

Traffic and Transport Assessment

Phase 2 of Proposed Residential Development at Southgreen, Co. Kildare

June 2026

Waterman Moylan Consulting Engineers Limited
Block S, Eastpoint Business Park, Alfie Byrne Road, Dublin D03 H3F4
www.waterman-moylan.ie

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Issue	Date	Prepared by	Checked by	Approved by
No. 1	11 July 2025	Fernando J. De Maio	Ian Worrell	Ian Worrell
No. 2	02 March 2026	Fernando J. De Maio / Mateus Castro Pereira	Ian Worrell	Ian Worrell
No. 3	16 June 2026	Fernando J. De Maio	Ian Worrell	Ian Worrell

Comments

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1. Introduction

1.1 Context

This Traffic and Transportation Assessment (TTA) has been prepared by Waterman Moylan as part of the planning documentation for the proposed Phase 2 Development at Southgreen, Kildare Town, Co. Kildare.

Pousterle Limited intend to apply for permission for development of a Large - Scale Residential Development (LRD) on a site of approx. 6.13 ha at Southgreen Road, Kildare, Co. Kildare. The site is generally bounded to the north by agricultural fields; to the south by the recently constructed Southern Internal Link Road; to the west by Southgreen Road and an existing Electricity Station; and to the east by Old Road and existing residential properties.

The proposed development will consist of:

- The construction of a new residential scheme of 146 no. residential units ranging in height from 1-3 storeys as follows:
    - 136 no. houses (7 no. 2 bed units; 102 no. 3 bed units; and 27 no. 4 bed units) in a mixture of bungalow, detached, semi-detached, and terrace style units ranging in height from 1 – 2 storeys.
    - 10 no. duplex apartment units (5 no. 1 beds, 3 no. 2 beds, and 2 no. 3 beds) in new Block A ranging in height from 2-3 storeys
- Each residential unit will be afforded with private open space in the form of a front/rear/side garden for houses or terrace / balconies for duplex apartment units.
- The provision of a new creche facility (approx. 161 sq m GFA) and associated areas of external open space (approx. 60 sq m) located at Block A.
- Public open space (approx. 6,992 sq m) is proposed in the form of 2 no. new large public open space areas within the site (approx. 3,046 sq m and 3,946 sq m respectively).
- Communal open space (approx. 82 sq m) is proposed adjacent to Block A.
- A total of 321 no. car parking spaces (305 no. for residential units and 16 no. for the creche facility) are provided. This provision includes 2 no. accessible spaces and 17 no. visitor spaces.
- A total of 527 no. cycle parking spaces (517 no. for residential units and 10 no. for the creche facility) are provided. This provision includes 75 no. visitor spaces. Resident cycle parking is proposed in the form of secure bicycle store enclosures to the front of terraced units; on curtilage spaces to the rear of units with side access; and a bicycle store for apartment units located within Block A. Visitor parking is proposed in the form of Sheffield stands.
- The development shall be served via 2 no. new vehicular access points from Southgreen Road. An additional private vehicular access point is proposed via Old Road to service 1 no. new bungalow (4 no. bed residential unit). Provision is also made for future vehicular access via Southgreen Road to serve the open space and amenity zoned lands to the north of the main development site.
- Pedestrian and Cyclist access is also proposed via Southgreen Road and via a new secondary access point from the Southern Internal Link Road to the south of the site and Old Road to the east of the site.

- Upgrades/widening to Southgreen Road including the provision of 2 no. directional single lane cycle tracks and pedestrian footpaths on either side of the Southgreen Road, together with amendments to the existing cycle tracks and footpaths on Southgreen Road north of Southern Internal Link Road are proposed.
- A new pedestrian/cycle link is also delivered to the north of the main development site connecting South Green Road to Old Road.
- The associated site and infrastructural works include provision for an ESB Sub Station; water services; foul and surface water drainage and connections; attenuation proposals; permeable paving; all landscaping works; boundary treatment; PV/Solar Panels; internal roads and footpaths; waste storage areas, all electrical services and all associated site development works.

The detailed breakdown of the proposed residential scheme is shown in **Table 1** below.

Description	1-bed	2-bed	3-bed	4-bed	Total
Houses		7	102	27	136
Apartments	5	3	2		10
Total	**5**	**10**	**104**	**27**	**146**

Table 1 | *Schedule of Accommodation.*

1.2 Response to LRD opinion (Pl. Apl. Reg. Ref. No. LRD2025005)

This report addresses the comments received on Kildare County Council's LRD Opinion (Pl. Apl. Reg. Ref. No. LRD2025005), as detailed below:

> "*Please note that there are concerns that there is inadequate bridge infrastructure to accommodate the scale of the development, without an investment in transport infrastructure to connect the development with the town centre. The increased amount of development is likely to lead to obstruction of the carriageways at junctions crossing the railway line where there is currently no two-way bridge over the railway line, The proposed development would therefore be premature pending proposals to upgrade the railway bridge in accordance with RD1 of Kildare Town Local Area Plan 2023-2029. (Rd1: Closure of Old Road Bridge to vehicular traffic and the replacement/upgrade of Southgreen Bridge to facilitate two-way traffic with improvements to approach roads (the upgrade must be delivered prior to the closure)".*
>
> *" It is noted by the Applicant that the figure of 0.339 trip rate departures is being used in the morning peak. The experience with residential developments in County Kildare is that a figure should be at least 1 should be used for the peak a.m. flow, as the underestimation of the trip rates will result in an underestimation of the assigned traffic flows on the network and residual handling capacities of junctions prior to saturation".*

The report assesses the following scenarios:

- Proposed shuttle link with its currently configuration and Old Road link opens to traffic.
- Proposed shuttle link with its currently configuration and Old Road link closes to traffic, and downgrade for pedestrian and cyclist use only.
- Proposed shuttle link with its currently configuration and Old Road link opens to traffic and trip rates increased by 50%.

- Proposed shuttle link with its currently configuration and Old Road link closes to traffic and trip rates increased by 50%.

The results of the analysis demonstrated that all junctions assessed and the shuttle link on Southgreen Road would operate within their respective capacities for all years and scenarios assessed.

1.3 Response to FI request (Pl. Apl. Reg. Ref. No. 26/60248)

A Stressed Scenario has been included as part of the Junction Assessment in response to Point 7 of the Further Information request issued by Kildare County Council in respect of Planning Application Reg. Ref. No. 26/60248, dated 30/04/2026. An extract of the FI relating to the Traffic Assessment is provided below. Item 7 states that:

> *"The Applicant is requested to revise the Traffic and Transport Impact Assessment to apply an outbound trip rate of 1 during the morning peak."*

On this basis, **Section 9** of this report assesses the impact of the Subject Site on the existing road network, adopting an outbound AM peak hour trip rate of 1.

Based on the above, the impact of the Subject Site on the existing road network has been assessed under the following conditions:

- Trip rates derived from existing developments in the vicinity of the proposed site have been increased by 50%.
- An outbound AM peak hour trip rate of 1 has been adopted

The results of the analysis demonstrated that all junctions assessed and the shuttle link on Southgreen Road would operate within their respective capacities for all years and scenarios assessed.

This TTA demonstrates that the existing bridge infrastructure has the capacity to handle the existing traffic flows and the traffic demand generated by the proposed development, the committed future developments, and the potential future developments in the surrounding area.

1.4 Scope

This Traffic and Transport Assessment is a comprehensive review of all the potential transport impacts of the overall development, based on the standard described in the following section. This report includes a detailed assessment of the transportation systems provided and the impact of the overall development on the surrounding transport network.

1.5 Standards

This Traffic and Transport Assessment has been prepared in accordance with best practice, and in accordance with the requirements of Section 15.7.4 of the Kildare County Development Plan 2023-2029 and the *Traffic and Transport Assessment Guidelines* published by Transport for Ireland (TII) / National Roads Authority (NRA) in May 2014.

1.6 Threshold for Transport Assessment

Section 2.1 of the *Traffic and Transport Assessment Guidelines (May 2014)* requires submission of a Transport Assessment where a proposed development meets one or more of the following criteria:

1- Traffic to and from the development exceeds 10% of the traffic flow on the adjoining road.

2- Traffic to and from the development exceeds 5% of the traffic flow on the adjoining road where congestion exists, or the location is sensitive.

3- Residential development in excess of 200 dwellings.

4- Retail and leisure development in excess of 1,000m^2.

5- Office, education, and hospital development in excess of 2,500 m^2.

6- Industrial development in excess of 5,000 m^2.

7- Distribution and warehousing in excess of 10,000 m^2.

The subject site includes a total of 146no. units and Threshold No. 3 is not met, and a full Traffic and Transport Assessment is therefore not required. However, given that the proposed development forms part of a wider strategic development area, this report evaluates the impact of the subject site on the capacity of the surrounding transport network, as well as the effects on future traffic flows, considering all committed and potential future development in the area.

1.7 Site Location

The subject site of this application is situated in Kildare, Co. Kildare. The site is located approximately 1.0km from Kildare Town City to the north. The site is currently in greenfield condition and is used for agricultural purposes.



Figure 1 | *Site location Map*
(Source: Google Earth)

1.8 Programme

It is assumed for the purposes of the assessment that the Subject Development will be constructed by the end of 2029 accordingly 2030 has been selected as the opening year.

The assessment years may lag pending approval of the planning application and may differ from the programme.

1.9 Assessment Scenarios

The scenarios that have been assessed as part of this report are the following:

- Base Year 2025
- Opening Year (With / Without Proposed Development) 2030
- Opening Year + 5 Years Forecast (With / Without Development) 2035
- Opening Year + 15 Years Forecast (With / Without Development) 2045

These assessment years are in line with the *Transport Assessment Guidelines (May 2014)*.

1.10 Documents Consulted

The following documents inter alia were consulted during the preparation of this Traffic and Transport Assessment:

- Civil Infrastructure Design Report in Support of Planning Application. Proposed Residential Development at Dunmurray Road, Kildare Town, Co. Kildare. Donnachadh O' Brien & Associates Consulting Engineers / NRB Consulting Engineer. Designated as "Eastern Development" for the purpose of this report.
  https://www.eplanning.ie/KildareCC/AppFileRefDetails/181026/0
- Cycle Design Manual
  https://www.nationaltransport.ie/wp-content/uploads/2023/08/Cycle-Design-Manual_Sept.-2023_Low-Res.pdf
- Eastern and Midland Regional Spatial and Economic Strategy 2019-2031
  https://emra.ie/dubh/wp-content/uploads/2020/05/EMRA_RSES_1.4.5web.pdf
- Implementation Roadmap for the National Planning Framework
  https://npf-cdn-prod.s3.eu-west-1.amazonaws.com/wp-content/uploads/20240502101327/NPF-Implementation-Roadmap.pdf
- Kildare County Development Plan 2023-2029
  https://kildarecoco.ie/AllServices/Planning/DevelopmentPlans/KildareCountyDevelopmentPlan2023-2029/
- Kildare Town Local Area Plan 2023 - 2029
  https://kildarecoco.ie/AllServices/Planning/LocalAreaPlans/CurrentLocalAreaPlans/KildareTownLocalAreaPlan2023-2029/
- Kildare Town Renewal Masterplan 2024
  https://kildarecoco.ie/AllServices/PublicRealm/TownRenewalMasterPlans/KildareTownRenewalMasterplan2024/
- National Planning Framework – Project Ireland 2040
  www.gov.ie/pdf/?file=https://assets.gov.ie/246231/39baaa8c-48dc-4f24-83bd-84bbcf8ff328.pdf#page=null
- Planning Design Standards for Apartments Guidelines for Planning Authorities (2025)
  https://assets.gov.ie/static/documents/Planning_Design_Standards_for_Apartments_080725_FINAL.pdf
- Project Appraisal Guidelines for National Roads Unit 5.3 - Travel Demand Projections. PE-PAG-02017
  https://www.tiipublications.ie/library/PE-PAG-02017-03.pdf
- Traffic and Transport Assessment Guidelines. PE-PDV-02045
  https://www.tiipublications.ie/library/PE-PDV-02045-01.pdf
- Smarter Travel: A Sustainable Transport Future

www.gov.ie/pdf/?file=https://assets.gov.ie/19854/37d829c9748446349ff586045bfbcaba.pdf#page=null

- Spatial Planning and National Roads: Guidelines for Planning Authorities https://www.gov.ie/pdf/?file=https://assets.gov.ie/111220/ef2d43a4-d3a0-418a-b0ba-03340e6d083a.pdf#page=null
- Sustainable Residential Development and Compact Settlements: Guidelines for Planning Authorities. www.gov.ie/pdf/?file=https://assets.gov.ie/280882/af1b1694-6ff4-4a14-b2c6-f104347ffb53.pdf#page=null
- Traffic and Transport Assessment. Proposed Mixed-Use Development at Southgreen, Kildare, Co. Kildare. Waterman Moylan consulting Engineers. April 2023. Designated as 'Southern Development' for the purposes of this report. https://www.eplanning.ie/KildareCC/AppFileRefDetails/23416/0

1.11 Study Methodology

The study area for this report is the transport network and junctions immediately surrounding the sites which will be affected as part of the Proposed Developments. The junctions chosen for assessment are outlined in **Section 3.3.2** below and were chosen based on professional judgement and observed vehicle behaviour within the local road network.

In line with best practice, the following methodology has been adopted for this assessment:

- A review of relevant available information was undertaken, as detailed in Section 1.8 above. This includes the Kildare County Development Plan 2023 – 2029, the Kildare Town Local Area Plan 2023 – 2029, the Kildare Town Renewal Masterplan 2024, and the Kildare Town Transport Strategy 2022. In addition, the existing traffic information and traffic and transport assessments submitted with planning applications for committed and potential future developments were reviewed as part of the present report, as well as other pertinent studies.
- An initial desktop study was conducted of the area surrounding the development site, identifying the existing transport links and road junctions with the potential to be affected by the Proposed Developments.
- A site visit was subsequently made to confirm the existing characteristics and conditions of the key junctions detailed in **Section 3.3.2** below.
- The Traffic section of this “Traffic Transport Assessment” is prepared with the following detail:
  - Understand the existing traffic flows.
  - Determine trips to be generated by the Proposed Developments and the committed and potential future developments in the surrounding area.
  - Determinate trip distribution for each development and for each scenario proposed.
  - Assess the percentage impact of traffic generated by the site in relation to existing traffic flows at local junctions. Determine if this exceeds 5% at congested junctions or 10% at non-congested junctions.
  - Model the junctions with a high impact based on the thresholds indicated above.
  - Identify, if necessary, mitigation measures.

1.12 Contents of the Transport Assessment

In accordance with Section 3.3 of the *Traffic and Transport Assessment Guidelines (May 2014)*, the contents of this Traffic and Transport Assessment include:

- **Policy Framework:** Latest Development Plans and Land Area Plans to guide the delivery and management of a package of integrated initiatives which ultimately seek to encourage sustainable travel practices of all residents and visitors travelling to/from the proposed development at Navan Road, Co. Louth.
- **Site Assessment:** A description of the proposed development, description of the existing and proposed traffic/transportation conditions including information on the current traffic, critical junctions, pedestrians, cycle, and public transport facilities.
- **Transportation Infrastructure:** Assessment of all potential impacts on transport infrastructure (road cycling, walking public transport), based on construction proposals and demand forecasts. The development impact upon any committed transport schemes should also be appraised. Design details should be incorporated where a proposal may have a direct impact upon transport infrastructure.
- **Transport Improvements:** Description of proposed transportation improvements to local roads, junctions, public transport, cycle, and pedestrian facilities.
- **Travel Characteristics:** Review of existing local travel characteristics and modal split.
- **Trip Assignments and Distribution:** The traffic and transportation implications of the development including consideration of trip generation/attraction, mode choice and trip distribution; as well as an analysis of under construction, permitted and future developments in the area.
- **Cumulative Impact:** The impact of the development on the surrounding road network including analysis of junction's capacity.
- **Parking Strategy:** Description of car and cycle parking requirements and provisions.

2. Policy Framework

2.1 National Policies and Strategies

2.1.1 National Planning Framework

The National Planning Framework (NPF) was published in 2018 and last updated in April 2025. It is the Government's strategic plan for shaping future growth and development in the country. To deliver the National Planning Framework vision and the ten National Strategic Outcomes, it is critical to integrate land use and transport planning and promote sustainable transport.

The National Planning Framework (NPF) provides a central planning policy strategy that guides future development and investment decisions and informs regional strategies and county development plans. The NPF adopts a strategic approach that promotes sustainable land use and transport strategies in both urban and rural areas. The aim of this approach is to reduce emissions, address the necessity of adapting to climate change, and protect the environment and its amenities.

The NPF aims to alleviate the environmental pressure caused by urban sprawl and its negative impact on key infrastructures and facilities. It encourages the development of compact, higher density infill and brownfield sites that are well-served by existing facilities, amenities, and public transport services.

Facilitating smart and sustainable growth within existing settlements can improve the liveability of urban areas. The physical format of urban development affects the public realm, traffic and parking, access to amenities, and public transport.

2.1.2 Spatial Planning and National Roads: Guidelines for Planning Authorities

Spatial Planning and National Roads: Guidelines for Planning Authorities set out planning policy considerations relating to development affecting national primary and secondary roads, including motorways and associated junctions, outside the 50-60 km/h speed limit zones for cities, towns, and villages.

The guidelines aim to facilitate a well-informed, integrated, and consistent approach that affords maximum support for the goal of achieving and maintaining a safe and network of national roads in the broader context of sustainable development strategies, thereby facilitating continued economic growth and development throughout the country.

The following Key Principles have informed these guidelines:

- Land-use and transportation policies are highly interdependent.
- Proper planning is central to ensuring road safety.
- Development should be plan-led.
- Development Management is the key to Plan Implementation.
- Planning Authorities and National Roads Authority and other public transport bodies must work closely together.

2.1.3 Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities (2024)

The Guidelines set out policy and guidance in relation to the planning and development of urban and rural settlements, with a focus on sustainable residential development and the creation of compact settlements. They are accompanied by a companion non-statutory Design Manual that illustrates best practice examples of how the policies and objectives of the Guidelines can be applied.

These Guidelines replace the Sustainable Residential Development in Urban Areas Guidelines for Planning Authorities issued as Ministerial guidelines under Section 28 of the Act in 2009, which in turn replaced the Residential Density Guidelines issued in 1999.

They build on and update previous guidance to take account of current Government policy and economic, social, and environmental considerations. There is a renewed focus in the Guidelines on the renewal of existing settlements and on the interaction between residential density, housing standards and quality urban design and placemaking to support sustainable and compact growth.

The policies and objectives set out in the Guidelines are intended as a tool to guide the appropriate scale of development at different locations, rather than as a prescriptive methodology. Flexibility is offered so that planning authorities can operate a plan led approach and take the circumstances of a plan area or a site into account as part of the decision-making process.

2.1.4 Smarter Travel

The Smarter Travel Policy, published in February 2009, outlined the Governments vision for achieving a sustainable transport system for Ireland by 2020. Smarter travel is currently outside its target period; however, it is a good reference for developments seeking to improve transport options. The document outlines a number of key policies to encourage a modal shift away from private car use and promote alternative travel modes such as public transport, walking and cycling.

Smarter Travel is a government policy which seeks to reduce the share of travel demand which is car dependant thus reducing reliance on fossils fuels and maximising the efficiency of the transport network. Its main objective is to promote a significant modal shift from private transport to public transport and sustainable transport modes. The policy sets out a target of 55% mode share for walking, cycling and public transport which it aims to achieve through several actions themed around the following:

- Encouraging Smarter Travel.
- Delivering Alternative Ways of Travelling.
- Improving the Efficiency of Motorised Transport.
- Ensuring Integrated Delivery of the Policy.

Aligning spatial planning and transport to address urban sprawl and urban-generated one-off housing in peri-urban areas is identified as a key area to encourage smarter travel. Specifically, the policy encourages good public transport connections with safe routes for walking and cycling to access and the use of local area plans and Strategic Development Zones (SDZs) within major urban areas as a way of improving the land use-transport integration.

2.1.5 Cycle Design Manual (2023)

The Cycle Design Manual (CDM) has been prepared by the National Transport Authority (NTA) and overseen by the Department of Transport. It replaces the previous National Cycle Manual, published by the NTA in 2011, which is now withdrawn.

The CDM draws on the experience of delivering cycling infrastructure across Ireland over the last decade, as well as learning from international best practice, and has been guided by the need to deliver safe cycle facilities for people of all ages and abilities.

The new manual places more emphasis on the range of cycles that cycle infrastructure will have to accommodate and the recommendations focus on segregating cyclists from traffic where speeds and volumes make roads unsuitable for sharing. There is also a general presumption towards segregating pedestrians and cyclists where possible.

The CDM includes a number of new types of infrastructure such as protected junctions, Dutch style cycle-friendly roundabouts, and parallel crossings which are commonly used in other countries and will now become an option for cycle infrastructure in Ireland. It should be noted that some newer features will require amendments to supporting Regulations and the Traffic Sign Manual so designers should consult with the relevant approving authority prior to installing any of the newer features to ensure applicability of designs/solutions.

It is intended that manual will be a live document which will be updated and expanded as required to reflect emerging best practice and feedback from user experience of the manual. For this reason, the latest version of the guidance should always be accessed through the NTA website.

2.1.6 Design Manual for Urban Roads & Streets (DMURS)

The Design Manual for Urban Roads and Streets (DMURS) is Ireland's national guidance document for designing urban roads and streets. Developed by a multidisciplinary team and launched in 2013, DMURS aims to shift the focus from car-centric infrastructure to streets that prioritize people, place-making, and sustainable transport. It is mandatory for all road authorities in Ireland when designing or upgrading urban roads.

DMURS promotes streets as vibrant public spaces that support walking, cycling, and public transport, contributing to healthier lifestyles and reduced emissions. It encourages collaborative design among planners, engineers, architects, and other professionals to create safe, attractive, and inclusive environments for all users.

DMURS is structured into five main chapters, each addressing a key aspect of urban street design. According to the official publication:

Introduction: Sets the context for DMURS, emphasizing a shift in design philosophy. It outlines the policy background and the manual's application across urban areas.

Re-examining the Street: Discusses the need for change in street design, highlighting the negative impacts of car dominance and advocating for a balanced approach that considers both movement and place. It introduces user priorities and the concept of streets as social spaces 2.

Street Networks: Focuses on creating integrated, permeable, and legible street networks. It covers movement functions, place contexts, block sizes, retrofitting, and traffic management strategies including congestion, bus services, and pollution control.

Street Design: Provides detailed guidance on designing individual streets. Topics include speed management, streetscape elements (trees, signage, furniture), pedestrian and cyclist infrastructure, and carriageway conditions. It also addresses historic contexts and materials selection 2.

Design Process provides a structured approach for implementing the principles and standards outlined in the previous chapters. This chapter is essential for ensuring that street design is not only technically sound but also context-sensitive and inclusive.

2.2 Regional Policies and Strategies

2.2.1 Eastern and Midland Regional Spatial and Economic Strategy (RSES) 2019-2031

The elected members of the Eastern and Midland Regional Assembly (EMRA) agreed to make the Regional Spatial and Economic Strategy (RSES) 2019-2031, on June 28th, 2019.

The RSES is a strategic plan which identifies regional assets, opportunities and pressures and provides appropriate policy responses in the form of Regional Policy Objectives. At this strategic level it provides a framework for investment to better manage spatial planning and economic development to sustainably grow the Region to 2031 and beyond. The RSES provides a:

- Spatial Strategy: to manage future growth and ensure the creation of healthy and attractive places to live, work, study, visit and invest in.
- Economic Strategy: that builds on our strengths to sustain a strong economy and support the creation of quality jobs that ensure a good living standard for all.
- Metropolitan Plan: to ensure a supply of strategic development areas for the sustainable growth and continued success and competitiveness of the Dublin Metropolitan Area.
- Investment Framework: to prioritise the delivery of key enabling infrastructure and services by government and state agencies.
- Climate Action Strategy: to accelerate climate action, ensure a clean and healthy environment and to promote sustainable transport and strategic green infrastructure.

The principal statutory purpose of the RSES is to support the implementation of Project Ireland 2040 – National Planning Framework and National Development Plan 2019-2027 and the economic policies of the Government by providing a long-term strategic planning and economic framework for the development of the Regions.

The RSES will be implemented by way of a review by local authorities of all development plans and Local Economic and Community Plans (LECPs). Key state agencies and sectoral bodies will also consider their strategies and investment plans, post adoption of RSES, to support the achievement of National and Regional Strategic Outcomes set out in the NPF and RSES.

2.2.2 Greater Dublin Area Cycle Network Plan (2022)

The Greater Dublin Area Cycle Network Plan sets out a strategy to expand the urban cycle network, links cities and towns of over 5,000 people with a safe, connected and inviting cycle network. The proposed cycle network of approximately 3,500km will connect over 200 settlements and 2.8 million people. The network will consist of primary routes (serving the highest demand), secondary and feeder routes (Forecast to have lower demand) as well as Greenway routes (through parks, along waterways, etc.)

The Plan will provide many benefits for cyclists and communities across Ireland, including:

- Ensuring delivery of a high-quality cycle network which will promote safety, comfort, and increased participation in cycling.
- Improving sustainable connectivity nationally and providing links with other networks such as CycleConnects, EuroVelo and Northern Ireland networks.
- Supporting both urban and rural economies through increased leisure and tourism cycling.
- Improving public health through well documented benefits of active travel.
- Guiding how local authorities prioritise exchequer-funded investments in cycle infrastructure.
- Making use of existing infrastructure wherever possible including greenways, road infrastructure, and declassified roads where safe and inviting cycle experiences can be provided.

2.2.3 Greater Dublin Area Transport Strategy 2022-2042

The National Transport Authority has prepared and published the Transport Strategy for the Greater Dublin Area, 2022-2042 in accordance with Section 12 of the Dublin Transport Authority Act, 2008.

The strategy details the transportation development across the region, including Dublin, Meath, Wicklow, and Kildare, over the strategy period. It has received approval from the Minister for Transport in accordance with relevant legislation.

The strategy addresses challenges related to population growth, urbanization, and climate change. It presents four objectives: promoting walking, cycling, and public transport as alternatives to private car use for sustainable mobility; developing seamless connections between different transport modes for integrated networks; prioritizing low-carbon and environmentally friendly solutions for climate action; and aligning transport development with land-use planning for spatial planning and accessibility.

The strategy proposes measures to ensure equitable access to transport services. These measures include enhancing public transport services (bus, tram, rail), expanding cycling infrastructure and bike-sharing programs, improving pedestrian facilities, upgrading roads, and developing park-and-ride facilities, and implementing smart mobility solutions.

The strategy acknowledges the significance of land use and transport planning in shaping people's travel choices. It advocates the use of local land use planning principles, such as promoting walking, cycling, and public transport by maximizing high-density residential development near local amenities, schools, and public transport.

In addition, the strategy sets out the requirements for new developments to prioritise walking, cycling and public transport and discourage the use of the private car. Maximum parking standards should be set for all new developments based on the level of public transport accessibility. The strategy therefore recommends that walking and cycling facilities should be easily accessible and retrofitted where practical.

2.2.4 Kildare County Development Plan 2023 – 2029

The Kildare County Development Plan (2023 – 2029) sets out the authority's policies and objectives for the development of the County for the period of 2023 to 2029.
The aim of the County Development Plan (CPD) is "*To promote and facilitate ease of movement within and through County Kildare, by integrating sustainable land use planning and a high-quality integrated transport system; and to support and prioritise investment in more sustainable modes of travel, the transition to a*

lower carbon transport system, and the development of a safer, efficient, inclusive, and connected transport system".

This CDP contains a series of sustainable transport goals, policies and objectives for healthy placemaking and sustainable movement that, over time, will achieve an increase in walking, cycling and use of public transport and a decrease in the use of the private car. Furthermore, the CDP includes sustainable transport indicators, including mode share targets, for the purpose of monitoring the efficacy of policies and objectives.

Therefore, the Plan seeks to develop and improve in a sustainable manner the social, economic, cultural and environments assets of the county. In the context of the subject development site and the proposed residential scheme the most relevant policies and objectives include the following:

(1) Overarching Goals, Policies and Objectives

TM P1: Promote sustainable development through facilitating movement to, from, through and within the County that is accessible to all and prioritises walking, cycling and public transport.

TM O7: Introduce measures to reduce traffic congestion in town centres such as pedestrianisation, pedestrian priority and/or improved pedestrian/cycling facilities, in particular increasing the number of safe crossings.

TM O9: Support and encourage the transition from fossil fuel use and consider the preparation of guidance for decommissioning of changing infrastructure to more sustainable uses, through the preparation of the Local Climate Action Plan.

(2) Sustainable Movements

TM O17: Support and facilitate the provision of electric vehicles including Battery Electric Vehicles (BEV) and Plugin Hybrid Electric Vehicles (PHEV) including electric cars, bikes and scooters as a more sustainable low carbon option to the conventional private motor vehicle. The support of e-scooters will be subject to the enactment of legislation to regulate and legalise e-scooters.

(3) Walking and Cycling

TM P2: Prioritise and promote the development of high-quality, suitable, safe and sustainable walking and cycling pathways and facilities, both intercounty, intra-county (in consultation with all relevant stakeholders including neighbouring local authorities) and within the towns and settlements of County Kildare within a safe road/street environment that will encourage a shift to active travel that is accessible for all, regardless of age, physical mobility, or social disadvantage, subject to all relevant and cumulative environmental assessments and planning conditions. New projects (including greenways, blueways and cycleways) should first be subject to the undertaking of feasibility assessment. Where feasibility is established, a Corridor and Route Selection Process will be undertaken where appropriate, for relevant new road infrastructure in two stages", Stage 1 – Route Corridor Identification, Evaluation and Selection and Stage 2 – Route Identification, Evaluation and Selection.

TM O20: Ensure new development areas are fully permeable for walking and cycling at a minimum, public transport (where appropriate) and provide for filtered permeability for private vehicle access in accordance with the NTA Permeability Best Practice Guide in order to give a competitive advantage to active travel modes for local trip making.

TM O21: Ensure site layout proposals detail present and possible future connections to pedestrian/cycle links and improve permeability between existing and proposed developments including adjacent developments thereby facilitating the '10-minute settlement' concept.

TM O23: Secure the development and delivery of the cycle network identified in the Draft Greater Dublin Area Cycle Network Plan (2021) and any subsequent updates to same to be published alongside the Transport Strategy for the Greater Dublin Area 2022-2042 and the TII National Cycle Network, subject to funding from the NTA.

TM O38: Support the development of accessible and barrier free cycling as a practical transport choice by providing secure, well-designed and welllit cycle parking facilities, including electrical and cargo/delivery bicycle parking in towns, at public service destinations and in all new residential and commercial developments in accordance with cycle parking design guidelines; The National Cycle Manual (NTA, 2011 – or the pending update), The Draft GDA Cycle Network Plan (NTA, 2021) and the Standards for Cycle Parking and Associated Cycling Facilities for New Developments document (Dun Laoghaire Rathdown County Council, 2018)

(4) Public Transport

TM P3: Promote the sustainable development of the county by supporting and guiding national agencies in delivering major improvements to the public transport network and to encourage a shift from car-based travel to public transport that is accessible for all, regardless of age, physical mobility, or social disadvantage.

TM O42: Seek to address urban congestion with particular emphasis on facilitating the development of local bus services for the Key Towns along with associated identified economic clusters within the county ensuring connectivity to and from residential areas, key employers, and public transport hubs such as train stations, along with retail and amenity sites.

TM O48: Support the implementation of the Irish Rail Customer Information Services (CIS) Strategy Report to provide reliable real time passenger information that is accessible to all, co-ordinated across the network in stations and on trains, and that is consistent across all media.

TM O50: Facilitate and support the extension of the DART+ line to Kilcock, the extension of the DART+ Southwestern line to Naas/Sallins (and promote a future extension to Newbridge and Kildare Town in the next DART + programme / GDA Transport Strategy Review) and the extension of the LUAS network, in co-operation with Irish Rail, the Department of Transport and the National Transport Authority.

(5) Road and Street Network

TM P4: Ensure ongoing competitiveness and the efficient movement of people and goods in the county through the improvement and expansion of the road and street network within the county to support economic development and provide access to new and existing communities, employment areas and development, all while prioritising sustainable modes of transport. New roads and other transport infrastructure projects should first be subject to the undertaking of feasibility assessment. Where feasibility is established, a Corridor and Route Selection Process will be undertaken where appropriate, for relevant new road infrastructure in two stages", Stage 1 – Route Corridor Identification, Evaluation and Selection and Stage 2 – Route Identification, Evaluation and Selection.

TM O63: Ensure that the planning, design and implementation of all road and street networks within urban areas across the county accord with the principles set out in the Design Manual for Urban Roads and Streets (2019), the National Cycle Manual (2011 – or the pending update) and all other standards where relevant.

TM O68: Co-operate with adjoining local authorities and other public authorities to secure new and/or improved road infrastructure in towns bordering the county boundary including those at locations in Blessington, Kilcock, Maynooth and Leixlip.

(6) Local Roads

TM P7: Ensure that the safety and capacity of the local road network is maintained and improved where funding allows and to ensure that local streets and roads within the county are designed to a suitable standard to accommodate sustainable modes of transport and the future needs of the county. These roads and streets should be appropriately designed for all road users regardless of age, physical mobility, or social disadvantage.

TM O98: Maintain and improve all local roads to an appropriate standard as per the annual Road Work Programme, subject to availability of resources.

TM O99: Ensure that all new streets in housing and mixed-use schemes are designed, in accordance with: • Design Manual for Urban Roads and Streets (2019); • Sustainable Residential Development in Urban Areas (2009) and accompanying Best Practice Design Manual (2009); • Architecture 2009-2015 Towards a Sustainable Future: Delivering Quality within the Built Environment (2009); • Any new guidance/standards from the DECLG; and • Any other relevant design standards.

TM O100: Ensure that all roads, streets and street networks within towns, villages and rural settlements, as appropriate, are designed to passively calm traffic through the creation of a self-regulating road/street environment, that clearly delineates village entrance points.

TM O101: Ensure that all developments allow for full connectivity (pedestrian, cycle and vehicular) to adjacent road networks and to adjacent lands, which may be developed in the future.

(7) Road and Street Design

TM P8: Ensure that streets and roads within the county are designed to balance placemaking and movement to prioritise sustainable modes of transport and to provide a safe traffic calmed street environment in accordance with the principles set out in the Design Manual for Urban Roads and Streets (2019) while meeting the needs of road users of all ages and abilities.

TM 105: Ensure that all streets and street networks are designed considering the hierarchy of users in Figure 5.9 above and includes the provision of high-quality walking and cycling infrastructure and traffic calming measures which may include speed ramps.

(8) Traffic and Transportation Management

TM P9: Effectively manage and minimise the impacts of traffic in urban areas and prioritise the movement of pedestrians, cyclists and public transport particularly at key junctions, while maximising the efficient use of existing resources.

(9) Parking

TM P10: Balance the demand for parking against the need to promote more sustainable forms of transport, to limit traffic congestion and to protect the quality of the public realm from the physical impact of parking, while meeting the needs of businesses and communities.

TM O110: Design car parking layouts in accordance with the Design Manual for Urban Roads and Streets (2019) and ensure that car parking, including the provision of fully accessible EV charging facilities, do not detract from the comfort and safety of pedestrians and cyclists or the attractiveness of the landscape.

TM O111: All non-residential development proposals will be subject to maximum car parking standards (and minimum cycle parking standards) and all residential development proposals in areas within walking distances of town centres (800 metres i.e. a 10-minute walk) and high-capacity public transport services (including but not limited to DART+ services, Bus Connects routes and any designated bus only/ bus priority

route) will be subject to maximum car parking standards (and minimum cycle parking standards) as a limitation to restrict car parking provision and achieve modal shifts to sustainable modes of transport.

TM O113: The quantum of car parking or the requirements for any such provision for apartment developments will have regard to the proximity and accessibility to urban locations, public transport and employment locations as outlined in the Sustainable Urban Housing: Design Standards for New Apartments (2020).

TM O118: Ensure the electrical wiring that developers install for all new residential units includes a double socket Home Charge Point for Electric Vehicles in order to comply with the Sustainable Energy Authority of Ireland (SEAI) Triple E Register and to promote the use of night-time renewable electricity in transport. In this regard developers shall provide for within curtilage/driveway car parking unless otherwise agreed in writing with the Planning Authority.

TM O120: Promote appropriate parking arrangements for specific user requirements including age friendly parking, hidden disabled, disabled parking, bicycle parking and motorcycle parking in towns, public transport nodes and other destinations.

TM O122: Support car sharing initiatives as part of new housing developments and workplaces.

2.3 Local Plans and Strategies

2.3.1 Kildare Town Local Area Plan 2023 – 2029

The Kildare Town Local Area Plan 2023 – 2029 is the key strategic document which will guide the sustainable development of the town for the period 2023 – 2029. The Plan sets out an overall strategy for the proper planning and sustainable development of the town of Kildare in the context of the National Planning Framework (2018), the Regional Spatial and Economic Strategy for the Eastern and Midland Region 2019-2031 and the Kildare County Development Plan 2023-2029.

To fully interpret all objectives for Kildare Town, it is essential that both the County Development Plan (CDP) and the Local Area Plan (the Plan) are read in tandem.

In addition, the Kildare Town Transport Strategy presents a comprehensive analysis of the transport infrastructure and service provision across all modes of transport in Kildare Town. The assessment leads to an understanding of the existing constraints and modal share. It also models future scenarios to ensure the optimal transportation interventions can be planned and provided; to secure long-lasting transport improvements to meet future demand and drive a sustainable modal shift for work, education, business and visitor trips.

Regarding with the movement and transportation strategies, the Kildare Town Local Area Plan sets out the following objectives:

(1) Walking and Cycling Objectives

This subsection delineates a series of measures designed to enhance pedestrian and cyclist mobility across Kildare Town.

The Kildare Development Plan outlines several permeability measures aimed at improving pedestrian connectivity by creating direct, efficient routes to key destinations. These measures are intended to reduce walking distances and promote non-motorised travel over private car use, thereby enhancing the town's walkability and integration with public transport.

As part of the Kildare Town Transport Strategy, a dedicated Cycling Strategy has been developed. This strategy proposes a network of safe and accessible cycling routes to support local trips such as commuting, accessing the train station, shopping, and social activities. While the GDA Cycle Network Plan served as a foundation, the strategy also introduces several additional links to better serve the local context.

The main measures in the surrounding roads of the subject site are:

- **Perm 33:** Install new footpaths along Old Road connecting to the Dunmurray Link Road.
- **Cycle 28:** Southgreen Road Upgrade Cycle track/cycle lane (part of road scheme and bridge upgrade)
- **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

The movement and transportation strategies below focus on sustainable users.

MTO 1.1: Support and promote the use of sustainable active transport modes in Kildare Town and seek to implement a connected network of walking and cycling infrastructure in the town as detailed in Table 7-1 and 7-2 and illustrated on Map 7.1 and 7.2. in conjunction with the National Transport Authority, Transport Infrastructure Ireland, other statutory agencies, and relevant stakeholders (where applicable). The indicative measures will form the basis for individual projects, when the detailed design will be configured, and each project will be subjected to rigorous analysis, including environmental / ecological assessment, where applicable, to ensure that they are the most suitable option at the particular location. All measures will be designed in accordance with a public realm palette devised for the town by the Council's Strategic Projects and Public Realm team and shall incorporate nature-based surface water management as a solution for surface water management.

MTO 1.3: Ensure all footpaths in Kildare Town are accessible to all members of the community, including people with disabilities, older persons and people with young children having regard to the challenges posed by differing road levels in the historic town centre.

MTO 1.5: Ensure new developments are permeable for walking and cycling and seek the retrospective implementation of walking and cycling facilities in existing neighbourhoods, where possible, in order to give competitive advantage to sustainable mobility.

MTO 1.9: Support the implementation of complementary active travel measures such as the crossing facilities throughout the town, as identified in the Kildare Town Transport Strategy, in tandem with a review of footpaths on approach roads and greater signal priority for active travel.

(2) Public Transport

MTO 2.6: Engage with the National Transport Authority (NTA) and Irish Rail to support and facilitate the following rail improvements, and where necessary to preserve the identified routes free from development: o The formation of a northern entrance to the train station. o The upgrading of the train station. o Achieving more frequent rail services. o Providing sufficient car-parking having regard to the efficient use of land.

(3) Roads and Streets Measures

This subsection outlines several measures aimed at improving the roads and streets in Kildare Town.

The proposed road and street interventions are informed by evidence-based transport modelling conducted as part of the Kildare Town Transport Strategy. Key measures include the closure of Old Road Bridge (RD1) to vehicular traffic, which is expected to enhance safety for pedestrians and cyclists, while also contributing to reduced emissions and noise levels. To maintain vehicular accessibility, two-way traffic will be introduced on Southgreen Bridge (RD1).

RD 1: Closure of Old Road Bridge to vehicular traffic and the replacement/upgrade of Southgreen Bridge to facilitate two-way traffic with improvements to approach roads (the upgrade must be delivered prior to the closure).

The movement and transportation strategies below focus on (1) Roads and Streets Measures.

MTO 3.1: (a) Maintain and improve, as required, the local road network to ensure a high standard of road quality and safety in accordance with the requirements of the Design Manual for Urban Roads and Streets (DMURS) or any subsequent guidelines. (b) Safeguard the development and carrying capacity of the national road infrastructure along the existing M7 Motorway and associated Junctions 13, in accordance with the Spatial Planning and National Roads Guidelines for Planning Authorities (DoECLG, 2012) or any subsequent guidelines.

MTO 3.2: Ensure the implementation of the following road measures contained in Table 7-4 and illustrated in Map 7.4 in accordance with the DMURS standards for urban roads and streets and where necessary to preserve the identified routes free from development: (i) Closure of Old Road Bridge to vehicular traffic and upgrade of Southgreen Bridge to two-way traffic. (ii) Northern Link Street and associated one-way streets. (iii) Closure of Bride Street within Market Square. (iv) One-way system on Meadow Road. (v) Upgrade signalised junctions to MOVA and SCOOT as appropriate. All road measures shall incorporate nature-based surface water management as a solution for surface water management.

(4) Parking Strategy

MTO 4.1: Apply the cycle parking and car-parking standards in the Kildare County Development Plan, and relevant Section 28 Guidelines, to all applications for planning permission in Kildare Town.

MTO 4.2: Ensure that cycle parking should be appropriately designed into the public realm and new developments at an early stage to ensure that adequate cycle parking facilities are provided.

MTO 4.4: Support and facilitate the implementation of the preferred car parking measures, as provided for on Map 7.5 and Table 7-5, as identified in the Kildare Town Transport Strategy.

MTO 4.9: Support the provision of charging facilities for Electric Vehicles (EVs) on public and private land in accordance with County Development Plan standards.

2.3.2 Kildare Town Renewal Masterplan 2024

The Kildare Town Renewal Masterplan 2024, published by Kildare County Council, is a strategic document aimed at guiding the sustainable regeneration and development of Kildare Town. It outlines a vision for enhancing the town's public realm, connectivity, heritage, and economic vitality through a series of targeted interventions and projects.

Key features of the Masterplan include:

- **Public Realm Improvements**: Enhancing streetscapes, public spaces, and pedestrian environments to create a more attractive and accessible town centre.
- **Transport and Connectivity**: Proposals to improve access to and around the town, including upgrades to the train station area and better integration of walking and cycling routes.
- **Heritage and Placemaking**: Emphasising the town's rich historical character while introducing modern design elements to support community use and tourism.
- **Economic and Community Development**: Supporting local businesses, encouraging investment, and creating spaces for community engagement and events.

The plan was developed through extensive public consultation and is intended to serve as a framework for securing funding and delivering projects over the coming years.

2.3.3 Kildare Town Transport Strategy 2022

The Kildare Town Transport Strategy provided a comprehensive analysis of the existing transport network within Kildare Town to support the evidence-based development of future iterations of the Kildare Town Local Area Plan (LAP). The strategy identified potential transport objectives for inclusion in the LAP, as referenced in Section 2.3.1.

The strategy aimed to enhance mobility and quality of life in Kildare Town and its environs. The study area encompassed the town and its principal access routes. Key goals included improving infrastructure for walking, cycling, and public transport; reducing car dependency; and promoting sustainable development. Objectives focused on creating a safer, more connected public realm, integrating transport modes, and aligning with national and regional planning frameworks. The strategy concluded with proposals for enhanced pedestrian and cycling links, improved public transport access, and public realm upgrades to support a vibrant, accessible, and environmentally sustainable town centre.

Several transport interventions were assessed using VISUM modelling software. In relation to the area surrounding the Subject Site, the preferred option—Option 1—proposed the closure of the Old Road Bridge to vehicular traffic and the upgrading of the Southgreen Road overpass to accommodate two-way traffic.

The assessment determined that closing the Old Road Bridge to vehicles would enhance safety for pedestrians and cyclists, encouraging active travel along this corridor. This measure was expected to reduce local emissions and noise, while improving permeability and aligning with the town's cycling strategy. Although the closure could cause minor inconvenience to motorists and entail economic costs associated with upgrading the Southgreen Bridge, it was anticipated to result in a modest improvement in overall accessibility.

The figure below illustrates the primary strategy proposed in the Kildare Town Transport Strategy, which has been integrated into the Kildare Town Local Area Plan 2023–2029 and the Kildare Town Renewal Masterplan 2024, as outlined in Sections 2.3.1 and 2.3.2.



Figure 2 | *Future Road Network– Combined DM Network and Road Strategy Measures*
(Source: Figure 9.35 of the Kildare Town Transport Strategy)

3. Receiving Environment

3.1 Land Use

Land uses are defined in the Kildare Town Local Area Plan 2023-2029, which indicates that the subject site is located within an area designated as "C – New Residential Phase 2": "*To protect future development lands from inappropriate forms of development which would impede the sequential expansion and consolidation of the town in terms of providing for new residential development for future plans. The inclusion of these lands will not in any way infer a prior commitment regarding the nature of any future zoning. Such a decision will be considered within the framework of the need for additional zoned lands and the proper planning and sustainable development of the area*".

Figure 3 below is taken from Map 11.1 of the Kildare Town Local Area Plan 2023-2029.

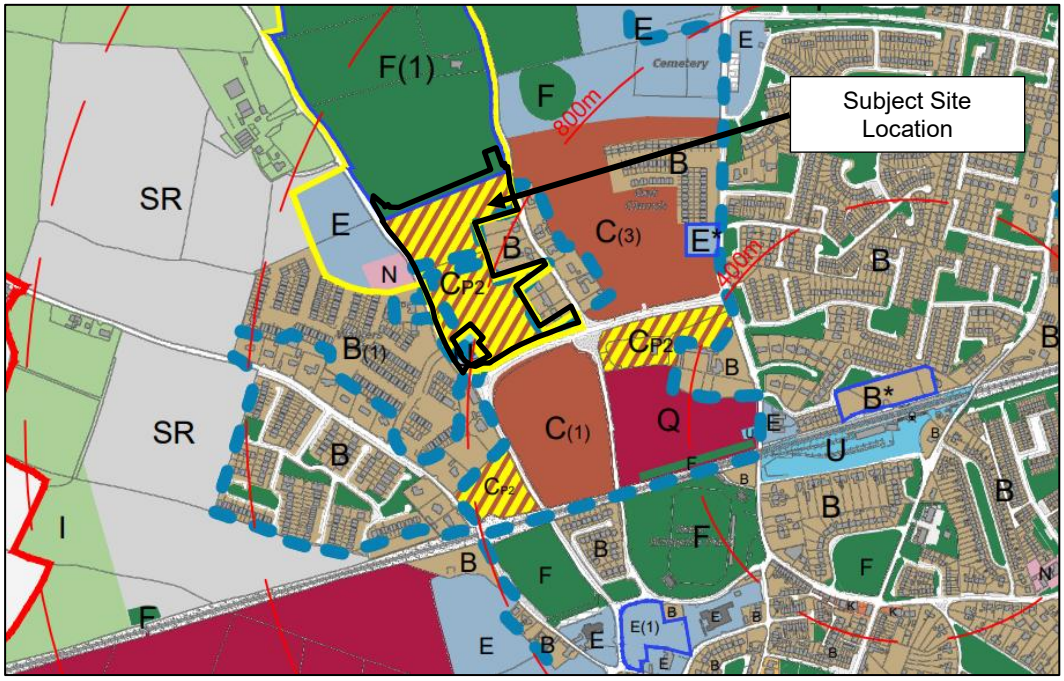


Figure 3 | *Site Location and Zoning*
(Source: Map 11.1 of the Kildare Town Local Area Plan 2023-2029)

3.2 Site Location and Description

The subject site is situated in Kildare, Co. Kildare, approximately 1.0 km north of Kildare Town Centre. It is currently a greenfield site used for agricultural purposes. The site is within an area undergoing development, located to the north of the southwestern railway line, and benefits from good vehicular and pedestrian connectivity, as detailed in the following section.

Although the site is not directly served by public transport, Kildare Railway Station is located within a 10-minute walk, and several bus stops are accessible within a 15-minute walk.

Further proposed infrastructure improvements in the surrounding area are also outlined in the subsequent sections.

3.3 Existing Road Network

3.3.1 Roads

The key roads within this network are shown in **Figure 4** and described below.

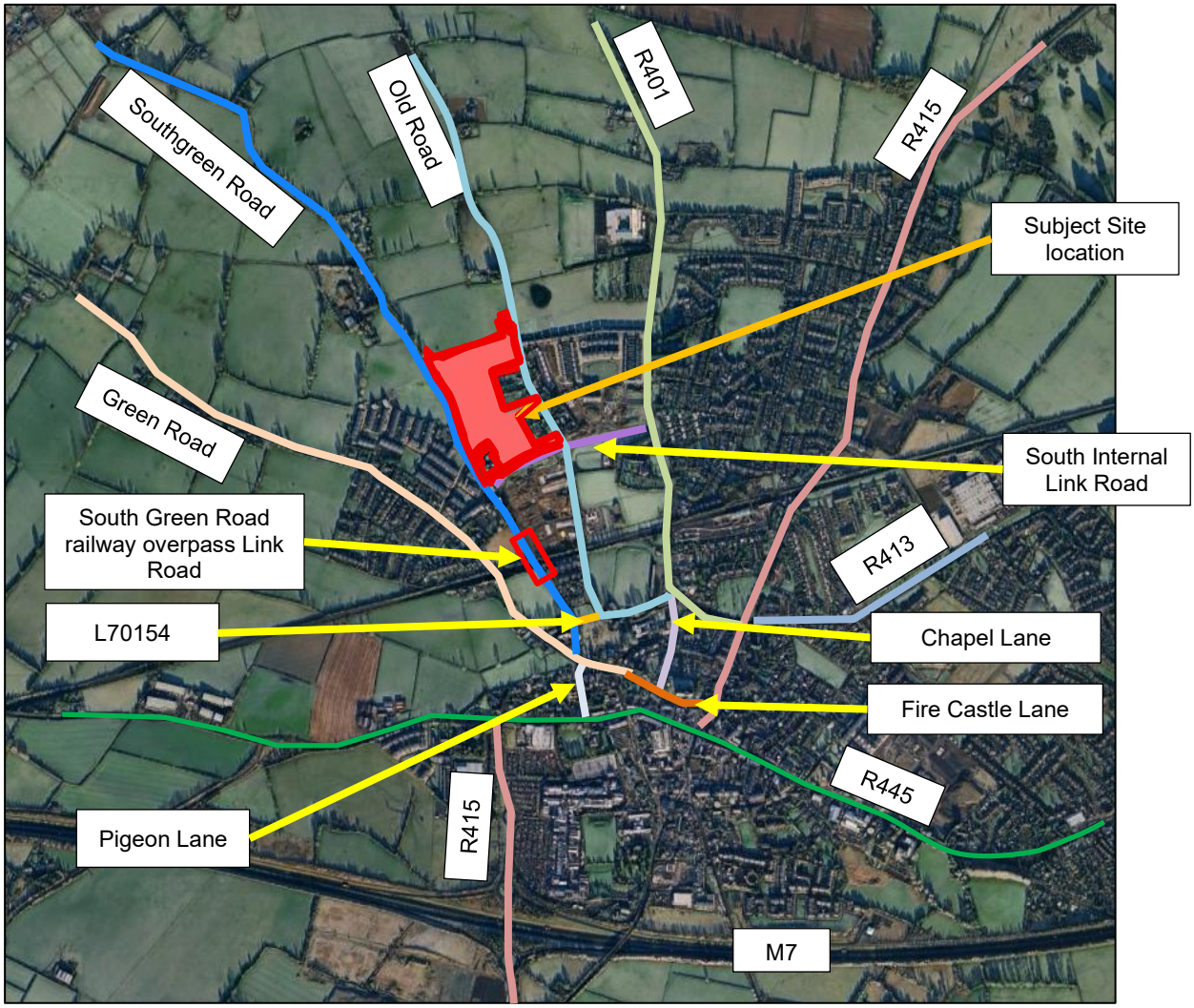


Figure 4 | *Existing Road Network*

Southgreen Road is a rural roadway that begins at its intersection with Green Road, Friary Road, and Pigeon Lane, situated to the south of the southwestern railway line. It runs in a northerly direction, crossing the railway via an overpass, and terminates at its junction with the R401. The road is a two-way carriageway with a typical width of approximately 5.5 metres. However, the overpass section is reduced to a one-way carriageway with a width of less than 4.0 metres and a 1.5-metre-wide footpath on the eastern side. Vehicular movement across the bridge is controlled by traffic signals positioned at either end.

According with the Kildare Town Local Area Plan, it is expected to upgrade the Southgreen Bridge to a two-way carriageway. The junction between Southgreen Road and the South Internal Link Road has recently been upgraded to a roundabout, which includes pedestrian crossings on all arms and integrated cycling

infrastructure. Additionally, a dedicated cycle path and footpath have been provided on both sides of Southgreen Road, extending approximately 100 metres to the north and south of the roundabout.

Old Road is a rural roadway that begins at its intersection with the R401 and Chapel Lane, to the south of the southwestern railway line. It runs in a northerly direction, crossing the railway, and terminates at another junction with the R401. The road is a two-way carriageway with a width of approximately 4.6 metres, providing access to agricultural lands and a number of residential properties.

As outlined in **Section 2.3.1** above, Old Road is designated to become a priority route for active travel modes. The proposed closure of Old Road Bridge to vehicular traffic will eliminate through traffic along this route. Consequently, the bridge will be restricted to pedestrians and cyclists only. To the mentioned traffic light to its junction with the R401, Old Road is a 6-metre-wide road with footpaths on both sides.

Bohereenagower Road (L70154) is a road link between Southgreen Road and Old Road. The road is a two-way carriageway with a width of 6.0 metres, running in an east–west direction.

The South Internal Link Road is a recently constructed roadway developed between 2020 and 2021. It links the R401, Old Road, and Southgreen Road, significantly enhancing both vehicular and pedestrian permeability in the area. The road is a two-way carriageway with a width of 6.6 metres, running in an east–west direction. It provides dedicated cycle paths and footpaths on both sides. The junction between South Internal Link Road and Old Road is a priority-controlled right-left stagger with pedestrian pelican-pedestrian crossing. At the junction with the R401, it forms a priority-controlled T-junction, equipped with toucan crossings on all arms to accommodate both pedestrians and cyclists.

Chapel Lane and **Fire Castle Lane** and are local urban streets, each configured as a two-way carriageway with an approximate width of 6.3 metres. Both streets are provided with footpaths on one side of the carriageway. Fire Castle Lane has narrow sections with less than 4.0-metre-wide road and provides access to the centre of Kildare Town.

Pigeon Lane is a two-way carriageway that begins at its intersection with Southgreen Road and Green Road, and ends at its junction with the R445. It serves as an important local link within Kildare Town. The carriageway has a width of approximately 6.5 metres and is provided with a footpath on one side. Signalised traffic control is in place at both junctions to manage vehicular and pedestrian movements.

The **R401** extends from Kinnegad in County Westmeath to Kildare Town Centre, passing through Edenderry in County Offaly. The total length of the route is approximately 42.3 kilometres, traversing the counties of Kildare, Offaly, and Meath. The R401 crosses the southwestern railway line via a one-way carriageway underpass with a width of less than 4.0 metres. Vehicular movement through the underpass is controlled by traffic signals located at either end. Between Kildare Town Community School, situated to the north of the site, and Kildare Town Centre, a footpath is provided along the eastern side of the road. Additionally, in the vicinity of a recently developed area, both footpaths and cycle tracks are provided on both sides.

The **R413** runs in a west-east from Kildare to Ballymore Eustace. The total length of the route is approximately 23 kilometres, all in Kildare County. The road is a two-way carriageway with a width of 6.5 metres. In Kildare Town Centre area, the R413 is provided with footpaths on both sides.

The **R415** runs in a north–south direction from its junction with the R403 in Allenwood to the R448 (formerly the N9) at Crookstown. The route passes through Kildare Town and crosses the N78 between Kilcullen and Athy. The entirety of the R415 lies within County Kildare. South of the R445, the R415 provides access to the M7 motorway at Junction 13. Between the R445 and the M7, the carriageway is approximately 6.0 metres wide and is served by footpaths on both sides. This section also provides direct access to the Kildare Village Shopping Outlet, making it a key link for both local and visitor traffic.

The **R445** is a non-motorway alternative route to the N7/M7 motorway between Naas and Limerick, and at 170 km it is one of the longest regional roads in Ireland (longer than most national roads). Indeed, much of the route comprises roads that were formerly part of the N7 between the cities, prior to motorway and other bypasses. Some of the R445 route also comprises local link roads to new N7/M7 route sections. In Kildare Town, the R445 the carriageway has a width of approximately 8.5 metres and is provided with a footpath on both sides.

The **M7 motorway** runs from the outskirts of Naas in County Kildare to Rossbrien on the outskirts of Limerick city. The M7 forms part of the Dublin to Limerick N7 national primary road. The section of the motorway bypassing Naas, an 8 km stretch, was the first section of motorway to open in Ireland, in 1983. Following substantial works to extend the M7 to Limerick, by the end of 2010, the motorway replaced all of the old single-carriageway N7 route which is now designated as R445. At 166.5 km, the M7 is the longest motorway in Ireland.

3.3.2 Junctions

The primary junctions in the local area surrounding the site are introduced in **Figure 5** below, which:

- **Junction 1:** is an existing priority-controlled T-junction located at the intersection of Southgreen Road, L70154 Bohereenagower Road and Green Road
- **Junction 2:** is an existing priority-controlled T-junction located at the intersection of Bohereenagower Road (L70154) and Old Road.
- **Junction 3:** is an existing priority-controlled T-junction located at the intersection of Dunmurry Road (R401), Old Road and Chapel Lane.
- **Junction 4:** is an existing signalised T-junction located at the intersection of Dunmurry Road (R401) and Southgreen Road.
- **Junction 5:** is an existing priority-controlled T-junction located at the intersection of Old Road and South Internal Link Road. This junction is located to the east of Junction 6.
- **Junction 6:** is an existing priority-controlled T-junction located at the intersection of Old Road and South Internal Link Road. This junction is located to the west of Junction 5.
- **Junction 7:** is an existing priority-controlled three-armed roundabout located at the intersection of Southgreen Road and South Internal Link Road.
- **Junction 8:** is an existing signalised crossroad located at the intersection of the R401, R415 and R413.

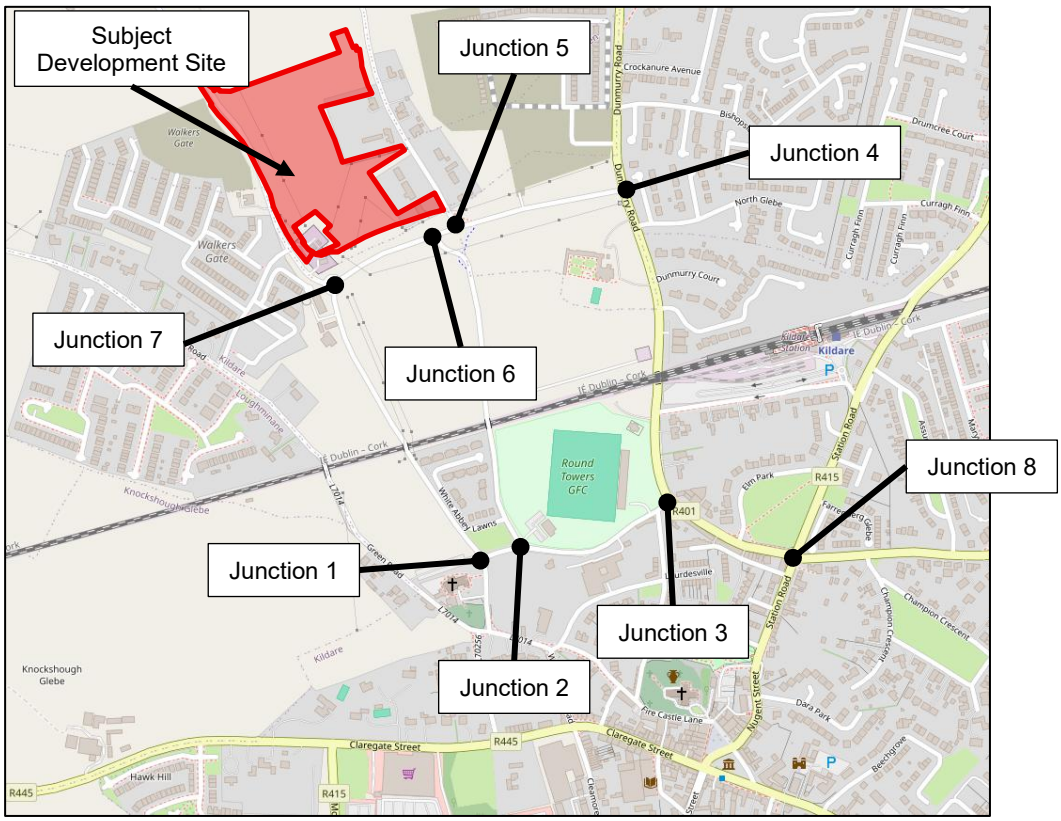


Figure 5 | *Primary Local Junctions*

3.4 Existing Traffic Conditions

To quantify the volumes of traffic movements at the key junctions shown in **Figure 5** above, a traffic survey was commissioned by the applicant and carried out by IDASO on Wednesday 14th May 2025 for a period of 12 hours. The results of the survey are presented in **Appendix B**.

The surveys were carried out on the above date to ensure that the flows were representative of a normal term and therefore not affected by school holidays or other public holidays or events. As such, they provide a reasonable representation of a neutral month during a period of normal school and work activity. The surveys are designed to provide representative values covering morning and evening periods during normal traffic conditions.

Based on the traffic survey results, the peak traffic hours at each junction are as follows:

- **Junction 1, 2, 3, 7 & 8:** Morning peak hour is from 08:00 to 09:00 and evening peak hour is from 17:00 to 18:00.
- **Junction 4 & 6:** Morning peak hour is from 08:00 to 09:00 and evening peak hour is from 15:30 to 16:30.
- **Junction 5:** Morning peak hour is from 08:15 to 09:15, and evening peak hour is from 15:30 to 16:30.

As can be seen above, each junction exhibits different AM and PM peak hours. To ensure a robust assessment, it is assumed that the peak hours for all junctions coincide during the same AM and PM periods. The existing AM and PM peak hour traffic flows are presented in **Figure 6** below and in **Appendix E – Figure A**.

The number of vehicles indicated in the figure below and the Figures in **Appendix E** are expressed in PCU. PCU represents the acronym for "Passenger Car Unit.". 1 PCU is equivalent to 1 passenger car or light goods vehicle (LGV), 1.5 PCUs to 1 medium heavy goods vehicle (Medium HGV), 2 PCUs to 1 bus, and 2 PCUs to 1 large heavy goods vehicle (Large HGV). 1 PCU is equivalent to 5.75 meters.

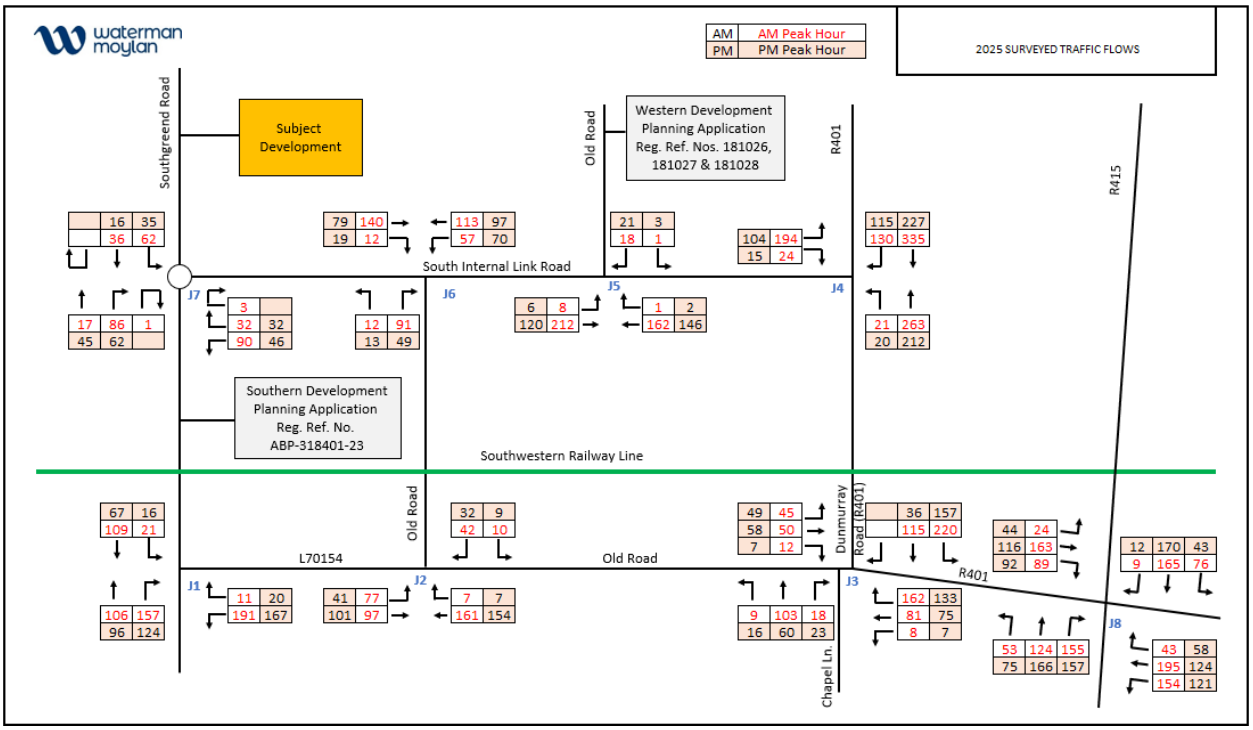


Figure 6 | *2025 Surveyed Traffic Flows*

In addition to the above and based on the received Kildare County Council LRD Opinion, additional traffic surveys were undertaken with the intent of obtaining existing inbound and outbound traffic flows data from residential estates with similar characteristics to the Proposed Development, located in close proximity to the Subject Site. In line with this, 3 no. junctions were surveyed, as presented in **Figure 7** below. The surveys were carried out by National Data Collection (NDC) on Tuesday 7th October 2025 for a period of 12 hours. The results of the surveys are presented in **Appendix C**.

The surveys were carried out on the above dates to ensure that the flows were representative of a normal term and therefore not affected by school holidays or other public holidays or events. As such, they provide a reasonable representation of a neutral month during a period of normal school and work activity. The surveys are designed to provide representative values covering morning and evening periods during normal traffic conditions.

The surveyed junctions are indicated below.

- **Junction A:** is an existing priority-controlled T-junction located at the intersection of Green Road, and Loughminane Green.
- **Junction B:** is an existing priority-controlled T-junction located at the intersection of Walkersgate and The Crescent.
- **Junction C:** is an existing priority-controlled T-junction located at the intersection of Dunmurray Road (R401) and Bishopsland



Figure 7 | *Surveyed junctions providing access to residential developments*

As presented in **Figure 7** above, the surveyed junctions provide access to existing residential neighbourhoods, with the following number of units:

- Residential Development A: 134 no. housing units.
- Residential Development B: 161 no. housing units.
- Residential Development C: 148 no. housing units.

Based on the traffic survey results, the peak traffic hours at each junction are as follows:

- **Junction A & B:** Morning peak hour is from 08:00 to 09:00 and evening peak hour is from 17:00 to 18:00.
- **Junction C:** Morning peak hour is from 08:00 to 09:00 and evening peak hour is from 15:45 to 16:45.

The traffic survey results during each peak hours are presented in the table below.

Junction	Residential Units	Trips			
		AM Peak Hour		PM Peak Hour	
		IN	OUT	IN	OUT
A	134	34	79	64	39
B	161	38	69	48	34
C	148	23	48	51	35

Table 2 | *Surveyed access to residential developments – Inbound and Outbound traffic flows during peak hours*

3.5 Multi-modal access to the site

3.5.1 Pedestrian Infrastructure and Walking Accessibility

The existing pedestrian infrastructure in the surrounding urban area comprises a well-connected network of footpaths that link the various neighbourhoods to one another, to the existing educational institutions and to the surrounding public transport network. The surrounding area is characterised by the presence of footpaths on both sides of the road and pedestrian crossings at all intersections. The extensive interconnection of the network allows for greater flexibility in the transportation of pedestrians.

In order to understand the catchment areas from the Subject Site, reference from the "*Guidelines for Providing for Journeys on Foot*" published by the *Institution of Highways & Transportation* in 2000 have been taken. This guideline indicates that the acceptable walking distances vary between individuals and circumstances. These include an individual's fitness, physical ability, and personal motivation; the size of the city itself and the quality of the surrounding footpath network. Furthermore, the document proposes walking distances and times based on an average walking speed of 1.4 metres per second (approximately 400 metres in five minutes). **Table 3** below summarises these suggestions.

	Town Centre	Commuting / School / Sight-seeing	Elsewhere
Desirable	200m (2.5 minutes)	500m (6 minutes)	400m (5 minutes)
Acceptable	400m (5 minutes)	1,000m (12 minutes)	800m (10 minutes)
Preferred Maximum	800m (10 minutes)	2,000m (24 minutes)	1,200m (15 minutes)

Table 3 | *Suggested Walking Distances*
(Source: Guidelines for Providing for Journeys on Foot)

Figure 8 below details the 10-minute, 15-minute and 24-minute walking catchments areas to summarise the accessibility of the subject site on foot (Preferred Maximum) to "Town Centres, Commuting / School / Sight-seeing, and Elsewhere" respectively, as per **Table 3** above. The figure below illustrates the presence of grocery stores, schools and first medical care within each walking isochrone.

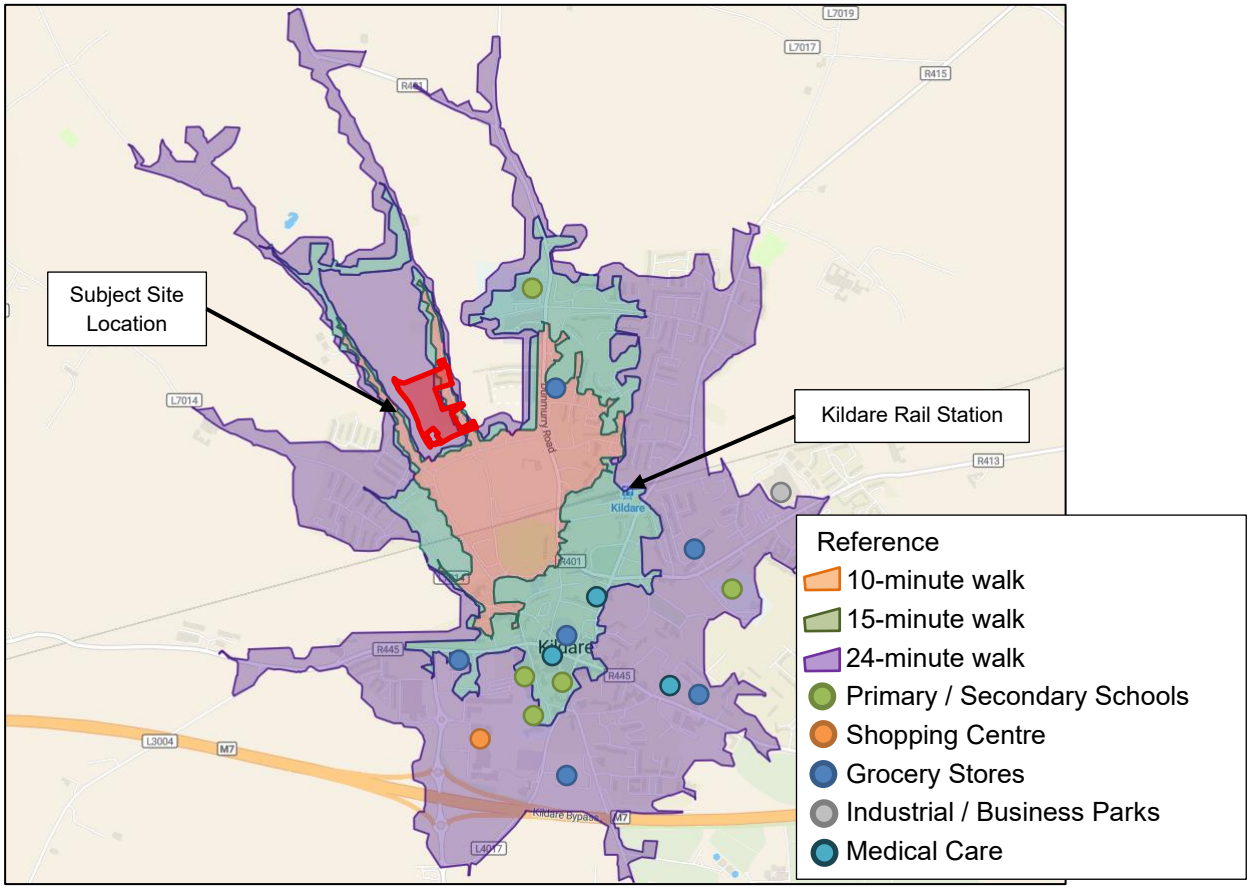


Figure 8 | *Isochrone map indicating Walking Accessibility*
(Source: Smappen)

3.5.2 Cycle Infrastructure and Cycling Accessibility

There is a lack of dedicated cycling infrastructure throughout Kildare Town as can be seen in **Figure 9** below. The existing cycling facilities have only recently been developed, primarily as part of the construction of the South Internal Link Road, as discussed in **Section 3.3.2** above.

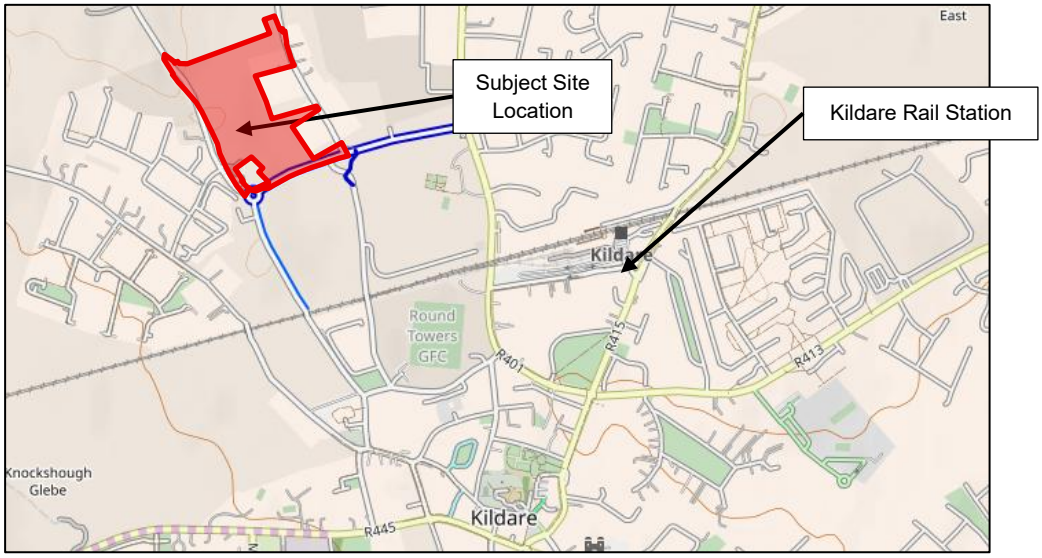


Figure 9 | *Existing cycle infrastructure*
(Source: Open Street Map)

Figure 10 below illustrates the cycling catchment areas accessible from the subject development for 10- and 15-minute cycle times. The figure below illustrates that the 10-minute cycling catchment area includes the centre of Kildare Town and its amenities.

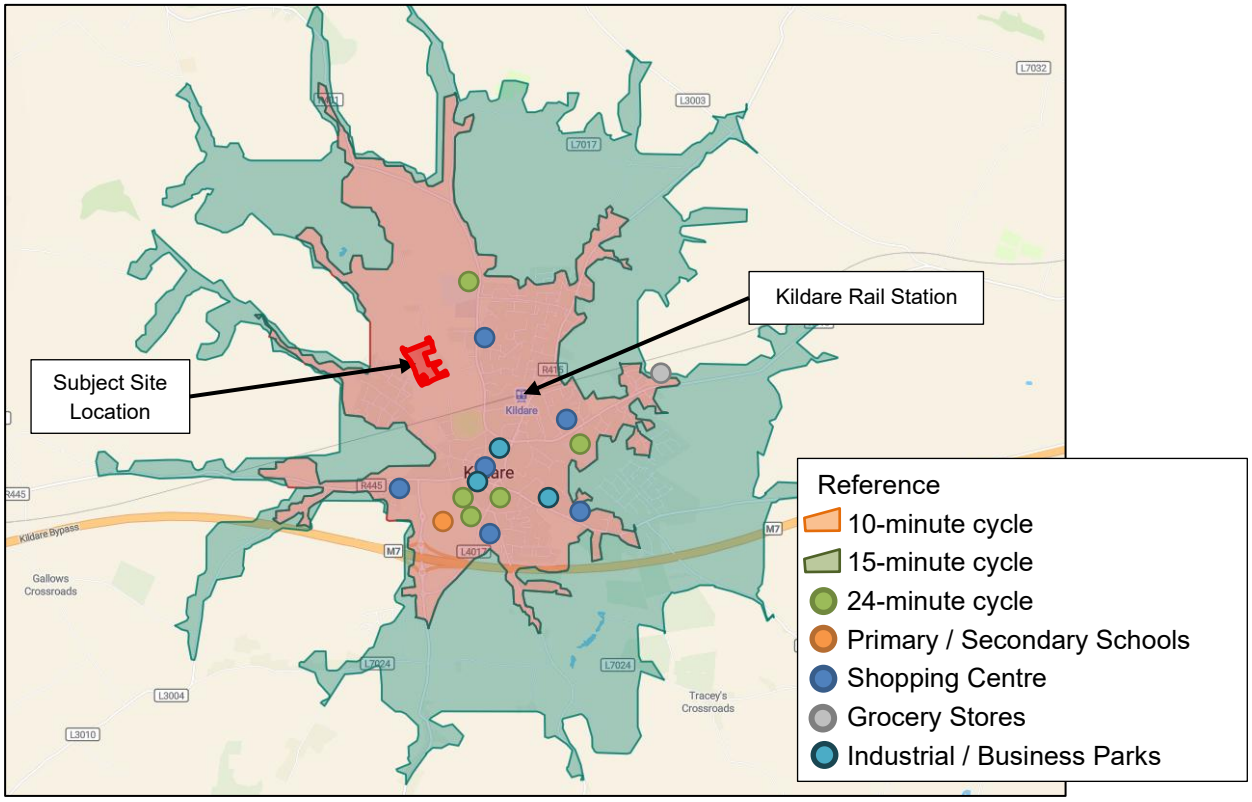


Figure 10 | *Isochrone map indicating Cycling Accessibility*
(Source: Smappen)

3.5.3 Bus Network

The nearest bus stops to the site are situated near Kildare Rail Station which is c. 1.0km (14-min walk) as shown in **Figure 11** below. The bus stops are served by bus route 883. Additional bus routes are available in Kildare Town Centre, around 1.2 km from the site (a 16-minute walk), including the bus routes 126, 126A, 126B, 126D, 26T, 126U, 726, IW02 & UM14.

The distance and walking times shown in **Figure 11** are obtained from the southern pedestrian access to the subject site.

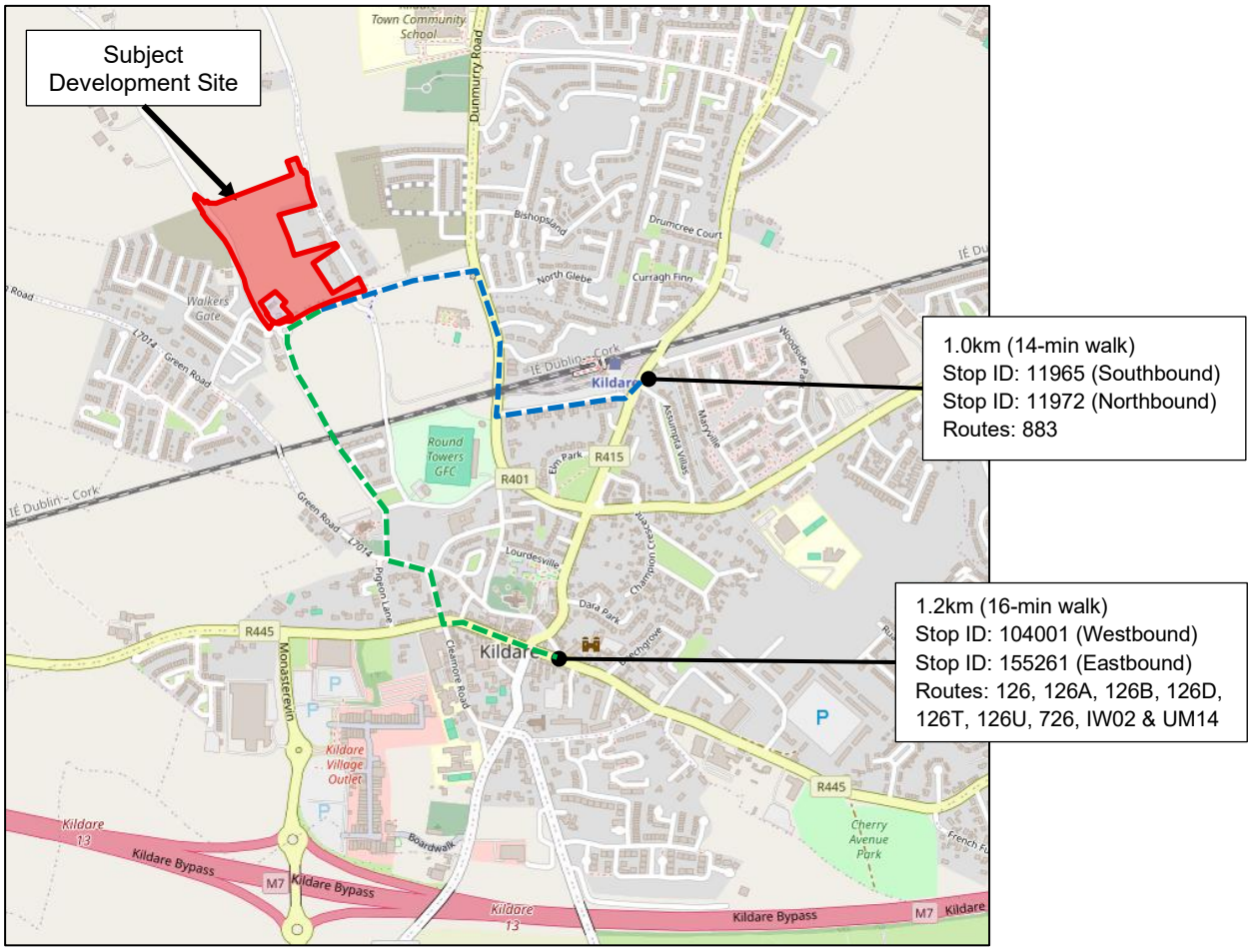


Figure 11 | *Bus Network – Walking distance from development to Bus Stops*

The bus routes and their frequencies are provided in **Table 4** below. The times indicated in the table are based on the timetable for each bus stop. The full bus timetables are provided in **Appendix A**.

Route	Route Name	Weekday Frequency	Saturday Frequency	Sunday Frequency
126	Rathangan – Dublin	8 services: 6:26, 7:50, 11:45, 13:40, 16:54, 18:07, 20:13 & 22:13	10 services: 7:05, 8:05, 8:51, 11:38, 13:38, 16:50, 17:55, 20:05, 22:10 & 23:35	9 services: 8:35, 10:03, 11:03, 12:52, 14:52, 16:52, 18:05, 20:10 & 22:10

	Dublin – Rathangan	8 services: 8:15, 9:07, 14:12, 18:00, 19:10, 19:53, 22:01 & 0:36	7 services: 8:36, 14:13, 18:08, 19:03, 19:56, 22:00 & 00:40	9 services: 12:17, 13:57, 15:57, 16:57, 17:55, 18:55, 19:57, 21:44 & 00:36
126A	Kildare – Dublin	1 Service (15:07)	1 Service (14:38)	No Service
	Dublin – Kildare	1 Service (10:56)	1 Service (10:49)	No Service
126B	Rathangan – Dublin	1 Service (10:05)	No Service	No Service
126D	Dublin – Kildare	1 Service (13:18)	No Service	No Service
126U	Kildare – Dublin UCD	1 Service (19:10)	No Service	No Service
126T	Dublin – Kildare	1 Service (16:54)	No Service	No Service
IW02	Newbridge – Monasterevin – Carlow	1 Service (7:25)	No Service	No Service
	Carlow – Monasterevin - Newbridge	1 Service (18:00)	No Service	No Service
UM14	Portlaoise to Maynooth	1 Service (7:30)	No Service	No Service
	Maynooth to Portlaoise	1 Service (19:45)	No Service	No Service
726	Dublin Airport – Laois Shopping Centre	Every 30 min. between 8:00 and 19:00. Every Hour between 19:00 and 8:00.		
	Laois Shopping Centre – Dublin Airport	Every 30 min. between 7:00 and 16:30. Every Hour between 16:30 and 7:00.		
883	Dunnes Newbridge – Athy Barrow Quay	3 Services: 12:13, 15:46 & 18:13	5 Services: 12:13, 15:46, 18:13, 20:58 & 23:23	3 Services 12:13, 15:46 & 18:13
	Athy Barrow Quay – Dunnes Newbridge	3 Services: 8:22, 11:12 & 14:42	5 Services: 8:22, 11:12, 14:42, 19:42 & 22:25	3 Services: 8:22, 11:12 & 14:42

Table 4 | *Local Bus Routes and Frequencies*
(Source: Transport for Ireland)

3.5.4 Railway Network

The nearest rail station to the subject site is the Kildare Rail Station, located approximately 900m to the southeast of the site. This distance can be reached in 12-minute walking or c. 3-minute cycling.

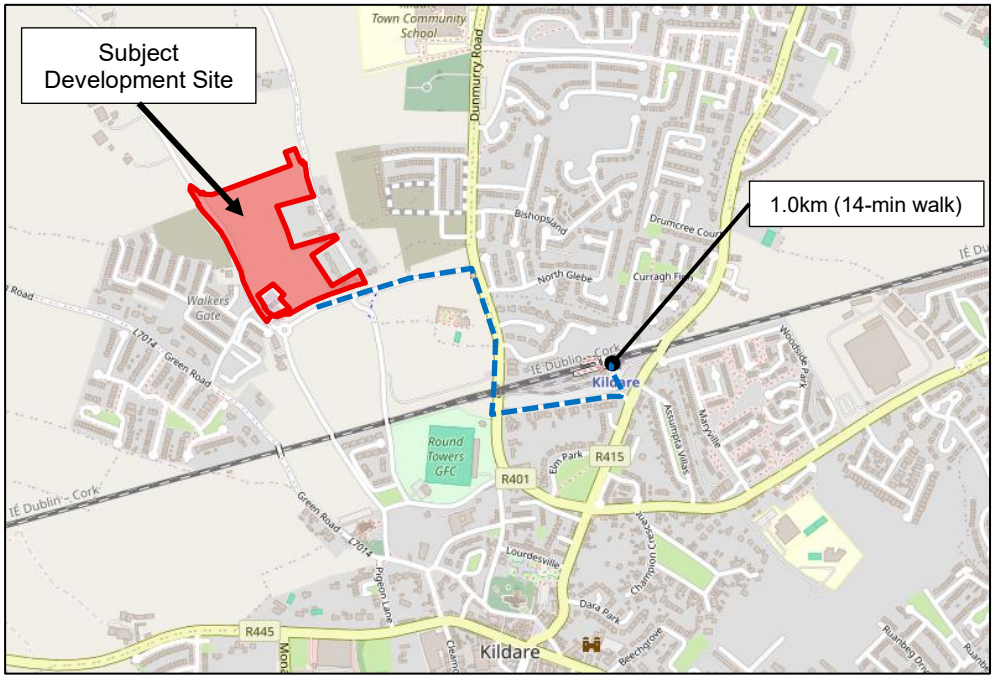


Figure 12 | *Location of Kildare Rail Station*
(Source: Open Street Map)

This station provides access to several regions of Ireland. **Figure 13** below shows the rail network.

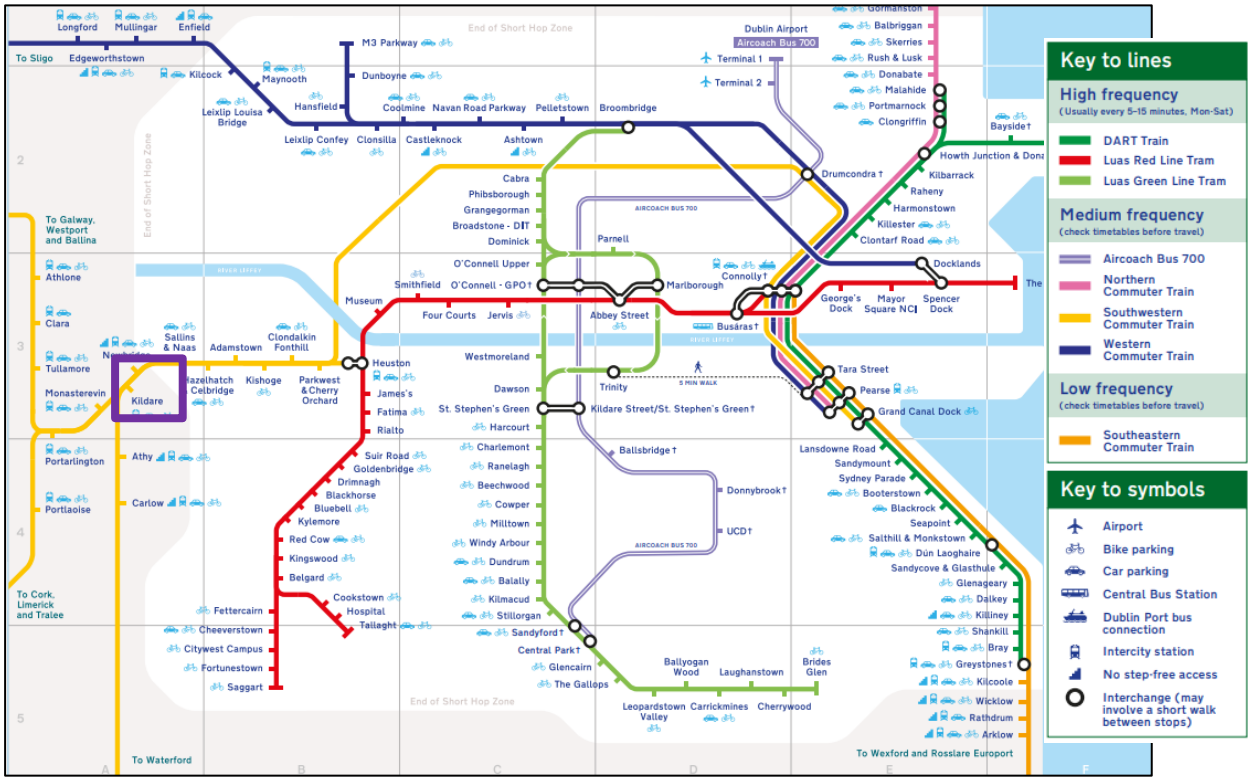


Figure 13 | *Location of Rail Station*
(Source: Transport for Ireland)

The rail routes serving at Kildare Rail Station are outlined in the table below with their frequencies. The times indicated in the table below are based on the timetable this rail station.

The full bus timetables are provided in **Appendix A**.

Route Name	Frequency
Commuter **Grand Canal Dock and Dublin Heuston – Kildare – Portlaoise**	**Dublin Heuston – Portlaoise** **Monday to Saturday:** Every hour between 9:59 and 21:06. **Sunday:** Every two hours between 9:51 and 20:35, plus **Newbridge – Kildare:** **Monday to Saturday:** 7:47, 15:38, 19:03 **Dublin Heuston – Kildare:** **Monday to Friday:** 6:14, 8:53, 12:52, 18:53 & 19:54 **Dublin Heuston – Kildare (Direct):** **Monday to Saturday:** 7:59, 10:39, 15:38, 15:56, 16:59, 17:55, 18:05, 19:03 **Sunday:** 8:24, 9:38, 10:58, 12:04, 13:40, 14:08, 15:40, 18:00, 18:53, 18:59, 19:09, 19:14, 19:58, 21:38
Commuter **Portlaoise – Kildare – Heuston – Grand Canal Dock and Dublin**	**Portlaoise – Dublin Heuston** **Monday to Saturday:** 5:57. Then every hour between 6:44 and 22:54. **Sunday:** Every two hours between 8:54 and 21:24 **Portarlingston – Dublin Houston:** **Monday to Friday:** 6:17, 7:08, 7:11 10:40, 15:45 & 20:57 **Kildare – Dublin Houston (Direct):** **Monday to Saturday:** 6:30, 7:35, 7:57, 8:16, 9:34, 12:44, 14:46, 16:39, 17:07, 19:27, 20:15, 22:11 & 23:04 **Sunday:** 10:06, 10:46, 12:09, 12:58, 13:41, 14:09, 15:50, 16:14, 17:03, 17:10, 18:06, 18:39, 20:08, 20:17
Dublin Heuston - Galway	**Monday to Saturday:** 6:14, 8:00, 17:00 **Sunday:** 8:24, 10:58, 12:04, 19:09
Dublin Heuston - Galway	**Monday to Saturday:** 7:21, 17:07, 19:27, 23:04 **Sunday:** 10:06, 12:58, 17:03, 18:39
Dublin - Waterford	**Monday to Saturday:** 7:47, 10:39, 15:38, 17:20, 18:05, 19:03, 21:07 **Sunday:** 9:38, 13:40, 15:40, 18:00, 19:14
Waterford - Dublin	**Monday to Saturday:** 7:35, 9:34, 12:44, 14:46, 16:39, 20:15, 22:11 **Sunday:** 10:46, 13:41, 15:50, 17:47, 20:17
Dublin - Westport & Ballina	**Friday:** 8:00, 17:39 **Sunday:** 14:08, 18:59
Westport & Ballina - Dublin	**Monday to Saturday:** 7:57, 19:27 **Sunday:** 18:39

Table 5 | *Irish Rail Frequencies*
(Source: Irish Rail)

4. Transportation Improvements

4.1 Pedestrian Measures

As indicated in Section 2.3.1 above, the Kildare Development Plan outlines several permeability measures aimed at improving pedestrian connectivity by creating direct, efficient routes to key destinations. These measures are intended to reduce walking distances and promote non-motorised travel over private car use, thereby enhancing the town's walkability and integration with public transport.

Figure 14 presents the proposed pedestrian measures throughout Kildare Town, which includes new footpaths, greenways and shared footpaths and cycle tracks.

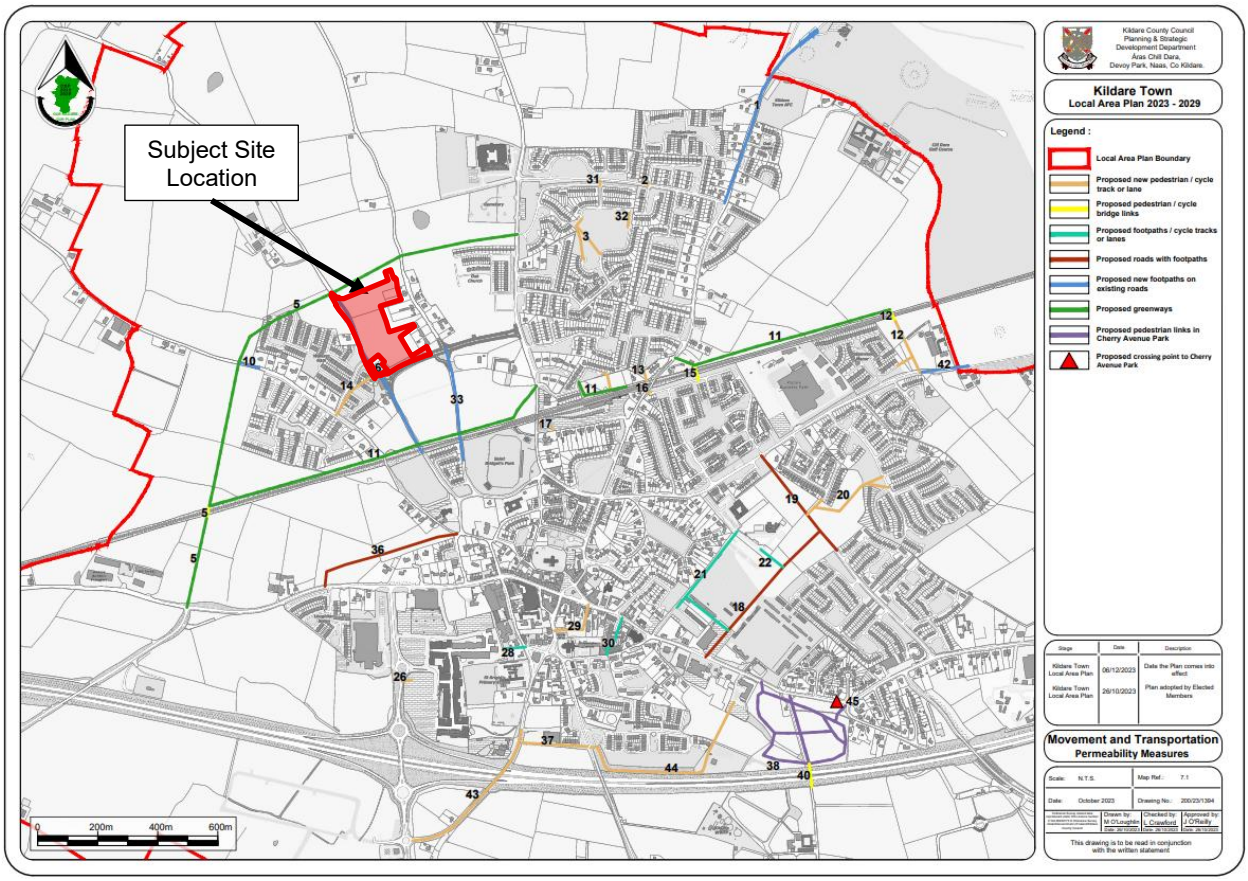


Figure 14 | *Proposed Permeability Measures*
(Source: Appendix A - Kildare Town Local Area Plan 2023-2029)

4.2 Cycling Measures

The proposed development site lies within the *"Newbridge & Kildare"* area as outlined in the *2022 Greater Dublin Area Cycle Network Plan*. An extract of the updated cycle network is reproduced in **Figure 15** below.

Cycle Network Plan identified and determined in a consistent, clear and logical manner, the following cycle networks within the GDA:

- The Urban Cycle Network at the Primary, Secondary and Feeder level;

- The Inter-Urban Cycle Network, linking the relevant sections of the Urban Network and including the elements of the National Cycle Network within the GDA. The Inter-Urban Network also includes linkages to key transport locations outside of urban areas such as airports and ports; and
- The Green Route Network that are cycle routes developed predominately for tourist, recreational and leisure purposes.

Figure 15 below shows the surrounding cycle network close to the Subject Development. The proposal includes several primary and secondary routes along main roads leading towards the city centre.

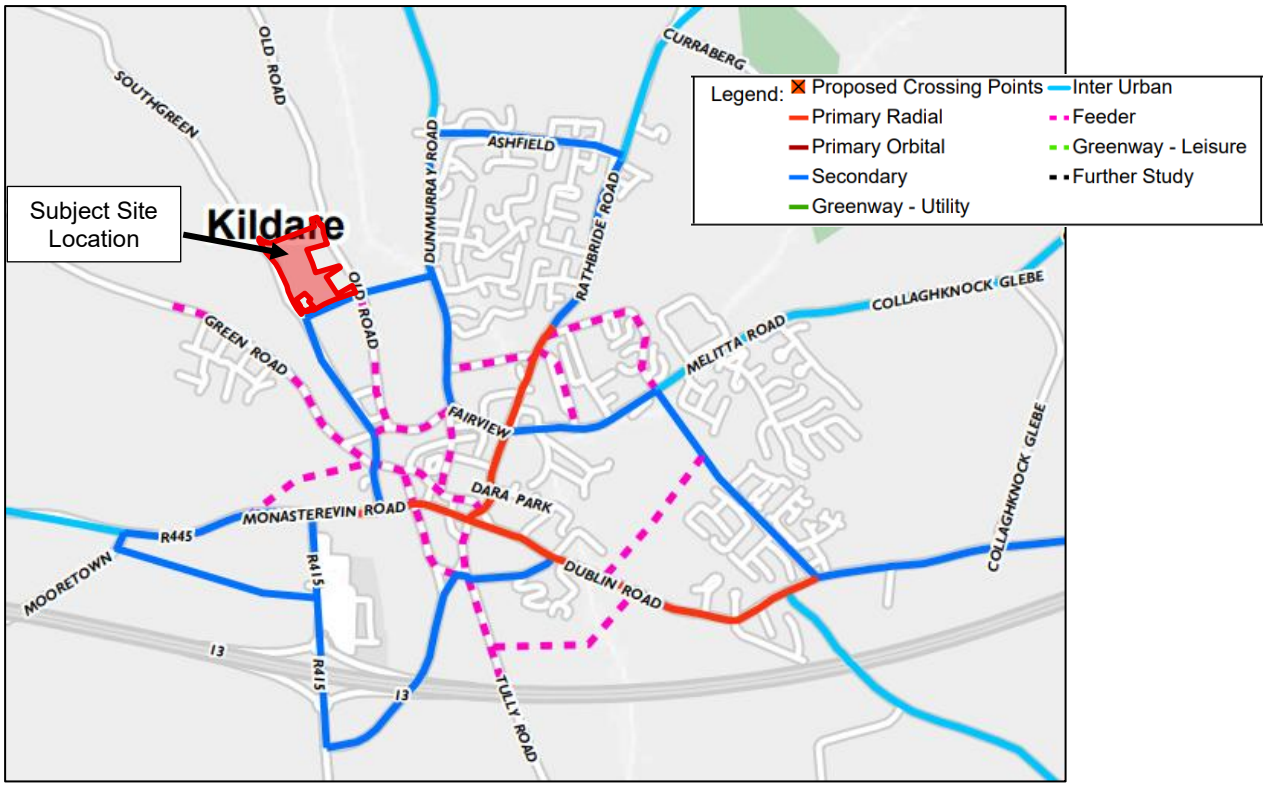


Figure 15 | *Proposed Cycle Network*
(Source: Newbridge & Kildare, GDA Cycle Network Plan, 2022)

The future local cycle network, as outlined in the 2022 Greater Dublin Area (GDA) Cycle Network Plan, includes two Secondary Routes along Southgreen Road and Dunmurray Road (R401). These routes are intended to provide a safe and secure cycling infrastructure connecting to Kildare Town Centre. Additionally, a feeder route is proposed along Old Road.

In alignment with the *GDA Cycle Network Plan*, the *Kildare Town Local Area Plan 2023–2029* proposes the implementation of cycling infrastructure measures in the surrounding area over the short to medium term, as detailed in Table 7-2: *Cycling Measures* of the aforementioned plan. The proposed measures are illustrated in **Figure 16** below.

Figure 16 shows a comprehensive and integrated cycle network, comprising several radial routes and greenways throughout Kildare Town. This cycle network aims to enhance connectivity and promote sustainable transport options within the town and its environs.

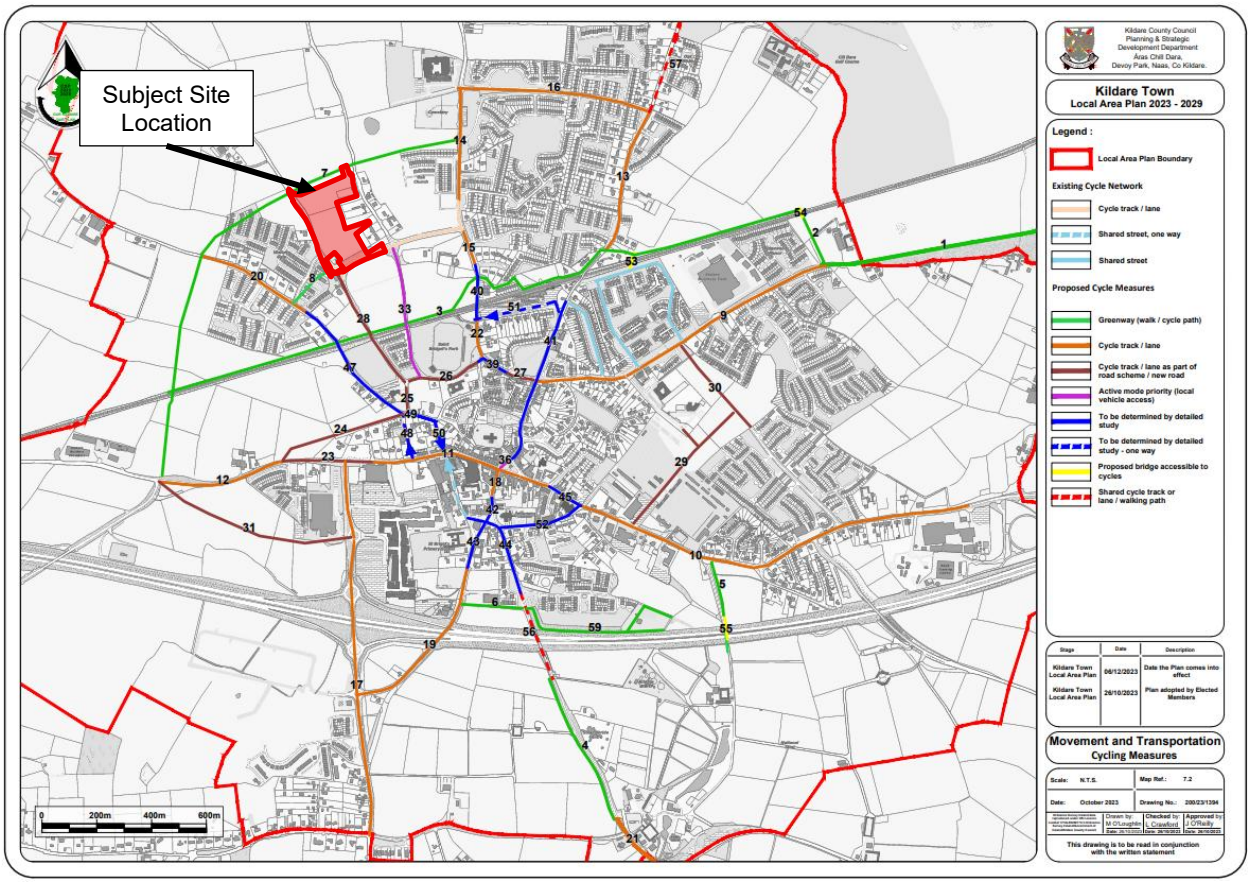


Figure 16 | *Proposed Cycling Measures*
(Source: Appendix A - Kildare Town Local Area Plan 2023-2029)

4.3 Rail Station: proposed improvements to the surrounding area

Kildare Town Development Plan 2023–2029 outlines two key components of the Train Station Improvements project, in alignment with the *Kildare Town Renewal Masterplan 2024*. These comprise the reimagining of vacant land owned by Iarnród Éireann and enhancements to the train station forecourt and Fair Green Road.

With regard to the Iarnród Éireann-owned vacant site, the proposal involves the development of a public realm strategy to explore the potential for opening the site for parking and facilitating access to the train station from the north side of the railway tracks, via Dunmurray Drive and Rathbride Road. This intervention aims to activate an underutilised site to address parking demand, alleviate congestion, and enhance overall accessibility.

In addition, the proposed strategy will examine further opportunities for the site's development, ensuring alignment with broader urban regeneration and mobility objectives.

Figure below shows the existing and potential routes to rail station

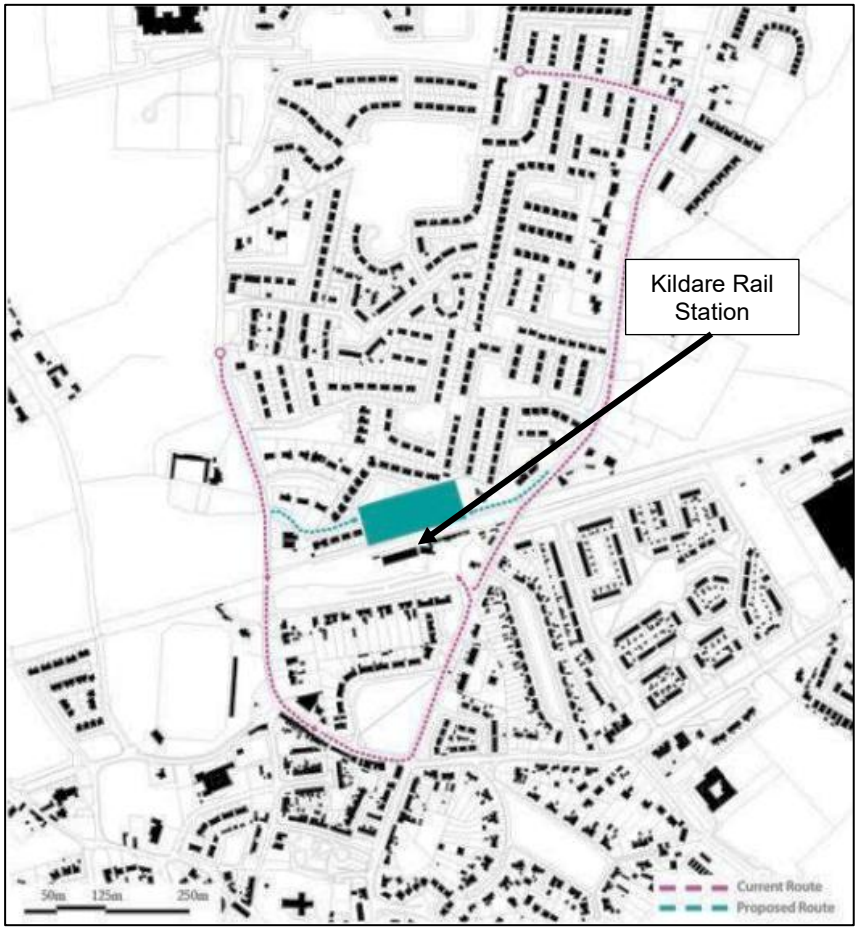


Figure 17 | *Existing and Potential Routes to Train Station*
(Source: Figure 4-6 of the Kildare Town Local Area Plan 2023-2029)

The proposed pedestrian access to the rail station would reduce the distance between the subject site and the station by around 300 metres, saving approximately five minutes on foot.

4.4 Road Measures

As indicated in Section 2.3.1 above, the Kildare Town Local Area Plan 2023–2029 proposed some road and street interventions to improve the movements across the area. Key measures include the closure of Old Road Bridge (RD1) to vehicular traffic, which is expected to enhance safety for pedestrians and cyclists, while also contributing to reduced emissions and noise levels. To maintain vehicular accessibility, two-way traffic will be introduced on Southgreen Bridge (RD1).

Figure 18 illustrates the proposed road infrastructure measures, including the closure of Old Road Bridge to vehicular traffic—downgrade for use by sustainable transport modes only—and the upgrade of Southgreen Bridge to accommodate two-way traffic flow.

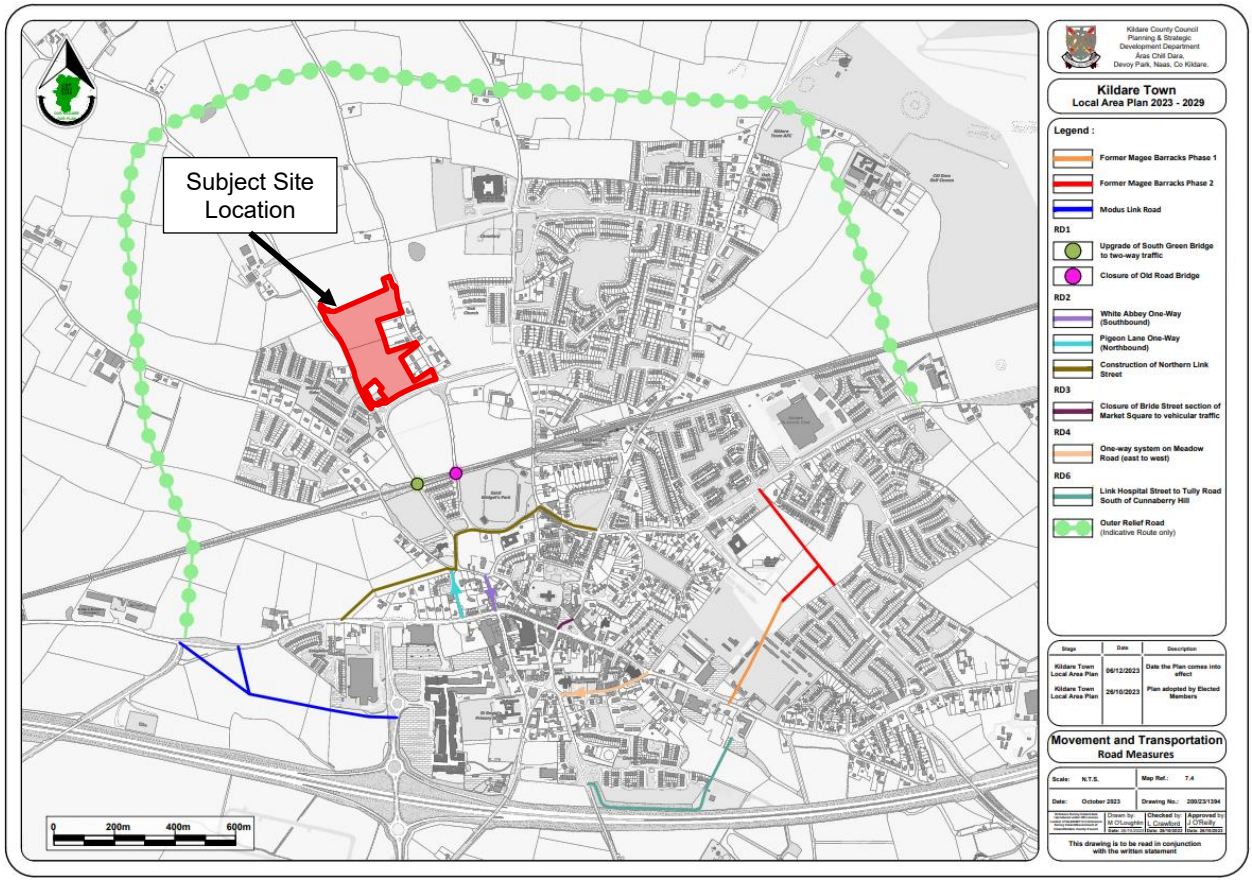


Figure 18 | *Proposed Road Measures*
(Source: Appendix A - Kildare Town Local Area Plan 2023-2029)

5. Proposed Development

5.1 Development Description

The proposed Large - Scale Residential Development (LRD) is located on a site of approx. 6.13 ha at Southgreen Road, Kildare, Co. Kildare. The site is generally bounded to the north by agricultural fields; to the south by the recently constructed Southern Internal Link Road; to the west by Southgreen Road and an existing Electricity Station; and to the east by Old Road and existing residential properties.

The proposed development will consist of:

- The construction of a new residential scheme of 146 no. house type units ranging in height from 1-3 storeys as follows:
    - 136 no. houses (7 no. 2 bed units; 102 no. 3 bed units; and 27 no. 4 bed units) in a mixture of bungalow, detached, semi-detached, and terrace style units.
    - 10 no. duplex apartment units (5 no. 1 beds, 3 no. 2 beds, and 2 no. 3 beds).
- Each residential unit will be afforded with private open space in the form of a front/rear/side garden for houses or terrace / balconies for duplex apartment units.
- The provision of a creche facility (approx. 161 sq m GFA) and associated areas of external open space (approx. 60 sq m).
- Public open space (approx. 6,992 sq m) is proposed in the form of 2 no. new large public open space areas within the site (approx. 3,046 sq m and 3,946 sq m respectively).
- Communal open space (approx. 82 sq m) is proposed adjacent to Block A.
- A total of 321 no. car parking spaces (305 no. for residential units and 16 no. for the creche facility) are provided. This provision includes 2 no. accessible spaces and 17 no. visitor spaces.
- A total of 527 no. cycle parking spaces (517 no. for residential units and 10 no. for the creche facility) are provided. This provision includes 75 no. visitor spaces. Resident cycle parking is proposed in the form of secure bicycle store enclosures to the front of terraced units; on curtilage spaces to the rear of units with side access; and a bicycle store for apartment units. Visitor parking is proposed in the form of Sheffield stands.
- The development shall be served via a new vehicular access point from Southgreen Road. An additional private vehicular access point is proposed via Old Road to service 1 no. new bungalow 4 bed residential unit.
- Pedestrian and Cyclist access is also proposed via Southgreen Road and via a new secondary access point from the Southern Internal Link Road to the south of the site and Old Road to the east of the site.
- 2 no. directional single lane cycle tracks on either side of the Southgreen Road, together with amendments to the existing cycle tracks and footpaths on Southgreen Road north of the east west link road.
- A new pedestrian/cycle link is delivered to the north connecting South Green Road to Old Road.
- The associated site and infrastructural works include provision for an ESB Sub Station; water services; foul and surface water drainage and connections; attenuation proposals; permeable paving; all landscaping works; boundary treatment; internal roads and footpaths; waste storage areas, all electrical services and all associated site development works.

The detailed breakdown of the proposed residential scheme is shown in **Table 6** below.

Description	1-bed	2-bed	3-bed	4-bed	Total
Houses		7	102	27	136
Apartments	5	3	2		10
Total	**5**	**10**	**104**	**27**	**146**

Table 6 | *Schedule of Accommodation*

5.2 Access Points and Internal Road Layout

Vehicular access to the Subject Development is proposed off Southgreen Road, as illustrated in **Figure 19** below.

All internal roads in the proposed development are designed for a speed limit of 30kph with typically 6.0m wide carriageways and footpaths along both sides. All intersections within the development itself will be priority junctions with raised tables where appropriate. The low design speeds and traffic calming measures will ensure the safe operation of these junctions and a safe/secure environment for pedestrians and cyclists.

In addition, the Proposed Development will benefit from several pedestrian and cycle access points, providing good permeability to the surrounding developments and roads, as shown in **Figure 19** below.

The design and layout of the proposal has been prepared to fully comply with the current relevant design standards and specifications applicable to this form of development.

Figure below shows the access points for vehicles, pedestrian and cyclist to each site, the internal roads and the surrounding road network.

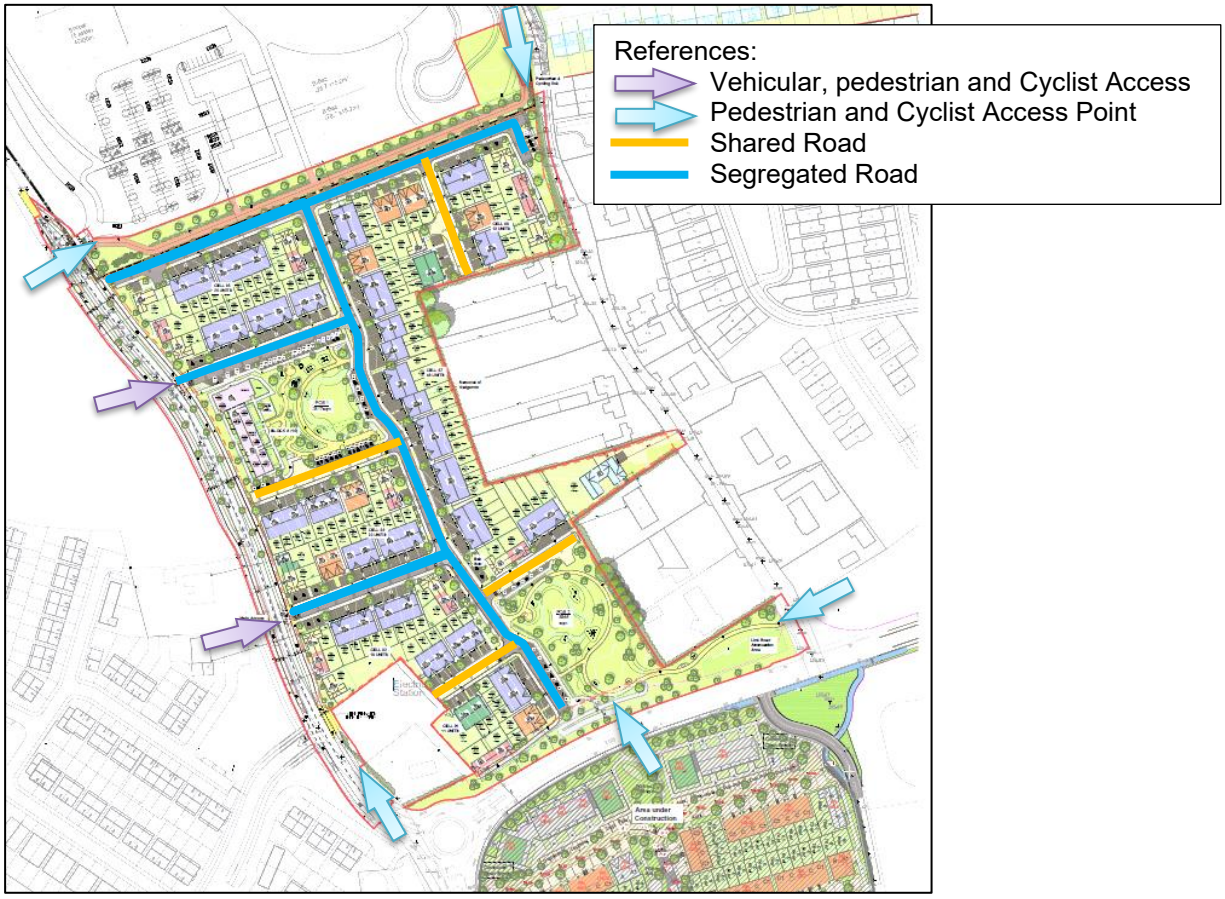


Figure 19 | *Proposed Development – Site Access Points*

All internal roads in the Subject Development are designed for a speed limit of 30kph with 5.5m wide carriageways and 2.0m wide footpaths along both sides.

To generate a safer environment, shared use surfaces (for both vehicles and pedestrians) have been generated with a differentiated rolling surface (in texture and level) so that it is easily identifiable by the driver. This was carried out in accordance with *section 4.3.4* of the *Design Manual for Urban Roads and Streets*, which indicate:

- *Use a variety of materials and finishes that indicate that the carriageway is an extension of the pedestrian domain.* A different finish to the rest of the pavement has been chosen to identify these areas.
- *Avoid raised kerb lines. Any Kerb line should be fully embedded within the street surface.* The shared areas have been raised from the remaining pavements using small ramps to start and end the shared areas.
- *Minimise the width of the vehicular carriageway and /or corner radii.* A reduction in the width of the carriageway has been implemented, from 5.50 m to 4.80 m.

All road intersections within the development itself will be priority junctions. The low design speeds and traffic calming measures will ensure the safe operation of these junctions.

5.3 Pedestrian and Cyclist Infrastructure

The proposed development features a network of interconnected footpaths, ensuring permeability throughout the site, as well as to the adjacent developments and the surrounding area.

All footpaths within the development are designed to be 2.0 metres wide, in accordance with Section 4.3.1 of the Design Manual for Urban Roads and Streets (DMURS), which recommends a minimum footpath width of 1.8 metres.

Additionally, the development offers well-connected pedestrian and cycle links to the surrounding area, including direct access to the existing school located to the east of the site through the provision of uni-directional cycle lanes either side of Southgreen Road and a 4.0m wide greenway from Southgreen Road to Old Road thus ensuring the vision of the local area plan is met.

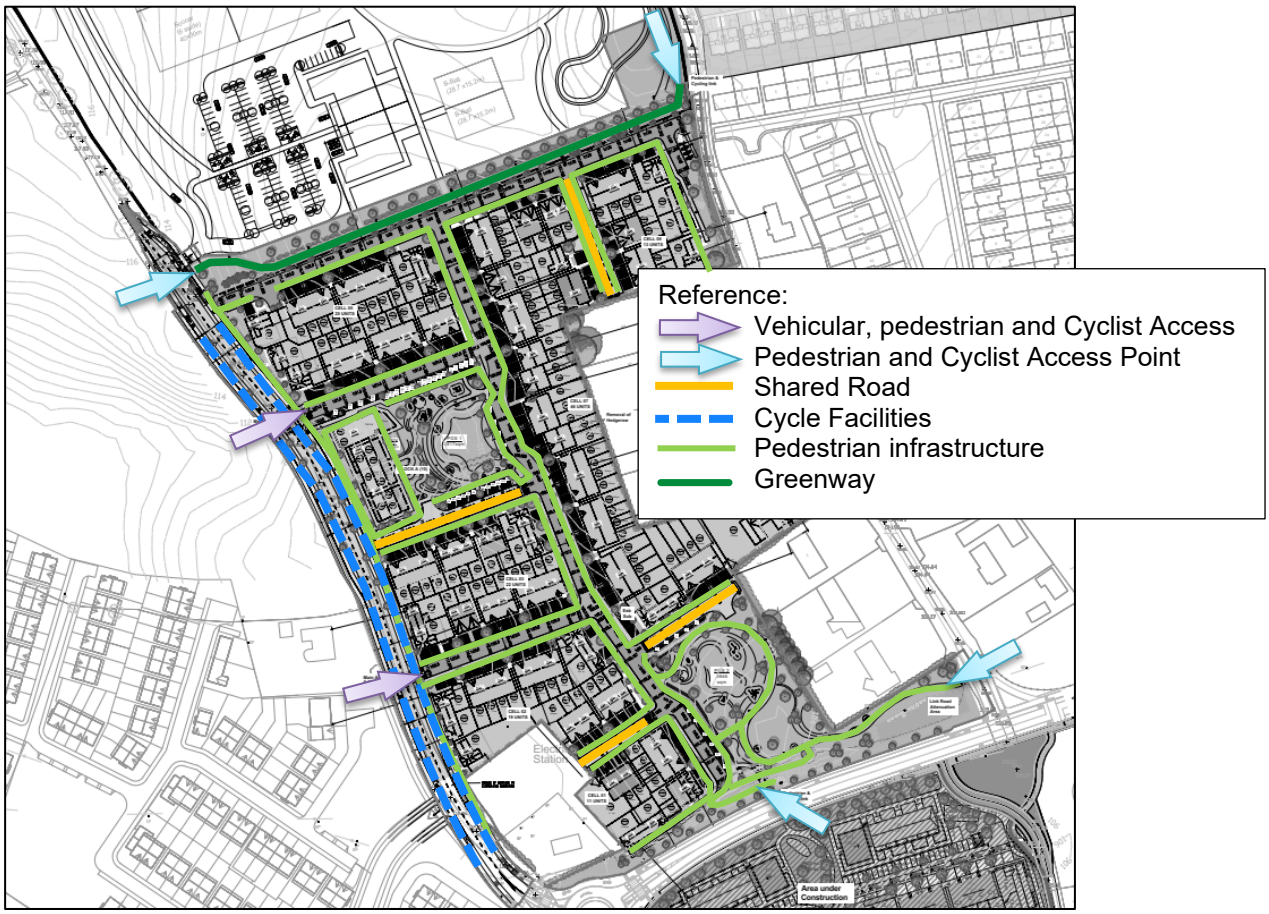


Figure 20 | *Pedestrian and Cycle Facility*

6. Travel Characteristics

6.1 Small Areas – Census 2022

To understand the vehicle ownership and mode of travel choice of the residents in the area, public information from the Census 2022 was used. The Census was conducted by the Central Statistics Office on 3rd April 2022, and distributed information in small areas that divide the territory.

It is important to choose a wide number of areas to obtain representative values that will allow us to approximate the future behaviour of the residents. 18 representative areas have been selected to reflect the Subject Development. The Small Areas that were consulted are shown in **Figure 21**. The number of houses and respective population in each consulted Small Area is provided in **Appendix C**.

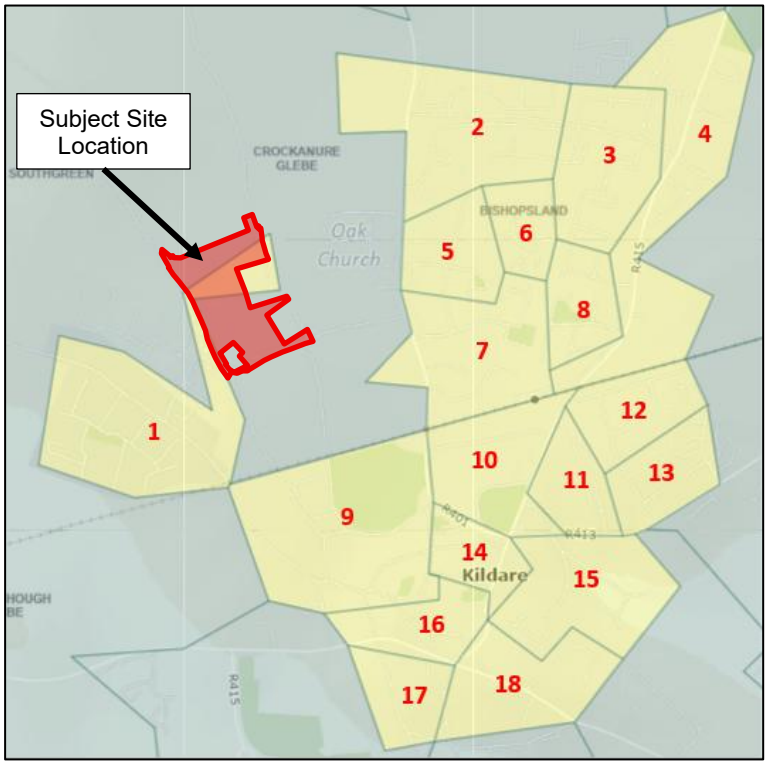


Figure 21 | *Consulted Small Area*
(Source: Central Statistics Office)

6.2 Mode Share, Modal Split and Car Ownership

The modal split, derived from statistical data, offers valuable insight into the travel behaviour of residents within the vicinity of the Subject Development. It is therefore reasonable to infer that future residents of the Subject Development are likely to exhibit similar commuting patterns.

According to the data, in the selected area are 5,575 individuals residing in 1,946 dwellings. There are 2,067 registered vehicles, equating to an average of 2.70 persons per vehicle or 1.06 vehicles per residential unit. In terms of modal split for journeys to work, school, or college: **68.0%** of trips are made by private car, **15.4%** by public transport (including bus, train, and Luas), **19.0%** on foot, and **1.8%** by bicycle.

The results of the survey on car ownership in the small areas surveyed are presented in **Appendix D**.

7. Trip Generation and Distribution

7.1 Trip Rates

In order to understand the existing traffic flow rates during peak hours, traffic flow surveys were carried out at three junctions providing access to existing neighbourhood (refer to **Section 3.4** above). As results, inbound and outbound traffic flows were recorded and results are shown in **Table 2** above. Based on the survey results and the number of existing housing units (refer to **Figure 7** in **Section 3.4**), arrival and departure trip rates for the AM and PM peak hours were established and indicated in **Table 7** below.

Location	AM Peak Hour		PM Peak Hour	
	Arrivals	Departures	Arrivals	Departures
Junction A – 134 no. Units	0.254 per unit	0.590 per unit	0.478 per unit	0.291 per unit
Junction B – 161 no. Units	0.236 per unit	0.429 per unit	0.298 per unit	0.211 per unit
Junction C – 148 no. Units	0.155 per unit	0.324 per unit	0.345 per unit	0.236 per unit

Table 7 | *Trip Rates - Surveyed access to residential development results*

For the purpose of this report, the adopted trip rates are based on the average trip rates observed at Junctions A, B, and C, presented in **Table 8** below.

Trip Rates	AM Peak Hour		PM Peak Hour	
	Arrivals	Departures	Arrivals	Departures
Average Trip Rates (A, B & C)	0.215 per unit	0.447 per unit	0.373 per unit	0.246 per unit

Table 8 | *Adopted Trip Rates - Surveyed access to residential developments*

To illustrate the difference between the adopted trip rates and those derived from approved TTA prepared by Waterman Moylan Consulting Engineers for the under construction Southern Development (Southgreen Development – Phase 1. Planning Application Reg. Ref. No. ABP-318401-23), **Table 9** below highlights the difference between the two sets of trip rates.

Trip Rates	AM Peak Hour		PM Peak Hour	
	Arrivals	Departures	Arrivals	Departures
Approved Trip Rates **Source:** Southgreen Development -Phase 1- Pl. Apl. Reg. Ref. No. ABP-318401-23	0.117	0.339	0.320	0.174
Trip Rates from **Table 8**	0.215	0.447	0.373	0.246
Comparation	+84%	+32%	+17%	+42%

Table 9 | *AM & PM Peak Hours – Trip rates comparation*

As shown in the table above, the trip rates derived from the surveyed traffic flows indicate a higher value compared with those approved as part of the Southgreen Development – Phase 1 (Planning Application Reg. Ref. No. ABP-318401-23).

7.2 Trip Generation

7.2.1 Subject Development

The Subject Development consists of 146 no. residential units comprising 136 no. houses and 10 no. apartment units. Considering the adopted trip ratios indicated in **Table 8** above, the AM and PM peak hour trip generation to/from the proposed development is shown in Table below.

Land Use	AM Peak Hour (08:00 – 09:00)		PM Peak Hour (17:00 – 18:00)	
	Arrivals	Departures	Arrivals	Departures
146 no. units	32	66	55	36
Total (146 no. units)	**98**		**91**	

Table 10 | *Trip Generation – Subject Development*

It has been estimated that the proposed development will generate a total of 98 vehicular movements in the AM peak hour (32 inbound and 66 outbound) and a total of 91 vehicular movements in the PM peak hour (55 inbound and 36 outbound).

7.2.2 Committed Developments & Potential Future Developments

The Committed Developments and the Potential Future developments in the surrounding area has been identified in the National Planning Application Database, which are shown in the figure below.

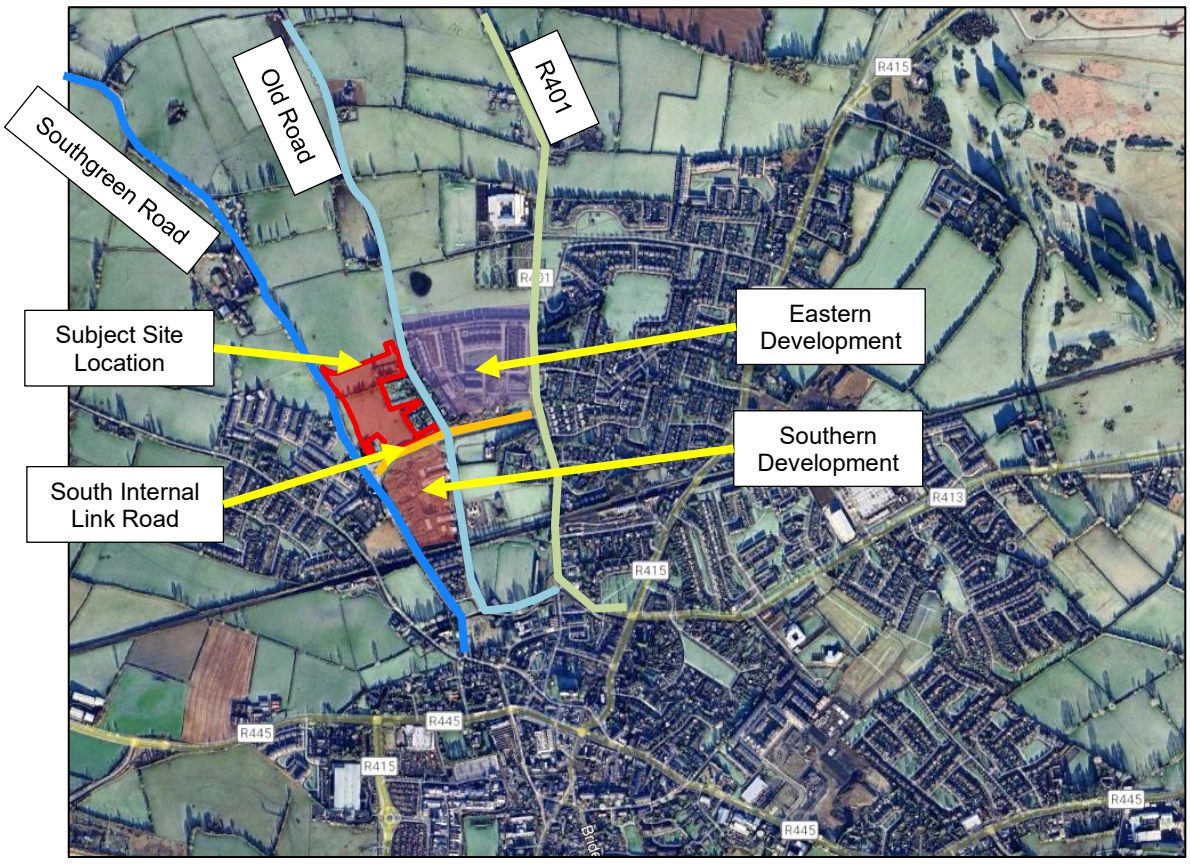


Figure 22 | *Location of the site & potential future developments in the surrounding area*

A brief description of each of them is provided below:

1. **Southern Development – Planning Application Reg. Ref. No. ABP-318401-23:** The application proposes the development of 168no. units. The proposed development will be accessed via Southgreen Road. The site is currently under construction.

   The TTA made for this development indicates that the site will generate a total of 77 trips (20 arrivals and 57 departures) during the AM peak hour and a total of 87 trips (54 arrivals and 29 departures) during the PM peak hour. In addition, the TTA provides the trip distribution of the development.

   The planning application indicates that construction of the development will be completed by the end of 2025. It is therefore assumed that this development will be ready in time for the opening of the subject development.

2. **Eastern Development – Planning Application Reg. Ref. No. 181026 (ABP-305526-20):** The application proposes the development of 245 no. units. The proposed development will be accessed via Old Road. The site is currently under construction.

   The TTA made for this development indicates that will generate a total of 137 trips (33 arrivals and 104 departures) during the AM peak hour and a total of 150 trips (100 arrivals and 50 departures) during the PM peak hour. In addition, the TTA provides the trip distribution of the potential future development.

   Furthermore, the planning application indicates that construction of the development will be completed by the end of 2023. It is therefore assumed that this development will be ready in time for the opening of the subject development.

7.3 Traffic Distribution Scenarios

Trips distribution has been carried out considering two possible scenarios:

Scenario A: The Subject Development has been constructed in accordance with the indicated programme (Refer to **Section 1.6** above). This scenario considers the existing traffic flows on the network with the growth factors (refer to **Section 7.5** below) and the traffic flow to/from each Committed Development and the Potential Future Developments (refer to **Section 7.2.2** above). In this scenario, Old Road Bridge is **open** to traffic (refer to **Section 4.4** above).

Scenario B: The Subject Development has been constructed in accordance with the indicated programme (Refer to **Section 1.6** above). This scenario considers the existing traffic flows on the network with the growth factors (refer to **Section 7.5** below) and the traffic flow to/from each Committed Development and the Potential Future Developments (refer to **Section 7.2.2** above). In this scenario, Old Road Bridge is **close** to traffic (refer to **Section 4.4** above).

7.4 Traffic Distribution: Scenario A

7.4.1 Surveyed Traffic Flows

For Scenario A, the existing traffic flows is detailed in **Section 3.4** above. Traffic flows are shown in **Figure 6** above and in **Appendix E – Figure A**.

7.4.2 Subject Development

The traffic distribution flows for the Subject Site are based on the traffic distribution of the approved Traffic and Transport Assessment prepared by Waterman Moylan Consulting Engineers for the under construction Southern Development (Southgreen Development -Phase 1-), detailed in Planning Application Reg. Ref. No. ABP-318401-23.

It has therefore been assumed that 90% of trips to/from the subject development will travel south from the site access via Southgreen Road. At Junction 7, traffic is expected to split, with 70% continuing southwards along Southgreen Road and 20% turning left towards Junction 6. The latter group is assumed to turn right at Junction 6, utilising the Old Road overpass. At Junction 2, this traffic is expected to turn left onto the R415. At Junction 8, part of this traffic will turn right towards Kildare Town Centre and part will continue eastwards on the R413, leading to Newbridge Town. Of the 70% continuing south at Junction 7, it is assumed that this traffic will proceed through Junction 1 towards the R445, which provide access to Kildare Town Centre, the Kildare Village and further that the M7 at Junction 13.

The trip distribution flows for the Scenario A are detailed in **Figure 23** below and in **Appendix E – Figure B**.

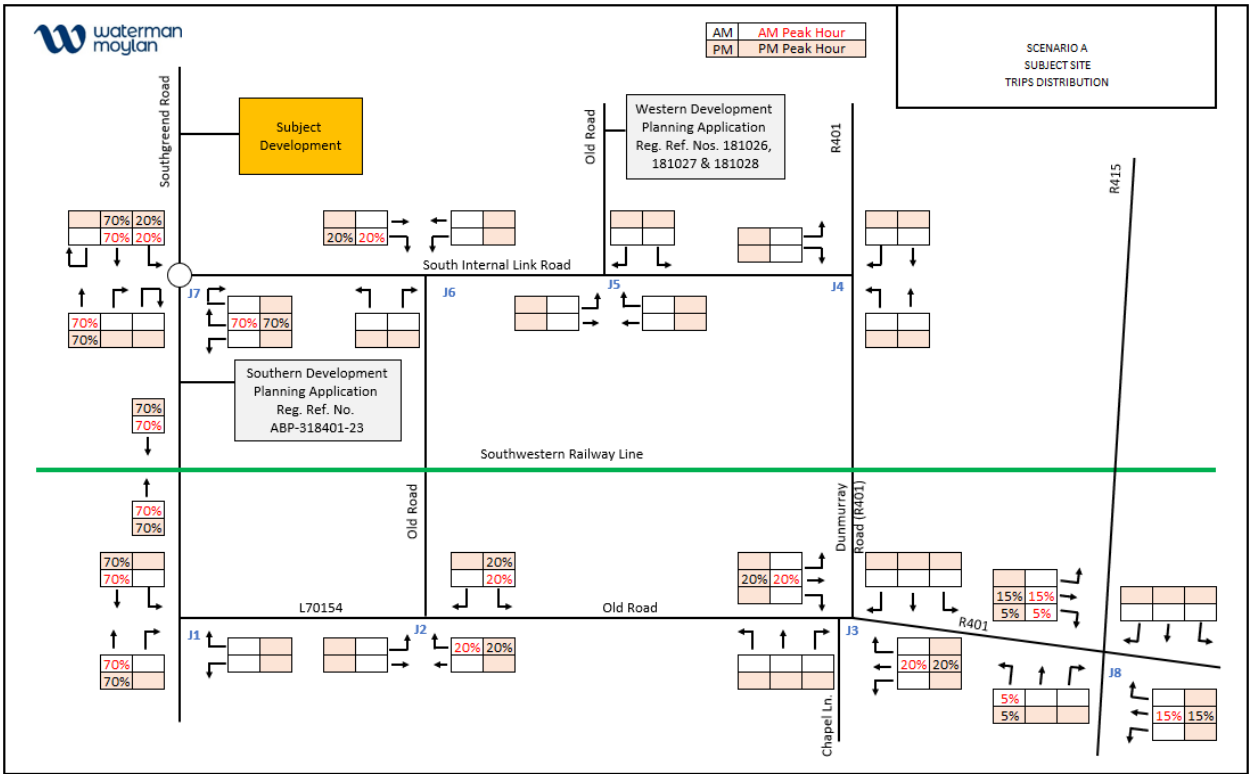


Figure 23 | *Scenario A – Subject Development - Trip Distribution*

Traffic generation for the Scenario A is shown in **Appendix E** – **Figure C**.

7.4.3 Southern Development

Trips distribution for the proposed Southern Development has been obtained from the previously approved Traffic and Transport Assessment prepared by Waterman Moylan Consulting Engineers for the under construction Southern Development (Southgreen Development -Phase 1-), detailed in Planning Application Reg. Ref. No. ABP-318401-23.

The remaining junctions, which were not assessed in the mentioned report, have been distributed in accordance with the trips expectations and in line with the existing traffic patterns, as evidenced by the surveyed traffic flow results (see **Section 3.4** above).

The trip distribution flows are shown in **Appendix E – Figure D**.

7.4.4 Eastern Development

Trips distribution for the proposed Eastern Development has been obtained from the previously approved Traffic and Transport Assessment prepared by NRB Consulting Engineer for the under construction Eastern Development (Southgreen Development -Phase 1-), detailed in Planning Application Reg. Ref. No. 181026 (ABP-305526-20).

The remaining junctions, which were not assessed in the mentioned report, have been distributed in accordance with the trips expectations and in line with the existing traffic patterns, as evidenced by the surveyed traffic flow results (see **Section 3.4** above).

The trip distribution flows are shown in **Appendix E – Figure E**.

7.5 Traffic Distribution: Scenario B

7.5.1 Redistributed Traffic Flows

For Scenario B, the existing traffic flows have been redistributed under the assumption that the Old Road Bridge is closed. Consequently, the current traffic movements have been adjusted to reflect potential driver behaviour. The following assumptions have been made:

- Trips that currently turn right at Junction 6 when arriving from Junction 7 are assumed to continue straight at Junction 7, then turn left at Junction 1, and proceed straight through Junction 2.
- Trips that currently turn left at Junction 6 when arriving from Junction 5 are assumed to be redistributed as follows: 60% will turn left at Junction 5, then turn right at Junction 4, and continue straight through Junction 3; the remaining 40% are assumed to turn left at Junction 7 and continue straight through Junction 1.
- It is assumed that the remaining trips turning left at Junction 6—excluding those reallocated in the previous bullet—arrived from Junction 4. Those trips will turn right at Junction 3 towards Junction 1, where will turn left.
- Trips currently arriving at Junction 6 from the south are removed, along with their associated downstream movements. It is assumed that trips which previously turned left at Junction 6 would instead have turned right at Junction 7 and are therefore subtracted from that movement accordingly. Likewise, it is assumed that trips which previously turned right at Junction 6 would instead continue straight ahead at Junction 5 and turned left at Junction 4 and are therefore subtracted from that movement.
- Trips currently arriving at Junction 2 from the north are considered to originate from both, Junction 2 and the residential development located between the railway and the L70154. To identify the proportion of trips generated by this development, the following procedure was followed:
    - As this development does not have a planning application listed on the National Planning Application Portal, the number of residential units was manually identified, and trip generation was estimated using the trip rates provided in **Table 8** above.

- The development comprises a total of 28 units, which are estimated to generate 14 trips during the AM peak hour (4 inbound and 10 outbound) and a total of 14 trips during the PM peak hour (9 inbound and 5 outbound).
- Based on the existing modal split at Junction 2, it has been assumed that 80% of trips to/from this development will turn right at Junction 2 towards Junction 1. The remaining 20% will turn left towards Junction 8. At Junction 1, it is assumed that 30% of the total trips to/from the site are expected to turn right at Junction 1 and the rest turn left southwards.
- The 30% of trips turning right at Junction 1 are added to the redistributed traffic flow, as they are considered to replace trips removed from Junction 6 (indicated above). It is assumed that these trips will turn right at Junction 7, continue towards Junction 4, and then turn left at that junction.

- The proportion of trips that arrive at Junction 2 from Junction 6, are removed from the assessment, along with their associated downstream movements. It is assumed that trips which previously turned right at Junction 2 would instead have turned left at Junction 1 and are therefore subtracted from that movement accordingly. Likewise, it is assumed that trips which previously turned left at Junction 2 would instead have continued straight ahead at Junction 8 and are therefore from that movement accordingly.
- Trips currently arriving at Junction 2 from Junction 1—excluding those associated with the residential development located between the railway and the L70154—are assumed to continue straight through Junction 1, then turn right at Junction 7, and finally turn left at Junction 4.
- Trips currently arriving at Junction 2 from Junction 3—excluding those associated with the residential development located between the railway and the L70154—are assumed to continue straight through Junction 2, then turn right at Junction 1 towards Junction 7, where they are expected to continue straight ahead.

As conclusion of the above, the 2025 redistributed traffic flows is shown in figure below and in **Appendix E – Figure F**.

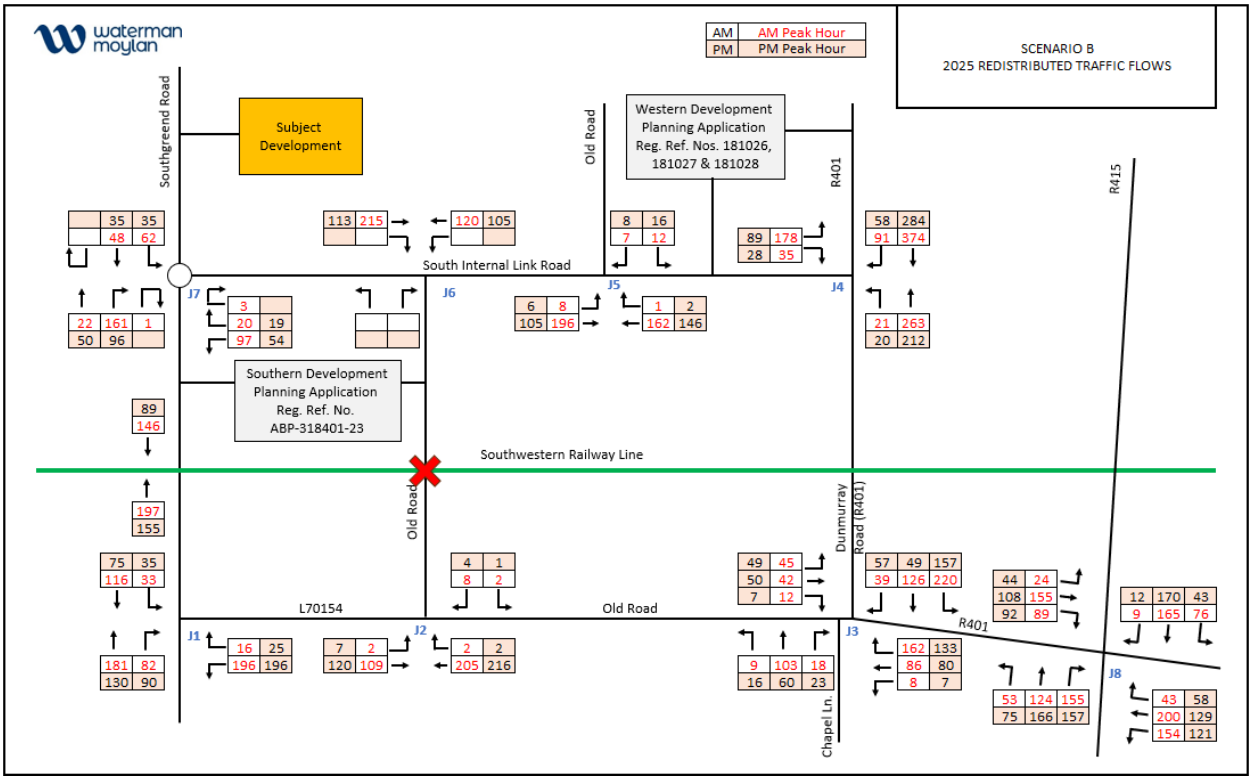


Figure 24 | *2025 Redistributed Traffic Flows*

7.5.2 Subject Development

For the scenario B, it has been assumed that 90% of trips to/from the subject development will travel south from the site access via Southgreen Road. At Junction 7, traffic is expected continuing southwards along Southgreen Road due the overpass on Old Road is close, and all traffic will be redirected using Southgreen Road.

It is assumed that the traffic flow will split at Junction 1, with 70% continuing straight ahead towards the R445, which provides access to Kildare Town Centre, Kildare Village, and further on to the M7 at Junction 13. The remaining 30% is expected to turn left, heading eastwards. At Junction 8, a portion of this traffic will turn right towards Kildare Town Centre, while the rest will continue eastwards along the R413 towards Newbridge Town.

The trip distribution flows for the Scenario A are detailed in **Figure 23** below and in **Appendix E – Figure G**.

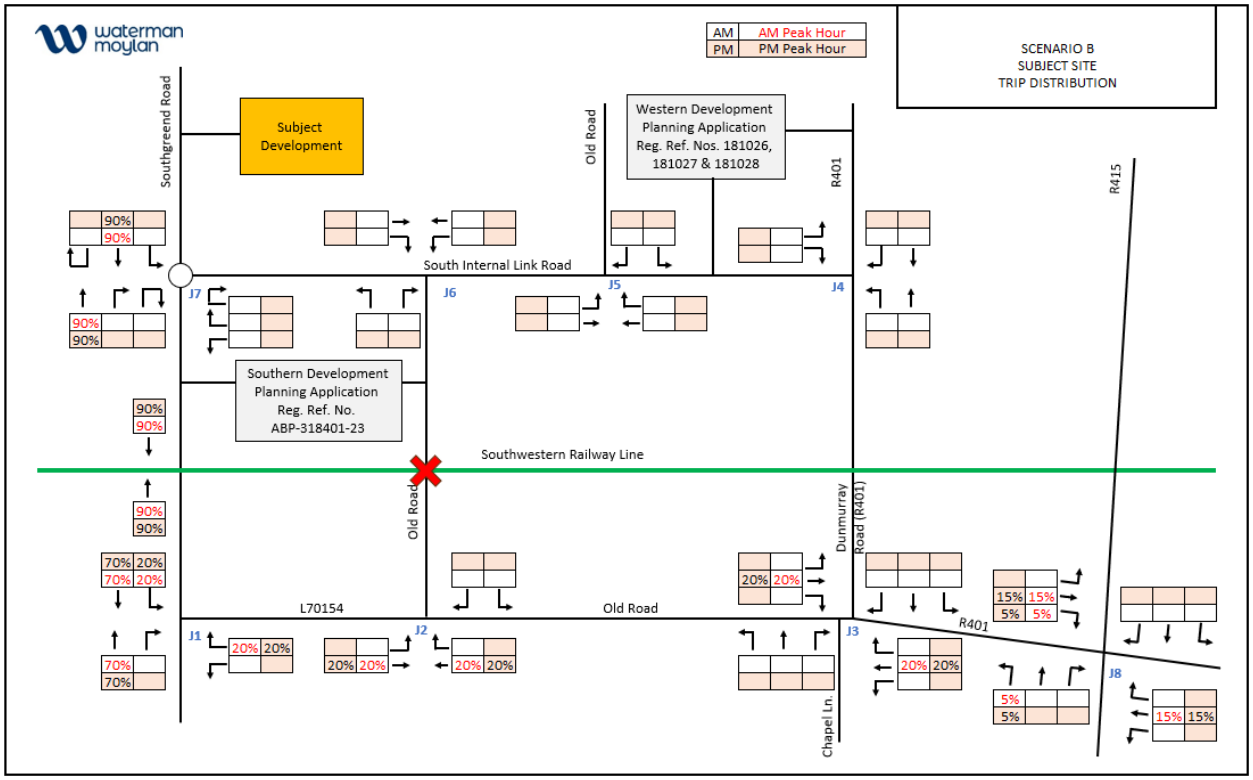


Figure 25 | *Scenario B – Subject Development - Trip Distribution*

Traffic generation for the Scenario A is shown in **Appendix E** – **Figure H**.

7.5.3 Southern Development

Under this scenario, as the Old Road has been closed to vehicular traffic, it is anticipated that traffic to/from the development will utilise Southgreen Road. Furthermore, to ensure a robust assessment, it is proposed that all southbound traffic will use the Southgreen Road Overpass.

At Junction 1, this traffic is expected to split in a manner consistent with the conditions outlined in **Section 7.4.3** above, in accordance with the approved Traffic and Transport Assessment prepared by Waterman Moylan Consulting Engineers for the Southern Development (Southgreen Development – Phase 1), as detailed in Planning Application Reg. Ref. No. ABP-318401-23.

The trip distribution flows for the Scenario B are detailed in **Appendix E – Figure I**.

7.5.4 Eastern Development

Under this scenario, as the Old Road has been closed to vehicular traffic, it is anticipated that all traffic flows previously proposed to use this route will be redirected via Southgreen Road and the Southgreen Road Overpass.

According to the information presented in **Section 7.4.4** above, and based on the previously approved Traffic and Transport Assessment prepared by NRB Consulting Engineers for the Eastern Development (Southgreen Development – Phase 1), as detailed in Planning Application Reg. Ref. No. 181026 (ABP-305526-20), trips that were originally expected to turn left at Junction 6 will instead do so at Junction 7.

The trip distribution flows for the Scenario B are detailed in **Appendix E – Figure J**.

7.6 Traffic Growth Rates

It has been assumed that the Subject Development will be constructed and full occupied by the year 2030.

As per methodology adopted in the *Transport Assessment Guidelines (May 2014)*, which this report is based on, the surveyed junctions were also assessed for the future design years of 2035 (Opening year + 5 years) and 2045 (opening year +15 years).

The traffic growth rate used to factor up the 2025 base year traffic movements (refer to **Section 3.4** of this report) is in accordance with *Table 6.2: Link-Based Growth Rates: County Annual Growth Rates (excluding Metropolitan Area)'* within the *TII Publications – Project Appraisal Guidelines for National Roads, Unit 5.3 – Travel Demand Projections (October 2021)*.

Based on the surveyed traffic count, the urban growth area has been identified as the central area of Kildare, where Light Vehicles are the predominant vehicle type. The TII forecast central growth factors assume traffic growth of 1.97% per annum between 2016 and 2030, 0.62% per annum between 2030 and 2040 and 0.53% per annum between 2040 and 2050.

The factors considered in the current assessment are shown below:

- Base line:..... 2025
- Opening year:..... 2030 = 1.102 (growth factor from 2025 to 2030)
- Opening year + 5:..... 2035 = 1.136 (growth factor from 2025 to 2035)
- Opening year + 15:..... 2045 = 1.204 (growth factor from 2025 to 2045)

8. Junction Assessment

8.1 Assessed Junctions

The assessed junctions are indicated below:

- **Junction 1:** (Existing priority-controlled T-junction): Southgreen Road / L70154 Bohereenagower Road / Green Road
- **Junction 2:** (Existing priority-controlled T-junction): Bohereenagower Road (L70154) / Old Road.
- **Junction 3:** (Existing priority-controlled T-junction): Dunmurry Road (R401) / Old Road / Chapel Lane.
- **Junction 4:** (Existing signalised T-junction): Dunmurry Road (R401) /Southgreen Road.
- **Junction 5:** (Existing priority-controlled T-junction): Old Road / South Internal Link Road.
- **Junction 6:** (Existing priority-controlled T-junction): Old Road / South Internal Link Road.
- **Junction 7:** (Existing priority-controlled three-armed roundabout): Southgreen Road / South Internal Link Road.
- **Junction 8:** (Existing signalised crossroad): R401 / R415 / R413.
- **Shuttle Link:** (Existing signalised single-lane shuttle system): Southgreen Road Railway Overpass

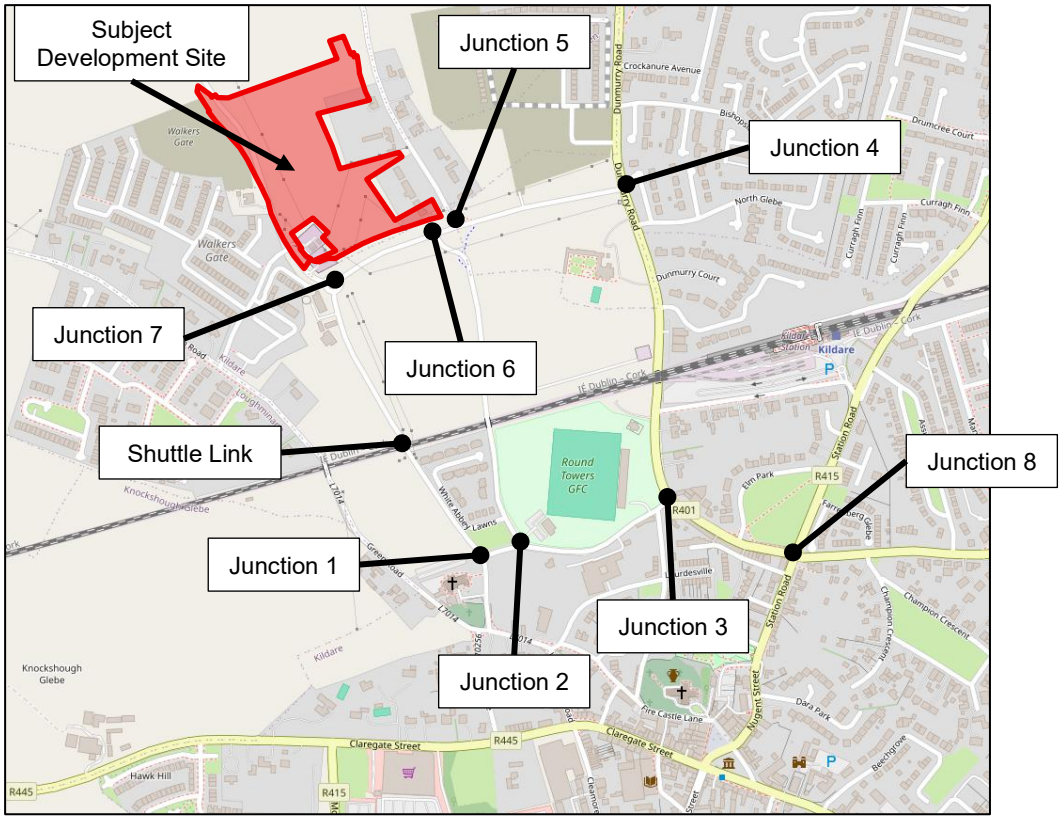


Figure 26 | *Assessed Junctions*

8.2 Traffic Impact of Proposed Development

The TII document *Traffic and Transport Assessment Guidelines (2014)* provides thresholds in relation to the impact of a proposed development on the local road network. These thresholds are introduced in **Section 1.4** of this report.

Traffic and Transport Assessment Guidelines (2014) indicates that the impact of new developments is significant if the level of traffic generated by them exceeds the thresholds of 10% for normal operating networks and 5% for congested networks. When such levels of impact are generated, a more detailed assessment should be carried out to determine the specific impact on the operational performance of the network.

Therefore, to assess the potential impact on each of the key junctions within the local road network, an evaluation was carried out for both Scenarios A and B. For Scenario A, the 2025 surveyed traffic flows (refer to **Section 7.4.1** above) and the trip generation associated of the subject development under Scenario A (refer to **Section 7.4.2** above) have been considered. For Scenario B, the 2025 redistributed traffic flows (refer to **Section 7.5.1** above) and the trip generation associated of the subject development under Scenario B (refer to **Section 7.5.2** above) have been considered.

The summary of this calculation for the Scenario A is presented in the table below.

Junction	Two-way Flows (AM) Do nothing	Two-way Flows (PM) Do Nothing	Two-way Traffic (AM) Subject Development	Two-way Traffic (PM) Subject Development	Traffic Increase (AM)	Traffic Increase (PM)
Junction 1	595	490	70	64	11.8%	13.1%
Junction 2	394	344	21	19	5.3%	5.5%
Junction 3	906	690	21	19	2.3%	2.8%
Junction 4	967	693	0	0	0.0%	0.0%
Junction 5	402	298	0	0	0.0%	0.0%
Junction 6	425	327	21	19	4.9%	5.8%
Junction 7	327	236	91	83	27.8%	35.2%
Junction 8	1250	1178	21	18	1.7%	1.5%
Shuttle Link	244	178	70	64	28.7%	36.0%

Table 11 | *Scenario A –Two-way traffic flow: 2025 Surveyed Traffic Flows and Subject Development*

The table above sets out the impact of traffic flows from the subject development on the road network for Scenario A. It can be observed that Junctions 1, 2, 6 & 7, and the shuttle Link, may experience an impact exceeding 5%. As such, no further assessment is required for the remaining junctions.

The summary of this calculation for the Scenario B is presented in the table below.

Junction	Two-way Flows (AM) Do nothing	Two-way Flows (PM) Do Nothing	Two-way Traffic (AM) Subject Development	Two-way Traffic (PM) Subject Development	Traffic Increase (AM)	Traffic Increase (PM)
Junction 1	624	551	90	83	14.4%	15.1%
Junction 2	328	350	21	19	6.4%	5.4%
Junction 3	870	688	21	19	2.4%	2.8%
Junction 4	962	691	0	0	0.0%	0.0%
Junction 5	386	283	0	0	0.0%	0.0%
Junction 6	335	218	0	0	0.0%	0.0%
Junction 7	414	289	88	82	21.3%	28.4%
Junction 8	1247	1175	21	20	1.7%	1.7%
Shuttle Link	343	244	88	82	25.7%	33.6%

Table 12 | *Scenario B – Two-way traffic flow: 2025 Redistributed Traffic Flows and Subject Development*

The table above presents the impact of traffic flows from the subject development on the road network under Scenario B. It can be observed that Junctions 1, 2 & 7, and the shuttle Link, may experience an impact exceeding 5%. Therefore, no further assessment is required for the remaining junctions.

8.3 Assessed Scenarios

The performance of the junctions has been analysed for the critical AM and PM peak hours for the following scenarios:

Scenario A:

A.1) **BASELINE 2025 / Scenario A**: with 2025 Surveyed Traffic Flows (refer to **Section 7.4.1**)

A.2) **DO NOTHING 2030 / Scenario A** (DN-2030/A) Opening Year without development: 2025 Surveyed Traffic Flows factored up (refer to **Section 7.6**) + traffic flow to/from the committed developments (refer to **Sections 7.4.3** & **7.4.4**). Traffic flow distribution is shown in **Appendix E – Figure K**.

A.3) **DO NOTHING 2035 / Scenario A** (DN-2035/A): Opening Year + 5 years, without development: 2025 Surveyed Traffic Flows factored up (refer to **Section 7.6**) + traffic flow to/from the committed developments (refer to **Sections 7.4.3** & **7.4.4**). Traffic flow distribution is shown in **Appendix E – Figure L**.

A.4) **DO NOTHING 2045 / Scenario A** (DN-2045/A): Opening Year + 15 years, without development: 2025 Surveyed Traffic Flows factored up (refer to **Section 7.6**) + traffic flow to/from the committed developments (refer to **Sections 7.4.3** & **7.4.4**). Traffic flow distribution is shown in **Appendix E – Figure M**.

A.5) **DO SOMETHING 2030 / Scenario A** (DS-2030/A) Opening Year with development: DN-2030/A + traffic to/from the Subject Development (refer to **Section 7.4.2**). Traffic flow distribution is shown in **Appendix E – Figure N**.

A.6) **DO SOMETHING 2035 / Scenario A** (DS-2035/A) Opening Year + 5 years, with development: DN-2035/A + traffic to/from the Subject Development (refer to **Section 7.4.2**). Traffic flow distribution shown in **Appendix E – Figure O**.

A.7) **DO SOMETHING 2045 / Scenario A** (DS-2045/A) Opening Year + 15 years, with development: DN-2045/A + traffic to/from the Subject Development (refer to **Section 7.4.2**). Traffic flow distribution is shown in **Appendix E – Figure P.**

Scenario B:

A.8) **BASELINE 2025 / Scenario B**: with 2025 Redistributed Traffic Flows (refer to **Section 7.5.1**)

A.9) **DO NOTHING 2030 / Scenario B** (DN-2030/B) Opening Year without development: 2025 Redistributed Traffic Flows factored up (refer to **Section 7.6**) + traffic flow to/from the committed developments (refer to **Sections 7.5.3** & **7.5.4**). Traffic flow distribution is shown in **Appendix E – Figure Q**.

A.10) **DO NOTHING 2035 / Scenario B** (DN-2035/B): Opening Year + 5 years, without development: 2025 Redistributed Traffic Flows factored up (refer to **Section 7.6**) + traffic flow to/from the committed developments (refer to **Sections 7.5.3** & **7.5.4**). Traffic flow distribution is shown in **Appendix E – Figure R**.

A.11) **DO NOTHING 2045 / Scenario B** (DN-2045/B): Opening Year + 15 years, without development: 2025 Redistributed Traffic Flows factored up (refer to **Section 7.6**) + traffic flow to/from the committed developments (refer to **Sections 7.5.3** & **7.5.4**). Traffic flow distribution is shown in **Appendix E – Figure S**.

A.12) **DO SOMETHING 2030 / Scenario B** (DS-2030/B) Opening Year with development: DN-2030/B + traffic to/from the Subject Development (refer to **Section 7.5.2**). Traffic flow distribution is shown in **Appendix E – Figure T**.

A.13) **DO SOMETHING 2035 / Scenario B** (DS-2035/B) Opening Year + 5 years, with development: DN-2035/B + traffic to/from the Subject Development (refer to **Section 7.5.2**). Traffic flow distribution shown in **Appendix E – Figure U**.

A.14) **DO SOMETHING 2045 / Scenario B** (DS-2045/B) Opening Year + 15 years, with development: DN-2045/B + traffic to/from the Subject Development (refer to **Section 7.5.2**). Traffic flow distribution is shown in **Appendix E – Figure V.**

8.4 Modelling Background

There are various modelling software packages available to assess every type of junction. Waterman Moylan Consulting Engineers uses ARCADY, TRANSYT and PICADY to analyse roundabouts, signalised and priority junctions, respectively.

ARCADY is a software for modelling roundabouts. This programme utilises roundabouts geometry and traffic flows input by the user to determine Ratio of Flow to Capacity (RFC) and queue length for each link on the roundabout.

TRANSYT (Traffic Network Study Tool) software is a widely accepted software for modelling signalled controlled junctions. This programme utilises the phases input by the user and optimises their timings over a cycle time. The outputs of a TRANSYT assessment include a Degree of Saturation percentage (DOS%) figure and queue length for each link on the road network.

PICADY is a software for modelling priority-controlled junctions. This programme utilises junction's geometry and traffic flows input by the user to determine Ratio of Flow to Capacity (RFC) and queue length for each link on the junction.

The results of the model include the following:

- DOS% / RFC ratio represents the ratio of demand flow to capacity. The practical capacity threshold is typically set at 0.85. A value below 0.85 indicates that the junction is operating in an efficient and stable state. A value between 0.85 and 1 represents variable operation and can be operating adequately if queuing and delay are deemed to be within an acceptable range. However, a junction is typically considered to be operating satisfactorily when the DOS%/RFC of each link does not exceed 0.9. A value exceeding 1 indicates a congested condition.
- Max Queue Length: This represents the maximum queue length of vehicles waiting to enter the junction on each arm.
- Average Delay: This shows the average amount of traffic delay at the junction per vehicle over the peak hour period.
- PCU: Passenger Car Unit. 1 car / LGV equals 1 PCU, 1 Medium HGV equals 1.5 PCU, 1 Bus equals 2.0 PCU, 1 Large HGV equals 2.3 PCU. 1 PCU equals 5.75m.

8.5 Assessment Results: Scenario A

The main results of the traffic assessment for each section are presented below. Further details can be found in **Appendix F**.

8.5.1 Junction 1: Southgreen Road / L70154 Bohereenagower Road / Green Road

Junction 1 is an existing priority-controlled T-junction located at the intersection of Southgreen Road, L70154 Bohereenagower Road & Green Road.

The arms of the junction were labelled as follows within the PICADY model:

- Arm A: Southgreen Road (S).
- Arm B: Southgreen Road (N).
- Arm C: L70154 (E).

A summary of the key results obtained from the PICADY model analysis is presented below.

Arm (Mov.)	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2025 BASELINE						
Stream B-C	0.1	8.77	0.05	0	7.96	0.04
Stream B-A	0.4	11.5	0.28	0.2	9.77	0.17
Stream C-AB	0	6.68	0.02	0	6.66	0.04
2030 DO NOTHING						
Stream B-C	0.1	10.2	0.07	0	8.66	0.05
Stream B-A	0.7	15.07	0.42	0.3	11.31	0.25
Stream C-AB	0	6.88	0.02	0	6.98	0.04
2030 DO SOMETHING						
Stream B-C	0.1	12.12	0.08	0.1	9.22	0.05
Stream B-A	1.2	19.41	0.55	0.5	12.56	0.32
Stream C-AB	0	6.97	0.02	0	7.13	0.05

2035 DO NOTHING						
Stream B-C	0.1	10.22	0.07	0	8.59	0.05
Stream B-A	0.7	14.99	0.43	0.3	11.14	0.25
Stream C-AB	0	6.86	0.02	0	6.93	0.05
2035 DO SOMETHING						
Stream B-C	0.1	12.14	0.08	0.1	9.14	0.05
Stream B-A	1.2	19.28	0.55	0.5	12.36	0.32
Stream C-AB	0	6.95	0.02	0	7.08	0.05
2045 DO NOTHING						
Stream B-C	0.1	10.58	0.07	0.1	8.73	0.05
Stream B-A	0.8	15.92	0.45	0.4	11.52	0.26
Stream C-AB	0	6.94	0.03	0.1	7	0.05
2045 DO SOMETHING						
Stream B-C	0.1	12.82	0.09	0.1	9.31	0.05
Stream B-A	1.4	20.86	0.58	0.5	13.73	0.33
Stream C-AB	0	7.03	0.03	0.1	7.15	0.05

Table 13 | *Junction 1 – Assessment Result – Scenario A*

The analysis summarised above indicates that the signalised junction 1 would operate within capacity for all assessed scenarios, including the 2045 DO SOMETHING (DS-2045/A) scenario during both peak hours.

8.5.2 Junction 2: Bohereenagower Road (L70154) / Old Road

Junction 2 is an existing priority-controlled T-junction located at the intersection of Bohereenagower Road (L70154) and Old Road.

The arms of the junction were labelled as follows within the PICADY model:

- Arm A: Bohereenagower Road (L70154) (W).
- Arm B: Old Road (N).
- Arm C: Bohereenagower Road (L70154) (E).

A summary of the key results obtained from the PICADY model analysis is presented below.

Arm (Mov.)	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2025 BASELINE						
Stream B-AC	0.1	8.36	0.12	0.1	8	0.09
Stream C-AB	0	5.61	0.02	0	5.59	0.02
2030 DO NOTHING						
Stream B-AC	0.1	8.36	0.12	0.1	8	0.09
Stream C-AB	0	5.61	0.02	0	5.59	0.02
2030 DO SOMETHING						

Stream B-AC	0.3	9.63	0.24	0.2	8.84	0.17
Stream C-AB	0.1	5.69	0.04	0.1	5.78	0.07
2035 DO NOTHING						
Stream B-AC	0.2	8.61	0.16	0.1	8.21	0.12
Stream C-AB	0	5.59	0.03	0.1	5.63	0.04
2035 DO SOMETHING						
Stream B-AC	0.2	8.63	0.18	0.1	8.19	0.13
Stream C-AB	0.1	5.65	0.04	0.1	5.73	0.07
2045 DO NOTHING						
Stream B-AC	0.2	8.8	0.17	0.1	8.37	0.13
Stream C-AB	0	5.56	0.03	0.1	5.6	0.04
2045 DO SOMETHING						
Stream B-AC	0.2	8.83	0.19	0.2	8.36	0.14
Stream C-AB	0.1	5.62	0.04	0.1	5.71	0.07

Table 14 | *Junction 2 – Assessment Result – Scenario A*

The analysis summarised above indicates that the signalised junction 2 would operate within capacity for all assessed scenarios, including the 2045 DO SOMETHING (DS-2045/A) scenario during both peak hours.

8.5.3 Junction 6: Old Road / South Internal Link Road

Junction 6 is an existing priority-controlled T-junction located at the intersection of South Internal Link Road, & Old Road.

The arms of the junction were labelled as follows within the PICADY model:

- Arm A: South Internal Link Road (E).
- Arm B: Old Road (S).
- Arm C: South Internal Link Road (W).

A summary of the key results obtained from the PICADY model analysis is presented below.

Arm (Mov.)	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2025 BASELINE						
Stream B-AC	0.3	10.07	0.24	0.2	8.51	0.14
Stream C-AB	0	5.5	0.02	0	5.83	0.04
2030 DO NOTHING						
Stream B-AC	0.4	11.33	0.31	0.3	9.62	0.21
Stream C-AB	0	5.52	0.03	0.1	5.88	0.04
2030 DO SOMETHING						
Stream B-AC	0.5	11.58	0.32	0.3	9.74	0.24
Stream C-AB	0.1	5.63	0.06	0.1	5.98	0.06

2035 DO NOTHING						
Stream B-AC	0.4	10.78	0.28	0.2	8.86	0.16
Stream C-AB	0	5.48	0.03	0.1	5.86	0.04
2035 DO SOMETHING						
Stream B-AC	0.4	11	0.29	0.2	8.9	0.18
Stream C-AB	0.1	5.59	0.06	0.1	5.96	0.06
2045 DO NOTHING						
Stream B-AC	0.4	11.2	0.3	0.2	9.03	0.17
Stream C-AB	0	5.46	0.03	0.1	5.87	0.05
2045 DO SOMETHING						
Stream B-AC	0.5	11.45	0.31	0.2	9.11	0.2
Stream C-AB	0.1	5.57	0.06	0.1	5.97	0.06

Table 15 | *Junction 6 – Assessment Result – Scenario A*

The analysis summarised above indicates that the signalised junction 6 would operate within capacity for all assessed scenarios, including the 2045 DO SOMETHING (DS-2045/A) scenario during both peak hours.

8.5.4 Junction 7: Southgreen Road / South Internal Link Road

Junction 7 is an existing priority-controlled three-armed roundabout located at the intersection of Southgreen Road & South Internal Link Road.

The arms of the junction were labelled as follows within the ARCADY model:

- Arm 1: South Internal Link Road (E).
- Arm 2: Southgreen Road (S).
- Arm 3: Southgreen Road (N).

A summary of the key results obtained from the PICADY model analysis is presented below.

Arm (Mov.)	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2025 BASELINE						
Arm 1	0.1	3.58	0.11	0.1	3.31	0.07
Arm 2	0.1	4.27	0.11	0.1	4.27	0.12
Arm 3	0.1	4.37	0.11	0.1	3.98	0.06
2030 DO NOTHING						
Arm 1	0.2	3.79	0.13	0.1	3.4	0.08
Arm 2	0.2	4.44	0.14	0.2	4.58	0.17
Arm 3	0.2	4.78	0.17	0.1	4.18	0.09
2030 DO SOMETHING						
Arm 1	0.2	4.01	0.15	0.1	3.51	0.09
Arm 2	0.2	4.62	0.17	0.3	4.93	0.22

Arm 3	0.3	5.25	0.25	0.2	4.38	0.13
2035 DO NOTHING						
Arm 1	0.2	3.81	0.13	0.1	3.4	0.08
Arm 2	0.2	4.44	0.14	0.2	4.6	0.17
Arm 3	0.2	4.8	0.18	0.1	4.18	0.09
2035 DO SOMETHING						
Arm 1	0.2	4.03	0.15	0.1	3.51	0.09
Arm 2	0.2	4.63	0.17	0.3	4.95	0.22
Arm 3	0.3	5.28	0.25	0.1	4.38	0.13
2045 DO NOTHING						
Arm 1	0.2	3.86	0.14	0.1	3.43	0.09
Arm 2	0.2	4.51	0.15	0.2	4.66	0.18
Arm 3	0.2	4.9	0.19	0.1	4.22	0.09
2045 DO SOMETHING						
Arm 1	0.2	4.09	0.16	0.1	3.53	0.1
Arm 2	0.2	4.7	0.18	0.3	5.03	0.23
Arm 3	0.4	5.39	0.26	0.2	4.42	0.13

Table 16 | *Junction 7 – Assessment Result – Scenario A*

The analysis summarised above indicates that the signalised junction 7 would operate within capacity for all assessed scenarios, including the 2045 DO SOMETHING (DS-2045/A) scenario during both peak hours.

8.5.5 Shuttle Link: Southgreen Road Railway Overpass

The Shuttle Link is an existing signalised single-lane shuttle system located on Southgreen Road Railway Overpass.

The TRANSYT analysis was undertaken using a two-phase signal cycle: Phase A for southbound traffic and Phase B for northbound traffic. A cycle time of 60 seconds was applied, with intergreen periods of 12 seconds allocated to each phase. These intergreen values were determined based on an 80-metre distance between the two stop lines. Assuming a conservative maximum vehicle speed of 30 km/h, it would take approximately 9.6 seconds for the last vehicle to clear the conflict zone, thereby justifying the selected intergreen duration.

The main traffic light results are summarised below.

AM Peak Hour				
Direction	Phase	Cycle Time	Phase Time	Intergreen
Southbound	A	60 seconds	21 seconds	12 seconds

Northbound	B	60 seconds	15 seconds	12 seconds

Table 17 | *Shuttle Link – Traffic Light Results – AM Peak Hour – Scenario A*

PM Peak Hour				
Direction	Phase	Cycle Time	Phase Time	Intergreen
Southbound	A	60 seconds	15 seconds	12 seconds
Northbound	B	60 seconds	21 seconds	12 seconds

Table 18 | *Shuttle Link – Traffic Light Results – PM Peak Hour – Scenario A*

The results of the Shuttle Link model based on the traffic flows indicates above are shown in Table below.

Arm (Mov.)	AM			PM		
	DOS (%)	Delay (s)	Queue (PCU)	DOS (%)	Delay (s)	Queue (PCU)
2025 BASELINE						
Southbound	24	18.47	1.57	18	13.47	1.31
Northbound	19	13.61	1.43	13	17.32	0.78
2030 DO NOTHING						
Southbound	30	19.13	1.93	25	14.18	1.93
Northbound	27	14.4	2.15	18	17.83	1.15
2030 DO SOMETHING						
Southbound	35	19.83	2.33	31	14.83	2.47
Northbound	34	15.21	2.8	24	18.39	1.49
2035 DO NOTHING						
Southbound	31	19.23	1.99	26	14.24	1.98
Northbound	28	14.47	2.2	19	17.88	1.17
2035 DO SOMETHING						
Southbound	36	19.94	2.39	32	14.89	2.58
Northbound	35	15.28	2.85	24	18.44	1.55
2045 DO NOTHING						
Southbound	32	19.45	2.14	27	14.37	2.13
Northbound	29	14.62	2.31	20	17.99	1.24
2045 DO SOMETHING						
Southbound	38	20.18	2.51	33	15.05	2.69
Northbound	36	15.45	2.97	25	18.57	1.62

Table 19 | *Shuttle Link – Assessment Result – Scenario A*

As can be seen from the analysis results above, the shuttle link would have capacity to accommodate the forecast demand arising from the new approved and proposed developments to the north of the railway line during both peak hours.

8.6 Assessment Results: Scenario B

The main results of the traffic assessment for each section are presented below. Further details can be found in **Appendix G**.

8.6.1 Junction 1: Southgreen Road / L70154 Bohereenagower Road / Green Road

Junction 1 is an existing priority-controlled T-junction located at the intersection of Southgreen Road, L70154 Bohereenagower Road & Green Road.

The arms of the junction were labelled as follows within the PICADY model:

- Arm A: Southgreen Road (S).
- Arm B: Southgreen Road (N).
- Arm C: L70154 (E).

A summary of the key results obtained from the PICADY model analysis is presented below.

Arm (Mov.)	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2025 BASELINE						
Stream B-C	0.2	11.28	0.14	0.1	8.93	0.11
Stream B-A	1.1	18.62	0.51	0.5	13.64	0.32
Stream C-AB	0	7.02	0.05	0.1	7.23	0.08
2030 DO NOTHING						
Stream B-C	0.1	10.27	0.13	0.1	8.5	0.11
Stream B-A	0.9	16.41	0.45	0.4	12.79	0.28
Stream C-AB	0	7.01	0.05	0.1	7.16	0.08
2030 DO SOMETHING						
Stream B-C	0.3	15.21	0.22	0.2	9.8	0.14
Stream B-A	1.9	26.48	0.65	0.7	15.77	0.4
Stream C-AB	0.1	7.21	0.06	0.1	7.57	0.11
2035 DO NOTHING						
Stream B-C	0.1	10.27	0.13	0.1	8.5	0.11
Stream B-A	0.9	16.41	0.45	0.4	12.79	0.28
Stream C-AB	0	7.01	0.05	0.1	7.16	0.08
2035 DO SOMETHING						
Stream B-C	0.2	12.99	0.2	0.2	9.27	0.13
Stream B-A	1.5	22.16	0.58	0.6	14.62	0.35
Stream C-AB	0.1	7.19	0.06	0.1	7.5	0.11
2045 DO NOTHING						
Stream B-C	0.2	12.24	0.16	0.1	9.23	0.12
Stream B-A	1.3	20.85	0.56	0.6	14.46	0.35

Stream C-AB	0.1	7.14	0.05	0.1	7.35	0.08
2045 DO SOMETHING						
Stream B-C	0.3	17.82	0.26	0.2	10.22	0.15
Stream B-A	2.4	31.33	0.7	0.8	16.88	0.43
Stream C-AB	0.1	7.34	0.06	0.1	7.7	0.11

Table 20 | *Junction 1 – Assessment Result – Scenario B*

The analysis summarised above indicates that the signalised junction 1 would operate within capacity f for all assessed scenarios, including the 2045 DO SOMETHING (DS-2045/B) scenario during both peak hours.

8.6.2 Junction 2: Bohereenagower Road (L70154) / Old Road

Junction 2 is an existing priority-controlled T-junction located at the intersection of Bohereenagower Road (L70154) and Old Road.

The arms of the junction were labelled as follows within the PICADY model:

- Arm A: Bohereenagower Road (L70154) (W).
- Arm B: Old Road (N).
- Arm C: Bohereenagower Road (L70154) (E).

A summary of the key results obtained from the PICADY model analysis is presented below.

Arm (Mov.)	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2025 BASELINE						
Stream B-AC	0	7.53	0.02	0	7.53	0.01
Stream C-AB	0	5.31	0	0	5.29	0
2030 DO NOTHING						
Stream B-AC	0	7.75	0.03	0	7.69	0.01
Stream C-AB	0	5.25	0	0	5.2	0
2030 DO SOMETHING						
Stream B-AC	0	7.83	0.03	0	7.75	0.01
Stream C-AB	0	5.24	0	0	5.16	0
2035 DO NOTHING						
Stream B-AC	0	7.78	0.03	0	7.82	0.01
Stream C-AB	0	5.23	0	0	5.18	0
2035 DO SOMETHING						
Stream B-AC	0	7.87	0.03	0	7.89	0.01
Stream C-AB	0	5.22	0	0	5.14	0
2045 DO NOTHING						
Stream B-AC	0	7.91	0.03	0	7.89	0.01
Stream C-AB	0	5.19	0	0	5.13	0

2045 DO SOMETHING						
Stream B-AC	0	7.99	0.03	0	7.97	0.01
Stream C-AB	0	5.18	0	0	5.1	0

Table 21 | *Junction 2 – Assessment Result – Scenario A*

The analysis summarised above indicates that the signalised junction 2 would operate within capacity for all assessed scenarios, including the 2045 DO SOMETHING (DS-2045/A) scenario during both peak hours.

8.6.3 Junction 7: Southgreen Road / South Internal Link Road

Junction 7 is an existing priority-controlled three-armed roundabout located at the intersection of Southgreen Road & South Internal Link Road.

The arms of the junction were labelled as follows within the ARCADY model:

- Arm 1: South Internal Link Road (E).
- Arm 2: Southgreen Road (S).
- Arm 3: Southgreen Road (N).

Arm (Mov.)	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2025 BASELINE						
Arm 1	0.3	4.1	0.24	0.3	3.89	0.2
Arm 2	0.2	4.79	0.17	0.2	4.59	0.13
Arm 3	0.3	5.41	0.26	0.3	5.16	0.25
2030 DO NOTHING						
Arm 1	0.2	4.02	0.16	0.1	3.58	0.1
Arm 2	0.4	5.02	0.25	0.3	4.95	0.24
Arm 3	0.3	5.6	0.21	0.1	4.64	0.12
2030 DO SOMETHING						
Arm 1	0.2	4.32	0.17	0.1	3.7	0.1
Arm 2	0.4	5.25	0.28	0.5	5.38	0.3
Arm 3	0.4	6.27	0.29	0.2	4.89	0.16
2035 DO NOTHING						
Arm 1	0.2	3.87	0.13	0.1	3.5	0.08
Arm 2	0.3	4.95	0.24	0.3	4.81	0.22
Arm 3	0.3	5.54	0.21	0.1	4.52	0.12
2035 DO SOMETHING						
Arm 1	0.2	4.15	0.14	0.1	3.61	0.08
Arm 2	0.4	5.17	0.27	0.4	5.21	0.28
Arm 3	0.4	6.19	0.29	0.2	4.75	0.16
2045 DO NOTHING						

Arm 1	0.2	4.11	0.17	0.1	3.62	0.1
Arm 2	0.4	5.18	0.27	0.4	5.08	0.26
Arm 3	0.3	5.89	0.23	0.2	4.74	0.13
2045 DO SOMETHING						
Arm 1	0.2	4.43	0.19	0.1	3.74	0.11
Arm 2	0.5	5.42	0.3	0.5	5.53	0.32
Arm 3	0.5	6.63	0.31	0.2	5	0.17

Table 22 | *Junction 7 – Assessment Result – Scenario B*

The analysis summarised above indicates that the signalised junction 7 would operate within capacity f for all assessed scenarios, including the 2045 DO SOMETHING (DS-2045/B) scenario during both peak hours.

8.6.4 Shuttle Link: Southgreen Road Railway Overpass

The Shuttle Link is an existing signalised single-lane shuttle system located on Southgreen Road Railway Overpass.

The TRANSYT analysis was undertaken using a two-phase signal cycle: Phase A for southbound traffic and Phase B for northbound traffic. A cycle time of 60 seconds was applied, with intergreen periods of 12 seconds allocated to each phase. These intergreen values were determined based on an 80-metre distance between the two stop lines. Assuming a conservative maximum vehicle speed of 30 km/h, it would take approximately 9.6 seconds for the last vehicle to clear the conflict zone, thereby justifying the selected intergreen duration.

The main traffic light results are summarised below.

AM Peak Hour				
Direction	Phase	Cycle Time	Phase Time	Intergreen
Southbound	A	60 seconds	19 seconds	12 seconds
Northbound	B	60 seconds	17 seconds	12 seconds

Table 23 | *Shuttle Link – Traffic Light Results – AM Peak Hour – Scenario B*

PM Peak Hour				
Direction	Phase	Cycle Time	Phase Time	Intergreen
Southbound	A	60 seconds	15 seconds	12 seconds
Northbound	B	60 seconds	21 seconds	12 seconds

Table 24 | *Shuttle Link – Traffic Light Results – PM Peak Hour – Scenario B*

The results of the Shuttle Link model based on the traffic flows indicates above are shown in Table below.

Arm (Mov.)	AM			PM		
	DOS (%)	Delay (s)	Queue (PCU)	DOS (%)	Delay (s)	Queue (PCU)
2025 BASELINE						
Southbound	36	18.42	2.68	23	14.02	1.8
Northbound	24	15.5	1.78	19	17.86	1.16
2030 DO NOTHING						

Southbound	46	19.94	3.53	37	15.54	3.04
Northbound	41	17.46	3.24	30	19.15	1.94
2030 DO SOMETHING						
Southbound	52	20.95	4.07	45	16.65	3.9
Northbound	51	19.14	4.33	37	20.12	2.48
2035 DO NOTHING						
Southbound	45	19.69	3.41	34	15.17	2.78
Northbound	36	16.87	2.81	26	18.73	1.71
2035 DO SOMETHING						
Southbound	50	20.66	3.94	42	16.19	3.54
Northbound	47	18.39	3.84	34	19.62	2.23
2045 DO NOTHING						
Southbound	50	20.62	3.92	40	15.87	3.32
Northbound	43	17.83	3.46	32	19.39	2.11
2045 DO SOMETHING						
Southbound	55	21.74	4.49	47	17.02	4.13
Northbound	53	19.63	4.57	39	20.4	2.67

Table 25 | *Shuttle Link – Assessment Result – Scenario B*

As can be seen from the analysis results above, the shuttle link would have capacity to accommodate the forecast demand arising from the new approved and proposed developments to the north of the railway line during both peak hours.

8.7 Summary of Assessment Results

The results of the analysis demonstrated that all junctions assessed and the shuttle link on Southgreen Road would operate within their respective capacities for all years and scenarios assessed.

9. Junction Assessment: Stress Scenario following Point 7 of the Received FI request.

This section responds to the Further Information Request (FI) issued by Kildare County Council in respect of Planning Application Reg. Ref. No. 26/60248, dated 30/04/2026. An extract of the FI relating to the Traffic Assessment is provided below. Item 7 states that:

> *"The Applicant is requested to revise the Traffic and Transport Impact Assessment to apply an outbound trip rate of 1 during the morning peak."*

Based on the above, this report assesses the impact of the Subject Site on the existing road network, adopting an outbound AM peak hour trip rate of 1.

This stress-test assess the traffic impact for the Do Something Scenarios, covering both Scenario A and Scenario B (Refer to **Section 7.3**). The Do-Nothing scenarios will reflect same behaviour, as outlined in **Section 8.3**.

The Subject Site traffic distribution is assumed to remain consistent with that presented in **Sections 7.4** and **Section 7.5**.

The committed and potential future developments are outlined in **Section 7.2**, with their respective distributions provided in **Sections 7.4** and **Section 7.5**.

9.1 Trip Rates

This stress test considers the adopted Trip Rates indicated in **Table 8** in **Section 7.1**, increasing them by 50% and a departure trip rate of 1 during the AM peak hour.

The considered Trip Rates are presented in **Table 26** below.

Trip Rates	AM Peak Hour		PM Peak Hour	
	Arrivals	Departures	Arrivals	Departures
Trip Rates	0.323 per unit	1 per unit	0.560 per unit	0.369 per unit

Table 26 | *Stress Scenario - Trip Rates*

9.2 Trip Generation

9.2.1 Subject Development

The Subject Development consists of 146 no. residential units comprising 136 no. houses and 10 no. apartment units. The AM and PM peak hour trip generation to/from the proposed development for the stress scenario is shown in Table below.

Land Use	AM Peak Hour		PM Peak Hour	
	Arrivals	Departures	Arrivals	Departures
146 no. units	48	146	82	54
Total (146 no. units)	**194**		**136**	

Table 27 | *Stress Scenario - Trip Generation – Subject Development*

It has been estimated that the proposed development will generate a total of 194 vehicular movements in the AM peak hour (48 inbound and 146 outbound) and a total of 136 vehicular movements in the PM peak hour (82 inbound and 54 outbound).

Traffic generation for the Scenario A is shown in **Appendix E** – **Figure W**, and for the Scenario A is shown in **Appendix E** – **Figure X**.

9.3 Traffic Impact of Proposed Development

The TII document *Traffic and Transport Assessment Guidelines (2014)* provides thresholds in relation to the impact of a proposed development on the local road network. These thresholds are introduced in **Section 1.4** of this report.

Traffic and Transport Assessment Guidelines (2014) indicates that the impact of new developments is significant if the level of traffic generated by them exceeds the thresholds of 10% for normal operating networks and 5% for congested networks. When such levels of impact are generated, a more detailed assessment should be carried out to determine the specific impact on the operational performance of the network.

Therefore, to assess the potential impact on each of the key junctions within the local road network, an evaluation was carried out for both Scenarios A and B. For Scenario A, the 2025 surveyed traffic flows (refer to **Section 7.4.1** above) and the trip generation associated of the subject development under Scenario A (refer to **Section 7.4.2** above) have been considered. For Scenario B, the 2025 redistributed traffic flows (refer to **Section 7.5.1** above) and the trip generation associated of the subject development under Scenario B (refer to **Section 7.5.2** above) have been considered.

The summary of this calculation for the Scenario A is presented in the table below.

Junction	Two-way Flows (AM) Do nothing	Two-way Flows (PM) Do Nothing	Two-way Traffic (AM) Subject Development	Two-way Traffic (PM) Subject Development	Traffic Increase (AM)	Traffic Increase (PM)
Junction 1	595	490	137	95	23.0%	19.4%
Junction 2	394	344	40	28	10.2%	8.1%
Junction 3	906	690	40	28	4.4%	4.1%
Junction 4	967	693	0	0	0.0%	0.0%
Junction 5	402	298	0	0	0.0%	0.0%
Junction 6	425	327	40	28	9.4%	8.6%
Junction 7	327	236	177	123	54.1%	52.1%
Junction 8	1250	1178	41	28	3.3%	2.4%
Shuttle Link	244	178	137	95	56.1%	53.4%

Table 28 | *Scenario A –Two-way traffic flow: 2025 Surveyed Traffic Flows and Subject Development*

The table above sets out the impact of traffic flows from the subject development on the road network for Scenario A. It can be observed that Junctions 1, 2, 6 & 7, and the shuttle Link, may experience an impact exceeding 5%. As such, no further assessment is required for the remaining junctions.

The summary of this calculation for the Scenario B is presented in the table below.

Junction	Two-way Flows (AM) Do nothing	Two-way Flows (PM) Do Nothing	Two-way Traffic (AM) Subject Development	Two-way Traffic (PM) Subject Development	Traffic Increase (AM)	Traffic Increase (PM)
Junction 1	624	551	176	123	28.2%	22.3%
Junction 2	328	350	40	28	12.2%	8.0%
Junction 3	870	688	40	28	4.6%	4.1%
Junction 4	962	691	0	0	0.0%	0.0%
Junction 5	386	283	0	0	0.0%	0.0%
Junction 6	335	218	0	0	0.0%	0.0%
Junction 7	414	289	175	122	42.3%	42.2%
Junction 8	1247	1175	41	30	3.3%	2.6%
Shuttle Link	343	244	175	122	51.0%	50.0%

Table 29 | *Scenario B – Two-way traffic flow: 2025 Redistributed Traffic Flows and Subject Development*

The table above presents the impact of traffic flows from the subject development on the road network under Scenario B. It can be observed that Junctions 1, 2 & 7, and the shuttle Link, may experience an impact exceeding 5%. Therefore, no further assessment is required for the remaining junctions.

9.4 Assessed Scenarios for Stress Scenario

Stress Test Scenario A: Old Road link opens to traffic

A.1) **DO SOMETHING 2030 / Stress Test Scenario A (ST-2030/A):** DN-2030/A (refer to **Section 8.3**) + 50% increase on the adopted Trip Rates (refer to **Section 9.1**). Traffic flow distribution is shown in **Appendix E – Figure Y.**

A.2) **DO SOMETHING 2035 / Stress Test Scenario A (ST-2035/A):** DN-2035/A (refer to **Section 8.3**) + 50% increase on the adopted Trip Rates (refer to **Section 9.1**). Traffic flow distribution is shown in **Appendix E – Figure Z**

A.3) **DO SOMETHING 2045 / Stress Test Scenario A (ST-2045/A):** DN-2045/A (refer to **Section 8.3**) + 50% increase on the adopted Trip Rates (refer to **Section 9.1**). Traffic flow distribution is shown in **Appendix E – Figure AA.**

Stress Test Scenario B: Old Road link closes to traffic

A.4) **DO SOMETHING 2030 / Stress Test Scenario B (ST-2030/B):** DN-2030/B (refer to **Section 8.3**) + 50% increase on the adopted Trip Rates (refer to **Section 9.1**). Traffic flow distribution is shown in **Appendix E – Figure AB.**

A.5) **DO SOMETHING 2035 / Stress Test Scenario B (ST-2035/B):** DN-2035/B (refer to **Section 8.3**) + 50% increase on the adopted Trip Rates (refer to **Section 9.1**). Traffic flow distribution is shown in **Appendix E – Figure AC.**

A.6) **DO SOMETHING 2045 / Stress Test Scenario B (ST-2045/B):** DN-2045/B (refer to **Section 8.3**) + 50% increase on the adopted Trip Rates (refer to **Section 9.1**). Traffic flow distribution is shown in **Appendix E – Figure AD.**

9.5 Assessment Results: Scenario A

The main results of the traffic assessment for each section are presented below. Further details can be found in **Appendix H**.

9.5.1 Junction 1: Southgreen Road / L70154 Bohereenagower Road / Green Road

Junction 1 is an existing priority-controlled T-junction located at the intersection of Southgreen Road, L70154 Bohereenagower Road & Green Road.

The arms of the junction were labelled as follows within the PICADY model:

- Arm A: Southgreen Road (S).
- Arm B: Southgreen Road (N).
- Arm C: L70154 (E).

A summary of the key results obtained from the PICADY model analysis is presented below.

Arm (Mov.)	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2025 BASELINE						
Stream B-C	0.1	8.77	0.05	0	7.96	0.04
Stream B-A	0.4	11.5	0.28	0.2	9.77	0.17
Stream C-AB	0	6.68	0.02	0	6.66	0.04
2030 DO NOTHING						
Stream B-C	0.1	10.2	0.07	0	8.66	0.05
Stream B-A	0.7	15.07	0.42	0.3	11.31	0.25
Stream C-AB	0	6.88	0.02	0	6.98	0.04
2030 DO SOMETHING						
Stream B-C	0.1	16.91	0.11	0.1	9.49	0.05
Stream B-A	2.2	28.78	0.7	0.5	13.19	0.35
Stream C-AB	0	7.01	0.03	0	7.2	0.05
2035 DO NOTHING						
Stream B-C	0.1	10.22	0.07	0	8.59	0.05
Stream B-A	0.7	14.99	0.43	0.3	11.14	0.25
Stream C-AB	0	6.86	0.02	0	6.93	0.05
2035 DO SOMETHING						
Stream B-C	0.1	16.9	0.11	0.1	9.41	0.05
Stream B-A	2.2	28.5	0.7	0.5	12.97	0.35
Stream C-AB	0	6.98	0.03	0.1	7.14	0.05

2045 DO NOTHING						
Stream B-C	0.1	10.58	0.07	0.1	8.73	0.05
Stream B-A	0.8	15.92	0.45	0.4	11.52	0.26
Stream C-AB	0	6.94	0.03	0.1	7	0.05
2045 DO SOMETHING						
Stream B-C	0.1	18.88	0.13	0.1	9.59	0.05
Stream B-A	2.6	32.01	0.73	0.6	14.43	0.36
Stream C-AB	0	7.07	0.03	0.1	7.21	0.05

Table 30 | *Junction 1 – Assessment Result – Scenario A*

The analysis summarised above indicates that the signalised junction 1 would operate within capacity for all assessed scenarios, including the 2045 DO SOMETHING (DS-2045/A) scenario during both peak hours.

9.5.2 Junction 2: Bohereenagower Road (L70154) / Old Road

Junction 2 is an existing priority-controlled T-junction located at the intersection of Bohereenagower Road (L70154) and Old Road.

The arms of the junction were labelled as follows within the PICADY model:

- Arm A: Bohereenagower Road (L70154) (W).
- Arm B: Old Road (N).
- Arm C: Bohereenagower Road (L70154) (E).

A summary of the key results obtained from the PICADY model analysis is presented below.

Arm (Mov.)	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2025 BASELINE						
Stream B-AC	0.1	8.36	0.12	0.1	8	0.09
Stream C-AB	0	5.61	0.02	0	5.59	0.02
2030 DO NOTHING						
Stream B-AC	0.1	8.36	0.12	0.1	8	0.09
Stream C-AB	0	5.61	0.02	0	5.59	0.02
2030 DO SOMETHING						
Stream B-AC	0.4	9.79	0.27	0.2	8.87	0.18
Stream C-AB	0.1	5.71	0.05	0.1	5.82	0.08
2035 DO NOTHING						
Stream B-AC	0.2	8.61	0.16	0.1	8.21	0.12
Stream C-AB	0	5.59	0.03	0.1	5.63	0.04
2035 DO SOMETHING						
Stream B-AC	0.3	8.71	0.21	0.2	8.19	0.14
Stream C-AB	0.1	5.67	0.05	0.1	5.77	0.08

2045 DO NOTHING						
Stream B-AC	0.2	8.8	0.17	0.1	8.37	0.13
Stream C-AB	0	5.56	0.03	0.1	5.6	0.04
2045 DO SOMETHING						
Stream B-AC	0.3	8.93	0.22	0.2	8.37	0.15
Stream C-AB	0.1	5.65	0.05	0.1	5.75	0.08

Table 31 | *Junction 2 – Assessment Result – Scenario A*

The analysis summarised above indicates that the signalised junction 2 would operate within capacity for all assessed scenarios, including the 2045 DO SOMETHING (DS-2045/A) scenario during both peak hours.

9.5.3 Junction 6: Old Road / South Internal Link Road

Junction 6 is an existing priority-controlled T-junction located at the intersection of South Internal Link Road, & Old Road.

The arms of the junction were labelled as follows within the PICADY model:

- Arm A: South Internal Link Road (E).
- Arm B: Old Road (S).
- Arm C: South Internal Link Road (W).

A summary of the key results obtained from the PICADY model analysis is presented below.

Arm (Mov.)	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2025 BASELINE						
Stream B-AC	0.3	10.07	0.24	0.2	8.51	0.14
Stream C-AB	0	5.5	0.02	0	5.83	0.04
2030 DO NOTHING						
Stream B-AC	0.4	11.33	0.31	0.3	9.62	0.21
Stream C-AB	0	5.52	0.03	0.1	5.88	0.04
2030 DO SOMETHING						
Stream B-AC	0.5	11.84	0.33	0.3	9.8	0.25
Stream C-AB	0.1	5.82	0.09	0.1	6.02	0.06
2035 DO NOTHING						
Stream B-AC	0.4	10.78	0.28	0.2	8.86	0.16
Stream C-AB	0	5.48	0.03	0.1	5.86	0.04
2035 DO SOMETHING						
Stream B-AC	0.4	11.21	0.3	0.2	8.93	0.19
Stream C-AB	0.1	5.75	0.09	0.1	6	0.07
2045 DO NOTHING						
Stream B-AC	0.4	11.2	0.3	0.2	9.03	0.17

Stream C-AB	0	5.46	0.03	0.1	5.87	0.05
2045 DO SOMETHING						
Stream B-AC	0.5	11.69	0.32	0.3	9.14	0.2
Stream C-AB	0.1	5.73	0.09	0.1	6.01	0.07

Table 32 | *Junction 6 – Assessment Result – Scenario A*

The analysis summarised above indicates that the signalised junction 6 would operate within capacity for all assessed scenarios, including the 2045 DO SOMETHING (DS-2045/A) scenario during both peak hours.

9.5.4 Junction 7: Southgreen Road / South Internal Link Road

Junction 7 is an existing priority-controlled three-armed roundabout located at the intersection of Southgreen Road & South Internal Link Road.

The arms of the junction were labelled as follows within the ARCADY model:

- Arm 1: South Internal Link Road (E).
- Arm 2: Southgreen Road (S).
- Arm 3: Southgreen Road (N).

A summary of the key results obtained from the PICADY model analysis is presented below.

Arm (Mov.)	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2025 BASELINE						
Arm 1	0.1	3.58	0.11	0.1	3.31	0.07
Arm 2	0.1	4.27	0.11	0.1	4.27	0.12
Arm 3	0.1	4.37	0.11	0.1	3.98	0.06
2030 DO NOTHING						
Arm 1	0.2	3.79	0.13	0.1	3.4	0.08
Arm 2	0.2	4.44	0.14	0.2	4.58	0.17
Arm 3	0.2	4.78	0.17	0.1	4.18	0.09
2030 DO SOMETHING						
Arm 1	0.2	4.01	0.15	0.1	3.55	0.1
Arm 2	0.2	4.62	0.17	0.3	5.11	0.24
Arm 3	0.3	5.25	0.25	0.2	4.47	0.14
2035 DO NOTHING						
Arm 1	0.2	3.81	0.13	0.1	3.4	0.08
Arm 2	0.2	4.44	0.14	0.2	4.6	0.17
Arm 3	0.2	4.8	0.18	0.1	4.18	0.09
2035 DO SOMETHING						
Arm 1	0.2	4.31	0.16	0.1	3.56	0.1
Arm 2	0.2	4.71	0.18	0.3	5.13	0.24

Arm 3	0.5	5.96	0.33	0.2	4.47	0.14
2045 DO NOTHING						
Arm 1	0.2	3.86	0.14	0.1	3.43	0.09
Arm 2	0.2	4.51	0.15	0.2	4.66	0.18
Arm 3	0.2	4.9	0.19	0.1	4.22	0.09
2045 DO SOMETHING						
Arm 1	0.2	4.38	0.17	0.1	3.58	0.1
Arm 2	0.3	4.78	0.19	0.4	5.22	0.25
Arm 3	0.5	6.11	0.34	0.2	4.51	0.15

Table 33 | *Junction 7 – Assessment Result – Scenario A*

The analysis summarised above indicates that the signalised junction 7 would operate within capacity for all assessed scenarios, including the 2045 DO SOMETHING (DS-2045/A) scenario during both peak hours.

9.5.5 Shuttle Link: Southgreen Road Railway Overpass

The Shuttle Link is an existing signalised single-lane shuttle system located on Southgreen Road Railway Overpass.

The TRANSYT analysis was undertaken using a two-phase signal cycle: Phase A for southbound traffic and Phase B for northbound traffic. A cycle time of 60 seconds was applied, with intergreen periods of 12 seconds allocated to each phase. These intergreen values were determined based on an 80-metre distance between the two stop lines. Assuming a conservative maximum vehicle speed of 30 km/h, it would take approximately 9.6 seconds for the last vehicle to clear the conflict zone, thereby justifying the selected intergreen duration.

The main traffic light results are summarised below.

AM Peak Hour				
Direction	Phase	Cycle Time	Phase Time	Intergreen
Southbound	A	60 seconds	21 seconds	12 seconds
Northbound	B	60 seconds	15 seconds	12 seconds

Table 34 | *Shuttle Link – Traffic Light Results – AM Peak Hour – Scenario A*

PM Peak Hour				
Direction	Phase	Cycle Time	Phase Time	Intergreen
Southbound	A	60 seconds	15 seconds	12 seconds
Northbound	B	60 seconds	21 seconds	12 seconds

Table 35 | *Shuttle Link – Traffic Light Results – PM Peak Hour – Scenario A*

The results of the Shuttle Link model based on the traffic flows indicates above are shown in Table below.

Arm (Mov.)	AM			PM		
	DOS (%)	Delay (s)	Queue (PCU)	DOS (%)	Delay (s)	Queue (PCU)
2025 BASELINE						
Southbound	24	18.47	1.57	18	13.47	1.31
Northbound	19	13.61	1.43	13	17.32	0.78
2030 DO NOTHING						
Southbound	30	19.13	1.93	25	14.18	1.93
Northbound	27	14.4	2.15	18	17.83	1.15
2030 DO SOMETHING						
Southbound	37	20.12	2.48	34	15.16	2.76
Northbound	43	16.3	3.68	26	18.68	1.68
2035 DO NOTHING						
Southbound	31	19.23	1.99	26	14.24	1.98
Northbound	28	14.47	2.2	19	17.88	1.17
2035 DO SOMETHING						
Southbound	38	20.23	2.54	35	15.23	2.81
Northbound	43	16.39	3.74	26	18.73	1.71
2045 DO NOTHING						
Southbound	32	19.45	2.14	27	14.37	2.13
Northbound	29	14.62	2.31	20	17.99	1.24
2045 DO SOMETHING						
Southbound	40	20.5	2.72	36	15.37	2.92
Northbound	45	16.6	3.87	28	18.86	1.78

Table 36 | *Shuttle Link – Assessment Result – Scenario A*

As can be seen from the analysis results above, the shuttle link would have capacity to accommodate the forecast demand arising from the new approved and proposed developments to the north of the railway line during both peak hours.

9.6 Assessment Results: Scenario B

The main results of the traffic assessment for each section are presented below. Further details can be found in **Appendix I**.

9.6.1 Junction 1: Southgreen Road / L70154 Bohereenagower Road / Green Road

Junction 1 is an existing priority-controlled T-junction located at the intersection of Southgreen Road, L70154 Bohereenagower Road & Green Road.

The arms of the junction were labelled as follows within the PICADY model:

- Arm A: Southgreen Road (S).
- Arm B: Southgreen Road (N).

- Arm C: L70154 (E).

A summary of the key results obtained from the PICADY model analysis is presented below.

Arm (Mov.)	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2025 BASELINE						
Stream B-C	0.2	11.28	0.14	0.1	8.93	0.11
Stream B-A	1.1	18.62	0.51	0.5	13.64	0.32
Stream C-AB	0	7.02	0.05	0.1	7.23	0.08
2030 DO NOTHING						
Stream B-C	0.1	10.27	0.13	0.1	8.5	0.11
Stream B-A	0.9	16.41	0.45	0.4	12.79	0.28
Stream C-AB	0	7.01	0.05	0.1	7.16	0.08
2030 DO SOMETHING						
Stream B-C	0.7	32.5	0.44	0.2	10.27	0.15
Stream B-A	4.3	49.4	0.82	0.8	16.9	0.44
Stream C-AB	0.1	7.3	0.07	0.1	7.73	0.12
2035 DO NOTHING						
Stream B-C	0.1	10.27	0.13	0.1	8.5	0.11
Stream B-A	0.9	16.41	0.45	0.4	12.79	0.28
Stream C-AB	0	7.01	0.05	0.1	7.16	0.08
2035 DO SOMETHING						
Stream B-C	0.5	21.54	0.34	0.2	9.66	0.14
Stream B-A	2.9	36.49	0.75	0.7	15.58	0.39
Stream C-AB	0.1	7.28	0.07	0.1	7.66	0.12
2045 DO NOTHING						
Stream B-C	0.2	12.24	0.16	0.1	9.23	0.12
Stream B-A	1.3	20.85	0.56	0.6	14.46	0.35
Stream C-AB	0.1	7.14	0.05	0.1	7.35	0.08
2045 DO SOMETHING						
Stream B-C	1.4	60.13	0.61	0.2	10.77	0.16
Stream B-A	6	67.54	0.88	0.9	18.19	0.46
Stream C-AB	0.1	7.42	0.07	0.1	7.86	0.12

Table 37 | *Junction 1 – Assessment Result – Scenario B*

The analysis summarised above indicates that the signalised junction 1 would operate within capacity for all assessed scenarios, including the 2045 DO SOMETHING (DS-2045/B) scenario during both peak hours.

9.6.2 Junction 2: Bohereenagower Road (L70154) / Old Road

Junction 2 is an existing priority-controlled T-junction located at the intersection of Bohereenagower Road (L70154) and Old Road.

The arms of the junction were labelled as follows within the PICADY model:

- Arm A: Bohereenagower Road (L70154) (W).
- Arm B: Old Road (N).
- Arm C: Bohereenagower Road (L70154) (E).

A summary of the key results obtained from the PICADY model analysis is presented below.

Arm (Mov.)	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2025 BASELINE						
Stream B-AC	0	7.53	0.02	0	7.53	0.01
Stream C-AB	0	5.31	0	0	5.29	0
2030 DO NOTHING						
Stream B-AC	0	7.75	0.03	0	7.69	0.01
Stream C-AB	0	5.25	0	0	5.2	0
2030 DO SOMETHING						
Stream B-AC	0	7.91	0.03	0	7.78	0.01
Stream C-AB	0	5.25	0	0	5.15	0
2035 DO NOTHING						
Stream B-AC	0	7.78	0.03	0	7.82	0.01
Stream C-AB	0	5.23	0	0	5.18	0
2035 DO SOMETHING						
Stream B-AC	0	7.95	0.03	0	7.91	0.01
Stream C-AB	0	5.23	0	0	5.13	0
2045 DO NOTHING						
Stream B-AC	0	7.91	0.03	0	7.89	0.01
Stream C-AB	0	5.19	0	0	5.13	0
2045 DO SOMETHING						
Stream B-AC	0	8.08	0.03	**0**	**7.99**	**0.01**
Stream C-AB	0	5.19	0	**0**	**5.09**	**0**

Table 38 | *Junction 2 – Assessment Result – Scenario A*

The analysis summarised above indicates that the signalised junction 2 would operate within capacity for all assessed scenarios, including the 2045 DO SOMETHING (DS-2045/A) scenario during both peak hours.

9.6.3 Junction 7: Southgreen Road / South Internal Link Road

Junction 7 is an existing priority-controlled three-armed roundabout located at the intersection of Southgreen Road & South Internal Link Road.

The arms of the junction were labelled as follows within the ARCADY model:

- Arm 1: South Internal Link Road (E).
- Arm 2: Southgreen Road (S).
- Arm 3: Southgreen Road (N).

Arm (Mov.)	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2025 BASELINE						
Arm 1	0.3	4.1	0.24	0.3	3.89	0.2
Arm 2	0.2	4.79	0.17	0.2	4.59	0.13
Arm 3	0.3	5.41	0.26	0.3	5.16	0.25
2030 DO NOTHING						
Arm 1	0.2	4.02	0.16	0.1	3.58	0.1
Arm 2	0.4	5.02	0.25	0.3	4.95	0.24
Arm 3	0.3	5.6	0.21	0.1	4.64	0.12
2030 DO SOMETHING						
Arm 1	0.2	4.75	0.18	0.1	3.76	0.1
Arm 2	0.4	5.36	0.3	0.5	5.59	0.32
Arm 3	0.6	7.21	0.38	0.2	4.99	0.18
2035 DO NOTHING						
Arm 1	0.2	3.87	0.13	0.1	3.5	0.08
Arm 2	0.3	4.95	0.24	0.3	4.81	0.22
Arm 3	0.3	5.54	0.21	0.1	4.52	0.12
2035 DO SOMETHING						
Arm 1	0.2	4.53	0.15	0.1	3.66	0.08
Arm 2	0.4	5.28	0.29	0.5	5.4	0.3
Arm 3	0.6	7.11	0.38	0.2	4.85	0.17
2045 DO NOTHING						
Arm 1	0.2	4.11	0.17	0.1	3.62	0.1
Arm 2	0.4	5.18	0.27	0.4	5.08	0.26
Arm 3	0.3	5.89	0.23	0.2	4.74	0.13
2045 DO SOMETHING						
Arm 1	0.3	4.88	0.2	0.1	3.8	0.11
Arm 2	0.5	5.55	0.32	0.5	5.75	0.34
Arm 3	0.7	7.7	0.41	0.2	5.11	0.19

Table 39 | *Junction 7 – Assessment Result – Scenario B*

The analysis summarised above indicates that the signalised junction 7 would operate within capacity for all assessed scenarios, including the 2045 DO SOMETHING (DS-2045/B) scenario during both peak hours.

9.6.4 Shuttle Link: Southgreen Road Railway Overpass

The Shuttle Link is an existing signalised single-lane shuttle system located on Southgreen Road Railway Overpass.

The TRANSYT analysis was undertaken using a two-phase signal cycle: Phase A for southbound traffic and Phase B for northbound traffic. A cycle time of 60 seconds was applied, with intergreen periods of 12 seconds allocated to each phase. These intergreen values were determined based on an 80-metre distance between the two stop lines. Assuming a conservative maximum vehicle speed of 30 km/h, it would take approximately 9.6 seconds for the last vehicle to clear the conflict zone, thereby justifying the selected intergreen duration.

The main traffic light results are summarised below.

AM Peak Hour				
Direction	Phase	Cycle Time	Phase Time	Intergreen
Southbound	A	60 seconds	19 seconds	12 seconds
Northbound	B	60 seconds	17 seconds	12 seconds

Table 40 | *Shuttle Link – Traffic Light Results – AM Peak Hour – Scenario B*

PM Peak Hour				
Direction	Phase	Cycle Time	Phase Time	Intergreen
Southbound	A	60 seconds	15 seconds	12 seconds
Northbound	B	60 seconds	21 seconds	12 seconds

Table 41 | *Shuttle Link – Traffic Light Results – PM Peak Hour – Scenario B*

The results of the Shuttle Link model based on the traffic flows indicates above are shown in Table below.

Arm (Mov.)	AM			PM		
	DOS (%)	Delay (s)	Queue (PCU)	DOS (%)	Delay (s)	Queue (PCU)
2025 BASELINE						
Southbound	36	18.42	2.68	23	14.02	1.8
Northbound	24	15.5	1.78	19	17.86	1.16
2030 DO NOTHING						
Southbound	46	19.94	3.53	37	15.54	3.04
Northbound	41	17.46	3.24	30	19.15	1.94
2030 DO SOMETHING						
Southbound	57	23.14	4.54	48	17.17	4.3
Northbound	60	20.18	5.54	40	20.56	2.75
2035 DO NOTHING						
Southbound	45	19.69	3.41	34	15.17	2.78
Northbound	36	16.87	2.81	26	18.73	1.71
2035 DO SOMETHING						
Southbound	56	22.75	4.39	45	16.69	3.92

Northbound	55	19.26	5	36	20.03	2.44
2045 DO NOTHING						
Southbound	50	20.62	3.92	40	15.87	3.32
Northbound	43	17.83	3.46	32	19.39	2.11
2045 DO SOMETHING						
Southbound	61	24.2	5	51	17.59	4.54
Northbound	62	20.79	5.81	42	20.87	2.89

Table 42 | *Shuttle Link – Assessment Result – Scenario B*

As can be seen from the analysis results above, the shuttle link would have capacity to accommodate the forecast demand arising from the new approved and proposed developments to the north of the railway line during both peak hours.

9.7 Summary of Assessment Results

This stress scenario has been carried out in response to the Further Information Requested issued by Kildare County Council. Item 7 states that:

> *"The Applicant is requested to revise the Traffic and Transport Impact Assessment to apply an outbound trip rate of 1 during the morning peak."*

Based on the above, the impact of the Subject Site on the existing road network has been assessed under the following conditions:

- Trip rates derived from existing developments in the vicinity of the proposed site have been increased by 50%.
- An outbound AM peak hour trip rate of 1 has been adopted

The results of the analysis demonstrated that all junctions assessed and the shuttle link on Southgreen Road would operate within their respective capacities for all years and scenarios assessed.

10. Parking

To determine the appropriate amount of car and cycle parking for the proposed development, reference will be made to the following guidelines/policies:

- Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities (2024)
- Sustainable Urban Housing: Design Standard for New Apartments (2025)
- Meath County Council Development Plan (2021 – 2027) Standards

10.1 Car Parking

10.1.1 Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities (2024)

The *Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities* set national planning policy and guidance in relation to the planning and development of urban and rural settlements, with a focus on sustainable residential development and the creation of compact settlements.

Section 5.3.4 Car Parking – Quantum, Form and Location indicates three areas:

(i) In city centres and urban neighbourhoods of the five cities, defined in Chapter 3 of that document (Table 3.1 and Table 3.2) car-parking provision should be minimised, substantially reduced, or wholly eliminated. The maximum rate of car parking provision for residential development at these locations, where such provision is justified to the satisfaction of the planning authority, shall be 1 no. space per dwelling.

(ii) In accessible locations, defined in Chapter 3 of that document (Table 3.8) car- parking provision should be substantially reduced. The maximum rate of car parking provision for residential development, where such provision is justified to the satisfaction of the planning authority, shall be 1.5 no. spaces per dwelling.

(iii) In intermediate and peripheral locations, defined in Chapter 3 of that document (Table 3.8) the maximum rate of car parking provision for residential development, where such provision is justified to the satisfaction of the planning authority, shall be 2 no. spaces per dwelling.

The table 3.1 of Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities define:

City – Centre: The city centres of Dublin and Cork, comprising the city core and immediately surrounding neighbourhoods, are the most central and accessible urban locations nationally with the greatest intensity of land uses, including higher order employment, recreation, cultural, education, commercial and retail uses. It is a policy and objective of these Guidelines that residential densities in the range 100 dph to 300 dph (net) shall generally be applied in the centres of Dublin and Cork.

City - Urban Neighbourhoods: The city urban neighbourhoods category includes: (i) the compact medium density residential neighbourhoods around the city centre that have evolved overtime to include a greater range of land uses, (ii) strategic and sustainable development locations, (iii) town centres designated in a statutory development plan, and (iv) lands around existing or planned high-capacity public transport nodes or interchanges (defined in Table 3.8) – all within the city and suburbs area. These are highly accessible urban locations with good access to employment, education and

institutional uses and public transport. It is a policy and objective of these Guidelines that residential densities in the range 50 dph to 250 dph (net) shall generally be applied in urban neighbourhoods of Dublin and Cork.

City - Suburban/Urban Extension: Suburban areas are the lower density car-orientated residential suburbs constructed at the edge of cities in the latter half of the 20th and early 21st century, while urban extension refers to the greenfield lands at the edge of the existing built-up footprint that are zoned for residential or mixed-use (including residential) development. It is a policy and objective of these Guidelines that residential densities in the range 40 dph to 80 dph (net) shall generally be applied at suburban and urban extension locations in Dublin and Cork, and that densities of up to 150 dph (net) shall be open for consideration at 'accessible' suburban / urban extension locations (as defined in Table 3.8).

The table 3.8 of Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities indicate:

High-Capacity Public Transport Node or Interchange: Lands within 1,000 metres (1km) walking distance of an existing or planned high-capacity urban public transport node or interchange, namely an interchange or node that includes DART, high frequency Commuter Rail, light rail or MetroLink services; or locations within 500 metres walking distance of an existing or planned BusConnects 'Core Bus Corridor' stop.

Accessible Location: Lands within 500 metres (i.e. up to 5–6-minute walk) of existing or planned high frequency (i.e. 10-minute peak hour frequency) urban bus services.

Intermediate Location: Lands within 500-1,000 metres (i.e. 10–12-minute walk) of existing or planned high frequency (i.e. 10-minute peak hour frequency) urban bus services; and Lands within 500 metres (i.e. 6-minute walk) of a reasonably frequent (minimum 15-minute peak hour frequency) urban bus service.

Peripheral: Lands that do not meet the proximity or accessibility criteria detailed above. This includes all lands in Small and Medium Sized Towns and in Rural Towns and Villages.

Based on the preceding analysis and the information presented in Chapters 3 and 4, it can be concluded that the proposed development is located in a Peripheral Locations.

The nearest bus stops are situated adjacent to Kildare Railway Station, approximately 1.0 km from the site (c. 14-minute walk). These stops are served by bus route 883, which operates 3 services on weekdays. Additional bus services are available in Kildare Town Centre, located around 1.2 km from the site (some 16-minute walk). These include routes 126, 126A, 126B, 126D, 26T, 126U, 726, IW02, and UM14. Most of these routes operate only once per day; however, route 883 provides up to 8 services on weekdays, and route 726 operates at a frequency of one bus every 30 minutes. Further details are provided in **Section 3.5.3**.

Kildare Railway Station is located approximately 900 metres southeast of the site. Rail service has a frequent to Connolly Station every 15 to 20 minutes during peak hours. Notably, the Kildare Town Development Plan 2023–2029 outlines proposed improvements to the area surrounding the station, including the provision of a new pedestrian and cyclist access route to the north of the station (refer to Section 4.3). This proposed access would reduce the walking distance from the site to the station by approximately 300 metres, equating to a time saving of around five minutes on foot.

As a result, for Peripheral Locations, the guidelines identify a maximum rate of 2no. car parking spaces per dwelling. Based on these maximum standards, **Table 43** below outlines the resultant maximum car parking quantum for the proposed development.

Land Use	Parking space Ratio	Car Parking spaces required (Maximum)
146 Units	2	292

Table 43 | *Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities – Maximum Car Parking Spaces*

10.1.2 Planning Design Standards for Apartments Guidelines for Planning Authorities (2025)

The following extract from the *Planning Design Standards for Apartments Guidelines for Planning Authorities (2025)*, summarises the car parking guidelines for new apartments:

> *Having regard to the types of location in cities and towns that may be suitable for apartment development, car parking ratios should be minimised, substantially reduced or wholly eliminated at locations that have good access to urban services and to public transport. Maximum car parking rates are set out in Section 5.25 (SPPR 3) of the SRDCSGs.*

10.1.3 Kildare County Development Plan 2023 - 2029

Chapter 15 of the Kildare County Development Plan 2023 - 2029 establishes the standard for parking facilities. Table 15.8 of the document outlines the maximum car parking standard to be considered within the county. Section 15.7.8 indicates that:

> *Residential development in areas within walking distances of town centres (800 metres i.e. a 10-minute walk) and high-capacity public transport services (including but not limited to Dart+ services, Bus Connects routes and any designated bus only or bus priority route) should be designed to provide for fewer parking spaces, having regard to the need to balance demand for parking against the need to promote more sustainable forms of transport, to limit traffic congestion and to protect the quality of the public realm from the physical impact of parking. Therefore, the number of spaces provided should not exceed the maximum provision set out below*

Land Use	Standard
Dwellings	1 space each for units up to and including 3 bed units and 1 space + 0.5 visitor spaces for units of 4 bedrooms or greater
Apartments	1.5 spaces per unit + 1 visitor space per 4 apartments
Crèche	0.5 per staff member plus 1 per 4 children

Table 44 | *Kildare County Development Plan 2023 - 2029 – Car Parking Standards.*

In addition, Kildare County Development Plan sets out that *New residential development should take account of the different criteria regarding car parking including*:

> *Parking spaces for visitors should be a minimum of 10% of the overall number of parking spaces provided in new residential developments.*

The maximum car parking spaces based on the Kildare County Development Plan is detailed in Table below.

Unit Type	No. Units	Maximum Car Parking Spaces			
		Ratio		Maximum	
		Resident	Visitor	Resident	Visitor
2-bed Houses	7	1	-	7	-
3-bed Houses	102	1	-	102	-
4-bed Houses	27	1.5	0.5 per unit	41	14
1-bed Apartments	5	1	1 per 4 units	5	3
2-bed Apartments	3	1		3	
3-bed Apartments	2	1		2	
Crèche	161 sqm GFA	5 staff	40 children	5	11
Total	**146**			**165**	**28**

Table 45 | *Kildare County Development Plan 2023 – 2029 – Maximum Car Parking Spaces*

10.1.4 Car Parking Proposed

Based on the Kildare County Development Plan 2023 - 2029 and the national policies indicated above, it is proposed an appropriate level of car parking for the proposed site.

Table below shows the car parking spaces breakdown.

Unit Type	No. Units	Car Parking Spaces			
		Ratio		Proposed	
		Resident	Visitor	Resident	Visitor
2-bed Houses	7	2	0.10	14	14
3-bed Houses	102	2		204	
4-bed Houses	27	2		54	
1-bed Apartments	5	1	0.33	5	3
2-bed Apartments	3	2		6	
3-bed Apartments	2	2		4	
Additional accessibility car parking spaces in the apartment area				1	
Total Residential	**146**	**1.94**	**0.11**	**288**	**17**
Crèche	161 sqm GFA	5 staff	40 children	5	11
Proposed car parking spaces				**321**	

Table 46 | *Proposed Car Parking Spaces*

Therefore, the Subject Development proposes a total of 321 no. car parking spaces. Of these, 288 no. spaces are allocated for residents, including 2 no. accessibility car parking spaces, and 17 no. visitor spaces distributed throughout the site, and 16 no. car parking spaces are proposed for the crèche, comprising 5 no. staff spaces and 11 no. drop-off spaces.

10.2 Bicycle Parking

10.2.1 Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities (2024)

The *Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities* set national planning policy and guidance in relation to the planning and development of urban and rural settlements, with a focus on sustainable residential development and the creation of compact settlements.

Section 5.3.5 Bicycle Parking and Storage indicates that in areas of high and medium accessibility, planning authorities must ensure that new residential developments have high quality cycle parking and cycle storage facilities for both residents and visitors. Access to secure storage of bicycles is a key concern for residents in more compact housing developments.

It is a specific planning policy requirement of these Guidelines that all new housing schemes (including mixed-use schemes that include housing) include safe and secure cycle storage facilities to meet the needs of residents and visitors. The following requirements for cycle parking and storage are recommended:

(i) **Quantity** – in the case of residential units that do not have ground level open space or have smaller terraces, a general minimum standard of 1 cycle storage space per bedroom should be applied. Visitor cycle parking should also be provided. Any deviation from these standards shall be at the discretion of the planning authority and shall be justified with respect to factors such as location, quality of facilities proposed, flexibility for future enhancement/ enlargement, etc. It will be important to make provision for a mix of bicycle parking types including larger/heavier cargo and electric bikes and for individual lockers.

(ii) **Design** – cycle storage facilities should be provided in a dedicated facility of permanent construction, within the building footprint or, where not feasible, within an adjacent or adjoining purpose-built structure of permanent construction. Cycle parking areas shall be designed so that cyclists feel safe. It is best practice that either secure cycle cage/compound or preferably locker facilities are provided.

Regarding the house units, as several of them are proposed with direct access to private rear gardens for cycle storage, no additional cycle parking is necessary. The table below shows the proposed cycle parking spaces considering the mid-terrace units and the total number of dwellings.

Unit Type	No. Units	Ratio		Required	
		Resident	Visitor	Resident	Visitor
2-bed Houses	2 No. Mid-terrace (7 total)	2	0.5	4	4
3-bed Houses	41 No. Mid-terraces (102 total)	3	0.5	123	51
4-bed Houses	0 No. Mid-terrace (27 total)	4	0.5	0	13
1-bed Apartments	5	1	0.5	5	2
2-bed Apartments	3	2	0.5	6	1
3-bed Apartments	2	3	0.5	6	1

Total	**53 (146 total)**			**144**	**72**

Table 47 | *Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities – Cycle Parking Spaces Required*

10.2.2 Planning Design Standards for Apartments Guidelines for Planning Authorities (2025)

The following extract from the *Planning Design Standards for Apartments Guidelines for Planning Authorities (2025)*, summarises the bicycle parking guidelines for new apartments:

> *Requirements for the quantity and design of bicycle parking are set out in Section 5.25 (including SPPR 4) of the SRDCSGs.*

10.2.3 Kildare County Development Plan 2023 - 2029

Chapter 15 of the Kildare County Development Plan 2023 - 2029 establishes the standard for parking facilities. Table 15.4 of the document outlines the minimum cycle parking standard to be considered.

Land Use	Standard
Dwellings	No required
Apartments	1 space per bedroom + 1 visitor space per 2 apartments
Crèche	1 space per 5 Staff + 1 space per 10 children

Table 48 | *Kildare County Development Plan 2023 - 2029 – Car Parking Standards.*

The minimum cycle parking spaces based on the Kildare County Development Plan is detailed in the Table below.

Unit Type	No. Units	Maximum Car Parking Spaces			
		Ratio		Maximum	
		Resident	Visitor	Resident	Visitor
2-bed Houses	7	-	-	-	-
3-bed Houses	102	-	-	-	-
4-bed Houses	27	-	-	-	-
1-bed Apartments	5	1	1 per 2 units	4	5
2-bed Apartments	3	2		16	
3-bed Apartments	2	3		6	
Total	**146**			**26**	**5**
Crèche	5 staff 40 children	1 per 5 Staff	1 per 10 children	**1**	**4**
			Total	**27**	**9**

Table 49 | *Kildare County Development Plan 2023 – 2029 – Maximum Car Parking Spaces*

10.2.4 Cycle Parking Proposed

Based on Kildare County Development Plan 2023 - 2029 and the national policies indicated above, it is proposed an appropriate number of cycle parking for the proposed site.

Cycle parking spaces proposed for the subject development are shown in

Crèche	**5 staff 40 children**	**1 per 5 Staff**	**1 per 10 children**	**1**	**9**
			Total	**527**	

Table 50 below.

Unit Type	No. Units	Ratio		Required	
		Resident	Visitor	Resident	Visitor
2-bed Houses	7	2	0.5	14	4
3-bed Houses	102	3	0.5	306	51
4-bed Houses	27	4	0.5	108	13
1-bed Apartments	5	1	0.5	5	2
2-bed Apartments	3	2	0.5	6	1
3-bed Apartments	2	3	0.5	6	1
Total	**146 total**			**445**	**72**
				517	
Crèche	5 staff 40 children	1 per 5 Staff	1 per 10 children	**1**	**9**
			Total	**527**	

Table 50 | *Cycle Parking Spaces Proposed*

The subject development included a total a total of 527 no. cycle parking spaces (517 no. for residential units and 10 no. for the creche facility) are provided. This provision includes 75 no. visitor spaces. Resident cycle parking is proposed in the form of secure bicycle store enclosures to the front of terraced units; on curtilage spaces to the rear of units with side access; and a bicycle store for apartment units. Visitor parking is proposed in the form of Sheffield stands.

11. Conclusion

11.1 Summary

This Traffic and Transportation Assessment (TTA) has been prepared by Waterman Moylan as part of the planning documentation for a proposed residential development on lands at Southgreen, Co. Kildare.

The site is located approximately 1.0km from Kildare Town City to the north. The site is currently in greenfield condition and is used for agricultural purposes.

The subject site, South Green Phase 2 is developed in a net site area of 4.50 Ha. The site is bound by Southgreen Road along the western edge of the site, the south internal link road to the south, Old Road and existing residential units along the eastern edge of the site, and by agricultural lands to the north. The approved Southgreen Phase 1 development is located directly south of the subject site and is currently under construction.

The proposed development will consist of 146no. residential dwellings. The mix of residential units consists of 136no. houses comprising 7no. 2-bed, 102no. 3-bed and 27no. 4-bed, and 10no. apartments, comprising 5no. 1-bed unit, 3no. 2-bed unit and 2no. 3-bed unit.

It is assumed for the purposes of the assessment that the Subject Development will be constructed by the end of 2029 accordingly 2030 has been selected as the opening year.

11.2 Conclusion

The main conclusions obtained in this TTA report are:

Road Network Assessment

The analysis of the road network considered the generation to/from the Subject Development and the trips to/from the committed and potential future development in the surrounding area.

The distribution of trips was carried out considering two possible scenarios:

- **Scenario A:** The Subject Development has been constructed in accordance with the indicated programme. This scenario considers the existing traffic flows on the network with the growth factors and the traffic flow to/from each Committed Development and the Potential Future Developments. In this scenario, Old Road Bridge is **open** to traffic.
- **Scenario B:** The Subject Development has been constructed in accordance with the indicated programme. This scenario considers the existing traffic flows on the network with the growth factors and the traffic flow to/from each Committed Development and the Potential Future Developments. In this scenario, Old Road Bridge is **close** to traffic.

The following junctions were assessed as part of this TTA:

- **Junction 1:** (Existing priority-controlled T-junction): Southgreen Road / L70154 Bohereenagower Road / Green Road
- **Junction 2:** (Existing priority-controlled T-junction): Bohereenagower Road (L70154) / Old Road.
- **Junction 3:** (Existing priority-controlled T-junction): Dunmurry Road (R401) / Old Road / Chapel Lane.
- **Junction 4:** (Existing signalised T-junction): Dunmurry Road (R401) /Southgreen Road.
- **Junction 5:** (Existing priority-controlled T-junction): Old Road / South Internal Link Road.
- **Junction 6:** (Existing priority-controlled T-junction): Old Road / South Internal Link Road.

- **Junction 7:** (Existing priority-controlled three-armed roundabout): Southgreen Road / South Internal Link Road.
- **Junction 8:** (Existing signalised crossroad): R401 / R415 / R413.
- **Shuttle Link:** (Existing signalised single-lane shuttle system): Southgreen Road Railway Overpass

In accordance with the TII guidelines, an assessment was conducted to determine the potential level of impact on each of the key junctions in the local road network. This assessment was carried out for both Scenarios A and B, considering the traffic flows surveyed in 2025 and the traffic flows generated by the subject development. Considering the results, Junctions 1 and 7, and the shuttle Link, may experience an impact exceeding 10%, whereas the remaining junctions show impacts below 5%. As such, no further assessment is required for those junctions.

The scenarios that have been assessed as part of this report are in line with the *Transport Assessment Guidelines (May 2014)*:

- Base Year 2025
- Opening Year (With / Without Proposed Development).....2030
- Opening Year + 5 Years Forecast (With / Without Development) 2035
- Opening Year + 15 Years Forecast (With / Without Development) 2045

Therefore, was modelled the following assessment years for **Scenario A** and **Scenario B**:

- **BASELINE 2025:** with 2025 Surveyed Traffic Flows.
- **DO NOTHING 2030** Opening Year without development: 2025 Surveyed Traffic Flows factored up + traffic flow to/from the committed developments.
- **DO NOTHING 2035** Opening Year + 5 years, without development: 2025 Surveyed Traffic Flows factored up + traffic flow to/from the committed developments.
- **DO NOTHING 2045** Opening Year + 15 years, without development: 2025 Surveyed Traffic Flows factored + traffic flow to/from the committed developments.
- **DO SOMETHING 2030** Opening Year with development: Do Nothing 2030 + traffic to/from the Subject Development.
- **DO SOMETHING 2035** Opening Year + 5 years with development: Do Nothing 2035 + traffic to/from the Subject Development.
- **DO SOMETHING 2045** Opening Year + 15 years with development: Do Nothing 2045 traffic to/from the Subject Development.

The results of the analysis demonstrated that all junctions and the Shuttle Link would operate within their respective capacities for all years and scenarios analysed.

In addition, a stress scenario has been carried out in response to the Further Information Requested issued by Kildare County Council. Item 7 states that:

> *"The Applicant is requested to revise the Traffic and Transport Impact Assessment to apply an outbound trip rate of 1 during the morning peak."*

Based on the above, the impact of the Subject Site on the existing road network has been assessed under the following conditions:

- Trip rates derived from existing developments in the vicinity of the proposed site have been increased by 50%.
- An outbound AM peak hour trip rate of 1 has been adopted

The results of the analysis demonstrated that all junctions assessed and the shuttle link on Southgreen Road would operate within their respective capacities for all years and scenarios assessed.

Parking Assessment

To determine the appropriate amount of car and cycle parking for the proposed development, reference will be made to the following guidelines/policies:

- Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities (2024)
- Planning Design Standards for Apartments Guidelines for Planning Authorities (2025)
- Kildare County Development Plan 2023 - 2029

Regarding the car parking spaces, it is proposed a total of 321 no. car parking spaces (305 no. for residential units and 16 no. for the creche facility) are provided. This provision includes 2 no. accessible spaces and 17 no. visitor spaces.

The cycle parking spaces a total of 527 no. cycle parking spaces (517 no. for residential units and 10 no. for the creche facility) are provided. This provision includes 75 no. visitor spaces. Resident cycle parking is proposed in the form of secure bicycle store enclosures to the front of terraced units; on curtilage spaces to the rear of units with side access; and a bicycle store for apartment units. Visitor parking is proposed in the form of Sheffield stands.

APPENDICES

A. Bus Timetables

B. Traffic Flow Survey Results - Wednesday 14th May 2025 (IDASO)

C. Traffic Flow Survey Results - Tuesday 7th October 2025 (NDC)

D. Census 2022

E. Traffic Diagrams

F. Junction Modelling Results: Scenario A

G. Junction Modelling Results: Scenario B

H. Junction Modelling Results: Stressed Scenario A

I. Junction Modelling Results: Stressed Scenario B

UK and Ireland Office Locations

