

Chapter 11

Material Assets

11.1 Introduction

This section of the EIS discusses the impact of the proposed M7 Naas to Newbridge By-Pass Upgrade Scheme on Agricultural and Non-Agricultural Property.

Other impacts on Material Assets are also addressed in the following sections:

- Chapter 8 Hydrogeology;
- Chapter 9 Hydrology;
- Chapter 13 Archaeology, Architecture and Cultural Heritage.
- Chapter 14 Landscape and Visual Impact;
- Chapter 15 Noise and Vibration; and
- Chapter 16 Air Quality and Climate;

The proposed upgrade scheme is comprised of the widening of the M7, the proposed Newhall Interchange and a number of additional attenuation ponds alongside the M7. The impacts of the proposed development are examined in the following format to address these elements:

- Widening of the M7;
- Agricultural Property Impacts – Newhall Interchange and Attenuation Ponds;
- Non Agricultural Property Impacts – Newhall Interchange and Attenuation Ponds.

11.2 Methodology

This chapter will describe the receiving environment and determine the significance of the impact of the proposed scheme on agriculture and property. 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).

The study area comprises of the farm, residential and other property directly impacted by the proposed scheme. An assessment of the study area was carried out to determine the baseline agricultural and property environment and assign a baseline rating to each of the individual properties directly impacted by the proposed scheme. This baseline rating together with the impact magnitude of the construction and operation impacts associated with the proposed scheme will determine the significance impact on both agriculture and property.

The assessment consisted of a desktop survey of available information, a roadside survey of the proposed route alignment and detailed farm surveys. The available information included the Design of the Proposed Road Development (**Figures 4.2 – 4.10, EIS Volume 3**), individual property drawings with landownership and proposed landtake.

The desktop survey of the baseline environment relied on information from a number of sources as outlined in **Table 11.1**.

Table 11.1: Information used in assessment and sources

Information	Source
Land ownership details	Kildare County Council & landowner consultation.
Soils information	'Soils Associations of Ireland and their land use potential'(Gardiner & Raford, 1980).
Agricultural statistics	National census of agriculture statistics derived from the June 2010 census of agriculture (Central Statistics Office, 2012).
Planning and zoning objectives	Kildare County Development Plan (2011-2017).

The desktop survey identified the farm holdings and other property directly impacted by the proposed scheme. For property where the impact consisted of lands other than public road, landowner consultation and field surveys were arranged.

Surveys involved on-site meetings and completion of detailed questionnaires with agricultural property owners. A walkover survey of the affected lands (around the proposed Newhall Interchange) enabled an assessment of the impact on the proposed scheme and the mitigation measures necessary to alleviate negative impact. Landowner consultation was conducted in June 2013. Detailed information from all surveys and landowner feedback was submitted to the project design team to assist with the preparation of the final design of the proposed scheme.

11.3 Impact of M7 Widening

The proposed widening of the M7 involves the addition of a third lane to both the northbound and southbound lanes of the M7 motorway between Johnstown and Greatconnell. The additional lanes will be developed within the existing land take of the M7 motorway – refer **Plate 11.1**, below, which outlines the available width of the central median and **Plate 11.2** which presents the M1 widening project where the third lane was also widened within the existing median.



Plate 11.1: Typical stretch of the M7 highlighting width of central median



Plate 11.2: M1 Widening project under construction

As no additional lands beyond the existing road land take will be required for the motorway widening and as the example of the M1 widening has shown that it is possible to successfully undertake a similar widening project and maintain two traffic lanes on both carriageways at all times it is concluded that there will be no impact on Material Assets. This conclusion is detailed below:

Agricultural Property

There will be no direct impact on agricultural property as a consequence of the construction or operation of the proposed widening of the M7. As a consequence of undertaking the widening within the existing road land take there will no requirement for the acquisition of any land, there will be no farm severance, no impact on farm buildings etc.

Indirect impacts may arise as a result of construction activities. These are reviewed in Section 11.4.4 under Construction Impacts and the referenced mitigation measures with respect to construction noise and dust will be applied throughout the whole scheme.

Residential Property

There will be no direct impact on any Residential Property assets as a consequence of the construction or operation of the proposed widening of the M7. A number of properties adjacent to the motorway currently experience high noise levels which impacts the amenity and enjoyment of their property. The noise assessment and

associated mitigation measures outlined under Chapter 15 Noise and Vibration has referenced the Kildare Local Authorities Noise Action Plan. The mitigation measures have been proposed to reduce noise experienced at these properties from existing levels – reference should be made to Chapter 15.

Commercial Property

There will be no impact on the operation of any commercial property as a consequence of the construction or operation of the proposed widening of the M7.

Community and Recreational Facilities

There will be no impact on any community or recreational facility nor will access to any facilities be negatively impacted.

Residual Impacts for Property

At operation, when all the mitigation measures detailed in this EIS have been completed, it is considered that there will be no residual impact on any property as a result of the proposed upgrade of the M7 Naas to Newbridge By-Pass.

11.4 Agricultural Property Impacts – Newhall Interchange and Attenuation Ponds

11.4.1 Study Area

There are 7 agricultural and 3 non-agricultural properties impacted by the proposed Newhall Interchange and additional attenuation ponds. Landtake will comprise of ten hectares of agricultural lands, non-agricultural property and public road. Agricultural lands consists of grassland and tillage lands adjacent to the existing M7 motorway. Non-agricultural property in the study area consists of commercial businesses and lands developed for industrial / warehousing use.

11.4.2 Assessment Methodology

Baseline rating

The 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 walkover surveys and landowner consultations on farm holdings directly affected by the proposed scheme.

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 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 indicative of a medium baseline rating.

Land quality on a farm holding will determine the 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 or typography 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 the available grassland area and access to and from a farmyard to 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.

The determination of a baseline rating will 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.

Baseline rating criteria

The criteria used to determine the baseline rating for the farm holdings on the proposed scheme are shown in Table 11.2.

Table 11.2: Baseline rating criteria

Baseline	Criteria
High	Intensively managed agricultural 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 livestock 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. Agricultural lands of medium quality which is zoned or planning permission exists for non-agricultural purposes.
Very low	Unused agricultural lands. Agricultural lands of poor quality which is zoned or planning permission exists for non-agricultural purposes.

Impact magnitude

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

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

Landtake

The effect of agricultural landtake can be significant and the acquired area together with 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.

For the proposed scheme, landtake will generally involve small areas along the external boundary of farms adjacent to the M7 motorway and the R445.

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 duration 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 impact than temporary severance.

For the proposed scheme, the effect of land severance will be limited due to the impact on farm holdings along external boundaries.

Impact on farm buildings / facilities

The impact of a proposed road 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.

There are no impacts on farm buildings / facilities on the proposed scheme.

Other impacts such as impacts to land drainage and services

The construction activities on a proposed road 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 scheme will impact on the local drainage network and field drainage adjacent to the M7 (refer **Figure 4.5, EIS Volume 3**). There will be an impact on water supply where existing connections to water mains are affected.

Magnitude of impact criteria

The criteria used to determine the magnitude of impact for the farm holdings on the proposed scheme are shown in **Table 11.3**.

Table 11.3: 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. • Temporary or short-term landtake of such an area without noticeable consequences. • 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.

Impact significance

The significance of the impact on a property is determined by the baseline rating of a farm holding combined with the magnitude of impact of the proposed scheme. 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 for a property is determined by reference to the matrix in **Table 11.4** using the baseline rating and magnitude of impact. The likely significance of impact is prior to the implementation of any mitigation measures.

Table 11.4: Significance of impact

Baseline rating	Magnitude of impact				
	Very low	Low	Medium	High	Very high
High	Slight	Slight	Moderate	Significant	Profound
Medium	Imperceptible	Slight	Moderate	Significant	Significant
Low	Imperceptible	Slight	Slight	Moderate	Moderate
Very low	Imperceptible	Imperceptible	Slight	Slight	Slight

11.4.3 Description of the Existing Environment

Agriculture in Ireland

The development of a road project which will require the permanent acquisition of agricultural lands may result in a reduction in the national utilisable agricultural area. The national agricultural area is 4,991,353ha including commonage and rough grazing. When these categories are excluded there is 3,777,734ha of grassland, 273,898ha of cereals and 80,029ha of other crops, fruit and horticulture.

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%).

Agriculture in Co. Kildare

The total agricultural area of Co. Kildare is 115,058ha and when commonage and rough grazing are excluded there is 79,651ha grassland, 26,849ha cereals and 3,962ha of other crops, fruit and horticulture (CSO, 2012).

There are 2,578 farms with an average farm size of 44.1ha. The main agricultural enterprises are beef (42.5%), tillage (15.5%), mixed grazing livestock (14.4%) and sheep (8.5%)(CSO, 2012).

Soils

The soils in the study area consist of two soil associations (Radford & Gardiner, 1980), No. 34 and No. 39.

Soil association No. 34 is comprised of Minimal Grey Brown Podzolic (70%), Gley (20%) and Brown Earth (10%) soils over limestone glacial till. The predominant soil is a well-drained, deep soil with medium texture and good moisture holding capacity while the associated Gley soil is poorly drained. The soil association has a wide use range being suitable for tillage, pasture meadow and forestry.

Soil association type No. 39 is comprised of Gley (90%) and Grey Brown Podzolic (10%) soils over limestone glacial till. The principal soil, similar to the associated soil in No. 34, is poorly drained due to the high clay content, weak structure and heavy texture of the soil. The associated Grey Brown Podzolic soil is well drained. The suitability of the soil association is limited due to poor drainage and use range is limited to pasture. With a suitable outfall, drainage and good management, maximum productivity can be sustained.

Agriculture in the study area

The study area topography is flat to undulating lowland with elevations ranging from approximately 120m to 70m. Lands comprise of dry mineral soils and allow moderate agricultural range and usage being suited to both grassland and tillage.

Agricultural practices along the proposed route are intensive in nature and the main farm enterprises comprise of tillage and beef production. There are equine farms and farms with mixed crops and livestock grazing (beef, horses and tillage) present. Farm size ranges from 3ha to 125ha with an average of approximately 33.5ha. The baseline rating of farms, directly affected by the proposed scheme, ranges from Medium on four farms to High on three farms.

Details of farm size, farm type and baseline rating for farms affected by the proposed scheme are presented in **Table 11.6**.

11.4.4 Predicted Impacts

Impact on agriculture nationally

The permanent acquisition of approximately 9.6ha of agricultural land is not significant at a national level.

Impact on agriculture in County Kildare

The proposed scheme will involve the permanent acquisition of approximately 9.6ha of agricultural land from seven farm holdings. This area, which may be significant on some of the affected individual farms, is not significant at a county level.

Impact on agriculture in the study area

The impact on agriculture is limited to those farm holdings directly impacted by the proposed scheme. Measures to mitigate the adverse effects of the project development are described in **Section 11.4.5**. The significance of the residual impact following the implementation of mitigation measures are described in **Section 11.4.6**.

The proposed Newhall Interchange and the additional attenuation ponds will directly affect seven agricultural properties. A detailed assessment involving landowner consultation was carried out on all farms.

A summary of the results of the impact on agriculture assessment is presented in **Table 11.5**.

The assessment of the impact of the proposed scheme on agriculture property is presented in **Table 11.6**.

Table 11.5: Summary of the impact on agriculture

Details	No. of farms	% of total
Magnitude of impact		
High	0	0%
Medium	4	57.1%
Low	3	42.9%
Very low	0	0%
Significance of impact		
Profound	0	0%
Significant	0	0%
Moderate	4	57.1%
Slight	3	42.9%
Imperceptible	0	0%

The magnitude of impact on farm holdings ranges from Low on three farms to Medium on four farms.

The significance of impact, which is determined by combining the magnitude of impact and the baseline rating for that farm, ranges from Slight on three farms to Moderate on four farms.

For farms with a Moderate significance of impact the farm enterprise can be continued as before but will experience increased management difficulties.

Details of magnitude of impact and impact significance for farms affected by the proposed scheme are presented in **Table 11.6 (refer Figures 11.1 – 11.9, EIS Volume 3)**.

Table 11.6: Assessment of the impact on agricultural property (refer Figures 11.1 – 11.9, EIS Volume 3)

No.	Farm size (Ha)	Enterprise type	Agri (Ha)	Baseline rating	Impact details	Magnitude of impact	Significance of impact	Mitigation measures	Residual impact
1	20.2	Equine	1.789	Medium	Reduction in area of lands. Impact on mature tree / hedge boundary.	Medium	Moderate	Replace boundary with permanent stockproof boundary.	Moderate
2	17.0	Leased	1.493	Medium	Reduction in area of lands. Impact on mature tree / hedge boundary.	Low	Slight	Replace boundary with permanent stockproof boundary.	Slight
3	125.0	Tillage	0.522	High	Reduction in area of lands. Impact on mature tree / hedge boundary.	Low	Slight	Replace boundary with permanent stockproof boundary.	Slight
4	23.2	Leased	3.796	High	Reduction in area of lands. Impact on access to lands. Impact on mature tree / hedge boundary.	Medium	Moderate	Replace access to lands. Replace boundary with permanent stockproof boundary.	Moderate
5	3.2	Equine	0.968	Medium	Reduction in area of lands. Impact on mature tree / hedge boundary.	Medium	Moderate	Replace boundary with permanent stockproof boundary.	Moderate
6	40.5	Mixed crops & livestock - Equine & Beef	0.569	High	Reduction in area of lands. Impact on mature tree / hedge boundary.	Medium	Moderate	Replace boundary with permanent stockproof boundary.	Moderate
7	5.7	Leased	0.474	Medium	Reduction in area of lands. Impact on mature tree / hedge boundary.	Low	Slight	Replace boundary with permanent stockproof boundary.	Slight

Construction Impact

The Upgrade scheme will comprise mainly of construction works within the existing boundary of the M7 motorway. Where the scheme directly impacts on agricultural lands outside of the motorway these impacts have been assessed as part of this chapter.

The assessment of the impact on agricultural land includes the effects of the construction impacts of the proposed scheme. The incorporation of construction impacts in the assessment acknowledges the presence of the M7 motorway as opposed to a 'green field' study area and the associated effects on adjacent agricultural lands from noise, air and visual impacts.

Construction activity associated with the proposed scheme will give effect to further 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. Intermittent noises close to farm buildings can distress livestock.

Mitigation

Measures to mitigate noise impacts on sensitive receptors is detailed within Chapter 15 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.

Dust

Dust generated from the exposure of soil to the atmosphere during construction may cause annoyance or nuisance to the farmer and farm animals. The proliferation of dust during construction has a nuisance effect.

Livestock are at risk of eye irritations from high levels of windblown dust particles. This stress may reduce productivity and increase management difficulties, especially on equestrian farms.

Mitigation

Measures to control the production of dust will be put in place by the contractor (refer Chapter 16 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 away as possible from the construction work during critical times.

Restricted access to land

Access to land will be required to be maintained during the road construction process (i.e. following the commencement of construction but before the accommodation works have been completed).

Mitigation

Access will be restored to lands where it is removed or restricted by the proposed scheme. 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 construction authorities 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.

Disturbance of field drainage

It is to be expected that field drainage systems currently in situ will be disturbed and in places destroyed by the construction works. These systems will be restored as part of the completed road works. However, there may be temporary impaired drainage in the period of time between initial disturbance and final reinstatement of such drainage works.

Mitigation

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 could include allowing waters to drain to less critical areas, so as to minimise the impact.

Disturbance of services

Access to either piped water or drinking points on watercourses may be affected during construction through the severance of piping on the farm or the diversion of watercourses used by livestock on the farm.

Electric fencing used on farms to stock proof farm boundaries or control the movement of stock may also be affected.

Mitigation

Where required, an alternative source of water / electricity will be provided to ensure that disruption to farming is minimised during the construction phase.

11.4.5 Mitigation

This section describes the measures that when implemented will mitigate the adverse impact on agriculture. 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 scheme 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 are proposed for the proposed scheme:

- Access will be restored to lands where it is removed or restricted by the proposed scheme. The location of such access will be at a suitable location and, where possible, with the agreement of the landowner.
- In general, permanent fencing along the proposed scheme will be timber post and rail fence with chain-link wire mesh in accordance with NRA Road Construction Details Drawing No. RCD/300/01. Permanent fencing of attenuation ponds will be 2.4m high chain link security fence. Where permanent fencing is erected on the boundary of the M7 motorway or associated attenuation ponds, it will be maintained by the Local Authority.
- For farm holdings with equestrian livestock, permanent fencing will be timber post and rail fence with chain-link wire mesh in accordance with NRA Road Construction Details Drawing No. RCD/300/02. Where permanent fencing is erected on the boundary of the M7 motorway or associated attenuation ponds, it will be maintained by the Local Authority.
- All existing land drains and watercourses severed by the proposed road will either be directed to a culvert under the proposed national road and / or associated side road realignments or will be incorporated into the new road drainage system. The new drainage system will be designed to ensure that the current drainage situation will not be made any worse and there will be no increased risk of flooding as a consequence of the proposed road scheme.
- Any services that are interfered with as a result of the road scheme 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 farms affected by the proposed scheme are presented in Table 11.6.

11.4.6 Residual Impact

The significance of the residual impact on agriculture has been assessed following the implementation of general mitigation measures as outlined in **Section 11.4.5**. A summary of the residual impact on agriculture is presented in **Table 11.7**.

Table 11.7: Summary of the residual agricultural impact

Details	No. farms	% of total
Significance of impact		
Profound	0	0%
Significant	0	0%
Moderate	4	57.1%
Slight	3	42.9%
Imperceptible	0	0%

There has been no change in the residual agricultural impact following the implementation of recommended mitigation.

11.5 Non-Agricultural Property Impacts

11.5.1 Assessment Methodology

The effect of the proposed scheme on property, other than agricultural property, was considered in this assessment and included impacts on residential, commercial and sites for future development. The effect of the proposed scheme on these properties has also been considered under other chapters in this EIS report such as Human Beings, Noise & Vibration, Air and Climate and Landscape & Visual Impact.

Baseline rating

Property within the study area was assigned a baseline rating determined by the property type. Residential, commercial and development property (with planning permission) are indicative of a high baseline rating. Development property without planning permission is indicative of a medium baseline rating.

Baseline rating criteria

The criteria used to determine the baseline rating for property on the proposed scheme are shown in Table 11.8.

Table 11.8: Baseline rating criteria

Baseline	Criteria
High	Residential property. Commercial property. Community / recreational property. Development land / site with planning permission.
Medium	Development land / site without planning permission.
Low	Not applicable.
Very low	Not applicable.

Impact magnitude

Impacts on non-agricultural properties arising from the proposed development include:

- Non-agricultural properties that are to be acquired and permanently demolished.
- Non-agricultural properties where a portion is to be acquired on a permanent basis, e.g. property area.
- Non-agricultural properties where a portion is to be acquired on a temporary basis, e.g. property curtilage.
- Non-agricultural properties to which access will be directly restricted or altered, e.g. reinstatement of a property entrance.
- Non-agricultural properties where a portion consisting entirely of public road will be acquired on a temporary or permanent basis.

Magnitude of impact criteria

The criteria used to determine the magnitude of impact for the farm holdings on the proposed scheme are shown in Table 11.9.

Table 11.9: Magnitude of impact criteria

Magnitude	Criteria
Very high	An impact on the property where the use of the property cannot continue.
High	Not applicable.
Medium	An impact on the property where the use of the property can continue. An impact of permanent duration resulting in a change to the character of the property.
Low	An impact on the property where the use of the property can continue. An impact of permanent or temporary duration with a minimal or temporary effect on the character of the property.
Very low	An impact on the property that does not affect the use of the property (i.e. acquisition of public road only)

Impact significance

The significance of the impact on a property is determined by the baseline rating assigned to the property combined with the magnitude of impact of the proposed scheme. There are two categories of baseline rating applicable ranging from 'medium' to 'high'. There are five categories of magnitude of impact ranging from 'very low' to 'very high'. The likely significance rating for a property is determined by reference to the matrix in Table 11.10 using the baseline rating and magnitude of impact. The likely significance of impact is prior to the implementation of any mitigation measures.

Table 11.10: Significance of impact

Baseline rating	Magnitude of impact				
	Very low	Low	Medium	High	Very high
High	Imperceptible	Slight	Significant	Not applicable	Profound
Medium	Imperceptible	Slight	Moderate	Not applicable	Significant
Low	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Very low	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

11.5.2 Description of Existing Environment

Property in the study area

The study area consists of those non-agricultural properties that are directly impacted by the scheme. The study area is located within the environs of Naas town in a semi-urban setting of agricultural lands, residential and commercial property. Non-agricultural property in the study area consists of three commercial properties located at Newhall, Naas, Co. Kildare. These consist of a commercial business in the auto sector and two properties developed for industrial / warehousing.

The baseline rating for the three non-agricultural properties is high.

11.5.3 Predicted Impacts

Impact on property in the study area

The impact on property along the proposed scheme is limited to property directly impacted by the proposed scheme. The proposed scheme will involve the permanent acquisition of approximately 0.43ha from three non-agricultural properties.

Measures to mitigate the adverse effects of the project development are described in **Section 11.5.4**. The significance of the residual impact following the implementation of mitigation measures are described in **Section 11.5.5**. A summary of the impact of the proposed scheme on property is presented in Table 11.11.

The assessment of the impact of the proposed scheme on property is presented in Table 11.12.

Table 11.11: Summary of the impact on property

Details	No. of properties	% of total
Magnitude of impact		
High	0	0%
Medium	2	66.7%
Low	1	33.3%
Very low	0	0%
Significance of impact		
Profound	0	0%
Significant	2	66.7%
Moderate	0	0%
Slight	1	33.3%
Imperceptible	0	0%

The magnitude of impact comprises of a Low impact on a developed industrial estate and a Medium impact on a developed industrial estate and a commercial business.

The significance of impact is determined by combining the baseline rating and magnitude of impact for a given property. The significance of the impact of the proposed scheme is Significant on a developed industrial estate (Property No. 1) Significant on a commercial business (Property No. 2) and Slight on a developed industrial estate (Property No. 3). On all of these properties, the continued use of the properties will be possible.

On Property No. 1 in Table 11.12, the proposed scheme will involve a reduction in the property area and an impact on the commercial access and property boundary due to the proposed junction for the realigned Rathasker local road. On Property No. 2, there is a reduction in the property area and impact on property boundary due to the proposed Newhall interchange. On Property No. 3, there is a slight reduction to the area of the property. There is no impact on the existing property boundary.

Details of magnitude of impact and impact significance for property affected by the proposed scheme are presented in Table 11.11.

Table 11.12: Assessment of the impact on property (refer Figures 11.1 – 11.9, EIS Volume 3)

No.*	Property type	Public Road (Ha)	Agri Land (Ha)	Other (Ha)	Baseline rating	Impact details	Magnitude of impact	Significance of impact	Mitigation measures	Residual impact
8	Commercial	0.000	0.000	0.331	High	Reduction in property area. Impact on commercial entrance and property boundary.	Medium	Significant	Replace property boundary and entrance on a like for like basis.	Significant
9	Commercial	0.000	0.000	0.072	High	Reduction in parking / compound area. Impact on security fence and property boundary.	Medium	Significant	Replace property boundary on a like for like basis.	Significant
10	Commercial	0.000	0.000	0.027	High	Slight reduction in property area.	Low	Slight	Replace property boundary on a like for like basis, if necessary.	Slight

*No. Corresponds to the landownership numbering on Figures 11.1 – 11.9

Construction impacts

The proposed scheme will comprise mainly of construction works within the existing boundary of the M7 motorway. Where the scheme directly impacts on private property outside of the motorway these impacts have been assessed as part of this chapter.

The assessment of the impact on property includes the effects of the construction impacts of the proposed scheme. The incorporation of construction impacts in the assessment acknowledges the presence of the M7 motorway as opposed to a 'green field' study area and the associated effects on adjacent property from noise, air and visual impacts. These construction impacts have been addressed and measures to mitigate the effects are outlined in Ch. 15 Noise and Vibration, Ch. 16 Air Quality and Climate and Ch. 14 Landscape and Visual of this EIS.

11.5.4 Mitigation

This section describes the measures that when implemented will mitigate the adverse impact on property. 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 scheme 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 are proposed for the M7 Naas to Newbridge By-pass Upgrade scheme:

- The replacement of boundary walls on non-agricultural properties will be on a like for like basis or better, subject to safety considerations, or will be treated as a compensation issue.
- Prior to construction and subject to written agreement of the relevant property owners, property condition surveys will be undertaken in relation to all buildings / structures in use located within 50 metres of the extents of the CPO boundary.
- Any services that are interfered with as a result of the road scheme will be repaired / replaced without unreasonable delay.

Further mitigation specific to individual properties for other impacts are detailed and described in Chapter 14 Landscape and Visual, Chapter 15 Noise and Vibration and Chapter 16 Air Quality and Climate of this EIS.

11.5.5 Residual Impact

The significance of the residual impact on property has been assessed following the implementation of general mitigation measures as outlined in **Section 11.5.4**. A summary of the residual impact on property is presented in **Table 11.13**.

Table 11.13: Summary of the residual property impact

Details	No. farms	% of total
Significance of impact		
Profound	0	0%
Significant	2	66.7%
Moderate	0	0%
Slight	1	33.3%
Imperceptible	0	0%

There has been no change in the residual agricultural impact following the implementation of recommended mitigation.

11.6 Difficulties Encountered

Agriculture

None.

Non Agricultural Property

One property was identified prior to publication as being affected by the acquisition of 0.027ha under the CPO. It was not possible to contact the landowner at that stage and the assessment of the non-agricultural impact was based on a desktop review. The baseline rating and magnitude of impact were determined to be High and Low respectively. The significance of the impact on this property is Slight.