codling wind park

Environmental Impact Assessment Report

Volume 3

Chapter 27 Traffic and Transport


codling
wind park

Table of contents

List of tables

List of figures

List of plates

Abbreviations

Abbreviation	Term in full
ABP	An Bord Pleanála
CEMP	Construction Environmental Management Plan
CEA	Cumulative Effects Assessment
CWP	Codling Wind Park
CWPL	Codling Wind Park Limited
DCC	Dublin City Council
DTTS	Department of Transport, Tourism and Sport
DT	Department of Transport
EC	European Commission
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EPA	Environmental Protection Agency
ESB	Electricity Supply Board
EU	European Union
UÉ	Uisce Éireann
GIS	Geographic Information System
HV	Heavy vehicles
V	Kilovolt
LV	Light vehicle
LAP	Local Area Plan
MAP	Maritime Area Planning
NSA	Nutrient Sensitive Area
OWF	Offshore wind farm
O&M	Operations and maintenance
OSS	Offshore substation structure
OTI	Onshore Transmission Infrastructure
RFC	Ratio of Demand Flow to Capacity
SPAR	Southern Port Access Route
TTA	Traffic and Transportation Assessment
TII	Transport Infrastructure Ireland
TJB	Transition joint bay

Definitions

Glossary	Meaning
Codling Wind Park (CWP) Project	The proposed development as a whole is referred to as the Codling Wind Park (CWP) Project, comprising of the offshore infrastructure, the onshore infrastructure and any associated temporary works.
Codling Wind Park Limited (CWPL)	A joint venture between Fred. Olsen Seawind (FOS) and Électricité de France (EDF) Renewables, established to develop the CWP Project.
Compound A	A temporary construction compound, support area and storage facility for the landfall works, and to support the installation of the onshore export cables. It will operate as a hub for the onshore construction works as well as acting as a staging post and secure storage for equipment and component deliveries.
Compound B	A temporary construction compound / laydown area for general cable route and onshore substation construction activities.
Compound C	A temporary construction compound for the onshore substation site. Contractor welfare facilities will be located in this compound as well as some material storage space.
Compound D	A temporary construction compound and laydown area to facilitate the construction of the bridge over the cooling water channel.
neutral period	For the purposes of data collection for Traffic and Transport, neutral periods have been defined as Monday to Thursdays during the following periods: • Late March and April – excluding the period surrounding St. Patrick's Day and Easter. • May – excluding the Thursday before and all the week of the Bank Holiday. • September – excluding school holidays and the return to school weeks. • October – excluding the Thursday before and all the week of the Bank Holiday; and • All of November. Bank Holidays (and the days before and after it) should be avoided. Neutral periods should be used unless alternatives are agreed in advance with TII. (Extract TII-PE-PAG-02016)
EirGrid	State-owned electric power transmission system operator in Ireland and nominated Offshore Transmission Asset Owner
ESB Networks (ESBN)	Owner of the electricity distribution system in the Republic of Ireland, responsible for carrying out maintenance, repairs and construction on the grid.
ESBN network cables	Three onshore export cable circuits connecting the onshore substation to the proposed ESBN Poolbeg substation, which will then transfer the electricity onwards to the national grid.

Glossary	Meaning
environmental impact assessment (EIA)	A systematic means of assessing the likely significant effects of a proposed project, undertaken in accordance with the EIA Directive and the relevant Irish legislation.
Environmental Impact Assessment Report (EIAR)	The report prepared by the Applicant to describe the findings of the EIA for the CWP Project.
landfall	The point at which the offshore export cables are brought onshore and connected to the onshore export cables via the transition joint bays (TJB). For the CWP Project The landfall works include the installation of the offshore export cables within Dublin Bay out to approximately 4 km offshore, where water depths that are too shallow for conventional cable lay vessels to operate.
onshore export cables	The cables which transport electricity generated by the WTGs from the TJBs at the landfall to the onshore substation.
onshore development area	The entire footprint of the OTI and associated temporary works that will form the onshore boundary for the planning application.
onshore transmission infrastructure (OTI)	The onshore transmission assets comprising the TJBs, onshore export cables and the onshore substation. The EIAR considers both permanent and temporary works associated with the OTI.
onshore substation	Site containing electrical equipment to enable connection to the national grid.
operations and maintenance (O&M) activities	Activities (e.g., monitoring, inspections, reactive repairs, planned maintenance) undertaken during the O&M phase of the CWP Project.
O&M phase	This is the period of time during which the CWP project will be operated and maintained.
planning application boundary	The area subject to the application for development consent, including all permanent and temporary works for the CWP Project.
Poolbeg 220kV substation	This is the ESBN substation that the ESBN network cables connect into, from the onshore substation.This substation will then transfer the electricity onwards to the national grid
transition joint bay (TJB)	This is required as part of the OTI and is located at the landfall. It is an underground bay housing a joint which connects the offshore and onshore export cables.
tunnel	The onshore export cables will be installed within a tunnel that extends from within Compound A, near the landfall, to the onshore substation site.

27 TRAFFIC AND TRANSPORT

27.1 Introduction

1. Codling Wind Park Limited (hereafter 'the Applicant') is proposing to develop the Codling Wind Park (CWP) Project, a proposed offshore wind farm (OWF) located in the Irish Sea approximately 13–22 km off the east coast of Ireland, at County Wicklow.

2. This chapter forms part of the Environmental Impact Assessment Report (EIAR) for the CWP Project. The purpose of the EIAR is to provide the decision-maker, stakeholders and all interested parties with the environmental information required to develop an informed view of any likely significant effects resulting from the CWP Project, as required by the European Union (EU) Directive 2011/92/EU (as amended by Directive 2014/52/EU) (the EIA Directive).

3. This EIAR chapter describes the potential impacts of the onshore transmission infrastructure (OTI) on Traffic and Transport during the construction, operation and maintenance (O&M) and decommissioning phases. The OTI is situated on the Poolbeg Peninsula and includes the transition joint bays (TJBs), onshore export cables, the onshore substation and the Electricity Supply Board Networks (ESBN) network cables to connect the onshore substation to the Poolbeg 220kV substation. This chapter will also describe the potential impacts of the works at the landfall (landward of the high water mark (HWM)), where the offshore export cables are brought onshore and connected to the onshore export cables at the TJBs (hereafter, these works are referred to as the 'OTI').

4. In summary, this EIAR chapter:

   - Details the EIA scoping and consultation process undertaken and sets out the scope of the impact assessment for Traffic and Transport;
   - Identifies the key legislation and guidance relevant to Traffic and Transport, with reference to the latest updates in guidance and approaches;
   - Confirms the study area for the assessment and presents the impact assessment methodology for Traffic and Transport;
   - Describes and characterises the baseline environment for Traffic and Transport, established from desk studies, project survey data and consultation;
   - Defines the project design parameters for the impact assessment and describes any embedded mitigation measures relevant to the Traffic and Transport assessment;
   - Presents the assessment of potential impacts on Traffic and Transport and identifies any assumptions and limitations encountered in compiling the impact assessment; and
   - Details any additional mitigation and / or monitoring necessary to prevent, minimise, reduce, or offset potentially significant effects identified in the impact assessment.

5. Offshore project components (wind turbines / foundations) will be fabricated off site. They may be stored at a suitable port facility and transported by sea directly offshore, as needed and so will have limited impact on the road network. On this basis, the transport of offshore components on the road network has not been considered as part of this assessment.

6. Cumulative effects are detailed within **Appendix 27.1 Traffic and Transport Assessment (TTA).**

7. The TTA forms the detailed assessment of the CWP Project traffic impacts, on the existing road network. The TTA also considers 'committed development' and an allowance for traffic from other development, together with CWP Project is accounted for in the traffic analysis. This incorporation of 'committed development' forms the cumulative effects assessment (CEA) for this chapter. The output from the traffic analysis determines how other plans, projects and activities may act cumulatively with the CWP Project.

8. A summary of the approach to the CEA for Traffic and Transport is presented in **Section 27.5.5**. This section summarises the 'other development' that were screened through in the **Appendix 27.1 Traffic and Transport Assessment** and incorporated into the detailed traffic assessment.

9. Additional information to support the assessment includes:

- **Appendix 27.2 Traffic Management Plan** (TMP)

27.2 Consultation

10. Consultation with statutory and non-statutory organisations is a key part of the EIA process. Consultation with regard to Traffic and Transport has been undertaken to inform the approach to and scope of the assessment.

11. The key elements to date have included EIA scoping, consultation events and meetings with key stakeholders. These included meetings held with Dublin City Council (DCC) Environmental and Transportation Department via Teams on the 20 October 2022 and the 14 June 2023. The feedback received throughout this process has been considered in preparing the EIAR. EIA consultation is described further in **Chapter 5 EIA Methodology**, the **Planning Documents** in the **Public and Stakeholder Consultation Report** which has been submitted as part of the planning application.

12. **Table 27-1** provides a summary of the key issues raised during the consultation process relevant to traffic and transport and details how these issues have been considered in the production of this EIAR chapter.

Table 27-1 Consultation responses relevant to Traffic and Transport

Consultee	Comment	How issues have been addressed
Scoping responses		
Transport Infrastructure Ireland (TII) 25 May 2021	• Provided general guidance recommendations for the preparation of an EIAR, which may affect the national road network and the Luas light rail network. • Refers to the protection of the Eastern Bypass and the M50 Dublin Port South Access Scheme in relation to Poolbeg. • Recommends consultations with Wicklow County Council and Dún Laoghaire Rathdown County Council in relation to the M11/N11 Junction 4 M50. • Identifies that alternatives to the provision of cable routing along/through national roads and the Luas Green Line should be addressed in the EIA Report. • TII recommend that the cabling route should seek to use the local road network or alternatives as	• The haul route for the construction phase will include the M50 and Dublin Tunnel on the national road network. The CWP Project will not affect and the Luas light rail network. The TII TTA guidance document was used for the assessment. • The Eastern Bypass under the Greater Dublin Area Transport Strategy 2022-2042 under the National Transport Authority (NTA) is not progressing at present. • The Southern Port Access Route (SPAR) is considered in the CEA in **Appendix 27.1 TTA**. • No works proposed near Junction 4 on the M50.

Consultee	Comment	How issues have been addressed
	opposed to the national road network. • Any future national road schemes should be noted. • Visual impacts from existing national roads and light rail networks should be considered. • Subject to meeting appropriate thresholds, a TTA may be required and should be carried out in line with relevant Guidance. • Road Safety Audit is not required for any onshore works as CWP will be accessing private roads and regional roads. • Haul routes should be clearly identified and assessed and reference to the consideration of 'abnormal loads' is made. • Consultation should be undertaken with all PPP Companies, MMaRC Contractors and roads authorities over which a haul route traverses to confirm any operational requirements.	• No cable works are proposed on national roads or the Luas Green Line. • Future national road schemes are noted in **Section 27.5.5.** • For the assessment of visual impact, refer to **Chapter 23 Landscape and Visual Impact Assessment.** • A TTA has been undertaken, refer to **Appendix 27.1**. • Haul Routes are identified and assessed within the EIAR, with reference to the abnormal loads. • CWPL has issued correspondence to the M50 Concession and MMaRC no response has been received to date.
Topic-specific meetings		
Dublin City Council (DCC): Project overview and traffic count locations 20 October 2022	• DCC outlined a TTA is likely required for the CWP Project. • Management of heavy good vehicles should be in line with DCC requirements and existing road restrictions (i.e., 5+ axle cordon on Sandymount Road). • Appropriate consideration to be given to the SPAR, the Eastern Bypass Route Corridor and the Poolbeg West Strategic Development Zone (SDZ) is progressing. • Consider the amenity and recreational proposals from the city to the Poolbeg Peninsula (i.e., coastal walkways etc). • DCC noted that there is a proposed upgrade of Sean Moore Roundabout to a four-arm signalised junction and recent upgrade works have been undertaken on Sean Moore Road with cycle lanes and signalised junction.	• TTA has been undertaken, refer to **Appendix 27.1**. • Haul routes for the CWP Project have been assessed, taking account of the DCC 5 axle cordon and were discussed with DCC during scoping. • These road network improvements are discussed within the EIAR. • TII have confirmed that the *"Eastern Bypass is not progressing at present".* • The Projects interaction with the coastal pathway is assessed in **Chapter 29 Population.** • This road network improvement was discussed with DCC and due to limited available data was excluded from the assessment.

Consultee	Comment	How issues have been addressed
	• Committed developments to consider other planning applications including the former Irish Glass Bottle Site. • DCC discussed traffic counts at the following locations: • Roundabout at Tom Clarke Bridge, junction with R801 • Sean Moore Road Roundabout • T Junction off South Bank Road, onto Pigeon House Road • Junction Pigeon House Road	• These road network improvements have been constructed and the geometry of the Sean Moore Road has been considered in the TTA. • These committed developments have been considered in the CEA, refer to **Section 27.5.5**. • Traffic counts at these locations were carried out during the neutral period in 2022. Further counts were undertaken and surveyed in September 2023.
DCC: Project overview, onshore traffic routes, traffic generations and distributions, peak hour assessment, cumulative developments 14 June 2023	The following key points were discussed: • Construction traffic management route outlined. • Morning and evening peak hour assessment time periods discussed, and peak hours confirmed. • Construction phase assessment scenarios discussed with DCC. • Operational and maintenance (O&M) phase was discussed with DCC that the phases is below threshold. • Growth rates for baseline traffic was discussed with DCC from the TII PE-PAG-02017 October 2017. • New access road from Pigeon House Road is under consideration. • Cumulative Developments to be considered are the Former Irish Glass Bottle Site, ESB Flex-gen projects, Uisce Éireann (UÉ) Ringsend Wastewater Treatment Development and 3FM.	• As presented in the scoping form to DCC in **Appendix 27.1**, **Annex A, the** Dublin Tunnel will be the main haul route for Heavy Vehicles (HV) traffic. Refer to the TMP in **Appendix 27.2**. • A review of planning submissions in the vicinity of the site, supported the selection of the morning and evening peak hours selected for the assessment. • A detailed analysis was undertaken by the CWP Project to determine the construction phase traffic. The CWP Project determined the quantity of the material required for the construction activities. These were plotted against the construction programme to determine the scenarios for assessment. • The O&M traffic is below the TII TTA thresholds and it was discussed at scoping with DCC to be scoped out of the assessments and hence, there are no O&M assessment scenarios. • DCC confirmed by email on the 26 June 2023 that Table 9.1 Link-Based Growth

Consultee	Comment	How issues have been addressed
		Rates: Metropolitan Area Annual Growth Rates – Alternative Future Demand Sensitivity Scenario should be used in the traffic assessments. • The CWP Project confirmed by email to DCC in September 2023 that a new temporary access road has been considered onto the Pigeon House Road and further traffic counts were undertaken. • Committed developments are addressed in **Appendix 27.1 TTA** and **Section 27.5.5** of this chapter.

27.3 Legislation and Guidance

27.3.1 Legislation

13. The main legislation that is applicable to the assessment of Traffic and Transport is summarised below. Further detail is provided in **Chapter 2 Policy and Legislative Context**.

- European Union (EU) Directive 2011/92/EU (as amended by Directive 2014/52/EU) on the assessment of the effects of certain public and private projects on the environment (the EIA Directive);
- The Planning and Development Act, 2000 (as amended); and
- The Planning and Development Regulations, 2001 (as amended).

27.3.2 Policy

14. The overarching planning policy relevant to the CWP Project is described in EIAR **Chapter 2 Policy and Legislative Context**. The assessment of the CWP Project against relevant planning policy is provided in the Planning Report. This includes planning policy relevant to Traffic and Transport.

27.3.3 Guidance

15. The principal guidance and best practice documents used to inform the assessment of potential impacts on Traffic and Transport is summarised below.

- Traffic and Transport Assessment Guidelines, by Traffic Infrastructure Ireland (TII), (May 2014);
- TII Project Appraisal Guidelines for National Roads Unit 5.2: Data Collection, PE-PAG-02016, (October 2016);

- TII Project Appraisal Guidelines for National Roads Unit 5.3: Travel Demand Projections, PE-PAG-02017, (October 2021);
- TII Project Appraisal Guidelines for National Roads Unit 16.1 - Expansion Factors for Short Period traffic counts, PE-PAG-02039, (October 2016);
- TII Road Safety Audit Guidelines (GE-STY-01027), (December 2017);
- Guidelines for Managing Opening in Public Roads, Second Edition (Rev 1), DTTS, (April 2017);
- Traffic Signs Manual (TSM) Chapter 8 Temporary Traffic Measures and Signs for Roadworks, DoT, (April 2019);
- Temporary Traffic Management Design Guidance, DoT, (April 2019);
- Temporary Traffic Management Operations Guidance Part 0 to Part 3, DoT, (April 2019); and
- Guidelines for the Environmental Assessment of Road Traffic, by the Institute of Environmental Management and Assessment, (1994).

16. In addition to specific Traffic and Transport guidance documents, the following guidelines were considered and consulted in the preparation of this chapter:

- Environmental Protection Agency (EPA) (2022). Guidelines on the Information to be Contained in Environmental Impact Assessment (EIA) Reports (hereafter referred to as the EPA Guidelines);
- Department of Housing, Planning, and Local Government (2018). Guidelines for Planning Authorities and An Bord Pleanála (ABP) on carrying out Environmental Impact Assessment (August 2018);
- Department of Communications, Climate Action and Environment & Sustainable Energy Authority of Ireland (2017). Guidance on EIS and NIS Preparation for Offshore Renewable Projects;
- European Commission (2017). Environmental Impact Assessment of Projects – Guidance on the preparation of the Environmental Impact Assessment Report; and
- EPA (2003). Advice Notes on Current Practice in the Preparation of Environmental Impact Statements.

27.4 Impact assessment methodology

17. **Chapter 5 EIA Methodology** provides a summary of the general impact assessment methodology applied to the CWP Project, which includes the approach to the assessment of transboundary and inter-related effects. The approach to the assessment of cumulative impacts is provided in **Chapter 5, Appendix 5.1 CEA Methodology**.

18. The Traffic and Transport impacts were considered for the following phases of the project:

- Construction phase;
- O&M phase; and
- Decommissioning phase.

19. The traffic associated with the activities of each phase were identified. These included:

- Construction phase traffic Heavy Vehicles (HVs) including any abnormal indivisible loads (AILs). Traffic estimates have been determined based on the volumes of materials and their movements during the different stages of the construction programme;
- Construction staff movements are defined by Light Vehicle (LV) movements generated during the different stages of the construction programme;
- O&M phase traffic is defined by LV movements, with occasional maintenance vehicles.
- Decommissioning phase traffic has been assumed to require similar traffic type and volumes to those required during the construction phase.

20. The traffic associated with each phase of the OTI was then assessed to determine if a TTA was required. The traffic volumes were assessed against the thresholds and sub-thresholds outlined in the TII TTA Guidelines Refer to **Appendix 27.1** for the TTA.

- The TTA was undertaken for the construction phase, as the traffic volumes are above thresholds outlined in the TII TTA Guidelines;
- A TTA was not undertaken for the O&M phase, as the traffic volumes are below the thresholds outlined in the TII TTA Guidelines; and
- A TTA was not undertaken for the decommissioning phase, as the traffic volumes and associated impacts would be no greater than those considered for the construction phase.

27.4.1 Study area

21. The study area for the Traffic and Transport assessment has been defined as the area where there is potential for Traffic and Transport impacts on receptors associated with the OTI works during the construction, O&M and decommissioning phases.

22. The potential Traffic and Transport receptors that were considered include:

- The road network (potential increase in traffic volumes and percentage HV increase);
- Junction assessments (capacity, delays, queue lengths, etc);
- Site access locations and visibility splays; and
- Pedestrians and cyclists.

23. Due to the DCC city centre road restrictions (the 5+ axle cordon), the haul routes and study area for construction phase HVs are along the following routes from the M50 to the onshore development area, refer to **Figure 27-1** :

- Route 1: To/from the M50 via the Dublin Tunnel, R131 East Wall Road and the East Link Bridge to/from the Sean Moore Roundabout, to/from the South Bank Road, to/from Pigeon House Road to Construction Compound C (Compound C)/ the onshore substation;
- Route 2: To/from the M50 via the Dublin Tunnel, R131 East Wall Road and the East Link Bridge to/from the Sean Moore Roundabout, to/from the South Bank Road, to/from Pigeon House Road, to/from Shellybanks Road to Construction Compound A (Compound A);
  Route 3: To/from the M50 via the Dublin Tunnel, R131 East Wall Road and the East Link Bridge to/from the Sean Moore Roundabout, to/from the South Bank Road, to/from to the Construction Compound B (Compound B).

24. As there are no constraints on the construction LV movements, the haul routes and study area for the construction phase LVs are along the following routes, refer to **Figure 27-2**:

- Route 1: To/from the M50 via the Dublin Tunnel, R131 East Wall Road and the East Link Bridge to/from the Sean Moore Roundabout, to/from the South Bank Road to/from Pigeon House Road, to/from Shellybanks Road to Compound A;
- Route 2: To/from the R801 North Wall Quay, R131 East Wall Road and the East Link Bridge to/from the Sean Moore Roundabout, to/from the South Bank Road, to/from Pigeon House Road, to/from Shellybanks Road to Compound A;
- Route 3: To/from the Sean Moore Road, to/from the Sean Moore Roundabout to/from the South Bank Road, to/from Pigeon House Road, to/from Shellybanks Road to Compound A.

25. The location of the OTI (including the planning application boundary) on Poolbeg Peninsula is presented in **Figure 27.3**.

26. AILs will be transported to the onshore development area via Dublin Tunnel where the height restriction allows. Any plans to transport AILs into the onshore development area during the construction phase will be undertaken in liaison with DCC as part of the implementation of the TMP for the project.

27. AILs such as the transformers for the onshore substation can be delivered to the Hammond Lane quayside or a Roll on Roll Off facility on the northern side of Dublin Port and transported into the site.

28. The study area includes the route for the transport of AILs over the new access bridge and into the site. Refer to **Plate 27-1**, which presents the vehicle tracking layout from the Hammond Lane quayside into the onshore substation site and **Appendix 27.2 TMP** for further details.

6°13'45"W 6°12'40"W 6°11'35"W

53°21'15"N 53°20'36"N 53°19'57"N

735,000 734,000 733,000

717,680 718,990 720,300

N W E S

Dublin tunnel

R131 - East Wall Road

R801 - North Wall Quay

R131 - East Link Bridge

Routes 1, 2

Route 2

Route 3

Onshore substation site

JTC1 JTC2 JTC3 JTC4 JTC5 JTC6

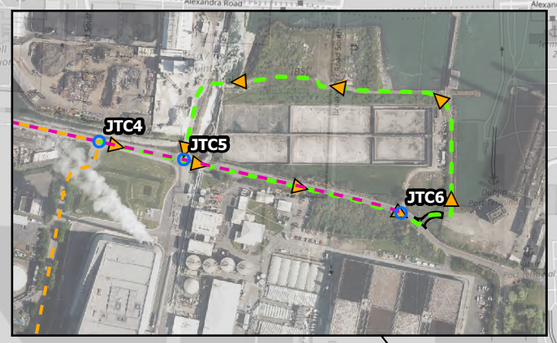
A B C D

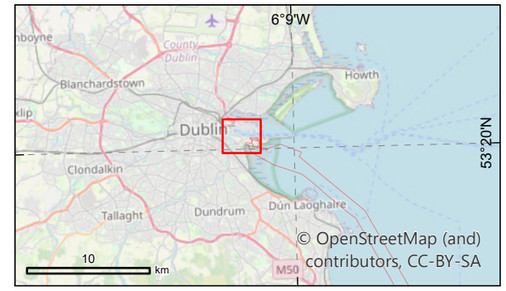
Pigeon House Rd

Sean Moore Rd

Sth Bank Road

Shellybanks Rd





0 125 250 500 Meters

Data sources: CWP, 2023; TOB, 2023
Background: OSM
Copyrights: ©OpenStreetMap

© OpenStreetMap (and) contributors, CC-BY-SA

Legend

- Planning application boundary
- High water mark
- Onshore substation boundary (operational)
- Temporary site access to construction compound C and onshore substation
- Access bridge to onshore substation
- Junction turning count (JTC)
- Temporary access route for construction compound A and B

Construction compounds

- Construction compound A
- Construction compound B
- Construction compound C
- Construction compound D

Heavy vehicles (HV) haul routes

- Route 1
- Route 2
- Route 3
- One-way construction route

codling wind park

Project: Codling Wind Park

Contractor: TOBIN

Website: www.tobin.ie

Figure 27.1
Heavy vehicles haul routes for the construction phase of the onshore transmission infrastructure

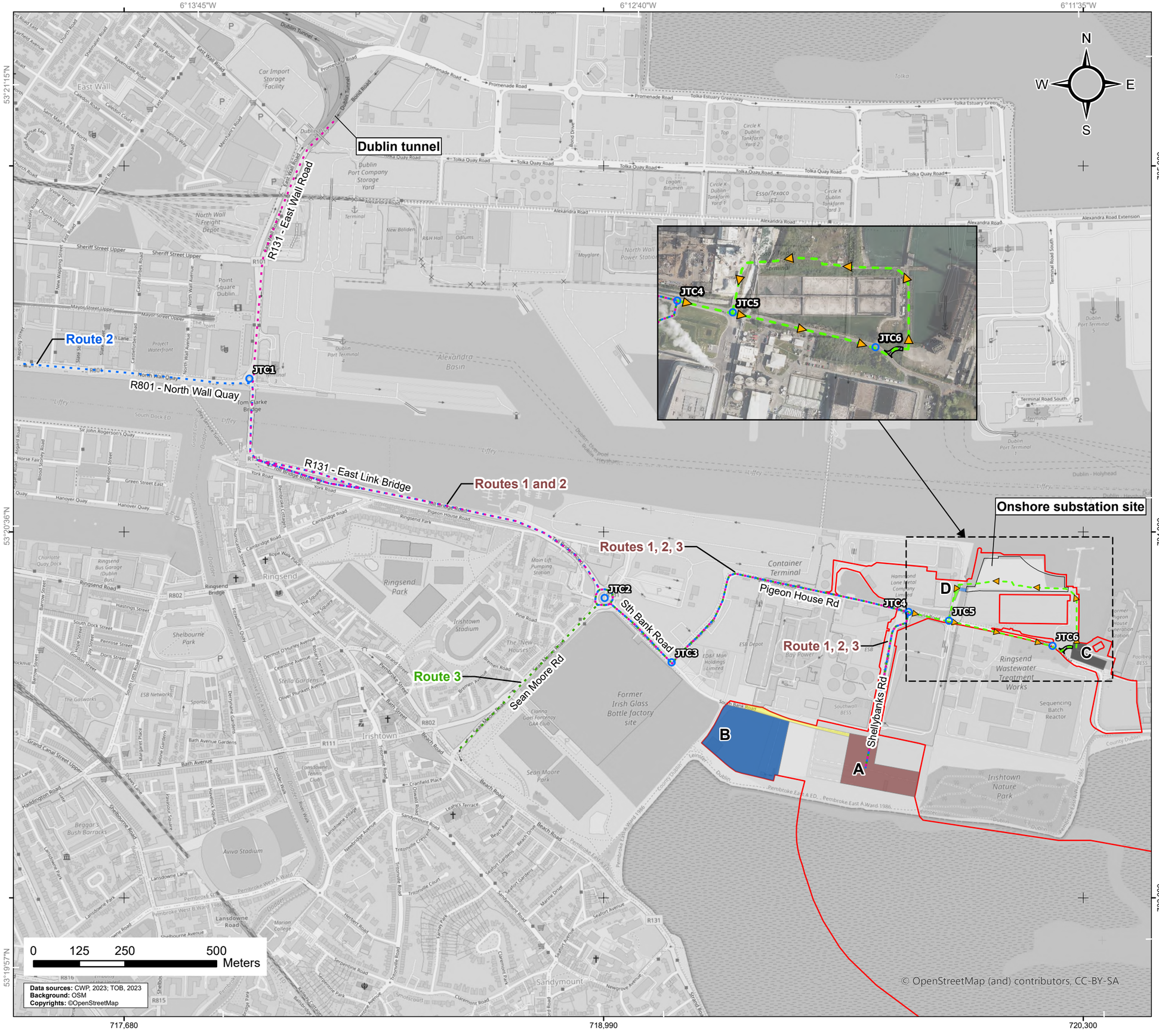
CWP doc. number: CWP-TOB-ENG-08-01-MAP-0979

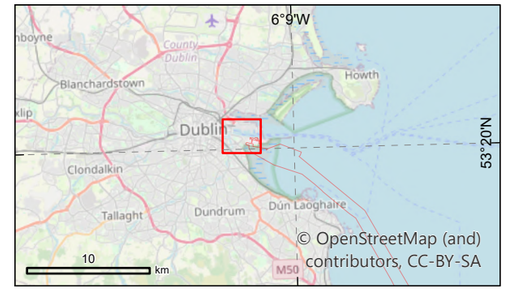
Internal descriptive code: PB - PAB..SS.PP.PL..SS.PP.BRIDGE..COMPs.CONSTRUCT.FOR.CONSENTS..RoW.COMPs.AB..WEST.RoW.COMP.C - RD.JTC..TRDC.HE/A/Y..HWM - (OSM..EIAR.FIG.27.01)

Size: A3
Scale: 1:10,000

CRS: EPSG 2157

Rev.	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/15	SP	DM/EA	ES





Legend

- Planning application boundary
- Onshore substation boundary (operational)
- High water mark
- Junction turning count (JTC)
- Access bridge to onshore substation
- Temporary site access to construction compound C and onshore substation
- Temporary access route for construction compound A and B

Construction compounds

- Construction compound A
- Construction compound B
- Construction compound C
- Construction compound D

Light vehicles (LV) haul routes

- Route 1
- Route 2
- Route 3
- One-way construction route

codling wind park

Project: Codling Wind Park

Contractor: TOBIN

Website: www.tobin.ie

Figure 27.2
Light vehicles haul routes for the construction phase of the onshore transmission infrastructure

CWP doc. number: CWP-TOB-ENG-08-01-MAP-0980

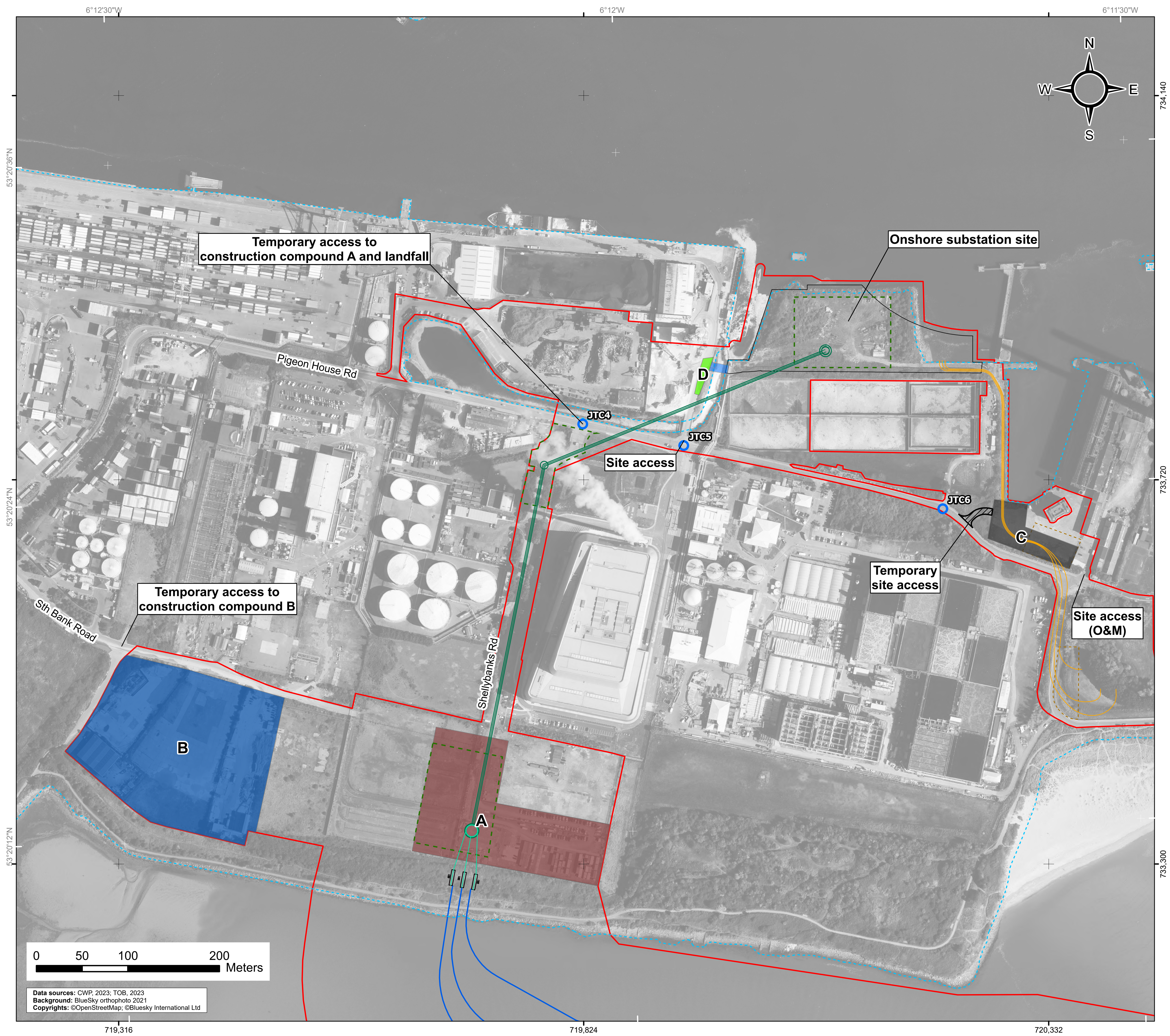
Internal descriptive code: PB - PAB_SS.PP.PL_SS.PP.BRIDGE_COMPs.CONSTRUCT.FOR.CONSENTS .RoW.COMPs.AB..WEST.RoW.COMP.C - RD.JTC..TROC.LIGHT..HWM - (OSM..ESAR.FIG.27.02)

Size: A3

Scale: 1:10,000

CRS: EPSG 2157

Rev.	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/15	SP	DM/EA	ES



Legend

- Planning application boundary
- High water mark
- Onshore substation boundary (operational)
- Junction turning count (JTC)
- Temporary site access to construction compound C and onshore substation
- Access bridge to onshore substation
- Offshore export cable
- Onshore export cable TJB connection
- Onshore export cable
- ESBN network cable
- Transition joint bay (TJB)
- Temporary HDD compound (ESBN network cables)
- Temporary tunnel shaft compound

Construction compounds

- Construction compound A
- Construction compound B
- Construction compound C
- Construction compound D

codling wind park	*Project:* Codling Wind Park	*Contractor:* TOBIN *Website: www.tobin.ie*

Figure 27.3
Onshore development area boundary with OTI and construction compound locations

CWP doc. number: CWP-TOB-ENG-08-01-MAP-0981

Internal descriptive code: PAB..OECs.3PB.Opt8.OnLoD..LF4.TWAaHWM..TJBs6..OnCs.TJBs6.T.SHAFT..OnC.LF4.to.SS.PP.T..SS.PP.PL ..SS.PP.BRIDGE..ENC..LoD..COMPs.CONSTRUCT.FOR.CONSENTS..COMPs.T..WEST.RoWs.COMP.C - RD.JTC..HWM - (ORT.BS.21..EIAR.FIG.27.03)	*Size:* A3 *Scale:* 1:4,000	*CRS:* EPSG 2157

Rev.	*Updates*	*Date*	*By*	*Chk'd*	*App'd*
00	Final for issue	2024/08/15	SP	DM/EA	ES

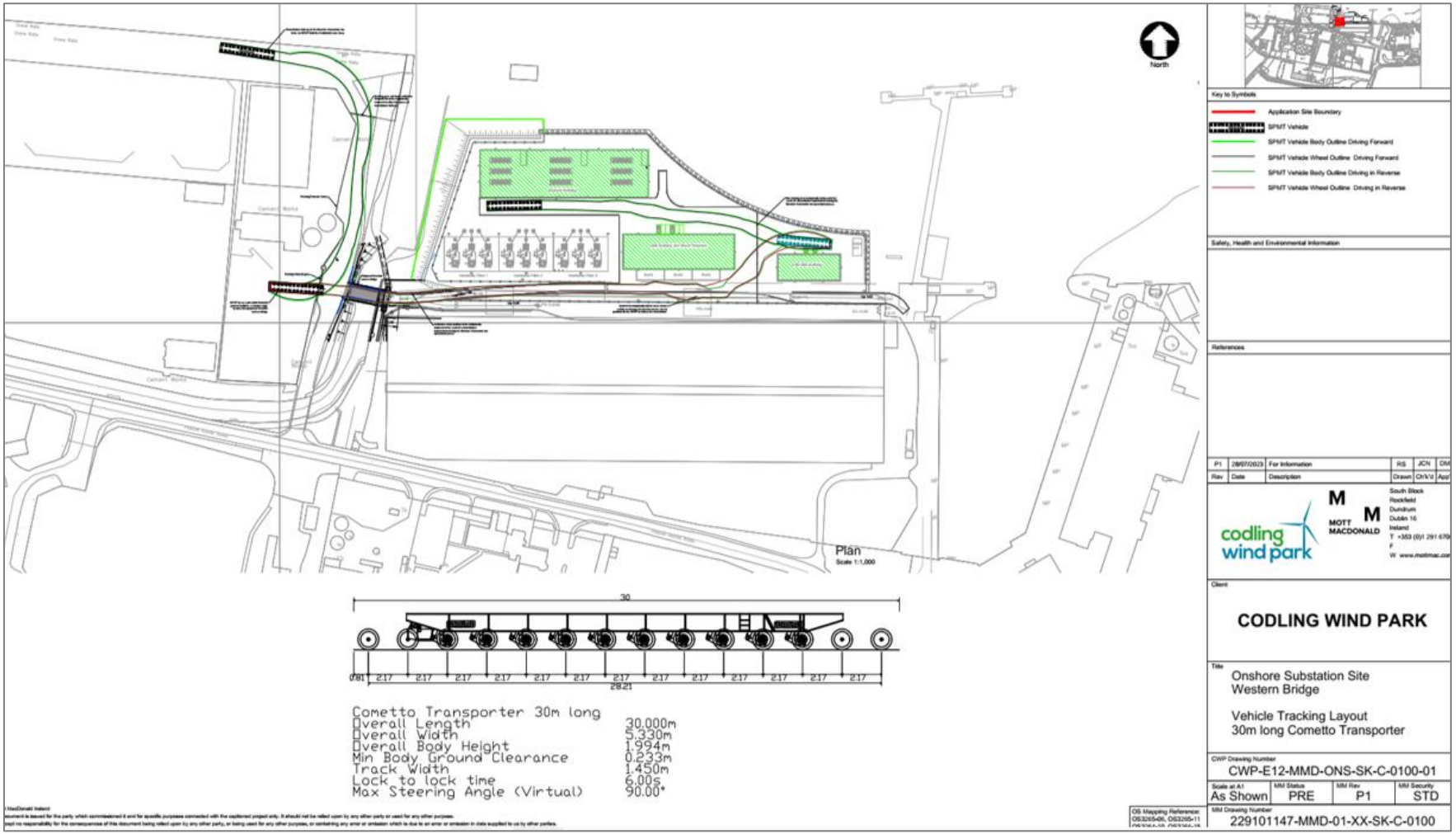


Plate 27-1 Onshore construction phase AIL vehicle tracking layout (from Hammond Lane quayside)

27.4.2 Data and information sources

Junction-specific surveys

29. In order to provide site-specific and up-to-date information on which to base the impact assessment, traffic count surveys were conducted in November 2022 and September 2023 for traffic volume data.

30. The traffic count was a Junction Turning Count (JTC) at 6 no. locations, refer to **Plate 27-2** and **Table 27-2**. The traffic count locations JTC1 to JTC3 were discussed during the initial meeting with DCC Environmental and Transportation Department.

31. The JTC was carried out for 24 hours in 15-minute intervals. The JTC distinguished between the vehicle classifications listed below:

- Pedal Cycles;
- Motorcycles;
- Light Vehicles (LVs);
- Medium Commercial Vehicles (OGV 1);
- Heavy Commercial Vehicles (OGV 2); and
- Buses and Coaches (PSV).

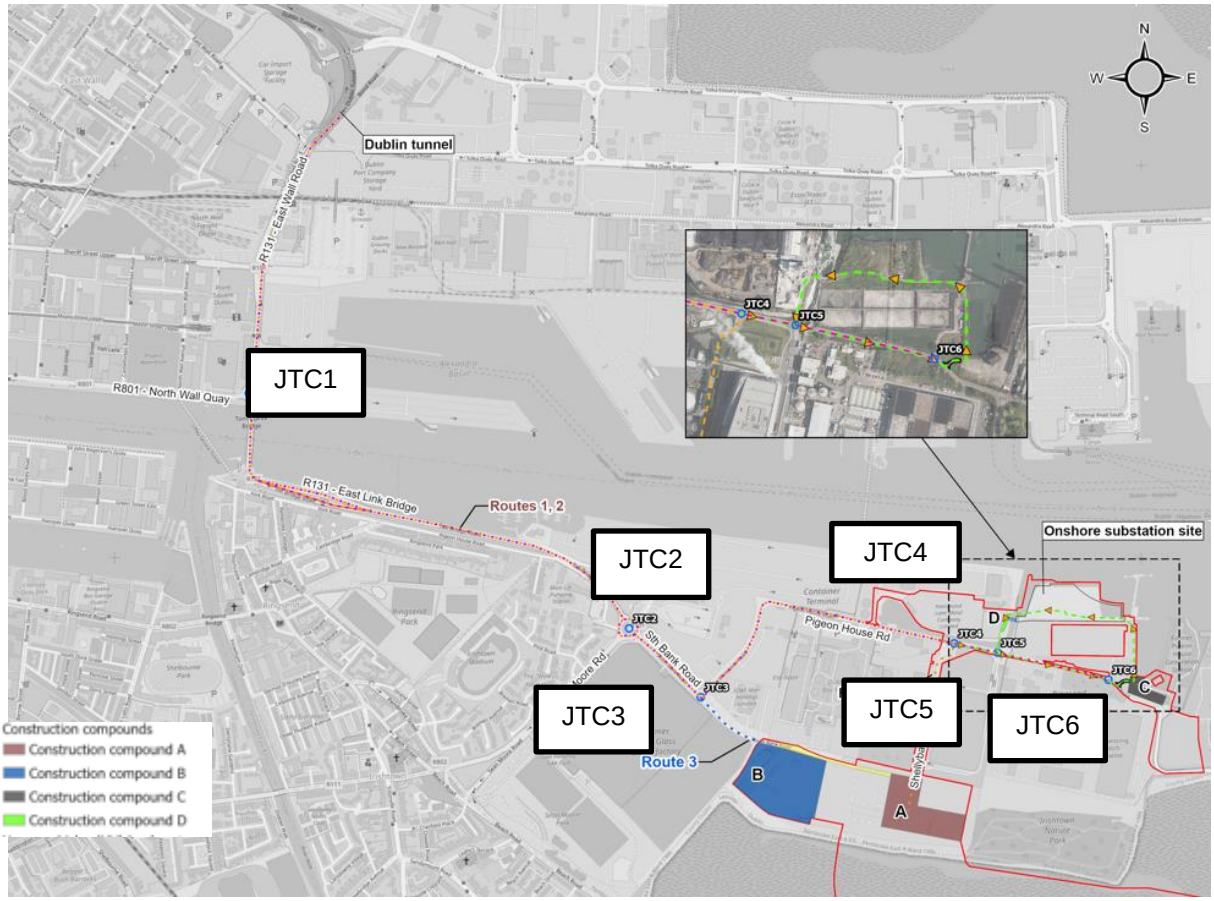


Plate 27-2 Traffic Count Location Map (Map Data © OpenStreetMap)

Table 27-2 Junction traffic count location details

Junction Reference	Junction Description	Junction Type & Road Name
Junction 1 (JTC1)	Roundabout at Tom Clarke Bridge, junction with R801	[**Junction 1** - Roundabout junction] R131 East Wall Road / Direct Access / R131 East Link Bridge / R801 North Wall Quay
Junction 2 (JTC2)	Sean Moore Road Roundabout	[**Junction 2** - Roundabout junction] R131 East Link Bridge / Sean Moore Road / South Bank Road / R131 Sean Moore Road / Pigeon House Road
Junction 3 (JTC3)	T Junction off South Bank Road, onto Pigeon House Road	[**Junction 3** - Priority T-Junction] South Bank Road / Pigeon House Road / South Bank Road
Junction 4 (JTC4)	Junction Pigeon House Road	[**Junction 4** - Priority T-Junction] Pigeon House Road (W)/ Pigeon House Road (E)/ Shelly Banks Road
Junction 5 (JTC5)	Junction Pigeon House Road	[**Junction 5** - Priority T-Junction] Pigeon House Road (E) / Ecocem Ireland / Pigeon House Road (W)/ Dublin Waste to Energy Facility
Junction 6 (JTC6)	Private Access	[**Junction 6** - Priority T-Junction] Pigeon House Road

Desk study

32. In addition to the junction specific surveys, a comprehensive desk-based review was undertaken to inform the baseline for Traffic and Transport. Key data sources used to inform the assessment are set out in **Table 27-3**.

Table 27-3 Data sources

Data	Source	Date (of Data Received)	Notes
Construction Traffic Volumes for the OTI	CWP Project Team	19.06.2023	The traffic volumes for the construction stage are based on the proposed design, and construction programme.
Traffic Distributions of Construction Staff	Estimated based on Junction Turning Count data	15.11.2022	The site-specific turning counts at the junctions determine the traffic flow patterns of the staff to and from the site.
Traffic Distributions of HVs	DCC HV/5 axle Cordon	14.06.2023	The traffic distribution of the HVs to the onshore development area is restricted by the DCC

Data	Source	Date (of Data Received)	Notes
			cordon on five axle vehicles. Scoping with DCC informed the HV haul routes.
Traffic count Data	TII Live traffic counter https://trafficdata.tii.ie/ Station Id: TMU N01 040.0 S	20.06.2023	Traffic volumes north of the Dublin Tunnel on the N01 South of M50 Jn02 Santry, Whitehall.

27.4.3 Impact Assessment

33. The significance of potential effects has been evaluated using a systematic approach, based upon identification of the importance/value of receptors and their sensitivity to the project activity, together with the predicted magnitude of the impact.

34. The key aspects used to define receptor sensitivity and magnitude of impact are based on:

- Sensitivity
  - Importance of the surrounding road network; and
  - Presence pedestrians and cyclists and their separation from the road network.
- Magnitude
  - A comparison of the traffic volume change from baseline (i.e., baseflow) traffic to the baseflow with the CWP traffic volume on the route. This comparison is the change in Average Daily Traffic (ADT) and HV content (as a percentage); and
  - The magnitude of the impact on a junction is the increase in RFC, queue and delays from the baseline scenario.

35. These criteria have been adopted in order to implement a specific methodology for Traffic and Transport.

Sensitivity of receptor

36. For each effect, the assessment identifies receptors sensitive to that effect and implements a systematic approach to understanding the impact pathways and the level of impacts on given receptors.

37. The receiving road network is also a factor when determining the sensitivity of the receptors. The criteria for defining sensitivity of the road network in this chapter is set out in **Table 27-4** Definition of terms relating to sensitivity of traffic receptor**.**

Table 27-4 Definition of terms relating to sensitivity of traffic receptor

Sensitivity	Criteria
Very High	Very high Importance and rarity, national scale and limited potential for substitution, i.e., the motorway road network
High	High Importance and rarity, national scale and limited potential for substitution, i.e., the primary and secondary national road network
Medium	Medium importance and rarity, regional scale, limited potential for substitution i.e. the regional road network
Low	Low importance and rarity, local scale, i.e., the local primary road network
Very Low	Very low importance and rarity, local scale, i.e., the local secondary and tertiary road network

38. The criteria for defining the sensitivity of pedestrians/cyclists in this chapter is set out in **Table 27-5**.

Table 27-5 Definition of terms relating to sensitivity levels for pedestrian and cyclist amenity and delay

Sensitivity	Criteria
Very High	Concentrations of sensitive receptors (e.g., hospitals, schools, residential dwellings, areas with high footfall) and no separation from traffic provided by the roadway environment.
High	A low concentration of sensitive receptors and limited separation from traffic provided by the roadway environment.
Medium	A low concentration of sensitive receptors (e.g., residential dwellings, pedestrian desire lines) and some separation from traffic provided by the roadway environment.
Low	Few sensitive receptors and/or highway environment that can accommodate changes in volume of traffic
Very Low	Links with no pedestrian, cycle or equestrian environment.

Magnitude of impact

39. The scale or magnitude of potential impacts (both beneficial and adverse) depends on the degree and extent to which the CWP Project activities may change the environment, which usually varies according to project phase (i.e., construction, O&M and decommissioning).

40. Factors that have been considered to determine the magnitude of potential impacts include:

- Level of deviation from baseline conditions; and
- Duration of impact.

41. The change in conditions on a junction are considered in determining the magnitude of impact. The criteria that are considered for non-signalised junctions (i.e., priority and roundabout junctions) are the changes in the following:

- The queue in vehicles per arm;

- The delay in seconds per arm;
- The RFC per arm;
- The junction delay in seconds; and
- Network Residual Capacity of the junction as a percentage.

42. The criteria for defining magnitude of impact for the purpose of the road network, pedestrian and cyclist assessments are provided in **Table 27-6** to **Table 27-7**.

43. These thresholds are guidance only and provide a starting point by which transport data will inform a local analysis augmented by professional judgement of the impact magnitude.

Table 27-6 Criteria for determination of magnitude of impact for the level of deviation from baseline

Magnitude	Definition
Very High	Either: • change from baseflow traffic ADT above 15% or more; • change from baseflow HV content above 10% or more.
High	Either: • change from baseflow traffic ADT by 15% or more; • change from baseflow HV content by 10% or more.
Medium	Either: • change from baseflow traffic ADT by 10% to 14%; • change from baseflow HV content by 5% to 9%.
Low	Either: • change from baseflow traffic ADT by 5% to 9%; • change from baseflow HV content by 2% to 4%.
Very low	Either: • change from baseflow traffic ADT by 0% to 4%; • change from baseflow HV content by 0% to 1%.

Table 27-7 Criteria for determination of magnitude of impact for pedestrian and cyclist amenity and delay

Magnitude	Definition	
	Pedestrian and Cyclist Amenity	**Pedestrian and Cyclist Delay**
Very High	Greater than 100% increase in traffic (or HGV component) and a review based upon the quantum of vehicles, vehicle speed and pedestrian footfall.	Informed by a review of the existing pedestrian and cycle environment and forecast change in delay.
High		
Medium		
Low		
Very low	Change in traffic flows (or HGV component) less than 100%	

Significance of effect

44. As set out in **Chapter 5 EIA Methodology**, an Impact Assessment Matrix (IAM) is used to determine the significance of an effect. In basic terms, the potential significance of an effect is a function of the sensitivity of the receptor and the magnitude of the impact, as shown in **Table 27-8**.

45. The matrix provides a framework for the consistent and transparent assessment of predicted effects across all technical chapters; however, it is important to note that the assessments are based on the application of expert judgement.

46. The matrix provides levels of effect significance ranging from Imperceptible to Profound, as defined in the Environmental Protection Agency (EPA) (2022) EIAR Guidelines. For the purposes of this assessment effects rated as being 'Significant – Moderate' or above are considered to be significant in EIA terms.

47. Effects rated as being 'Moderate' are effectively significant / not significant subject to professional judgement, with a rationale provided for this in the main assessment. Effects identified as less than moderate significance are not considered to be significant in EIA terms.

Table 27-8 Impact assessment matrix for determination of significance of effect

Sensitivity of Receptor	Magnitude of Impact				
	Very High	High	Medium	Low	Very low
Very High	Profound	Very Significant	Significant	Moderate	Slight
High	Very Significant	Significant	Significant – Moderate	Moderate – Slight	Not Significant
Medium	Significant	Significant – Moderate	Moderate	Slight	Imperceptible
Low	Moderate	Moderate – Slight	Slight	Not Significant	Imperceptible
Very Low	Slight	Not Significant	Imperceptible	Imperceptible	Imperceptible

27.5 Assumptions and limitations

27.5.1 General

48. **Chapter 4 Project Description** outlines the CWP Project phases and anticipated years of commencement of the phases and their completion, as listed below:

- Construction commencing in 2026 with completion in 2029, with a 36-month construction programme;
- O&M commencing in 2029 with a 25-year operational lifetime; and
- Decommissioning commencing at the end of the operational lifetime.

49. The assumptions and limitations of each phase of the CWP Project are discussed in the following sections.

27.5.2 Construction Phase

50. The traffic generations for the construction phase are based on site specific parameters including but not limited to material volumes, vehicle capacities (i.e., HV), construction programme and construction methodologies.

51. Traffic generations for the construction phase of the OTI were developed by the civil design team over the 36-month construction programme, to determine the one-way and two-way HV, AIL and LV movements per month.

52. In developing the traffic generations, the civil design team made the following assumptions:

- All material cut from the works is assumed to be removed from the onshore development area directly and not stockpiled onsite;
- For removal of waste / materials (i.e., soils) all HVs are assumed to arrive to site empty and depart fully loaded;
- All vehicles transporting materials for delivery to the site will deliver the materials and depart the site empty;
- Bulking factors have been applied to all excavated / displaced soils or aggregate;
- All construction staff are assumed to arrive and depart the site by single occupancy of a passenger car (i.e., LV);
- The working hours for the construction phase are Monday to Friday from 07:00-19:00 hrs and from 07:00-14:00 hrs on Saturdays. Therefore, it is assumed there are a total of 5.5 working days per week of the construction phase;
- During some construction activities there will be 24-hour construction activities i.e. the tunnel for the onshore export cable and the HDD ESBN network cables. For robustness, it is assumed the working day will be 12 hours only;
- All HV are assumed to be evenly distributed over the workday (i.e., 12 hours); and
- A 10 % contingency was applied to all traffic generations for robustness.

53. The TTA was undertaken for the construction phase, as the traffic volumes are above thresholds outlined in the TII TTA Guidelines.

27.5.3 Operational and Maintenance Phase

54. With regard to traffic, the onshore substation will be generally unmanned during the O&M phase. The traffic generated during this phase will be minimal, with a small number of trips to the onshore substation for inspection, repairs, monitoring and maintenance purposes. There will be on average, c. 1 visit per week.

55. Due to the low volume of traffic generations, it is assumed that the O&M phase traffic generations will be attributed to 6 no. LV per car parking spaces on the GIS Building and Shunt Reactors building and 3 no. LV per car parking spaces at the ESB GIS Building.

56. A TTA was not undertaken for the O&M phase, as the traffic volumes associated are below the thresholds outlined in the TII TTA Guidelines.

27.5.4 Decommissioning Phase

57. It is assumed that the decommissioning phase traffic generations will be of a similar nature of the construction phase. No final decision has been made for this phase. Refer to **Chapter 4 Project Description** for full details of the Decommissioning Phase.

58. It is assumed that the decommissioning activities, will generate similar traffic volumes to the construction phase activities. A TTA was not undertaken for the decommissioning phase, as the traffic volumes and associated impacts would be no greater than those considered for the construction phase.

27.5.5 Consideration of committed developments and cumulative effects

Network / Road Infrastructure Improvements

59. TTAs review committed developments within the vicinity of the site that may have an effect on the same parts of the receiving road network as the proposed development. This generally includes sites which have previously been granted planning permission, but which are yet to be constructed or to become operational.

60. There are several schemes and transportation infrastructure improvements, in the vicinity of the Poolbeg Peninsula. A desktop review of the CEA long list provided in **Appendix 5.1 CEA Methodology** and publicly available information was undertaken in June 2024.

61. The following developments were reviewed to determine if they coincide with the development of the CWP Project:

- Dublin Port Company 3FM Project (CEA-1348);
- Pembroke Beach DAC / Becbay Ltd & Fabrizia Developments Ltd – Redevelopment of former glass bottle site (CEA- 0333, CEA-0339, CEA-0387 and CEA-1354);
- Dublin Port Company - MP2 Project (CEA-1323, CEA-1328);
- Electricity Supply Board (ESB) - Poolbeg Generating Station / Flexible Thermal Generation (CEA-1337);
- Electricity Supply Board (ESB) - Poolbeg Generating Station / Battery Energy Storage System (BESS) (CEA-1336);
- ESB - Dublin Bay Power Station / BESS (CEA-1341);
- ESB - Dublin Bay Power Station / Flexible Thermal Generation (CEA-1342);
- Circle K Ireland Energy - Terminal redevelopment at Alexandra Road (CEA-0380);
- Irish Water - Ringsend Wastewater Treatment Plant Upgrade Project (CEA-0331);
- Dublin Port Company - Capital Dredging Project (CEA-0192);
- Dublin Port Company - Berth 50 Pontoons (CEA-0197);
- ESB - Dublin Bay Power Station OCGT (CEA-1327);
- Electricity Supply Board (ESB) - Poolbeg Generating Station / Substation (CEA-1346);
- National Transport Authority- Bus Connects Ringsend to City Centre Scheme; and
- Poolbeg West Planning Scheme 2019.

62. The following developments were screened through to inform the development of the overall traffic assessment:

- Electricity Supply Board (ESB) - Poolbeg Generating Station / Substation (CEA-1346) (construction phase traffic);
- ESB - Dublin Bay Power Station OCGT (CEA-1327) (construction phase traffic); and
- ESB - Poolbeg Generating Station OCGT (CEA-1338) (construction phase traffic).

63. The potential cumulative effects of these developments have been assessed using information on traffic generations and distributions. This data was sourced from the planning documentation including traffic assessments and EIARs submitted to DCC.

64. For full details on the list of developments that were reviewed and what was incorporated into the traffic analysis, refer to **Appendix 27.1 TTA**.

27.6 Existing environment

65. The following sections provide a description of the baseline conditions for Traffic and Transport.

27.6.1 Overview of the Road Network

66. The onshore development area is located on the Poolbeg Peninsula, Dublin. The main road network is the M50, national motorway and the Dublin Tunnel to the R131, regional road.

67. The R131 includes the East Wall Road to Junction 1. South of Junction 1 is the Tom Clarke Bridge over the River Liffey along the East Link Bridge via the toll plaza to the South Bank Road at Junction 2 (Sean Moore Road Roundabout).

68. Junction 3 (DCATS junction) is located on South Bank Road, with a priority T- junction to Pigeon House Road.

69. Junction 4 is located on Pigeon House Road, with a priority T-junction to Shellybanks Road to the to Compound A and the landfall area.

70. Junction 5 is located on Pigeon House Road, with a crossroad to private access to Dublin Waste to Energy facility and to Ecocem Ireland.

71. Junction 6 is located on Pigeon House Road, with a priority T-junction to a private access. The new temporary access road entrance into the onshore substation is located here. This access will be used for the duration of the construction phase. Vehicles will access from the temporary access road onto the existing access road on the eastern boundary and into the onshore substation site and Compound C. The new temporary access road is located approximately 30 metres east of Junction 6.

72. The results of the traffic count surveys for each of the separate junctions is presented in **Table 27-9** which show the following:

- Baseline network traffic for the existing road network; and
- Existing percentage HV.

Table 27-9 Baseline Traffic Volume – 2022 and 2023

Road	Baseline 2022	
	Average Daily Traffic (ADT)	Percentage HV
Junction 1		
R131-East Wall Road (N)	28,521	19%
R131-East Link Bridge (S)	20,557	14%
R801 North Wall Quay (W)	10,287	21%
Junction 2		
R131 NW	20,488	14%
South Bank Road	3,960	45%
R131 S	19,765	5%
Junction 3		

Road	Baseline 2022	
	Average Daily Traffic (ADT)	Percentage HV
South Bank Road (N)	3,371	41%
South Bank Road (W)	4,721	54%
Road	**Baseline 2023**	
	Average Daily Traffic (ADT)	**Percentage HV**
Junction 4		
Pigeon House Road (E)	2,180	17%
Shellybanks Road	0	0%
Pigeon House Road (W)	2,355	16%
Junction 5		
Pigeon House Road (W)	1,964	10%
Pigeon House Road (E)	1,870	7%
Junction 6		
Pigeon House Road (E)	1,564	4%
Private Access	4	0%
Pigeon House Road (W)	1,564	4%

27.6.2 Pedestrian and Cyclists Accessibility

73. Facilities on the East Wall Road (R131) consist of off-road footway and cycle track with controlled crossings at the signalised junctions. There is a bus stop located approximately 200m of the Sean Moore roundabout that accommodates buses to Dublin City Centre and Dublin Airport.

74. Facilities on the Tom Clarke Bridge (R131) consist of raised footways on both sides of the road and public lighting. There is no existing cycle facilities and pedestrian crossing along the Tom Clarke Bridge.

75. For the South Bank Road there is a pedestrian footway on the southside of the carriageway and public lighting. The footway terminates approximately 300 m from the Sean Moore Roundabout Junction (Junction 2). There are no existing cycle facilities along the South Bank Road.

76. Facilities on the Pigeon House Road consist of a pedestrian footway on the west side for 230 m from the Junction 3 (DCATS junction). A footway commences on the southern side of the carriageway, with both footways to the ESB Poolbeg Generating station. There are no existing cycle facilities along the Pigeon House Road.

77. The Great South Wall Walk (The Poolbeg Lighthouse Walk) is a pedestrian amenity located to the east of the onshore development area. Sandymount and Irishtown have a pedestrian amenity link to the Great South Wall Walk via Sean Moore Park, Pembroke Cove and Irishtown Nature Park via a coastal walkaway overlooking Dublin Bay and Sandymount Strand. **Chapter 29 Population** considers the coastal walkway in further detail.

78. Existing pedestrian facilities on R131 Sean Moore Road, Sean Moore Park and Beach Road, and on the neighbouring streets within the vicinity of the onshore development area are in good condition.

79. Facilities on the Sean Moore Road (R131) consist of raised footways on both sides of the road, public lighting, cycle track and controlled crossings. There is a bus set down area located approximately 200m south of the onshore development area boundary. This stop accommodates Aircoach, Dublin City Centre and Dublin Airport.

80. Facilities on the Sean Moore Park and Beach Road (R802) consist of raised footways on both sides of the road, public lighting, and controlled crossings. There are no existing cycle facilities along the R802. The number 18 and 39A Dublin Bus serves Sean Moore Park, the route commences from O'Connell Street travels through Lansdowne Road by Sean Moore Park towards Sean Moore Road Roundabout (Junction 2).

27.6.3 Predicted future baseline

Climate change and natural trends

81. In the future, climate change presents the potential for increased impacts to road infrastructure such as from fluvial flood risk, ice damage and erosion. These aspects for road infrastructure are considered at a national level and a series of measures to adapt to climate change are outlined in the Developing Resilience to Climate Change in the Irish Transport Sector (DTTS, 2019). In this regard, the implications of climate change would not significantly influence overall traffic volumes, which are the key consideration for this impact assessment.

82. Natural trends in Traffic and Transport are subject to various influences (i.e., proximity to education, national and local holiday periods). Natural trends have the potential to impact in the baseline parameters (i.e., traffic volumes) depending on the time of year. To ameliorate this concern, the traffic counts were undertaken in accordance with the TII PE-PAG-02016 during the neutral period or representative months avoiding national and local holiday periods, local school holidays, mid-terms and any other abnormal periods. This helped to ensure an unbiased sample and an appropriate representative sample of traffic volumes.

Future baseline

83. It is noted that the onshore development area falls within the lands subject to development by Dublin Port Company as part of their Masterplan programme. The northern part of the Poolbeg Peninsula, on which the onshore substation is located, is zoned Employment (Heavy) – Zone Z7 in the Dublin City Development Plan 2022–2028. Furthermore, part of the landfall area falls into the Poolbeg West Strategic Development Zone (SDZ). On this basis, the onshore development area could see some development (and interaction with Traffic and Transport) in future years, subject to planning permission.

Forecasting of future baseline traffic flow

84. The predicted future baseline (i.e., baseflow) year to be assessed is determined based on the TII TTA Guideline document. The assessment year is the year when the construction phase is scheduled to commence, 2026.

85. Forecasting baseflow traffic from a short-term peak (i.e., 24-hour traffic count) to an ADT was undertaken in accordance with the TII PE-PAG-02039 to factor up the short period traffic counts from a daily to a weekly, then monthly to determine the ADT.

86. Forecasting baseflow traffic from the baseline year (i.e., 2022 and 2023) to a future year for assessment (i.e., 2026) was undertaken in accordance with the TII PE-PAG-02017 (**Table 27-11**). As discussed with DCC during the scoping process, Link-Based Growth Rates: Metropolitan Area Annual Growth Rates – Alternative Future Demand Sensitivity Scenario (i.e., Table 9.1 of TII PE-PAG-02017) was used to predict the LV and HV traffic for the Dublin Metropolitan Area.

87. The traffic is split into LV and HV the respective growth factor is applied to the vehicle category. Refer to **Table 27-10** for associated growth rates applied to the baseline traffic flows.

Table 27-10 Link-Based Growth Factors – Alternative Future Demand Sensitivity Scenario – Dublin Metropolitan

Growth Factors	2016–2030
LV	1.0555
HV	1.1233

Table 27-11 Forecasted Traffic Volume – 2026

	Baseline 2022 / 2023		Forecasted 2026	
Road	**Baseline 2022**			
	Average Daily Traffic (ADT)	**Percentage HV**	**Average Daily Traffic (ADT)**	**Percentage HV**
Junction 1				
R131 East Link Bridge	28,521	19%	30,471	19.9%
R131	20,557	14%	21,890	14.5%
R801	10,287	21%	11,007	22.4%
Junction 2				
R131 NW	20,488	14%	21,817	14.6%
South Bank Road	3,960	45%	4,302	47.0%
R131 SW	19,765	4.6%	20,923	4.8%
Junction 3				
South Bank Road (N)	3,371	41%	3,652	42.8%
South Bank Road (W)	4,721	54%	5,157	55.8%
Road	**Baseline 2023**		**Forecasted 2026**	
Junction 4				
Pigeon House Road (E)	2,180	17%	2,289	17.7%
Pigeon House Road (W)	2,355	16%	2,472	17.0%

	Baseline 2022 / 2023		Forecasted 2026	
Road	**Baseline 2022**			
Junction 5				
Pigeon House Road (W)	1,964	10%	2,055	10.0%
Pigeon House Road (E)	1,870	7%	1,954	7.6%
Junction 6				
Pigeon House Road (E)	1,564	4%	1,632	4.5%
Private Access	4	0%	4	0.0%
Pigeon House Road (W)	1,564	4%	1,632	4.5%

27.7 Scope of the assessment

88. An EIA Scoping Report for the OTI was published on the 6 May 2021. The Scoping Report was uploaded to the CWP Project website and shared with regulators, prescribed bodies and other relevant consultees, inviting them to provide relevant information and to comment on the proposed approach being adopted by the Applicant in relation to the onshore elements of the EIA.

89. Based on responses to the Scoping Report, further consultation, and refinement of the CWP Project design, potential impacts to Traffic and Transport scoped into the assessment are listed below in **Table 27-12.**

Table 27-12 Potential impacts scoped into the assessment.

Impact No.	Description of impact	Notes
Construction		
Impact 1: Construction Phase Traffic – Network	Construction related traffic distributed over the road network in the vicinity of the onshore development area.	Traffic generations distributed on the road network based on the assumptions and limitations as identified in **Section 27.5-5**. Traffic volumes for the construction phase are above the TII TTA Guidelines thresholds and on this basis, a TTA has been undertaken (**Appendix 27.1 TTA**).
Impact 2: Construction Phase Traffic – Junction	Construction related traffic distributed over the junctions in the vicinity of the onshore development area.	Traffic generations distributed via the junctions is based on the assumptions and limitations as identified in **Section 27.5-5**. Traffic volumes for the construction phase are above the TII TTA Guidelines thresholds and on this basis, a TTA has been undertaken (**Appendix 27.1 TTA**).
Impact 3: Construction Stage Traffic – Pedestrian and Cyclists Accessibility	Construction related traffic distributed over the road network in the vicinity of the pedestrian and cyclist facilities on each road within the study area.	Traffic generations distributed on the road network based on the assumptions and limitations as identified in **Section 27.5-5**. Traffic volumes for the construction phase are above the TII TTA Guidelines thresholds and on

		this basis, a TTA has been undertaken (**Appendix 27.1 TTA**).
Decommissioning		
Impact 1: Decommissioning Phase Traffic – Network	Decommissioning related traffic distributed over the road network in the vicinity of the onshore development area.	There is potential for road network and junction impacts during the decommissioning phase of the OTI. However, a TTA was not undertaken for the decommissioning phase, as the traffic volumes and associated impacts would be no greater than those considered for the construction phase.
Impact 2: Decommissioning Phase Traffic – Junction	Decommissioning related traffic distributed over the junctions in the vicinity of the onshore development area.	
Impact 3: Decommissioning Phase – Pedestrian and Cyclists Accessibility	Decommissioning related traffic distributed over the road network in the vicinity of the pedestrian and cyclist facilities on each road within the study area.	

90. Based on responses to the Scoping Report, further consultation, and refinement of the CWP Project design, potential impacts to Traffic and Transport scoped out of the assessment are listed below in **Table 27-13**.

Table 27-13 Potential impacts scoped out of the assessment

Description of impact	Justification for scoping out
Operation and Maintenance (O&M)	The traffic volumes are below the thresholds in the TII TTA Guidelines, and hence do not require a TTA (i.e., junction assessment). The onshore substation will be generally unmanned during the O&M phase with the exception of any maintenance, repair or inspections activities. Any associated traffic and transport impacts during this phase would be very low and is not predicted to have significant effects.

27.8 Assessment parameters

27.8.1 Background

91. Complex, large-scale infrastructure projects with a terrestrial and marine interface such as the CWP Project, are consented and constructed over extended timeframes. The ability to adapt to changing supply chain, policy or environmental conditions and to make use of the best available information to feed into project design, promotes environmentally sound and sustainable development. This ultimately reduces project development costs and therefore electricity costs for consumers and reduces CO_2 emissions.

92. In this regard the approach to the design development of the CWP Project has sought to introduce flexibility where required, among other things, to enable the best available technology to be constructed and to respond to dynamic maritime conditions, whilst at the same time to specify project boundaries, project components and project parameters wherever possible, whilst having regard to known environmental constraints.

93. **Chapter 4 Project Description** describes the design approach that has been taken for each component of the CWP Project. Wherever possible the location and detailed parameters of the CWP Project components are identified and described in full within the EIAR. However, for the reasons outlined above, certain design decisions and installation methods will be confirmed post-consent, requiring a degree of flexibility in the planning consent.

94. Where necessary, flexibility is sought in terms of:

- Up to two options for certain permanent infrastructure details and layouts such as the WTG layouts.
- Dimensional flexibility; described as a limited parameter range i.e. upper and lower values for a given detail such as cable length.
- Locational flexibility of permanent infrastructure; described as Limit of Deviation (LoD) from a specific point or alignment.

95. The CWP Project had to procure an opinion from An Bord Pleanála to confirm that it was appropriate that this application be made and determined before certain details of the development were confirmed. An Bord Pleanála issued that opinion on 25th March 2024 (as amended in May 2024) and it confirms that the CWP Project could make an application for permission before the details of certain permanent infrastructure described in **Section 4.3** of **Chapter 4 Project Description** is confirmed.

96. In addition, the application for permission relies on the standard flexibility for the final choice of installation methods and O&M activities.

97. Notwithstanding the flexibility in design and methods, the EIAR identifies, describes and assesses all of the likely significant impacts of the CWP Project on the environment.

27.8.2 Options and dimensional flexibility

98. Where the application for permission seeks options or dimensional flexibility for infrastructure or installation methods, the impacts on the environment are assessed using a representative scenario approach. A “representative scenario” is a combination of options and dimensional flexibility that has been selected by the author of this EIAR chapter to represent all of the likely significant effects of the project on the environment. Sometimes, the author will have to consider several representative scenarios to ensure all impacts are identified, described and assessed.

99. For Traffic and Transport the infrastructure design and installation techniques with potential to give rise to traffic and transport impacts have been confirmed in the planning application and consequently the assessment is confined to a confirmed design for all construction and O&M phase impacts.

100. The modelled traffic numbers for the confirmed design are detailed in **Section 27.9**, **Table 27-16** to **Table 27-18**.

27.8.3 Limit of deviation

101. Where the application for permission seeks locational flexibility for infrastructure, the impacts on the environment are assessed using a LoD. The LoD is the furthest distance that a specified element of the CWP Project can be constructed.

102. LoD within the onshore development area (seaward of the high water mark) are noted below in **Table 27-14.**

103. For Traffic and Transport, a conclusion is provided in **Table 27-14** which confirms that the LoDs for the permanent infrastructure relevant to traffic and transport will not give rise to any new or materially different effects. The LoDs are therefore not considered further within this assessment.

Table 27-14 Limit of deviation (LoD) relevant to assessment of Traffic and Transport

Project component	Limit of deviation (LoD)	LoD impact summary
TJBs	0.5 m either side (i.e., east / west) of the preferred TJB location	No potential for new or materially different effects.
Landfall cable ducts	Defined LoD boundary (see **Chapter 4 Project Description**)	No potential for new or materially different effects.
Location of onshore substation revetment perimeter structure	Defined LoD for sheet piling at toe of the revetement	No potential for new or materially different effects.

27.9 Traffic and Transportation Assessment

27.9.1 General

104. The objective of this section of the report is to summarise **Appendix 27.1 TTA**, which examines the traffic and transport implications associated with the CWP Project in terms of the integration with existing traffic and committed developments in the area.

105. The conclusions of the TTA, have been used to inform the EIAR assessment in **Section 27.11** of this chapter.

106. The TTA analyses the change in traffic flow volumes from the existing baseline and the potential impacts to the operational capacity of the key junctions (the change in RFC). These TTA outputs are used in **Section 27.11**, to confirm magnitude of impact and significance of effect ratings for the road network, junctions and pedestrian/cyclists, in line with the assessment criteria outlined in **Section 27.4**.

27.9.2 Site Access Facilities

Construction Phase

107. The access to the Compound C and the onshore substation will be via the new temporary access road, 30 metres to the east of Junction 6, for the duration of the construction phase. This is a one-way system access point. The egress from the onshore substation during construction phase will be using the new access bridge over the cooling water discharge channel and turning right onto the Pigeon House Road at Junction 5 (refer to **Figure 27-1**).

108. Site access construction activities for the onshore substation includes:

- Installation of the new temporary access road;
- Upgrades to the existing access road on the eastern boundary, leading into the onshore substation site;
- Installation of the new bridge to provide vehicle access across the cooling water discharge channel; and
- New internal access road layout within the onshore substation site boundary.

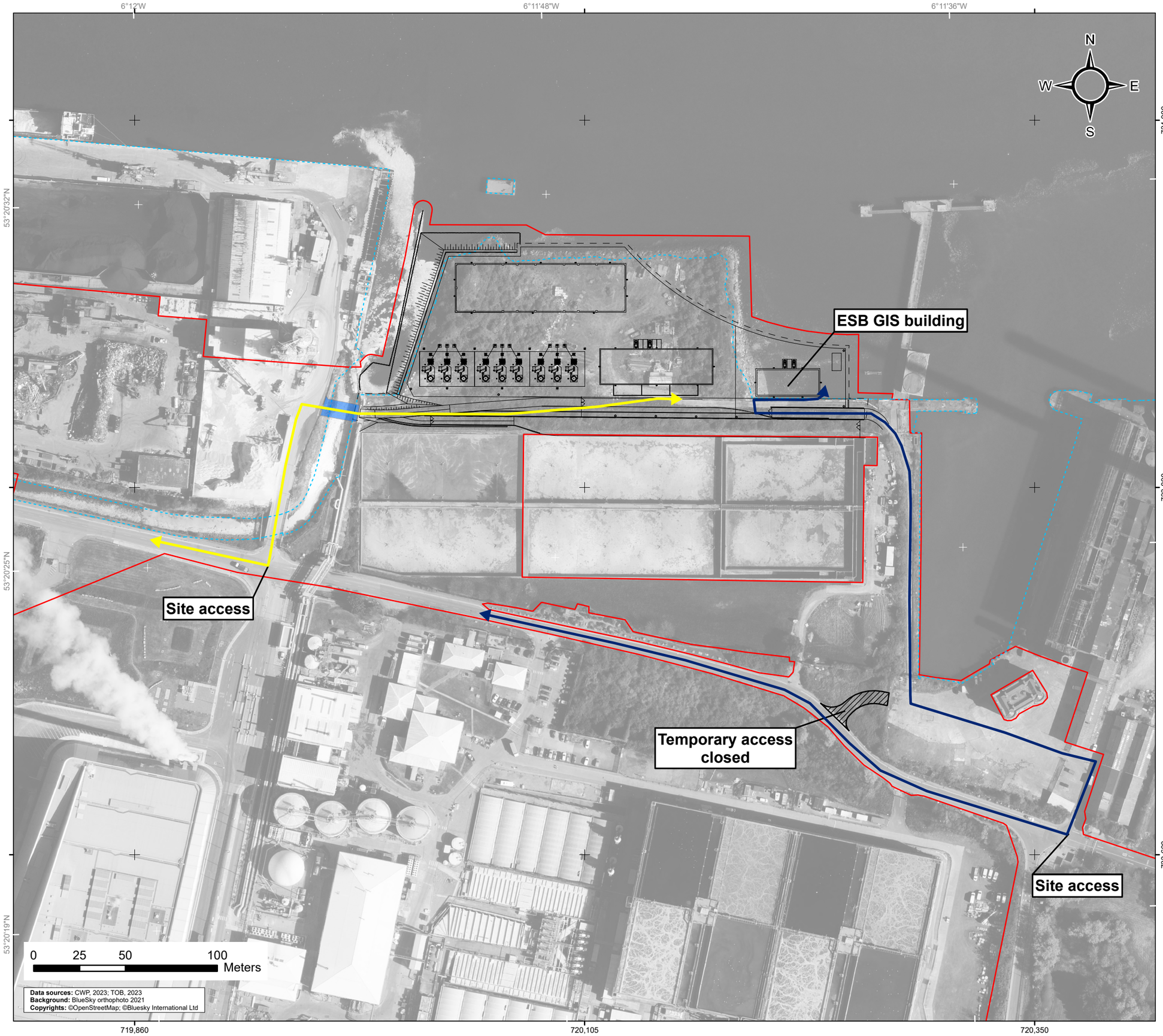
109. The access to the Compound A (landfall area) will be via the priority T-junction (Junction 4) off Pigeon House Road with Shellybanks Road. This is a two-way access point.

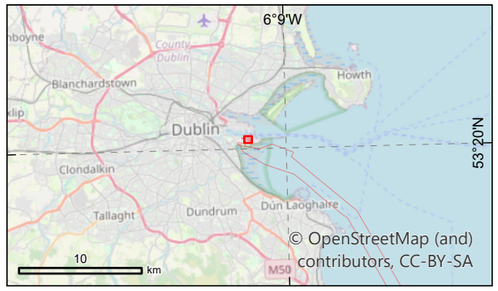
110. The access to the Compound B will be from Junction 3 (DCATS junction), via the South Bank Road. This is a two-way access point.

O&M Phase

111. During the O&M phase, the following access points will be used at the onshore substation, refer to **Figure 27-4:**

- The existing access road on the eastern boundary will provide access into and out of the ESB Gas insulated substation (GIS) building which is being developed as part of the onshore substation plans. (EirGrid specifications require that this building retains separate access/exit points from the CWP Project onshore substation);
- Uisce Éireann (UÉ) vehicles will access their site (i.e., stormwater tanks) using the existing access road on the eastern boundary and will then depart via the bridge over the cooling water discharge channel (to the west); and
- The bridge over the cooling water discharge channel will provide access into and out of the CWP Project onshore substation.





Legend

- Planning application boundary
- Onshore substation electrical layout
- Onshore substation boundary (operational)
- High water mark
- Access bridge to onshore substation
- Temporary site access to construction compound C and onshore substation

Operational phase traffic movements

- Access and egress route for O&M phase traffic to the ESB GIS building
- Access and egress route for O&M phase traffic to the CWP onshore substation

codling wind park

Project: Codling Wind Park

Contractor: TOBIN

Website: www.tobin.ie

Figure 27.4
Operational and maintenance (O&M) phase traffic flow to and from the onshore substation

CWP doc. number: CWP-TOB-ENG-08-01-MAP-0982

Internal descriptive code: PAB..SS.PP.PL..SS.PP.LO.CIV..SS.PP.BRIDGE.. WEST.RoW.COMP.C - TRDO&M..HWM - (ORT.BS.21..EIAR.FIG.27.04)

Size: A3

Scale: 1:2,000

CRS: EPSG 2157

Rev.	Updates	Date	By	Chk'd	App'd
00	Final for issue	2024/08/15	SP	DM/EA	ES

27.9.3 Assessment Methodology

112. The TTA assessment methodology is undertaken in accordance with TII Traffic and Transportation Guidelines. Baseline data survey was undertaken as per **Section 27.4.2** and forecasted to future baseline flows as per **Section 27.6.3**. The CWP Project has three phases:

i. Construction phase;

ii. O&M phase; and

iii. Decommissioning phase.

113. Traffic generations and distribution were developed for each of the three phases and compared against the thresholds and sub-thresholds in the TTA guidance document to determine if a full TTA was required.

114. A full TTA was only required for the construction phase. A TTA was not required for the O&M phase, and decommissioning phase. Full details of the TTA and threshold checks are included in the TTA in **Appendix 27.1**.

115. Traffic generations for the construction phase were based on materials for the construction of all elements of the OTI. These traffic generations were used in the determination of traffic scenarios (scenario 1,2 and 3).

116. The traffic assessment considers three impacts:

i. Impact 1 – Network assessment;

ii. Impact 2 – Junction assessment; and

iii. Impact 3 – Pedestrian and Cyclists Accessibility.

117. Assessment on these impacts is summarised, alongside their results in the subsequent paragraphs of this section.

Construction Phase – Traffic Generations

118. The traffic generations for each month of the construction programme, is shown in the graphical representation in **Plate 27-3.** For full details on traffic generations, refer to **Appendix 27.1**.

119. As outlined in **Section 27.9.3** three traffic assessment scenarios have been developed for the project. The assessment scenarios for traffic generations are outlined in **Table 27-13** and are assessed as part of this EIAR.

120. In developing the traffic generations daily, hourly and ADT, the TTA has incorporated the following assumptions:

- It was assumed there are 4 weeks per month;
- The operational hours for the construction phase are Monday to Friday from 07:00-19:00 hrs and from 07:00-14:00 hrs on Saturdays. In this assessment, it is assumed there are a total of 5.5 working days per week of the construction phase;
- During some construction activities there will be 24-hour construction activities i.e. the tunnel for the onshore export cable and the HDD ESBN network cables. For robustness, it is assumed the working day will be 12 hours only;
- All HV are assumed to be evenly distributed over the workday (i.e., 12 hours);
- HV in-site and out-site movements would occur during AM and PM peak hours; and

- All LVs are assumed to arrive in the morning peak (i.e., AM Peak) and depart in the evening (i.e., PM Peak).

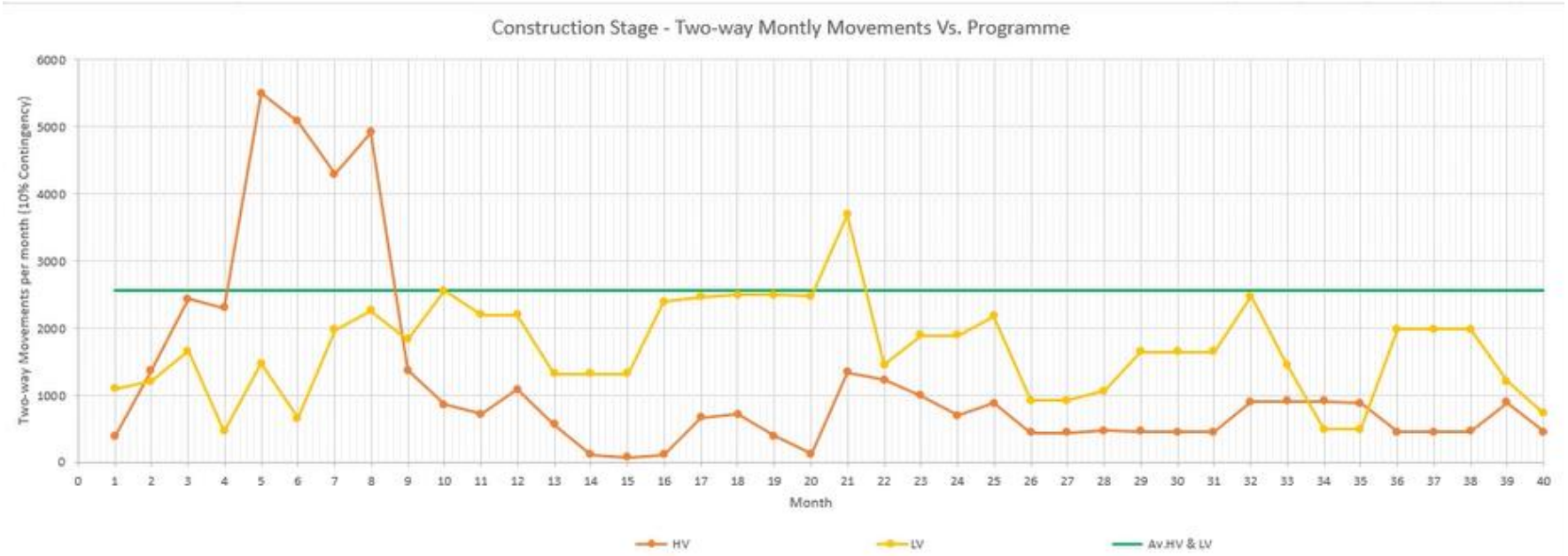


Plate 27-3 Proposed Development – Construction Phase Traffic Generations

Table 27-15 Construction Phase Traffic Scenarios

Impact No.	Description	Notes
Construction		
Scenario 1	Peak HV in construction Month 5.	Each scenario has been assessed as a Network Assessment and as a Junction Assessment
Scenario 2	Peak LV in construction Month 21.	
Scenario 3	Average vehicle movements over construction programme	

121. In **Appendix 27.1 TTA** the three scenarios considered:

- HV in-site and out-site movements would occur during AM and PM peak hours; and
- LVs would arrive during AM peak and depart during PM peak hour.

122. The three scenarios considered the following in terms of traffic movements:

Scenario 1 – Peak HV Traffic (Month 5)

123. Assumption that all HV traffic will travel into and out of the Compound C/ onshore substation site.

124. For LV's – assumed that all the construction personnel will park at Compound A and walk to their work areas.

Scenario 2 – Peak LV Traffic (Month 21)

125. HVs are associated with piling works for the onshore substation buildings:

- 30% access and exit Compound A;
- 10% access and exit Compound B; and
- 60% access and exit Compound C/ onshore substation site.

126. For LV's – assumed that all the construction personnel will park at Compound A and walk to their works areas.

Scenario 3 – Average Traffic

127. Assumption that HV trips will split as:

- 30% access and exit Compound A;
- 10% access and exit Compound B; and
- 60% access and exit Compound C/ onshore substation site.

128. For LV's – assumed that all the construction personnel will park at Compound A and walk to their work areas.

129. The construction phase traffic associated with Scenarios 1-3 are outlined in **Table 27-16**, **Table 27-17** and **Table 27-18**.

Table 27-16 Construction Phase Traffic Generations – Scenario 1

Construction Phase – Peak	Scenario1 – Month 5			
	Arrival		Departure	
	LV	HV	LV	HV
AM Peak	34	10	0	10
PM Peak	0	10	34	10

Table 27-17 Construction Phase Traffic Generations – Scenario 2

Construction Phase – Peak	Scenario 2 – Month 21			
	Arrival		Departure	
	LV	HV	LV	HV
AM Peak	84	3	0	3
PM Peak	0	3	84	3

Table 27-18 Construction Phase Traffic Generations – Scenario 3

Construction Phase – Average	Scenario 3			
	Arrival		Departure	
	LV	HV	LV	HV
AM Peak	31	2	0	2
PM Peak	0	2	31	2

Construction Phase – Traffic Distributions

130. Due to the DCC city centre road restrictions (the 5+ axle cordon), the haul routes for construction phase HVs will be Routes 1-3 as detailed in **Figure 27-1** :

- Onshore substation: The HVs will arrive to/from the M50 via the Dublin Tunnel, R131 East Wall Road travel through Junctions 1-3 and then travel towards the onshore substation area via Junctions 4, 5 and 6. To exit, HVs will follow the one-way system and leave via the bridge over the cooling water channel, located on the western boundary of the onshore substation site. HV's will then access the Pigeon House Road, using Junction 5 and turning right;
- Construction compounds: The HVs will arrive from the Dublin Tunnel and travel through Junctions 1-3. HVs will continue through Junction 3 to access Compound B. The HV shall also turn left at Junction 3, continue to Junction 4 and turn right at Shellybanks Road towards Compound A and the landfall area. Construction Compounds D and C (Compounds D and C) will be accessed via Junctions 5 and 6 respectively. To exit the construction compounds, HVs shall follow the same arrival route, back towards the Dublin Tunnel.

131. AILs will be transported to the onshore development area via Dublin Tunnel where the height restriction allows. Any plans to transport AILs into the onshore development area during the construction phase will be undertaken in liaison with DCC as part of the implementation of the TMP for the project.

132. AILs such as the transformers for the onshore substation can be delivered to the Hammond Lane quayside or a Roll on Roll Off facility on the northern side of Dublin Port and transported into the site. The study area includes the route for the transport of AILs over the new access bridge and into the

site. Refer to **Plate 27-1**, which presents the vehicle tracking layout from the Hammond Lane quayside into the onshore substation site and **Appendix 27-2 TMP** for further details

133. LV traffic distributions will be Routes 1-3 as detailed in **Figure 27-2**:

- The LVs will arrive from the Dublin Tunnel and from the City Centre to Sean Moore Road. Continuing to Junction 4 and turn right to Shellybanks Road. To exit the site, LV shall utilise the same route towards Sean Moore Road (Junction 2) and Junction 1;
- All staff (i.e., LV) are assumed to park within the Compound A. There is some overflow carpark spaces at Compound C. However, as a traffic assessment scenario it is assumed for LV movements that all the construction personnel will park at Compound A and walk to their work areas;
- At Junction 1 and 2, it is assumed that the construction traffic distributions will match the existing traffic distribution patterns in the morning and evening peak hours.

134. It is assumed that all LV arriving and departing at Sean Moore Roundabout (Junction 2) will match the existing LV distributions on the R131 as recorded during the Junction Turning Count surveys (i.e., south towards Irishtown or north toward Tom Clarke bridge from the Sean Moore Roundabout, Junction 2).

135. It is assumed that all LV arriving and departing from Tom Clarke Roundabout (Junction 1) will match the LV distribution on the R131 and R801 roads only. It is noted that the Arm to the Port is gated and not available for LV traffic distribution.

27.9.4 Traffic Assessment on the Network

136. The road network traffic assessment is the addition of the construction phase CWP Project generated traffic and committed development traffic on the baseflow traffic for the year of assessment on each road. The assessment is based on the roads influenced by the development traffic only.

137. In order to determine committed developments a desktop review of the CEA long list provided in **Appendix 5.1 CEA Methodology** and publicly available information was undertaken in June 2024.

138. The objective of the review was to determine if the construction phase or operational phase of other developments would coincide with the construction phase of this application in 2026. As described in **Section 27.5.5** the committed development assessed included:

- EirGrid – at the Poolbeg Generating Station / Substation (CEA-1346) (construction phase traffic);
- ESB - Dublin Bay Power Station OCGT (CEA-1327) (construction phase traffic) and
- ESB - Poolbeg Generating Station OCGT (CEA-1338) (construction phase traffic).

139. The key parameters for the network assessment are the ADT and the percentage HV content.

140. The comparison between the baseflow traffic on each road and baseflow with the addition of the Scenario 1-3 traffic is undertaken to determine the effect of the CWP Project on the road network within the study area.

Network Analysis Results

141. A summary of the road network analysis results for each arm of Junction 1 to Junction 6 are shown in **Table 27-19.** The full output for the assessment along the network is included in **Appendix 27.1 TTA**.

142. The results in **Table 27-19** the indicate the potential impacts on the baseline year of 2022 and 2023, and the year of the assessment in 2026.

Table 27-19 Network Analysis Results – Junction 1 to Junction 6

	Baseflow 2026		Scenario 1		Difference between Scenario 1 & 2026 Baseflow		Scenario 2		Difference between Scenario 2 & 2026 Baseflow		Scenario 3		Difference between Scenario 3 & 2026 Baseflow	
Junction 1	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**
R131-East Wall Road (N)	30,471	20.%	30,746	20.6%	275	0.6%	30,595	20.0%	76	0.0%	30,553	20.1%	82	0.1%
R131-East Link Bridge(S)	21,890	14.5 %	22,169	15.5%	279	0.9%	22,022	14.7%	132	0.2%	21,975	14.7%	85	0.2%
R801 North Wall Quay (W)	11,007	22.4 %	11,010	22.4%	3	0.0%	11,016	22.4%	8	0.0%	11,010	22.4%	3	0.0%
Junction 2	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**
R131 (N)	21,817	14.6 %	22,096	15.5%	279	0.9%	21,950	14.8%	132	0.2%	21,902	14.8%	85	0.2%
South Bank Road (E)	4,302	47.0 %	4,619	49.1%	317	2.2%	4,530	45.9%	228	1.0%	4,422	47.0%	120	0.0%
R131 (S)	20,923	4.8%	20,962	4.8%	38	0.0%	21,019	4.8%	96	0.0%	20,959	4.8%	36	0.0%
Junction 3	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**
South Bank Road (N)	3,652	42.8 %	3,969	45.6%	317	2.9%	3,880	41.8%	228	1.0%	3,773	42.9%	120	0.2%
South Bank Road (W)	5,157	55.8 %	5,474	57.2%	317	1.3%	5,385	54.6%	228	1.2%	5,277	55.7%	120	0.2%
Junction 4	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**
Pigeon House Rd (E)	2,289	17.7 %	2,606	25.2%	317	7.4%	2,510	18.3%	222	0.6%	2,403	19.1%	115	1.3%
Pigeon House Rd (W)	2,472	17%	2,789	24%	317	7%	2,693	17.6%	222	0.6%	2,586	18.3%	115	1.3%

	Baseflow 2026		Scenario 1		Difference between Scenario 1 & 2026 Baseflow		Scenario 2		Difference between Scenario 2 & 2026 Baseflow		Scenario 3		Difference between Scenario 3 & 2026 Baseflow	
Junction 5	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**
Pigeon House Rd (W)	2,055	10%	2,305	19.8%	250	9.8%	2,091	11.6%	36	1.5%	2,089	11.5%	35	1.5%
Pigeon House Rd (E)	1,954	7.6%	2,204	18.1%	250	10.5%	1,990	9.3%	36	1.7%	1,989	9.2%	35	1.6%
Junction 6	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**	**ADT**	**%HV**
Pigeon House Rd (E)	1,632	4.5%	1,757	11.3%	125	6.8%	1,650	6.8%	18	1.0%	1,649	5.5%	58	1.0%
Site Access	4.0	0.0%	4.0	0.0%	0.0	0.0%	4.0	0.0%	0.0	0.0%	4.0	0.0%	62	0.0%
Pigeon House Rd (W)	1,632	4.5%	1,949	11.3%	125	6.8%	1,650	6.8%	18	1.0%	1,649	5.5%	120	1.0%

Junction 1 – R131 (N) / Direct Access/R131 East Wall Road Southbound (S)/ North Wall Quay Roundabout

143. The results in **Table 27-19** indicate the difference between the baseflow traffic for the year of the assessment in 2026 and the three scenarios assessed at Junction 1. A comparison of the scenarios is outlined in the subsequent paragraphs.

144. Scenario 1 is the peak HV movements in month 5 of the construction phase with associated LV movements. The following results were obtained:

- Scenario 1 will operate with less than 0.6% change on in HV movements on the R131 (N) with an ADT value 275 movements (i.e., two-way) daily.
- Scenario 1 will operate with less than 0.9% change on in HV movements on the R131 East Wall Road (S) with an ADT value 279 movements (i.e., two-way) daily.
- Scenario 1 will operate with less than 0.0% change on in HV movements on the North Wall Quay with an ADT value 3 movements (i.e., two-way) daily.

145. Scenario 2 is the peak LV movements in month 21 of the construction phase with associated HV movements. The following results were obtained:

- Scenario 2 will operate with less than 0.0% change on in HV movements on the R131 (N) with an ADT value 76 movements (i.e., two-way) daily.
- Scenario 2 will operate with less than 0.2% change on in HV movements on the R131 East Wall Road (S) with an ADT value 132 movements (i.e., two-way) daily.
- Scenario 2 will operate with less than 0.0% change on in HV movements on the North Wall Quay with an ADT value 8 movements (i.e., two-way) daily.

146. Scenario 3 is the average of the vehicle movements over the entire construction phase. The following results were obtained:

- Scenario 3 will operate with less than 0.1% change in HV movements on the R131 (N) with an increase in ADT of 82 movements (i.e., two-way) daily.
- Scenario 3 will operate with less than 0.2% change on in HV movements on the R131 East Wall Road (S)\ with an ADT value 85 movements (i.e., two-way) daily.
- Scenario 3 will operate with less than 0.0% change on in HV movements on the North Wall Quay with an ADT value 3 movements (i.e., two-way) daily.

Junction 2 – R131 (N) East Link Bridge/ South Bank Road / R131(S) Sean Moore Road/ (the Sean Moore Road Roundabout)

147. The results in **Table 27-19** indicate the difference between the baseflow traffic for the year of the assessment in 2026 and the three scenarios assessed at Junction 2. A comparison of the scenarios is outlined in the subsequent paragraphs.

148. Scenario 1 is the peak HV movements in month 5 of the construction phase with associated LV movements. The following results were obtained:

- Scenario 1 will operate with less than 0.9% change in HV movements on the R131 (N) with an ADT value 279 movements (i.e., two-way) daily.
- Scenario 1 will operate with less than 2.2% change in HV movements on the South Bank Road I with an ADT value 317 movements (i.e., two-way) daily.
- Scenario 1 will operate with less than 0.0% change in HV movements on the R131 (S) with an ADT value 38 movements (i.e., two-way) daily

149. Scenario 2 is the peak LV movements in month 21 of the construction phase with associated HV movements. The following results were obtained:

- Scenario 2 will operate with less than 0.2% change in HV movements on the R131 (N) with an ADT value 132 movements (i.e., two-way) daily.
- Scenario 2 will operate with less than 1.0% change in HV movements on South Bank Road (E) with an ADT value 228 movements (i.e., two-way) daily.
- Scenario 2 will operate with less than 0.0% change in HV movements on the R131 (S) with an ADT value 96 movements (i.e., two-way) daily.

150. Scenario 3 is the average of the vehicle movements over the entire construction phase. The following results were obtained:

- Scenario 3 will operate with less than 0.2% change in HV movements on the R131 (N) with an increase in ADT of 85 movements (i.e., two-way) daily.
- Scenario 3 will operate with less than 0.0% change in HV movements on the South Bank Road (E) with an ADT value 120 movements (i.e., two-way) daily.
- Scenario 3 will operate with less than 0.0% change in HV movements on the R131 (S) with an ADT value 36 movements (i.e., two-way) daily.

Junction 3 - R131 South Bank Road (N) / R131 South Bank Road (W)

151. The results in **Table 27-19** indicate the difference between the baseflow traffic for the year of the assessment in 2026 and the three scenarios assessed at Junction 3. A comparison of the scenarios is outlined in the subsequent paragraphs.

152. Scenario 1 is the peak HV movements in month 5 of the construction phase with associated LV movements. The following results were obtained:

- Scenario 1 will operate with less than 2.9% change in HV movements on the R131 South Bank Road (N) with an ADT value 317 movements (i.e., two-way) daily.
- Scenario 1 will operate with less than 1.3% change in HV movements on the R131 South Bank Road (S) with an ADT value 317 movements (i.e., two-way) daily.

153. Scenario 2 is the peak LV movements in month 21 of the construction phase with associated HV movements. The following results were obtained:

- Scenario 2 will operate with less than 1.0% change in HV movements on the R131 South Bank Road (N) with an ADT value 228 movements (i.e., two-way) daily.
- Scenario 2 will operate with less than 1.2% change on HV movements on the R131 South Bank Road (S) with an ADT value 228 movements (i.e., two-way) daily.

154. Scenario 3 is the average of the vehicle movements over the entire construction phase. The following results were obtained:

- Scenario 3 will operate with less than 0.2% change in HV movements on the R131 South Bank Road (N) with an increase in ADT of 120 movements (i.e., two-way) daily.
- Scenario 3 will operate with less than 0.2% change on HV movements on the South Bank Road (E) with an ADT value 120 movements (i.e., two-way) daily.

Junction 4 - Pigeon House Road (E) / Pigeon House Road (W)

155. The results in **Table 27-19** indicate the difference between the baseflow traffic for the year of the assessment in 2026 and the three scenarios assessed at Junction 4. A comparison of the scenarios is outlined in the subsequent paragraphs.

156. Scenario 1 is the peak HV movements in month 5 of the construction phase with associated LV movements. The following results were obtained:

- Scenario 1 will operate with less than 7.4% change in HV movements on the Pigeon House Road (E) with an ADT value 317 movements (i.e., two-way) daily.
- Scenario 1 will operate with less than 7% change in HV movements on the Pigeon House Road (W) with an ADT value 317 movements (i.e., two-way) daily.

157. Scenario 2 is the peak LV movements in month 21 of the construction phase with associated HV movements. The following results were obtained:

- Scenario 2 will operate with less than 0.6% change in HV movements on the Pigeon House Road (E) with an ADT value 222 movements (i.e., two-way) daily.
- Scenario 2 will operate with less than 0.6% change in HV movements on the Pigeon House Road (W) with an ADT value 222 movements (i.e., two-way) daily.

158. Scenario 3 is the average of the vehicle movements over the entire construction phase. The following results were obtained:

- Scenario 2 will operate with less than 1.3% change in HV movements on Pigeon House Road I with an ADT value 115 movements (i.e., two-way) daily.
- Scenario 2 will operate with less than 1.3% change in HV movements on the Pigeon House Road (W) with an ADT value 115 movements (i.e., two-way) daily.

Junction 5 - Pigeon House Road I / Pigeon House Road (E)

159. The results in **Table 27-19** indicate the difference between the baseflow traffic for the year of the assessment in 2026 and the three scenarios assessed at Junction 5. A comparison of the scenarios is outlined in the subsequent paragraphs.

160. Scenario 1 is the peak HV movements in month 5 of the construction phase with associated LV movements. The following results were obtained:

- Scenario 1 will operate with less than 9.8% change in HV movements on the Pigeon House Road (W) with an ADT value 250 movements (i.e., two-way) daily.
- Scenario 1 will operate with less than 10.5% change in HV movement on the Pigeon House Road (E) with an ADT value 250 movements (i.e., two-way) daily.

161. Scenario 2 is the peak LV movements in month 21 of the construction phase with associated HV movements. The following results were obtained:

- Scenario 2 will operate with less than 1.5% change in HV movements on the Pigeon House Road (W) with an ADT value 36 movements (i.e., two-way) daily.
- Scenario 2 will operate with less than 1.7% change in HV movements on the Pigeon House Road (E) with an ADT value 36 movements (i.e., two-way) daily.

162. Scenario 3 is the average of the vehicle movements over the entire construction phase. The following results were obtained:

- Scenario 3 will operate with less than 1.5% change in HV movements on the Pigeon House Road (W) with an ADT value 35 movements (i.e., two-way) daily.
- Scenario 3 will operate with less than 1.6% change in HV movements on the Pigeon House Road (E) with an ADT value 35 movements (i.e., two-way) daily.

Junction 6 Pigeon House Road (E) / Site Access / Pigeon House Road (W)

163. The results in **Table 27-19** indicate the difference between the baseflow traffic for the year of the assessment in 2026 and the three scenarios assessed at Junction 3. A comparison of the scenarios is outlined in the subsequent paragraphs.

164. Scenario 1 is the peak HV movements in month 5 of the construction period with associated LV movements. The following results were obtained:

- Scenario 1 will operate with less than 6.8% change in HV movements on the Pigeon House Road (E) with an ADT value 125 movements (i.e., two-way) daily.
- Scenario 1 will operate with less than 6.8% change in HV movements on the Pigeon House Road (W) with an ADT value 125 movements (i.e., two-way) daily.

165. Scenario 2 is the peak LV movements in month 21 of the construction period with associated HV movements. The following results were obtained:

- Scenario 2 will operate with less than 1.0% change in HV movements on the Pigeon House Road (E) with an ADT value 18 movements (i.e., two-way) daily.
- Scenario 2 will operate with less than 1.0% change in HV movements on the Pigeon House Road (W) with an ADT value 18 movements (i.e., two-way) daily.

166. Scenario 3 is the average of the vehicle movements over the entire construction period. The following results were obtained:

- Scenario 3 will operate with less than 1.0% change in HV movements on the Pigeon House Road (E) with an ADT value 58 movements (i.e., two-way) daily.
- Scenario 3 will operate with less than 1.0% change in HV movements on the Pigeon House Road (W) with an ADT value 120 movements (i.e., two-way) daily

27.9.5 Traffic Assessment on the Junctions

167. The existing Junctions (i.e., Junctions 1, 2, 3, 4, 5 and 6) on the road network have been analysed using the Transport Research Laboratory (TRL) computer program JUNCTION 10 PICADY and ARCADY. These are widely accepted tools used for the analysis of priority junctions and roundabouts.

168. Assessed Traffic:

- 2022/2023 Baseflow: traffic survey results from 2022 and 2023;
- 2026 Baseflow: 2022 / 2023 baseflow traffic volumes factored up to year of construction (2026);
- 2026 Baseflow plus committed development (cumulative): factored up baseflow traffic plus committed developments traffic;
- 2026 Baseflow plus committed development plus Scenarios (1, 2 and 3): factored up baseflow traffic plus committed developments traffic plus estimated construction phase CWP Project traffic in Scenarios 1, 2 and 3.

169. The summary of the results of the PICADY and ARCADY analysis are presented in the section Junction Analysis Results of the TTA. Full details of the TTA including the origin/destination traffic demand tables for all the different scenarios tested and junctions analysed are included in the TTA in **Appendix 27.1**.

170. The analysis indicated that there will be no queues and minimal delays during the peak hours for the three scenarios at the 6 no. junctions.

171. The junction assessments indicate 5 no. junctions (i.e. Junction 2, Junction 3, Junction 4, Junction 5 and Junction 6) are currently below the desirable capacity of 0.85 and will remain below capacity with the CWP Project during the construction phase.

172. Junction 1 presented a Ratio of Flow to Capacity (RFC) of 0.85 during baseflow traffic in 2026. The committed development traffic increased the RFC on arm C (R131 (S)) from 0.85 to 0.85 and 0.89 during morning and evening peak hours, respectively. With the CWP Project included, the RFC increased up to a maximum of 0.87 and 0.92 during the morning and evening peak hours of the three construction phase scenarios.

173. Therefore, comparing the construction phase traffic scenarios with the committed development traffic, all three scenarios traffic will slightly decrease the junction's performances (i.e. from 0.85 up to 0.87 in the morning peak hour, and from 0.89 up to 0.92 in the evening peak hour). There is a slight decrease, this was not considered a significant issue overall in terms of the operation of the junction.

27.10 Primary mitigation measures

174. Throughout the evolution of the CWP Project, measures have been adopted as part of the evolution of the project design and approach to construction, to avoid or otherwise reduce adverse impacts on the environment. These mitigation measures are referred to as 'primary mitigation'. They are an inherent part of the CWP Project and are effectively 'built in' to the impact assessment.

175. Primary mitigation measures relevant to the assessment of Traffic and Transport are set out in **Table 27-20**.

Table 27-20 Primary mitigation measures

Project Element	Description
DCC 5x Axle Cordon / Heavy Goods Vehicle Management Strategy	The CWP Project will comply with the five-axle cordon and Heavy Goods Vehicle Management Strategy which is implemented by DCC in the vicinity of the onshore development area. On this basis, the assessed haul routes for the construction HV movements will be from M50 and Dublin Tunnel to the onshore development area.
Site selection: avoidance of residential properties and areas of recreational amenity	The site selection and consideration of alternatives process for the CWP Project (see EIAR **Chapter 3 Site Selection and Consideration of Alternatives**) considered a number of alternative locations for the onshore substation site. The process evaluated alternative sites using a multi-criteria assessment, which included a consideration of likely environmental effects. The main reasons for selecting the preferred onshore substation site included its proximity to the grid connection point and within a heavily industrialised area. It is also located away from residential properties and areas of recreational amenity. The selection of the site is therefore considered a key driver for mitigation by avoidance.
Installation of the onshore export cable	The installation method for the onshore export cables between the landfall and the onshore substation site (i.e. underground tunnelling) ensures that open cut trenching is not required across Pigeon House Road. There is no requirement to close the Pigeon House Road during the onshore export cable installation works and will maintain access for the local population to the Great South Wall and the Poolbeg Lighthouse during the construction phase.

27.11 Impact assessment

27.11.1 Construction phase

176. The potential environmental impacts arising from the construction of the CWP Project are listed in **Table 27-21** to **Table 27-23** along with the parameters against which each construction phase impact has been assessed. A description of the potential effect on Traffic and Transport receptors caused by each identified impact is given below.

Impact 1: Construction Phase Traffic – Network

Significance of the effect

177. The impact of construction phase traffic on the surrounding network considered the sensitivity of the road network and the magnitude of the impact as detailed in **Section 27.4**. The magnitude of impact takes account of the outputs from **Appendix 27.1 TTA**, on the changes of the baseline traffic and HV content on the surrounding road network.

178. The significance matrix provided in **Table 27-8**, which is a function of the sensitivity of the receptor and the magnitude of the impact, has been used to determine the significance of effects on the network, at each junction during the construction phase. However, it is important to note that the assessments are also based on the application of expert judgement.

Table 27-21 Significance of the Effect - Network Impact

Extent	Scenario / month of completion	Sensitivity of receptor	Magnitude of impact	Significance of effect
Junction 1				
R131-East Wall Road (N)	Scenario 1 – Month 5	Medium	Very low	Imperceptible
	Scenario 2 – Month 21	Medium	Very low	Imperceptible
	Scenario 3 – Average	Medium	Very low	Imperceptible
R131-East Link Bridge (S)	Scenario 1 – Month 5	Medium	Very low	Imperceptible
	Scenario 2 – Month 21	Medium	Very low	Imperceptible
	Scenario 3 – Average	Medium	Very low	Imperceptible

Extent	Scenario / month of completion	Sensitivity of receptor	Magnitude of impact	Significance of effect
R801 North Wall Quay (W)	Scenario 1 – Month 5	Medium	Very low	Imperceptible
	Scenario 2 – Month 21	Medium	Very low	Imperceptible
	Scenario 3 – Average	Medium	Very low	Imperceptible
Junction 2				
R131 (NW)	Scenario 1 – Month 5	Medium	Very low	Imperceptible
	Scenario 2 – Month 21	Medium	Very low	Imperceptible
	Scenario 3 – Average	Medium	Very low	Imperceptible
South Bank Road	Scenario 1 – Month 5	Medium	Low	Slight
	Scenario 2 – Month 21	Medium	Low	Slight
	Scenario 3 – Average	Medium	Low	Slight
R131 (SW)	Scenario 1 – Month 5	Medium	Very Low	Imperceptible
	Scenario 2 – Month 21	Medium	Very Low	Imperceptible
	Scenario 3 – Average	Medium	Very Low	Imperceptible
Junction 3				
South Bank Road (N)	Scenario 1 – Month 5	Medium	Low	Slight
	Scenario 2 – Month 21	Medium	Low	Slight

Extent	Scenario / month of completion	Sensitivity of receptor	Magnitude of impact	Significance of effect
	Scenario 3 – Average	Medium	Low	Slight
South Bank Road (W)	Scenario 1 – Month 5	Medium	Low	Slight
	Scenario 2 – Month 21	Medium	Low	Slight
	Scenario 3 – Average	Medium	Low	Slight
Junction 4				
Pigeon House Rd (E)	Scenario 1 – Month 5	Low	Medium	Slight
	Scenario 2 – Month 21	Low	Very low	Imperceptible
	Scenario 3 – Average	Low	Very low	Imperceptible
Pigeon House Rd (W)	Scenario 1 – Month 5	Low	Medium	Slight
	Scenario 2 – Month 21	Low	Very low	Imperceptible
	Scenario 3 – Average	Low	Very low	Imperceptible
Junction 5				
Pigeon House Rd (W)	Scenario 1 – Month 5	Low	High	Moderate-Slight
	Scenario 2 – Month 21	Low	Very low	Imperceptible
	Scenario 3 – Average	Low	Very low	Imperceptible
	Scenario 1 – Month 5	Low	High	Moderate-Slight

Extent	Scenario / month of completion	Sensitivity of receptor	Magnitude of impact	Significance of effect
Pigeon House Rd (E)	Scenario 2 – Month 21	Low	Very low	Imperceptible
	Scenario 3 – Average	Low	Very low	Imperceptible

Junction 6

Pigeon House Rd (E)	Scenario 1 – Month 5	Low	Medium	Slight
	Scenario 2 – Month 21	Low	Very low	Imperceptible
	Scenario 3 – Average	Low	Very low	Imperceptible
Pigeon House Rd (W)	Scenario 1 – Month 5	Low	Medium	Slight
	Scenario 2 – Month 21	Low	Very low	Imperceptible
	Scenario 3 – Average	Low	Very low	Imperceptible

179. The significance of effects for the road network at Junctions 1-6, ranges from Imperceptible to Moderate Slight, in EIA terms.

180. It is also noted the duration for all scenarios are deemed short-term (effects lasting 1-7 years) in EIA terms.

Additional mitigation

181. Based on the predicted significance of effect, mitigation is not required beyond the primary mitigation described in **Section 27.10**. However, the additional mitigation outlined in **Section 27.12** will also be implemented during the construction phase of the OTI as this is considered appropriate best practice

Residual effect

182. With the adoption of the additional mitigation measures the magnitude of impact will range from very low to medium. The significance of the residual effect is therefore predicted to be **Imperceptible** to **Slight**, which is not significant in EIA terms.

Impact 2: Construction Stage Traffic – Junctions

Significance of the effect

183. The impact of construction phase traffic on the surrounding junction capacity considered the sensitivity of the road network as detailed in **Table 27-4.** The magnitude of impact takes account of the outputs from **Appendix 27.1**, on the increase in RFC from the baseline scenario.

184. The significance matrix provided in **Table 27-8**, which is a function of the sensitivity of the receptor and the magnitude of the impact, has been used to determine the significance of effects at each junction during the construction phase. However, it is important to note that the assessments are also based on the application of expert judgement

Table 27-22 Significance of the Effect - Junctions Impact

Extent	Scenario / Month of Completion	Sensitivity of Receptor	Magnitude of Impact	Significance of Effect
Junction 1	Scenario 1 – Month 5	Medium	Very low	Imperceptible
	Scenario 2 – Month 21	Medium	Very low	Imperceptible
	Scenario 3 – Average	Medium	Very low	Imperceptible
Junction 2	Scenario 1 – Month 5	Medium	Low	Slight
	Scenario 2 – Month 21	Medium	Very low	Imperceptible
	Scenario 3 – Average	Medium	Very low	Imperceptible
Junction 3	Scenario 1 – Month 5	Medium	Low	Slight
	Scenario 2 – Month 21	Medium	Low	Slight
	Scenario 3 – Average	Medium	Low	Slight
Junction 4	Scenario 1 – Month 5	Low	Low	Not Significant

Extent	Scenario / Month of Completion	Sensitivity of Receptor	Magnitude of Impact	Significance of Effect
	Scenario 2 – Month 21	Low	Very low	Imperceptible
	Scenario 3 – Average	Low	Very low	Imperceptible
Junction 5	Scenario 1 – Month 5	Low	Very low	Imperceptible
	Scenario 2 – Month 21	Low	Very low	Imperceptible
	Scenario 3 – Average	Low	Very low	Imperceptible
Junction 6	Scenario 1 – Month 5	Low	Very low	Imperceptible
	Scenario 2 – Month 21	Low	Very low	Imperceptible
	Scenario 3 – Average	Low	Very low	Imperceptible

185. The significance of effects for junction impacts at Junctions 1-6, ranges from Imperceptible to Slight in EIA terms.

186. It is also noted the duration for all scenarios are deemed short-term (effects lasting 1–7 years) in EIA terms.

Additional mitigation

187. Based on the predicted significance of effect, mitigation is not required beyond the primary mitigation described in **Section 27.10**. However, the additional mitigation outlined in **Section 27.12** will also be implemented during the construction phase of the OTI as this is considered appropriate best practice.

Residual effect

188. With the adoption of the additional mitigation measures the magnitude of impact would be very low. The significance of the residual effect is therefore predicted to be **Imperceptible – Not Significant**, which is not significant in EIA terms

Impact 3: Construction Stage Traffic – Pedestrian and Cyclists Accessibility

Significance of the effect

189. The impact considered the sensitivity of pedestrian and cyclists (**Table 27-5**), and the magnitude of the impact (**Table 27-7**), associated with development generated construction traffic on pedestrian and cyclist facilities within the study area.

190. The R131 East Wall Road and R131 East Link Bridge are the haul routes which carry the majority of the construction generated traffic.

191. Traffic volume, composition, and speeds, in combination with pedestrian footways and crossings, can contribute to the level of general unpleasantness, fear, intimidation and delay experienced by pedestrians and other vulnerable road users. As shown in **Section 27.11**, **Table 27-21**, the network assessment determined the effect on these haul routes as follows:

- R131 East Wall Road - Imperceptible effect in traffic flow during construction. A maximum increase in HV content of 0.5% was shown in scenario 1.
  - An imperceptible effect is anticipated on pedestrians and cyclists. There are wide footways as part of road, with segregated cycle and pedestrian facilities provided on both sides of the carriageway with signalised controlled pedestrian crossings. The increase of HV content during the construction phase is very low at this location from the CWP Project;
  - An imperceptible effect is anticipated on cyclists as off-road segregated shared cycle / pedestrian facilities are provided to both side of the carriageway. The cyclist is segregated from traffic on the carriageway with a very low increase in HV content.
- R131 East Link Bridge - Not Significant effect in traffic flow during construction. A maximum increase in HV content of 0.8% was shown in scenario 2.
  - An imperceptible effect is anticipated on pedestrians as wide footways as part of road segregated cycle and pedestrian facilities are provided to both side of the carriageway with signalised controlled pedestrian crossings. The increase of HV content is very low;
  - An imperceptible effect is anticipated on cyclists as off-road segregated shared cycle / pedestrian facilities are provided to both side of the carriageway. The cyclist is segregated from traffic on the carriageway with a very low increase in HV content.

Table 27-23 Significant of the Effect – Pedestrian and Cyclists

Extent	Scenario / Month of Completion	Sensitivity of Receptor	Magnitude of Impact	Significance of Effect
Pedestrian and Cyclists	R131 East Wall Road	Low	Very low	Imperceptible
	R131 East Link Bridge	Low	Very low	Imperceptible

192. The significance of effects for pedestrians and cyclists is Imperceptible in EIA terms.

193. It is also noted the duration for all scenarios are deemed short-term (effects lasting 1–7 years) in EIA terms.

Additional mitigation

194. Based on the predicted significance of effect, mitigation is not required beyond the primary mitigation described in **Section 27.10**. However, the additional mitigation outlined in **Section 27.12** will also be implemented during the construction phase of the OTI as this is considered appropriate best practice.

Residual effect

195. With the adoption of the additional mitigation measures the magnitude of impact will remain at very low (the lowest level on the matrix). The significance of the residual effect is therefore predicted to also remain at **Imperceptible**, which is not significant in EIA terms

27.11.2 Operation and maintenance (O&M)

196. The onshore substation will be generally unmanned during the O&M phase with the exception of maintenance, repair or inspections activities. These will be on average of *c.* 1 visit per week.

197. The potential impact of the O&M related traffic for the CWP Project, was determined to be below the thresholds in the TII TTA Guidelines and hence a TTA was not required. This phase was scoped out of the impact assessment.

198. Any associated traffic and transport impacts during this phase would be very low and not predicted to have significant effects.

27.11.3 Decommissioning phase

199. It is recognised that legislation and industry best practice change over time. However, for the purposes of the EIA, at the end of the operational lifetime of the CWP Project, it is assumed that all OTI will be removed where practical to do so. In this regard, for the purposes of an assessment scenario for decommissioning impacts, the following assumptions have been made:

- The TJBs and onshore export cables (including the cable ducting) shall be completely removed.
- The landfall cable ducts and associated cables shall be completely removed.
- The underground tunnel, within which the onshore export cables will be installed shall be left in situ and may be reused for the same or another purpose.
- The onshore substation buildings and electrical infrastructure shall be completely removed.
- The reclaimed land, substation platform, perimeter structures and the new access bridge at the onshore substation site will remain in situ and may reused for the same or another purpose.
- The ESBN network cables (including the cable ducting) shall be completely removed.

200. The general sequence for decommissioning is likely to include:

- Dismantling and removal of electrical equipment;
- Removal of ducting and cabling, where practical to do so;
- Removal and demolition of buildings, fences, and services equipment; and
- Reinstatement and landscaping works.

201. Closer to the time of decommissioning, it may be decided that removal of certain infrastructure, such as the TJBs, landfall cable ducts and associated cables, onshore export cables and ESBN networks cables, would lead to a greater environmental impact than leaving the components in situ. In this case it may be preferable not to remove these components at the end of their operational life. In any case,

the final requirements for decommissioning of the OTI, including landfall infrastructure, will be agreed at the time with the relevant statutory consultees.

202. It is anticipated that for the purposes of an assessment scenario, decommissioning phase traffic would require similar traffic type and volumes to those required during the construction phase. Impacts associated with this phase will be no greater than those identified for the construction phase.

27.12 Additional mitigation measures

203. Based on the predicted significance of effect, mitigation is not required beyond the primary mitigation described in **Section 27.10**. However, the additional mitigation outlined below will also be implemented during the construction phase of the OTI as this is considered appropriate best practice.

Table 27-24 Additional mitigation measures

Project Element	Description
Construction Traffic	The Traffic Management Plan (TMP) (**Appendix 27.2**) contains the control measures and monitoring procedures for managing the potential traffic and transport impacts of constructing the CWP Project.
Potential for reduction in construction HV movements: excavated material management within the onshore development area	It is currently assumed that the excavated material at the landfall and onshore substation site will not be suitable for re-use and will therefore be taken off-site for disposal. However, during the detailed design stage, maximising beneficial re-use of the excavated material on site will be prioritised over off-site disposal.

27.13 Cumulative effects

204. A fundamental component of the EIA is to consider and assess the potential for cumulative effects of the CWP Project with other projects, plans and activities (hereafter referred to as 'other development').

205. Cumulative effects are detailed within **Appendix 27.1 TTA.** The TTA considers 'committed development' and an allowance for traffic from other development, together with CWP Project is accounted for in the traffic analysis. The output from the traffic analysis determines how other plans, projects and activities may act cumulatively with the CWP Project.

206. Taking into account the committed developments as part of the traffic analysis, the TTA does not identify any significant cumulative effects resulting from the CWP Project alongside the other developments.

27.14 Transboundary Impacts

207. There are no transboundary impacts with regard to Traffic and Transport as the onshore development area would not be sited in proximity to any international boundaries. Transboundary impacts are therefore scoped out of this assessment and are not considered further.

27.15 Inter-relationships

208. The inter-related effects assessment considers the potential for all relevant effects across multiple topics to interact, spatially and temporally, to create inter-related effects on a receptor group. This includes incorporating the findings of the individual assessment chapters to describe potential additional effects that may be of greater significance when compared to individual effects acting on a receptor group.

209. The term 'receptor group' is used to highlight the fact that the proposed approach to the inter-relationships assessment has not assessed every individual receptor considered in this chapter, but instead focuses on groups of receptors that may be sensitive to inter-related effects.

210. **Chapter 5 EIA Methodology** provides a matrix to show at a broad level where across the EIAR interactions between effects on different receptor groups have been identified.

211. The potential inter-related effects that could arise in relation to Traffic and Transport are presented in **Table 27-25**.

Table 27-25 Inter-related effects (phase) assessment for Traffic and Transport

Impact / Receptor	Related chapter	Phase Assessment
Impact 1 + 2: Construction phase traffic (network and junctions)	**Chapter 19 Land, Soils & Geology**	During the construction phase, soil excavations and management is required within the onshore development area. There will be a requirement to transport soil materials off-site, which would impact on the volume of construction traffic on the surrounding road and junction networks. Construction traffic volumes have accounted for material being excavated and removed off-site during the construction phase. These traffic volumes have been modelled in terms of potential road and junction network impacts and are detailed in **Appendix 27.1 TTA**. The traffic and transport assessment concluded that there would be no significant traffic volume effect on the road and junction network. Therefore, it is not anticipated that there any inter-related effects produced that are of greater significance than those already assessed.

27.16 Potential monitoring requirements

212. No monitoring is required in relation to Traffic and Transport.

27.17 Impact assessment summary

213. This chapter of the EIAR has assessed the potential environmental impacts on Traffic and Transport from the construction and decommissioning phases of the CWP Project.

214. This section, including **Table 27-26**, summarises the impact assessment undertaken and confirms the significance of any residual effects.

215. **Appendix 27.1 TTA** forms the detailed assessment of the CWP Project traffic impacts, on the existing road network. The TTA also considers 'committed development' and an allowance for traffic from other development, together with CWP Project is accounted for in the traffic analysis. The outputs from the traffic analysis in the TTA were used to inform the impact assessment for this chapter.

216. The assessment considered impacts to:

- The network in terms of changes to existing baseline traffic and HV content;
- The operational capacity of junctions on the road network; and
- Pedestrian and cyclists using the surrounding road network.

217. In total 3 no. separate traffic scenarios were considered for the construction phase as follows:

- Scenario 1 Peak HV Month 5;
- Scenario 2 Peak LV Month 21; and
- Scenario 3 Average LV and HV.

218. The assessment accounted for the five-axle cordon which is implemented by DCC in the vicinity of the CWP Project onshore development area. On this basis, the haul route for the construction HV movements will be via the M50 and Dublin Tunnel.

219. A TMP (**Appendix 27.2**) will be implemented for the construction phase of the CWP Project. This Plan contains control measures and monitoring procedures for managing the potential traffic and transport impacts of constructing the CWP Project.

220. After the implementation of additional mitigation, the significance of residual effects for the road network, junction impacts and pedestrians and cyclists, ranges from Imperceptible – Slight, which is not significant in EIA terms.

Table 27-26 Summary of potential Impacts and residual effects

Potential Impacts	Receptor	Receptor Sensitivity	Magnitude of Impact	Significance of effect	Additional Mitigation	Residual effect
Construction						
Impact 1: Construction Stage Traffic Network	All road users	Low-Medium	Very low-High	Imperceptible – Moderate-Slight (not significant)	Detailed in **Section 27.12**. Includes for the implementation of a TMP and measures for the management of excavated material during the construction phase.	Imperceptible – Slight (not significant)
Impact 2: Construction Stage Traffic - Junctions	All road users	Low-Medium	Very low -Low	Imperceptible – Slight (not significant)		Imperceptible (not significant)
Impact 3: Construction Stage Traffic – Pedestrian and Cyclists Accessibility	Pedestrian, and cyclists	Low	Very low	Imperceptible (not significant)		Imperceptible (not significant)
Operation and Maintenance (O&M) The traffic volumes are below the TII TTA thresholds, and it was discussed with DCC that this phase would be scoped out of the assessment.						
Decommissioning						
Impact 1: Decommissioning Stage Traffic Network	All road users	It is recognised that legislation and industry best practice change over time. However, for the purposes of the EIA, at the end of the operational lifetime of the CWP Project, it is assumed that all OTI will be removed where practical to do so. In this regard, for the purposes of an assessment scenario for decommissioning impacts, the following assumptions have been made: • The TJBs and onshore export cables (including the cable ducting) shall be completely removed. • The landfall cable ducts and associated cables shall be completely removed.				
Impact 2: Decommissioning Stage Traffic - Junctions	All road users					

Potential Impacts	Receptor	Receptor Sensitivity	Magnitude of Impact	Significance of effect	Additional Mitigation	Residual effect
Impact 3: Decommissioning Stage Traffic – Pedestrian and Cyclists Accessibility	Pedestrian, and cyclists	• The underground tunnel, within which the onshore export cables will be installed shall be left in situ and may be reused for the same or another purpose. • The onshore substation buildings and electrical infrastructure shall be completely removed. • The reclaimed land, substation platform, perimeter structures and the new access bridge at the onshore substation site will remain in situ and may reused for the same or another purpose. • The ESBN network cables (including the cable ducting) shall be completely removed. The general sequence for decommissioning is likely to include: • Dismantling and removal of electrical equipment; • Removal of ducting and cabling, where practical to do so; • Removal and demolition of buildings, fences, and services equipment; and • Reinstatement and landscaping works. Closer to the time of decommissioning, it may be decided that removal of certain infrastructure, such as the TJBs, landfall cable ducts and associated cables, onshore export cables and ESBN networks cables, would lead to a greater environmental impact than leaving the components in situ. In this case it may be preferable not to remove these components at the end of their operational life. In any case, the final requirements for decommissioning of the OTI, including landfall infrastructure, will be agreed at the time with the relevant statutory consultees. It is anticipated that for the purposes of an assessment scenario, impacts will be no greater than those identified for the construction phase.				

27.18 References

221. Environmental Protection Agency (EPA) (2022). *Guidelines on the information to be contained in Environmental Impact Assessment Reports.*

222. European Commission (2017). Environmental Impact Assessment of Projects - Guidance on the preparation of the Environmental Impact Assessment Report.

223. National Roads Authority (2014). TII Library - Traffic and Transport Assessment Guidelines PE-PDV-02045 May 2014. Retrieved from TII Library Website: https://www.tiipublications.ie/library/PE-PDV-02045-01.pdf

224. Transport Infrastructure Ireland (2021). *TII Publications - Project Appraisal Guidelines for National Roads Unit 5.3 - Travel Demand Projections PE-PAG-02017 October 2021*. Retrieved from TII Publications Website: https://www.tiipublications.ie/library/PE-PAG-02017-03.pdf

225. Transport Infrastructure Ireland (2023). *TII Publications - Geometric Design of Junctions (priority junctions, direct accesses, roundabouts, grade separated and compact grade separated junctions) DN-GEO-03060 May 2023.* Retrieved from TII Publications Website: ttps://www.tiipublications.ie/library/DN-GEO-03060-03.pdf

226. DCC (2022). Dublin City Development Plan 2022-2028