

15 HUMAN BEINGS

15.1 Introduction

This chapter assesses the impact of the proposal on human beings within the study area, particularly with regards to land uses for commercial, industrial, agricultural, residential and leisure purposes. It seeks to assess how the proposal might impact upon the surrounding land uses, through loss of land or demolition of residential property.

Further this chapter assesses the impact of the proposals on pedestrians, cyclists, and community effects (community severance, new severance, relief from existing severance, journey lengths, local travel patterns, and demography);

This chapter overlaps with the impacts predicted for human beings in the noise, air and landscape and visual chapters. Detailed consideration of noise, air and visual impacts are considered separately in Chapters 11, 12 and 13 respectively

15.2 Methodology

A desk top study including a review of the relevant area plan context together with appropriate field survey helped ascertain the existing land use and their location within the area. This was examined and cross referenced in relation to the proposal.

15.2.1 Pedestrians, Cyclists, Equestrians and Community Effects

The following aspects have been considered in assessing impacts on pedestrians, cyclists, and community effects:

- Community severance
- New severance
- Relief from existing severance
- Journey lengths and local travel patterns
- Demography

15.2.1.1 Community Severance, New Severance

Community severance can be defined as “the separation of residents from facilities and services they use within their community caused by new developments or by changes in traffic flows”, (Design Manual for Roads and Bridges [DMRB], Highways Agency 1994-1999). In addition community severance can result from the demolition of a community facility or loss of land used by the public (parkland, playing pitches etc.). Communities can also be affected by severance of residential clusters.

The assessment of community severance in this report is broadly based upon the methodology of the DMRB. This has involved:

- 1 Identifying facilities likely to be important for the local community and broadly identifying the likely catchment of the facility; it is assumed that people will use the nearest available facility.
- 2 Identifying routes likely to be used by pedestrians and cyclists (referred to hereafter as pedestrian routes); it is assumed that these include all public roads, and tracks/footpaths which are not obviously private.
- 3 Where the proposed route crosses pedestrian routes, the nature of the crossing is examined, and compared to the criteria in Table 15.1 to assess its potential impact on community severance; it is assumed that a dual carriageway would be a barrier to pedestrians while an at-grade single carriageway can be traversed.
- 4 The significance of the severance impact is assessed as a combination of the magnitude of the impact, as defined in Table 15.1, the likely number of pedestrians affected (it is assumed that this is positively related to the number of residential properties severed and negatively related to the existing journey length) and whether the impact causes severance from a community facility and/or severance of a residential cluster.

Table 15.1: Criteria for Assessing the Magnitude of Severance Impacts

Severance Impact	Criteria ¹
Slight	Pedestrian at-grade crossing of a new road carrying below 8,000 vehicles per day (AADT); or a new bridge will need to be climbed or a subway traversed; or journeys will be increased by 100-250m.
Moderate	Two or more of the hindrances set out under 'slight' applying to single trips; or pedestrian at-grade crossing of a new road carrying 8,000-16,000 vehicles per day (AADT) in the opening year; or journeys will be increased by 250-500m.
Severe	Pedestrian at-grade crossing of a new road carrying over 16,000 vehicles per day (AADT) in the opening year; or journeys will be increased by over 500m; or three or more of the hindrances set out under 'slight' or two or more set out under 'moderate'.

¹ after DMRB (1994-1999).

15.2.1.2 Relief from Existing Severance

Development proposals can also reduce existing community severance by reducing traffic levels on existing roads. Given that the relief of severance is not significant where traffic flows are already relatively low, relief from the existing severance is only assessed where existing traffic levels are 8,000 AADT or greater (DMRB, 1994-1999). The impact of relief from existing severance is assessed using the criteria in Table 15.2.

Table 15.2: Criteria for Assessing the Magnitude of Relief from Existing Severance¹

	Level of Relief From Severance as Reduction In Existing Traffic Levels		
	<i>Slight</i>	<i>Moderate</i>	<i>Substantial</i>
Built up Area	c. 30%	30-60%	60%+
Rural Area	60-70% ²	75-90% ³	90%+ ⁴

¹ from DMRB (1994-1999).

² where the existing road is passing through a village or on the perimeter of a built-up area use c.30%.

³ where the existing road substantially bisects a village or small town this figure may be halved.

⁴ where the existing road substantially bisects a village or small town this figure may be reduced to 60%.

15.2.1.3 Journey Lengths and Local Travel Patterns

As a first step in assessing how a scheme might affect the duration or distance of pedestrians and other journeys, existing local travel patterns should be established.

The steps taken are outlined below, as identified by the DMRB:

- 1 Identify key community facilities. The following key facilities and their catchment areas should be covered by the assessment, where relevant:- Doctors, Hospitals, Aged Persons Homes, Schools, Shops, Post Offices, Churches, Parks and Play areas, and Sports Centres.
- 2 In estimating the number of users within a catchment area, it should be assumed that people would use the nearest available facility unless there is evidence to the contrary.

15.2.2 Land Use

The assessment of the effects of land-take, for the proposal, can cover a wide range of land values and primary uses. Impacts on land use are considered under impacts on settlements using the following headings:

- Demolition of private property
- Loss of community/recreational land
- Effects on development land
- Impacts on local businesses

15.2.2.1 Demolition and Land Take of Private Property

The direct impacts upon residential property arising from demolition or landtake from residential lands (gardens, driveways, etc.) were assessed. Developments such as that proposed can also cause nuisance impacts to residential property. These can result from noise impacts and visual impacts as well as general disruption during construction. These are broadly compared by examining the number of occupied properties within specified distance bands from the proposed route. Detailed consideration of noise, air and visual impacts are considered separately in Chapters 11, 12 and 13 respectively.

Table 15.3: Grading of Impacts for Residential Property

Scale of Impact	Definition/Guidelines
Major	Demolition of dwelling/acquisition of the whole of the property. A substantial portion of the curtilage is acquired, significantly affecting the setting of the residence. Typically, in excess of a third, on average, of the depth of the front (or rear) curtilage is acquired.
Moderate	The landtake is sufficiently large so as to have a noticeable effect on the setting of the residence. Typically between one-fifth and one-third, on average, of the depth of the front (or rear) curtilage is acquired.
Minor	Part of the curtilage is acquired, resulting in little effect on the setting of the residence. Typically less than one-fifth, on average, of the depth of the front (or rear) curtilage is acquired.
Not Significant	The land acquisition is at the boundary of the property and mainly involves road frontage (outside the curtilage of the property).

15.2.2.2 Loss of Community/ Recreational Land

Features of potential recreation/amenity value within the route corridor were identified from site surveys and from issues raised in the public consultation process.

Table 15.4: Grading of Impacts for Community/Recreational Land

Scale of Impact	Definition/Guidelines
Major	Landtake is so great that the can amenity no longer be used for its present purpose
Moderate	The landtake is sufficiently large so as to impair the functionality of the facility.
Minor	The land acquisition is so small that it has no significant effect on the functionality of the facility.
Not Significant	The land acquisition is at the boundary of the property and mainly involves road frontage (outside the curtilage of the property).

15.2.2.3 Effects on Development Land

The environmental assessment should take into account of, as far as is practicable, future changes in land use due to new development which would be likely to occur in the absence of a scheme. This should be done by considering the impact of a scheme's land-take on any sites covered by land use planning designations, as indicated in development plans.

In addition, future changes in land use, for which planning permission has been granted, may also be relevant to the assessment of a scheme. For example, where a proposed scheme would run close to an area reserved for housing development it should be recognised that more residents would be affected by noise, visual intrusion etc than current assessment suggests. Alternatively, planned development could reduce the landscape quality of an area, for example. The impacts of planned land use changes for a scheme should therefore be considered, in broad terms, as part of the overall assessment.

15.2.2.4 Impact on Local Businesses

Table 15.5 outlines the grading of impacts in relation to commercial properties. In addition to impacts resulting from demolitions and land take, the realignment of rural roads may also potentially affect the retail sector, either positively through the enhanced shopping experience in small towns and villages afforded by the improved traffic management, or negatively by the decline in passing trade that might ensue.

Table 15.5: Grading of Impacts for Commercial Property

Scale of Impact	Definition/Guidelines
Major	Acquisition of the whole or a substantial portion of property and associated buildings, which may lead to closure of the business.
Moderate	Acquisition is sufficiently large so as to result in increased management/operational difficulties for the business.
Minor	A small portion of the property is acquired resulting in, at most, some slight management/operational difficulties for the business.
Not Significant	The land acquisition is at the boundary of the property and mainly involves road frontage (outside the curtilage of the property).

15.2.5 Public Utilities

Ordnance Survey mapping was used in conjunction with services data, (gathered by way of consultation with relevant service providers) to identify the location of the utilities that may be affected by the scheme.

15.2.6 Agricultural Land Quality

This section considers the potential impact of the proposal on agricultural businesses in immediate proximity to the proposals. The assessment of farm holdings has been carried out by on site appraisal of farm boundaries and farm centres within the study area; and on site appraisal of farming patterns in the vicinity of the site.

Particular attention has been given to key agricultural elements, as follows:

- The type of agricultural enterprises carried out and the husbandry/management currently employed;
- Estimation of the amount of agricultural land that the scheme is likely to need. In this context, land-take will include land taken directly by the scheme and also land which will no longer be viable for agricultural use, for example, because severance (splitting of a holding into more than one part) makes it impossible to farm some land productively;
- The likely impacts of major accommodation works for access, drainage and water supply; and
- Consideration of the potential effects of the road scheme on farm diversification and agri-environment schemes.

Information on agricultural land classification was achieved through consultation with the Department of Agriculture and Regional Development (DARD).

The agricultural effects that have been assessed together with the guidance relating to the level of significance of these effects are summarized in the Table 15.6.

Table 15.6: Agricultural Significance of Effects

Agricultural Significance of Effects	Effects
Major adverse	Land Quality Loss of predominantly the “best and most versatile” Definition grade 1, 2 and 3A land.
Moderate adverse	Land Quality Loss of a proportion of the “best and most versatile” land
Slight adverse	Agricultural Land Quality Loss of predominantly of the lower quality grades 3B, 4 and 5 land

15.3 Existing Environment

The proposed development aims to establish a vehicular ferry crossing at the mouth of Carlingford Lough, at a suitable narrow location between Greenore in Co. Louth and Greencastle in Co. Down.

The ferry terminal at Greenore is proposed at the north-eastern tip of Greenore head adjacent to the existing Greenore Port facilities. Proposals are located on brownfield lands presently occupied by inter-alia -a warehouse building and stone hardstanding area. Existing access gates to the port are to be relocated to facilitate separate entrances for the main port and the ferry. Traffic will pass through the existing warehouse building - which will have both gable ends removed however remain in situ. Spaces for ferry traffic to queue are proposed on an existing hard-standing area towards the northwest of the site. The proposed location of the concrete slipway is currently a heavily disturbed and backfilled area. A County Council car park is located immediately adjacent and south of the site. It is proposed to facilitate pedestrian access to the ferry from this car park.

The proposed site of the ferry terminal at Greencastle is located to the east of Greencastle village. The location of the proposed off-road queuing lanes and ticket sales building is currently a greenfield site, comprising a flat medium sized field of moderate pasture. The location of the proposed concrete slipway is a stony beach to the southwest of the proposed location of the off-road queuing lanes and ticket sales building. The proposal also includes a road widening along Greencastle Pier Road.

For a complete description of development proposals please refer to Chapter 3 - Description and Alternatives.

Chapter 4 - Policies and Plans - contains an assessment of the development plan context of each site complete with comprehensive reference to development plan zonings.

15.3.2 Pedestrians, Cyclists, Equestrians and Community Effects

15.3.2.1 Existing Severance

The principal roads in the study area are as follows:

- R175 Greenore to Dundalk
- R176 Greenore to Carlingford
- A2 Kilkeel to Newry
- Euston Street Greenore
- Greencastle Pier Road Greencastle

Further to the above, there are numerous other roads of varying standards, criss-crossing the study area, many of which have linear, ribbon (largely residential) development. A number of these minor roads act as distributor roads serving the larger communities and mainly carry local traffic.

15.3.3 Journey Lengths and Local Travel Patterns

Within the study area, movement is concentrated on the existing A2 R175 and R176 roads. Further to this, minor roads relating to Greenore and Greencastle also experience levels of movement. Minor roads act as distributor roads servicing the larger communities, and associated ribbon development. Many of these minor roads are rural in nature and relatively small levels of vehicular traffic movements and are therefore used extensively by the local communities.

The A2 and the Regional roads in County Louth will experience high levels of vehicular activity and as such pedestrians and cyclist movements are likely to be concentrated on the minor roads given the extremely busy nature of these roads.

Pedestrian and cyclist movements are likely to be relatively short trips (given the rural nature of the study area) and concentrated within existing settlements or between neighbouring settlements.

15.3.4 Demography

The main local settlements are the small villages of Greencastle in County Down and Greenore in County Louth. Scattered rural housing is found throughout the study area.

15.3.5 Residential Land

There are a number of residential properties within the study area, largely detached properties, a number of which are farm houses, reflecting the incidence of agricultural land use.

A total of 48 residential properties were identified within 200m of the proposed Greencastle slipway and road upgrade. A total of 4 residential properties were identified within 200m of the proposed Greenore slipway. Residential properties have been identified in Figure 15.1.

The proposed slipways on both the Greencastle and Greenore sides of the development would not have a direct effect on residential land. The proposed road upgrade along the Greencastle Pier road would have a direct impact on residential land through the loss of land belonging to a property.

15.3.6 Commercial/Industrial Land

Greenore Port Limited is located within proximity to the proposed development. In 2005 Greenore was Ireland's 10th largest port in terms of tonnage handled with 649,000 tonnes of goods handled. The Port is the only privately owned Port in Ireland.

As stated, the Greencastle element of this trans-boundary proposal is located on a green-field site. There are no existing port facilities at Greencastle.

15.3.7 Recreation and Community Land

In the Republic of Ireland Greenore Golf Course is located within the study area.

Within Northern Ireland a number of Caravan and holiday parks are located within 2km south east of the settlement Greencastle, including Cranfield Bay Holiday Village, Chestnutt Holiday Parks, Cranfield Caravan Park and Shanlieve Holiday Park. The location of these recreational lands is identified in Figure 15.1.

A number of cycle routes pass through the study area on the Greencastle side of the proposal, including the Cranfield/Greencastle route and the Knockchree Route, as identified by the Mourne Heritage Trust.

A number of boats are moored proximate to the existing jetty at Greencastle. These boats are used for leisure and light fishing and boat owners do not hold a license in relation to their current mooring location.

15.3.8 Development Land

The proposal has been fully considered in the context of the Draft Banbridge/Newry and Mourne Area Plan 2015 and County Louth Development Plan.

A review has taken place of all details of planning applications submitted in proximity to the Greenore and Greencastle proposals during the last 5 years.

15.3.5 Public Utilities

The approximate location of all public utilities has been reviewed as part of the EIA.

15.3.6 Agriculture

The potential effects of the proposed development on agriculture within the study area are primarily dependent upon: the existing agricultural enterprise type; the intensity that the enterprise is farmed; and the quality of the host lands which the enterprise occupies.

The following enterprises types may potentially be affected by a development such as the one proposed:

- Horses - Horses, particularly thoroughbred horses are animals of a nervous disposition and are prone to stress caused by irregular noise and moving vehicles. Land take and severance could result in fields of obscure shapes/sizes which may become unsuitable for grazing horses due to increased risk of injury;
- Beef/sheep- Beef and sheep enterprises would be less affected than dairy enterprises as a dairy enterprise would be required to move stock on a much more frequent basis. Drystock enterprises may become affected by severance and land take however farming practises may be adapted to mitigate overall impacts.
- Arable- Fields used for growing crops may be affected by land take/severance. Fields may become unsuitable for the use of large machinery used to harvest the crops.
- Forestry- In recent years, this enterprise has become more common place as an alternative farming practise. Once the forest has been established that the area is visited is low. However, clearing of thinning may require the ability of large machinery to access the site. Land take or severance may deem the site too small or awkward for the operation of large machinery and it may require a change in enterprise type.

Development proposals could also necessitate the removal Farm buildings- removal of farm buildings may significantly impact upon the day-to-day operation of the enterprise. This is a potential impact which may be common to all agricultural enterprise types.

Agricultural land identified within the study area is primarily used for grazing of livestock. No horses were identified within the immediate vicinity of the scheme. It is not anticipated that the scheme will require the demolition of any farm buildings.

With regard to the quality of the agricultural land, a system for classifying soils and agricultural is utilised in Northern Ireland known as the Agricultural Land Classification (ALC). Guidelines for using the system were produced by the Department of Agriculture Northern Ireland (DANI, now known as DARD) in 1997 [1]. This has supplemented the original guidelines by the Ministry of Agriculture, Fisheries and Food (MAFF, now known as the Department for Environment, Food and Rural Affairs (DEFRA) produced in October 1988.

This classification is typically applied to determine the quality of agricultural land. The classes are based largely on the climatic, topographic and soil type, altitude and slope characteristics of the land. The system seeks to measure the way in which these parameters interact to pose limitations upon the versatility and flexibility of the land to grow crops. ALC has five main classes with the third class sub-divided into two. Grade 1 is the highest grade and represents soils with no physical limitations to the range of crops that can be grown. Grade 5 is the lowest grade and is severely constrained and would normally be limited to rough grazing.

This classification system was available for land at the Greencastle side of the proposed development. The proposed slipway is ALC 4 (i.e. poor quality, limited in use and most suitable for grass) and the majority of land extending along the proposed road upgrade is ALC 4A (i.e. poor quality, limited in use and most suitable for grass) and 3B (moderate quality, capable of producing high yield of narrow crop range and therefore most suitable for grazing). A small proportion of ALC 2 (very good quality, suitable for a wide range of horticultural and arable crops) to the north east of the proposal.

Table 15.7: Agricultural Land Classification in Northern Ireland

Grade	Soil Profiles	Soil Depth (cm)	Annual Rainfall (mm)	Growing Season Days	Altitude m (asl)	Slope Degrees	Description	Comments
1	Brown Earths on Sand, Gravel or Sandy Till	>60	<850	250-300	<100	<7	Excellent quality	Not extensive in Northern Ireland. Has minor or no physical limitations that would affect agricultural use or productivity. Suitable for wide range of agricultural and horticultural crops. Yield is usually high and less variable.
2	Brown Earth and some Surface Water Gley on Sand or Sandy Till	45 – 60	<1050	250-280	<150	<7	Very good quality	Not very common in Northern Ireland. Slight physical limitations on use or productivity. Suitable for wide range of agricultural and horticultural crops. Yield is slightly lower than grade 1.
3a	Surface Water Gley, Shallow Brown Earth and Brown Podzolic	30 – 45	<1150	250-280	<200	<7	Good quality	Common in Northern Ireland. Sandy textures and better drainage of class 3. This land type can consistently produce high to moderate yield for narrow range of arable crops.
3b	Surface water Gley, Lake Clay, Alluvium and Organic Alluvium.	20 – 30	<1400	250-280	<200	7-11	Moderate quality	Common in Northern Ireland. Clayey textures and worse drainage of class 3. Capable of producing high yield of narrow crop range, principally cereals and grass. Therefore commonly used as grazing land.
4	Most Rankers, Podzols, Peat Podzol, Humic Gleys, Peat and Organic Alluvium	15 – 20	<1100-1500 or <800 lowland	230-250	<300	11-18	Poor quality	Common in Northern Ireland. Very limited in use either by poor drainage, extreme climate or both in situations of drought in shallow soils. Mostly suitable for grass.
5	Urban and Disturbed soils. Blanket Peat, Humic and Rock Rankers	<15	800-2000	<230	0-1000	>7	Very poor quality	Common in Northern Ireland. Almost of no arable agricultural potential. Found in lowland swamps, coastal marshes or humic rankers on mountaintops. Mainly suitable as permanent pasture or rough grazing.

15.4 Impacts

15.4.1 Construction Phase

In general terms impacts which relate to the construction phase of the proposal are temporary in nature such as road closures, movement of heavy plant and machinery on local road network, noise and dust emissions resulting from construction processes. A summary of likely impacts is provided under the following headings:

- Road Users;
- Settlement; and
- Local economy.

15.4.1.1 Road Users

Construction taking place on or close to existing roads can disrupt road users. The magnitude of the disruption is dependent on the nature and the duration of the works. Motorists can also be inconvenienced by the presence of works vehicles travelling along public roads or crossing public roads.

Cyclists and pedestrians can be subjected to nuisances due to construction activities and the presence of works vehicles similar to the above. Noise, mud and dust may also be a cause for annoyance. The location of construction compounds and on site facilities can lead to disruption for road users and pedestrians and cyclists, as well as the impact of noise, mud and dust.

Overall the proposed construction stages at both sites are very temporary in duration and most works are contained within the site itself. The predicted impact for road users during construction is slight negative.

15.4.1.2 Settlement

In general, users of facilities can be affected by nuisances caused by construction activities e.g. noise, vibration and dust. Construction works can also result in occasional disruptions to water and electricity supplies, and can temporarily disrupt access to facilities.

Similarly, the location of construction compounds and on site facilities can lead to disruption to nearby properties and facilities due to noise, visual, and mud and dust impact.

Further consideration has been given to construction related impacts in Chapter 12 Air Quality & Climate and Chapter 11 Noise & Vibration.

15.4.1.3 Local Economy

The construction of the scheme will create employment opportunities for construction personnel. Spending by these personnel will lead to additional consumption and will foster further employment creation opportunities in the non-construction sectors. Some local businesses will be expected to experience increased turnover from the supply of goods and services required for the construction of the scheme.

Some economic functions may be adversely affected as a result of changes to travel patterns caused by temporary road closures and the re-routing of journeys.

Overall there is a slight beneficial impact during the construction stage.

15.4.2 Operational Phase

15.4.2.1 Impact on Private Property

The number of residential properties that would be affected by the proposed road is summarised in the table below. All measurements are taken from the centre line of the route.

Table 15.8: Residential Properties within 300m at Greenore

0m / Demolition	0-50m	50-100m	100-200m	200-300m	Total
0	27	5	6	8	46

As can be seen from Table 15.8, the proposal will not result in the demolition of *any* residential properties. In total, 46 residential properties are located within 300m of the proposals. These residential properties are to be found throughout the study area but concentrated within Greenore to the west and southwest of the proposals.

Table 15.9: Residential Properties within 300m at Greencastle

0m / Demolition	0-50m	50-100m	100-200m	200-300m	Total
0	0	0	4	43	47

As can be seen from Table 15.9, the proposal will not result in the demolition of any residential properties. In total, 47 residential properties are located within 300m of the proposals. These residential properties are to be found throughout the study area but concentrated to the immediate north and south of the proposed terminal site at Greencastle and along Greencastle Pier Road.

The two nearest receptors on the Greencastle side of the proposed ferry terminal will be the properties on either side of the proposed terminal site, 80 and 88 Greencastle Pier Road. 80 Greencastle Pier Road is approximately 174m from the nearest landing point of the proposed ferry slipway while 88 Greencastle Pier Road is approximately 105m away.

The nearest receptor on the Greenore side of the proposed ferry slipway is located on Euston Street - approximately 230m southwest of the proposed ferry slipway.

At Greencastle proposed works are located on an area of agricultural land beyond any limit of development - as designated within the relevant development plan documents.

At Greenore the proposal is located within a largely brownfield site immediately adjacent and partially within the existing Port.

Limited road widening proposals are likely to impact on no existing residential properties as widening has avoided the frontage of residential properties.

Further assessments of potential impacts on surrounding dwellings are contained within: Chapter 11 - Noise and Vibration; Chapter 12 - Air and Climate; and Chapter 13 - Landscape and Visual Impact. All assessments demonstrate that impacts on surrounding dwellings are within acceptable parameters.

There will be limited demolition of commercial property within Greenore Port to facilitate the Greenore terminal construction and operation and the related impact is assessed as minor.

Table 15.10 shows land take proposed by the acquisition of part of private property. The impacts referred to relate to land take required for local road re-alignments, the construction of the slipway across the shore and Lough bed and to permit the construction and operation of the Greenore terminal. The impact of each property has been assessed and indicated accordingly.

The proposed realignment of Greencastle Pier Road has been designed to minimise landtake and avoid the need for demolition. Where there is loss of lands detailed consultations have taken place with affected parties.

Where part of the curtilage of a property is to be acquired, agreement will be reached with the landowner during the land purchase negotiations on the types of boundary walls/fences to be provided. Replacement accesses will be provided for any property whose existing access is affected by the scheme.

Table 15.10: Land Take

Location	Landowner	Nature of Impact	Impact
Greencastle Pier Road	Kieran Sloan	Loss of part of curtilage	Minor
Greencastle Pier Road	Bernard Trainor	Loss of part of curtilage	Minor
Greencastle shore line	Trustees of Mourne Shores	Loss of part of shore between Low Water and High Water Marks	Minor
Carlingford Lough	Crown Estates	Loss of part of sea bed below Low Water Mark	Minor
Greencastle Pier Road	DRD Roads Service	Loss of grass verge	Minor
Greenore Port	Greenore Port Ltd	Relocation of security hut and modifications of building	Minor

As Table 15.10 illustrates, 6 properties have been affected by land take all of which are considered to suffer minor impact.

15.4.2.2 Loss of Community / Recreational Land

There is no predicted direct loss of community or recreational lands. While the proposals at both Greenore and Greencastle are located on the shore of Carlingford access along the beach and at the proposed slipways will not be restricted. No significant impacts are predicted for community or recreational lands.

15.4.2.3 Impacts on Local Businesses

No commercial properties will experience demolition or loss of land associated with said business with the exception of small modifications required at Greenore Port as set out in Table 15.10.

15.4.2.4 Pedestrians, Cyclists, Equestrians and Community Effects

Community Severance, New Severance & Impact on Journey Lengths

The proposals require alterations to Greencastle Pier Road through local realignments. This section examines the effect that these road alterations will have on non-motorised users who are travelling on 'through' journeys (i.e. journeys commencing and terminating at points outside any realigned sections). Given the rural nature of the study area, the majority of the existing road network is found to be without footpaths.

The proposals do not result in any severance in access to Greencastle or Greenore as all such pedestrian links along the road network will be maintained as at present and there will be no increase in journey lengths.

The proposed realignments to Greencastle Pier Road will not alter the current pedestrian, cyclists or equestrian movements along this road. In fact it could be argued that there will be an improvement in access for the local community due to the widening of the road.

Boat owners who presently moor their boats proximate to the existing jetty at Greencastle may incur disruption during the construction phase and may be required to seek an alternative location to moor these vessels when the ferry is operational. This impact will only be temporary and is assessed as slight.

15.4.1 Public Utilities

The proposal is likely to have an impact on public utilities identified within the study area, during the construction phase of the scheme. Excavation and/or construction works in the vicinity of overhead lines, cables, mains and/or other equipment, may cause temporary disruption to services. Despite the potential for minor disruption the overall impact is not assessed as significant. Any existing service (e.g. electricity, gas, telecommunications and water) permanently affected by the scheme will be reinstated.

15.4.2 Agricultural Land

Given that the proposal is located on greenfield site at Greencastle, there will be an associated loss of agricultural lands. There is potential for further direct land take along proposed road upgrades leading to the new facility. A target width of 5.5 meters is required to allow the passing of cars and coaches/lorries. Please refer to Chapter 14 - Traffic and Transport. Where possible, this extra width will be provided in the existing hedgerows and verges. Where required additional works will be provided by the use of passing bays wherever feasible. This work would entail the removal of some hedgerows and the reinstatement of hedgerows or fences set back into the adjacent field.

The majority of land take is ALC grade 4, 4A and 4B which is poor in agricultural quality. Although there is a loss of a green-field site this is assessed as insignificant when balanced against the potential socio-economic benefits of the proposal.

The predicted impact on agricultural lands is slight adverse.

15.5 Socio Economic Impacts

An Economic Impact Assessment of the proposal has been included in Appendix 2.3. As stated in the study, it has been undertaken to provide an overall perspective of the contribution that the project would make to economic development and jobs in the cross-border Carlingford Lough region. The study is not a business case or feasibility report on the financial or commercial merits or otherwise of a car ferry on Carlingford Lough; rather it is concerned with the wider economic impacts of the proposed car ferry, which are primarily tourism development and jobs.

15.6 Mitigation

Construction Phase

The implementation of the following mitigation measures (where practical) will further reduce the adverse impacts associated with the construction phase:

- Confine heavy construction vehicles to specific roads;
- Restrict the number of access points to the construction site;
- Control the movement of work vehicles close to sensitive human receptors such as residential or commercial properties;
- Residents should be kept informed of the works to be carried out and of any proposals for work outside normal hours;
- Ensure that the main compounds are located in areas away from sensitive receptors such as residential or commercial properties, and can be accessed from roads;
- Phase the construction programme to limit disruption to road users,
- Limit the number and duration of temporary road closures;
- Provide reasonable and safe facilities for pedestrians and cyclists; and
- Advanced warning should be given of any necessary route diversions.

Further relevant mitigation measures are included in Chapters 11 Noise and 12 Air Quality.

Land take as a result from the scheme is not considered to be significant therefore corresponding mitigation measures have not been identified. Where hedgerows are removed these will be reinstated or

alterative stock-proof fencing will be provided to ensure field boundaries remain secure to keep livestock in place. Where any fences, walls or hedges are damaged during the construction phase these will be made stock proof immediately. During the construction phase the contractor will be advised to close all gates used to prevent stock from straying. Existing access to property will, where practicable remain during construction, otherwise reasonable temporary access will be provided. The crossings or adjustments to the utilities will be constructed in accordance with the relevant service providers to avoid/minimise disruption to their services. Any disruption to water supply will be reinstated immediately or an alternative source will be provided.

The proposed road improvements may create benefits in terms of upgraded infrastructure.

Discussions should be made with boat owners currently mooring their vessels proximate to the jetty to seek suitable alternatives during the construction and operational phases of the development.

Mitigation relating to air quality, noise and landscape/visual are discussed in Chapters 11, 12 and 13. All impacts have been assessed as being within acceptable parameters.

15.7 Residual Impact

The overall residual impact of the proposal on the Human Environment is likely to be positive, due to the benefits that will arise from the provision of an improved Greencastle Pier road and the economic benefit of providing a new linkage between Northern Ireland and Republic of Ireland.

In addition there will be a further economic benefit during the construction phase as a result of using local labour forces.

It is not anticipated that there will be any further negative residual impacts as a result of the proposal.