# KILDARE TOWN TRANSPORT STRATEGY

## Volume 1 - Strategy Report


January 2022

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# 1 INTRODUCTION

# 1. Introduction

## 1.1 Overview

AECOM have been appointed by Kildare County Council (KCC) to prepare a transport strategy for Kildare Town. This strategy aims to secure long-lasting transport improvements in Kildare Town to ensure growing use of sustainable travel modes for work, education, business and visitor trips. The Transport Strategy presents a comprehensive analysis of the current transport situation in Kildare Town, outlines the impact of future proposed land development on transportation and presents potential solutions to improve conditions for active modes, private motorised vehicles and public transport.

The provision of high quality transport infrastructure is an essential component of urban regions and the delivery of sustainable development. Transport infrastructure provides the critical link between homes and activities such as work, school, college, leisure, shopping, healthcare and socialising. From an economic perspective, businesses are reliant on efficient, safe and reliable transport in order to attract employees or customers and to transport goods across the country. As a result, transport investment can help unlock new opportunities when it is well co-ordinated and has sufficient funding; or can constrain opportunities if uncoordinated and poorly funded. The creation of a sustainable, affordable and efficient transport system will support economic development, reduce negative environmental impacts and enhance wellbeing.

In recent years, Kildare Town has experienced modest levels of housing and employment growth which in turn has resulted in increased travel demand. This increasing trend in travel demand has been disrupted by the Covid-19 pandemic which has significantly altered travel patterns and is likely to do so for the medium term. In these uncertain times it is important to take a coordinated approach ensuring that when travel patterns do begin to normalise and grow again, there is adequate infrastructure in place to accommodate this demand.

Effective planning practices can help to identify the conditions required to operate an efficient transport system and facilitate development growth proposals. This multi-modal strategy will provide a blueprint for transport investment within Kildare Town which will support the delivery of sustainable development and the regeneration of the town centre. In particular, the Strategy will inform the revision of the future draft Local Area Plan (LAP) for Kildare Town 2022-2028. The role of the Strategy is to inform the revision of the LAP by providing a comprehensive, evidence based approach to the development of road-based and sustainable transport which supports the Council's land-use plans.

## 1.2 Background

The population of the Kildare Town was 8,634 in 2016, which represents a population increase of 6% since the 2011 Census. In recent decades, the periphery of Kildare Town has expanded to accommodate new housing estates and Kildare Retail Village, an important employment and visitor destination. Kildare Town contains numerous medieval features and the Irish National Stud, located 2 kilometres south of Kildare Town, attracts a substantial number of tourists each year. Under the County Development Plan, Kildare Town has been designated as a primary tourism town within the county. This is also recognised by Bord Failte, with significant investment and development expected in the coming years to enhance Kildare Town as a tourist destination.

In respect to sustainable travel, Kildare Town has a centrally located train station, which is an advantage in the promotion of car alternatives, and a relatively compact town centre which is suitable for cycling and walking if infrastructure for these modes improves. Furthermore, local schools are located inside the settlement boundary and potentially within walking or cycling distance for most pupils and parents. From a roads perspective, Kildare town has excellent access to the national road network via Junction 13 on the M7. At present, car dependency is relatively high, with 74% of residents driving to work, which represents a key challenge in the promotion of sustainable travel.

The Kildare Town Transport Strategy (KTTS) aims to provide a multi-modal framework to inform future transport infrastructure planning, investment and delivery. The KTTS will inform the development of the Draft Kildare Town Local Area Plan (2022-2028) in line with the proposals in the Kildare County Development Plan 2017-2023 (and any successor to same) and relevant national policy. The transport strategy is focused on sustainability, which in practice means; supporting compact urban growth, encouraging modal shift from car to sustainable transport modes and promoting Kildare Town Centre as the core of economic and social activity in the settlement. The KTTS aims to make Kildare Town more attractive to live, work, visit and recreate in for residents and visitors. The strategy will examine all transport modes and travel within the town, with particular focus on the links between residential and employment areas, as well as the town centre and the train station. It will be a priority of the strategy to improve walking and cycling infrastructure, in a comprehensive plan which will also provide measures to improve travel by public transport and road.

## 1.3 Report Structure

The Strategy Report draws on the information presented in the Baseline Report on Kildare Town to propose and assess potential options for inclusion in the Kildare Town Transport Strategy. The Strategy is contained in Volume 1 of the report, which is structured in the following way:

Section 2: Transport and Development Context – A summary of the key policy, development and transport information presented in the Baseline Report.

Section 3: Consultation and Stakeholders - A summary of the consultation process and survey responses.

Section 4: Strengths, Weaknesses, Opportunities and Threats (SWOT)

Section 5: Strategy Objectives - An outline of the Strategy objectives.

Section 6: Analysis Tools - A description of the analysis tools used in developing the Strategy.

Section 7: Option Assessment Methodology – A summary of the option assessment process.

Section 8: Public Transport Options Assessment– A description and assessment of options to improve public transport.

Section 9: Road Transport Options Assessment– A description and assessment of options to manage roads.

Section 10: Parking Options Assessment - A description and assessment of options to improve parking.

Section 11: Non-Motorised Interventions – A description and assessment of options to enhance pedestrian permeability and cycling.

Section 12: Public Realm – A description of the public realm measures proposed to support Kildare Town centre.

Section 13: Kildare Town Transport Strategy – A summary of the strategy.

Section 14: Strategy Implementation – The phasing of implementation to achieve the objectives of the strategy, a review of important transport planning principles to incorporate in future design and modal split targets.

The appendices for the report are located in a separate document; Volume 2 of the Kildare Town Transport Strategy.

## 1.4 Approach

### 1.4.1 Strategy Development

The Kildare Town Transport Strategy examines the transport network within the town of Kildare in order to provide supportive analysis which will assist in providing an evidence-based development of future revisions of the Kildare Town Local Area Plan. The strategy examines possible objectives which may be included as objectives in the Kildare Town LAP and in some cases includes a high level Multi Criteria Analysis (MCA) which teases out options at a very high level.

The Kildare Town LAP will bring forward objectives which may include those identified in the Kildare Town Transport Strategy. However, it must be remembered that the objectives of the Kildare Town LAP will then form the basis for individual projects. The major projects outlined in this strategy will then be examined on their own merits and be subject to the rigorous analysis requirements of the Public Spending Code (PSC) and the Common Appraisal Framework for Transport Projects and Programmes (CAF). The PSC and CAF require the identification and examination of various options including the following:

- Do Nothing;
- Do Minimum;
- Pedestrian;
- Cycle;
- Public Transport in various forms; and
- Road or Street improvements.

While the Kildare Town Transport Strategy includes some high-level MCAs, these would not be sufficient for the purpose of assessing an individual project developed from an objective within the Kildare Town LAP. They do not proport to be a definitive analysis of all the options for the possible objectives, but rather a broad reckoning which indicates they are suitable for inclusion as potential transport objectives for inclusion in the upcoming statutory LAP reviews.

It should also be noted that the individual projects will be subjected to public consultation, environmental and heritage studies, relevant statutory procedures and consultation with the relevant statutory stakeholders.

An overview of the approach taken in developing this transport strategy is provided below.

**Stage 1** Evidence Analysis and Public Consultation

**Stage 2** Strategy Option Development

**Stage 3** Option Assessment and Draft Strategy

**Stage 4** Public Consultation on Draft Strategy

**Stage 5** Final Strategy

### 1.4.2 Importance of Influencing Modal Choices and Encouraging Modal Shift

People choose their preferred mode of transport by weighing the benefits and costs of each mode for their trip purpose and requirements. If a car is available, this gives private motor vehicles an advantage over sustainable modes of transport as it provides door-to-door access to any location in the state, whereas public transport is restricted to particular routes or active modes are limited by distance.

However, policy and infrastructure interventions can ensure that sustainable travel modes have a competitive advantage over private motor vehicles by delivering interventions such as bus priority or permeability interventions which ensure that sustainable travel is faster and more convenient than driving. By increasing the benefits of using sustainable travel modes, this influences decisions by residents to encourage modal shift away from private motor vehicles. The Kildare Town Transport Strategy is intentionally restrained in respect to the roads strategy, seeking to only provide extra capacity where it is required to support the growth of the town in the future, in order to avoid making private motor vehicles the default mode of choice for travelling around the town. Instead, the strategy proposes a comprehensive network for walking and cycling which will make travel by active modes more convenient and safer, particularly for internal trips. For longer distance travel, a comprehensive bus and rail strategy proposes improvements which will make it easier to travel further afield by non-car modes and access employment or services without the need of a private motor vehicle.

This approach to strategy development is in line with national transport policy changes which emphasise the importance of promoting sustainable travel and reducing the negative environmental, health and social impacts of private motorised transport. The Department of Transport (DoT) is developing a land transport investment framework which will guide transport investment in the future to ensure that it contributes to achieving the National Strategic Outcomes of the National Planning Framework. This investment framework seeks to ensure that transport investment aligns with four priorities:

1. Protection and renewal
2. Decarbonisation
3. Mobility of people and goods in urban areas
4. Enhanced regional and rural connectivity

Furthermore, the forthcoming framework establishes a clear investment hierarchy for transport; with active modes as the first priority, followed by public transport in second and road infrastructure as the lowest priority for investment. This hierarchy clearly shows the infrastructure solutions that are required to meet the National Strategic Outcomes and the Climate Action Plan 2021. The KTTS seeks to meet this requirement by creating a strategy which will transform travel by active modes within the town and enhance public transport connectivity across the region.

## 1.5 Study Area

The study area for the KTTS is shown in Figure 1.1 as a blue circle. The study area encompasses the urban area of Kildare Town, the surrounding rural periphery and the Irish National Stud to the south.


*Figure 1.1 KTTS Study Area*

# 2 TRANSPORT AND DEVELOPMENT CONTEXT

# 2. Transport and Development Context

## 2.1 Policy Review

This section reviews relevant national, regional and local policy documents to highlight transport proposals or planned infrastructure which will affect the KTTS study area.

### 2.1.1 National Policy

#### 2.1.1.1 National Planning Framework

Project Ireland 2040 – National Planning Framework (NPF) provides a high-level strategic planning framework to guide development and investment over the coming decades. The NPF contains a set of ten National Strategic Outcomes (NSOs) to guide future development and investment.

Key future planning, development and place-making policy priorities for the Eastern and Midland Region which are relevant to Kildare include:

- "Enabling the complementary development of large and county towns in the wider Greater Dublin Area and Midland areas on the key strategic and public transport routes in a regionally co-ordinated manner, with an enhanced emphasis on measures to promote self-sustaining economic and employment based development opportunities to match and catch-up on rapid phases of housing delivery in recent years."[1]

- "Building on the progress made in developing an integrated network of greenways, blueways and peatways, that will support the diversification of rural and regional economies and promote more sustainable forms of travel and activity based recreation utilising canal and former rail and other routes." [2]

From the ten National Strategic Outcomes: NSO 1: Compact Growth, NSO 2: Enhanced Regional Accessibility and NSO 4: Sustainable Mobility are the most relevant to the Kildare Town Transport Strategy.

Another applicable objective from the document is the NPF's National Policy Objective (NPO) 27 that states:

- "Ensure the integration of safe and convenient alternatives to the car into the design of our communities, by prioritising walking and cycling accessibility to both existing and proposed developments, and integrating physical activity facilities for all ages."[3]

#### 2.1.1.2 National Development Plan 2018-2027

The National Development Plan (NDP) sets out the investment priorities that underpin the successful implementation of the new National Planning Framework. It is designed to guide national, regional and local planning and investment decisions in Ireland over the next two decades. The NDP has allocated funding for the procurement of some 300 additional rail carriages which will help to provide an increased level of service on the Kildare rail line, directly benefiting Kildare Town.

#### 2.1.1.3 Climate Action Plan 2021

With the expected growth in population, the need to reduce carbon emissions is only going to become more challenging. In 2017, transport contributed to almost a fifth of Ireland's greenhouse gases. On top of this, air pollution emitted from transportation impacts local air quality and harms people's health. Changes to transport will play an important part in addressing the challenges of climate change.

Key policies in the Climate Action Plan 2021 to make growth in Ireland less transport intensive include:

[1] *Project Ireland 2040 – National Planning Framework, p.35*

[2] *Project Ireland 2040 – National Planning Framework, p.35*

[3] *Project Ireland 2040 – National Planning Framework, P82*

- The successful execution of the NPF designed to promote compact, connected and sustainable living;
- Expansion of walking, cycling and public transport to promote modal shift; and
- Better use of market mechanisms to support modal shift.

In terms of the Kildare Town Transport Strategy, this means improvements to the walking, cycling and public transport networks in addition to improving the road network with a view to reducing congestion. This will help to deliver a better-connected network for all users and the reduction of congestion and improvement in safety will encourage a modal shift towards greener travel.

#### 2.1.1.4 National Cycle Policy Framework 2009-2020

The National Cycle Policy Framework (NCPF; 2009-2020) is a policy document developed by the Department of Transport, (DoT) which sets out 19 specific objectives for cycling. A key component of this document is 109 individual, but integrated, actions which aim to ensure that a cycling culture is developed in Ireland. This document is close to expiry, but it contained the notable aspiration that 10% of all journeys would be completed by bike in 2020 which has not been achieved nationally. The NCPF does not mention Kildare Town or Kildare specifically, but this document would support the improvement of cycling infrastructure to contribute to higher cycling modal share.

It should be noted that a new national sustainable mobility policy is currently under development by the DoT which will replace this policy.

#### 2.1.1.5 National Disability Inclusion Strategy (NDIS) 2017-2021

The NDIS is the key policy framework to action local authorities and public agencies to address the needs of people with disabilities. The strategy includes specific actions for local authorities in relation to transport, such as Action 108 which requires the 'dishing' of footpaths so that they have regular slopes which allow for wheelchair access. Furthermore, Action 109 requires the roll-out of accessible inter-city coaches and wheelchair accessible regional and rural bus stops.

It should also be noted that Ireland ratified the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) in 2018. UNCRPD ratification puts obligations on public bodies to ensure access for persons with disabilities to the physical environment and transportation in both urban and rural areas.

#### 2.1.1.6 Local Link Rural Transport Programme Strategic Plan 2018-2022

The National Transport Authority published its Local Link Rural Transport Programme Strategic Plan in 2018, with a mission statement 'to provide a quality nationwide community based public transport system in rural Ireland which responds to local needs.' The key priorities of this strategic plan are to reduce social exclusion and integrate rural transport services with other public transport services. In addition to this, one of the key objectives is greater co-ordination between the NTA and local authorities regarding the assessment of strategic transport needs and the development of transport plans for local areas.

### 2.1.2 Regional Policy

#### 2.1.2.1 Regional Spatial and Economic Strategy for the Eastern and Midland Region 2019-2031

The Regional Spatial and Economic Strategy (RSES) for the Eastern and Midland Region 2019-2031 sets out a framework to direct future growth of the Region over the medium to long term. The RSES will help implement the strategic planning framework set out in the NPF.

The RSES Settlement Strategy identifies Kildare Town as being within the Core Region of the Eastern and Midland Region. The RSES also acknowledges the important value of developing and improving the Strategic Greenway network; which includes reference to the Grand Canal Greenway, from Docklands through the southern inner suburbs, to Naas, Newbridge and Kildare and connecting to the Barrow Way:

> *"Grand Canal Greenway from Docklands through the southern inner suburbs to Naas, Newbridge and Kildare joining the Barrow Way at Athy with potential to link to Cork"*

In terms of retail function, the RSES designates Kildare Town as a Level 3 town, which is a town and/or District Centre & Sub-County Town Centre (Key Service Centre). Kildare Town is also noted within the Strategic Natural, Cultural and Green Infrastructure Assets in the Region as being one of the Medieval, historic and walled towns. Kildare Town is specifically noted as being one of the designated Irish Heritage Towns. The RSES outlines that:

> *"These built heritage assets are a non-renewable resource that contribute to our understanding of our past, and the well-being and quality of life of our current citizens and also represent an opportunity for sustainable economic development."*

#### 2.1.2.2 Transport Strategy for Greater Dublin Area 2016-2035

The Transport Strategy for the Greater Dublin Area (GDA) 2016-2035 aims to contribute to the economic, social and cultural progress of the GDA by providing for the efficient, effective and sustainable movement of people and goods.

The strategy outlines a suite of transportation objectives for the GDA including the provision of additional public transport facilities (heavy rail, light rail, bus and bus rapid transit facilities), cycling and walking infrastructure and road network measures up to 2035.

The priorities of the strategy which are relevant to Kildare Town include the following:

- To address urban congestion;
- To protect the capacity of the strategic road network;
- To reduce the share of trips undertaken by car and increase walking, cycling and public transport mode share;
- To provide a safe cycling network;
- To enhance the pedestrian environment, in particular to overcome severance and increase permeability; and
- To consider all-day travel demand from all societal groups.

Kildare is included on radial corridor D: Newbridge – Naas – Clondalkin – North Tallaght – to Dublin City Centre. However, this radial corridor is only stated as extending as far west as Newbridge. Kildare is referenced as being outside the metropolitan area and is referred to as a large urban settlement. The strategy states that much of the growth in these large urban settlements has largely been outside of the catchment of rail stations with bus often serving a more extensive catchment. The strategy intends to deliver further improvement to both bus and rail services from these towns into Dublin City Centre, as further population growth occurs. It is noted that this corridor will benefit from improvements to the Kildare rail line such as the reopening of the Phoenix Park Tunnel Link for passenger services, linking the Kildare Line to the City Centre.

The strategy also identifies six regional bus corridors which form part of the Core Bus Network, one of which the 'M7/ N7, via Long Mile Road' will serve regional buses from Kildare.

#### 2.1.2.3 Greater Dublin Area Cycle Network Plan

The Greater Dublin Area Cycle Network Plan is the National Transport Authority's plan for a regional cycle network. The Cycle Network Plan aims to ensure that cycling is supported and enhanced in order to achieve strategic objectives and reach national goals for cycle usage.

Figure 2.1 illustrates the proposed cycle network plan for Kildare Town, showing where investment in cycling infrastructure is expected over the forthcoming years.


*Figure 2.1: Greater Dublin Area Cycle Network Plan - Sheet N19: Proposed Cycle Network Newbridge & Kildare*

### 2.1.3 Local Policy

#### 2.1.3.1 Kildare County Development Plan 2017 – 2023

The Settlement Hierarchy of the Kildare Development Plan 2017-2023 (as varied), designates Kildare Town as one of the Self-Sustaining Growth Towns as shown in Figure 2.2, the RSES defines these towns as follows:

> *"those with a moderate level of jobs and services, which adequately cater for the people of its service catchment with good transport links and capacity for continued commensurate growth."*

The development strategy for County Kildare *'is based on building strong urban centres while protecting the rural hinterlands'*. This strategy is informed by the RSES. The strategy will see the critical mass of population growth directed towards the areas of Kildare covered by the RSES Metropolitan Area Strategic Plan (MASP). This covers the towns of Maynooth, Leixlip, Celbridge, Kilcock and also the key town of Naas. While the Self-Sustaining Growth Towns will see *'measured growth with emphasis on economic growth'*.

Kildare Town is expected to accommodate 4.7% of the county's overall growth under the current Kildare County Development Plan, which equates to an increase of 1,850 in population and a ca. 661 increase in housing units (based on an occupancy of 2.8 as per Census 2016).

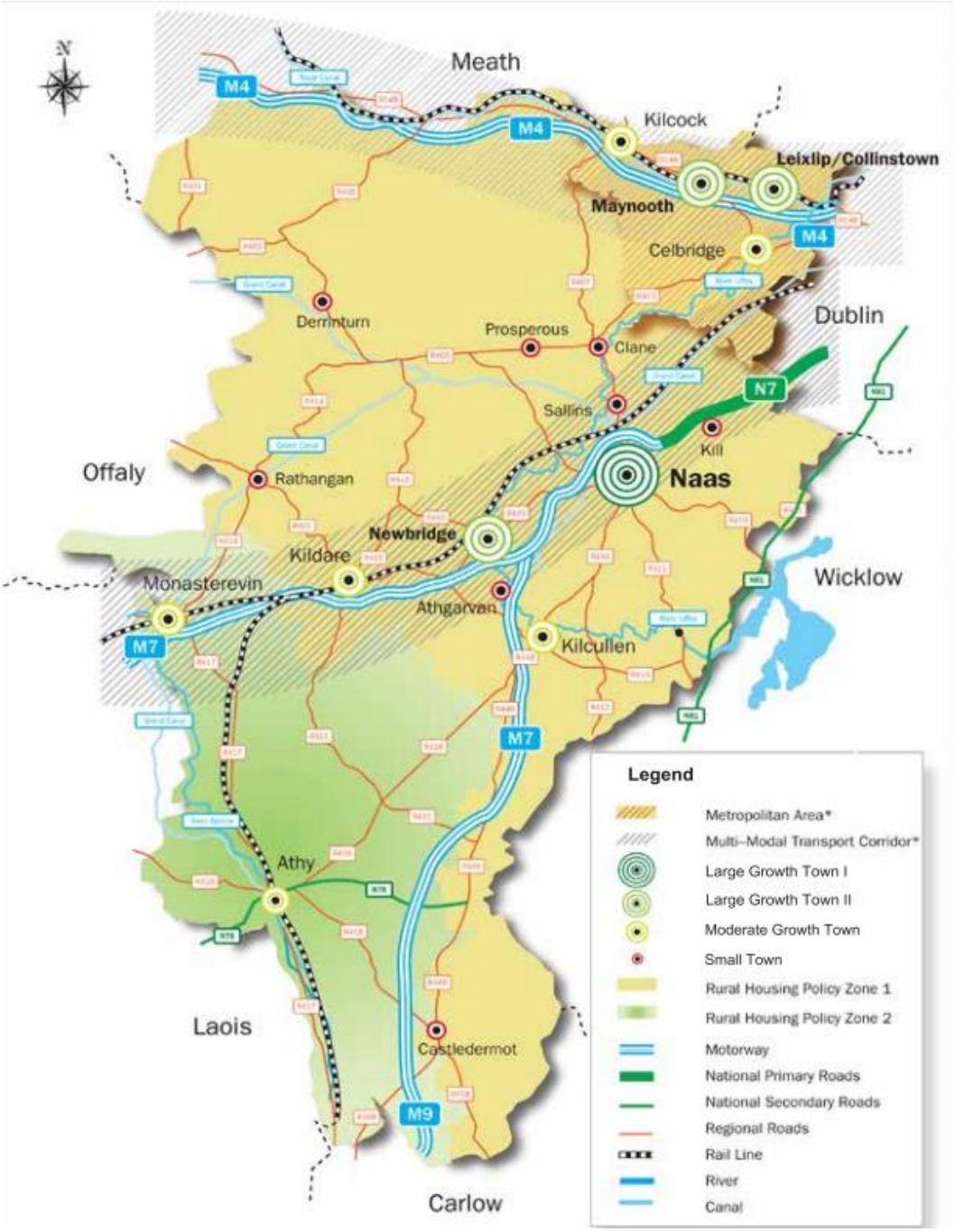



*Figure 2.2: Core Strategy Map of the Kildare County Development Plan 2017 - 2023*

The Development Plan contains a number of transport policies that are relevant to the development of the Kildare Town Transport Strategy. Some of the most relevant include the following:

- MT1: Promote the sustainable development of the county through the creation of an appropriately phased integrated transport network that services the needs of communities and businesses;
- MT2: Support sustainable modes of transport by spatially arranging activities around existing and planned high quality public transport systems;
- MT3: Influence people's travel behaviour and choices towards more sustainable options by working closely with relevant organisations in improving and accessing public transport facilities;
- MT4: Develop sustainable transport solutions within and around the major towns in the county that encourage a transition towards more sustainable modes of transport, whilst also ensuring sufficient road capacity for trips which continue to be taken by private vehicles;
- MT7: Focus on improvements to the national, regional and local network that provide additional capacity in order to reduce congestion and provide for current and future demand; and
- MT8: Seek to address urban congestion with particular emphasis on facilitating improved bus transport movement and reliability and improved links to bus and railway stations.

The following Development Plan Movement and Transportation Objectives are also material to the development of Kildare Town Transport Strategy:

- MTO3: Review and implement Integrated Transport Studies for Maynooth, Leixlip, Celbridge, Naas, Newbridge, Kildare and Athy in conjunction with the DTTAS, TII and the NTA and to prepare new Integrated Transport Studies for other towns, villages and settlements as required, to provide a framework to cater for the movement of pedestrians, cyclists, public transport and private vehicles;

There is also a Traffic and Transportation Management objective in the Development Plan to:

- TMO 2: Carry out a review of Traffic Management Plans including the following towns in conjunction with the NTA: Maynooth, Naas, Newbridge, Kildare, Celbridge, Athy.

#### 2.1.3.2 Kildare Town Local Area Plan 2012-2018

The LAP contains the long-term development strategy for Kildare Town for a 15-20 year horizon. Figure 2.3 shows the transportation and infrastructure objectives which are summarised below.

The LAP contains 8 key strategic objectives, number 7 which is relevant in terms of transportation is outlined below, along with the supporting actions.

7) To provide additional transportation infrastructure and development of linkages which includes the following:
   i. Maintain the principal spine routes serving the town.
   ii. Provide for an outer relief road connecting the Rathbride Road (R415) and the Rathangan Road (R401) to the Monasterevin Road.
   iii. Develop the Green Road, Dunmurray Road, Rathbride Road and Melitta Road as radial routes connecting residential neighbourhoods to the town centre.
   iv. Develop distributor roads (including cycle routes and continuous footpaths) connecting proposed neighbourhoods to primary radial routes, proposed primary and post primary school sites and ultimately forming an orbital route connecting the Dublin Road and the Monasterevin Road in the longer term.
   v. Develop a new street connection between the Dublin Road, the Tully Road and Grey Abbey Road.
   vi. Establish new streets connecting the Kildare Retail Outlet to the Monasterevin Road and St. Brigid's Square.
   vii. Develop an avenue at Magee Barracks connecting the Dublin Road and Melitta Road.

viii. Provide for connections between Magee Barracks and Melitta Road, Ruanbeg and Coolaghknock.

ix. Restrict the number of access points from proposed office and industrial parks onto the local road network.

x. Investigate the potential of re-establishing the connection between the National Stud and the Dublin Road in consultation with the Irish National Stud and the National Roads Authority.

xi. Investigate the feasibility of identifying a route corridor to link the Melitta Road to the Rathbride Road.

xii. Investigate the possibility of re-locating the train station to a more appropriate site for modern commuter town (possibly Enterprise Centre on Melitta Rd.) in accordance with Objective LT 4 Section 6.5.3 of the CDP 2011–2017.

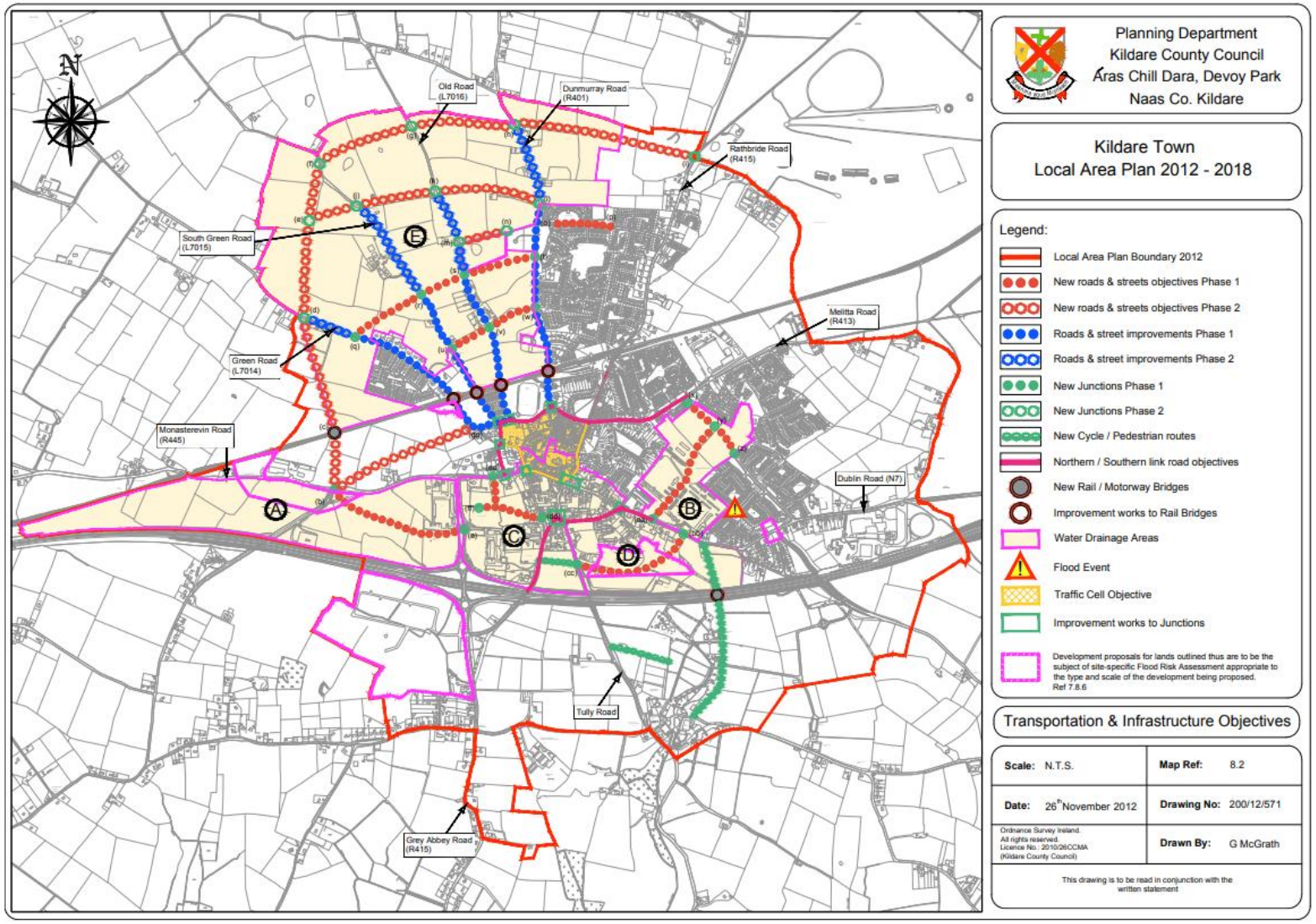



*Figure 2.3: Local Area Plan Transportation & Infrastructure Objectives*

#### 2.1.3.3 Kildare Town Traffic Management Plan 2008

The Kildare Traffic Management Plan (TMP) was formed from the recommendations of the Integrated Framework Plan for Land Use and Transportation (IFPLUTS). The requirement of the TMP was to review and refine the IFPLUTS recommendations and develop specific preliminary traffic management design recommendations for Kildare Town centre and the adjacent street network.

#### 2.1.3.4 Kildare Town Renewal Plan

The Kildare Town Renewal Plan is an Urban Design Analysis and Town Renewal Plan funded by the Town and Village Renewal Scheme launched in 2016 by the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. As part of the implementation process, Kildare County Council were required to undertake the following steps:

- Step 1: Conduct a town 'Health Check' to assess the vitality and viability of the town centre;
- Step 2: Establish a Town Renewal Committee with the involvement of the Local Authority, Local Business representatives, residents and the wider community;
- Step 3: Prepare a Town Renewal Plan on the basis of the results of the Health Check, setting out in detail the measures to be taken to support the renewal and revitalization of the town; and
- Step 4: Implement the Town Renewal Plan.

As part of the Renewal Plan a movement analysis of Kildare Town was undertaken and the pertinent issues from this analysis are summarised as follows. The analysis was undertaken for pedestrian, cyclists, public transport and cars within Kildare Town. The pedestrian and cycle networks are shown in Figure 2.4.

Key issues for pedestrians were:

> *"Widths of footpaths, quality of hard landscaping and provision for wheelchair users are all items which could be addressed in order to improve the pedestrian experience."*
>
> *"One of the largest and most significant pedestrianised areas in the town is Kildare Village Outlet Centre which attracts approximately 4 million people every year. Pedestrian access between the Outlet Centre and Kildare Town could be strengthened if a route from recently granted phase 3 of the Kildare Village Outlet Centres development to Academy Street could be delivered."*

In relation to cycling, the Plan found that there were no cycle paths in the town with cyclists found to be using footpaths instead, however it is noted in the plan that not many cyclists were observed during surveys.

In relation to public transport, that plan notes that Kildare is well served by rail via *"slower moving suburban services and faster moving main-time services during peak periods"*. It also highlights the bus services that serve the town referencing the 126 which is now operated by Go Ahead and the service provided by South Kildare community transport.

On vehicular movement, the renewal plan highlights the importance the N7 has played in taking unwanted through traffic out of Kildare Town which has benefited the town. However, it notes the dominance of the car in Kildare Town and also notes the problem of HGV's using Kildare Town as a through route which is unsuited to the narrow streets of the town noting that:

> *"consideration could be given to restricting times of access to maintain the quality of these spaces as streets rather than roads."*

The Renewal Plan also carries an analysis of parking in Kildare Town noting that car parking dominates the backlands of the town.

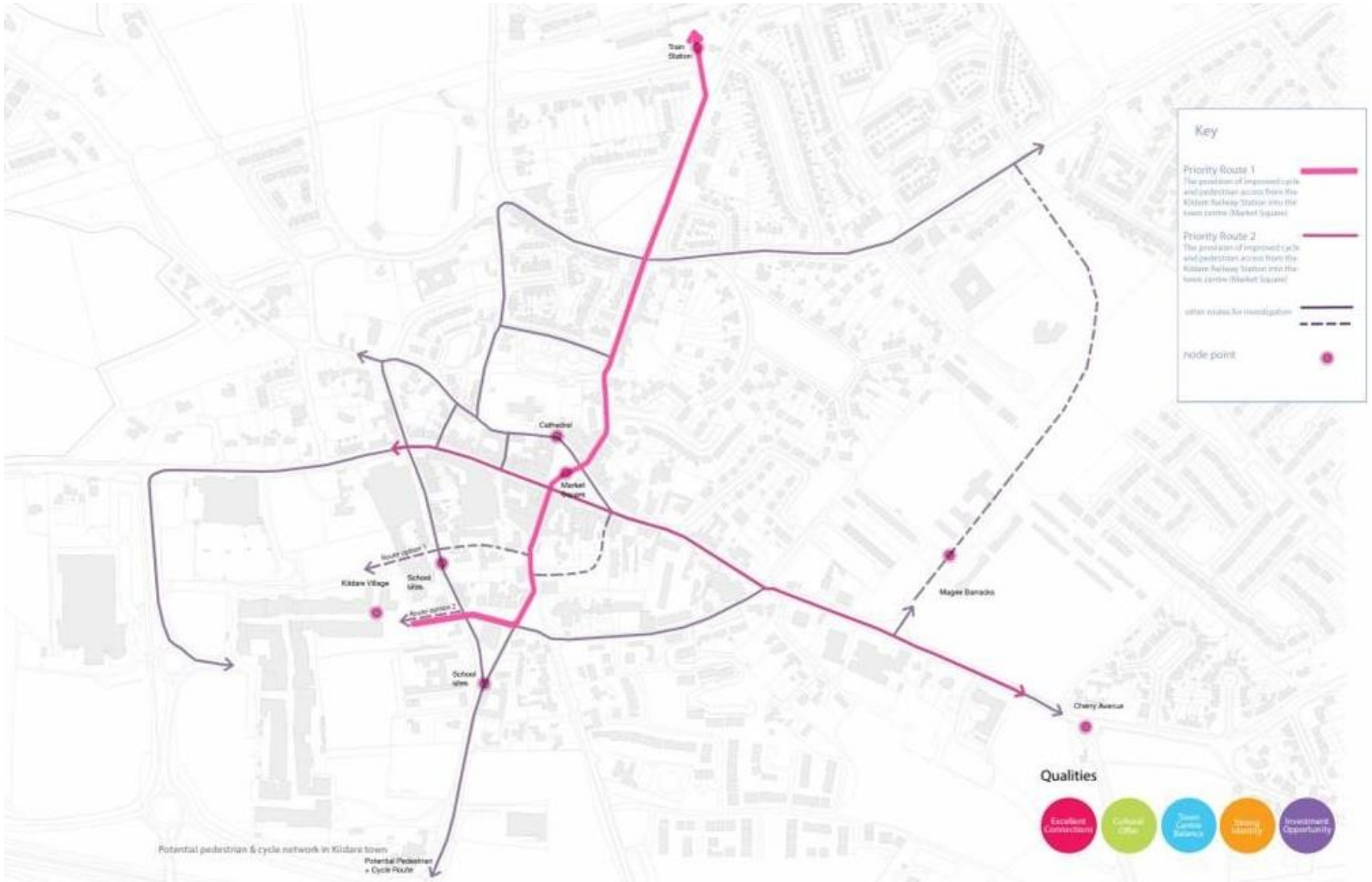



*Figure 2.4: Proposed Pedestrian and Cycle Network*

#### 2.1.3.5 Other Relevant Local Policy Documents

In addition to these policy documents, other relevant local policy documents for Kildare Town include the Kildare Town Historic Landscape Assessment; Kildare Architectural Conservation Area report and the Kildare Walled Town Conservation Plan.

## 2.2 Settlement Context

This section provides a review of key demographic, employment, building-use and school location datasets within Kildare Town.

### 2.2.1 Land Use Composition

Figure 2.5 shows the land use composition of Kildare Town using GeoDirectory (2017) to show residential, commercial and buildings used for both residential and commercial purposes. Commercial Buildings are primarily located in the Town Centre, extending south west to Kildare Retail Village which is sited near the M7 Junction 13. There are also concentrations of commercial buildings along the Dublin Road and Melitta Road in the east of the town.

Residential buildings are spread throughout the town with significant clustering to the north and east of the town centre in large housing estates. To the south of the M7, residential development takes the form of ribbon type development predominantly along R415 and L7024. When analysing land use, it is important to note the lack of commercial buildings in the areas to the North of the town centre and the peri-urban area along the R415 and L7024, which may indicate a reliance on the private car for a large number of trip purposes such as childcare and convenience shopping.

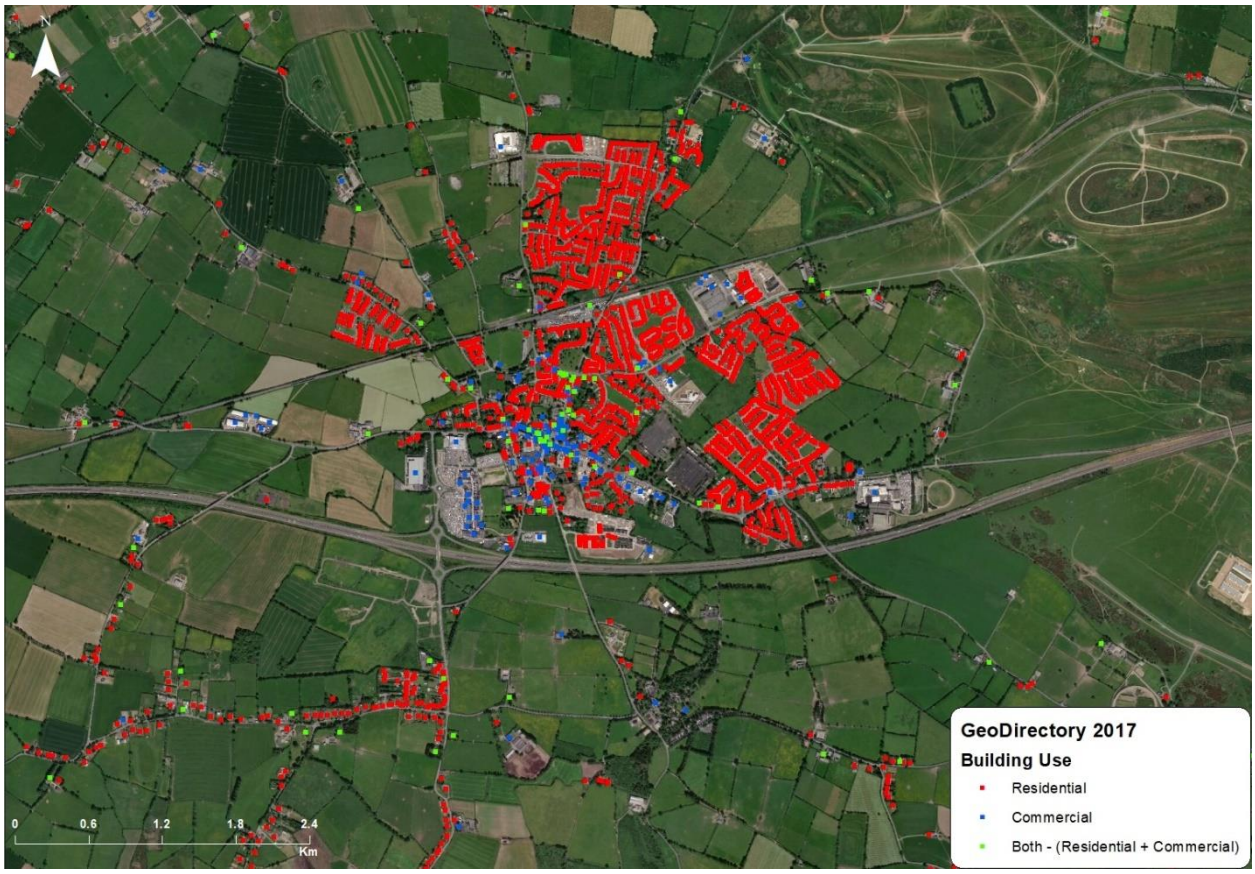



*Figure 2.5: Residential and Commercial Buildings in Kildare Town (GeoDirectory, 2017)*

### 2.2.2 Schools and Education Facilities

Kildare Town has 3 primary schools; Kildare Town Educate Together, Gaelscoil Mhic Aodha and St Brigid's Kildare Town Primary School. The location of these schools is shown in Figure 2.6. Table 2.1 provides a breakdown of the number of pupils attending each primary school as reported to the

Department of Education and Skills. The largest of the 3 schools in terms of pupil numbers is St Brigid's with over 1,000 pupils, while the other two schools are substantially smaller.

*Table 2.1 2019 - 2020 Primary Schools Pupil Numbers*

| School Name | No. Of Pupils |
|---|---|
| Kildare Town Educate Together | 415 |
| St Brigid's Kildare Town Primary School | 1,001 |
| Gaelscoil Mhic Aodha | 148 |

In addition to the 3 Primary Schools, Kildare Town has one Secondary School called the Kildare Town Community School which is located on the northern side of the town on the Dunmurray Road. Figure 2.6 shows the location of the Kildare Town Community School and Table 2.2 shows that 925 pupils attend this secondary school.

*Table 2.2 2020 Secondary School Pupil Numbers*

| School Name | No. Of Pupils |
|---|---|
| Kildare Town Community School | 925 |

The primary schools are located within close proximity to Kildare Town Centre, located less than 1km from the Market Square. Their central location makes them easily accessible on foot or bike from most of the town which is positive in terms of sustainable travel. The location of the Secondary school on the northern periphery of the town is a less than ideal location in terms of access by walking or cycling. However, at just under 1.5km from Market Square, it is under a 24-minute walk from the centre of town and given the relatively flat gradient it is quite cyclable. It is also well positioned in the context of future expansion of Kildare Town with potential for housing expansion in the north-west suburbs.


*Figure 2.6: Location of Education Facilities in Kildare Town*

## 2.3 Transport Context

This section provides an overview of the modal split for travel, the origin-destination of trips, public transport services, the road network and collisions in the study area.

### 2.3.1 Modal Split Analysis

#### 2.3.1.1 Work Trips

Figure 2.7 shows the modal split for work trips by Kildare Town residents taken from the 2016 census. This highlights that Kildare residents are highly car dependent with 74.1% of commuters travelling by private motor vehicle. Public transport use is relatively low with a combined figure of 11.6% of trips made this way which breaks down as 5.6% and 6% using bus and rail respectively. The percentage walking to work is quite high at 11% while cycling is quite low at 1.7% cycling to work.

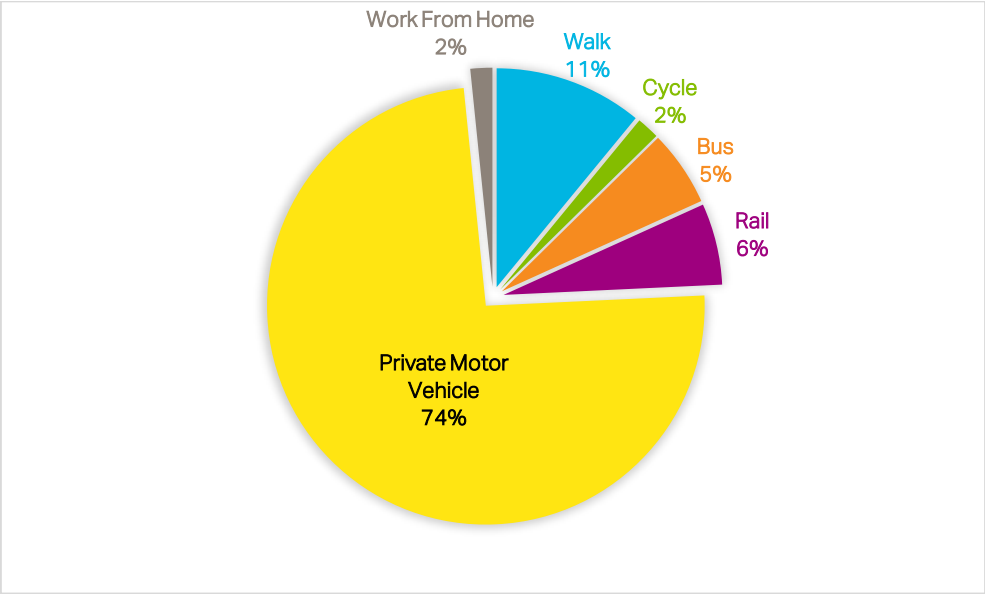



*Figure 2.7: Kildare Town Modal Split – Work Trips*

### 2.3.2 Road Network

The major roads in Kildare Town are shown in Figure 2.8. The main east-west access road through Kildare is the R445, Newbridge Road / Monasterevin Road. The main north-south route through the town is provided by the R415, the R401 ties in with the R415 and also provides for north-south movements in particular for the residential area of Bishopsland. The R413 departs for the R445 just west of Newbridge and skirts the Curragh to the north, entering Kildare Town to the north east and linking up with the R415 in the centre of Kildare Town. The opening of the M7 Motorway has had a big impact on Kildare Town, bypassing it to the south and taking significant volumes of passing traffic out of the town centre.

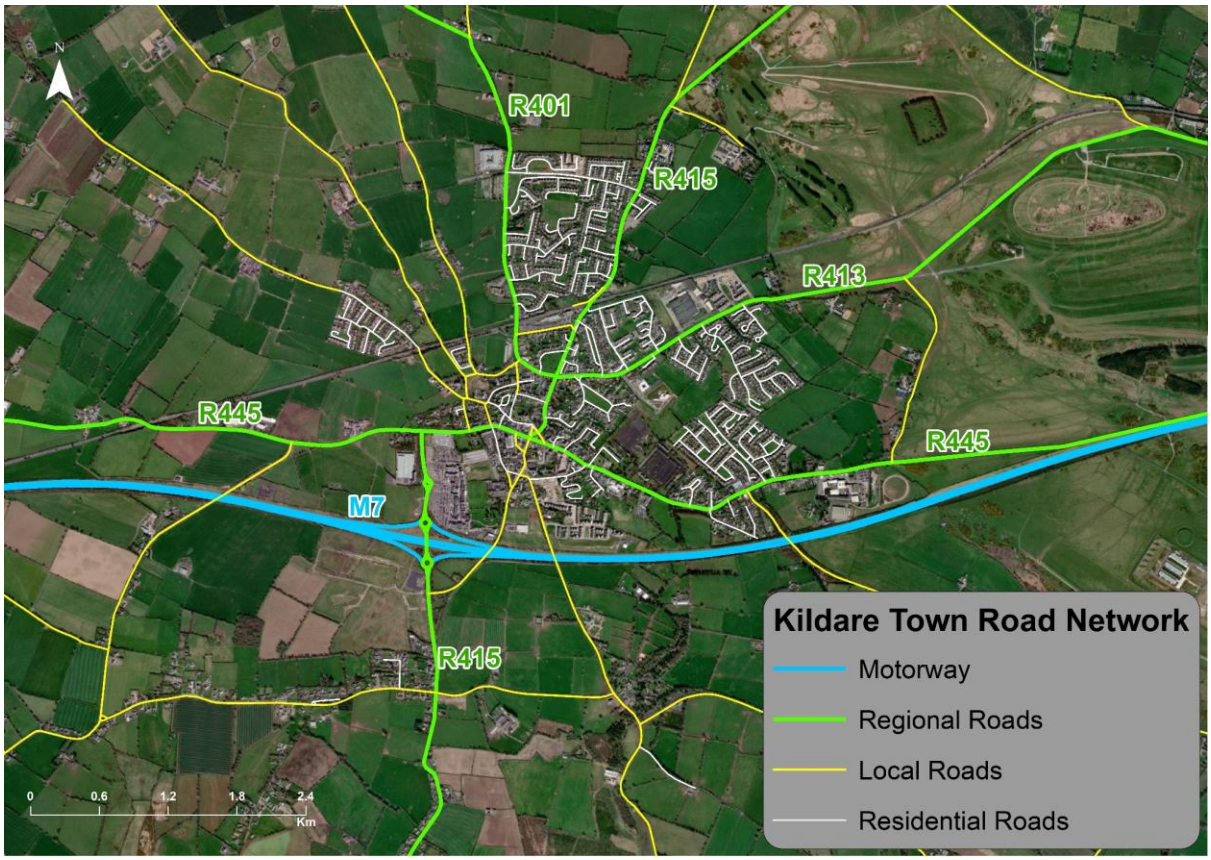



*Figure 2.8: Road Network Kildare Town*

### 2.3.3 Public Transport Network

#### 2.3.3.1 Bus Services

Kildare Town is served by a number of bus services offering connections to towns within Kildare, Dublin and the rest of Ireland. Table 2.3 provides an overview of the origin and destination of each of the bus services that serve Kildare Town.

*Table 2.3 Summary of Bus Services Serving Kildare Town*

| Operator | Route No. | Origin | Destination | < 07:00 | 07:00 - 10:00 | 10:00 - 17:00 | 17:00 - 19:00 | > 19:00 | No. Services Daily |
|---|---|---|---|---|---|---|---|---|---|
| Local Link Kildare | 883 | Athy | Newbridge | 0 | 1 | 3 | 0 | 0 | 4 |
| | | Newbridge | Athy | 0 | 1 | 2 | 1 | 0 | 4 |
| Kyanitedale Ltd | 826 | Monasterevin | Naas General Hospital | 1 | 2 | 5 | 1 | 0 | 9 |
| | | Naas General Hospital | Monasterevin | 0 | 2 | 5 | 1 | 1 | 9 |
| GoAhead | 126 | DCU Collins Avenue | Kildare | 0 | 1 | 1 | 2 | 3 | 7 |
| | | Kildare | Connolly Station | 1 | 1 | 3 | 1 | 2 | 8 |
| | 126d | Connolly Station | Kildare (Via Suncroft) | 0 | 0 | 1 | 0 | 0 | 1 |
| | 126b | Kildare | Connolly Station (via Suncroft) | 0 | 1 | 0 | 0 | 0 | 1 |
| | 126a | Connolly Station | Kildare | 0 | 1 | 0 | 0 | 0 | 1 |
| | | Rathangan | Connolly Station | 0 | 0 | 1 | 0 | 0 | 1 |
| Dublin Coach | 726 | Laois | Dublin Airport | 6 | 6 | 14 | 2 | 6 | 34 |
| | | Dublin Airport | Laois | 6 | 3 | 14 | 4 | 7 | 34 |
| | 300 | Ennis / Killarney / Tralee / Limerick | Dublin City - Bachelors Walk (via Kildare Village) | 3 | 6 | 14 | 4 | 8 | 35 |
| | | Dublin City - Burgh Quay | Ennis / Killarney / Tralee / Limerick | 2 | 6 | 14 | 4 | 9 | 35 |
| | 816 | Portarlington Library | Kildare Village | 1 | 2 | 7 | 2 | 4 | 16 |
| | | Kildare Village | Portarlington Library | 0 | 3 | 7 | 2 | 4 | 16 |
| Kenneally's / JJ Kavanagh | Num14 | Maynooth | Kildare | 0 | 0 | 0 | 0 | 3 | 3 |
| | | Kildare | Maynooth | 0 | 2 | 1 | 0 | 0 | 3 |

#### 2.3.3.2 Rail Services

Kildare Town station is located on the main southern rail line which connects Dublin with the regional cities of Cork, Galway, Limerick and Waterford. All inbound services that stop at Kildare Town station terminate at Heuston station and do not use the Phoenix Park tunnel; these inbound services are listed in Table 2.4. Commuter rail services that avail of the Phoenix Park Tunnel commence at Newbridge station. In the outbound direction, Kildare Town has a number of daily services to regional cities and also a large number of trains to Portlaoise, the outbound rail services are listed in Table 2.5.

*Table 2.4: Summary of Inbound Services to Heuston Station– Time serving Kildare Town Station*

| Origin | < 07:00 | 07:00 - 10:00 | 10:00 - 17:00 | 17:00 - 19:00 | > 19:00 | No. Services Daily |
|---|---|---|---|---|---|---|
| Portlaoise | 2 | 4 | 7 | 2 | 4 | 19 |
| Athlone | 1 | 1 | | | | 2 |
| Kildare | 1 | | | | | 1 |
| Carlow | | 1 | | | 1 | 2 |
| Limerick | | 2 | | | | 2 |
| Galway | | 2 | | 1 | 1 | 4 |
| Waterford | | 2 | 3 | 1 | 1 | 7 |
| Westport | | 1 | | | | 1 |
| Total Number of Inbound Services: | | | | | | 39 |

*Table 2.5: Summary of Services Outbound from Heuston Station – Time serving Kildare Town Station*

| Destination | < 07:00 | 07:00 - 10:00 | 10:00 - 17:00 | 17:00 - 19:00 | > 19:00 | No. Services Daily |
|---|---|---|---|---|---|---|
| Portlaoise | | 3 | 7 | 3 | 5 | 18 |
| Waterford | | 1 | 2 | 2 | 1 | 6 |
| Galway & Westport | | 1 | 1 | | | 2 |
| Limerick | | | 1 | 1 | | 2 |
| Athlone | | | | 1 | | 1 |
| Kildare | | | | | 2 | 2 |
| Total Number of Outbound Services: | | | | | | 31 |

### 2.3.4 Path Network and Permeability

Table 2.6 provides an overview of the walking catchment for key locations within Kildare Town. This table provides a count of the number of residential and commercial addresses in each catchment area using the GeoDirectory (2018) database. Furthermore, the table provides a breakdown of the percentage of total buildings in the zone of influence study area which are within walking distance of each location. This highlights that the Community School and Kildare Village catchments are very small and capture less than 20% of residential buildings in the study area. In comparison, the primary school's catchment is larger, covering 45% of residential buildings. The bus catchment is reasonably strong at 43% of residential buildings, which is larger than the train station catchment which services only 33% of houses due to the poor connections to surrounding residential areas. The town centre has a large catchment area, but the table shows only 34% of residences are within 1km of the town centre due to the construction of a large number of buildings on the periphery of the settlement beyond this distance.

*Table 2.6: GeoDirectory Statistics for Building Coverage of Key Services*

| Catchment | Existing Path Network Catchment | | % of Total Study Area Buildings | |
|---|---|---|---|---|
| | Residential Addresses | Commercial Addresses | Residential Addresses | Commercial Addresses |
| Town Centre - 1km | 1,209 | 343 | 34% | 80% |
| Train Station - 1km | 1,172 | 182 | 33% | 42% |
| Bus Stops - 500m | 1524 | 332 | 43% | 77% |
| Kildare Village - 1km | 345 | 273 | 10% | 64% |
| Supermarkets - 1km | 1,006 | 337 | 29% | 79% |
| Community School - 1km | 556 | 5 | 16% | 1% |
| Primary Schools - 1km | 1,583 | 355 | 45% | 83% |

### 2.3.5 Cycling Infrastructure

Until very recently, there was almost no existing dedicated cycling infrastructure within the study area. However, the recently constructed link road between Southgreen Road and the R410/Dunmurray Road includes cycling infrastructure which consists of a combination of cycle track, cycle lane and shared pedestrian and cycle sections. Older residential streets at Woodside Park and Maryville contain physical traffic calming and can also be considered shared streets as part of a cycling network, although the lack of a direct connection between Woodside Park and Station Road prevents these streets being used as through routes for cycling trips. Finally, a one-way system was implemented during summer 2020 on Cleamore Road (north of the junction with Academy Street only) in order to create additional space for walking and cycling, and therefore this street has also been mapped as a 'shared street' Figure 2.9 below.


*Figure 2.9: Existing Cycle Infrastructure*

### 2.3.6 Trip Length Distribution Analysis

The National Transport Authority provided trip length distribution information which summarises the length of trips made by residents of Kildare Town using each mode of transport for internal and external trips. In this section, the trip length distribution for internal work and education trips will be examined in addition to external work trip length distribution. The purpose of this analysis is to understand the potential for modal shift to active modes for internal trips and public transport for external trips.

Figure 2.10 shows the trip length distribution for external work trips of Kildare Town residents by mode. The graph highlights a dependency on the private car for external work trips accounting for 724 trips at 50km trip length. It also highlights that rail is the most popular public transport option for external commuters accounting for 324 trips at 50km trip length and bus accounting for just 56 trips. The graph suggests that improvement to public transport frequencies particularly in the AM peak and PM peak periods may help to encourage people out of cars and onto public transport for external trips.

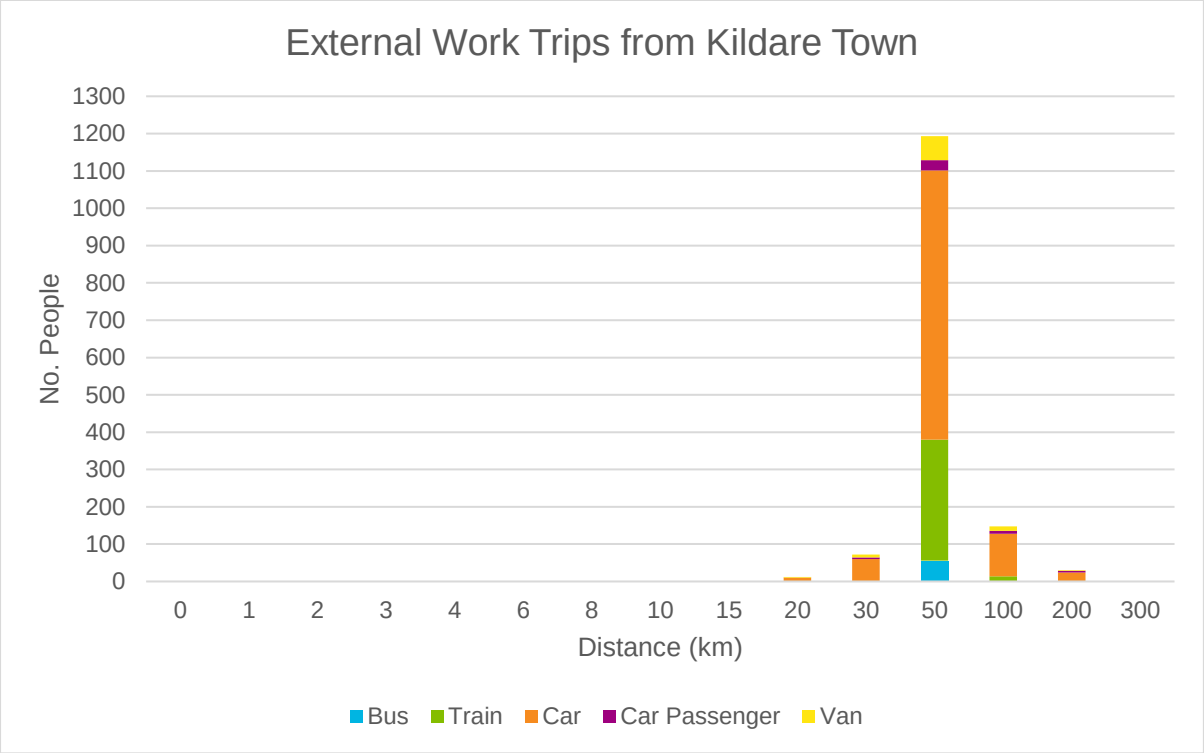



*Figure 2.10 – Trip Length Distribution of External Work Trips from Kildare Town*

Figure 2.11 shows the trip length distribution for internal work trips within Kildare Town by mode. The graph highlights the popularity of walking to work in Kildare Town as the majority of internal work trips are less than 3km in length. However, it should be noted the high prevalence of car use for short work trips, which suggests there is scope to encourage people out of cars and encourage modal shift to walking and cycling for these short trips.

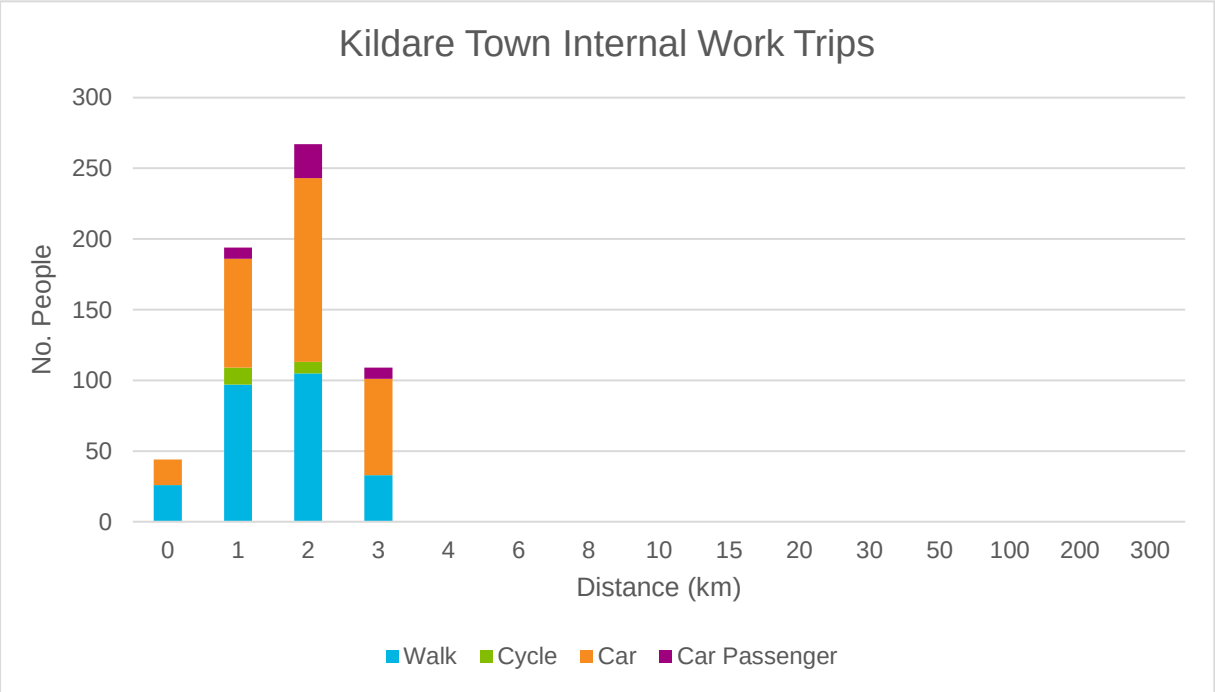



*Figure 2.11 - Trip Length Distribution of Internal Work Trips within Kildare Town*

Figure 2.12 shows the trip length distribution of internal Kildare Town education trips by mode. The graph highlights the high use of private cars for the school run with 644 of all trips made as car passengers which equates to 59% of all trips. Given the compact nature of Kildare Town, which results

in short education trips of 3km or less, there is significant scope to encourage car passenger education trips to switch to walking or cycling for the school run.

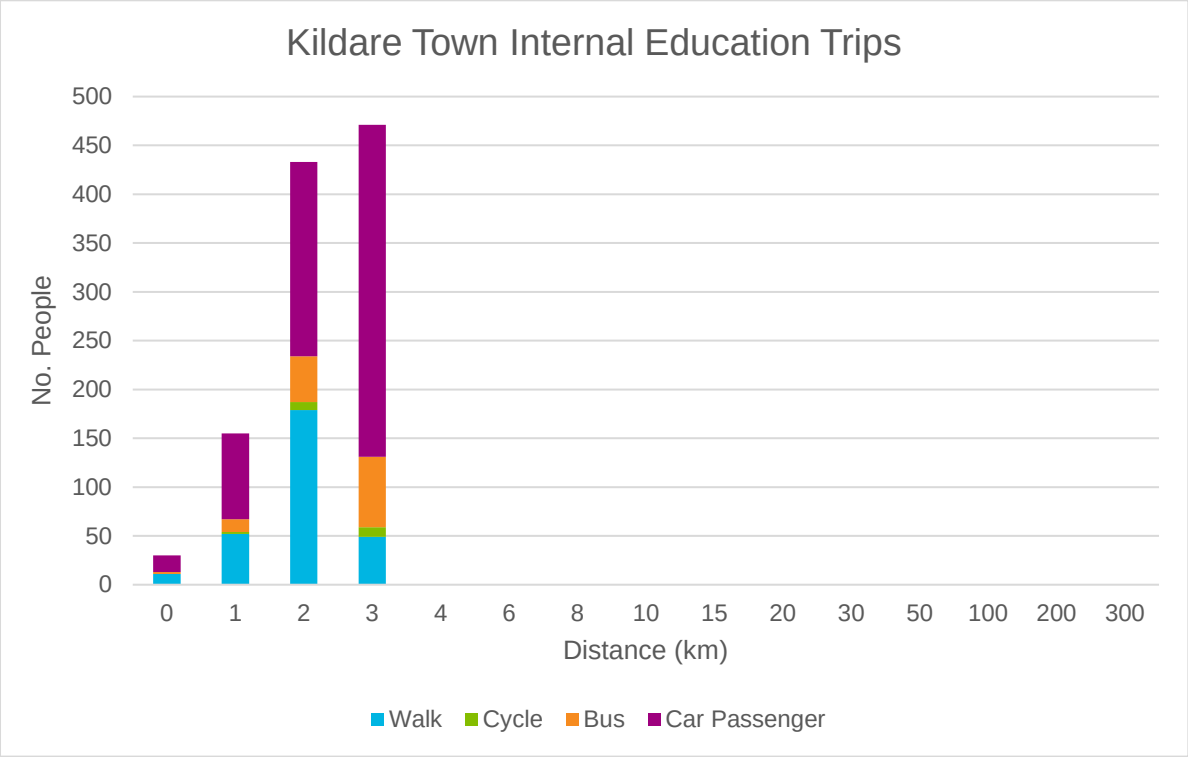



*Figure 2.12- Trip Length Distribution of Internal Education Trips within Kildare Town*

# 3 CONSULTATION AND STAKEHOLDERS

# 3. Consultation and Stakeholders

Early engagement with key stakeholders and the general public prior to developing the Kildare Town Transport Strategy was considered essential in order to gain an appreciation of existing transport issues and opportunities and to ensure that the proposals which will be contained within the strategy will meet community needs. The consultation process took place in two parts; the first stage collected information on transport issues to inform the development of the draft transport strategy, while the second stage gathered views on the draft transport strategy prior to its finalisation.

## 3.1 Stage 1: Consultation to Inform the Development of the Draft Strategy

### 3.1.1 Stakeholder Engagement

The following sections summarise feedback received from Councillors and from other stakeholders on the transport issues which they wished to see considered as part of the development of the Transport Strategy.

#### 3.1.1.1 Councillor Meeting

A briefing consultation was held on Tuesday the 1st of July 2020 via Microsoft Teams. This was attended by eight councillors representing the Kildare and Newbridge Local Electoral Areas in addition to staff from Kildare County Council and AECOM:

The key issues raised at the workshops included:

- The need for improvements to footpaths and for cycle facilities, including the need to prioritise safety for children when designing cycle facilities.
- A suggestion that cycle facilities be considered along the R445 as far as Newbridge.
- The difficulty of delivering cycling infrastructure due to the width of streets in the town centre and the potential to implement one-way systems in the town in order to create space for footpaths and cycle facilities.
- Concern about whether children would cycle to school even if the infrastructure was put in place – a concern about the perception that cycling is “not cool”.
- The need for a pedestrian link to the Curragh along the R413 Melitta Road which could potentially form part of a Slí na Sláinte walking route.
- The importance of securing a pedestrian link from Kildare Village to the Town Centre.
- The potential benefits of a local bus service for children living in estates far from their school and for older members of the community.
- The need for bus shelters in rural areas surrounding the town to encourage children to get the bus to school in Kildare Town.
- The need for more bus stops and the potential for an orbital bus route.
- The need for improved facilities at the train station – e.g. lift and shelter, but also the need to prioritise requests to Irish Rail rather than asking for a long shopping list.
- Parking issues in the town centre.
- The importance of the planned link within the Magee Barracks development.
- Vehicular access to the train station, including whether a one-way loop could be introduced around the narrow existing road bridges and whether the train station could be moved to the former Black and Decker site (to the east of the current station).
- A suggestion that Newtown junction needs to be signalised for safety reasons.
- Safety issues at Moore’s Bridge behind the Curragh Racecourse and the possible need to look at moving HGV routes.

- A suggestion that junction improvements should be implemented in a consistent way to create a pattern which is easier for people to navigate.
- A suggestion that there are too many traffic signals in the town centre.
- Concerns about the cost of some of the potential strategy objectives and whether inexpensive and quick measures such as improvements for walking and cycling can be prioritised.
- Suggestions relating to traffic management issues at particular locations such as a yellow box at the junction of Pigeon Lane and Monasterevin Road, a potential turning lane from the Monasterevin Road towards Kildare Village and/or reorganisation of traffic light poles.
- The need to consider Kildare Town in its wider context within South Kildare and close to Offaly and Laois border and to consider links to towns such as Suncroft and Rathangan.
- Concern that asking too much of potential developers in terms of new infrastructure requirements may hinder investment in the town.
- The need for more clarity around who can use the existing bus which links Kildare Village to the National Stud.
- Interest among people living in the hinterlands of the town for a Park & Ride facility on the outskirts of the town so that they can use the town's amenities.
- The potential for an encased walkway along the train line similar to a facility in Galway.
- Queries in relation to the traffic modelling being undertaken as part of the Transport Strategy.

#### 3.1.1.2 Written Responses from Stakeholders

More than one hundred primary stakeholders with a possible interest in the Transport Strategy were identified prior to the consultation period. These included: public representatives; schools; staff based in other departments of Kildare County Council; bus operators; Irish Rail; state agencies and government departments; utility companies; large employers and retail groups; sports clubs; and other local community organisations and service providers. All identified primary stakeholders were contacted by email or phone in June and invited to submit feedback by email to help inform the preparation of the Transport Strategy.

Summarised below are the responses from the National Transport Authority and Transport Infrastructure Ireland. These are National Agencies with responsibility for providing and improving transport and transport infrastructure in Ireland. For information regarding other submissions made by other stakeholders please consult the accompanying baseline report.

##### National Transport Authority (NTA)

- The preparation of a Kildare Town Transport Strategy will provide an opportunity to create a holistic transport approach to support the proper planning and sustainable development of Kildare.
- There is a requirement to ensure future growth areas are located in close proximity to public transport services which will in turn support the continued improvement of these services.
- Travel patterns between Kildare Town, Naas and Newbridge and opportunities to serve them by sustainable modes should be considered.
- The preparation of the Kildare Town Transport Strategy should be guided by the Transport Strategy for the Greater Dublin Area 2016-2035 and the Local Planning Principles contained within. These include:
  - Planning at the local level should promote walking, cycling and public transport by maximising the number of people living within walking and cycling distance of their neighbourhood or district centres, public transport services and other services;
  - New development areas should be fully permeable for walking and cycling and walking and cycling facilities should be implemented retrospectively in existing neighbourhoods to give a competitive advantage to these modes;

  - Where possible, developments should provide for filtered permeability; and
  - Proposals for right of way extinguishments should only be considered where these do not result in more circuitous trips for local residents to public transport or local destinations.

- The continued provision for and enhancement of a bus network to serve Kildare Town and provide connections to neighbouring towns should be a central ambition of the Transport Strategy and bus priority measures should be provided for. Early engagement with the NTA regarding bus network proposals is encouraged.
- The Strategy should assess current bus stop locations in terms of ease of access from surrounding neighbourhoods and should also assess whether there is a requirement for an interchange location or an area which provides for enhanced facilities such as shelters.
- The Strategy should appraise permeability within the town and present proposals to enhance permeability within the town to key attractors.
- Current walking and cycling routes available to the town centre within a 1-3km radius should be assessed. It is important to create a network of routes rather than follow a piecemeal approach to infrastructure provision. This includes creating attractive walking and cycling facilities within the town centre itself.
- The opportunity provided by Magee Barracks redevelopment site to enhance permeability and create attractive walking and cycling routes is noted. All links to surrounding areas should be provided from the outset and should be cycle friendly, without obstructive gates or barriers.
- A comprehensive cycle network must be created which allows people to travel to the main trip attractors such as shops, schools, employment, the hospital and the train station. It is critical that the cycle network includes the central area of Kildare and that the infrastructure will bring people safely to their destination, not just the edge of the centre.

### Transport Infrastructure Ireland (TII)

- The N/M7 is identified as part of the core Trans-European Transport Networks (TEN-T). The TEN-T regulations define the objective of increasing the benefits for road users by ensuring safe, secure and high-quality standards for road users and freight transport to achieve integrated and intermodal long-distance travel routes across Europe.
- The N/M7 and its associated junctions represent one of the most important national routes in the country. TII therefore wishes to ensure in so far as practicable, the preservation of the efficiency, capacity and safety of national roads in this area.
- In the vicinity of M7 and Junction 13 Kildare Town, Traffic and Transport Assessments supporting planning applications granted planning permission south of M7 Junction 13 have identified future year capacity constraints at the junction of the M7 and R-415. It is critical that the future land use planning and transportation framework for Kildare Town responds to this constraint by developing a combined strategy that safeguards the strategic function of the M7 and associated junctions, including identifying appropriate mitigation as necessary.
- The Transport Strategy should inform the future Local Area Plan and be prepared on the basis of an evidence-based area transport assessment, in accordance with the requirements of the Department of Environment, Community and Local Government's (DoECLG's) Spatial Planning and National Roads Guidelines.
- The development plan principles promoted in the Spatial Planning and National Roads Guidelines require that where a development plan or local area plan proposes development to take place on zoned lands adjacent to national roads, which could affect the operation and capacity of such roads, the planning authority must prepare its plans in such a way that demonstrates that such roads can continue to perform their strategic transport function into the future.
- The Kildare Town Transport Strategy, in tandem with the future Local Area Plan, should be evidence based and linked to a clear phasing and implementation plan, to ensure required infrastructure is

provided in a co-ordinated way to support development objectives, safeguard the strategic function of the M7 and associated Junction 13, and align with the provisions of the DoECLG's Spatial Planning and National Roads Guidelines (2012).

- Consideration should be given to including the requirements of Chapter 3 of the DoECLG's Spatial Planning and National Roads Guidelines, into the Kildare Town Transport Strategy, concerning specific objectives relating to Traffic and Transport Assessment, Road Safety Audit, Environmental Noise Regulations and Signage, etc.
- TII would also welcome that appropriate building set back requirements from the M7, included in the Draft Kildare Town Transport Strategy, reflect the Council's own Noise Plans.

### 3.1.2 Online Survey

#### 3.1.2.1 Introduction

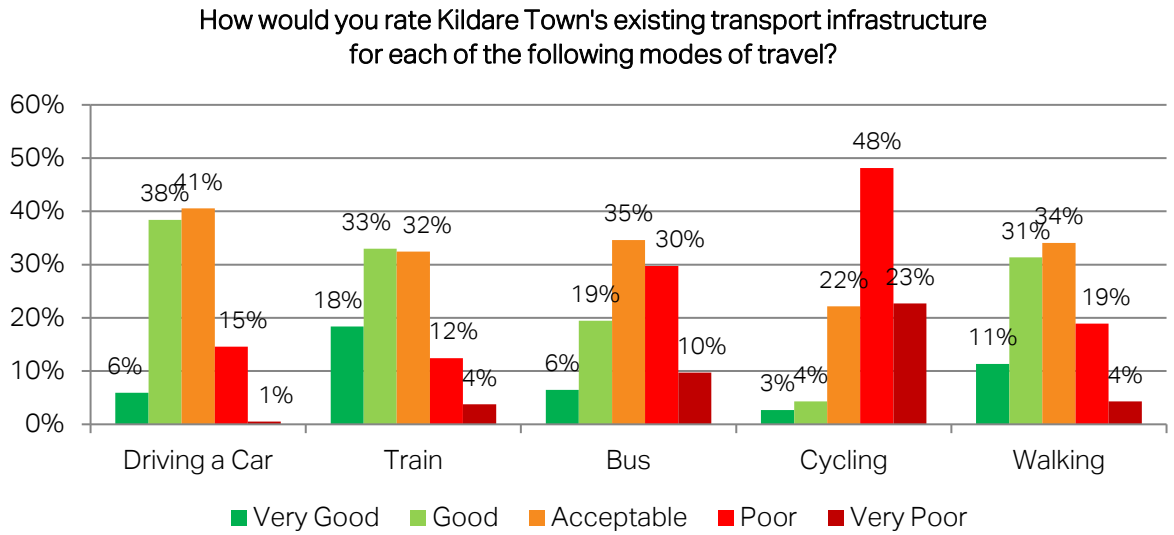
An online public consultation survey was launched on the on Kildare County Council's Consultation Portal on the 12th of June 2020 and remained open for five weeks. The purpose of the online public consultation was to gauge opinions from people who live, work, shop, spend leisure time or attend education within the Kildare Town Transport Strategy study area to understand current issues related to transport and obtain views on potential solutions. The survey was promoted by Kildare County Council through social media, local newspapers and the council's own website.

In total, 190 respondents completed the survey, which included five respondents who said that they were representing an organisation or group. These responses on behalf of organisations are analysed separately to those from individuals in the sections below. Skip logic was designed into the survey to ensure that respondents were only asked questions which would be relevant to them based on their previous responses. Respondents representing an organisation or group were not asked questions relating to their individual circumstances or travel behaviour.

As the Covid-19 pandemic was ongoing at the time of the survey and significantly impacting travel behaviour, all respondents were asked to provide feedback which reflected their travel patterns and issues prior to the start of the Covid-19 crisis.

#### 3.1.2.2 Transport in Kildare Town

All respondents were asked to rate Kildare Town's existing transport infrastructure for each of the main modes of travel as shown in Figure 3.1. The worst rated travel mode is cycling, with a combined 71 percent of respondents rating existing infrastructure for cycling as either poor or very poor. Infrastructure for bus travel is also rated relatively poor, with a combined 40 percent of respondents rating it as poor or very poor. The travel modes with the highest proportion of good and very good responses were train and driving a car, at 51 percent and 44 percent respectively.




*N=185*

[4]*Figure 3.1: Rating of Kildare Town's Existing Transport Infrastructure*

The ratings given by respondents to different transport modes have also been examined for the subset of respondents who use each mode as their main commuting mode as shown in Figure 3.2. Comparing the two sets of results shows that a higher proportion of respondents who commute by bus and by bike rate the infrastructure for these modes as poor or very poor when compared to the sample overall. However, this difference may simply be a factor of the small number of bus and cycling commuters in the sample. Existing infrastructure for travelling by car and by train is rated similarly among the full sample and the groups of respondents who use these modes as their main commuting mode.

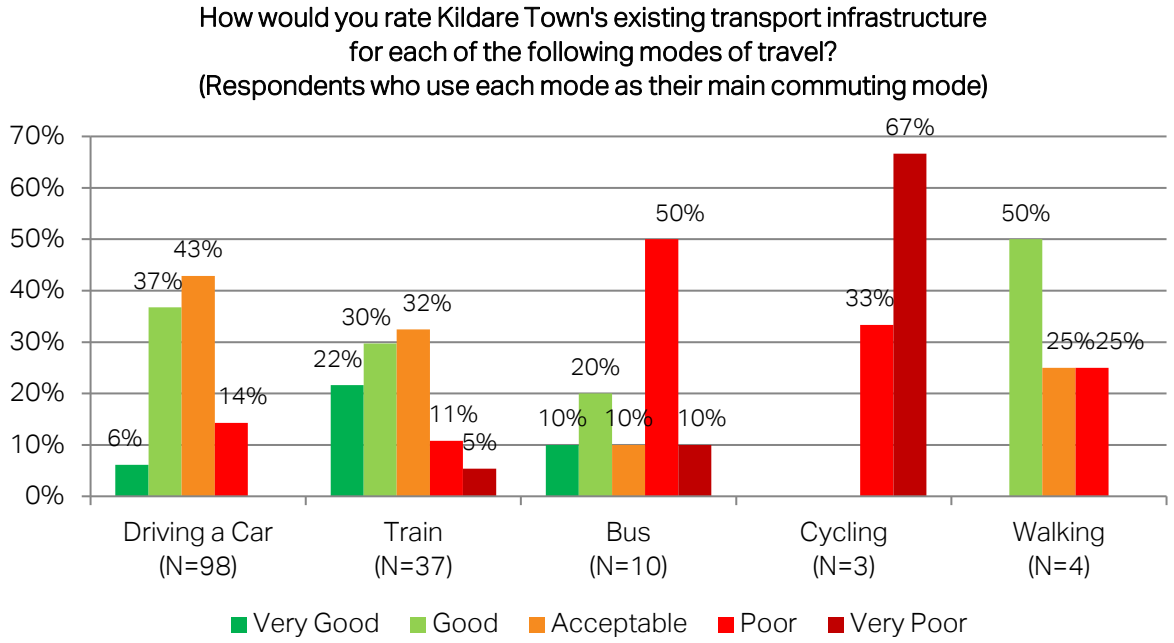



*Figure 3.2: Rating of Kildare Town's Existing Transport Infrastructure by Mode Users (Usual Commute)*

Respondents were asked to rate a wide selection of potential future changes to transport infrastructure from 'extremely important' to 'not at all important' as shown in Figure 3.3. Note that public transport related improvements were excluded from this question as these were covered in the following question. All potential changes were perceived to be either extremely important or very important by a significant proportion of respondents (between 34 percent and 89 percent). Improved public realm and

[4] "N" refers to number of respondents relevant to this question

walking and cycling environment in the town centre and improved walking and cycling links on main routes to the town centre were the options rated as extremely important or very important by the largest proportions of respondents.

The potential changes which were rated as least important included a reduction in on-street car parking in the town centre and the provision of real time car parking occupancy data. However, a majority of respondents still rated these potential measures to be at least 'slightly' important, with only one third rating reduced on-street car parking to be 'not at all important' and 17% rating real time car parking occupancy data as not at all important.

Figure 3.4 illustrates how respondents rated the importance of different potential improvements to public transport. Almost all of the options were rated as either 'extremely important' or 'very important' by at least two thirds of respondents. The highest rated potential changes were: measures to reduce anti-social behaviour at bus stops; improved facilities at the train station; an extension of the 'short hop' rail fare zone; and changes which make it easier to transfer from public transport services available in Kildare Town to other public transport services.

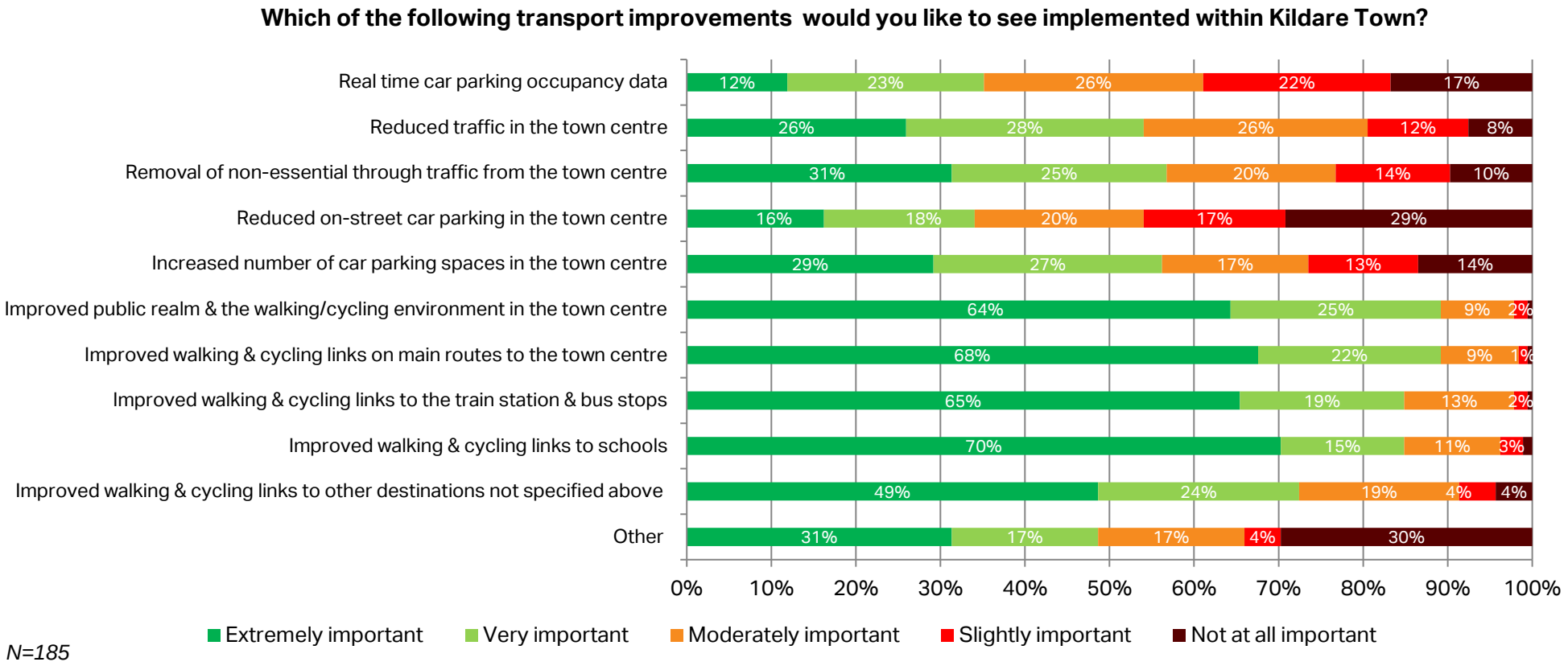



*Figure 3.3: Importance of Different Potential Transport Improvements (within Kildare Town) to Respondents*

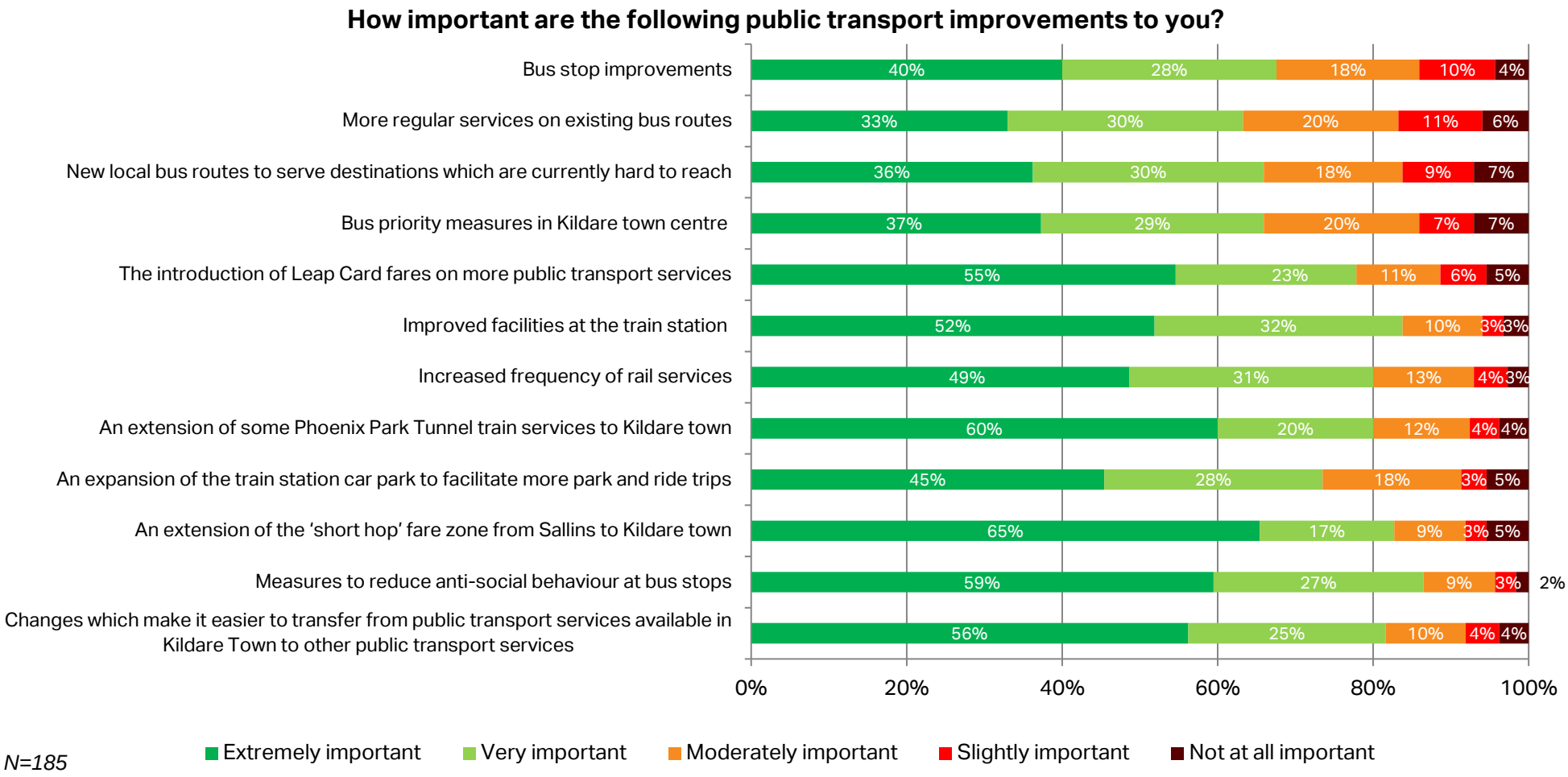



*Figure 3.4: Importance of Different Potential Public Transport Improvements to Respondents*

## 3.2 Stage 2: Consultation on Draft Strategy

A second round of consultation took place in July-August 2021 to gather views from the public and stakeholders on the draft Kildare Town Transport Strategy. In the stage 2 consultation, 84 submissions were received from the public/residents associations (81 via the online survey) and 10 additional written submissions were received from stakeholders. This information has been used to revise and finalise the measures proposed in the final Kildare Town Transport Strategy. Please refer to the Stakeholder and Public Consultation No. 2 Submissions Report (separate document) for full details.

### 3.2.1 Draft Strategy Measures Removed or Modified

As part of the stage 2 consultation process, a number of measures were modified or removed from the draft strategy, these are documented in Table 3.1.

*Table 3.1 List of Strategy Measures Removed or Modified as a Result of Stage 2 Consultation*

| Transport Mode | Measure | Changes Made |
|---|---|---|
| Road | RD 1 | Closure of Old Road Bridge will not be implemented until the Southgreen Bridge has been replaced and opened to two-way traffic as an alternative route. |
| Road | RD 4 | One way system on Meadow Road will not be implemented until the Hospital Street – Tully Link road has been constructed as an alternative route. |
| Cycling | C36 (short term), C37, C38, C39, C40, C41, C42, C43, C44, C45, C46, C47, C48, C49, C50, C51, C52 | Proposed link type changed from 'shared street' or 'shared street – one way' to 'to be determined by detailed study' or 'to be determined by detailed study – one way'. |
| Cycling | C52 | Reference to 'one-way' removed from proposed link type description (potential to facilitate contra flow cycling while retaining a one-way restriction for other vehicles now to be investigated as part of future detailed study). |
| Cycling | C9, C10, C11, C45 | Proposed phasing for delivery of cycling facilities on part of Melitta Road (C9) and on Main Street (C10,11,45) changed from 'medium term' to 'short-medium term'. |
| Permeability | PERM-1 | Shared walking/cycling facility has been extended along Rathbride Road from Rathbride Abbey to Cill Dara Golf Club |
| Parking | PK 2 | This measure involves the relocation of on-street parking on Main Street and this has been changed from a medium term measure to a short-medium term measure |
| Parking | PK 1 | Location of VMS signs adjusted based on consultation feedback |

| | | |
|---|---|---|
| Public Transport | PT 3 | Inclusion of additional bus stop on Rowanville R445 near Chapmans garage. Train station bus stop improved with shelter and live travel information for bus route 883. |
| Public Transport | PT 4 | Increased bus frequencies measure expanded to include greater frequencies on the 883 to improve connectivity between the retail village, town centre and train station |

### 3.2.2 Additional Measures or Changes in the Final Strategy

In addition to the measures which were removed or modified, a number of additional measures or changes were introduced in the final strategy document in response to the Stage 2 consultation process. These additions to the strategy are summarised in Table 3.2.

*Table 3.2 List of Additions to the Strategy as a Result of Stage 2 Consultation*

| Transport Mode | Section | New Measure Description |
|---|---|---|
| Road | Road Complimentary Measures | New complementary measure about demand management aspects of the strategy |
| Cycling | C57 | New cycling measure on northern part of Rathbride Road (same link as PERM 1) consisting of a shared walking and cycling path on one side of the road to connect Rathbride Abbey to Cill Dara Golf Club and Kildare Town Football Club. The draft strategy had proposed a footpath extension only on part of this link and had not proposed any cycling measure north of Rathbride Abbey. |
| Permeability | PERM 42 | Extend footpath east along the Melitta Road (R413) |
| Permeability | Permeability Assessment Maps | New mapping provided which shows the reduction in distance benefits of the network improvements from each home |
| Permeability | Permeability Strategy Maps | New map added which shows the existing path network and the proposed permeability path network in the same image |
| Permeability | Permeability Assessment Maps | New mapping provided which shows the role of the permeability network in connecting key public transport hubs |
| Permeability/ Cycling | Non-Motorised Modes Complimentary Measure | New complementary measure about improving walking/cycling times at signalised junctions as part of the MOVA/SCOOT upgrade |
| Permeability/ Cycling | Non-Motorised Modes | New complementary measure added which identifies extra crossing points to facilitate key desire lines |

| Transport Mode | Section | New Measure Description |
|---|---|---|
| | Complimentary Measure | |
| Permeability/ Cycling | Non-Motorised Modes Complimentary Measure | New complementary measure added which emphasises the need to construct the pedestrian/cyclist routes linked to road projects even if the road is cancelled/delayed |
| Permeability/ Cycling | Non-Motorised Modes Complimentary Measure | New complimentary measure added to review footpaths on approach roads |
| N/A | Introduction | Text added about modal choices and the importance of modal shift in Section 1.4.2 |
| N/A | Planning Principles | Section added regarding important planning principles in respect to biodiversity and climate change |
| N/A | Planning Principles | Section added regarding important planning principles in respect to inclusive design and universal access for people with disabilities |
| N/A | Modal Split Targets | Measurable modal split targets introduced in Section 14.3 |
| N/A | Transport Context | Trip length distribution graphs and analysis added in Section 2.3.6 |
| Public Transport | Public Transport Option Assessment | Substantial new 'Public Transport Context' section added to strengthen the justification for the public transport options selected as preferred measures in the strategy |
| Public Transport | Public Transport Complimentary Measures | New complimentary measure about signal priority for buses being explored as part of the MOVA/SCOOT signal upgrade. |
| Public Transport | Public Transport Complimentary Measures | New aspirational bus priority route from M7 to train station |

# 4 STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS (SWOT)

# 4. Strengths, Weaknesses, Opportunities and Threats (SWOT)

Table 4.1 provides a summary of the strengths, weaknesses, opportunities and threats (SWOT) analysis for the Kildare Town study area to inform the development of the strategy objectives.

*Table 4.1 SWOT Analysis of Kildare Town*

| Strengths | Weakness |
|---|---|
| • Central Location of the Train Station and its proximity to the town centre.<br>• Proximity to the M7 and Junction 13.<br>• Historic town centre and Market Square.<br>• Proximity to the Curragh.<br>• Frequent intercity bus services.<br>• Frequent rail services.<br>• Vibrant retail location in the form of Kildare Village.<br>• Japanese Gardens and the National Stud. | • High Levels of car dependency.<br>• Low levels of cycling.<br>• Peripheral location of the town's secondary school.<br>• Peripheral location of Kildare Village.<br>• Limited commuter bus services.<br>• Severance caused by the M7 and Rail Line.<br>• Lack of cycling facilities.<br>• Impermeable housing estate design.<br>• Lack of footpaths on the periphery of the town. |
| **Opportunities** | **Threats** |
| • Opening up of cul-de-sac estates to improve accessibility to key locations.<br>• Integrating commuter and intercity bus services.<br>• Regeneration of Magee Barracks site.<br>• Additional pedestrian connections to Kildare Village.<br>• Underutilised back-land sites.<br>• Greenfield development lands located approximate to Town Centre and Train Station.<br>• Provision of orbital roads to take traffic out of the Town Centre.<br>• Relocating parking spaces to facilitate public realm improvements.<br>• Facilitating latent demand for public transport, walking and cycling.<br>• Boosting tourism to Japanese Gardens, National Stud and Kildare Village.<br>• Boosting tourism to town centre.<br>• Change in commuter patterns due to Covid 19. | • Negative Impacts of Covid 19.<br>• Lack of funding for transport infrastructure.<br>• Objections from local residents and businesses.<br>• Further construction of low density, impermeable housing estates.<br>• Insufficient co-ordination of land use and transport plans.<br>• Future peripheral education and employment development.<br>• Lack of interconnectivity between Kildare Retail Village and the town centre. |

# 5 STRATEGY OBJECTIVES

# 5. Strategy Objectives

## 5.1 Introduction

The Kildare Town Transport Strategy objectives were developed through collaboration with Kildare County Council and on the basis of the information presented in the baseline report, the public consultation process and the SWOT analysis.

The Kildare Town Transport Strategy contains objectives for five transport modes/issues:

- Public transport
- Cycling
- Walking
- Road
- Parking

The merits of each potential strategy option will be assessed in a Multi-Criteria Analysis (MCA) against the strategy objectives in the case of public transport, roads and parking.

## 5.2 Objectives

The Kildare Town Transport Strategy will aim to achieve the following objectives:

### 5.2.1 Public Transport Objectives

1. Ensure convenient access from residential, employment, education, healthcare and retail facilities to public transport stops.
2. Improve the routing and frequency of existing bus and rail services.
3. Provide bus priority infrastructure in the town centre if required.
4. Improve public transport stops in respect to location, information, accessibility, infrastructure and visibility.
5. Improve integration between the train station, town centre and local bus routes.

### 5.2.2 Cycling Objectives

1. Provide an integrated cycle network for Kildare Town in accordance with the National Transport Authority's Cycle Network Plan for the Greater Dublin Area.
2. Improve safety for cyclists in Kildare Town.
3. Prioritise investment in schemes that will deliver the greatest modal shift potential.
4. Provide recommendations on the quality of cycle facilities that should be delivered.
5. Expand cycle parking in the town centre and at public transport nodes.
6. Engage with schools with the aim of increasing cycling mode share.

### 5.2.3 Walking Objectives

1. Provide an integrated walking network for Kildare town.
2. Improve the standard of existing pavements or paths where required.
3. Improve permeability to enhance access to homes, jobs, schools, shops, public transport and services.
4. Improve safety for pedestrians, particularly for vulnerable road users, by improving crossing points.
5. Engage with schools with the aim of increasing walking mode share.

### 5.2.4 Road Objectives

1. Reduce unnecessary vehicular trips through Kildare town centre.
2. Mitigation measures to improve road safety and eliminate collision hotspots.
3. Reduce vehicular emissions in town centre by promoting mode transfer to sustainable travel modes.
4. Provide recommendations on the future road schemes required to meet capacity requirements and changing travel patterns.
5. Review existing road plans in the existing LAP to identify the most appropriate traffic solutions which will support the delivery of the multi-modal strategy.

### 5.2.5 Parking Objectives

1. To ensure appropriate provision and location of car parking to support and improve the economic vitality of the town centre.
2. 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.
3. To relocate parking from the main street and the town centre to facilitate public realm and walking/cycling/public transport infrastructure improvements.
4. Improve the quality of parking information with new parking signage and technology.

# 6 ANALYSIS TOOLS

# 6. Analysis Tools

This section describes the analysis tools used to anticipate issues and develop solutions for the Kildare Town Transport Strategy. The following analysis tools were used:

- VISSIM Model – Micro-simulation traffic model used to assess the operation of individual junctions and traffic management proposals at a local level.
- VISUM Model – Strategic transport model used to inform the development of the roads strategy for Kildare town and to assess the performance of the road network in future years.
- ArcGIS Network Analyst – GIS method used to assess the impact of the permeability strategy on the walking catchments to key services and locations.

## 6.1 VISSIM Model

AECOM were commissioned by Kildare County Council (KCC) to develop a microsimulation, Kildare Town Model (KTM) in VISSIM. The model was created with a base year of 2018. The model was developed with peak periods in line with a previously developed strategic (VISUM) model, 08:00-09:00 and 17:00-18:00 for the AM and PM hours respectively.

The extent of the study area is provided in Figure 6.1. The modelled area covers all the main junctions in Kildare Town and main roads running through the town. The study area extent includes the following key roads:

- R455 between the Curragh to the east and the railway line to the west;
- R401 Dunmurray Road and R415 Station Road;
- The R413 Melitta Road to northeast; and Green Road and Southgreen Road to northwest; and
- The R415 between the R445 and the M7, Tully Road / Bride St and Grey Abbey Road to the south.

A full document describing the development of the Kildare Town VISSIM model can be found in the Micro-Simulation Transport Modelling Report (TMR) located in Appendix C (see Volume 2).

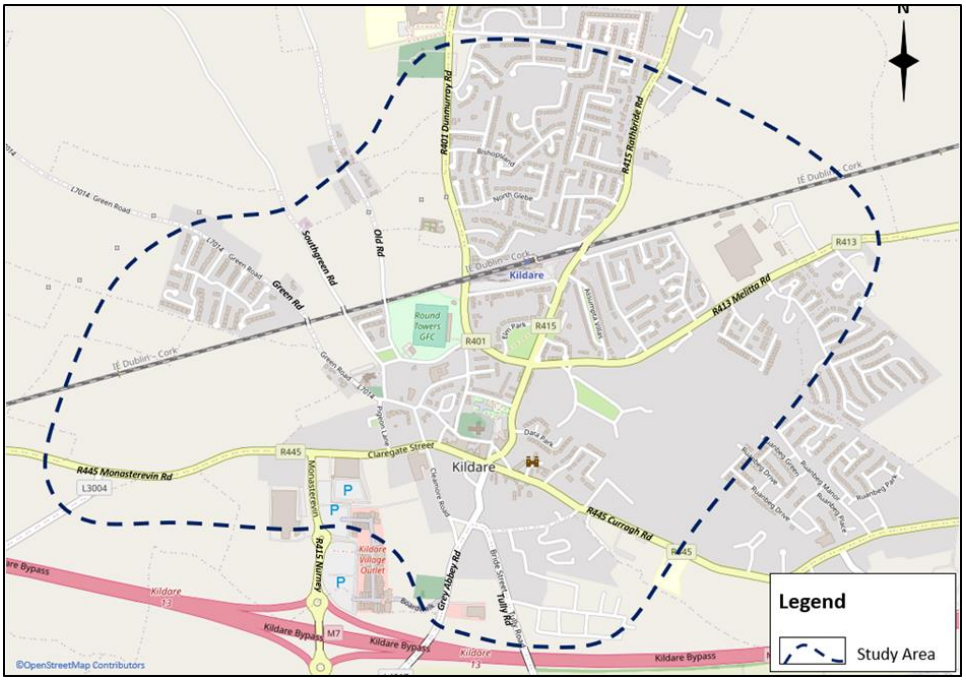



*Figure 6.1 VISSIM Model Microsimulation Area*

## 6.2 VISUM Model

A VISUM local area model (LAM) was developed to study the transport network in Kildare and its environs in the present day and in future years during the AM and PM peaks. The base model uses a POWSCAR (Place of Work, School or College, Census of Anonymised Records, 2016) trip matrix, modified according to extensive traffic survey data collected in 2018. Future year models were developed according to the TII Project Appraisal Guidelines Figure 6.2 shows the model zone structure used in the Kildare Town local area model which is compatible with local land-use zoning, the NTA's Eastern Regional Model and TII's National Transport Model.

A full document describing the development of the Kildare Town LAM can be found in the Strategic Transport Modelling Report located in Appendix B (see Volume 2).

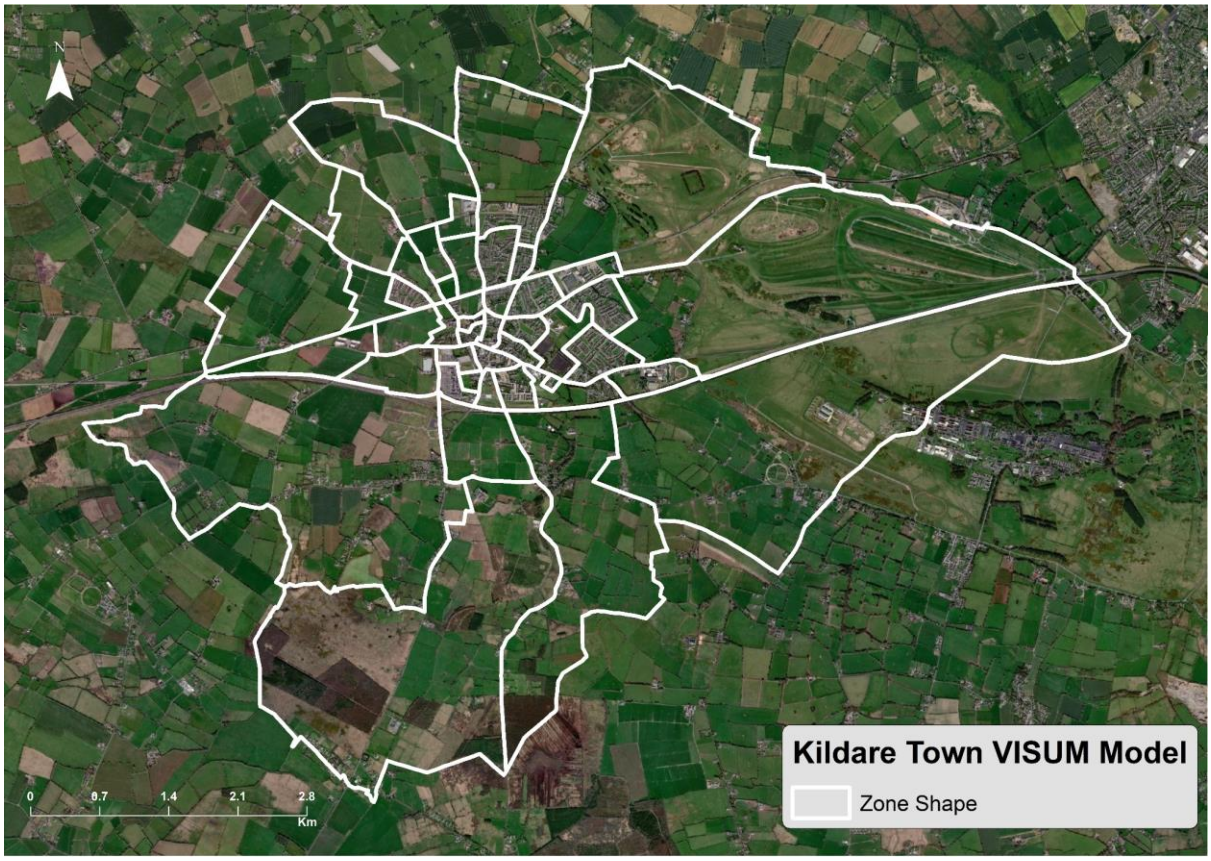



*Figure 6.2: VISUM Local Area Model – Zone Structure*

## 6.3 ArcGIS Network Analyst

In order to assess the walking catchments for key destinations in Kildare Town, 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 walkers/cyclists.

An example of the road and path network is shown in Figure 6.3, which shows the pedestrian network for Kildare Town as dotted red lines. 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 was assembled for the entire Kildare Town area. The path network ceases on approach roads where the footpath ends. The path network was originally extracted from Open Street Map and then extensively modified using aerial photography, Google Street View and site visits 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 Kildare Town. To assess the 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 in each scenario.

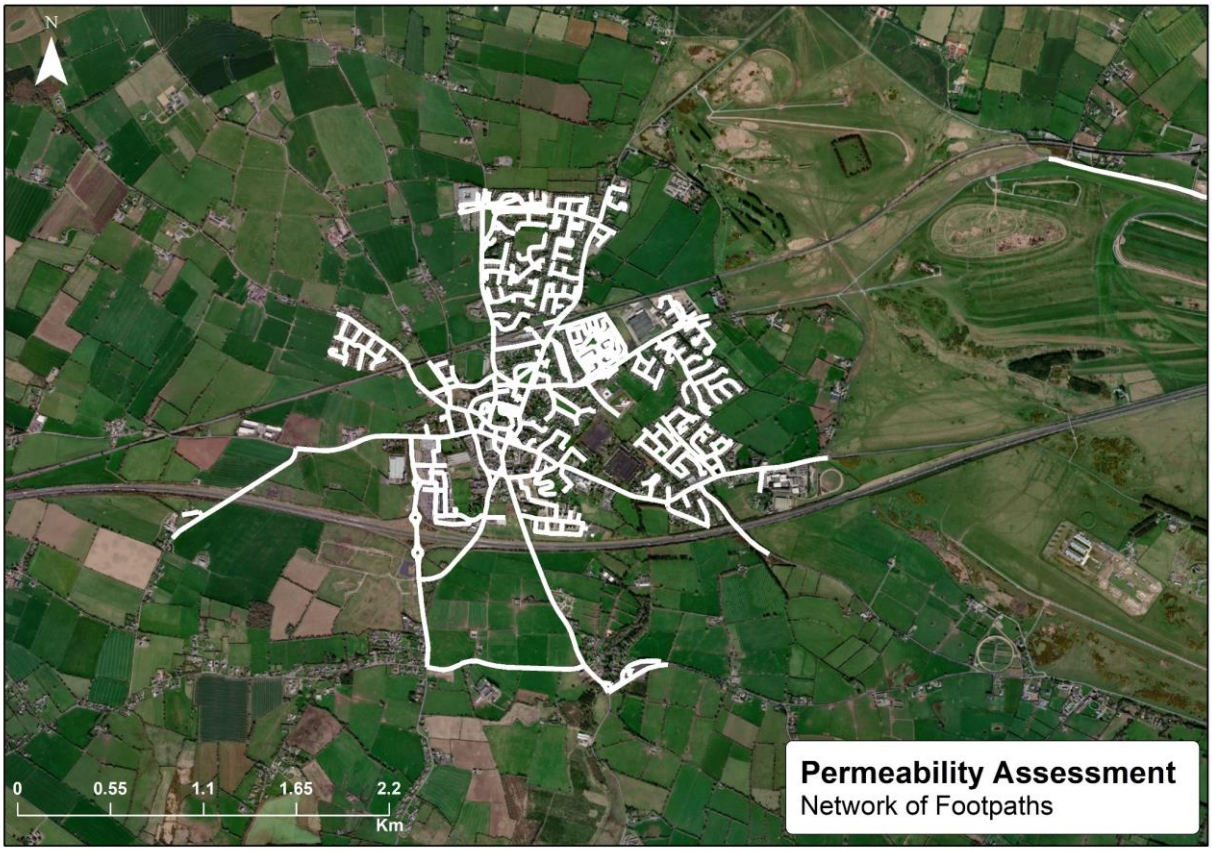



*Figure 6.3 Baseline Network of Footpaths*

# 7 OPTION ASSESSMENT METHODOLOGY

# 7. Option Assessment Methodology

This section presents the methodology used for the assessment of potentially viable strategy options identified within the study area. This is a high level assessment and individual projects will be subjected to a more detailed appraisal prior to progressing further (this is discussed in more detail in Section 1.4.1).

## 7.1 Assessment Criteria

A multi-criteria analysis (MCA) is carried out separately to assess options for the road, parking and public transport interventions. Grouping options according to mode allows for fair assessments to be undertaken against similar types of infrastructure. The 'Common Appraisal Framework for Transport Projects and Programmes' (CAF) published by the Department of Transport, Tourism and Sport (DTTAS), March 2016, requires schemes to undergo an MCA using the following criteria:

- Economy
- Integration
- Accessibility and Social Inclusion
- Safety
- Environment
- Physical Activity

Table 7.1 presents a summary of the MCA criteria and the issues considered.

*Table 7.1: Multi-Criteria Analysis – Assessment Criteria*

| MCA criteria | Summary of Issues Considered |
|---|---|
| Economy | Considers the cost of the project, potential returns, journey time savings and other transport indicators |
| Integration | Studies the accordance of the measure with local planning policies and integration in respect to land-use activities and other strategy proposals |
| Accessibility/ Social Inclusion | Considers the impact on accessibility to key trip destinations, social inclusion for marginalised groups and interchange between transport modes |
| Safety | Anticipates the impact of the measure on safety issues and collisions |
| Environment | Considers the impact of the measure on the natural and built environment |
| Physical Activity | Assesses the impact of the measure on walking and cycling |

The assessment process draws on all available data from; public consultation, Kildare County Council feedback, GIS analysis and transport model outputs to appraise each option according to the strategy objectives. In addition to the qualitative MCA process, some supporting quantitative evidence will be presented to show the impact of the roads strategy and some bus priority measures in the transport model, as well as the benefits of the permeability strategy demonstrated in ArcGIS.

## 7.2 Assessment Scale

An option summary table in CAF format has been prepared which collates and summarises the impact of each option on the assessment criteria. A seven-point scale has been applied as used in Project Appraisal Balance Sheet (PABS) assessments. 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 comparatively against all other options. For illustrative purposes, this seven-point scale is colour coded as presented in Table 7.2, with advantageous options graded to 'dark green' and disadvantageous options graded to 'dark red' in accordance with the CAF.

*Table 7.2: MCA Colour Coded Ranking Scale*

| Colour | Description |
|---|---|
| | Major or highly positive |
| | Moderately positive |
| | Minor or slightly positive |
| | Not significant or neutral |
| | Minor or slightly negative |
| | Moderately negative |
| | Major or highly negative |

At the end of the options assessment, an overall MCA conclusion is provided for each option, bringing together each of the individual criterion assessments. All criteria are considered in undertaking the overall assessment for each option and a lower ranking on one criteria will not necessarily mean that the option is not suitable. At the end of each assessment section, the preferred options to be included in the transport strategy are clearly identified along with an indication of the delivery timescale.

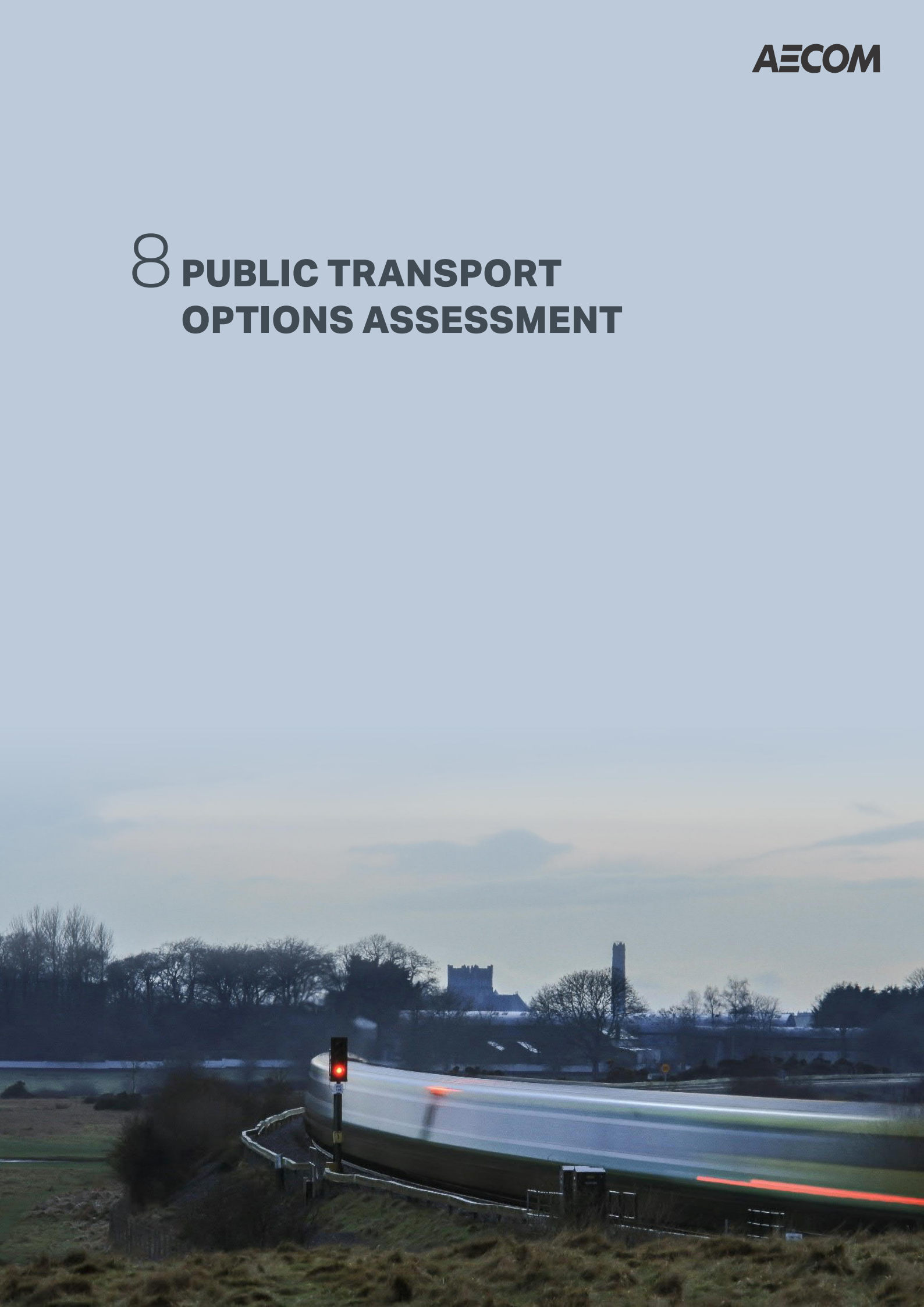
## 7.3 Implementation Timescale

Once the options have been assessed and the preferred strategy interventions have been identified, they will be categorised according to their estimated delivery timescale. In this regard, the following categories will be used to define the implementation timescale for each measure:

- *Short term*: Measure intended for implementation within 1-2 years
- *Medium term*: Measure intended for implementation within 3-5 years
- *Long term*: Measure intended for implementation within 6-10 years

The timescale category is not a reflection of the importance attached to each measure, but rather reflects the challenge involved for implementation and the expected duration of the planning/construction process.

# 8 PUBLIC TRANSPORT OPTIONS ASSESSMENT



# 8. Public Transport Options Assessment

The public transport options assessment begins with the public transport context section which provides additional analysis to inform the option development process. Following this, the preferred location for a bus transfer point and the preferred public transport measures are identified through an option assessment process.

## 8.1 Public Transport Context

### 8.1.1 Overview

This section provides an overview of the public transport analysis that was undertaken during the baseline review phase of this project in addition to public transport frequency, POWSCAR and population growth analysis that was undertaken during the options development phase. The purpose of this section is to examine in detail the existing public transport provision to and from Kildare Town. Using POWSCAR records for those commuting from Kildare Town for work and third level education, and the records of people commuting to Kildare town for work, the existing trip patterns can be examined in detail. This allows for a detailed examination of how well the existing public transport provision to, and from, Kildare Town can meet this travel demand.

The purpose of this analysis is to determine whether or not the current public transport provision is adequate to meet the current level of trip demand or future growth. Where deficiencies are identified in the existing network in terms of insufficient capacity, public transport options are created to address these issues in the following sections.

### 8.1.2 Public Transport Policy Context

The public transport policy context for the Kildare Town Public Transport Strategy has largely been informed by the National Transport Authority's Transport Strategy for the Greater Dublin Area 2016-2035. The NTA's GDA Transport Strategy provides the following guiding principles which have informed the development of the public transport options and assessment:

#### 8.1.2.1 GDA Transport Strategy Policy on Bus Services

Below are the key proposals from the NTA's GDA Transport Strategy 2016-2035, which are relevant to the Kildare Town Public Transport Strategy for bus services:

- As passenger demand increases, additional capacity will be added to the bus network where it is required;
- Express services will be provided from the major towns in the GDA hinterland to Dublin City Centre at a frequency which meets demand, including a bus every 30 minutes during peak travel periods from the Regional Planning Guidelines Growth Towns of Navan, Naas and Wicklow;
- Bus services will be regularly reviewed by the Authority in collaboration with the relevant bus operators and amended as necessary to take account of changing development and travel patterns to ensure that services operate optimally; and
- Appropriate measures to ensure the safety and security of bus passengers.

#### 8.1.2.2 GDA Transport Strategy Policy on Bus Stops and Bus Shelters

Below are the key proposals from the NTA's GDA Transport Strategy 2016-2035, which are relevant to the Kildare Town Public Transport Strategy for bus stops and bus shelters:

- A standardised style of pole, flag (head plate at top of pole) and information panel, under the Transport for Ireland brand, will be used at all bus stops in the region;
- There will be a rationalisation of bus stop poles and sharing of nearby bus stops between operators; and

- Key bus stop locations, busy bus stops and key interchange locations will be equipped with bus shelters, where space permits, incorporating comprehensive information panels and appropriate seating.

#### 8.1.2.3 GDA Transport Strategy Policy on Fares

Below are the key proposals from the NTA's GDA Transport Strategy 2016-2035, which are relevant to the Kildare Town Public Transport Strategy regarding public transport fares:

- A simplified fare system will be introduced in the Greater Dublin Area, covering bus, rail, Luas and Metro services, which will also facilitate multi-leg and multi-modal journeys in a cost effective manner;
- All bus services will migrate to a cashless system, to facilitate driver safety and faster passenger boarding times; and
- The current Leap card system will be further developed with new products and services added and will, over time, transition to an account based system using mobile phones and/ or other payment methods as new technologies mature.

#### 8.1.2.4 GDA Transport Strategy Policy on Optimising Interchange and Transport Facilities

Below are the key proposals from the NTA's GDA Transport Strategy 2016-2035, which are relevant to the Kildare Town Public Transport Strategy regarding interchange and transport facilities:

- Provide high quality passenger interchange points, which facilitate convenient transfer between public transport services, in various town centres throughout the region and at key transport locations in the Dublin Metropolitan Area, such as St. Stephen's Green, Westmoreland Street/D'Olier Street, Tallaght and Blanchardstown;
- Ensure that such transport interchanges are developed in a manner where service schedules are optimally coordinated, where distances between connections are minimised to the extent practicable, where good directional signage for connections is provided and where necessary operating facilities are provided to facilitate connectivity;
- Provide secure and comfortable waiting facilities for passengers, with shelters and seating within a well-lit environment, and support facilities such as toilets and refreshments where deemed necessary;
- Provide, outside of Dublin City Centre, drop-off facilities and taxi ranks at key train stations and Luas stops;
- Ensure that secure cycle parking facilities are provided at all train stations, and that cycle parking stands are provided at all Luas and BRT stops outside of the core city centre area; and
- Subject to demand and available space, provide cycle parking stands at key bus stops.

### 8.1.3 Public Transport Objectives

Having cognisance of the supporting policy context, the following objectives were developed to guide the development of public transport options in the Kildare Town Transport Strategy:

1. Ensure convenient access from residential, employment, education, healthcare and retail facilities to public transport stops.
2. Improve the routing and frequency of existing bus and rail services.
3. Provide bus priority infrastructure in the town centre if required.
4. Improve public transport stops in respect to location, information, accessibility, infrastructure and visibility.

5. Improve integration between the train station, town centre and local bus routes.

### 8.1.4 Public Transport and Trip Analysis

This section provides additional analysis of existing public transport services and travel demand, as well as considering the requirements for additional capacity to facilitate future growth. This analysis will inform the development of public transport options and their assessment in later sections.

#### 8.1.4.1 Public Transport Accessibility Levels (PTALs)

Public Transport Accessibility Levels (PTAL) is an analysis tool which shows the density of the public transport network. The analysis area is divided into a 100-metre grid and each square receives a score. An accessibility index is calculated for each public transport stop and route at the stop. The index consists of the walk time to the public transport stop, the service frequency and the average wait time at the stop. It also includes a reliability factor, which is different for rail and bus. The values of each stop and route in a square are summed and translated to a standardised score for each grid square, as seen in Figure 8.1 for 07:00 to 19:00 and Figure 8.2 for 07:00 – 08:00. The standardised scores range from 0, the worst score, to 6b, the best score.

In Kildare Town, the highest scores are focused on the bus stop outside Kildare Retail Village, which serves coaches from the M7 and the Market Square area which serves a high number of bus services passing through the centre of Kildare Town. The results for 07:00 – 08:00 highlight a significant reduction in service in Kildare town with the bus stop outside Kildare Village and Market Square having the highest services levels in the AM peak.

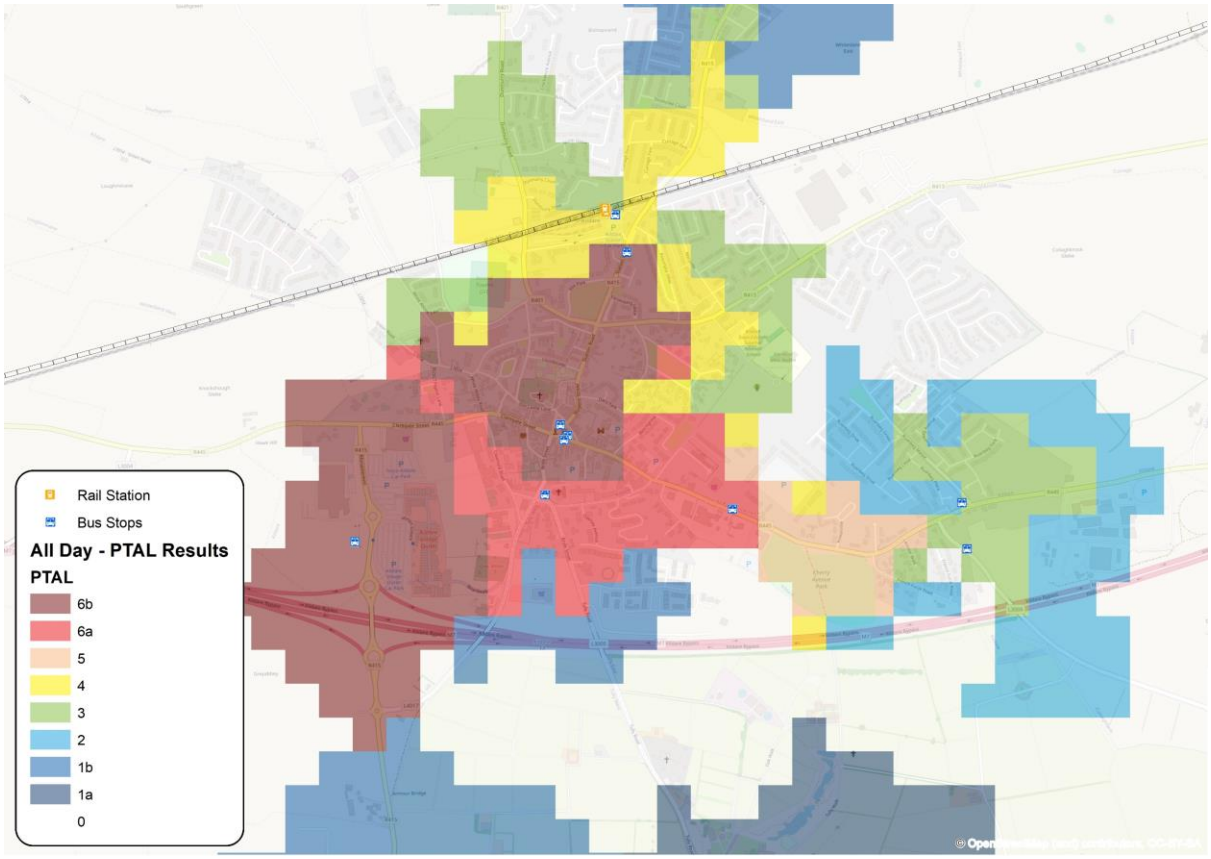



*Figure 8.1 – 07:00 – 19:00 PTAL Results for Kildare Town*

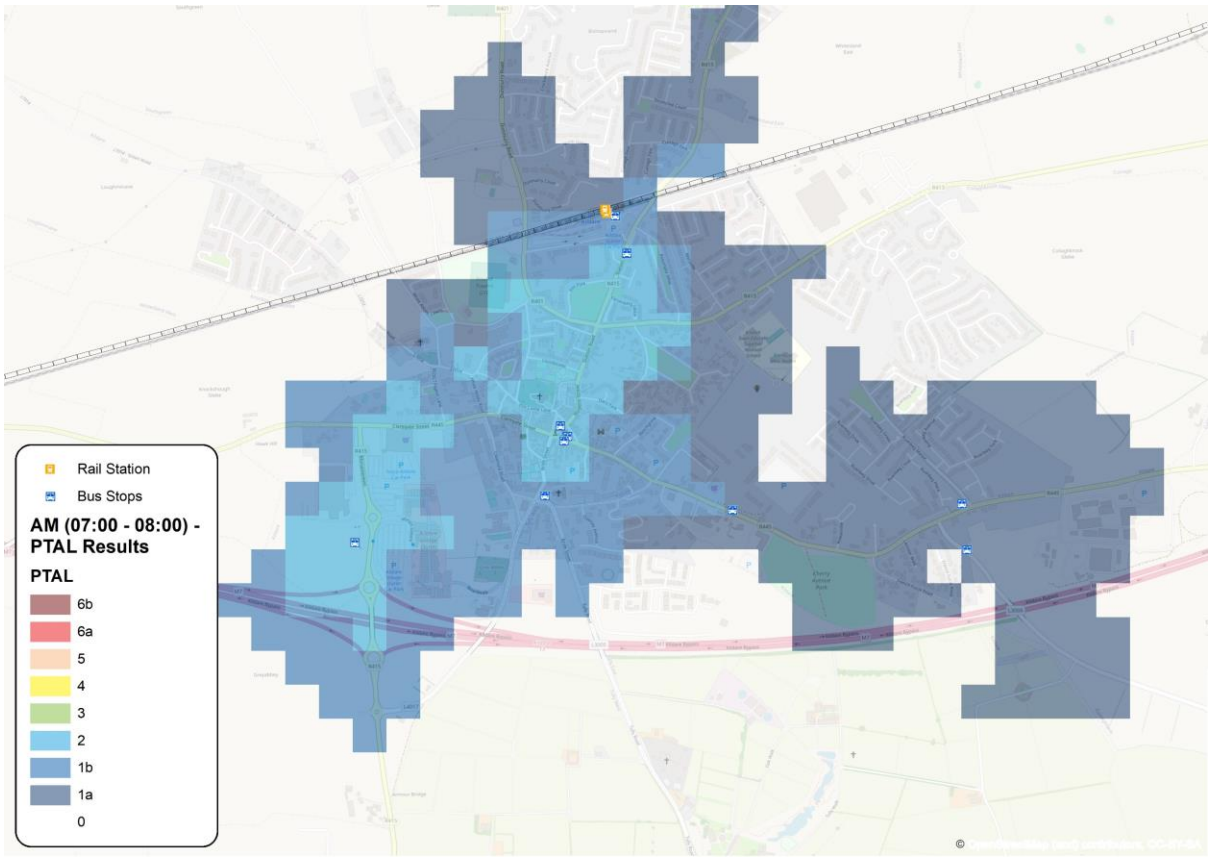



*Figure 8.2 - 07:00 – 08:00 PTAL Results for Kildare Town*

### 8.1.4.2 Examination of Public Transport Frequencies and Trips Patterns for Kildare Town Residents

A detailed analysis of public transport frequencies has been undertaken to inform the creation of the KTTS Public Transport Strategy and this analysis builds on the frequency information presented in Section 2.3.3. This frequency analysis has been undertaken for both bus and rail based services and focuses on the usability of services for work and third level commuters from Kildare Town and work commuters to Kildare Town. In this analysis, a peak AM commuting hour of 07:00 to 08:00 has been analysed in detail. This hour was chosen given the longer journey times from Kildare Town to Dublin City and surroundings areas.

Table 8.1 shows the frequency of bus services departing Kildare Town between 07:00 – 08:00. There are 9 services departing during this time period out of a total of 112 that depart over a 24-hour period. During this time period, the highest frequency services have a 30 minutes headway and there are two routes with this level of frequency; the 726 and 300, which are both operated by Dublin Coach and serve demand to Dublin Airport and Dublin City respectively. There are five services operating at a 60 minute headway and 3 services that do not have a departure during this time period.

*Table 8.1 – Frequency of Bus Services departing Kildare Town between 07:00 - 08:00*

| Operator | Route No. | Origin | Destination | 07:00 - 08:00 Frequency | No. Services 07:00 - 08:00 | No. Services Daily |
|---|---|---|---|---|---|---|
| Local Link Kildare | 883 | Athy | Newbridge | 60 mins | 1 | 4 |
| Kyanitedale Ltd | 826 | Monasterevin | Naas General Hospital | 60 mins | 1 | 9 |
| Go Ahead | 126 | Kildare | Connolly Station | 0 | 0 | 8 |
| | 126b | Kildare | Connolly Station (via Suncroft) | 0 | 0 | 1 |
| | 126e | Kildare | Merrion Street | 60 mins | 1 | 1 |
| | 126a | Rathangan | Connolly Station | 0 | 0 | 1 |
| Dublin Coach | 726 | Laois | Dublin Airport | 30 mins | 2 | 34 |
| | 300 | Ennis / Killarney / Tralee / Limerick | Dublin City - Bachelors Walk (via Kildare Village) | 30 mins | 2 | 35 |
| | 816 | Kildare Village | Portarlington Library | 60 mins | 1 | 16 |
| Kenneally's / JJ Kavanagh | Num14 | Kildare | Maynooth | 60 mins | 1 | 3 |
| Total | | | | | 9 | 112 |

Table 8.2 shows the frequency of rail services departing Kildare town between 07:00 – 08:00. This table highlights the frequent departures to Heuston Station from Kildare Town, however, departures in the other direction are limited with only two departures; 1 service to Portlaoise and 1 service to Waterford.

*Table 8.2 - Frequency of Rail Services departing Kildare Town between 07:00 - 08:00*

| Service | 07:00 - 08:00 Frequency | No. Services 07:00 - 08:00 | No. Services Daily |
|---|---|---|---|
| Kildare to Heuston | 7.5 mins | 8 | 39 |
| Kildare to Portlaoise | 60 mins | 1 | 18 |
| Kildare to Waterford | 60 mins | 1 | 6 |
| Kildare to Galway & Westport | 0 | 0 | 2 |
| Kildare to Limerick | 0 | 0 | 2 |
| Kildare to Athlone | 0 | 0 | 1 |
| Total | | 10 | 68 |

Figure 8.3 shows the public transport services departing Kildare Town between 07:00 – 08:00 and their frequency of service. This map shows the destinations which can be reached by residents of Kildare Town by public transport and the towns visitors can travel from. This highlights the radial nature of the public transport network, which is focused on providing access on routes to Dublin.

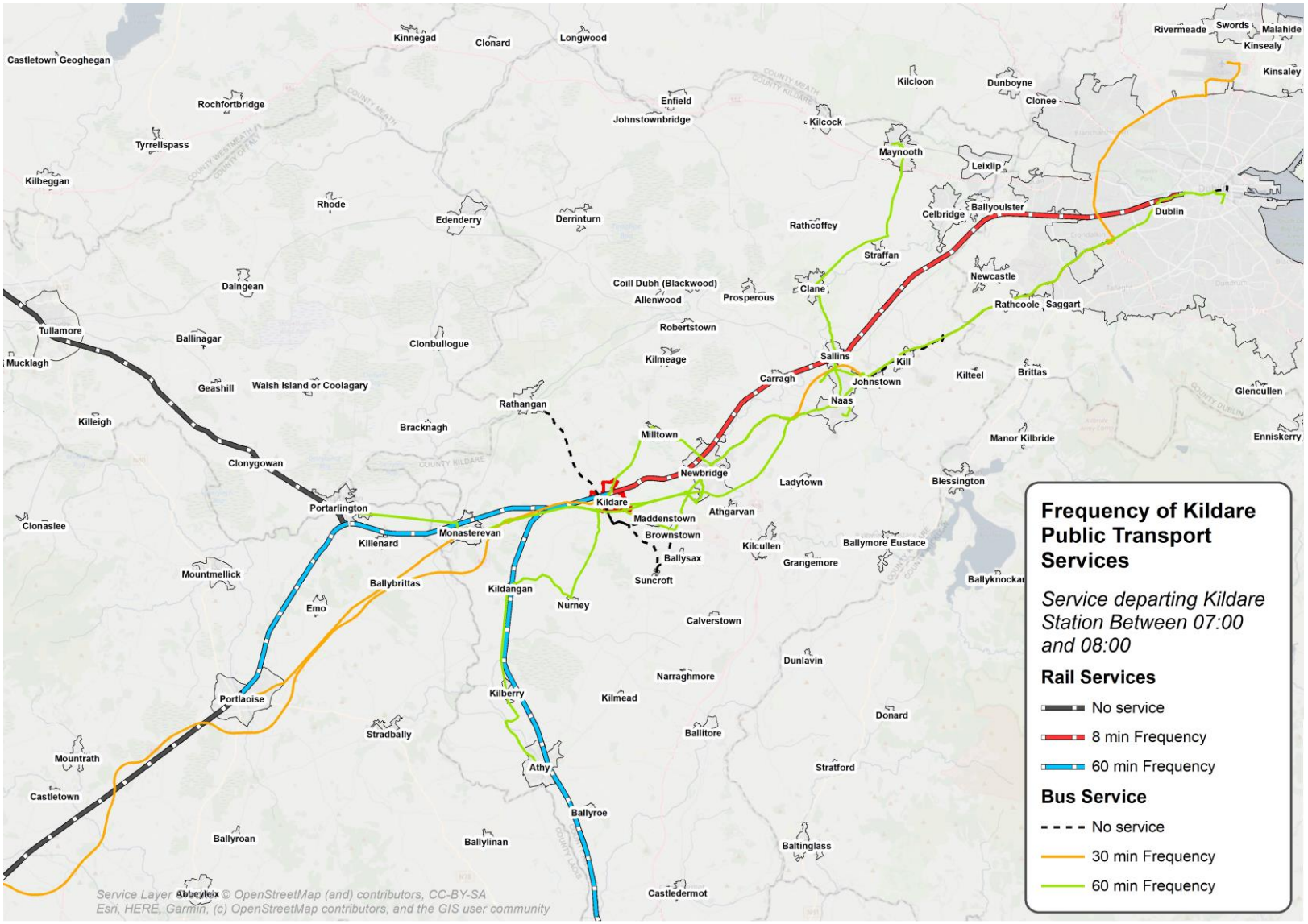



*Figure 8.3 – Map of services departing Kildare Town between 07:00 - 08:00*

Using POWSCAR records from the 2016 census, an analysis of commuting destinations for work and third level commuters was undertaken. The purpose of this analysis is to identify the key destinations for residents of Kildare Town and assess the frequency of public transport services to these locations. Figure 8.4 shows the public transport services that operate between 07:00 – 08:00 with the top 21 POWSCAR work and college destinations for Kildare Town residents overlaid on the same map. The top destinations are represented using the National Transport Authority's modified settlement boundary which includes suburban employment locations. These top 21 destinations account for 84% of trips originating in Kildare Town and Table 8.3 shows the name of the destination and the number of trips involved.

*Table 8.3 – Top 21 Destinations of Kildare Town Residents*

| Destination Name | No. of Outbound Trips |
|---|---|
| Kildare Town | 519 |
| Newbridge | 394 |
| Naas Newbridge Environs | 369 |
| Naas | 228 |
| South East Quadrant of Dublin City Centre | 60 |
| Tallaght | 52 |
| North East Quadrant of Dublin City Centre | 41 |
| Red Cow | 36 |
| South West Quadrant of Dublin City Centre | 30 |
| Ballyfermot | 28 |
| Maynooth | 27 |
| UCD | 27 |
| Carlow | 26 |
| Monasterevin Environs | 24 |
| Rathangan Environs | 24 |
| Portlaoise | 23 |
| Rathcoole Newcastle Environs | 21 |
| Clondalkin | 21 |
| West Tallaght | 20 |
| Athy | 16 |
| Ballymun | 15 |

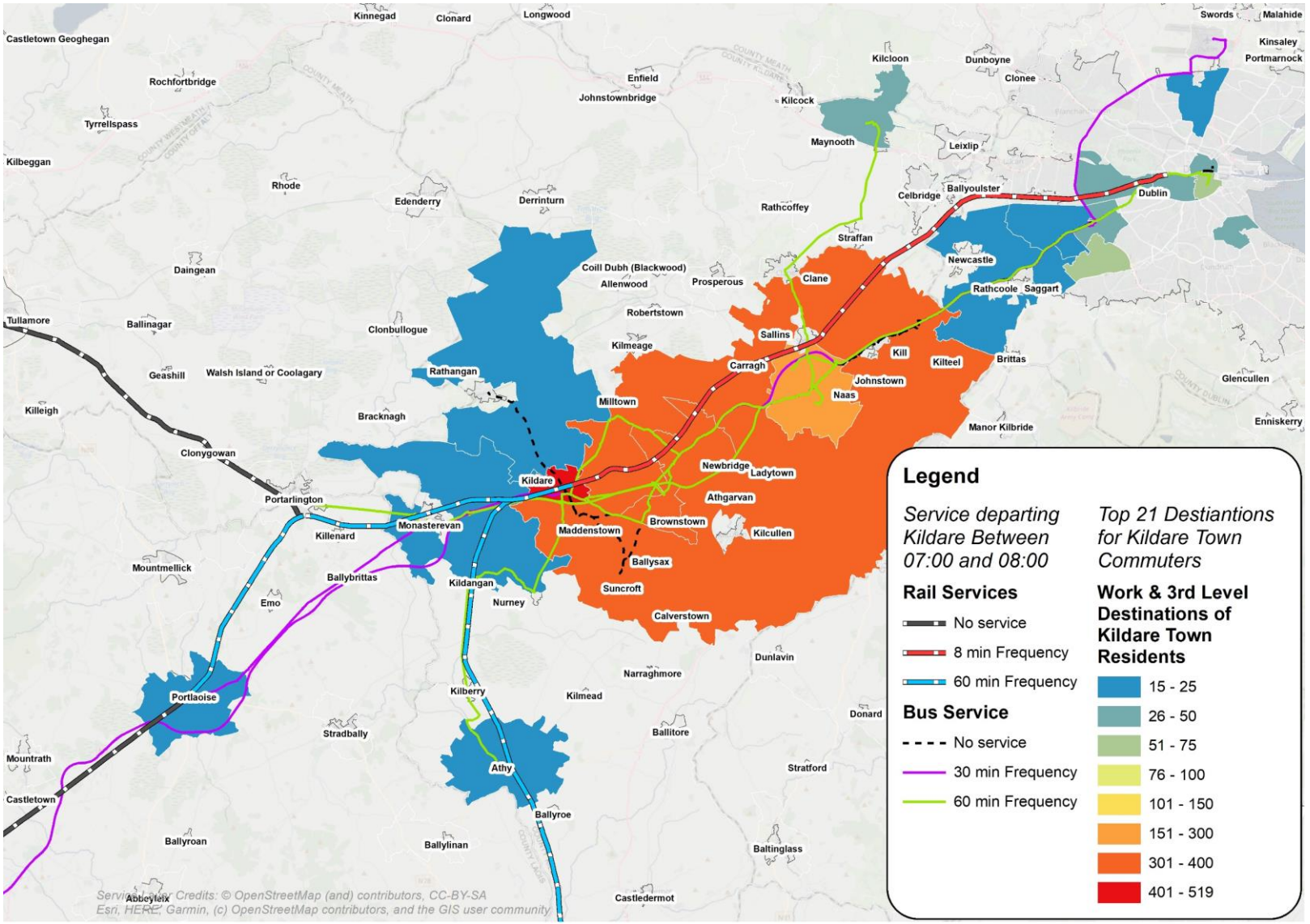



*Figure 8.4 – Frequency of public transport departing Kildare Town between 07:00 – 08:00 and Place of Work and Third Level Destinations of Kildare Residents*

Having plotted the commuting destinations of Kildare Town residents in ArcGIS, it was then possible to determine the destinations accessible by public transport services operating between 07:00 – 08:00. To undertake this analysis, a straight-line distance catchment of 400 metres for bus stops and 1km for train stations was assumed for all stops served by public transport routes operating from Kildare Town between 07:00 – 08:00. Table 8.4 shows that 48% of work and college trips from Kildare Town are to locations which are accessible by public transport, although as noted in Section 8.1.4.2, the frequency of these public transport connections is quite low. However, concerningly the majority of work and college commutes (52%) are to locations which are not public transport accessible. The work and college destinations, categorised by access to public transport, are shown in Figure 8.5.

*Table 8.4 –Kildare Town Residents Commuting Trips by Public Transport Accessibility*

| Kildare Town Residents: Work and College Trip Destinations | Total | % |
|---|---|---|
| Accessible by Public Transport | 1,129 | 48% |
| Not Accessible by Public Transport | 1,247 | 52% |
| All Work & 3rd Level Trips | 2,376 | |

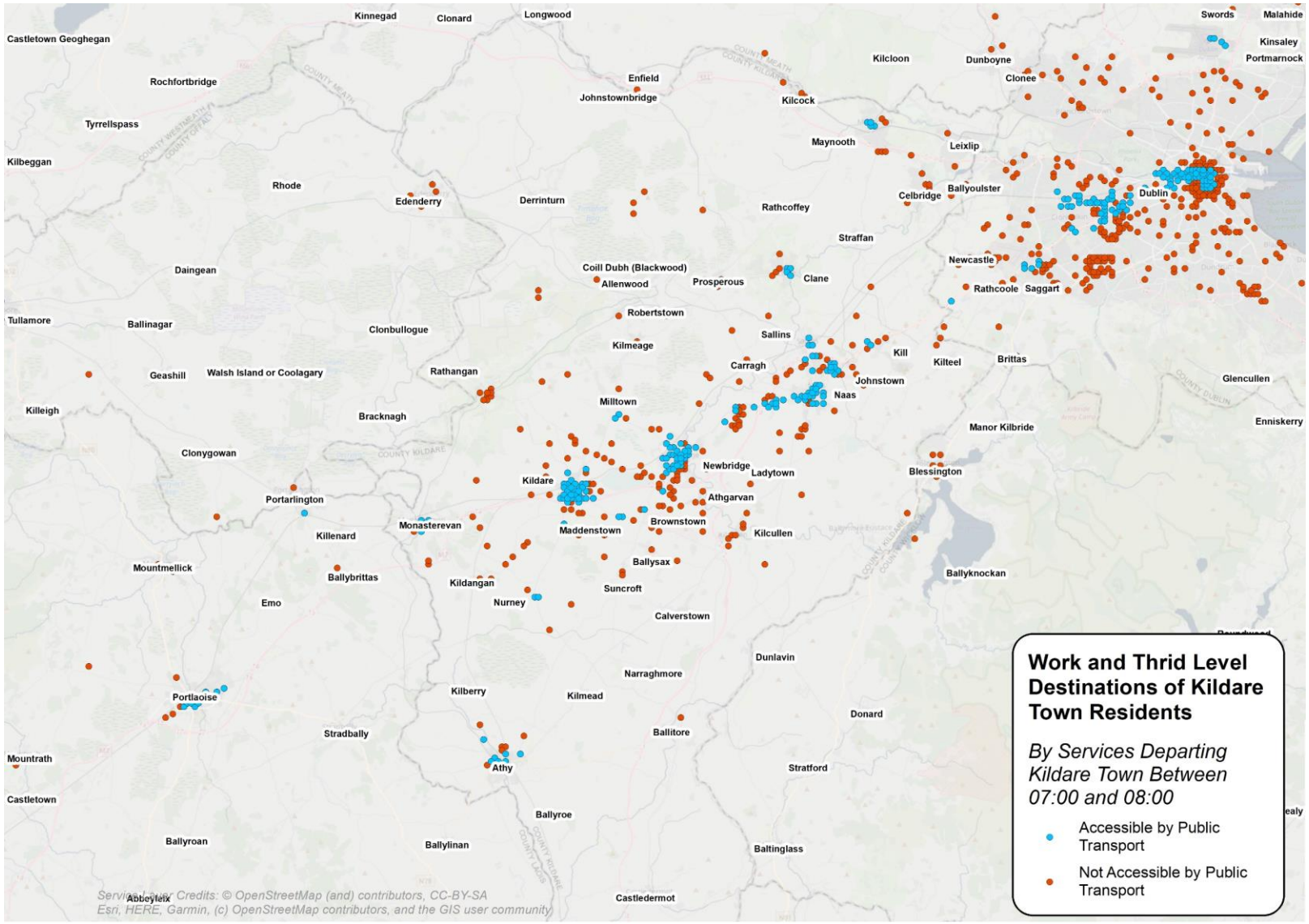



*Figure 8.5 – Kildare Town Residents: Work and College Trip Destinations Accessible by Public Transport during 07:00 - 08:00*

#### 8.1.4.3 Examination of Public Transport Frequencies and the Origin of Work Trips to Kildare Town

A similar analysis was undertaken for work trips travelling to Kildare Town by examining 2016 POWSCAR records. Likewise, a morning hour of 07:00–08:00 was used for the analysis of public transport frequencies to Kildare Town. Table 8.5 shows the bus routes which serve Kildare Town between 07:00 – 08:00[5]. There are nine bus services which serve Kildare Town in total, but only three of these operate during the 07:00 – 08:00 time period. Two of the bus services that operate in this time period have a 60 minute headway and one bus route has a 30 minute headway.

*Table 8.5 – Frequencies of Bus Services to Kildare Town*

| Operator | Route No. | Origin | Destination | 07:00 - 08:00 Frequency | No. Services 07:00 - 08:00 | No. Services Daily |
|---|---|---|---|---|---|---|
| Local Link Kildare | 883 | Newbridge | Athy | 0 | 0 | 4 |
| Kyanitedale Ltd | 826 | Naas General Hospital | Monasterevin | 0 | 0 | 9 |
| Go Ahead | 126 | DCU Collins Avenue | Kildare | 0 | 0 | 7 |
| | 126d | Connolly Station | Kildare (Via Suncroft) | 0 | 0 | 1 |
| | 126a | Connolly Station | Kildare | 0 | 0 | 1 |
| Dublin Coach | 726 | Dublin Airport | Laois | 60 mins | 1 | 34 |
| | 300 | Dublin City - Burgh Quay | Ennis / Killarney / Tralee / Limerick | 30 mins | 2 | 35 |
| | 816 | Portarlington Library | Kildare Village | 60 mins | 1 | 16 |
| Kenneally's / JJ Kavanagh | Num14 | Maynooth | Kildare | 0 | 0 | 3 |
| Total | | | | | 4 | 110 |

Table 8.6 shows the frequency of rail services serving Kildare Town station there are a total of 15 services calling at Kildare Town station between 07:00 – 08:00. The service frequencies range from 10 minutes on services originating at Portlaoise to 60 mins on services originating at Waterford.

*Table 8.6 – Frequencies of Rail Services to Kildare Town*

| Origin | 07:00 - 08:00 Frequency | No. Services 07:00 - 08:00 | No. Services Daily |
|---|---|---|---|
| Heuston to Kildare | 30 mins | 2 | 31 |
| Portlaoise to Kildare | 10 mins | 6 | 19 |
| Waterford to Kildare | 60 mins | 1 | 7 |
| Galway & Westport to Kildare | 30 mins | 2 | 5 |
| Limerick to Kildare | 60 mins | 1 | 2 |
| Athlone to Kildare | 20 mins | 3 | 7 |
| Total | | 15 | 71 |

[5] 7-8am was chosen as the analysis period to reflect the long bus journey times for trips from surrounding settlements, to Kildare Town, which can take over an hour with a transfer. The 7-8am time period is when people using these services would board the bus in order to reach Kildare Town for work at 9am.

Figure 8.6 shows the frequency of the public transport routes which would carry people inbound to Kildare Town during the hours 07:00 – 08:00.

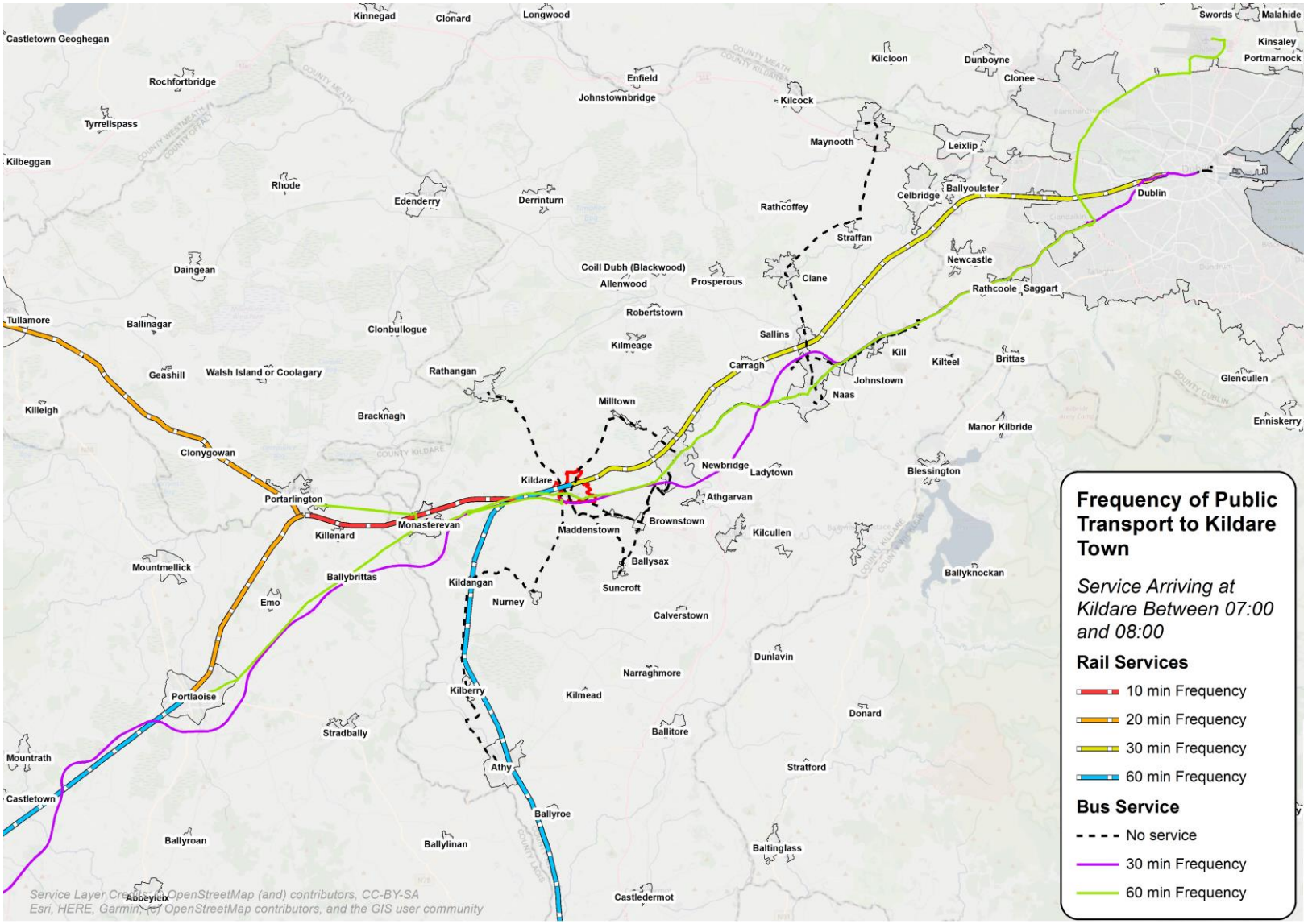



*Figure 8.6 – Frequencies of Public Transport Services for Trips to Kildare Town*

Table 8.7 shows the trip numbers from the top 21 origin locations for work trips to Kildare Town, taken from POWSCAR. The top 21 origin locations equate to 85% of all work trips to Kildare Town. As shown in the table, a large number of work trips to Kildare Town are internal to the settlement, or originate in County Kildare showing the strong relationship with Newbridge and Naas. Table 8.7 also highlights the importance of other towns in close proximity to Kildare Town for work trips such as Rathangan, Monasterevin, Portlaoise, Portarlington and Athy.

*Table 8.7 - Top 21 Origins for Trips to Kildare Town*

| Settlement Name | Inbound Work Trips |
|---|---|
| Kildare | 885 |
| Naas Newbridge Environs | 756 |
| Newbridge | 378 |
| Monasterevin Environs | 293 |
| Rathangan Environs | 274 |
| Athy Environs | 176 |
| Laois Rural | 163 |
| Offaly Rural | 124 |
| Monasterevin | 100 |
| Rathangan | 89 |
| Naas | 84 |
| Portlaoise | 81 |
| Portarlington | 65 |
| Prosperous Environs | 64 |
| Athy | 53 |
| Kilcullen | 39 |
| Enfield Environs | 33 |
| Carlow Rural | 32 |
| Sallins | 24 |
| Wicklow Mtns | 24 |
| North East Kildare County | 23 |

Figure 8.7 shows the origin of work trips to Kildare Town at the settlement level with the frequency of public transport services to Kildare Town between 07:00 – 08:00 also shown. This figure highlights the strong concentration of work trips to Kildare Town which originate within Kildare County and also emphasises the relationship of Kildare Town with the surrounding towns.

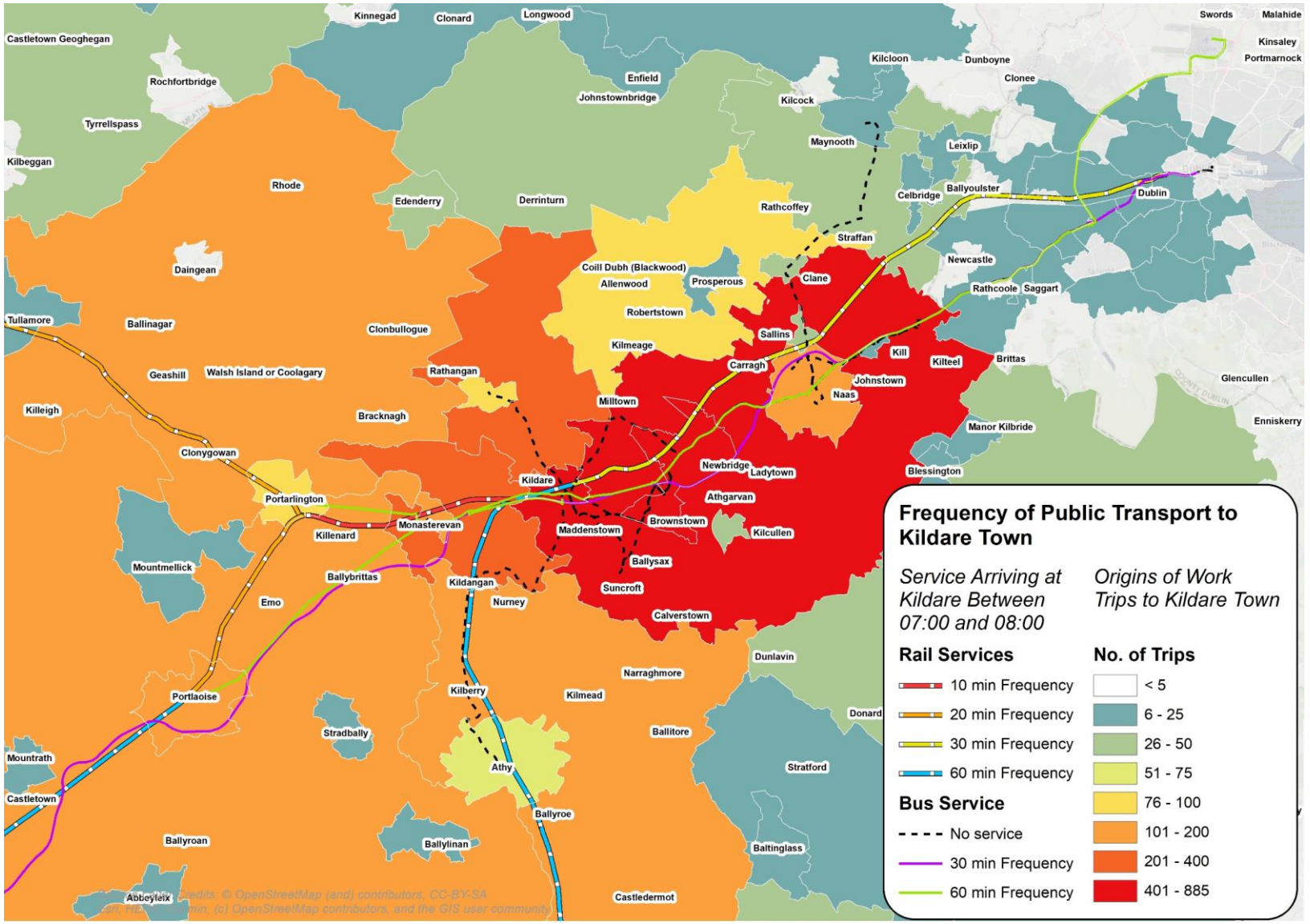



*Figure 8.7 - Frequency of public transport serving Kildare Town between 07:00 – 08:00 for work trips to Kildare Town*

#### 8.1.4.4 Public Transport Access for Inbound and Outbound Trips

Table 8.8 presents a summary of the trip demand to, and from, Kildare town and highlights whether there is a public transport connection for this trip during the 07:00 – 08:00 time period. As shown in the table, 89% of trips have an existing public transport connection, however, the analysis has shown that the frequency of the existing public transport connections during this time period is quite limited on most routes to and from Kildare Town. Some of the locations which are inaccessible include Rathangan, Tallaght, Kilcullen and parts of Offaly.

It should be noted that there is an existing public transport connection to Rathangan via the 126A route operated by Go Ahead, but it does not operate during the 07:00 to 08:00 time period. The 126 also operates a service to Tallaght called the 126T, however, this service operates from Newbridge to Dublin City (via Tallaght) and does not provide a service for residents of Kildare Town. The only locations which aren't served by existing public transport services (over a 24 hour period) from Kildare Town are Tallaght, Kilcullen and Offaly Rural, however, it should be noted that the train line passes through a large portion of the Offaly Rural area.

*Table 8.8 – Summary of Trip Demand to and from Kildare Town*

| Settlement | Outbound Trips | Inbound Trips | Two Way Trip Demand | Existing Public Transport Connection between 07:00 - 08:00 |
|---|---|---|---|---|
| Kildare | 519 | 885 | 1,404 | Y |
| Naas Newbridge Environs | 369 | 756 | 1,125 | Y |
| Newbridge | 394 | 378 | 772 | Y |
| Monasterevin Environs | 24 | 293 | 317 | Y |
| Naas | 228 | 84 | 312 | Y |
| Rathangan Environs | 24 | 274 | 298 | N |
| Athy Environs | 6 | 176 | 182 | Y |
| Laois Rural | 4 | 163 | 167 | Y |
| Offaly Rural | 2 | 124 | 126 | N |
| Monasterevin | 5 | 100 | 105 | Y |
| Portlaoise | 23 | 81 | 104 | Y |
| Rathangan | 8 | 89 | 97 | N |
| Prosperous Environs | 8 | 64 | 72 | Y |
| Athy | 16 | 53 | 69 | Y |
| Portarlington | 3 | 65 | 68 | Y |
| South East Quadrant of Dublin City Centre | 60 | - | 60 | Y |
| Tallaght | 52 | 3 | 55 | N |
| Carlow | 26 | 21 | 47 | Y |
| Kilcullen | 4 | 39 | 43 | N |
| North East Quadrant of Dublin City Centre | 41 | 2 | 43 | Y |
| Two way trip demand with public transport connection | | | 4,845 | 89% |
| Two way trip demand with public transport connection | | | 617 | 11% |

#### 8.1.4.5 Examination of Future Trip Demand

An examination of future trip demand was also undertaken to understand whether the public transport network requires additional capacity to cater for population growth. A future year of 2040 was chosen for this analysis to align with the growth rates from the National Planning Framework. The analysis is based on work and third level trips from Kildare town, and work trips to Kildare town, taken from the CSO's 2016 POWSCAR and factored up to estimate the volume of trips in 2040. This was achieved by

summing the trip demand and multiplying them by population growth. This process used different population growth estimates for inbound and outbound trips:

- Outbound Trips: All outbound POWSCAR trips from Kildare Town were multiplied by 20%, which is the National Planning Framework forecast growth for Kildare Town
- Inbound Trips: All inbound trips from POWSCAR were multiplied by the population growth designated in the National Planning Framework for the origin location

It should be noted that this analysis assumes that the distribution of trips to and from Kildare Town will remain constant up to 2040. The results of this analysis are shown in Table 8.9 which provide the total number of trips between Kildare Town and other settlements in 2016 and 2040. This analysis is used during option development to justify increased frequencies on certain public transport routes.

*Table 8.9 –Growth in Trips between Kildare Town and other Settlements by 2040*

| Settlement/Environ<br>-Destination for Outbound Trips<br>-Origin for Inbound Trips | 2040 Outbound Trips from Kildare Town | | | | 2040 Inbound Trips to Kildare Town | | | | Total 2016 Two-way Trip Demand to/from Kildare Town | Total 2040 Two-way Trip Demand to/from Kildare Town | Trip Growth | Existing Public Transport Connection between Kildare Town and Settlement | Public Transport Service | Outbound Public Transport Frequency | Inbound Public Transport Frequency |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2016 Outbound Trips | Population Growth 2016 to 2040 | Trip Growth | Total Outbound Trip Demand 2040 | 2016 Inbound Trips | Population Growth 2016 to 2040 | Trip Growth | Total Inbound Trip Demand | | | | | | | |
| Kildare Town | 519 | | 102 | 621 | 885 | 20% | 174 | 1,059 | 1,404 | 1,681 | 277 | Y | N / A | | |
| Naas Newbridge Environs | 369 | | 73 | 442 | 756 | 18% | 133 | 889 | 1,125 | 1,330 | 206 | Y | 126e<br>726<br>826<br>883<br>Heuston Train Service | 60 mins<br>60 mins<br>60 mins<br>60 mins<br>7.5 mins | 0<br>60 mins<br>0<br>0<br>30 mins |
| Newbridge | 394 | | 78 | 472 | 378 | 19% | 71 | 449 | 772 | 921 | 149 | Y | 126e<br>726<br>883<br>Heuston Train Service | 60 mins<br>60 mins<br>60 mins<br>7.5 mins | 0<br>60 mins<br>0<br>30 mins |
| Naas | 228 | | 45 | 273 | 84 | 27% | 23 | 107 | 312 | 380 | 68 | Y | 126e<br>726<br>826 | 60 mins<br>60 mins<br>60 mins | 0<br>60 mins<br>0 |
| Monasterevin Environs | 24 | | 5 | 29 | 293 | 15% | 43 | 336 | 317 | 364 | 47 | Y | 126a / 126 | 0 | 0 |
| Rathangan Environs | 24 | | 5 | 29 | 274 | 16% | 43 | 316 | 298 | 345 | 48 | N | 126 | 0 | 0 |
| Athy Environs | 6 | | 1 | 7 | 176 | 11% | 20 | 195 | 182 | 202 | 21 | Y | Waterford Train Service<br>Local Link 883 | 60 mins<br>0 | 60 mins<br>60 mins |
| Laois Rural | 4 | | 1 | 5 | 163 | 18% | 30 | 193 | 167 | 197 | 30 | Y | Dublin Coach 300<br>Dublin Coach 726 | 30 mins<br>30 mins | 30 mins<br>60 mins |
| Offaly Rural | 2 | | 0 | 2 | 124 | 15% | 18 | 142 | 126 | 144 | 19 | N | Athlone Train Service | 0 | 20 mins |
| Portlaoise | 23 | | 5 | 28 | 81 | 21% | 17 | 98 | 104 | 126 | 22 | Y | Portlaoise Train Service | 60 mins | 10 mins |
| Monasterevin | 5 | | 1 | 6 | 100 | 17% | 17 | 117 | 105 | 123 | 18 | Y | Portlaoise Train Service<br>826 Bus Service | 60 mins<br>60 mins | 10 mins<br>60 mins |
| Rathangan | 8 | | 2 | 10 | 89 | 13% | 12 | 100 | 97 | 110 | 13 | N | 126 | 0 | 0 |
| Athy | 16 | | 3 | 19 | 53 | 20% | 10 | 63 | 69 | 82 | 13 | Y | Waterford Train Service<br>Local Link 883 | 60 mins<br>0 | 60 mins<br>60 mins |
| Portarlington | 3 | | 1 | 4 | 65 | 18% | 12 | 77 | 68 | 80 | 12 | Y | Athlone Train Service | 0 | 20 mins |
| Prosperous Environs | 8 | | 2 | 10 | 64 | 9% | 6 | 70 | 72 | 80 | 8 | Y | | | |
| South East Quadrant of Dublin City Centre | 60 | | 12 | 72 | - | 17% | 0 | - | 60 | 72 | 12 | Y | 126e | 60 mins | 0 |
| Tallaght | 52 | | 10 | 62 | 3 | 21% | 1 | 4 | 55 | 66 | 11 | N | No Service | 0 | 0 |
| Carlow | 26 | | 5 | 31 | 21 | 16% | 3 | 24 | 47 | 55 | 8 | Y | Waterford Train Service | 60 mins | 60 mins |
| North East Quadrant of Dublin City Centre | 41 | | 8 | 49 | 2 | 21% | 0 | 2 | 43 | 51 | 8 | Y | 126 | 0 | 0 |
| Maynooth | 27 | | 5 | 32 | 14 | 35% | 5 | 18 | 41 | 51 | 10 | Y | Num14 | 60 mins | 0 |
| Kilcullen | 4 | | 1 | 5 | 39 | 18% | 7 | 45 | 43 | 50 | 8 | N | No Service | | |

20%

## 8.2 Bus Transfer Point Options and Assessment

This section identifies a range of potential locations for a bus transfer point in Kildare Town. The MCA provides an initial high-level assessment of available options in order to identify the preferred location for the bus transfer point which meets the strategy objectives.

Table 8.10 presents a summary of the MCA criteria used and the summary of issues considered when assessing each of the four transfer points.

*Table 8.10: Multi-Criteria Analysis – Assessment Criteria*

| MCA criteria | Summary of Issues Considered |
|---|---|
| Economy | Considers the cost of the project, potential returns, journey time savings and other transport indicators |
| Integration | Studies the accordance of the measure with local planning policies and integration in respect to land-use activities and other strategy proposals |
| Accessibility/ Social Inclusion | Considers the impact on accessibility to key trip destinations, social inclusion for marginalised groups and interchange between transport modes |
| Safety | Anticipates the impact of the measure on safety issues and collisions |
| Environment | Considers the impact of the measure on the natural and built environment |
| Physical Activity | Assesses the impact of the measure on walking and cycling |

The MCA is a direct comparison across each of the four options with the purpose of selecting a short-term option capable of being implemented within 1-2 years and also a medium to long term option which could be implemented within 3-10 years.

### 8.2.1 Bus Transfer Point Option Development

A bus transfer point is a location where multiple bus routes overlap, and passengers can transfer from one bus service to another service to reach their final destination. Bus transfer point designs vary from on-street bus stops with multiple overlapping routes, to larger off-road bus stations which provide a dedicated facility for bus passengers to transfer. In the context of Kildare Town, a transfer point would likely resemble a high quality bus stop with covered seating and transport information which will provide passengers a comfortable facility to transfer between services. Generally, a bus transfer point should be sited in a central location where there is a large volume of passengers, good accessibility for active modes and sufficient parking. When considering options for potential bus transfer point sites in Kildare Town, the following criteria were considered:

- The location should be able to serve inter-city coaches and local bus routes
- The location should allow for supporting bus priority measures
- The location should have sufficient space for multiple bus bays
- The land should be free from development or suitable for a change of use
- The location should be central and near key trip attractors

In total, four possible locations were identified as bus transfer point options which met the broad criteria above, these potential sites for a bus transfer point are shown in Figure 8.8.

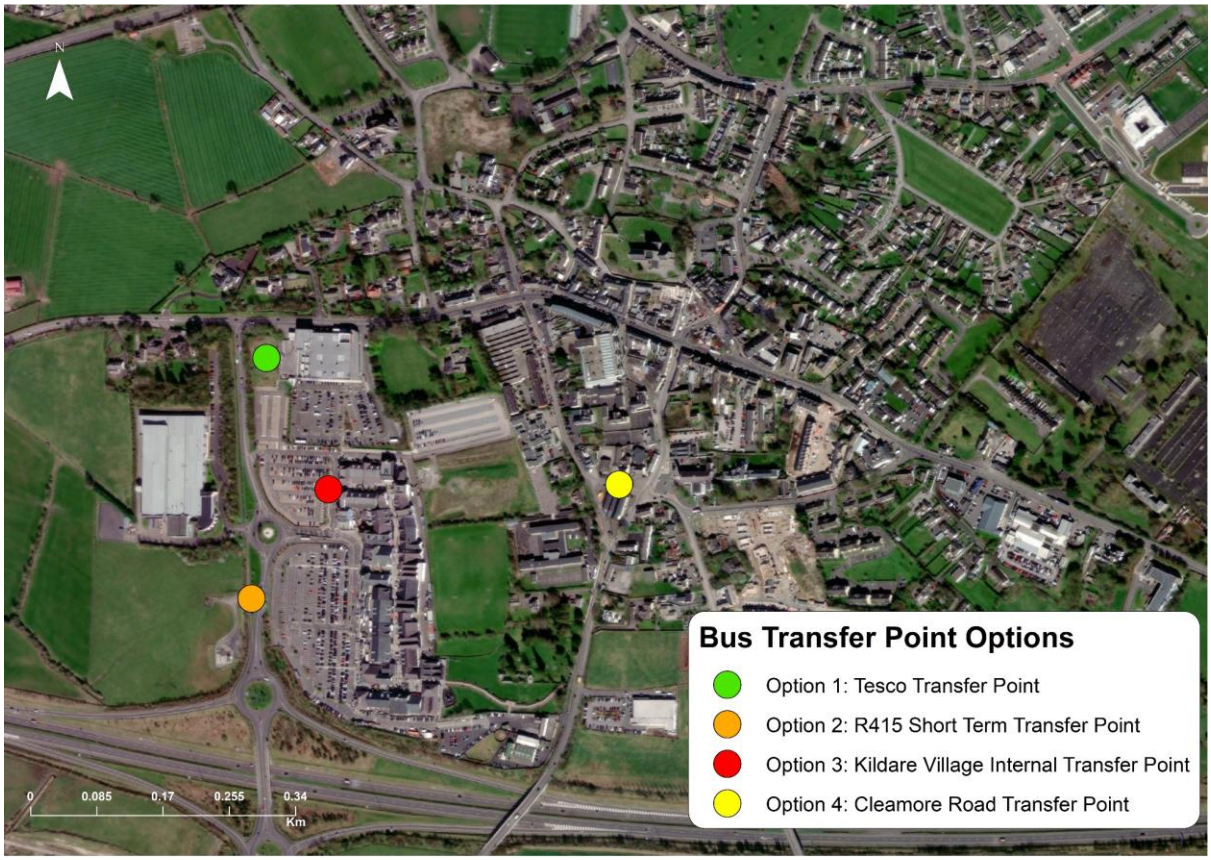



*Figure 8.8 Location of Potential Bus Transfer Point Options*

### 8.2.2 Bus Transfer Point Options

#### 8.2.2.1 Option 1: Transfer Point Adjacent to Tesco

This bus transfer point option involves acquiring a parcel of greenfield land adjacent to the Tesco store at the junction of the R415 and R445 for the construction of a new bus transfer point to serve Kildare Town. This option would allow for interchange between the 126 commuter service and the inter-city service operated by Dublin Coach. This would be achieved by extending the 126 from Market Square to the new transfer point and the intercity service operated by Dublin Coach further north to the transfer point, as shown in Figure 8.9. Other bus services could avail of this transfer point such as the Local Link 883 service. Coach parking could also be provided at the transfer point to allow for day trips to Kildare Village with shuttle services operating to National Stud. While this proposed transfer point is located on the periphery of the town, the location is necessary to attract intercity coaches (which will not divert via the Town Centre). Existing local bus services will serve most of Kildare town on the way to / from the transfer point, providing access to the transfer point for most people.

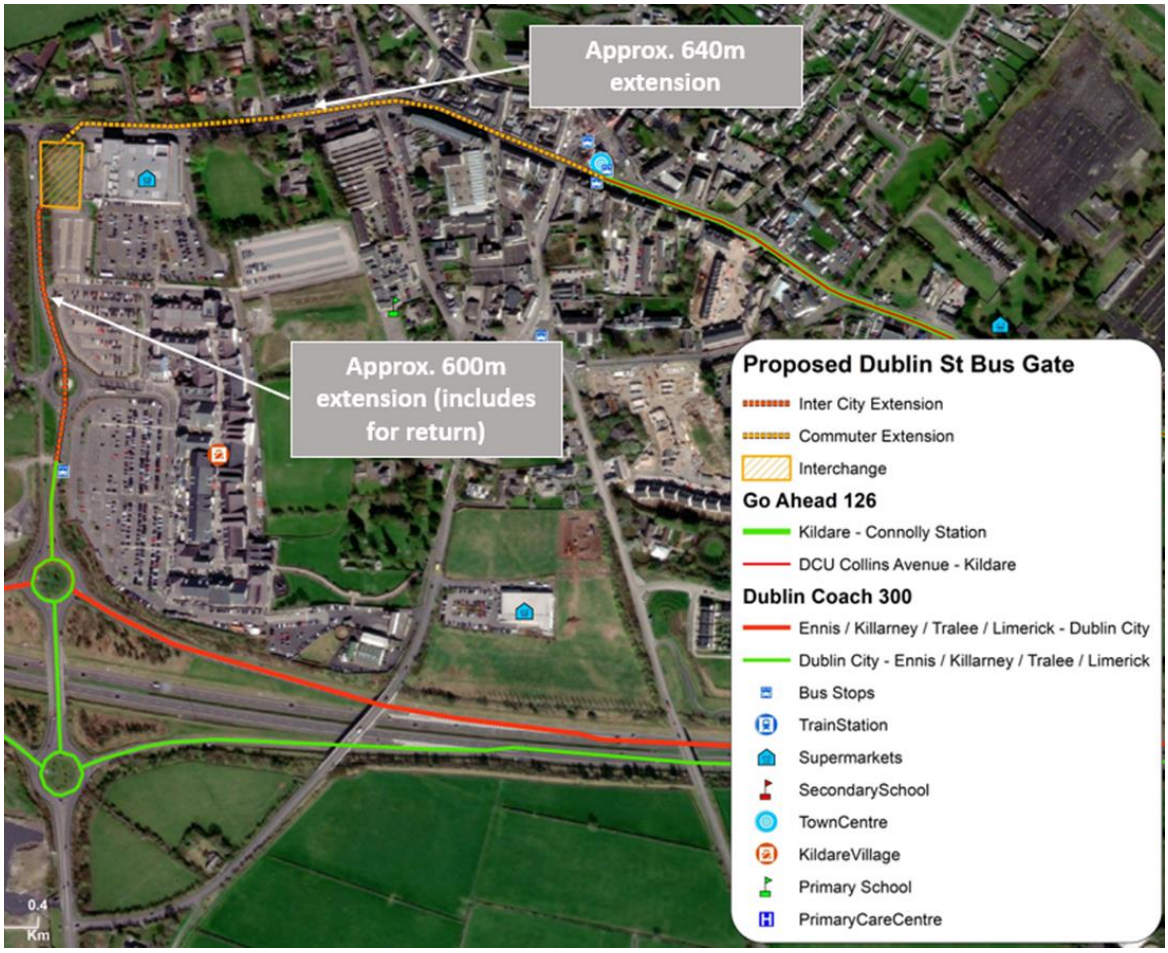



*Figure 8.9 Option 1 Tesco Bus Transfer Point*

#### 8.2.2.2 Option 2: Kildare Retail Village Transfer Point

This option extends the 126 to the existing inter-city bus stop outside of Kildare Retail Village (Figure 8.10). This would allow for better integration of commuter and inter-city services without the costs associated with a purpose-built transfer point facility as outlined in Option 1. This option would require a new bus stop and lay-by facility on the northbound section of the R415 opposite the existing Kildare Retail Village bus stop. This would allow the 126 to terminate and layover at this location by turning around at the M7 junction roundabout. To support this option, additional bus stops would be provided along the extended route of the 126, improving public transport access on the western side of Main Street for Kildare town residents and enhancing connectivity to the retail village.

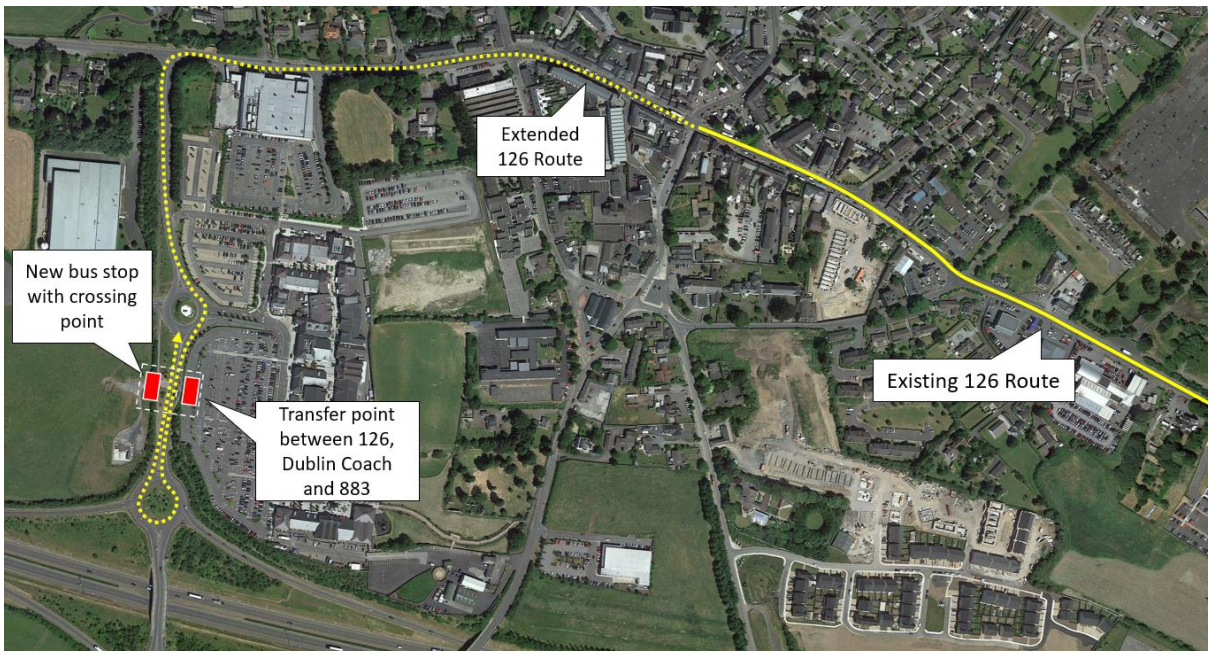



*Figure 8.10: Option 2 Overview*

#### 8.2.2.3 Option 3: Kildare Village Road Internal Transfer Point

This option involves extending both the 126 operated by Go Ahead and the inter-city services operated by Dublin Coach to serve an internal transfer point within Kildare Village. Figure 8.11 shows how this arrangement would operate.

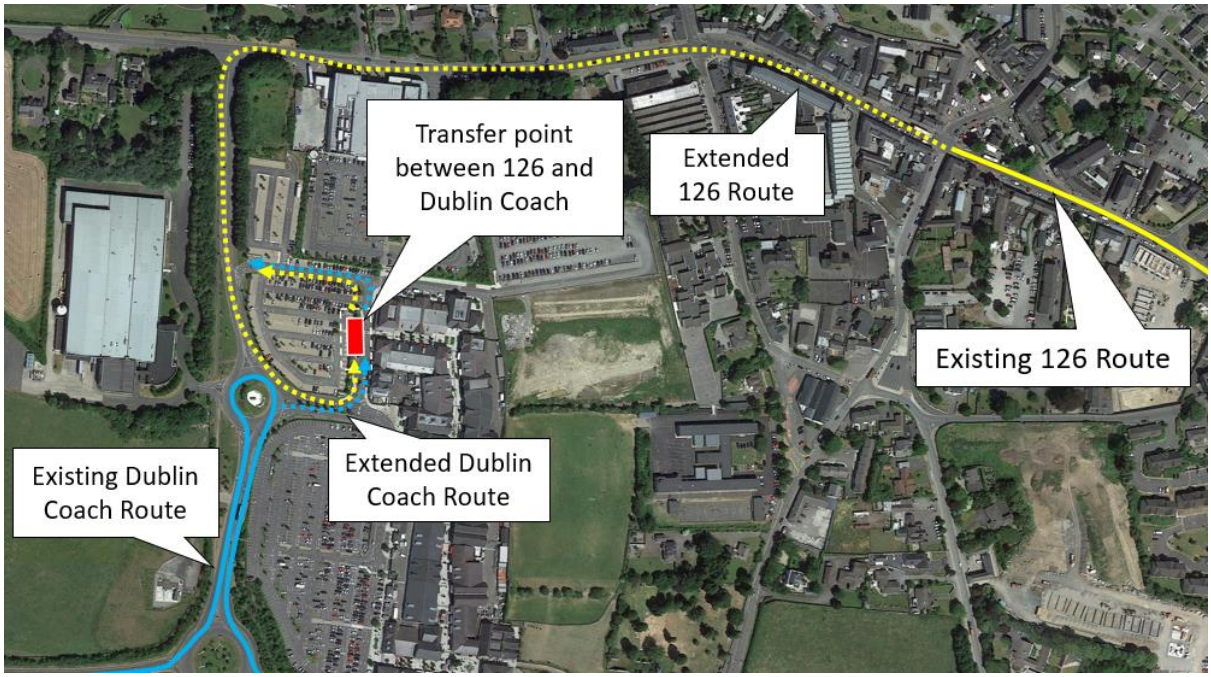



*Figure 8.11: Overview of Option 3*

#### 8.2.2.4 Option 4: Cleamore Road Transfer Point

This option involves extending the current route 126 operated by Go Ahead down Bride Street, to terminate at CMWS Hall Kildare on Cleamore Road. This option would require the removal of on street parking on Cleamore Road to allow for a layover facility. The 126 would then travel along Cleamore Road and turn onto the Main Street to serve Market Square as shown in Figure 8.12. This option would bring the 126 terminus closer to the existing pedestrian entrance to Kildare Village and also to the planned pedestrian entrance to be delivered as part of the phase 3 expansion of Kildare Village. This option would also involve extending the inter-city services operated by Dublin Coach to serve an internal bus stop provided within Kildare Village. Through the phase 3 permeability link, passengers would be able to transfer from commuter and inter city services.

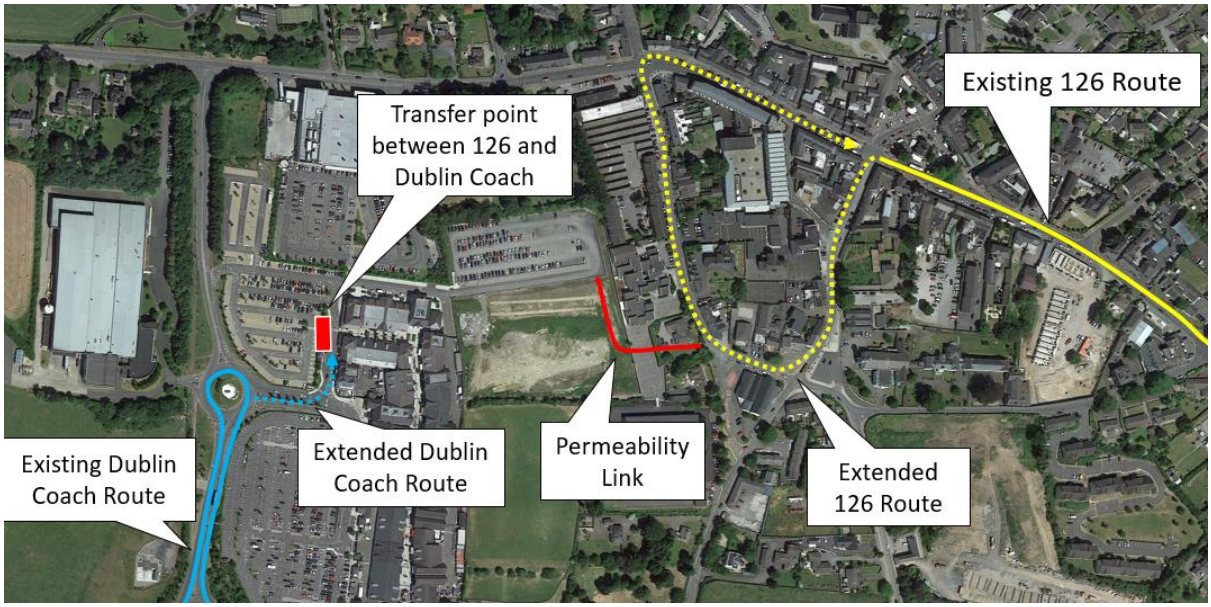



*Figure 8.12: Cleamore Road Transfer Point*

### 8.2.3 Bus Transfer Point Options Assessment

The bus transfer point options are assessed according to the six CAF criteria in the outline MCA shown in Table 8.12. This table summarises the impact of each option according to the assessment criteria. The assessment considers the relative merit of each option according to the seven-point scale presented in Table 8.11. The analysis presented is outline in nature and will require further detailed examination as part of separate study.

*Table 8.11: MCA Colour Coded Ranking Scale*

| Colour | Description |
|---|---|
| | Major or highly positive |
| | Moderately positive |
| | Minor or slightly positive |
| | Not significant or neutral |
| | Minor or slightly negative |
| | Moderately negative |
| | Major or highly negative |

*Table 8.12: Multi-Criteria Analysis of Bus Transfer Point Options*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome | Summary Justification |
|---|---|---|---|---|---|---|---|---|
| Option 1: Transfer Point Adjacent to Tesco | | | | | | | | The financial cost of this option would be considerably high due to site acquisition costs. However, it would deliver benefits of integrating inter-city and commuter services. The integration of bus services would deliver environmental and physical activity benefits. With the largest benefits for access and social inclusion and integration of public transport services. |
| Option 2: Kildare Retail Village Transfer Point | | | | | | | | This option would deliver integration of commuter and inter-city services at a fraction of the cost of the Tesco bus transfer point option. Integration of both service types will encourage more sustainable commuting by bus/coach, which would result in environmental benefits. This option would also help to improve access and social inclusion and assist in the integration of public transport services in Kildare Town, resulting in increased use of sustainable modes and associated increase in physical activity. |
| Option 3: Kildare Village Road Internal Transfer Point | | | | | | | | This option would deliver integration of commuter and inter-city services within Kildare Village. Integration of both service types will encourage more sustainable commuting by bus/coach, which would result in environmental benefits. This option would also help to improve access and social inclusion and assist in the integration of public transport services in Kildare Town resulting in increased use of sustainable modes and associated increase in physical activity. |

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome | Summary Justification |
|---|---|---|---|---|---|---|---|---|
| Option 4: Cleamore Road Transfer Point | | | | | | | | This option integrates inter-city and commuter bus services by way of a permeability link and it may result in increased bus journey times due heavy school traffic at drop off and pick up times. This would affect the reliability and journey times of the 126 which may reduce accessibility. There would be some modest construction costs involved in creating the bus transfer point which would affect economy. |

### 8.2.4 Preferred Bus Transfer Point Location

The Multi-Criteria Analysis clearly discounts Option 1, the Tesco transfer point, with the MCA highlighting that it provides clear benefits to the town, but it is not as favourable as the other options due to the high cost of investment. Similarly, Option 4 was discounted as it would affect the reliability and journey times of the 126 bus which may reduce accessibility.

Overall, Options 2 and 3 are shown to provide similar net benefits to Kildare town with major integration and accessibility benefits produced by providing for local and inter-city bus transfers. Therefore, these 2 options will form the short and medium-long term bus transfer points for Kildare Town. It should be noted that implementation of Option 3 is contingent on the opening of the permeability link that would connect Kildare Village with Academy Street and the Cleamore Road area of Kildare Town. In order to ensure that this permeability link is implemented, Kildare County Council will work with the owners of Kildare Retail Village to expedite the delivery of the permeability link to Cleamore Road prior to the development of the bus transfer point within the Retail Village. Option 2 is the short term transfer solution, which involves adding a new bus stop opposite the existing Kildare Retail Village bus stop, which can be implemented immediately. Option 3 is viewed as the medium-long term solution.

## 8.3 Public Transport Options Description and Assessment

The public transport options are assessed according to the six CAF categories in individual MCA assessments. The criteria used to assess the options in each MCA are outlined in Table 8.13. The MCA is informed by the baseline review and the analysis in the public transport context section, but it is primarily a qualitative high-level assessment to identify the options which will most contribute to achieving the project objectives.

*Table 8.13 Criteria Used in MCA Assessment*

| MCA criteria | Summary of Issues Considered |
|---|---|
| Economy | Considers the cost of the project, potential returns, journey time savings and other transport indicators |
| Integration | Studies the accordance of the measure with local planning policies and integration in respect to land-use activities and other strategy proposals |
| Accessibility/ Social Inclusion | Considers the impact on accessibility to key trip destinations, social inclusion for marginalised groups and interchange between transport modes |
| Safety | Anticipates the impact of the measure on safety issues and collisions |
| Environment | Considers the impact of the measure on the natural and built environment |
| Physical Activity | Assesses the impact of the measure on walking and cycling |

The MCA assessment is completed separately for each option because the options are not directly comparable, and they must be assessed on their individual merit in respect to the project objectives and assessment criteria. In the MCA, the relative merit of each option is rated according to the seven-point colour scale presented in Table 8.14.

*Table 8.14 MCA Colour Coded Ranking Scale*

| Colour | Description |
|---|---|
| | Major or highly positive |
| | Moderately positive |
| | Minor or slightly positive |
| | Not significant or neutral |
| | Minor or slightly negative |
| | Moderately negative |
| | Major or highly negative |

### 8.3.1 Option 1: Bus Gate on Main Street

#### 8.3.1.1 Option Description

Option 1 proposes a bus gate along a section of Main Street near Market Square to provide for shorter journey times on the bus route 126 and increased reliability. To support this measure, a number of turns are banned to stop large volumes of traffic rerouting through Market Square. The bus gate option and supporting traffic management measures are explained in the sketch provided in Figure 8.13

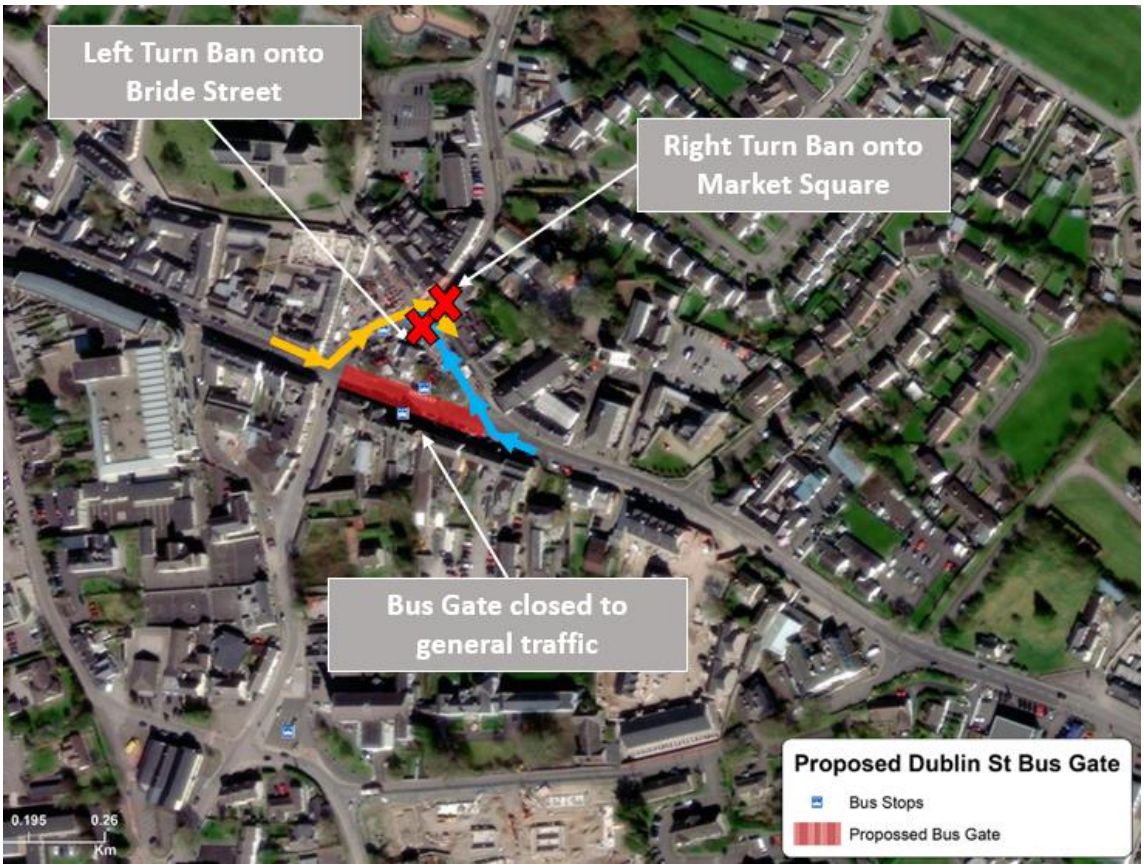



*Figure 8.13: Diagram of Bus Gate and Supporting Traffic Measures*

#### 8.3.1.2 Option Testing

To inform the MCA process, the bus gate was tested in the VISUM Local Area Model to compare the 2025 Do-Something (DS) scenario with the Do-Minimum (DM) scenario without the bus gate. The difference in traffic flow between the DS bus gate scenario and the DM is shown in Figure 8.14 for the AM peak in 2025. In these images, reduction in traffic flow is shown as green lines and an increase in traffic flow is shown in red. This shows that traffic volumes have reduced on the Main Street as intended as a result of the bus gate but that most of the diverted vehicles have rerouted onto lower capacity roads such as Meadow Road or the Tully Road-Hospital Street link road. Particularly, in the case of the Tully Road-Hospital Street link road, this is a residential street which is not equipped to handle the volume of rerouted traffic and this may present a safety issue.

*Figure 8.14: Difference in Traffic Flow 2025 due to Bus Gate – AM Peak*

#### 8.3.1.3 Option Assessment

The Main Street bus gate would require a small amount of infrastructure investment, However, the surrounding road network cannot absorb the diversion of this volume of traffic; causing a severe economic impact on the town centre. The Bus Gate is likely to have negative impacts on safety and environment pushing cars onto residential roads in order to avoid the town centre, adding to journey times and increasing traffic levels on less suitable roads. The impact on public transport accessibility would be positive, while the impact on the private car/HGVs will be very negative; resulting in a neutral score. This option would help with the integration of bus services but overwhelming the surrounding road network with excessive traffic flows would harm the local economy and hinder town centre regeneration. Reducing traffic on the Main Street could promote a small increase in physical activity. Supporting infrastructure in the form of distributor roads would be required for this option to be workable.

*Table 8.15: Multi Criteria Analysis of Bus Gate on Main Street*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| Option 1: Bus Gate on Main Street | | | | | | | |

### 8.3.2 Option 2: Improve Quality of Bus Stops and Coverage

#### 8.3.2.1 Option Description

This option recommends that all bus stops should be formalised in the town to have a minimum standard of infrastructure to improve legibility and promote public transport use. This option introduces a minimum standard which ensures that each bus stop consists of a safe waiting area, a clearly identifiable bus stop pole and timetable information. At key locations such as; the Market Square, the new transfer point at Kildare Village and the train station; the existing bus stops should be upgraded to ensure there is a shelter for passengers with lighting and Real Time Passenger Information (RTPI) signs. As part of this improvement, a number of additional bus stops will be added to expand the bus passenger catchment e.g. new bus stops along the extended 126 route to Kildare Retail Village. A new bus stop will also be created on the R445 Rowanville near Chapmans garage on the route of the 126. It is also proposed that the existing bus stop at Kildare Town train station be upgraded to a minor bus/rail transfer hub with a shelter and live departure information for bus and rail services.

#### 8.3.2.2 Option Assessment

Upgrading bus stops would require investment, but the potential boost in patronage as a result of improved bus stop infrastructure and passenger information may offset some of this expenditure. At present, there are few formal bus stops and creating suitable stop infrastructure would improve safety for pedestrians and increase the visibility of public transport services to enhance accessibility. Improving bus stop infrastructure may increase the number of people using the service and this will have a modest benefit on the environment. Improving the quality of bus stops will encourage social inclusion and accessibility for marginalised groups. Providing timetable information at bus stops would increase the potential for public transport interchange which would aid integration. Improved bus stops may attract walkers/cyclists and boost physical activity.

*Table 8.16: Multi Criteria Analysis of Improved Quality and Coverage of Bus Stops*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| Option 2: Improve Quality of Bus Stops and Coverage | | | | | | | |

### 8.3.3 Option 3: Work with the NTA for More Frequent Bus Services

#### 8.3.3.1 Option Description

This option commits Kildare County Council to work with the NTA to improve the frequency of bus services that serve Kildare Town. This option has been informed the public transport and trip analysis presented in Section 8.1.4.5. As shown in the Public Transport Context section, there is significant trip demand to/from Kildare town and a number of key destinations. The analysis shows that Newbridge and Naas, and their environs, are big trip destinations for Kildare Town residents with similarly high levels of demand for trips to Kildare Town from these destinations. The 126 service offers local connections to both Newbridge and Naas as well as longer distance trips to Dublin City Centre. It is proposed that the frequencies on the 126 would be increased to make it a more attractive and convenient service for those traveling to Newbridge, Naas or Dublin City Centre. Greater frequency on Route 126 will also increase the potential for interchange with inter-city Dublin Coach services via the bus transfer point identified in Section 8.2.4.

This option involves increasing the departures on the 126 to it make more frequent at peak and off peak times with a minimum frequency of 15 minutes proposed in Kildare Town across the day. It is envisioned this simplified and increased departure times would help to make the service more attractive to potential users. Increased frequencies on departures from Kildare Town in the morning peak commencing at 06:30 until 10:00 are required. In the evening peak period, additional services for the outbound direction from Dublin City Centre to Kildare town, 16:00 to 20:00 are also required on the 126.

In addition to improving frequencies on the 126, it is also proposed to improve the all-day frequencies on the on Local Link 883 Athy-Kildare-Newbridge. Within Kildare Town, people can use this service to travel from the train station to the town centre and Kildare Retail Village. Currently the 883 only as 4 departures in each direction across the day and it is hoped that this could be improved to a minimum 30 minute frequency across the day and potentially better frequencies at peak times. In addition to the demand shown for commuting trips between Kildare Town and Athy in Table 8.9, there will also be non-work trips, retail trips and leisure trips which are not included in these figures.

Table 8.9 highlights that there is significant demand for trips to and from Kildare town to surrounding towns. In addition to the 126 and 883, there may also be scope for improving other bus services that serve Kildare Town. KCC will work with the NTA to explore opportunities to improve the other bus services that serve Kildare Town.

These timetable improvements will deliver a greatly improved bus service for the people of Kildare Town and they will result in significantly increased bus capacity, greater frequency of services and improved reliability in respect to timetabling.

#### 8.3.3.2 Option Assessment

Improving bus services would involve a financial cost, but this may be partially offset by an increase in passengers and revenue which may occur from enhancing passenger services. A modest safety and physical activity benefit could occur from attracting mode transfer from the private car and encouraging walking to bus stops. Larger environmental and accessibility benefits may result from improved bus services and a greater number of people travelling by bus.

*Table 8.17: Multi Criteria Analysis of More Frequent Bus Services*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| Option 3: More Frequent Bus Services | | | | | | | |

### 8.3.4 Option 4: Relocation of Kildare Town Train Station

#### 8.3.4.1 Option Description

As part of the strategy, the relocation of the Kildare Town Train Station was considered to a site further east of the existing station. Figure 8.15 shows the location of the existing station and the proposed location.


*Figure 8.15: Proposed New Location for Kildare Town Train Station*

#### 8.3.4.2 Analysis

In order to assess the catchment impact of relocating the train station, the new station location was assessed using ArcGIS to determine the 1km catchment of the proposed station location. A 1km catchment equates to a 10-15-minute walk depending on walking pace and this is considered a reasonable distance for someone to walk to access a train station. A 1km catchment was generated for the new station location and this catchment was generated using a path network which includes the permeability measures proposed in the Kildare Town Transport Strategy as detailed in Section 11.1. The permeability strategy path network was used in this assessment in order to give the proposed new station location the best possible catchment performance. Once the 1km walking catchment was generated, it was quantified using GeoDirectory to determine the number of residential and commercial buildings within the catchment, as shown in Figure 8.16.

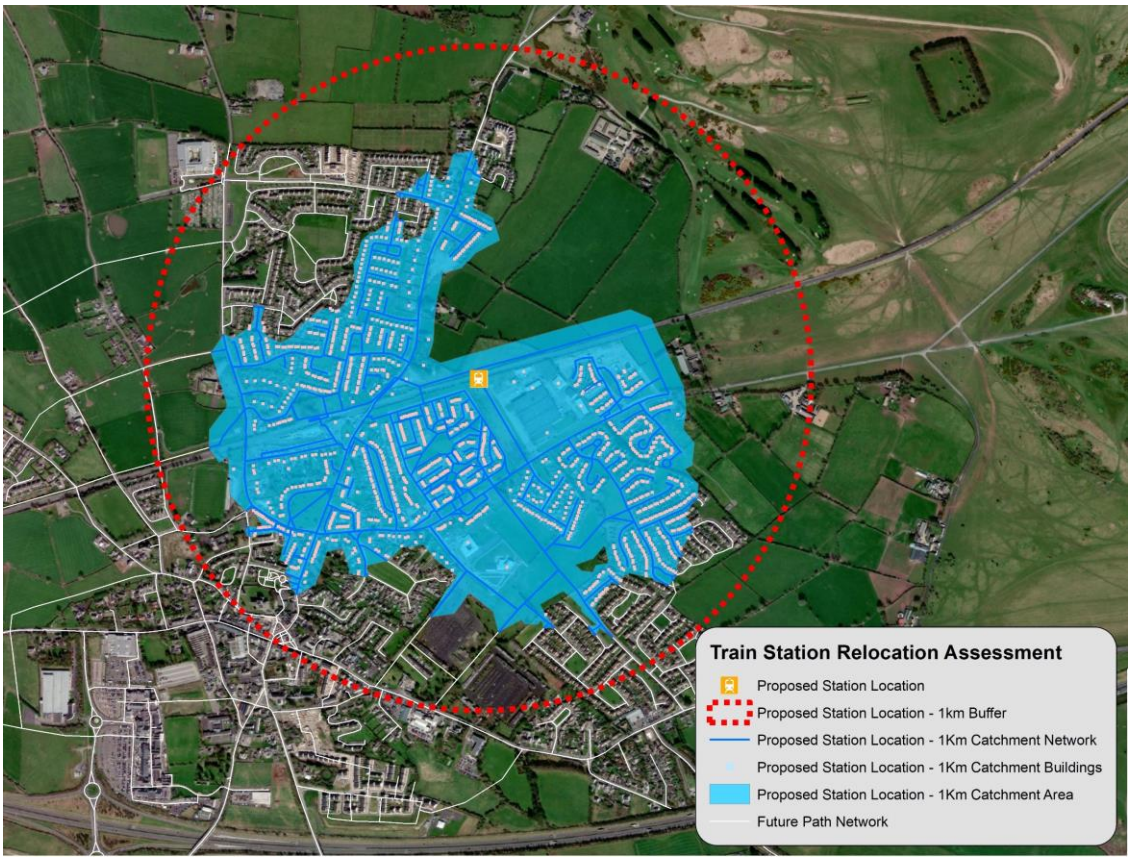



*Figure 8.16: Train Station Relocation Assessment*

The catchment of the relocated station was then compared with the existing train station location catchment which was also generated using the future path network. The results of this comparison are shown in Table 8.18.

*Table 8.18: Comparison of station catchments*

| Catchment | Residential / Commercial Address Points |
|---|---|
| Train Station -Existing - 1km | 1,594 |
| Train Station -Proposed - 1km | 1,423 |
| Difference | -171 |
| % Difference | -12% |

As can been seen from Table 8.18, the proposed station location results in a smaller catchment with the proposed location having 12% less residential / commercial address points within its catchment. Figure 8.16 highlights that the proposed location does not serve the town centre or Kildare Retail Village within its 1km walking catchment. It also highlights that a portion of the eastern unconstrained 1km catchment encompasses the Curragh Plains. The Curragh Plains are protected from development meaning that these lands would not become available for development constraining the potential for the proposed station location to improve its catchment in the future. Furthermore, the lands to the north of the proposed station location will remain undeveloped as they are zoned as 'green belt' and this will mean the catchment will not grow over time. The primary residential growth area of Kildare town is in the north-west and the existing train station location will be much closer to these new residential areas which will strengthen its catchment and boost the potential patronage on trains.

#### 8.3.4.3 Option Assessment

The cost of relocating the train station would be considerable given land acquisition costs and the construction of a new station building, platforms, car park, signals and crossovers. The location of the new station would result in a slight reduction in personal safety on platforms given it is a more remote location with less passive surveillance. Construction of a new station on a greenfield site would have a negative impact on the environment and a weaker catchment would reduce the number of people using rail. The reduction in train station accessibility will have a negative impact on social inclusion and accessibility for marginalised groups. A less accessible station may attract less walkers/cyclists travelling to the train station, decreasing physical activity.

As can been seen from Table 8.18 and Table 8.19, the proposed relocation of the train station does not perform strongly in terms of catchment or in the MCA and as such it is not considered a credible option to be brought forward in the strategy. It is proposed to retain the existing location of the train station as the optimal location as it serves a larger catchment and also provides better access to key destinations within the town such as the town centre and Kildare Retail Village.

*Table 8.19: Multi Criteria Analysis of Relocation of Kildare Town Train Station*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| Option 4 - Relocation of Kildare Town Train Station | | | | | | | |

### 8.3.5 Option 5: Work with the NTA for Northern Entrance to Kildare Town Train Station

#### 8.3.5.1 Option Description

At present, there is no northern entrance to Kildare Town Train Station, and this limits the walking catchment to the housing estates in the north of the town (Figure 8.17).


*Figure 8.17: No Access to Kildare Town Train Station from the North*

The northern entrance proposal would be integrated with the proposed permeability and greenway strategy to ensure that access to the housing estates to the north is significantly improved and access from future development to the east and west is provided for via the greenway. The vacant site to the north of the new entrance allows for a small amount of infill development to take place, this could include community infrastructure such as a playground or community hall to ensure that there is passive surveillance of the new train station entrance and paths. The various elements of Option 5 are shown in Figure 8.18.

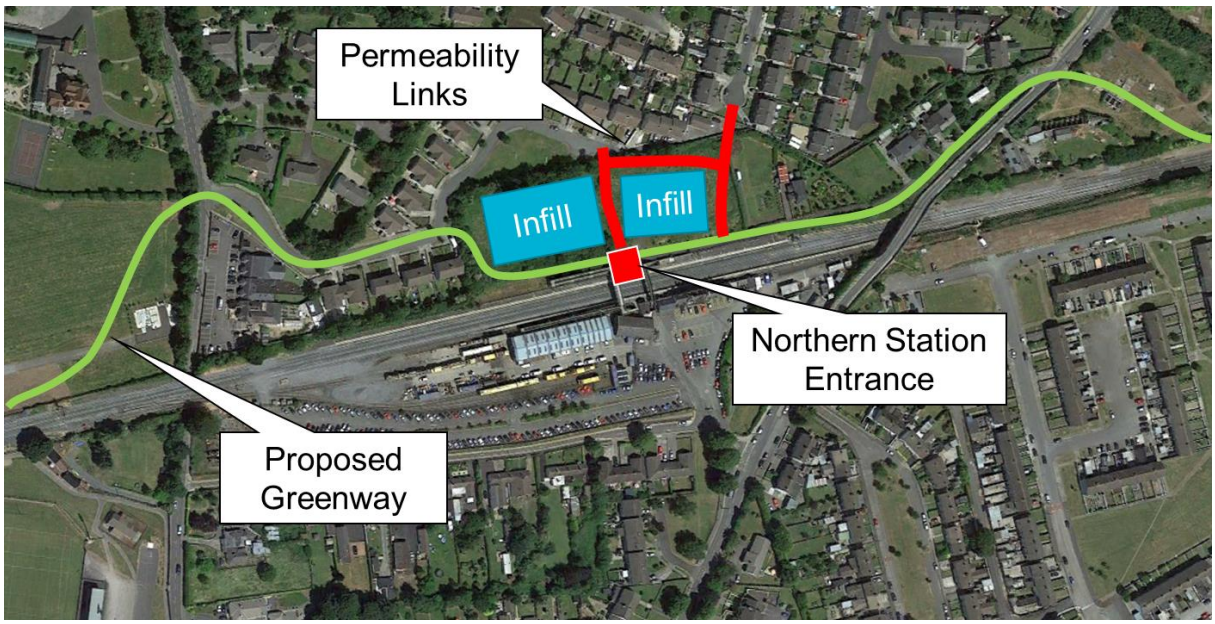



*Figure 8.18 Northern Train Station Entrance*

### 8.3.5.2 Option Assessment

Installing a northern access to the Kildare Town Rail Station would involve a financial cost, but this may be partially offset by an increase in passenger numbers as a result of the station being easier to reach. At present, there is only a southern entrance to the train station, so a northern access would enhance accessibility. Improving station access may increase the number of people using train services and this will have a modest benefit on the environment through mode transfer. Improving access will encourage social inclusion and accessibility for marginalised groups. A more accessible station may attract walkers/cyclists and boost physical activity.

*Table 8.20: Multi Criteria Analysis of Northern Entrance to Kildare Town Train Station*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| Option 5: Northern Entrance to Kildare Town Train Station | | | | | | | |

### 8.3.6 Option 6: Work with the NTA for Train Station Upgrade

#### 8.3.6.1 Option Description

At present, Kildare Town Train Station does not have lifts to allow access by wheelchairs, people with limited mobility or prams. Instead, a long wheelchair ramp is provided to allow users to transfer platforms and this arrangement is not ideal. The wheelchair ramp at the station is shown in Figure 8.19. In addition to access issues, there is also insufficient cycle parking or passenger shelters at the station.

*Figure 8.19: Existing Ramp Kildare Town Train Station*

This option proposes that Kildare County Council will work with the NTA to upgrade the train station by providing lifts to transfer between platforms, additional shelters, smart card tag on/off machines and extra cycle parking. This will make the train station universally accessible and increase the appeal of rail travel. As part of the detailed design of this option, an accessibility audit will be completed to improve access for all users to the train station.

#### 8.3.6.2 Option Assessment

Station upgrades would incur financial cost, but these changes are necessary to allow universal access. Eliminating the long ramps used for wheelchair/pram access would improve safety. Greater cycle parking would encourage more cycling to the station and potentially reduce driving. Accessibility and social inclusion would be improved with the implementation of lifts. This policy is integrated with other measures intended to boost rail patronage.

*Table 8.21: Multi Criteria Analysis of Train Station Upgrade*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| Option 6: Train Station Upgrade | | | | | | | |

### 8.3.7 Option 7: Work with the NTA for More Frequent Rail Services

#### 8.3.7.1 Option Description

This option proposes that KCC will work the NTA to deliver more frequent rail services to Kildare Town train station. This option has been informed the public transport and trip analysis presented in Section 8.1.4.5. It is anticipated that this option will ensure a minimum of a 15-minute frequency inbound to Dublin during the 6.30am – 10am morning peak, and outbound from Dublin during the 5pm – 8pm evening peak. Peak rail services at Kildare Town Train station are relatively frequent, but the frequency can vary from under ten minutes to over half an hour, this can be observed in Table 8.22. Increased rail frequencies could be achieved through the extension of Phoenix Park Tunnel Services to Kildare Town. This option was informed by the public transport and trip analysis undertaken in the Public Transport Context Section.

*Table 8.22: Proposed Additional Rail Services*

| Direction | Timetable | < 07:00 | 07:00 - 08:00 | 08:00 - 09:00 | 09:00 - 10:00 | 10:00 - 11:00 | 11:00 - 12:00 | 12:00 - 13:00 | 13:00 - 14:00 | 14:00 - 15:00 | 15:00 - 16:00 | 16:00 - 17:00 | 17:00 - 18:00 | 18:00 - 19:00 | 19:00 - 20:00 | > 20:00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Inbound | Existing Services | 4 | 7 | 3 | 2 | 1 | 1 | 2 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 5 |
| | Additional Services | | | 1 | 2 | 1 | 1 | | 1 | | 1 | | | 1 | | |
| | Proposed Timetable | 4 | 7 | 4 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 5 |
| Outbound | Existing Services | 0 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 3 | 2 | 4 | 3 | 3 | 5 |
| | Additional Services | 4 | | | 1 | | 1 | 1 | 1 | 1 | -1 | | | 1 | 1 | |
| | Proposed Timetable | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 4 | 4 | 5 |

#### 8.3.7.2 Option Assessment

Improving the regularity of peak rail services will involve additional operating costs which would be partly offset by the fact that there is excess demand for rail travel at present which would use the new services and generate revenue. Modest mode transfer from the private car would provide a small environmental, physical activity and safety benefit. Improved rail frequency would enhance accessibility to/from Kildare Town.

*Table 8.23: Multi Criteria Analysis of More Frequent Rail Services*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| Option 7: More Frequent Rail Services | | | | | | | |

### 8.3.8 Summary of MCA Results

Table 8.24 provides a summary of the MCA colour coding across every public transport option assessment.

*Table 8.24 Multi Criteria Analysis of Public Transport Options*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| Option 1: Bus Gate on Main Street | | | | | | | |
| Option 2: Improve Quality of Bus Stops and Coverage | | | | | | | |
| Option 3: More Frequent Bus Services | | | | | | | |
| Option 4 - Relocation of Kildare Town Train Station | | | | | | | |
| Option 5: Northern Entrance to Kildare Town Train Station | | | | | | | |
| Option 6: Train Station Upgrade | | | | | | | |
| Option 7: More Frequent Rail Services | | | | | | | |

### 8.3.9 Preferred Public Transport Measures

The MCAs have clearly identified the following public transport interventions for inclusion in the strategy as short term measures:

- Option 2: Improve Quality of Bus Stops and Coverage
- Option 3: Work with the NTA to achieve increased frequencies on the 126 and 883 services
- Option 5: Work with the NTA to create a Northern Entrance to Kildare Town Train Station

The following options have been selected as Medium-term rail measures:

- Option 6: Work with the NTA for a Train Station Upgrade (including accessibility audit to train station)
- Option 7: Work with the NTA for More Frequent Rail Services

### 8.3.10 Complimentary Public Transport Measures

To support the public transport strategy, a number of complimentary measures are proposed to ensure the effective operation of public transport within Kildare Town:

#### Work with the NTA to Achieve Leap Card Integration at Kildare Train Station

At present, Kildare Town Train Station lies outside of the Short Hop Zone, as shown in Figure 8.20, which is the extent of the Leap Car integration on the GDA Commuter Rail Network. It is proposed that Kildare County Council should work with the NTA for the Short Hop Zone to be extended to include Kildare Town in order to allow for Leap card integration. This would allow local residents to avail of lower rail fares which would increase the appeal of the train for commuter and non-work trips to Dublin City.

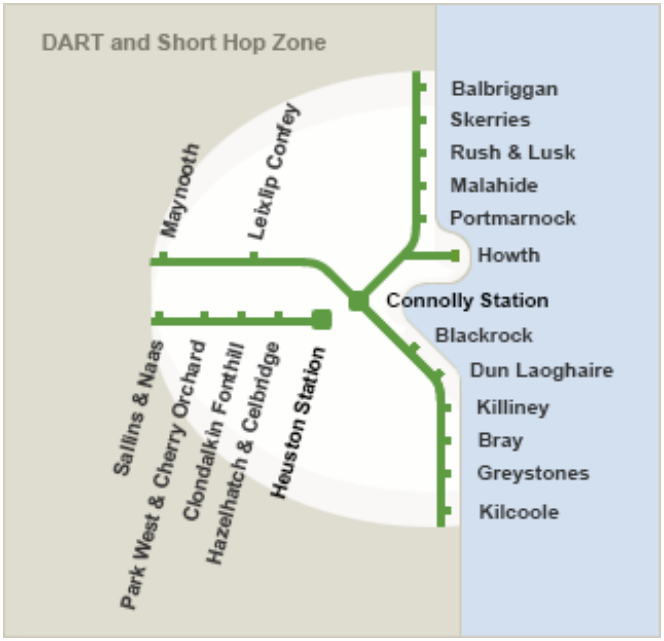



*Figure 8.20: Extent of Leap Card Integration on the Greater Dublin Area Rail Network*

#### Work with the NTA to Extend Phoenix Park Tunnel Services to Kildare

The Phoenix Park Tunnel provides a connection from the Kildare railway line to the city centre stations of Connolly, Tara, Pearse and Grand Canal Dock (Figure 8.21). At present, all train services from Kildare town terminate at Heuston Station which is inconvenient for city centre trips and requires interchange with the Luas red line. It is proposed that Kildare County Council should work with the NTA to extend Phoenix Park Tunnel services to Kildare Town to further increase the appeal of rail travel for residents. This measure could be integrated with Option 7 which proposes enhanced rail frequencies to Kildare town.

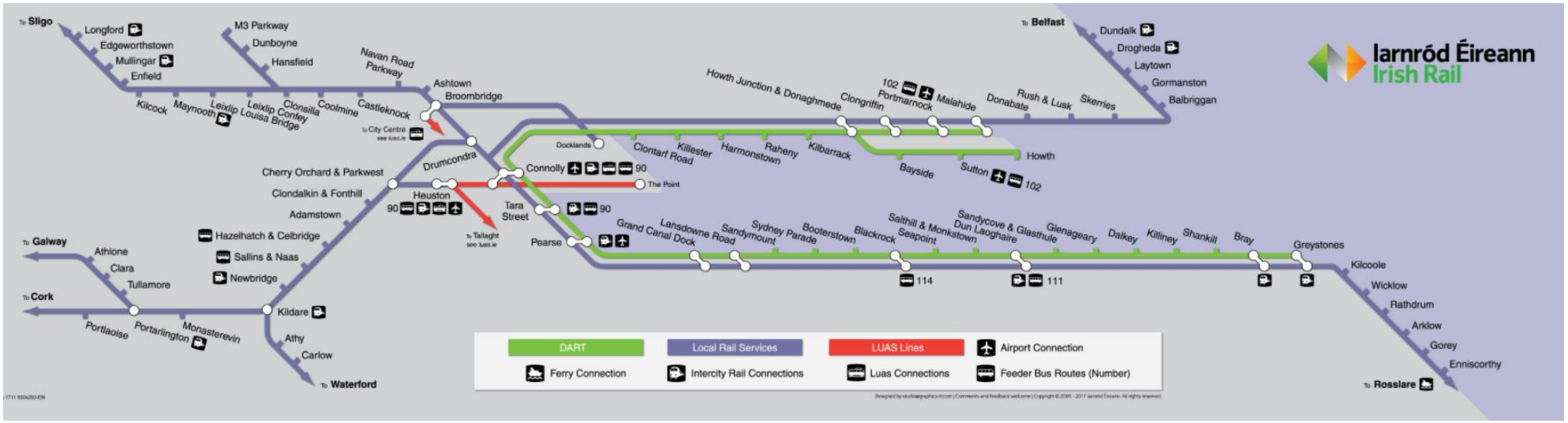



*Figure 8.21: Dublin Commuter Rail Network Map*

### Kildare Retail Village Complimentary shuttle service

Kildare County Council will work closely with Kildare Retail Village to ensure their complimentary shuttle bus service is retained as part of the operation of the Retail Village. Working in collaboration, both parties will explore opportunities to improve its operation and identify opportunities for its expansion. The shuttle bus service offers a connection from Kildare Town Train Station to the Retail Village and also the nearby Irish National Stud and Japanese Gardens operating daily. It should be noted that the bus shuttle service is currently suspended due to Covid 19.

### Junction Priority for Public Transport

Kildare County Council will work to provide priority for public transport services through Kildare town by providing priority measures at key junctions in Kildare Town. This will be achieved through the use of MOVA and SCOOT which are junction control technologies that can provide green signals when a public transport vehicle is detected waiting at a junction. This will help to improve public transport journey times through Kildare Town by minimising dwell time spent at junctions in the town.

### Future Bus Priority Route to Kildare Train Station

As part of the Transport Strategy, a longer-term public transport priority route was identified to serve Kildare Town train station (Figure 8.22). The purpose of the route is to improve the journey time of buses through Kildare Town and provide a public transport link between the bus transfer points at Kildare Retail Village and the bus/rail transfer hub. The route would use the R415, Northern Link Street, Southgreen, Dunmurray Link Road and Dunmurray Road. This route would access the train station via the new western car park entrance, which includes a short two-way section on Fair Green Road. The routing has been chosen to avail of the proposed Northern Link Street and to serve residential lands north of the rail line. This priority route would make use of bus priority measures, such as signal priority, to ensure that inter-city coaches from the M7 could interchange at Kildare Town Train Station without experiencing delays. The priority route is indicative, with the priority measures yet to be determined, and the concept will be explored further in later reviews of the transport strategy.

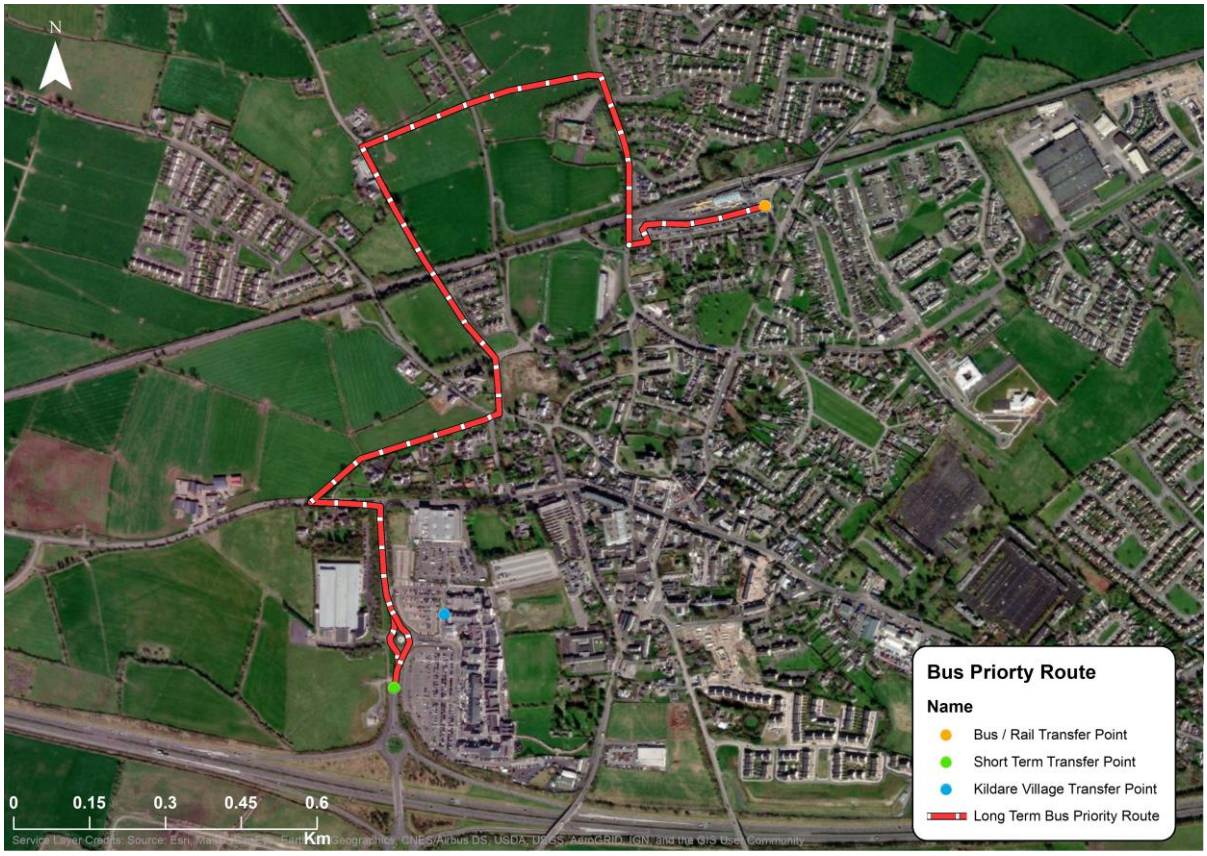



*Figure 8.22 – Long Term Bus Priority Route*

# 9 ROAD TRANSPORT OPTIONS ASSESSMENT

# 9. Road Transport Options Assessment

## 9.1 Overview

One of the main aims of the Kildare Town Transport Strategy is to reduce car dependency in Kildare Town through improvements to public transport services and walking/cycling facilities. This is in line with the Department of Transport's forthcoming land transport investment framework which sets out a clear modal hierarchy for the future funding of infrastructure, with active modes (walking and cycling) prioritised first, followed by public transport and finally private motorised transport. The road strategy in the KTTS focuses on reducing unnecessary vehicular trips through the town centre, to facilitate infrastructure improvements for active modes and safety. In respect to future development, the road strategy seeks to ensure that Kildare Town will have sufficient road capacity to support additional population and ensure the efficient movement of vehicles on the road network. The roads strategy is intentionally restrained, seeking to only deliver new road projects when they are absolutely essential to the growth of the town and complement the multi-modal transport strategy.

This section of the strategy describes the process conducted to create the road strategy and assess its impact. This includes a description of the road options which were assessed, transport modelling results for each option and multi-criteria analysis tables which identify the preferred options which form the final roads strategy. Finally, this section provides transport modelling results which outline the impact of the combined roads strategy as well as defining the phasing for the implementation of each measure and additional complementary measures.

## 9.2 Road Objectives

The following five road objectives were defined at the outset of the transport strategy and have been used to guide the identification of roads options and their assessment:

1. Reduce unnecessary vehicular trips through Kildare town centre.
2. Mitigation measures to improve road safety and eliminate collision hotspots.
3. Reduce vehicular emissions in town centre by promoting mode transfer to sustainable travel modes.
4. Provide recommendations on the future road schemes required to meet capacity requirements and changing travel patterns.
5. Review existing road plans in the existing LAP to identify the most appropriate traffic solutions which will support the delivery of the multi-modal strategy

## 9.3 Do Minimum Road Network

The roads strategy assumes that several committed roads schemes will be completed in the future and they form the Do-Minimum (DM) road network, which is described in Table 9.1. In the 2025 DM network, only Phase 1 of the Magee Barracks Roads is assumed to have been completed, while in the 2035 DM network; Phase 2 has been completed to link Melitta Road with the R445. In some cases, elements of the DM network are already in place, such as the one-way system on Cleamore Road and the construction of the Dunmurray Link Road.

The Do-Minimum road network is assumed to be in place in every transport modelling scenario, with proposed road strategy options tested in addition to the DM network changes to assess their impact. The Do-Minimum network is not assessed in the strategy because these interventions are regarded as a certainty. In combination, the DM network and the preferred road strategy measures, will form the future road network for Kildare Town.

*Table 9.1 Do-Minimum Road Network in 2025 and 2035*

| Year | Do-Minimum Road Network |
|---|---|
| 2025 | • Phase 1 Magee Barracks Roads<br>• Dunmurray Link Road/South Internal East-West Link<br>• Modus link road<br>• Hospital Street to Tully Road link road<br>• One-way northbound system implemented on Cleamore Road<br>• Traffic signals at Southgreen Bridge<br>• Traffic signals at Pigeon Lane/Green Road junction |
| 2035 | • Phase 1 and 2 Magee Barracks Roads<br>• Dunmurray Link Road/South Internal East-West Link<br>• Modus link road<br>• Hospital Street to Tully Road link road<br>• One-way northbound system implemented on Cleamore Road<br>• Traffic signals at Southgreen Bridge<br>• Traffic signals at Pigeon Lane/Green Road junction |

The different elements of the DM road network are shown spatially in Figure 9.1.

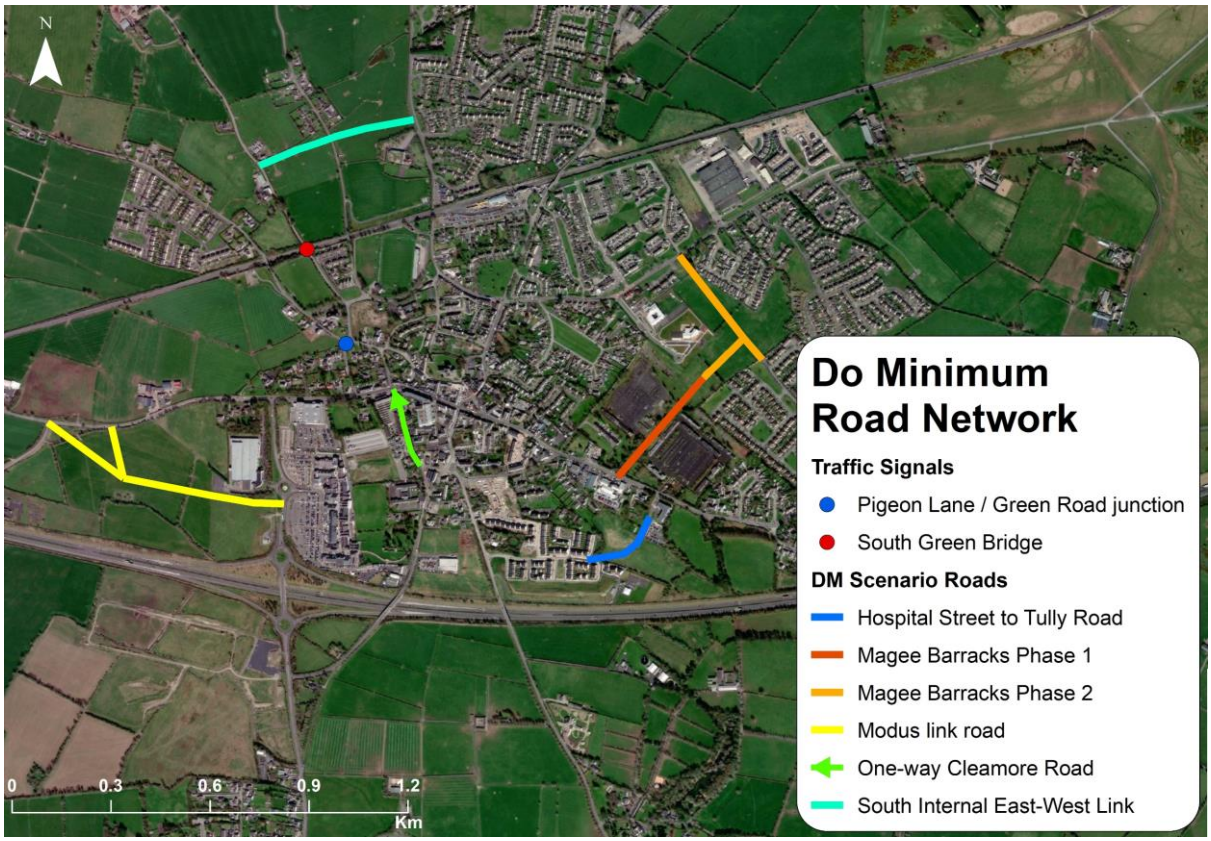



*Figure 9.1 Do-Minimum Road Network in 2035*

## 9.4 Market Square Pedestrianisation

The first stage in the development of the road strategy involved determining which section of Market Square should be pedestrianised and closed to vehicle traffic to support the public realm proposals for the town centre. This section describes the two options that were considered; closing Bride Street or closing the eastern section of Market Square, and the results of the VISUM and VISSIM transport modelling used to inform the preferred solution.

### 9.4.1 Market Square Pedestrianisation Options

#### 9.4.1.1 Bride Street Road Closure in Market Square

This option proposes closing the section of Bride Street which runs through Market Square to vehicle traffic to improve the public realm and allow for pedestrianisation (Figure 9.2). The eastern section of Market Square remains open to vehicle traffic in this option.


*Figure 9.2 Bride Street Road Closure in Market Square*

#### 9.4.1.2 Closure of Eastern Section of Market Square to Vehicle Traffic

In this option, the eastern section of Market Square has been closed to vehicle traffic to improve the public realm and allow for pedestrianisation (Figure 9.3). This option includes a new pedestrian crossing point at the north of the square to allow for easy access between the pedestrianised east and west sections of Market Square across the R415.


*Figure 9.3 Closure of the Eastern Section of Market Square*

### 9.4.2 Market Square Pedestrianisation Transport Modelling Results

This section provides the VISUM transport modelling results for the two Market Square pedestrianisation options in 2025 and 2035 to inform the selection of the preferred solution.

#### 9.4.2.1 VISUM Results: Bride Street Road Closure in Market Square

**2025 Results**

The closure of the section of Bride Street through Market Square was tested in 2025 and compared against the Do-Minimum scenario for the AM and PM peaks in the network statistics shown in Table 9.2. The AM difference plot is provided in Figure 9.4, which shows the difference in traffic volumes between the tested scenario and the Do-Minimum Scenario. An increase in traffic is shown as red links while a decrease in traffic is shown as green links.

The network statistics show that the closure of the section of Bride Street in Market Square has resulted in a slight increase in trip distance and travel time delay and a minor reduction in average speed. In the difference plot, it can be observed that traffic volumes have reduced on Bride Street and traffic is rerouting onto the eastern section of Market Square and the R445. To a certain extent, the closure of Bride Street is causing vehicle rerouting across the wider town centre road network with increased traffic volumes on Pigeon Lane and Old Road.

*Table 9.2 Network statistics (Bride Street Closure Vs DM) - 2025*

| Peak | Option | Total Network Trips | Total Network Vehicle km | Total Network Travel Time (hrs) | Average Network Vehicle Speed (kph) |
|---|---|---|---|---|---|
| AM Peak | DM - 2025 | 8,545 | 77,024 | 1,394 | 55.26 |
| | Bride St. Closure | 8,545 | 77,035 | 1,406 | 54.80 |
| PM Peak | DM - 2025 | 8,998 | 95,910 | 1,606 | 59.72 |
| | Bride St. Closure | 8,998 | 95,940 | 1,608 | 59.70 |

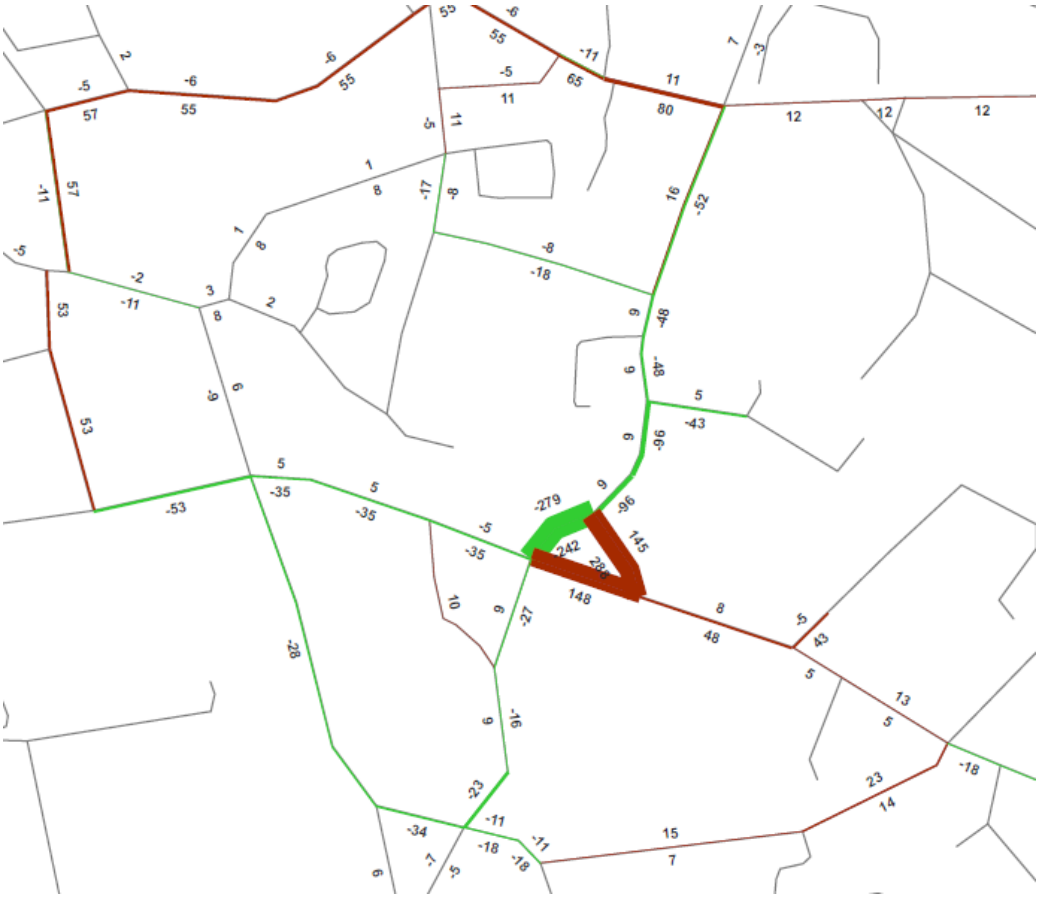


*Figure 9.4 Flow comparison (Bride Street Closure Vs DM)– 2025 – AM Peak*

## 2035 Results

The closure of the section of Bride Street through Market Square is tested in 2035 and compared against the Do-Minimum scenario for the AM and PM peaks in the network statistics shown in Table 9.3. The AM difference plot is provided in Figure 9.5, which shows the difference in traffic volumes between the tested scenario and the Do-Minimum Scenario.

The network statistics show that the closure of Bride Street in Market Square has resulted in a slight increase in trip distances and travel time delay. These negative impacts on traffic are marginal and they are not likely to have a significant impact on travel in the town centre in 2035 when the Magee Barracks Roads will provide an alternative north-south route. Compared to 2025, the 2035 difference plots show that there is less traffic and rerouting of traffic across the wider network, due to the additional road infrastructure in place in 2035 relative to 2025.

*Table 9.3 Network statistics (Bride Street Closure Vs DM) - 2035*

| Peak | Option | Total Network Trips | Total Network Vehicle km | Total Network Travel Time (hrs) | Average Network Vehicle Speed (kph) |
|---|---|---|---|---|---|
| AM Peak | DM- 2035 | 9,727 | 85,150 | 1,512 | 56.30 |
| | Bride St. Closure | 9,727 | 85,224 | 1,517 | 56.20 |
| PM Peak | DM- 2035 | 9,785 | 104,939 | 1,734 | 60.50 |
| | Bride St. Closure | 9,785 | 105,054 | 1,733 | 60.60 |

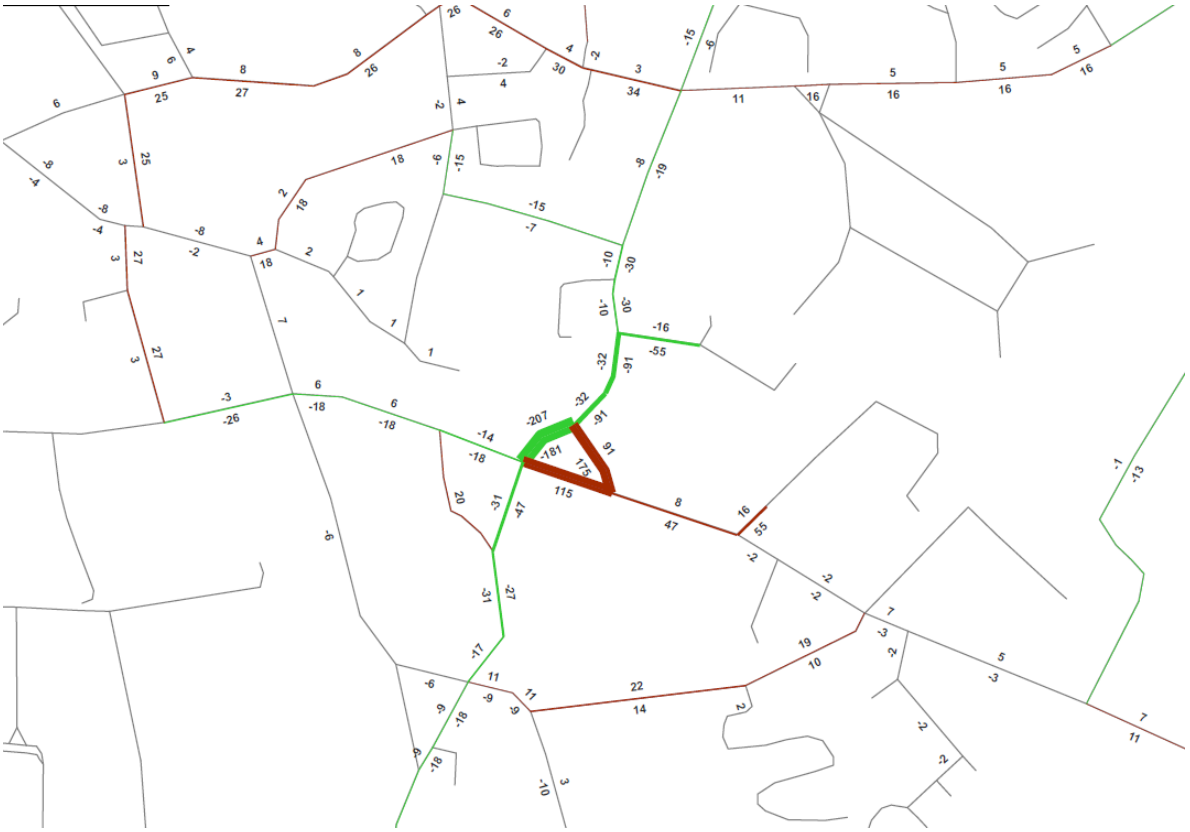


*Figure 9.5 Flow comparison (Bride Street Closure Vs DM)– 2035 – AM Peak*

#### 9.4.2.2 VISUM Results: Closure of Eastern Section of Market Square

**2025 Results**

The closure of the eastern section of Market Square was tested in the 2025 traffic model and compared to the DM scenario in the AM and PM peaks in the network statistics shown in Table 9.4. A difference plot for the AM peak is shown in Figure 9.6. In respect to the network statistics, there is a marginal increase in total vehicle kilometres travelled, reflecting the slight rerouting caused by closing the eastern section of Market Square, this is also associated with a small increase in travel time delay. The difference plot shows that the impact on traffic routing is very localised, with most traffic switching from the eastern section of Market Square to Bride Street in Market Square.

*Table 9.4 Network statistics (Closure of the Eastern Section of Market Square Vs DM) - 2025*

| Peak | Option | Total Network Trips | Total Network Vehicle km | Total Network Travel Time (hrs) | Average Network Vehicle Speed (kph) |
|---|---|---|---|---|---|
| AM Peak | DM- 2025 | 8,545 | 77,024 | 1,394 | 55.26 |
| | Eastern Market Sq. Closure | 8,545 | 77,104 | 1,395 | 55.30 |
| PM Peak | DM- 2025 | 8,998 | 95,910 | 1,606 | 59.72 |
| | Eastern Market Sq. Closure | 8,998 | 95,957 | 1,612 | 59.50 |

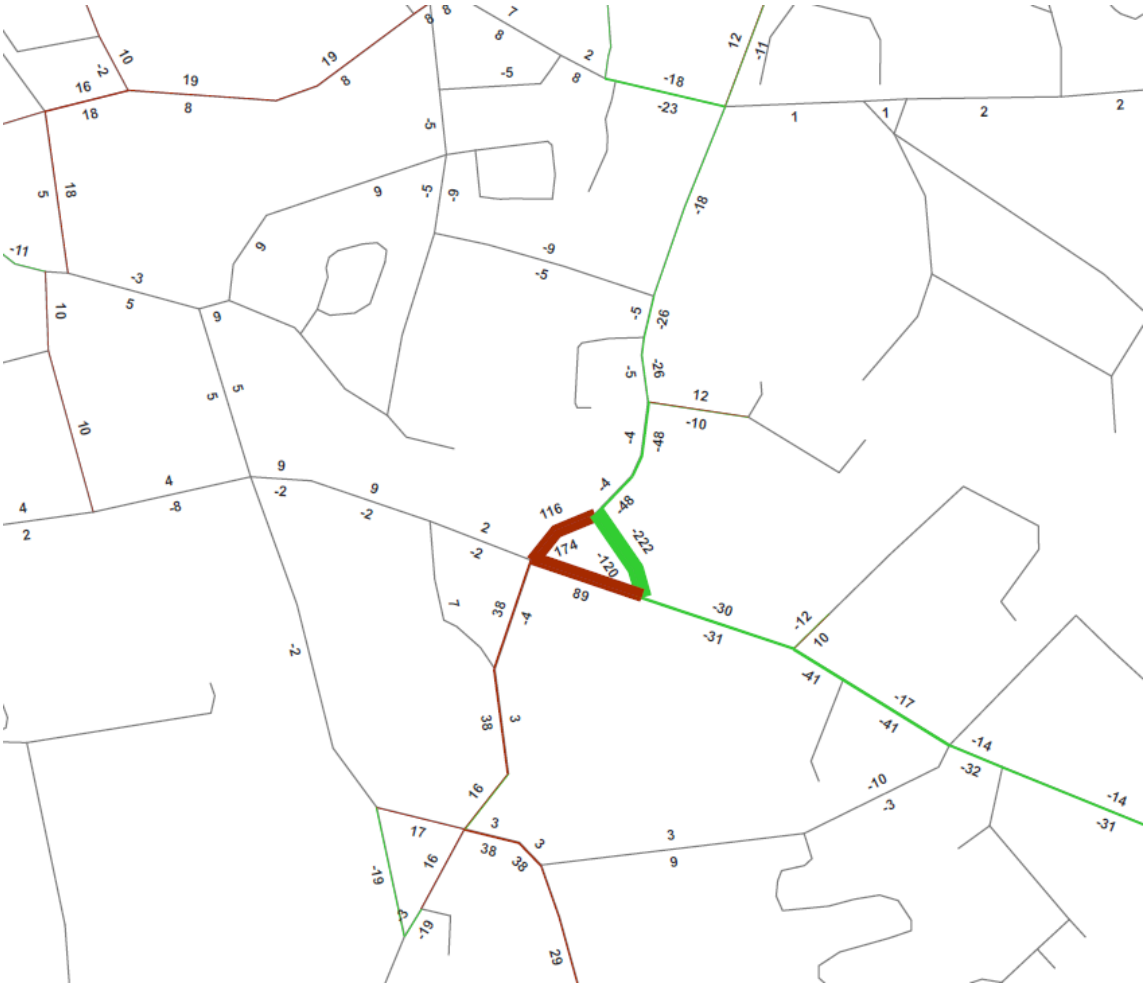


*Figure 9.6 Flow comparison (Eastern Market Square Closure Vs DM)– 2025 – AM Peak*

## 2035 Results

The closure of the eastern section of Market Square is tested in 2035 and compared to the DM scenario for the AM and PM peaks. The network statistics are shown in Table 9.5, with the flow difference plots shown in Figure 9.7 for the AM peak. This option results in a marginal reduction in average network speeds and a minor increase in travel time delay. In the AM peak, there is a slight increase in total vehicle km due to rerouting and a minor increase in delay in both time periods. The difference plots show that the impact is very localised, with traffic switching from the eastern section of Market Square to Bride Street.

*Table 9.5 Network statistics (Eastern Market Square Closure Vs DM) - 2035*

| Peak | Option | Total Network Trips | Total Network Vehicle km | Total Network Travel Time (hrs) | Average Network Vehicle Speed (kph) |
|---|---|---|---|---|---|
| AM Peak | DM- 2035 | 9,727 | 85,150 | 1,512 | 56.30 |
| | Eastern Market Sq. Closure | 9,727 | 85,196 | 1,516 | 56.20 |
| PM Peak | DM- 2035 | 9,785 | 104,939 | 1,734 | 60.50 |
| | Eastern Market Sq. Closure | 9,785 | 104,921 | 1,736 | 60.40 |

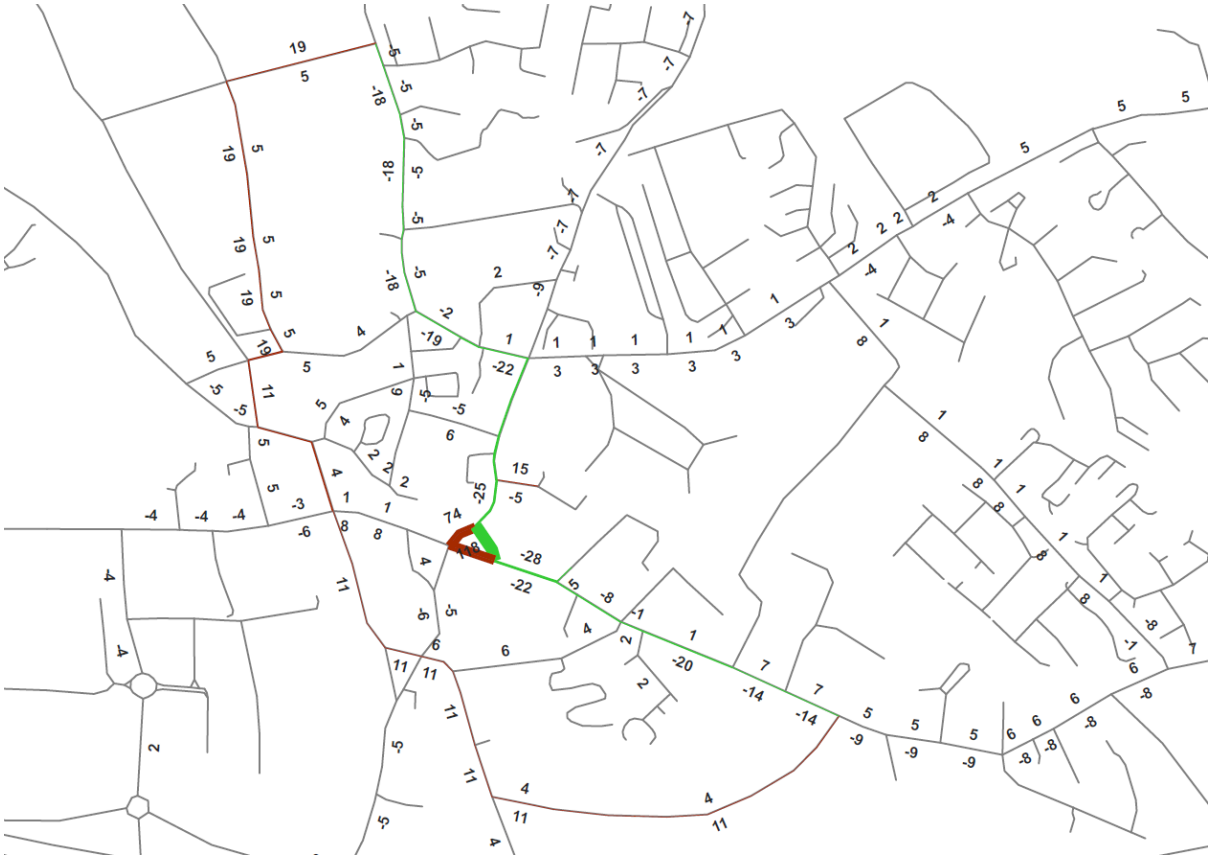


*Figure 9.7 Flow comparison (Eastern Market Square Closure Vs DM)– 2035 – AM Peak*

#### 9.4.2.3 Comparison of VISSIM Microsimulation Results

**2025 Results**

The closure of the Bride Street section or eastern section of Market Square was tested in the VISSIM microsimulation model which allows traffic flows and queues to be shown visually. In the 2025 AM period, Figure 9.8 shows the queuing around Market Square when the eastern section is closed to traffic while Figure 9.9 shows the same when the Bride Street section is closed to traffic.

The VISSIM modelling indicates that in both scenarios, there will be greater queuing when compared to the Do-Minimum Scenario because total junction capacity has been reduced through a road closure. However, when the two Market Square road closures are compared, it can be observed that the closure of the eastern side of the square results in longer queuing along the R445. In this scenario, all traffic must travel through a single crossroads junction and longer queues develop as vehicles must wait behind right-turning vehicles. Whereas, when the Bride Street section of Market Square is closed to traffic, vehicle demand is split between a signalised T-junction (Bride Street/R445) and a priority T-junction (Market Square East/R445) and this operates more efficiently with shorter queues as illustrated in Figure 9.9.


*Figure 9.8 VISSIM 2025 AM – Comparison of DM and Eastern Section of Market Sq. Closed to Traffic*


*Figure 9.9 VISSIM 2025 AM – Comparison of DM and Bride Street Section of Market Sq. Closed to Traffic*

### 2035 Results

Figure 9.10 and Figure 9.11 show the same Market Square scenarios in the 2035 AM peak period in comparison to the Do-Minimum Scenario. These images show a similar theme to the results explained in 2025, with the Bride Street Road closure performing better with shorter queuing than the closure of the eastern side of the square. Due to growth in population and jobs, there are more trips occurring in 2035 than 2025 and this results in slightly longer queues in both scenarios.


*Figure 9.10 VISSIM 2035 AM – Comparison of DM and Eastern Section of Market Sq. Closed to Traffic*


*Figure 9.11 VISSIM 2035 AM – Comparison of DM and Bride St. Section of Market Sq. Closed to Traffic*

### 9.4.3 Conclusion of Market Square Assessment

#### 9.4.3.1 Traffic Modelling and Policy Considerations

The VISUM results indicate that the negative impact on vehicular traffic from closing either side of Market Square is relatively modest in 2025 or 2035 with minor increases projected in trip distance and delay (due to vehicles rerouting). However, it is important to note that the VISUM network statistics cover the entire study area (Figure 1.1) and the VISSIM results must be considered as well to understand the localised impact on the junctions in Market Square and the increase in queue lengths.

The VISSIM modelling considered the local impact of closing either side of Market Square on the R445/Bride Street junction in greater detail. It is important to acknowledge that a road closure in Market Square will reduce vehicle capacity and result in longer queuing than the existing situation. However, the VISSIM analysis highlighted that the closure of the eastern side of Market Square resulted in longer queuing of vehicles along the R445, Bride Street and through Market Square. Long queues of vehicles in Market Square will have a negative impact on the local area, as well as causing greater delays to residents and visitors to Kildare town centre. In comparison with this scenario, the closure of the Bride Street section of Market Square results in less queuing because vehicle demand is spread across two junctions which operate more efficiently.

The VISSIM modelling results clearly favour the closure of the Bride Street section of Market Square and this provides a strong justification for this side to be the preferred outcome of the assessment. However, wider policy priorities must also be considered as well as the implications for transport. In this regard, the recent pedestrianisation of the car park in the north-west of Market Square has been very successful, with this area now being used as a space where people can socialise, eat outside or attend the regular weekly market as shown in Figure 9.12. The closure of the Bride Street section of Market Square would allow for this pedestrianised space to be extended to Kildare Town Tourism Office, which would create a large pedestrian plaza in the centre of the town which could be used for a larger market, outdoor dining and cultural events. This plaza would enhance the public realm of the town centre and strengthen the appeal of visiting Kildare town for retail, social or tourism activities. In contrast with this, the closure of the eastern side of Market Square would create two small plazas, divided by traffic on Bride Street, which would be a less useful space for holding markets or cultural events and provide weaker public realm improvements.

*Figure 9.12 Pedestrianised Space in North-West of Market Square*

#### 9.4.3.2 Preferred Road Closure in Market Square

On the basis of the transport and public rationale outlined in Section 9.4.3.1, it has been determined that Bride Street is the preferred road closure in Market Square in the long term. In the Kildare Town Transport Strategy, the closure of the Bride Street section is proposed as a medium-long term measure in the roads strategy (RD 3) which will require the completion of the Northern Link Street and Magee Barracks Roads prior to implementation. The provision of the Magee Barracks Roads and the Northern

Link Street will ensure that there is an alternative north-south route for traffic and HGVs once Bride Street has been closed in Market Square. Kildare County Council will take steps to ensure the safety of pedestrians and cyclists at the eastern section of Market Square once traffic is diverted from Bride Street. This will involve the redesign of the eastern side of Market Square junction to increase its capacity to cater for greater vehicle volumes and to ensure the safety of pedestrians and cyclists.

#### 9.4.3.3 Design Considerations for Bride Street Road Closure

The closure of the Bride Street section of Market Square will mean that traffic will have to divert via the eastern side of Market Square to travel north and south. The junctions shown in Figure 9.13 may need to be redesigned to facilitate the safe movement of traffic through Market Square:

- R415- Northern Market Sq. Junction: With the closure of Bride Street, there will no longer be a requirement for a T-Junction at this location. A crossing point and signals may be considered at this location to improve pedestrian east-west access across the north of Market Square. Consideration may also be given to widening of the carriageway to facilitate larger vehicles.
- Bride Street-R445 Junction: This signalised four-arm junction will become a T-junction and it will need to be redesigned.
- Eastern Market Sq.-R445 Junction: This junction may have to be realigned to allow for the safe turning of larger vehicles at this location. Particular consideration will have to be given to vehicles turning right from Market Square onto the R445 and turning left from the R445 to Market Square as this involves a sharp turn. It may be appropriate to consider a HGV ban at this location to make this junction safer and reduce disruption to traffic flow from slow turning vehicles, once the Magee Barracks Roads are in place as an alternative route for goods vehicles. It should be noted that there is a well of historical interest located in this area and it will be a constraint for any future junction redesign.

The precise approach taken to the realignment and redesign of these junctions will be determined in a detailed design process which will occur at a later date, prior to the implementation of the Bride Street road closure in Market Square.


*Figure 9.13 Junction Redesigns Required to Facilitate Bride Street Closure*

## 9.5 Road Options Description

Following the determination that the Bride Street section of Market Square should be closed to traffic, a number of road options were developed to improve traffic conditions across Kildare Town. The majority of these options are tested in the VISUM transport model to assess their impact on the road network in Kildare and inform the option assessment process.

### 9.5.1 Option 1: Closure of Old Road Bridge and Replace Southgreen Bridge

In this option, Old Road Bridge is closed to motor vehicle traffic to facilitate access for pedestrians and cyclists. In addition to this, the traffic signals are removed on Southgreen bridge and the bridge is replaced to accommodate two-way traffic as well as improvements to the approach roads. The replacement of Southgreen bridge and the improvements to approach roads are required to provide additional capacity to facilitate access to the new housing areas zoned in the north-west of the town and to improve safety. The replacement of Southgreen bridge will also increase capacity on this road to accommodate the vehicles rerouted from Old Road Bridge once it is closed. The closure of Old Road Bridge will provide for a high-quality walking and cycling link between the town and the main future development areas in the north-west. The closure of Old Road Bridge is integrated into the cycling and walking network strategies to deliver improvements for active modes along this corridor. The location of Old Road Bridge and Southgreen Bridge is shown in Figure 9.14.

A design process will have to be completed to determine the best approach for delivering this option. It is likely that bollards and road markings would be introduced on the road carriageway of Old Road to stop traffic accessing the bridge. New signs would be provided at junctions to inform drivers that Old Road Bridge is a cul-de-sac with access only for local residents. There will be improvements to pedestrian infrastructure on Old Road to compliment these changes and Old Road will become part of the cycling network.

It is important to note that the recently completed Dunmurray Link Road will provide east-west access to Southgreen Road and the R401 for residents to the north of the railway line on Old Road.

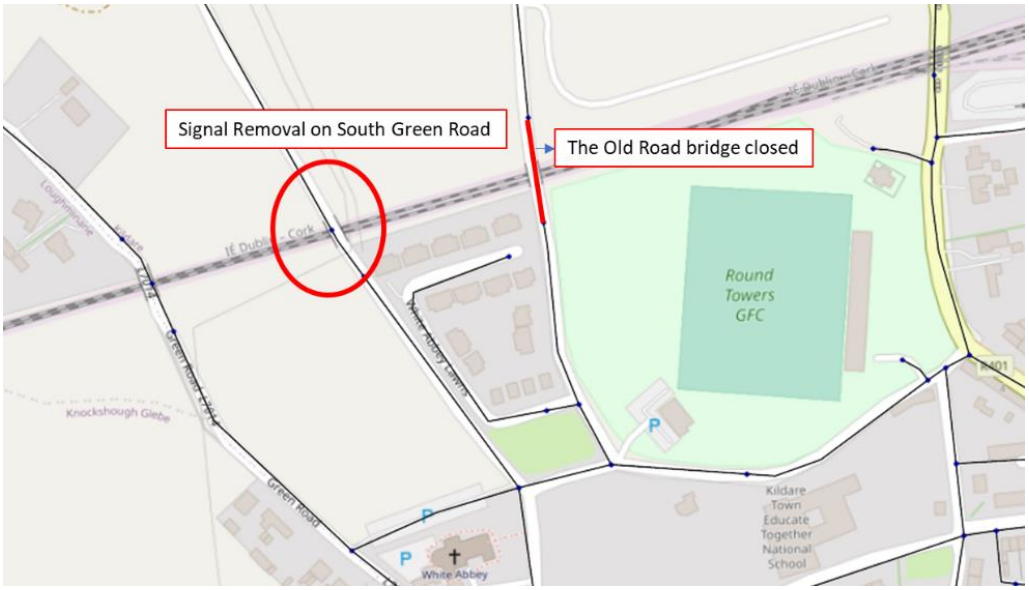



*Figure 9.14 Option 1: Closure of Old Road Bridge and Replacement of Southgreen Bridge*

### 9.5.2 Option 2: Northern Link Street

#### 9.5.2.1 Option 2 Description

In this option, a new link road is proposed from the R445 to the junction of Green Road and Pigeon lane, with the local roads improved along the route until the junction with the R415 as shown in Figure 9.15. The existing junction between Green Road and Pigeon Lane will be redesigned to accommodate the new road. To complement the new road, a one-way system is proposed for White Abbey Road (southbound) and Pigeon Lane (northbound). Other improvements include a new access to the GAA pitches and the implementation of local access only arrangements on a number of roads.

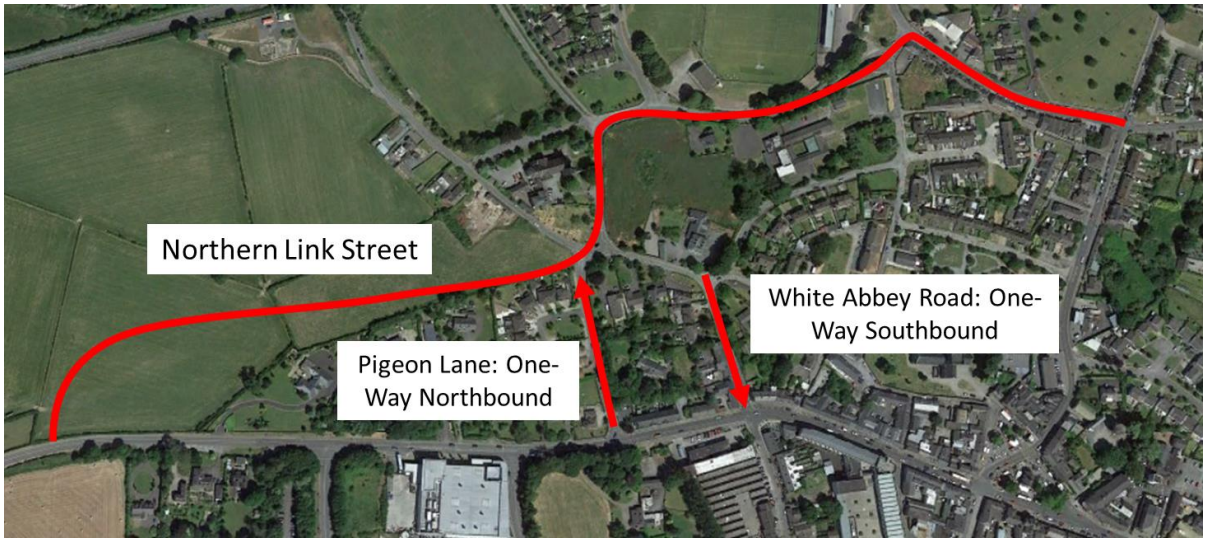



*Figure 9.15 Option 2: Northern Link Street*

#### 9.5.2.2 Northern Link Street Background

A detailed route selection process was completed for the Northern Link Street project in 2019 which considered nine potentially feasible orbital route options (Figure 9.16) and brought them through a Stage 1 Preliminary Options Assessment process to identify a shorter list of options. Following this, five options were brought forward to a Stage 2 Route Options Appraisal (including traffic modelling assessment) and Option O3 was identified as the Emerging Preferred Route (EPR). The EPR was put on public display for a non-statutory public consultation in June 2019, which included a presentation to local elected representatives. Following feedback from residents and Councillors which focused on town centre accessibility, three alternative modifications of the EPR were identified, each maintaining some accessibility to the town centre. These were assessed using a refined traffic model to identify the final Preferred Route. A Preferred Route has subsequently been identified and the design for the Northern Link Street scheme has been included for consideration as road Option 2.

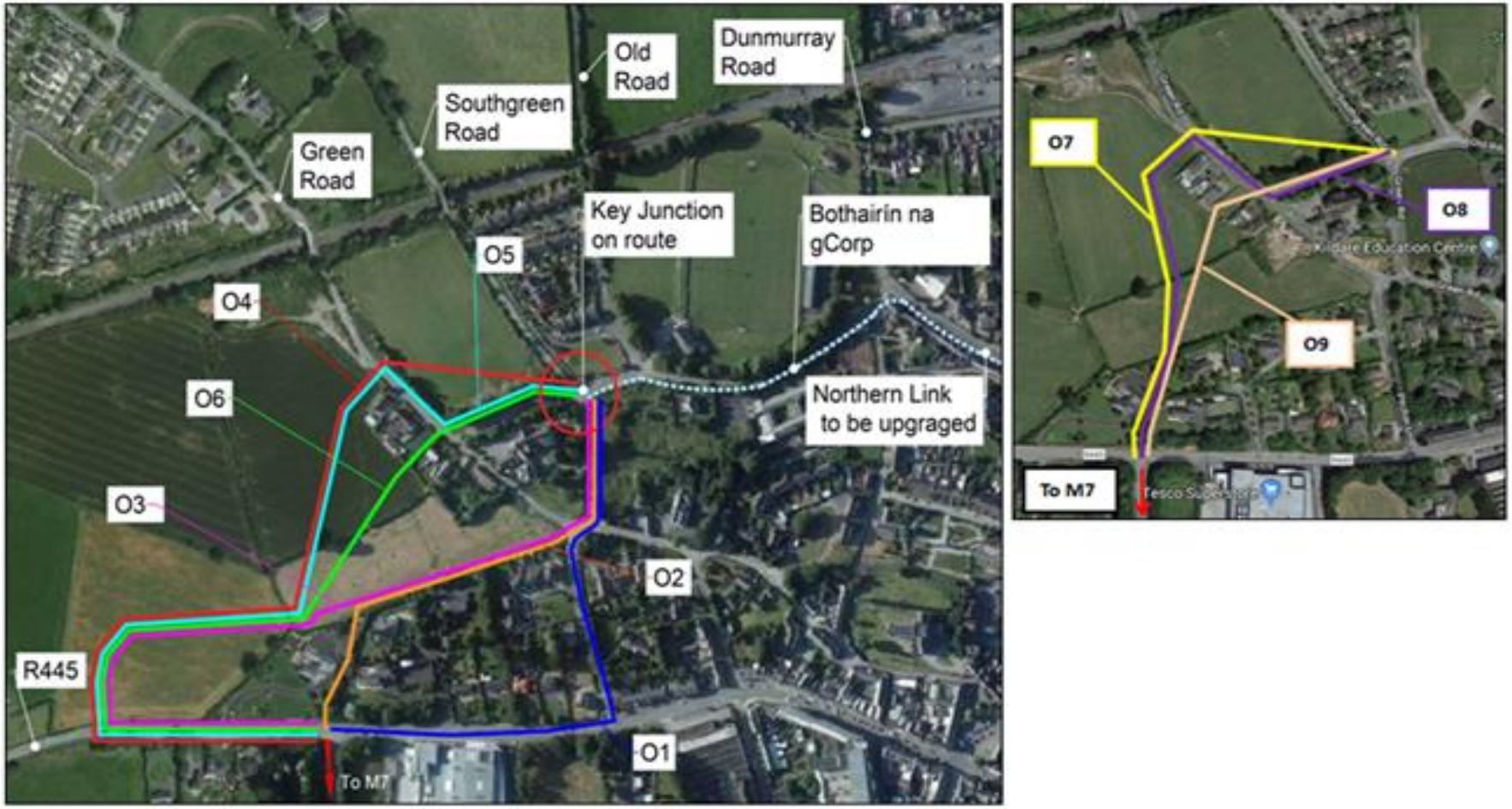



*Figure 9.16 Example of the Route Options Assessed in the Northern Link Street Report*

### 9.5.3 Option 3: Bride Street Road Closure and One-Way System

In this option, Bride Street becomes a one-way road (southbound only) from the junction with Bang-Up Lane to the junction with Cleamore Road as shown in Figure 9.17. Furthermore, this option involves the closure of Bride Street to motorised traffic between the R445 and Bang Up Lane as well as the closure of the eastern section of Market Square to vehicles. The closure of the southern section of Bride Street and the eastern section of Market Square would facilitate public realm improvements and pedestrianisation.

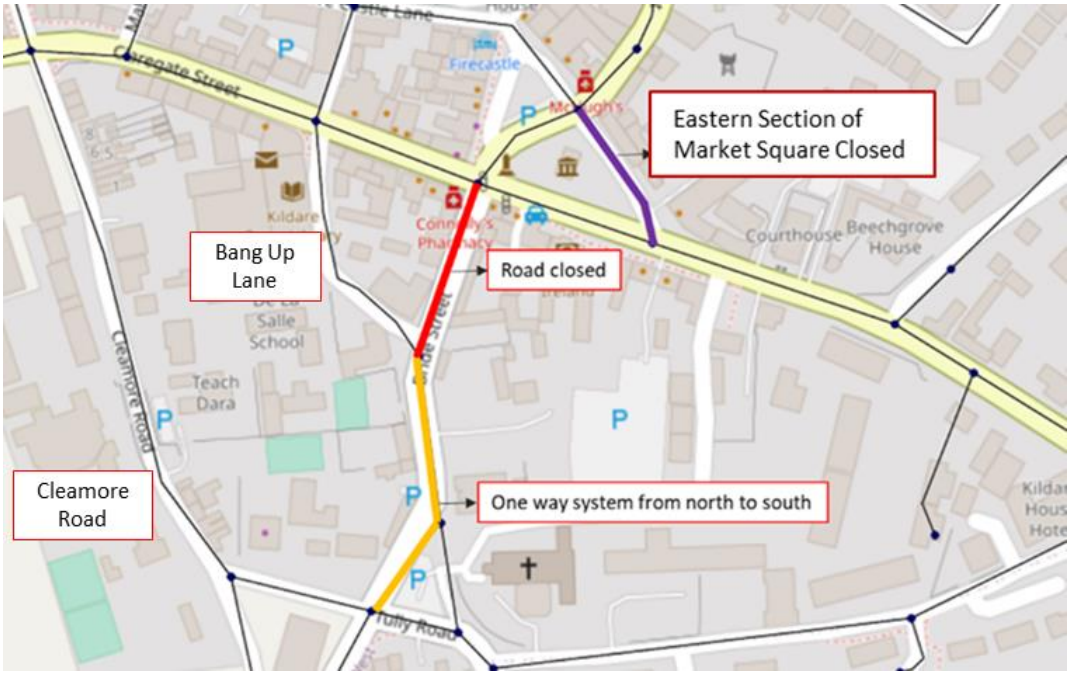



*Figure 9.17 Option 3: Bride Street Road Closure and One-Way System*

### 9.5.4 Option 4: Bride Street Southbound One-way System

In this option, Bride Street is made a one-way road (southbound only) from the junction with the R445 to the junction with Cleamore Road, as shown in Figure 9.18. Reducing vehicle traffic along this street would allow for measures to enhance the public realm and expand pedestrian facilities.

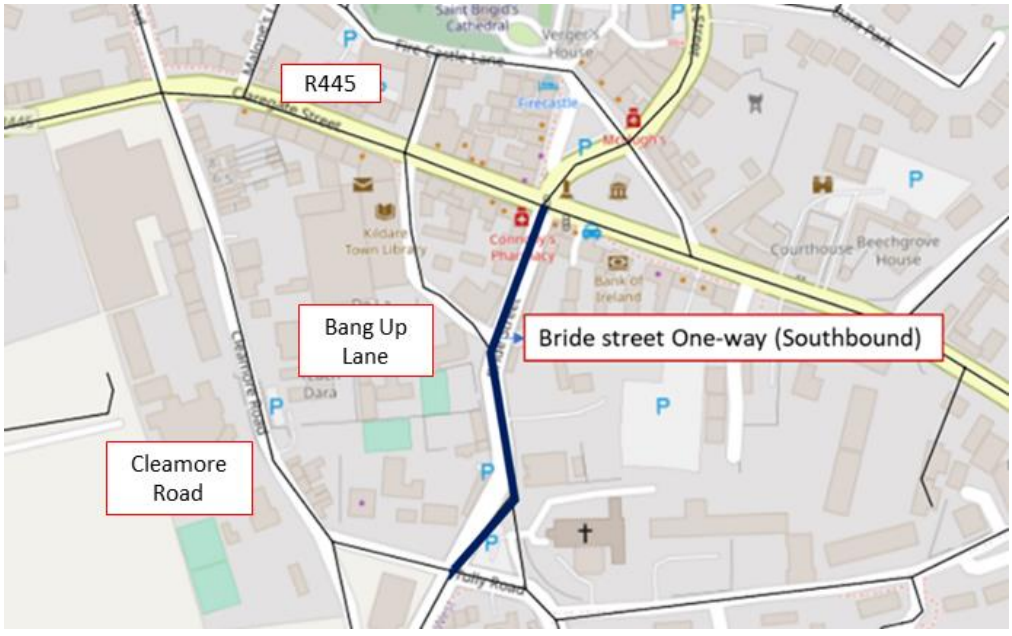



*Figure 9.18 Option 4: Bride Street Southbound One-way System*

### 9.5.5 Option 5: One-Way Northbound System on Bride Street

In this option, a northbound one-way system is implemented on Bride Street between the R445 and Bang Up Lane, as shown in Figure 9.19. The section of Bride Street to the south of Bang Up Lane remains two way to facilitate access to the Bride Street off-street car park which may be upgraded as part of the parking strategy.


*Figure 9.19 Option 5: One-Way Northbound System on Bride Street*

### 9.5.6 Option 6: One-Way Westbound System on Meadow Road

In this option, a one-way westbound system is implemented on Meadow Road to reduce traffic volumes and facilitate improvements to the infrastructure for active modes (Figure 9.20).

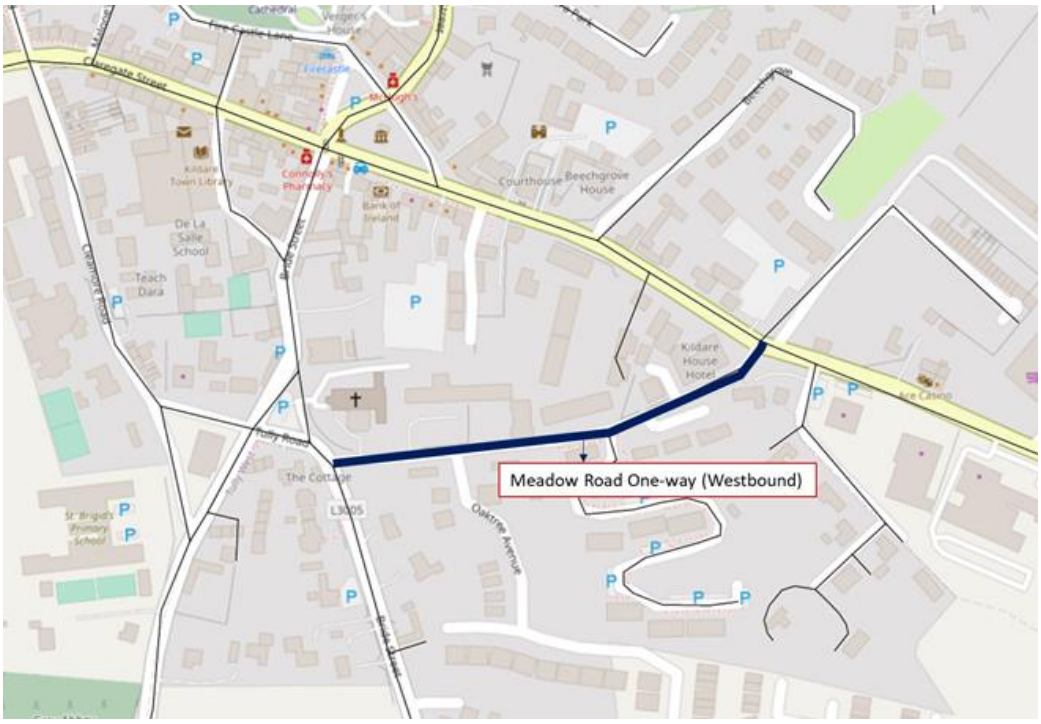



*Figure 9.20 Option 6: One-Way Westbound System on Meadow Road*

### 9.5.7 Option 7: Upgrade Signalised Junctions to MOVA or SCOOT as Appropriate

This option would upgrade signalised junctions to MOVA or SCOOT as appropriate to improve traffic flow and improve the safety of pedestrians, cyclists and vulnerable road users through the implementation of Intelligent Transport Solutions technology. This option has not been assessed in the transport model.

### 9.5.8 Option 8: Bride Street to Melitta Road One-Way Northbound System

In this option, a northbound one-way system is implemented from Bride Street to Melitta Road to reduce traffic volumes on the corridor and facilitate public realm improvements. The extent of the one-way system is shown in Figure 9.21.

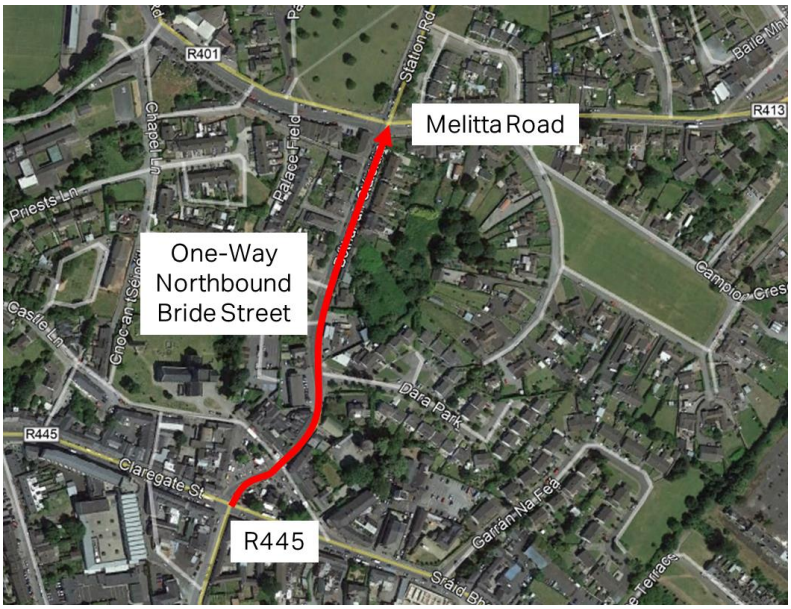



*Figure 9.21 Option 8: Bride Street to Melitta Road One-Way Northbound System*

### 9.5.9 Option 9: Northern Clockwise One-Way Loop System on R401 and R415

In this option, a clockwise one-way loop system is implemented on the R401 and R415 as shown in Figure 9.22. This option would allow for the signalised shuttle systems to be removed on the two bridges over the railway line.

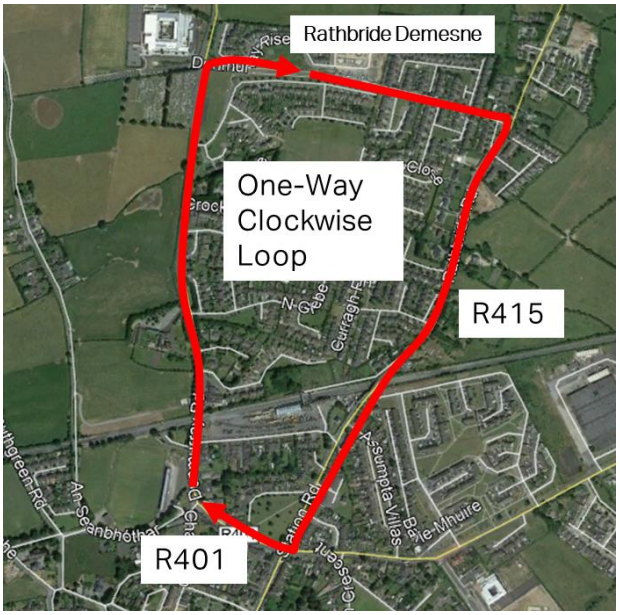



*Figure 9.22 Option 9: Northern Clockwise One-Way Loop System on R401 and R415*

### 9.5.10 Option 10: Town Centre Clockwise One-Way Loop System

In this option, a clockwise one-way loop system is implemented in the central areas of Kildare Town as shown in Figure 9.23. This one-way system would reduce traffic flows on Bride Street, Market Square, Meadow Road, Cleamore Road, Pigeon Lane and the R401; to facilitate public realm improvements.

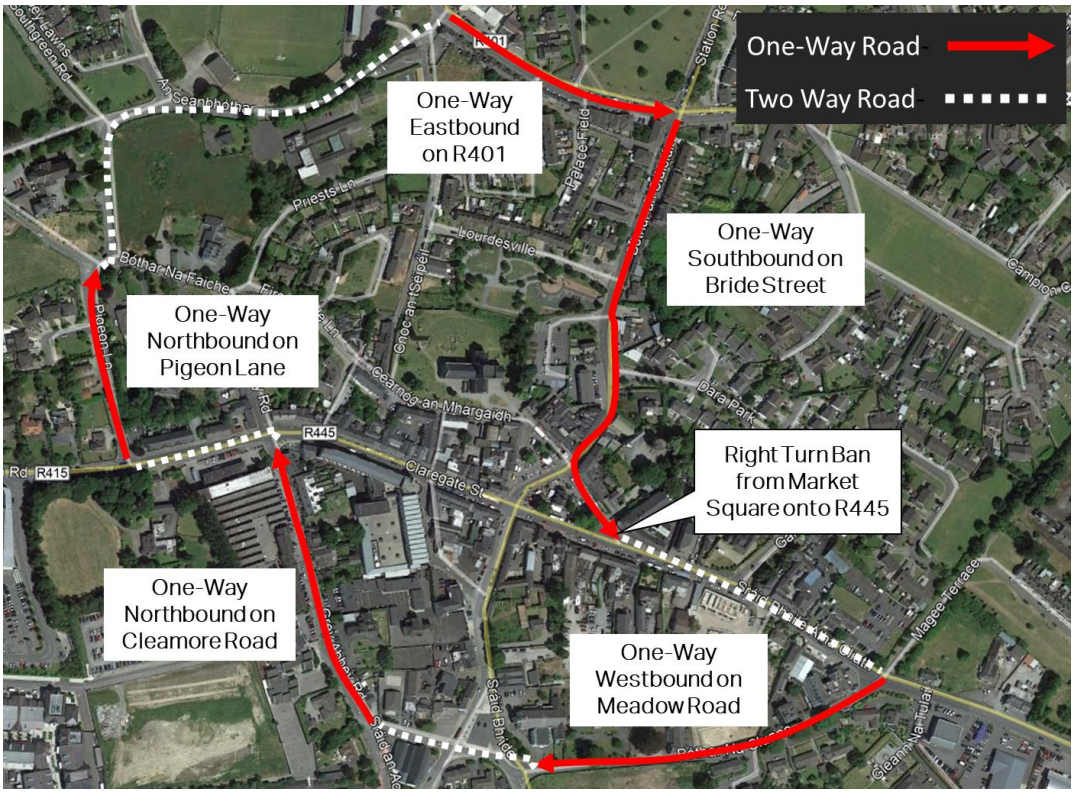



*Figure 9.23 Option 10: Town Centre Clockwise One-Way Loop System*

## 9.6 VISUM Modelling Results

This section describes the results of the strategic transport modelling (VISUM) assessment of the potential options to inform the MCA process. In this section, difference plots from the VISUM modelling are presented for each Do-Something (DS) option and a summary of network statistics across all options is provided.

### 9.6.1 Option 1: Closure of Old Road Bridge and Replace Southgreen Bridge

Option 1 contains two elements, the closure of Old Road Bridge and the replacement of Southgreen Bridge to accommodate two-way traffic. To avoid the closure of Old Road Bridge having undue influence on the difference plot results, a variation of the DM scenario ('Alternative DM Scenario') is used which includes the closure of Old Road Bridge so that the comparison between the DS and DM scenarios focuses on the impact of upgrading Southgreen Bridge. Option 1 was compared against this Alternative DM Scenario in 2025 for the AM peak and the flow difference plot is shown in Figure 9.24. This difference plot shows that some traffic has transferred onto Southgreen Road from the Dunmurray Road since the bridge has been made two-way.

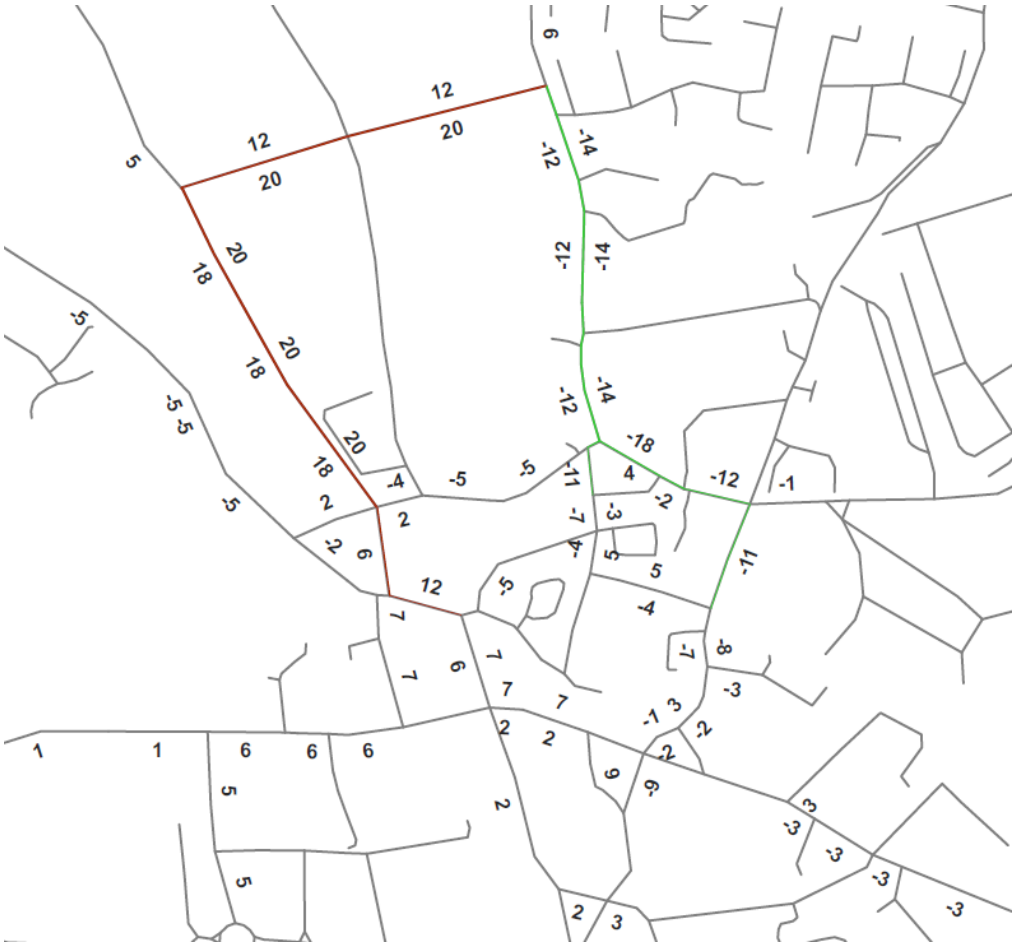


*Figure 9.24 Flow comparison (Option 1 Vs DM Special Scenario) – 2025 – AM Peak*

### 9.6.2 Option 2: Northern Link Street

Option 2 was compared against the Do-Minimum scenario for 2025 for the AM peak and the difference plot is shown in Figure 9.25. The difference plot highlights that the introduction of the Northern Link Street has reduced traffic volumes on the R445 and in the town centre, by facilitating traffic movements between the west and north of the town without the need to travel through central areas.

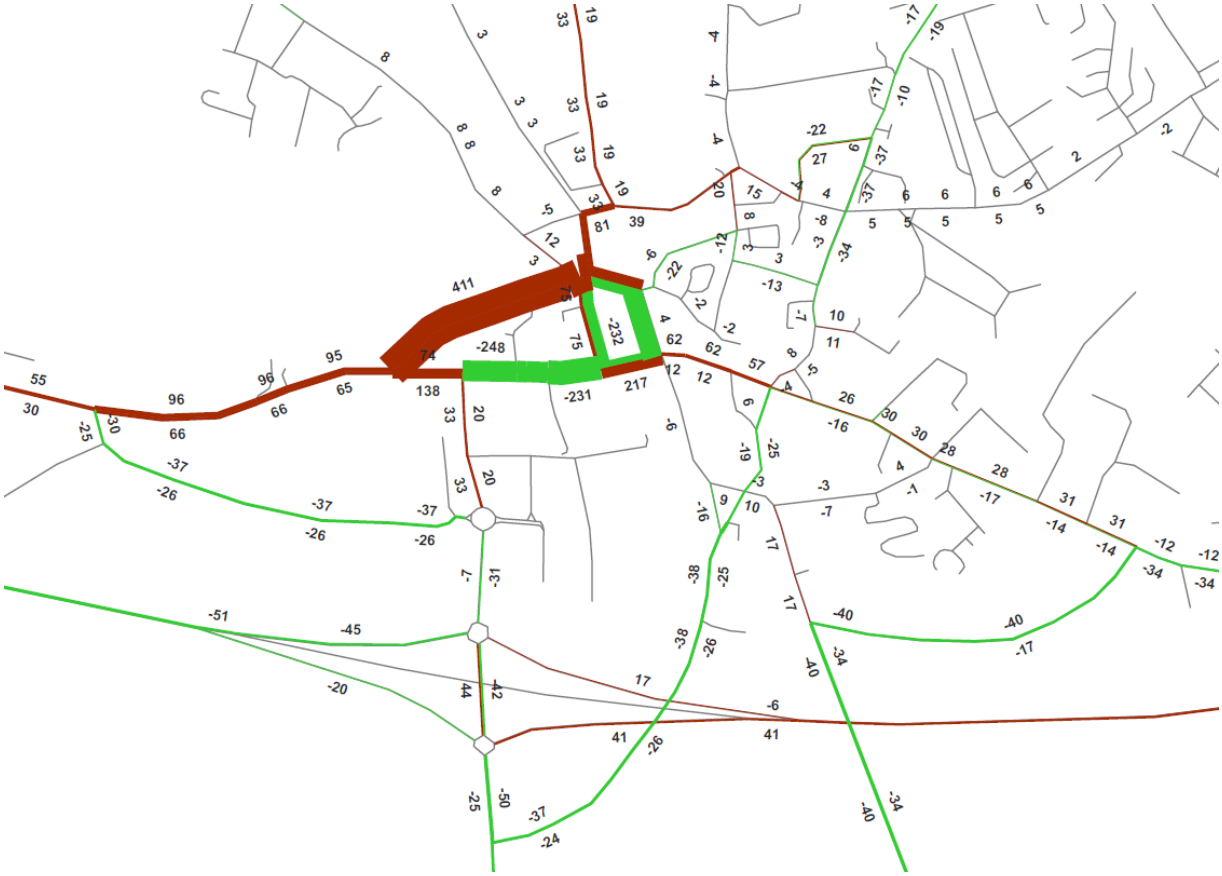


*Figure 9.25 Flow comparison (Option 2 Vs DM)– 2025 – AM Peak*

### 9.6.3 Option 3: Bride Street Road Closure and One-Way System

Option 3 was compared against the Do-Minimum scenario for 2025 in the AM peak with the flow difference plot shown in Figure 9.26. Due to the road closure and one-way system introduced in this option, total vehicle km has increased as traffic has to reroute, with the difference plot showing that traffic has moved from Bride Street to Bang Up Lane and Meadow Road. The increase in traffic volumes on Bang Up Lane and Meadow Road is concerning as these are low capacity routes which cannot cater for a large number of additional vehicles.

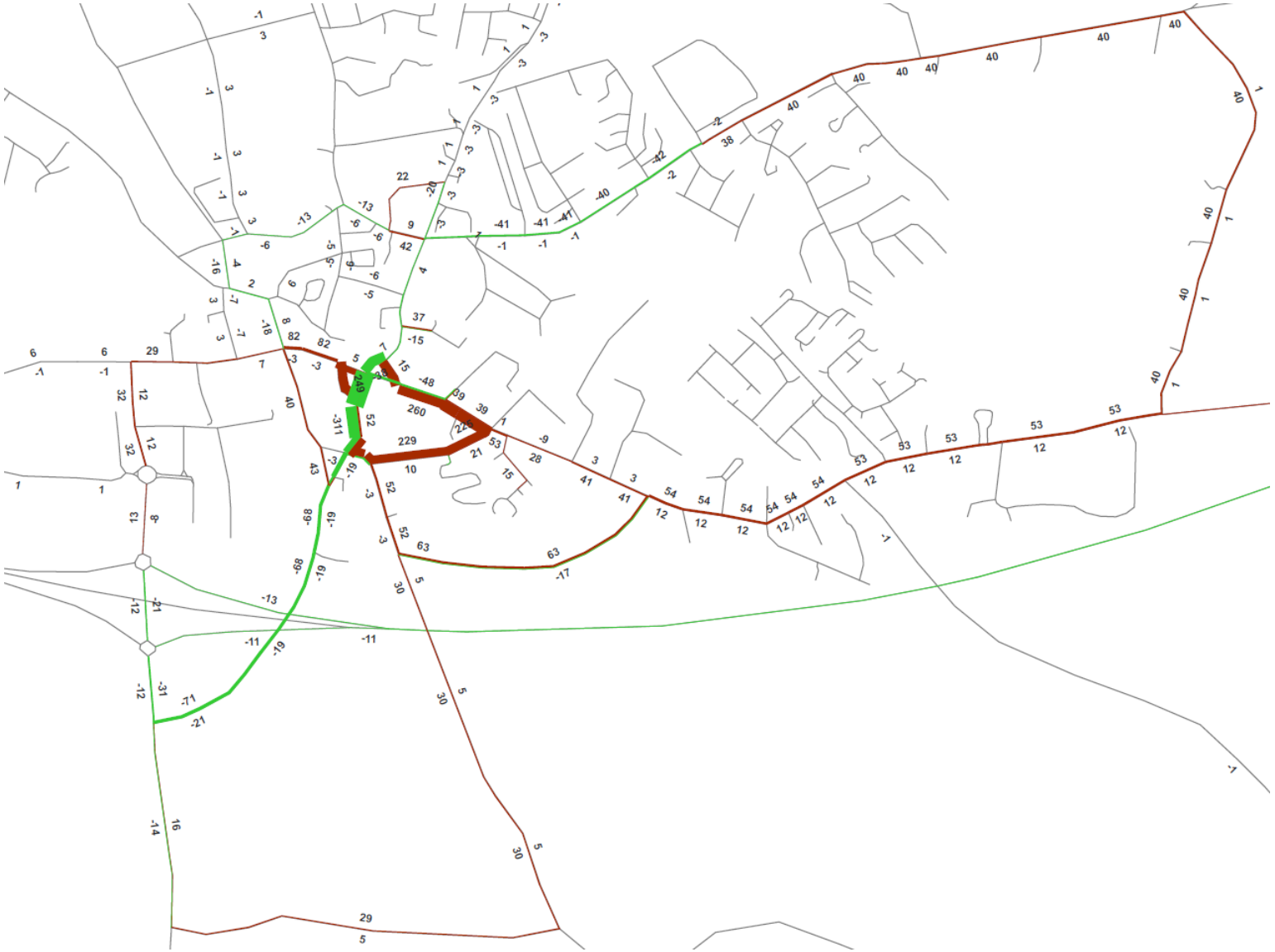


*Figure 9.26 Flow comparison (Option 3 Vs DM)– 2025 – AM Peak*

### 9.6.4 Option 4: Bride Street Southbound One-Way System

Option 4 is tested in 2025 against the Do-Minimum scenario in the AM peak with the flow difference plot shown in Figure 9.27. The difference plot highlights a substantial increase in traffic on the eastern section of Market Square, the R445 and Meadow Road. Public realm improvements are planned for Market Square and increasing traffic volumes through this area may be an issue. Higher traffic volumes on Meadow Road, which is a narrow street with limited capacity, would also be a problem.

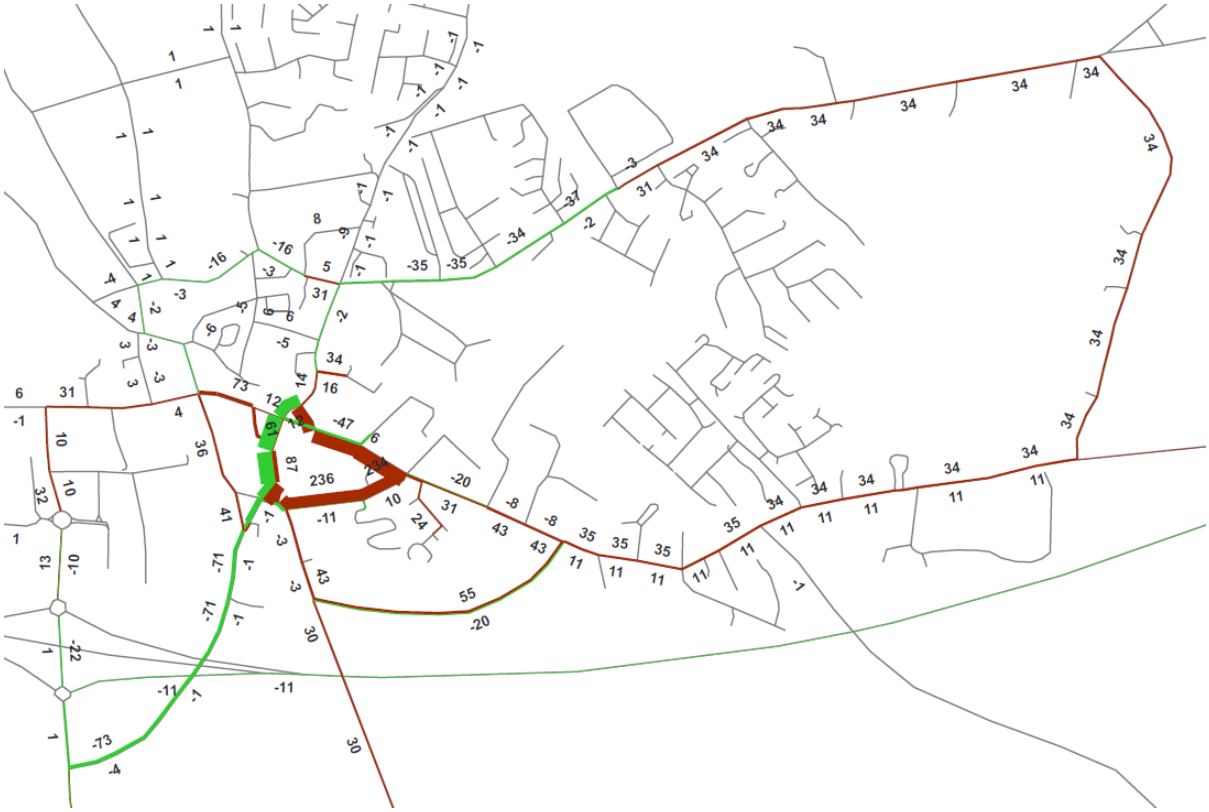


*Figure 9.27 Flow comparison (Option 4 Vs DM)– 2025 – AM Peak*

### 9.6.5 Option 5: One-Way Northbound System on Bride Street

Option 5 is tested in 2025 against the DM scenario for the AM peak with the flow difference plot shown in Figure 9.28. Traffic volumes on Bride Street have reduced slightly along the route, with a significant shift in traffic from Bride Street onto Bang Up Lane for southbound traffic.


*Figure 9.28 Flow comparison (Option 5 Vs DM)– 2025 – AM Peak*

Bang Up Lane is a very low capacity street, as can be observed in Figure 9.29, and diverting large volumes of traffic onto this street may be problematic in respect to safety and congestion.

*Figure 9.29 Bang Up Lane in Kildare Town (Source: Google)*

### 9.6.6 Option 6: One-Way Westbound System on Meadow Road

Option 6 was tested in the 2025 scenario in the AM peak with the flow difference plot shown in Figure 9.30. The introduction of a one-way westbound system on Meadow Road has meant that a certain amount of traffic was rerouted onto the Hospital Street-Tully Road link to the south.

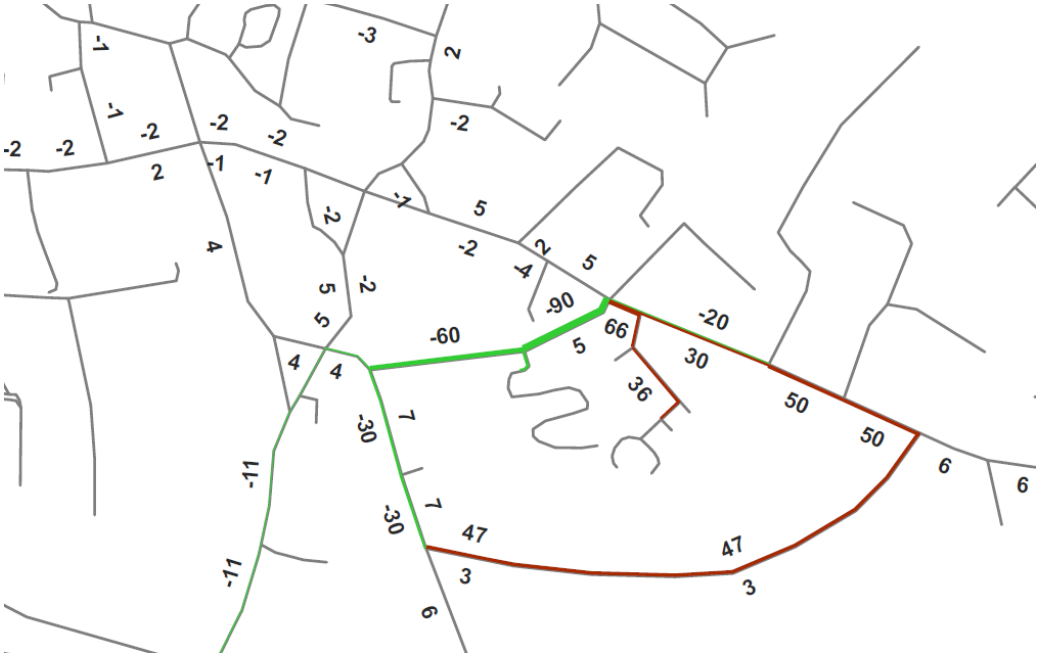



*Figure 9.30 Flow comparison (Option 6 Vs DM)– 2025 – AM Peak*

### 9.6.7 Option 8: Bride Street to Melitta Road One-Way Northbound System

Option 8 was tested in the 2025 scenario in the AM peak with the flow difference plot shown in Figure 9.31. Due to the lack of alternative north-south routes through the town in 2025, significant diversion of southbound traffic from Bride Street has led to a substantial increase in traffic volumes on Old Road and Green Road to the west, and a low capacity lane on the eastern periphery of the town.

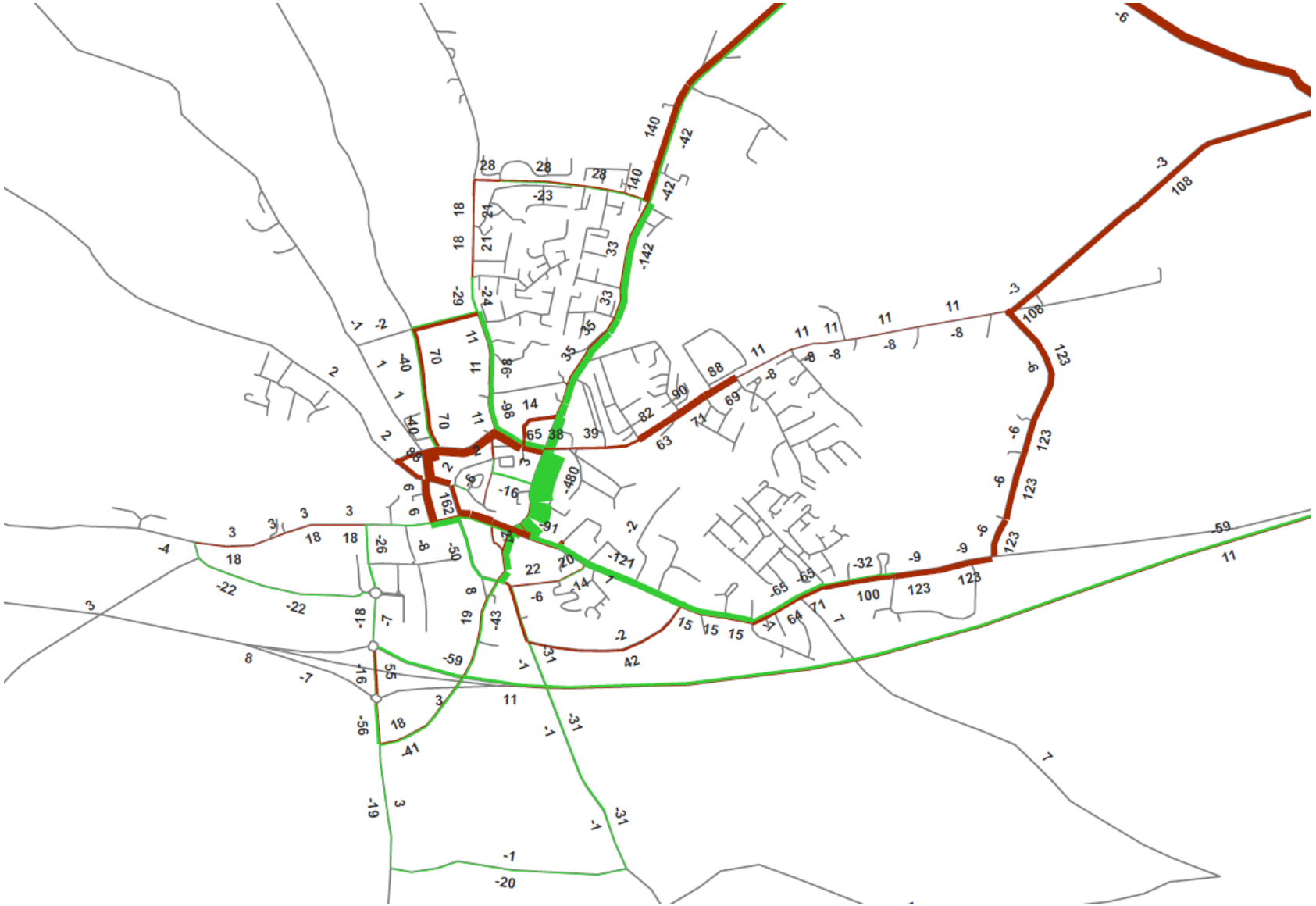


*Figure 9.31 Flow comparison (Option 8 Vs DM)– 2025 – AM Peak*

### 9.6.8 Option 9: Northern Clockwise One-Way Loop System on R401 and R415

Option 9 was tested in the 2025 scenario in the AM peak with the flow difference plot shown in Figure 9.32. The introduction of a large one-way system in the north of the town has reduced traffic volumes on the roads where the one-way system has been implemented, but it has also caused a significant amount of traffic to reroute onto surrounding roads. For instance, there has been a large increase in motor vehicle volumes on Old Road to the west of the R401 and to the east; traffic has diverted from Bride Street onto a narrow lane located on the eastern periphery of the town which has low capacity.

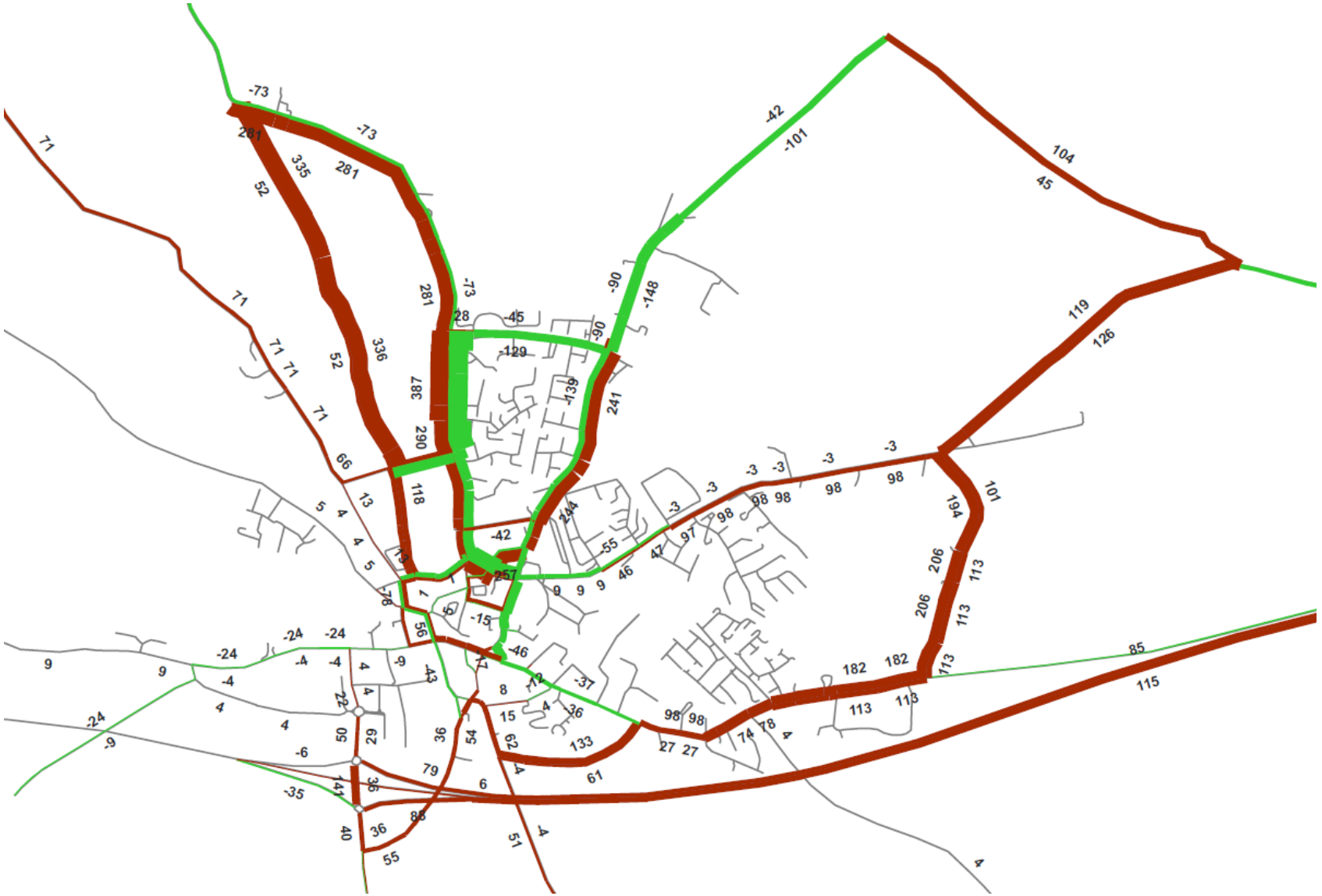


*Figure 9.32 Flow comparison (Option 9 Vs DM)– 2025 – AM Peak*

### 9.6.9 Option 10: Town Centre Clockwise One-Way Loop System

Option 10 was tested in the 2025 scenario in the AM peak with the flow difference plot shown in Figure 9.33. The introduction of a large one-way loop system in the town centre has caused a major redistribution of traffic to alternative routes. In particular, a large volume of traffic has been rerouted to the east onto a minor lane due to the lack of north-south alternatives to the R415 which may cause safety issues as this is a low capacity lane. Furthermore, traffic has increased on the Hospital Street-Tully Road link road in the south of the town which will increase vehicle volumes through a residential housing estate.

*Figure 9.33 Flow comparison (Option 10 Vs DM)– 2025 – AM Peak*

### 9.6.10 VISUM Network Statistics

Table 9.6 provides a summary of the network statistics in 2025 across the AM and PM peaks. The most beneficial option presented in the network statistics is the Northern Link Street because this is the only option which involves the construction of new road. The Northern Link Street results show that this road produces a reduction in vehicle distance and delay, with a slight increase in average network speed.

Option 1, the replacement of Southgreen Bridge, results in a small increase in vehicle kilometres due to the rerouting caused by closing Old Road Bridge to facilitate active mode improvements, but there is minimal impact on vehicle delay or speeds. Similarly, the one-way system on Meadow Road (Option 6) also has a minor impact on the network statistics and is designed to facilitate pedestrian and cyclist improvements.

While the network statistics for Options 3-5, which test various one-way systems and road closures on Bride Street, are not particularly negative, the difference plots have highlighted that they will divert vehicles onto roads which are less suitable for carrying high volumes of traffic. Options 8-10 which test a series of one-way systems in the centre and north of the town, all result in longer trip distances and delay from rerouting of traffic and lower vehicle speeds. This is particularly the case for Option 9 (Northern One Way Loop System) in the AM peak, which results in major travel time delays across the network, lower average vehicle speeds and much longer trips from rerouting.

*Table 9.6 Network statistics for the DM and DS Options in 2025*

| Model | Total Network Trips | Total Network Vehicle km | Total Network Travel Time (hrs) | Average Network Vehicle Speed (kph) |
|---|---|---|---|---|
| **AM Peak** | | | | |
| *DM 2025* | *8,545* | *77,024* | *1,394* | *55.26* |
| **Option 1**: Replace Southgreen Bridge | 8,545 | 77,083 | 1,394 | 55.30 |
| **Option 2**: Northern Link Street | 8,545 | 76,965 | 1,376 | 55.94 |
| **Option 3**: Bride Street Road Closure and One-Way System | 8,545 | 77,311 | 1,408 | 54.90 |
| **Option 4**: Bride Street Southbound One-Way System | 8,545 | 77,295 | 1,406 | 55.00 |
| **Option 5**: Bride Street One-Way Northbound System | 8,545 | 77,017 | 1,395 | 55.20 |
| **Option 6**: One-Way Westbound on Meadow Road | 8,545 | 77,056 | 1,395 | 55.30 |
| **Option 8:** Bride Street to Melitta Road One-Way Northbound System | 8,545 | 77,573 | 1,450 | 53.49 |
| **Option 9:** Northern Clockwise One-Way Loop System on R401 and R415 | 8,545 | 80,408 | 1,684 | 47.74 |
| **Option 10:** Town Centre Clockwise One-Way Loop System | 8,545 | 77,584 | 1,416 | 54.78 |
| **PM Peak** | | | | |
| *DM 2025* | *8,998* | *95,910* | *1,606* | *59.72* |
| **Option 1**: Replace Southgreen Bridge | 8,998 | 96,048 | 1,606 | 59.82 |
| **Option 2**: Northern Link Street | 8,998 | 95,637 | 1,591 | 60.13 |
| **Option 3**: Bride Street Road Closure and One-Way System | 8,998 | 95,905 | 1,611 | 59.52 |
| **Option 4**: Bride Street Southbound One-Way System | 8,998 | 95,919 | 1,620 | 59.20 |
| **Option 5**: Bride Street One-Way Northbound System | 8,998 | 95,850 | 1,608 | 59.60 |
| **Option 6**: One-Way Westbound on Meadow Road | 8,998 | 95,939 | 1,606 | 59.70 |
| **Option 8:** Bride Street to Melitta Road One-Way Northbound System | 8,998 | 96,568 | 1,622 | 59.54 |
| **Option 9:** Northern Clockwise One-Way Loop System on R401 and R415 | 8,998 | 97,381 | 1,635 | 59.57 |
| **Option 10:** Town Centre Clockwise One-Way Loop System | 8,998 | 96,759 | 1,630 | 59.38 |

## 9.7 Road Options – Multi Criteria Analysis

The road options are assessed according to the six CAF criteria in ten individual MCA assessments. The criteria used to assess the options in each MCA are outlined in Table 9.7. The MCA is informed by the transport modelling and baseline review, but it is primarily a qualitative high-level assessment to identify the options which will most contribute to achieving the project objectives.

*Table 9.7 Criteria Used in MCA Assessment*

| MCA criteria | Summary of Issues Considered |
|---|---|
| Economy | Considers the cost of the project, potential returns, journey time savings and other transport indicators |
| Integration | Studies the accordance of the measure with local planning policies and integration in respect to land-use activities and other strategy proposals |
| Accessibility/ Social Inclusion | Considers the impact on accessibility to key trip destinations, social inclusion for marginalised groups and interchange between transport modes |
| Safety | Anticipates the impact of the measure on safety issues and collisions |
| Environment | Considers the impact of the measure on the natural and built environment |
| Physical Activity | Assesses the impact of the measure on walking and cycling |

The MCA assessment is completed separately for each option because the options are not directly comparable, and they must be assessed on their individual merit in respect to the project objectives and assessment criteria. In each of the MCA tables, the relative merit of each option is rated according to the seven-point colour scale presented in Table 9.8.

*Table 9.8 MCA Colour Coded Ranking Scale*

| Colour | Description |
|---|---|
| | Major or highly positive |
| | Moderately positive |
| | Minor or slightly positive |
| | Not significant or neutral |
| | Minor or slightly negative |
| | Moderately negative |
| | Major or highly negative |

### 9.7.1 Option 1 MCA: Closure of Old Road Bridge and Replace Southgreen Bridge

Table 9.9 shows the MCA assessment for Option 1. The MCA assessment determined that the closure of Old Road Bridge to vehicular traffic would improve safety for pedestrians and cyclists, boosting physical activity along this route. By closing the road, local emissions and noise will reduce, while the improvement in conditions for active modes will be integrated with the permeability and cycling strategies. The closure of Old Road Bridge will slightly inconvenience drivers, which will negatively affect economy along with the cost of replacing Southgreen bridge to facilitate two-way traffic. Accessibility will improve slightly with the introduction of two-way traffic on Southgreen bridge. Overall, the introduction of Option 1 was determined to have a positive impact on transportation in the town and it is recommended for inclusion in the final strategy.

*Table 9.9 Option 1 MCA Results*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| **Option 1**: Close Old Road Bridge + Replace Southgreen Bridge | | | | | | | |

### 9.7.2 Option 2 MCA: Northern Link Street

Table 9.10 shows the MCA assessment for Option 2. The MCA determined that the Northern Link Street will require substantial investment, but the transport modelling showed that it should produce benefits to drivers across the town by reducing journey times and the distance of trips. As the scheme includes improved facilities for pedestrians and cyclists, they will also benefit from more convenient trips. By introducing a road built to modern standards, which draws traffic away from historic streets and the town centre, safety should be improved.

Furthermore, this option should also improve road safety at Pigeon Lane/Southgreen Road junction by introducing one-way systems. Construction on a greenfield site and encouraging car use by making driving more convenient with additional capacity may have a modest negative impact on the environment. Accessibility between the west and the north of the town will be improved, and the new road is integrated with the cycling and permeability strategies.

Northern Link Street includes provision for cycling and walking improvements which will boost physical activity. Overall, the introduction of Option 2 was determined to have a positive impact on transportation in the town and it is recommended for inclusion in the final strategy.

*Table 9.10 Option 2 MCA Results*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| **Option 2**: Northern Link Street | | | | | | | |

### 9.7.3 Option 3 MCA: Bride Street Road Closure and One-Way System

Table 9.11 shows the MCA assessment for Option 3. The MCA and transport modelling determined that Option 3 resulted in negative impacts on travel time and trip distance due to the rerouting caused by the road closure and a one-way system on Bride Street. Longer journey times would hurt the economy of the town and reduce accessibility, while diverting large volumes of traffic onto Bang Up Lane and Meadow Road would present a safety issue due to their low capacity.

This option would reduce integration with the parking strategy as it would restrict access to the off-street car park on Bride Street. Overall, the introduction of Option 3 was determined to have a negative impact on transportation in the town and it is excluded from the final strategy.

*Table 9.11 Option 3 MCA Results*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| **Option 3**: Bride Street Road Closure + One Way System | | | | | | | |

### 9.7.4 Option 4 MCA: Bride Street Southbound One-Way System

Table 9.12 shows the MCA assessment for Option 4. The MCA determined that creating a one-way southbound system on Bride Street would cause some negative impact on the economy through longer journey times and distances. While safety and emissions locally on Bride Street would improve, rerouting of traffic onto low capacity streets like the eastern section of Market Square and Meadow Road would increase hazards and emissions in those areas.

Accessibility for drivers would be reduced, but there would be some improvement in pedestrian and cyclist accessibility if space is reallocated to these modes on Bride Street. A southbound one-way system on Bride Street would restrict access to the off-street car park, which may be upgraded as part of the parking strategy, which would reduce strategy integration. Overall, the introduction of Option 4 was determined to have a negative impact on transportation in the town and it is excluded from the final strategy.

*Table 9.12 Option 4 MCA Results*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| **Option 4**: Bride Street One-Way Southbound | | | | | | | |

### 9.7.5 Option 5 MCA: One-Way Northbound System on Bride Street

Table 9.13 shows the MCA assessment for Option 5. The transport modelling determined that creating a one-way northbound system on Bride Street causes significant rerouting of southbound traffic through the narrow Bang Up Lane which will present a safety issue due to its low capacity. Yet, the transport modelling shows that this option will only have a modest impact on the network statistics and economy. However, restricting vehicle traffic will reduce accessibility for drivers, while access for active modes should be improved, boosting physical activity.

A northbound one-way system on Bride Street would restrict access to the off-street car park, which may be upgraded as part of the parking strategy, which would reduce strategy integration. Overall, the introduction of Option 5 was determined to have a neutral or negative impact on transportation in the town and it is excluded from the final strategy.

*Table 9.13 Option 5 MCA Results*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| **Option 5**: Bride Street One-Way Northbound | | | | | | | |

### 9.7.6 Option 6 MCA: One-Way Westbound System on Meadow Road

Table 9.14 shows the MCA assessment for Option 6. The introduction of a one-way system on Meadow Road is linked to public realm improvements which will enhance conditions for pedestrians as well as improving integration, safety and physical activity. This measure has a limited impact on traffic conditions with most vehicles diverting to the higher capacity R445. The local environment on Meadow Road will benefit from lower traffic volumes which will result in lower emissions and noise. Overall, the introduction of Option 6 was determined to have a positive impact on transportation in the town and it is recommended for inclusion in the final strategy.

*Table 9.14 Option 6 MCA Results*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| **Option 6**: Meadow Road One-Way Westbound | | | | | | | |

### 9.7.7 Option 7 MCA: Upgrade Signalised Junctions to MOVA or SCOOT as Appropriate

Table 9.15 shows the MCA assessment for Option 7. The MCA determined that upgrading traffic signals to MOVA/SCOOT would involve some financial cost, but it would also improve safety and the appeal of physical activity for vulnerable road users. The primary benefits would be in respect to integration as technological improvements would allow for more effective utilisation of existing road infrastructure and improve traffic flow/safety. Overall, the introduction of Option 7 was determined to have a positive impact on transportation in the town and it is recommended for inclusion in the final strategy.

*Table 9.15 Option 7 MCA Results*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| **Option 7:** Upgrade Signalised Junctions to MOVA or SCOOT as Appropriate | | | | | | | |

### 9.7.8 Option 8 MCA: Bride Street to Melitta Road One-Way Northbound System

Table 9.16 shows the MCA results for Option 8. The MCA determined that the introduction of a one-way system on Bride Street would involve some financial cost and the diversion of traffic onto lengthier routes would have an economic cost. The diversion of traffic onto the small lane at the eastern periphery of Kildare Town will have safety issues due to its low capacity, furthermore traffic has increased in central areas of Kildare such as Old Road and Green Road. The reduction in traffic on Bride Street will improve the local environment, through lower air and noise pollution, but longer car journeys due to rerouting will result in additional emissions across the study area.

The introduction of a one-way system, with wider footpaths, will benefit pedestrian accessibility and social inclusion, but it would also reduce town centre accessibility for drivers and result in the diversion of the Local Link bus route in one direction. The wider footpaths which will be possible due to the removal of one lane of traffic will promote physical activity and support the walking strategy. Overall, the introduction of Option 8 was determined to have a negative impact on transportation in the town and it is excluded from the final strategy.

*Table 9.16 Option 8 MCA Results*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| **Option 8:** Bride Street to Melitta Road One-Way Northbound System | | | | | | | |

### 9.7.9 Option 9 MCA: Northern Clockwise One-Way Loop System on R401 and R415

Table 9.17 shows the MCA results for Option 9. The MCA determined that the introduction of a large one-way loop system in the north of the town would have a significantly negative impact on economy through longer journey times and the cost of signage. Safety would be negatively impacted by rerouting large volumes of traffic onto roads and lanes with lower capacity. The local environment on the one-way streets would improve, through lower air and noise pollution, but rerouting and longer journeys would increase emissions across the study area overall.

Access and social inclusion would be improved on the one-way roads for pedestrians with better footpath infrastructure, but the negative impact on accessibility for drivers, cyclists and buses would produce a negative impact overall. Similarly, the introduction of such a large one-way system would harm integration with the cycling strategy proposals and hinder access to important locations such as the train station and town centre. However, the one-way systems would allow for pedestrian infrastructure improvements which would boost physical activity. Overall, the introduction of Option 9 was determined to have a negative impact on transportation in the town and it is excluded from the final strategy.

*Table 9.17 Option 9 MCA Results*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| **Option 9:** Northern Clockwise One-Way Loop System on R401 and R415 | | | | | | | |

### 9.7.10 Option 10 MCA: Town Centre Clockwise One-Way Loop System

Table 9.18 shows the MCA results for Option 10. The MCA determined that the introduction of a large central one-way system would cause significant rerouting of traffic, resulting in longer trips and additional traffic on lower capacity roads which would present a safety issue. Local air and noise pollution on the one-way streets would improve, but longer trips for rerouted traffic would result in greater emissions and reduce accessibility to the town centre.

The introduction of the one-way loop in the town centre would impact on some of the proposed cycling facilities, and result in the rerouting of a Local Link bus in one direction, which would produce a minor negative impact in regard to integration. However, the one-way systems would allow for pedestrian infrastructure improvements which would boost physical activity. Overall, the introduction of Option 10 was determined to have a negative impact on transportation in the town and it is excluded from the final strategy.

*Table 9.18 Option 10 MCA Results*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| **Option 10:** Town Centre Clockwise One-Way Loop System | | | | | | | |

### 9.7.11 Summary of MCA Results

Table 9.19 provides a summary of the MCA colour coding across every road option assessment. The MCA determined that Options 1, 2, 6 and 7 should be brought forward for inclusion in the strategy as preferred measures.

*Table 9.19 Multi Criteria Analysis of Road Options*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| **Option 1**: Close Old Road Bridge + Replace Southgreen Bridge | | | | | | | |
| **Option 2**: Northern Link Street | | | | | | | |
| **Option 3**: Bride Street Road Closure + One Way System | | | | | | | |
| **Option 4**: Bride Street One-Way Southbound | | | | | | | |
| **Option 5**: Bride Street One-Way Northbound | | | | | | | |

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| **Option 6**: Meadow Road One-Way Westbound | | | | | | | |
| **Option 7**: Upgrade Signalised Junctions to MOVA or SCOOT as Appropriate | | | | | | | |
| **Option 8:** Bride Street to Melitta Road One-Way Northbound System | | | | | | | |
| **Option 9:** Northern Clockwise One-Way Loop System on R401 and R415 | | | | | | | |
| **Option 10:** Town Centre Clockwise One-Way Loop System | | | | | | | |

## 9.8 Preferred Road Transport Measures

### 9.8.1 Road Strategy Measures

At the start of this strategy, it was determined that the Bride Street section of Market Square should be closed to vehicular traffic to improve the public realm. In addition to this measure, the MCA and transport modelling assessment has identified four additional options which will form the preferred suite of road measures in the transport strategy. The road strategy will consist of the following measures:

- Option 1: Closure of old road bridge to vehicular traffic and the replacement of Southgreen bridge to facilitate two-way traffic with improvements to approach roads (Road Measure 1)
- Option 2: Construction of Northern Link Street (Road Measure 2)
- Closure of Bride Street section of Market Square to vehicular traffic (Road Measure 3)
- Option 6: One-way westbound system on Meadow Road (Road Measure 4)
- Option 7: Upgrade signalised junctions to MOVA or SCOOT as appropriate (Road Measure 5)

The measures which form the road transport strategy are shown visually in Figure 9.34, except for RD 5 because the precise traffic signals to be upgraded will be identified in a detailed study at a later date.


*Figure 9.34 Road Strategy Measures*

Figure 9.35 shows the Kildare Town Road Strategy Measures in combination with the Do-Minimum Road Network to provide an overview of the future changes to the road network in Kildare Town.


*Figure 9.35 Future Road Network– Combined DM Network and Road Strategy Measures*

### 9.8.2 Phasing of Road Strategy Measures

The preferred road options have been renamed as road measures for the strategy. Each of the road measures is phased as short, medium or long term in respect to implementation. The phasing of each of the road measures is outlined in Table 9.20. Some measures are reliant on elements of the Do-Minimum road network being delivered before they can be implemented, these are; RD3 which can only be implemented when the Magee Barracks Roads are complete and RD 4 which will only be implemented when the Hospital Street – Tully Road link road has been constructed. Furthermore, the closure of Old Road Bridge in RD1 will not occur until the upgrade of Southgreen Bridge has taken place.

*Table 9.20 Phasing of Road Measures*

| | | | *Delivery Timeframe* | | |
|---|---|---|---|---|---|
| Option | Measure | Short Description | Short Term (1-2 Years) | Medium Term (3-5 Years) | Long Term (6-10 Years) |
| Option 1 | RD 1 | Closure of Old Road Bridge to vehicular traffic and the upgrade of Southgreen bridge to two-way traffic with improvements to approach roads | | x | |
| Option 2 | RD 2 | Construction of Northern Link Street | | x | |
| Option N/A | RD 3 | Closure of Bride Street section of Market Square to vehicular traffic (linked to development of Magee Barracks Roads) | | x | x |
| Option 6 | RD 4 | One-way system on Meadow Road running east to west (to be delivered after the development of the Hospital Street – Tully Road link road to ensure an alternative route is available) | x | | |
| Option 7 | RD 5 | Upgrade signalised junctions to MOVA or SCOOT as appropriate | x | x | |

### 9.8.3 Impact of Combined Road Strategy

In this section, the combined Roads Strategy is tested in the future year VISUM transport models to assess the impact on the Kildare Town transport network. The future year VISUM Traffic Modelling Report can be found in Appendix D. Table 9.21 shows the road strategy measures which are included in the 2025 and 2035 scenarios, with RD 3 (Bride Street Market Square closure) added in 2035 when the Magee Barracks Roads are in place.

*Table 9.21 Road Measures Included in 2025 and 2035 Scenario*

| Measure | Short Description | 2025 Scenario | 2035 Scenario |
|---|---|---|---|
| RD 1 | Closure of Old Road Bridge to vehicular traffic and the upgrade of Southgreen bridge to two-way traffic with improvements to approach roads | x | x |
| RD 2 | Construction of Northern Link Street | x | x |
| RD 3 | Closure of Bride Street section of Market Square to vehicular traffic (linked to development of Magee Barracks Roads) | | x |
| RD 4 | One-way system on Meadow Road running east to west | x | x |
| RD 5 | Upgrade signalised junctions to MOVA or SCOOT as appropriate | N/A – Not Modelled | |

#### 9.8.3.1 2025 VISUM Scenario

The combined road strategy was compared against the DM 2025 scenario and the network statistics are presented in Table 9.22. It can be observed that the combined road strategy results in a slight increase in vehicle speeds in the AM and PM peak as well as a slight reduction in travel time delay.

*Table 9.22 Network statistics – Combined Roads Strategy - 2025*

| Peak | Option | Total Network Trips | Total Network Vehicle km | Total Network Travel Time (hrs) | Average Network Vehicle Speed (kph) |
|---|---|---|---|---|---|
| AM | DM- 2025 | 8,545 | 77,024 | 1,394 | 55.26 |
| | Combined Road Strategy | 8,545 | 77,093 | 1,382 | 55.80 |
| PM | DM- 2025 | 8,998 | 95,910 | 1,606 | 59.72 |
| | Combined Road Strategy | 8,998 | 95,778 | 1,601 | 59.83 |

Difference plots comparing the combined roads strategy with the 2025 DM scenario are provided in Figure 9.36 for the AM peak and Figure 9.37 for the PM peak.

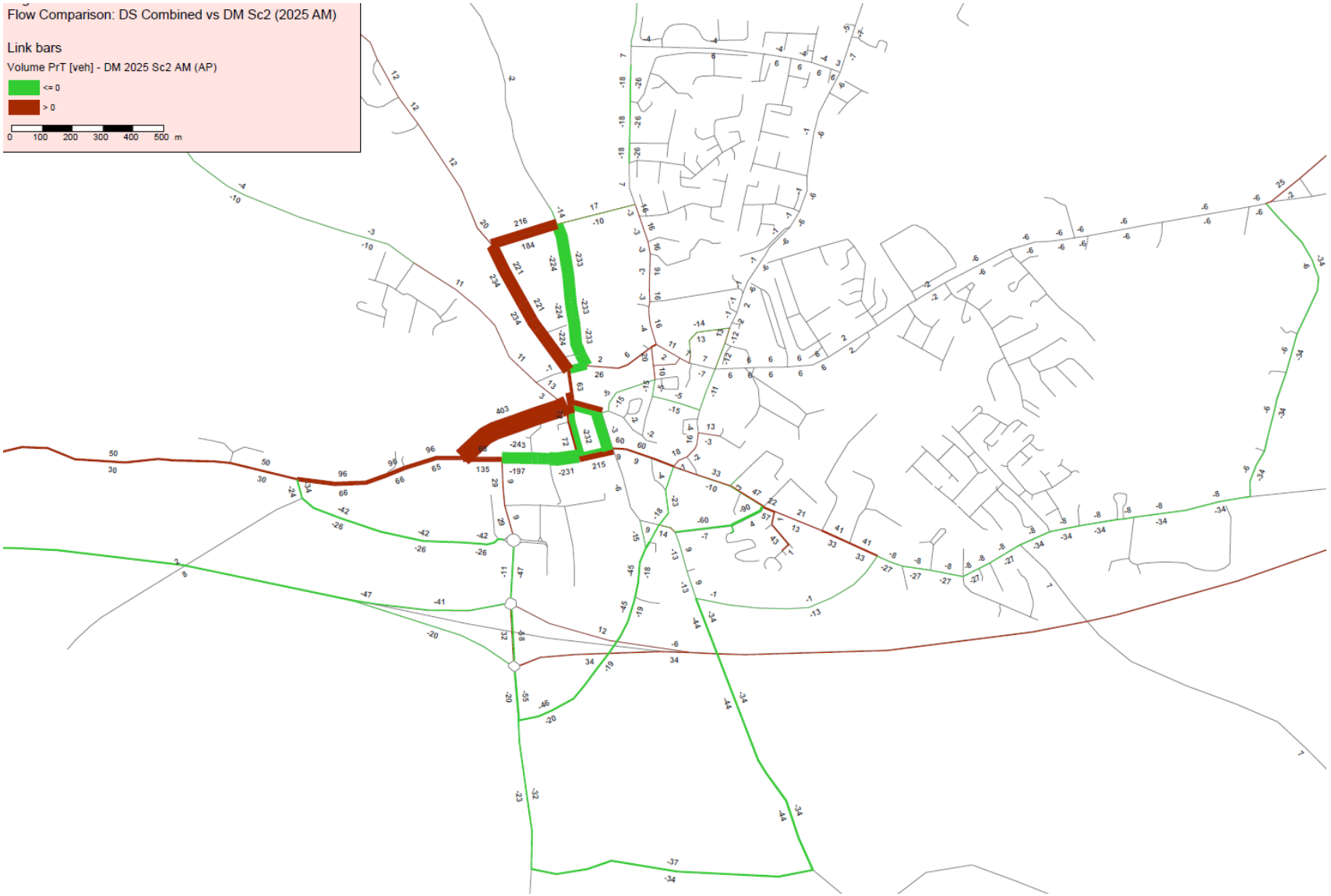



*Figure 9.36 Combined Road Strategy vs DM Scenario 2025 – AM Peak*

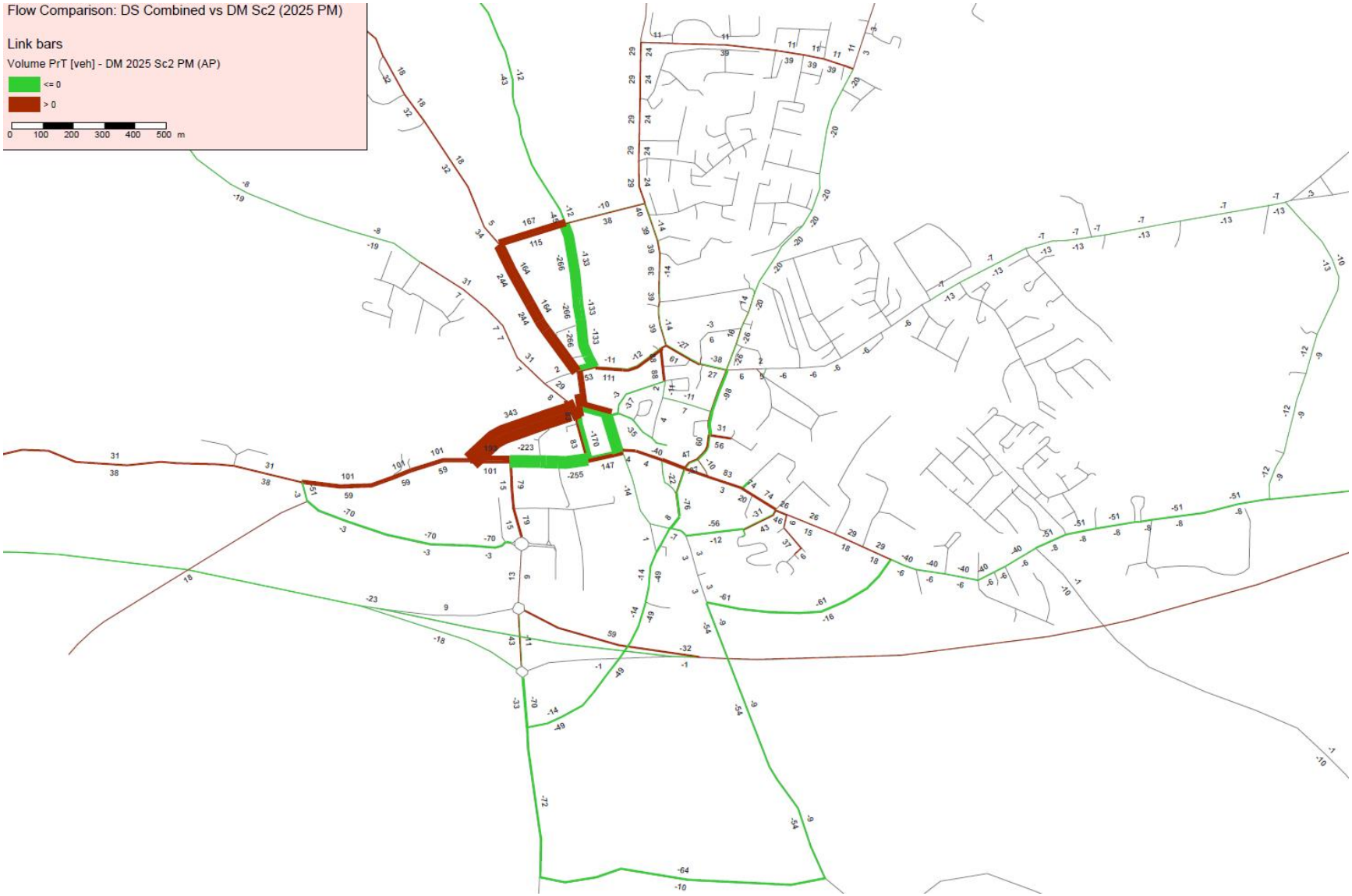



*Figure 9.37 Combined Road Strategy vs DM Scenario 2025 – PM Peak*

#### 9.8.3.2 2035 VISUM Scenario

The combined road strategy was compared against the DM 2035 scenario and the network statistics are presented in Table 9.23. It can be observed that the combined road strategy results in a slight increase in vehicle speeds in the AM and PM peak as well as a slight reduction in travel time delay. In the 2035 scenario, the Kildare town transport network has improved with the opening of Phase 2 of the Magee Barracks Road which provides a bypass of the town centre for the east of the town.

*Table 9.23 Network statistics – Combined Roads Strategy – 2035*

| Peak | Option | Total Network Trips | Total Network Vehicle km | Total Network Travel Time (hrs) | Average Network Vehicle Speed (kph) |
|---|---|---|---|---|---|
| AM | DM- 2035 | 9,727 | 85,150 | 1,512 | 56.30 |
| | Combined Road Strategy | 9,727 | 85,226 | 1,501 | 56.80 |
| PM | DM- 2035 | 9,785 | 104,939 | 1,734 | 60.50 |
| | Combined Road Strategy | 9,785 | 104,898 | 1,718 | 61.05 |

Difference plots comparing the combined roads strategy with the 2035 DM scenario are provided in Figure 9.38 for the AM peak and Figure 9.39 for the PM peak.

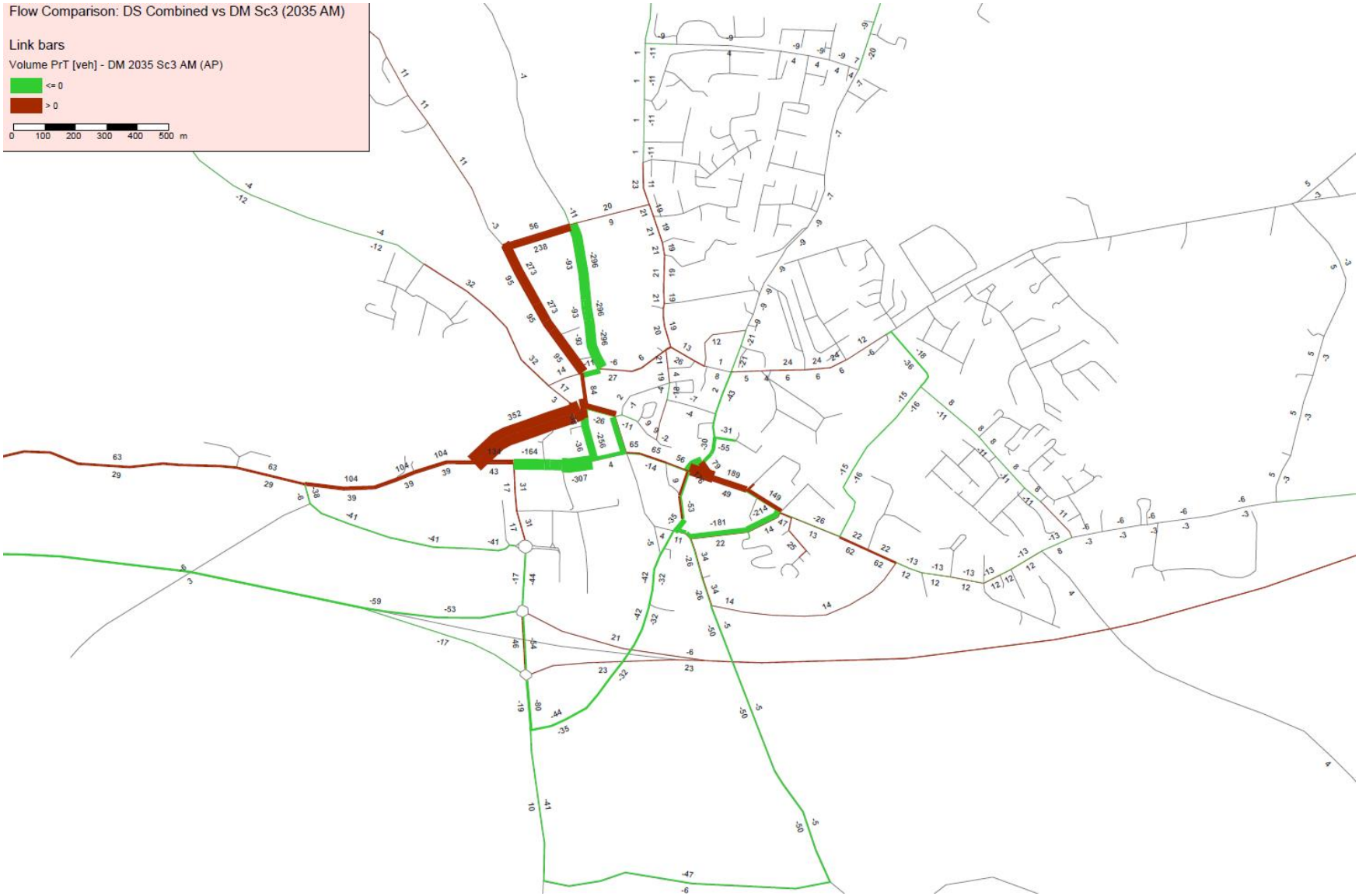



*Figure 9.38 Flow comparison (Combined Road Strategy Vs DM)– 2035 – AM Peak*

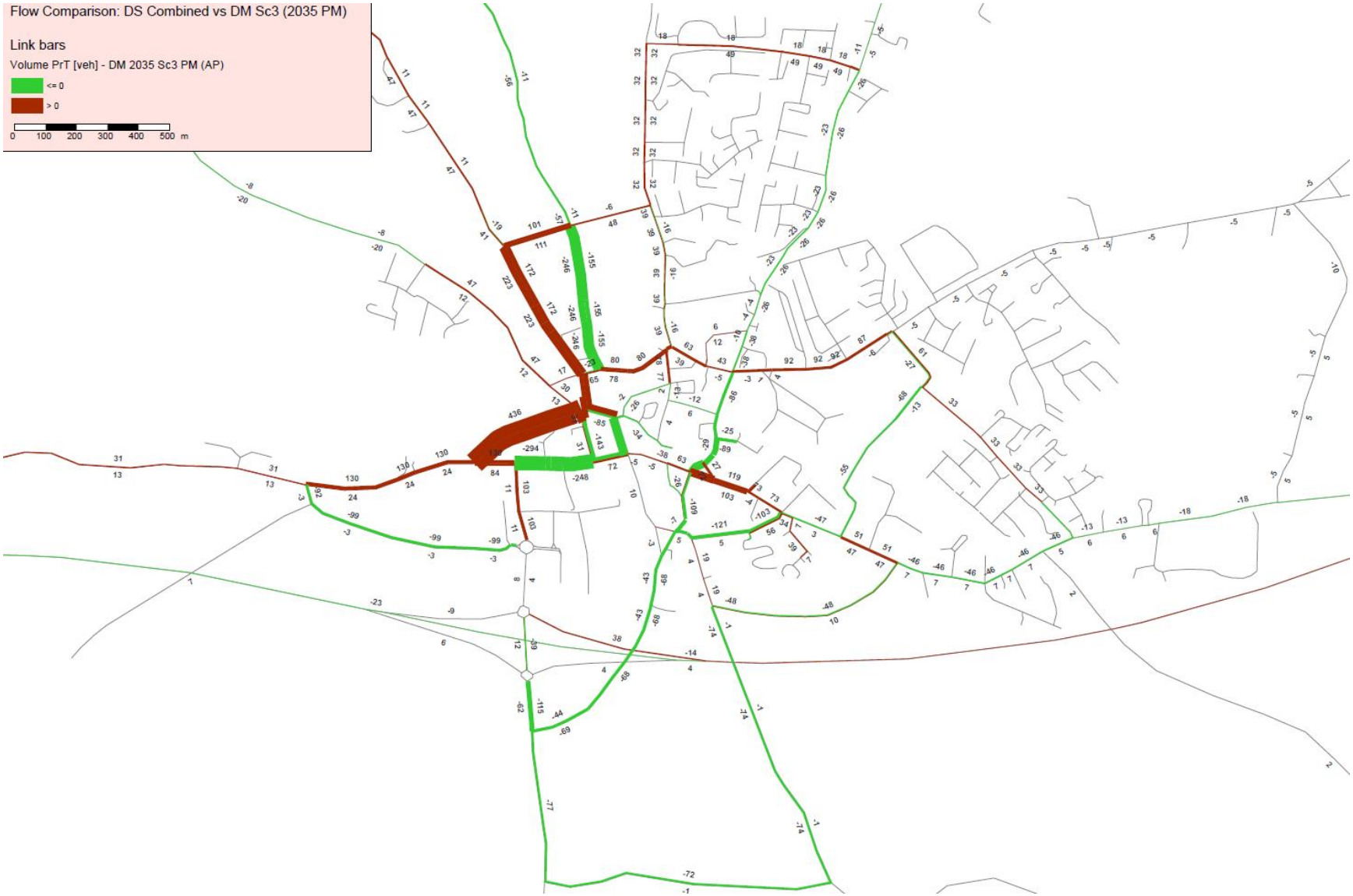



*Figure 9.39 Flow comparison (Combined Road Strategy Vs DM)– 2035 – PM Peak*

#### 9.8.3.3 Road Strategy Impact on M7 Junction

An ARCADY transport model was used to assess the operation of Junction 13 on the M7 to ensure it was not negatively impacted by the measures in the Kildare Town roads strategy. The ARCADY results are based on a scenario which assumes average traffic flows on a typical weekday in the 2025 and 2035 combined strategy scenarios. The ARCADY modelling results showed that the implementation of the strategy did not have an adverse impact on M7 Junction 13 with each arm of the junction operating at the same 'Level of Service' in the roads strategy scenario as was observed in the Do-Minimum Scenario for 2025 or 2035. It is acknowledged that one-off events, such as sales events at the Kildare Retail Village, could have a greater impact on the operating capacity of the junction. However, there are traffic management strategies implemented to manage the flow of the traffic through the junction for these one-off events.

#### 9.8.3.4 Micro Simulation VISSIM Modelling Results

The VISSIM microsimulation modelling tests the impact of the road strategy[6] on the town centre road network, rather than the entire study area. Table 9.24 and Table 9.25 show the VISSIM network statistics in 2025 and 2035 for the AM and PM peaks respectively. In 2025, the combined transport strategy has resulted in a slight decrease in delay in both peaks and a marginal increase in speed in the PM peak due to the opening of the Northern Link Street. The VISSIM model network is restricted to the town centre, where road capacity has been reduced from closing the Bride Street section of Market Square, so the combined road strategy results in a slight increase in delay in 2035 when trip demand has increased due to growth in population and jobs. The future year VISSIM Traffic Modelling Report can be found in Appendix E.

*Table 9.24 VISSIM - AM Peak - Network Performance Results*

| Modelled Year | Scenario | Average Speed (kmph) | Total travel time (h) | Total Delay (h) |
|---|---|---|---|---|
| 2025 | Do Minimum | 26 | 204 | 78 |
| | Road Strategy | 26 | 203 | 75 |
| 2035 | Do Minimum | 25 | 258 | 87 |
| | Road Strategy | 23 | 283 | 105 |

*Table 9.25 VISSIM – PM Peak - Network Performance Results*

| Modelled Year | Scenario | Average Speed (kmph) | Total travel time (h) | Total Delay (h) |
|---|---|---|---|---|
| 2025 | Do Minimum | 26 | 186 | 74 |
| | Road Strategy | 27 | 182 | 67 |
| 2035 | Do Minimum | 26 | 205 | 67 |
| | Road Strategy | 26 | 214 | 69 |

### 9.8.4 Potential Complimentary Measures

#### 9.8.4.1 Potential One-Way System on Nugent Street

In the longer term, the transport modelling highlighted that it may be possible to introduce a one-system on Nugent Street, as part of the closure of the Bride Street section of Market Square, once the Magee

[6] It should be noted that in the VISSIM modelling, the closure of Bride Street in Market Square is included in the 2025 scenario to test its impact on town centre traffic without the Magee Barracks Roads in place. This was to inform the selection of the preferred side of Market Square to close to traffic in Section 9.4. In the actual transport strategy and VISUM modelling, the Bride Street section of Market Square is not closed until the 2035 scenario when the full Magee Barracks Roads are in place as an alternative route.

Barracks Roads are complete in 2035. This would enable footpath widening and public realm improvements along Nugent Street, but it would also result in diversion of the Local Link route 883 bus service. Implementation of a one-way system on Nugent Street may take place in the future after the Magee Barracks Roads are in place and a detailed assessment process has been completed.

#### 9.8.4.2 Possible Future Heavy Goods Vehicle Ban in Town Centre

Due to the lack of roads which allow for an effective bypass of the town centre until the completion of the Northern Link Street and Magee Barracks Roads, a Heavy Goods Vehicle ban in the town centre was not considered to be a viable measure for consideration in the short term as part of the strategy. However, in the future when the Magee Barracks Roads and Northern Link Street are place, it may be suitable to consider the potential role of a HGV ban in the town centre to improve safety and reduce emissions once alternative routes are available. Further exploration of this concept will take place after the lifetime of this transport strategy, when the KTTS is being reviewed and revised in the future.

#### 9.8.4.3 Demand Management

Demand management is an important aspect of promoting mode transfer to sustainable travel modes and ensuring that private motor vehicles are only used for essential trips. The KTTS promotes demand management through the introduction of Mobility Management Plans for larger employers in the parking strategy which will ensure that suitable facilities exist in workplaces to encourage the use of active travel and modal shift away from private motor vehicles. Importantly, the parking strategy also does not increase parking supply in the town centre, with the new off-street car park designed to accommodate on-street parking spaces removed from the Main Street rather than provide additional capacity. When it is considered that the population of the town will grow over the next ten years, but parking supply will remain the same, this will act as a constraint on traffic growth and encourage the use of sustainable travel modes. In this respect, the reduction in vehicle capacity in Market Square through the Bride Street road closure and the enhancement of the public realm will likely encourage the use of active modes to reach the town centre.

In the future, the update of traffic signals in the town to MOVA/SCOOT in road measure RD 5 will allow for more effective traffic management. This will also allow for signal priority to be given to sustainable modes of transport, such as pedestrians or buses, to ensure that access by these modes is prioritised.

### 9.8.5 Protected Road Corridors for Future Development

Kildare town has a large amount of land zoned for future residential development which will take place during and after the lifetime of this transport strategy. In addition to the road strategy, a number of corridors have been identified which will be protected in development plans to provide space for potential future roads to serve the town as it expands. It is important to note that these protected corridors are intended as very long term plans, which are not proposed as part of the transport strategy. These protected corridors will be linked to development and if the zoned lands are not constructed then these roads will not be necessary. The town will have to expand significantly for these protected corridors to be utilised as roads, which is unlikely to happen for several decades.

There are three protected road corridors:

- Outer Orbital Corridor: An outer orbital road connecting the R445 with the R415
- Inner Relief Corridor: A distributor road connecting the R401 with the Outer Orbital Corridor
- Eastern Distributor Road Corridor: A distributor road connecting Melitta Road with the R445

The protected corridors are shown visually, with indicative routes, in Figure 9.40. The actual location of the roads will be determined through a route selection and detailed design process.

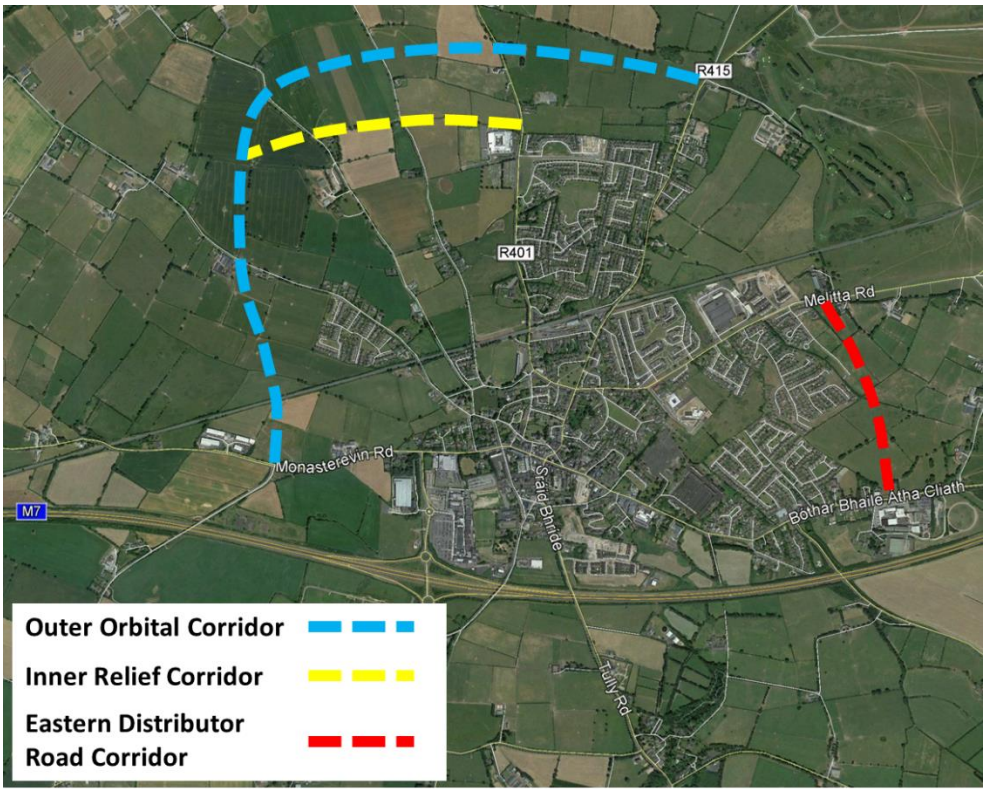



*Figure 9.40 Protected Road Corridors for Future Development – Indicative Routes*

It was determined that a continuous orbital corridor extending from the west of the town on the R445, across the north of the town, to the east of the town on Melitta Road; was not required due to the lack of zoned development in the north-east. In the future, most of the growth in Kildare Town will occur in the north-west between the R445 and the R401; with these protected corridors designed to provide a future orbital route which links these areas with the existing urban area. There is no need to designate a protected road corridor from the R415 to Melitta Road because the land-use zoning for the majority of land in the north-east is 'green belt' which will remain undeveloped and will not require a road.

# 10 PARKING OPTIONS ASSESSMENT

# 10. Parking Options Assessment

## 10.1 Overview

This section identifies and assesses options to improve the distribution and operation of car parks in Kildare Town. The parking strategy is integrated with the public transport, walking, cycling and road strategies to ensure that mutually supportive measures are implemented. To support the town centre, particularly in respect to retail, the total parking stock in central areas is not reduced. Instead, where parking spaces are removed to improve the operation of the transport network or the public realm, the spaces are relocated to an alternative site nearby.

## 10.2 Parking Objectives

The parking strategy seeks to achieve the following objectives:

1. To ensure appropriate provision and location of car parking to support and improve the economic vitality of the town centre
2. 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.
3. To relocate parking from the main street and the town centre to facilitate public realm and walking/cycling/public transport infrastructure improvements
4. Improve the quality of parking information with new parking signage and technology

## 10.3 Parking Options Description and Assessment

The parking options are assessed according to the six CAF categories in individual MCA assessments. The criteria used to assess the options in each MCA are outlined in Table 10.1. The MCA is informed by the baseline review, but it is primarily a qualitative high-level assessment to identify the options which will most contribute to achieving the project objectives.

*Table 10.1 Criteria Used in MCA Assessment*

| MCA criteria | Summary of Issues Considered |
|---|---|
| Economy | Considers the cost of the project, potential returns, journey time savings and other transport indicators |
| Integration | Studies the accordance of the measure with local planning policies and integration in respect to land-use activities and other strategy proposals |
| Accessibility/ Social Inclusion | Considers the impact on accessibility to key trip destinations, social inclusion for marginalised groups and interchange between transport modes |
| Safety | Anticipates the impact of the measure on safety issues and collisions |
| Environment | Considers the impact of the measure on the natural and built environment |
| Physical Activity | Assesses the impact of the measure on walking and cycling |

The MCA assessment is completed separately for each option because the options are not directly comparable, and they must be assessed on their individual merit in respect to the project objectives and assessment criteria. In the MCA, the relative merit of each option is rated according to the seven-point colour scale presented in Table 10.2.

*Table 10.2 MCA Colour Coded Ranking Scale*

| Colour | Description |
|---|---|
| | Major or highly positive |
| | Moderately positive |
| | Minor or slightly positive |
| | Not significant or neutral |
| | Minor or slightly negative |
| | Moderately negative |
| | Major or highly negative |

### 10.3.1 Option 1: Installation of VMS Parking Signs

#### 10.3.1.1 Option Description

This option proposes the installation of an inner and outer ring of parking Variable Messaging Signs (VMS) in Kildare Town. The purpose of the signs is to assist drivers parking in Kildare Town by making it easier and quicker to locate available parking space. The signs will show the number of spaces available in each car park, letting drivers know where the vacant spaces are located and plan their route accordingly. The outer ring of VMS signs will be deployed on all major approach roads as indicated in Figure 10.1, while the inner ring of signs will be deployed on roads leading to the town centre. In addition to informing drivers, the VMS signs will assist the Council in diverting traffic along preferred routes and divert circulating traffic looking for a car parking space away from the Main Street.


*Figure 10.1: Proposed locations of VMS Parking Signs in Kildare Town*

#### 10.3.1.2 Option Assessment

While there will be costs associated with the installation of VMS signs, they will assist drivers in finding vacant parking spaces in Kildare Town. This will help to eliminate unnecessary journeys circulating through Kildare Town and help to reduce carbon emissions. VMS signs will also help to integrate parking provision within Kildare Town.

*Table 10.3 Parking Option 1 MCA*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| Option 1: Installation of VMS Parking Signs | | | | | | | |

### 10.3.2 Option 2: Relocation of On-Street Parking from Main Street

#### 10.3.2.1 Option Description

It is proposed to remove on street parking from Main Street to allow for improvement to the public realm in the form of improved walking and cycling facilities. This will help to make Main Street a more inviting destination to visit and spend time. The car parking spaces relocated from the main street would instead be provided in an off-street car park located in close proximity to main street (see options below). It is important to note that this proposal will not result in the loss of any town centre parking spaces, it is simply moving the spaces to a nearby off-street car park, which will be identified from the parking options which are assessed in Section 10.3. The areas of on-street parking to be relocated from Main Street are defined in Figure 10.2.

It should be noted that as part of this measure blue badge parking will be retained on Main Street.

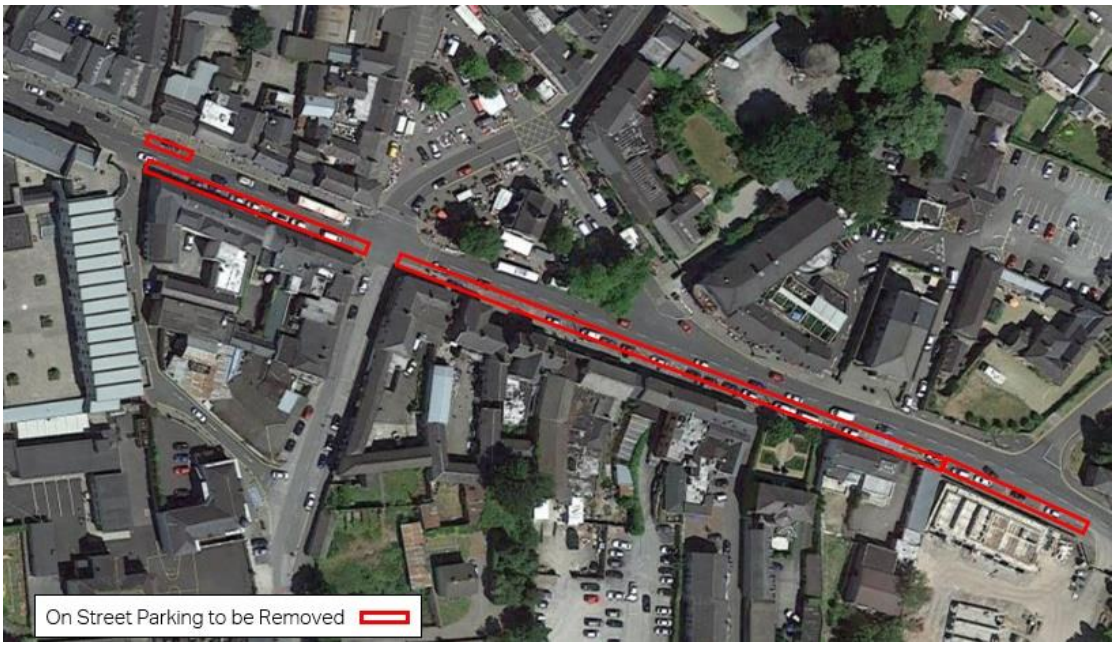



*Figure 10.2: Sections of On-Street Parking to be Relocated to Bride Street Car Park*

#### 10.3.2.2 Option Assessment

The public realm improvements on Main Street will cost money but the benefit to business in increased footfall should offset some of these initial costs. This option should lead to improvements in safety with wider footpaths and cycling facilities with less car traffic. Due to a decrease in car traffic there should be improvement in air quality. Improving walking and cycling facilities along the main street will help make it more accessible and socially inclusive to all. Also supporting improvements to public transport and physical activity.

*Table 10.4 Parking Option 2 MCA*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| Option 2: Relocate On-Street Parking on Main Street | | | | | | | |

### 10.3.3 Option 3: Upgrade Bride Street Off-Street Car Park

#### 10.3.3.1 Option Description

This measure proposes that the Bride Street car park should be formalised, which would entail paving, road markings, lighting and improved wayfinding. Incorporated into this option is a proposed walking link to Main Street using an existing archway. This walking link would help to improve accessibility from the car park to Main Street and increase the appeal of the car park for drivers visiting the town centre. There is underutilised land adjacent to the Bride Street car park which could offer the potential to expand the car park in the future, as indicated in Figure 10.3.

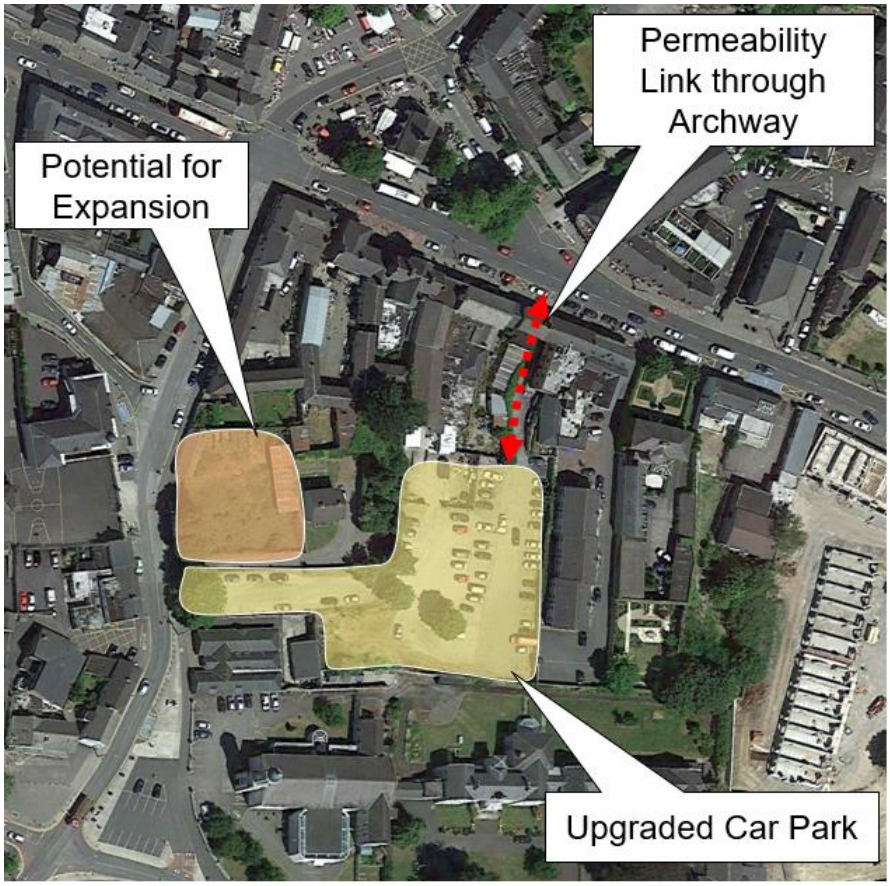



*Figure 10.3: Location of Bride Street Car Park and Associated Walking Link*

#### 10.3.3.2 Option Assessment

While there will be financial costs associated with upgrading Bride Street car park, it will help to deliver strong benefits to Kildare Town. Improving safety by reducing traffic along main street and helping to make the town centre more accessible for all. This option would allow more parking near the Main Street which could boost retail activity in the town centre. Additional town centre parking would improve vehicular accessibility and its implementation would be integrated with the relocation of parking spaces from Main Street. Increased parking supply in this back-land location would encourage users to walk to the main street and produce a slight benefit to physical activity.

*Table 10.5 Parking Option 3 MCA*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| Option 3: Upgrade Bride Street Off-Street Car Park | | | | | | | |

### 10.3.4 Option 4: New Car Park Facility on the site of the former Kildare Chilling Company on Bride Street

#### 10.3.4.1 Option Description

This measure proposes that the existing structures forming the now disused Kildare Chilling Site should be demolished and the site repurposed for use as a car park, as shown in Figure 10.4. Currently the site is disused and considered underutilised given its location in the centre of Kildare Town. The car park would be formalised, which would entail paving, road markings, lighting, and improved wayfinding. The proximate location of this site to Main Street makes it an attractive location to accommodate car parking spaces relocated from Main Street. This site might also be able to offer coach parking facilities.


*Figure 10.4 Option 4: Potential new Car Park Location on Bride Street*

It should be noted that the former Kildare Chilling Company building is recorded in the National Inventory of Architectural Heritage (NIAH) as a building of historic and social significance. The NIAH states that "*This building is of some social and historical significance, attesting to the continued industrialisation of Kildare town in the mid twentieth century... The building is a prominent feature of the streetscape, forming the corner of Bangup Lane and Bride Street.*[7]"

#### 10.3.4.2 Option Assessment

There will be significant financial costs associated with site acquisition and demolition works, however it may deliver strong benefits to Kildare Town. The new car park could improve safety by reducing traffic along main street and aid integration by accommodating the relocated car park spaces which would be removed from the Main Street. This option would allow additional parking near the town centre which could boost retail activity. Additional town centre parking would improve vehicular accessibility, but this impact would be weakened by the site's proximity to the existing off-street car parks at the shopping centre and Bride Street, which would mean it is essentially replicating an existing service. The car park would involve the demolition of the former Kildare Chilling Company building which is a building of historic and social significance, as recorded in the NIAH, and this would have a negative impact on the

[7] NIAH Entry for Kildare Chilling Company Building: https://www.buildingsofireland.ie/buildings-search/building/11817043/kildare-chilling-company-bangup-lane-bride-street-kildare-kildare-kildare

built environment and the historic urban streetscape of this heritage town. Increased parking supply in this Main Street proximate location would encourage users to walk to the Main Street and produce a slight benefit to physical activity.

*Table 10.6 Parking Option 4 MCA*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| Option 4: New Car Park Facility on the site of the former Kildare Chilling Company on Bride Street | | | | | | | |

### 10.3.5 Option 5: New Car Park Facility on Brownfield lands located on Dublin Street

#### 10.3.5.1 Option Description

This option proposes the reuse of brownfield lands for a new Town Centre car park in the site located at the intersection of Dublin Street and Magee Terrace, as shown in Figure 10.5. The car park would require new paving, road markings, signage, lighting, and improved wayfinding. The proximity of this site to the Main Street makes it an attractive location to accommodate the car parking spaces relocated from Main Street. The location of the site on Dublin Street would help to attract those entering Kildare Town from the east to park before they reach Main Street, which may help to reduce traffic flows along Main Street and improve parking legibility for visitors of Kildare Town.


*Figure 10.5 Option 5: Proposed car park site at the intersection of Dublin Street and Magee Terrace*

#### 10.3.5.2 Option Assessment

There will be financial costs associated with site acquisition, however this site has the potential to deliver strong benefits to Kildare Town. The car park's location in the east of the town has the potential to improve safety by reducing traffic along Main Street. This option would allow more parking near Main Street which may help to boost town centre retail activity. Additional town centre parking would improve vehicular accessibility and its implementation would be integrated with the relocation of parking spaces from Main Street. Increased parking supply in this Main Street proximate location would encourage users to walk to the Main Street and produce a slight benefit to physical activity.

*Table 10.7 Parking Option 5 MCA*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| Option 5: New Car Park Facility on Brownfield lands located on Dublin Street | | | | | | | |

### 10.3.6 Option 6: New Car Park Facility at the Water Tower Site

#### 10.3.6.1 Option Description

This option proposes using the old Water Tower site in Kildare town as a future off-street car parking facility. The site is currently an underutilised brownfield site which is centrally located on the eastern side of Market Square in the centre of Kildare Town. The site would offer central, off-street car parking in Kildare town which would be capable of accommodating the car park spaces relocated from the Main Street. Given the constrained nature of the site, it is not considered suitable for the accommodation of coach parking. The extent and location of the site is shown in Figure 10.6.


*Figure 10.6: Potential Car Park at the Water Towner Site*

#### 10.3.6.2 Option Assessment

There will be financial costs associated with site acquisition, however, this site has the potential to deliver strong benefits to Kildare Town. There may be potential for negative impacts on safety given its location in the centre of Kildare town, and access provided via the eastern section of Market Square which will be heavily trafficked since the Bride Street section of the square will be pedestrianised. The car park is centrally located, which will improve town centre accessibility, but access is via the eastern section of Market Square which will be accommodating more traffic due to the Bride Street pedestrianisation and this could be affected by congestion. This option would allow more parking near Main Street which will positively impact town centre retail activity. Additional town centre parking would improve vehicular accessibility and its implementation would be integrated with the relocation of parking spaces from Main Street. Increased parking supply in this Main Street proximate location would encourage users to walk to the Main Street and produce a slight benefit to physical activity.

*Table 10.8 Parking Option 6 MCA*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| Option 6: New Car Park Facility at the Water Tower Site | | | | | | | |

### 10.3.7 Option 7: Upgrade of Kildare Town Train Station Car Park

#### 10.3.7.1 Option Description

At present, the train station car park has a single vehicular entrance to the east, which means that traffic has to make a circular route due to the one way system on Fair Green Road. This option will improve the Kildare Town Train Station car park by upgrading the paving, improving road markings and adding lighting. At present, some parking areas are quite informal without road markings, it is expected that the upgraded and formalised train station car park will have a slightly higher capacity as a result. In addition, it is also proposed to introduce a new entrance to the western end of the car park on to Fair Green Road. This new entrance would entail making the western end of Fair Green Road two way to avoid any conflicts with the one-way shuttle system on Dunmurray Road. The western new entrance would help to remove some unnecessary traffic from the town centre and relieve congestion on Station Road (R415). The different elements of Option 7 are shown visually in Figure 10.7.

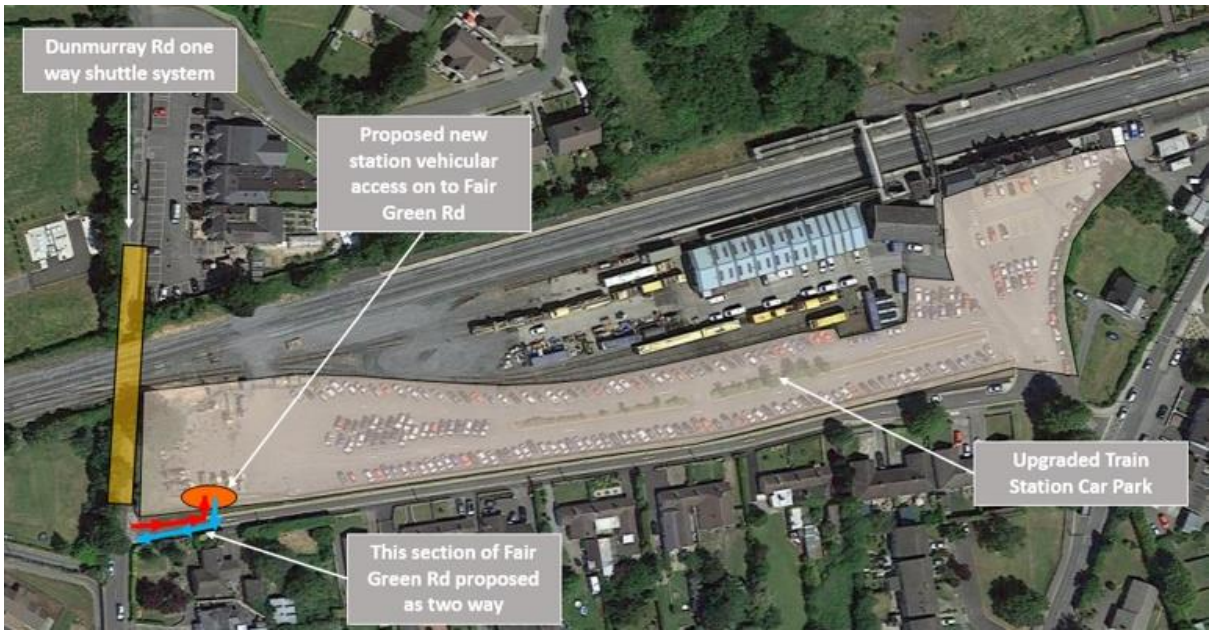



*Figure 10.7: Extent of Kildare Town Train Station Parking Upgrades*

#### 10.3.7.2 Option Assessment

While there will be financial costs associated with upgrading Kildare Town Train Station car park, it would allow for extra parking capacity which would help to encourage more people to travel by sustainable modes, thus reducing emissions and improving air quality. Additional car park access would improve vehicular accessibility in Kildare town. Increased parking supply would encourage more people to commute via train which will result in slight increase to physical activity as taking the train involves more walking than driving.

*Table 10.9 Parking Option 7 MCA*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| Option 7: Upgrade of Kildare Town Train Station Car Park | | | | | | | |

### 10.3.8 Option 8: Mobility Management Plans

#### 10.3.8.1 Option Description

This option proposes that mobility management plans (MMPs) will be developed for major workplace locations throughout Kildare Town such as the Kildare Chilling Company, Kildare Village and other significant businesses or organisations. In accordance with the Smarter Travel[8] (2009) national policy document, MMPs will be recommended for all organisations or businesses which contain over 100 staff. The NTA guide to Workplace Travel Plans for implementors states that; *'workplace travel plans have been shown to reduce single-occupant car use by 10-24%, with the reduction depending on the extent of the travel plan and site-specific issues'*.

#### 10.3.8.2 Option Assessment

MMPs would be low cost to implement with potential cost savings by reducing the need for future investment in car parking. Mode transfer from the private car to sustainable travel modes could result

[8] It should be noted that a new national sustainable mobility policy is currently under development by the DoT which will replace the Smarter Travel policy, but this new policy will likely also recommend the use of MMPs to encourage modal shift to sustainable modes and reduce car use.

in a modest boost to safety and the environment. Reducing car use would aid the achievement of land-use-transport policy objectives and improve integration. MMPs improve conditions for cyclists in the workplace by providing infrastructure (e.g. showers, lockers, etc) which will boost accessibility and physical activity.

*Table 10.10 Parking Option 8 MCA*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| Option 8: Mobility Management Plan | | | | | | | |

### 10.3.9 Option 9: Upgrade Nugent Street Car Park

#### 10.3.9.1 Option Description

Nugent Street car Park is an existing car park in close proximity to Market Square and it is linked to the town centre via an existing laneway. Nugent Street car park is an underutilised car park within Kildare Town with a perception of being unsafe particularly at night. Upgrading the Nugent street car park will entail improving wayfinding from Market Square to Nugent Street car park by improving the existing lane as well as enhanced lighting and security measures within Nugent Street car park, lane way and environs. These measures will help to improve the public perception of Nugent Street as a good place to park and support the relocation of parking spaces from the Main Street. Car park signage will also be improved to direct those entering Kildare Town along Station Road (R415) to use Nugent Street car park and avoid unnecessary trips through the town centre. Nugent Street car park, the laneway link and its proximity to Market Square is shown in Figure 10.8.

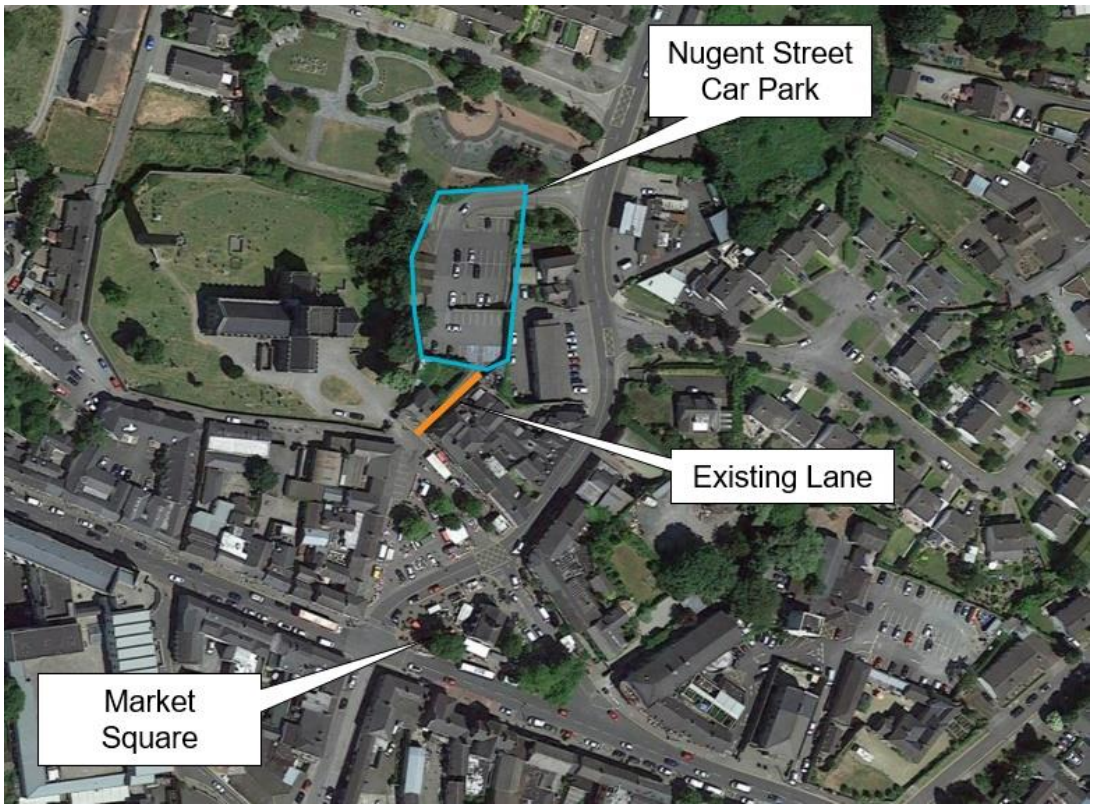



*Figure 10.8: Location of Nugent Street Car Park and Proximity to Market Square*

#### 10.3.9.2 Option Assessment

There will be financial costs associated with upgrading Nugent Street Car Park but not to the same extent as other car parks because Nugent Street is already an established car park. The improvements

will improve safety and encourage more people to park there, helping to reduce traffic along Main street. It could also help boost retail activity in the town centre. It will improve vehicular accessibility and its implementation would be integrated with the relocation of parking spaces from Main Street. Improving the car park would encourage more walking to the town centre and decrease the number of vehicles on Main Street having positive impacts on integration and accessibility.

*Table 10.11 Parking Option 9 MCA*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| Option 9: Upgrade Nugent Street Car Park | | | | | | | |

### 10.3.10 Summary of MCA Results

Table 10.12 provides a summary of the MCA colour coding across every parking option assessment.

*Table 10.12 Multi Criteria Analysis of Public Transport Options*

| Option | Economy | Safety | Environment | Access & Social Inclusion | Integration | Physical Activity | Combined Assessment Outcome |
|---|---|---|---|---|---|---|---|
| Option 1: Installation of VMS Parking Signs | | | | | | | |
| Option 2: Relocate On-Street Parking on Main Street | | | | | | | |
| Option 3: Upgrade Bride Street Off-Street Car Park | | | | | | | |
| Option 4: New Car Park Facility on the site of the former Kildare Chilling Company on Bride Street | | | | | | | |
| Option 5: New Car Park Facility on Brownfield lands located on Dublin Street | | | | | | | |
| Option 6: New Car Park Facility at the Water Tower Site | | | | | | | |
| Option 7: Upgrade of Kildare Town Train Station Car Park | | | | | | | |
| Option 8: Mobility Management Plan | | | | | | | |
| Option 9: Upgrade Nugent Street Car Park | | | | | | | |

## 10.4 Preferred Parking Measures

As a result of the MCA, the following parking options have been selected for inclusion in the strategy as short term measures:

- Option 8: Mobility Management Plan
- Option 9: Upgrade Nugent Street Car Park

In the short to medium term, i.e. 1-5 years, the following measure is proposed:

- Option 2: Relocate On-Street Parking on Main Street (after creation of new off-street car park)

In the medium term, i.e. 3-5 years, the following measures are proposed:

- Option 1: Installation of VMS Parking Signs
- Option 7: Upgrade of Kildare Town Train Station Car Park

The MCA determined that Option 4 (former Kildare Chilling Company Site off-street car park) should be removed from the strategy as it does not provide sufficient benefits to justify the demolition of a building of historic and architectural significance. Of the remaining off-street car park options (Option 3: Bride Street, Option 5: Dublin Street and Option 6: Water Tower), Kildare County Council will examine the feasibility of these options and identify the preferred site/sites to be developed as an off-street car park in the medium term. It is not recommended that all three sites should be developed as constructing this number of new off-street car parks in Kildare Town would represent an oversupply of car parking and an inefficient use of land which could be used for densification or other uses.

There are no long term parking options proposed. A number of complimentary measures are outlined in the following section to support the parking strategy. Following this, potential options to improve parking technology are described.

## 10.5 Complimentary Parking Measures

To support the parking strategy, a number of complimentary measures are proposed to ensure the effective operation of car parks and goods vehicles in Kildare Town:

- Improve Car Park Signage: The signs used to guide drivers to car parks in Kildare Town should be improved and they should direct cars along routes which support the objectives of the Kildare Town Transport Strategy e.g. rerouting traffic to reduce vehicle traffic on Main Street.
- Review Parking Duration: Parking duration should be reviewed at car parks throughout Kildare Town to reach a suitable balance between long and short-term parking. Parking duration limits should be specified in car parks and enforced to be effective.
- Review HGV Loading Bays: In addition to the parking strategy, it will be necessary in the future to review the HGV loading bays used throughout Kildare Town to optimise the operation of heavy vehicle traffic in the town and support the proposals of the Kildare Town Transport Strategy.
- Enhanced Parking Enforcement: To support the public transport, permeability and cycling strategy; parking enforcement will be enhanced to eliminate illegal parking in bus stops, pedestrian paths and cycle lanes. This will ensure that road space designated for sustainable modes will be clear of private vehicles, an issue which will become particularly important as the permeability, cycling and public transport strategies are implemented. This will ensure that efficient and safe access is maintained for walkers, cyclists and public transport users to encourage modal shift.
- Review School Drop-Off Facilities: In addition to the parking strategy, it will be necessary to review school drop-off facilities in the future at the four schools in the town; Kildare Town Educate Together, St Brigid's Primary School, Gaelscoil Mhic Aodha and Kildare Town Community School. The review will identify access and safety issues regarding the existing school drop-off facilities and identify improvements which will improve efficiency, safety and prioritise access by active modes and school buses. A detailed options selection and design process will be completed to identify the best solution for each school.
- Review of Layby at Kildare Town Train Station: KCC will engage with Irish Rail to determine whether the layby located at Kildare Town Train Station can be relocated to a different location owned by Irish Rail. The relocation of the existing layby facility as shown in Figure 10.9 would allow for a considerable expansion of the park and ride facilities at the Train Station.

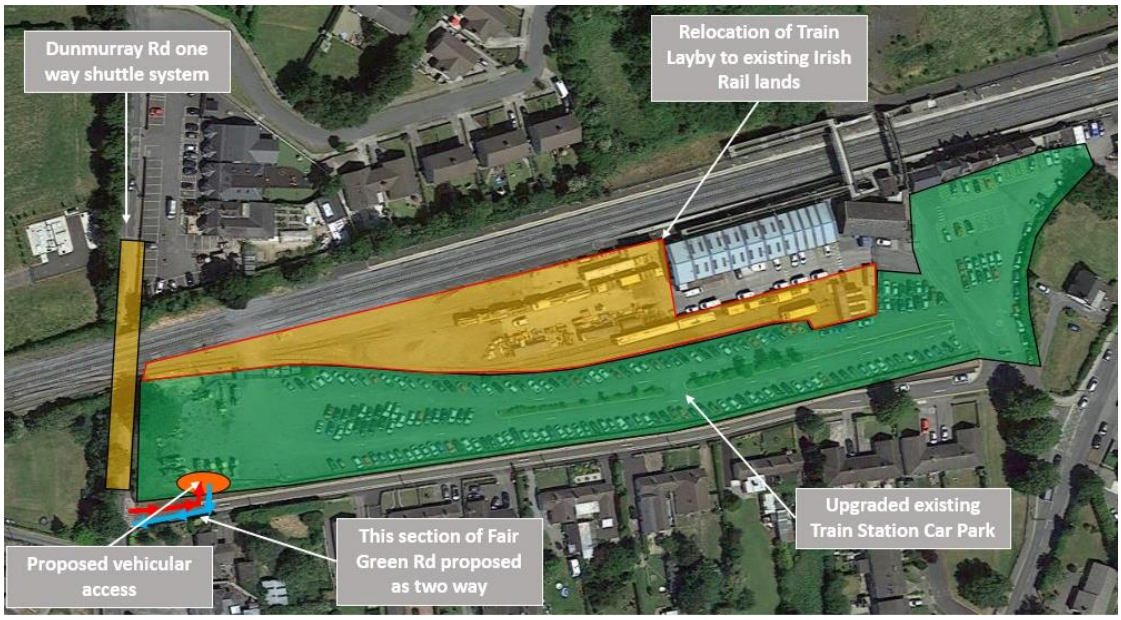



*Figure 10.9: Proposed relocation of Layby at Kildare Town Train Station*

## 10.6 Parking Technology

This Section provides an overview of parking technology and explores potential solutions for Kildare Town.

### 10.6.1 Variable Message Signs

Variable Message Signs (VMS) can be deployed at three strategic areas:

- Strategic Level - Information can be provided on key routes heading into the town centre, the signs can have multiple functions displaying parking information, traffic information or special event information
- Tactical Signs - Information provided on the individual car parks within the inner road network
- Car Park - Information provided at car park entries on current status (Full / Spaces) and where appropriate on individual floors for large multi storey car parks

VMS systems help reduce time wasted searching for a parking space or queueing at car park entrances and have the benefit of improving the public image of parking management and a reduction in driver frustration. In areas where the utilisation of car parks is non uniform or skewed, it can help to improve the utilisation of off-street long stay parking which in turn benefits the accessibility to short stay on-street parking. Further detail on each type of VMS technology is provided below:

#### VMS: Strategic Level Signage

The main advantage of strategic VMS signs is their ability to display a full range of messages and their flexibility to deal with changes within the parking provision. They can be used to show messages in dual text and pictures, offering greater display flexibility and can provide additional strategic information e.g. traffic and road information/warnings, which allows the motorist to make informed route choices. An example of strategic level VMS infrastructure sign is shown in Figure 10.10.

*Figure 10.10 Example of Strategic VMS Sign in Oxford Street, Belfast*

A further advantage of this type of sign is its ability to convey messages with limited text, eliminating any confusion due to language barriers. In addition to mains power this type of sign can be powered by solar panel or wind (or a combination of sources), providing a sustainable solution with limited environmental impacts. These signs are generally used at key strategic points on corridors into town centres.

#### VMS: Tactical Level Signage

Tactical VMS signs can be the same format as the strategic signs or can be limited function signage, used to provide drivers with information on the location and availability of spaces in car parks; they combine static signage with LED inserts. The signs can display information such 'FULL', 'CLOSED', 'SPACES' or the actual number of available spaces. This type of sign is normally post mounted on either one or two posts.

The main advantages of these signs are their low cost and generally low maintenance requirements. A significant disadvantage of these signs is the limited information that can be displayed on the signs and their potential inflexibility if the parking provision / usage changes, which could result in the need for new sign facing boards.

Within the confines of the Parking Strategy, the use of this level of sign is expected to be limited and may only be useful to those car parks which have been identified as having high utilisation and high occupancy in order to defer users to other car parks.

#### VMS: Car Park Signage

These signs are generally used to reinforce information provided by the main external signage and have similar characteristics to the limited function signage. The main difference is that the signs are normally ceiling or wall mounted at the entries to car park building. Signs combine parking signage with LED inserts displaying information such 'FULL', 'CLOSED', 'SPACES' or the actual number of available spaces. The main advantages of these signs are their low cost, no need for ground foundations and generally low maintenance costs. As with the tactical level signs, the implementation of these signs could be ad-hoc based on the utilisation and occupancy of the car parks.

### 10.6.2 Parking Solutions and Technology

#### Parking Smartphone Applications

A wide range of mobile parking applications are available online. Mobile apps provide drivers with a flexible online payment option to pay for parking durations of stay such as 'Pay Now' or 'Pay Later'

payment options. These applications can also inform drivers about the price of parking in advance of their arrival to make an informed choice. An example of a parking payment app is shown in Figure 10.11.


*Figure 10.11 Example of Parking Payment Application*

Mobile payment apps may also have a range of additional features such as providing the user with real time parking availability and tariff information. This enables users to locate the nearest and cheapest available parking space. The parking rules, regulations and tariffs at each given parking space are also displayed, if applicable. An example of a holistic parking solution which directs drivers to the nearest free parking space is shown in Figure 10.12.


*Figure 10.12 Example of Holistic Parking Solution Application*

### Parking Sensors

Parking bay vehicle detector sensors can be installed into individual parking spaces. Bay sensors use infrared and / or electromagnetic technology to record the presence of a vehicle. The vehicle's length

of stay is also recorded. Occupancy data is then wirelessly transmitted to a central software system. An example of a parking bay sensor is shown in Figure 10.13.

*Figure 10.13 Example of a Parking Bay Sensor*

The wireless transmission of data can alert nearby traffic attendants to parking infringements. Real time parking occupancy data can also be available online. This notifies drivers to the most convenient and cheapest parking space in their local area. The data is utilised by management systems such as space and permit management, Variable Message Signage and parking enforcement. Bay sensors have a greater than 99.7% vehicle detection rate.

### Inductive Loops

Inductive loops are still one of the most common methods of detecting vehicle movement. Loops are installed within the road surface and vehicles are detected by changes in the inductive field strength. The vehicle movements by inductive loops can be transmitted and used to provide real-time parking space availability information on VMS.

The typical accuracy of effectively installed inductive loops is in the region of 95%. The main advantages of this form of monitoring are that they are a low cost option and are easy to install and provide a reliable level of accuracy.

The main disadvantages are they cannot be installed in some road surfaces, e.g. steel reinforced concrete and need to be replaced if the road surface is re-laid, incurring high maintenance costs.

# 11 NON-MOTORISED MEASURES

# 11. Non-Motorised Measures

## 11.1 Permeability Measures

### 11.1.1 Walking Objectives

This section outlines the development of the permeability options, sets out the final permeability strategy and quantifies the improvement in access to key locations. In addition, the expected delivery timetable and the strategic role of each measure is defined. The permeability strategy seeks to achieve the following walking objectives:

1. Provide an integrated walking network for Kildare Town;
2. Improve the standard of existing pavements or paths where required;
3. Improve permeability to enhance access to homes, jobs, schools, shops, public transport and services;
4. Improve safety for pedestrians, particularly for vulnerable road users, by improving crossing points; and
5. Engage with schools with the aim of increasing walking mode share.

### 11.1.2 Permeability Options Development

The permeability strategy seeks to create convenient, efficient routes to key trip attractors and reduce walking trip distances to give non-motorised modes a competitive advantage over private cars. Similar to other urban areas across the Greater Dublin Area, there are numerous issues affecting permeability in Kildare Town such as boundary walls, railways and motorways which have been documented in the Baseline Report (Appendix A – see Volume 2 of Strategy). 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), retail (supermarkets, local shops), and education (schools).

### 11.1.3 Permeability Options Description

There are 42 measures which make up the permeability strategy, these are listed and described in Table 11.1. In cases where the permeability measure is derived from a proposed road or greenway scheme, this is clearly indicated in bold.

*Table 11.1: List of Permeability Strategy Measures*

| Options | Description |
|---|---|
| 1 | Shared walking/cycling path on one side of Rathbride Road from Rathbride Abbey to Cill Dara Golf Club |
| 2 | Create a pedestrian / cyclist link from Rathbride Abbey onto Rathbride Demesne |
| 3 | Install new footpaths across the green area to provide formal connections between Oakland Grove, Dunmurray View and Farrincooley Crescent |
| 4 | Create a pedestrian / cyclist link connecting Rathbride Close to Drumcree Court |
| 5 | Creation of a north western **Greenway** linking rom the Monasterevin Road (R445) to the Dunmurray Road (R401) and connecting with Green Road, Southgreen Road and Old Road |
| 6 | Extend Footpaths along Southgreen Road north of the Train Line to connecting with the Greenway proposed under option 5 |
| 7 | Creation of pedestrian / cyclist link connecting Fennor Lawns with North Glebe |
| 8 | Creation of pedestrian / cyclist link connecting Drumcree Court with Curragh Finn |
| 9 | Creation of pedestrian / cyclist link connecting North Glebe with Curragh Finn |

| Options | Description |
|---|---|
| 10 | Extend existing footpath north along Green Road to connection with Greenway proposed under Option 5 |
| 11 | Creation of a new east west Greenway extending along the Rail line connecting with the north western greenway proposed under Option 5 at its western most and extending to connect with a new pedestrian footbridge proposed under option 12 connecting with Melitta Road (R413) |
| 12 | Creation of a new pedestrian / cyclist link connecting the proposed east west greenway under option 11 with Melitta Road (R413). This option involves a new pedestrian bridge over the rail line. |
| 13 | Creation of a new pedestrian / cyclist links connecting Curragh Finn and Dunmurray Drive to Kildare Town Train Station |
| 14 | New Pedestrian Cycle link connecting Green Road with Southgreen Road and the newly constructed Southgreen Link Road. |
| 15 | Construction of a new pedestrian / cycle bridge over the Train Line Connecting the East West Greenway proposed under Option 11 and Woodside Park. |
| 16 | Creation of pedestrian / cyclist link connecting Woodside Park to Station Road |
| 17 | Creation of new multi modal access to Kildare Town Train Station on the western end of Fair Green Road |
| 18 | Phase 1 of Magee Barracks Internal road Network |
| 19 | Phase 2 of Magee Barracks Internal road Network |
| 20 | Creation of pedestrian / cyclist link connecting Curragh Plains, Coolaghknock Green and Melitta Park to Phase 2 of the Magee Barracks Internal Road Network |
| 21 | Pedestrian links delivered as part of Phase 1 of Magee Barracks Redevelopment |
| 22 | Creation of pedestrian / cyclist link connecting Phase 1 of Magee Barracks internal roads to Schools |
| 23 | Creation of pedestrian / cyclist link connecting Coolaghknock Park, Coolaghknock Close, Coolaghknock Drive and Coolaghknock Gardens together |
| 24 | Creation of pedestrian / cyclist link connecting Ruanbeg to Coolaghknock Gardens |
| 25 | Creation of pedestrian / cyclist link connecting Ruanbeg Drive to Phase 2 of Magee Barracks internal roads |
| 26 | Creation of pedestrian / cyclist link connecting Kildare Village Car Park to Kildare Village Bus Stop on the R415 |
| 27 | Internal Pedestrian Link delivered as part of Phase 3 of Kildare Village |
| 28 | Creation of pedestrian / cyclist link from Phase 3 of Kildare Village to Academy Street |
| 29 | Creation of pedestrian / cyclist link from Bride Street to Main Street via newly proposed car park |
| 30 | Creation of pedestrian / cyclist link connecting Dublin Street to Meadow Road |
| 31 | Creation of pedestrian / cyclist link connecting Meadow Court to Rathbride Demesne |
| 32 | Install new footpaths across the green area to provide formal connections between Farrincooley Crescent and Willow Grove |
| 33 | Install new Footpaths along Old Road connecting to the Dunmurray Link Road |
| 34 | Road Scheme with footpaths connecting Hospital Street to Tully Road |
| 35 | Road Scheme with footpaths - Modus Link Road |
| 36 | Road Scheme with footpaths - Northern Link Street |
| 37 | Creation of pedestrian / cyclist link connecting Grey Abbey Road with Tully Road |
| 38 | Pedestrian links included in Cherry Avenue Park |
| 39 | Creation of walking/cycling only link as part of Modus Link Road development |
| 40 | Pedestrian cycle bridge over the M7 |
| 41 | Link between Oaktree Road and Cherry Avenue Park |
| 42 | Extension of footpaths along Melitta Rd (R413) from Ridgewood Manor to the edge of the Curragh. |

The permeability measures numbered in Table 11.1 are shown visually in Figure 11.1, in combination these measures represent the permeability strategy for Kildare Town. Figure 11.2 is also shown to demonstrate how the new permeability measures are integrated into the existing path network to enhance accessibility across Kildare town.

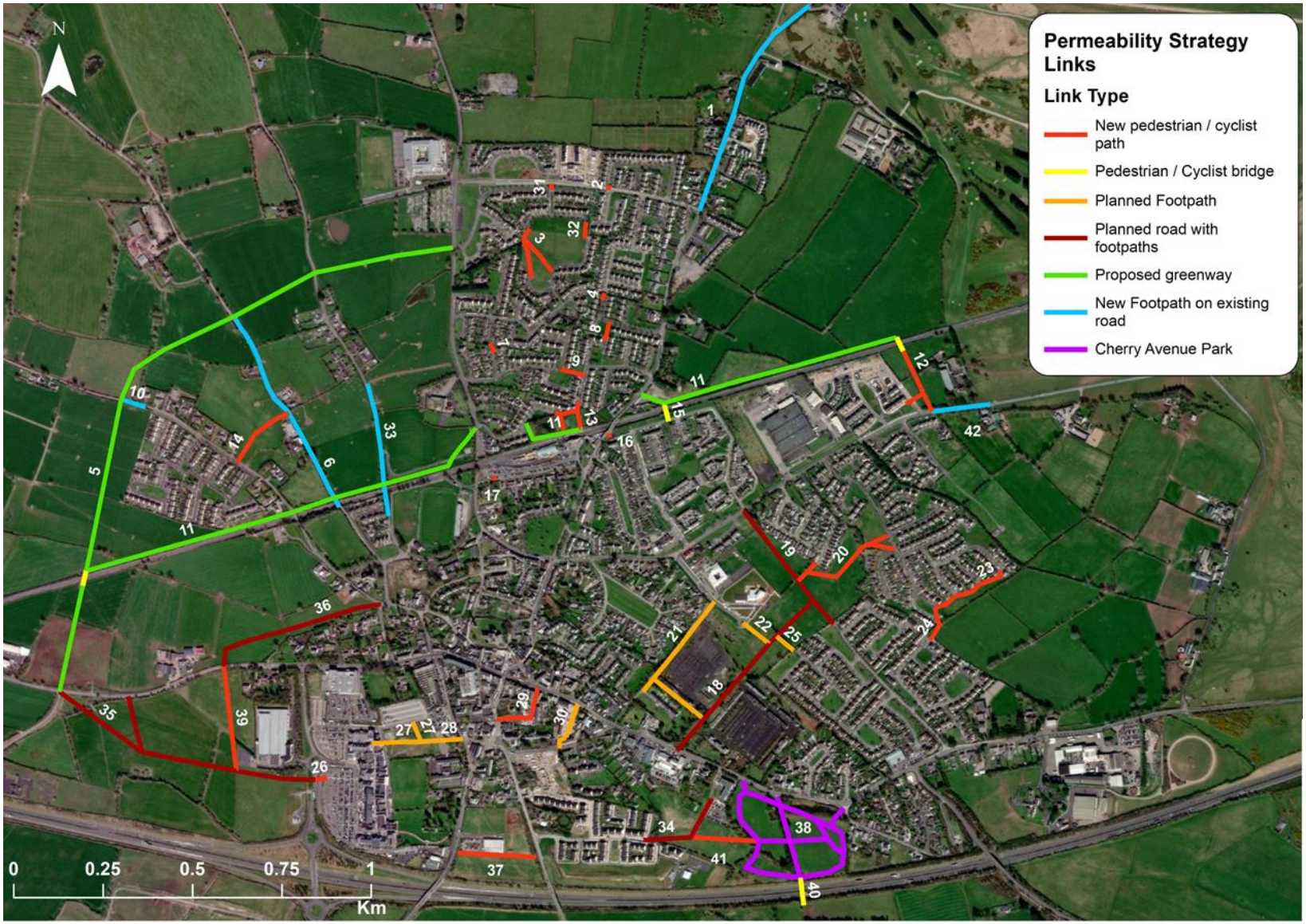



*Figure 11.1 Kildare Town Permeability Strategy*

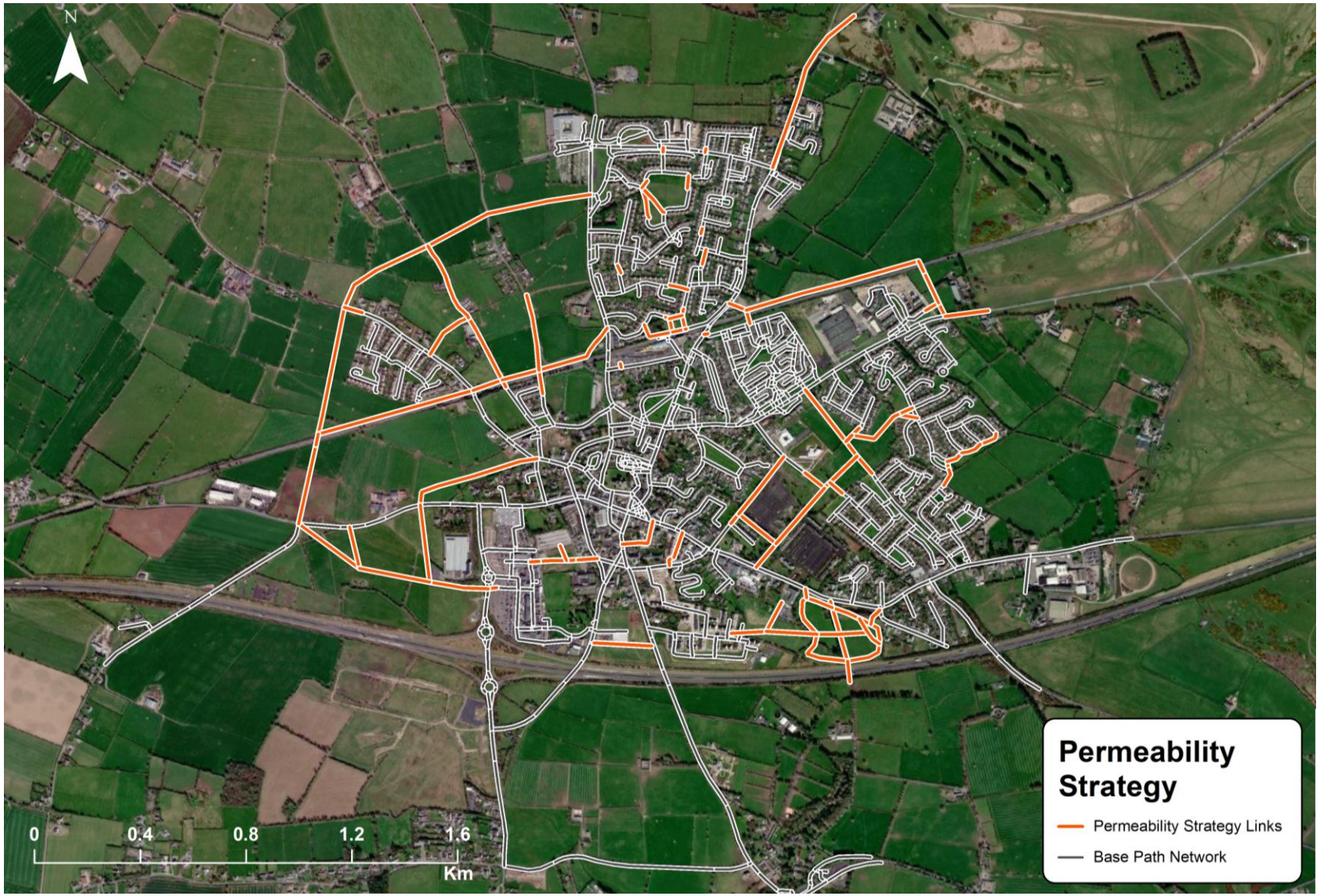



*Figure 11.2 Combined Path Network – Existing (Base) and Proposed Walking Network*

### 11.1.4 Permeability Strategy Assessment

The impermeable neighbourhoods of Kildare Town require a holistic solution which encompasses a large number of interconnected permeability links to improve conditions for walking and cycling. Individually, the purpose of each link may not be immediately apparent, but in combination each link forms part of a wider walking or cycling route to a key destination (e.g. employment, education, retail) or a critical piece of transport infrastructure (e.g. bus stop, greenway, train station). As a result, it is not appropriate to assess each permeability option individually, as would occur in a roads scheme where different options are ranked. Instead the benefits of the permeability network as a whole are assessed to quantify the number of homes which will be added to the walking catchment for key destinations.

This section assesses the expansion of walking distance catchments in Kildare Town with the implementation of the permeability strategy measures. To conduct this analysis, a Do-Something path network was created which contained the baseline path network with the addition of all proposed paths, roads and footbridges. The following sections present the results of the network analyst GIS assessment which show the spatial expansion in walking catchments as a result of the strategy and the reduction in distance to key destinations. Section 11.1.4.8 summarises the quantitative benefits of the strategy through the expansion of buildings in the catchment for key destinations as well as the reduction in distance for key trip types across the town.

A3 versions of the permeability catchment maps can be found in Appendix F in Volume 2 of the KTTS.

#### 11.1.4.1 Impact on Primary School Catchment

Figure 11.3 shows the expansion of the 1km primary schools catchment with the implementation of the permeability options, which are shown as white lines. The increase in catchment area when the proposed permeability measures are implemented is shown as an orange shaded area. There is a considerable increase in the number of homes added to the 1km catchment area, with an additional 673 homes (42.5% increase) brought into the walking catchment. It should also be noted greater benefits are observed in relation to reducing walking distance to school where implementation of the permeability measures results in a substantial reduction of over 100 metres in school trip distances for 1,018 buildings across the town.

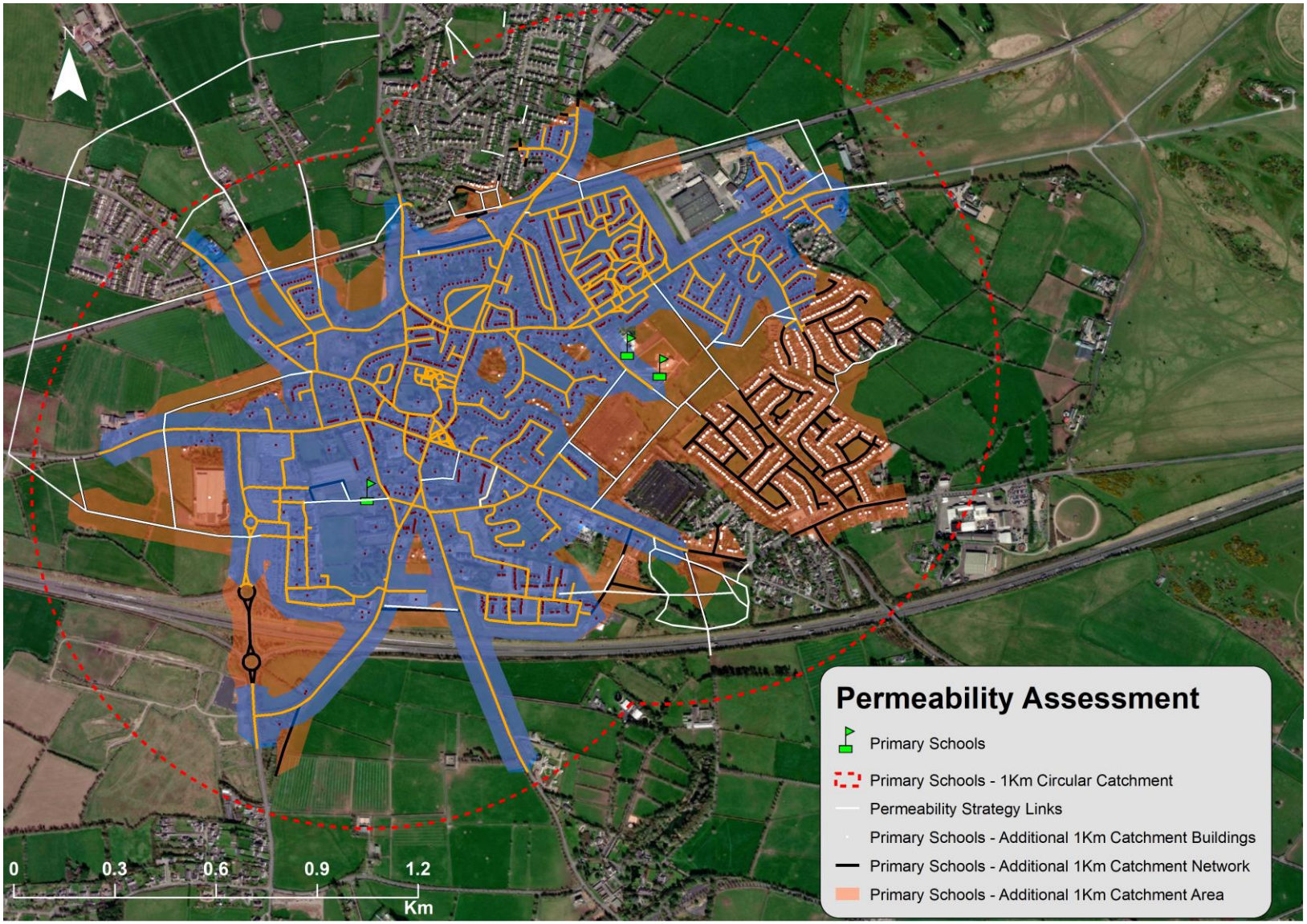



*Figure 11.3: Expansion of the 1km Catchment for Primary Schools*

#### 11.1.4.2 Impact on Secondary School Catchment

Figure 11.4 shows the expansion of the 1km secondary school catchment with the implementation of the permeability options, which are shown as white lines. The increase in catchment area when the proposed permeability measures are implemented is shown as a yellow shaded area. There is a small increase in the number of homes added to the 1km catchment area, with an additional 11 homes (2% increase) brought into the walking catchment. Greater benefits are observed in relation to reducing walking distance to schools. Implementation of the permeability measures results in a substantial reduction of over 100m in school trip distances for 1,469 buildings. This represents a reduction in walking distance for 46% of buildings within Kildare Town for secondary schools

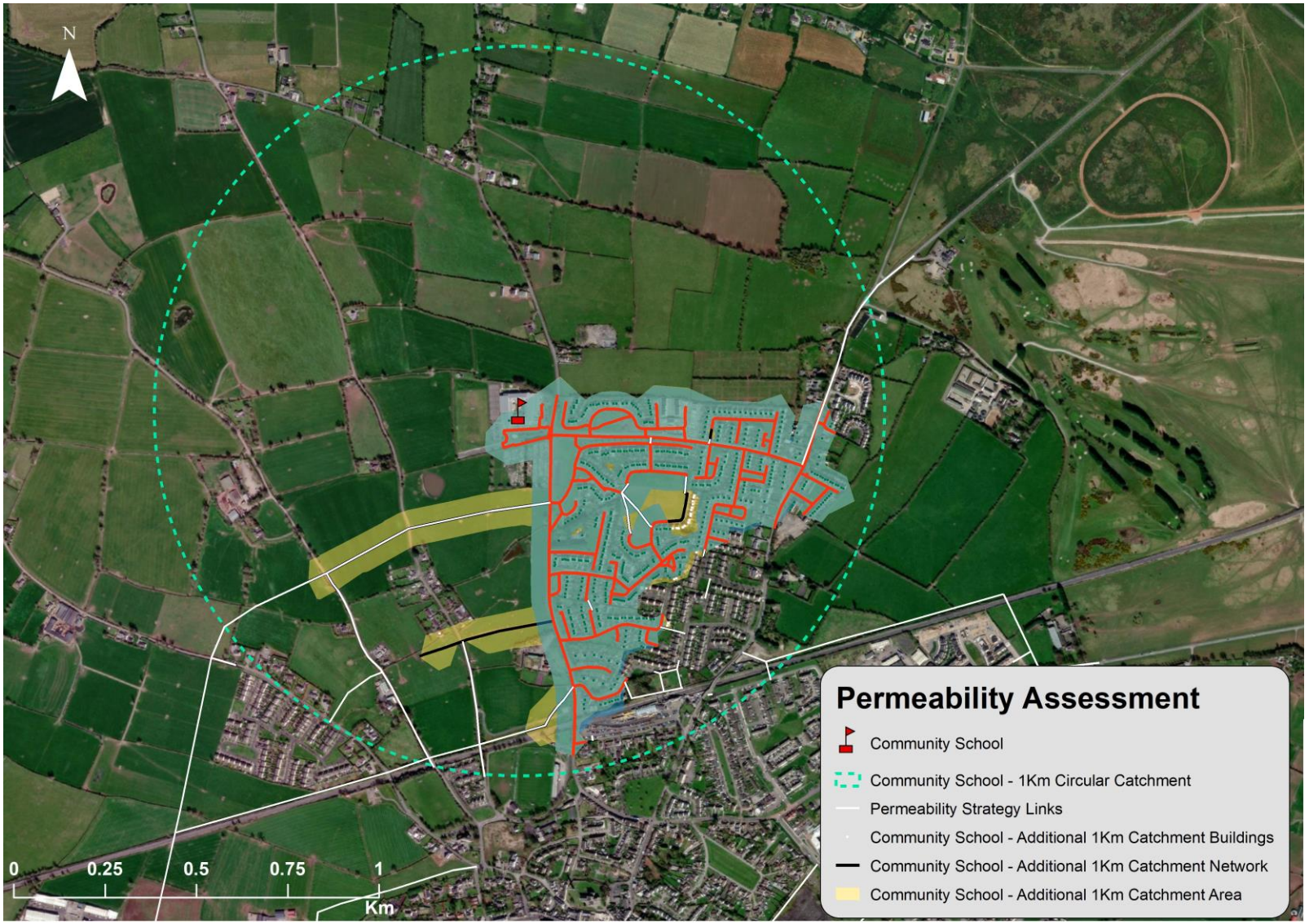



*Figure 11.4: Expansion of the 1km Catchment for Secondary Schools*

#### 11.1.4.3 Impact on Supermarket Catchment

Figure 11.5 shows the expansion of the 1km catchment for supermarkets, with the implementation of the permeability options, which are shown as white lines. The increase in catchment area when the proposed permeability measures are implemented is shown as a blue shaded area. There is a significant increase in the number of homes added to the 1km catchment area, with an additional 435 homes (43.2% increase) brought into the walking catchment. Implementation of the permeability measures results in a substantial reduction of over 100m in supermarket trips distances for 1,278 buildings. This represents a reduction in walking distance for 40% of buildings within Kildare Town for supermarket trips.

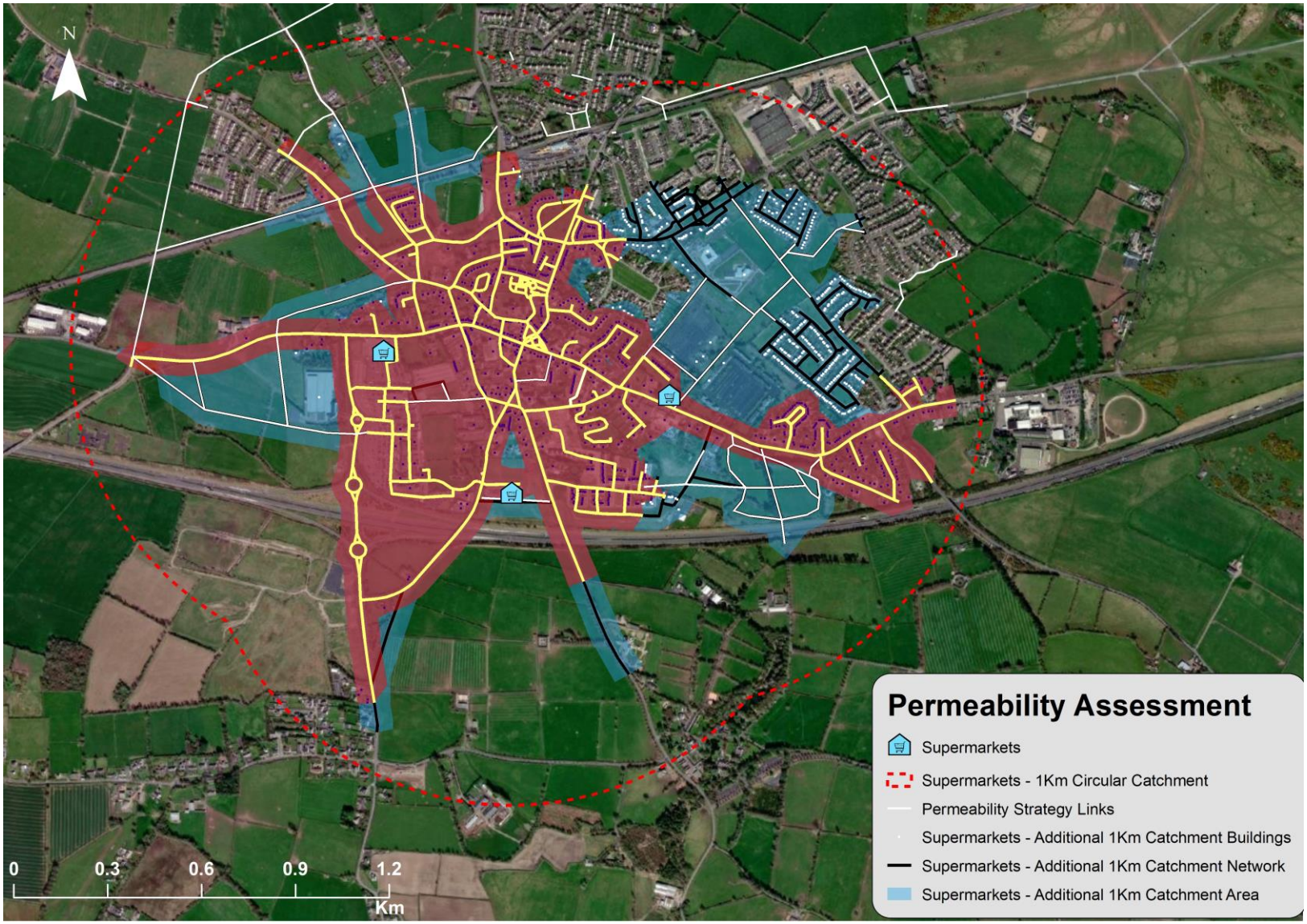



*Figure 11.5: Expansion of the 1km Catchment for Supermarkets*

#### 11.1.4.4 Impact on Bus Stop Catchment

Figure 11.6 shows the expansion of the 500m bus catchment with the implementation of the permeability options, which are shown as white lines. The increase in catchment area when the proposed permeability measures are implemented is shown as a blue shaded area. There is an increase in the number of units added to the 1km catchment area, with an additional 227 homes (14.9% increase). Additional benefits are observed in relation to reducing walking distance to bus stops. Implementation of the permeability measures results in a substantial reduction of over 100m in bus stop trip distances for 1,279 buildings. This represents a reduction in walking distance for 40% of buildings within Kildare town to the nearest bus stop.

It should be noted that the catchment analysis includes two new additional bus stops proposed as part of the public transport strategy.

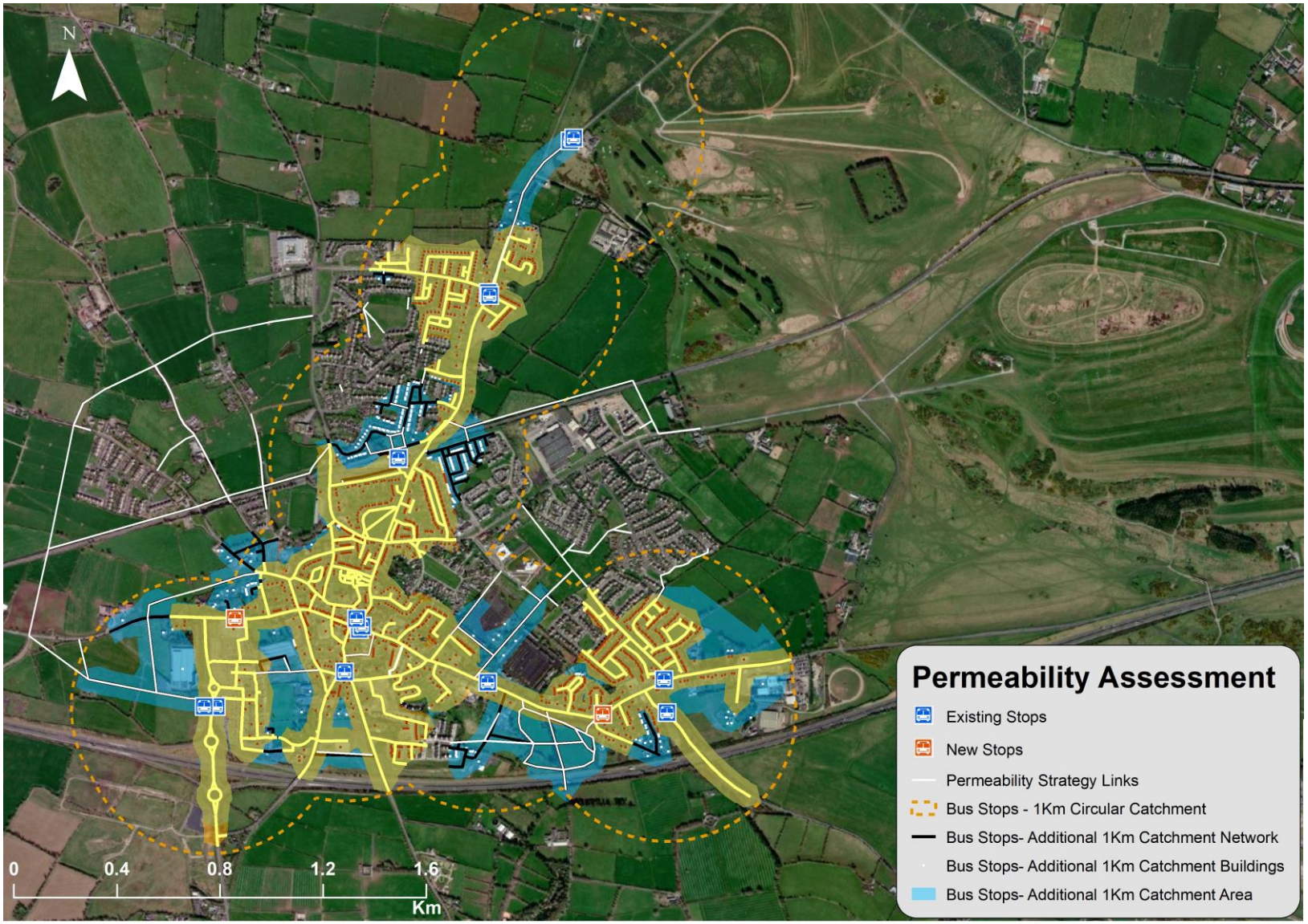



*Figure 11.6: Expansion to the 500m Catchment for Existing Bus Stops*

#### 11.1.4.5 Impact on Rail Catchment

Figure 11.7 shows the expansion of the 1km rail station catchment with the implementation of the permeability options, which are shown as white lines. The increase in catchment area when the proposed permeability measures are implemented is shown as a light red shaded area. There is a modest increase in the number of homes added to the 1km catchment area, with an additional 237 homes (20.2% increase) brought into the walking catchment. Additional benefits are observed in relation to reducing walking distance to the train station. Implementation of the permeability measures results in a substantial reduction of over 100m in trip distances to rail for 1,274 buildings. This represents a reduction in walking distance for 40% of buildings within Kildare town to the train station.

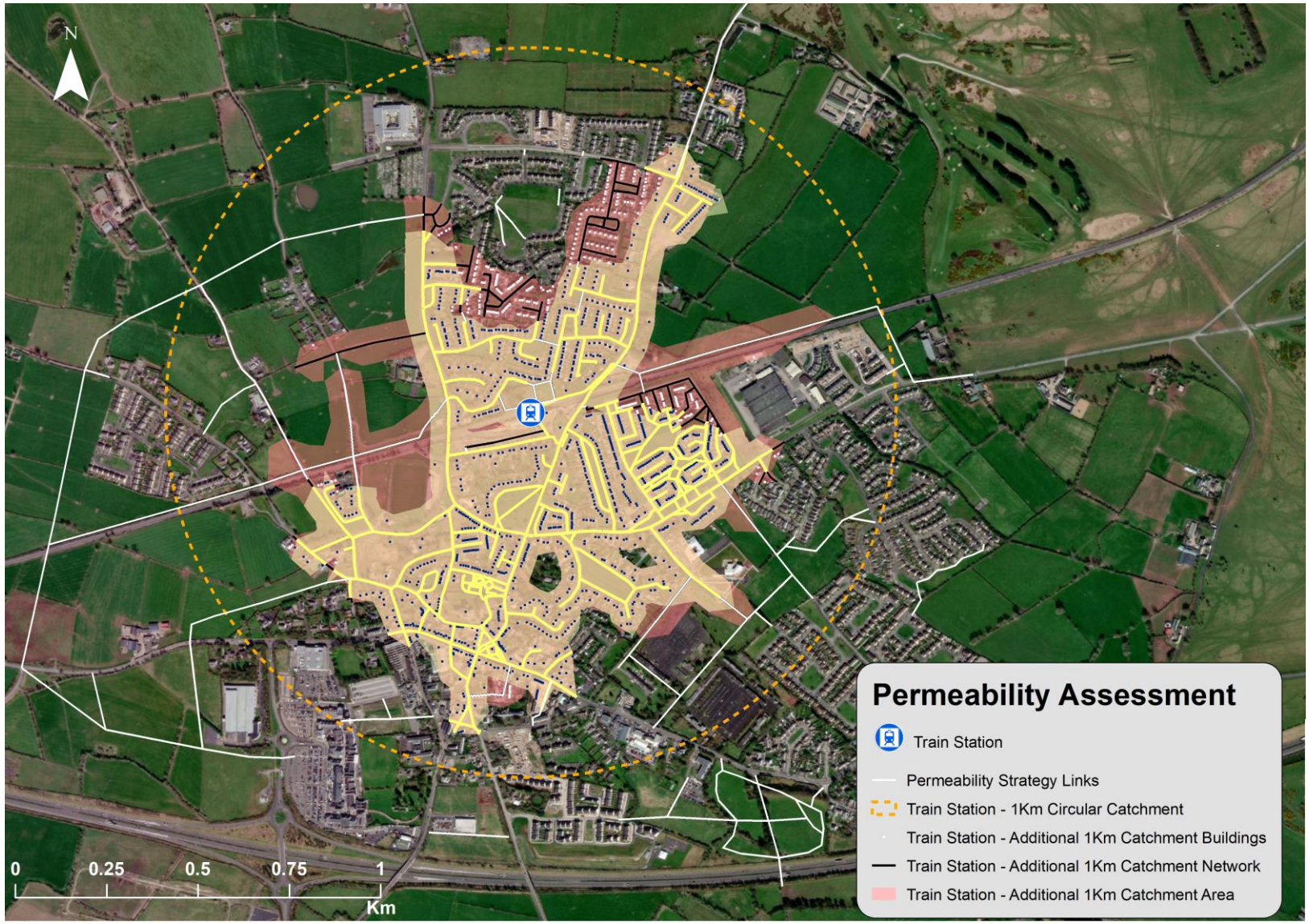



*Figure 11.7: Expansion to the 1km Catchment for the Train Station*

#### 11.1.4.6 Impact on Town Centre Catchment

Figure 11.8 shows the expansion of the 1km town centre catchment with the implementation of the permeability options, which are shown as white lines. The increase in catchment area when the proposed permeability measures are implemented is shown as a dark blue shaded area. There is a small increase in the number of homes added to the 1km catchment area, with an additional 63 homes (5.2% increase) brought into the walking catchment. Additional benefits are observed in relation to reducing walking distance to the town centre. Implementation of the permeability measures results in a substantial reduction of over 100m in trip distances to the town centre for 410 buildings. This represents a reduction in walking distance for 13% of buildings within Kildare town to the town centre.

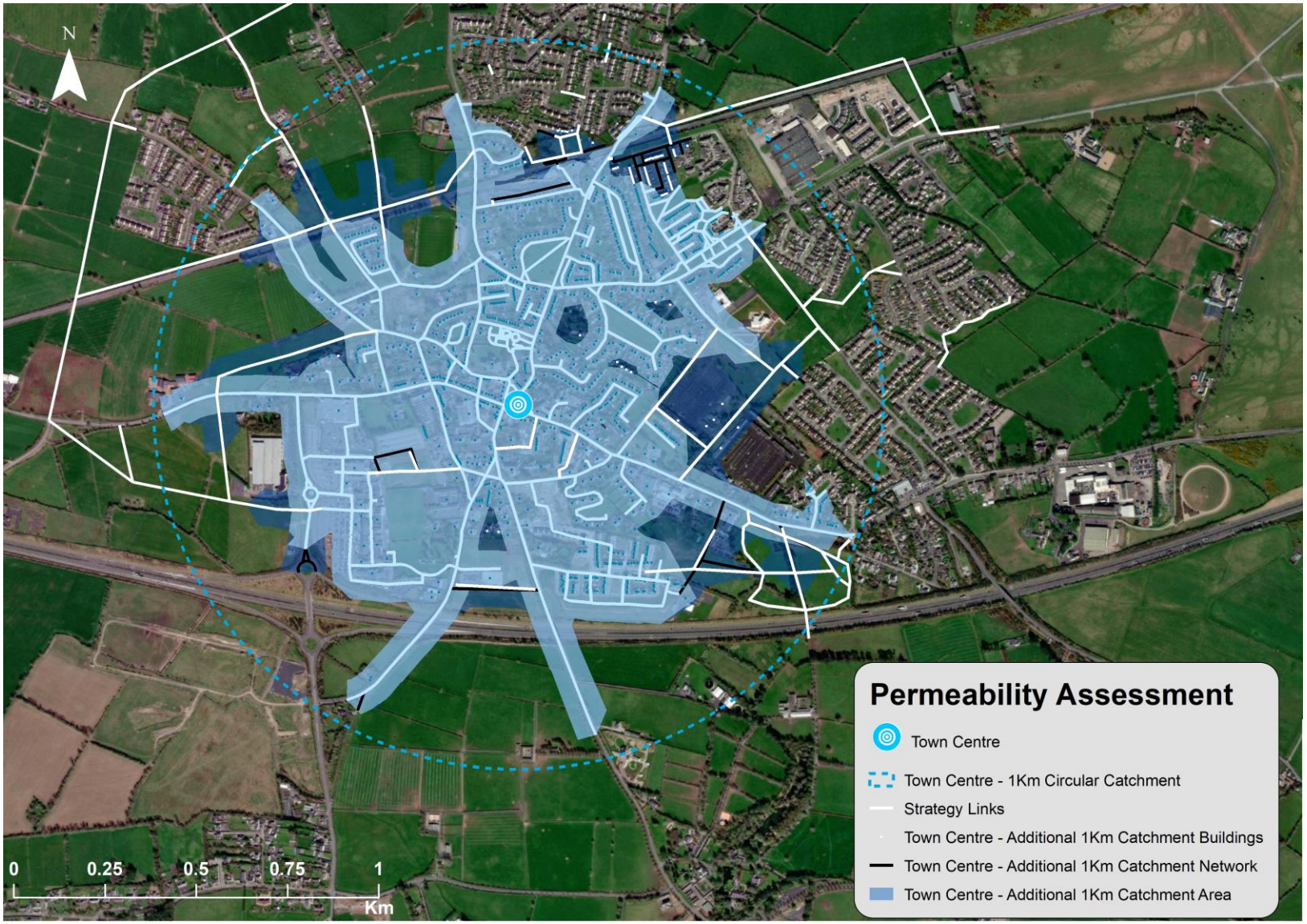



*Figure 11.8 Expansion to the 1km Catchment for the Town Centre*

#### 11.1.4.7 Impact on Kildare Retail Village Catchment

Figure 11.9 shows the expansion of the 1km Kildare Retail Village catchment with the implementation of the permeability options, which are shown as white lines. The increase in catchment area when the proposed permeability measures are implemented is shown as a dark orange shaded area. There is a substantial increase in the number of homes added to the 1km catchment area, with an additional 211 homes (61.2% increase) brought into the walking catchment. Additional benefits are observed in relation to reducing walking distance to the Retail Village. Implementation of the permeability measures results in a substantial reduction of over 100m in trip distances to the retail village for 2,339 buildings. This represents a reduction in walking distance for 73% of buildings within Kildare town to Kildare Retail Village.

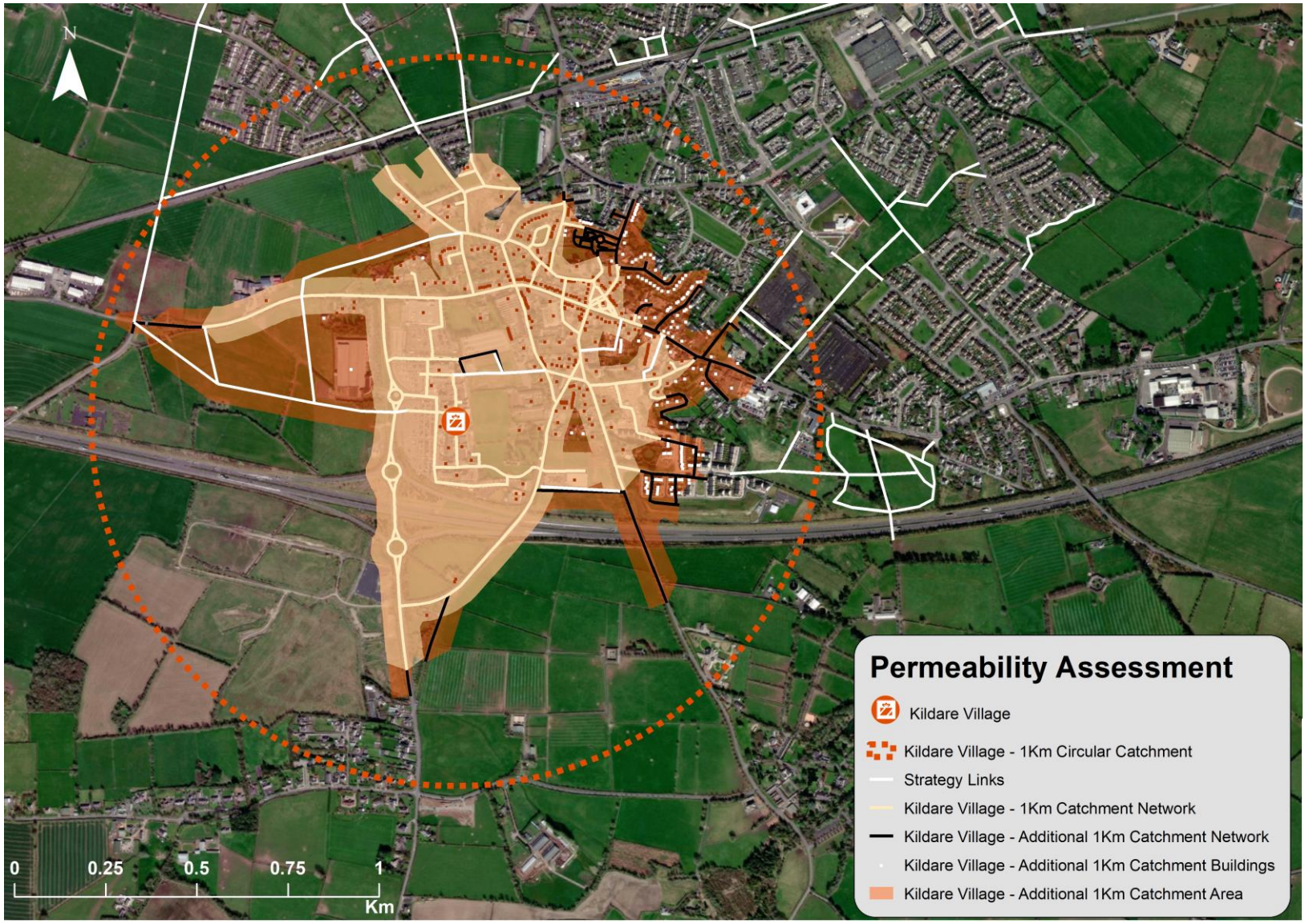



*Figure 11.9 Expansion to the 1km Catchment for the Retail Village*

#### 11.1.4.8 Quantified Benefits of the Permeability Strategy

In order to quantify the change in permeability as a result of the permeability strategy, the following statistics were produced using GIS tools and data from the GeoDirectory database of buildings (2018):

**Number of Residential or Commercial Units Added to Walking Catchment**

The implementation of the permeability strategy results in an increase in the number of buildings inside the walking distance catchment area for key destinations. The results are summarised in Table 11.2. While there is a modest improvement in respect to all catchments, the greatest proportional benefits are observed for the retail village, primary schools and supermarkets, followed by the train station and bus stops.

*Table 11.2: Expansion of Walking Catchment to Key Destinations*

| | *Existing Path Network* | | *Future Path Network* | | *Difference* | | *% Increase* | |
|---|---|---|---|---|---|---|---|---|
| Catchment | Residential Addresses | Commercial Addresses | Residential Addresses | Commercial Addresses | Residential Addresses | Commercial Addresses | Residential Addresses | Commercial Addresses |
| Town Centre - 1km | 1,209 | 343 | 1,272 | 344 | 63 | 1 | 5.2% | 0.3% |
| Train Station - 1km | 1,172 | 182 | 1,409 | 185 | 237 | 3 | 20.2% | 1.6% |
| Bus Stops - 500m | 1,524 | 332 | 1,751 | 348 | 227 | 16 | 14.9% | 4.8% |
| Kildare Village - 1km | 345 | 273 | 556 | 297 | 211 | 24 | 61.2% | 8.8% |
| Supermarkets - 1km | 1,006 | 337 | 1,441 | 351 | 435 | 14 | 43.2% | 4.2% |
| Community School - 1km | 556 | 5 | 567 | 5 | 11 | 0 | 2.0% | 0.0% |
| Primary Schools - 1km | 1,583 | 355 | 2,256 | 362 | 673 | 7 | 42.5% | 2.0% |

**Reduction in Walking Distance to Key Destinations**

The reduction in distance to key destinations was also assessed from every building in Kildare town (Table 11.3). This is a more accurate assessment of the town-wide benefits and the impact of the integrated permeability network. It can be observed that a large proportion of buildings in Kildare town experience a significant reduction in trip distance to key destinations, with many trips reducing by over 100 metres. Reducing trip distances to key destinations is an important factor to increase the popularity and convenience of walking, which should contribute to modal shift from the private car for local trips.

*Table 11.3 Reduction in Distance to Key Destinations*

| Scale of Impact | Bus Stops | Train Station | Primary Schools | Community Schools | Town Centre | Kildare Village | Supermarkets |
|---|---|---|---|---|---|---|---|
| Less Than 100m | 395 | 903 | 1,490 | 169 | 588 | 613 | 299 |
| 100m-500m | 990 | 786 | 591 | 1,003 | 218 | 2,102 | 736 |
| 500m-1km | 265 | 285 | 162 | 314 | 192 | 219 | 538 |
| 1000m+ | 24 | 203 | 265 | 152 | - | 18 | 4 |
| No change | 1,493 | 1,009 | 681 | 1,541 | 2,177 | 240 | 1,593 |

#### 11.1.4.9 Geographic Impact of Permeability Measures in Reducing Trip Distance

In addition to quantifying the benefits of the permeability strategy; a series of maps were also generated to graphically display the reduction in walk distance from buildings in Kildare town to key destinations. Maps were generated which show the reduction in walking distance from every building in Kildare town to the town centre, train station and primary schools. These destinations are focused on because making these facilities more accessible will have a significant impact on encouraging more sustainable travel within the town.

Figure 11.10 shows the impact of the proposed permeability network in reducing trip distances to Kildare town centre. The figure highlights the significant positive impacts on the Ruanbeg, Rathbride Close, parts of Woodside Park and Curragh Finn housing estates. The proposed permeability network will make these areas significantly more accessible to the town centre with shorter trips distances, which will help to encourage the use of sustainable modes for trips to the town centre.

Figure 11.11 shows the impact of the proposed permeability network in reducing trip distances to Kildare Town train station. The figure highlights the significant benefits the proposed permeability network has on large parts of the town with major improvements for Ruanbeg Manor, Woodside Park, Bishopsland and Loughminane. Reducing trip distances from these areas to the train station will help to encourage walking to the train station and the use of rail as an alternative to the private motor car.

Figure 11.12 shows the impact of the proposed permeability network in reducing trip distances to primary schools within Kildare Town. The figure highlights significant benefits for the Ruanbeg Manor, Bishopsland and Coolaghknock areas. Encouraging sustainable travel to primary schools can have an impact on reducing congestion in Kildare Town at drop off and pick up times.

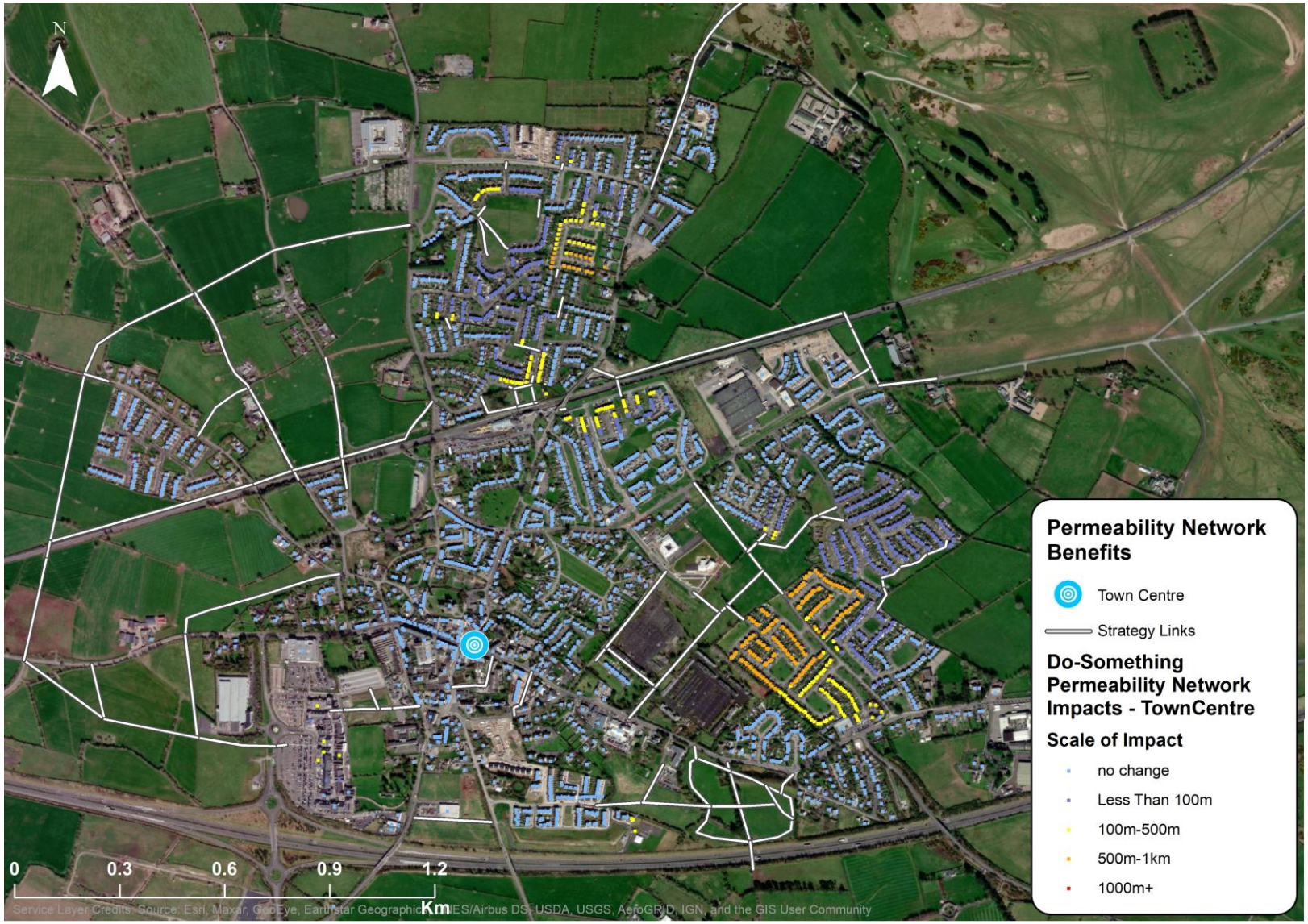



*Figure 11.10 – Reduction in Distance to the Town Centre from Buildings in Kildare Town*

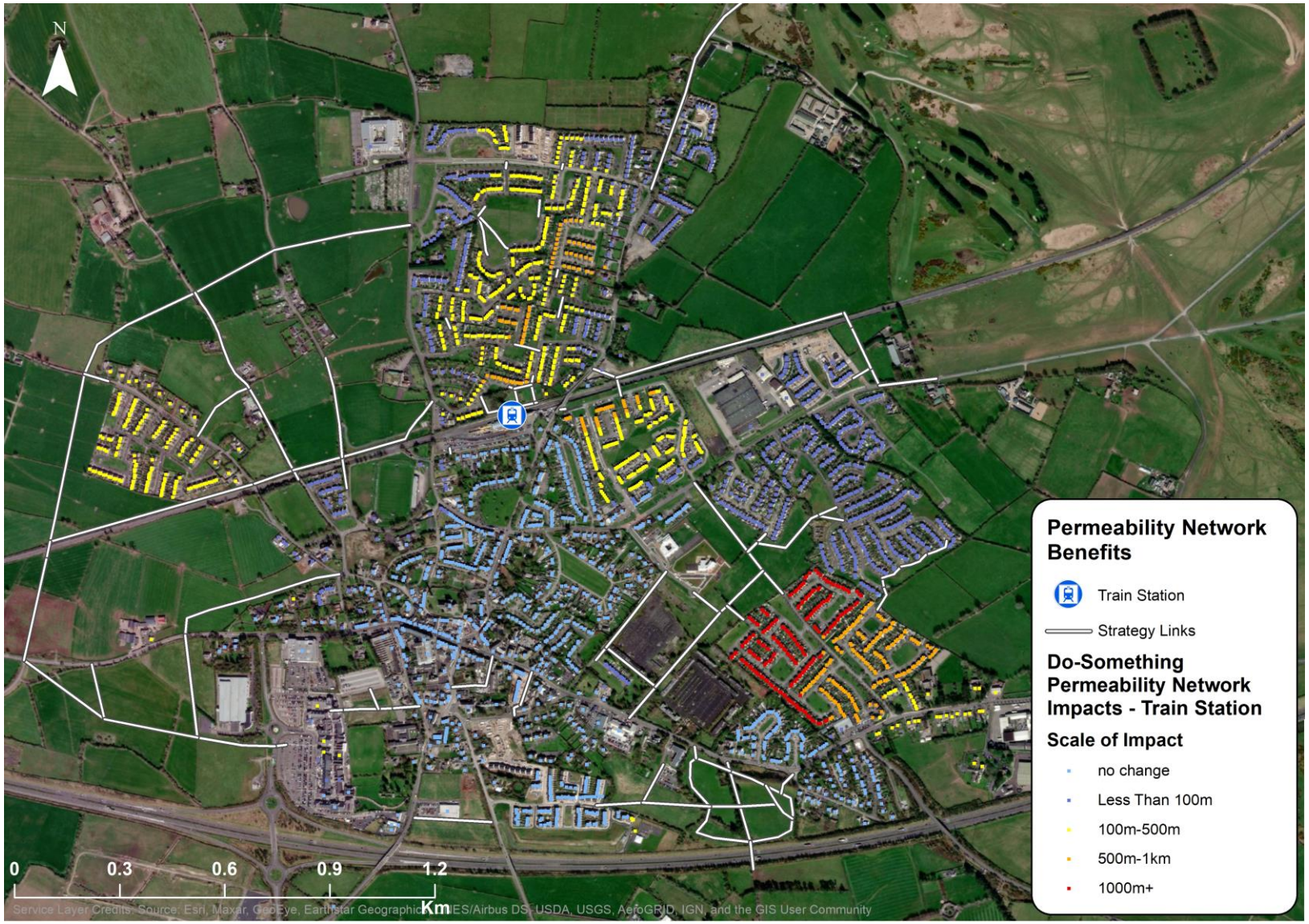



*Figure 11.11 – Reduction in Distance to the Train Station from Buildings in Kildare Town*

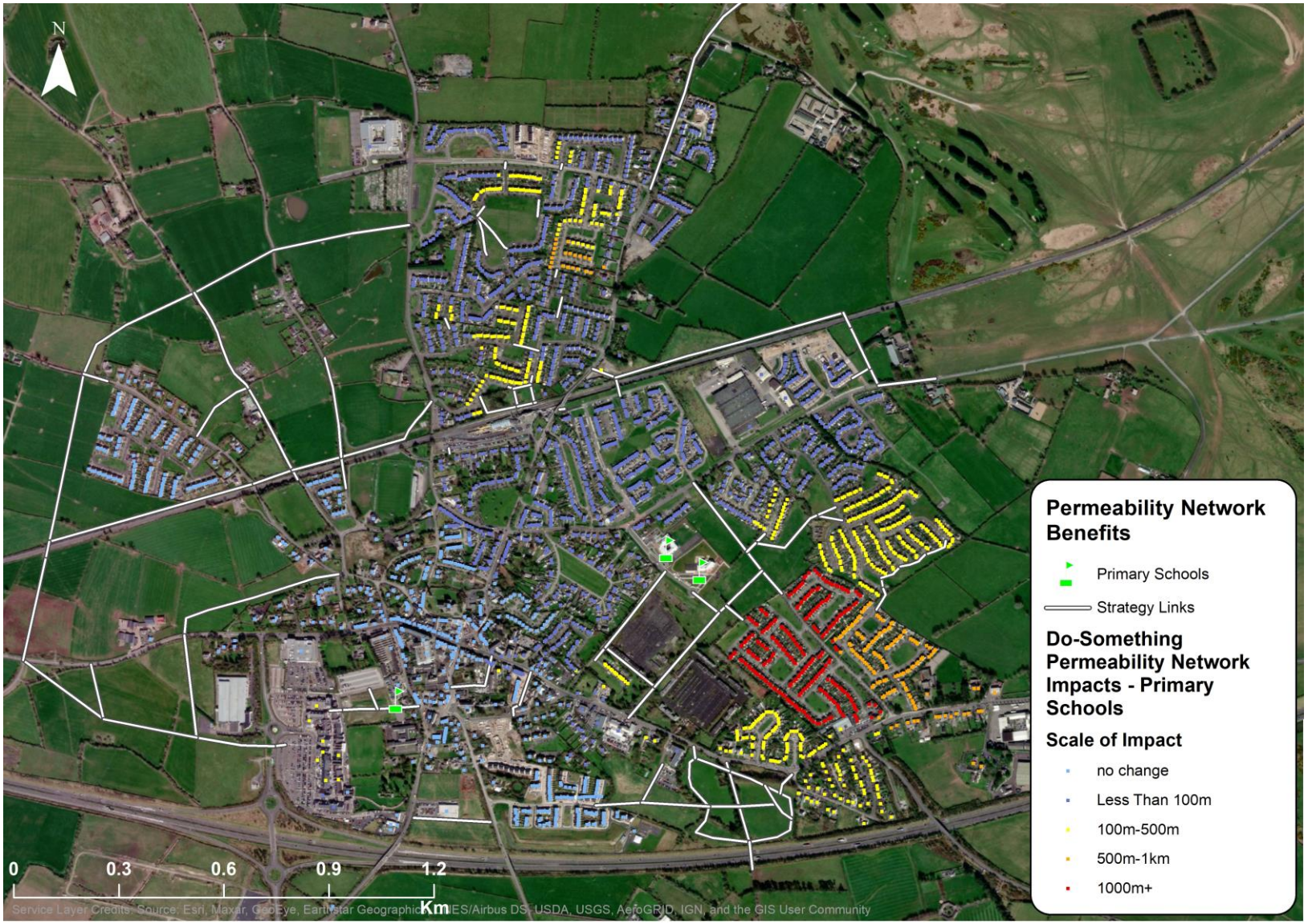



*Figure 11.12 – Reduction in Distance to the Primary Schools from Buildings in Kildare Town*

#### 11.1.4.10 Kildare Town Permeability Network and Integrated Public Transport Network

Public transport analysis has shown that the public transport services within Kildare Town are focused at the train station, Market Square in the centre of the town, Kildare Retail Village and the bus stop outside Kildare Retail Village. The focus of the Public Transport Strategy has been to link as much as possible the frequent public transport service hubs within Kildare Town by improving and extending the 126, improving the frequency of the 883 service and proposing more frequent rail services. However, the permeability network will also play an important role in linking these key public transport hubs together.

Figure 11.13 shows the future public transport network in Kildare Town if the public transport strategy measures are implemented and how the proposed permeability network will help to link these services together. The map highlights that the walk time from the train station to Market Square is 9 minutes. Walking times from Market Square to Kildare Retail Village and the internal transfer point will be 8 minutes via the new pedestrian link which connects the retail village to Academy Place. Using the proposed pedestrian link through the Kildare Retail Village car park to the short term bus transfer point, walk times will be 4 minutes. The map highlights the impact the permeability strategy will have by making Kildare Town a better connected and more walkable town which will help to encourage a combination of walking, cycling and public transport for internal and external trip making.

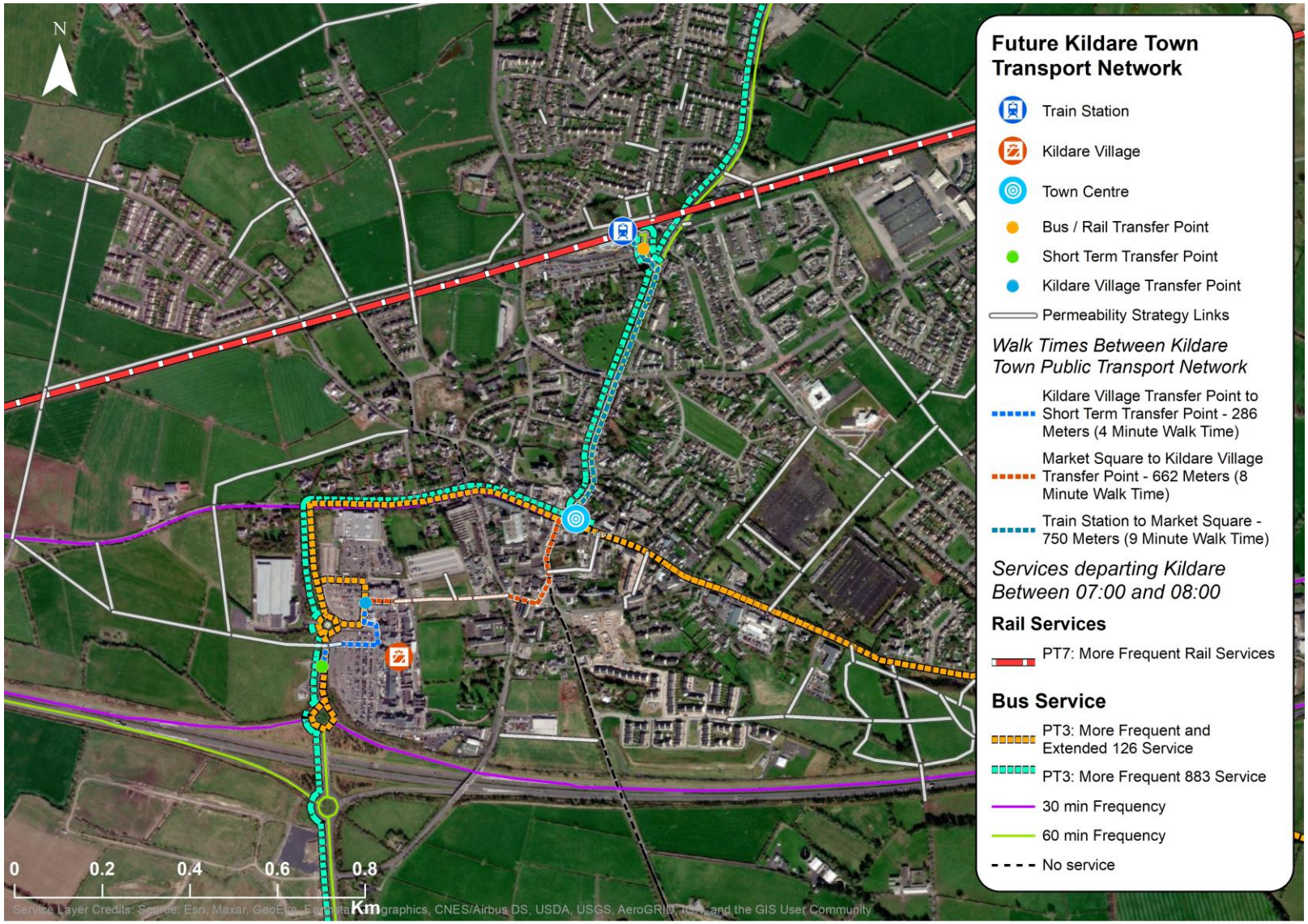



*Figure 11.13 – Future Kildare Town Transport Network*

### 11.1.5 Phasing and Travel Role of Strategy Measures

The permeability strategy measures vary from simple interventions, such as creating links between housing estates, to more complex solutions such as pedestrian/cyclist footbridges. The expected delivery timeframe of each permeability measure is defined in Table 11.4. Furthermore, Table 11.4 gives an indication of whether each strategy measure improves accessibility to key destinations such as bus stops, the rail station, schools, supermarkets, the primary care centre, town centre, greenways or future development lands. This list of destinations is not exhaustive, and this qualitative assessment seeks to highlight the role of each measure in the improvement of walking/cycling for different trip types, rather than indicating the relative importance of each measure.

In respect to implementation, stakeholder and community engagement will be important in the delivery of the permeability strategy. It will be vital that the benefits of the permeability measures are communicated to local people prior to development and that residents are actively involved in the decision-making and design process. The National Transport Authority's (2015) 'Permeability: Best Practice Guide' provides detailed guidance on the implementation of permeability links and the most appropriate approach to community engagement.

*Table 11.4: Delivery Timeframe and Role of Permeability Measures*

| Measure No. | Measure | Delivery Timeframe | Access to Destination Improved by Measure | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Bus Stop | Rail Station | School | Supermarket | Primary Care Centre | Town Centre | Greenway | Future Development Lands |
| 1 | Shared walking/cycling path on one side of Rathbride Road from Rathbride Abbey to Cill Dara Golf Club | Short Term | x | x | x | | | x | | |
| 2 | Create a permeability link from Rathbride Abbey onto Rathbride Demesne | Short Term | | x | x | | | x | | |
| 3 | Install new footpaths across the green area to provide formal connections between Oakland Grove, Dunmurray View and Farrincooley Crescent | Short Term | | x | x | | | x | x | |
| 4 | Create a Permeability Link connecting Rathbride Close to Drumcree Court | Short Term | x | x | x | | | x | | |
| 5 | Creation of a north western greenway linking rom the Monasterevin Road (R445) to the Dunmurray Road (R401) and connecting with Green Road, Southgreen Road and Old Road | Long - linked to residential development in local area | | | x | | | | x | x |
| 6 | Extend Footpaths along Southgreen Road north of the Train Line to connecting with the Greenway proposed under option 5 | Medium - linked to residential + Greenway development | | x | x | | | x | x | x |
| 7 | Creation of permeability link connecting Fennor Lawns with North Glebe | Medium Term | | x | x | | | x | | |
| 8 | Creation of permeability link connecting Drumcree Court with Curragh Finn | Short Term | | x | | | | x | x | |
| 9 | Creation of permeability link connecting North Glebe with Curragh Finn | Short Term | x | x | x | | | x | x | |
| 10 | Extend existing footpath north along Green Road to connection with Greenway proposed under Option 5 | Long - linked to Greenway development | | | x | | | | x | x |

| Measure No. | Measure | Delivery Timeframe | Access to Destination Improved by Measure | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Bus Stop | Rail Station | School | Supermarket | Primary Care Centre | Town Centre | Greenway | Future Development Lands |
| 11 | Creation of a new east west Greenway extending along the Rail line connecting with the north western greenway proposed under Option 5 at its western most and extending to connect with a new pedestrian footbridge proposed under option 12 connecting with Melitta Road (R413) | Long Term | | x | | | | | x | x |
| 12 | Creation of a new permeability link connecting the proposed east west greenway under option 11 with Melitta Road (R413). This option involves a new pedestrian bridge over the rail line. | Long Term - Linked to development of greenway | x | | | | | | x | x |
| 13 | Creation of a new permeability links connecting Curragh Finn and Dunmurray Drive to Kildare Town Tran Station | Short Term | | x | | | | x | x | |
| 14 | New Pedestrian Cycle link connecting Green Road with Southgreen Road and the newly constructed Southgreen Link Road. | Medium Term | | x | x | | | | | x |
| 15 | Construction of a new pedestrian / cycle bridge over the Train Line Connecting the East West Greenway proposed under Option 11 and Woodside Park. | Long Term | x | x | x | x | | x | x | |
| 16 | Creation of permeability link connecting Woodside Park to Station Road | Short Term | x | x | | | | | | |
| 17 | Creation of new multi modal access to Kildare Town Train Station on the western end of Fair Green Road | Medium Term | | x | | | | | | |
| 18 | Phase 1 of Magee Barracks Internal road Network | Medium Term | x | x | x | x | x | x | | |
| 19 | Phase 2 of Magee Barracks Internal road Network | Long Term | x | x | x | x | x | x | | |
| 20 | Creation of permeability link connecting Curragh Plains, Coolaghknock Green and Melitta Park to Phase 2 of the Magee Barracks Internal Road Network | Long Term - linked to development of Magee | | | x | x | x | x | | |

| Measure No. | Measure | Delivery Timeframe | Access to Destination Improved by Measure | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Bus Stop | Rail Station | School | Supermarket | Primary Care Centre | Town Centre | Greenway | Future Development Lands |
| | | Barracks Phase 2 | | | | | | | | |
| 21 | Pedestrian links delivered as part of Phase 1 of Magee Barracks Redevelopment | Medium | x | | x | x | x | x | | |
| 22 | Creation of permeability link connecting Phase 1 of Magee Barracks internal roads to Schools | Medium - link Ph1 Magee Barracks Rd | x | | x | x | x | x | | |
| 23 | Creation of permeability link connecting Coolaghknock Park, Coolaghknock Close, Coolaghknock Drive and Coolaghknock Gardens together | Medium Term | x | | | x | | | | |
| 24 | Creation of permeability link connecting Ruanbeg to Coolaghknock Gardens | Short Term | x | | x | x | x | x | | |
| 25 | Creation of permeability link connecting Ruanbeg Drive to Phase 2 of Magee Barracks internal roads | Longer Term | | x | x | | | | | |
| 26 | Creation of permeability link connecting Kildare Village Car Park to Kildare Village Bus Stop on the R415 | Short Term - to improve access to Bus Stop | x | | | | | | | |
| 27 | Internal Pedestrian Link delivered as part of Phase 3 of Kildare Village | Medium Term | x | | | | | | | |
| 28 | Creation of permeability link from Phase 3 of Kildare Village to Academy Street | Medium Term | x | | | | | x | | |
| 29 | Creation of permeability link from Bride Street to Main Street via newly proposed car park | Short / Medium Term - Linked to the relocation of on street parking | x | | x | | | x | | |
| 30 | Creation of permeability link connecting Dublin Street to Meadow Road | Short Term | x | | | | | x | | |

| Measure No. | Measure | Delivery Timeframe | Access to Destination Improved by Measure | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Bus Stop | Rail Station | School | Supermarket | Primary Care Centre | Town Centre | Greenway | Future Development Lands |
| 31 | Creation of permeability link connecting Meadow Court to Rathbride Demesne | Short Term | x | x | x | | | x | | |
| 32 | Install new footpaths across the green area to provide formal connections between Farrincooley Crescent and Willow Grove | Short Term | x | x | x | | | x | | |
| 33 | Install new Footpaths along Old Road connecting to the Dunmurray Link Road | Medium Term | | | x | | | x | x | x |
| 34 | Planned Road with footpaths connecting Hospital Street to Tully Road | Medium Term | x | | x | x | x | | | |
| 35 | Planned road with footpaths - Modus Link Road | Medium Term | x | | | | | | | x |
| 36 | Planned road with footpaths - Northern Link Street | Medium Term | | x | | | | | | x |
| 37 | Creation of pedestrian / cyclist link connecting Grey Abbey Road with Tully Road | Long Term | | | x | x | x | x | | |
| 38 | Pedestrian links included in Cherry Avenue Park | Long Term | | | | | | x | x | |
| 39 | Creation of walking/cycling only link as part of Modus Link Road development | Medium Term | x | | | x | | | x | x |
| 40 | Pedestrian cycle bridge over the M7 | Long Term | | | | | | x | x | |
| 41 | Link between Oaktree Road and Cherry Avenue Park | Long Term | x | | | x | x | x | | |
| 42 | Extension of footpaths along Melitta Rd (R413) from Ridgewood Manor to the edge of the Curragh. | Short Term | | | | | | | x | |

## 11.2 Cycling Measures

This section describes development of the cycle network measures and sets out the proposed cycle network strategy. The expected delivery timeframe and role of each measure in supporting an increase in the uptake of cycling for different trip types is defined. Finally, recommendations are made regarding the provision of cycle parking facilities within the study area.

### 11.2.1 Cycling Objectives

The cycling measures seek to achieve the following strategy objectives:

1. Provide an integrated cycle network for Kildare Town in accordance with the National Transport Authority's Cycle Network Plan for the Greater Dublin Area;
2. Improve safety for cyclists in Kildare Town;
3. Prioritise investment in schemes that will deliver the greatest modal shift potential;
4. Provide recommendations on the quality of cycle facilities that should be delivered;
5. Expand cycle parking in the town centre and at public transport nodes; and
6. Engage with schools with the aim of increasing cycling mode share.

### 11.2.2 Development of Cycle Network Measures

In the survey undertaken as part of the baseline analysis for the Transport Strategy, existing infrastructure for cycling in Kildare Town was rated much more poorly than existing infrastructure for any other mode, with over 70 percent of respondents rating existing infrastructure as 'poor' or 'very poor'. Responses to other multiple-choice questions, as well as the open comments received highlighted that there is significant demand for the delivery of safe cycling facilities throughout the study area.

The cycling strategy seeks to develop a network of safe, comfortable routes throughout the 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 and to enable visitors to access key local visitor attractions such as the Curragh and Irish National Stud & Gardens by bicycle.

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

- The NTA's Cycle Network Plan for the Greater Dublin Area (also referred to as GDA Cycle Network Plan) published in 2013;
- Existing cycle infrastructure within the study area and current cycling conditions / traffic regime on all key links;
- Planned/anticipated road schemes and other relevant measures which form part of this strategy (e.g. parking and permeability measures);
- Obvious constraints which impact the feasibility of prioritising cycling on some major roads;
- The location of schools, employment, supermarkets and the train station and desire lines to these destinations from residential areas;
- The location of important tourist destinations and desire lines to these destinations from the train station and from potential future recreational/Inter-Urban cycle routes; and
- Relevant input collected through the public consultation survey, written submissions from primary stakeholders and a workshop with local Councillors.

The cycle network infrastructure measures within this strategy have been allocated an indicative 'link type' category which is included in Table 11.5 and shown in Figure 11.14. These categories should be

considered as provisional at this point, as future, more detailed analysis of location specific considerations, traffic levels and speeds may determine that an alternative category is more suitable for some links.

The GDA Cycle Network Plan published in 2013 categorises proposed cycle routes following roads within Kildare Town as either 'Primary/Secondary' routes or 'Feeder' routes. Green routes away from roads were categorised separately as either 'Greenway' or 'Minor Greenway'. In the case of cycling links on or along roads, the GDA Cycle Network Plan does not propose the type of infrastructural improvement, if any, which should be provided at specific locations. The relevant categorisation of each link according to the GDA Cycle Network Plan has been included for reference purposes in the Cycle Network Measures table.

In this strategy, the provision of dedicated cycling infrastructure (Cycle Track/Cycle Lane) is proposed for many road sections throughout the study area. Segregated cycle tracks and cycle lanes have been combined into a single category for the purpose of the strategy because a scheme on any one road will often be comprised of both types of facility and smooth transitions are important to success. However, while the exact degree of segregation to be provided at different points on these links is best determined at detailed design stage, the overall objective should be to ensure that to the greatest extent possible, the degree of protection provided from vehicular traffic ensures a high level of perceived, as well as actual, safety, as this is an essential component of achieving modal shift.

The provision of a shared cycle and pedestrian facility is proposed for two locations as an alternative to a dedicated cycle facility and separate footpath. This is due to a combination of space constraints and the fact that these sections of the network will not be heavily used by commuters at peak times.

A number of links within the study area have been categorised as 'to be determined (TBD) by detailed study'. On these links, some improvements will be required to improve safety and/or comfort for cyclists. However, more detailed analysis is needed to develop appropriate solutions for these streets, most of which are quite constrained with regard to available road width and/or the potential for land take. It is likely that some of these streets will need to be designated as 'Shared Streets'. The type of road environments which are typically suitable to be designated as 'Mixed/Shared Streets' for cycling according to the National Cycle Manual are: residential areas, access roads and streets, environmental traffic cells (low traffic neighbourhoods where through traffic has been eliminated using 'modal filters') and shopping streets. Mixed/shared streets are most suitable where there are low traffic speeds and volumes and the traffic function is subordinate to vulnerable road user requirements. However, it should be acknowledged that the criterion of low traffic volumes will not be achievable on all of the streets which have been allocated the category of 'TBD by detailed design' within the strategy, particularly in the short to medium term. For example, traffic volumes on Nugent Street/ Station Road are higher than desirable for a Shared Street, but as the space on most of this link is very constrained it may also not be possible to provide dedicated cycling facilities.

There is some overlap between measures included in the cycling strategy and the permeability strategy outlined previously. In general, it has been assumed that unless otherwise stated, all new links included within the permeability strategy will also be accessible for cycling. However, only measures which provide some 'strategic' function in the context of the overall cycle network have been included/duplicated here as cycle network options.

An objective of the Kildare Town Transport Strategy is to provide an integrated cycle network in accordance with the GDA Cycle Network Plan. The GDA Cycle Network Plan therefore acted as a starting point for the development of cycle network options. Numerous additional links not in the GDA Cycle Network Plan have also been provided for in this strategy, with the majority of these relating to cycle facilities which can be provided in conjunction with new roads/road improvement or proposals for new links which are also in the permeability strategy, including a number of links which are intended to be delivered in conjunction with new residential development. Some links or link sections in the GDA Cycle Network Plan which have not been included in this strategy are described below.

- The existing road bridge crossing over the rail line on Station Road/Rathbride Road has been excluded from the proposed network in this strategy, despite being designated as part of a

'Feeder' route in the GDA Network Plan, as the very limited available width (a one-way shuttle system for vehicles is already in operation), combined with steep gradients make it unattractive for cyclists to share space with vehicles. As a partial alternative, it is proposed to provide a new pedestrian and cycle bridge to the east of this location connecting a new greenway on the north side of the rail line with the Woodside Park estate, with onward travel to the town centre from Woodside Park possible via Maryville, Melitta Road and the southern part of Station Road. The measures in other sections of this strategy to provide a new northern entrance to the train station (PT 5) and to provide a western entrance to the carpark from Fair Green Road (PERM 17) will also be beneficial if delivered in helping to provide cyclists coming from the northern part of the study area with options which allow them to avoid using the road bridge on Station Road when travelling to the train station.

- Route KT3 within the GDA Cycle Network Plan extends across the M7 to a junction with the R415. In this strategy, it is not proposed to provide cycling improvements on this M7 crossing, as this link does not connect to any other cycle facility or key destination, and improving the M7 crossing to the east, on Tully Road, was considered to be a greater priority in order to facilitate cycling trips to the Irish National Stud & Gardens, St Brigid's Well and the Solas Bhride Centre.
- The GDA Cycle Network Plan includes multiple long-distance inter-urban cycle routes which connect to Kildare Town, including: K15 (Naas – Newbridge – Kildare – Monasterevin); K12 (Pollardstown Fen Feeder Greenway) and K21 (Rathangan – Kildare – Curragh – Kilcullen – Ballymore Eustace – Hollywood). This strategy does not discount the delivery of any of these routes in the future, but with the exception of a section of K15 which is provided for by the proposed Greenway through the Curragh (Measure 1), and a section of K12 which extends as far as Kildare Golf Club (Measure 57), these inter-urban routes are considered outside of the scope of this transport strategy which is focused on Kildare town and its immediate environs.

In addition to the above, Cleamore Road is included in the GDA Cycle Network Plan as a 'feeder' route for cycling but since summer 2020, cycling on Cleamore Road has only been possible in a northbound direction, as a one-way traffic system was introduced to facilitate required footpath widening. A contra-flow cycle facility on Cleamore Road was considered as part of this transport strategy, but it was determined that there is insufficient width to accommodate this.

### 11.2.3 Cycle Network Measures

Proposed cycle network measures are described in Table 11.5. Each link has been allocated a rating with regard to its potential to contribute to modal shift to cycling for trips to school, work or 3rd level education (including the train station, as many Kildare town residents commute to Dublin for these activities) and supermarkets. Each link has also been given a rating in respect to its importance for facilitating leisure cycling and access to important tourist attractions.

Figure 11.14 presents the proposed cycle network incorporating both existing links and strategy measures.

*Table 11.5: Delivery Timeframe and Role of Cycling Measures*

| ID | Description | Proposed Link Type | Proposed Timeframe | Existing Scheme or Corresponding Road/Permeability Measure | GDA Cycle Network Plan | Importance of Link for Cycling Trip Type | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | *School* | *Work & 3rd Level (incl. Train Station)* | *Supermarket* | *Tourism & Leisure Cycling* |
| 1 | Curragh Greenway (towards Newbridge via Racecourse) | Greenway | Long term | n/a | Inter-Urban | Low | Medium | Low | High |
| 2 | Connection from east-west Greenway to Melitta Road | Greenway | Long term | PERM 12 | n/a | Medium | Medium | Low | High |
| 3 | East-west Greenway along the rail line | Greenway | Long term | PERM 11 | n/a | Medium | High | Low | High |
| 4 | Tully Road (middle section) | Greenway | Long term | n/a | Feeder | Low | Low | Low | High |
| 5 | R445 to proposed M7 crossing/potential link to Irish National Stud & Gardens via proposed Cherry Avenue Park | Greenway | Long term | PERM 38 | n/a | Low | Low | Low | High |
| 6 | Tully Road to Grey Abbey Road | Greenway | Long term | PERM 37 | Minor Greenway | Low | Low | High | Medium |
| 7 | North western Greenway | Greenway | Linked to residential development | PERM 5 | n/a | Medium | Low | Low | Medium |
| 8 | Connection from Green Road to Southgreen Road | Greenway | Linked to residential development | PERM 14 | n/a | High | High | Low | Low |
| 9 | R413 Melitta Road (middle section) | Cycle Track/ Cycle Lane | Short-medium term | n/a | Primary/ Secondary | Medium | Medium | Low | Medium |
| 10 | Dublin Road (Meadow Road to Curragh) | Cycle Track/ Cycle Lane | Short-medium term | n/a | Primary/ Secondary (to French Furze Road junction) | High | High | High | Medium |

| ID | Description | Proposed Link Type | Proposed Timeframe | Existing Scheme or Corresponding Road/Permeability Measure | GDA Cycle Network Plan | Importance of Link for Cycling Trip Type | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | *School* | *Work & 3rd Level (incl. Train Station)* | *Supermarket* | *Tourism & Leisure Cycling* |
| 11 | Monasterevin Road/Main Street R445 | Cycle Track/ Cycle Lane | Short-medium term | n/a | Primary/ Secondary | High | High | High | High |
| 12 | Monasterevin Road R445 (western section) | Cycle Track/ Cycle Lane | Long term | n/a | Primary/ Secondary | Low | Medium | Low | Medium |
| 13 | Rathbride Road R415 | Cycle Track/ Cycle Lane | Long term | n/a | Feeder | High | High | High | Medium |
| 14 | Dunmurray Road R401 (northern section - Bishopsland to KTCS) | Cycle Track/ Cycle Lane | Medium term | n/a | Primary/ Secondary | High | Medium | Medium | Medium |
| 15 | Dunmurray Road R401 (Dunmurray Link Road to Dunmurray Drive) | Cycle Track/ Cycle Lane | Short term | n/a | Primary/ Secondary | High | Medium | Medium | Medium |
| 16 | Rathbride Demesne | Cycle Track/ Cycle Lane | Medium term | n/a | n/a | High | Medium | Low | Low |
| 17 | R415 (Monasterevin Road to Kildare Village) | Cycle Track/ Cycle Lane | Medium term | n/a | n/a | Low | High | Low | Medium |
| 18 | Bride Street (St. Brigid's Primary School to Market Square) | Cycle Track/ Cycle Lane | Short term | n/a | Feeder | High | Medium | Medium | High |
| 19 | Grey Abbey Road (southern section adjacent to development lands) | Cycle Track/ Cycle Lane | Long term | n/a | Primary/ Secondary | Low | Low | Medium | Low |
| 20 | Green Road (western section) | Cycle Track/ Cycle Lane | Long term | n/a | Feeder | Medium | Medium | Medium | Low |
| 21 | Tully Road (section adjacent to National Stud) | Cycle Track/ Cycle Lane | Long term | n/a | Feeder | Low | Low | Low | High |
| 22 | Dunmurray Road R401 (southern section - Fairgreen Road to Old Road) | Cycle Track/ Cycle Lane | Medium term | n/a | Primary/ Secondary | High | High | Medium | Medium |

| ID | Description | Proposed Link Type | Proposed Timeframe | Existing Scheme or Corresponding Road/Permeability Measure | GDA Cycle Network Plan | Importance of Link for Cycling Trip Type | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | *School* | *Work & 3rd Level (incl. Train Station)* | *Supermarket* | *Tourism & Leisure Cycling* |
| 23 | Monasterevin Road (section forming part of Northern Link Street scheme) | Cycle Track/ Cycle Lane (part of road scheme) | Medium term | Northern Link Street (RD 2) | Primary/ Secondary | Low | Medium | Low | Low |
| 24 | Northern Link Street (R445 to Green Road/Pigeon Lane junction) | Cycle Track/Cycle Lane (part of road scheme) | Medium term | Northern Link Street (RD 2) | n/a | Low | Low | Low | Low |
| 25 | Green Road (Pigeon Lane to Southgreen Road junction) | Cycle Track/Cycle Lane part of road scheme) | Medium term | Northern Link Street (RD 2) | Feeder | Medium | Medium | Medium | Low |
| 26 | Bothar na gCorp | Cycle Track/Cycle Lane (part of road scheme) | Medium term | Northern Link Street (RD 2) | Feeder | Medium | Medium | Medium | Low |
| 27 | Fairview Cottages R401 (southern section) | Cycle Track/Cycle Lane (part of road scheme) | Medium term | Northern Link Street (RD 2) | Primary/ Secondary | High | Medium | Low | Low |
| 28 | Southgreen Road Upgrade | Cycle Track/Cycle Lane (part of road scheme) | Medium term | Southgreen Bridge and approach roads upgrade (RD1) | n/a | Medium | Medium | Low | Low |
| 29 | Magee Barracks Phase 1 | Cycle Track/Cycle Lane (part of road scheme) | Medium term | Magee Barracks Phase 1 | n/a | High | High | High | Low |
| 30 | Magee Barracks Phase 2 | Cycle Track/Cycle Lane (part of road scheme) | Long term | Magee Barracks Phase 2 | n/a | High | High | High | Low |
| 31 | Modus Link Road | Cycle Track/Cycle Lane (part of road scheme) | Medium term | Modus Link Road | n/a | Low | Medium | Low | Low |

| ID | Description | Proposed Link Type | Proposed Timeframe | Existing Scheme or Corresponding Road/Permeability Measure | GDA Cycle Network Plan | Importance of Link for Cycling Trip Type | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | *School* | *Work & 3rd Level (incl. Train Station)* | *Supermarket* | *Tourism & Leisure Cycling* |
| 32 | Hospital Street to Oaktree Road | Cycle Track/Cycle Lane (part of road scheme) | Medium term | Hospital Street to Tully Road | n/a | Medium | Medium | Medium | Low |
| 33 | Old Road | Active Mode Priority, Local Vehicle Access | Short term | Old Road Bridge closure (RD1) | n/a | Medium | Medium | Medium | Low |
| 34 | Lourdesville | Active Mode Priority, Local Vehicle Access | Medium term | Northern Link Street (RD 2) | n/a | Medium | Medium | Medium | Low |
| 35 | Market Square | Active Mode Priority, Local Vehicle Access | Short term | Complements 'Kildare Town Laneways Strategy' proposed in Town Renewal Plan | Feeder | Medium | Medium | Medium | High |
| 36 | Bride Street section of Market Square | TBD by detailed study<br><br>Active Mode Priority | Short term<br><br>Long term | Closure of Bride Street section of Market Square (RD3) | n/a | Medium | High | Medium | High |
| 37 | Fire Castle Lane | TBD by detailed study | Short term | Complements 'Kildare Town Laneways Strategy' proposed in Town Renewal Plan | Feeder | Medium | Medium | Medium | Low |
| 38 | Chapel Hill/Chapel Lane | TBD by detailed study | Medium term | n/a | Feeder | High | Medium | Low | Low |
| 39 | Fairview Cottages R401 | TBD by detailed study | Medium term | Northern Link Street (RD 2) | Primary/ Secondary | Medium | Medium | Low | Low |
| 40 | Dunmurray Road (rail bridge section) | TBD by detailed study | Short term | n/a | Primary/ Secondary | High | High | Medium | Medium |

| ID | Description | Proposed Link Type | Proposed Timeframe | Existing Scheme or Corresponding Road/Permeability Measure | GDA Cycle Network Plan | Importance of Link for Cycling Trip Type | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | *School* | *Work & 3rd Level (incl. Train Station)* | *Supermarket* | *Tourism & Leisure Cycling* |
| 41 | Station Road (north of Market Square) | TBD by detailed study | Short term | n/a | Primary/ Secondary (between Main Street & Melitta Road), Feeder (north of Melitta Road) | Medium | High | Medium | High |
| 42 | Bride Street (section south of school) | TBD by detailed study | Short term | n/a | Feeder | High | High | High | High |
| 43 | Grey Abbey Road (northern section) | TBD by detailed study | Long term | n/a | Primary/ Secondary | Low | Medium | Medium | Low |
| 44 | Bride Street (Cleamore Road to Tully Road) | TBD by detailed study | Short term | n/a | Feeder | Medium | Medium | Medium | High |
| 45 | Main Street (Meadow Road to Beechgrove) | TBD by detailed study | Short-medium term | n/a | Primary/ Secondary | High | High | High | Medium |
| 46 | Oaktree Road | TBD by detailed study | Medium term | Hospital Street to Tully Road scheme | n/a | Medium | Medium | Medium | Medium |
| 47 | Green Road (eastern part) | TBD by detailed study | Medium term | n/a (but links into upgraded junction on RD2 at southern end) | Feeder | High | High | High | Low |
| 48 | Pidgeon Lane | TBD by detailed study, One Way | Medium term | Northern Link Street scheme (RD2) | Feeder | High | High | High | Low |
| 49 | Friary Road | TBD by detailed study | Medium term | Northern Link Street scheme (RD2) | Feeder | High | High | High | Low |
| 50 | White Abbey Road | TBD by detailed study, One Way | Medium term | Northern Link Street scheme (RD2) | Feeder | High | High | High | Low |

| ID | Description | Proposed Link Type | Proposed Timeframe | Existing Scheme or Corresponding Road/Permeability Measure | GDA Cycle Network Plan | Importance of Link for Cycling Trip Type | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | *School* | *Work & 3rd Level (incl. Train Station)* | *Supermarket* | *Tourism & Leisure Cycling* |
| 51 | Fair Green Road | TBD by detailed study, One Way | Short term | Some overlap with delivery of station car park improvements (PK4) & new western entrance (PERM17) | Feeder | Medium | Medium | Low | Low |
| 52 | Meadow Road | TBD by detailed study | Short term | RD 4 | Primary | High | Low | Medium | Low |
| 53 | New pedestrian/cycle bridge connecting proposed east-west Greenway with Woodside Park | New bridge | Long term | PERM 15 | Replaces Feeder on section of Station Road which crosses rail line | High | High | High | Medium |
| 54 | Eastern rail line greenway bridge | New bridge | Long term | PERM 12 | n/a | Low | Medium | Low | High |
| 55 | M7 crossing from proposed Cherry Avenue Park to potential link to Irish National Stud & Gardens | New bridge | Long term | PERM 40 | Minor Greenway | Low | Low | Low | High |
| 56 | Tully Road M7 Crossing | Shared cycle / walking path | Long term | n/a | Feeder | Low | Low | Low | High |
| 57 | Rathbride Abbey to Kildare Golf Club | Shared cycle / walking path | Short term | PERM 1 | K12 | Low | Low | Low | Medium |
| 58 | Link between Oaktree Road and Cherry Avenue Park | Greenway | Long term | PERM 41 | n/a | Low | Low | High | High |

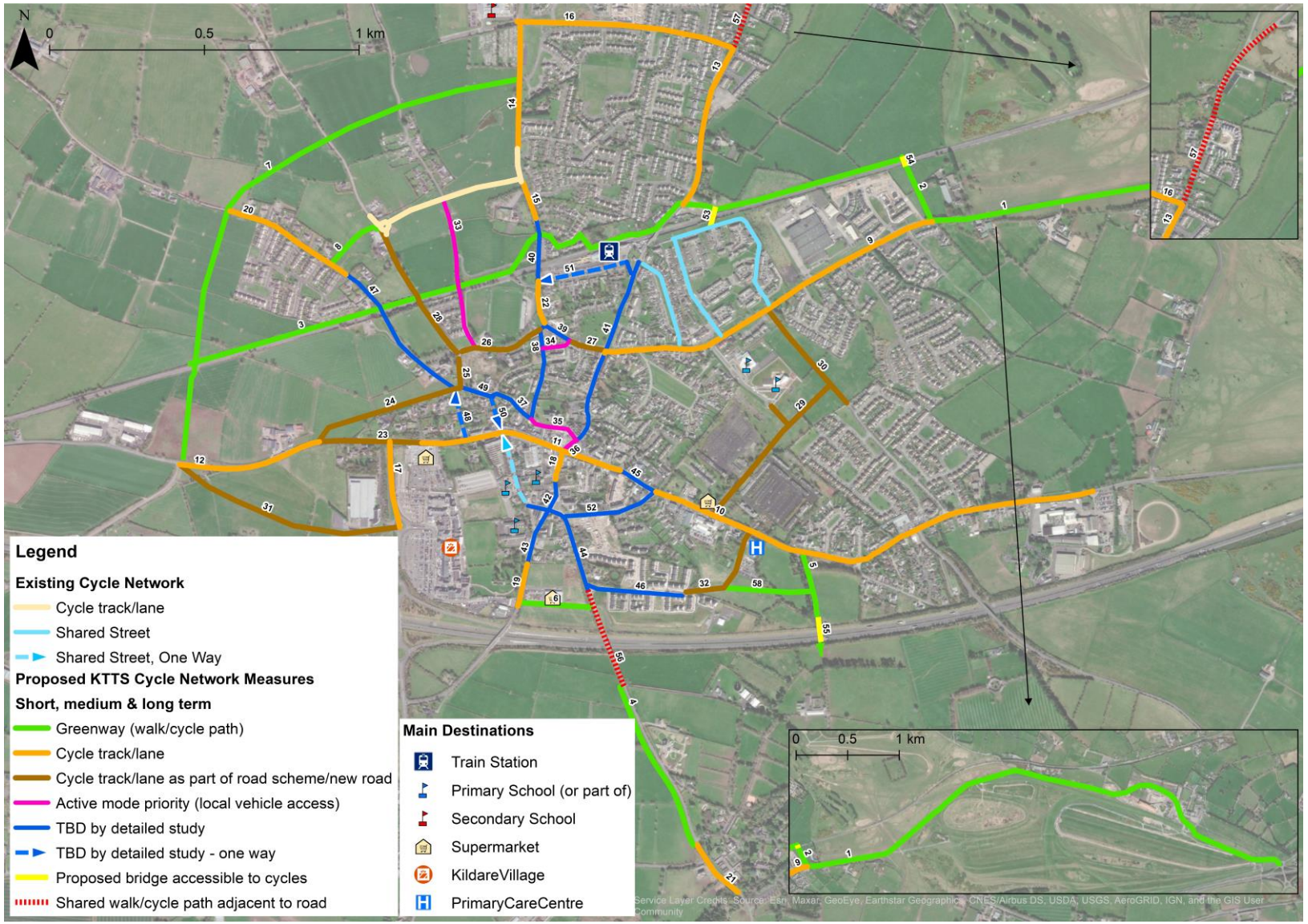



*Figure 11.14 Proposed Cycle Network Measures*

### 11.2.4 Cycle Parking

An absence of convenient and adequately secure cycle parking at all types of destinations presents a barrier to modal shift to cycling. Different types of cycle parking solutions are typically required at different locations and in some cases, a variety of different cycle parking solutions are required at the same location to accommodate different cycle parking duration or types of users.

Cycle parking facilities should be capable of supporting the frame of the cycle and preventing it from falling over; protecting the cycle against theft and allowing the cyclist sufficient room to position and lock the cycle. In addition, consideration should be given to protection against weather, lighting and ease of access.

As outlined in more detail in the baseline report in Volume 2, a cycle parking survey was undertaken as part of the site visit completed in November 2020 to assess current provision of cycle parking within Kildare town. The survey encompassed most of the key destinations within the town with the main exception being private workplaces. The survey showed a need to significantly enhance public cycle parking provision throughout the study area, particularly at the train station, within the town centre, at community facilities and at some retail destinations. The National Cycle Manual provides comprehensive guidance regarding cycle parking which should be referred to by all stakeholders, with the aim of bringing all destinations in Kildare town up to best practice standards in terms of both the quality and quantity of cycle parking provided.

Investment in high quality secure cycle parking is particularly important at the train station. There is likely to be limited passive surveillance at the train station outside of peak commuting times and bicycles are likely to be left for long periods of time, including sometimes overnight, which increases the risk of theft. Therefore, it is recommended that a variety of options should be made available to accommodate the needs of different user groups, including regular sheltered cycle parking stands available to all free of charge and a more secure option which could potentially be supported by charging a small fee. For example, consideration should be given to the provision of a secure compound accessible only to registered users using an electronic fob, as is commonly found at similar commuter railway stations in other countries. Users could pay a monthly or annual fee for access to such a facility, which should also include lockers to facilitate the storage of helmets and other gear. Given the constraints on accessing the current main entrance to the station by bicycle from the north east, it is suggested that secure cycle parking should also be provided on the north side of the station if the proposed public transport measure (PT5) to provide a northern entrance to the station is delivered.

It was not possible to assess the current provision of cycle parking at private workplaces, or other supporting facilities currently in place at workplaces such as showers and lockers as part of this study. However, experience in other locations in Ireland has demonstrated that workplace facilities are very often below best practice standards and are regularly cited in employee travel surveys as a barrier to people choosing to cycle to work. It is recommended that KCC engage with workplaces in the study area to understand current provision and provide advice on best practice. For larger workplaces, this could form part of the process of preparing and monitoring Mobility Management Plans (see Parking Measure PK 8), but there may also be opportunities to engage more informally with other workplaces.

## 11.3 Non-Motorised Modes Complimentary Measures

To support the permeability and cycling strategies, several complimentary measures are proposed to ensure their effective operation:

### 11.3.1 Ensuring Delivery of Active Mode Measures Linked to Road Projects

Elements of the active mode network, such as walking links or cycle tracks, which are reliant on road projects to be delivered should be implemented even if the road project is not completed. This is to ensure that the active mode network is complete and creates a comprehensive network of routes for people to walk or cycle on even if road projects are delayed. Some roads with footpaths, such as the Magee Barracks Roads, play a vital part in the permeability network and this complementary measure will ensure that alternative walking/cycling links will be provided along the route in the event that the road project is delayed or cancelled.

### 11.3.2 Review Footpaths on Approach Roads

The KTTS proposes numerous extensions to existing footpaths and new pedestrian routes to enhance accessibility for pedestrians across the study area. In addition to this, the pedestrian network would benefit from a review of footpaths on approach roads to understand whether additional footpaths, such as longer distance routes to destinations beyond the study area, would be beneficial to enhance pedestrian access and safety.

### 11.3.3 Greater Signal Priority for Pedestrians and Cyclists

RD 5 proposes the upgrade of traffic signals in the town to MOVA/SCOOT and more effective management of traffic signals will allow for improved priority for pedestrians and cyclists. The detailed design process of implementing permeability/cycling links will be able to consider the need for junction modifications in more detail to enhance priority and safety for cyclists and pedestrians.

### 11.3.4 New Crossing Facilities to Facilitate Walking and Cycling Routes

As part of the KTTS baseline analysis, the location of existing crossing points in Kildare town were identified. This assessment highlighted areas where there are fewer crossing points and additional infrastructure would improve safety as well as reducing severance on busy roads. Furthermore, extra crossing points are required to facilitate access between permeability measures and enhance pedestrian accessibility across the path network. Figure 11.15 shows the locations where new crossing points would be beneficial to active modes in Kildare town and Table 11.6 provides a description of each new crossing point. This map intentionally excludes road schemes such as the Northern Link Street and the Magee Barracks Roads because crossing point locations will be identified separately as part of their detailed design process.

*Table 11.6 Description of Proposed Crossing Facilities*

| No. | Description |
|---|---|
| 1 | Crossing point across Rathbride Demesne linked to PERM 2 |
| 2 | Crossing point across Dunmurry Road to facilitate the railway greenway (PERM 11) |
| 3 | Crossing point across Melitta Road to facilitate access to PERM 12 |
| 4 | Crossing point across Main Street east (R445) |
| 5 | Crossing point across R445 to access Magee Barracks Roads |
| 6 | Crossing point across Meadow Road to Oaktree Avenue estate |
| 7 | Crossing point from Modus Link Road to Kildare Retail Village which will also facilitate crossing between two bus stops on R415 |
| 8 | Crossing point to the new eastern entrance to Kildare Retail Village (PERM 28) |
| 9 | Crossing point to Cherry Avenue Park |
| 10 | Crossing point to PERM 37 |
| 11 | Crossing point at the north of Market Square to allow for safe and convenient east-west access |

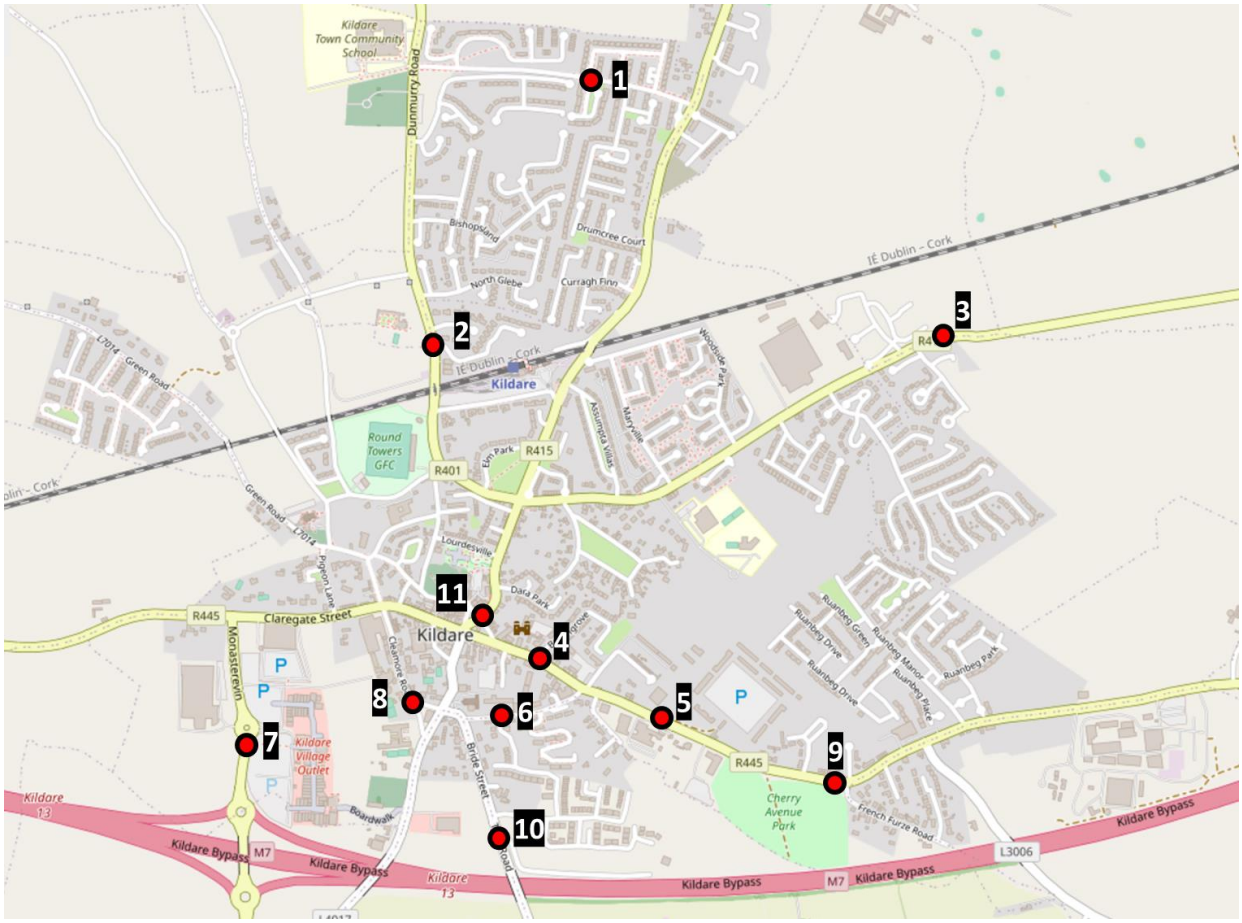



*Figure 11.15 Proposed Locations for Additional Crossing Facilities*

# 12 PUBLIC REALM PROPOSALS

# 12. Public Realm Proposals

As part of the Town and Village Renewal Scheme launched in 2016, Kildare County Council received funding to improve the public realm of Kildare Town. This project began with conducting a town Health Check to assess the vitality and viability of the town centre, followed by establishing a Town Renewal Committee which involved local stakeholders. Building on the information collected in the Health Check, a Town Renewal Plan is being prepared which sets out the measures to be taken to support the renewal and revitalisation of the town centre. The Town Renewal Plan (TRP) is being prepared through a collaboration between KCC and the Metropolitan Workshop. The TRP measures are also being informed by urban design analysis and extensive consultation through public events and workshops. The TRP will include a masterplan and an implementation strategy for improving the public realm of Kildare Town, which contains several project designs which can be progressed to the Part 8 planning approval stage.

The KTTS takes cognisance of the draft Town Renewal Plan and has incorporated a number of public realm proposals into the option design process. The KTTS involves five integrated strategies which propose interventions for walking, cycling, roads, public transport and parking. Each of the mode-specific transport strategies draws on the ideas in the draft Town Renewal Plan and incorporates a number of proposals. TRP draft proposals which are also planned in the KTTS include the following measures:

- The upgrade of Nugent Street Car Park and associated paths to Market Square;
- The pedestrianisation of the Bride Street section of Market Square to compliment the public realm improvements;
- Introduction of cycle lanes throughout the town;
- Enhancements to laneways and permeability links throughout the town;
- Upgrade and formalisation of train station car park; and
- Creation of a northern train station entrance.

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# 13 KILDARE TOWN TRANSPORT STRATEGY

# 13. Kildare Town Transport Strategy

## 13.1 Public Transport Strategy

The measures included in the public transport strategy are listed in Table 13.1 and shown in Figure 13.1 with the same numbering.

*Table 13.1 Public Transport Strategy Map*

| Measure | Type | Short Description |
|---|---|---|
| PT 1 | Bus Transfer Point | Extension of route 126 to R415 outside Kildare Village to create bus transfer point with Dublin Coach services |
| PT 2 | Bus Transfer Point | Extend Dublin Coach services and route 126 to serve a transfer point within Kildare Village |
| PT 3 | Bus | Improve quality and coverage of bus stops |
| PT 4 | Bus | KCC to work with the NTA to achieve more frequent bus services |
| PT 5 | Rail | KCC to work with the NTA to create a northern entrance to Kildare town train station |
| PT 6 | Rail | KCC to work with the NTA to upgrade the train station |
| PT 7 | Rail | KCC to work with the NTA to achieve more frequent rail services |

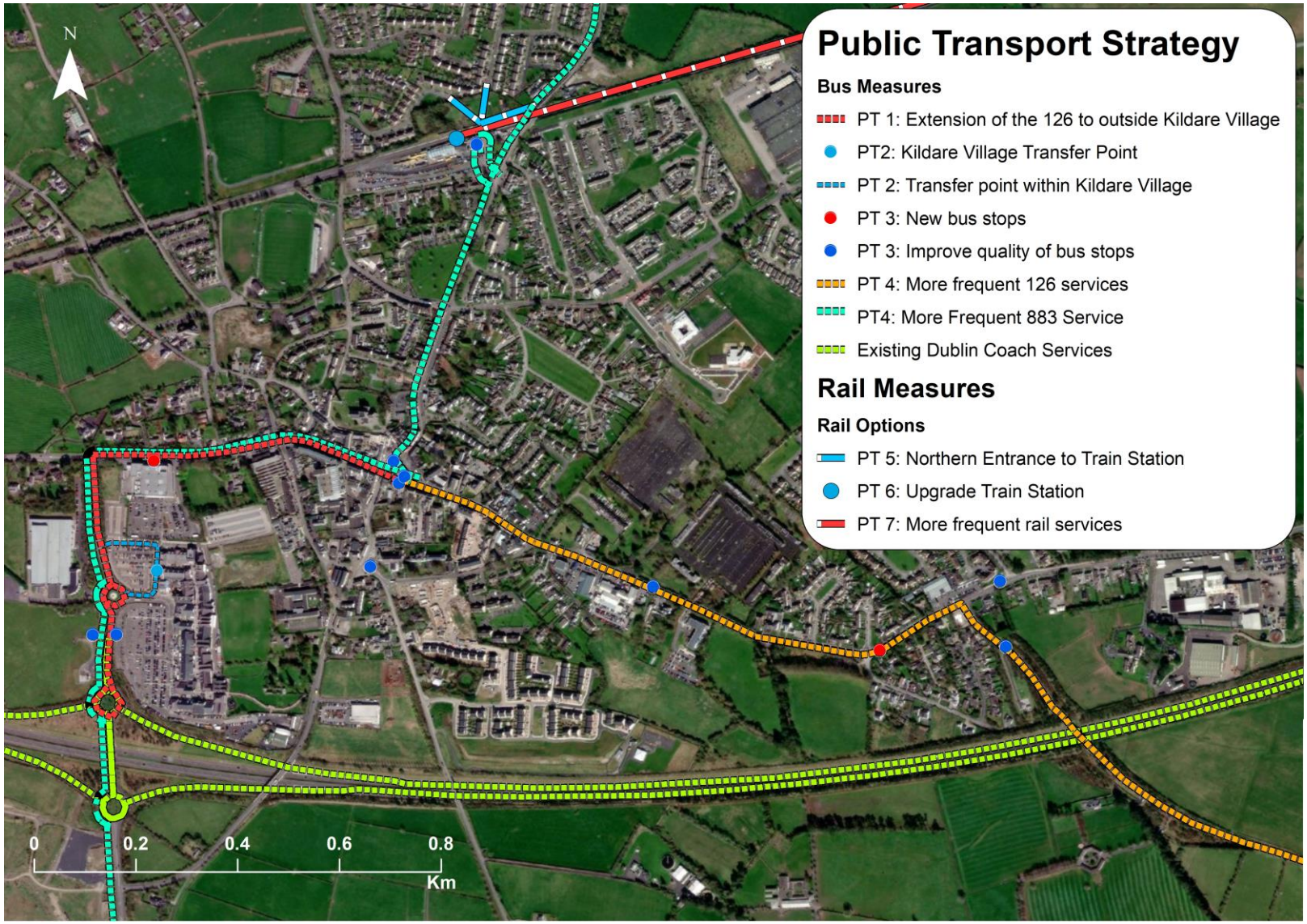


*Figure 13.1 Public Transport Strategy Measures*

In addition to the main public transport measures, there are several complimentary measures, outlined in Table 13.2, which will compliment and support the public transport strategy.

*Table 13.2 Public Transport Strategy – Complimentary Measures*

| Complimentary Measure | Description |
|---|---|
| Leap Card Integration | Work with the NTA to achieve leap card integration at Kildare Train Station |
| Phoenix Park Tunnel Services | Work with the NTA to extend Phoenix Park tunnel rail services to Kildare |
| Kildare Retail Village Complimentary shuttle service | Kildare County Council will work closely with Kildare Retail Village to ensure their complimentary shuttle bus service is retained as part of the operation of the Retail Village |
| Junction Priority for Public Transport | Kildare County Council will work to provide greater priority for public transport services throughout Kildare town by providing signal priority measures at key junctions |
| Future Bus Priority Route to Kildare Train Station | Examine the potential for a longer-term public transport priority route between the M7 and Kildare Town train station |

## 13.2 Strategy for Non-Motorised Modes

### 13.2.1 Permeability Strategy

The permeability measures numbered in Table 13.3 are shown in Figure 13.2 across Kildare town.

*Table 13.3 List of Permeability Strategy Measures*

| Measure | Description |
|---|---|
| PERM 1 | Shared walking/cycling path on one side of Rathbride Road from Rathbride Abbey to Cill Dara Golf Club |
| PERM 2 | Create a pedestrian / cyclist link from Rathbride Abbey onto Rathbride Demesne |
| PERM 3 | Install new footpaths across the green area to provide formal connections between Oakland Grove, Dunmurray View and Farrincooley Crescent |
| PERM 4 | Create a pedestrian / cyclist link connecting Rathbride Close to Drumcree Court |
| PERM 5 | Creation of a north western Greenway linking from the Monasterevin Road (R445) to the Dunmurray Road (R401) and connecting with Green Road, Southgreen Road and Old Road |
| PERM 6 | Extend Footpaths along Southgreen Road north of the Train Line to connecting with the Greenway proposed under PERM 5 |
| PERM 7 | Creation of pedestrian / cyclist link connecting Fennor Lawns with North Glebe |
| PERM 8 | Creation of pedestrian / cyclist link connecting Drumcree Court with Curragh Finn |
| PERM 9 | Creation of pedestrian / cyclist link connecting North Glebe with Curragh Finn |
| PERM 10 | Extend existing footpath north along Green Road to connection with Greenway proposed under PERM 5 |
| PERM 11 | Creation of a new east west Greenway extending along the Rail line connecting with the north western greenway proposed under PERM 5 at its western most and extending to connect with a new pedestrian footbridge proposed under PERM 12 connecting with Melitta Road (R413) |

| Measure | Description |
|---|---|
| PERM 12 | Creation of a new pedestrian / cyclist link connecting the proposed east west greenway under PERM 11 with Melitta Road (R413). This option involves a new pedestrian bridge over the rail line. |
| PERM 13 | Creation of a new pedestrian / cyclist links connecting Curragh Finn and Dunmurray Drive to Kildare Town Train Station |
| PERM 14 | New Pedestrian Cycle link connecting Green Road with Southgreen Road and the newly constructed Southgreen Link Road. |
| PERM 15 | Construction of a new pedestrian / cycle bridge over the Train Line Connecting the East West Greenway proposed under PERM 11 and Woodside Park. |
| PERM 16 | Creation of pedestrian / cyclist link connecting Woodside Park to Station Road |
| PERM 17 | Creation of new multi modal access to Kildare Town Train Station on the western end of Fair Green Road |
| PERM 18 | Phase 1 of Magee Barracks Internal road Network |
| PERM 19 | Phase 2 of Magee Barracks Internal road Network |
| PERM 20 | Creation of pedestrian / cyclist link connecting Curragh Plains, Coolaghknock Green and Melitta Park to Phase 2 of the Magee Barracks Internal Road Network |
| PERM 21 | Pedestrian links delivered as part of Phase 1 of Magee Barracks Redevelopment |
| PERM 22 | Creation of pedestrian / cyclist link connecting Phase 1 of Magee Barracks internal roads to Schools |
| PERM 23 | Creation of pedestrian / cyclist link connecting Coolaghknock Park, Coolaghknock Close, Coolaghknock Drive and Coolaghknock Gardens together |
| PERM 24 | Creation of pedestrian / cyclist link connecting Ruanbeg to Coolaghknock Gardens |
| PERM 25 | Creation of pedestrian / cyclist link connecting Ruanbeg Drive to Phase 2 of Magee Barracks internal roads |
| PERM 26 | Creation of pedestrian / cyclist link connecting Kildare Village Car Park to Kildare Village Bus Stop on the R415 |
| PERM 27 | Internal Pedestrian Link delivered as part of Phase 3 of Kildare Village |
| PERM 28 | Creation of pedestrian / cyclist link from Phase 3 of Kildare Village to Academy Street |
| PERM 29 | Creation of pedestrian / cyclist link from Bride Street to Main Street via newly proposed car park |
| PERM 30 | Creation of pedestrian / cyclist link connecting Dublin Street to Meadow Road |
| PERM 31 | Creation of pedestrian / cyclist link connecting Meadow Court to Rathbride Demesne |
| PERM 32 | Install new footpaths across the green area to provide formal connections between Farrincooley Crescent and Willow Grove |
| PERM 33 | Install new Footpaths along Old Road connecting to the Dunmurray Link Road |
| PERM 34 | Road Scheme with footpaths connecting Hospital Street to Tully Road |
| PERM 35 | Road Scheme with footpaths - Modus Link Road |
| PERM 36 | Road Scheme with footpaths - Northern Link Street |

| Measure | Description |
|---|---|
| PERM 37 | Creation of pedestrian / cyclist link connecting Grey Abbey Road with Tully Road |
| PERM 38 | Pedestrian links included in Cherry Avenue Park |
| PERM 39 | Creation of walking/cycling only link as part of Modus Link Road development |
| PERM 40 | Construction of a new pedestrian / cycle bridge over the M7 connecting with the National Stud and Japanese Gardens |
| PERM 41 | Link between Oaktree Road and Cherry Avenue Park |
| PERM 42 | Extension of footpaths along Melitta Rd (R413) from Ridgewood Manor to the edge of the Curragh. |

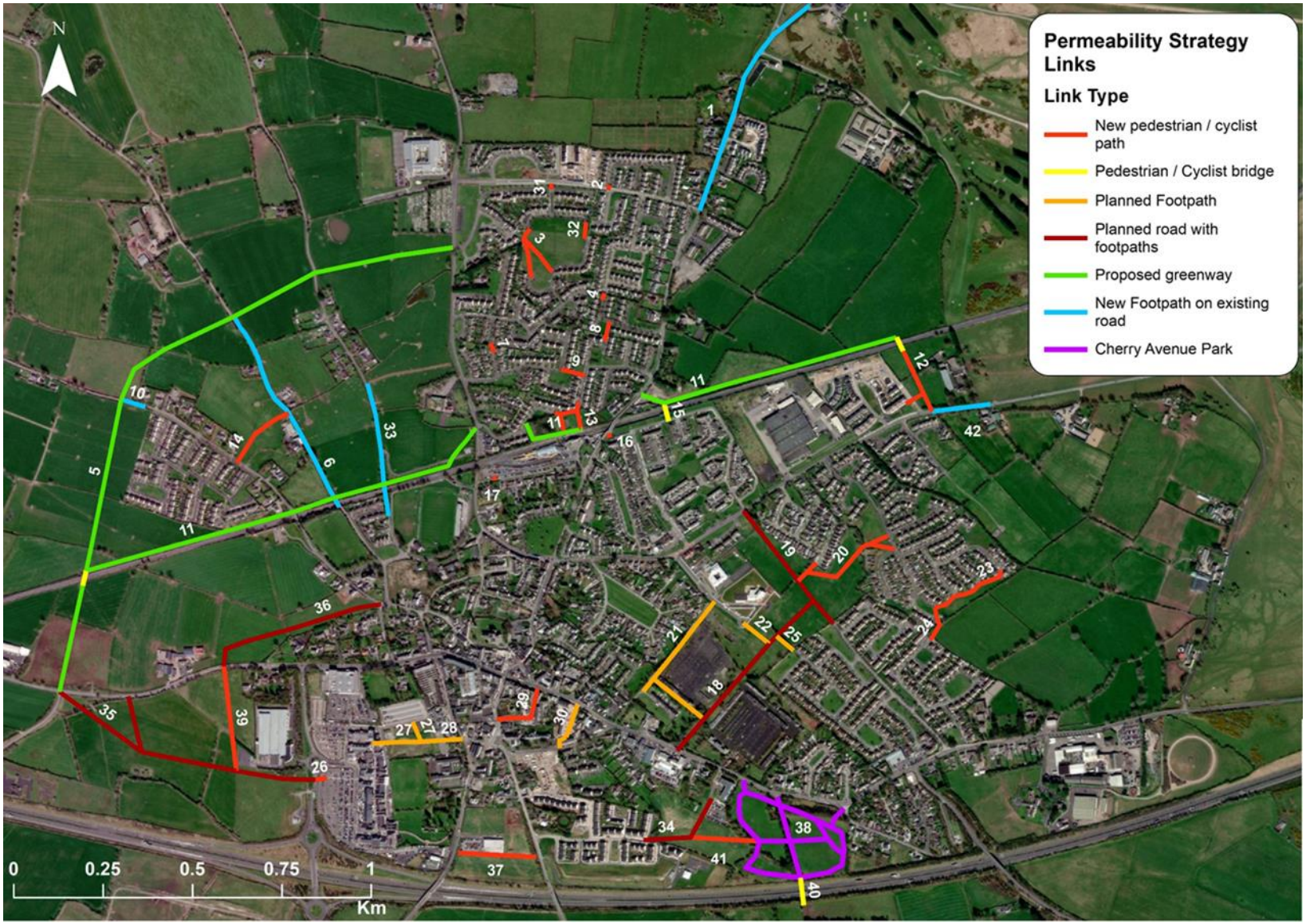


*Figure 13.2 Permeability Strategy Measures*

### 13.2.2 Cycling Strategy

The cycling measures numbered in Table 13.4 are displayed spatially in Figure 13.3.

*Table 13.4 Cycle Network Strategy Measures*

| Option | Description |
|---|---|
| C1 | Curragh Greenway (towards Newbridge via Racecourse) |
| C2 | Connection from east-west Greenway to Melitta Road |
| C3 | East-west Greenway along the rail line |
| C4 | Greenway section on Tully Road (middle section) |
| C5 | R445 to proposed M7 crossing via Cherry Avenue Park |
| C6 | Greenway connection from Tully Road to Grey Abbey Road |
| C7 | North western Greenway |
| C8 | Connection from Green Road to Southgreen Road |
| C9 | R413 Melitta Road (middle section) - cycle track/cycle lane |
| C10 | Dublin Road (Meadow Road to Curragh) - cycle track/cycle lane |
| C11 | Monasterevin Road/Main Street R445 - cycle track/cycle lane |
| C12 | Monasterevin Road R445 (western section) - cycle track/cycle lane |
| C13 | Rathbride Road R415 - cycle track/cycle lane |
| C14 | Dunmurray Road R401 (northern section - Bishopsland to KTCS) - cycle track/cycle lane |
| C15 | Dunmurray Road R401 (Dunmurray Link Road to Dunmurray Drive) - cycle track/cycle lane |
| C16 | Rathbride Demesne cycle track/cycle lane - cycle track/cycle lane |
| C17 | R415 (Monasterevin Road to Kildare Village) - cycle track/cycle lane |
| C18 | Bride Street – St. Brigid's Primary School to Market Square - cycle track/cycle lane |
| C19 | Grey Abbey Road (southern section adjacent to development lands) - cycle track/cycle lane |
| C20 | Green Road (western section) - cycle track/cycle lane |
| C21 | Tully Road (section adjacent to National Stud) - cycle track/cycle lane |
| C22 | Dunmurray Road R401 (southern section - Fairgreen Road to Old Road) - cycle track/cycle lane |
| C23 | Monasterevin Road (section forming part of Northern Link Street scheme) - cycle track/cycle lane |
| C24 | Northern Link Street (R445 to Green Road/Pigeon Lane junction) - cycle track/cycle lane |
| C25 | Green Road (Pigeon Lane to Southgreen Road junction) - cycle track/cycle lane as part of Northern Link Street scheme |
| C26 | Bothar na gCorp - cycle track/cycle lane as part of Northern Link Street scheme |
| C27 | Fairview Cottages R401 (southern section) - cycle track/cycle lane as part of Northern Link Street scheme |
| C28 | Southgreen Road - cycle track/cycle lane as part of road upgrade in conjunction with bridge upgrade |
| C29 | Magee Barracks Phase 1 - cycle track/cycle lane as part of new road |
| C30 | Magee Barracks Phase 2 - cycle track/cycle lane as part of new road |

| Option | Description |
|---|---|
| C31 | Modus Link Road - cycle track/cycle lane as part of new road |
| C32 | Hospital Street to Oaktree Road - cycle track/cycle lane as part of new road |
| C33 | Old Road - active mode priority as closure of Old Road Bridge will eliminate through traffic |
| C34 | Lourdesville - active mode priority/elimination of through traffic as part of Northern Link Street scheme |
| C35 | Market Square (west) - active mode priority through elimination of through traffic |
| C36 | Bride Street section of Market Square – improvement TBD by detailed study in short and medium term, active mode priority through pedestrianisation/vehicular access restricted to local access/deliveries in the long term |
| C37 | Fire Castle Lane - improvement TBD by detailed study |
| C38 | Chapel Hill/Chapel Lane - improvement TBD by detailed study |
| C39 | Fairview Cottages R401 - improvement TBD by detailed study |
| C40 | Dunmurray Road (rail bridge section) - improvement TBD by detailed study |
| C41 | Station Road (north of Bride Street) - improvement TBD by detailed study |
| C42 | Bride Street (section south of school) - improvement TBD by detailed study |
| C43 | Grey Abbey Road (northern section) - improvement TBD by detailed study |
| C44 | Bride Street (Cleamore Road to Tully Road) - improvement TBD by detailed study |
| C45 | Main Street (Meadow Road to Beechgrove) - improvement TBD by detailed study |
| C46 | Oaktree Road - improvement TBD by detailed study (in conjunction with delivery of new road link to Hospital Street) |
| C47 | Green Road (eastern part) - improvement TBD by detailed study |
| C48 | Pidgeon Lane - improvement TBD by detailed study (one-way traffic/cycling) |
| C49 | Friary Road - improvement TBD by detailed study |
| C50 | White Abbey Road - improvement TBD by detailed study (one-way traffic/cycling) |
| C51 | Fair Green Road - improvement TBD by detailed study (one-way traffic/cycling) |
| C52 | Meadow Road - improvement TBD by detailed study |
| C53 | New pedestrian/cycle bridge connecting proposed east-west Greenway with Woodside Park |
| C54 | New pedestrian/cycle bridge connecting proposed east-west Greenway with Melitta Road and Curragh Greenway via C2 |
| C55 | M7 Crossing from proposed Cherry Avenue Park to potential link to Irish National Stud & Gardens |
| C56 | Tully Road M7 Crossing (raised shared walking & cycling path alongside carriageway) |
| C57 | Rathbride Abbey to Kildare Golf Club (raised shared walking and cycling path alongside carriageway) |
| C58 | Link between Oaktree Road and Cherry Avenue Park |

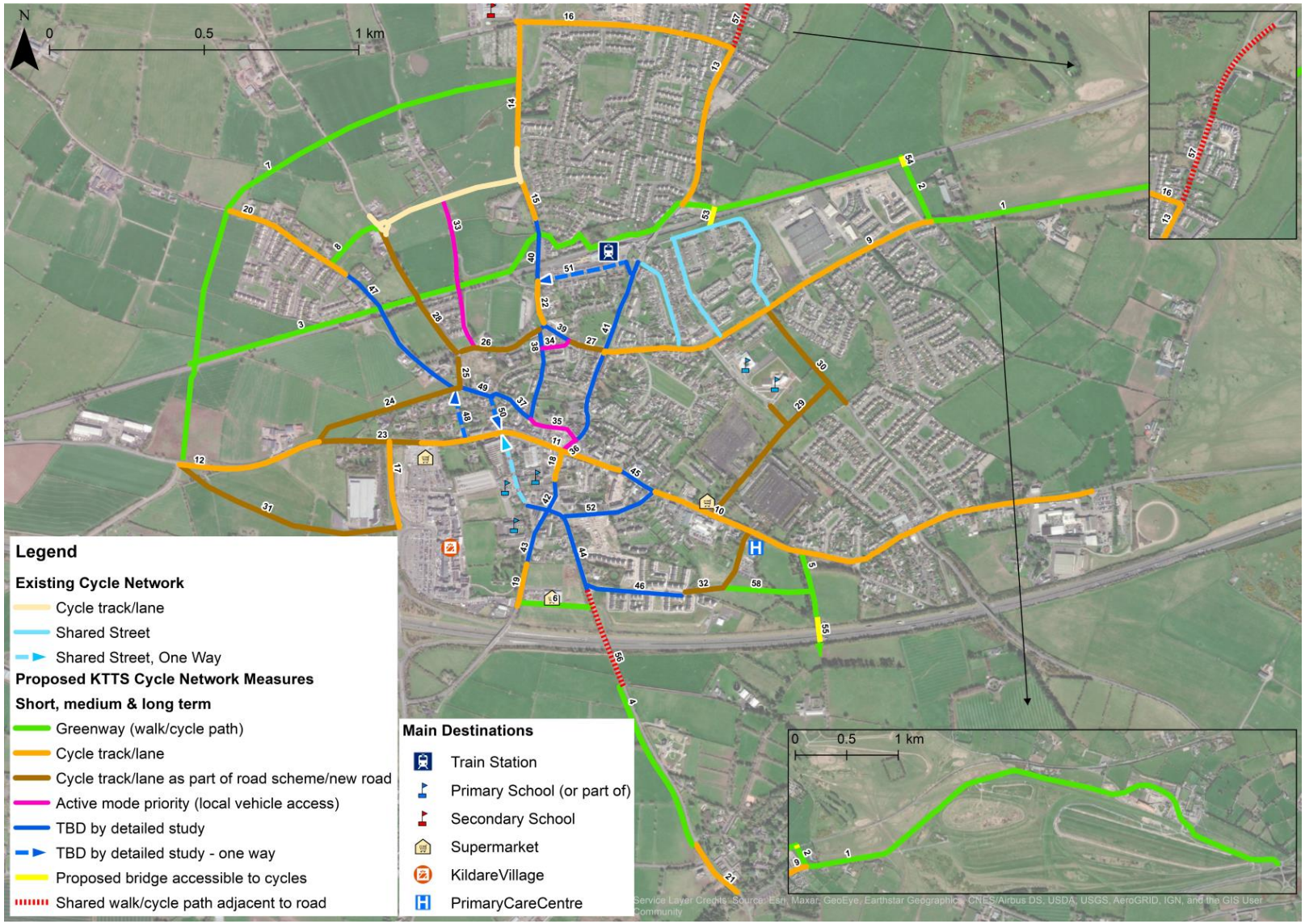


*Figure 13.3 Cycle Network Measures*

### 13.2.3 Non-Motorised Modes Complimentary Measures

In addition to the main permeability and cycling measures, there are several complimentary measures, outlined in Table 13.5, which will support the non-motorised modes strategy.

*Table 13.5 Non-Motorised Modes Strategy – Complimentary Measures*

| Complimentary Measure | Description |
|---|---|
| Ensure the delivery of active mode measures linked to road projects | This will ensure that important walking and cycling links, which are reliant on road projects, will still be implemented even if the road is not completed as planned |
| Review footpaths on approach roads | This review will consider whether additional footpaths are required on existing approach roads to serve locations outside the study area |
| Greater signal priority for pedestrians and cycling | This will seek to provide greater signal priority for active modes as part of the upgrade of junctions to MOVA/SCOOT |
| New crossing facilities | This measure proposes several new crossing facilities to support the permeability and cycling strategies |

## 13.3 Roads Strategy

The list of measures contained in the road's strategy are listed in Table 13.6 and shown in Figure 13.4.

*Table 13.6 List of Roads Strategy Measures*

| Measure | Short Description |
|---|---|
| RD 1 | Closure of Old Road Bridge to vehicular traffic and the upgrade of Southgreen bridge to two-way traffic with improvements to approach roads |
| RD 2 | Construction of Northern Link Street |
| RD 3 | Closure of Bride Street section of Market Square to vehicular traffic |
| RD 4 | One-way system on Meadow Road running east to west |
| RD 5 | Upgrade signalised junctions to MOVA or SCOOT as appropriate (Not shown on map) |


*Figure 13.4 Road Strategy Measures*

Table 13.7 lists the complimentary measures that will support the delivery of the road strategy.

*Table 13.7 Roads Strategy – Complimentary Measures*

| Measure | Description |
|---|---|
| Potential One-Way System on Nugent Street | A detailed assessment will take place to determine whether a one-way system can be implemented on Nugent Street once the Magee Barracks Roads are in place. |
| Possible Future Heavy Goods Vehicle Ban in Town Centre | Consideration in a future review of the strategy regarding whether a HGV ban in the town centre could be implemented once the Magee Barracks Roads and the Northern Link Street are in place. |
| Demand Management | Demand management is an important aspect of promoting mode transfer to sustainable travel modes and ensuring that private motor vehicles are only used for essential trips. The KTTS will promote a number of demand management measures as described in the road and parking strategies. |

## 13.4 Parking Strategy

The measures included in the parking strategy are listed in Table 13.8 and shown in Figure 13.5.

*Table 13.8 List of Parking Strategy Measures*

| Measure | Short Description |
|---|---|
| PK 1 | Installation of VMS Parking Signs |
| PK 2 | Relocate On-Street Parking on Main Street |
| PK 3 | Creation of a new or upgraded town centre off-street car park at the most appropriate of the three identified sites; Water tower, Dublin Road, Bride Street off-street car park. The preferred site/sites will be identified by a Kildare County Council feasibility study at a later date |
| PK 4 | Upgrade of Kildare Town Train Station Car Park |
| PK 5 | Mobility Management Plans for Major Workplace Locations |
| PK 6 | Upgrade Nugent Street Car Park |


*Figure 13.5 Parking Strategy Measures*

Table 13.9 outlines the complimentary measures that will support the delivery of the parking strategy.

*Table 13.9 Parking Strategy – Complimentary Measures*

| Measure | Description |
|---|---|
| Improve Car Park Signage | Directional signage for car parks in Kildare Town should be improved and direct cars along routes which support the objectives of the Kildare Town Transport Strategy |
| Review Parking Duration | Parking duration should be reviewed at car parks throughout Kildare Town to reach a suitable balance between long and short-term parking |
| Review HGV Loading Bays | Review the HGV loading bays used throughout Kildare Town to optimise the operation of heavy vehicle traffic in the town |
| Enhanced Parking Enforcement | Parking enforcement will be enhanced to eliminate illegal parking in bus stops, pedestrian paths and cycle lanes |
| Review School Drop-Off Facilities | Identify access and safety issues regarding the existing school drop-off facilities and identify improvements which will improve efficiency, safety and prioritise access by active modes and school buses |
| Review of Layby at Kildare Town Train Station | KCC will engage with Irish Rail to determine whether the relocation of the existing layby facility would allow for a considerable expansion of the park and ride facilities at the Train Station |

# 14 STRATEGY IMPLEMENTATION

# 14. Strategy Implementation

This section defines the delivery timeframe for each measure contained in the Kildare Town Transport Strategy and establishes a series of planning principles to support the delivery of the Strategy.

## 14.1 Strategy Phasing

The implementation of the Kildare Town Transport Strategy has to be carefully phased to ensure that all measures are mutually supportive in achieving the objectives of the strategy.

### 14.1.1 Short Term Measures

Table 14.1 lists the short term measures in the Kildare Town Transport Strategy across all modes. The short term permeability measures are shown in Figure 14.1. The short term cycling measures are shown in Figure 14.2, alongside existing cycling infrastructure. A3 versions of these maps can be found in Appendix F.

*Table 14.1:Kildare Town Transport Strategy Phasing – Short Term Measures*

| Measure | Type | Short Description | Short Term (1-2 Years) | Medium Term (3-5 Years) | Long Term (6-10 Years) | Notes |
|---|---|---|---|---|---|---|
| PT 1 | Bus Transfer Point | Extension of route 126 to R415 outside Kildare Village to create bus transfer point with Dublin Coach services | x | | | |
| PT 3 | Bus | Improve quality and coverage of bus stops (not shown on map) | x | | | |
| PT 5 | Rail | KCC to work with the NTA to create a northern entrance to Kildare town train station | x | | | |
| PT 6 | Rail | KCC to work with the NTA to upgrade the train station | x | x | | |
| PK 2 | Parking | Relocate On-Street Parking on Main Street | x | x | | Linked to the development of a new off-street car park in PK 3. |
| PK 3 | Parking | Creation of a new or upgraded town centre off-street car park at the most appropriate of the three identified sites; Water tower, Dublin Road, Bride Street off-street car park. The preferred site/sites will be identified by a Kildare County Council feasibility study at a later date. | x | x | | |
| PK 5 | Parking | Mobility Management Plans for Major Workplace Locations | x | | | |
| PK 6 | Parking | Upgrade Nugent Street Car Park | x | | | |
| PERM-1 | Permeability | Shared walking/cycling path on one side of Rathbride Road from Rathbride Abbey to Cill Dara Golf Club | x | | | |
| PERM-2 | Permeability | Permeability link from Rathbride Abbey onto Rathbride Demesne | x | | | |

| Measure | Type | Short Description | Short Term (1-2 Years) | Medium Term (3-5 Years) | Long Term (6-10 Years) | Notes |
|---|---|---|---|---|---|---|
| PERM-3 | Permeability | New footpaths across the green area | x | | | |
| PERM-4 | Permeability | Permeability Link connecting Rathbride Close to Drumcree Court | x | | | |
| PERM-8 | Permeability | Permeability link connecting Drumcree Court with Curragh Finn | x | | | |
| PERM-9 | Permeability | Permeability link connecting North Glebe with Curragh Finn | x | | | |
| PERM-13 | Permeability | Creation of a Permeability link connecting Curragh Finn and Dunmurray Drive to Kildare Town Train Station | x | | | |
| PERM-16 | Permeability | Permeability link connecting Woodside Park to Station Road | x | | | |
| PERM-24 | Permeability | Permeability link connecting Ruanbeg to Coolaghknock Gardens | x | | | |
| PERM-26 | Permeability | Permeability link connecting Kildare Village Car Park to Kildare Village Bus Stop on the R415 | x | | | To improve access to bus stop |
| PERM-29 | Permeability | Permeability link from Bride Street to Main Street | x | x | | Linked to the relocation of on street parking |
| PERM-30 | Permeability | Permeability link connecting Dublin Street to Meadow Road | x | | | |
| PERM-31 | Permeability | Permeability link connecting Meadow Court to Rathbride Demesne | x | | | |
| PERM-32 | Permeability | New footpaths across the green area connecting Farrincooley Crescent and Willow Grove | x | | | |

| Measure | Type | Short Description | Short Term (1-2 Years) | Medium Term (3-5 Years) | Long Term (6-10 Years) | Notes |
|---|---|---|---|---|---|---|
| PREM 42 | Permeability | Extension of footpaths along Melitta Rd (R413) from Ridgewood Manor to the edge of the Curragh. | x | | | |
| C9 | Cycling | R413 Melitta Road (middle section) - cycle track/cycle lane | x | x | | |
| C10 | Cycling | Dublin Road (Meadow Road to Curragh) - cycle track/cycle lane | x | x | | Linked to the relocation of on street parking |
| C11 | Cycling | Monasterevin Road/Main Street R445 - cycle track/cycle lane | x | x | | Linked to the relocation of on street parking |
| C15 | Cycling | Dunmurray Road R401 (Dunmurray Link Road to Dunmurray Drive) - cycle track/cycle lane | x | | | |
| C18 | Cycling | Bride Street – St. Brigid's Primary School to Market Square - cycle track/cycle lane | x | | | |
| C33 | Cycling | Old Road - active mode priority as closure of Old Road Bridge will eliminate through traffic | x | | | RD 1 |
| C35 | Cycling | Market Square (west) - active mode priority through elimination of through traffic | x | | | |
| C36 | Cycling | Bride Street section of Market Square – TBD improvement in short term (active mode priority in long term when traffic removed as part of RD 3) | x | | | |
| C37 | Cycling | Fire Castle Lane – TBD by detailed study | x | | | |
| C40 | Cycling | Dunmurray Road (rail bridge section) - TBD by detailed study | x | | | |

| Measure | Type | Short Description | Short Term (1-2 Years) | Medium Term (3-5 Years) | Long Term (6-10 Years) | Notes |
|---|---|---|---|---|---|---|
| C41 | Cycling | Station Road - TBD by detailed study | x | | | |
| C42 | Cycling | Bride Street (section south of school) - TBD by detailed study | x | | | |
| C44 | Cycling | Bride Street (Cleamore Road to Tully Road) - TBD by detailed study | x | | | |
| C45 | Cycling | Main Street (Meadow Road to Beechgrove) - TBD by detailed study | x | x | | |
| C51 | Cycling | Fair Green Road - TBD by detailed study (one-way traffic/cycling) | x | | | |
| C52 | Cycling | Meadow Road shared - street improvement (one-way traffic/cycling) | x | | | RD 4 |
| C57 | Cycling | Rathbridge Abbey to Kildare Golf Club shared walking and cycling path | x | | | PERM1 |
| RD 4 | Road | One-way system on Meadow Road running east to west | x | | | The implementation of the one-way system on Meadow Road will only take place when the Hospital Street-Tully Link Road has been constructed to provide an alternative Route. |
| RD 5 | Road | Upgrade signalised junctions to MOVA or SCOOT as appropriate | x | x | | |

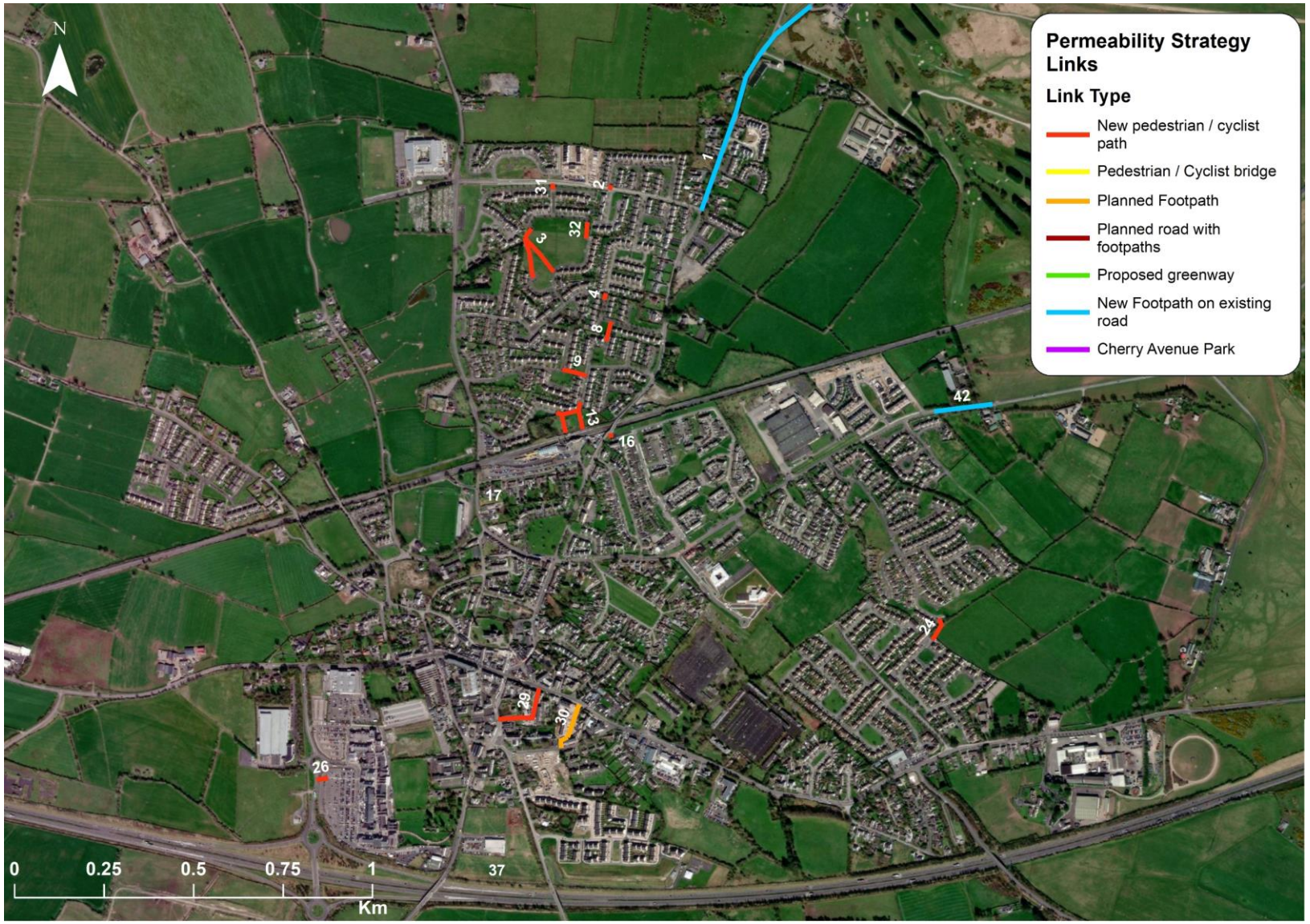


*Figure 14.1: Short Term Permeability Measures and Greenway or Road Schemes*

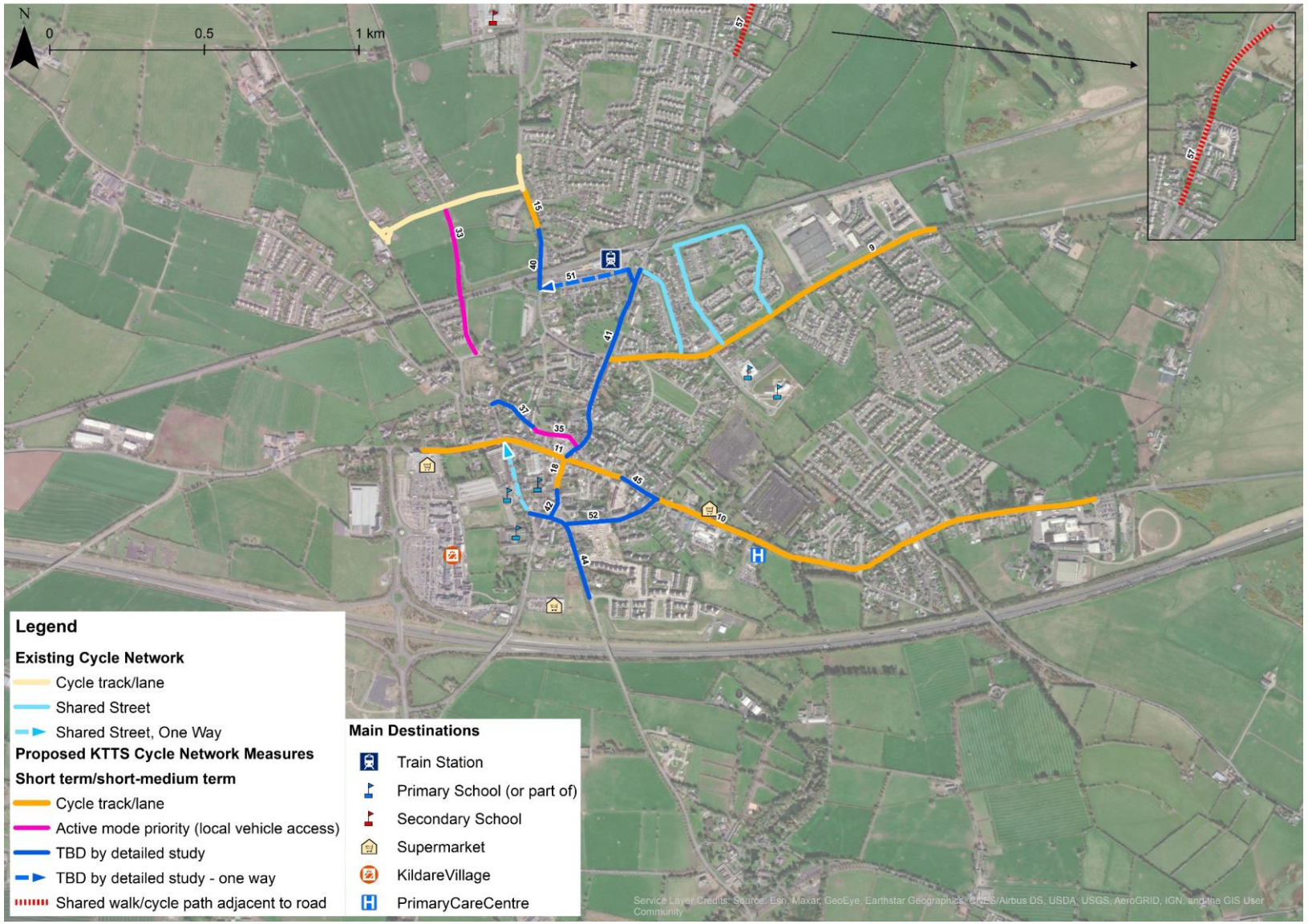


*Figure 14.2: Short Term Cycling Measures and Existing Infrastructure*

### 14.1.2 Medium Term Measures

Table 14.2 lists the medium term measures in the Kildare Town Transport Strategy across all modes. The short and medium term permeability measures are shown in Figure 14.3. The short and medium term cycling measures are shown in Figure 14.4 alongside existing cycling infrastructure. A3 versions of these maps can be found in Appendix F.

*Table 14.2: Kildare Town Transport Strategy Phasing – Medium Term Measures*

| Measure | Type | Short Description | Short Term (1-2 Years) | Medium Term (3-5 Years) | Long Term (6-10 Years) | Notes |
|---|---|---|---|---|---|---|
| PT 2 | Bus Transfer Point | Extend Dublin Coach services and route 126 to serve a transfer point within Kildare Village | | x | | |
| PT 4 | Bus | KCC to work with the NTA to achieve more frequent bus services | | x | | |
| PT 6 | Rail | KCC to work with the NTA to upgrade the train station | x | x | | |
| PT 7 | Rail | KCC to work with the NTA to achieve more frequent rail services | | x | | |
| PK 1 | Parking | Installation of VMS Parking Signs | | x | | |
| PK 2 | Parking | Relocate On-Street Parking on Main Street | x | x | | Linked to the development of a new off-street car park in PK 3. |
| PK 3 | Parking | Creation of a new or upgraded town centre off-street car park at the most appropriate of the three identified sites; Water tower, Dublin Road, Bride Street off-street car park. The preferred site/sites will be identified by a Kildare County Council feasibility study at a later date. | x | x | | |

| Measure | Type | Short Description | Short Term (1-2 Years) | Medium Term (3-5 Years) | Long Term (6-10 Years) | Notes |
|---|---|---|---|---|---|---|
| PK 4 | Parking | Upgrade of Kildare Town Train Station Car Park | | x | | |
| PERM-6 | Permeability | Extend Footpaths along Southgreen Road connecting with Greenway | | x | | |
| PERM-7 | Permeability | Permeability link connecting Fennor Lawns with North Glebe | | x | | |
| PERM-14 | Permeability | Permeability link connecting Green Road with Southgreen Road. | | x | | |
| PERM-17 | Permeability | New multi modal access to Kildare Town Train Station on Fair Green Road | | x | | |
| PERM-18 | Permeability | Phase 1 of Magee Barracks Internal road Network | | x | | |
| PERM-21 | Permeability | Pedestrian links delivered as part of Phase 1 of Magee Barracks Redevelopment | | x | | |
| PERM-22 | Permeability | Permeability link connecting Phase 1 of Magee Barracks internal roads to Schools | | x | | |
| PERM-23 | Permeability | Permeability link connecting Coolaghknock Park, Coolaghknock Close, Coolaghknock Drive and Coolaghknock Gardens | | x | | |
| PERM-27 | Permeability | Permeability Link delivered as part of Phase 3 of Kildare Village | | x | | |
| PERM-28 | Permeability | Permeability link from Phase 3 of Kildare Village to Academy Street | | x | | |

| Measure | Type | Short Description | Short Term (1-2 Years) | Medium Term (3-5 Years) | Long Term (6-10 Years) | Notes |
|---|---|---|---|---|---|---|
| PERM-29 | Permeability | Permeability link from Bride Street to Main Street | x | x | | Linked to the relocation of on street parking |
| PERM-33 | Permeability | New Footpaths along Old Road connecting to the Dunmurray Link Road | | x | | |
| PERM-34 | Permeability | Road Scheme with footpaths connecting Hospital Street to Tully Road | | x | | |
| PERM-35 | Permeability | Road Scheme with footpaths - Modus Link Road | | x | | |
| PERM-36 | Permeability | Road Scheme with footpaths - Northern Link Street | | x | | |
| PERM-39 | Permeability | Creation of walking/cycling only link as part of Modus Link Road development | | x | | |
| C8 | Cycling | Connection from Green Road to Southgreen Road | | x | | Phasing dependent on residential development PERM 14 |
| C9 | Cycling | R413 Melitta Road (middle section) - cycle track/cycle lane | x | x | | |
| C10 | Cycling | Dublin Road (Meadow Road to Curragh) - cycle track/cycle lane | x | x | | Linked to the relocation of on street parking |
| C11 | Cycling | Monasterevin Road/Main Street R445 - cycle track/cycle lane | x | x | | Linked to the relocation of on street parking |
| C14 | Cycling | Dunmurray Road R401 (northern section - Bishopsland to KTCS) - cycle track/cycle lane | | x | | |

| Measure | Type | Short Description | Short Term (1-2 Years) | Medium Term (3-5 Years) | Long Term (6-10 Years) | Notes |
|---|---|---|---|---|---|---|
| C16 | Cycling | Rathbride Demesne cycle track/cycle lane - cycle track/cycle lane | | x | | |
| C17 | Cycling | R415 (Monasterevin Road to Kildare Village) - cycle track/cycle lane | | x | | |
| C22 | Cycling | Dunmurray Road R401 (southern section - Fairgreen Road to Old Road) - cycle track/cycle lane | | x | | |
| C23 | Cycling | Monasterevin Road (section forming part of Northern Link Street scheme) - cycle track/cycle lane | | x | | RD 2 |
| C24 | Cycling | Northern Link Street (R445 to Green Road/Pigeon Lane junction) - cycle track/cycle lane | | x | | RD 2 |
| C25 | Cycling | Green Road (Pigeon Lane to Southgreen Road junction) - cycle track/cycle lane as part of Northern Link Street scheme | | x | | RD 2 |
| C26 | Cycling | Bothar na gCorp - cycle track/cycle lane as part of Northern Link Street scheme | | x | | RD 2 |
| C27 | Cycling | Fairview Cottages R401 (southern section) - cycle track/cycle lane as part of Northern Link Street scheme | | x | | RD 2 |
| C28 | Cycling | Southgreen Road - cycle track/cycle lane as part of road upgrade in conjunction with bridge upgrade | | x | | RD 1 |

| Measure | Type | Short Description | Short Term (1-2 Years) | Medium Term (3-5 Years) | Long Term (6-10 Years) | Notes |
|---|---|---|---|---|---|---|
| C29 | Cycling | Magee Barracks Phase 1 - cycle track/cycle lane as part of new road | | x | | |
| C31 | Cycling | Modus Link Road - cycle track/cycle lane as part of new road | | x | | |
| C32 | Cycling | Hospital Street to Oaktree Road - cycle track/cycle lane as part of new road | | x | | |
| C34 | Cycling | Lourdesville - active mode priority/elimination of through traffic as part of Northern Link Street scheme | | x | | RD 2 |
| C38 | Cycling | Chapel Hill/Chapel Lane - TBD by detailed study | | x | | |
| C39 | Cycling | Fairview Cottages R401 - TBD by detailed study | | x | | RD 2 |
| C45 | Cycling | Main Street (Meadow Road to Beechgrove) - TBD by detailed study | x | x | | |
| C46 | Cycling | Oaktree Road - TBD by detailed study (in conjunction with delivery of new road link to Hospital Street) | | x | | |
| C47 | Cycling | Green Road (eastern part) - TBD by detailed study | | x | | |
| C48 | Cycling | Pigeon Lane - TBD by detailed study (one-way traffic/cycling) | | x | | RD 2 |
| C49 | Cycling | Friary Road - TBD by detailed study | | x | | RD 2 |

| Measure | Type | Short Description | Short Term (1-2 Years) | Medium Term (3-5 Years) | Long Term (6-10 Years) | Notes |
|---|---|---|---|---|---|---|
| C50 | Cycling | White Abbey Road - TBD by detailed study (one-way traffic/cycling) | | x | | RD 2 |
| RD 1 | Road | Closure of Old Road Bridge to vehicular traffic and the upgrade of Southgreen bridge to two-way traffic with improvements to approach roads | | x | | The closure of Old Road Bridge will only take place when the Southgreen Bridge has been replaced to accommodate two-way traffic. |
| RD 2 | Road | Construction of Northern Link Street | | x | | |
| RD 3 | Road | Closure of Bride Street section of Market Square to vehicular traffic | | x | x | Linked to the completion of the Magee Barracks Roads |
| RD 5 | Road | Upgrade signalised junctions to MOVA or SCOOT as appropriate | x | x | | |

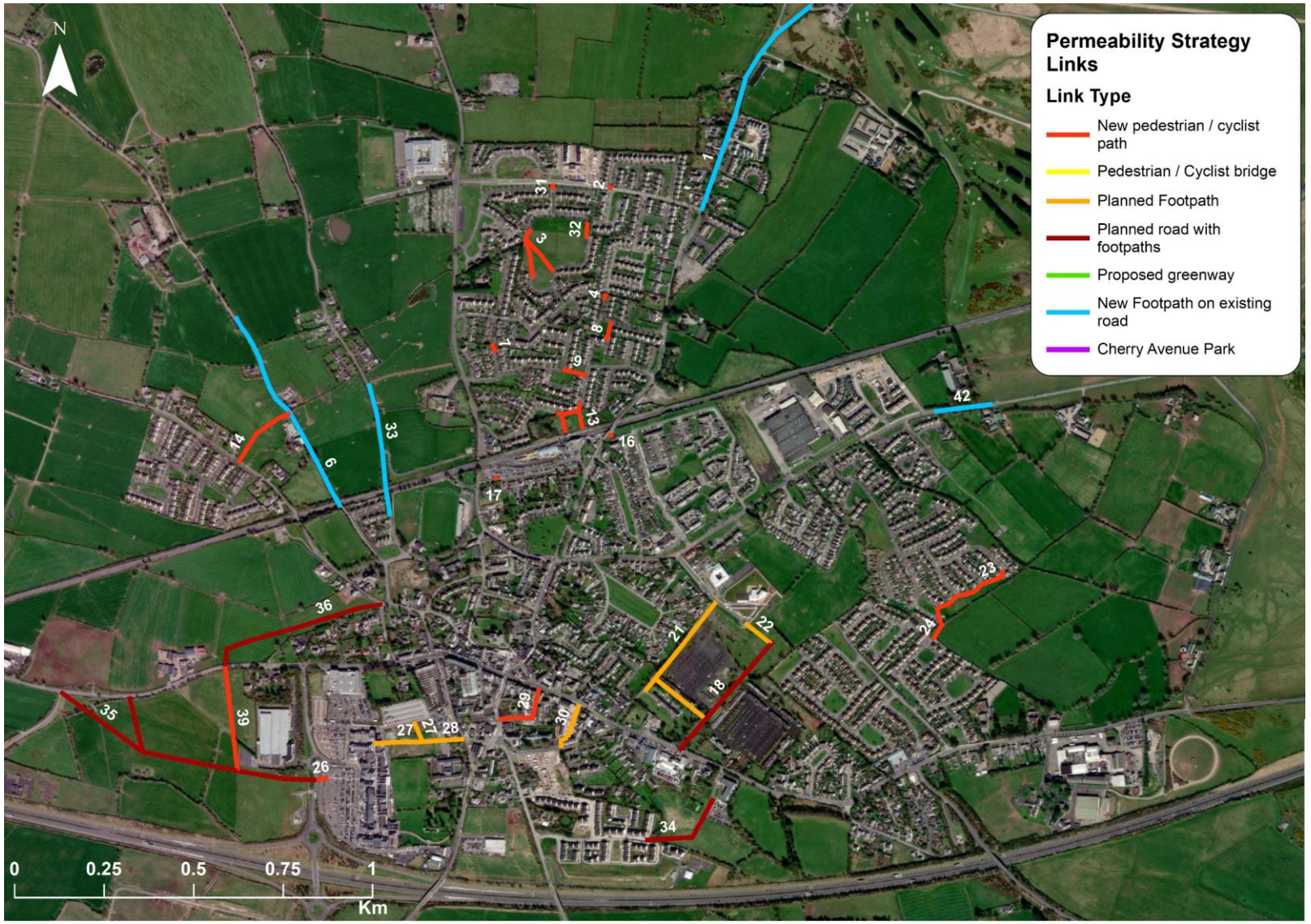


*Figure 14.3: Short and Medium Term Permeability Measures as well as Greenway or Road Schemes*


*Figure 14.4: Short and Medium Term Cycling Measures*

### 14.1.3 Long Term Measures

Table 14.3 lists the long term measures in the Kildare Town Transport Strategy across all modes. The short, medium and long term permeability measures are shown in Figure 14.5. The short, medium and long term cycling measures are shown in Figure 14.6. A3 versions of these maps can be found in Appendix F.

*Table 14.3: Kildare Town Transport Strategy Phasing – Long Term Measures*

| Measure | Type | Short Description | Short Term (1-2 Years) | Medium Term (3-5 Years) | Long Term (6-10 Years) | Notes |
|---|---|---|---|---|---|---|
| PERM-5 | Permeability | North western Greenway linking from the Monasterevin Road (R445) to the Dunmurray Road (R401) and connecting with Green Road, Southgreen Road and Old Road | | | x | Linked to residential development in local area |
| PERM-10 | Permeability | Extend footpath north along Green Road to connection with Greenway | | | x | Linked to Greenway development |
| PERM-11 | Permeability | Creation of a new east west Greenway | | | x | |
| PERM-12 | Permeability | New Permeability link connecting east west greenway with Melitta Road (R413). This option involves a new pedestrian bridge over the rail line. | | | x | |
| PERM-15 | Permeability | New pedestrian / cycle bridge over the Train Line Connecting the East West Greenway and Woodside Park. | | | x | |
| PERM-19 | Permeability | Phase 2 of Magee Barracks Internal road Network | | | x | |
| PERM-20 | Permeability | Permeability link connecting Curragh Plains, Coolaghknock Green and Melitta Park to Phase 2 of Magee Barracks | | | x | |

| Measure | Type | Short Description | Short Term (1-2 Years) | Medium Term (3-5 Years) | Long Term (6-10 Years) | Notes |
|---|---|---|---|---|---|---|
| PERM-25 | Permeability | Permeability link connecting Ruanbeg Drive to Phase 2 of Magee Barracks | | | x | |
| PERM 37 | Permeability | Creation of pedestrian / cyclist link connecting Grey Abbey Road with Tully Road | | | x | |
| PERM 38 | Permeability | Pedestrian links included in Cherry Avenue Park | | | x | |
| PERM 40 | Permeability | Construction of a new pedestrian / cycle bridge over the M7 connecting with the National Stud and Japanese Gardens | | | x | |
| PERM 41 | Permeability | Link between Oaktree Road and Cherry Avenue Park | | | x | |
| C1 | Cycling | Curragh Greenway (towards Newbridge via Racecourse) | | | x | |
| C2 | Cycling | Connection from east-west Greenway to Melitta Road | | | x | PERM 12 |
| C3 | Cycling | East-west Greenway along the rail line | | | x | PERM 11 |
| C4 | Cycling | Greenway section on Tully Road (middle section) | | | x | |
| C5 | Cycling | R445 to proposed M7 crossing via Cherry Avenue Park | | | x | PERM 38 |
| C6 | Cycling | Greenway connection from Tully Road to Grey Abbey Road | | | x | PERM 37 |
| C7 | Cycling | North western Greenway | | | x | Phasing dependent on residential development.<br>PERM 5 |

| Measure | Type | Short Description | Short Term (1-2 Years) | Medium Term (3-5 Years) | Long Term (6-10 Years) | Notes |
|---|---|---|---|---|---|---|
| C12 | Cycling | Monasterevin Road R445 (western section) - cycle track/cycle lane | | | x | |
| C13 | Cycling | Rathbride Road R415 - cycle track/cycle lane | | | x | |
| C19 | Cycling | Grey Abbey Road (southern section adjacent to development lands) - cycle track/cycle lane | | | x | |
| C20 | Cycling | Green Road (western section) - cycle track/cycle lane | | | x | |
| C21 | Cycling | Tully Road (section adjacent to National Stud) - cycle track/cycle lane | | | x | |
| C30 | Cycling | Magee Barracks Phase 2 - cycle track/cycle lane as part of new road | | | x | |
| C36 | Cycling | Bride Street section of Market Square - (active mode priority in long term through pedestrianisation/vehicular access restricted to local access/deliveries) | | | x | RD 3 |
| C43 | Cycling | Grey Abbey Road (northern section) - TBD by detailed study | | | x | |
| C53 | Cycling | New pedestrian/cycle bridge connecting proposed east-west Greenway with Woodside Park | | | x | PERM 15 |
| C54 | Cycling | New pedestrian/cycle bridge connecting proposed east-west Greenway with Melitta Road and Curragh Greenway via C2 | | | x | PERM 12 |

| Measure | Type | Short Description | Short Term (1-2 Years) | Medium Term (3-5 Years) | Long Term (6-10 Years) | Notes |
|---|---|---|---|---|---|---|
| C55 | Cycling | New pedestrian/cycle bridge across M7 from proposed Cherry Avenue Park to potential link to Irish National Stud & Gardens | | | x | PERM 40 |
| C56 | Cycling | Tully Road M7 Crossing (raised shared walking & cycling path alongside carriageway) | | | x | |
| C58 | Cycling | Link between Oaktree Road and Cherry Avenue Park | | | x | |
| RD 3 | Road | Closure of Bride Street section of Market Square to vehicular traffic | | x | x | Linked to the completion of the Magee Barracks Roads |

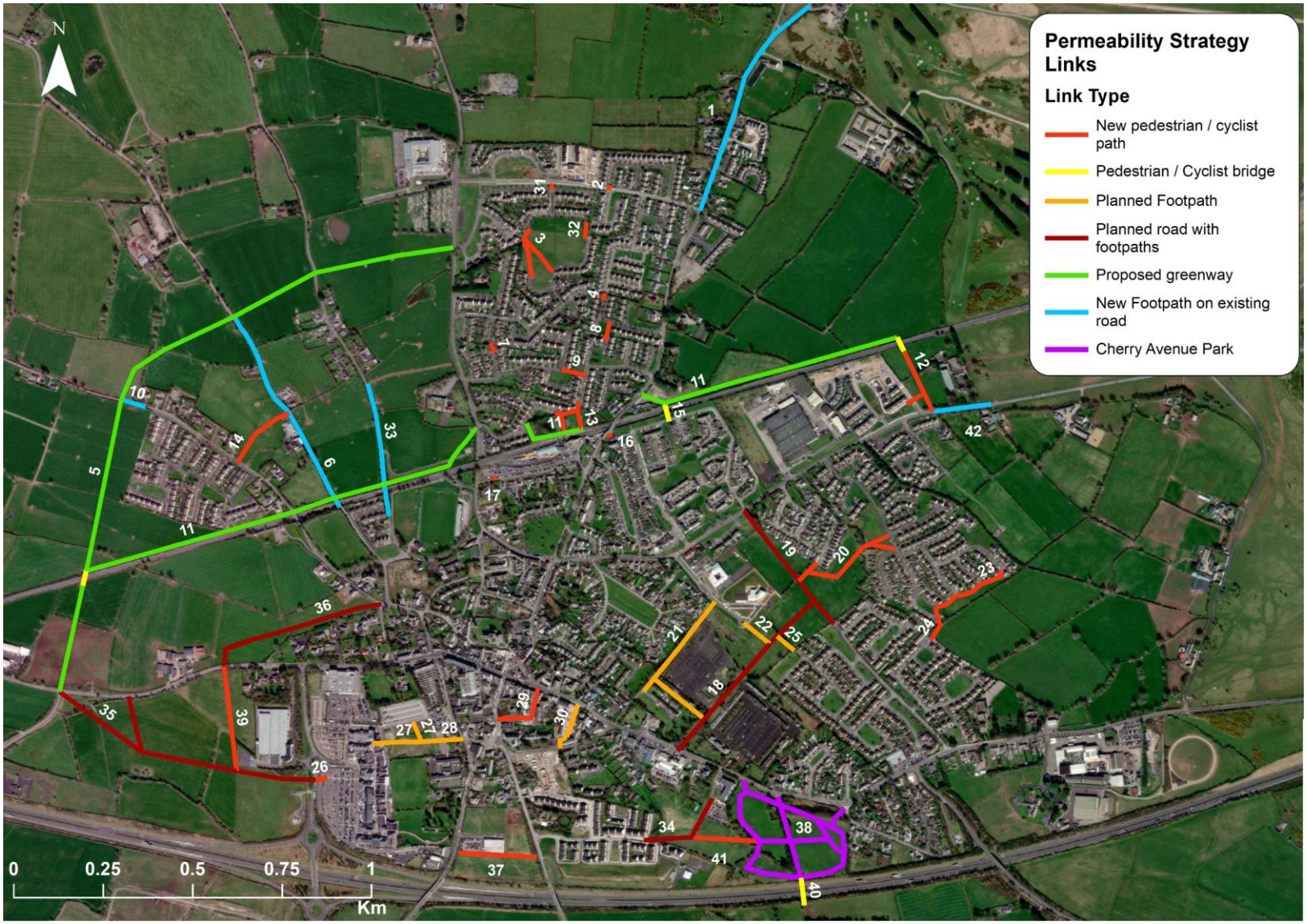


*Figure 14.5: Short, Medium and Long Term Permeability Measures with Greenway or Road Schemes*

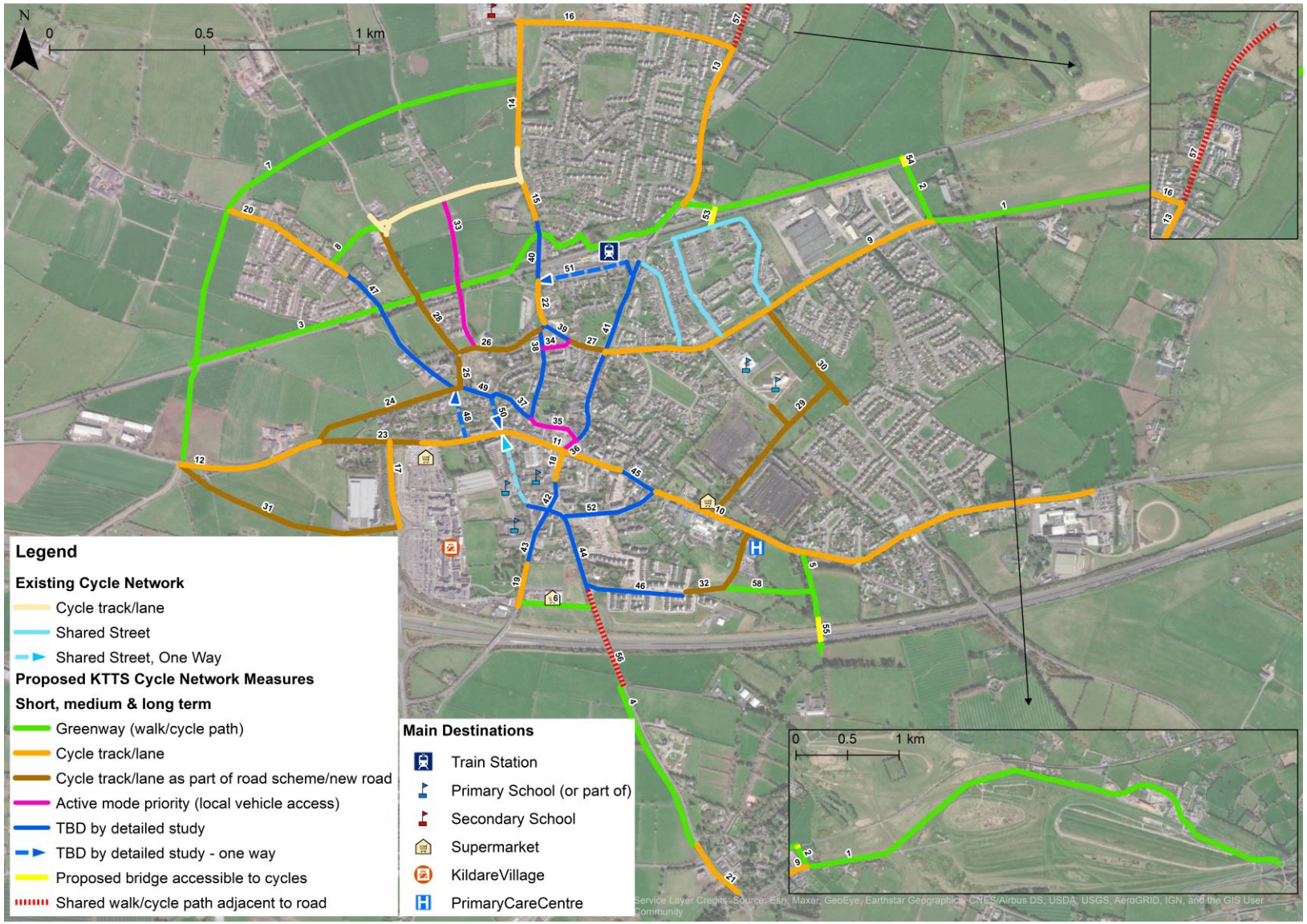


*Figure 14.6: Short, Medium and Long Term (Full Strategy) Cycling Measures*

## 14.2 Future Planning Principles to Support Strategy

If the Kildare Town Transport Strategy is to be successful, then an integrated approach with significant liaison between the transportation and planning departments of Kildare County Council will be required to ensure that car-centric development does not occur. In general, it is more economical, easier and less controversial with the public to implement sustainable travel concepts at the initial design and planning stage rather than attempting to retrofit established areas afterwards. This section describes key planning principles for each mode of transport which should be considered for future development to ensure the prioritisation of sustainable modes of travel. Further planning principles are also provided regarding the importance of biodiversity and inclusive design.

### 14.2.1 Permeability and Cycling Planning Principles

#### 14.2.1.1 Active Mode Planning Principles

The active mode interventions proposed in this strategy seek to remedy permeability and access issues that have emerged through the poor design of residential and commercial areas. In many cases, housing and commercial estates have been constructed with a single entrance and surrounding walls to stop walking and cycling to surrounding areas. While the proposed strategy will solve many of the existing problems, it is vital that the planning system encourages the use of active travel modes in future development to ensure these issues are not repeated.

In future, it is advisable that the following planning concepts are adopted to improve permeability and conditions for active modes:

- Residential or commercial estates should have multiple entrances to facilitate permeability for walking and cycling to public transport, jobs and services;
- New housing estates should leave sufficient space for future permeability connections with adjacent zoned development. At present, cul-de-sac designs and the lack of free corridors mean that some existing neighbourhoods can never be retrofitted to be more permeable;
- The use of high perimeter walls around residential and employment areas should be eliminated as they cause indirect travel paths which favour car use;
- Mixed-use development should be encouraged to reduce the length of journeys and to encourage the use of active modes;
- Local jobs, retail and services should be located centrally in the town whenever feasible, to encourage the use of walking and cycling. Retail and services should generally be located in, or adjoining, central areas[9] and should be prohibited from suburban locations, unless part of planned neighbourhood centres and at an appropriate scale. It should be noted that all retail development should be in line with the principles of the Retail Planning Guidelines (2012). Generally, high intensity employment uses should be located in, or adjoining, central areas while low intensity employment uses (such as logistics and warehousing) should be located in edge of centre or peripheral locations of the town;
- Schools should be located near residential areas and within the existing urban footprint. Locating schools in out of town locations will promote car use and reduce pupil safety when walking or cycling to school;
- Land segregation caused by long tracts of railway line or motorway should be mitigated with regular crossing points for walking or cycling; and

[9] In Kildare, there are two primary retail areas; the town centre and Kildare Retail Village. While the retail village is on the periphery of the town, it is an established retail destination within walking distance of the town centre and further development is appropriate in this location. Over time, the improvement of permeability links between the town centre and the retail village is intended to create a continuous retail corridor which will cater for range of customers. Improving the range of retail and services within walking/cycling distance of the town centre and the retail village will encourage local use of active modes.

- Formal crossing points, such as signalised junctions or zebra crossings, should be provided to enable safe pedestrian travel for all ages and means.

#### 14.2.1.2 Cycle Design and Planning Principles

Further detail on these issues and preferred design can be found in 'Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (Cities, Towns and Villages)' (Department of Housing, Local Government and Heritage, 2009) and the National Transport Authority's 'Permeability: Best Practice Guide' (2015).

In addition to the permeability principles, it is advisable that the following planning concepts are integrated into design to improve the safety and convenience of cycling trips:

- Provision of effective, segregated cycling facilities will require reallocation of road space from cars to cyclists to create continuous corridors which eliminate conflict between modes;
- New roundabouts should be designed in accordance with the National Cycle Manual (NCM) and existing roundabouts should be retrofitted or converted to signalised junctions;
- New roads with segregated cycling facilities should be designed in accordance with the National Cycle Manual;
- Greenways and off-road cycleways should be sufficiently lit to provide for commuting travel;
- Obstacles (e.g. bollards, gates) should be removed from cycling routes to allow uninterrupted journeys and to facilitate non-standard cycles (e.g. disability adapted bikes) or cargo bikes;
- New residential and employment areas require sufficient, sheltered and secure cycle parking; and
- Major public transport stops should have sufficient, sheltered and secure cycle parking.

Further elaboration of these concepts and design standards can be found in the National Cycle Manual (2011) and the Design Manual for Urban Roads and Streets (2019). An interim advice note has also been published to supplement the guidance in DMURS in response to the Covid-19 pandemic.

### 14.2.2 Public Transport Planning Principles

The Strategy proposes a number of public transport improvements and future development practices will determine if the growth of Kildare town will support these measures or hinder their success. In this regard, the following principles will be important to follow in development control and urban design:

- New development should be encouraged to locate on public transport corridors. The Guidelines[10] define a public transport corridor as a location less than 1km from a rail service or 500 metres from a bus stop when walking on the path network;
- Higher residential densities are required along public transport corridors to support patronage and higher frequencies. Housing densities in Kildare are very low, with many residential areas falling below 10 units per hectare (UPH). The Guidelines[11] recommend that housing densities should be at least 35-50 UPH in outer suburban/greenfield locations, with densities below 30 UPH discouraged;
- Urban sprawl through the extension of the existing urban boundary with single-use, low density residential development should not occur as this encourages car dependency;
- Jobs located in central areas and along radial links are the easiest to service with bus routes and future high intensity employment uses (e.g. offices, public/commercial services, hotels, etc.) should be focused in these areas. Peripheral employment centres will guarantee a high mode share for cars as they are serviced by few bus routes and are less convenient for active

[10] 'Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (Cities, Towns and Villages)' (2009)

modes – peripheral locations should be reserved for employment types that are land extensive with relatively low employment generation such as warehousing;

- Speed ramps result in uncomfortable bus journeys and negatively impact the safe transportation of ambulance patients. Alternative traffic calming designs, such as speed cushions with built-out kerbs, should be designed to be bus-friendly and allow convenient emergency vehicle access; and
- Sufficient, secure and sheltered cycle parking should be provided at public transport stops.

Further detail on sustainable development in residential areas can be found in the 'Guidelines for Planning Authorities on Sustainable Residential Development in Urban Areas (Cities, Towns and Villages)' (2009).

### 14.2.3 Road Planning Principles

In order to maintain the efficient operation of the road network in Kildare, the following principles should be applied in the planning process:

- The strategic function of the National Road Network should be protected in accordance with the Spatial Planning and National Roads Guidelines for Planning Authorities (2012) through plan-led development and appropriate zoning objectives;
- The strategic role of the M7 Junction 13 should be protected by restricting direct access to the road from residential or employment uses for private motor vehicles;
- Peripheral development should be discouraged as this will increase the modal split for car traffic and negatively affect the efficient operation of the local and strategic road network;
- Future road construction should design pedestrian, bus and cyclist infrastructure in accordance with DMURS and the NCM; and
- Non-NCM standard roundabouts are dangerous for cyclists and new roundabouts, if absolutely essential, must be designed in accordance with the NCM or ideally replaced with signalised junctions if possible.

Further elaboration of these concepts can be found in the National Cycle Manual (2011) and the Design Manual for Urban Roads and Streets (2019). An interim advice note has also been published to supplement the guidance in DMURS in response to the Covid-19 pandemic.

The transport model created for Kildare town will be used to assess the impact of future planning applications on the road network and the consistency of the proposals with the KTTS.

### 14.2.4 Biodiversity and Climate Change Planning Principles

In order to meet the requirements of environmental and climate change legislation, it is important that regard is given to the following principles in the planning process:

- The implementation of measures in the KTTS and other developments in Kildare Town should be sensitive to biodiversity issues and seek to mitigate any negative impacts on the environment and minimise biodiversity loss.
- The design of new infrastructure should take into consideration environmental solutions which can reduce greenhouse gas emissions such as planting vegetation and incorporating sustainable urban drainage schemes.
- The measures proposed in the KTTS will improve conditions for active modes and public transport. The planning process should seek to build on these benefits in order to encourage modal shift away from the private car and reduce transport emissions.

### 14.2.5 Inclusive Design and Universal Access Planning Principles

In order to meet the requirements of disability legislation, it is important that the following planning principles are applied when the measures from the KTTS are implemented:

- Pavements and footpaths should utilise 'dishing' to ensure that there are accessible slopes for wheelchair users to access pedestrian routes.
- Future bus stops and bus stop upgrades should be wheelchair accessible.
- Public spaces created by pedestrianisation of roads should be wheelchair accessible.

## 14.3 Modal Split Targets

The Climate Action Plan and the Low Carbon Development Act require public bodies to take steps to reduce greenhouse gas emissions in order to contribute to achieving the target of a 51% reduction in greenhouse gas emissions by 2030. Transport is a major source of Irish greenhouse gas emissions and the Kildare Town Transport Strategy 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 transport strategy in achieving this goal, it is important to set measurable targets which can be evaluated in the future when the KTTS is reviewed.

The current modal split for work and education trips by residents of Kildare Town is shown in Table 14.4. This highlights that the residents of Kildare Town are car dependent with 74.1% of work trips and 54.4% of education trips made by private motor vehicle. 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 KTTS proposes numerous improvements which will help to encourage a shift to more sustainable travel behaviour. The walking and cycling networks proposed in the KTTS 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.

*Table 14.4 Census 2016 – Modal Split for Kildare Town Residents (% Percentage)*

| Trip Type | Walk | Cycle | Bus | Rail | Private Motor Vehicle | Work/Study From Home |
|---|---|---|---|---|---|---|
| Work Trips | 11 | 1.7 | 5.6 | 6 | 74.1 | 1.6 |
| Education Trips | 19.2 | 0.9 | 22.9 | 2.6 | 54.4 | 0 |

The draft 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, and this means car dependency levels are lower in the GDA than in Kildare town. In the KTTS study area, work car dependency is higher than the GDA at 74.1%, in part due to the rural location of the town where cars can be necessary to reach employment. Due to the high number of internal trips involved in education travel, car dependency for education trips is lower at 54.4% but this is still high considering most schools are within walking or cycling distance of most homes.

In light of the current levels of car dependency in Kildare town and the level of intervention proposed, it would be appropriate to set challenging modal split targets of a -10% reduction in private motor vehicle use for work trips and a -5% reduction in private motor vehicle use for education trips by Census 2036. The KTTS sets out measures to be implemented over a 10-year timeframe with the Irish Census taking place in the following years; 2022, 2026[12], 2031 and 2036 assuming 5-year intervals continue after the 2026 Census. If the strategy is implemented as planned, then most measures will be in place by the 2036 Census and this is the best opportunity to assess modal split for Kildare town 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

[12] Census 2021 was postponed until 2022 due to the Covid-19 pandemic. The CSO have stated that the following census will still take place in 2026 even though this will only be a 4 year interval after the 2022 Census. Source: https://www.cso.ie/en/census/census2021postponementfaq/

will rely on the majority of the KTTS measures being adopted by the Local Area Plan and being implemented prior to 2036. If the modal split targets are achieved, then car dependency for work trips would reduce to 64.1% and education trips car dependency would fall to less than half of trips at 49.4%.