

Chapter 16

Material Assets and Land

16.1 Introduction

This Material Assets and Land chapter of the Environmental Impact Assessment Report (EIAR) discusses the impact of the proposed Dursey Island Cable Car and Visitor Centre Development on agricultural property and material assets including utilities, rights of way, property and land.

A development may affect material assets and land if it involves any of the following:

- Acquisition of land;
- Demolition of buildings;
- Revaluation of or change in the development potential of adjoining lands/properties; or,
- Changes to existing services / infrastructure.

Impacts on material assets and land are also addressed throughout this EIAR, most particularly in the EIAR chapters listed below.

Title	Relevant Aspect
Chapter 5 - Traffic and Transport	Road safety
Chapter 6 - Population and Human Health	Human health and nuisance
Chapter 8 - Soils and Geology	Natural resources
Chapter 9 - Hydrogeology	Groundwater
Chapter 10 - Hydrology	Water availability and quality
Chapter 11 - Landscape and Visual	Views and landscaping
Chapter 12 - Noise and Vibration	Noise environment
Chapter 13 - Air Quality and Climate	Air Quality
Chapter 14 - Archaeological and Cultural Heritage	Cultural assets
Chapter 15 - Architectural Heritage	Architectural assets

This chapter also identifies the positive impacts that the development will have, such as the amenity that the development will provide.

16.2 Methodology

This chapter describes the receiving environment and determines the significance of the impact of the proposed development on:

- Agriculture;
- Land use and ownership – an examination of impacts on housing, severance, loss or rights of way or amenities, conflicts, or other changes likely to ultimately alter the character and use of the surroundings;
- Local businesses – an assessment of employment and employment opportunities, property and lands for development. The type and extent of positive and/ or negative impacts of the proposed development to current economic activity will be assessed;
- Infrastructure; and

- Existing services and utilities.

The assessment methodology has considered the following guidelines:

- Advice notes on current practice in the preparation of Environmental Impact Statements (EPA, 2003);
- Guidelines on the information to be contained in Environmental Impact Statements (EPA, 2002); and
- Environmental Impact Assessment of National Road Schemes – A Practical Guide (NRA, 2008).

The following draft guidance documents have also been consulted:

- Guidelines on the Information to be contained in Environmental Impact Assessment Reports, Draft August 2017;
- Revised Guidelines on the Information to be Contained in Environmental Impact Statements, Draft September 2015; and
- Advice Notes for Preparing Environmental Impact Statements, Draft September 2015.

The methodology for the assessment of the significance of impact on material assets and land comprised of a desktop survey of project mapping and information, roadside survey of the proposed development and detailed farm surveys involving landowner consultation. The baseline environment and impact assessment relied on information from various sources as outlined in Table 16.1. Aerial photography, Ordnance Survey Ireland (OSI) maps, Google Maps and a site layout plan of the existing area and proposed development have been consulted.

Table 16.1 Information Used in Assessment and Sources

Information	Source
Land registry / landownership information	Cork County Council and landowner consultation.
Land use, farm details	Landowner consultations and walkover farm surveys.
Agricultural statistics	Statistical Yearbook of Ireland 2017 / Agriculture (Central Statistics Office, 2018). National census of agriculture statistics derived from the June 2010 census of agriculture (Central Statistics Office, 2012).
Soils information	Irish National Soils Map, 1:250,000k, V1b(2014). Teagasc, Cranfield University (Environmental Protection Agency (EPA), 2014). Creamer, R. "Irish SIS Final Technical Report 13: Irish Soil Information System Legend" (EPA, 2014). Creamer, R. "Irish SIS Final Technical Report 10: Soil Profile Handbook" (EPA, 2014).
Planning and zoning objectives	West Cork Municipal District Local Area Plan (2017-2020)
Mapping and project information, Compulsory Purchase Order (CPO) deposit mapping and schedule	Roughan & O'Donovan

The completion of farm surveys and roadside surveys took place between April and May 2019. The detailed farm surveys were carried out and consultation was conducted with the landowners for 15 farm holdings and the shareholders of one area of commonage.

The farm surveys involved on-site meetings with agricultural property owners, a walkover survey of affected lands and the completion of detailed farm questionnaires. The farm survey of the affected lands enabled an assessment of the impact of the proposed development and the possible mitigation measures necessary to alleviate negative impact.

Confirmation of landownership information, landowner feedback on the proposed design and relevant survey information were submitted to the project design team to assist with the preparation of the final design.

16.2.1 Study Area

The study area comprises of the agricultural and non-agricultural land and property directly impacted by the proposed Dursey Island Cable Car and Visitor Centre Development, as presented in Figures 1.1 – 1.3 of Volume 3 of this EIAR. The study area includes agricultural lands in Ballynacallagh Townland on Dursey Island for the proposed cable car site. The study area also includes agricultural lands from Ballaghboy Townland to Killough East Townland for the provision of 10 no. passing bays, 1 no. visibility splay and completion of a number of additional localised improvements along an 8km section of the R572, between its junction with the R575 at Bealbarnish Gap and the cable car site.

There are 16 agricultural properties directly impacted by the proposed Dursey Island Cable Car and Visitor Centre Development and landtake will comprise of approximately 2.1187Ha of lands (including 0.7490Ha roadbed). There are 15 farm holdings on the Beara Peninsula and one commonage on Dursey Island. The agricultural land cover consists mainly of improved grassland on the mainland and upland grazing on the island.

16.2.2 Assessment Methodology

The baseline environment for agricultural property was evaluated on an individual property basis and assigned a baseline rating. This baseline rating combined with a magnitude of impact from construction and operation impacts associated with the proposed development will determine the significance of the agricultural impact.

16.2.2.1 Baseline Rating

Farm holdings within the study area were assigned a baseline rating which is determined by the farm type, farm size, land quality, sensitivity to construction and any existing adverse effects. This information was sourced from landowner consultation and walkover surveys on farm holdings directly affected by the proposed development.

Farm type influences the degree of the baseline rating with higher ratings for specialist farm types or enterprises that consist of the breeding or farming of high value livestock. Enterprises that are farmed at an intensive level, such as dairying i.e. with a high stocking rate, and indoor farm enterprises such as pig or poultry farms are indicative of a high baseline rating. Tillage-based and horticultural farm enterprises are indicative of a high baseline rating. Less intensive farm enterprises such as beef and sheep farms are generally indicative of a medium baseline rating.

Larger farm holdings or single unit farms will allow for greater scale of production and are indicative of a high baseline rating. Farms that are smaller or fragmented in structure are generally indicative of a medium baseline rating.

Land quality on a farm holding will determine farm productivity and lands of good quality will be indicative of a high baseline rating. Farms with lands that are limited in agricultural usage due to soil type, typography or drainage will be indicative of a medium or low baseline rating.

The sensitivity of some farm enterprises to the effects of construction or operational impacts will influence the baseline rating of farm holdings. Such farms will include specialist dairy farms and specialist equine farms. Dairy farms are sensitive to impacts that will reduce available grassland area and existing access to the milking platform, i.e. access for dairy cows between the farmyard and the grazing paddocks. Equine livestock used for the breeding and training of horses can be regarded as sensitive to impacts such as noise, dust and visual impacts. However, there are no dairy or equine holdings affected by the proposed development.

The determination of a baseline rating may also be influenced by existing adverse effects such as the proximity of the lands to urban areas and the zoning of lands for other than agricultural uses.

16.2.2.2 **Baseline Rating Criteria**

The criteria used to determine the baseline rating for the farm holdings on the proposed development are shown in Table 16.2. The criteria for each of the baseline ratings have been developed in consideration of the relevant EPA guidelines on describing the existing environment.

Table 16.2 Baseline Rating Criteria

Baseline	Criteria
High	Intensively managed farm enterprises. Specialist dairy enterprises or farm enterprises involved in the breeding of high-quality livestock. Tillage enterprises on good quality lands. Mixed livestock and/or tillage enterprises on good quality lands. Agricultural lands used for research and education.
Medium	Livestock and / or tillage enterprises on medium quality lands. Agricultural lands of good quality leased for livestock or tillage production. Agricultural lands of good quality which is zoned or planning permission exists for non-agricultural purposes.
Low	Extensively managed farm enterprises on medium quality lands. Land parcels with limited agricultural capacity due to size or shape. Agricultural lands of medium or poor quality leased for livestock or tillage production. Lands under commercial forestry or woodland. Agricultural lands of medium quality which is zoned or planning permission exists for non-agricultural purposes.
Very low	Extensively managed livestock farm enterprises on poor quality lands. Unused agricultural lands of medium or poor quality. Agricultural lands of poor quality which is zoned or planning permission exists for non-agricultural purposes.

16.2.2.3 Impact Magnitude

Impacts on agricultural properties arising from construction and operation of the proposed development include:

- Landtake;
- Land severance;
- Impact on farm buildings / facilities;
- Other impacts such as on land drainage and services.

Landtake

The effect of agricultural landtake can be significant and the acquired area together with its location and duration will determine the magnitude of impact. The greater the area of landtake indicates a higher magnitude of impact. The area and location of landtake are often interlinked as landtake near a farmyard on a single unit farm will generally be of a greater magnitude than a similar area on a fragmented part of the farm holding. The duration of landtake can vary from permanent (greater than sixty years), short term (one year to seven years) to temporary (less than one year). The degree of the magnitude of impact decreases with shorter durations.

Landtake associated with the approach road comprises of permanent landtake from farm holdings for completion of aforementioned roadworks on the R572. As well as the permanent landtake discussed above, there will be temporary landtake associated with each of the locations to provide for the completion of construction works. The area of temporary landtake, in each case, will not be significant and will comprise of agricultural lands and public road.

Land Severance

The severance of lands is largely determined by the landtake location and can often result in more significant impacts on farm holdings. Similar to the effect of landtake, the area of severed lands, their location relative to remaining lands and the duration of severance will influence the magnitude of impact. The severance of a significant area or proportion of available land will indicate a high magnitude of impact. The severance of lands adjoining a farmyard, particularly an intensive farm such as a dairy farm, will have a higher magnitude of impact than the severance of lands at the external boundary of a farm. The permanent severance of lands will have a greater magnitude of impact than temporary severance.

The proposed development will not result in the severance of agricultural lands. There will be an impact on existing field access to lands on some farm holdings.

Impact on Farm Buildings / Facilities

The impact of a proposed development on farm buildings or facilities is generally indicative of a medium to high magnitude of impact. The degree of magnitude will depend on the type and nature of farm buildings that are affected. Where animal housing and animal manure storage or fodder storage facilities are affected the degree of magnitude will be high. Farm buildings such as general-purpose sheds or animal handling facilities are indicative of a medium magnitude of impact. Other facilities such as the loss of natural shelter are indicative of a medium magnitude of impact.

The proposed development will impact on existing farm buildings on two farms. On one farm there will be an impact on a number of traditional drystone buildings. On one farm there will be an impact on a farmhouse structure (derelict).

Other Impacts Such as Impacts to Land Drainage and Services

The construction activities on a proposed development may result in the disturbance of existing land drainage and the interruption of services such as water, power and other utilities. The magnitude of impact will be influenced by the type of disturbance and the duration involved. These impacts are generally of a temporary to short term duration being limited to the extent of construction works.

The design of the proposed development may temporarily impact on the local drainage network and field drainage. There will be a temporary impact on water supply where existing connections to water mains are affected.

16.2.2.4 Magnitude of Impact Criteria

The criteria used to determine the magnitude of impact for the farm holdings on the proposed development are shown in Table 16.3. The criteria for each of the impact ratings have been developed in consideration of the relevant EPA guidelines on the assessment of impact.

Table 16.3 Magnitude of Impact Criteria

Magnitude	Criteria
Very high	<ul style="list-style-type: none"> The impact on the farm is such that the farm enterprise(s) cannot continue. Permanent landtake of such an area that the farm holding is unworkable. Permanent land severance of such an area that the farm enterprise is unworkable. Essential farm buildings / facilities may be significantly impacted.
High	<ul style="list-style-type: none"> The impact on the farm is such that the farm enterprise(s) cannot continue without significant management changes. Permanent landtake of such an area that the continued management of the farm enterprise will require significant change. Permanent land severance of a nature that the continued management of the farm enterprise will require significant change. Essential farm buildings / facilities may be directly or indirectly impacted.
Medium	<ul style="list-style-type: none"> The impact on the farm is such that the farm enterprise(s) can be continued as before but with increased management difficulties. Permanent landtake of such an area that the management of the farm enterprise(s) can be continued but with increased difficulties. Permanent land severance of a nature that the management of the farm enterprise(s) will require management changes. Farm buildings and/or farm facilities may be directly or indirectly impacted.
Low	<ul style="list-style-type: none"> The impact on the farm is such that the farm enterprise(s) can be continued as before with minor management changes. Permanent or short-term landtake of such an area that the farm enterprise(s) suffer minor difficulties as a result. Permanent or short-term land severance of a nature that the farm enterprise(s) will require minor management changes. Farm buildings / facilities would not be directly impacted. There may be indirect impacts. Temporary construction impacts.
Very low	<ul style="list-style-type: none"> The impact on the farm is such that the farm enterprise can be continued as before with temporary or short-term management changes.

Magnitude	Criteria
	<ul style="list-style-type: none"> • Temporary or short-term landtake of such an area without noticeable consequences. • Permanent landtake involving public roadbed only. • Temporary or short-term land severance of a nature that the farm enterprise can be continued but with minor management changes. • Farm buildings / facilities would not be directly impacted. There may be indirect impacts. • Temporary construction impacts.

16.2.2.5 Impact Significance

The significance of impact on an agricultural property is determined by the baseline rating of a farm holding combined with the magnitude of impact of the proposed development. There are four categories of baseline rating ranging from 'very low' to 'high'. There are five categories of magnitude of impact ranging from 'very low' to 'very high'. The likely significance rating is determined by reference to the matrix in Table 16.4 using the baseline rating and magnitude of impact. The likely significance of impact is prior to the implementation of any mitigation measures.

Table 16.4 Significance of Impact

Baseline Rating	Magnitude of impact				
	Very High	High	Medium	Low	Very Low
High	Profound	Significant	Moderate	Slight	Slight
Medium	Significant	Significant	Moderate	Slight	Imperceptible
Low	Moderate	Moderate	Slight	Slight	Imperceptible
Very Low	Slight	Slight	Slight	Imperceptible	Imperceptible

16.3 Description of Existing Environment

16.3.1 Agricultural Land in Ireland

The proposed development will require the permanent acquisition of agricultural lands which may result in a reduction in the national utilisable agricultural area. In 2016, the agricultural area farmed is 4,447,200ha including rough grazing. When rough grazing is excluded there is 3,563,000ha of silage, hay and pasture; 281,100ha of cereals and 70,600ha of other crops, fruit and horticulture (Central Statistics Office, 2018).

There are 139,860 farms in Ireland with an average farm size of 32.7ha. The main agricultural enterprises are beef (55.6%), dairying (11.2%), mixed grazing livestock (10.5%) and sheep (9.7%). Mixed field crops (6.9%), tillage (3.4%), mixed crops and livestock (1.7%) and other (1%) are the remaining enterprises (Central Statistics Office, 2012).

16.3.2 Agricultural Land in Co. Cork

The total agricultural area of Co. Cork is 561,802ha and when commonage and rough grazing are excluded there is 439,121ha grassland, 40,519ha cereals and 14,623ha of other crops, fruit and horticulture (Central Statistics Office, 2012).

There are 14,222 farms with an average farm size of 38.1ha. The main agricultural enterprises are beef (42.2%), dairy (28.4%), mixed grazing livestock (8.5%), mixed

field crops (7.0%), tillage (5.6%), sheep (4.6%), mixed crops & livestock (2.5%) and other (1.2%) (Central Statistics Office, 2012).

16.3.3 Agriculture in the Study Area

The agricultural lands in the study area are typical of the Beara Peninsula and comprise of improved grassland, suited for livestock grazing and fodder production, and upland heath which is suited to extensive livestock grazing. The topography is hilly with elevations for the passing bay location along the R572 of between 50m and 110m. On Dursey Island the elevations are between 10m and 20m. (OSI, 2019).

The affected farm holdings along the approach road (R572) range in size from ~11ha to ~40ha and the average farm size at 19.4ha is lower than the average farm size at a national level and particularly for County Cork. The average farm size does not include the 132ha commonage on Dursey Island that is farmed by several shareholders. Farming enterprises are extensive to moderately intensive in nature and comprise of mixed livestock (43.8%), specialist beef (31.2%), specialist sheep (12.5%) and lands leased out to local farmers (12.5%).

16.3.4 Soils

Soil series information is organised as Soils Associations – the mapping of local soils series or soil types that commonly occur in the landscape. There are two main soil associations found within the study area, Bantry and Schull. The Soil Associations within the study area are presented in Figure 16.1.

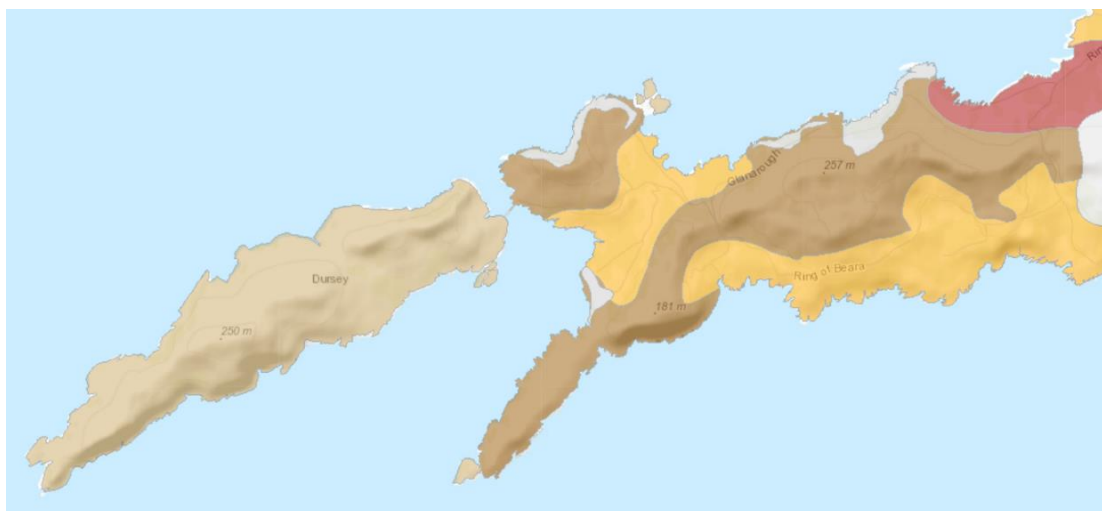


Plate 16.1 Soil Associations (Teagasc, Cranfield University, 2018)

Soil Association Bantry (area shaded in dark brown in Plate 16.1) soils are classified as a Histic Lithosol soil and are defined as peat over sandstone and shale bedrock. They represent unimproved areas of grassland on upland parts of the study area. Land use is mainly extensive grazing by livestock such as cattle and sheep.

Although soil series information is not available in Plate 16.1 for Ballynacallagh Townland on Dursey Island it is closely represented by Soil Association Bantry.

Soil Association Schull (area shaded in dark yellow in Plate 16.1) soils are classified as a Humic Brown Earth and are defined as coarse loamy drift with siliceous stones. These soils represent improved soils on lower lying parts of the study area. Land use is suited to livestock grazing and silage and / or hay production.

Summary details of baseline ratings for agricultural property along the proposed development are presented in Table 16.5.

Table 16.5 Baseline Ratings for Agricultural Property

Baseline Rating	No. of Farms	% of Total
High	0	0.0
Medium	13	81.3
Low	3	18.7
Very Low	0	0.0
	16	100.0%

Further detail on farm size, farm type and baseline rating for farms affected by the proposed passing bays are presented in Table 16.7.

16.3.5 Local Economy and Business

Section 6.3.9 of Chapter 6 of Volume 2 of this EIAR -Population and Human Health – provides a detailed description of the local economy in the study area.

There will be some disturbance and nuisance caused during construction due to noise and air emissions and increased construction traffic. However, with the application of appropriate mitigation strategies these will be minimised to an acceptable level.

During operation, the proposed development will impact positively on the local community by increasing tourist numbers in the area. Improved facilities will be provided which will benefit the area, including improved tourism and employment. The provision of the visitor centre and increased car parking facilities will be important assets to the facility. The proposed development will bring many positive impacts for the local community in terms of the provision of an improved cableway and a new visitor centre area and improved connectivity and access to and from Dursey Island.

16.3.6 Services and Utilities

During construction operations, existing overhead lines will be diverted or maintained and protected. It is not expected that there will be any interruptions to local utility services as a result of any diversions carried out.

During the construction of the proposed development, it is proposed to upgrade supporting infrastructure/utilities (including mainland and island water supply and wastewater treatment systems and mainland-side telecommunications connectivity) to facilitate the provision of improved welfare facilities and to accommodate the anticipated increase in visitor numbers associated with the proposed development. These upgrades are detailed below, and further detail is available in Chapter 4 of Volume 2 of this EIAR – Description of the Proposed Development. All of these upgrades will serve the site of the proposed development only, and will not result in any improvements of utilities for local residences.

Mainland Water Supply

Communications with Irish Water have confirmed that there is no water supply network system in place on the mainland side of the site. However, CCC have confirmed that there is a well located in the existing visitor car park.

In order to support the anticipated peak mainland-side demand of 12,705 L/day, a new water supply network will need to be created to service the visitor centre. There is a groundwater well located in the existing visitor car park, which has been tested as part of the site investigations. It is proposed to construct a new bored well adjacent to the existing well. Water will be pumped to reservoir tanks located within the mainland station building. The water distribution network will incorporate a new potable water treatment system and will be gravity fed, minimising the need for ongoing maintenance requirements. The treated potable mains water will be distributed to the mainland-side buildings of the proposed development through a water meter that will be linked to the building management system. Hot water generation plant will be provided locally in each of the buildings. The distribution of hot, cold and mains water throughout the buildings will consist of horizontal distribution generally taken through the corridor ceilings to the user points.

Island Water Supply

There is a small-scale water supply network system on Dursey Island. This supply serves approximately 25 private properties but does not extend to the island side cable car landing point (eastern end of the island).

It is proposed to utilise a new rainwater harvesting/grey water recycling system at the island-side cableway terminal to support the anticipated peak visitor demand of 1,035 L/day. Raw rainwater/grey water will only be used in non-potable applications (e.g. flushing toilets, landscape maintenance). No potable water supply is to be provided at the Island cableway terminal, instead potable water shall be brought to site if required. Water distribution on the Island-side development will be gravity fed, minimising the need for ongoing maintenance.

Mainland Wastewater Treatment

Communications with Cork County Council have confirmed that wastewater from the cableway welfare facilities are being discharged to an on-site septic tank, which is periodically de-sludged. Residences in the vicinity are served by private septic tanks.

It is proposed to construct a tertiary wastewater treatment system with a sand polishing filter to service the visitor centre facilities. This system is detailed in Section 4.6.17.2 of Chapter 4 of Volume 2 of this EIAR – Description of the Proposed Development. Treated effluent will be discharged to ground via the sand polishing filter/percolation area (in raised beds).

Island Wastewater Treatment

There are currently no public toilets available to visitors on the island side of the site. There is no formal wastewater drainage and treatment system in place on the island. Residences are served by private septic tanks.

It is proposed to construct a proprietary wastewater treatment system with a sand polishing filter to service the facilities at the island-side line station. Due to the lack of subsoil at the island-side station, the proposed sand polishing filter will be raised and banded above existing ground level and formed from imported suitable material.

Telecommunications and Internet Connectivity

EIR's Network Design Bureau Services Office were consulted in relation to the location of phone lines in the vicinity of the proposed Visitor Centre. There is currently a phone line network system in place for the study area. However, there is no broadband connectivity at the site. It is proposed to introduce point-to-point high-speed overhead

fibre broadband from Lehanmore Community Centre to the mainland Visitor Centre buildings. Consultation will continue with EIR during the detailed design of the proposed development.

The proposed overhead fibre broadband will necessitate the running of new fibre optic cable along the R572 Regional Road from Lehanmore Community Centre to the proposed development 4.3km away. The new overhead line will utilise existing telephone poles with new fibre optic joint boxes (small black boxes) fixed to the poles at regular intervals. The broadband works will be carried out as part of a separate advanced works contract which will be complete before the main works commence.

Electricity

The site of the proposed development is serviced by a phase 3 supply connectivity. The energy provider to the existing cableway is SSE Airtricity. The meter point reference number (MPRN) is 1000 706 3245. The current maximum import capacity (MIC) is 15 kilovolt-amperes (kVA). In order to meet increased electrical demand during the operational phase of the proposed development, it will be necessary to increase the MIC of the site's supply.

Following on from preliminary discussions with ESB Networks, it was agreed that a new/upgraded, dedicated ESB supply will be provided to the site. The ESB will be required to provide an increased 3ph power supply at low voltage to the site. The new utility supply will terminate in a new ESB substation located at the rear of the site. This will be a purpose built ESB substation constructed in line with ESB Networks requirements. The client intake/meter room will be located next to the ESB substation. This room will contain a new client intake panel containing the supply feeding the new mainland buildings and cable car.

Fuel Supply Networks

Communications with Bord Gáis have confirmed that there is no gas networks supply system in place for the study area. In order to run the heating system for the mainland buildings, a fuel supply will be required. Although subject to detailed design it is proposed at this stage that the heating system will be provided by a series of electrically driven Air to Water Heat Pumps. This negates the requirement for fossil fuel storage onsite. The installation of Heat Pump Technology will also satisfy the renewable energy requirements for the "Nearly Zero Energy Buildings." The Heat Pumps indoor unit will be located in the Mechanical Plant Room with the condenser unit located externally. The Heat Pumps will feed the low-pressure hot water heating installation and be distributed through corridor ceiling voids into the heated areas. It is intended to utilise a mix of underfloor heating and radiators at this stage of the project

16.3.7 Rights of Way

Public access will be maintained to two no. access routes via the site throughout construction and operation: a gate leading to private farmland, and the entrance to the Garnish Loop walking route (the latter of which is a public right of way). The existing cableway will remain operational throughout the works insofar as is possible to ensure safe access.

16.4 Description of Likely Impacts

The proposed development will involve a total landtake of approximately 2.1187ha from 16 farm holdings. This figure consists of permanent acquisition of 1.3697ha agricultural lands and 0.7490ha public road.

16.4.1 Impact on Agricultural Land

16.4.1.1 Impact on Agricultural Land Nationally

The permanent acquisition of approximately 1.3697ha of agricultural land is not significant at a national level.

16.4.1.2 Impact on Agricultural land in County Cork

The proposed development will involve the permanent acquisition of approximately 1.3697ha of agricultural land from 16 agricultural properties. This area, which may be significant on some of the individual farms, is not significant at a county level.

16.4.1.3 Impact on Agricultural land in the Study Area

The impact on agriculture is limited to those farm holdings directly impacted by the proposed development. Measures to mitigate the adverse effects of the development are described in Section 16.5. The significance of the residual impact following the implementation of mitigation measures are described in Section 16.6.

A summary of the results of the impact on agriculture assessment is presented in Table 16.6.

Table 16.6 Summary of the Impact on Agricultural Land

Magnitude of Impact	No. of Farms	% of Total
Very high	0	0
High	0	0
Medium	1	6.3%
Low	12	75.0%
Very low	3	18.7%
	16	100.0%
Significance of Impact	No. of Farms	% of Total
Profound	0	0
Significant	0	0
Moderate	0	0
Slight	13	81.3%
Imperceptible	3	18.7%
	16	100.0%

The magnitude of impact on agricultural land and property ranges from Very Low to Medium. There are no agricultural properties where the magnitude of impact is High or Very High.

The significance of impact, which is determined by combining the magnitude of impact and the baseline rating for that farm, ranges from Imperceptible to Slight.

On one farm a traditional farmhouse (derelict) structure will be acquired. On one farm a traditional dry stone shed will be impacted. On these farms the significance of the agricultural impact will be slight.

Increasing the number of visitors on Dursey Island has the potential to adversely affect agricultural land on the island. However, the mitigation measures of Chapter 7 of this

EIAR – Biodiversity – prescribe the formalisation of three waymarked loop trails on existing roads/trails on the island (in agreement with private landowners), and it is considered that formalisation of these trails will discourage walkers from wandering off established paths onto farmland. Thus, it is considered that increased numbers of visitors on the island will not have a significant negative effect on agriculture in the study area.

By increasing ease of access and ease of movement of goods to-and-from Dursey Island, the proposed development may have a positive effect on agriculture on the island, and may contribute to the prevention of land abandonment, which is in evidence.

Further detail of the impact assessment of the proposed development on agriculture is presented in Table 16.7.

Table 16.7 Assessment of the Impact of the Proposed Development on Agricultural Land

No.	CPO Ref.	Size (ha)	Farm Enterprise Type	Public Road (ha)	Agri / Land (ha) (EST)	Baseline Rating	Impact Details	Magnitude of Impact	Impact Significance	Mitigation Measures	Residual Impact Significance
1	CPO 121 and 122	21.0	Mixed livestock - Beef & Sheep	0.096	0.1607	Medium	Reduction in agricultural area due to landtake at junction with R375. Impact on existing field boundaries.	Low	Slight	Replace boundary with permanent stockproof boundary.	Slight
2	CPO 120	17.8	Leased - Long term	0.117	0.102	Low	Reduction in agricultural area. Impact on existing field boundaries. Impact on existing field gate. Impact on old stone sheds. Impact on field water supply and land drainage.	Medium	Slight	Replace field access gate on affected lands. Replace boundary with permanent stockproof boundary.	Slight
3	CPO 119	40.5	Beef	0.061	0.059	Medium	Reduction in agricultural area. Impact on existing field boundaries. Impact on existing field gate. Impact on derelict farm house building.	Low	Slight	Replace field access gate on affected lands. Replace boundary with permanent stockproof boundary.	Slight
4	CPO 117	19.0	Beef	0.013	0.063	Medium	Slight reduction in agricultural area. Impact on existing field boundaries.	Low	Slight	Replace boundary with permanent stockproof boundary.	Slight
5	CPO 118	25.0	Mixed livestock - Beef & Sheep	0.022		Medium	Public road only	Very Low	Imperceptible		Imperceptible

No.	CPO Ref.	Size (ha)	Farm Enterprise Type	Public Road (ha)	Agri / Land (ha) (EST)	Baseline Rating	Impact Details	Magnitude of Impact	Impact Significance	Mitigation Measures	Residual Impact Significance
6	CPO 116	22.7	Mixed livestock - Beef & Sheep	0.088	0.092	Medium	Reduction in agricultural area. Impact on existing field boundaries. Impact on existing field gate. Impact on underground utilities.	Low	Slight	Replace field access gate on affected lands. Replace boundary with permanent stockproof boundary.	Slight
7	CPO 115	12.1	Mixed livestock - Beef & Sheep	0.012		Medium	Public road only	Very Low	Imperceptible		Imperceptible
8	CPO 114	14.0	Mixed livestock - Beef & Sheep	0.064	0.073	Medium	Slight reduction in agricultural area. Impact on existing field boundaries.	Low	Slight	Replace boundary with permanent stockproof boundary.	Slight
9	CPO 112	14.0	Sheep	0.069	0.018	Medium	Slight reduction in agricultural area. Impact on existing field boundaries.	Low	Slight	Replace boundary with permanent stockproof boundary.	Slight
10	CPO 113	Na	Beef	0.013	-	Medium	Public road only	Very Low	Imperceptible		Imperceptible
11	CPO 111	14.0	Beef	0.023	0.038	Medium	Slight reduction in agricultural area. Impact on existing field boundaries.	Low	Slight	Replace boundary with permanent stockproof boundary.	Slight
12	CPO 110	16.2	Leased - Short term	0.078	0.041	Low	Slight reduction in agricultural area. Impact on existing field boundaries.	Low	Slight	Replace boundary with permanent stockproof boundary.	Slight
13	CPO 109	11.3	Sheep	0.023	0.011	Medium	Slight reduction in agricultural area. Impact on existing field boundaries.	Low	Slight	Replace boundary with permanent stockproof boundary.	Slight

No.	CPO Ref.	Size (ha)	Farm Enterprise Type	Public Road (ha)	Agri / Land (ha) (EST)	Baseline Rating	Impact Details	Magnitude of Impact	Impact Significance	Mitigation Measures	Residual Impact Significance
14	CPO 108	16.2	Mixed livestock - Sheep & Ponies	0.013	0.009	Medium	Slight reduction in agricultural area. Impact on existing field boundaries.	Low	Slight	Replace boundary with permanent stockproof boundary.	Slight
15	CPO 104	27.9	Beef	0.036	0.082	Medium	Reduction in agricultural area. Impact on existing field boundaries. Impact on existing field gates. Impact on land drainage.	Low	Slight	Replace field access gate on affected lands. Replace boundary with permanent stockproof boundary.	Slight
16	CPO 101	132.3	Commonage - Beef & Sheep	0.021	0.621	Low	Reduction in agricultural area. Temporary impact on stock movement.	Low	Slight	Replace boundary with permanent stockproof boundary.	Slight
Total	-	-	-	0.749 (35%)	1.3697 (65%)	-	-	-	-	--	

16.4.2 Impact on Utilities and Rights of Way

It is not expected that there will be any impacts to utilities during the construction of the proposed development.

16.4.3 Construction Impacts

The assessment of the impact on agricultural land includes the effects of the construction impacts of the proposed passing bays. Construction activity associated with the proposed development will give effect to further temporary impacts on agricultural property such as:

- Construction noise;
- Dust;
- Restricted access to land;
- Disturbance of field drainage;
- Disturbance of services.

The nature of each specific impact is discussed below.

Construction Noise

The activity of earth moving machinery, transport lorries and other ancillary vehicles will generate additional noise emissions in the immediate vicinity of the road construction. Noise can be of significance for farm animals (i.e. when noise becomes excessively loud). In general, animals become accustomed to regular noises and sounds. Intermittent noises can cause fright and distress. Blasting activity can be of particular concern with certain farm enterprises such as breeding and training of horses. However, there are no equine holdings in the study area and blasting is not an expected element of the proposed works. Intermittent noises close to farm buildings can distress livestock.

Dust

Dust generated from the exposure of soil to the atmosphere during construction may cause annoyance or nuisance to the farmer and farm animals. Livestock are at risk of eye irritations from high levels of windblown dust particles. This stress may reduce productivity and increase management difficulties, particularly on equestrian farms.

Restricted Access to Land

Generally speaking, access to land will be maintained throughout the construction and operation of the proposed development. During the construction phase, every effort will be made to maintain access to-and-from Dursey Island via the existing cableway. However, it is conceivable that access to the cableway will be temporarily restricted at times, for reasons of safety. This may pose temporary, slight negative impacts for farmers with land on the island. However, corresponding mitigation measures have been set out in Chapter 6 of Volume 2 of this EIAR – Population and Human Health – which require that residents and farmers of Dursey Island shall be informed of any interruptions to the service, 1 week prior to interruptions, where possible. This measure will serve to reduce negative effects related to restricted access to land. However, these mitigation measures may not be sufficient for farmers, who may require access to land during this period for herding and/or feeding of animals.

Disturbance of Field Drainage

Field drainage systems currently in situ may be disturbed by the construction works. These systems will be restored as part of the proposed development. However, there

may be temporary impaired drainage in the period of time between initial disturbance and final reinstatement of such drainage works.

Disturbance of Services

Access to piped water may be affected during construction through the severance of piping on the farm. Electric fencing used on farms to stock proof farm boundaries or control the movement of stock may also be affected.

Disturbance of Field Boundaries

Field boundaries within the proposed development boundary are earthen embankments or a mixture of earthen embankments and dry-stone walls. These field boundaries may be impacted by the proposed roadworks during construction.

16.5 Mitigation Measures

This section describes the measures that when implemented will mitigate the adverse impact on agricultural land. The assessment does not consider at this stage measures such as compensation for land acquisition and disturbance. These matters will be agreed with landowners or their representative(s) once approval for the proposed development has been granted. In the event that agreement is not possible, such compensation will be decided upon by a property arbitrator.

The following general mitigation measures will be provided:

- Access will be restored to lands where it is removed or restricted. Required replacement field access gates are identified in Table 16.7. The location of such field access gates will be at a suitable location and, where possible, with the agreement of the landowner.
- In general, permanent fencing will comprise of timber post and tension mesh fencing in accordance with CC-SCD-00320. Where field boundaries, that comprise of dry-stone walls, are removed as a result of the construction of the proposed development, the Contractor shall be responsible for the restoration of the section of the field boundary in question to dry-stone wall using stone from the affected field boundary. This restoration work shall be carried out by a suitably qualified and experienced professional, such that the wall is of the same style as the vernacular dry-stone walls of the region. Further fencing details are presented in Chapter 4 of this EIAR.
- Where boundaries at dwelling houses are removed as part of the proposed development, the boundary treatment is proposed on a like for like basis subject to final agreement on accommodation works with individual property owners.
- All existing land drains and watercourses severed by the proposed development will either be piped or re-directed into the existing drainage outfall.
- Any services that are interfered with as a result of the proposed development will be repaired / replaced without unreasonable delay.
- Ducting for the restoration of water and power supply services will be provided, as necessary, at a suitable location with the agreement of the landowner.

Details of mitigation measures for individual farms affected by the proposed development are presented in Table 16.7.

The following mitigation measures will be implemented during the construction stage:

- Measures to mitigate noise impacts on sensitive receptors are detailed within Chapter 12 Noise and Vibration. Good communication between the contractor and adjacent landowners during the construction phase, especially when excessively loud activities are programmed, will prevent undue disturbance to farm animals due to noise. It will also facilitate farm enterprises so that valuable livestock sensitive to noise can be moved away from the construction work during critical times.
- Measures to control the production of dust will be put in place by the contractor (refer Chapter 13 Air Quality and Climate which presents a series of measures to control dust). Good communication between the contractor and the farmers in the proximity of construction activities will facilitate on-going farm enterprises so that valuable livestock are kept as far as possible from the construction work during critical times.
- Access will be restored to lands where it is removed or restricted by the proposed development. The location of such access will be at a suitable location and, where possible, with the agreement of the landowner. Good communication between individual farmers and the contractor will minimise difficulties caused by the restriction of access to land. Temporary fencing will be erected as required to delineate the site boundary and to minimise disturbance to adjacent lands. Temporary access gates may be required until such time as the permanent access arrangements are in place.
- The residents and farmers of Dursey Island shall be informed of any interruptions to the cableway service, 1 week prior to interruptions, where possible. In cases in which access to-and-from Dursey Island is restricted for more than two days, or where more regular access is required by farmers with livestock on the island, alternative access to-and-from the island shall be provided for farmers by CCC.
- In cases where impeded drainage during construction will cause obvious difficulty to a particular landowner, temporary measures will be looked at on a site-specific basis. This may include allowing waters to drain to less critical areas, so as to minimise the impact.
- Where required, an alternative source of water / electricity will be provided to ensure that disruption to farming is minimised during the construction phase.

16.6 Residual Impacts

The significance of the residual impact on agriculture has been assessed following the implementation of general mitigation measures. A summary of the residual impact on agriculture is presented in Table 16.8.

Table 16.8 Summary of the Residual Agricultural Impact

Significance of Impact	No. of Farms	% of Total
Profound	0	0
Significant	0	0
Moderate	0	0
Slight	13	81.3%
Imperceptible	3	18.7%
	16	100.0%

There is no Profound, Significant or Moderate residual impact on agriculture as a result of the proposed development. Furthermore, no residual impacts are predicted on material assets as a result of the proposed development.