

Chapter 5

Traffic and Transport

5.1 Introduction

This chapter sets out the assessment of the traffic and transport impacts of the proposed Dursey Island Cable Car and Visitor Centre development. It considers the capacity of the existing road and transport network and identifies measures required, including management of visitor numbers to the Visitor Centre and upgrades of the approach road, to accommodate the increase in traffic associated with the proposed development.

5.2 Methodology

Site Visit

The existing road network and traffic environment of the site of the proposed development was visited a number of times by the project team. During these visits traffic and parking conditions were observed and road conditions were measured.

Traffic & Parking Surveys

Traffic surveys were undertaken to determine the baseline traffic conditions along the approach roads. Parking demand surveys were carried out at the existing car park areas at the end of the R572.

Guidance Documents

This Traffic & Transport Assessment has been undertaken in accordance with current best practice guidance and planning policies. The following documents have been referenced during the preparation of this report;

- Transport Infrastructure Ireland Traffic and Transport Assessment Guidelines, PE-PDV-02045, (May 2014);
- TII Publication, DN-GEO-03031 Rural Road Link Design; and
- Cork County Development Plan 2014.

Projected Visitor Numbers

Projected visitor numbers are determined based on a tourism assessment for the proposed Visitor Centre. The associated traffic generation is estimated both annually, monthly, daily and at peak times, and the projected visitor numbers considers the management of visitors considering the car parking capacity and the capacity of the island to accommodate visitors as set out in Chapter 7 of this EIAR.

Car Parking Demand

The car parking demand has been estimated based on the projected visitor numbers and associated traffic generation. This parking demand considers the anticipated peak arrivals and departure times and the average duration of stay.

Traffic Assessment & Roadworks

The methodology used in the traffic assessment for the proposed Visitor Centre involved analysis of the additional traffic loading resulting from the proposed development and an examination of the capacities and potential delays on the approach roads and junctions. Appropriate road upgrades are then identified.

5.3 Baseline Environment / Existing Scenario

5.3.1 Site Location

The proposed Dursey Island Cable Car and Visitor Centre Development is located at the site of the existing Dursey Island Cable Car at the southwestern tip of the Beara Peninsula (Lamb's Head) in the west of County Cork. The existing cable car site is located in a remote rural environment, accessed from the Ring of Beara which includes the R572 from Glengarriff and Castletownbere and the R575 from Eyerles leading to the R571 from Kenmare.

The closest town to the site is Castletownbere, 22km to the east, which is the main service town for the Beara Peninsula. Plate 5.1 shows the location of the Beara Peninsula and Dursey Island. Dursey Island is one of fifteen 'Signature Discover Points' featured in the Wild Atlantic Way guide.



Plate 5.1 Road Network – Regional Area

5.3.2 Existing Road Network

The Dursey Island Cable Car is accessed via the R572 regional road. The R572 commences at Glengarriff, 55km to the east, where it connects with the N71 National Road, and it passes through Adrigole and Castletownbere. The average journey time by car from Glengarriff to the site is 1 hour, which gives an average travel speed of 55kph. The R572 from Glengarriff forms part of the Ring of Beara route along with the R575 from Bealbarnish Gap and then the R571 continuing along the north side of the peninsula via Allihies and Ardgroom and connecting back to the N71 at Kenmare approximately 70km to the northeast. The regional road network is shown on the map in Plate 5.1.

On the final approach to the cable car site, the R572 at the western end of the Beara Peninsula extends 8 km from its junction with the R575 at Bealbarnish Gap to the site, as shown on Plate 5.3. This section of the R572 is a narrow road with

numerous tight bends and limited forward visibility on some of these bends where the road skirts around rock outcrops, see Plate 5.2 below. The average journey time by car from Bealbarnish Gap to the Dursey Island Cable Car is 12 minutes, which gives an average travel speed of 40kph, although the journey times can increase at busy times. Much of this section of the R572 is only wide enough for one-way traffic, where traffic in opposing directions must give-way at suitable passing places. Only 30% of the R572 from Bealbarnish Gap to the Visitor Centre has a width of 4.8m or wider, which allows for comfortable passing of cars and light commercial vehicles (mini-buses, camper vans, etc.). The other 70% of the route is too narrow for two-way traffic and traffic must pass at localised passing places, such as accesses and side roads. This often requires opposing traffic to give-way, and at times vehicle are forced to reverse to suitable passing locations, which can lead to traffic congestion at busy times.

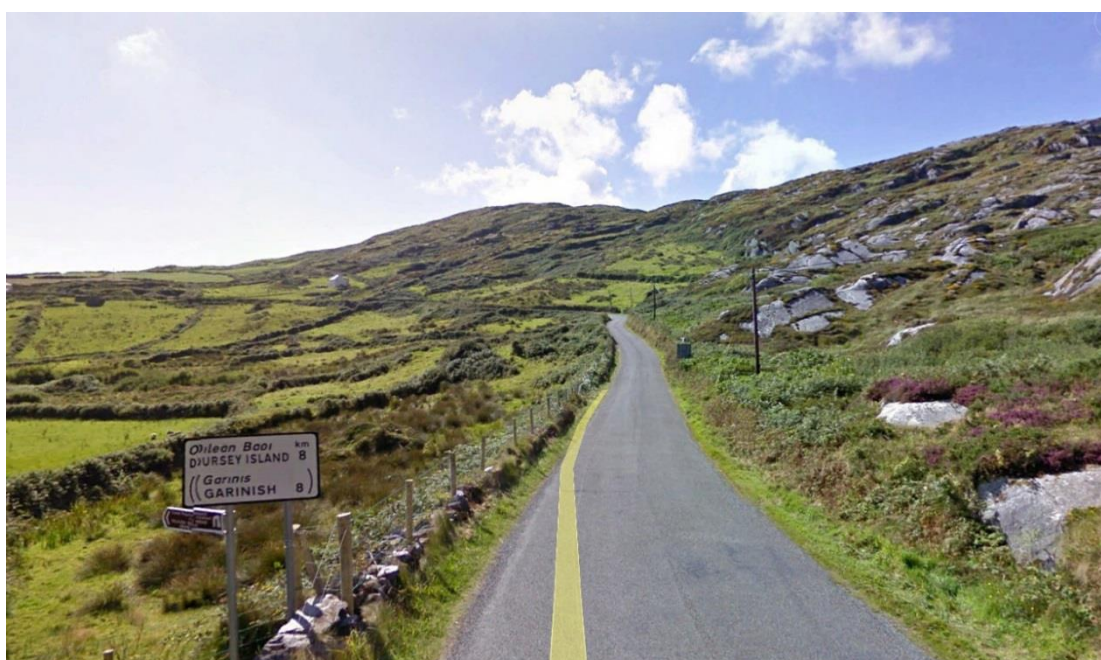


Plate 5.2 R572 view west from the junction with the R575

An assessment of the forward visibility was carried out on the R572 between the junction of the R575 at Bealbarnish Gap and the cable car site. The existing road has little or no verge width along its length, which restricts the forward visibility on bends. Along some lengths of the road, motorists can potentially see oncoming vehicles across the low stone walls which border the road.

The forward visibility assessment considered a driver's-eye-position and target-position in the horizontal plane taken from the middle of the carriageway. A driver's eye height of 1.05m and a target height of 0.26m were used. The forward visibility was then calculated in accordance with TII Publications DN-GEO-03031, using the "Visibility Check" feature of Civil 3D software. Separate checks were carried out at 5-metre intervals in each direction. This exercise highlighted a number of locations where forward visibility is severely restricted, but it is also noted that traffic speeds at a number of these locations is suitably reduced to reflect the road layouts and visibility. While the road has a speed limit of 80kph the average traffic speed along this section of the road is 40kph and traffic speeds on the blind bends has been observed to much less than this, where the risks of driving at higher speeds are obvious to the driver.



Plate 5.3 Road Network – Local Area

5.3.3 Existing Visitor Number & Traffic

The Dursey Island Cable Car currently has approximately 22,000 visitors a year, with the peak months of July and August seeing nearly 10,000 cable car journeys combined.

Detailed traffic surveys were undertaken on May and June bank holiday weekends in 2019. A summary of the results are as follows:

- The existing peak season traffic to the site is estimated at 434 two-way vehicles per day
- The busiest hour at the site in terms of access is from 12:00 – 13:00 with 68 two-way vehicles.

The 8km stretch of the R572 regional road from Bealbarnish Gap to the cable car site also provides access to in excess of 130 private properties, which generates local traffic.

5.3.4 Car Park

The car park at the existing cable car site currently accommodates approximately 70 vehicles, however this is often oversubscribed during peak season. This can lead to cars being parked informally at the side of the road and drivers making awkward U-turn movements, which can result in traffic congestion in the area.

There is car parking available near the end of the peninsula at Lehanmore and Garnish where up to 60 additional cars can be accommodated. This car parking could accommodate people who wish to explore other parts of the headland and to walk along the waymarked routes, including the Beara Way, which extends onto Dursey Island.

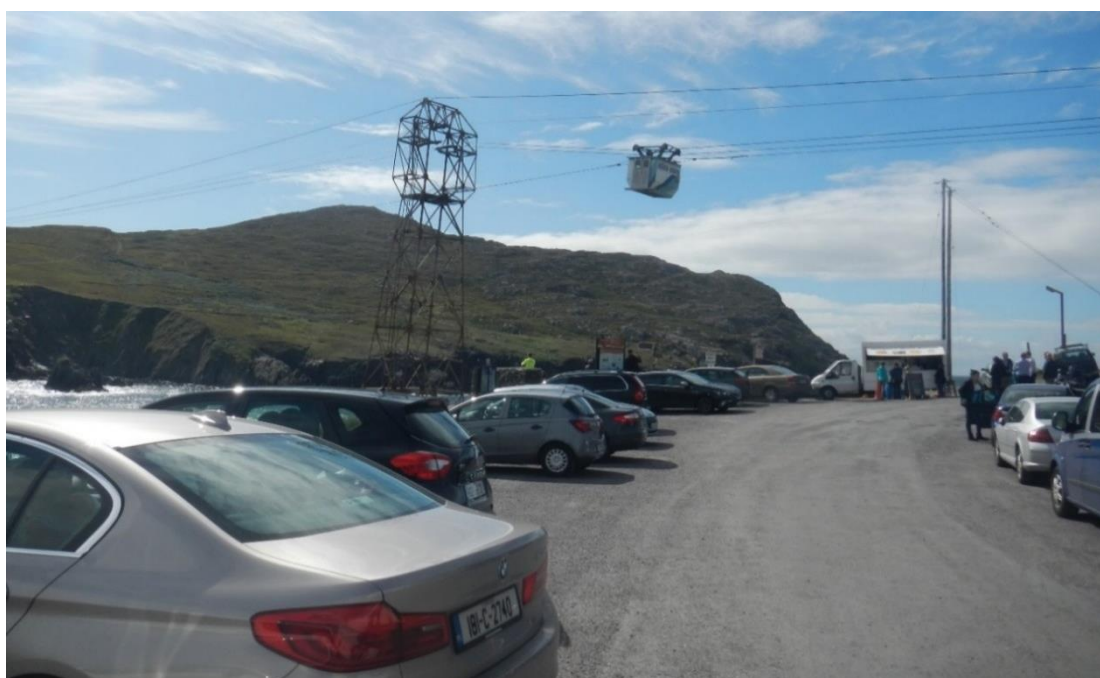


Plate 5.4 Visitor Centre car park

5.3.5 Public Transport

There are two Bus Éireann services that operate on the Beara Peninsula as follows:

- Route 236 – operates between Cork City and Glengarriff & Castletownbere – with two services to / from Castletownbere and five services to / from Glengarriff during the week, and one service to / from Castletownbere and three to / from Glengarriff on weekends / public holidays.
- Route 282 - operates on the Ring of Beara from Kenmare during the summer months only (end of June to end of August) with two services per day, one in the morning and one in the afternoon. The route goes from Kenmare to Glengarriff – Castletownbere – Eyeries Cross and back to Kenmare.

There are a number of other private bus service that operate between Castletownbere / Glengarriff and Cork or Killarney and there are a number of local mini-bus / taxi services that operate around the Ring of Beara and connect to the existing cable car site.

5.3.6 Walking and Cycling

There are a number of waymarked walk and cycle ways on the Beara Peninsula as outlined below.

The Beara Way is a trail that provides a circular route on the Beara Peninsula extending nearly 200km. The route follows a mixture of public roads and tracks and connects to the main towns and villages on the Peninsula including Glengarriff, Kenmare, Lauragh, Ardgroom, Eyeries, Allihies and Castletownbere. It extends out to Dursey Sound from Allihies along a route that is mostly off-road on the north side of the peninsula and it then continues across onto Dursey Island via the cableway. A section of the Beara Way, either side of Dursey Sound is shown on Plate 5.5 below.



Plate 5.5 Beara Way

The Beara Way Cycling Route is a National Cycling Route and for most parts is on country roads. The route travels along the entire Beara Peninsula, following the Ring of Beara and passing through all the towns and villages along the way. It extends along the R572 to the cable car site.

5.3.7 Road Safety

A review of the road safety statistics for the R572 from Bealbarnish Gap to the proposed development reports that there have been four collisions recorded for the period 2005 – 2015 (see Plate 5.6) (two incidents were at the same location). All of these collisions resulted in minor injuries. There were no serious or fatal collisions

recorded. These collision statistics do not indicate any specific road safety risk locations.



Plate 5.6 Road Collision Statistics Locations 2010-2015 (Source: Road Safety Authority www.rsa.ie)

5.3.8 Transport Planning Policy

Cork County Development Plan 2014

The Cork County Development Plan 2014 includes a number of planning policies and objectives that relate to the proposed Visitor Centre and road and transport infrastructure. Extracts of the relevant policies and objectives are provided below.

The Tourism Developments and Facilities section of the Plan includes the following:

- *8.9.1 Facilitating the development of infrastructure to meet the needs of visitors is fundamental to the effective delivery of a sustainable tourism product in County Cork.*
- *8.9.2 The Council will seek to promote the development of tourism in a manner that is compatible with the conservation and enhancement of the environment.....*
- *8.9.7 Both the County Council and the NRA recognise the necessity to facilitate ready access to the many tourist destinations around the country. In this regard the sensitive improvement of access infrastructure and the provision of clear and consistent tourist signage is an essential element in assisting the motoring tourist to locate and access such attractions in a safe and efficient manner....*

The Plan includes the following Transport and Mobility Objectives in:

- *TM 1-1: Transport Strategy: a) Provide a choice of transport modes for all citizens and visitors. Foster sustainable economic and population growth by maintaining and developing an efficient and integrated transport system for the*

County and, at the same time, encourage balanced investment in less polluting and more energy efficient modes of public and private transport.

- *TM 3-2: Regional & Local Roads: c) Seek funding for the following Regional and Local Roads Projects in the County: Projects Critical to the Delivery of Planned Development R572 (Glengarriff to Castletownbere);*
- *TM 3-3: Road Safety and Traffic Management:*
 - *e) Improve the standards and safety of public roads and to protect the investment of public resources in the provision, improvement and maintenance of the public road network. &*
 - *f) Promote road safety measures throughout the County, including traffic calming, road signage and parking.*

The Cork County Development Plan, Volume 2 Chapter 5, identifies Scenic Routes, where the character of views and prospects are to be protected and this includes: Scenic Route S118, which is the R572 Regional Road from Castletownbere via Cahermore to Garnish, with views of Bear Haven, Bear Island, Firkeel Bay, Dursey Sound & Island, the Sea, Slieve Miskish Mountains & surrounding hills.

West Cork Municipal District Local Area Plan, 2017

The West Cork Municipal District Local Area Plan 2017 also includes relevant planning policy as follows:

Boundary Objectives for Allihies, DB---04: Encourage the realignment of the R575 from the Bealbarnish Gap and the realignment and improvement to the local roads L4904 & L4905 as important village entrances.

5.4 Predicted Impacts

5.4.1 Operation Phase

5.4.1.1 Characteristics of the Proposed Development

While the proposed development is described in detail in Chapter 4 of this EIAR, the main components of the development that are particularly relevant to road and transport aspects include:

- A split level visitor car park on the mainland with approximately 100 car parking spaces and retention of a small residents' car park on the island.
- Road improvement works along the 8km stretch of the R572 from Bealbarnish Gap to the cable car site, including the widening of the carriageway at 11 locations (10 no. passing bays and 1 no. visibility splay) and further road improvements to include pavement and verge works at a number of other locations. Works also involve improvements to the junction visibility at Bealbarnish gap and completion of a number of local improvements to improve visibility) on the mainland-side approach road R572. The locations of these improvements are spaced so as to reduce the distances between two-way sections and passing bays and in order to allow opposing drivers to see each other in sufficient time to give way at one-way road sections. It is proposed to acquire the sections of privately-owned roadside land required for these works by means of compulsory purchase order (CPO).

5.4.1.2 Projected Visitor & Traffic Numbers

The proposed development will allow a greater number of site visitors to make the cable car journey to Dursey Island. The existing cableway has limited capacity and it cannot accommodate the current peak season demands, whereas the new cableway

will have a much improved capacity and will result in a significant increase in the portion of visitors arriving at the end of the peninsula also travelling across the Cable Car. As detailed in Chapter 7 Biodiversity of this EIAR, specifically Section 7.8, mitigation measures to manage visitor numbers have been developed so that no more than 80,000 visitors per annum and 12,835 visitors per month at peak season will be permitted to make the cable car journey to Dursey Island. Considering the significantly improved capacity of the cable car it is estimated that 80% of all visitors to the Visitor Centre will make the trip on the cable car to the island.

It is estimated that during peak season the proposed visitor centre will see up to 640 visitors per day. The busiest hour would see approximately 1/8 of the daily traffic arriving or departing, or a peak of 65 vehicles per hour. The total daily traffic at peak season on the R572 at the Visitor Centre entrance is estimated at 500 vehicles during peak season. This represents an increase in traffic of 16% per day during peak season.

It is considered that this level of traffic increase during the peak season will require some upgrading of the R572 road from Bealbarnish Gap to the Visitor Centre to allow for increased widths and passing bays that are suitable for two-way traffic.

5.4.1.3 Management of the Visitor Numbers

The mitigation measures detailed in Chapter 7 Biodiversity have been developed and will be implemented for the operational phase so that visitor numbers are controlled at peak times and to ensure a more evenly spread of visitors throughout the season and also during the day to reduce the sharp peak periods. This will ensure that both the car parking capacity and that the capacity of the island to accommodate visitors will be managed and will not impact on the biodiversity, as described in Chapter 7 of this EIAR. While the overall daily visitor numbers will slightly increase, the peak demand will not increase significantly. The management of visitor numbers will involve a range of measures including marketing, pre-booking and discount price tickets for off-peak times and the provision of real time car park information at strategic locations and restricting travel times for the cable car. These measures are all detailed in Chapter 7 and Chapter 18 of this EIAR.

To advise motorists approaching the Dursey Island Cable Car and Visitor Centre along the Ring of Beara, it is proposed to install a Variable Message Sign (VMS) at four locations namely: 1. R572 Bealbarnish Gap, 2. the R572 / R571 Junction at Castletownbere-Bearhaven, 3. the R575 / R571 Junction at Eyeries Cross and 4. the N71 / R572 Junction at Glengarriff, as presented in Plate 5.7. A permanent electronic car park monitor will be provided to record occupancy rates at the Visitor Centre, and this will link to these VMS. At busy times when the Visitor Centre is at capacity the VMS signs will alert drivers to the lack of parking and this will allow people to alter their plans well before they get to the end of the Peninsula.

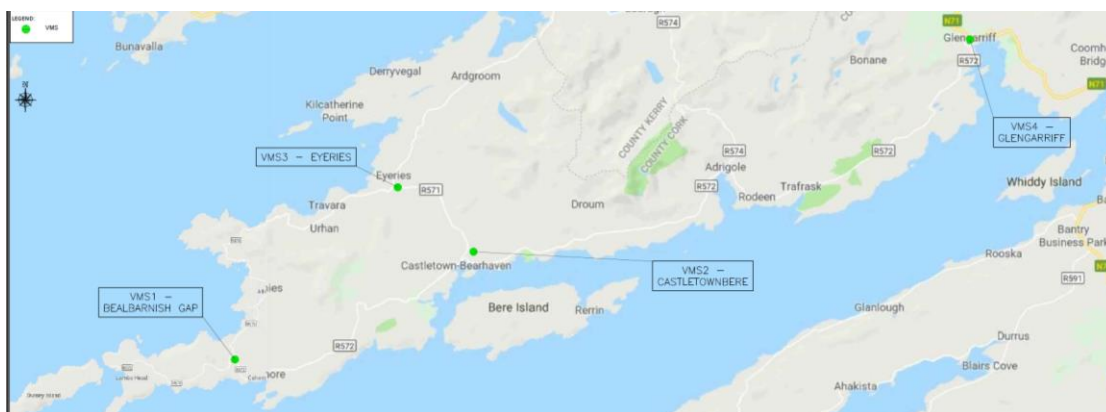


Plate 5.7 Proposed locations of VMS to inform visitors of visitor centre/car park capacity

5.4.1.4 Car Park Provision and Demand

Based on a peak of 640 visitors per day, an average vehicle occupancy of 2.4 persons and an average visit duration of 3 hours, the peak demand for cars based on the current visitor arrival profiles is estimated at 97 vehicles during the peak seasons and peak times. The Mitigation Measures in Chapter 7 Biodiversity (specifically Section 7.8) will restrict the number of visitors that can access the Centre at busy times and will result in a better spread of visitor arrivals during the day. The proposed Visitor Centre car park on the mainland is being increased from 70 spaces to 100 spaces. It is not desirable to provide any additional car parking spaces on site, due to site constraints including biodiversity and landscape. This increase in car parking will accommodate the parking demand through the implementation of the associated mitigation measures contained in this EIAR.

The proposed car park can accommodate a mini-bus set down located at the front of the Visitor Centre building entrance. The layout of the car park is designed with a one-way loop road to provide improved traffic circulation and minimise delays for traffic search for a space and turning around. Camper vans will not be accommodated at the proposed car park and instead will be directed to alternative parking facilities using the aforementioned variable message signs.

On the island side of the site, it is proposed to retain the existing 10-space residents' car park.

5.4.1.5 Road Improvement Works

The approach roads along the R572 from Glengarriff and the R571 & R575 from Kenmare to Bealbarnish Gap have considerable landscape character and do not need to be upgraded for the small increase in traffic during peak season attracted to the proposed Visitor Centre.

Improvement works are required on the 8km stretch of the R572 Regional Road, from Bealbarnish Gap at the R572 / R575 junction to the Visitor Centre, to address existing congestion problems and facilitate anticipated volumes of traffic generated by the proposed development. A number of new and improved two-way sections of road and passing locations are to be created to provide sufficient traffic capacity. The locations of the two-way sections of road and passing bays have been designed so that the distances between two-way / passing sections of road is suitably reduced and also located so that opposing traffic can see each other in sufficient time to give-way at the narrow sections. Other road improvements will include some verge widening to provide adequate forward visibility and pavement strengthening works. This will ensure that the road doesn't become blocked and minimises the risk that

some vehicles would need to reverse to the next nearest passing point. It is proposed to acquire the sections of privately owned land required at 11 locations for these works by means of compulsory purchase order (CPO). These road improvements measures will also allow the approach road to better deal with camper vans and mini-buses, including the local school bus service. Details of the proposed road upgrades are shown on Figure 4.12 to 4.22 included in Volume 3 of this EIAR.



Plate 5.8 Indicative design of passing bay to be constructed on R572

5.4.2 Construction Stage

The construction stage of the project is anticipated to last for approximately 18 months. The impacts that the construction stage will have on the surrounding road network in terms of haulage routes, traffic and site compounds and parking has been considered.

It will be necessary to transport materials, including large prefabricated steel and/or concrete elements, to the site via the R572 regional road. This is the only access route to the mainland site up as far as the junction of the R572 and R575 at Bealbarnish Gap, located 8km east of the cable car site. From Bealbarnish Gap construction traffic could come from the direction of Allihies (to the northeast) or Castletownbere (to the east). It is assumed that most of the construction traffic will come from the Castletownbere and Glengarriff direction since it is on the main route from Cork City.

Marine access will be required for construction works on the island. There are existing piers and slipways in the vicinity of both cableway stations. The mainland pier is approximately 250m southeast of the mainland station and the island pier is approximately 300m south of the island station. It is anticipated that materials required for works on the island will be ferried from the mainland pier to the island pier. This crossing is approximately 500m long. From island pier materials will be transported up the existing pier access track to the location of the island works.

However, the mainland pier is relatively exposed and therefore vulnerable to adverse weather and seafaring conditions, and its use may not be possible to cross the sound. Consequently, the contractor may also need to depart from Garinish Point, a relatively sheltered pier and slipway located 1.8km northeast of the cableway (3.6km by road). This entails a 5km trip by boat, provided seafaring conditions are suitable for passage through the sound.

Temporary traffic management arrangements are to be implemented to facilitate ongoing access to the existing cable car via construction access points throughout the works.

Considering that visitor numbers to the site are especially high during the summer months, and since there is a requirement to maintain access to the existing cable car throughout the construction period (insofar as is possible), it is proposed that the timing of the more disruptive works aspects of the works will be carried out during the off-season (October – March) where possible. Limited car parking is to be maintained for visitors throughout the construction stage.

The works contractor, when appointed, will be required to prepare a Construction Environmental Management Plan (CEMP) and associated Traffic Management Plan (TMP) that maximises the safety of the workforce and the public and minimises construction traffic generation and disruption, while maintaining access to properties at all times. The contractor shall provide an appropriate information campaign for the duration of the construction works so local residents and visitors are aware of the traffic management measures that are to be implemented.

5.5 Mitigation Measures

No mitigation measures are required for the roads, traffic and transportation.

5.6 Residual Impacts

The proposed development will result in an increase in traffic associated with the increase in visitor numbers. During the design development and the preparation of this EIAR the need for the proposed Mitigation Measures in Chapter 7 Biodiversity (specifically Section 7.8) was identified and the appropriate road upgrade works have been identified.

The construction stage traffic impacts will be minimised through the implementation of a Construction Traffic Management Plan and restricting the main construction activities and associated traffic to the off season when traffic on the surrounding road network are considerably less than peak season.

The residual impact of the proposed development for roads, traffic and transportation will result in slight to moderate adverse effects, which can be accommodated by the surrounding road and transportation network.