



Traffic and Transport Assessment

Gas Turbine Power Generation Station Phase 2 at Kilshane, Co. Dublin

May 2026

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1. Introduction

1.1 Context

This Traffic and Transportation Assessment (TTA) has been prepared by Waterman Moylan Engineering Consultants as part of a planning documentation for the Proposed Kilshane Phase 2 Development in Dublin 11.

The proposed development will consist of the following:

- 2 additional gas turbines producing 340MW each
- 400kV GIS building and associated compound
- Increasing diesel storage from 5000t to 15000t
- Extension to administration building
- Access roads
- Electrical substation

Phase 1 which is located immediately north of this subject site has received a notification to grant permission under Reg. Ref. FW25A/0523E.

1.2 Scope

This Traffic and Transport Assessment is a comprehensive review of all the potential transport impacts of the overall development, based on the standards 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.

1.3 Standards

This Traffic and Transport Assessment has been prepared in accordance with Section 14.17.4 (Objective DMSO113) of the Fingal Development Plan 2023 – 2029 and in accordance with the Traffic and Transport Assessment Guidelines published by Transport for Ireland (TII) / National Roads Authority (NRA) in May 2014.

1.4 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 1,000sqm.
- 5- Office, education, and hospital development in excess of 2,500sqm.
- 6- Industrial development in excess of 5,000sqm.

7- Distribution and warehousing in excess of 10,000sqm.

The proposed development exceeds 5,000 sqm of industrial development and therefore a TTA is required.

1.5 Site Location

The site is located at Kilshane, Dublin 11, just west of the N2 Primary Road as shown in **Figure 1**, approximately 300m west of the R135 and is located approx. 2 km north-west of the M50. It totals c. 5.22 ha in area.

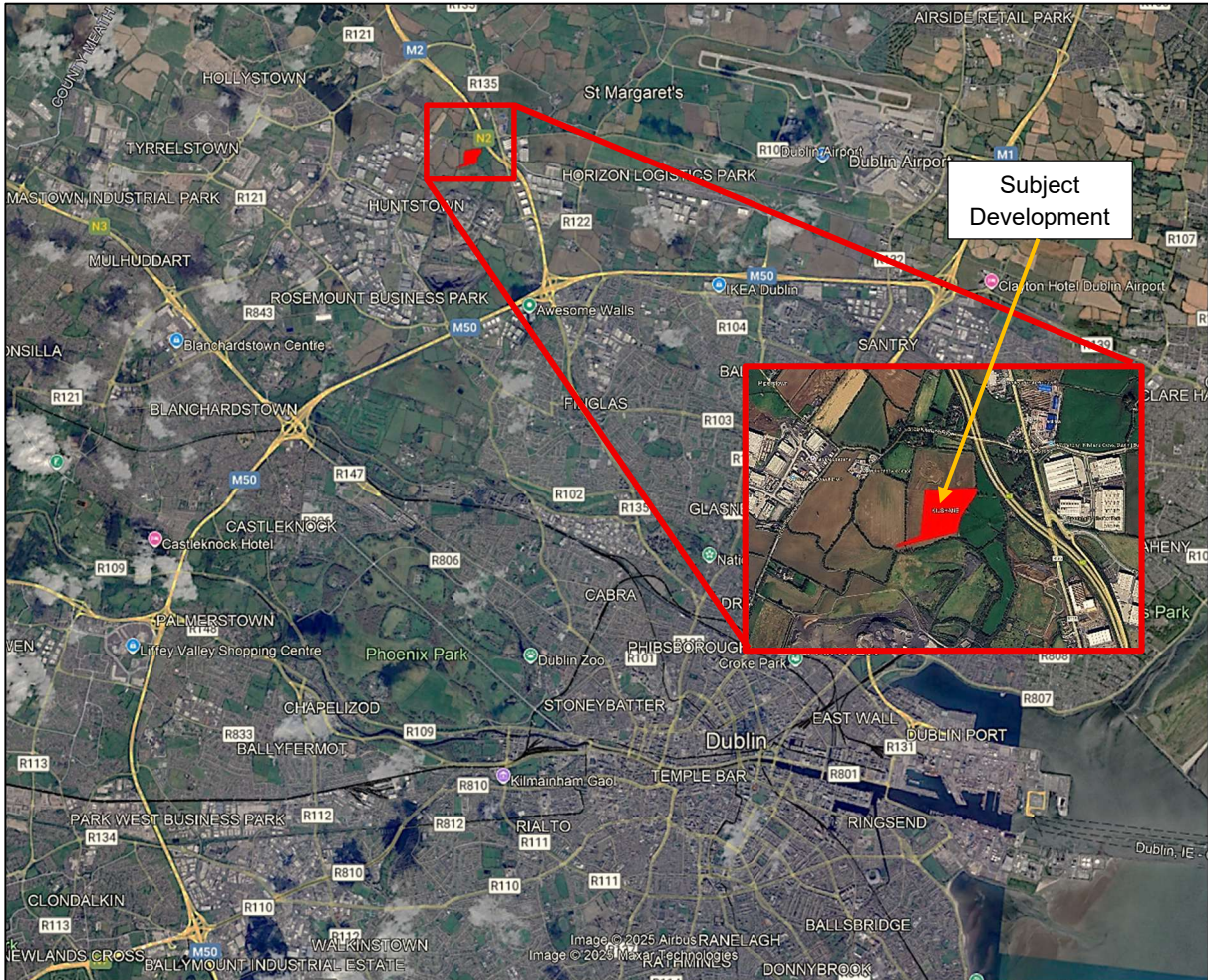


Figure 1 | Site Location Map

1.6 Programme

It is anticipated that construction of the proposed development will commence in 2027 for completion in 2029. (Note: The assessment years may lag pending approval of the planning application and may differ from the programme).

1.7 Assessment Years

The years that have been assessed as part of this Traffic and Transport Assessment are the following:

Base Year	:	2025
Opening Year (With / Without Development)	:	2029
Opening Year + 5 Years Forecast (With / Without Development)	:	2034
Opening Year + 15 Years Forecast (With / Without Development):		2044

These assessment years are in line with the 'Transport Assessment Guidelines (May 2014)'. Details of each assessment year is presented later in this report.

1.8 Documents Consulted

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

- 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
- BusConnects Routes Map
<https://busconnects.ie/wp-content/uploads/2021/01/swords-area-map.pdf>
- Greater Dublin Area Transport Strategy (2022 – 2042) Standards
<https://www.nationaltransport.ie/wp-content/uploads/2023/01/Greater-Dublin-Area-Transport-Strategy-2022-42-1.pdf>
- Greater Dublin Area – Cycle Network Plan
<https://www.nationaltransport.ie/wp-content/uploads/2023/01/2022-GDA-Cycle-Network.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>
- Fingal Development Plan 2023 – 2029
<https://www.fingal.ie/development-plan-2023-2029>
- New Dublin Area Bus Network – Bus Connects
<https://busconnects.ie/wp-content/uploads/2021/01/busconnects-final-summary-report-fa.pdf>
- National Planning Framework – Project Ireland 2040
www.gov.ie/pdf/?file=https://assets.gov.ie/246231/39baaa8c-48dc-4f24-83bd-84bbcf8ff328.pdf#page=null
- 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>
- Smarter Travel: A Sustainable Transport Future
www.gov.ie/pdf/?file=https://assets.gov.ie/19854/37d829c9748446349ff586045bfbcab.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>
- National Planning Framework – Project Ireland 2040
www.gov.ie/pdf/?file=https://assets.gov.ie/246231/39baaa8c-48dc-4f24-83bd-84bbcf8ff328.pdf#page=null
- Huntstown Battery Energy Storage System – Construction Traffic Management Plan

- <https://planningapi.agileapplications.ie/api/application/document/FG/7A74VKMLU4DD897XZKJW67EZKRKWQKFYUVHU9FD6E9PG8XUTV8LACGTPH7TLR3YDS2YL6YKAY4YAA>
- Shipping Container Depot at Kilshane – Engineering Assessment Report
<https://planningapi.agileapplications.ie/api/application/document/FG/TB5RFCAQW4X4HFKZSCGK5EZA55U4S8WNDQNEQEZEAYP8BUE3E5V4J642C7N6SQTFLF3KT3A9HVQF>
- High Technology Manufacturing Unit – Chapter 12 Environmental Impact Assessment Report
<https://planningapi.agileapplications.ie/api/application/document/FG/YGQMBLNVUFM85WPD9NA8A28J5JXWTWEBW87TGUHSYFELUYR5X8CSVYNVMWGK96LME4JKQHUBVPAZV>
- Huntstown Data Hall – Chapter 13 Environmental Impact Assessment Report
<https://planningapi.agileapplications.ie/api/application/document/FG/48Q39TFYT98DJHZLL76E5Y7Y62ANHR7K85KB2R8AL5CCUSK9YPVCQYWAJ7R6F5J63789WDWE7C2ZW>
- Gas Turbine Power Generation Station (Phase 1) – Traffic and Transport Assessment Report
<https://www.pleanala.ie/publicaccess/EIAR-NIS/311528/EIAR%EF%80%A8/Volume%202/EIA%20Volume%202-EIA%20Report-Complete.pdf?r=896718>
- Overall Site Masterplan – Chapter 13 Environmental Impact Assessment Report
[https://www.pleanala.ie/publicaccess/EIAR-NIS/317480/317480%20-%20eiar%20main%20report%20\(january%202023\)%20\(part%209\).pdf?r=212977](https://www.pleanala.ie/publicaccess/EIAR-NIS/317480/317480%20-%20eiar%20main%20report%20(january%202023)%20(part%209).pdf?r=212977)

1.9 Study Methodology

The study area for this report is the transport network and junctions immediately surrounding the site which will be affected as part of the proposed development. 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 Fingal County Development Plan 2023–2029, existing traffic information, traffic and transport assessments submitted with planning applications for committed and potential future developments, 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 development.
- A site visit was subsequently made to confirm the existing characteristics and conditions of the key junctions / roads detailed in **Section 3.4** below.
- Consultations with Fingal County Council to agree on the site access arrangements and to determine the scope of the traffic analysis required to accompany the planning application.
- The Traffic section of this “Traffic Transport Assessment” is prepared with the following detail:
 - Obtain data on existing traffic flow conditions.
 - Determine trips to be generated by the proposed development and the committed and potential future developments in the surrounding area.
 - Determinate trip distribution for each development.

- 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.

1.10 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.
- **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.
- **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.
- **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 NPF 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 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.

2.1.4 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.

2.2 Regional Policies and Strategies

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

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 and the economic policies and objectives of the Government by providing a long-term strategic planning and economic framework for the development of the Region.

The RSES will be implemented in policy by way of review by local authorities of all development plans and Local Economic and Community Plans (LECPs) after the adoption of this Strategy. Key state agencies and sectoral bodies will also have to consider their strategies and investment plans in light of the adoption of the RSES.

The RSES will be realised by the delivery of European and National funding that will achieve the Regional Strategic Outcomes (and NPF National Strategic Outcomes) expressed in the Strategy. These funds will focus on the priorities and key aspects of the RSES to sustainably grow the Region to 2031 and beyond.

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 New Dublin Area Bus Network

Following three rounds of public consultation which began in 2017, the National Transport Authority (NTA) published, in September 2020, the new Dublin Area bus network. This new bus network plan is the last version resulting from previous redesign proposals and with consideration given to issues raised by 72,000 submissions. The implementation of the New Network will take place on a phased basis over a number of years starting in 2021, subject to Government funding.

The new Dublin Area bus network will provide a more coherently planned, higher ability, more understandable network, delivering a better overall bus system for the Dublin region. It will consist of spines radiating from the city centre. Spines are very frequent routes made up of individual bus services timetabled to work together along a corridor. At the end of the corridor, the individual services branch off to serve different areas. The network will also include orbitals across the North, West and South areas of Dublin, added local area services, peak only and express services.

The new network will see increased evening and weekend services, with most frequent routes operating every 15 minutes or better on weekdays and Saturdays, most on Sundays also. There will be routes that will run 24 hours a day. These services will operate throughout the night to support the night-time economy

across Dublin. Overall, the level of bus services in the Dublin network will increase by 23% as a result of the new network. Other benefits of the New Network include:

- A 23% overall increase in bus services.
- Increased capacity, particularly for all day services.
- A more easily understood city network.
- Better access to bus services for passengers.

New connections to schools, hospitals, and other essential services.

2.3 Local Plans and Strategies

2.3.1 Fingal Development Plan (2023 – 2029)

The Fingal 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 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 a number of most relevant policies and objectives include:

(1) The Role of Transportation Policy in Addressing Climate Change

“Policy CMP1 – Decarbonisation of Motorised Transport: Support the decarbonisation of motorised transport and facilitate modal shift to walking, cycling and public transport and taking account of National and Regional policy and guidance, while supporting an efficient and effective transport system.”

“Objective CMO1 – Transition to Sustainable Modes: Work with the NTA, TII and other transport agencies in facilitating the integrated set of transport objectives for the County as set out in this Plan, in line with National and Regional policy including the NTA’s GDA Transport Strategy and any subsequent plan to encourage modal shift towards more sustainable modes of transport and patterns of commuting to reduce reliance on the private car.”

“Objective CMO2 – Modal Shift: Work with the NTA to develop mode share targets for the County to achieve and monitor a transition to more sustainable modes including walking, cycling and public transport, during the lifetime of this Plan. This includes providing targeted infrastructure in the most appropriate locations and prioritising development at the most accessible locations in order to achieve the appropriate levels of integration and sustainable transport provision.”

(2) Integrated Land Use and Transportation

“Policy CMP3 – Integrated Land-Use and Transport Approach Provide for an integrated approach to land-use and transportation aimed at minimising the demand for travel and prioritising sustainable modes of transport including walking, cycling and public transport.”

“Objective CMO3 – Integration of Public Transport and Development Support and facilitate high-density, mixed-use development and trip intensive uses along public transport corridors and to ensure the integration of high-quality permeability links and public realm in conjunction with the delivery of public transport services through plan frameworks to generate and reinforce sustainable patterns of compact growth and development in the County.”

(3) Mobility Management

“Policy CMP5 – Mobility Management and Travel Planning Promote best practice mobility management and travel planning through the requirement for proactive mobility strategies for developments focussed on prioritising sustainable modes of travel including walking, cycling and public transport.”

(4) A Sustainable and Integrated Transport Network

“Policy CMP6 – Integrated Transport Network: Support and facilitate sustainable mobility objectives set out in the NPF, RSES, Smarter Travel and the NTA’s GDA Transport Strategy and any subsequent plan to ensure the creation of a high-quality and integrated transport network to serves the needs of the County and the wider region.”

(5) Walking and Cycling

“Policy CMP7 – Pedestrian and Cycling Network Secure the development of a high-quality, connected and inclusive pedestrian and cycling network and provision of supporting facilities / infrastructure across the County, including the upgrade of the existing network and support the integration of walking, cycling and physical activity with placemaking including public realm improvements, in collaboration with the NTA, other relevant stakeholders, local communities and adjoining Local Authorities in the context of the impact of development schemes with cross boundary impacts and opportunities where appropriate. Routes within the network shall have regard to NTA and TII national standards and policies.”

“Policy CMP8 – Greenway Network Secure the development of an expanded Greenway network in collaboration with relevant stakeholders including the NTA, adjoining landowners, local communities and adjoining Local Authorities where appropriate and encourage and facilitate opportunities for enhanced linkage and connectivity to adjoining towns and villages and their services, amenities, attractions and public transport nodes and to cross-County, Regional and National Greenway projects.”

“Policy CMP9 – Prioritisation of Pedestrians and Cyclists Support the prioritisation of pedestrians and cyclists and the provision of improved public realm to make walking and cycling safer, healthier, quicker, more direct and more attractive.”

“Policy CMP10 – Bicycle Infrastructure Improve bicycle priority measures and cycle parking infrastructure throughout the County in accordance with best accessibility practice.”

“Objective CMO6 – Improvements to the Pedestrian and Cyclist Environment Maintain and improve the pedestrian and cyclist environment and promote the development of a network of pedestrian/cycle routes which link residential areas with schools, employment, recreational destinations, and public transport stops to create a pedestrian/cyclist environment that is safe, accessible to all in accordance with best accessibility practice.”

“Objective CMO7 – Integration of Active Travel with Public Transport Work with the relevant transport providers, agencies, and stakeholders to facilitate the integration of active travel (walking/cycling etc.) with public transport, ensuring ease of access for all.”

“Objective CMO8 – Active Travel Strategy Prepare an Active Travel Strategy to encourage active travel and modal shift to sustainable transport modes.”

“Objective CMO9 – Active Travel Audits Carry out active travel audits in towns and villages in collaboration with local communities and other relevant stakeholders to inform improvements to the public realm and the pedestrian and cycling network.”

“Objective CMO10 – Bicycle Parking Provide publicly accessible high-quality cycle parking spaces, both standard bicycle spaces and nonstandard for adapted and cargo bikes, in town and village centres and key destinations and near the entrance to all publicly accessible buildings as required.”

“Objective CMO11 – Walking and Cycling Infrastructure Support the provision of walking and cycling infrastructure, including bike parking, bike repair and support services, to increase footfall and economic activity in town and village centres while reducing emissions and improving quality of life.”

“Objective CMO12 – Walking and Cycling and Green Infrastructure Network Ensure that new walking and cycling routes are designed, insofar as possible, to function as links in the County’s green infrastructure network and that adequate replacement and additional planting of native species and pollinators is provided and that SuDS approaches are used to treat surface water run-off.”

“Objective CMO13 – Walking and Cycling Network and Tourist Trail Support the formulation and delivery of integrated pedestrian/cycle network plans which connect adjacent communities providing linkages to all modes of transport which will provide links to all destinations of the County creating the nucleus of a slow tourist trail.”

(6) Public Transport

“Policy CMP18 – Public Transport Support the provision of a high-quality public transportation system that is accessible to all to serve the needs of the County and to enable a significant shift from car-based travel to public transport.”

“Objective CMO23 – Enabling Public Transport Projects Support the delivery of key sustainable transport projects including MetroLink, BusConnects, DART+ and LUAS expansion programme so as to provide an integrated public transport network with efficient interchange between transport modes to serve needs of the County and the mid-east region in collaboration with the NTA, TII and Irish Rail and other relevant stakeholders.”

“Objective CMO24 – NTA Strategy Support NTA and other stakeholders in implementing the NTA Strategy including MetroLink, BusConnects, DART +, LUAS and the GDA Cycle Network.”

“Objective CMO25 – Level Crossings and Public Transport Schemes Ensure that appropriate measures are put in place to mitigate the impacts of level crossing closures on the Maynooth rail line including protection measures for public transport and increased priority for cycling and walking.”

“Objective CMO26 – Orbital Public Transport Undertake a feasibility study for the progression of an orbital public transport route linking the Dublin–Belfast rail line, Swords, Dublin Airport, Finglas, Blanchardstown and surrounding areas along the route, during the lifetime of the Plan in consultation with the NTA and other stakeholders.”

“Objective CMO27 – Public Transport Routes Work with the NTA and other relevant national transport agencies to establish future public transport routes that will support the County’s medium to long term development, including orbital routes to provide connectivity between key urban centres and outer suburban areas.”

“Objective CMO28 – Bus Connectivity Work with relevant national transport agencies to create bus connectivity between Dublin 15, including the Blanchardstown Centre and Dublin Airport/Swords.”

“Objective CMO29 – Integration of Public Transport Services and Development Work with the NTA, TII and other relevant national transport agencies to optimise accessibility to public transport, increase catchment and maximise permeability through the creation of high-quality walking and cycling routes linking to public transport stops.”

“Objective CMO30 – Cycling and Walking Links Avail of the opportunities provided by any public transport infrastructure works to improve and provide new cycling and walking links, including crossings of motorways and major roads which currently represent major permeability barriers to active travel especially in South Fingal.”

“Objective CMO31 – South Fingal Transport Study Implement the recommendations of the South Fingal Transport Study 2019 in consultation with the relevant stakeholders.”

(7) Park and ride

“Policy CMP21 – Park and Ride Support the provision of Park and Ride facilities in conjunction with supporting ancillary infrastructure to accommodate the transition to sustainable mobility modes at suitable locations in accordance with the large-scale transportation projects being delivered under the NTA Strategy.”

(8) Parking

“Policy CMP25 – Car Parking Management Implement a balanced approach to the provision of car parking with the aim of using parking as a demand management measure to promote a transition towards more sustainable forms of transportation, while meeting the needs of businesses and communities.”

“Objective CMO32 – Car Parking Standards Implement appropriate car parking standards for a range of land-use types, where provision is based on factors such as site location, level of public transport accessibility and impact of parking provision on local amenity.”

“Objective CMO33 – Accessible Car Parking Promote appropriate parking arrangements for specific user requirements in town and district centres, public transport nodes and other destinations.”

(9) Roads and Street Design

“Policy CMP34 – Road and Street Design Ensure that roads and streets within the County are designed to balance the needs of all road users, including children and other vulnerable road users and promote road safety, place-making and sustainable movement, providing a street environment that prioritises active travel and public transport whilst ensuring the needs of commercial servicing is accommodated.”

“Objective CMO45 – Design Manual for Urban Roads and Streets Design new streets and roads within urban areas in accordance with the principles, approaches and standards contained within DMURS.”

- Junctions will be designed with corner radii that reduce pedestrian crossing distances to the minimum allowable by DMURS wherever possible.
- The narrowest carriageway widths allowable by DMURS will be the default standard in Fingal wherever possible.”

“Objective CMO46 – Speed Limits and Traffic Calmed Areas Expand the 30kph speed limits and traffic calmed areas at appropriate locations throughout the County including in towns and village areas where appropriate and to all residential developments and at schools.”

“Objective CMO47 – Road Safety and Rural Roads Prioritise safety on rural roads and junctions, while having regard to the protection of biodiversity, Green Infrastructure and rural character present in roadside trees, hedgerows and banks.”

“Objective CMO48 – Roads and Streets and Green Infrastructure New roads and streets to incorporate green Infrastructure elements such as sustainable drainage infrastructure, planting of native trees, hedgerows and pollinator species in medians and on roadside verges, as appropriate to the location.”

(10) Enterprise and employment

“Objective DMSO95 – Retail Impact Assessment: Retail development should be in accordance with the fundamental objective to support the vitality and viability of the retail centre and must demonstrate compliance with the sequential approach. Proposals to amalgamate retail units will be carefully considered. Major retail proposals (exceeding 1,000 sq. m.) are required to provide a detailed Retail Impact Assessment (RIA), a Transport Impact Assessment (TIA) and Screening for Appropriate Assessment, as appropriate.”

“Objective DMSO99 – Retail Warehousing: Only permit retail warehousing on lands zoned for this purpose (RW) or Major Town Centre (MC) and where there is a clear evidence-based need for such uses. In addition, proposals will be required to comply with the Objectives of Section 7.5.4 Retail, of Chapter 7 of this Plan.”

(11) Connectivity and Movement

“Objective DMSO111 – Mobility Management Plan: For all new developments which are likely to generate a significant demand for travel, require the preparation and submission of a Mobility Management Plan as part of the development management process. This requirement includes existing developments that are expanding or intensifying their use.”

“Objective DMSO113 – Traffic and Transport Assessment: Require the provision of a Traffic and Transport Assessment where new development is likely to have a significant effect on travel demand and the capacity of the surrounding transport network including the road network and public transport services network.”

3. Receiving Environment

3.1 Land Use

Land uses are defined in the *Fingal Development Plan 2023-2029*, which indicates that the subject site is located within an area designated as “HI – Heavy Industry”. The objective is to provide for heavy industry.

Figure 2 below is taken from Sheet No. 12 of Fingal Development Plan 2023-2029.

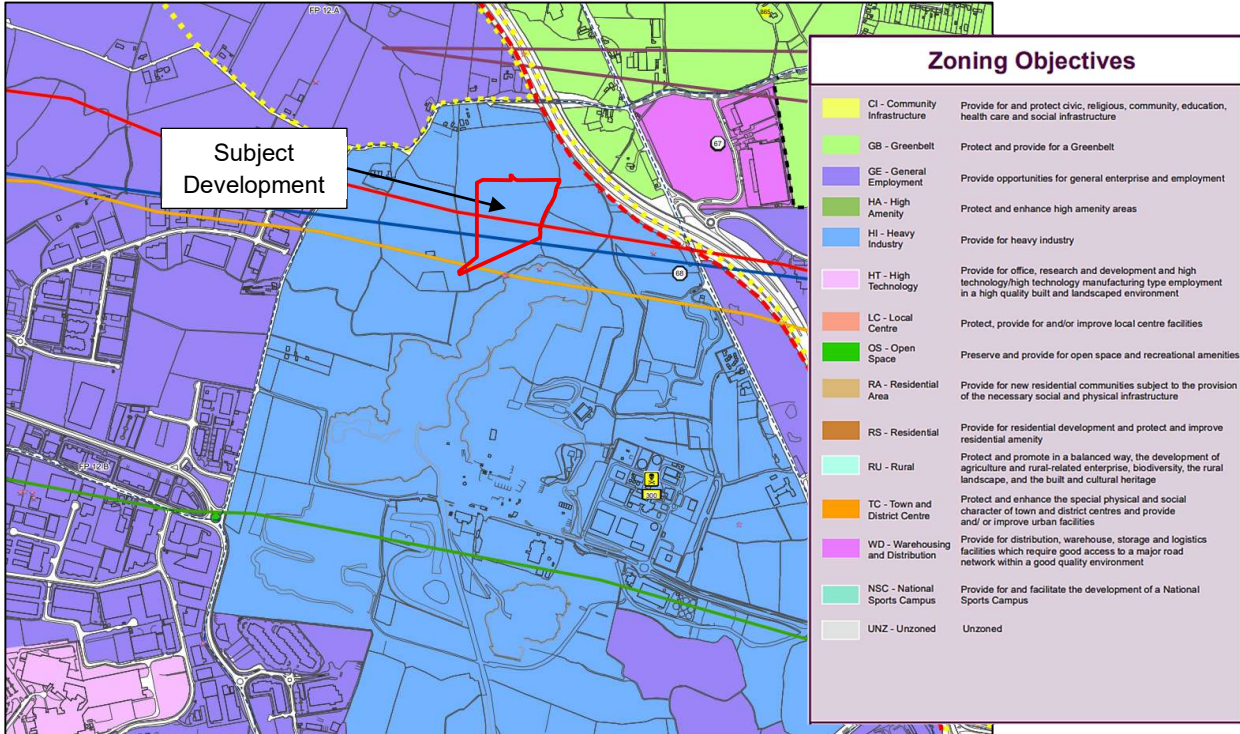


Figure 2 | Site Location and Zoning
 (Source: Sheet No. 12 of Fingal Development Plan 2023-2029)

3.2 Site Location and Description

The site is located at Kilshane, Dublin 11, just west of the N2 Primary Road, approximately 300m west of the R135 and is located approx. 2 km north-west of the M50.

The site is bound to the north by the Phase 1 Development which has received a notification to grant permission under Reg. Ref. ABP-317480-23. The remaining lands surrounding the site largely comprise agricultural fields, with the businesses and commercial/industrial sheds appearing in the wider vicinity east and west of the site.

The subject development forms part of a larger landholding pertaining to Kilshane Energy as described in Section 6.2.5 below. The overall landholding is bound to the west of the site is a small-scale haulage premises (PD Flaherty Logistics). Beyond the M2 to the east are areas of commercial / logistics development including Quantum Distribution Park and Dublin Airport Logistics Park, beyond which lies further greenfield lands and Dublin Airport. Huntstown Quarry, Huntstown Power Station and anaerobic digestion facility are located further to the south of the site.

Figure 3 below shows the location of the subject development.

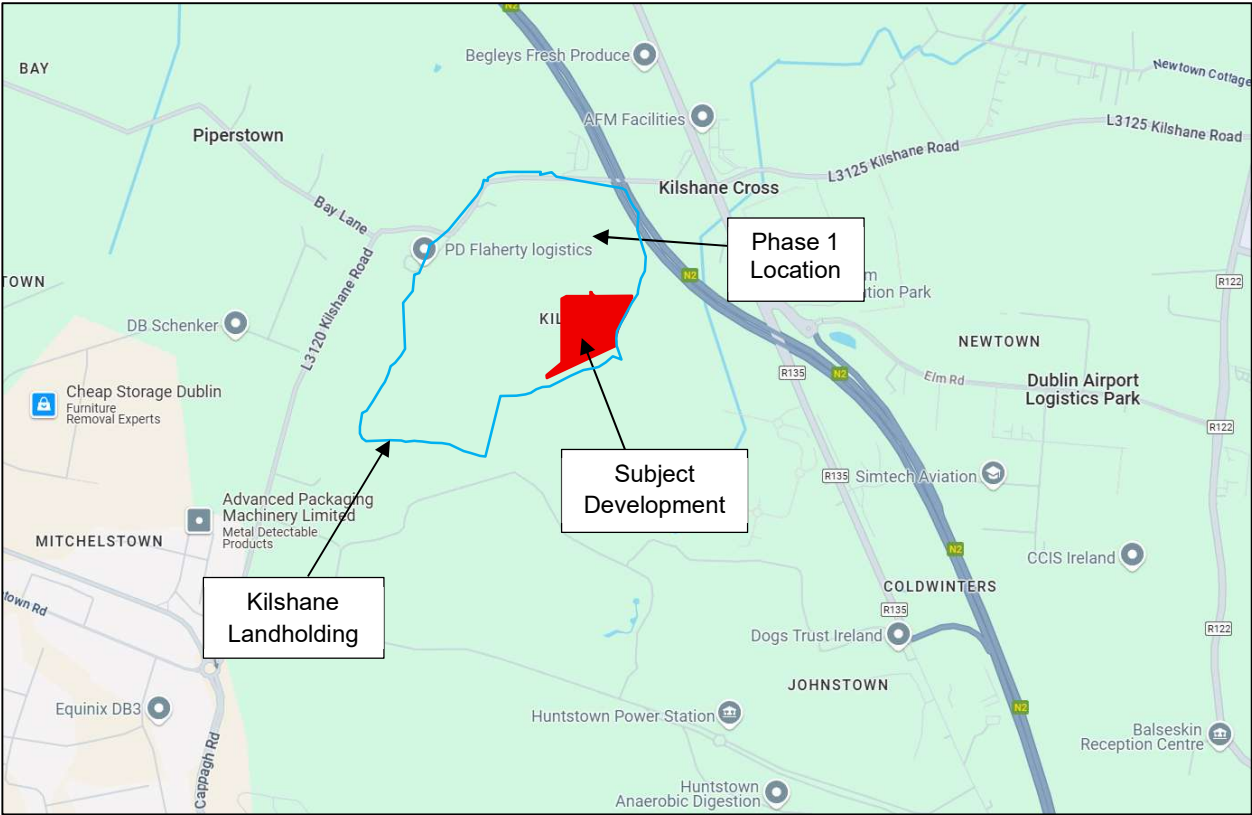


Figure 3 | Site Location

3.3 Existing Road Network

3.3.1 Roads

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

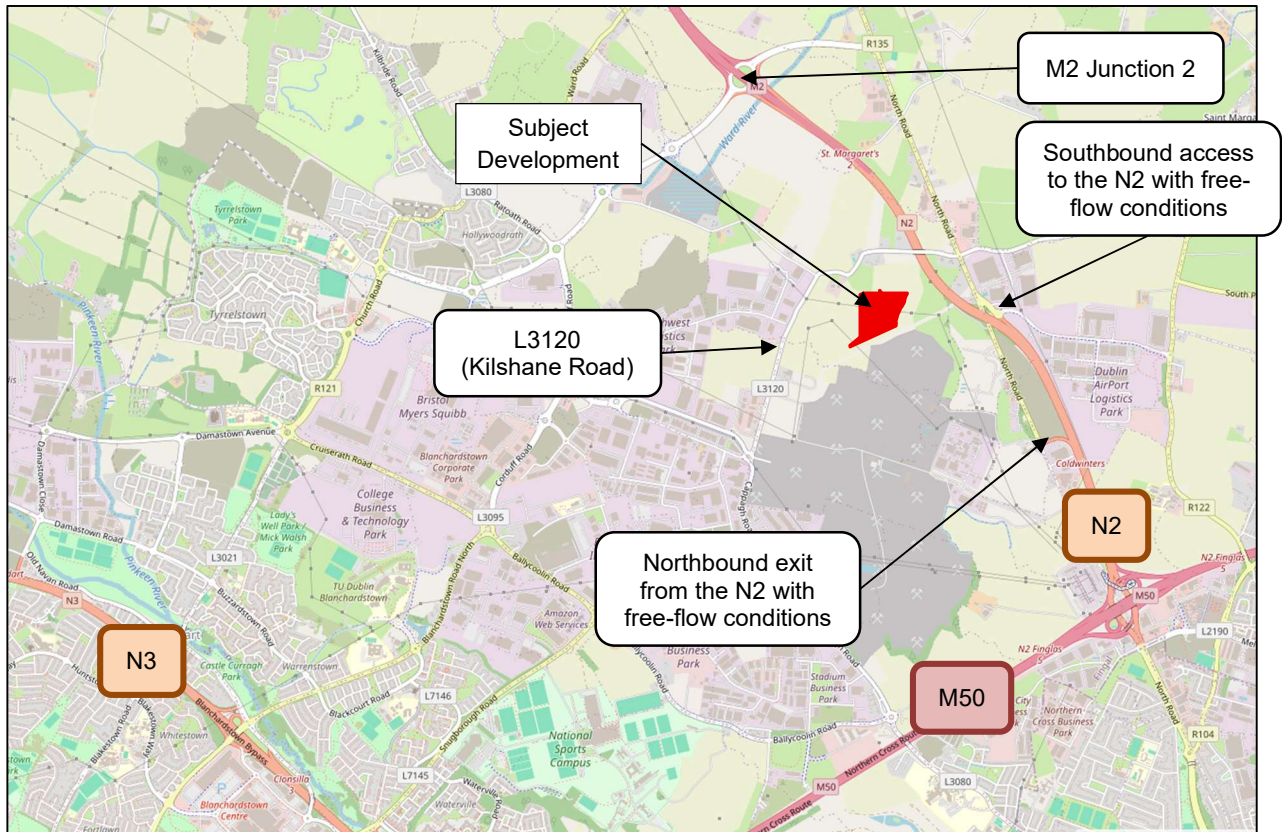


Figure 4 | Existing Road Network

The subject site is currently accessed from the **Kilshane Road (L3120)**. The Kilshane Road at this location is a 2-lane carriageway with a posted speed limit of 60 km/hr. There are no dedicated pedestrian and cycle facilities at this location.

The **R135** at Kilshane is a regional single carriageway road with a pavement width of approximately 9 metres. It follows a north-south alignment, extending northward towards Ashbourne and connecting southward to the N2. The N2 in turn provides access to the M2 motorway via junctions 2 and 3. The road is subject to a speed limit of 60 km/h. There are no dedicated pedestrian or cycling facilities along this section of the R135.

The **N2** at Kilshane is a national primary road that forms part of the strategic route connecting Dublin to the northwest of Ireland. It features a dual carriageway configuration in this area and links directly to the M2 motorway at junctions 2 and 3. There are no dedicated pedestrian or cycling facilities along this section of the R135.

The **N3** road is a national primary road running between Dublin, Cavan and the border with County Fermanagh. The former section from its junction with the M50 to Dublin city centre, as well as the bypassed section from Clonee to the border with County Cavan, have been reclassified as the R147 road.

The **M50** at Kilshane is a major orbital motorway serving the Dublin region, providing a critical link between national primary routes including the N2 and M1. The M50 is a tolled motorway, and there are no dedicated pedestrian or cycling facilities along this section.

3.3.2 Junctions

The primary junctions in the vicinity of the subject development site that are considered relevant to the subject assessment are the following:

- **Junction 1 (permitted roundabout):** (L3120) Kilshane Road / Proposed Site Access to Phase 1 and Phase 2 development (**See section 4.3**).
- **Junction 2 (Kilshane Cross) (signalised crossroads):** (L3120) Kilshane Road / R135 / (L3125) Kilshane Road

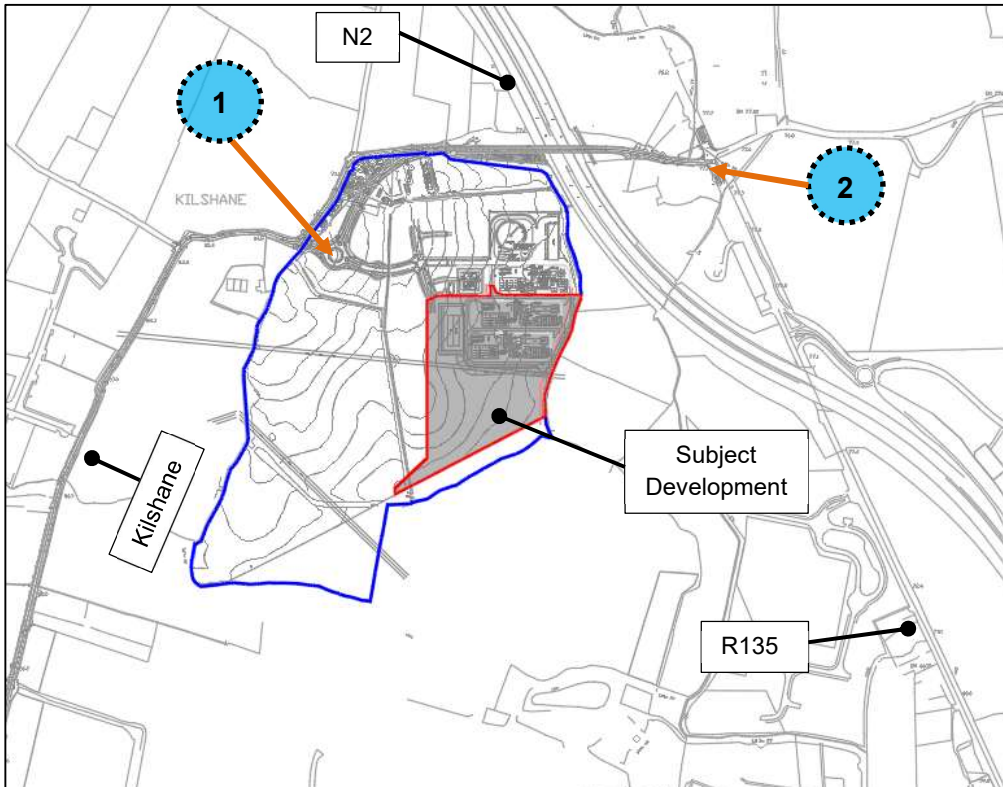


Figure 5 | Primary Local Junctions

3.4 Multi-modal access to the site

3.4.1 Bus Network

There are no public transport services operating directly on Kilshane Road. The nearest bus stops are located on the R135. Additionally, there are bus stops located on the Mitchelstown Road at the Northwest Business Park, situated to the east and southwest of the site. Details on current bus services and walking routes to/from the site are provided below:

- “Suncourt” bus stop (Stop 101121) on the R135. This is 950m (approx. 13 min walk) away from the existing site entrance. This stop is served by bus routes 103 & 105X in a southbound direction only.

- “Kilshane Cross” bus stops numbers 105621 and 134321 on the R135. This is 2.0km (approx. 27 min walk) away from the existing site entrance. This stop is served by bus routes 103 & 105X in a northbound direction only.
- Northwest bus stops numbers 7680 and 7676 on the Mitchelstown Road at Northwest Business Park, serve route 40E in both directions and are 1.6km (approx. 22 min walk) away from the existing site entrance.

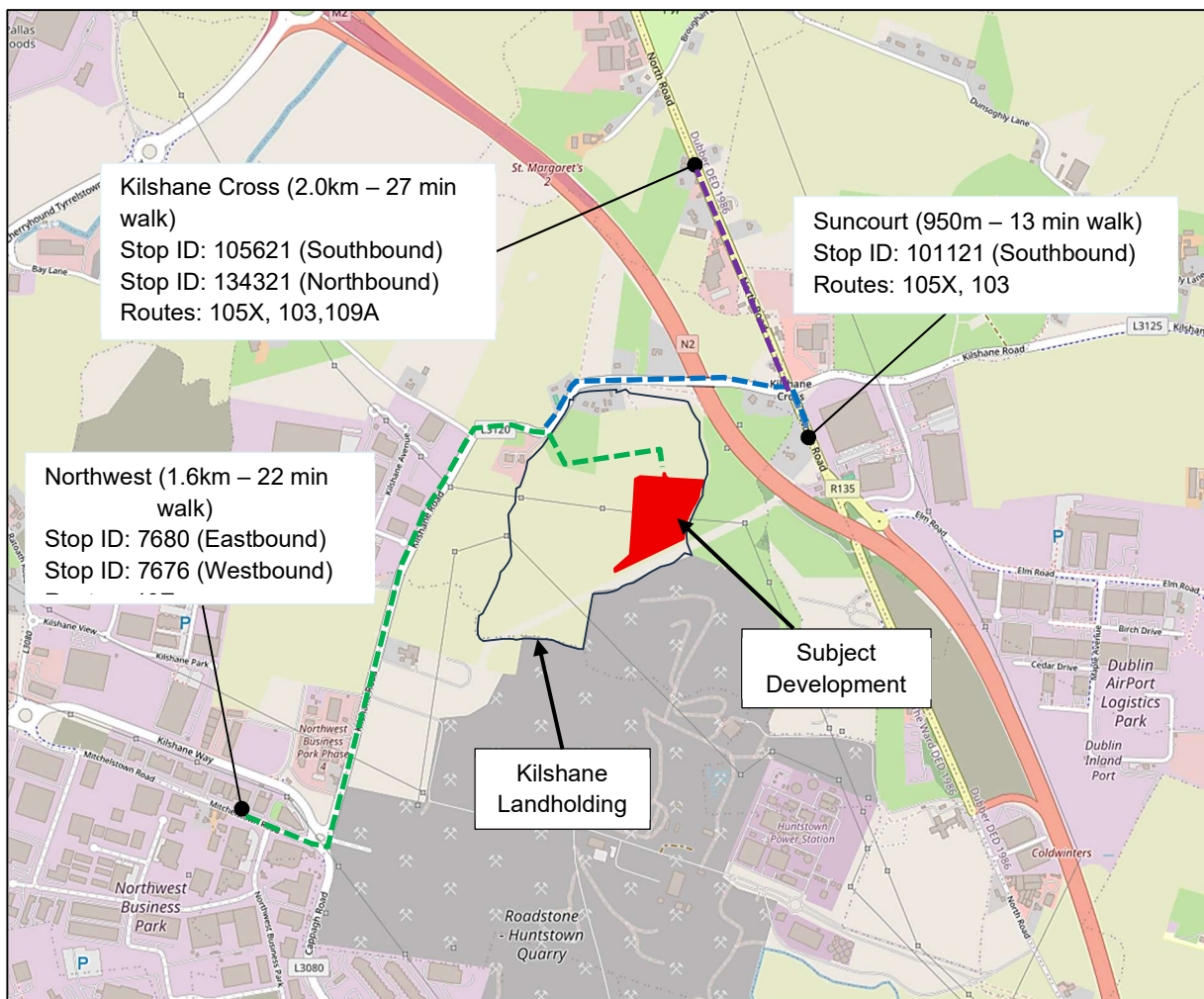


Figure 6 | Bus Network – Walking distance from development to Bus Stops

The bus routes and their frequencies are provided in **Table 1** below. The times indicated in the table are based on the timetable for each bus stop.

Route	Direction	Weekday Frequency	Saturday Frequency	Sunday Frequency
103	Beresford Place -Ratoath via Ashbourne	Every 20 minutes from 9:01 to 23:52	Every 30 minutes between 06:23 and 12:17 Every 20 minutes between 12:17 and 18:20 Every 30 minutes between 18:20 and 23:53	Every hour between 07:25 and 12:25 Every 30 minutes from 12:25 to 18:59 Every hour from 18:59 to 23:53
	Ratoath – Townsend via Ashbourne	20 minutes from 06:39 to 21:29 Every 30 minutes from 21:29 to 00:59	Every 30 minutes from 07:39 to 13:19 Every 20 minutes from 13:19 to 19:59 Every 30 minutes from 19:59 to 00:53	Every hour
105X	Dublin – Fairyhouse Road via Ratoath	At 17:54, 18:11 and 18:39	No service	No service
	Fairyhouse Road – Dublin via Ratoath	At 07:39, 07:54 and 08:09	No service	No service
109A	Dublin Airport – Kells via Navan	Every hour	Every hour	Every hour
	Kells to Dublin Airport via Navan	Every hour	Every hour	Every hour
40E	Broombridge Luas - Tyrrelstown	Every 30 minutes from 06:22 to 23:30	Every 30 minutes from 07:30 to 23:30	Every 30 minutes from 07:50 to 23:30
	Tyrrelstown -Broombridge Luas	Every 30 minutes from 05:37 to 22:45	Every 30 minutes from 06:40 to 22:55	Every 40 minutes from 07:15 to 23:30

Table 1 | Local Bus Routes and Frequencies

3.4.2 Pedestrian Infrastructure and Walking Accessibility

There are no dedicated pedestrian walkways along Kilshane Road in the vicinity of the subject development. However, there is a pedestrian footpath, on the northern side of the road closer to the N2 east over the N2 flyover for approximately 380m.

As a reference for the potential accessibility to the site the “Guidelines for Providing for Journeys on Foot” published by the Institution of Highways & Transportation in 2000 was considered. This guideline indicates that acceptable walking distances will vary between individuals and circumstances, such as an individual’s fitness, physical ability, and personal motivation; the size of the city itself and the quality of the surrounding footpath network. This document also suggests walking distances and times based on an average walking speed of 1.4m/sec (approximately 400m in five minutes). **Table 2** 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 2 | Suggested Walking Distances

(Source: Guidelines for Providing for Journeys on Foot)

Figure 7 below details the 10-, 15- and 24-minute catchments areas, through the form of isochrones, to summarise the accessibility of the subject site on foot (Preferred Maximum) to Town Centres, Elsewhere and Commuting Schooling / Sight-seeing, respectively as per **Table 2** above.

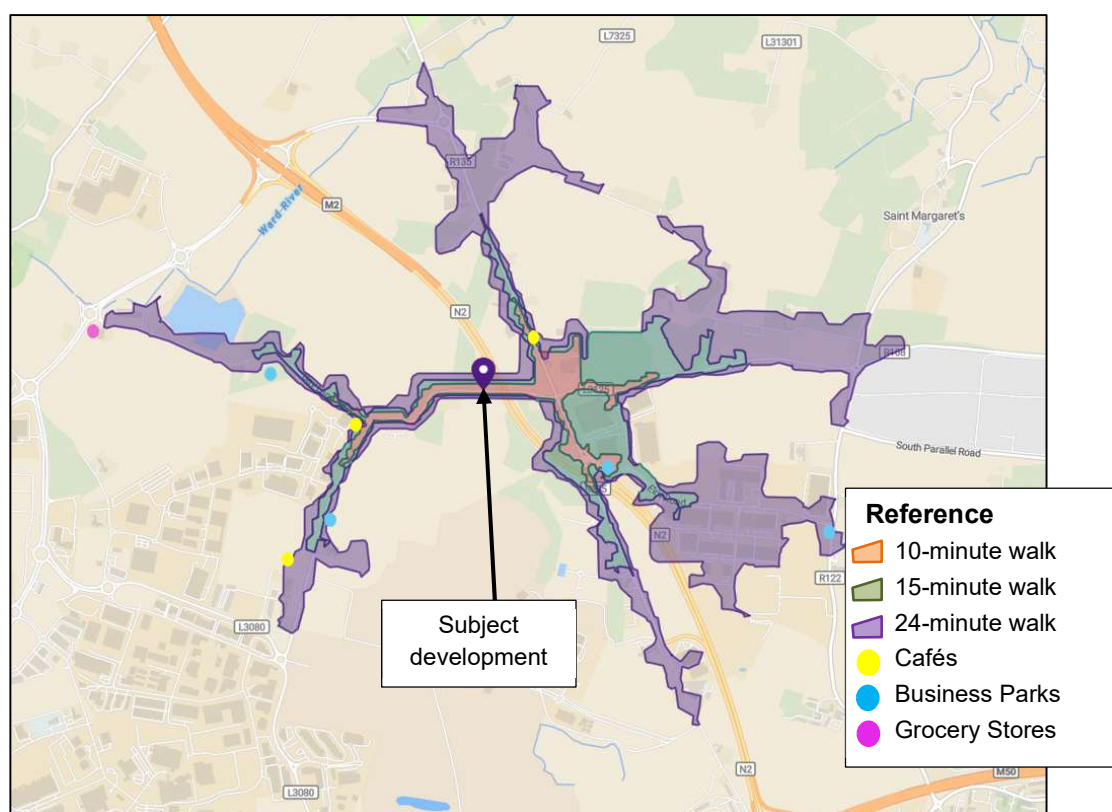


Figure 7 | Isochrone map indicating Walking Accessibility

(Source: Smappen)

As illustrated, a 24-minute walk will enable access to bus stops and bus routes as was detailed in **Section 3.4.1** above. It also provides access to amenities such as cafés, grocery stores and business parks.

3.4.3 Cycle Infrastructure and Cycling Accessibility

There is no dedicated cycle infrastructure along Kilshane Road as illustrated in **Figure 8** below.



Figure 8 | Existing cycling infrastructure
 (Source: Open Street Map)

Figure 9 below illustrates the cycling catchment areas accessible from the subject development for 10, 15, and 24-minute cycle times.

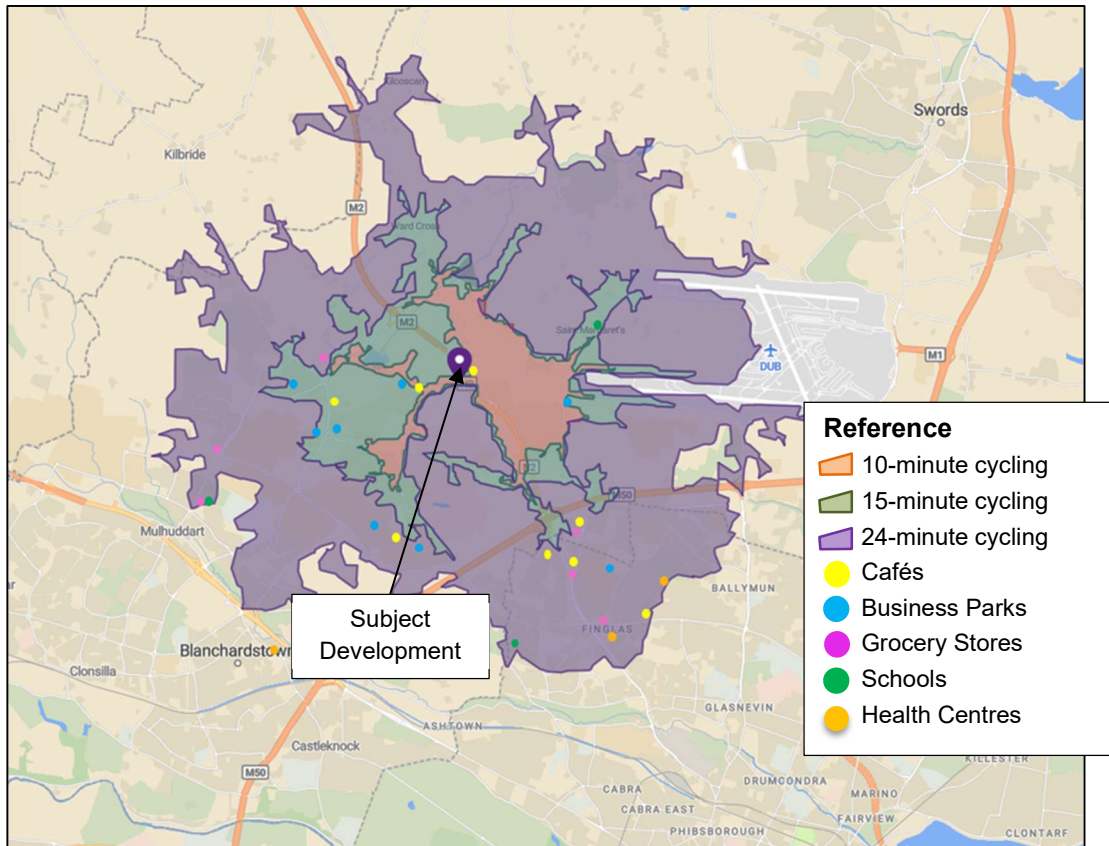


Figure 9 | Isochrone map indicating Cycling Accessibility
(Source: Smappen)

The figure above illustrates that the 24-minute cycle catchment area includes provides access to amenities such as cafés, grocery stores, medical centres and schools.

3.5 Existing Traffic Conditions

The existing traffic conditions for the subject site have been derived from the Planning Application Reg. Ref. No. FW24A/0339E. The proposed development includes a traffic survey carried out by IDASO on Thursday 2nd May 2024 over the course of 12 hours (7:00am to 7:00pm). Survey results are included in the Appendix B of the Engineering Assessment Report included in the mentioned planning application.

Although the traffic survey was conducted at Junction 2 (refer to **Figure 5** above), it is possible to extend the traffic impact assessment to Junction 1, as there are no developments along Kilshane Road (L3120) that would significantly alter traffic flow.

The results indicated that peak traffic volumes at the surveyed junction occurred during the morning period of 08:00–09:00 and the evening period of 17:00–18:00. These peak hour volumes are illustrated in **Figure 10** below.

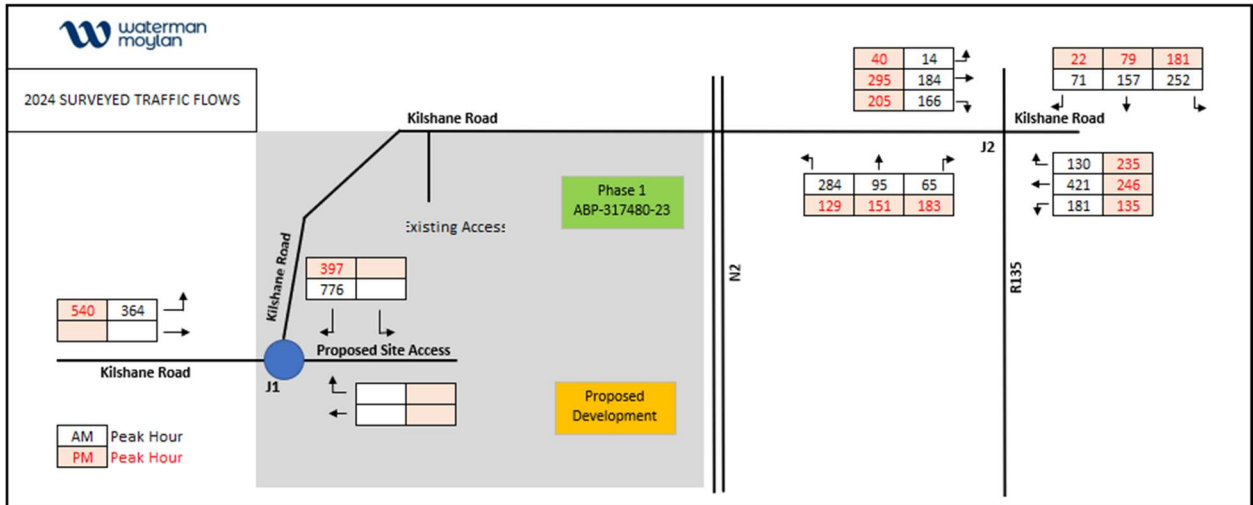


Figure 10 | 2024 Surveyed Traffic Flows

For the purposes of this current application, the traffic counts shown in **Figure 10** above has been factored up to the year 2025 to establish the base traffic conditions. The background traffic growth rates used to factor up the flows are in accordance with the 'Table 6.1: Link-Based Growth Rates: Metropolitan Area Annual Growth Rates' within the TII Publications – Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections (October 2021). These are:

- 2024 – 2025 (Central Growth Rate): 1.016

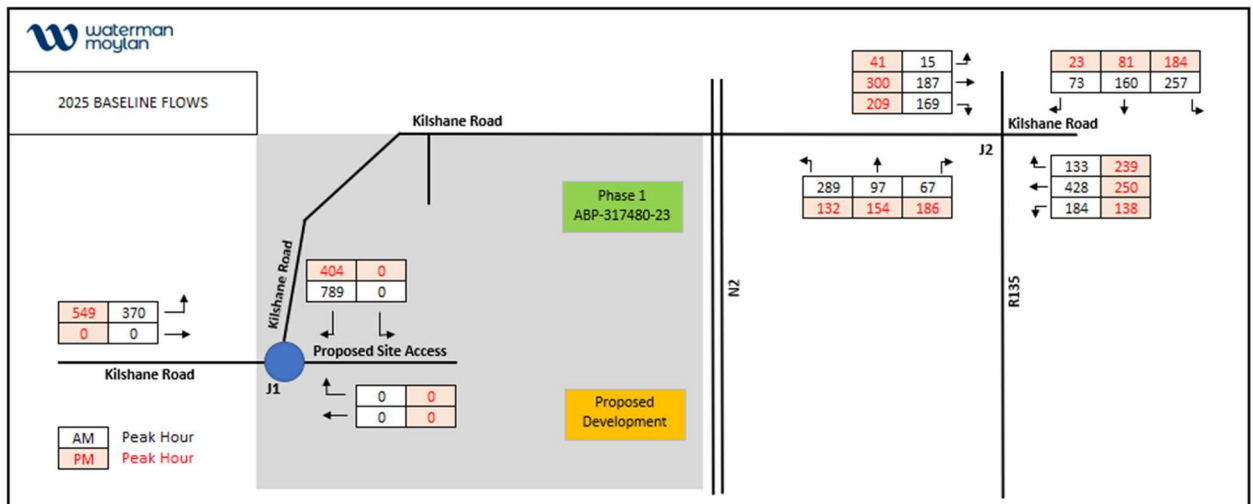


Figure 11 | 2025 Baseline Flows

4. Transportation Improvements

4.1 BusConnects

The BusConnects project, currently being promoted by the National Transport Authority (NTA), aims to deliver a significantly improved bus service in the Greater Dublin Area (GDA). Some of the route improvements identified in the BusConnects plan are already in place or underway. According to BusConnects the above route types can be defined as follows:

Spines routes: are very frequent routes made up of individual bus services that are timetabled to work together over their common sections.

Radials routes: are other services that operate into Dublin city centre. These services are not part of any Spine and operate to their own timetable.

Orbitals routes: provide connections between suburbs, without having to travel into the city centre.

Local routes: provide connections to Local centres and link to onward transport connections.

Peak routes operate during peak travel periods, providing additional capacity along key bus corridors. Express routes are direct services from outer suburbs to the city centre during peak hours, serving limited stops to get passengers to their destination faster.

The routes proposed to serve the surrounding area of the Subject Development are shown in **Table 3** below, which also gives the route name and weekday and weekend frequency, and the map showing the location of each bus route is shown in **Figure 12** below. The subject development is proposed to be served by route bus route L62 which is located at 1.6km (22 min walk) away from the Subject Site to the south.

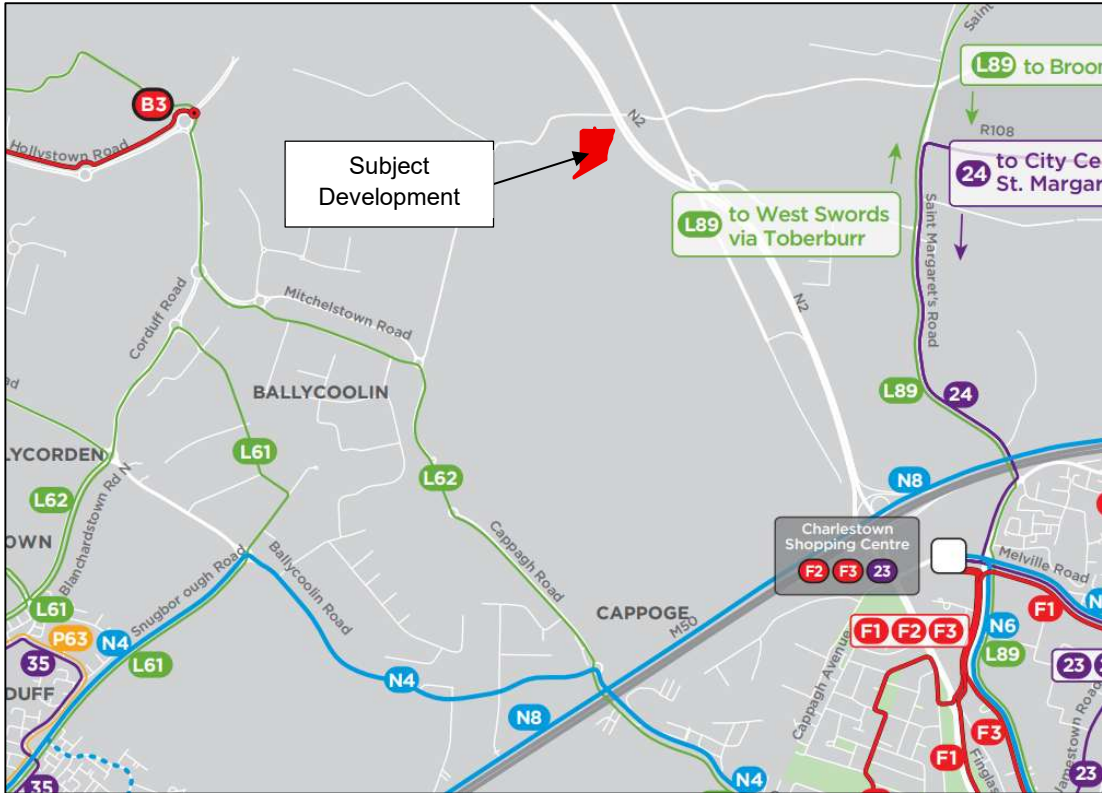


Figure 12 | BusConnects Route Map
(Source: extracted from BusConnects Revised Network Map 2023)

4.3 Local Network Improvements

Local network improvements are planned along Kilshane Road (L3120), as part of a broader development initiative associated with the approved Phase 1 of the project (Reg. Ref. ABP-317480-23).

The proposed upgrades include road improvement works to 493.34m Kilshane Road (L3120), including the realignment of a portion of the road (293.86m) within the subject lands boundary and the provision of new footpaths, off-road cycle ways, together with the construction of a new roundabout linking the permitted realignment of Kilshane Road back to the existing road network to the northeast of the subject lands and to the proposed internal road network to serve the proposed development.



Figure 14 | Local Network Improvements

5. Proposed Development

5.1 Development Description

The site is located at Kilshane, Dublin 11, just west of the N2 Primary Road, approximately 300m west of the R135 and is located approx. 2 km north-west of the M50.

The site is bound to the north by the Phase 1 Development which has received a notification to grant permission under Reg. Ref. FW25A/0523E. The remaining lands surrounding the site largely comprise agricultural fields, with the businesses and commercial/industrial sheds appearing in the wider vicinity east and west of the site.

The proposed development will consist of the following:

- 2 additional gas turbines producing 340MW each
- 400kV GIS building and associated compound
- Increasing diesel storage from 5000t to 15000t
- Extension to administration building
- Access roads
- Electrical substation

5.2 Development Access Point

Vehicular access to the subject development will be provided via a new roundabout, connecting to the internal road to be provided in Phase 1 which is located immediately north of the subject site. This phase has received a notification to grant permission under Reg. Ref. ABP-317480-23. The permitted roundabout will also serve as the primary access point for pedestrians and cyclists.

As part of the Phase 1 project, a section of Kilshane Road along the north-western boundary of the site is proposed to be realigned and upgraded. The upgraded road layout will include dedicated 2-metre-wide footpaths and 2-metre-wide cycle lanes on both sides of the carriageway.

The development access point is shown in **Figure 15** below:

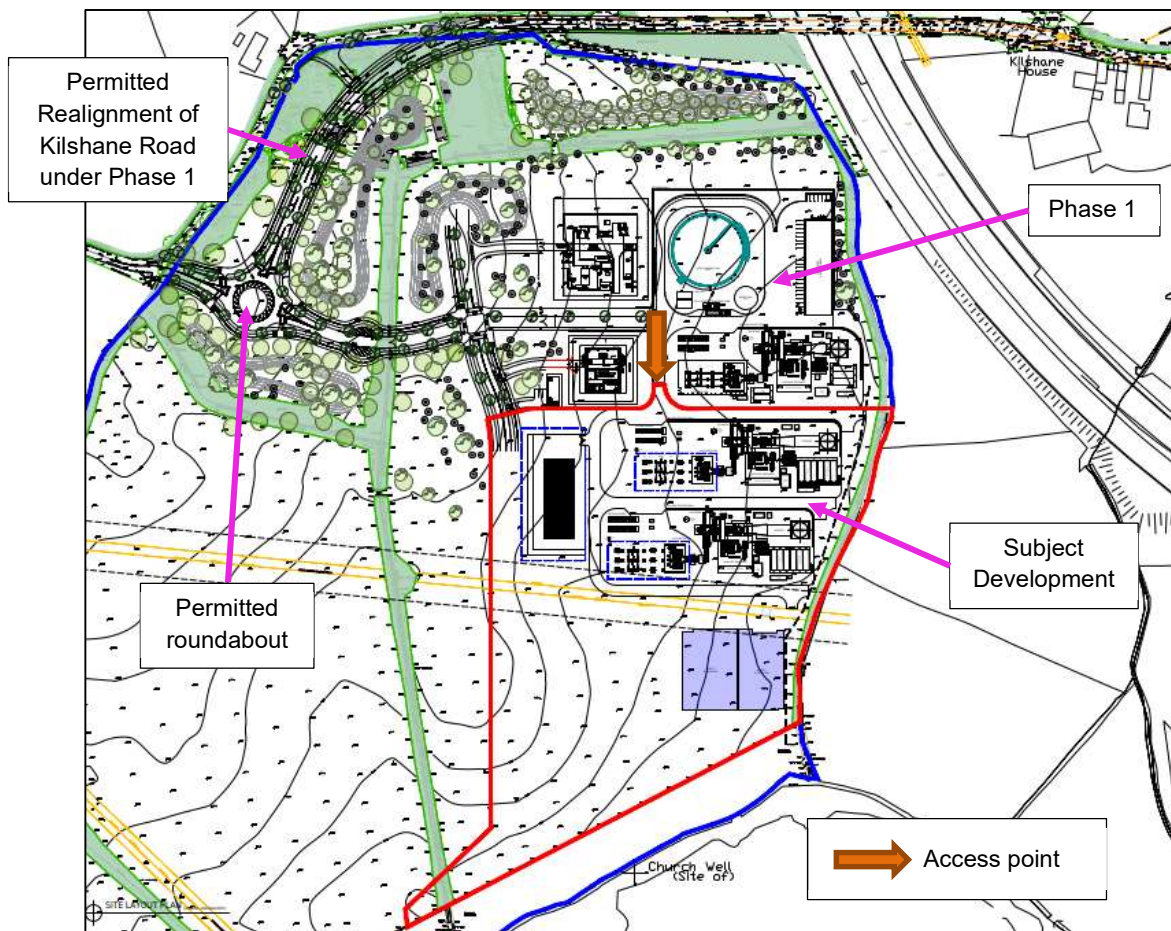


Figure 15 | Proposed Development – Site Access Point

5.3 Construction and Operation Phase

The construction period for the subject development is expected to overlap with that of Phase 1 which has received a notification to grant permission under Reg. Ref. ABP-317480-23. According to the TTA prepared by Waterman Moylan Consulting Engineers *report No. 21-099r.011B* included with the Planning Application for the Phase 1 development, the construction phase is expected to occur from 2025 to 2028. The proposed subject development's construction phase will occur from 2027 to 2029.

During the construction of Phase 1, the site will accommodate approximately 200 construction staff. Once Phase 2 construction commences, staffing levels are expected to increase by an additional 50 personnel, bringing the total number of construction staff on-site to 250 during the peak overlapping period.

According to the TTA prepared by Waterman Moylan Consulting Engineers *report No. 21-099r.011B* included with the Planning Application for the Phase 1 development, during the operation phase, Phase 1 will have 25 no. staff. Upon completion of the proposed subject development, an additional 5 no. staff will be employed bringing the total number of staff to 30.

6. Trip Generation and Distribution

6.1 Subject Development

Trip generation potential for the proposed development has been estimated based on the staff number and HGV deliveries advised by the developer based on the size and use of the proposal and has been estimated for the Construction Phase and the Operational Phase.

6.1.1 Construction Traffic

As mentioned in **Section 5.3**, the construction period for the subject development is expected to overlap with that of the approved Phase 1 development (Reg. Ref. ABP-317480-23).

With regard to heavy goods vehicles, an estimate of the daily traffic movements associated with construction activities has been made based on experience of similar sites, assuming that the worst-case scenario for construction traffic will be during the excavation phase. Determination of the construction traffic movements is based on the assumptions set out below:

- Construction Work Schedule: The normal working week is 39 hours worked over five days between Monday and Friday each week. Normally Monday-Thursday from 07:00 to 17:00, with a minimum of 8 working hours, and Friday from 7:00 to 4:00, with a minimum of 7 working hours.¹
- This assessment assumes that workers should arrive on site before 07:00 and leave after 16:00.
- This report assumes that HGV movements will occur from 07:30 to 16:00.
- Conservatively assuming removal trucks will operate Monday – Friday only.
- 20 working days per month.
- Preliminary calculations for the excavation required by the proposed development indicate a total volume of 63.856 m³. Refer to Waterman Moylan Drawing No. KPS-WMC-PH1-00-DR-C-P150 for details. It is assumed that excavation for the approved Phase 1 development will be completed prior to the commencement of the current development.
- Carrying capacity of trucks is 15m³.
- Peak hours on the road network occur from 08:00 to 09:00 in the morning and from 17:00 to 18:00 in the evening (refer to **Section 3.5** above).

It is estimated that the Subject Site will generate a total of 4,257 two-way trips over a 160-day period (approximately eight months) during the excavation phase. This gives an average of 26 truck arrivals and 26 truck departures per working day. Additional HGV movements for stone deliveries and large concrete pours are expected to vary between 5 and 10 two-way traffic flows per day. Therefore, during the excavation phase, a total of approximately 31 to 36 HGV movements per day is anticipated. For the purposes of this assessment, it is assumed that 5 two-way HGV movements will occur during the AM peak hour, with the remaining movements distributed throughout the rest of the working day.

The general workforce is expected to be approximately 250 people per day. As indicated in **Section 3.4** above, the site is currently poorly connected to public transport. Consequently, it is anticipated that staff will primarily commute to and from the development by personal vehicles, carpooling, or shuttle buses. Given the location of Subject Development and considering the worst-case scenario, it is assumed that 200 cars will arrive and depart during the peak hours (average vehicle occupancy of 1.25 people).

¹ Construction Sector - Workplace Relations Commission:
https://www.workplacerelations.ie/en/what_you_should_know/hours-and-wages/sectoral%20employment%20orders/construction-sector/

The estimated distribution of **inbound** traffic to the Construction Site is as follows:

- 80% (160 trips) of the inbound traffic generated by the construction site will be between 06:00 and 07:00.
- 10% (20 trips) of the inbound traffic generated by the construction site will be between 07:00 and 08:00.
- 5% (10 trips) of the inbound traffic generated by the construction site will be between 08:00 and 09:00.
- 5% (10 trips) of the inbound traffic generated by the construction site will be after 09:00.

As indicated above, it is assumed that workers will leave the site after 16:00, and based on experience from similar construction projects, the estimated distribution of **outbound** traffic to the Construction Site is as follows:

- 80% (160 trips) of the outbound traffic generated by the construction site will be between 16:00 and 17:00.
- 20% (40 trips) of the outbound traffic generated by the construction site will be between 17:00 and 18:00.

The trips generated are shown in the table below.

	AM Peak Hour (08:00 - 09:00)		PM Peak Hour (17:00 - 18:00)	
	Arrivals	Departures	Arrivals	Departures
Construction Traffic	23	13	0	40

Table 4 | Subject Development Trip Generation - Construction Phase

In table above, the 5 two-way HGV movements have been expressed in PCU (1 HGV = 2.5 PCU).

Trip Distribution:

It is assumed that approximately 80% of workers will commute via the N2, with 40% travelling through Junction 2, located to the north of Kilshane Road, and 40% using the free-flow slip road from the N2 northbound, situated to the south of Kilshane Road (refer to **Figure 4** above). These workers will then proceed via Kilshane Road from the north of the permitted roundabout. The remaining 20% are expected to arrive from the west from the N3 or residential areas located to the east of the proposed site. As construction personnel are expected to remain on-site throughout the day, AM peak departures will primarily consist of HGVs. The same directional distribution is anticipated for the PM peak period.

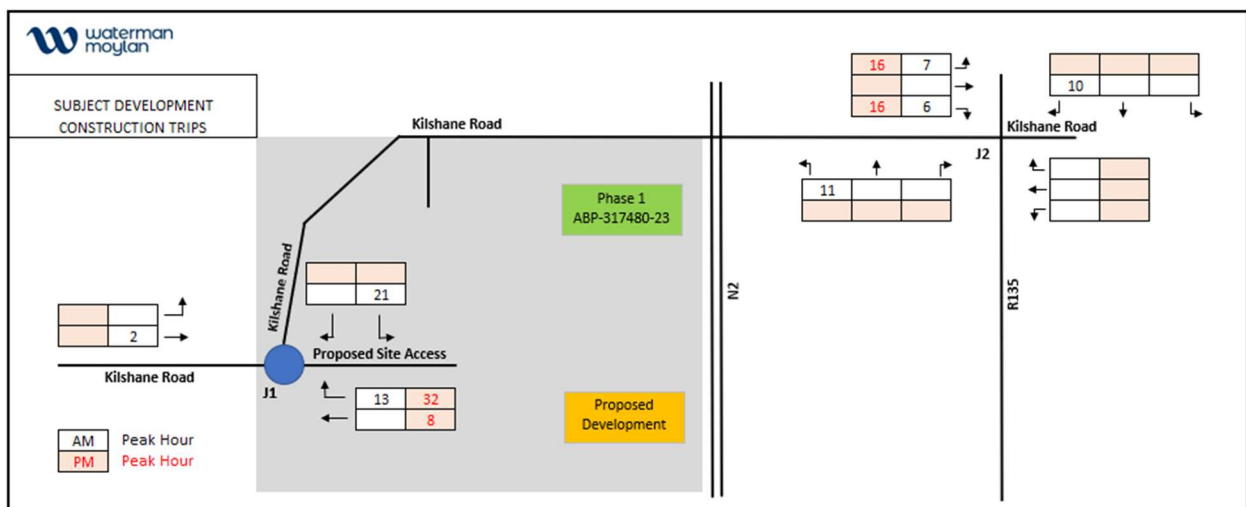


Figure 16 | Subject Development Trip Assignment - Construction Phase

6.1.2 Operational Traffic

Below is the information for the operational phase provided by the developer which was used to estimate the operational traffic to/from the development.

- Average and maximum number of staff: 25-30 people
- Average and maximum number of daily HGV deliveries: average of 1-2 per week.

It is worth noting that the maximum number of 30 staff comprises of 25 no. staff for Phase 1 and additional 5 no. staff for the Phase 2, subject development. As both phases share the same access point, operational traffic has been assessed based on this maximum staffing level.

In order to carry out a conservative assessment of the surrounding road network during the operation phase, all the staff members will travel to/from the site in their personal cars. It is also assumed that the HGV deliveries will be scheduled outside of the peak hours. Thus, trips generated during the operation phase are shown below.

	AM Peak Hour		PM Peak Hour	
	Arrivals	Departures	Arrivals	Departures
Operation Traffic	30	0	0	30

Table 5 | Subject Development Trip Generation - Operation Phase

Trip Distribution:

It is assumed that approximately 80% of staff will commute via the N2, with 40% travelling through Junction 2, located to the north of Kilshane Road, and 40% using the free-flow slip road from the N2 northbound, situated to the south of Kilshane Road (refer to **Figure 4** above). These workers will then proceed via Kilshane Road from the north of the permitted roundabout. The remaining 20% are expected to arrive from the west from the N3 or residential areas located to the east of the proposed site. The same directional distribution is anticipated for the PM peak period.

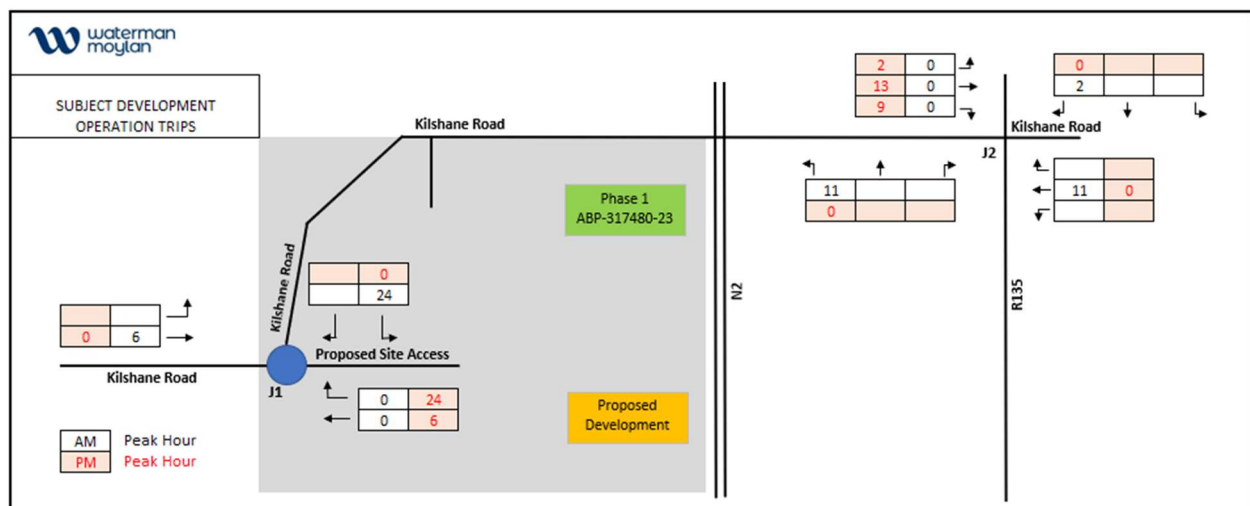


Figure 17 | Subject Development Trip Assignment - Operation Phase

6.2 Committed and Potential Future Developments

To provide a robust and cumulative assessment of local road network, nearby developments that are likely to have an impact on the local road network, have also been assessed in this TTA with regards to trip generation and additional traffic. The location of these developments is shown in **Figure 18** below:

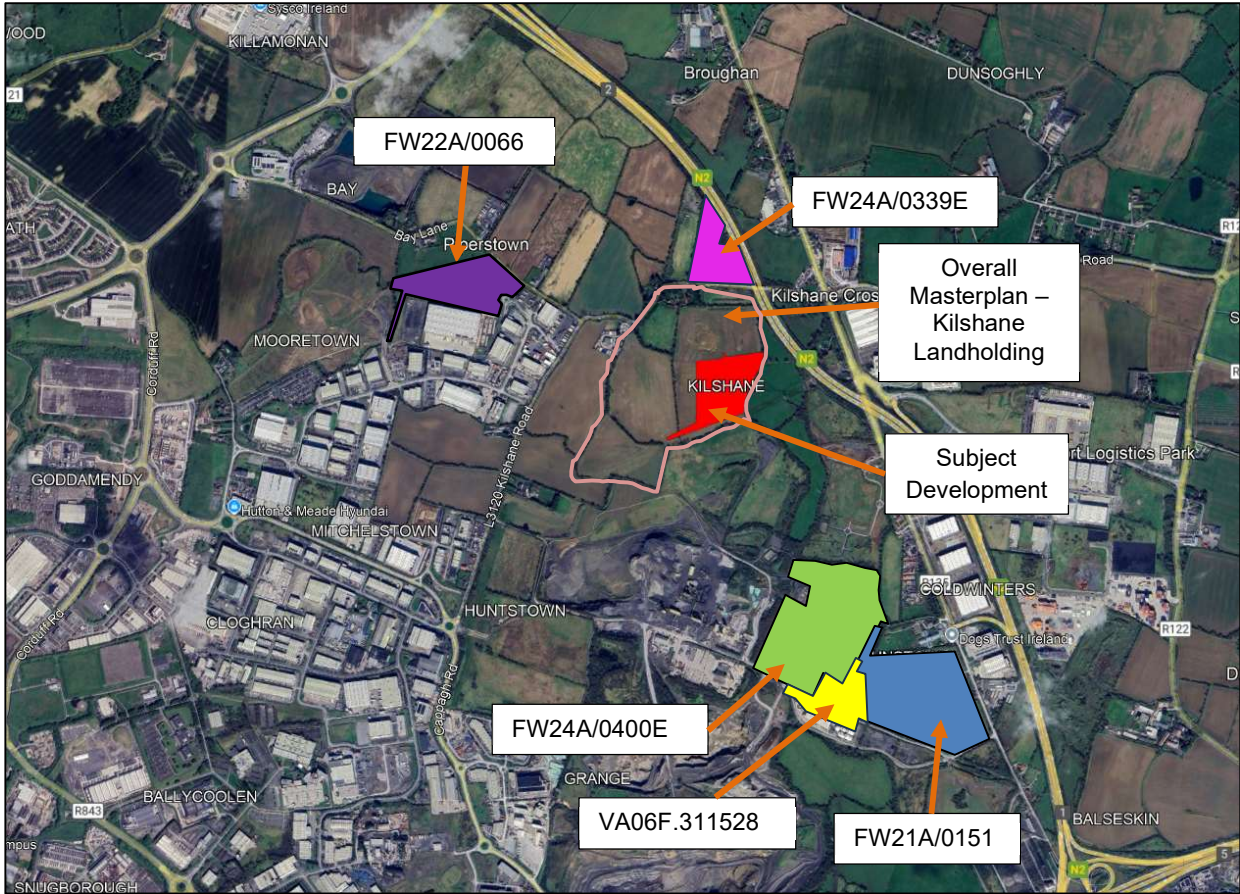


Figure 18 | Location of committed developments

6.2.1 Huntstown Battery Energy Storage System: FW24A/0400E

The committed Huntstown Battery Energy Storage development is located south of this subject site and received a notification to grant permission in May 2025. The development comprises a Battery Energy Storage System facility to include up to 85 no. containerised battery storage modules on concrete bases, 20 no. transformer and power conditioning units, cable racks, and associated lighting.

Construction is expected to start in 2026 and run for 15-27 months, therefore overlapping with the construction phase of the subject development. It is not expected that this development will add additional traffic flows to the existing road network after concluded the construction phase.

Trip generation has been obtained from the approved Construction Traffic Management Plan prepared by Mott Macdonald as part of the Huntstown Battery Energy Storage planning application. The calculated trips are reproduced in the table below.

Huntstown Battery Energy Storage	AM Peak Hour		PM Peak Hour	
	Arrivals	Departures	Arrivals	Departures
Construction traffic	31	3	3	31

Table 6 | AM & PM Peak Hours Trip Generation – Huntstown Battery Energy Storage

(Source: Section 2.4 – Construction Traffic Management Plan report. Pl. Ap. Reg. Ref. No. FW24A/0400E)

The trip distribution has been derived from the Construction Traffic Management Plan prepared by Mott MacDonald. The report indicates that construction vehicles will utilise the existing Huntstown Power Station access on North Road. North Road and the R135 can be accessed from the south (Dublin direction) via the N2, or from the north via the M2 Junction 2 (Cherryhound Interchange). For the purposes of this assessment, it is assumed that a proportion of traffic travelling along the R135 will continue straight ahead at the R135 and Kilshane Road junction. The traffic distribution is illustrated in **Figure 19** below.

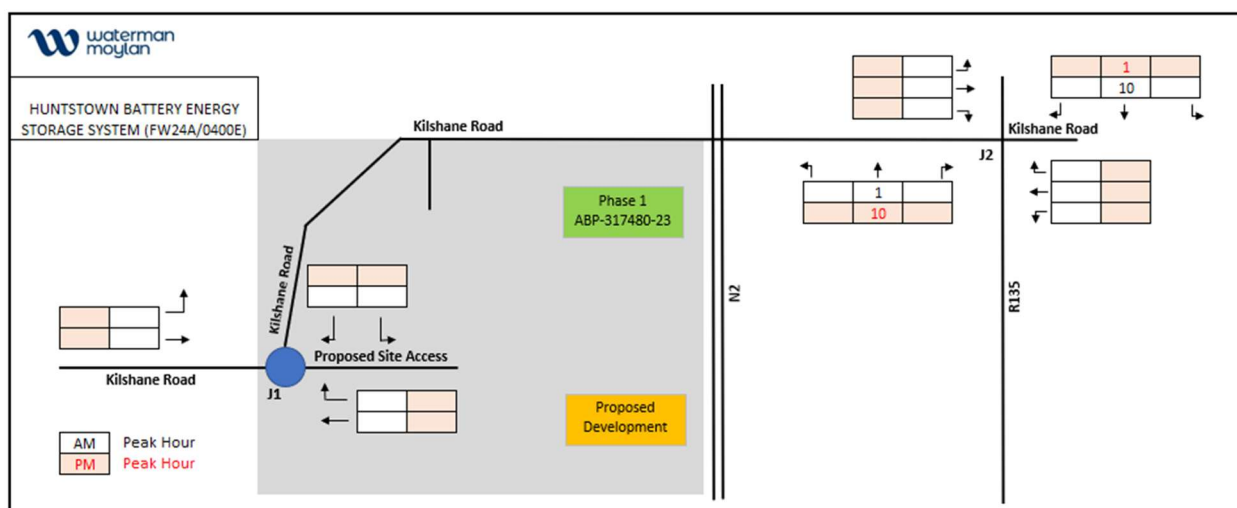


Figure 19 | Committed Development - Huntstown Battery Energy Storage System: (FW24A/0400E)

6.2.2 Shipping Container Depot at Kilshane: FW24A/0339E

The committed shipping container depot development is located north of this subject site and received a notification to grant permission under Reg. Ref. ABP-321196-24.

Operational traffic from the approved Engineering Assessment Report prepared by Waterman Moylan has been used to obtain trips generated by this development. The trips are reproduced in the table below.

Shipping Container Depot	AM Peak Hour		PM Peak Hour	
	Arrivals	Departures	Arrivals	Departures
Operational traffic	15	15	15	15

Table 7 | AM & PM Peak Hours Trip Generation – Shipping Container Depot

(Source: Table 13.3 – Chapter 3.1 EIAR report. Pl. Ap. Reg. Ref. No. FW22A/0066)

It is anticipated that this development will be operational at the commencement of the construction phase of the subject development

The trip distribution was extracted from Engineering Assessment Report prepared by Waterman Moylan. This report indicates that 80% of outbound vehicles will travel east along Kilshane Road (L3120) towards the N2 & M50, while the remaining 20% will travel west along Kilshane Road (L3120) towards Blanchardstown and the M3 motorway.

Trip distribution at Junction 2 is proposed to follow the same patterns observed in the surveyed traffic flows (refer to **Section 3.5** above).

Traffic flow distribution is presented in **Figure 20** below.

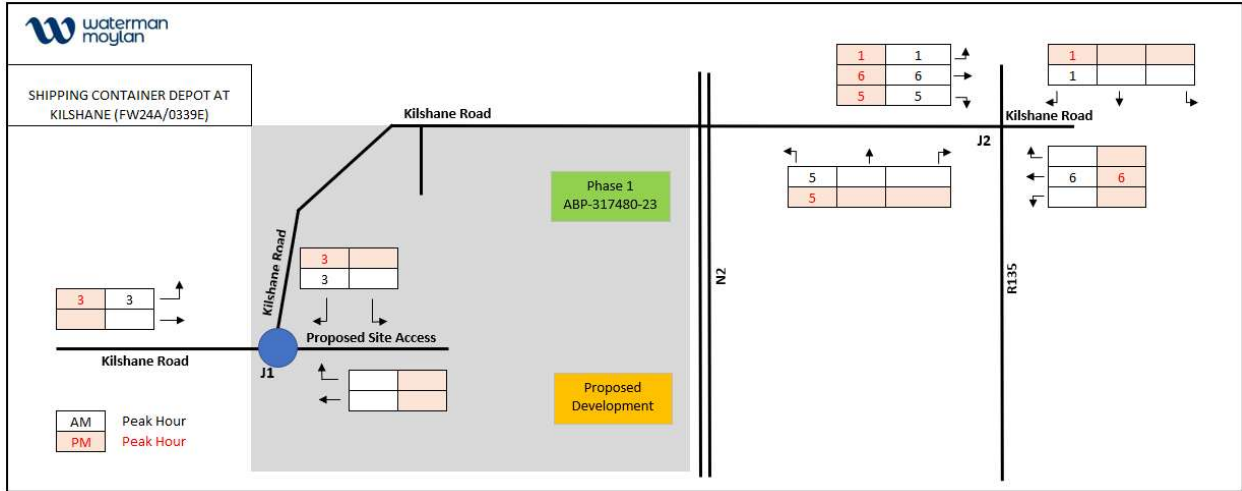


Figure 20 | Committed Development - Shipping Container Depot at Kilshane (FW24A/0339E)

6.2.3 High Technology Manufacturing Unit: FW22A/0066

The committed High Technology Manufacturing Unit development is located southwest of this subject site adjacent to Bay Lane. It received a notification to grant permission in July 2022. The lands are to be accessed directly from Kilshane Road via Bay Lane.

The proposed development comprises the construction of a high technology manufacturing unit (for the manufacturing of high technology electrical components), with a total gross floor area (GFA) of 23,600 sq.m (including ancillary office space of 2,318 sq.m. at ground and first floor levels), and with a main parapet height of c. 12 metres and maximum height of 14.5 metres.

It is anticipated that this development will be operational at the commencement of the construction phase of the subject development.

Trip generation has been obtained from Chapter 12 of the approved Environmental Impact Assessment Report prepared by AWN Consulting as part of the proposed High Technology Manufacturing Unit planning application. The trips are reproduced in the table below.

High Tech Manufacturing Unit	AM Peak Hour		PM Peak Hour	
	Arrivals	Departures	Arrivals	Departures
Operational traffic	81	17	16	86

Table 8 | AM & PM Peak Hours Trip Generation –High Technology Manufacturing Unit

(Source: Table 13.3 – Chapter 3.1 EIAR report. Pl. Ap. Reg. Ref. No. FW22A/0066)

The trip distribution was extracted from the Environmental Impact Assessment Report (EIAR) prepared by AWN Consulting. According to the information provided in the document, trips to and from the committed

developments will be distributed along the internal road network within the industrial park located to the west of the subject site. A small proportion of trips will travel via Kilshane Cross and will be reflected at the assessed junctions. Further details are provided in Appendix D, pages 8 and 18 of the EIAR.

In addition, trip distribution at Junction 2 is proposed to follow the same patterns observed in the surveyed traffic flows (refer to **Section 3.5** above).

The traffic flow distribution is illustrated in **Figure 21** below.

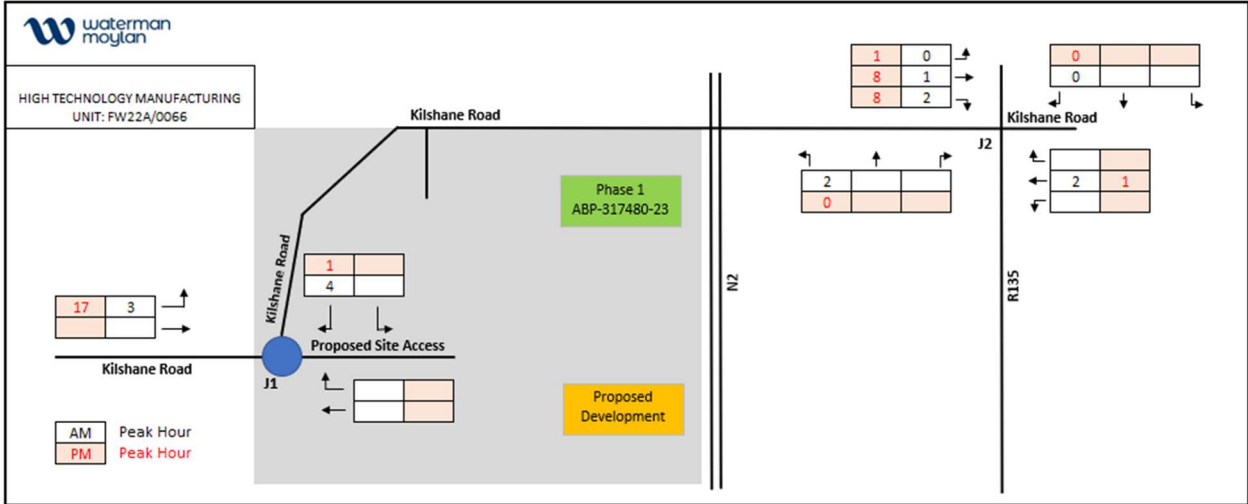


Figure 21 | Committed Development - High Technology Manufacturing Unit (FW22A/0066)

6.2.4 Huntstown Data Hall: FW21A/0151

The committed development Huntstown Data Hall is located south of this subject site. It received a notification to grant permission in March 2025.

The proposed development comprises the construction of 2 no. data hall buildings (Buildings A and B) comprising data hall rooms, mechanical and electrical galleries, ancillary offices including meeting rooms, workshop spaces, staff areas including break rooms, toilets, shower/changing facilities, storage areas, lobbies, outdoor staff areas, loading bays and docks, associated plant throughout, photovoltaic panels and screened plant areas at roof levels, circulation areas and stair and lift cores throughout.

According to the approved EAR, the construction of this data hall will run from 2024 to 2027. Therefore, this development will be operational at the commencement of the construction phase of the subject development.

Trip generation has been obtained from Chapter 13 of the approved Environmental Impact Assessment Report prepared by AWN Consulting as part of the proposed High Technology Manufacturing Unit planning application. At operational stage, the site will be run on a 24-hour basis with varying shifts.

The trips are reproduced in the table below.

Huntstown Data Hall	AM Peak Hour		PM Peak Hour	
	Arrivals	Departures	Arrivals	Departures
Operational traffic	8	8	4	157

Table 9 | AM & PM Peak Hours Trip Generation – Huntstown Data Hall

(Source: Table 13.3 – Chapter 13 EIAR report. Pl. Ap. Reg. Ref. No. FW21A/0151)

The trip distribution was extracted from the Environmental Impact Assessment Report prepared by AWN Consulting and is presented in **Figure 22** below.

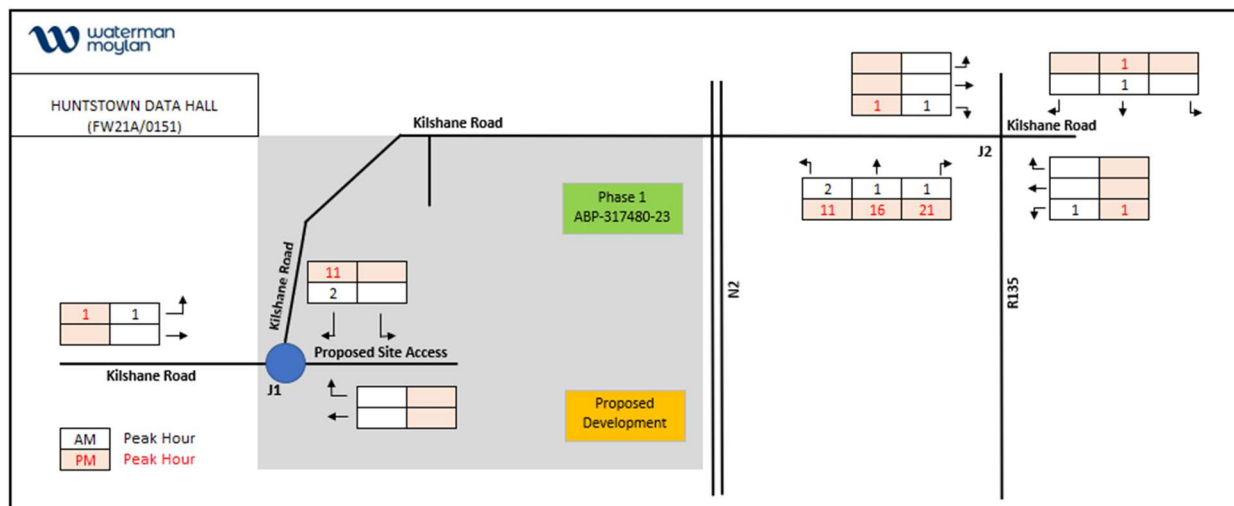


Figure 22 | Committed Development - Huntstown Data Hall (FW21A/0151)

6.2.5 220Kv Gas Insulated Switchgear – VA06F.311528

The committed development comprises a two-storey 220kV Gas Insulated Switchgear (GIS) substation to be known as 'Mooretown' with a total gross floor area of 2,068m² and overall height of 17m – 20m, 5 no. 20kV switchgear buildings, a series coil and 1 no. 20kV control room building, underground cabling and all associated and ancillary site works.

It received a notification to grant permission in March 2025. According to the approved EIAR prepared by AWN Consulting, the construction phase was expected to run from 2021 to 2023. For the purpose of this assessment, it is assumed that construction will commence in late 2025, therefore overlapping with the construction phase of the subject development.

Trip generation has been obtained from Chapter 13 of the approved Environmental Impact Assessment Report prepared by AWN Consulting as part of the proposed 220kV gas insulated switchgear (GIS) substation planning application.

The trips are reproduced in the table below:

220kV gas insulated switchgear	AM Peak Hour		PM Peak Hour	
	Arrivals	Departures	Arrivals	Departures
Construction traffic	8	5	3	6

Table 10 | AM & PM Peak Hours Trip Generation – 220kV Gas Insulated Switchgear

(Source: Table 13.1 – Chapter 13 EIAR report. Pl. Ap. Reg. Ref. No. VA06F.311528)

The trip distribution was extracted from the Environmental Impact Assessment Report prepared by AWN Consulting and is presented in **Figure 23** below.

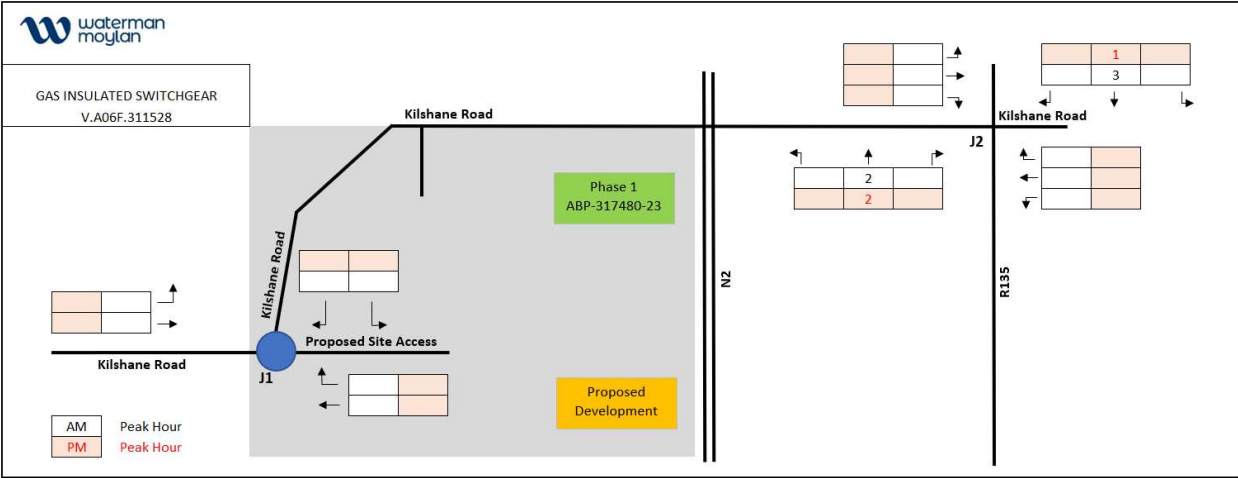


Figure 23 | Committed Development - 220Kv Gas Insulated Switchgear – VA06F.311528

6.2.6 Overall Site Masterplan

The subject application for the power station is included in a masterplan, according to the approved Phase 1 planning application under Reg. Ref ABP-317480-23. The overall masterplan to be developed in 28.34ha lands includes the construction of several industrial units in line with the Fingal County Council Zoning. **Figure 24** below shows the overall site masterplan extracted from the approved Phase 1 planning application.



Figure 24 | Masterplan Site – Extracted from approved Phase 1 planning application (Reg. Ref. ABP-317480-23)

Table 11 below shows the masterplan schedule of accommodation. The masterplan includes the gas turbine power station and 11 industrial commercial units. The proposed site access for the subject application has been designed to accommodate the masterplan.

Building	GFA (sqm)	Car Parking Provided*
Unit 1	2,800	28
Unit 2	3,400	40
Unit 3	4,000	40
Unit 4	6,500	71
Unit 5	6,500	65
Unit 6	3,400	40
Unit 7	3,400	38
Unit 8	6,500	66

Unit 9	3,900	40
Unit 10	1,200	12
Unit 11	1,000	10
Total	42,600	450

Table 11 | Masterplan Schedule of Accommodation –

(Source: Extracted from approved Phase 1 planning application (Reg. Ref. ABP-317480-23))

According to the approved Phase 1 planning application under Reg. Ref ABP-317480-23, the overall site masterplan is expected to have at least 500+ employees with a car being the primary method of transport to the site. It is estimated that the masterplan lands will generate 450 trips inbound during the AM peak hour and 450 trips outbound in the PM peak hour. This is based on the number of car parking spaces provided. It is assumed that the masterplan lands will be developed and operational by 2040.

The trip distribution was extracted from the Traffic and Transport Assessment by Waterman Moylan and is presented in **Figure 25** below.

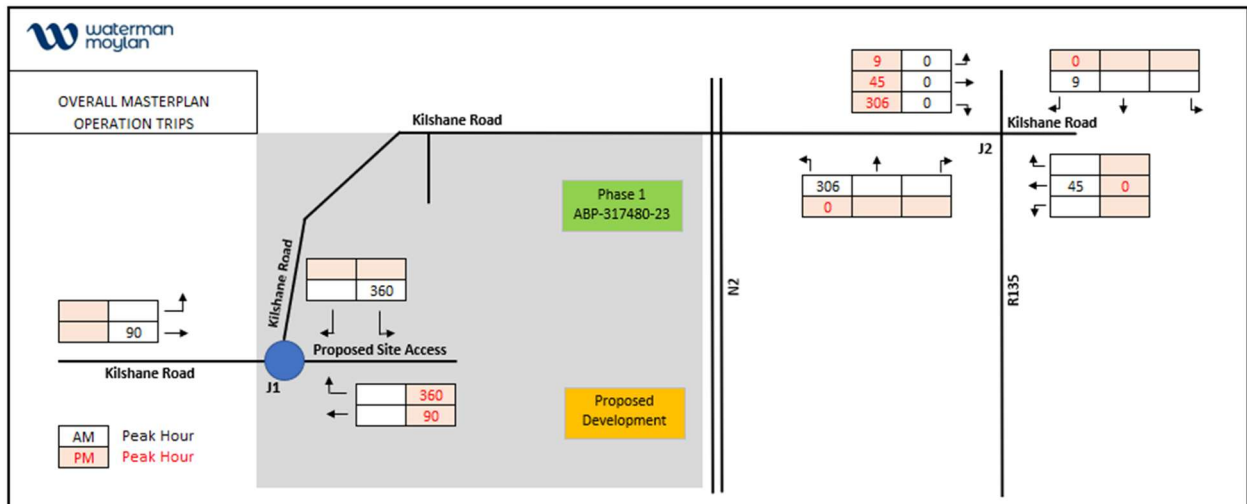


Figure 25 | Overall Site Masterplan

7. Junction Assessment

7.1 Junctions Assessed

The primary junctions in the vicinity of the subject development site that are considered relevant to the subject assessment are the following:

- **Junction 1 (permitted roundabout):** (L3120) Kilshane Road / Proposed Site Access to Phase 1 and Phase 2 development (See section 4.3).
- **Junction 2 (Kilshane Cross) (signalised crossroads):** (L3120) Kilshane Road / R135 / (L3125) Kilshane Road

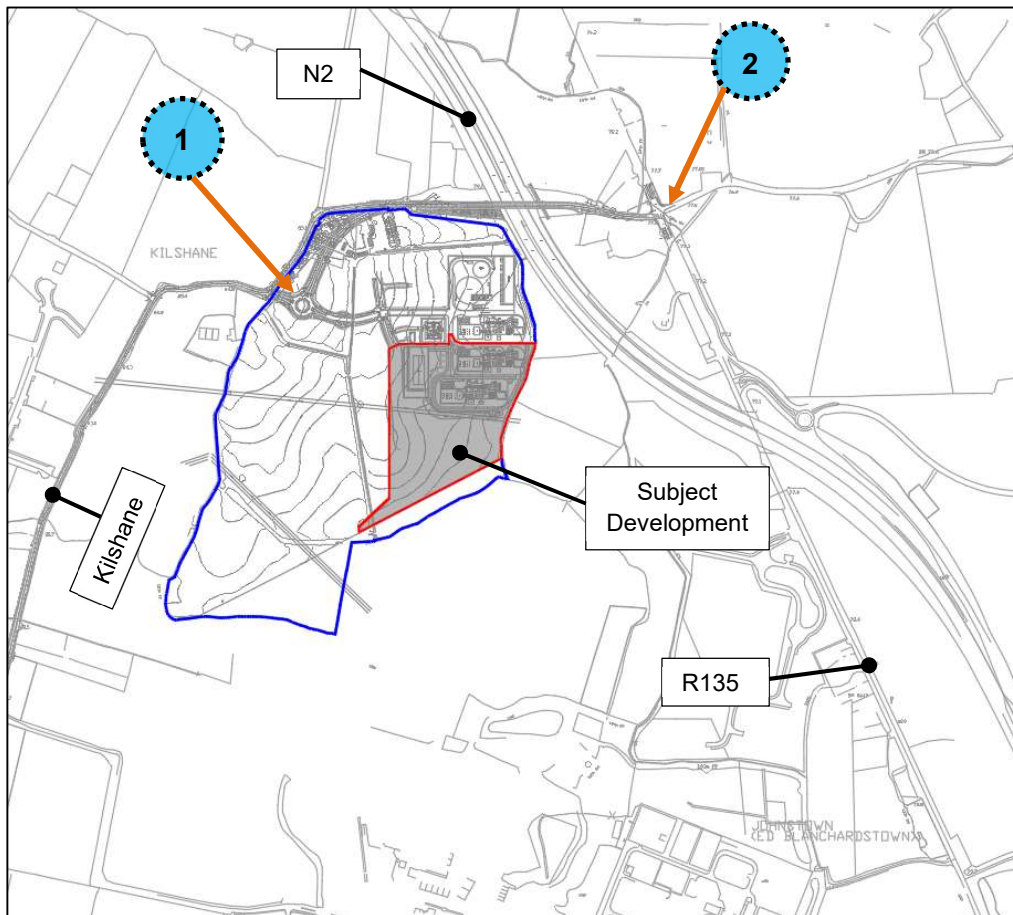


Figure 26 | Junctions Assessed

7.2 Traffic impact of the Subject 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 1.3** of this TTA.

The TII document indicates that the impact of new developments is considered to be 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.

7.2.1 Construction phase

A summary of the comparison between the base year two-way traffic flows (refer to **Section 3.5** above) and the construction traffic flows (refer to **Section 6.1.1** above) at each studied junction is presented in **Table 12** below.

Junction	Junction Base Year Flow -	Junction Base Year Flow -	Additional Traffic Two-way Flow (AM)	Additional Traffic Two-way Flow (PM)	% Expected Increase (AM)	% Expected Increase (PM)
	AM Peak Hour	PM Peak Hour				
1	1,159	953	36	40	3%	4%
2	2,059	1,937	34	32	2%	2%

Table 12 | Existing and Expected Two-way Flows – Construction Phase

As shown in the table above, during construction phase, Junction 1 and Junction 2 are expected to receive a two-way traffic increase below 5% in both the AM and PM peak hour, representing neutral and not-significant alterations to the junctions.

Therefore, no further traffic assessment is deemed necessary for the construction phase of the subject development.

7.2.2 Operation phase

It has been assumed that, on the busiest day, a maximum of 30 staff will be present, comprising of 25 staff for Phase 1 and an additional 5 staff for Phase 2. As both phases share the same access point, operational traffic has been assessed based on this maximum staffing level.

The comparison between the base year two-way traffic flows (refer to **Section 3.5** above) and the maximum operation traffic flows (refer to **Section 6.1.2** above) at each studied junction is presented in **Table 13** below.

Junction	Junction Base Year Flow -	Junction Base Year Flow -	Additional Traffic Two-way Flow (AM)	Additional Traffic Two-way Flow (PM)	% Expected Increase (AM)	% Expected Increase (PM)
	AM Peak Hour	PM Peak Hour				
1	1,159	953	30	30	3%	3%
2	2,059	1,937	24	24	1%	1%

Table 13 | Existing and Expected Two-way Flows – Operation Phase

As shown in the table above, during operation phase, Junction 1 and Junction 2 are expected to receive a two-way traffic increase below 5% in both the AM and PM peak hour, representing neutral and not-significant alterations to the junctions.

Therefore, no further traffic assessment is deemed necessary for the operational phase of the subject development.

8. Parking

8.1 Car Parking Proposed

Car parking standards for general industrial development are provided in Table 14.19 of Fingal Development Plan (2023-2029). However, these standards are not applicable due the nature of the subject development.

According to the approved Travel Plan prepared as part of the planning application for Phase 1, it will only require 1-2 staff on average each day and up to 25 staff required on busiest days. The proposed subject development is expected to follow a similar pattern, with an average daily requirement of 1–2 staff and a maximum of 5 staff on the busiest days. Therefore 26 no. car parking spaces (including 1 no. disabled parking space and 2 no. EV charging points) proposed in the approved Phase 1 development are adequate.

Figure 27 shows the location of the car parking spaces.

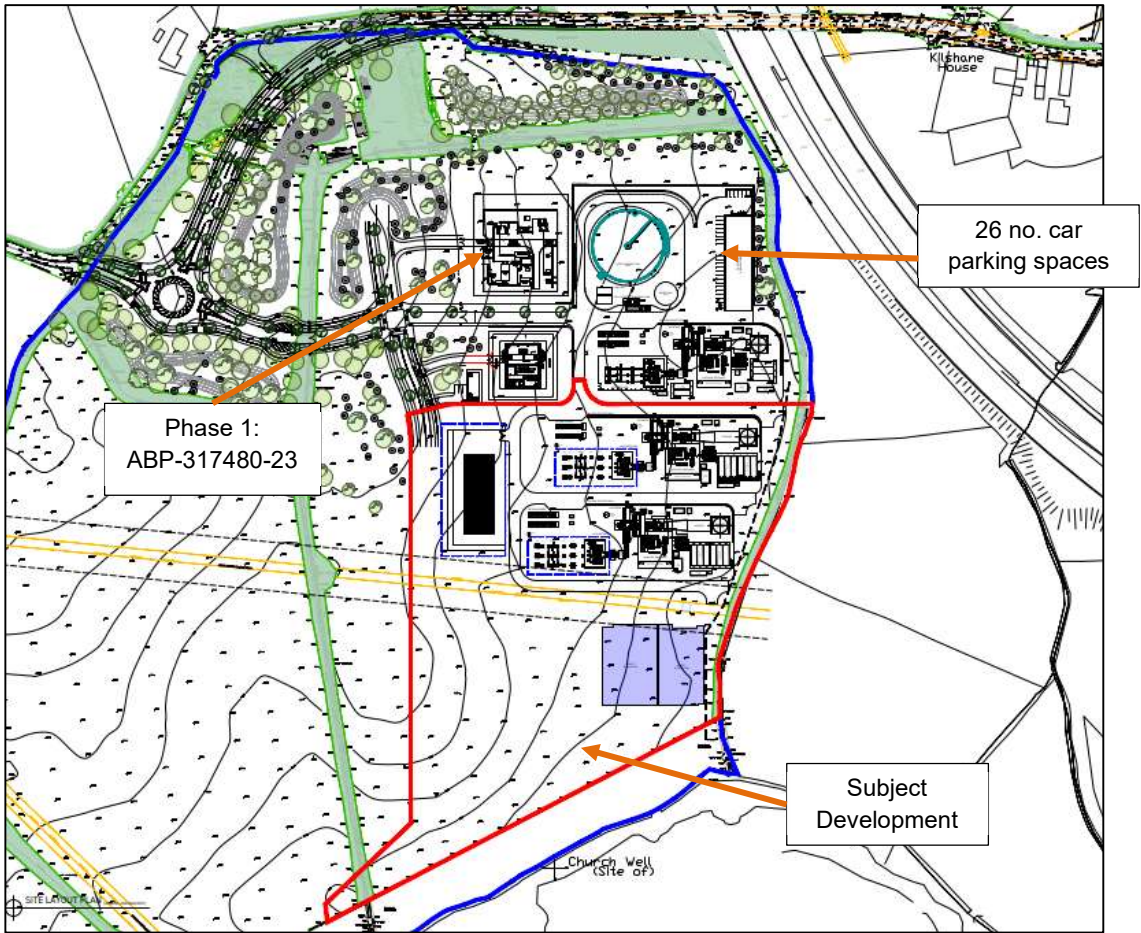


Figure 27 | Location of car parking spaces

8.2 Bicycle Parking Proposed

Cycle parking standards for general industrial development are provided in Table 14.17 of Fingal Development Plan (2023-2029). However, these standards are not applicable due the nature of the subject development.

The proposed development will utilise the 20 no. sheltered bicycle parking spaces included as part of the Phase 1 planning application (Reg Ref. ABP-317480-23).

Given the low number of staff expected on-site (approx.1–2) on a typical day and up to 5 on the busiest days, this provision is considered sufficient. Furthermore, the absence of dedicated cycling infrastructure along Kilshane Road limits the likelihood of significant demand for cycling as a primary mode of commuting.

9. Conclusion

9.1 Summary

This Traffic and Transportation Assessment (TTA) has been prepared by Waterman Moylan Engineering Consultants as part of a planning documentation for the Proposed Kilshane Phase 2 Development in Dublin 11.

The proposed development will consist of the following:

- 2 additional gas turbines producing 340MW each
- 400kV GIS building and associated compound
- Increasing diesel storage from 5000t to 15000t
- Extension to administration building
- Access roads
- Electrical substation

9.2 Conclusion

The main conclusions obtained in this TTA report are:

Site Accessibility

There are no public transport services operating directly on Kilshane Road. The nearest bus stops are located on the R135. Additionally, there are bus stops located on the Mitchelstown Road at the Northwest Business Park, situated to the east and southwest of the site. Details on current bus services and walking routes to/from the site are provided below:

- “Suncourt” bus stop (Stop 101121) on the R135. This is 950m (approx. 13 min walk) away from the existing site entrance. This stop is served by bus routes 103 & 105X in a southbound direction only.
- “Kilshane Cross” bus stops numbers 105621 and 134321 on the R135. This is 2.0km (approx. 27 min walk) away from the existing site entrance. This stop is served by bus routes 103 & 105X in a northbound direction only.
- Northwest bus stops numbers 7680 and 7676 on the Mitchelstown Road at Northwest Business Park, serve route 40E in both directions and are 1.6km (approx. 22 min walk) away from the existing site entrance.

There are no dedicated pedestrian walkways along Kilshane Road in the vicinity of the subject development. However, there is a pedestrian footpath, on the northern side of the road closer to the N2 east over the N2 flyover for approximately 380m.

There is no dedicated cycle infrastructure along Kilshane Road.

Road Network Assessment

Trip generation potential for the proposed development has been estimated based on the staff number and goods deliveries advised by the developer based on the size and use of the proposal and has been estimated for the Construction Phase and the Operational Phase.

In addition, to provide a robust and cumulative assessment of local road network, nearby developments that are likely to have an impact on the local road network, have also been assessed in this TTA with regards to trip generation and additional traffic

The primary junctions in the vicinity of the subject development site that are considered relevant to the subject assessment are the following:

- Junction 1 (permitted roundabout): (L3120) Kilshane Road / Proposed Site Access to Phase 1 and Phase 2 development (See section 4.3).
- Junction 2 (Kilshane Cross) (signalised crossroads): (L3120) Kilshane Road / R135 / (L3125) Kilshane Road

As a result, during both the construction and operation phases, Junction 1 and Junction 2 are expected to experience a two-way traffic increase of less than 5% during both the AM and PM peak hours, representing neutral and not-significant alterations to the junctions. Therefore, no further traffic assessment is deemed necessary for the both phases of the subject development.

Parking Assessment

Car parking standards for general industrial development are provided in Table 14.19 of Fingal Development Plan (2023-2029). However, these standards are not applicable due the nature of the subject development.

According to the approved Travel Plan prepared as part of the planning application for Phase 1, it will only require 1-2 staff on average each day and up to 25 staff required on busiest days. The proposed subject development is expected to follow a similar pattern, with an average daily requirement of 1–2 staff and a maximum of 5 staff on the busiest days. Therefore 26 no. car parking spaces (including 1 no. disabled parking space and 2 no. EV charging points) proposed in the approved Phase 1 development are adequate.

Cycle parking standards for general industrial development are provided in Table 14.17 of Fingal Development Plan (2023-2029). However, these standards are not applicable due the nature of the subject development.

The proposed development will utilise the 20 no. sheltered bicycle parking spaces included as part of the Phase 1 planning application (Reg Ref. ABP-317480-23).

Given the low number of staff expected on-site—1–2 on a typical day and up to 5 on the busiest days—this provision is considered sufficient. Furthermore, the absence of dedicated cycling infrastructure along Kilshane Road limits the likelihood of significant demand for cycling as a primary mode of commuting.

UK and Ireland Office Locations

