13. Transport and Accessibility

Transport and Accessibility Study Area

Transport and Accessibility Survey Locations

The transport and accessibility ES chapter reports on the likely transport and accessibility effects associated with the demolition and construction stage and operational stage of the proposed development.

Existing Conditions

A desk-based review was undertaken to establish existing and future transport and accessibility conditions in the study area. Two classified turning count surveys and four automatic traffic count surveys were undertaken in the study area to establish background traffic conditions on the local highway network.

The following sensitive receptors were identified:

- Non-motorised users;
- Public right of way users;
- Motorists and freight vehicles;
- Public transport users; and
- Emergency vehicles.

Demolition and Construction

The demolition and construction traffic effects are anticipated to be short-term (less than 5 years), temporary, direct, and relate to the arrival and departure of construction workers and construction materials/equipment and waste.

The demolition and construction stage would be expected to generate a peak of up to 488 vehicle movements per day (244 vehicle arrivals and 244 vehicle departures), of which there would be 354 HGV movements (177 HGV arrivals and 177 HGV departures) and 134 construction worker movements (67 car arrivals and 67 car departures).

During the demolition and construction stage the following impacts and effects have been assessed:

- Increase in severance for non-motorised users which would result in a not significant minor adverse effect;
- Increase in driver delay for motorists and freight vehicles and emergency vehicles which would result in a not significant negligible adverse effect;
- Increase in pedestrian and cyclist delay which would result in a not significant minor adverse effect; and
- Increase in accidents and safety due to increase in traffic flows which would result in not significant minor adverse effects.

Operation

Operational traffic effects are anticipated to be long-term (more than 10 years), permanent, direct, and relate to the arrival and departure of trips associated with additional cruise and freight ships that will berth at the docks as a result of the development.

The primary access route for vehicles entering the site, particularly large HGVs, coaches, and taxis, is via the main strategic route from A39 Melvill Road, Bar Road and into Tinners Walk (at the existing site entrance).

The proposed development could result in 11 additional Excellence Class cruise ships per year calling at Falmouth As a maximum, this could generate 384 additional vehicle movements in a day (192 vehicle arrivals and 192 vehicle departures) in the worst-case whereby two Excellence Class cruise ships are docked at once. This is broken down into 160 coach movements (80 arrivals and 80 departures), 54 shuttlebus movements (27 arrivals and 27 departures) and 170 car/taxi movements (85 arrivals and 85 departures). Note that most of the time, there are no cruise ships docked at the site, so this is a worst-case scenario in terms of assessing the impacts of the proposed development.

During operation, the following impacts and effects have been assessed:

- Increase in severance for non-motorised users which would result in not significant negligible adverse effects;
- Increase in driver delay for motorists and freight vehicles and emergency vehicles which would result in not significant negligible adverse effects;
- Increase in accidents and safety due to increase in traffic flows would result in not significant minor adverse effects; and
- Change in public transport trips which would result in not significant minor adverse effects.

13 Transport and Accessibility

13.1 Introduction

13.1.1 This chapter reports on the likely Transport and Accessibility effects associated with the demolition and construction stage and operational stage of the proposed development.

13.1.2 It describes the methods used to assess potential impacts and likely effects; the baseline transport and access conditions currently existing at and surrounding the application site; the likely effects taking into consideration embedded mitigation measures; and the likely residual effects. Where relevant, the assessment follows the methodology set out in the IEMA Guidelines for the Environmental Assessment of Traffic and Movement[1].

13.1.3 This chapter is supported by the following technical appendices in ES Volume 2:

- Technical Appendix 13.1 – Transport Assessment (TA).

13.1.4 The assessment has been informed by the following legislation, policies and published guidance:

- National Legislation and Policy:
  - NPPF (2024)[2]: in particular; Section 2 – Achieving sustainable development; and Section 9 – Promoting sustainable transport.
- Regional Policy:
  - The Cornwall Transport Plan (Local Transport Plan to 2030); and
  - Cornwall Local Plan: Strategic Policies 2010–2030 (Adopted November 2016).
- Local Policy:
  - Falmouth Town Council: Strategic Plan (2023-207).
- National Guidance and Industry Standards:
  - Guidelines for Environmental Impact Assessment (2004)[3];
  - Guidelines for the Environmental Assessment of Traffic and Movement (2023)[4];
  - Design Manual for Roads and Bridges (DMRB), LA 112: Population and Human Health (2020)[5]; and
  - TAG Unit A4.1: Social Impact Appraisal (2022)[6].

13.2 Consultation

13.2.1 Table 13.1 summarises the key EIA Scoping Opinion responses and any separate consultations that have been undertaken with respect to the transport and accessibility assessment.

Table 13.1: Summary of Consultation

Consultee /Date of Consultation	Summary of Comments	Summary of Action Taken and Where in this Chapter Comments are Addressed
Highway England Scoping Opinion received 30 August 2023	In adherence to national planning practice guidance and the Department for Transport's Circular 01/2022, a comprehensive assessment of transport-related impacts should be conducted and reported. This assessment should encompass construction-related disruptions, changes in traffic volume, composition, or routing, modifications to transport infrastructure, and address any congestion or safety concerns through appropriate mitigation measures. Although the development is unlikely to result in significant impacts on individual junctions, the assessment should consider predicted trip generation and distribution affecting the strategic road network (SRN) junctions. No impact on SRN operational assets is anticipated due to the site's distance from the SRN.	Transport-related impacts and effects of the scheme during the demolition and construction stage and operational stage have been fully assessed in the TA in ES Volume 2: Technical Appendix 13.1.
Network Rail Scoping Opinion received 01 September 2023	The EIA should consider both passenger and freight rail opportunities to mitigate potential adverse environmental impacts, specifically road traffic, as the development appears substantial but lacks information on passenger trips and construction volume. These opportunities include using Falmouth Docks station for staff transportation, potential rail freight support, and considering future rail infrastructure, which could benefit from the support of Great Western Railway, Cornwall Council, and the Port Operator.	Construction and operational stages trips are presented in section 13.5 (Assessment Method). Section 13.13 (Enhancement Measures) proposes encouraging construction workers to use the Falmouth Docks train station for arriving at and departing from the site. This measure should be incorporated into a Construction Transport Management Plan once a contractor has been appointed.

13.3 Assessment Scope

13.3.1 The assessment has been undertaken following the IEMA Guidelines for the Environmental Assessment of Traffic and Movement ('the Guidelines'), published in 2023, which provide the basis for a systematic, consistent and comprehensive coverage for the assessment of traffic and movement impacts for a wide range of development projects. It is noted that the 2023 guidelines update and replace the 1993 'Guidelines for the Environmental Assessment of Road Traffic' ('the 1993 Guidelines'), to meet current regulations, processes and latest guidance in environmental assessment.

13.3.2 The assessment also draws on DMRB part LA 112, which sets out the requirements for assessing and reporting the environmental effects on population and health from construction, operation and maintenance of highways projects. This is also applicable for development projects in assessing the effects arising to walkers, cyclists, and horse-riders (WCH). DMRB part LA 112 supersedes the former DMRB Volume 11, Section 3, Part 6 (Land); Volume 11, Section 3, Part 8 (Pedestrians, Cyclists, Equestrians and Community Effects); and Volume 11, Section 3, Part 9 (Vehicle Travellers).

13.3.3 Finally, the Transport Analysis Guidance (TAG) published by the Department for Transport (DfT) provides useful supplementary guidance. Specifically, TAG Unit A4.1 'Social Impact Appraisal' provides guidance on assessing hindrance to pedestrian movements.

[1] Institute of Environmental Management and Assessment (IEMA) Guidelines, Environmental Assessment of Traffic and Movement, July 2023.
[2] Department for Levelling Up, Housing & Communities. 2023. National Planning Policy Framework. London. HMSO. https://www.gov.uk/guidance/national-planning-policy-framework
[3] Institute of Environmental Management and Assessment (IEMA). 2004. Guidelines for Environmental Impact Assessment.
[4] Institute of Environmental Management and Assessment (IEMA). 2023. Guidelines for the Environmental Assessment of Traffic and Movement.
[5] Highways England. 2020. Design Manual for Roads and Bridges, LA 112 Population and human health. Revision 1.
[6] Department for Transport. 2022. Transport Analysis Guidance Unit A4.1: Social Impact Appraisal. https://www.gov.uk/government/publications/tag-unit-a4-1-social-impact-appraisal

Technical Scope

13.3.4 Following the Guidelines and in accordance with the Scoping Opinion, the technical scope of the assessment for the demolition and construction stage and the operational stage has considered the following potential effects:

Demolition and Construction stage:

- Severance;
- Driver delay;
- Pedestrian and driver delay; and
- Accidents and safety on the local highway network.

Operational Stage:

- Severance;
- Driver delay;
- Accidents and safety on the local highway network; and
- Change in public transport trips.

Spatial Scope

13.3.5 In accordance with 'DMRB LA 112 Population and Human Health' the study area has been determined based upon the site boundary plus an additional 500 m area beyond the site boundary.

13.3.6 According to the guidance, the study area can be extended/reduced based on the likely effects of the proposed development. Considering the local highway network and sensitive receptors likely to be affected by the proposed development's generated trips, the study area, as shown in

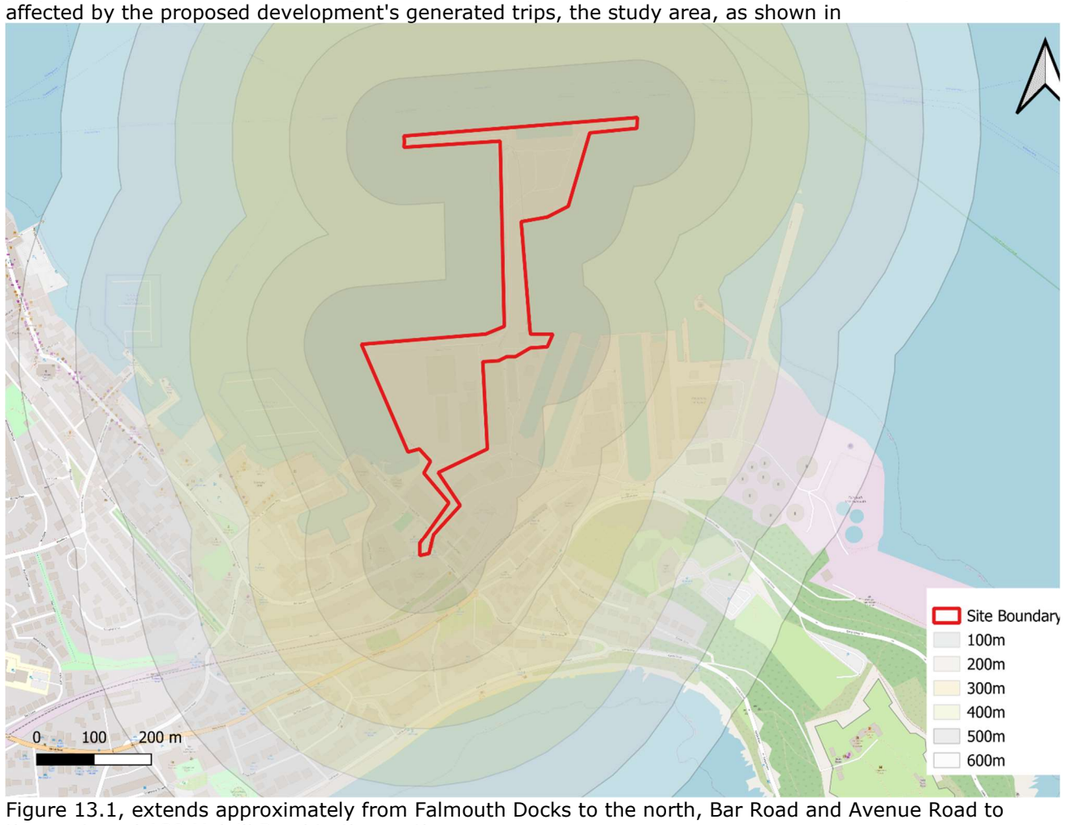


Figure 13.1, extends approximately from Falmouth Docks to the north, Bar Road and Avenue Road to the west, and A39 Melvill Road to the south.

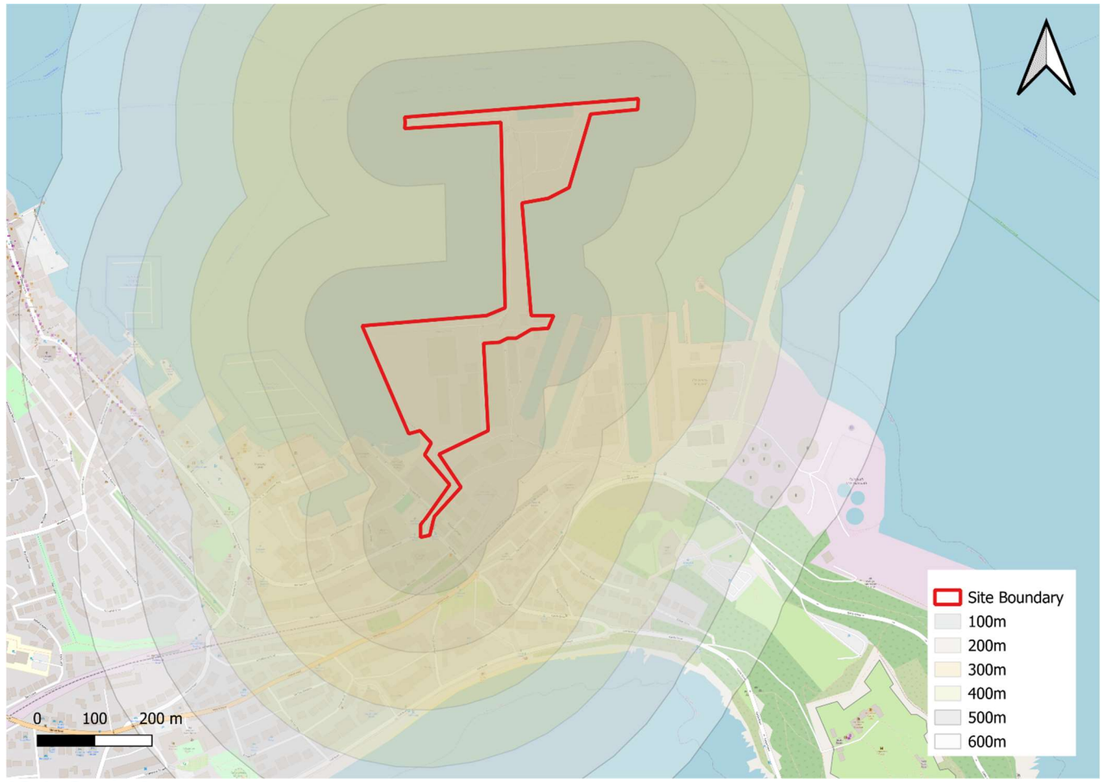


Figure 13.1: Study Area

Temporal Scope and Assessment Scenarios

13.3.7 The assessment has considered impacts arising during the demolition and construction stage which would be of expected to be temporary and short to medium-term (0-5 years) in duration and the operational stage, which would be expected to be long-term in nature (i.e. greater than 10 years).

13.3.8 The construction stage would be expected to commence in 2025 and last until 2029, with peak construction trip generation expected in 2026. Therefore, the assessment has considered impacts arising during the construction stage against a 2026 future baseline.

13.3.9 On this basis, the following construction stage scenarios have been assessed in 2026:

- '2026 without construction'; and
- '2026 with construction'.

13.3.10 The proposed development is expected to be operational in terms of generating additional traffic from 2027. Therefore, the assessment has considered operational impacts arising against a 2027 future baseline.

13.3.11 On this basis, the following operational stage scenarios have been assessed in 2027:

- '2027 without proposed development', and
- '2027 with proposed development'.

13.3.12 Both the '2026 without Construction' and '2027 without Development' future baseline scenarios have been derived to account for forecast background traffic growth, with data obtained from National Road Traffic Projections.

13.4 Baseline Characterisation Method

Desk Study

13.4.1 The following paragraphs provide an overview of the current baseline transport and accessibility conditions within the study area considering pedestrian and cycle facilities and access; public transport accessibility; and the operation of the existing highway network. Consideration is also given to the existing baseline flows where available. This analysis provides the baseline context against which the transport movements and accessibility of the proposed development have been assessed.

13.4.2 In order to establish the existing baseline transport conditions in the study area, relevant data was reviewed and assessed. The data sets and associated sources can be summarised as follows:

- Cruise ship call data (obtained from FDEC);
- Coach trip pick-up/drop-off data (obtained from FDEC);
- Great Western Railway train timetables;
- OTS Falmouth bus timetables;
- Census method of travel to work data (2011 and 2021);
- Department for Transport (DfT) Road Safety Data (STATS19);
- Google Streetview; and
- OpenStreetMap.

13.4.3 Furthermore, to establish future baseline transport and accessibility conditions in the study area in the relevant future years (2026 and 2027), the following data sources were used:

- National Trip End Model (NTEM) background traffic growth factors derived from TEMPro v8.0 (for cars and vans); and
- National Road Traffic Projections (NRTP) 2022 (for heavy goods vehicles (HGV).

Field Study

13.4.4 To establish background traffic conditions on the local highway network within the study area, two classified turning count (CTC) surveys and four automatic traffic count (ATC) surveys were undertaken at the following locations in November 2023 (as shown in Figure 13.2):

- **CTC 1** at Bar Road/Tinners Walk priority junction (junction to the dock's main gate);
- **CTC 2** at A39 Melvill Road/Bar Terrace/Pendennis Rise/Castle Hill roundabout;
- **ATC 1** at A39 Melvill Road;
- **ATC 2** at Bar Road;
- **ATC 3** at Tinners Walk (at dock's main gate); and
- **ATC 4** at Avenue Road (in between Arnwenack Avenue and Lansdowne Road).

13.4.5 In addition to the six recorded traffic surveys, an additional traffic site (Site 5) has been established on Bar Road, just before the A39 Melvill Road roundabout. This site has been established to assess changes in traffic flow along the main strategic route into the site on Bar Road. As site 5 wasn't commissioned as part of the November 2023 traffic surveys, traffic data for Site 5 has been sourced from the Bar Road arm of CTC 2 and will contribute to understanding the traffic patterns and potential impacts related to the development on Bar Road (in between Tinners Walk and the A39 Melvill Road roundabout).

- **Site 5** is located at Bar Road (just before the A39 Melvill Road roundabout).

13.4.6 Figure 13.2 shows the location of the traffic surveys and additional traffic site in relation to the site boundary.

Figure 13.2: Survey Locations

13.4.7 The CTC surveys recorded turning counts by vehicle type in 15-minute time intervals for a 24-hour period on Wednesday 22 November 2023.

13.4.8 The ATC surveys recorded vehicle counts and speeds by vehicle type and direction in 15-minute time intervals for a continuous 7-day period from Wednesday 22 November 2023 until Tuesday 28 November 2023.

13.4.9 Both the CTC and ATC surveys were undertaken during a neutral period as defined by TAG Unit M1.2, so are considered representative of typical transport conditions.

13.4.10 At each ATC, 5-day average and 7-day average traffic flows were recorded which were converted to 24-hour Annual Average Daily Traffic (AADT) and Annual Average Weekday Traffic (AAWT), as follows.

13.4.11 In the absence of suitable spatial and temporal coverage of permanent ATCs in the study area, the surveyed traffic flows have been converted to 24-hour Annual Average Daily Traffic (AADT-24) and 24-hour Annual Average Weekday Traffic (AAWT-24) through the methodology set out in the COBA Manual (DMRB Volume 13, Section 1, Part 4). This involves taking the 16-hour (06:00-22:00) traffic flows across the average (7-day) week (AADT) and average (5-day) weekday (AAWT) recorded by the November 2023 ATCs, and applying the appropriate M-Factor (where it is assumed that Seasonality Index = 1) to convert the November flows to a representative annual all-vehicle flow, which is then divided by 8760 (hours in a year) and multiplied by 24 (hours in a day).

13.4.12 To obtain AADT-24 and AAWT-24 data for Site 5, the 24-hour CTC data from CTC 2 (which the traffic flow data for this site is based) was first converted to a 7-day average using a conversion factor derived from the four ATCs to convert the 24-hour CTC data into a 7-day average. This 7-day average was then converted to AADT-24 and AAWT-24 following the same COBA method above.

13.4.13 The ATC surveys have also been used to convert the 24-hour flows to 18-hour and 8-hour flows.

13.4.14 This traffic data forms the basis for this chapter and ES Chapter 14: Noise and Vibration, and ES Chapter 15: Air Quality.

Future Baseline

13.4.15 To derive a baseline estimate of traffic flows in the relevant future years, traffic growth factors have been derived and applied to the 2023 baseline traffic flows.

13.4.16 To factor existing 2023 baseline vehicle flows (excluding HGVs), traffic growth factors from the National Trip End Model (NTEM) core scenario have been extracted using TEMPro v.8.0 from 2023 to 2026 (for the demolition and construction stage) and from 2023-2027 (for the operational stage). The growth factors pertain to 'Cornwall' and 'Falmouth East' (MSOA E02003916) and are presented in Table 13.2.

Table 13.2: Background Traffic Growth Factors for Total Vehicles (Excluding HGVs). Source: TEMPro v8.0.

Year	Region	Area	Scenario	Average Day Growth Factor
2023 > 2026	Cornwall	Falmouth East	Core	1.03388
2023 > 2027	Cornwall	Falmouth East	Core	1.004075

13.4.17 For HGVs, TEMPro factors do not consider HGVs, therefore HGV growth factors have been obtained from the National Road Traffic Projections 2022 core scenario, as shown in Table 13.3. The 'A road' growth factor is considered most appropriate for the local highway network.

Table 13.3: Background Traffic Growth Factors for HGVs. Source: National Road Traffic Projections 2022.

Year	Area	Scenario	Road Type	HGV growth factor
2023 > 2026	South West	Core	A road	1.00508
2023 > 2027	South West	Core	A road	1.00614

13.4.18 The future baseline does not include trips generated by relevant cumulative schemes on the local highway network as no cumulative schemes that meet the cumulative scheme criteria defined within the scoping report have been identified for inclusion within the ES at the time of ES preparation (see ES Volume 2: Technical Appendix 2.8). This has been confirmed by both the MMO and CC. Accordingly, this chapter will not consider inter-project effects.

13.5 Assessment Method

Methodology

13.5.1 The methodology for assessing the environmental impact of the traffic generated by the proposed development has been assessed following the IEMA Guidelines.

13.5.2 The IEMA Guidelines do not apply specifically to temporary traffic movements associated with construction, however, have been adopted for the purposes of this assessment. The assessment methods employed in this chapter conform with those set out in the IMEA Guidelines and focus on the potential impacts on local roads and the users of those roads.

13.5.3 The IEMA Guidelines state that the perceptible impact of changes in traffic flow on the environment is less sensitive than changes in traffic flow at junctions on the surrounding network. The Guidelines suggest that the following criteria are adopted to assess whether public road links are to be the subject of environmental assessment:

- "**Rule 1** – Include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%)"; and
- "**Rule 2** – include highway links of high sensitivity where traffic flows have increased by 10% or more".

13.5.4 The IEMA Guidelines state that projected changes in traffic of less than 10% over the course of a day creates no discernible environmental impact, given that daily variations in background traffic flow may fluctuate by this amount, and that a 30% change in traffic flow represents a reasonable threshold for including a public road link within the assessment. Although construction traffic movements are temporary in duration, an increase in traffic could adversely affect the users of road links. Consequently, the receptors that have been assessed are the public road links which would be used by Proposed Development construction traffic.

13.5.5 The following methodology for assessing the demolition and construction stage and operational stage scenarios have been considered within this chapter of the ES.

Demolition and Construction Stage

13.5.6 The agreed assessment scenarios for the demolition and construction stage are as follows:

- Scenario 1: Future baseline (2026); and
- Scenario 2: Future baseline (2026) + proposed development demolition and construction traffic flows.

13.5.7 For the demolition and construction stage, estimates of the construction trips generated by the proposed development on the local highway network have been derived by Ramboll and FDEC based on professional experience and data from comparable construction sites. It is estimated that the demolition and construction stage would generate a peak of up to 488 vehicle movements per day (244 vehicle arrivals and 244 vehicle departures), of which there would be 354 HGV movements (177 HGV arrivals and 177 HGV departures) and 134 construction worker movements (67 car arrivals and 67 car departures) throughout the 10-hour working day.

13.5.8 Table 13.4 shows the anticipated peak construction trips converted to AADT-24 and AAWT-24 at five receptor sites. These values have been calculated to inform the assessment of future construction stage transport effects. The construction trips have been distributed across the local highway network along the agreed-upon construction vehicle route outlined in Chapter 5: Demolition and Construction, which includes A39 Melvill Road, Bar Road, and Tinners Walk (the site entrance).

Table 13.4: Peak Construction Trips (Two-Way, AADT-24 & AAWT-24)

Site ID	Location	AADT-24 (Two-Way)			AAWT-24 (Two-Way)		
		Total Vehicles	HGVs	% HGVs	Total Vehicles	HGVs	% HGVs
ATC 1	Melvill Road	266	169	64	373	238	64
ATC 2	Bar Road	0	0	0	0	0	0
ATC 3	Tinners Walk (Falmouth Docks Entrance)	266	169	64	373	238	64
ATC 4	Avenue Road (Between Arnwenack Avenue and Lansdowne Road)	0	0	0	0	0	0
SITE 5	Bar Road (Before A39 Melvill Roundabout)	266	169	64	373	238	64

Operational Stage

13.5.9 The agreed assessment scenarios for the operational stage are as follows:

- Scenario 1: Future Baseline (2027); and
- Scenario 2: Future Baseline (2027) + Proposed Development.

13.5.10 For the operational stage, estimates of proposed development trips have been based on the site's increased capacity to handle additional cruise and freight ships due to the proposed development.

13.5.11 Currently trips generated by the site are associated to servicing:

- Military ships;
- Cruise ships;
- Freight ships; and
- Ship repair.

13.5.12 Once the proposed development is complete, the increase in trips will be associated with vehicles servicing the additional cruise and freight ships. Based on information provided by FDEC, it is assumed that trips related to military ships and ship repair will not change or increase due to the proposed development. Therefore, trips associated with military ships and ship repairs are not included in the proposed development's trip generation estimates.

13.5.13 In the absence of traffic survey data specific to cruise and freight ships at Falmouth docks, the estimation of trips associated with the increase in cruise and freight ships has been derived from first principles, using data provided by FDEC.

13.5.14 To derive estimates of cruise ship trips, it is assumed that when the development is complete, the site will be able to accommodate two Excellence-class cruise ships, which is one additional Excellence-class ship compared to the site's current capacity. Therefore, the trip generation associated with one additional Excellence-class cruise ship is considered to be representative of the proposed development's cruise ship trip generation. This assumption represents a 'worst-case' scenario in which two Excellence-class ships are docked simultaneously. While this scenario is expected to occur only once or twice a year, it serves as a basis for estimating the increased trip generation resulting from the site's capacity to accommodate an additional cruise ship.

13.5.15 As Falmouth Docks serves only as a 'stop-off' port for cruise ships, the trip generation associated with the additional cruise ships consists of:

13.5.16 **Coach trips** associated with transporting passengers around Cornwall on pre-planned day excursions;

13.5.17 **Shuttle bus trips** associated with transporting disembarking passengers to and from Falmouth town centre who opt not to go on the pre-planned day excursions; and

13.5.18 **Taxi trips** associated with passengers exploring Falmouth or the surrounding areas who opt not to go on the pre-planned coach trips, along with a small proportion of passengers that start or end their cruise at Falmouth (facilitated by a special request).

13.5.19 Since Falmouth is a 'stop-off' port for cruise ships, trips associated with loading the ships with supplies have not been included within the cruise ship trip estimate, as it has been assumed that all cruise ships will have been fully loaded and serviced at other ports prior to arrival in Falmouth.

13.5.20 The following assumptions were considered in the derivation of proposed development cruise trip generation:

- **Coach trip generation** is based on the maximum coach capacity FDEC anticipates will be required to service an additional Excellence-class cruise ship, which is 40 coaches. This capacity is based on spatial constraints of the site and existing coach arrival and departure data provided by FDEC (which is appended in the TA in Technical Appendix 13.1). The maximum number of coach trips generated by an Excellence-class cruise ship call, based on the coach capacity of 40 coaches per ship, is estimated to be 160 vehicle trips per day, consisting of:
  - 40 coach arrivals to pick up day excursion passengers at the start of the day;
  - 40 coach departures to transport day excursion passengers off-site;
  - 40 coach arrivals to drop off day excursion passengers at the end of the day; and
  - 40 coach departures to return to depot.
- **Shuttlebus trip** is based on two shuttle bus vehicles transporting passengers to and from Falmouth town centre during the day. The shuttle buses will operate on a staggered timetable which allows each vehicle to complete an average of 1.5 round trips per hour (i.e. 3 arrivals and 3 departures per hour), across the operational hours of 9am to 6pm. Therefore, the total number of shuttle bus trips generated by an additional Excellence-class cruise ship call is estimated to be 54 vehicle trips per day (27 departures and 27 arrivals).
- **Taxi trip generation** is based on worst-case assumptions provided by FDEC, whereby the total number of taxi trips generated by an additional Excellence-class cruise ship call is estimated to be 170 vehicle trips per day, consisting of:
  - 90 trips associated with taxis transporting passengers for trips (assumed 5 arrivals and 5 departures per hour between 9 am and 6 pm);

- 40 trips associated with taxis dropping-off passengers starting their cruise (assumed 20 arrivals and 20 departures between 9 am and 11 am);
- 40 trips associated with taxis picking-up passengers finishing their cruise (assumed 20 arrivals and 20 departures between 10 am and 12 pm);
- Note that passengers would generally not start/finish their cruise at Falmouth, however some taxi trips associated with this have been included as a worst-case scenario.

13.5.21 Based on the following assumptions and to undertake a robust assessment, it is estimated that maximum trip generation for the proposed development cruise trips (when an Excellence-class cruise is docked) would be 384 vehicle movements (192 arrivals and 192 departures) consisting of 160 coach movements (80 arrivals and 80 departures), 54 shuttle bus movements (27 arrivals and 27 departures), and 170 car/taxi movements (85 arrivals and 85 departures). A full breakdown of the proposed development cruise ship trips across a typical day is presented in the TA in Technical Appendix 13.1.

13.5.22 For this ES transport chapter, the typical daily cruise ship trip estimates must be converted to AADT-24 using the 2023 cruise ship call data provided by FDEC. This data accounts for the frequency of cruise ship calls at the port throughout the year. In 2023, Falmouth accommodated a total of 42 cruise ships during the cruise ship season. By averaging the existing cruise ship trips (discussed earlier in this section) across the year based on these cruise calls, the estimated AADT-24 is 36 trips, and the AAWT-24 is 37 trips for the proposed development's cruise ship trips. These trips are considered to be representative of proposed development cruise ship trips across an average year.

13.5.23 Table 13.5 presents the cruise ship AADT-24 and AAWT-24 at the five receptor sites. These values have been calculated to inform the assessment of future operational stage transport effects. These trips have been assigned to the local highway network according to the trip distribution presented in Technical Appendix 13.1. As Tinners Walk is the primary entrance to the site, it will experience the total estimated trip generation associated with the proposed development (i.e. 36 AAD-24 and 37 AAWT24). The trip generation totals for the other receptor sites will be based on the derived trip distribution at each respective site.

Table 13.5: Proposed Development Cruise Ship Trips (Two-Way, AADT-24 & AAWT-24)

Site ID	Location	AADT-24 (Two-Way)			AAWT-24 (Two-Way)		
		Total Vehicles	HGVs	% HGVs	Total Vehicles	HGVs	% HGVs
ATC 1	Melvill Road	31	18	59	32	19	59
ATC 2	Bar Road	5	3	68	5	3	68
ATC 3	Tinners Walk (Falmouth Docks Entrance)	36	22	60	37	22	60
ATC 4	Avenue Road (Between Arnwenack Avenue and Lansdowne Road)	0	0	0	0	0	0
SITE 5	Bar Road (Before A39 Melvill Roundabout)	31	18	59	32	19	59

13.5.24 Following redevelopment of the site, it has been estimated that the proposed development would generate an additional 12 (3,000 tonne) freight ships across the year and therefore estimates of AADT-24 and AAWT-24 for freight ship trips have also been included in the final proposed development trip generation.

13.5.25 Accordingly, FDEC has estimated that each freight ship will generate 120 HGV movements (60 HGV trips arriving and 60 HGV trips departing) for servicing. This translates to an additional 1,440 HGV trips per year (720 HGVs arriving and 720 HGVs departing) to accommodate the 12 additional ships. Consequently, this results in an AADT-24 of 4 HGV trips (2 HGV trips arriving and 2 HGV trips departing) and an AAWT-24 of 6 HGV trips due to the increased freight operations associated with the proposed development. Table 13.6 presents the estimated freight trips at each receptor site. The distribution of these trips across five sites has been determined based on the trip distribution presented in the in the TA in Technical Appendix 13.1.

Table 13.6: Proposed Development Freight Ship Trips (Two-Way, AADT-24 & AAWT-24)

Site ID	Location	AADT-24 (Two-Way)			AAWT-24 (Two-Way)		
		Total Vehicles	HGVs	% HGVs	Total Vehicles	HGVs	% HGVs
ATC 1	Melvill Road	4	4	100	6	6	100
ATC 2	Bar Road	0	0	0	0	0	0
ATC 3	Tinners Walk (Falmouth Docks Entrance)	4	4	100	6	6	100
ATC 4	Avenue Road (Between Arnwenack Avenue and Lansdowne Road)	0	0	0	0	0	0
SITE 5	Bar Road (Before A39 Melvill Roundabout)	4	4	100	6	6	100

13.5.26 The final trip generation for the proposed development is presented in Table 13.7 as AADT-24 and AAWT-24. Full details of the breakdown of operational stage trip generation are presented in the TA in Technical Appendix 13.1.

Table 13.7: Proposed Development Trips (Two-Way, AADT-24 & AAWT-24)

Site ID	Location	AADT-24 (Two-Way)			AAWT-24 (Two-Way)		
		Total Vehicles	HGVs	% HGVs	Total Vehicles	HGVs	% HGVs
ATC 1	Melvill Road	35	22	63	38	25	65
ATC 2	Bar Road	5	3	68	5	3	68
ATC 3	Tinners Walk (Falmouth Docks Entrance)	40	25	64	43	28	65
ATC 4	Avenue Road (Between Arnwenack Avenue and Lansdowne Road)	0	0	0	0	0	0
SITE 5	Bar Road (Before A39 Melvill Roundabout)	35	22	63	38	25	65

13.5.27 The distribution of operational stage trips across the local highway network is based on turning proportions derived from the 2023 baseline surveys, along with consideration for the specific access routes required for each vehicle type associated to the proposed development. Each vehicle type related to cruise ships (coaches, shuttle buses, and taxis) and freight ships (HGVs) will have specific access route requirements, which will influence routing to and from the site. For instance, cruise ship coaches and freight ship HGVs will follow the main strategic vehicle route to and from the site via the A39, Bar Road and Tinners Walk. This route provides the most direct route to the site from the strategic road network and avoids the lower-grade roads through Falmouth town centre which are unsuitable for larger coaches and HGVs.

13.5.28 Shuttle buses transporting cruise ship passengers into Falmouth will utilise the most direct route into the town centre. This route proceeds west from Tinners Walk, along Bar Road, and into Falmouth town centre before returning to the site via the same route in reverse.

13.5.29 The distribution of taxis for cruise ship passenger drop-offs and pick-ups is based on car trip observations from the 2023 baseline surveys. Based on the data, most car trips will follow the main

strategic vehicle route to and from the A39, while a smaller portion will approach from the west via Bar Road.

13.5.30 Full details of the trip distribution for each vehicle type are illustrated in the operational stage trip distribution figures presented in the TA in Technical Appendix 13.1.

13.6 Assessment Criteria

13.6.1 The general criteria used to assess if an effect is significant or not, is set out in Chapter 2: EIA Process and Methodology further details are provided herein. This is determined by consideration of the sensitivity of the receptor, magnitude of impact and scale of the effect. In considering the significance of an effect, consideration has been given to the duration of the effect, the geographical extent of the effect and the application of professional judgement.

13.6.2 Paragraph 3.12 of the IEMA Guidelines states that: "For many effects there are no simple rules or formulae which define thresholds of significance and there is, therefore, a need for interpretation and judgement *on the part of the assessor, backed-up by data or quantified information wherever possible*".

13.6.3 The following effects relating to increases in traffic flows have been assessed, and the significance of effects quantified, based on the following broad principles as set out in the IEMA guidelines:

- Low impact: 30% increase in traffic (10% adjacent to sensitive receptors);
- Medium impact: 60% increase in traffic (20% adjacent to sensitive receptors); and
- High impact: 90% increase in traffic (30% adjacent to sensitive receptors).

13.6.4 The assessment criteria for each assessed effect during the demolition and construction stage and operational stage is detailed in the following sub-sections.

Severance

13.6.5 Severance is the perceived division of a community when it becomes separated by major transport infrastructure, particularly for non-motorised users. Factors which need to be considered when determining severance comprise road width, traffic flows, speed of traffic, the presence of pedestrian crossing facilities and the number of pedestrian movements across the affected route.

13.6.6 DMRB part LA 112 contains sensitivity values for non-motorised users (walkers, cyclists and horse riders (WCH)) based on traffic flow thresholds, which are helpful for analysing the sensitivity of these receptors to severance and delay. These sensitivity values are presented in Table 13.8.

Table 13.8: Thresholds for determining WCH receptor sensitivity based on DMRB part LA 112

WCH receptor sensitivity	Description
Very high	1) national trails and routes likely to be used for both commuting and recreation that record frequent (daily) use. Such routes connect communities with employment land uses and other services with a direct and convenient WCH route. Little / no potential for substitution. 2) routes regularly used by vulnerable travellers such as the elderly, school children and people with disabilities, who could be disproportionately affected by small changes in the baseline due to potentially different needs. 3) 3) rights of way for WCH crossing roads at grade with >16,000 vehicles per day.
High	1) regional trails and routes (e.g. promoted circular walks) likely to be used for recreation and to a lesser extent commuting, that record frequent (daily) use. Limited potential for substitution; and/or 1) 2) rights of way for WCH crossing roads at grade with >8,000 - 16,000 vehicles per day.
Medium	1) public rights of way and other routes close to communities which are used for recreational purposes (e.g. dog walking), but for which alternative routes can be taken. These routes are likely to link to a wider network of routes to provide options for longer, recreational journeys, and / or 2) 2) rights of way for WCH crossing roads at grade with >4000 - 8000 vehicles per day.
Low	1) routes which have fallen into disuse through past severance or which are scarcely used because they do not currently offer a meaningful route for either utility or recreational purposes, and/or 3) 2) rights of way for WCH crossing roads at grade with <4000 vehicles per day
Negligible	n/a

13.6.7 Based on historic DfT guidance, changes in traffic flow of 30 %, 60 % and 90 % are regarded as producing 'slight', 'moderate' and 'substantial' changes in severance, respectively. However, caution should be observed when applying these thresholds to very low baseline flows, given severance impacts are unlikely to be significant even with high percentage changes in traffic.

13.6.8 Based on TAG Unit A4.1, severance may be classified according to the following four broad levels:

- None - Little or no hindrance to pedestrian movement.
- Slight - All people wishing to make pedestrian movements will be able to do so, but there will probably be some hindrance to movement.
- Moderate - Pedestrian journeys will be longer or less attractive; some people are likely to be dissuaded from making some journeys on foot.
- Severe - People are likely to be deterred from making pedestrian journeys to an extent sufficient to induce a reorganisation of their activities. In some cases, this could lead to a change in the location of centres of activity or to a permanent loss of access to certain facilities for a particular community. Those who do make journeys on foot will experience considerable hindrance.

13.6.9 TAG Unit A4.1 also provides guidance for assessing the impact of changes in severance between the 'without scheme' and 'with scheme' scenarios, as replicated in Table 13.9.

Table 13.9: Assessment of change in severance based on TAG Unit A4.1

'Without scheme' severance scoring	'With scheme' severance scoring			
	None	**Slight**	**Moderate**	**Severe**
None	None	Slight negative	Moderate negative	Large negative
Slight	Slight positive	None	Slight negative	Moderate negative
Moderate	Moderate positive	Slight positive	None	Slight negative
Severe	Large positive	Moderate positive	Slight positive	None

13.6.10 Therefore, the assessment of severance has been based on the estimated changes in traffic flow compared to the future baseline, and professional judgement regarding local context including road

width, traffic flows, speed of traffic, the presence of pedestrian crossing facilities and the number of pedestrian movements across the affected route.

Driver Delay

13.6.11 Assessment of driver delay has been based on the technical work reported within the TA in Volume 2: Technical Appendix 13.1. This has considered delay to drivers/passengers of private vehicles (e.g. car, LGV, HGV). Delay to public transport (bus) passengers is considered in the 'Public Transport' effects.

13.6.12 Based on the Guidelines, effects are only likely to be significant when the traffic on the highway network is predicted to be at or close to the capacity of the system. Professional judgement has been applied to determine significance of effects.

Pedestrian and Cyclist Delay

13.6.13 Non-motorised user delay and severance are closely related effects. Severance can induce delay to non-motorised users (also referred to as pedestrian and cyclist delay), for example by requiring multi-stage crossing of roads or indirect routing to reach crossings. Changes in the volume, composition or speed of traffic may affect the ability of people to crossroads. However, non-motorised user delay is also dependent on local contextual factors including general level of non-motorised user activity, visibility, and condition of infrastructure.

13.6.14 Given the close relationship between severance and non-motorised user delay, the receptor sensitivity thresholds for WCH users (Table 13.8) are also relevant to non-motorised user delay.

13.6.15 Transport Research Laboratory (TRL) research, as reported in the Guidelines, concluded that the mean pedestrian delay was found to be eight seconds at flows of 1,000 vehicles per hour, and below 20 seconds at 2,000 vehicles per hour for various types of crossing condition. A two-way flow of 1,400 vehicles per hour has been adopted as a lower threshold for assessment (equating to a mean 10 second delay for a link with no pedestrian facilities) in the TRL report. Therefore, any road with a two-way flow of less than 1,400 vehicles per hour is deemed to have a negligible effect on pedestrian delay. Roads exceeding this threshold have been assessed using professional judgement.

13.6.16 Moreover, DMRB part LA 112 also contains threshold values for determining the magnitude of impact to non-motorised users based on change in journey length on rights of way, which is directly related to non-motorised user delay. These threshold values are presented in Table 13.10.

Table 13.10: Thresholds for determining magnitude of impact on WCH receptors based on DMRB part LA 112.

Magnitude of impact (change)	Description
Major	>500m increase (adverse) / decrease (beneficial) in WCH journey length.
Moderate	>250m - 500m increase (adverse) or decrease (beneficial) in WCH journey length
Minor	>50m - 250m increase (adverse) or decrease (beneficial) in WCH journey length.
Negligible	<50m increase (adverse) or decrease (beneficial) in WCH journey length.
No change	No loss or alteration of characteristics, features, elements or accessibility; no observable impact in either direction.

13.6.17 Professional judgement has been applied to determine whether non-motorised user delay constitutes a significant effect, using these thresholds as a guide.

Accidents and Safety

13.6.18 The guidelines recommend that the traffic and movement experts engage with the relevant authorities to determine the best approach for determining the significance of road safety effects. Given the proposed development is expected to result in relatively small scale and localised changes in traffic flow, it is considered appropriate and proportionate to base the assessment of effects related to accidents and road safety using historic collision data (DfT STATS19 data for previous five years available) to identify collision severity and casualty rates and using professional judgment to consider the effect of increased traffic flows on these routes.

Public Transport

13.6.19 There is no formal guidance for assessing the environmental effects of developments on the public transport network. Therefore, the assessment has been undertaken by application of professional judgement, taking account of changes in the public transport network configuration, passenger demand, journey times, and journey quality due to the proposed development, to consider the magnitude of impact as follows:

- Low: little perceptible impact on public transport capacity or service quality
- Medium: some perceptible impact on public transport capacity or service quality
- High: considerable perceptible impact on public transport capacity or service quality.

Receptor Sensitivity/Value Criteria

13.6.20 The potential receptors are the users of transport networks within the relevant study area. The sensitivity of a road can be defined by the vulnerability of the user groups who are likely to use it, i.e. the elderly or children. A sensitive area may be where pedestrian activity is high, near a school, or an

accident black spot. it also takes into account the existing nature of the road, i.e. an existing residential area is likely to be more sensitive than an A road.

13.6.21 The sensitivity of receptors has been classified as low, medium or high, in accordance with the criteria set out in Table 13.11.

Table 13.11: Receptor Sensitivity Criteria

Sensitivity	Criteria
Low	Receptors with some sensitivity to traffic flow: motorists and freight vehicles
Medium	Receptors of moderate sensitivity to traffic flow: public transport, emergency services
High	Receptors of greatest sensitivity to traffic flow: non-motorised users

Impact Magnitude Criteria

13.6.22 The magnitude of impact has been classified as low, medium or high, in accordance with the criteria set out in Table 13.12.

Table 13.12: Impact Magnitude Criteria

Magnitude of Impact	Criteria			
	Negligible	Low	Medium	High
Severance	Increase in total traffic flows of 30 % or under	Increase in total traffic flows of 30 % – 60 %	Increase in total traffic flows of 60 % - 90 %	Increase in total traffic flows of 90 % and above
Driver Delay	Assessed on a case-by-case basis using professional judgement subject to the sensitivity and vulnerability of the receptor and the results of any capacity assessments/traffic modelling undertaken as part of the TA. Impacts are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system.			
Pedestrian and cyclist delay (incorporating delay to all non-motorised users)	Any road with a two-way flow of less than 1,400 vehicles is deemed to have a negligible effect. Roads above this are assessed on the basis of professional judgment.			
Accidents and Road Safety	Assessed on the basis of professional judgement using historical collision data to identify existing collision severity and casualty rates			
Public Transport	Assessed on the basis of professional judgment taking account of changes in the public transport network configuration, passenger demand, journey times, and journey quality due to the proposed development			

Scale of Effect Criteria

13.6.23 Impacts have been assessed on the basis of the value/sensitivity of receptors against the magnitude of impact to determine the scale of effect as presented in Table 13.13.

Table 13.13: Scale of Effect Criteria

Sensitivity of Receptor	**Magnitude of Change (impact)**		
	Low	**Medium**	**High**
Low	Negligible	Minor	Minor
Medium	Minor	Moderate	Moderate
High	Minor	Moderate	Major

13.6.24 The determination of the importance and sensitivity of the receptors and the magnitude of change specifically relating to road traffic has been informed by the IEMA Guidelines.

13.6.25 Where the existing baseline HGV or total traffic flows are very minor, a small increase in vehicles would produce a large change in magnitude whereas in real terms the increase in traffic may still be considered to be negligible or slight. In these instances, appropriate professional and experienced judgements have been made.

13.6.26 Based on professional judgement, moderate and major effects are considered significant in EIA terms.

13.6.27 In determining the significance of reported effects, consideration has been given to the type of effect i.e. direct, indirect or secondary, the geographical extent of the effect and the duration of the effect i.e. temporary which is considered to be either short-term (up to 5 years) or medium-term (5-10 years) or long-term (10 years or more).

13.6.28 Duration of effects has been described as short, medium or long-term, in accordance with the criteria set out in Table 13.14.

Table 13.14: Duration of Effects Criteria

Duration	Criteria
Short	Up to 5 years
Medium	5-10 years
High	10 years or more

Nature of Effect Criteria

13.6.29 The nature of the effect has been described as either adverse, neutral or beneficial as follows:

- Beneficial – An advantageous effect to a receptor;
- Neutral – An effect that on balance, is neither beneficial nor adverse to a receptor or is equally beneficial and adverse to a receptor; or
- Adverse – A detrimental effect to a receptor.

13.7 Assumptions and Limitations

13.7.1 The assessment has relied on primary data and assumptions provided by FDEC, Ramboll and Paul Castle Associates (traffic data consultant). The assessment has also relied on secondary data from multiple sources as described within this ES chapter. It has been assumed that these data sets have been reported correctly. Where possible, information provided by FDEC relating to the trip generation potential of the proposed development has been verified using data from appropriate reference sites and application of professional judgement.

13.8 Baseline Conditions

Existing Baseline

13.8.1 The following section provides an overview of the existing baseline transport and accessibility conditions within the study area and details how the existing baseline has been defined. This analysis provides the baseline context against which the transport movements and accessibility of the proposed development have been assessed.

Existing Site Use

13.8.2 Falmouth Docks offer a range of services to shipping, including ship repair, refuelling, cleaning, and waste disposal, alongside providing a port for the Royal Navy, cruise ships, ferries, and other commercial ships to dock. The docks support the following types of ships and activities:

- **Military ships:** The docks house parts of the Royal Navy Fleet, particularly the auxiliary ships such as HMS Mounts Bay, HMS Lyme Bay, and HMS Argos.
- **Cruise ships:** A number of cruise ships visit Falmouth each year between April and October as a 'stop-off' port. Currently the site cannot accommodate Excellence-class cruise ship alongside – these ships berth in Falmouth Bay and passengers are tendered to shore.
- **Cargo ships:** Falmouth is a busy shipping/cargo port with a schedule of freight traffic throughout the year.

- **Ship repair:** The docks repair a wide range of vessels, from luxury yachts and warships to tankers and cruise liners, primarily managed by FDEC.

Local Highway Network

13.8.3 The site is accessed from one vehicular access off Tinners Walk to the south of the site. Tinners Walk connects the site to the local highway network via a priority junction with Bar Road. To the south, Bar Road connects to the A39 Melvill Road / Castle Road / Pendennis Road roundabout and to the east Bar Road connects through to the Falmouth town centre via Grove Place and Bank Place.

13.8.4 The A39 Melvill Road is the major road in the area linking Falmouth with Truro and the A30 to the north. The A30 is a strategic road through Cornwall and Devon, linking towards Exeter and the M5 in the east and with Penzance in the west. The A39 passes along the eastern boundary of Falmouth and serves as the main strategic link into Falmouth and the national strategic highway network. At a local level, the A39 plays a significant role in providing vehicular access through Falmouth and to the wider town, intersecting with many minor roads to the east and west of Falmouth.

13.8.5 Bar Road is a minor single carriageway road that provides access to the site from the A39 and from Falmouth town centre, and all the car parks, within a half-mile (walking distance) radius of the site. Avenue Road and Swanpool Street/Woodlane, provide two alternative routes to the A39 off the Bar Road/Grove Place/Bank Place link road into Falmouth town centre.

13.8.6 To the east and south of the A39 Melvill Road/Castle Road/Pendennis Road roundabout, Pendennis Rise provides access to Falmouth Docks train station and Castle Hill extends Castle Drive providing access to Pendennis Castle. Pendennis Rise and Castle Drive make a loop around Pendennis Castle and also connects to Cliff Road, which is a minor road running along Tunnel Beach to the south of the site and Falmouth.

Public Transport

13.8.7 The closest train station to site is Falmouth Docks train station which is a minor train station with one platform and acts as a terminus of the Maritime Line between Falmouth Docks and Truro. The station is a short walk (5 minutes) or car journey (2 minutes) from the site via Bar Road and Pendennis Rise. Rail services are currently operated by Great Western Railway (GWR) which operates services to and from Truro and Falmouth Docks via Falmouth Town, Penmere, Penryn and Perranwell every 30 minutes Monday to Saturday during the day (c.06:00-18:00) and hourly at evenings (c.18:00-23:00) and on Sundays (c.09:00-22:00).

13.8.8 Public transport includes local passenger ferry services connecting Falmouth to Tolverne and Truro (seasonal), and to Flushing and St Mawes (year-round). A park and float facility operates from Falmouth, providing a ferry link from the out-of-town car parking facility at Ponsharden with the town centre.

13.8.9 The nearest bus stops from the site gatehouse (within 400 m of site) are located on:

- Bar Road (50 m) and Marine Crescent (330 m) to the west
- Castle Hill (175 m and 290 m) and the A39 Melvill Road (180 m and 190 m) to the south
- Pendennis Rise (Falmouth Docks train station) to the east

13.8.10 There is only one public bus service that serves all the identified bus stops close to site and that is bus service 67 which is operated by OTS Bus and Coach. This is a Falmouth town centre loop service operating from Falmouth bus station on Killigrew Street to Pendennis Castle via Falmouth Docks that operates hourly between 09:00 and 17:00 Monday to Friday and 09:00 to 18:00 Saturday. Table 13.15 presents a summary of the service.

Table 13.15: Bus Service Summary

Service	Stops	Mon-Fri	Sat	Sun
67 - Falmouth Town Loop Service	Falmouth Bus Station, Killigrew Street, Falmouth Maritime Museum, Falmouth Docks, Pendennis Castle, Gyllyngvase Beach.	Every hour from 09:00 to 17:00	Every hour from 09:00 to 17:00	No Service

13.8.11 The bus stops situated on Bar Road, Marine Crescent and Pendennis Rise are located along the northern boundary of the carriageway and provide access to the west to east loop service out of Falmouth town centre. The Castle Hill and A39 Melvill Road bus stops provide stops either side of the carriageway, allowing access to the bus loop service in either direction. Almost all of the nearby bus stops only provide a bus stop pole or marked bus stop area, apart from southbound stop on the A39 Melvill Road and the stop on Marine Crescent which provide bus shelters.

13.8.12 There are other bus stops further away from the site closer to Falmouth town centre on Bank Place, Marlborough Road, Woodlane and Falmouth bus station on Killigrew Street, but these stops are between 500 m to 1 km walk from the site. These stops provide access to other local connections to Penryn, Helston, Truro and Redruth along with other larger towns within Cornwall and Devon such Penzance, St. Austell and Plymouth.

13.8.13 Falmouth can also be accessed by coach from around the UK via the National Express coach services which operate between Penzance, Bristol, and London. These services drop off and pick up on Berkeley Vale in the centre of Falmouth, approximately 2 km from the site (6-minute car ride or approximately 30-minute walk).

Walking and Cycling Network

13.8.14 Currently pedestrians can access the site from pedestrian footpaths along Tinners Walk. Tinners Walk provides a key pedestrian link to Bar Road which connects the site to the local pedestrian network, with Bar Road connecting to Marine Crescent and Falmouth town centre to the west and Pendennis Rise (Falmouth Docks train station), Castle Hill (Pendennis Castle) and the A39 Melvill to the south. Additionally, the 'South West Coast Path' runs close to Falmouth docks. The path passes along Tinners Walk and around the docks and allows pedestrians to access nearby nature reserves. This extensive footpath network ensures that the area is highly accessible and promotes sustainable travel choices for those wishing to access the docks by foot.

13.8.15 The closest pedestrian crossing facilities to site are on Tinners Walk. There is a pelican crossing across the main gated entrance to the site which enables pedestrians to cross from the gatehouse to the other side of the carriageway, and there is also a pedestrian refuge island and dropped kerbs across Tinners Walk at the Tinners Walk / Bar Road priority junction, to assist pedestrians crossing Tinners Walk. There are no other dedicated pedestrian crossing facilities close to site along Bar Road, Bar Terrace and at the A39 Melvill Road / Castle Road / Pendennis Road roundabout. The closest other crossing to the site is on Grove Place approximately 400 m to the west of Tinners Walk.

13.8.16 Falmouth Docks train station can be accessed from site on foot via Bar Road and Pendennis Rise which provide a direct pedestrian link to and from the train station and the site entrance on Tinners Walk without having to cross any roads. Pendennis Rise has footways on both sides of the carriageway and the walking journey is approximately 400 m and would take approximately 4 minutes to walk.

13.8.17 The A39 Melvill Road can be reached off Bar Road and provides footways along both sides of the carriageway along its 3.5 km length along the edge of Falmouth town centre with limited crossing facilities.

13.8.18 Currently, there are no dedicated cycle facilities near the site and entrance to Falmouth Docks. Cyclists can access the site by utilising the town's network of shared roads and streets.

13.8.19 No National Cycle Routes (NCRs) are present near the site or within Falmouth.

Baseline Traffic Data

13.8.20 Table 13.16 presents the 2023 baseline traffic for total vehicles and HGVs in AADT-24 and AAWT-24 along with the percentage HGVs at the four recorded ATC survey sites as well as the additional traffic site, Site 5.

Table 13.16: 2023 Baseline Trips (Two-Way, AADT-24 & AAWT-24)

Site ID	Location	AADT-24 (Two-Way)			AAWT-24 (Two-Way)		
		Total Vehicles	HGVs	% HGVs	Total Vehicles	HGVs	% HGVs
ATC 1	Melvill Road	4082	452	11	4382	519	12
ATC 2	Bar Road	1760	254	14	1890	292	15
ATC 3	Tinners Walk (Falmouth Docks Entrance)	2169	106	5	2329	122	5

Table 13.16: 2023 Baseline Trips (Two-Way, AADT-24 & AAWT-24)							
ATC 4	Avenue Road (Between Arnwenack Avenue and Lansdowne Road)	3415	191	6	3667	219	6
SITE 5	Bar Road (Before A39 Melvill Roundabout)	3475	140	4	3731	160	4

13.8.21 As the existing baseline trips (Table 13.16) were surveyed in November 2023, these trips do not account for any cruise ship-related trips, as cruise ships operate at the docks between April and October which is outside of when the traffic surveys were recorded. To account for cruise ship trips in the traffic data (as a worst-case), an estimate of cruise ship related trips have been added onto the surveyed flows to give an adjusted estimate of existing baseline trips (adjusted baseline trips).

13.8.22 To undertake a robust assessment, it has been assumed that the missing element of existing cruise trips from the November 2023 surveys is equivalent to trips required to service the largest cruise ship that enters Falmouth Bay, which is an Excellence-class cruise ship. At present, this size cruise ship anchors within Falmouth Bay and tender calls are made to Falmouth Docks for passengers to disembark. An estimate of trips for an Excellence-class cruise ship are presented in Table 13.5 and these trips are estimated to be representative of trips for the missing cruise trips from the November 2023 surveys and will form an adjusted baseline from which this assessment will be based.

13.8.23 Table 13.17 presents the 2023 adjusted baseline trips as AADT-24 and AAWT-24 at the five receptor sites and are assumed to be representative of a worst-case baseline scenario with an estimate of cruise ships missing from the 2023 November surveys.

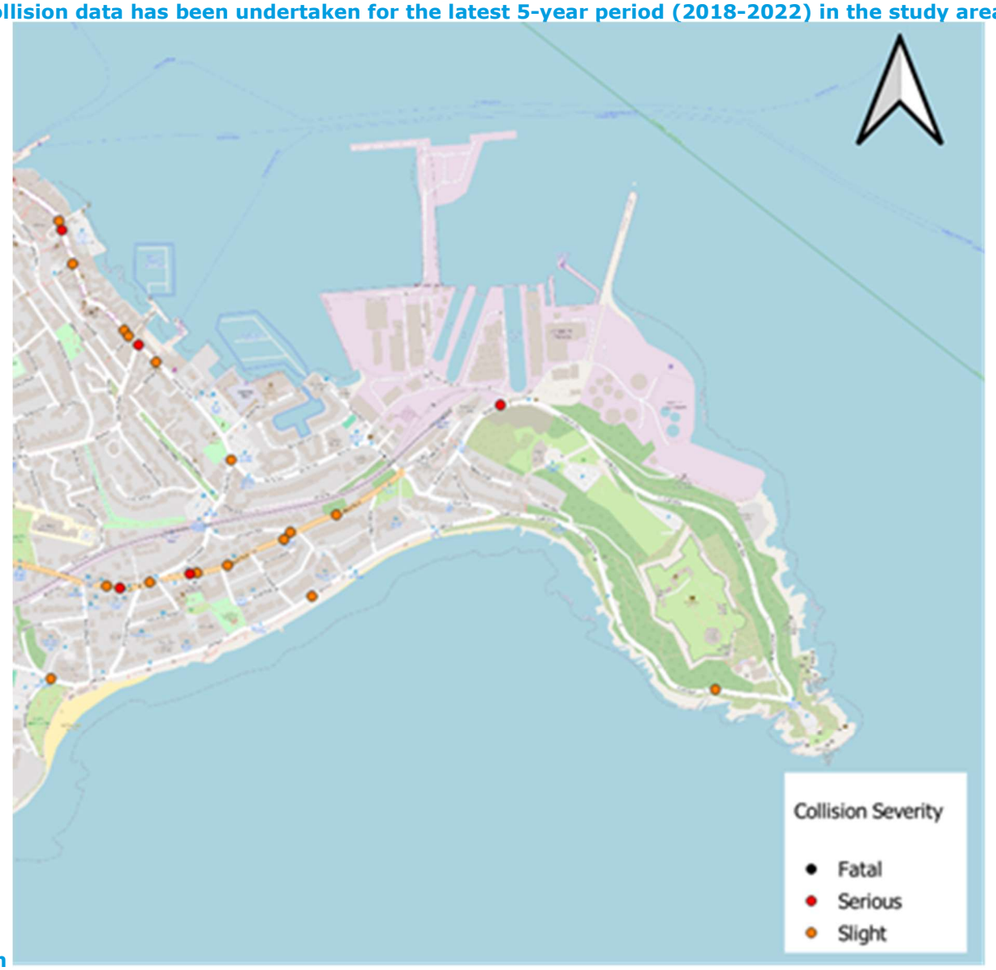
Table 13.17: 2023 Adjusted Baseline Trips (Two-Way, AADT-24 & AAWT-24)							
Site ID	**Location**	**AADT-24 (Two-Way)**			**AAWT-24 (Two-Way)**		
		Total Vehicles	**HGVs**	**% HGVs**	**Total Vehicles**	**HGVs**	**% HGVs**
ATC 1	Melvill Road	4118	470	11	4419	538	12
ATC 2	Bar Road	1768	260	15	1898	298	16
ATC 3	Tinners Walk (Falmouth Docks Entrance)	2213	131	6	2375	148	6
ATC 4	Avenue Road (Between Arnwenack Avenue and Lansdowne Road)	3415	191	6	3667	219	6
SITE 5	Bar Road (Before A39 Melvill Roundabout)	3511	158	5	3768	179	5

13.8.24 To complete the baseline data, Table 13.18 summarises the 2023 baseline traffic speeds at each ATC location.

Table 13.18: 2023 Baseline Traffic Speeds (mph)						
Site ID	**Location**	**Direction**	**5-day average**		**7-day average**	
			85th percentile	**Mean**	**85th percentile**	**Mean**
ATC 1	Melvill Road	WB	30.5	24.6	30.3	24.5
		EB	32.5	26.9	32.4	27.0
		Two-way	31.7	25.8	31.5	25.8
ATC 2	Bar Road	WB	27.8	21.9	27.4	21.6
		EB	30.0	23.5	29.9	23.5
		Two-way	29.3	23.0	29.1	22.9
ATC 3		NEB	15.8	13.1	16	13.2
	Tinners Walk (Falmouth Docks Entrance)	SWB	14.3	11	14	10.9
		Two-way	15.3	12	15.2	11.9
ATC 4	Avenue Road (Between Arnwenack Avenue and Lansdowne Road)	NB	21.2	17.9	21.2	17.9
		SB	22.5	19	22.3	18.8
		Two-way	21.9	18.5	21.8	18.4

Accidents

To determine the safety of the existing highway in the vicinity of Falmouth Docks, a review of the collision data has been undertaken for the latest 5-year period (2018-2022) in the study area shown in



13.8.25 Figure 13.3.

Figure 13.3: Accident Review – Falmouth Docks
Source: Crashmap

13.8.26 An accident data review of the study area highlights that 21 incidents have occurred over the latest five year period, of which 15 incidents were slight, six were serious and zero were fatal.

13.8.27 The accident analysis identifies there were no incidents close to Falmouth Docks with the majority of incidents happening along the A38 which is a busy A road running through the town. Three of the accidents involved pedal cycles (two on Melvill road and one on Arwenack Street) and eight accidents involved pedestrians (only one of which was on Melvill Road, however, six were on Arwenack Street/Church Street). As these accidents were mainly slight in severity and spread across a five-year period, there is no evidence suggesting any specific safety issue.

13.8.28 It should also be noted, due to the impact on travel as a result of Covid-19 restrictions (i.e., working from home, limited travel etc), that data in 2020 and 2021 may have been affected.

Future Baseline

13.8.29 This section summarises future changes to baseline conditions which are anticipated to come about prior to the demolition and construction stage and the operational stage of the proposed development.

13.8.30 As summarised in the section 13.3 (Assessment Scope), the relevant future year for the demolition and construction stage is 2026 (based on the anticipated peak period of construction traffic movements); and the relevant future year for the operational stage is 2027 (based on the earliest anticipated operation of the proposed development in terms of traffic related impacts).

13.8.31 The 2026 and 2027 future baseline traffic flows are presented in AADT-24 and AAWT-24 in Table 13.19. These trips account for background traffic growth from the 2023 baseline year to the future baseline years of 2025 and 2027, estimated using TEMPro and National Road Traffic Projections 2022. No cumulative scheme trips have been added as no cumulative schemes have been identified for the project.

Table 13.19: 2026 Future Baseline Traffic Flows (Two-Way, AADT-24 & AAWT-24)

ID	Name	AADT-24 (Two-Way)			AAWT-24 (Two-Way)		
		Total Vehicles	Total HGVs	% HGVs	Total Vehicles	Total HGVs	% HGVs
ATC 1	A39 Melvill Road	4196	471	11	4504	540	12
ATC 2	Bar Road	1800	258	14	1932	296	15
ATC 3	Tinners Walk (Falmouth Docks Entrance)	2252	128	6	2416	144	6
ATC 4	Avenue Road (Between Arnwenack Avenue and Lansdowne Road)	3489	192	6	3746	220	6
SITE 5	Bar Road (Before A39 Melvill Roundabout)	3582	158	4	3844	180	5

Table 13.20: 2027 Future Baseline Traffic Flows (Two-Way, AADT-24 & AAWT-24)

ID	Name	AADT-24 (Two-Way)			AAWT-24 (Two-Way)		
		Total Vehicles	Total HGVs	% HGVs	Total Vehicles	Total HGVs	% HGVs
ATC 1	A39 Melvill Road	4263	472	11	4575	541	12
ATC 2	Bar Road	1828	259	14	1962	297	15
ATC 3	Tinners Walk (Falmouth Docks Entrance)	2290	128	6	2457	144	6
ATC 4	Avenue Road (Between Arnwenack Avenue and Lansdowne Road)	3548	192	5	3809	221	6
SITE 5	Bar Road (Before A39 Melvill Roundabout)	3642	159	4	3909	180	5

Sensitive Receptors

13.8.32 Based on the Guidelines, the receptors (i.e. population groups) that may be sensitive to changes in traffic conditions are:

- Non-Motorised Users;
- Public Right of Way (PRoW) users;
- Motorists and freight vehicles;
- Public transport users; and
- Emergency services.

13.8.33 The sensitivity of receptors has been classified as low, medium or high, in accordance with the criteria set out in Table 13.21, unless otherwise defined by the guidelines. On the basis of professional

judgement, receptor sensitivity has been defined consistent with the hierarchy of road users in the Highway Code.

Table 13.21: Summary of Sensitive Receptors

Receptor	Sensitivity
Non-Motorised Users	High
Public Right of Way Users	High
Motorists and Freight Vehicles	Low
Public Transport Users	Medium
Emergency Services	Medium

13.9 Assessment of Effects

Demolition and Construction Effects

13.9.1 The demolition and construction stage is anticipated to commence in 2025 and continue for approximately 42 months, with completion in 2029. The demolition and construction traffic effects are therefore anticipated to be short-term (<5 years), temporary, direct, and relate to the arrival and departure of construction workers, construction materials/equipment and waste, and their impact on existing users of the highway network and PRoWs in the study area, including non-motorised users, public transport users, and motorists.

13.9.2 The port currently operates 24 hours per day, 7 days per week, and it is anticipated that the majority of construction works will also be undertaken on this basis, with the exception of the following activities, which would not be undertaken at nighttime:

- Demolition works;
- Piling; and
- Compaction works.

13.9.3 The majority of traffic movements associated with construction are likely to be during the week, with removal of dredge arising from site anticipated to occur between 08:00 and 18:00 Monday to Friday. There would be some vehicle movements on the local highway network outside of these hours attributed to construction worker arrivals and departures and possible abnormal loads.

13.9.4 All construction HGVs will access the site via the designated construction HGV route that includes the A39 Melvill Road, Bar Road, and Tinners Walk, where the main site entrance is located. It should be noted that there is a low bridge on Bar Road, with a maximum clearance of 4.7 m, although this is not a constraint to existing dock operations.

13.9.5 All construction HGVs will exit the site via the designated construction HGV route, turning left from Tinners Walk onto Bar Road and then turning right onto A39 Melvill Road at the A39 Melvill Road roundabout.

13.9.6 It is anticipated that construction workers will arrive to site by private cars and vans and park on-site. During the peak construction stage, it is estimated that the site will accommodate a maximum of 100 construction workers, with an average car share of 1.5 workers per car, resulting in approximately 67 construction worker trips arriving in the morning and departing in the evening.

13.9.7 Based on best estimates of construction vehicles described in Chapter 5: Demolition and Construction and presented earlier in this chapter, the demolition and construction stage would be expected to generate a peak of up to 488 two-way vehicle movements per day (244 vehicle arrivals and 244 vehicle departures), of which there would be 354 two-way HGV movements (177 HGV arrivals and 177 HGV departures) and 134 two construction worker movements (67 car arrivals and 67 car departures).

13.9.8 Table 13.22 presents the peak construction trips as AADT-24 and compares the estimated AADT-24 traffic flows 'without' and 'with' peak construction year trips at each receptor site in the study area during the peak construction year of 2026.

Table 13.22: '2026 Without Construction' and '2026 With Construction' scenarios (Two-Way AADT-24)

ID	Name	2026 Without Development	2026 With Development	% Change

Table 13.22: '2026 Without Construction' and '2026 With Construction' scenarios (Two-Way AADT-24)

		Total Vehicles	Of which HGVs	Total Vehicles	Of which HGVs	Total Vehicles	HGVs
ATC 1	A39 Melvill Road	4243	472	4509	641	6	36
ATC 2	Bar Road	1821	261	1821	261	0	0
ATC 3	Tinners Walk	2284	131	2550	300	12	129
ATC 4	Avenue Road	3526	192	3526	192	0	0
SITE 5	Bar Road (Before A39 Melvill Roundabout)	3624	158	3890	327	7	107

13.9.9 As per Rule 1 of the Guidelines, the following links are identified for assessment of potential effects because an increase in traffic flow of more than 30 % or an increase in HGV flow of more than 30 % would be expected due to the demolition and construction stage:

- ATC 1 – A39 Melvill Road (HGV change);
- ATC 3 – Tinners Walk (HGV change); and
- SITE 5 – Bar Road (before the A39 Melvill Roundabout) (HGV change).

13.9.10 As per Rule 2 of the Guidelines, the following links within the study area are identified for assessment of potential effects because an increase in traffic flow of more than 10 % (but less than 30%) would be expected due to the demolition and construction stage:

- ATC 3 – Tinners Walk (Total vehicles change).

Severance

13.9.11 Severance refers to the perceived division of a community due to transport infrastructure, experienced primarily by non-motorised users like walkers, cyclists, and horse-riders (WCH). Existing conditions for non-motorised users at the site entrance on Tinners Walk are considered good given the provision of footways along both side of the carriageway and the provision of an uncontrolled crossing and local trip generators or attractors.

13.9.12 Typically, non-motorised user sensitivity to traffic flows would be considered high. However, according to DMRB part LA 112 thresholds for determining WCH receptor sensitivity (Table 13.7), the WCH receptor sensitivity in this case would be considered low. This is because Tinners Walk primarily serves as the entrance to Falmouth Docks and is not a primary pedestrian link. Additionally, vehicle flows on this route are under 4,000 vehicles per day, further supporting the lower sensitivity classification. The presence of pedestrian footways on both sides of the road, along with a pedestrian island for safer crossing, means that the overall receptor sensitivity can be considered as low.

13.9.13 Based on DfT guidance, changes in total vehicle flow of 30%, 60% and 90% are regarded as producing 'slight', 'moderate' and 'substantial' changes in severance, respectively.

13.9.14 On this basis, a negligible change in severance would be expected on Tinners Walk and Bar Road (just before A39 Melvill Road roundabout) during the demolition and construction stage due to the total vehicle change being below the 30% threshold and accordingly a negligible change in severance would be expected on the remaining links in the study area (Table 13.22) during the demolition and construction stage.

13.9.15 According to TAG Unit A4.1, which provides guidance on assessing hindrance to pedestrian movements, severance currently experienced by non-motorised users is considered to be slight based on professional judgment. Pedestrians on Tinners Walk and Bar Road can make movements but may face some hindrance. The demolition and construction stage is expected to increase traffic flows due to the rise in HGV and workforce trips, leading to greater exposure to HGVs and longer crossing times for non-motorised users. Consequently, based on professional judgment, non-motorised users may experience moderate severance during the demolition and construction stages. This is due to the anticipated increase in HGV traffic flow, with a 129% increase on Tinners Walk and a 107% increase

on Bar Road (before the A39 Melvill Roundabout). The increases in HGV traffic are likely to impact the safety and comfort of pedestrians and cyclists, leading to a moderate level of severance (based on TAG Unit A4.1 guidance).

13.9.16 The changes in traffic flow in the demolition and construction stage would not be expected to generate material changes in average vehicle speeds. Moreover, the demolition and construction stage would not be expected to change the condition of infrastructure for non-motorised users such as footways or crossings, meaning a material change in road safety conditions for non-motorised users would not be expected. The demolition and construction stage would also not be expected to result in any PRoW diversions nor materially change the length of journeys for non-motorised users.

13.9.17 Overall, non-motorised user receptors would be of low sensitivity to changes in severance. Based on anticipated changes in HGV traffic flow and professional judgement regarding local context, there would be a moderate impact on severance during the demolition and construction stage. Accordingly, severance effects on non-motorised users during the demolition and construction stage would be temporary, short-term, direct and **Minor Adverse (not significant)**.

Driver Delay

13.9.18 Assessment of driver delay is based on the technical work reported within the TA in Technical Appendix 13.1. Effects are only likely to be significant when the traffic on the highway network is predicted to be at or close to the capacity of the system.

13.9.19 Driver delay can be experienced by users of private cars, vans and HGVs. The sensitivity of motorists and freight vehicles is considered to be low, on the basis of the road user hierarchy. Driver delay can also be experienced by emergency services, for which sensitivity is considered to be medium.

13.9.20 Junction assessments for the Tinners Walk/Bar Road priority junction and A39 Melvill Road/Bar Terrace/Pendennis Rise/Castle Hill roundabout are presented in the TA in Volume 2: Technical Appendix 13.1. The assessments demonstrate that both junctions would be expected to operate within capacity during the AM, PM, development network peak hours, and construction peak periods of the demolition and construction stage. Consequently, drivers would experience minimal delay while passing through these junctions during the demolition and construction stages.

13.9.21 The scale of vehicle trips generated by the proposed development during the demolition and construction stage would not be expected to generate a material impact on the operation of strategic junctions in the study area, nor induce a material change to vehicle speeds on strategic links. Therefore, negligible change to driver delay would be expected during the demolition and construction stage. Moreover, it is considered that the scale of trip generation relative to future baseline flows on strategic links does not warrant more detailed modelling of the local highway network.

13.9.22 Overall, driver receptors would be of low sensitivity to changes in driver delay. Based on anticipated changes in traffic flow and professional judgement regarding local context, there would be a low impact on non-motorised user delay during the demolition and construction stage. Accordingly, non-motorised user delay effects on non-motorised users during the demolition and construction stage would be temporary, short-term, direct and **Negligible Adverse (not significant)**.

Pedestrian and Cyclist Delay

13.9.23 Any roads with a two-way flow of less than 1,400 vehicles per hour is deemed to have a negligible effect on pedestrian (non-motorised user) delay. Table 13.23 and Table 13.24 presents estimated AM and PM peak hour flows which would be expected on each link in the study area in the '2026 Without Construction' and '2026 With Construction' scenarios.

Table 13.23: Two-Way AM peak hour flows in '2026 Without Construction' and '2026 With Construction' scenarios

ID	Link Name	2026 Without Construction		2026 With Construction		% change	
		Total Vehicles	Of which HGVs	Total Vehicles	Of which HGVs	Total Vehicles	HGVs
ATC 1	A39 Melvill Road	390	19	515	29	24	34
ATC 2	Bar Road	126	2	133	2	5	0
ATC 3	Tinners Walk	446	33	518	38	14	13
SITE 5	Bar Road (Before A39 Melvill Roundabout)	425	35	490	40	13	13

Table 13.24: Two-Way PM peak hour flows in '2026 Without Construction' and '2026 With Construction' scenarios

ID	Link Name	2026 Without Construction		2026 With Construction		% change	
		Total Vehicles	Of which HGVs	Total Vehicles	Of which HGVs	Total Vehicles	HGVs
ATC 1	A39 Melvill Road	537	16	617	16	13	0
ATC 2	Bar Road	208	14	208	14	0	0
ATC 3	Tinners Walk	398	28	438	68	9	59
SITE 5	Bar Road (Before A39 Melvill Roundabout)	480	18	520	58	8	69

13.9.24 Based on Table 13.23 and Table 13.24, no links would be expected to experience a two-way flow of greater than 1,400 vehicles per hour in the demolition and construction stage, which would lead to the conclusion of a negligible effect on pedestrian and cycle delay. In addition, it is expected that the proposed development would not materially increase traffic flows on Tinners Walk during the demolition and construction stage, and therefore would not introduce additional delay to non-motorised users.

13.9.25 Elsewhere, increases in traffic flow are expected on Bar Road (before A39 Melvill roundabout) and A39 Melvill Road during the AM and PM peak hours due to the proposed development during the demolition and construction stage. However, the scale of this increase is not expected to cause additional delays for non-motorised users.

13.9.26 Although non-motorised users may experience delays at crossings on nearby highway links, the proposed development during the demolition and construction stage will not result in changes to the existing crossing infrastructure for non-motorised users.

13.9.27 Overall, non-motorised user receptors would be of high sensitivity to changes in non-motorised user delay. Based on anticipated changes in traffic flow and professional judgement regarding local context, there would be a low impact on non-motorised user delay during the demolition and construction stage. Accordingly, non-motorised user delay effects on non-motorised users during the demolition and construction stage would be temporary, short-term, direct and **Minor Adverse (not significant).**

Accidents and Safety

13.9.28 Changes to road safety due to increases in traffic flow are principally experienced by non-motorised users, in relation to the total volume of traffic, HGV composition, vehicle speeds, and the availability of infrastructure to protect non-motorised users from traffic (e.g. segregated footways and cycle lanes, formal crossing points).

13.9.29 Review of historical collision data has identified the following hotspots with potential existing road safety issues:

- Melvill Road – A39

13.9.30 Between the A39 Melvill Road/Bar Road roundabout and just west of the A39 Melvill Road/Avenue Road junction, a total of nine accidents have occurred. Of these, seven were minor, and two were severe. One of the minor accidents involved three casualties, while the remaining eight accidents each had a single casualty.

13.9.31 The A39 Melvill Road is expected to experience a 6 % change in total traffic volume and a 36 % change in the number of HGVs (Table 13.22) using the highway during the demolition and construction stage. These changes in traffic flow are not considered significant.

13.9.32 There are no national, regional or local cycle routes on the Melvill Road. There are wide and well-lit footways both sides of the highway, with crossing opportunities at either the Melvill Road/Bar Road junction or the Melvill Road/Avenue Road junction.

13.9.33 Overall, non-motorised user receptors would be of high sensitivity to changes in accidents and road safety. Based on known collision hotspots, anticipated changes in traffic flow in relation to these hotspots, and professional judgement regarding local context, there would be a low impact on accidents and road safety during the demolition and construction stage. Accordingly, accident and road safety effects on non-motorised users during the demolition and construction stage would be temporary, short-term, direct and **Minor Adverse (not significant)**.

Operational Effects

13.9.34 The operational stage is anticipated to commence from 2027. The operational traffic effects are therefore anticipated to be long-term (>10 years), permanent, direct, and relate to the arrival and departure of trips related to additional cruise and freight ships that will dock at the port as a result of the redevelopment, and their impact on existing users of the highway network and PRoWs in the study area, including non-motorised users, public transport users, and motorists.

13.9.35 Falmouth Docks operates 24 hours a day, seven days a week to ensure seamless access for passengers and freight around the clock. The majority of vehicle movements on the local highway network would happen between 6am and 7pm for trips associated with freight, ship repair & the military, with a small minority of these trips occurring off-peak, between 7pm to 6am. Cruise ship trips will predominantly operate between 7am and 7pm, with ships docking in the morning to allow passengers to be able to disembark and join any pre-planned day trip excursions (as described in section 13.5) or to explore Falmouth town, the docks and local surrounding areas.

13.9.36 Cruise ships adhere to a predetermined schedule for docking dates and times (as shown in the 2023 cruise ship call data presented in Technical Appendix 13.1) during the cruise season, which typically runs from early April to the end of October. Any impact on the local highway network caused by cruise ship trips will therefore be confined to this period, as no cruise ship will arrive or depart at the docks outside of these months. Like cruise ships, freight ships will dock at the site according to a predetermined schedule and due to the nature of the operations and trip generation, freight ships will not dock on site when cruise ships are docked.

13.9.37 The primary access route for vehicles entering the site, particularly large HGVs, coaches, and taxis, is via the main strategic route from A39 Melvill Road, Bar Road and into Tinners Walk (at the sites entrance). While a smaller number of vehicles, such as taxis and shuttle buses (which service the docking cruise ships), may approach from the west through the town centre and Bar Road (west), most traffic to and from the site originates from the A39 Melvill Road, as it's an important A-road with increased capacity bringing traffic into Falmouth and close to the docks from the strategic network.

13.9.38 Pedestrians and cyclists can access the site using the local roads and footpaths. Public transportation options include the local town loop bus service, and the Falmouth Docks train station, located a short 5-minute walk south of the site. These multi-modal transportation options provide accessible and sustainable travel options to the site.

13.9.39 The proposed development would be expected to generate a maximum of 624 additional two-way vehicle movements per day (312 vehicle arrivals and 312 vehicle departures) as a 'worst-case' scenario whereby two excellence-class cruise ships would be docked in port at once, of which there would be 320 two-way coach movements (160 arrivals and 160 departures), 54 shuttlebus movements (27 arrivals and 27 departures) and 250 car/taxi movements (125 arrivals and 125 departures).

13.9.40 For the purpose of this EIA assessment, 'worst-case' operational stage daily trips have been converted into AADT-24 and AADT-24 and presented in Table 13.25 and Table 13.26, which compares the 'Without Development' and 'With Development' scenarios for both AADT-24 and AAWT-24 at the five assessed sites in the opening year (2027).

Table 13.25: '2027 Without Development' and '2027 With Development' scenarios (Two-Way AADT-24)

ID	Name	2027 Without Development		2027 With Development		% Change	
		Total Vehicles	Of which HGVs	Total Vehicles	Of which HGVs	Total Vehicles	HGVs
ATC 1	A39 Melvill Road	4268	472	4308	495	1%	5%
ATC 2	Bar Road	1831	262	1839	268	0%	2%
ATC 3	Tinners Walk	2298	131	2346	159	2%	22%
ATC 4	Avenue Road	3548	192	3548	192	0%	0%
SITE 5	Bar Road (Before A39 Melvill Roundabout)	3647	159	3687	182	1%	14%

Table 13.26: '2027 Without Development' and '2027 With Development' scenarios (Two-Way AAWT-24)

ID	Name	2027 Without Development		2027 With Development		% Change	
		Total Vehicles	Of which HGVs	Total Vehicles	Of which HGVs	Total Vehicles	HGVs
ATC 1	A39 Melvill Road	4580	541	4623	566	1	5
ATC 2	Bar Road	1965	300	1974	307	0	2
ATC 3	Tinners Walk	2466	148	2517	179	2	21
ATC 4	Avenue Road	3809	221	3809	221	0	0
SITE 5	Bar Road (Before A39 Melvill Roundabout)	3914	180	3957	205	1	14

13.9.41 In accordance with Rule 1 of the Guidelines, no links were identified where total traffic or HGV flows increased by more than 30%.

13.9.42 As per Rule 2 of the Guidelines, the following links within specifically sensitive areas have been identified for assessment of potential effects, as an increase in HGV traffic flow of more than 10% is expected in the operational stage:

- ATC 3 – Tinners Walk; and
- SITE 5 – Bar Road (before the A39 Melvill Roundabout).

Severance

13.9.43 Based on DfT guidance, changes in total vehicle flow of 30 %, 60 % and 90 % are regarded as producing 'slight', 'moderate' and 'substantial' changes in severance, respectively.

13.9.44 On this basis, a negligible change in severance would be expected due to the slight increase of total vehicle trips during the operational stage, and accordingly a negligible change in severance would be expected on the remaining links in the study area (Table 13.25) during this stage.

13.9.45 In accordance with TAG Unit A4.1, which provides guidance on assessing hindrance to pedestrian movements, severance currently experienced by non-motorised users is considered to be slight based on professional judgment. Pedestrians on Tinners Walk and Bar Road can make movements but might face some hindrance. The operational stage is expected to increase traffic flows due to the increase in coach, bus, and taxi trips as a result of the proposed development, resulting in a slight increase in exposure to large vehicles and cars and subsequently longer crossing times for non-motorised users. However, as the total vehicle increase is relatively modest (Table 13.25 and Table 13.26), severance experienced by non-motorised users during the operational stage would still be considered slight based on professional judgment and consequently, the operational stage would have a 'none' effect on severance according to TAG Unit A4.1.

13.9.46 The changes in traffic flow in the operational stage would not be expected to generate material changes in average vehicle speeds. Moreover, the operational stage would not be expected to change the condition of existing infrastructure for non-motorised users such as footways or crossings beyond the site boundary, meaning a material change in road safety conditions for non-motorised users would not be expected. The operational stage would also not be expected to result in any PRoW diversions nor change the length of journeys for non-motorised users.

13.9.47 Overall, non-motorised user receptors would be of low sensitivity to changes in severance. Based on anticipated changes in traffic flow and professional judgement regarding local context, there would be a low impact on severance during the operational stage. Accordingly, severance effects on non-motorised users during the operational stage would be permanent, long-term, direct, and **Negligible Adverse (not significant)**.

Driver Delay

13.9.48 Assessment of driver delay is based on the technical work reported within the in the TA Volume 2: Technical Appendix 13.1. Effects are only likely to be significant when the traffic on the highway network is predicted to be at or close to the capacity of the system.

13.9.49 Driver delay can be experienced by users of private cars, vans and HGVs. The sensitivity of motorists and freight vehicles is considered to be low, based on the summary of sensitive receptors (Table 13.11). Driver delay can also be experienced by emergency services, for which sensitivity is considered to be medium.

13.9.50 Junction assessments for the Tinners Walk/Bar Road priority junction and the A39 Melvill Road/Bar Terrace/Pendennis Rise/Castle Hill roundabout are presented in the TA in Volume 2: Technical Appendix 13.1. The junction assessments demonstrate that the junctions would be expected to operate well within capacity during the AM, PM and development network peaks during the operational stage. Accordingly, minimal delay to drivers would be expected when passing through the junctions during the operational stage.

13.9.51 The scale of vehicle trips generated by the proposed development during the operational stage would not be expected to generate a material impact on the operation of strategic junctions in the study area, nor induce a material change to vehicle speeds on strategic links. Therefore, negligible change to driver delay would be expected during the operational stage. Moreover, it is considered that the scale of trip generation relative to future baseline flows on strategic links does not warrant more detailed modelling of the local highway network.

13.9.52 Overall, driver receptors would be of low sensitivity to changes in driver delay. Based on anticipated changes in traffic flow and professional judgement regarding local context, there would be a low impact on non-motorised user delay during the operational stage. Accordingly, non-motorised user delay effects on non-motorised users during the operational stage would be permanent, long-term, direct and **Negligible Adverse (not significant)**.

Accidents and Safety

13.9.53 Review of historical collision data has identified the following hotspots with potential existing road safety issues:

- Melvill Road A39.

13.9.54 The A39 Melvill Road is expected to experience a 1 % change in total traffic volume and a 5 % change in the number of HGVs using the highway during the operational stage. These changes in traffic flow are not considered significant.

13.9.55 There are no national, regional, or local cycle routes on the A39 Melvill Road. There are wide and well-lit footways both sides of the highway, with crossing opportunities at the A39 Melvill Road/Bar Road roundabout and just west of the A39 Melvill Road/Avenue Road junction.

13.9.56 Overall, non-motorised user receptors would be of high sensitivity to changes in accidents and road safety. Based on known collision hotspots, anticipated changes in traffic flow in relation to these hotspots, and professional judgement regarding local context, there would be a low impact on accidents and road safety during the operational stage. Accordingly, accident and road safety effects on non-motorised users during the operational stage would permanent, long-term, direct and **Minor Adverse (not significant)**.

Public Transport

13.9.57 Effects on public transport can be experienced by users of the local bus and rail networks. The sensitivity of public transport users is considered to be medium, on the basis of the road user hierarchy.

13.9.58 The closest existing bus services to the site run along Bar Road and A39 Melvill Road. Therefore, an increase in traffic flows on the Bar Road and A39 Melvill Road could induce additional delay to bus services. However, it is considered that the scale of traffic flow uplift which would be expected due to the operational stage would not materially impact bus journey times.

13.9.59 No changes to existing bus services are expected during the operational stage. The proposed development is not anticipated to generate additional public bus trips for staff or visitors during this stage, as bus and coach trips will be accommodated by pre-planned coach trips and pre-arranged shuttle bus services to and from Falmouth town centre. Consequently, the proposed development would not be expected to increase patronage on existing bus services and, therefore, would not have a material impact on bus service capacity.

13.9.60 Furthermore, the proposed development would not be expected to generate additional rail trips during the operational stage. The increased number of trips at the site is anticipated to be a result of coach, bus, and taxi trips catering to cruise ship passengers for tours and excursions in and around Falmouth and Cornwall. These trips are not associated with rail trips, so there would be no significant impact on rail service capacity.

13.9.61 Overall, public transport user receptors would be of medium sensitivity to changes in public transport. Based on professional judgement, there would be a low impact on public transport during the operational stage. Accordingly, public transport effects on public transport users during the operational stage would be permanent, long-term, direct and **Minor Adverse (not significant)**.

13.10 Additional Mitigation

Demolition and Construction Stage

13.10.1 No significant transport and accessibility effects have been identified in the demolition and construction stage; therefore, it is considered that no additional mitigation is required (beyond the embedded mitigation identified in Chapter 5: Demolition and Construction).

Operational Stage

13.10.2 No significant transport and accessibility effects have been identified in the operational stage; therefore, it is considered that no additional mitigation is required.

13.11 Enhancement Measures

13.11.1 Whilst no requirement for additional mitigation has been identified, enhancement measures are suggested to further reduce private car travel and enable and encourage access to the site by sustainable modes in both the demolition and construction and operational stages.

13.11.2 During the demolition and construction stage, enhancement measures would be implemented and monitored through the Construction Traffic Management Plan (CTMP). Examples of measures include:

- Scheduling and management of construction HGV arrivals/departures to minimise trips made in peak hours, and to avoid multiple HGV arrivals/departures at one time.
- Monitoring of construction HGV arrivals/departures to enforce requirements around vehicle routing, arrival/departure time, appropriate driver/vehicle accreditations (e.g. Direct Vision

Standard, HGV Safety Permit), and restrictions on waiting, loading/unloading or parking on the public highway.

- To promote the use of public transportation and minimise the reliance on private vehicles, construction workers, where practical, should be encouraged to utilise local bus services or the Falmouth Docks train station, conveniently located nearby, as an alternative mode of travel to and from the site.
- Recording any complaints by members of the public in relation to construction traffic and taking further measures to respond to issues identified.

13.12 Demolition and Construction Residual Effects

13.12.1 As no additional mitigation would be required, the residual demolition and construction effects remain as reported in Section 13.9 and summarised in Table 13.27.

13.13 Operational Residual Effects

13.13.1 As no additional mitigation would be required, the residual operational effects remain as reported in Section 13.9 and summarised in Table 13.27.

13.14 Summary of Significant Effects

13.14.1 Table 13.27 provides a tabulated summary of the outcomes of the transport and accessibility effects of the proposed development. It reports on the likely significant effects with respect to transport and accessibility associated with the demolition and construction stage and operational stage of the proposed development.

Table 13.27: Summary of Transport and Accessibility Effects

Receptor	Description of Effect	Pre-Additional Mitigation Effect: Scale/ Nature/ Significance*	Additional Mitigation	Post-Additional Mitigation Effect: Scale/ Nature/ Significance*	Details of Residual Effect			
					Direct/ Indirect	Permanent/ Temporary	Reversible/ Irreversible	Short-term/ Medium-term/ Long-term
Demolition and Construction Stage								
Non-motorised users	Severance	Minor/ Adverse/ Not Significant	Not required	Minor/ Adverse/ Not Significant	Direct	Temporary	Reversible	Short-term
Motorists and Freight, Emergency Services	Driver delay	Negligible/ Adverse/ Not Significant	Not required	Negligible/ Adverse / Not Significant	Direct	Temporary	Reversible	Short-term
Non-motorised users	Pedestrians and Cyclists	Minor/ Adverse/ Not significant	Not required	Minor/ Adverse/ Not significant	Direct	Temporary	Reversible	Short-term
Non-motorised users	Accidents and safety	Minor/ Adverse/ Not significant	Not required	Minor/ Adverse/ Not significant	Direct	Temporary	Reversible	Short-term
Operational Stage								
Non-motorised users	Severance	Negligible/ Adverse/ Not Significant	Not required	Negligible/ Adverse / Not Significant	Direct	Permanent	Irreversible	Long-term
Motorists and Freight, Emergency Services	Driver Delay	Negligible/ Adverse/ Not significant	Not required	Negligible/ Adverse / Not significant	Direct	Permanent	Irreversible	Long-term
Non-motorised users	Accidents and Safety	Minor/ Adverse/ Not significant	Not required	Minor/ Adverse / Not significant	Direct	Permanent	Irreversible	Long-term
Public transport users	Public Transport	Minor/ Adverse/ Not significant	Not required	Minor/ Adverse / Not significant	Direct	Permanent	Irreversible	Long-term

Notes (refer to Chapter 2: EIA Process and Methodology for definitions):
* Negligible/Minor/Moderate/Major, Adverse/Neutral/Beneficial, Significant/Not Significant

13.15 Cumulative Effects

Intra-Project Effects

13.15.1 As explained in Chapter 2: EIA Process and Methodology, intra-project cumulative effects are discussed in Chapter 20: Intra-Cumulative Effects.

Inter-Project Effects

13.15.2 No development projects have been identified as likely to have inter-project cumulative effects.