Industrial Estate |
| 50 | New pedestrian paths aimed at making Newbridge Town Centre more permeable |
| 51 | New pedestrian path connecting Newbridge Industrial Estate to the Athgarvan Road |
| 52 | New pedestrian path connecting Naas Road to new proposed bridge (Link 72) also provides safe walking connection to the Patrician Catholic Secondary School and St Conleth's & Mary's Catholic National School. |
| 53 | New pedestrian path connecting the Vale and Rickardstown to Newbridge Train Station |
| 54 | New pedestrian path connecting Rickardstown through Newbridge Town Football Club to Station Road |
| 56 | New pedestrian path connecting Dunnes to Newbridge Retail Park |
| 57 | New pedestrian path connecting Liffey View to Athgarvan Road and new proposed pedestrian Bridge (Link 71) over the Liffey |
| 58 | New pedestrian path connecting L2003 Newbridge Southern Relief Road |
| 59 | New pedestrian path connecting Morristown Ave to proposed Train Line Greenway (Link 78) |

| Link No. | Description |
|---|---|
| 60 | New residential development Curragh Farm Estate |
| 61 | New residential development Station walk |
| 62 | New residential development White Oaks |
| 63 | New residential development on Station Road |
| 64 | New residential development on Station Road |
| 65 | New residential development between Ballymany and Green Road |
| 66 | Planned section of L2003 Newbridge Southern Relief Road with footpaths across the River Liffey including new road bridge |
| 67 | Planned road connection with footpaths from Green Road to Standhouse Road |
| 69 | Planned road connection with footpaths from the Meadows to Milltown Road |
| 70 | Planned road connection with footpaths from Standhouse Road to Morristown |
| 71 | Potential new active modes bridge across the Liffey |
| 74 | Potential new active modes bridge across the Liffey connecting with Corablly harbour Quietway |
| 75 | Proposed Liffey Greenway |
| 76 | Proposed M7 Greenway |
| 77 | Proposed M7 Greenway / Pollardstown Fen Greenway |
| 78 | Proposed Train Line Greenway |
| 79 | Proposed Walshestown Road Quietway |
| 80 | Proposed Great Connell Quietway |

| Link No. | Description |
|---|---|
| 81 | Proposed Corbally Harbour Quietway |
| 82 | Upgraded Bridge to better provide for active modes on Morristown Bridge |
| 83 | Upgraded Bridge to better provide for active modes on Rickardstown Bridge |
| 84 | Upgraded footpath in the "Strand" Liffey Linear Park |
| 87 | Potential New Bridge Connecting Baroda Court, Wellesley Manor, and Proposed Strategic Housing Development to the Liffey Greenway |
| 88 | New pedestrian path connecting Baroda Court, Wellesley Manor, and Proposed Strategic Housing Development to new bridge (link 87) connecting to the Liffey Greenway |
| 90 | New Greenway along east side of the River Liffey |
| 91 | New pedestrian bridge over the River Liffey from Old Connel Wier to New Greenway on East side of the River Liffey |
| 92 | New pedestrian bridge over the River Liffey from Ring of Roseberry to New Greenway on East side of the River Liffey |

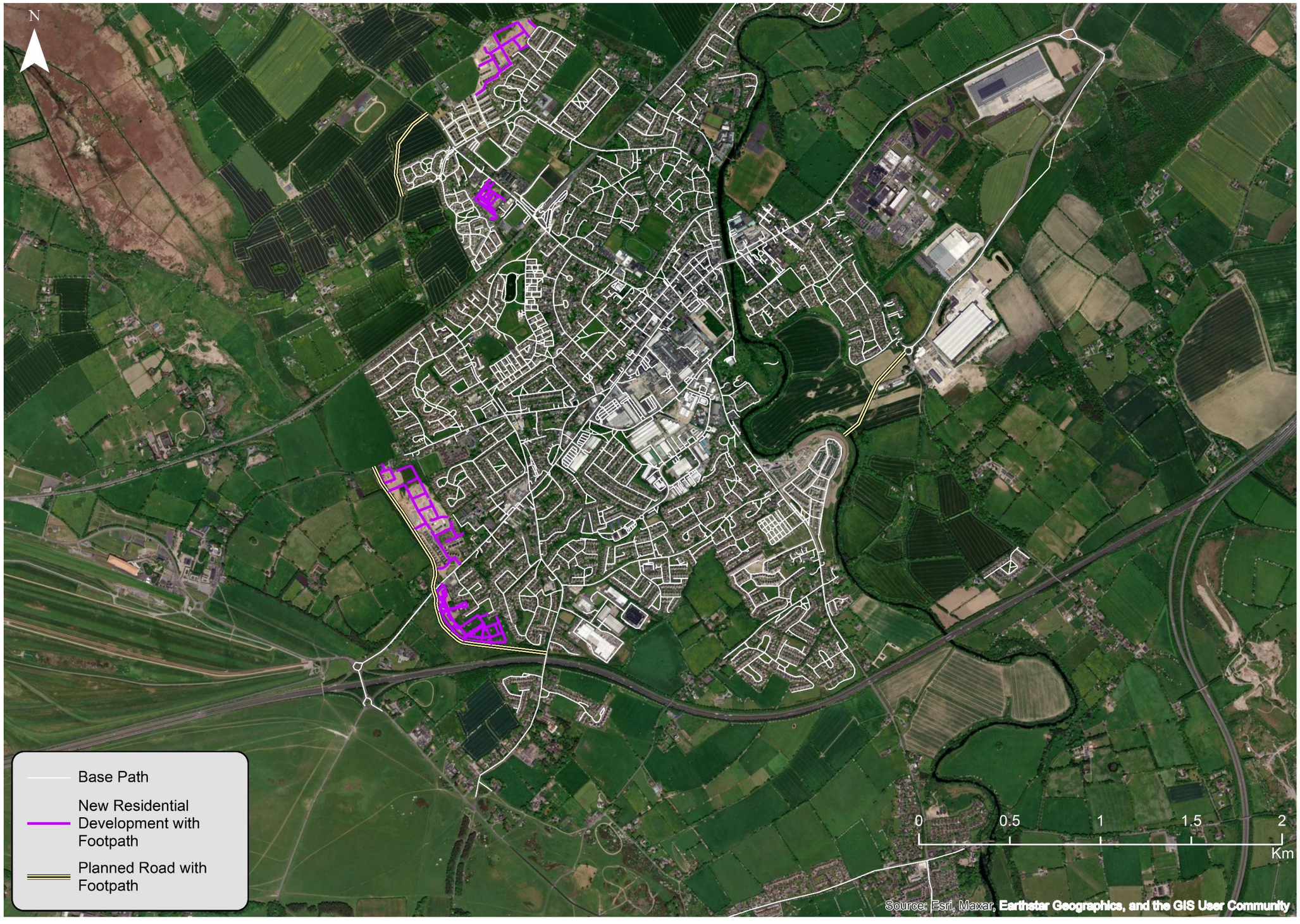


**Figure 2-5 – Base Paths and Committed Roads and New / Planned Residential Areas**

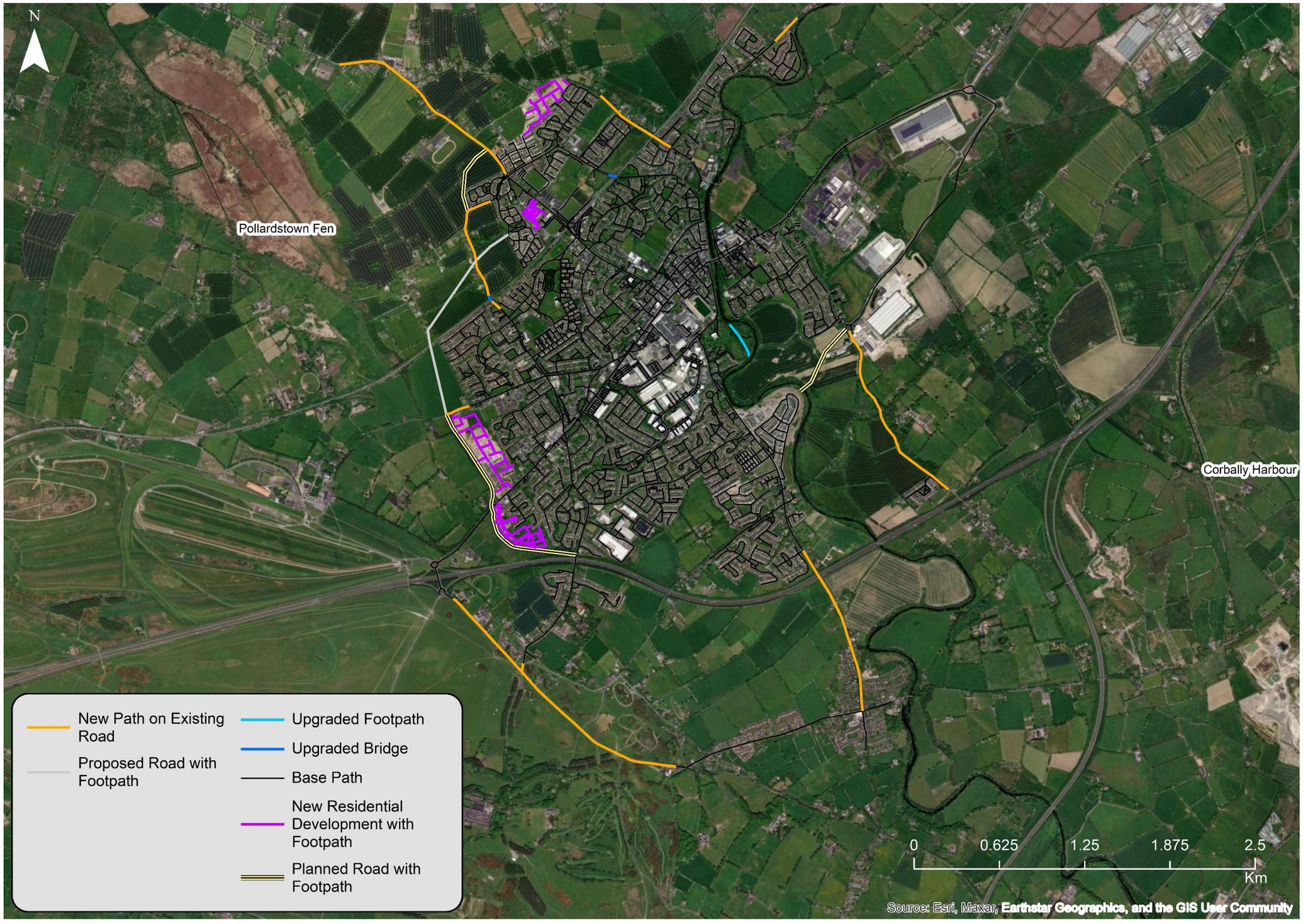


**Figure 2-6 - Base Paths and Committed Roads and New / Planned Residential Areas and Upgraded and Extended Paths**

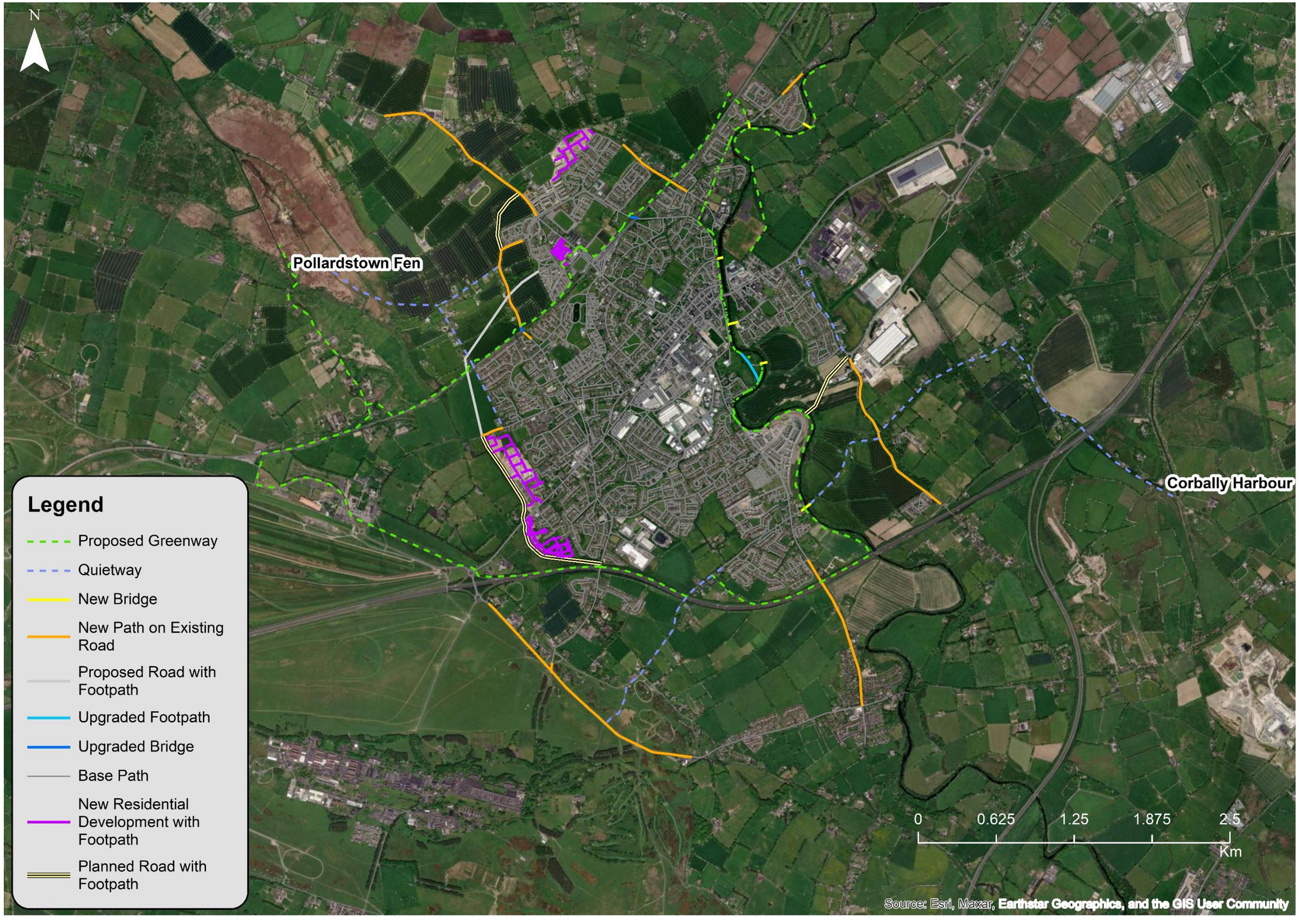


**Figure 2-7 - Base Paths, Committed Roads, New / Planned Residential Areas, Upgraded, Extended Paths and Greenways and Quietways**


**Figure 2-8 - Base Paths, Committed Roads, New / Planned Residential Areas, Upgraded, Extended Paths, Greenways, Quietways and Active Mode Links and New Bridges**

#### 2.2.3.1.5 Moorefield Park Permeability Options

Figure 2-9 shows three options to provide a permeability connection through Moorefield Park, one of which will be chosen pending the completion of the public consultation process. The connection through Moorefield Park is important for those travelling from the south of Newbridge and accessing the town centre. It has the potential to cut journey distances by over half a kilometre, which would reduce the duration of a walking trip to Newbridge Town Centre by over 7 minutes. Figure 2-10 highlights the potential impact of link 49-A on reducing journey distances from residential areas in the south of Newbridge to Moorfield Road and surrounding destinations.


**Figure 2-9 - Moorefield Park Permeability Options**

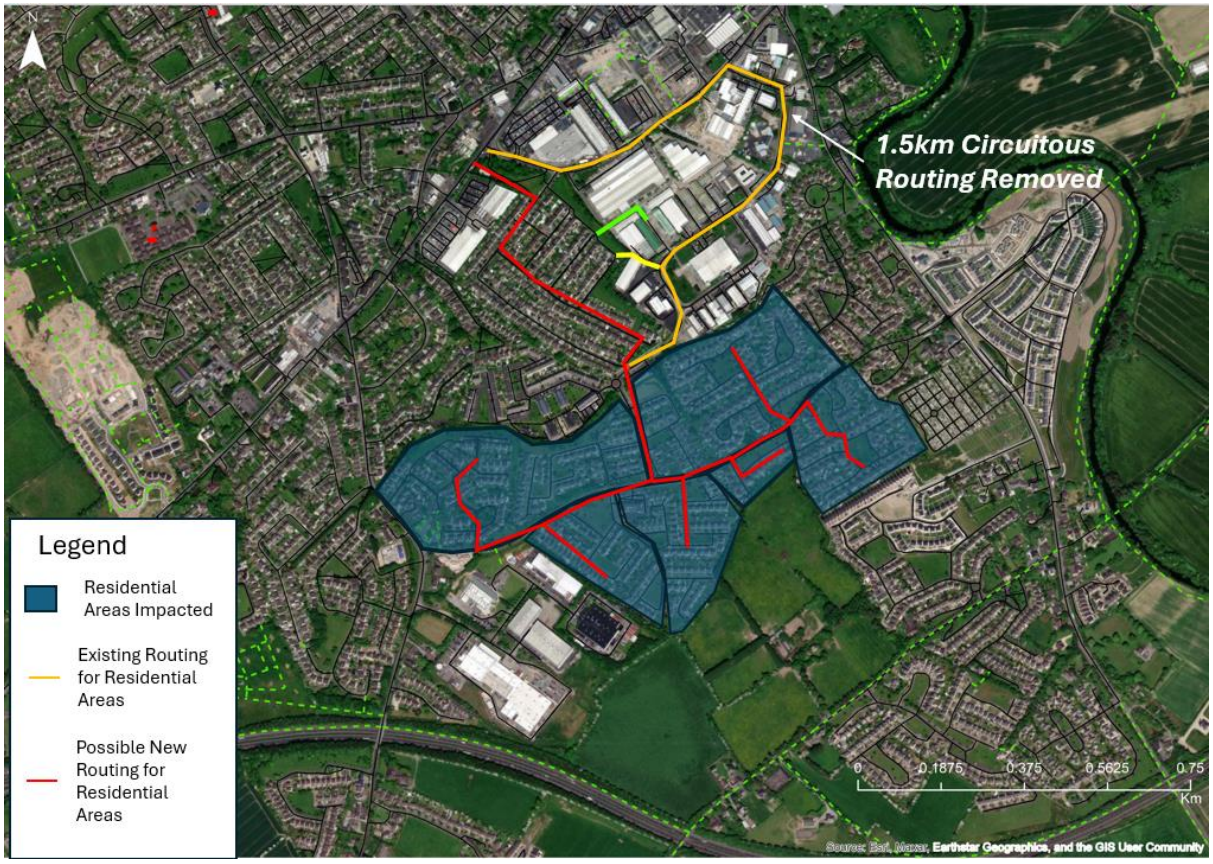


**Figure 2-10 – Diagram showing potential impact of Link 49A**

#### 2.2.3.1.6 Cycling Objectives

The cycling strategy seeks to achieve the following objectives:

1. Provide an integrated, inclusive cycle network for Newbridge in accordance with the National Transport Authority's Cycle Network Plan for the Greater Dublin Area.
2. Improve safety for cyclists in Newbridge.
3. Improve cycling connections between homes and key trip attractors such as the town centre, train station, university, supermarkets, and schools.
4. Enhance inter-urban cycling links between Newbridge and nearby settlements or employment locations.
5. Promote modal shift from the private car to cycling, particularly for short-medium distance trips.

#### 2.2.3.1.7 Cycling Options Development

The cycling strategy seeks to develop a network of safe, comfortable routes throughout the NABTA study area so that cycling becomes an attractive option for many local trips such as commuting to work and school; travelling to the train station; shopping; visiting friends and family; and travel to social activities. Although not a primary objective, the strategy also seeks to facilitate recreational cycling.

The proposed set of cycle network infrastructure measures outlined in the following section were developed through an iterative process which considered:

- Planned/anticipated road schemes and walking/permeability measures which form part of the strategy.
- The NTA's GDA Cycle Network Plan (revised and enhanced version published as part of the GDA Transport Strategy 2022-2042.
- Existing cycle infrastructure within the study area and current cycling conditions / traffic regime on all key links.
- The location of schools, employment, supermarkets and the existing and proposed future train station as well as the location of future development areas; and
- Relevant input collected through public and stakeholder consultation.

The cycling network infrastructure measures have been allocated an indicative 'link type' category. These categories, which are described in the following section, should be considered as provisional at this point, as future more detailed analysis of location specific considerations, including the availability of road space and/or land, traffic levels, and traffic speeds, may determine that an alternative category is more suitable for some links.

The provision of dedicated cycling infrastructure is proposed for many road sections throughout the study area. Cycle track schemes along roads may consist of a mix of segregated cycle tracks and on road cycle lanes. However, the overall objective should be to ensure that the degree of protection provided from vehicular traffic ensures a high level of perceived safety, as well as actual safety, as this is an essential component of achieving modal shift.

In addition to cycle network measures, a large number of complimentary active mode measures related to cycling are proposed, including measures related to crossing facilities, cycle and scooter parking and storage, and improving the availability of different types of cycles (and potentially also e-scooters) through methods other than personal ownership.

#### 2.2.3.1.8 Cycling Network Measures

There are eight different categories of measures for links in the cycle network. The provisional indicative 'link type' category for each cycling strategy measure is shown in Table 2.2 and on the Cycling Strategy map (Figure 2 5). Three of these categories involve measures carried over from the walking/permeability strategy. These include 'Greenway', 'Active modes bridge', and 'Quietway'. These link types were described previously. The links in these categories are numbered on the walking/permeability strategy maps and detailed in the walking/permeability measures table and therefore these measures are not numbered on the cycle strategy map or included in the cycling strategy measures table.

Other categories of cycling measures which are included in the cycling strategy map and measures table are described below.

- Primary Radial, Orbital and Secondary Links: Primary and Secondary links will generally be adjacent to the existing road carriageway or only slightly removed, with good visibility from the road and should provide some physical protection from vehicular traffic in so far as possible.
- Feeder and Quietways: Shared streets are streets where traffic volumes and/or speeds should be kept reasonably low, and cyclists will cycle on the carriageway. The map shows existing streets where it is proposed that some measures are required to improve the street for cycling.
- Inter-urban cycle route: It is proposed that inter-urban cycle routes should be delivered to Kildare, Naas, and Milltown. These links are shown as arrows at the edge of the NLPT study area. On these routes some dedicated space / protection from traffic is required for cyclists but the exact route and type of infrastructure will need to be determined by a future study and design may vary on different sections. The strategy also proposes links to Celbridge and Kilcock, however, these are in the 'cycle track' category.

**Table 2-3 – Roads used within the Cycle Network and Category**

| Road Name | Network Category |
|---|---|
| Dara Park | Feeder |
| Highfield Estate | Feeder |
| Lakeside Park | Feeder |
| Páirc Mhuire | Feeder |
| Eyre Street | Feeder |

| Road Name | Network Category |
|---|---|
| Henry Street | Feeder |
| Market Square | Feeder |
| Piercetown | Feeder |
| College Park | Feeder |
| College Farm | Feeder |
| The Green | Feeder |
| The Avenue | Feeder |
| The Great Southern | Feeder |
| Barretstown Road | Feeder |
| Curragh Road | Feeder |
| R413 | Feeder |
| Walshestown Road | Feeder |
| Cutlery Road | Feeder |
| Cill Dara Industrial Estate | Feeder |
| Athgarvan Road | Feeder |
| Ring of Roseberry | Feeder |
| Standhouse Lawns | Feeder |
| The Meadows | Feeder |
| Morristown Woods | Feeder |

| Road Name | Network Category |
|---|---|
| Roseberry Hill | Feeder |
| Roseberry Hill | Feeder |
| Langton Park | Feeder |
| Moorefield Crescent | Feeder |
| Moore Park | Feeder |
| The Oaks | Feeder |
| John Street | Feeder |
| James Street | Feeder |
| Limerick Lane | Feeder |
| Town Centre Links | Feeder |
| Morristown Road | Feeder |
| Blackberry Lane | Feeder |
| Connell Drive | Feeder |
| Chapel Lane and Connell Drive | Feeder |
| Great Connell | Feeder |
| Roseberry | Feeder |
| Beechmount | Feeder |
| Corbally Harbour Quietway | Greenway Leisure |
| Bad Lippspringe Way | Greenway Leisure |

| Road Name | Network Category |
|---|---|
| Liffey Green Way | Greenway Leisure |
| Athgarvan Road | Greenway Leisure |
| Rickardstown to Station Road Greenway | Greenway Leisure |
| M7 - Greenway | Greenway Leisure |
| Pollardstown Fen Greenway | Greenway Leisure |
| R413 - Greenway | Greenway Leisure |
| Train Line Greenway | Greenway Leisure |
| Ring of Roseberry | Greenway Leisure |
| Blackberry Lane | Greenway Leisure |
| Morristown Road | Primary Orbital |
| Langton Road | Primary Orbital |
| Green Road | Primary Orbital |
| Athgarvan Road | Primary Orbital |
| Newbridge South Orbital Relief Road, | Primary Orbital |
| Lakeside Crescent to Station Road | Primary Orbital |
| Rickardstown | Primary Orbital |
| Sexs Road | Primary Orbital |
| Rickardstown to Station Road Connection | Primary Orbital |
| Lakeside Park | Primary Orbital |

| Road Name | Network Category |
|---|---|
| Station Road | Primary Radial |
| Main Street | Primary Radial |
| Moorefield Road | Primary Radial |
| Edward Street | Primary Radial |
| R445 | Primary Radial |
| Charlotte Street | Primary Radial |
| Standhouse Road | Primary Radial |
| Saint Conleth's Bridge | Primary Radial |
| Great Connell Road | Quietway |
| Walshestown Quietway | Quietway |
| Corbally Harbour Quietway | Quietway |
| Rickardstown | Secondary |
| Green Road | Secondary |
| Roseberry Hill | Secondary |
| R445 | Secondary |
| R413 | Secondary |
| Great Connell Road | Secondary |
| Newbridge South Orbital Relief Road, | Secondary |
| Newbridge South Orbital Relief Road | Secondary |

| Road Name | Network Category |
|---|---|
| Standhouse Road | Secondary |
| Athgarvan Road | Secondary |
| Town Centre Links | Secondary |
| Newbridge Industrial Estate | Secondary |
| The Close | Secondary |
| Connection from Morristown to Station Road | Secondary |
| Rickardstown to Station Road Connection | Secondary |
| The Avenue | Secondary |
| Station Road | Secondary |

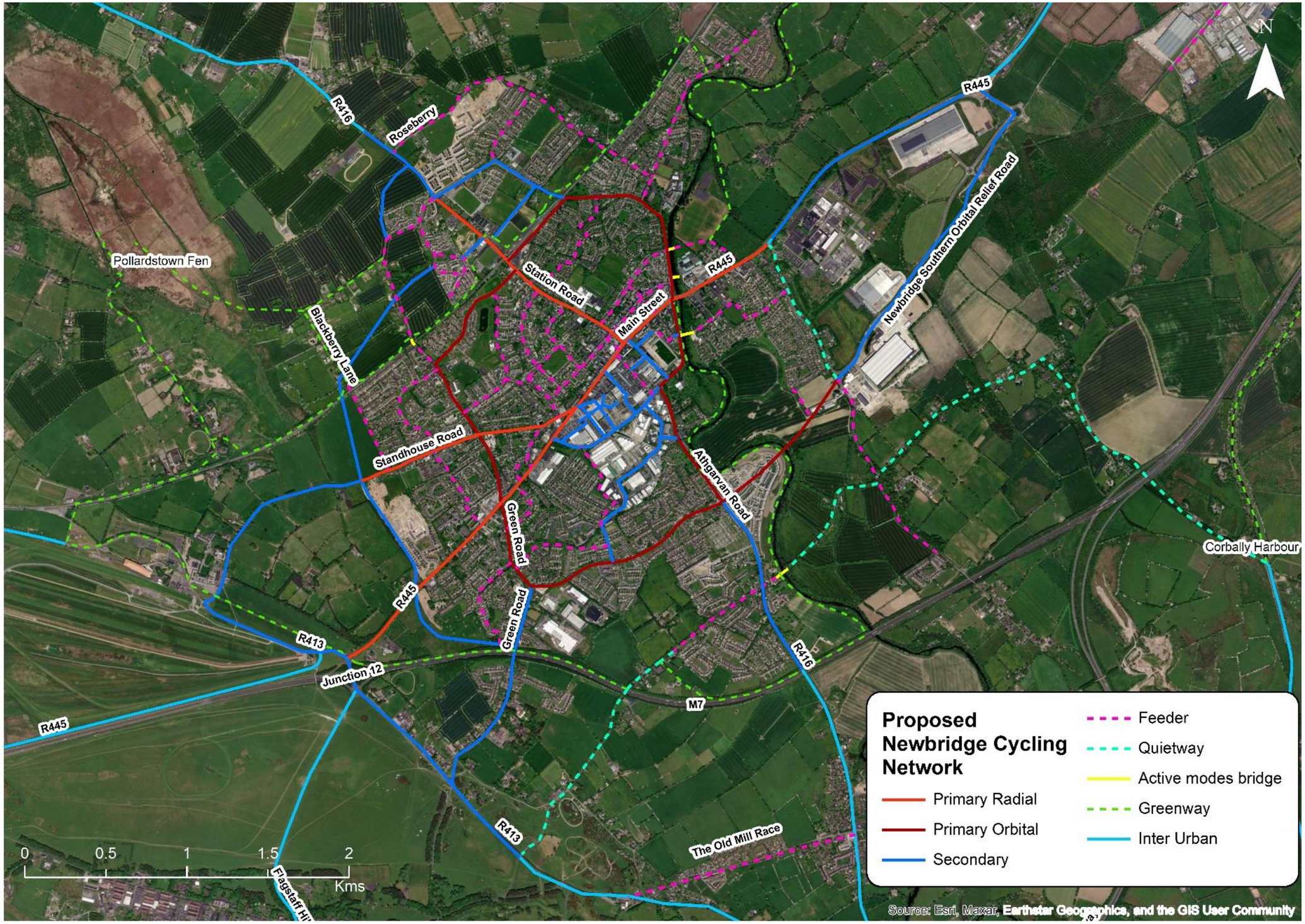


**Figure 2-11 – Draft Newbridge Cycling Network**

#### 2.2.3.1.9 Complementary Active Mode Measures

As highlighted previously, new, and improved crossing facilities for active modes will be required at many locations throughout Newbridge. However, this recommendation has been included only as a complementary measure at this stage, as a more detailed study of the requirement for crossings throughout the NABTA study area and optimal design solutions can best be undertaken as part of the design process for other cycling and walking measures already in the strategy (e.g., cycle track measures and 'path on new road' measures).

Other complementary active mode measures all relate to cycling and e-scooter use and were developed as part of the NABTA, these options are listed below t. In addition, many of the recommended measures are still high level or conceptual at this stage and require further investigation by KCC and other relevant stakeholders to design optimal solutions in more detail.

- Work with NTA to achieve a coordinated approach to the provision of shared bikes and/or e-scooters in Newbridge and the surrounding region to ensure effective regulation, avoid a proliferation of different unconnected schemes and ensure that potential negative safety and accessibility impacts are minimised.
- Consider the quality of cycling infrastructure in Newbridge and anticipated timelines for improvement on each corridor when planning the introduction and expansion of shared bike or e-scooter scheme(s) and identifying hubs/station locations.
- If supporting a one-way bike share / e-scooter share scheme to operate in the area, consider potential redistribution challenges associated with each station and how these will be addressed.
- If allowing an e-scooter share scheme to operate in the area, consider introduction of a fleet ratio target to incentivise the operator to offer bikes in addition to e-scooters.
- Work with NTA, operators and developers to seek introduction of an on-demand 'back to base' share scheme offering e-cargo-bikes.
- Seek to introduce or support small scale bike loan schemes for individuals/households and small businesses, with a particular focus on e-bikes and e-cargo bikes to enable participants to 'trial' these options for an agreed period of time.
- Organise 'come and try it' opportunities and loan schemes for different types of micro mobility vehicles.
- Work with Irish Rail and NTA to significantly enhance cycle parking options at Newbridge Train Station and provide a higher security option, in addition to sheltered standard cycle parking.
- Upgrade Main Street cycle parking as part of future redesign of the street and consider potential to provide a small secure hub at a nearby off-street location to improve the cycle parking options available for people working in the Main Street area.
- Work with businesses, sports clubs, schools, and other relevant destinations to secure delivery of high-quality cycle parking facilities and ensure cycle parking is prominent and visible. Consider part funding new infrastructure to incentivise private sector stakeholders to invest in upgrades in a timely manner.

- Assess interest in the Bike Bunker concept among residents of areas where there are clusters of dwellings without access to suitable cycle storage solutions and seek to provide the facility where interest exists.
- Support residents to install secure front garden cycle storage solutions in suitable areas.
- Following legalisation of e-scooters, seek to provide dedicated e-scooter parking solutions on Main Street and work with stakeholders to encourage provision of suitable facilities at other destinations, particularly the train station.
- Work with Irish Rail and NTA and businesses to secure delivery of bike repair and/or cleaning facilities in prominent locations throughout Newbridge.

#### 2.2.3.2 Public Transport Options Description

This section outlines the development of the public transport measures and sets out all of the options that were considered in the creation of the final public transport strategy.

##### 2.2.3.2.1 Public Transport Principles

In respect to public transport, the guiding principles of the ABTA are:

- Improve access from residential, employment, education, healthcare, and retail facilities to public transport stops, particularly those with higher frequency services.
- Improve the coverage, frequency and capacity of bus and rail services.
- Provide bus priority infrastructure where necessary to improve journey times and reliability.
- Improve public transport stops/stations with respect to location, information, accessibility, infrastructure, and visibility.
- Improve interchange experience for passengers changing between different modes of public transport or routes.
- Promote modal shift from the private car to bus or rail, particularly for medium/long distance trips.

##### 2.2.3.2.2 Public Transport Options

The central aim of the Public Transport Strategy is to make travel by public transport from, to and around Newbridge quicker and more convenient for all users. The strategy seeks to do this by placing an emphasis on improving bus movements through the centre of Newbridge and providing for more interchange opportunities across public transport modes. The strategy was developed to integrate with the walking and cycling strategies and make traveling by sustainable modes seamless. The roads strategy will help to reallocate space in the centre of Newbridge away from private cars and prioritise its use for sustainable modes with public transport playing a central role. The full list of public transport options is provided in Table 2-4 and shown in Figure 2-12. Further details on each option are provided in Part 3 of this report as part of the option assessment. Option 7, 8, 9, 10 and 11 are policy options and are not shown on the Map in Figure 2-12.

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### Table 2-4 – Draft Public Transport Options Description

| Option No. | Description |
|---|---|
| Option 1 | Provide for a bus priority route on Main Street. |
| Option 2 | Work with the key Stakeholders to upgrade of key bus stops within Newbridge. |
| Option 3 | Work with the key Stakeholders to upgrade the facilities at Newbridge Train Station. |
| Option 4 | Work with the key Stakeholders to install new bus stops within Newbridge. |
| Option 5 | Work with the key Stakeholders to provide a Local Interchange hub within Newbridge to provide for better transfer between public transport services and other modes. |
| Option 6 | Work with the key Stakeholders to provide a Series of Key Interchange Hubs within Newbridge at the following locations:<br>– Train Station<br>– Whitewater Centre<br>– Newbridge Business Park<br>– Little Connell Industrial Estate |
| Option 7 | Work with the key Stakeholders to Achieve Leap Card Integration at Newbridge Train Station. |
| Option 8 | Work with the key Stakeholders in the implementation of the new Dublin Commuter Zone and National Fares strategy to ensure cheaper fares for Newbridge Commuters. |
| Option 9 | Work with the key Stakeholders to establish a new public transport connections to key destinations for commuter to and from Newbridge, building on the work of Connection Ireland. |
| Option 10 | Work with the key Stakeholders to explore the feasibility of implementing a Newbridge town bus service. |
| Option 11 | Work with the key Stakeholders to improve the frequency on key bus services serving Newbridge. |

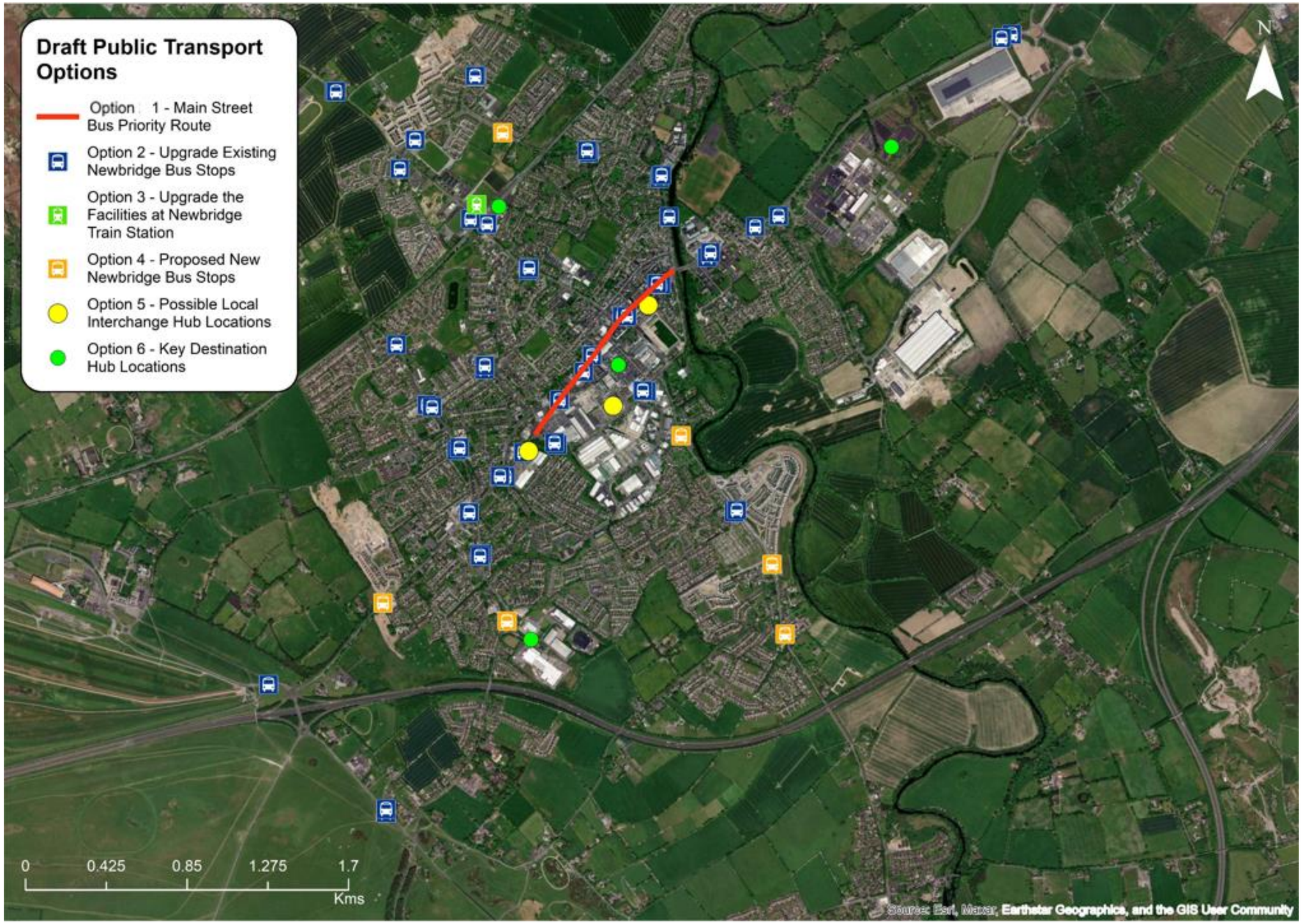


**Figure 2-12 – Draft Public Transport Options**

#### 2.2.3.2.3 Complementary Public Transport Options

To complement the Newbridge public transport strategy KCC will work with key stakeholders to deliver a series of Neighbourhood Mobility Hubs which will complement the Local Interchange Hub in Newbridge Town Centre and the Key Destination Hubs located at the

- Train Station
- Whitewater Centre
- Newbridge Business Park
- Little Connell Industrial Estate

As outline in Section 2.2.3.2.2 of the strategy. Neighbourhood Mobility Hubs may be included as an element of new large-scale residential developments in Newbridge or retrofitted where possible into existing residential Neighbourhoods. The Role of the Neighbourhood Mobility Hubs is to encourage more travel by sustainable modes either walking and cycling for shorter trips or public transport for longer trips.

These Hubs will be designed to work in partnership with the larger-scale Mobility Hubs in Newbridge to generate network benefits and more multimodal sustainable trips for internal and external trips in and out of Newbridge. Neighbourhood Hubs where possible will be focused on public transport, such as a bus stop, will be easily accessible by walking and cycling and include some of the elements included in the large-scale Interchange Hub this may include some of the following elements, they will unlikely include all these elements:

- Shared mobility services: bike/cargo bike/car/e-scooter.
- Car parking and secure parking for private bikes.
- EV charging infrastructure.
- Area for taxis.
- Travel information services.
- Set in a high-quality public realm.

### 2.2.3.3 Road Options Description

This section describes the road options which are assessed in this report.

#### 2.2.3.3.1 Road Transport Principles

In respect to road transport, the guiding principles of the ABTA which influenced option development are:

- Reduce car dependency by promoting mode transfer to walking, cycling and public transport.
- Reduce unnecessary vehicular trips through Newbridge town centre.
- Improve road safety and eliminate collision hot spots.
- Identify the transport corridors required to support the movement of people and goods to enable the growth of Newbridge.
- Provide efficient access to existing or proposed park and ride facilities.

#### 2.2.3.3.2 Overall Concept for Future Roads in Newbridge

Due to the NIFTI hierarchy, it will not be appropriate to make the case for significant additional road construction in isolation. Instead, future road construction will have to be linked to

improvements in sustainable travel as part of a multimodal solution. The road options described in the following section aim to deliver a future network where road access to every major trip attractor is maintained, via new and improved orbital links, but cross-town trips by private motor vehicles will be discouraged. The road options have been developed to complement each other and the existing road network the overall roads strategy has been designed to be interdependent of each other resulting in an interconnected future strategy. As a result of this interconnected approach to strategy development the implementation of a number of road options cannot happen in isolation rather, they require other options to be in place before they can be considered for implementation.

The roads strategy will maintain car access to all parts of Newbridge however the NABTA seeks to make it easier and quicker to make a large number of internal trips by active modes. While some of the measures in the roads strategy will help offer alternative routes for traffic, they are unlikely to result in a congestion free network instead the emphasis of the NABTA is placed on encouraging mode shift from cars to active modes for a large number of internal trips.

The central aim of the road's strategy is to remove unnecessary through traffic from Newbridge town centre, this is in response to the findings of Phase1 Public Consultation. The strategy also aims to improve the efficiency of buses, allow for the reallocation of space to sustainable modes and improvements to the public realm. This concept is explained visually in Figure 2.6.

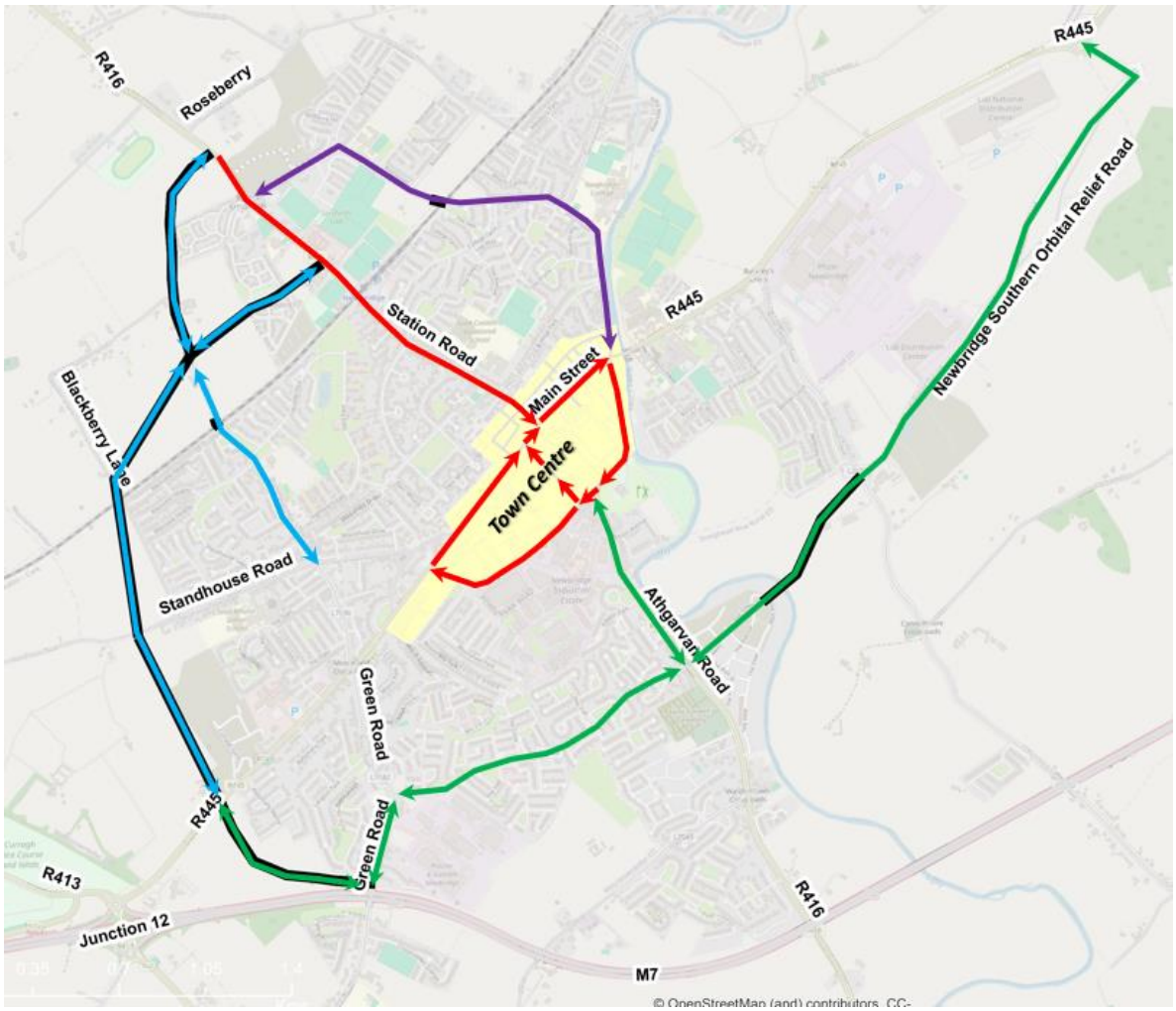


**Figure 2-13 – Overall Concept for Roads Options in Newbridge**

#### 2.2.3.3.3 Committed Future Roads

There are a number of roads that are currently at construction or have planning permission. These roads are classed as committed future roads measures and therefore are not considered in the assessment of roads options. These measures are described in Table 2-5 and shown in Figure 2-14.

**Table 2-5 - Committed Future Roads**

| Measure | |
|---|---|
| 1 | New connections between Ballymany Road to Standhouse Road |
| 2A | New connections between Ballymany Rd to Green Road (will not connect to Green Road this connection is delivered under Option 2B) |
| 3 | Second Bridge across the River Liffey via Belin Woods |


**Figure 2-14 - Committed Future Roads**

#### 2.2.3.3.4 Roads Options Description

Outlined within this section are all options considered in formulating the future roads strategy for the NABTA. Measures are outlined in Table 2-6 and shown in Figure 2-15 and Figure 2-16, which show the town centre options in more detail.

**Table 2-6 – Draft Roads Strategy Options**

| Option No. | Description |
|---|---|
| Option 2B | New road connection between Ballymany Rd to Green Road – connection to Green Road. (combines with committed measure 2A to make the connection to Green Road). |
| Option 4 | New road connection from Morristown (L7036) to the R416 Milltown Road. |
| Option 5 | New road connection from Morristown (L7036) to the R416 Station Road at the entrance to the Department of Defence, through Morristown Crescent, utilising the existing section of street already constructed. |
| Option 6 | Reconfiguration of two key town Centre Junctions at:<br>1. Junction of St. Conleth's Bridge / Athgravan Road / Main Street / Canning Place |

| Option No. | Description |
|---|---|
| | 2. Junction of Moorfield Road / Athgravan Road / Edward Street |
| Option 7 | 30 kilometres per hour speed limit in the centre of Newbridge. |
| Option 8 | Junction upgrades within Newbridge to ensure junctions are better designed for active modes users. This measure includes the following junction locations along the following roads:<br>1. along Athgarvan Road (R416),<br>2. Ballymany Road, Moorfield,<br>3. Edward Street,<br>4. Main Street and Naas Road (R445) and<br>5. Station Road (R416). |
| Option 9 | New road connection from Standhouse Road to The Meadows Road. |
| Option 10 | Work with key stakeholders to provide upgrade works to the M7 Junction 12 to better provide for active modes, which should include improved pedestrian crossings on all arms of the junction. |
| Option 11 | The upgrade of Rickardstown and Morristown Road bridges to better provide for general traffic, walking and cycling. |
| Option 12 | Installation of Quietways on Walshestown Road, Great Connell North and South and Blackberry Lane. This will be achieved with the installation of filtered permeability, which is where types of traffic are restricted or 'filtered' by bollards, planters, trees, or using camera enforcement, or other traffic calming measures. The purpose of this option is to ensure that these routes become less attractive for rat-running, helping to make these streets less busy with cars and in turn safer and more attractive for trips by walking and cycling. |
| Option 13 | Making Eyre Street one-way in the Westbound direction allowing traffic flow from Canning Place to Station Road. |
| Option 14 | A ban on right turning traffic from Main Street to Station Road.<br>This option is dependent on the following options being in place:<br>– Option 2B -new road connection between Ballymany Rd to Green Road<br>– Option 4 - new road connection from Morristown (L7036) to the R416 Milltown Road. |

| Option No. | Description |
|---|---|
| | – Option 5 - new road connection from Morristown (L7036) to the R416 Station Road<br>– Option 9 - new road connection from Standhouse Road to The Meadows Road |
| Option 15 | Removal of turning lanes from Main Street at the junction of Main Street and Station Road. This would involve the removal of the right turning lane on both sides of the junction and combining these turning lanes into the main lane merging turning traffic to Station Road with traffic continuing along Main Street. |
| Option 16 | Closure of Lanes linking Main Street and Eyre Street. This option is linked with Option 15 Making Eyre Street one-way, Westbound, and seeks to eliminate rat running between Main Street and Eyre Street as a result of the one-way system and improve pedestrian safety along Main Street. Using Filtered permeability, the lanes would still allow for local access while maintaining the connection for people walking and cycling. This measure covers the following lanes:<br>1. Robert Street<br>2. Annes Street<br>3. Thomas Street<br>4. Francis Street<br>5. Closure of car park access at The Liffey Arms and Main Street |

Note: parking option 1 and public transport option 1 have both been included on the town centre map to provide the wider town centre context.

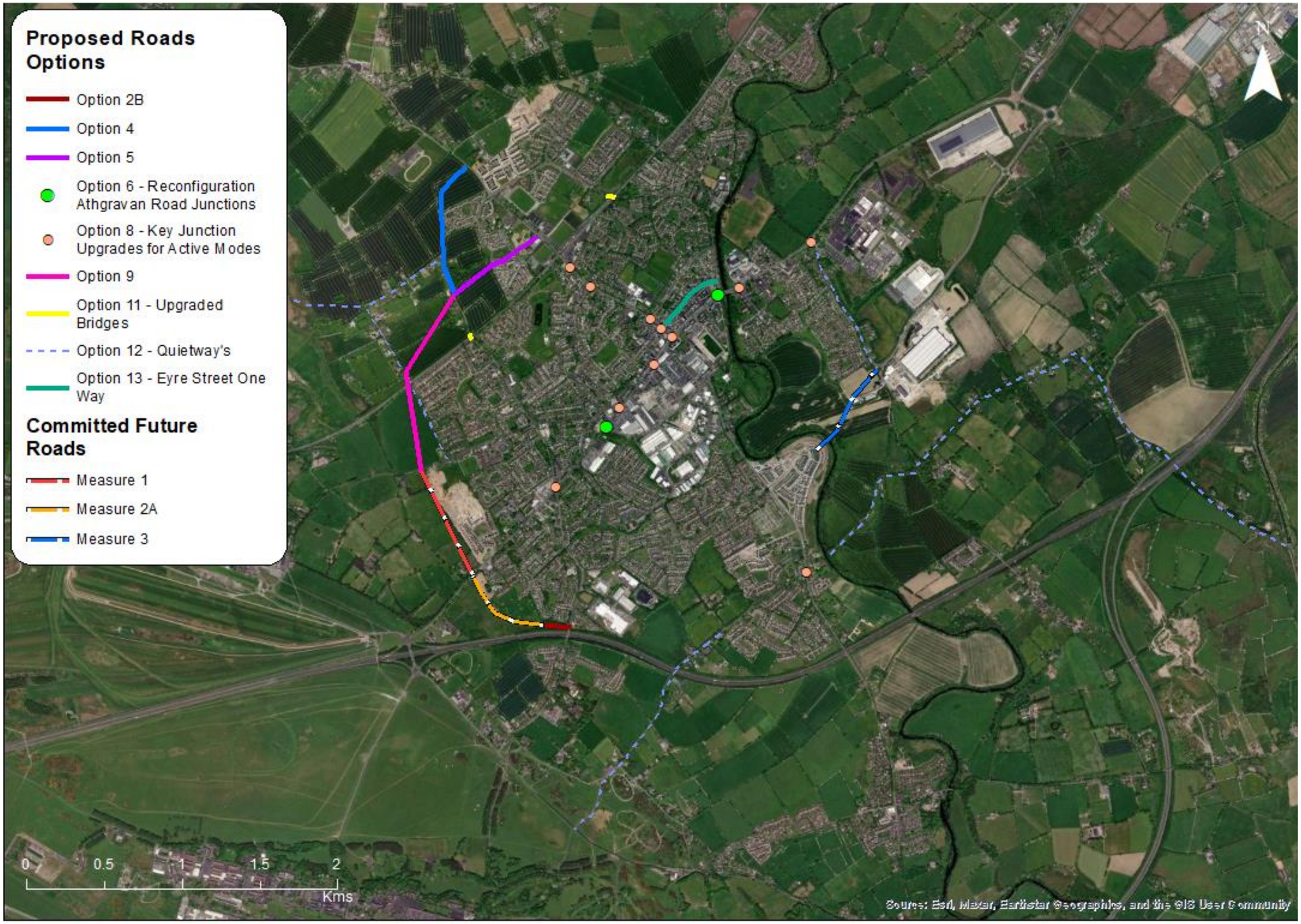


**Figure 2-15 – Draft Roads Strategy Options**

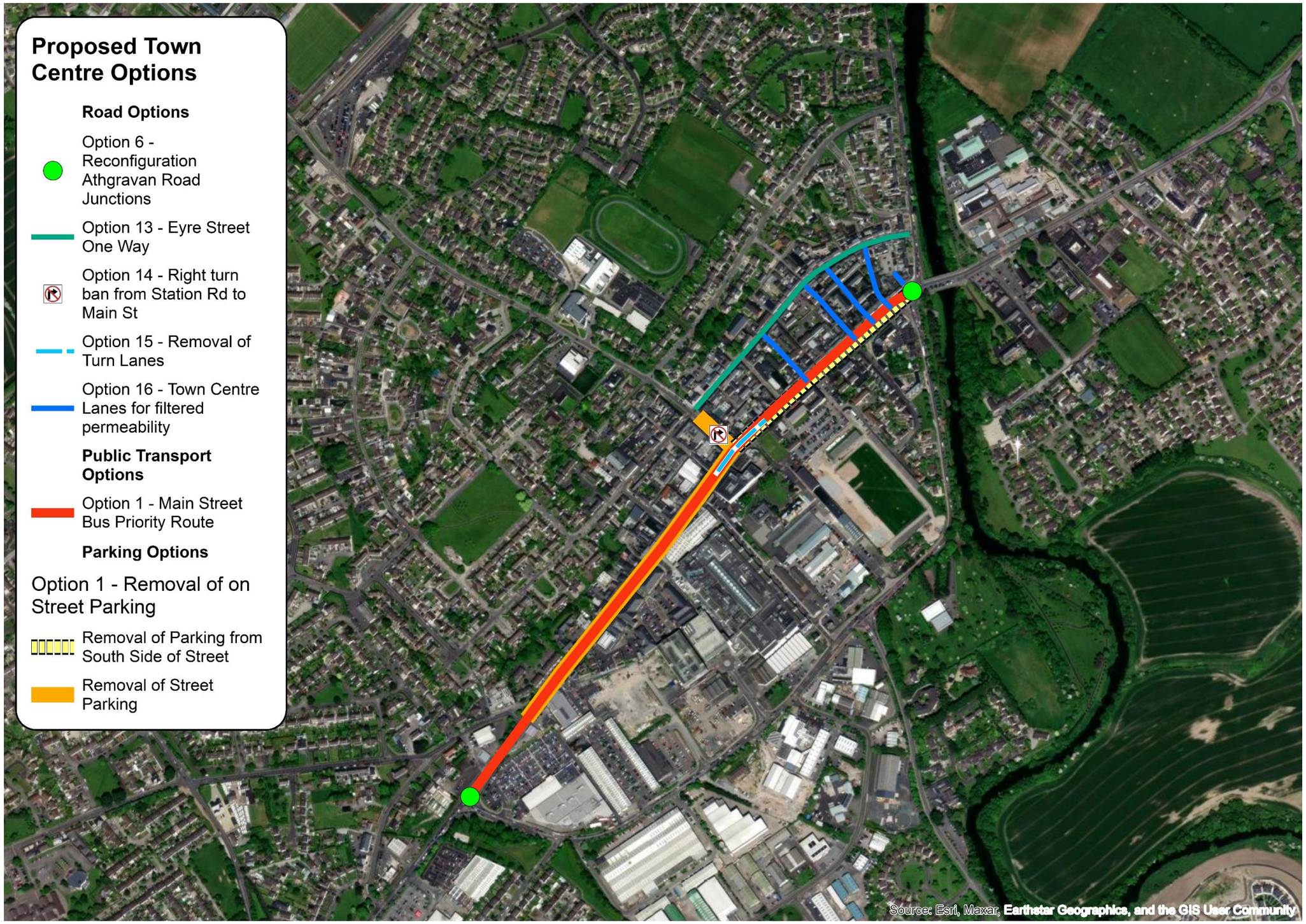


**Figure 2-16 – Town Centre Roads**

### 2.2.3.4 Parking Options

The following section describes the parking options in the NABTA.

#### 2.2.3.4.1 Parking Principles / Objectives

In respect to parking, the guiding principles in the NABTA which informed parking option development are:

- Manage the provision of car parking to support and improve the economic vitality of the town centre.
- To ensure car parking provision encourages sustainable commuter travel, especially for journeys into Dublin City Centre, and supports access by public transport, cycling and walking.
- To reduce on-street parking, where appropriate, in the town centre to facilitate public realm and walking/cycling/public transport infrastructure improvements.
- Improve the quality of parking information with new parking signage and technology.
- Introduce parking demand management measures to reduce car dependency and enhance the attractiveness of sustainable travel.

#### 2.2.3.4.2 Parking Options Description

Outlined within this section are all options considered in formulating the future parking strategy for the NABTA, measure is outline in Table 2-7 and shown in Figure 2-17.

**Table 2-7 – Draft Parking Options Description**

| Option No. | Description |
|---|---|
| Option 1 | Relocation of parking spaces from Edward Street, Charlotte Street (southern part of Station Road) and the south side of Main Street, while maintaining street parking on the north side of Main Street. This is to better facilitate movement of public transport through Newbridge. These spaces will be accommodated in existing town centre car parks to ensure accessibility of Newbridge Town Centre by car. Blue badge parking spaces will also be maintained to ensure accessibility for all users. |
| Option 2 | Enforce County Development Plan (CDP) parking provisions at all new development sites within Newbridge. Reducing parking provision is a key part of demand management to reduce car trips and encourage the use of sustainable travel. The number of parking spaces provided at new developments is controlled by planning conditions during the planning permission stage.<br><br>This option proposes that the CDP levels are the maximum parking levels allowed in Newbridge going forward. These standards are:<br><br>• For houses -1 space for each unit up to and including 3 bed units and 1 space +0.5 visitor spaces for units of 4 units or greater.<br>• For apartments – 1.5 spaces per unit + 1 visitor space per 4 apartments. |

| Option No. | Description |
|---|---|
| Option 3 | Work with key stakeholders to expand the capacity at Newbridge train station car park. |
| Option 4 | The introduction of a park and stride facility for all schools located along the Naas Road utilising the Newbridge Town Hall public car park. |
| Option 5 | Introduce mobility management plans for major employers within Newbridge. This option would apply to large employers with more than 100 employees, major trip attractors and large schools. Furthermore, the implementation and monitoring of mobility management plans at large new developments will be required. |
| Option 6 | Installation of variable message (VMS) parking signs on key approach roads to ensure location of parking within Newbridge is legible and eliminate traffic circulating looking for parking within the town. |
| Option 7 | Increase parking enforcement to eliminate illegal parking in road space designated for sustainable travel modes. |
| Option 8 | Implement smart parking measures and provide a town parking app. Smart parking measures, such as Automated Number Plate Recognition (ANPR) technology or a bay monitoring system, reduce time spent by motorists looking for a parking space and provides useful data on car park usage. This data helps determine parking trends and the analysis of capacity requirements in the future. |
| Option 9 | Provide hidden disability/age friendly designated parking spaces. Hidden disability spaces, also known as sunflower spaces, are used by people who have a disability but do not necessarily qualify for a blue badge. Age friendly spaces are for older people who do not qualify for a blue badge. These spaces are located away from the road, near to the pay machine (if relevant) and near to the destination of the parking. Such spaces have already been introduced in Waterford and Blessington by local authorities. |

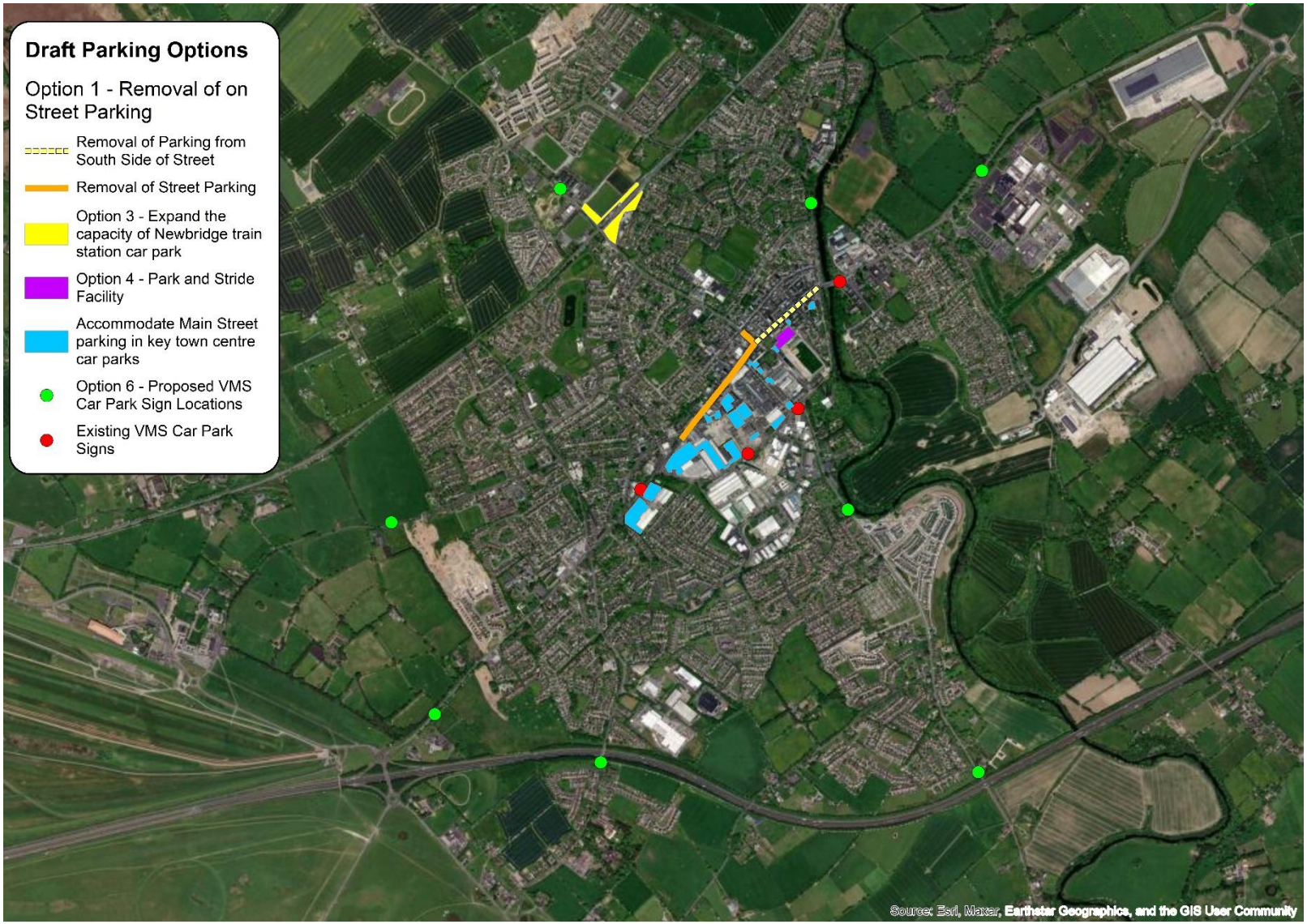


**Figure 2-17 – Draft Parking Options**

# 3. Part 3 – Option Assessment

## 3.1 Options Assessment Methodology

This section summarises the Multi-Criteria Analysis (MCA) approach used in the NABTA to assess the options.

### 3.1.1 MCA Use in Option Assessment

As mentioned earlier in the report, MCA assessment is used for roads, parking, and public transport options. The standard MCA approach in other projects is to compare similar options in the same table to identify the preferred option. In the NABTA, the options are often significantly different and not directly comparable in this way. Therefore, the MCAs will group options into a combined table only when they are comparable options, but otherwise individual MCAs will be used to assess each option on its individual merit.

### 3.1.2 MCA Assessment Criteria

A multi-criteria analysis is carried out to assess options for the road, parking, and public transport interventions. Given the focus on sustainable transport and the decarbonisation of transport, bespoke MCA criteria were developed for the NABTA which are different than the Transport Appraisal Framework (TAF) criteria. The new criteria, shown in Table 3-1, are a departure from TAF themes, with a greater focus on wider societal and the environmental impacts. Under each criterion, a number of elements will be considered as outlined in the table, based on evidence collected during the study, project analysis, consultation feedback and KCC direction.

**Table 3-1 – NABTA MCA Criteria**

| NLPT Criteria Used for MCAs | Each MCA Criteria Assessment Considers |
|---|---|
| Decarbonisation Impact | Climate Change Impact |
| | Local Environmental Impacts |
| | Contribution to decarbonisation |
| Sustainable Land-Use and Transport Impact | Land-Use Integration |
| | Accessibility |
| | Modal Shift |
| | Strategy Integration |
| Community Impact | Social impacts |
| | Safety |
| | Severance |
| Feasibility | Cost |
| | Constraints |
| | Realism of delivery |

### 3.1.3 MCA Assessment Scale

In the option assessment MCAs, a seven-point scale is used been applied as shown in Table 3-2. Given that most impacts are qualitative at this strategic stage, each criterion is scored on the extent to which it offers a positive or negative impact. For illustrative purposes, this seven-point scale is colour coded as presented in with advantageous options graded to 'dark green' and disadvantageous options graded to 'dark red'.

### Table 3-2 – MCA Colour Coded Ranking Scale

| Colour | Description |
|---|---|
| | **Major Benefit:** The proposal is expected to have a clear and considerable benefit or positive impact |
| | **Moderate Benefit:** The proposal is expected to have a moderate benefit or positive impact |
| | **Minor Benefit:** The proposal is expected to only have a minor benefit or positive impact |
| | **Neutral:** Overall, the proposal is expected to have neither a positive nor negative impact |
| | **Minor Disbenefit:** The proposal is only expected to result in a minor negative impact |
| | **Moderate Disbenefit:** The proposal is expected to have a moderate disbenefit or negative impact |
| | **Major Disbenefit:** The proposal is expected to have a clear and considerable disbenefit or negative impact |

*Source: TII and NTA ABTA How to Guide Guidance Document – Pilot Methodology*

## 3.2 Active Travel Measures Assessment – Catchment Analysis

For active modes, the impact of the permeability measures is tested in GIS to identify the benefits from the proposed future path network with respect to reducing trip distances by walking/cycling to key destinations in Newbridge. In this section, the set of permeability strategy measures shown on the maps includes some links which were not included in the baseline path network, but which are no longer identified as measures in the strategy as they are now delivered. These are not specifically highlighted on these maps but can be seen on the overall strategy maps. In addition, as previously mentioned, the GIS catchment analysis did not include a small number of additional permeability strategy measures which were added to the strategy following the completion of the GIS assessment and therefore those measures are not shown on the maps in this section.

It is important to note that the calculated future catchment areas for primary schools, secondary schools, bus stops and supermarkets are based on current facilities only, the analysis does not take into consideration the future development of new schools, supermarkets and bus stops to support and service population growth within expanding areas of the town.

### 3.2.1 Impact on Primary School Catchment

Figure 3-1 displays the expansion of the 1km primary school catchment with the implementation of permeability measures, as shown by the blue lines on the map. The increase in catchment area because of the additional permeability measures can be seen by the light red shaded area.

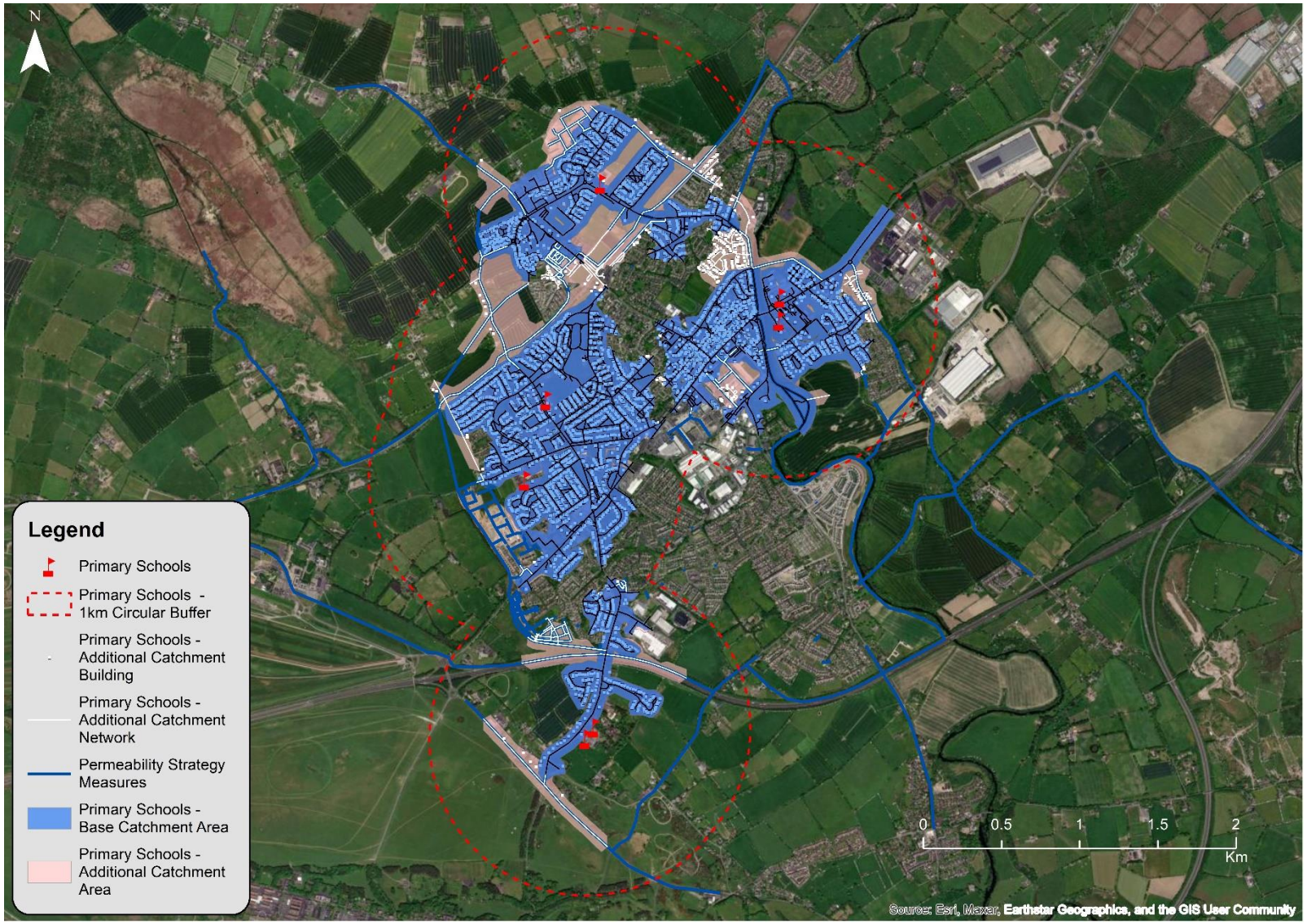


**Figure 3-1 – Expansion to the 1 km Catchment for Primary Schools**

### 3.2.2 Impact on Secondary Schools Catchment

Figure 3-2 shows the additional 1 km secondary school catchment with the implementation of permeability measures, which are shown as blue lines. The additional catchment area due to the new connectivity options can be seen by the purple shaded area. Compared to the impact on primary school catchment, there is a modest increase in the catchment area for secondary schools. With all four of the secondary schools looked close to each other and in the central part of Newbridge the impact of the permeability strategy measure for secondary schools is limited.

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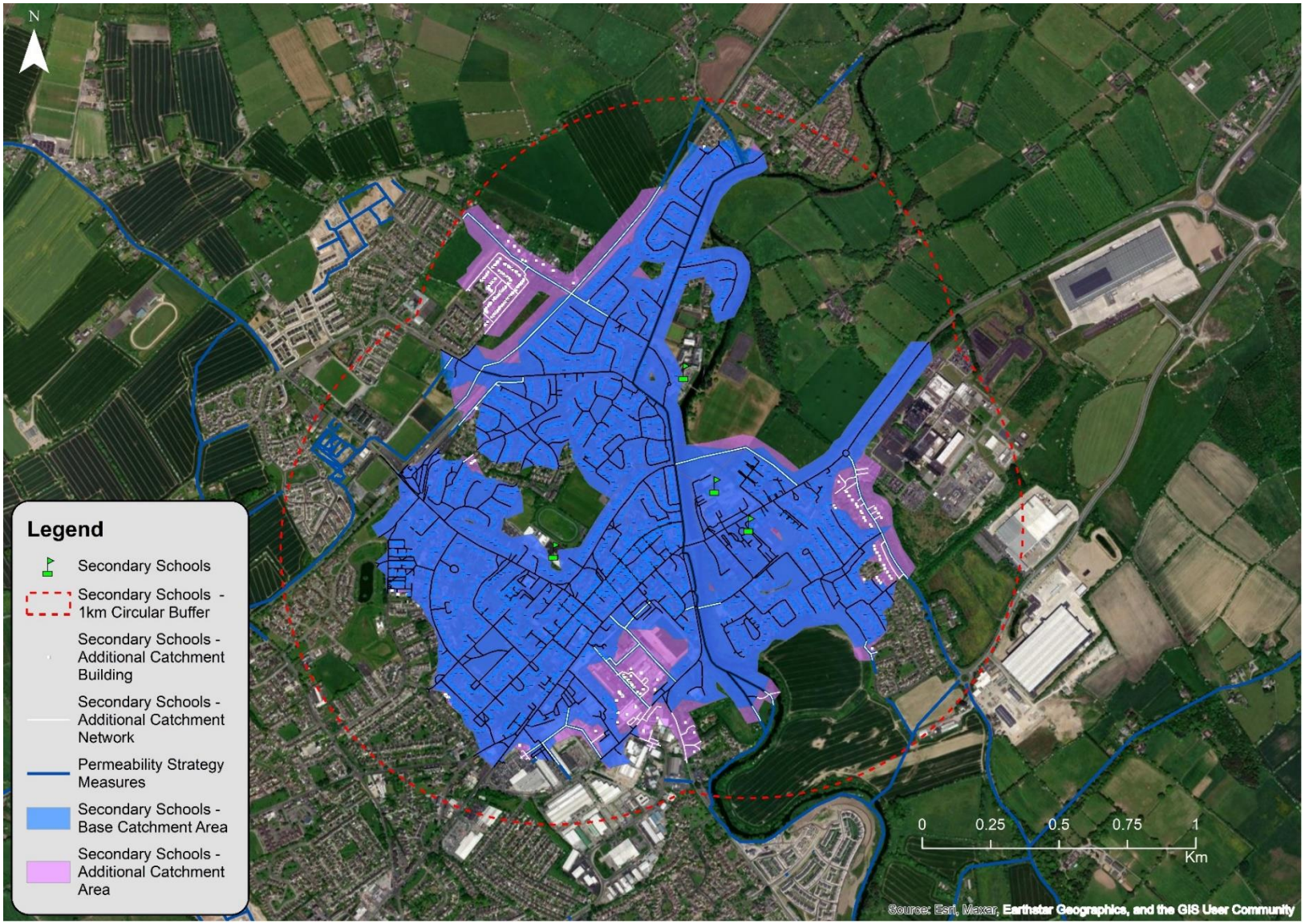


**Figure 3-2 – Expansion to the 1 km Catchment for Secondary Schools**

### 3.2.3 Impact on Supermarkets Catchment

Figure 3-3 displays the expansion of the 1 km catchment for supermarkets with the implementation of the permeability measures, which are shown by the blue lines. The increase in catchment area when the proposed permeability measures are implemented is shown by the light purple shaded area. The south, north and east of Newbridge benefits from the proposed connectivity options. However, given all the supermarkets are located within the centre of Newbridge, the impact of the implementation of the strategy measures is limited.

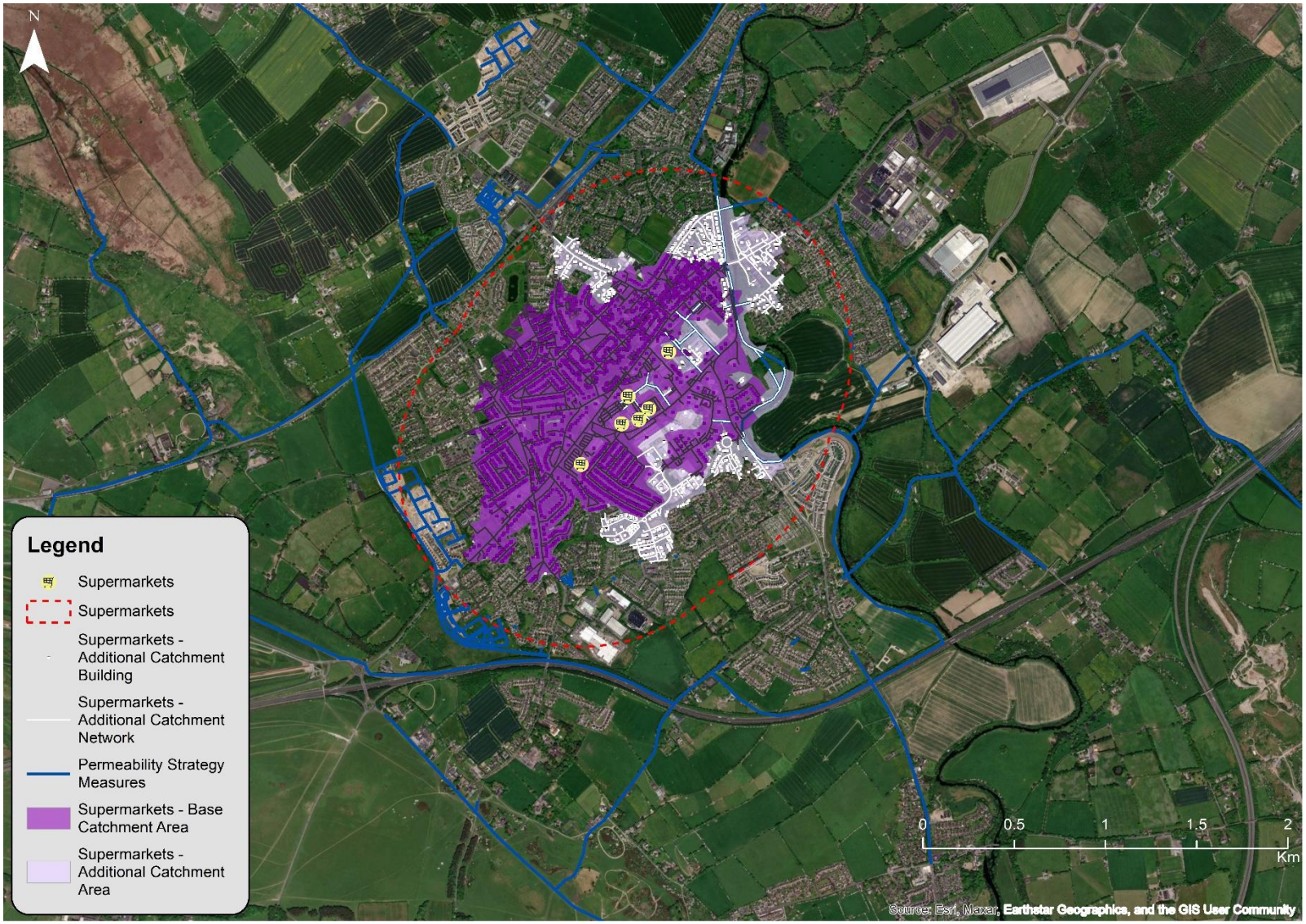


**Figure 3-3 – Expansion to the 1 km Catchment for Supermarkets**

### 3.2.4 Impact on Whitewater Centre Catchment

Figure 3-4 exhibits the additional 1 km Whitewater Centre catchment with the implementation of the proposed permeability measures, which are shown by the blue lines. The increase in catchment area when the proposed permeability measures are implemented is denoted by the light red shaded area. The permeability measures help to extend the catchment area to the south and east.


**Figure 3-4 – Expansion to the 1 km Catchment for Whitewater Centre**

### 3.2.5 Impact on Train Station Catchment

Figure 3-5 shows the additional 1 km catchment for Newbridge train station with the implementation of permeability measures, as shown by the blue lines. The yellow shaded area shows the additional catchment area that will be generated from the proposed permeability improvements. Most of the additional catchment is to the north, east and west of the station.

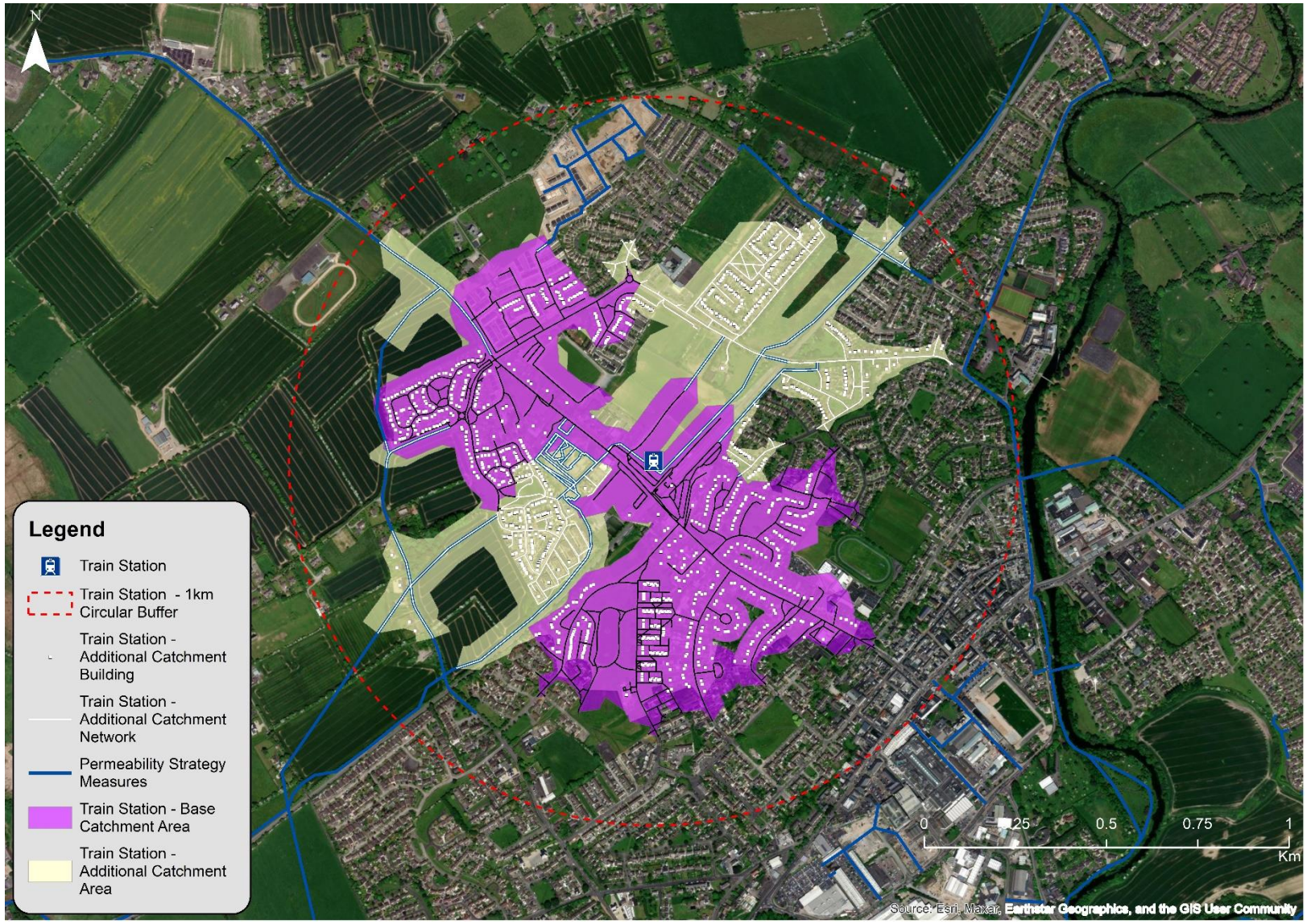


**Figure 3-5 – Expansion to the 1Km Catchment for Train Station**

### 3.2.6 Impact on Bus Stop Catchment

Figure 3-6 shows the additional 500-meter catchment for bus stops in Newbridge with the implementation of new bus stops and the permeability measures, as shown in blue lines. The light-yellow area shows the additional catchment area that will be generated from the proposed new bus stops in combination with the permeability improvements. Through the improvement in permeability and the additional bus stops there are significantly more homes now within 500m of bus stops in Newbridge.

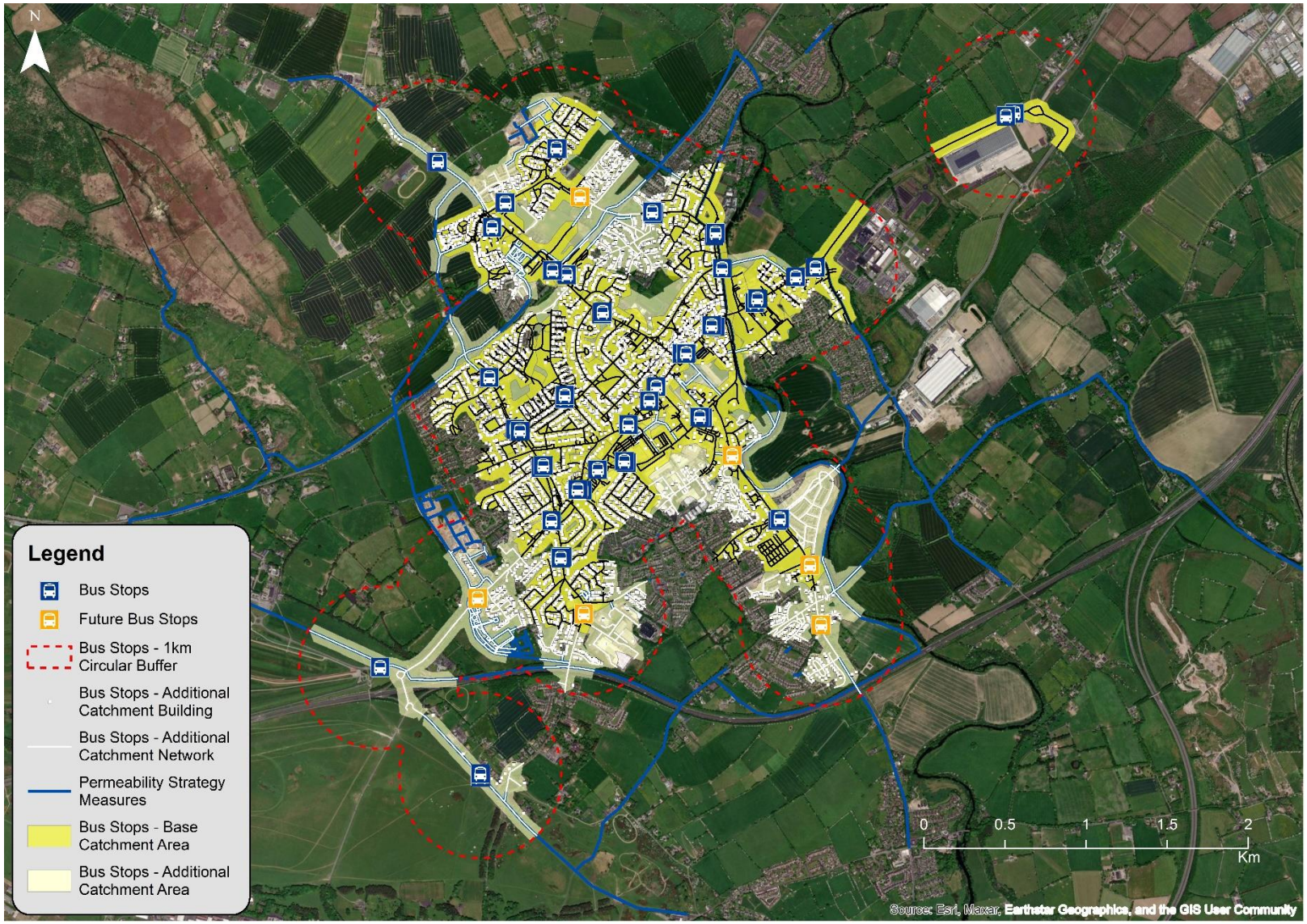


**Figure 3-6 – Expansion to the 500m Catchment for Bus Stops**

### 3.2.7 Summary of Quantified Benefits of the Permeability Measures – To be completed post Public Consultation

#### 3.2.7.1 Number of Units Added to the 1 km Walking Catchment – To be completed post Public Consultation

#### 3.2.7.2 Reduction in Walking Distance to Key Destinations – To be completed post Public Consultation

#### 3.2.7.3 Geographic Impact of Permeability Measures in Reducing Trips Distances – To be completed post Public Consultation

#### 3.2.7.4 Suggested Next Steps

It proposed that the permeability / walking network is adopted to form the permeability / walking network of the NABTA.

## 3.3 Public Transport Options MCA Assessment

This section identifies and assesses options to improve public transport services and reliability within Newbridge based on an MCA where the rationale for the scoring of each option is provided. The public transport strategy is integrated with the active modes, road, and parking strategies to ensure mutually supportive measures are implemented.

### 3.3.1 Option 1- Bus Priority Route on Main Street.

This option seeks to establish a public transport priority route on Newbridge Main Street to ensure the more efficient movement of public transport vehicles, specifically buses, through the town centre. Newbridge Main Street has the highest frequency of public transport in the town and helping these vehicles move through the town quicker would be beneficial in reducing journey times, improving journey time reliability, and overall helping to encourage greater use of the bus for external trips.

This option is dependent on the relocation of on street parking from main street to the nearby off-street car parks, outlined in Option 1 of the Draft Parking Strategy. The removal of street parking would allow for some physical priority measures to be introduced along Main Street. Given the confined nature of Main Street physical separation of public transport and general traffic won't be possible along its entire length. Where physical separation can't be achieved, it may be possible to use technology at junctions to give public transport vehicles priority to minimise dwell time at the junctions.

Figure 3-7 shows how the bus priority route has been designed to complement the road and parking options utilising the space reallocated from parking and building on the general traffic reductions expected from the implementation of the turn bans. This measure should help to make travel by public transport more attractive and therefore have a positive impact on decarbonisation. Similarly, the bus priority route should be beneficial for land use integration and sustainable travel helping to encourage greater use of public transport. Given the limited cross section of Main Street there will be some constraints that may impact negatively on the community and the feasibility of this route. However, the relocation of parking away from main street should help to mitigate these potential negative impacts.

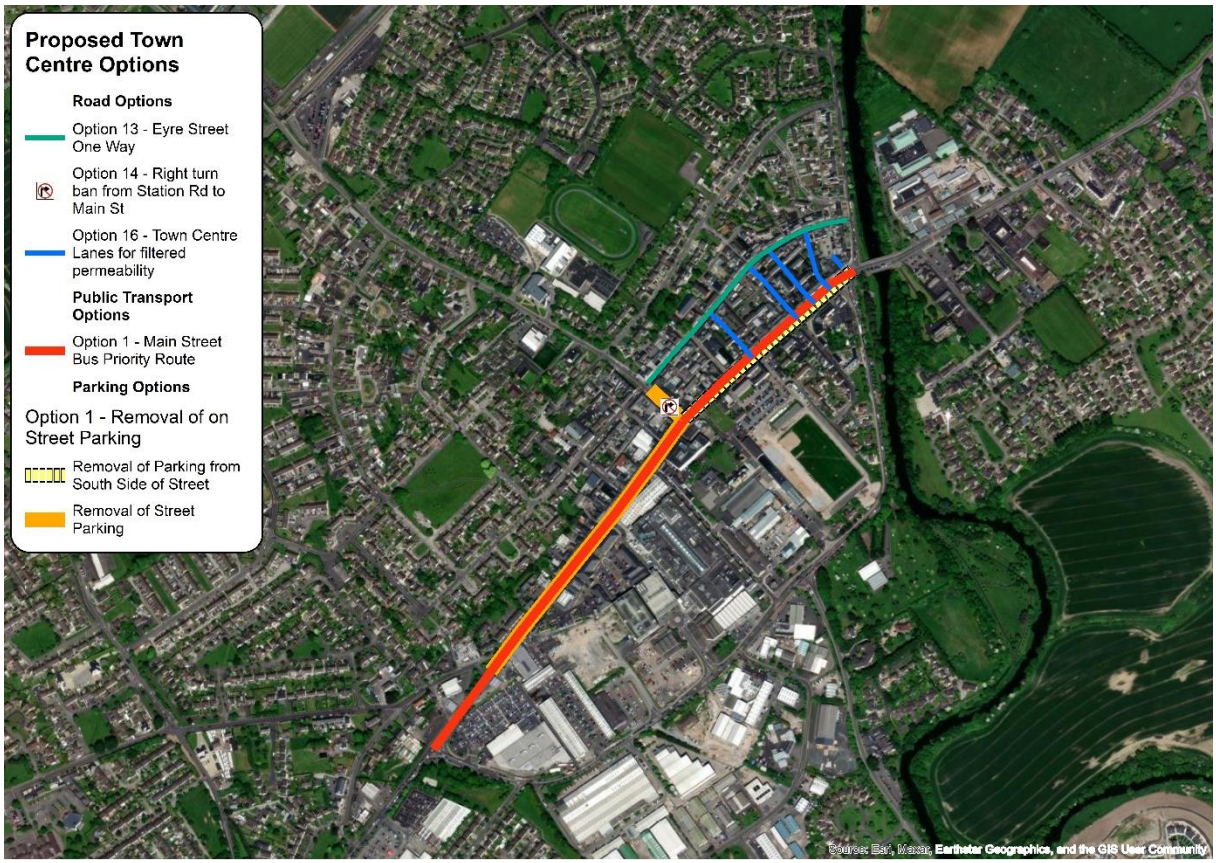


**Figure 3-7 – Town Centre Options**

**Table 3-3 – MCA of Bus Priority Route**

| Option | Decarbonisation Impact | Sustainable Land-Use and Transport Impact | Community Impact | Feasibility |
|---|---|---|---|---|
| Option 2 – Bus Priority Route on Main Street | | | | |

## 3.3.2 Option 5: Local Interchange Hub

Three potential locations for a local interchange hub or mobility hub were identified in Newbridge. They are shown in Figure 3-8. They include:

i. Newbridge Town Hall Car Park
ii. Woodie's Newbridge Car Park
iii. Machinery Yard on Athgarvan Road

These sites have been considered in the strategy for the provision of a local interchange hub. An interchange hub can be defined as a recognisable and easily accessible place that integrates multiple transport modes for the benefit of various users. It aims to provide a multimodal network for people's sustainable movement while enhancing connectivity. Hubs usually provide supplementary facilities and services, which improve the users' trip experience.

Generally, mobility hubs are designed on a bespoke basis for specific locations and depending on demand in the area appropriate components are chosen for each hub.

Depending on their type, mobility hubs may include a variety of different services and functions, including:

- Shared mobility services: bike/cargo bike/car/e-scooter.
- Public transport stop.
- Connection with pedestrian and cycling routes.
- Parking for private bikes.
- EV charging infrastructure.
- Area for taxis.
- Travel information services.
- Improved public realm and supporting amenities such as: Wi-Fi, resting area, storage facilities, delivery pick up lockers, coffee kiosks etc. are also components of some mobility hubs.

After assessing all these sites, location number I 'Newbridge Town Hall Car Park' is the preferred location, as it is centrally located and lies on the route of a large number of buses services serving Newbridge. This location also ties in with the bus priority option (option 1) which is beneficial to the use of public transport in Newbridge. The Woodies location is more removed from the town centre and as such is considered less accessible than Newbridge Town Hall Car Park. The Machinery Yard Site on the Athgarvan Road is considered less than ideal, as the Athgarvan road has a large number of car parking spaces, which can result in congestion along the road at times. This congestion would result in slow moving buses through Newbridge. This location would also require all of the routes to be rerouted to serve Athgarvan Road.

Table 3-4 shows the MCA analysis for each of the options.

**Figure 3-8 – Possible Locations for Mobility Hubs in Newbridge**

**Table 3-4 – Public Transport Option 5 MCA Analysis**

| Option | Decarbonisation Impact | Sustainable Land-Use and Transport Impact | Community Impact | Feasibility |
|---|---|---|---|---|
| Newbridge Town Hall Car Park location | | | | |
| Woodie's Newbridge Car Park location | | | | |
| Machinery Yard on Athgarvan Road location | | | | |

The Newbridge Town Hall Car Park location is considered the best location for the implementation of the Local Interchange Hub.

### 3.3.3 Newbridge General Public Transport Improvement Options

KCC have developed an extensive list of options to provide for general public transport improvements within Newbridge. The aim of these options is to encourage the use of public transport for a range of trip purposes and for internal and external trips. They have also been developed to better integrate public transport with other modes of transport to support multimodal trip making for the residents of and travellers to Newbridge. The options are listed below and shown in Figure 3-9. It should be noted that as options 7, 8, 9, 10 and 11 are policy related they are not shown on the map.

- Option 2 - work with the key Stakeholders to upgrade key bus stops within Newbridge.
- Option 3 - work with the key Stakeholders to upgrade the facilities at Newbridge Train Station.
- Option 4 - work with the key Stakeholders to install new bus stops within Newbridge.
- Option 6 - work with the key Stakeholders to provide a Series of Key Interchange Hubs within Newbridge at the following locations:
    i. Train Station
    ii. Whitewater Centre
    iii. Newbridge Business Park
    iv. Little Connell Industrial Estate
- Option 7 - work with the key Stakeholders to Achieve Leap Card Integration at Newbridge Train Station.
- Option 8 - work with the key Stakeholders in the implementation of the new Dublin Commuter Zone and National Fares strategy to ensure cheaper fares for Newbridge Commuters.
- Option 9 - work with the key Stakeholders to establish a new public transport connections to key destinations for commuter to and from Newbridge, building on the work of Connection Ireland.

- Option 10 - work with the key Stakeholders to explore the feasibility of implementing a Newbridge town bus service.
- Option 11 - work with the key Stakeholders to improve the frequency on key bus service serving Newbridge.

The MCA for each of these options is included in Table 3-8Table 3-5.

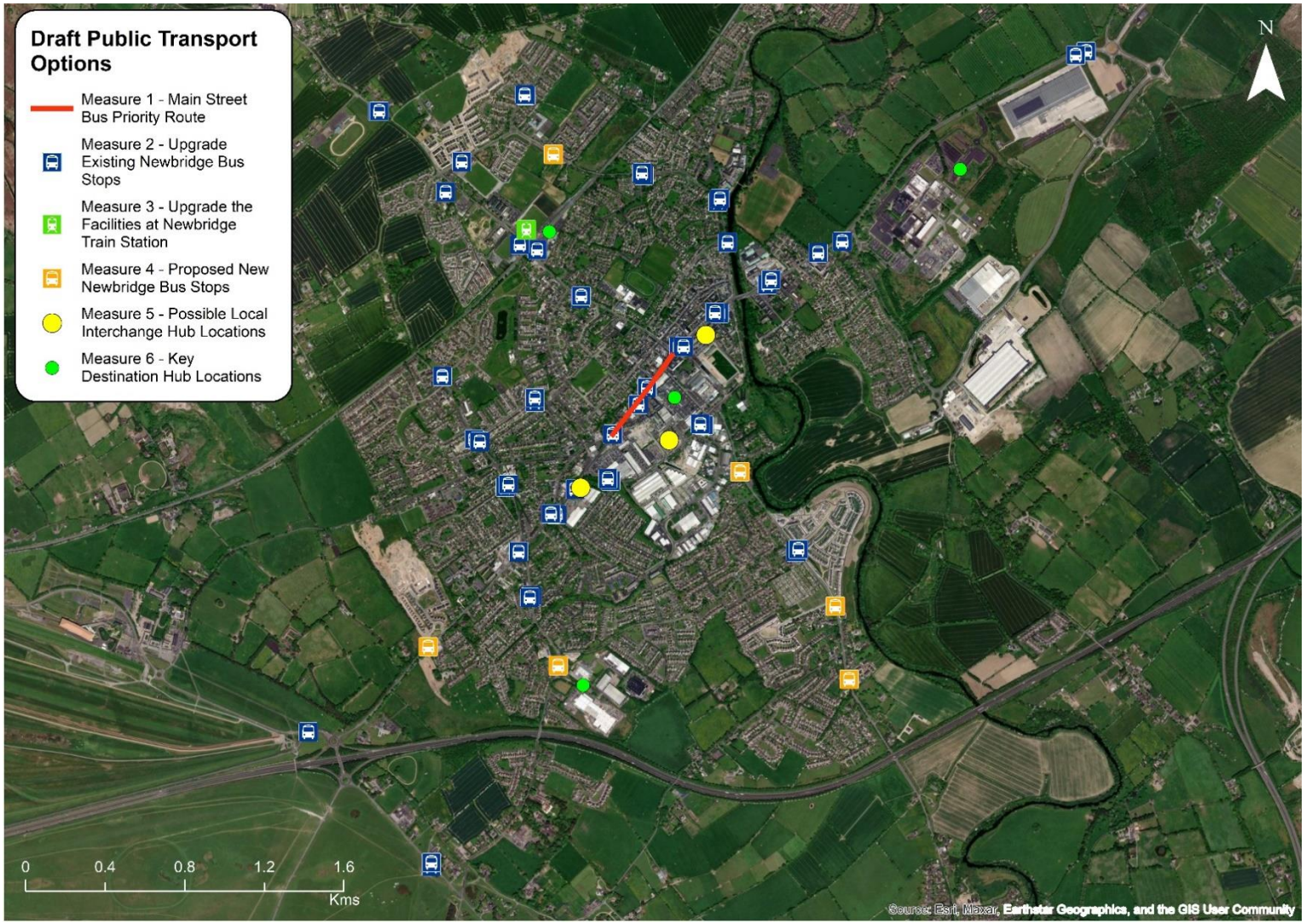


**Figure 3-9 – Newbridge General Public Transport Improvements**

### Table 3-5 - General Public Transport Improvements MCA

| Option | Decarbonisation Impact | Sustainable Land-Use and Transport Impact | Community Impact | Feasibility |
|---|---|---|---|---|
| Option 2 – Upgrade Key Bus Stops | | | | |
| Option 3 - Upgrade the facilities at Newbridge Train Station. | | | | |
| Option 4 – Installation of new bus stops within Newbridge | | | | |
| Option 6 – Provision of Key Interchange Hubs | | | | |
| Option 7 - Leap Card Integration at Newbridge Train Station | | | | |
| Option 8 - Implementation of the new Dublin Commuter Zone | | | | |
| Option 9 - Establish new public transport connections | | | | |
| Option 10 - Newbridge town bus service | | | | |
| Option 11 - Improve the frequency on key bus services serving Newbridge | | | | |

#### 3.3.3.1 Suggested Options Brought Forward

It is suggested that the following public transport options are brought forward:

- Option 1 - Bus Priority Route on Main Street.
- Option 2 – Upgrade Key Bus Stops.
- Option 3 - Upgrade the facilities at Newbridge Train Station.
- Option 4 – Installation of new bus stops within Newbridge.
- Option 5 – Local Interchange Hub at Newbridge Town Hall Car Park location.
- Option 6 – Provision of Key Interchange Hubs.
- Option 7 - Leap Card Integration at Newbridge Train Station.
- Option 8 - Implementation of the new Dublin Commuter Zone.
- Option 9 - Establish new public transport connections.
- Option 10 - Newbridge town bus service.
- Option 11 - Improve the frequency on key bus services serving Newbridge.

## 3.4 Road Options Assessment

### 3.4.1 Road Options Modelling

This section presents the findings of the strategic transport modelling (VISUM) assessment conducted to inform the MCA process. Difference plots from the VISUM modelling are included for Do-Something (DS) options and these plots illustrate the changes in flow difference compared to the Do-Minimum (DM). In the difference plots, red roads indicate an increase in traffic, while green areas indicate a reduction in traffic. The difference plots presented in this section are focused on the 2040 future year, so that the impact of full development growth can be assessed, primarily in the AM peak which is generally the most focused peak where the highest traffic flows are observed. The network statistics will provide a full overview of all results in 2028 and 2038 in the AM and PM peaks in comparison with the DM.

In the assessment of road options, a number of related options have been assessed together as the options have limited impact on their own. Instead, the assessment of road options focuses on the cumulative impact of grouped options. It also reflects the interdependency of a number of the road options.

#### 3.4.1.1 Do-Minimum Scenario

In the future scenarios, it is assumed that the Do-Minimum road network or the committed future roads outlined in Section 2.2.3.3.3 are in place by 2020 and 2040. For the difference plots for DS options, they are compared against the DM scenario. The base model network reflects 2023 so the DM roads are all expected to be in place by 2030 so are reflected in all the future year modelling. The DM Roads are:

- Measure 1 - new connections between Ballymany Road to Standhouse Road.
- Measure 2A - new connections between Ballymany Rd to Green Road (will not connect to Green Road, this connection is delivered under Option 2B as such this road has limited benefit in the DM).
- Measure 3 - second Bridge across the River Liffey via Belin Woods.


**Figure 3-10 – Do-Minimum Road Network**

### 3.4.1.2 Assessment of Town Centre Options

#### Overview

A series of options were formulated aimed at reducing the level of traffic in Newbridge Town Centre. The purpose of these options is to try and reduce through traffic in the town centre and also to improve the movement of public transport through Newbridge town centre.

In order to achieve this, a turn ban was developed, to stop right turning traffic from Station Road to Main Street, in addition to making Eyre Street one way in the westbound direction, from Canning Place to Station Road. These options were developed to encourage traffic traveling through Newbridge to use alternative routes to Station Road.

The test is to demonstrate the impacts on the network without alternative routes being in place. As highlighted in Section 2.2.3.3.4 the implementation of Option 15 is dependent on alternative routes being in place which will be provided by the following options:

- Option 2B -New road connection between Ballymany Rd to Green Road
- Option 4 - New road connection from Morristown (L7036) to the R416 Milltown Road.
- Option 5 - New road connection from Morristown (L7036) to the R416 Station Road
- Option 9 - New road connection from Standhouse Road to The Meadows Road

The options Included in this modelling test are listed below and shown in Figure 3-11.

- Option 13 - Making Eyre Street one-way in the Westbound direction allowing traffic flow from Canning Place to Station Road.
- Option 15 - A ban on right turning traffic from Station Road to Main Street

**Figure 3-11 – Town Centre Modelled Options**

#### 3.4.1.2.1 Modelled Impact of Town Centre Options

These options, Option 13 and 15, were compared against the Do-Minimum scenario for the 2040 AM peak and the difference plot is shown in Figure 3-12. The difference plot shows the impact of the turn bans and making Eyre Street one-way in the westbound direction. As can be seen from the flow comparison these options result in a decrease of traffic along the western section of Main Street, before the junction with Station Road, and a significant decrease in traffic along Station Road. The difference plot also shows increase in traffic along College Park, Morristown Road, and Blackberry Lane as the alternative north south routes with movement on Station Road restricted with the turn bans.


**Figure 3-12 – Flow Comparison – Town Centre Options**

### 3.4.1.3 Assessment of Outer Orbital Options

#### 3.4.1.3.1 Overview

An orbital roads strategy was developed to complement the town centre roads options with the approach to provide orbital movements to reduce town centre through traffic. The orbital options have been tested with the town centre options in place. The options listed below are included in this options test and shown in Figure 3-13.

- Option 2B -New road connection between Ballymany Rd to Green Road – connection to Green Road. (combines with committed measure 2A to make the connection to Green Road).
- Option 4 - New road connection from Morristown (L7036) to the R416 Milltown Road.
- Option 5 - New road connection from Morristown (L7036) to the R416 Station Road at the entrance to the Department of Defence, through Morristown Crescent, utilising the existing section of street already constructed.
- Option 9 - New road connection from Standhouse Road to The Meadows Road.


**Figure 3-13 – Options included in the Orbital Test**

#### 3.4.1.3.2 Modelled Impact of Town Centre Options

Options 2B, 4, 5 and 9 were compared against the Do-Minimum scenario for the 2040 AM peak and the difference plot is shown in Figure 3-14. Figure 3-14 highlights that with the outer orbital options in place the increase in traffic along college Park is slighted reduced along with significant reduction in traffic along Blackberry Lane with committed options 1, 2A and 3 in addition to Options 2B, 9, 5 and 4 carry significant levels of traffic helping to reduce traffic on Main Street and Athgarvan Road and ensures the traffic is being carried on roads with the cross section capable of carrying them.


**Figure 3-14 – Flow Comparison – Town Centre Options and Orbital Options**

### 3.4.2 Road Options MCA Assessment

The road options are assessed in MCA tables. The MCA assessment is informed by the transport modelling and baseline review, but it is primarily a qualitative high-level assessment to identify the most beneficial options.

#### 3.4.2.1 Orbital Options Assessment Combined

The orbital options consist of the below options which are designed to complement the committed roads options. These options are shown in Figure 3-15.

- Option 2B: new road connection between Ballymany Rd to Green Road – connection to Green Road. (combines with committed measure 2A to make the connection to Green Road)
- Option 4: new road connection from Morristown (L7036) to the R416 Milltown Road.
- Option 5: new road connection from Morristown (L7036) to the R416 Station Road at the entrance to the Department of Defence, through Morristown Crescent, utilising the existing section of street already constructed.
- Option 9: new road connection from Standhouse Road to The Meadows Road

While it's noted that orbital roads can have varying impacts on decarbonisation, depending on their design and supporting infrastructure. They can provide more indirect routes for vehicles which can help support sustainable transportation alternatives on the more direct routes through the centre of town. If designed solely for high-speed motor vehicle traffic without adequate policies in place, they may encourage car use and increase emissions. These options will be designed to provide for walking and cycling. They will also be able to cater for public transport and may be of use in the implementation of a town-based bus services within Newbridge. The provision of bus priority on Main Street as a result of reduced through traffic will help to ensure these options help to deliver a multimodal solution which improves public transport as well as car travel.

These options will have a positive impact on land-use integration, accessibility, modal shift, and strategy integration. They are key to facilitating development by providing access to the greenfield sites in close proximity to Newbridge train station, which have been shown in the Land Use Assessment to have the greatest potential to promote sustainable travel. These options are integrated with the sustainable transport elements of this strategy will have a positive role in promoting the use of sustainable travel.

Furthermore, these options and the western orbital they will deliver will have broader positive impacts on public health, accessibility, economic development, and sustainability goals. By being designed with consideration of community needs and concerns, it can improve mobility and remove HGVs from the town centre.

This is due to the completed orbital being able to take people from the north of Newbridge to the south and giving access to M7 without travelling through the town centre. The provision of an orbital distributor will allow for improved bus priority route through the centre of Newbridge. This will positively impact the community, as well as the safety benefit of removing heavy vehicles from town centre streets.

It is important to note that while these options and the western orbital may have these positive impacts, it also comes with a high capital cost and a lengthy delivery time. However,

there is the possibility of conditioning the delivery of sections of Options 9, 5 and 4 to the delivery of residential development in this area.


**Figure 3-15 – Orbital Road Options**

## Table 3-6 – Orbital Road Options MCA

| Option | Decarbonisation Impact | Sustainable Land-Use and Transport Impact | Community Impact | Feasibility |
|---|---|---|---|---|
| Option 2B: new road connection between Ballymany Rd to Green Road | | | | |
| Option 4: new road connection from Morristown (L7036) to the R416 Milltown Road | | | | |
| Option 5: new road connection from Morristown (L7036) to the R416 Station Road | | | | |
| Option 9: new road connection from Standhouse Road to The Meadows Road) | | | | |

#### 3.4.2.2 Town Centre Options

A series of roads options were developed focusing on the town centre to deliver the roads strategy objectives. The main aim of these options is to reduce through traffic on Main Street, in order to create a lower traffic environment in the centre of Newbridge and improve the operation of public transport through the centre of Newbridge. To achieve this the below options were developed, they are also shown in Figure 3-16.

- Option 6: Reconfiguration of two key town Centre Junctions at:
    v. Junction of St. Conleth's Bridge / Athgarvan Road / Main Street / Canning Place
    vi. Junction of Moorfield Road / Athgarvan Road / Edward Street
- Option 7: 30 kilometres per hour speed limit in the centre of Newbridge.
- Option 13: Making Eyre Street one-way in the westbound direction allowing traffic flow from Canning Place to Station Road.
- Option 14 A ban on right turning traffic from Station Road to Main Street
- Option 15: Removal of turning lanes from Main Street at the junction of Main Street and Station Road. This would involve the removal of the right turning lanes on both sides of the junction and combining these turning lanes into the main lane merging turning traffic to Station Road with traffic continuing along Main Street
- Option 16: Closure of lanes linking Main Street and Eyre Street. This option is linked with Option 15 Making Eyre Street one-way and seeks to eliminate rat running between Main Street and Eyre Street as a result of the one-way system and also improve pedestrian safety along Main Street. Using Filtered permeability, the lanes would still allow for local access while maintaining the connection for people walking and cycling. This measure covers the following lanes:
    vii. Robert Street
    viii. Anne's Street
    ix. Thomas Street
    x. Francis Street
    xi. Closure of car park access at The Liffey Arms and Main Street

The reconfiguration of the two key junctions in Newbridge town centre at either end of Main Street to ensure they are more active mode focused is a key intervention to make the town centre a more people-oriented space. This option would be subject to further study to determine the best general traffic arrangement for these junctions while also providing for better walking and cycling connections and facilities at the junctions.

Reducing speed limits in Newbridge town centre will help to reduce fuel consumption and greenhouse gas emissions from vehicles and improve air quality. This, in turn, can encourage greater use of active modes in the town centre as traffic travelling at lower speeds it is safer for active modes. This helps to make the town centre a more welcoming place for active mode users and less of a transient car dominated space with high levels of fast moving through traffic.

Eyre Street has a narrow cross section and the movement of cars in both directions along the street can prove problematic at times. The street was made one-way to address this issue. Removing traffic in the eastbound direction, towards the River Liffey, will reduce by half the level of traffic on the street. However, this displaced traffic will likely reroute to surrounding

streets as an alternative so it is unlikely this option will have a big decarbonising impact in the immediate future. With the removal of one lane of traffic there is the opportunity to provide better walking and cycling infrastructure along Eyre St, which will have a positive impact on promoting more sustainable travel. In the short term there may be some limited negative impact on the immediate community surrounding Eyre St. However, the longer-term impact of reducing traffic in the area will be positive.

Option 14 and 15 are linked with each other and have been considered together as option 15 is the short-term action and option 14 forms the longer-term action. In the short term the removal of the turning lanes from the junction of Main Street and Station Road will allow for improvements to the walking and cycling facilities along Main Street. In the longer term the banning of turning movements for traffic turning right from Station Road to Main Street will help to reduce through traffic in the town centre. The traffic banned from turning from Station Road to Main Street will be reroute using alternative routings to make this movement. The modelling has shown that these alternative routings will likely include Sexs Road and Morristown Road and. However, given the cross section of these alternative routes and in particular Sexs Road and Morristown Road bridges the implementation of the turn bans has been linked to the upgrading of Sexs bridge and Morristown bridge (Option 11) and the installation of the Western orbital included in options 2B, 4 5 and 9 and committed measures 1, 2A and 3 to provide adequate alternative routing for north south traffic in Newbridge.

Option 16 is linked to the implementation of options 13 and 14 as is designed to improve pedestrian safety along Main Street and limit nuisance rat running from Main Street to Eyre Street. The lanes will be closed using filtered permeability measures such as bollards, tree planting or flower boxes to stop the movement of general traffic but allow for the movement of cyclist and pedestrians. This will help to create a low traffic environment on these lanes.

When all these options are implemented, they will have a combined effective of limiting unnecessary through traffic in the town centre and helping to make it a more welcoming place for walking and cycling whilst also helping to improve public transport operations.

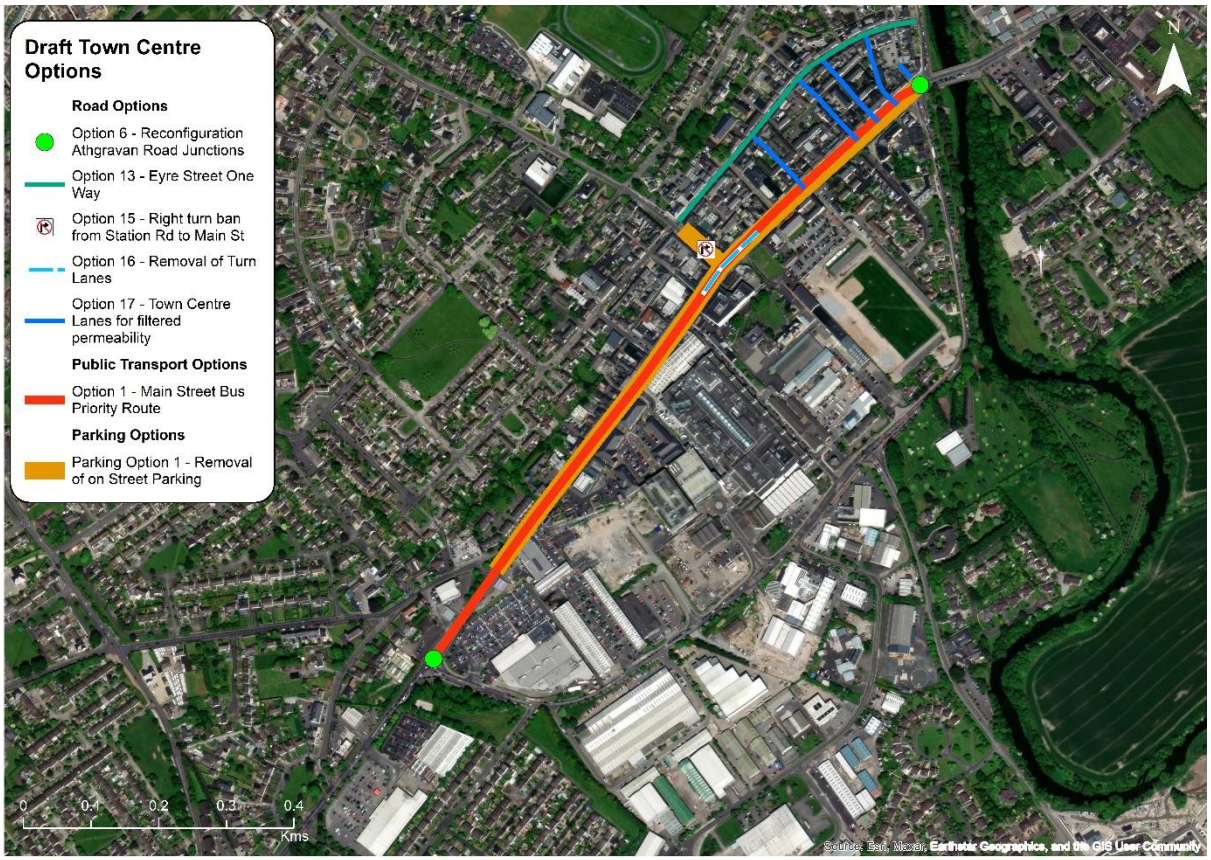


**Figure 3-16 – Town Centre Road Options**

**Table 3-7 – Town Centre Road Options MCA**

| Option | Decarbonisation Impact | Sustainable Land-Use and Transport Impact | Community Impact | Feasibility |
|---|---|---|---|---|
| Option 6: Reconfiguration of two key town Centre Junctions | | | | |
| Option 7: 30 kilometres per hour speed limit in the centre of Newbridge. | | | | |
| Option 13: Making Eyre Street One Way - westbound | | | | |
| Option 14: A ban on right turning traffic from Station Road to Main Street | | | | |
| Option 15: Removal of turning lanes from Main Street at the junction of Main Street and Station Road | | | | |
| Option 16: Closure of Lanes linking Main Street and Eyre Street | | | | |

#### 3.4.2.3 Option 8 - Active Mode Junction Upgrades

Option 8 is designed to deliver active mode upgrades to a number of junctions within Newbridge. The purpose of this option is to ensure junctions are better designed for active modes users. This measure includes the following junction location along the following roads:

i. Athgarvan Road (R416).
ii. Ballymany Road, Moorfield.
iii. Edward Street.
iv. Main Street and Naas Road (R445).
v. Station Road (R416).

Junctions play an important role in regulating general traffic as well as in active travel. Ensuring that town centre junctions are redesigned to better provide for active travel will help to encourage this as an alternative to private cars. This option is linked to a future study to redesign these junctions, but at a minimum they should provide signalised pedestrian crossings on all arms of the junction, prioritise green time for pedestrians over general traffic, and provide a green jump for cyclists to make the junctions safer from a cycling perspective. The junctions should also where possible be designed to priorities public transport and where there is no physical separation of public transport and general traffic be designed to provide priority for public transportation by Smart means.

Redesigning these junctions will have a positive impact on social aspects by promoting sustainable travel and improving safety for pedestrians, cyclists.

**Table 3-8 - Roads Option 8 MCA Analysis**

| Option | Decarbonisation Impact | Sustainable Land-Use and Transport Impact | Community Impact | Feasibility |
|---|---|---|---|---|
| Option 8: Active Mode Junction Upgrades | | | | |

### 3.4.2.4 Option 10 - M7 Junction 12 Active Modes Improvements

Option 10 commits KCC to working with key stakeholders to provide upgrade works to the M7 Junction 12 to better provide for active modes which should include improved pedestrian crossings on all arms of the junction.

Like option 8, this option would see these junctions improved from an active modes point of view. This would likely include the installation of signalised crossings on all arms of the junction. Possibly the installation of a Toucan Crossings to cater for the crossing of cyclists and pedestrian however this would be linked to the designed on the secondary cycle link on this junction in accordance with the cycling strategy.

This option may result in more idling of cars and potentially an increase in carbon emissions associated with the operation of the junction. However, this will potentially be offset by making it a safer junction for active mode users. It will also help to overcome the severance associated with the M7 in Newbridge having a positive impact on land use integration and a positive community impact. The MCA scoring for roads option 10 is shown in Table 3-9.

**Table 3-9 - Roads Option 10 MCA Analysis**

| Option | Decarbonisation Impact | Sustainable Land-Use and Transport Impact | Community Impact | Feasibility |
|---|---|---|---|---|
| Option 10: Active Mode Junction Upgrades | | | | |

### 3.4.2.5 Options 11 - Upgrade of Rickardstown and Morristown Road Bridges

Option 11 involves the upgrade of Rickardstown and Morristown Road bridges to better provide for general traffic, walking and cycling. As outlined in Section 3.4.2.2 this option is requited to facilitate the alternative routings to facilitate the implementation of the Main Street and Station Road turn bans. While the turn bans may lead to a more circuitous routing for general traffic the improvement to active modes and improvement to severance related to the train line will help to offset the negatives associated with decarbonisation. The MCA scoring for roads option 10 is shown in Table 3-10.

**Table 3-10 - Roads Option 11 MCA Analysis**

| Option | Decarbonisation Impact | Sustainable Land-Use and Transport Impact | Community Impact | Feasibility |
|---|---|---|---|---|
| Option 11: upgrade of Rickardstown and Morristown Road bridges | | | | |

### 3.4.2.6 Option 12 - Installation of Quietways

The installation of Quietways on Walshestown Road, Great Connell North and South and Blackberry Lane will help to promote greater use of active modes in these areas and create an active modes links to Corbally Harbour and Pollardstown Fen linking Newbridge to the

Grand Canal. The Quietways will also help to ensure that these routes become less attractive for rat-running, helping to make these streets less busy with cars generating positive impacts for communities in these areas. The MCA scoring for roads option 10 is shown in Table 3-11.

**Table 3-11 – Roads Option 12 MCA Analysis**

| Option | Decarbonisation Impact | Sustainable Land-Use and Transport Impact | Community Impact | Feasibility |
|---|---|---|---|---|
| Option 12: Installation of Quietway's | | | | |

### 3.4.2.7 Suggested Options Brought Forward

It is suggested that all of the road's options are brought forward to form the roads strategy of the NABTA.

## 3.5 Parking Options Assessment and Strategy

This section identifies and assesses options to improve parking facilities as part of the NABTA. The parking options are integrated with the public transport, active modes, and road strategies to promote sustainable travel through demand management where possible.

### 3.5.1 Parking Options Description and Assessment

#### 3.5.1.1 Parking Option 1: Reallocation of Street Parking from Edward Street, Charlotte Street and Main Street.

Table 3-12 provides the MCA for parking option 1 (reallocation of Street Parking from Edward Street, Charlotte Street and Main Street.). The reallocation of street parking from Edward Street, Charlotte Street and Main and the reallocation of this reclaimed roads space to enhance the movement of public transport through the centre of Newbridge (Public Transport Option 1) will have positive impacts on the community, promoting sustainable travel and improving safety for active modes along Main Street. These spaces will be accommodated in the existing town centre car parks. While feasible, engagement with stakeholders will be important as part of the redesign of the Main Street to deliver this option.

**Table 3-12 Parking Option 1 MCA Analysis**

| Option | Decarbonisation Impact | Sustainable Land-Use and Transport Impact | Community Impact | Feasibility |
|---|---|---|---|---|
| Option 1: Reallocation of Street Parking from Edward Street, Charlotte Street and Main Street. | | | | |

#### 3.5.1.2 Parking Option 2: Enforcement of Kildare County Development Plan (CDP) Parking Provisions at New Development Sites

Enforcing CDP parking provisions at new development sites is highly feasible and low in cost to implement. The decarbonisation and sustainable travel impact is modestly positive as the CDP parking provision is quite generous and the probability of residents/visitors finding parking elsewhere is high. This is a short-term demand reduction measure, which can be capitalised upon further through the creation of car-free, or low car developments, elsewhere in Newbridge. The rationale for the scoring based on these points are illustrated in Table 3.34.

**Table 3-13 - Option 2 MCA Analysis**

| Option | Decarbonisation Impact | Sustainable Land-Use and Transport Impact | Community Impact | Feasibility |
|---|---|---|---|---|
| Option 2: Enforcement of Kildare County Development Plan (CDP) Parking Provisions at New Development Sites | | | | |

#### 3.5.1.3 Parking Option 3 Expand the Capacity at Newbridge Train Station Car Park

Expanding the provision of car parking at Newbridge train station will help to encourage greater use of the train for longer distant commuter trips. This option has a slightly negative impact on decarbonisation as it has the possibility to promote driving to the station over walking and cycling however greater use of the train for long distance commuting trips should help to offset this. The rationale for the scoring based on these points are illustrated in Table 3-14.

**Table 3-14 – Parking Option 2 MCA Analysis**

| Option | Decarbonisation Impact | Sustainable Land-Use and Transport Impact | Community Impact | Feasibility |
|---|---|---|---|---|
| Option 3 Expand the Capacity at Newbridge Train Station Car Park | | | | |

#### 3.5.1.4 Option 4 The introduction of a park and stride facility

The MCA for option 4 is shown in Table 3-15. Introducing a Park and Stride facility for the schools located along the Naas Road in Newbridge would help to alleviate the safety concerns raised in the Phase 1 consultation for those cycling and walking to these schools while also helping to minimise peak hour morning traffic on St. Conleth's Bridge. This option should reduce potential conflicts on the roads surrounding the school zone thereby improving accessibility. Other benefits include increased physical activity and removing traffic from the town centre.

**Table 3-15 – Parking Option 4 MCA Analysis**

| Option | Decarbonisation Impact | Sustainable Land-Use and Transport Impact | Community Impact | Feasibility |
|---|---|---|---|---|
| Option 4 The introduction of a park and stride facility | | | | |

#### 3.5.1.5 Option 5: Introduction of Mobility Management Plans for Major Employers

The MCA for option 5 can be seen in Table 3-16. The introduction of mobility management plans (MMPs) in locations such as Newbridge Business Park would be low in cost and could potentially provide cost savings for businesses in the future if investment in further car parking is not required. MMPs should result in a certain amount of modal shift from the private car to sustainable modes which should benefit the environment, decarbonisation and safety at the businesses which implement MMPs. This option is complementary to option 6 from the public transport strategy, which seeks to establish mobility hubs at key locations within Newbridge.

**Table 3-16- Parking Option 5 MCA Analysis**

| Option | Decarbonisation Impact | Sustainable Land-Use and Transport Impact | Community Impact | Feasibility |
|---|---|---|---|---|
| Option 5: Introduction of Mobility Management Plans for Major Employers | | | | |

#### 3.5.1.6 Option 6: Installation of Variable Message (VMS) Parking Signs on Key Roads

While there are substantial financial costs required to invest in infrastructure for VMS signs such as installation, operation, and maintenance overheads; these signs will help to communicate and assist drivers with real-time information on directions and the availability of vacant parking spaces in Newbridge town centre and key locations like the Whitewater Centre. This will help to eliminate unnecessary journeys circulating through Newbridge providing a safer and more environmentally friendly town centre for Newbridge. The provision of these signs will help to educate drivers about the alternative routing to access car parks rather than using Main Street helping to reduce town centre traffic, as well as provide instructions to avoid traffic restrictions in the town centre. While the VMS signs will facilitate

parking in the short term, their role will change over time as the infrastructure improves, with VMS signs being used primarily as directional signage to support sustainable travel and bus priority measures in the future. The scoring of the MCA in Table 3.44 has been conducted according to this rationale.

**Table 3-17 – Parking Option 6 MCA Analysis**

| Option | Decarbonisation Impact | Sustainable Land-Use and Transport Impact | Community Impact | Feasibility |
|---|---|---|---|---|
| Option 6: Installation of Variable Message (VMS) Parking Signs on Key Roads | | | | |

#### 3.5.1.7 Option 7: Increase Parking Enforcement to Eliminate Illegal Parking in Road Space Designated for Sustainable Travel Modes

Table 3-18 displays the MCA for option 7. Introducing heavier parking enforcement measures to eliminate illegal parking in road space designated for sustainable travel modes would provide a practical solution to improving safety, bus efficiency and convenience for cyclists/pedestrians. Greater dedicated space for cycling may encourage people to shift from private vehicles to sustainable travel modes. Labour costs from greater enforcement would be the main feasibility issue to consider.

**Table 3-18 – Parking Option 7 MCA Analysis**

| Option | Decarbonisation Impact | Sustainable Land-Use and Transport Impact | Community Impact | Feasibility |
|---|---|---|---|---|
| Option 7: Increase Parking Enforcement to Eliminate Illegal Parking in Road Space Designated for Sustainable Travel Modes | | | | |

#### 3.5.1.8 Option 8: Implementation of Smart Parking Measures and Provision of a Town Parking App

Table 3.48 displays the MCA for option 16. Smart parking measures and a town parking app use technology to benefit the community through summarising parking space availability and other services, allowing parking traffic to be managed better. The parking sensors and application development required to implement this measure would incur substantial costs. Furthermore, making parking easier may not aid sustainable travel, although this app would help to stop people driving through the town centre looking for spaces and creating unnecessary congestion. Overall, the impact on decarbonisation is deemed to be largely neutral, by reducing unnecessary car trips to full car parks it will lessen emissions to a certain extent, but it will also facilitate car parking which could encourage driving.

**Table 3-19 – Parking Option 8 MCA Analysis**

| Option | Decarbonisation Impact | Sustainable Land-Use and Transport Impact | Community Impact | Feasibility |
|---|---|---|---|---|
| Option 8: Implementation of Smart Parking Measures and Provision of a Town Parking App | | | | |

#### 3.5.1.9 Option 9: Provision of Hidden Disability and Age Friendly Designated Parking Spaces

The provision of hidden disability and age friendly designated parking spaces would be a major benefit to the community through improving safety and accessibility for those more vulnerable within the community. This option would be relatively easy to implement as it is using parking spaces that already exist. The MCA scoring for option 8 can be seen in Table 3-20.

**Table 3-20 – Parking Option 8 MCA Analysis**

| Option | Decarbonisation Impact | Sustainable Land-Use and Transport Impact | Community Impact | Feasibility |
|---|---|---|---|---|
| Option 9: Provision of Hidden Disability and Age Friendly Designated Parking Spaces | | | | |

#### 3.5.1.10 Suggested Options Brought Forward

It is suggested that the following parking options are brought forward:

- Option 1: Reallocation of Street Parking from Edward Street, Charlotte Street and Main Street.
- Option 2: Enforcement of Kildare County Development Plan (CDP) Parking Provisions at New Development Sites
- Option 3 Expand the Capacity at Newbridge Train Station Car Park
- Option 4 The introduction of a park and stride facility
- Option 5: Introduction of Mobility Management Plans for Major Employers
- Option 6: Installation of Variable Message (VMS) Parking Signs on Key Roads
- Option 7: Increase Parking Enforcement to Eliminate Illegal Parking in Road Space Designated for Sustainable Travel Modes
- Option 8: Implementation of Smart Parking Measures and Provision of a Town Parking App
- Option 9: Provision of Hidden Disability and Age Friendly Designated Parking Spaces

# 4. Part 4 – Refinement of Proposals

## 4.1 Sense Check of Proposals Based on ABTA 2018 Guidance

The 2018 ABTA guidance contains a checklist to ensure the transport measures associated with preferred development scenario cover certain key areas. The checklist and content check in the NABTA is summarised in Table 4.1.

## Table 4-1 – ABTA Guidance Part 4 Checklist

| ABTA Guidance Checklist | Check | NABTA Content |
|---|---|---|
| Connectivity and accessibility to public transport services, walking and cycling networks are safeguarded and provided for; | ✓ | The NLPT contains a large number of measures to improve public transport, walking and cycling networks. Both in respect to the range of destinations served and the quality of infrastructure. |
| Development phasing and the mechanism for transport infrastructure / services delivery, including the financial requirements, are fully considered; | ✓ | All measures have been phased and the feasibility assessed where appropriate. |
| Road proposals and associated junctions can meet the anticipated level of trip demand pertaining to each mode; | ✓ | Road modelling indicates that the road strategy will have sufficient capacity to cater for demand. While there will be capacity constraints on certain parts of the network, this is reasonable considering the level of growth planned and the NLPT does not intend to facilitate unconstrained traffic growth. A reasonable level of traffic congestion is necessary to discourage car use, as the sustainable travel improvements introduced by the NABTA are introduced, in order to encourage modal shift away from the car. |
| Where applicable, the strategic national road network will be protected from local car trip generation; | ✓ | The road strategy has taken measures to protect the strategic road network the M7. |
| DMURS (Design Manual for Urban Roads and Streets) is reflected in the design process; | ✓ | This is a strategy, rather than a design document, so DMURS has been referred to in the planning principles section for future reference by designers when implementing the measures. |
| National Cycle Manual (NCM) is reflected in the design process; | ✓ | This is a strategy, rather than a design document, so NCM has been referred to in the planning principles section for future reference by designers when implementing the measures. |

| ABTA Guidance Checklist | Check | NLPT Content |
|---|---|---|
| The land use planning process, and transport planning, has been integrated in identifying the most appropriate land use and transport solutions. | ✓ | An integrated land-use-transport assessment process was completed to identify the preferred land-use scenario with all NLPT measures integrated to support the new growth areas. |
| The proposed transportation options will ultimately ensure that appropriate levels of service will be provided across all modes of transport; | ✓ | Frequency improvements to public transport will cater for additional demand and VISUM transport modelling has shown that the roads strategy will be able to cater for future growth. As noted previously, sections of the road network will experience congestion at peak times as shown by the volume/capacity plots in the roads modelling, but it is not the role of the NLPT to facilitate unconstrained traffic growth. A certain amount of congestion is necessary to show the appeal of public transport alternatives and promote modal shift. |
| An appropriate level of contingency has been considered for each mode to allow for development-related growth in transport demand external to the Plan area; and | ✓ | The strategy assumes the town will experience modest levels of population growth up to 2040 so the transport measures all involve an appropriate increase in capacity, which will also facilitate a growth in external trip generation. |
| Due to the proposed transportation options, excess capacity in relation to road and public transport networks will arise, notwithstanding the development objectives relating to the wider area. | ✓ | The NLPT does not aim to provide excess road capacity and instead only provides new infrastructure when it can be used as part of an integrated approach to improve sustainable travel. |

## 4.2 Refinement of Proposals after Phase 2 Consultation – To be completed post P2 Consultation

Part 4 of the ABTA documents the changes which were made to the options to turn them into strategy measures.

## 4.3 Modal Split Targets

The Climate Action Plan requires public bodies to take steps to reduce greenhouse gas emissions in order to contribute to achieving the national target of a 51% reduction in greenhouse gas emissions by 2030. Transport is a major source of Irish greenhouse gas emissions, and the NABTA will play an important local role in providing an investment plan which will promote sustainable travel and modal shift away from higher polluting vehicles. In order to assess the success of the NABTA in achieving this goal, it is important to set measurable modal split targets which can be evaluated in the future when the ABTA is reviewed.

At present 58% of Newbridge residents drive to work in Census 2022. In order to achieve modal shift, fundamental changes are required to the transport network to promote the use of sustainable modes of travel and the NABTA proposes numerous improvements which will help to encourage a shift to more sustainable travel behaviour. The walking and cycling networks proposed in the NABTA have the greatest potential for promoting modal shift over short-medium distance trips within the town, while the public transport improvements will provide better alternatives for longer distance trips.

The Greater Dublin Area Transport Strategy 2022-2042 expects to achieve a reduction in car mode share from 58% in 2016 to 49% in 2042. This would represent a reduction in car modal share of 9%, which would result in thousands fewer car trips each day. It is important to note that the GDA strategy area covers many urban areas, with extensive sustainable travel alternatives, which demonstrates how difficult it is to achieve mode shift.

In light of the current levels of car dependency in Newbridge and the level of intervention proposed, it would be appropriate to set a challenging modal split target of a - 7% reduction in private motor vehicle modal split for work trips by Census 2040 to align with the future 2040 growth scenario. The NABTA sets out measures to be implemented over a 10-year timeframe with the Irish Census taking place in the following years; 2027, 2032, 2037 and 2041. If the NABTA is implemented as planned, then most measures will be in place by the 2040 Census, and this is the best opportunity to assess modal split for Newbridge and determine if the modal split targets have been achieved. Furthermore, monitoring of modal split statistics and progress can take place at each Census period in the lead up to 2036. The achievement of the modal split targets will rely on the majority of the NABTA measures being adopted by the Local Area Plan and implemented prior to 2040. If the modal split targets are achieved, then car dependency for work trips would reduce to 51%.

## 4.4 Relationship with Joint-LAP Process

The land-use growth plans for Newbridge were developed by the Planning Department and assessed as part of the land-use-transport analysis process at the start of the NABTA, documented in the report located in Appendix B of Volume 2. This integrated approach with the planning department ensures that the NABTA measures will facilitate future development plans in the LAP, while the location of future growth in the LAP zoning has been influenced by

the NLPT land-use assessment which identified the area's most appropriate to promote sustainable travel.

The transport measures and future land-use development scenario developed in the NABTA will be integrated into the Newbridge LAP being prepared by Kildare County Council. While most measures from the NABTA will be retained, not all measures from the strategies will be kept in the LAP as the development of the plan will involve further consultation with stakeholders. As part of the LAP consultation process, transport measures may be removed or added based on feedback.

Following the conclusion of the NABTA, the draft LAP will be developed with the NABTA evidence contributing to the development of the land-use and transport sections. It is expected that the LAP will operate from 2024-2030.

## 4.5 Longer Term Development of Newbridge

While the NABTA has 2040 as its planning horizon year, a longer-term view has been taken to the future development of Newbridge post 2040. This approach was taken to ensure future development can be delivered in tandem with the supporting transport infrastructure ensuring the integration of land use and transport planning.

While in the immediate future it is expected that Newbridge will see consolidation of development north of the rail line within the catchment of Newbridge train station and also experience infilling and densification of the central area of Newbridge to follow this up to 2040. Post 2040 it is anticipated that development may take place to the east side of Newbridge. This development has the potential to be linked the delivery of a second train station and follow the principles of transport-oriented development.

To support this development an eastern distributor road would be required to open land for development. A likely path for this distributor corridor would be to extend from the R445 Naas Road and would require connections across the River Liffey and the rail line. In addition to residential development, it is also anticipated there will be more employment development in this area and on the lands south of the R445.

With a combination of residential and employment development taking place in this area there may be potential to provide a new junction and interchange facility on the M7 and M9 in the Hillsborough. Such an interchange would be a key driver for employment growth in the area and also help to reduce through traffic out of Newbridge town centre.

This longer-term development strategy for Newbridge post 2040 and the supporting infrastructure required, which includes:

- Potential New Train Station to the east of the existing.
- New road crossing over the River Liffey.
- New Road Crossing over the Rail Line.
- New Eastern Distributor Road.
- Potential new M7 and M9 Junction and interchange facility.

This future development approach will require extensive discussion and agreement with key stakeholders. The development of such a strategy will be to cover the development of Newbridge post 2040.

# 5. Part 5 – Finalisation of the ABTA – To be completed post P2 Consultation

# 6. Part 6 - Monitoring and Review

## 6.1 Monitoring NABTA Progress

Regular monitoring of the NABTA will be required over the lifetime of the NABTA in order to establish:

- Progress on implementation of selected measures for each mode of transport (e.g., changes to transport infrastructure and services); and
- Observed travel patterns and associated transport impacts and how these compare with the NABTA's transport principles, development assumptions and intended outcomes.

Monitoring of the NABTA implementation and impacts should also inform any review processes related to the Joint LAP as well as the development of future LAPs.

It is recommended that a progress report should be compiled annually summarising progress with regard to the implementation of NABTA measures and documenting any other relevant changes to transport infrastructure or services which may impact travel behaviour. This reporting should encompass measures delivered or overseen by KCC, (independently or in cooperation with other public or private entities) as well as measures which are not within the remit of KCC to deliver but which will nevertheless impact future travel behaviour within the study area. In addition to details regarding the implementation of specific infrastructural measures contained within the ABTA for each mode, such as permeability improvements, new cycle facilities, new roads and other infrastructure, the progress report could also include items such as:

- Details of improvements to public transport frequencies, operating hours and/or geographic coverage.
- Details of significant changes to the number of car parking spaces provided at locations throughout the town (either public or privately managed) and any relevant changes to parking charges or permit regimes.
- Details of organisations who have submitted up to date Mobility Management Plans to Kildare County Council (voluntarily or in connection with a planning application) and details of any associated review/monitoring/enforcement activities undertaken by KCC.
- Details of any changes to the number, type and distribution of bikes, e-bikes or e-scooters provided as part of any future share/short term hire schemes.
- Number of school pupils completing 'Cycle Right' training.
- Number of workplaces which hold Cycle Friendly Employer Certification.

The impacts of the ABTA measures implemented, any other relevant measures/changes implemented within the study area and growth within the study area should also be monitored on a regular basis to support an understanding of how actual outcomes compare with intended outcomes and assess the extent to which the ABTA's transport principles are being met. Some of the key performance indicators which should be monitored are discussed below:

- The primary source of data on mode share (usual mode of travel) for commuting to work and education is the Census. The results of Census 2022 emerged during the

course of finalising the strategy however the baseline was completed prior to these results being available. Future Censuses will take place in 2027, 2032 and 2037.

- In 2022, a new question was introduced in the Census to collect data on the usual number of days respondents work from home. This will be an important trend to monitor over time as remote working can have a significant impact on travel demand, particular at peak times.
- Changes in car ownership (e.g. cars per adult 18+ and car per household) should be monitored following each Census to assess the extent to which car dependency is reducing within the study area.
- Travel surveys conducted in workplaces and schools can provide information on mode share for commuting purposes at more regular intervals than the Census and to each specific destination, as well as valuable information on the factors which influence travel choices. It is recommended that KCC encourage major employers and schools to undertake travel surveys at least once every two years at the same time of year as part of regular updates to Mobility Management Plans/Travel Plans and that results should be shared with KCC.
- Residents and visitors to Newbridge could also be asked for feedback on travel within the study area through other means. For example, an online survey could be undertaken every few years to assess how attitudes to the use of different travel modes are changing and help to identify significant remaining barriers to modal shift.
- An annual traffic count, similar to the Canal Cordon Count undertaken by Dublin City Council could be undertaken at the same time of year each year to provide further information on mode shift and extent to which the use of sustainable modes of travel is increasing. This would be supplemented by information from the national rail census and a bespoke bus occupancy survey to enable the tracking of trends over time.
- Automatic pedestrian and cycle counters which can continuously monitor the use of specific links should be installed on key links throughout the study area, particularly on significant new/upgraded routes, in order to allow for analysis of trends in overall use as well as fluctuations by day, time of day and time of the year. Cycle counters are now available which can also count and classify e-scooters.
- Cycle parking occupancy surveys should be undertaken regularly (e.g. quarterly or biannually) at key destinations such as the train station, schools, Main Street, supermarkets, and leisure destinations. In addition to counting the total number of parked cycles, cycle parking surveys should also include some monitoring of the presence of non-standard cycles which can help provide an indication of the extent to which cycling in Newbridge is becoming more inclusive and accessible to a more diverse group of people over time (e.g. cycles with child seats or trailers attached, cargo cycles, adult tricycles, children's bicycles, and other bikes).
- Data on the use of public transport for travel to and from the study area as well as within the study area should be requested from the NTA on an annual basis, if possible, to monitor the increase in passenger numbers over time.
- The benefits of bus priority measures and/or requirement for further measures to be introduced should be monitored through regular analysis of changes to bus journey times and reliability (assuming this data can be obtained from the NTA).
- Car parking occupancy and duration data should be analysed to understand the impact of parking measures introduced and how the use of available space can be

optimised. Initially data may be obtained from manual surveys but over time more data may be collected automatically as additional technologies are deployed to manage parking availability and information.

- In the event of a share/short term hire scheme being introduced for cycles and/or e-scooters, data on the use of the scheme should be analysed to understand overall use as well as the most common trip patterns, types of trips and if possible, the demographic groups which benefit most from the scheme. This could help inform future regulation of and/or investment in these schemes and identify gaps / unmet needs.
- Collision statistics should be monitored as they become available to identify road safety issues which could potentially be remedied through the delivery of measures in the NABTA, or other measures not included in the NABTA and to assess whether there are any trends which can be observed from the data.

## 6.2 Review Process for the NABTA

It is proposed that the NABTA is reviewed every 5 years as part of the revision and update of the Newbridge Local Area Plan. If the LAP is not renewed every five years, then the NABTA can be reviewed independently, considering the progress reports mentioned in the previous section and the changing policy or infrastructure context. The review should amend and update the NABTA as required to ensure it is still a relevant document which can inform KCC transport and development decisions in Newbridge.