

37 Land Use

This chapter addresses the potential effects on existing and future land use within the Fastlink section of the proposed scheme. Agriculture is the main land use in the study area and the construction of the proposed scheme would result in a permanent loss of approximately 127 hectares (ha) of agricultural land.

Mitigation measures to reduce the impacts on agricultural businesses will include the provision of bridges or underpasses over and under the proposed scheme to maintain access to fields severed by the route. Mitigation would also include reconnection of field drainage systems, watering points for livestock and reinstatement of boundary features. The assessment found that no farms would have their viability compromised by the proposed scheme.

The main commercial and residential area within the study area is Stonehaven. In addition, there are scattered properties situated in the surrounding countryside and a few non-agricultural commercial properties. The access to four businesses would be affected (one of them adversely) by the proposed scheme and of these, one business would also be directly affected by land-take. The proposed scheme would not require the demolition of any residential properties within the Fastlink study area.

The proposed scheme would also affect community land, predominantly in the form of woodland. However, mitigation planting would result in a net gain of woodland in the study area.

37.1 Introduction

37.1.1 This chapter addresses the potential effects of the proposed scheme on existing and future land use within the Fastlink study area. The Fastlink section of the AWPR extends from ch0 to ch11500 and the study area that has been defined to assess the impacts on land use extends to 500m either side of the centreline of the proposed scheme, as shown on Figures 37.2a-f. This area lies within the Aberdeenshire Council boundary.

37.1.2 The types of land use addressed in this chapter include agriculture, forestry, community facilities (as community land but not buildings, unless to provide context), residential, business and industrial land, disused waterways and development land. Potential impacts on community facilities that are buildings are addressed in Chapter 46 (Pedestrians, Cyclists, Equestrians and Community Effects). In addition to the potential loss of agricultural, development land and the loss of land used by the community, this chapter considers the effects of demolition on residential and commercial property.

37.1.3 The main commercial interests identified within the study corridor are those in the primary sector (agriculture and forestry), with agriculture being the main land use identified. Other commercial interests include manufacturing, transport and communications. In this chapter, agriculture, forestry and other agriculturally related commercial activities that use the land as a resource, including sporting interests, are considered together.

37.1.4 The temporary changes to land use during the construction period, e.g. land required for storage of materials or plants, is considered separately in Chapter 48 (Disruption due to Construction).

Agriculture, Forestry and Sporting Interests

37.1.5 The assessment of the potential impacts of the scheme on agriculture, forestry (commercial) and sporting interests was undertaken by the Scottish Agricultural College (SAC) with input from ADAS for land at Elrick and North Cookney farms. In addition, a poultry assessment was undertaken for poultry enterprises (Coneyhatch, Fishermyle, Elrick and Lembas) by veterinarian Paul McMullin of Poultry Health Services and is reported separately in Appendix A37.4.

37.1.6 For the purposes of this assessment, agriculture is considered to be the practice of cultivating the land and rearing stock to produce food products. Forestry is defined in relation to the rearing of

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trees to produce wood and wood products. Sporting interests include shooting and stalking activities over agricultural land, forestry as well as water and fishing activities upon lochs, reservoirs, rivers, burns, canals and ponds.

37.1.7 The agricultural activities in the study area potentially affected by the proposed scheme are diverse. The capability of land to support different types of agricultural systems, from intensive arable cropping to more extensive pasture based systems, is determined by a range of physical factors such as relief and topography, climate (rainfall and growing season) and soil characteristics. Land is classed by the Macaulay Land Use Research Institute (MLURI) according to its land capability, reflecting the above conditions, and which is further discussed in Section 37.2.

37.1.8 In addition to their main farming activities, farmers are developing, particularly in more recent years, complementary activities to generate more diverse income streams for the farming business. These include novel crop and livestock systems, provision of tourist accommodation, leisure and recreation pursuits (including equestrian activity), value-added products and contracting (labour and machinery). In terms of assessing impacts on these additional business activities (e.g. liveries), the loss of agricultural land has been addressed in the agricultural assessment. However, the impacts on the business have been addressed by the business impact assessment.

37.1.9 The agricultural assessment within this chapter:

- describes the agriculture, forestry and sporting activity in the route corridor;
- outlines the potential effects on agriculture, forestry and sporting activities during construction and operation of the proposed scheme;
- describes mitigation measures; and
- identifies residual effects as well as potential aggregate residual effects.

Community Land

37.1.10 For the purposes of this assessment, community land is land that is used by the community for educational, recreational and amenity purposes, and can be either publicly or privately owned. This includes open ground encompassing common or open space, woodland, countryside/greenbelt, derelict and vacant land. In DMRB Volume 11, 'common', refers to any town or village green, and 'open space' refers to any land laid out as a public park or used for public and private recreation, or land that is a disused burial ground. Community land is defined as that used by the public for recreation and amenity. Access to community facilities such as buildings, footpaths, cycleways and equestrian routes are considered separately in Chapter 46 (Pedestrians, Cyclists, Equestrians and Community Effects). Land containing archaeological remains, historic buildings or gardens are considered in Chapter 43 (Cultural Heritage).

37.1.11 DMRB Volume 11 also requires that any potential impacts on un-navigable, disused waterways and any waterway restoration or development proposals be considered. British Waterways was consulted regarding the proposal and to identify the presence of any disused waterways in the study area. As no waterways of this category have been identified for this assessment, this is not considered further in this chapter. Impacts on land of ecological importance are addressed in Chapter 40 (Ecology and Nature Conservation).

Residential and Commercial Land Use

37.1.12 The assessment of the potential impacts on residential and commercial land use is concerned with the demolition of property and associated land-take, as a result of the proposed scheme resulting in loss of homes, facilities, amenities, services or employment. Compensation may be available where there is demolition or loss of private property, and this will be addressed by an economic appraisal of the scheme by the District Valuer prior to the commencement of construction.

37.1.13 An assessment of the potential impact of the proposed scheme on non-agricultural/forestry businesses and commercial interests within the study area was undertaken independently by Tribal

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HCH and is documented in a separate report (Aberdeen Western Peripheral Route: Fastlink Impact on Businesses, Tribal HCH 2006 and 2007). This report is confidential as it contains commercially sensitive information on businesses.

Development Land

37.1.14 The assessment of impacts on development land addresses the potential effects of the scheme on future land use changes. For the purposes of this assessment, development land is land that is covered by local authorities' land use planning designations, as identified in Structure and Local Plans, as well as any planning proposals lodged with the planning authorities.

37.2 Approach and Methods

37.2.1 The assessment of the potential impacts of the proposed scheme on land use was undertaken in accordance with the 'Design Manual for Roads and Bridges' (DMRB) Volume 11, Section 3, Part 6 (The Highways Agency et. al., 1993).

37.2.2 The approach and method used is considered separately for each of the following land interests:

- agriculture, forestry and sporting interests;
- community land;
- residential and commercial land use; and
- development land.

37.2.3 For the assessment, the sensitivity of land use features is identified. The magnitude of impacts is then assessed based on specified criteria. From the sensitivity and magnitude, an assessment of the significance of impacts is then made. Mitigation measures to address adverse impacts are identified. This is followed by an assessment of the residual impacts of the scheme, taking into account those mitigation measures.

Agriculture, Forestry and Sporting Interests

37.2.4 The assessment of the effects on agriculture, agriculturally related activities, forestry and sporting activities involves a combination of:

- desk based research of information sources in relation to agriculture, forestry and land use in the area;
- consultation where appropriate with interested parties and organisations;
- identification of characteristics and extent of different agricultural, forestry and land management activities along the length of the proposal;
- site visits and inspections by experienced professionals; and
- interviews with the landowners and tenants whose land would be directly affected by the proposed scheme.

37.2.5 To assess the overall significance of the potential effects of the proposed scheme on agricultural, forestry and sporting activities, an objective assessment involving sensitivity to impact and magnitude of effects was adopted. This provided an assessment framework and ensured overall consistency of reporting.

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- 37.2.6 Structured interviews were held with the landowners and tenants of the potentially affected farms and holdings, and with forestry and sporting landowners and managers within the study corridor. This allowed the following baseline information to be ascertained:
- extent of property holdings and form of land ownership;
 - land use, management and performance levels attained;
 - labour and machinery resources;
 - sporting activity and management;
 - other business interests; and
 - existing grants.
- 37.2.7 The questionnaire used in the survey and interviews for the Northern Leg, Southern Leg and the Fastlink can be found in Appendix A7.2. The results of these interviews were supplemented by the following assessments:
- Land Use and Land Capability
- 37.2.8 The combination of site visits and soil investigations allowed land use and land capability along the proposed scheme to be categorised.
- 37.2.9 Additionally, MLURI Land Capability for Agriculture data were used to indicate the land class along the proposed scheme. This classification system gives an indication of the capability of the land to grow certain types of crops and grass. The full classification can be found in Appendix A7.3. Land is classified into seven main classes, some of which have subdivisions. Class 1 is the best quality land and Class 7 is the poorest quality land. Classes 1, 2 and 3₁ are known as prime quality land. Classes 3₂ to 7 are known as non-prime land. The MLURI data were verified with on site assessments of topsoil depth, soil texture, soil colour, wetness, stone content and gradient. This allowed a full and complete assessment of the land according to the Macaulay Land Capability for Agriculture Classification System.
- 37.2.10 Both the magnitude of the effects and the sensitivity of the holdings or particular agricultural land uses are assessed. The assessment of the magnitude of impact is based upon the anticipated land-take identified for each land interest based on the current road model at the time and landscape mitigation proposals. Issues such as severance, access and changes in management of the land parcels are also identified and considered in the magnitude assessment. The assessments of sensitivity are based on the quality of the land affected, the type of farming activity practiced and the farm size. The assessment of magnitude and sensitivity has been based upon indicative criteria and professional judgement.

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37.2.11 Table 37.1 and Table 37.2 outline the characteristics and description of impacts for each sensitivity and magnitude rating.

Table 37.1 – Sensitivity of Receptor

Sensitivity	Characteristics
High	Presence of prime quality land (Grade 1, 2, 3 ₁). Conventionally farmed intensive arable cropping and/or intensive livestock systems (e.g. dairying). Land of any farm type farmed according to organic/biodynamic standards. Small farm size < 50ha High value woodland that is rare or distinctive and susceptible to small changes.
Medium	Presence of land of moderate quality (Grade 3 ₂ , and 4). Conventionally farmed mixed livestock and crop systems of moderate intensity. Average farm size > 50 < 100ha. Moderate value woodlands tolerant of moderate levels of change.
Low	Presence of land of low quality (Grade 5, 6 & 7). Conventionally farmed extensive livestock systems. Large farm size >100ha. Land let out. More commonplace woodland tolerant of noticeable change or undergoing substantial development.

Table 37.2 – Magnitude of Impact

Magnitude	Impact Description (one or more criteria)
High	Loss of > 10% of the farmed area. High degree of severance (> 10% of the farmed area). Access to fields compromised with longer route required and machinery restricted. High degree of disruption to cultivation patterns with high risk of change in land use. Disruption to driven shooting and high value fishing (e.g. salmon). Potential for high degree of change in permanent or seasonal employment. Noticeable change to the woodland over a wide area or an intensive change over a limited area.
Medium	Loss of >5% <10% of the farmed area. Moderate degree of severance (>5% < 10% of the farmed area). Access to fields changed but moderate increase in travelling and all machinery able to access. Moderate degree of disruption to cultivation patterns with moderate risk of change in land use. Disruption to walked up shooting and medium value fishing (e.g. trout). Potential for moderate degree of change in permanent or seasonal employment. Small changes to the woodland over a wide area or a noticeable change over a limited area.
Low	Loss of >1% <5% of the farmed area. Low degree of severance (<5% of the farmed area). Access changed with minimal increase in travelling and all machinery able to access. Minimal degree of disruption to cultivation patterns and low risk of change in land use. Disruption to rough shooting and low value fishing (e.g. no permit charged). Potential for low degree of change in permanent or seasonal employment. Very minor changes to the woodland over a wide area or minor changes over a limited area.
Negligible	Negligible change to any of the above factors.

37.2.12 Professional judgement and awareness of the relative balance of importance between sensitivity and magnitude allows the overall significance of impact to be assessed in accordance with the general approach and methods adopted in this document and the following table.

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Table 37.3 – Significance of Impact

Magnitude	Sensitivity		
	High	Medium	Low
High	Substantial	Moderate/Substantial	Moderate
Medium	Moderate/Substantial	Moderate	Slight/Moderate
Low	Slight/Moderate	Slight	Negligible/Slight
Negligible	Slight	Negligible/Slight	Negligible

37.2.13 The table provides a guide as to the significance of impact, although it should be noted that professional judgement is used to determine the final significance category. The significance of impact is assessed without mitigation and then with mitigation to determine the residual impacts.

37.2.14 Additionally, in accordance with DMRB Volume 11, an assessment of the residual impact on the likely future business viability of each of the agricultural land holdings is made. The final assessment relies on professional judgement and is completed by assessing various factors including:

- potential impacts of land-take and severance post mitigation;
- likelihood of change in the type of husbandry and land use;
- impact on environmental agreements; and
- the consequent potential impact on likely future viability.

37.2.15 Viability of units is only assessed where the residual significance of agricultural impact is Moderate or above and where the land interests are considered agricultural/forestry commercial businesses, (i.e. where the majority of the income arises from agricultural and/or forestry production activity).

37.2.16 Impacts relating to the total area of land lost for each land capability grade are also determined for each land interest and for the Fastlink of the proposed scheme.

Community Land

37.2.17 Community land was identified through site visits, as well as a review of OS map data and the development plans, which are discussed in paragraph 37.2.22 (Development Land) and in more detail in Chapter 49 (Policies and Plans). The approach to assessing the impact on community land has been to assess the sensitivity of each feature identified according to the sensitivity criteria shown in Table 37.4. The magnitude or extent to which the route affects any of these features was then calculated using criteria as set out in Table 37.5. An assessment of the significance of impact is then undertaken as shown in Table 37.6.

Table 37.4 – Criteria for Sensitivity of Community Land Use Interests

Sensitivity	Description
High	Community land of national importance, e.g. National Parks.
Medium	Land used by the community on a regional scale, e.g. Country Parks, forests and other land managed in such a way as to attract visitors from a regional, or wider, catchment.
Low	Locally used community land, e.g. local parks, cemeteries and local areas of woodland potentially used for recreation.

Table 37.5 – Magnitude of Impact Criteria for Community Land Use Interests

Magnitude	Impact Description (one or more criteria)
High	> 50% loss of land and/or complete severance of a site.
Medium	Loss of part of a site (between approximately 15% to 50%) and/or major severance of a site.
Low	< 15% loss of a site and/or partial severance.
Negligible	Very slight change from the baseline condition. Change hardly discernible, approximating to a 'no change' in conditions.

Table 37.6 – Significance of Impact Criteria for Land Use Interests

Magnitude	Sensitivity		
	High	Medium	Low
High	Substantial	Moderate/Substantial	Moderate
Medium	Moderate/Substantial	Moderate	Slight/Moderate
Low	Slight/Moderate	Slight	Negligible/Slight
Negligible	Slight	Negligible/Slight	Negligible

Residential and Commercial Land Use

- 37.2.18 The approach to assessing the potential impact of the proposed scheme on businesses and industrial land was undertaken by conducting face to face interviews with those businesses likely to be affected by the route through demolition or land-take. The interviews were conducted to ascertain the implications of loss of employment and future viability.
- 37.2.19 Residential properties affected by the proposed scheme were identified through a review of Ordnance Survey maps and consultation. The demolition of residential properties is always assessed as an adverse impact of Substantial significance.
- 37.2.20 The assessment of the impact on individual businesses was undertaken using the following criteria:
- Beneficial Impact: the business would be able to continue trading and developing as planned with the proposed scheme making a beneficial contribution to business development;
 - Neutral Impact: the business would be affected by the proposed scheme, but it is likely to be able to continue trading; and
 - Adverse Impact: the business would have to reduce its activities, relocate or close completely.
- 37.2.21 The proposed scheme will require changes to existing access arrangements. The potential impacts from changes to access will include non-agricultural businesses. Therefore, changes to existing access arrangements for non-agricultural businesses is assessed according to the following criteria:
- Beneficial Impact: business access arrangements are maintained and enhanced such that the business may potentially benefit from improved access.
 - Neutral Impact: business access arrangements maintained with minor modifications/diversions or no diversions required.
 - Adverse Impact: business access arrangements not maintained, without extensive modifications and diversions required.

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Development Land

- 37.2.22 A review of the following Structure and Local Plans was undertaken to identify development land within the study area:
- North East Scotland Together Aberdeen and Aberdeenshire Structure Plan 2001-2016 (July 2002); and
 - Aberdeenshire Local Plan (June 2006).
- 37.2.23 Further detailed information on development plans for Aberdeenshire is provided in Chapter 49 (Policies and Plans).
- 37.2.24 The assessment of impacts on development land was undertaken through consultation with the Aberdeenshire Council Planning Authority. The Council was contacted to identify current planning applications within the study area. They were invited to provide comment on these and on the development land identified.
- 37.2.25 Planning applications within the study area comprise sites covered by current planning applications, applications within the last five years (July 2001 to July 2006), including approved applications not yet implemented, applications pending, and applications refused, but with an appeal pending. Planning applications not considered by the assessment are those which are single housing improvements/extensions that are not directly affected by the proposed scheme; applications which have been withdrawn; applications which have been refused; enforcement actions; and applications outside of the study area.
- 37.2.26 It should be noted that Part E of this ES considers the cumulative environmental effects of the AWPR and major developments likely to take place within the area over similar timescales.
- 37.2.27 The assessment of the impact on development land and planning applications was undertaken using the following criteria:
- Beneficial: the land will still be available for the proposed use, and the development of the road would improve the viability of the site for the proposed development (generally through improved access). Impacts on the amenity of the site would not interfere with its proposed use or the impact on the amenity would be beneficial, in that the road would improve the appropriateness of the site for its proposed use.
 - Neutral: the land will still be available for the proposed use and there would be no impact on the viability of the site for the proposed development. There would be no impact on the amenity of the site that would interfere with its proposed use.
 - Adverse: some or all of the site would no longer be available for the proposed use and the road would reduce the viability of the development taking place. Or, the road would impact on the amenity of the site in such a way as to interfere with its proposed use.
 - Mixed: the assessment of potential impacts includes some adverse and some beneficial factors.

Limitations to Assessment

- 37.2.28 DMRB Volume 11 identifies the potential 'blight' that could occur as part of a road scheme. Blight manifests itself as the reduction in property prices and/or the partial dereliction of an area due to its proximity to the proposed scheme. It further reflects an anticipated fall in the desirability of a property/area as a result of construction and operation of the road. Property prices are not a material consideration in the planning process and therefore not usually assessed in EIA. Blight is not specifically assessed as it would result in 'doubling up' of impacts (i.e. factors that contribute to blight e.g. noise, visual disturbance and community effects are already included within the relevant chapters of this ES). The potential for economic blight is considered as changes to the viability of a

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business due to the proposed scheme, and is included within the assessment (refer to Section 37.5).

- 37.2.29 Land-take estimates are based on the areas shown on the Draft Compulsory Purchase Orders (CPO) which include the scheme design elements, the extent of earthworks and the mitigation measures proposed in this ES (including land returned to agriculture and forestry). At the time of writing this report, the CPO was in the process of being finalised. As the assessment was therefore based on the Draft CPO, any further refinement of detailed design elements may affect the land-take of the scheme. However, it is considered that the areas calculated in this chapter represent a robust assessment; any changes to design elements are envisaged to be minor and, consequently, it is unlikely that impacts reported in this chapter would be affected. However, should later amendments to the scheme design be likely to affect land-take significantly, a recalculation and reassessment would be undertaken.
- 37.2.30 Land-take calculations are reported in hectares to two decimal points. The calculations are generated by using ArcView GIS and AutoCAD measurements. AutoCAD measurements are specifically used for the field-by-field assessment. It should be noted that there will be an inherent limitation to the accuracy of the figures based on the limitations of the software. Severance is also calculated to two decimal places but reported in whole numbers (although the percentage of severance is calculated based on the two decimal place value).
- 37.2.31 There are some differences between the land-take estimates for agricultural land and community land, due to the different focuses of these assessments. The assessment for agricultural land considers the loss of an area belonging to a particular land interest, where the extent of land affected includes not only areas required for the scheme, but also those used for mitigation purposes such as planting. This loss would be reduced if any areas required for mitigation are returned to agriculture and are therefore available for use by the land interest. In contrast, the loss of community land considers the loss of land in terms of its availability for use by the community rather than the land interest. In this assessment, mitigation areas (e.g. planting) may retain a community use and therefore can often result in a reduction to the amount of community land lost.
- 37.2.32 Similarly, the land-take and area calculations undertaken for the land use assessment differ from those undertaken as part of the ecology assessment, owing to the different focuses of the assessments. The land use assessment considers the value of woodland in terms of community use, whereas the ecology assessment considers the value of woodland in terms of habitat and presence of protected species.

Agriculture, Forestry and Sporting Interest

- 37.2.33 The approach and methods adopted for assessing the impact on agricultural, forestry and sporting interests has involved interviews with affected land interests and an assessment of the general impacts on their business. However, in addition to the limitations discussed in previously, the assessment is limited in the following areas :
- only desk based assessments have been completed for two land interests as it was not possible to arrange visits with them in the assessment timeframe;
 - land-take measurements are estimates (see paragraph 37.2.30); and
 - mitigation measures have been identified and proposed where possible but these have not been refined and agreed with the land interests.
- 37.2.34 Nevertheless, the assessment is considered to provide a robust indication of the significance of effect on agricultural, forestry and sporting interests within the limits described above.

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37.3 Baseline Conditions

- 37.3.1 The land use within the study corridor for the Fastlink section of the scheme is predominantly rural in nature. The main land use is agricultural land with scattered residential properties, towns and villages. A description of land uses within the study area for the proposed scheme is provided in this section.
- 37.3.2 Existing land use within the study area is shown on Figures 37.2a-f. Transport infrastructure and public utilities are also discussed below, although these are not highlighted on the figures. Agricultural land use details are presented in Figures 37.1a-f.

Agriculture, Forestry and Sporting Interest

General Context

- 37.3.3 The Aberdeenshire Council area covers some 500,000 hectares of agricultural land equivalent to 8% of the Scottish agricultural land area. Land quality characteristics within the regions vary considerably. There is some prime quality (LCA Class 3₁) arable land in the region although the majority of the land is of more marginal quality (LCA Class 3₂). Hence the proportion of arable crops grown is relatively small with approximately one-third of the land area being classed as arable (in crop or in rotational grassland). Where cereal crops are grown, these are predominantly spring sown. Grass is by far the most important crop in the region with two-thirds of the total land area in temporary grass, permanent grass or rough grazing (SEERAD, 2006).
- 37.3.4 Cattle and sheep, dairy and mixed farms predominate with both crop and livestock farms having a relatively small average farm size when compared to the Scottish average. With good quality grassland common, the beef and sheep sectors are important both in the region and in a Scottish context. However, agriculture in the Aberdeen area, like other parts of Scotland, is changing and a decline in the livestock sector (particularly dairy and sheep) is evident as systems become less intensive. (SEERAD, 2006).
- 37.3.5 The majority of the area affected by the proposed scheme is agricultural land.

Land Capability

- 37.3.6 As discussed, the majority of the land within the study area is of Land Capability Class 3₂ (moderate range of crops of average production levels). There are isolated pockets of prime quality land of Land Capability Class 3₁. However, there is none of Class 1 or 2 in the study area.
- 37.3.7 At the very southern end of the Fastlink study area (ch000), the Land Capability Class is 3₂ and this continues until Coneyhatch Farm (ch2200). The land quality then deteriorates to Class 5 and Class 6 before returning to Class 3₂ at ch3500. Class 3₂ continues through to ch8500 with an isolated pocket of Class 3₁ at Elrick Farm (ch5400). The Land Capability Class reverts to Class 5 and 6 where the Fastlink would cross Stranog Hill (ch8600 to ch10000). The remaining section of the proposed Fastlink route is Class 3₂.

Table 37.7 – Land Capability

Land Capability	Length	Percentage
Class 1	0.0km	0%
Class 2	0.0km	0%
Class 3 ₁	0.5km	5%
Class 3 ₂	7.5km	65%
Class 4	0.0km	0%
Class 5	0.9km	8%
Class 6	1.4km	12%
Class 7	0.0km	0%
Woodland	0.4km	3%
Scrub	0.3km	3%
Other	0.5km	4%
Total	11.5km	100%

- 37.3.8 A full description of the land capability assessment can be found at Appendix A7.3 and Appendix A37.1. Figures 37.1a-f show the indicative land capability for each field affected by the proposed development.

Scope of Agriculture, Forestry and Sporting Interests

- 37.3.9 A total of 31 agriculture, forestry and sporting land interests have been identified in the Fastlink study area. The total combined area of the land interests affected by the proposal is approximately 3,096ha.

Agriculture

- 37.3.10 The range of agricultural activity varies from intensive livestock and arable farming systems to extensive cattle and sheep systems. Land use also includes organic and biodynamic farming and occasional equestrian units. The type of activity and the level of intensity are determined by a number of factors including the land capability. There is a general cropping (cereals, vegetables and bulbs) unit at the southernmost end of the Fastlink study area. However, this changes to intensive poultry production before reverting to beef and sheep systems as the route progresses farther northwards. A further poultry unit can be found near Cookney, which is in close proximity to two biodynamic units (Burnorrachie and Lembas). A dairy unit is located to the north of Cookney.

Forestry

- 37.3.11 Compartments of commercial forestry and farm woodland are located within the study corridor of the proposed scheme. No land owned or managed by the Forestry Commission is present within the study area. However, there is an area of scrub woodland and commercial coniferous woodland at Megray Wood (ch1500). This is the only major block of commercial woodland within the Fastlink study area.

Sporting

- 37.3.12 Sporting activity is limited within the study area. There are no commercial shoots, although rough shooting does take place. There is also stalking of roe deer, which is prevalent around woodland areas. Sporting activity is more prevalent at the southern end of the Fastlink study area.

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Sensitivity Assessment

37.3.13 The baseline data collected during the survey were used to give an individual sensitivity assessment for each land interest affected by the project. The sensitivity assessments for each land interest can be found below in Table 37.8.

Table 37.8 – Agricultural Sensitivity Assessments

Land Interest	Farm Type	Scope of Agricultural, Forestry and Sporting Activity	Sensitivity
Land at Stonehaven south of A90T Land Ref 744 (Figure 37.1a)	No agricultural use	Land not used for agricultural purposes.	Low
Sluie Estates Land Ref 543 (Figure 37.1a)	General Cropping	Farmed under contract farming agreement (owner is farmer). Grow cereals (winter wheat, winter barley and spring barley) along with oilseed rape and potatoes. Currently no livestock. No environmental schemes. Small area of farm woodland. Rough shooting.	Medium
FM Developments (including Megray Weood) Land Ref 627 (Figure 37.1a & b)	General Cropping	Large estate growing winter and spring cereals, oilseed rape, potatoes, turnips and daffodils. Also has suckler herd of 75 cows. Rural Stewardship and Land Management Contract environmental agreements. Mature coniferous plantation and scrub woodland. Roe deer stalking and pheasant shooting around forestry areas.	Medium
Mains of Cowie Land Ref 518 (Figure 37.1a)	Mixed (Cereals and Beef)	Mixed farm growing spring and winter cereals and supporting suckler herd of 120 cows and finishing cattle. Other business activity includes agricultural contracting. SSSI on cliff area. Land Management Contract environmental agreement. Limited sporting activity.	Medium
Glen Ury (South of A90T) Land Ref Unknown (Figure 37.1a)	No Agricultural Use	Land not used for agricultural purposes.	Low
Logie Farm Land Ref 501 (Figure 37.1a)	Cereals	Winter and spring cereals, potatoes and set-aside. Farm has also finished pigs in the past. Other business interests include Trout Fly Fishing Fishery. Rural Stewardship Scheme, Land Management Contract and SSSI environmental agreements. SSSI on cliff area. Rough shooting and stalking.	Medium
Fishermyre Land Ref 632 (Figure 37.1b)	Specialist Poultry	Specialist rearer of chicks. Contract rear chicks from day old to 48 days. Capacity 22,000 birds. Grazing let out. No environmental agreements. Roe deer shooting (non-commercial let). Sensitivity of poultry enterprise has been assessed as Low (see Appendix A37.4)	Medium
Coneyhatch Land Ref 636 (Figure 37.1b)	Specialist Poultry	Specialist broiler producer (95,000 birds). Land fallow and used for manure disposal. No environmental agreements. No sporting interests. Other business interests include plant hire and haulage. Sensitivity of poultry enterprise has been assessed as Low (see Appendix A37.4)	Medium
Wyndford Farm Land Ref 515 (Figure 37.1b)	Cereals	Spring barley with limited grazing (let out). No livestock. Land Management Contract environmental agreement. No sporting activity.	Medium
Cowie Estate Land Ref 626 (Figure 37.1b and c)	Estate	No agricultural activity. Rough shooting.	Low
Broomhill Land Ref 515 (Figure 37.1c)	Specialist Beef	Spring Barley. Suckler herd of 75 cows. No environmental agreements. No sporting activity.	Medium

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Land Interest	Farm Type	Scope of Agricultural, Forestry and Sporting Activity	Sensitivity
Burnside Farm Land Ref 620 (Figure 37.1c)	Specialist Beef	Spring barley. Fattening cattle (45-60). No environmental agreements. No sporting activity.	Medium
Erick Farm Land Ref 520 (Figure 37.1c)	Cereals	Winter wheat and spring barley plus set-aside. Oilseed rape also has been grown. Rural Stewardship and Land Management Contract environmental agreements. Some scrub woodland. No sporting activity. Land also supports holiday lodge, let house and fishing (run as separate businesses).	Medium
North Erick Poultry Ltd Land Ref 759 (Figure 37.1c)	Specialist Poultry	Specialist broiler unit (see Appendix A37.4). Agricultural land used by Land Ref 520. Sensitivity of poultry enterprise assessed as Medium (see Appendix A37.4).	Medium
Burnorrachie Land Ref 622 (Figure 37.1c)	Biodynamic	Biodynamic farming unit. Oats, potatoes, carrots, parsnips, leeks, cauliflower, broccoli, kale, sprouts, cabbages and swedes. Finishing cattle (15). Land Management Contract Menu Scheme agreement. Organic Aid Scheme. Hedges and coppice. No sporting activity.	High
Clayfolds Land Ref 639 (Figure 37.1c)	Smallholding	Supports horses and sheep although there is no commercial agricultural activity. No environmental agreements. No sporting interests.	Low
Mains of Cookney Land Ref 522 (Figure 37.1d)	Specialist Beef	Spring barley. Herd of 170 suckler cows. Peat bog SSSI (Red Moss and Netherly). Also Land Management Contract Menu Scheme agreement. Commercial coniferous plantation (Sitka Spruce). Rough shooting.	Medium
Floors Land Ref 515 (Figure 37.1c and d)	Mixed (Cereals and Beef)	Spring barley. Herd of 40 suckler cows. No environmental agreements. No sporting activity.	Medium
North Cookney Land Ref 515 (Figure 37.1d)	Specialist Sheep	Flock of 80 breeding ewes. Land Management Contract environmental scheme. Rough shooting of pheasant and partridge.	Medium
Burnside of Newhall Land Ref 633 (Figure 37.1d)	Specialist Beef	Winter and spring barley. Herd of 65 suckler cows. Winter grazing of sheep. Land Management Contract environmental agreement. No sporting interests.	Medium
West Stoneyhill Farm Land Ref 5002 (Figure 37.1d)	Mixed (sheep, cattle and hens)	No cropping. Flock of pure Suffolk sheep (22) and flock of cross ewes (40). Herd of eight commercial suckler cows plus two pure Simmental cows. Flock of 49 hens producing eggs for sale. Two stallions bred to 8-10 mares per year. Additionally 3 brood mares. No environmental agreements. No sporting interests.	Medium
Berry Top Farm Land Ref 535 (Figure 37.1d)	Dairy (with beef)	30ha of spring cereals grown. Farm supports herd of 110 dairy cows plus throughput of some 600 beef cattle. No environmental agreements. No sporting interests.	High
Elsick Estate Land Ref 629 (Figure 37.1e)	Mixed (Cereals and Beef)	240ha of arable cropping (winter and spring cereals plus oilseed rape). Herd of 400 commercial suckler cows with progeny sold store and finished. No environmental agreements. 40ha of policy and amenity woodland. Some non-commercial sporting activity (roe deer stalking and pheasant shooting). Other business activity centred on let properties.	Medium
West Quoscies Land Ref 624 (Figure 37.1e)	Crop, cattle and sheep	Spring barley grown. Majority of farm in grass. Most of grass let out but some retained to support flock of 120 ewes. Rural Stewardship Scheme applied for. Small area of farm woodland. No sporting activity.	Medium
Nether Crossley Land Ref 536 (Figure 37.1e)	Let Out	All land in grass and let out for seasonal grazing. No environmental agreements. No sporting interests.	Low

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Land Interest	Farm Type	Scope of Agricultural, Forestry and Sporting Activity	Sensitivity
East Crossley Steading Land Ref 5003 (Figure 37.1e)	Equestrian	Land used to support equestrian activity.	Medium
Land Near Crossley Land Ref 718 (Figure 37.1e)	Equestrian	Land used to support equestrian activity.	Medium
Greens of Crynoch Land Ref 553 (Figure 37.1e and f)	Let out and forestry	Majority of land let out on seasonal basis for grazing/silage. No livestock owned. No environmental agreements. Young mixed coniferous/broadleaved plantation subject to Woodland Grant Scheme conditions. No sporting interests.	Low
Craigentath Land Ref 555 (Figure 37.1f)	Crop, cattle and sheep	Spring barley. Herd of 26 suckler cows plus followers. Flock of 190 breeding ewes. Rural Stewardship Scheme application lodged and subject to Land Management Contract environmental agreement. No sporting activity.	Medium
Blaikiewell Farm Land Ref 551 (Figure 37.1f)	Crop (with beef)	Winter and spring cereals (wheat and barley) plus set-aside. Herd of 160 pedigree suckler cows plus herd of 150 commercial suckler cows. No environmental agreements. No sporting interests.	Medium
Redwing Liveries Land Ref 635 (Figure 37.1f)	Equestrian	Animal sanctuary for horses and ponies.	High

37.3.14 Of the 31 sensitivity assessments, three are high, 22 are medium, and six are low.

37.3.15 The three high sensitivity land interests include Burnorrachie (biodynamic farm), Berry Top (dairy) and an animal sanctuary (Redwing Liveries). The 22 medium sensitivity holdings support beef, sheep, poultry and arable systems of moderate intensity and the remaining six low sensitivity holdings are predominantly units that have a low level of agricultural production, let land out and where income from farming is a secondary income stream.

Community Land

37.3.16 Land within the study area is predominantly rural and few areas of community land have been identified. The main areas of community land identified comprise Slicewell's Wood and Megray Wood, both of which are located north of Stonehaven and west of where the proposed scheme crosses Limpet Burn (approximately ch1500). Limpet Wood flanks Limpet Burn west of Megray Wood. However, the majority of Limpet Wood is located outwith the study area. There are also smaller areas of woodland at H Ram Wood north of the Stonehaven junction, areas around Fishermyle north of Megray Wood and a small area of wood around ponds near Elrick Farm. Finally, there is a young plantation woodland south of Greens of Crynoch.

37.3.17 Megray Wood is approximately 20.39ha of densely planted plantation coniferous woodland with no paths that are suitable for recreation. Slicewell's Wood is a broadleaved plantation within a private estate, which contains a path running from North Lodge to Glen Urys. The woodland areas around Fishermyle cover a total area of approximately 15.15 hectares of broadleaved trees (although it also contains some Scot's Pine) and does not contain any recreational paths.

37.3.18 H Ram Wood is a small woodland (0.66ha) near Megray Burn. This woodland is probably the remains of a larger coniferous plantation but is now little more than a shelter belt and has no recreational paths. The broadleaved plantation south of Greens of Crynoch is very young (the trees are still in tubes). As this plantation is still developing, its value as community land is currently limited. The sensitivity and sizes of these woodlands are shown in Table 37.9.

37.3.19 The only community facility identified within the study corridor is the community hall in the village of Cookney. The hall is approximately 200m west of the proposed AWPR and on a road that will be overbridged to maintain access to and from Cookney.

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- 37.3.20 The sensitivity of community land within the route corridor is detailed below in Table 37.9, assigned based on the criteria set out in Table 37.4. Sensitivity is based on community use and not on the ecological value of woodland as habitat (which is discussed separately in Chapter 40: Ecology and Nature Conservation).

Table 37.9 – Sensitivity of Community Land

Community Land Area	Area (ha)	Sensitivity
Slicewell's Wood	40.92	Low
Megray Wood	20.39	Low
Limpet Wood	13.57	Low
Woodland at Fishermyle	15.15	Low
H Ram Wood	0.66	Low
Plantation south of Greens of Crynoch	14.55	Low
Wood around ponds near Elrick	2.68	Low

Residential and Commercial Land Use

- 37.3.21 In order to determine the potential land uses affected by land-take resulting from the scheme, descriptions of the residential areas, educational facilities, businesses and transport infrastructure in the study area are provided below.

Residential Areas

- 37.3.22 The study corridor for the Fastlink is predominantly rural in nature and the main land use is agricultural, therefore there are few residential areas within the study corridor. Those identified are located mainly within the town of Stonehaven and the two communities at Cookney and Burnhead. Other residential properties comprise mainly farm dwellings.
- 37.3.23 Stonehaven, a large coastal town approximately 24km south of Aberdeen, was once a fishing village which has grown to contain a population of approximately 11,000. The majority of the town is located outside of the study area; only the northeast area lies within the study area. Stonehaven has many tourist attractions including Dunnottar Castle, restaurants and hotels. The town has various other community facilities, a hospital, a number of schools and recreational facilities. In contrast, Cookney and Burnhead are smaller rural communities. Burnhead contains no community facilities, while Cookney has a community hall which is still in use.

Educational Facilities

- 37.3.24 There is only one educational facility within the study corridor, Mackie Academy including its associated playing fields. Mackie Academy is a secondary school situated within Stonehaven which accommodates approximately 1200 pupils and 80 members of staff.
- 37.3.25 It should be noted that Maryculter East School is no longer a school, but a private residential property.

Business and Industrial Land

- 37.3.26 Due to the rural nature of the study area, businesses are predominantly agricultural. The non-agricultural commercial businesses comprise Stonehaven Football Club/Grounds, Stonehaven Golf Club & Course, Lembas Organic Farm Shop, RUM Consultancy in Cookney and Redwing Livery and Horse Sanctuary. No industrial land was identified.
- 37.3.27 Stonehaven Football Club is located within Glenury Park near the site of the former Glenury Royal Distillery which is now a housing estate. The club play in the North Region Super League, which is an amateur junior league.

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- 37.3.28 Stonehaven Golf Club (established in 1888) is an 18-hole golf course with clubhouse located above the cliffs northeast of Stonehaven.
- 37.3.29 Lembas are a wholesale farm shop located at Lorieneen, Bridge of Muchalls (Figure 37.2c) and are growers, distributors and packers of organically grown food certified by Biodynamic Agricultural Association (Demeter) and the Soil Association. In addition, the landowners have three small flocks of free-range poultry which supply the shop with eggs.
- 37.3.30 RUM Consultancy is a laboratory offering services in environmental and industrial analysis, which is located in the old Church building at Cookney.
- 37.3.31 Redwing Livery and Horse Sanctuary is located south of Cleanhill Wood. The livery is a commercial business while the horse sanctuary is operated as a charity. The area occupied by the livery and sanctuary lies at the division between the proposed Fastlink and the Southern Leg routes with the majority of the buildings in the Fastlink study area. Therefore, the impacts on the livery and sanctuary business will be considered in full in this chapter only.
- 37.3.32 Logie Trout Fishery is located outside of the study corridor downstream of where the scheme would cross Limpet Burn.. Due to potential impacts of the scheme on Limpet Burn, and therefore on the viability of the business which is downstream of the burn, it has been included in the assessment.

Transport Infrastructure and Public Utilities

- 37.3.33 Due to the rural nature of the study corridor, the current transport infrastructure is minimal. It consists of predominantly local access roads, the B979 and the A90. The Dundee-Aberdeen Railway line is also located within the study corridor and runs between the A90 and Stonehaven.
- 37.3.34 Public utilities along the route include Scotland Gas Network gas pressure mains, overground and underground electricity powerlines, Scottish Water apparatus, mains and sewerage network pipelines and communication network cables. A BP oil pipeline and Shell gas pipeline run roughly parallel and to the west of B979, however these would not be crossed by the Fastlink.

Development Land

- 37.3.35 Potential development land is identified within the Development Plans for Aberdeenshire. The Development Plan comprises the Structure Plan and Local Plan. The relevant Structure Plan is the Aberdeen and Aberdeenshire Structure Plan 2001-2016 (North East Scotland Together) which provides strategic guidance and was approved in July 2002. The Fastlink study corridor is located wholly within the Aberdeenshire Council area and therefore the relevant Local Plan is the Aberdeenshire Local Plan 2006. The Aberdeenshire Local Plan safeguards the AWPR through its general commitment to the development of a Modern Transport System.
- 37.3.36 At Stonehaven, there are currently two residential development sites which are designated within the Aberdeenshire Local Plan. These are described as an Opportunity Site (OP) within the Local Plan which is a site which is available or likely to become available for development, and includes potential Greenfield and Brownfield housing, economic development and employment allocations. Sites OP1_F and OP2_F were allocated for 150 and 166 housing units respectively, all of which have been constructed. These sites will therefore not be considered further in this assessment.
- 37.3.37 There are no additional relevant development land designations within Aberdeenshire Council as indicated in the Aberdeenshire Local Plans.

Planning Applications

- 37.3.38 Table 37.10 provides a list of planning applications that have been approved by Aberdeenshire Council within the last five years (July 2001 to July 2006) and are within or near the Fastlink study area. The locations of these planning applications are shown on Figures 37.2a-f.

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- 37.3.39 There is a significant number of planning applications relating to large residential sites which are allocated within the Local Plan (OP1_F and OP2_F). These sites are now wholly constructed are therefore not considered further in this assessment.
- 37.3.40 There are five planning applications which have been lodged within the last 5 years but have yet to be determined. These are detailed in Table 37.11. The locations of these planning applications are shown on Figures 37.2a-f.

Table 37.10 – Planning Applications

Planning Application Site	Ref	Figure	Proposed Development	Status of Application
Brookfield, Maryculter	P3 _F	37.2e	Horse shelter/tack room/store and formation of parking area.	Granted November 2002.
Elrick Farm, Bridge of Muchalls (plots 1&2) S010382PP S010383PP	P7 _F	37.2c	Outline permission for erection of dwelling house	Refused Oct 2001 Appeal submitted May 2002 and granted with conditions in August 2002.
Elrick Farm, Bridge of Muchalls S010389PF	P8 _F	37.2c	Alterations, extensions to and change of use of steading to form 2 dwelling houses	Approved August 2001 with conditions
Elrick Steading, Bridge of Muchalls, Stonehaven APP/2004/2469	P9 _F	37.2c	Change of use and alterations and extension to steading to form dwellinghouse	Granted subject to conditions November 2004
Elrick Farm, Bridge of Muchalls, Stonehaven APP/2005/1158	P10 _F	37.2c	Erection of two dwelling houses and garages	Granted subject to conditions
Cookney Grange (land adjacent), Cookney S020894PF	P11 _F	37.2d	Erection of dwelling house and formation of vehicular access	Approved November 2002
Cookney Grange, Cookney, Stonehaven APP/2004/2390	P12 _F	37.2d	Erection of dwelling house and formation of vehicular access (change of house type)	Granted subject to conditions November 2004
Cookney Grange, Netherley APP/2005/2187	P13 _F	37.2d	Erection of dwelling house	Granted subject to conditions October 2005
Mains of Cookney (land adjacent), Cookney S020504PF	P14 _F	37.2d	Residential Development of 8 detached dwelling houses and garages	Approved Jan 2003 with conditions
Harecraig, Cookney S020038PP	P15 F	37.2d	Erection of replacement dwelling house	Approved June 2002
Harecraig, Cookney S030431RM	P16 _F	37.2d	Reserved matters for erection of dwelling house	Approved with conditions, June 2003
Burnside of Newhall, Newtonhill S030036AN	P17 _F	37.2d	Erection of storage building	Approved August 2003
East Crossley Steading, Netherley S020569PF	P18 _F	37.2e	Formation of sand manege	Approved July 2002
Craigneath Steading, Blairs S030482PF	P19 _F	37.2f	Alterations and change of use of steading to form dwelling house	Approved August 2003

Table 37.11 – Planning Applications yet to be Determined

Planning Application Site	Ref	Figure	Proposed Development	Status of Application
Ury Estate, Stonehaven	P1 _F	37.2a	Residential Development	Yet to be determined
Ury Estate, Stonehaven	P2 _F	37.2a	Golf Course	Council minded to grant subject to clearance from Transport Scotland with respect to the AWPR.
New Mains of Ury Farmhouse, Glenury APP/2006/0220	P4 _F	37.2a	Part change of use of one room of dwelling house to hairdressing salon	Yet to be determined
Coneyhatch, Netherley APP/2005/0369	P5 _F	37.2b	Change to workshop and office	Yet to be determined
Coneyhatch, Glen Ury APP/2005/3545	P6 _F	37.2b	Change of use of land from agricultural storage to commercial storage	Yet to be determined

37.4 Potential Impacts

37.4.1 The potential impacts, without mitigation, on land use in the study area are discussed below.

Agriculture, Forestry and Sporting Interests

37.4.2 The scheme has the potential to affect the scope and scale of agricultural and forestry-based land management activities and the productive and sporting capacity of the land and water within the route corridor. The possible effects could include:

- disruption and disturbance during the construction phase including land temporarily lost;
- permanent loss of land due to proposed scheme and associated works;
- severance of fields;
- disruption to cultivation and land management patterns, sporting activity and in some cases temporary or permanent change in land use;
- access restrictions with changes in routes to and from fields;
- disruption to existing drainage schemes and disruption of provision of water to fields;
- loss of, or gaps in, commercial and amenity forestry, shelterbelts and covers;
- increase of woodland windthrow risk;
- landscape and visual effect of new and exposed woodland edges; and
- changes in permanent and/or seasonal employment patterns due to changes in the scale and nature of agriculture, forestry and sporting enterprises.

37.4.3 The impacts of the proposed scheme have been assessed for all of the agriculture, forestry and sporting land interests potentially affected by the development. The potential impacts are detailed in Appendix A37.2. A summary of the potential impacts is provided in Table 37.12 below.

Table 37.12 – Significance of Potential Impacts

Significance of Pre-Mitigation Impacts						
Substantial	Moderate/ Substantial	Moderate	Slight/ Moderate	Slight	Negligible/ Slight	Negligible
1	13	4	1	5	6	1

37.4.4 The potential impacts on one land interest have been assessed as being of Substantial significance. The impacts are described in Table 37.13 below.

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Table 37.13 – Description of Potential Substantial Impacts

Land Interest	Description of predicted impacts
Redwing Liveries Land Ref 635 Figure 37.1f	Loss of 6.94ha of LCA Class 3.2 land equating to 20% of the farm area. Business and operational impacts assessed in paragraphs 37.4.13-37.4.14. Estimated 1ha of land severed by the main alignment (equivalent to 4% of the farm area).

- 37.4.5 The potential impacts before mitigation for the remaining land interests (i.e. those assessed as Moderate/Substantial, Moderate, Slight/Moderate, Slight, Negligible/Slight and Negligible) are summarised in Table 37.14.
- 37.4.6 The main impacts upon these other agricultural land interests relate to loss of land, severance of fields, loss of access, loss of field boundaries (predominantly drystone walls), loss of watering points for livestock and disruption to existing field drainage systems.
- 37.4.7 The main impacts on forestry occur on Megray Wood and at Greens of Crynoch. Without mitigation, there is a risk of windthrow in some stands of forest. Windthrow (uprooting) is the most extreme case of mechanical and physiological damage to trees caused by wind. Shallow rooting trees and dense woodland are more prone to windthrow if suddenly exposed, for example when shelter from other trees is removed through felling.
- 37.4.8 The main impacts on sporting activity would occur at the southern end of the study area where rough shooting would be limited within the vicinity of the proposed road.

Table 37.14 – Summary of Potential Impacts for Agriculture, Forestry and Sporting Interests

Significance	Land Reference	Area Lost		Severance
		ha	% Farm Area	
Moderate/ Substantial	Sluie Estates, Land Ref 543, Figure 37.1a	25.57	19	Yes
	Fishermyre, Land Ref 632, Figure 37.1b	1.20	10	No
	Coneyhatch, Land Ref 636 & 626, Figure 37.1b	6.09	22	Yes
	Burnside Farm, Land Ref 620, Figure 37.1c	5.14	13	Yes
	Elrick Farm, Land Ref 520, Figure 37.1c (Including land owned by North Elrick Poultry Ltd, Land Ref 759, Figure 37.1c)	9.12 (1.19)	11 (39)	Yes (Yes)
	Burnside of Newhall, Land Ref 633, Figure 37.1d	3.83	5	Yes
	West Stoneyhill Farm, Land Ref 5002, Figure 37.1d	2.94	14	Yes
	Berry Top Farm, Land Ref 535, Figure 37.1d	5.03	3	Yes
	West Quoscies, Land Ref 624, Figure 37.1e	4.59	5	Yes
	East Crossley Steading, Land Ref 5003, Figure 37.1e	2.18	23	Yes
	Craigtenth, Land Ref 555, Figure 37.1f	5.67	10	Yes
	Blaikiewell Farm, Land Ref 551, Figure 37.1f	4.85	13	Yes
Moderate	Land at Stonehaven South of A90T, Land Ref 744, Figure 37.1a	1.20	28	No
	Cowie Estate, Land Ref 626, Figure 37.1b & c	10.43	7	Yes
	Land near Crossley, Land Ref 718, Figure 37.1e	0.65	9	Yes
	Greens of Crynoch, Land Ref 553, Figure 37.1e & f	7.26	13	Yes
Slight/Moderate	Burnorrachie, Land Ref 622, Figure 37.1c	0.00	0	No
Slight	Wyndford Farm, Land Ref 515, Figure 37.1b	1.62	4	Yes
	Broomhill, Land Ref 515, Figure 37.1c	2.55	4	Yes
	Mains of Cookney, Land Ref 522, Figure 37.1d	6.66	3	Yes
	North Cookney, Land Ref 515a, Figure 37.1d	4.04	4	Yes
	Elsick Estate, Land Ref 629, Figure 37.1e	11.59	2	Yes

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Significance	Land Reference	Area Lost		Severance
		ha	% Farm Area	
Negligible/Slight	FM Developments (including Megray Wood), Land Ref 627, Figure 37.1a & b	0.85	<1	No
	Mains of Cowie, Land Ref 518, Figure 37.1a	0.07	<1	No
	Glen Ury, South of A90T, Land Ref Unknown, Figure 37.1a	0.03	3	No
	Logie Farm, Land Ref 501, Figure 37.1a	0.35	<1	No
	Floors, Land Ref 515, Figure 37.1c & d	0.01	<1	No
	Nether Crossley, Land Ref 536, Figure 37.1e	1.83	3	Yes
Negligible	Clayfolds, Land Ref 639, Figure 37.1c	0.04	<1	No

37.4.9 Burnorrachie would not lose land to the scheme. However, the owners perceive that there would be pollution from the road and this would compromise agricultural activity. Chapter 44 (Air Quality) assesses the potential air pollution risk to Burnorrachie. The scheme would have a Moderate adverse impact on air quality at Burnorrachie, however it should be noted that traffic-related pollutant levels would remain very low with, or without, the proposed scheme in place. The presence of the road would not jeopardise the organic or biodynamic certification status of the unit.

37.4.10 The potential impacts on three poultry units at Fishermyme, Coneyhatch and North Elrick Poultry Ltd are described in detail in Appendix A37.4. The pre-mitigation significance of impacts on the poultry enterprises are all assessed as follows:

- Fishermyme – Negligible;
- Coneyhatch – Slight/Negligible; and
- North Elrick Poultry Ltd. – Moderate/Slight.

37.4.11 In addition, the poultry enterprise at Lembas was also assessed and the significance of impacts was determined as Slight.

Community Land

37.4.12 Areas of land used by the community that would be directly affected by the proposed route are limited to woodland within the Fastlink study corridor. The woodlands that would be affected comprise H Ram Wood, Limpet Wood, Megray Wood, the woodland areas near Fishermyme and the Plantation at Greens of Crynoch. In addition, small areas (<0.5ha) of wood at West Quoscies and Harecraig would be affected, however, these are not significant in terms of community land (total land affected 0.19ha). Table 37.15 details the potential impacts on woodland areas. For the assessment of potential impacts on habitats, refer to, Chapter 40 (Ecology and Nature Conservation).

Table 37.15 – Loss of Land Used by the Community

Name of Land Area	Type	Description of Impact	Area of Land-take ha	Sensitivity	Magnitude	Significance
H Ram Wood	Woodland	Loss of 100% of woodland area	0.66	Low	High	Moderate
Limpet Wood	Woodland	Loss of 6.22% of woodland area	0.84	Low	Low	Negligible/Slight
Megray Wood	Woodland	Loss of 3.14% of woodland area.	0.64	Low	Low	Negligible/Slight
Woodland areas near Fishermyme	Woodland	Loss of 8.64% of woodland area	1.31	Low	Low	Negligible/Slight
Greens of Crynoch Plantation	Woodland	Loss of 16.83% and severance of woodland area	2.45	Low	Medium	Slight/Moderate

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Note: Area of Land-take is estimated and is subject to change once the CPO is finalised

Residential and Commercial Land Use

- 37.4.13 No residential or commercial properties within the Fastlink study corridor would require demolition under the proposed scheme. However, Redwing Livery & Blaikiewell Animal Sanctuary would be directly affected by land-take to accommodate the proposed scheme.
- 37.4.14 This business would be affected by the proposed Cleanhill junction (ch11498) near Burnhead. It is estimated that in total, approximately 7ha of fields (20% of total business land) would be lost to the route. Approximately 29% of the total land-take would be landscaped and used for landscape and visual mitigation. The route would run directly through the livery and riding school area and would also require the loss of one of the sheds. The land that would be left would be severed into two parcels of approximately 27ha and 1ha. The smaller land parcel would be separated from the larger parcel of land by the AWPR and, in practice, not be suitable for use by the business as no access between the two areas is proposed. In addition, the access road to and from the business would change requiring a 1km diversion.
- 37.4.15 Although no other businesses within the Fastlink would be directly affected, several would experience indirect impacts, particularly during construction of the scheme. In addition, there would be a change in access arrangements where the proposed scheme crosses or severs existing access to two businesses. Table 37.16 summarises the potential impacts on businesses with explanatory notes as appropriate. Chapter 46 (Pedestrians, Cyclists, Equestrians and Community Effects) considers the wider implications of local vehicular traffic issues on the local community.

Table 37.16 – Details of Potential Impacts on Businesses

Business	Impact Type (Demolition, Land-take, Change in Access, etc)	Job Loss	Existing Access	Change in Access/Loss of Custom	Potential Impact
Stonehaven Golf Course	Improved access.	None	Accessed from the A90 and Stonehaven	No change to existing access. Additional access to AWPR and A90.	Beneficial
Stonehaven Football club	Improved access.	None	Accessed from the A90 and Stonehaven	No change to existing access. Additional access to AWPR and A90.	Beneficial
Mackie Academy	Perception of potential pollution.	None	Accessed from the A90 and Stonehaven.	No change to existing access.	Neutral
Lembas Organic Farm	Perception of potential pollution and biosecurity concerns in regards to poultry	None	Accessed from a minor road.	No change in existing access, underbridge provided.	Neutral
Logie Trout Fishery	Potential changes in water quality to Limpet Burn	None envisaged	Accessed from the A90	No changes in access. No loss of custom envisaged	Neutral
RUM Consultancy	Change in access	None envisaged	Accessed from road through Cookney Village	Road North of Cookney will be realigned and an overbridge provided.	Neutral
Redwing Livery & Horse Sanctuary	Change in access, land-take and severance.	Unknown	Accessed from road on the eastern boundary of the property.	Access would be from the south, from access road to Craigneath, approximately 1km south of the property.	Adverse

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- 37.4.16 Although there would be no change to the existing access to Stonehaven Golf Course or Stonehaven Football Club, the presence of the AWPR and the new Stonehaven Junction would result in improved access to and from Aberdeen for these businesses. Due to improved access, the potential impacts of the scheme on these businesses have been assessed as beneficial.
- 37.4.17 Lembas Organic Farm would not be directly affected by land-take as a result of the scheme. However, the business has raised concerns about the potential pollution impacts that vehicle emissions could have on their organic and biodynamic produce as their closest fields would be within 230m from the road. Lembas Organic Farm also raised concerns about the potential pollution impacts on produce sold in the Farm Shop and bio-security risks with regards to their poultry.
- 37.4.18 Lembas is not included in the air quality assessment as it would be more than 200m from the proposed scheme and impacts are not expected. For this reason, this property has not been included in the agricultural assessment. Traffic-related pollutant levels would remain very low with or without the proposed scheme in place within the vicinity of this unit. It is assessed that the organic and biodynamic status of neither the farm nor the shop would be compromised due to their proximity to the scheme. The biosecurity risk to poultry from the proposed scheme has been assessed as low due to the distance of the unit from the carriageway (refer to Appendix A37.4 Poultry Assessment).
- 37.4.19 Mackie Academy would not be directly affected by land-take by the scheme. However during consultation, the school raised concerns regarding air pollution and additional noise arising from the proposed scheme. The school would be approximately 350m from the nearest element of the scheme (A90 slip roads). Due to the distance involved, no significant noise or pollution impacts from the scheme are anticipated.

Development Land

- 37.4.20 There are no development allocations within the Fastlink study area. The impact of the proposed scheme on planning applications (July 2001 to July 2006) within the route corridor is summarised in Table 37.17. The following applications have been assessed with neutral impacts and have not been included in Table 37.17:
- P2F – Ury Estate, Stonehaven – APP/2004/2267 – Golf Course;
 - P4F – New Mains of Ury Farmhouse, Glenury APP/2006/0220 – Part change of use of one room of dwellinghouse to hairdressing salon;
 - P5F – Coneyhatch, Netherley APP/2005/0369 – Change to workshop and office;
 - P6F – Coneyhatch, Glen Ury APP/2005/3545 – Change of use of land from agricultural storage to commercial storage;
 - P17F – Burnside of Newhall, Newtonhill S030036AN – Erection of storage building; and
 - P18F – East Crossley Steading, Netherley S020569PF – Formation of sand manege.

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Table 37.17 – Impacts on Planning Applications

Planning application Site	Ref	Figure	Proposed Development	Status of Application	Impact of Route
Ury Estate, Stonehaven	P1 _F	37.2a	Residential Development	Yet to be determined	Adverse – may have an impact on amenity due to close proximity of proposed scheme.
Brookfield, Maryculter	P3 _F	37.2e	Horse shelter/tack room/store and formation of parking area.	Granted November 2002.	Awaiting location plan
Elrick Farm, Bridge of Muchalls (plots 1&2) S010382PP S010383PP	P7 _F	37.2c	Outline permission for erection of dwelling house	Refused Oct 2001 Appeal submitted May 2002 and granted with conditions in August 2002.	Adverse – may have an impact on amenity due to close proximity of proposed scheme.
Elrick Farm, Bridge of Muchalls S010389PF	P8 _F	37.2c	Alterations, extensions to and change of use of steading to form 2 dwelling houses	Approved August 2001 with conditions	Adverse – may have an impact on amenity due to close proximity of proposed scheme.
Elrick Steading, Bridge of Muchalls, Stonehaven APP/2004/2469	P9 _F	37.2c	Change of use and alterations and extension to steading to form dwellinghouse	Granted subject to conditions November 2004	Adverse – may have an impact on amenity due to close proximity of proposed scheme.
Elrick Farm, Bridge of Muchalls, Stonehaven APP/2005/1158	P10 _F	37.2c	Erection of two dwelling houses and garages	Granted subject to conditions	Adverse – may have an impact on amenity due to close proximity of proposed scheme.
Cookney Grange (land adjacent), Cookney S020894PF	P11 _F	37.2d	Erection of dwelling house and formation of vehicular access	Approved November 2002	Adverse – may have an impact on amenity due to close proximity of proposed scheme.
Cookney Grange, Cookney, Stonehaven APP/2004/2390	P12 _F	37.2d	Erection of dwelling house and formation of vehicular access (change of house type)	Granted subject to conditions November 2004	Adverse – may have an impact on amenity due to close proximity of proposed scheme.
Cookney Grange, Netherley APP/2005/2187	P13 _F	37.2d	Erection of dwelling house	Granted subject to conditions October 2005	Adverse – may have an impact on amenity due to close proximity of proposed scheme.
Mains of Cookney (land adjacent), Cookney S020504PF	P14 _F	37.2d	Residential Development of 8 detached dwelling houses and garages	Approved Jan 2003 with conditions	Adverse – Part of site (1.43ha) would be required for the road
Harecraig, Cookney S020038PP	P15 _F	37.2d	Erection of replacement dwelling house	Approved June 2002	Adverse – may have an impact on amenity due to close proximity of proposed scheme and 0.04ha of land required.
Harecraig, Cookney S030431RM	P16 _F	37.2d	Reserved matters for erection of dwelling house	Approved with conditions, June 2003	Adverse – may have an impact on amenity due to close proximity of proposed scheme.
Craigneath Steading, Blairs S030482PF	P19 _F	37.2f	Alterations and change of use of steading to form dwelling house	Approved August 2003	Adverse – may have an impact on amenity due to close proximity of proposed scheme.

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- 37.4.21 A residential development of eight detached houses was granted planning permission in January 2003 at Mains of Cookney. A 1.43ha portion of this site, which is approximately 33% of the total development area would be required for the road and associated embankment and therefore the impact is assessed as adverse (P14_F, Figure 37.2d).
- 37.4.22 An application for the erection of a replacement dwelling house was granted planning permission in June 2002 at Harecraig, Cookney. In order to maintain access, an area of 0.04ha of the site, which is approximately 8% of the total development area would be required to accommodate the Cookney overbridge.
- 37.4.23 An outline planning application for a residential development at Ury Estate, to the north of Stonehaven, is currently with Aberdeenshire Council for consideration. This site is located to the west of the southern leg to the immediate north of the Stonehaven junction. The close proximity of the housing may result in a loss of amenity and therefore the impact is assessed as adverse (P1_F, Figure 37.2a).
- 37.4.24 Four planning consents for residential properties located at Elrick Farm, Bridge of Muchalls (P7_F-P10_F, Figure 37.2c). This development land is located within approximately 200m of the proposed scheme and as such may have an adverse impact in terms of amenity.
- 37.4.25 There are three planning consents for residential properties at Cookney Grange (P11_F-P13_F, Figure 37.2d) which are located within approximately 400m of the proposed Fastlink route. The close proximity of the scheme may result in a loss of amenity and therefore the impact has been assessed as adverse.
- 37.4.26 There are two planning consents for housing at Harecraig, Cookney (P15_F and P16_F, Figure 37.2d). These sites are within approximately 300m of the proposed Fastlink section of the route and are directly adjacent to the necessary upgrading of the existing local roads. The close proximity of the scheme may result in a loss of amenity and therefore the impact has been assessed as adverse.
- 37.4.27 Finally, planning consent for the change of use from a steading to a dwelling house at Craigneath is within approximately 500m of the proposed Southern Leg route (P19_F, Figure 37.2f). The open views towards the proposed scheme would result in a loss of amenity and as such the impact has been assessed as adverse.

37.5 Mitigation

- 37.5.1 The mitigation proposals are based on:
- Avoidance – routing to avoid effects;
 - Reduction – provision of measures to minimise potential effect;
 - Offset – provision of works or compensation; and
 - Enhancement – provision of measures to improve existing conditions.
- 37.5.2 The design of the scheme has sought to avoid impacts to sensitive areas of land, wherever practicable. However land-take, including demolition of private property, would occur where it is considered necessary for the purposes of constructing the proposed scheme and/or for associated mitigation measures such as landscape work. Where the required land-take would result in the demolition of property or for the loss of land used for farming or commercial forestry, financial compensation to the value assessed by the District Valuer will be provided.

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- 37.5.3 Mitigation measures with respect to agriculture and forestry have been developed with the aim of protecting the agricultural capability of land and soils and the maintenance of the viability of farming units. The mitigation measures incorporate the following principles:
- reducing the temporary loss of land to agriculture and forestry during construction through construction programming, consultation with land interests and reinstatement of agricultural land, post construction;
 - provision of access for land interests to their holdings at all times during construction and operation;
 - limiting damage to agricultural capability of soils through adoption of procedures relating to soil stripping, handling and storage during construction and reinstatement;
 - pre-construction drainage works where required and reinstatement/provision of new drainage as required to maintain agricultural land capability and avoid flooding issues; and
 - provision of financial compensation as agreed and determined by the District Valuer.
- 37.5.4 Consultation with landowners and tenants is ongoing, but the provision of accommodation works has yet to be agreed. However, agreed mitigation measures and accommodation works will be included within the construction contract. For the purposes of the residual impact assessment, provision of field and steading access, re-instatement of boundary features and re-instatement of field drainage systems have been assumed.
- 37.5.5 Financial compensation will be provided for any area of agricultural land, woodland or forestry that will be lost as a result of the construction or operation of the proposed scheme, in accordance with the District Valuer's assessment.
- 37.5.6 The various mitigation measures to reduce effects on agriculture, forestry and sporting activity are listed in Table 37.18. Mitigation is considered for each land interest. A series of mitigation measures from this list will be applied on a case-by-case basis for each land interest, depending on the impact and the scope for mitigation.
- 37.5.7 Details of the mitigation measures to be employed on a farm by farm basis are detailed for each of the land interests in Appendix A37.2.

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Table 37.18 – Agriculture, Forestry and Sporting Mitigation Measures

Mitigation Item Number	Mitigation Measure
LU1	Permanent loss of agricultural land and forestry has been reduced through route selection, construction programming, and planning. In addition, the loss will be reduced by re-instatement plans, where appropriate, post construction.
LU2	Access to agricultural land and woodland will be provided at all times during the construction process and post construction. Where appropriate and justified, agricultural overbridges and underpasses will be incorporated into the road design.
LU3	Damage to the agricultural capability of soils will be avoided by the adoption of appropriate measures during construction and reinstatement.
LU4	Existing field and forestry drainage systems will be re-instated to ensure that land capability is maintained and flooding will not be exacerbated.
LU5	Financial compensation, where appropriate, will be provided for the loss of agricultural land, forestry or land with sporting interests, as agreed with the District Valuer.
LU6	Notice of intention to commence construction work will be given to the owners and occupiers of all land along the route before entry is made to such land. Consultation with the landowners and occupiers will allow agreement to a programme of works that minimises disturbance. Any work will be carried out in accordance with the agreed programme as far as is practically possible.
LU7	Preparation of a schedule of condition for agricultural land (including drainage), forestry, roads and paths likely to be affected by the proposed development. This will be made available to the owner or occupier and will ensure that land, roads and paths are restored to the reasonable satisfaction of the landowner or occupier.
LU8	Agriculture, forestry and sporting roads and paths will be re-instated to a condition equivalent to that subsisting before the commencement of any works.
LU9	Agricultural land will be re-instated to a condition as near as is reasonably practicable to that subsisting before the commencement of the works. Topsoil where disturbed will be left in a loose friable condition and where agreed appropriate cover will be replaced. Re-grading where appropriate will be undertaken and land returned to agriculture.
LU10	Where ancillary apparatus and material is sited on agricultural land it would be done so with agreement of the land owner/occupier.
LU11	There will be provision of temporary fences, lights and guards in appropriate locations for the protection of the health and safety of the public and animals and to avoid trespass. Where appropriate, fencing of the working area to a standard adequate for the purpose of excluding any stock kept on adjoining land will be undertaken. All temporary fencing will be maintained in position during constructional work and thereafter unless otherwise agreed with the occupier.
LU12	Where boundary features such as fences, walls and hedges have to be removed to allow construction these will be reinstated with appropriate materials in each case to provide a secure field boundary.
LU13	Precautions relating to the exclusion of stock will be combined with due care and attention by construction staff to prevent the straying of livestock.
LU14	Where access will require to be altered either temporarily or permanently as a result of construction, alternative access for stock and machinery will be provided as appropriate in consultation with the land owner/occupier. Recessed access to be provided off main and side roads as appropriate with loading/unloading area if required.
LU15	All reasonable precautions will be taken during construction to avoid as far as is possible, the spreading of soil borne pests and diseases, and animal and crop diseases. Precautions as recommended by the Scottish Executive Environment and Rural Affairs Department will be observed.
LU16	Careful excavation, storage and replacement of topsoil and subsoil will avoid damage to soils and soil structure and to protect the agricultural capability.
LU17	Particular care will be taken to minimise damage or disturbance to field drains. Laying of new drains will be undertaken as required to keep the affected and adjoining land in good order. Repairing and reinstatement of field drains will be agreed with the land owner/occupier. Where appropriate the integrity of the drainage system will be secured in advance through the installation of header drains (cut off drains) to facilitate construction. All remaining remedial and new drainage works to be undertaken post construction.
LU18	Water supplies for livestock will be protected at all times and alternative supplies would be provided where access would be compromised by any works.
LU19	An assessment will be made of the risk of windthrow from any proposed felling and management measures defined for each section of woodland. These will include felling to windfirm

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Mitigation Item Number	Mitigation Measure
	edges, topping, pollarding and coppicing.
LU20	All felling to create a windfirm edge will take account of ecological landscape and visual effects. Design to maximise where possible ecological, landscape/visual opportunities.
LU21	Where there are no windthrow or landscape visual issues, tree felling will be minimised to that necessary to allow the safe construction and operation of the road.
LU22	Soil disturbance and compaction from harvesting and extraction will be minimised.
LU23	Reasonable claims in respect of damage to agricultural land or sporting rights will be payable, as will professional charges.

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- 37.5.8 The majority of the proposed mitigation will relate to the provision of access to fields and severed areas, reinstatement of boundary features (drystone walls and fences) as well as watering points for livestock and provision of new or reinstated field drainage systems. In specific areas, a need has been identified for dedicated agricultural overbridges or underpasses as well as provision of livestock holding pens to aid stock movement. These are identified in Table 37.19.
- 37.5.9 Additionally, re-grading of agricultural land has been proposed as part of the landscape mitigation proposals (see Chapter 41 and Chapter 42). Some of this land has the potential to be returned to agricultural use, limiting the agricultural area permanently lost to the proposed scheme. The land interests subject to re-grading are also listed in Table 37.19.

Table 37.19 – Major Mitigation Works

Mitigation	Description	Benefiting Land Reference
Use of Overbridges, Underpasses and new links/steading access to ease severance	U89K NMU Underpass at ch1550 (Figure 37.1b)	Sluie Estate, Land Ref 543 Coneyhatch, Land Ref 636
	Burn of Muchalls Accommodation Underpass at ch4300 (Figure 37.1c)	Burnside Farm, Land Ref 620
Re-grading of embankments with potential to return to agricultural use	Main alignment embankment between ch6400 and ch6700 (Figure 37.1d)	North Cookney, Land Ref 515 Burnside of Newhall, Land Ref 633
	Main alignment between ch10300 and ch11200 (Figure 37.1f)	Greens of Crynoch, Land Ref 553 Craigentath, Land Ref 555
Felling of Forestry and Woodland	Felling to avoid potential windthrow risk (Figure 37.1b)	Megray Wood, Land Ref 627

Community Land

- 37.5.10 The proposed scheme has been designed so that areas designated as Country Parks, city parks and local parks have been avoided.
- 37.5.11 Woodland was assessed as the main type of community land that would be lost to the proposals. This loss of the use of woodland for amenity purposes will be mitigated through planting and the provision of paths where public access to woodland has been affected. Further details on planting as proposed by the ecology and landscape mitigation and provision of alternative paths are discussed in Chapters 40 (Ecology and Nature Conservation), Chapter 41 (Landscape) and Chapter 46 (Pedestrians, Cyclists, Equestrians and Community Effects) respectively.
- 37.5.12 In total, approximately 22.34ha of planting is proposed for the Fastlink section of the scheme, however much of this planting can not be considered to mitigate for community land losses. The majority of the planting would not directly compensate for the loss in an affected woodland or the area of planting would be too small (less than 0.5ha) to be of any community value. Therefore, only areas likely to retain community value have been considered as mitigation. Areas of scrub planting are also excluded as they can not be used as community land.
- 37.5.13 Table 37.20 provides details of the mitigation re-planting at the woodland areas affected.

Table 37.20 – Woodland Mitigation

Woodland Affected	Area (ha) to be replanted/replaced			
	West of AWPR	East of AWPR	Total	Type
H Ram Wood	0	0.97	0.97	Mixed Woodland
Limpet Wood	0.13	0.16	0.29	Riparian & Mixed Woodland
Woodland at Fishermyre (various areas)	1.26	1.91	3.17	Broadleaved & Mixed
Plantation Greens of Crynoch	0.52	0.23	0.75	Mixed
Harecraig – Cookney	0.89	0.00	0.89	Mixed

37.5.14 In addition to the woodland specific planting, there would be four areas where woodland will be planted in excess of 0.5ha as part of the landscape and visual mitigation. Although, these areas are not compensating for a direct loss at a specific woodland due to their size, these areas may also be of value to the community. Details of the additional planting are provided in Table 37.21.

Table 37.21 – Additional Woodland Planting

Area of planting	Area (ha)	Type
East of Megray	0.59	Mixed
Near North Rothnick	0.85	Mixed
Elrick Farm	0.67	Mixed
Redwing Livery	0.88	Mixed
Total additional planting exceeding 0.5ha	3.00	n/a

Residential and Commercial Land Use

- 37.5.15 For the purposes of this assessment, where land is required for the proposed scheme that would result in the loss of residential and commercial properties, it is assumed land owners would be compensated financially for the loss in accordance with the District Valuer's assessment. Further details of the extent of financial compensation are beyond the scope of this assessment and will be provided by the District Valuer. Alternative access will also be provided to a number of properties where the proposed scheme affects existing access, as discussed in Section 37.4.
- 37.5.16 Potential mitigation measures for non-agricultural businesses directly affected have been identified by Tribal during the interviews. At the time of writing this report, these had not been confirmed and agreed with the relevant parties. As such, these have not been included in the assessment.

Development Land

- 37.5.17 As stated in previously, where land take would be required for the proposed scheme, financial compensation will be considered in accordance with the District Valuer's assessment.
- 37.5.18 Where impacts in terms of amenity have been identified, mitigation measures will seek to reduce this impact through landscape planting, which can also assist in alleviating any potential noise and visual impacts arising from the proposed scheme.
- 37.5.19 A summary of the non-agricultural mitigation measures is provided in Table 37.22. Mitigation measures relating to agricultural, forestry (commercial) and sporting interests are provided in Table 37.18.

Table 37.22 – Non-Agricultural Mitigation Measures

Mitigation Item Number	Mitigation objective	Mitigation Measure
LU24	Offset	Where permanent loss of land or demolition of property occurs, consideration will be given to the provision of appropriate financial compensation to relevant landowners, to an amount determined by the District Valuer.
LU25	Reduction	Where access arrangements for businesses are disrupted by the route access will be maintained/restored to these businesses with possible requirements for diversions and modifications.
LU26	Offset	Areas of woodland replaced or planted (see ecology/landscape mitigation for further details).

37.6 Residual Impacts

Agriculture, Forestry and Sporting Interests

- 37.6.1 The magnitude and significance of residual impacts have been determined for each of the affected land interests. These are detailed in Appendix A37.2.
- 37.6.2 The post mitigation significance of residual effects (adverse) are summarised in Table 37.23.

Table 37.23 – Adverse Residual Effects of Proposed Development

Significance of Residual Effect (Adverse)						
Substantial	Moderate/ Substantial	Moderate	Slight/ Moderate	Slight	Negligible/ Slight	Negligible
1	12	5	1	5	6	1

- 37.6.3 The assessments make allowance for land to be returned to agricultural use. The residual impacts on one land interest (Redwing Livery) have been assessed as Substantial significance. Residual impacts on seventeen land interests (55%) have been assessed as Moderate or Moderate/Substantial and impacts on 13 land interests (42%) have been assessed as Slight, Slight/Moderate or Negligible/Slight residual impact significance.
- 37.6.4 Although specific mitigation measures have been developed to address potential impacts generally, the residual impacts are broadly similar to the pre-mitigation effects. This is due to the loss of agricultural and forestry land, which would be a major impact of the proposed development. Mitigation has been developed to restore access and minimise the impact of severance. However, the potential impact of the loss of land to the scheme would remain.
- 37.6.5 The residual impacts on the three poultry units at Fishermyre, Coneyhatch and North Elrick Poultry Ltd are described in detail in Appendix 37.4. The mitigation reduces the significance of impact as follows:
- **Fishermyre, Land Ref 632** – The predicted significance of impact was assessed as Negligible. Extensive mixed woodland planting will provide visual and noise screening. No residual impacts were identified.
 - **Coneyhatch, Land Ref 636** – The predicted significance of impact was assessed as Negligible/Slight. Evergreen plantation on the western side of the proposed alignment continuous with the existing conifer plantation reduces the significance of impact to Negligible.
 - **North Elrick Poultry Ltd, Land Ref 759** – The predicted significance of impact was assessed as Slight/Moderate. A continuous belt of mixed planting is proposed to provide screening and a physical barrier. This is supplemented by a solid barrier (wall). Vermin control measures are also proposed. The significance of impact is assessed as Negligible/Slight.

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37.6.6 Mitigation planting on the eastern side of the main alignment reduces the residual impact on the Lembas Poultry Enterprise from Slight to Negligible.

37.6.7 The mitigation reduces the significance of residual impact on the following agricultural land interest:

- **Craigentath, Land Ref 555** – The predicted significance of impact was assessed as Moderate/Substantial. The mainline of the proposed scheme would result in the loss of 5.67ha (10% of the farm area) and sever an estimated 6ha. The severance would restrict movements of livestock and machinery to outlying fields. An access track from the C5K to the severed fields is provided as part of the scheme. The C5K Underbridge would also be used. Regrading of the mainline embankments allows potential return to agricultural use, limiting the amount of land take. Some 2.39ha has the potential to return to agriculture reducing the land take to 3.28ha (6% of the farm area). Additional mitigation includes restoring boundary features (drystone walls and fences) and tying in existing drainage and provision of new drainage as required. The residual impacts on this property have been assessed as Slight.

37.6.8 The land-take effects of the proposed development are summarised in Table 37.24. The areas presented in the table are estimates of the total land lost to the scheme after mitigation measures such as landscape re-grading of embankments and cuttings have been completed, where land identified as such has been returned to agricultural use and where areas of felled woodland and forestry to mitigate windthrow have been replanted.

Table 37.24 – Residual Land-take of Agricultural and Commercial Forestry Land

	Prime Agricultural Land (ha)			Non-Prime Agricultural Land (ha)					Woodland and Commercial Forestry (ha)	Scrub (ha)	Totals (ha)
	LCA Class			LCA Class							
	1	2	3.1	3.2	4	5	6	7			
Estimated Land-take	0.00	0.00	4.71	96.47	0.00	9.79	12.36	0.00	5.91 (3.09ha Commercial Forestry)	3.09	132.33
Potential for Land Returned to Agriculture	0.00	0.00	0.00	4.97	0.00	0.00	0.00	0.00	0.00	0.00	4.97
Net Land-take	0.00	0.00	4.71	91.50	0.00	9.79	12.36	0.00	5.91	3.09	127.36

37.6.9 It is estimated that approximately 127.36ha of land would be lost to the proposed development after land has been returned to agriculture and woodland/forestry. Of this, less than 4% is prime land (4.71ha), which is located to the north of the Burn of Muchalls. An estimated 89% of non-prime land (113.65ha) would also be affected.

37.6.10 It is estimated that a further 5%, or approximately 5.91ha, of woodland would be lost to the proposed development, of which 3.09ha is commercial forestry. A further 3.09ha of scrub would also be lost, although 22.34ha would be planted in mixed, coniferous, broadleaved, scrub and riparian woodland as part of the mitigation proposals. However, none of this woodland would be used for commercial purposes and only 9.06ha will mitigate against community land losses. Therefore, in terms of net loss although 127.36ha will be lost to agriculture only 105.02ha will be occupied by the proposed alignment and associated structures.

Effects on Farm Viability

37.6.11 Assessments have been made of the effects of land-take and severance on the business viability of the land interests. The financial impact of the proposed development has been assessed, in broad terms, using standard performance figures produced by SEERAD and adapted by SAC for different farm types. This has helped inform the assessment of the impact on farm viability which has also been based upon professional judgement.

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- 37.6.12 Farms that have been assessed with residual impacts of less than Moderate, were assumed to remain viable. All farms with residual impacts above Moderate have been assessed (refer to Appendix A37.2) to determine whether or not they would remain viable.
- 37.6.13 For the purposes of this assessment, it is assumed that for all businesses, compensation as agreed with the District Valuer will be available for compulsory purchase, severance, injurious affection (adverse effects such as noise and vibration from the scheme and its construction) and disturbance. Additionally, where land interests are displaced from an agricultural unit, it is assumed that Farm Loss Payment is also payable.
- 37.6.14 Some of the units that would be affected by the route rely only partly on income from agricultural activity. This is particularly the case for a number of smaller land holdings where land is leased to third parties for grazing and cropping. Although effects on land holding may be substantial, the impact of the loss of revenue may be of lower significance as income is also derived from other sources. Therefore, the viability assessment is considered more appropriate for commercial farms where income derived from agricultural activity forms a high proportion of the total business income.
- 37.6.15 The assessment found that no agricultural businesses would be considered unviable according to the criteria stated in this report.
- 37.6.16 The commercial viability of Redwing Livery has been assessed under Residential and Commercial Land Use.

Summary and Conclusion

- 37.6.17 The 31 agricultural, commercial forestry and sporting land interests that would be affected by the proposed development collectively farm 3,096ha.
- 37.6.18 The proposed development would result in adverse residual impacts (Moderate or above) on 18 land interests (58%). It is predicted that the viability of these units would not be affected.
- 37.6.19 It is estimated that 119 fields would be affected with a net loss of 127.36ha of agricultural, woodland and commercial forestry land in order to construct and operate the proposed scheme. This includes land that would be returned to agriculture. Less than 4% of the land that would be lost is prime agricultural land. The total land lost equates to 4% of the total land farmed collectively by the 31 land interests.
- 37.6.20 Overall, the proposed development has been assessed as having Slight/Moderate residual impacts on agriculture, commercial forestry and sporting interests in the study area for the Fastlink section of the scheme. This is based on the total area of land lost, its quality and the overall impacts of severance, access and drainage on the affected agricultural, forestry and sporting land interests.

Community Land

- 37.6.21 Residual impacts on woodlands within the Fastlink study area have been identified. A net loss would occur at Megray, Limpet and Greens of Crynoch. Overall, there would be a net gain of 2.96ha of woodland within the study area. This estimate takes into consideration woodland planting at specific woodlands where a loss occurs and additional areas of woodland planting that would be greater than 0.5 ha.

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37.6.22 In addition to the woodland specific planting detailed in Table 37.25, planting of over 0.5ha is proposed in several areas, as shown in Table 37.21. A total of 6.09ha woodland would be lost to the scheme (including the losses at West Quoscies and Harecraig totalling 0.19ha). However, there will also be additional planting of 9.06ha, resulting in a net gain of 2.96ha of woodland. This gain in woodland is considered in terms of community land. The ecological or landscape value of these areas is included in Chapters 40 and 41, respectively. The areas of woodland that would be lost are listed in Table 37.26. The proposed scheme would result in an overall gain of woodland within the study area and as such, the overall significance of woodland loss is assessed as Negligible.

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Table 37.25 – Residual Impacts on Woodlands

Woodland	Area Lost (ha)	% Lost	Area replanted (ha)			Type	Severance	Residual		
			West of AWPR	East of AWPR	Total			Total Land lost/gained (ha)	% lost	Significance
Megray Wood	0.64	3.14	0	0	0	n/a	No	-0.64	3.14	Negligible/Slight
Limpet Wood	0.84	6.22	0.13	0.16	0.29	Riparian & Mixed	Yes	-0.55	4.05	Negligible/Slight
Woodland at Fishermyre	1.31	8.64	1.26	1.91	3.17	Broadleaved & Mixed	No	+1.86	n/a	Negligible
H Ram Wood	0.66	100	0	0.97	0.97	Mixed	No	+0.31	n/a	Negligible
Plantation Greens of Crynoch	2.45	16.83	0.52	0.23	0.75	Mixed	Yes	-1.70	11.96	Negligible/Slight
Harecraig – Cookney	0.19	82.46	0.89	0	0.89	Mixed	No	+0.70	n/a	Negligible
West Quoscies	0.004	1.18	0	0	0	n/a	No	-0.004	1.18	Negligible

Residential and Commercial Land Use

- 37.6.23 Residual impacts on Redwing Liveries and Blaikiewell Animal Sanctuary have been identified as it would be directly affected by land-take, potentially resulting in a 20% loss of business land and change in access. It is assumed that this business would receive financial compensation for the loss of land based on the District Valuer's assessment. Although it is possible that additional land could be purchased to compensate for the land lost, this could not be confirmed at this stage of assessment.
- 37.6.24 The proposed scheme would result in improved access for the Stonehaven Golf Club and the Stonehaven Football Club resulting in a beneficial residual impact for these businesses. The access to RUM Consultancy would be reinstated with minor modifications/diversions, therefore the impact on this business would remain neutral.

Development Land

- 37.6.25 As stated previously, a proposed residential development of eight houses was approved in January 2003 at P14_F (Figure 37.2d). There would be a residual adverse impact on land lost at P14_F due to the land required (1.43ha) to accommodate the proposed scheme. In addition, P15_F would also be affected by land-take in order to accommodate access to an overbridge, although the extent is minor (0.04ha). The residual impact upon both these sites has been assessed as adverse.
- 37.6.26 Residual impacts on a number of planning consents for residential properties (P1_F, P7_F-P13_F, P16_F and P19_F, refer to Figures 37.2a, 37.2c-e and 37.2f) have also been identified. These planning consents would not be directly affected by land-take required to accommodate the proposed scheme. These development sites are located in close proximity to the proposed route and could have result in an impact upon residential amenity. Where possible, mitigation measures in the form of landscape works have been included in a number of these locations to provide screening. However, there would be residual impacts on these sites as a result of the scheme.
- 37.6.27 Table 37.26 below summarises residual impacts post mitigation for non-agricultural land uses. For residual impacts on agricultural land uses, refer to Appendix A37.2.

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Table 37.26 – Non-Agricultural Residual Impacts

Issue	Predicted Impact (with no mitigation)		Description of Mitigation Proposed	Residual Impact Significance
	Description	Significance		
Residential and Commercial Land Use	Redwing Livery & Blaikiewell Animal Sanctuary loss of 20% of business land required by proposed scheme and change in access.	Adverse	Financial compensation as appropriate.	Adverse (Substantial for agricultural land)
	Improved access to Stonehaven Golf Course & Stonehaven Football Club.	Beneficial	None necessary.	Beneficial
	Change in access to businesses with minor modifications (RUM Consultancy)	Neutral	Access reinstated.	Neutral
Development Land	Potential loss of amenity (P1 _F)	Adverse	None Proposed.	Adverse
	Potential loss of amenity (P7 _F)	Adverse	Mixed woodland to provide screening.	Adverse
	Potential loss of amenity (P8 _F)	Adverse	Mixed woodland to provide screening.	Adverse
	Potential loss of amenity (P9 _F)	Adverse	Mixed woodland to provide screening.	Adverse
	Potential loss of amenity (P10 _F)	Adverse	Mixed woodland to provide screening.	Adverse
	Potential loss of amenity (P11 _F)	Adverse	None Proposed.	Adverse
	Potential loss of amenity (P12 _F)	Adverse	None Proposed.	Adverse
	Potential loss of amenity (P13 _F)	Adverse	None Proposed.	Adverse
	Loss of 1.43ha development land for residential site. (P14 _F)	Adverse	Financial compensation as appropriate.	Adverse
	Loss of 0.04ha development land for dwellinghouse and potential loss of amenity (P15 _F)	Adverse	Mixed woodland and scrub woodland to provide screening.	Adverse
	Potential loss of amenity (P16 _F)	Adverse	Mixed woodland and scrub woodland to provide screening.	Adverse
Potential loss of amenity (P19 _F)	Adverse	None Proposed.	Adverse	
Community Land	Loss of 3.14% of total woodland area at Megray Wood.	Negligible/Slight	Financial compensation as appropriate. Additional woodland planting (3.00ha total for entire study area).	Negligible/Slight
	Loss of 6.22% of total woodland area at Limpet Wood.	Negligible/Slight	Financial compensation as appropriate. 0.29ha of riparian and mixed woodland planting.	Negligible/Slight
	Loss 8.64% of total woodland at Fisherymyre	Negligible/Slight	Financial compensation as appropriate. 3.19ha of mixed and broadleaved planting.	Negligible
	Loss of 100% of woodland at H Ram Wood.	Moderate	Financial compensation as appropriate. 0.97ha of mixed woodland planting.	Negligible
	Loss of 16.83% of total woodland area and severance at Greens of Crynoch Plantation	Moderate/Slight	Financial compensation as appropriate. 0.71ha of mixed woodland planting.	Negligible/Slight

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Issue	Predicted Impact (with no mitigation)		Description of Mitigation Proposed	Residual Impact Significance
	Description	Significance		
	Loss of 0.19ha of non community woodland at Harecraig-Cookney.	Negligible	Financial compensation as appropriate. 0.89ha of mixed woodland planting.	Negligible
	Loss of 0.004ha of non community woodland at West Quoscies.	Negligible	Financial compensation as appropriate. Additional woodland planting (3.00ha total for entire study area).	Negligible

37.7 References

Aberdeenshire Council (2006). Local Plan.

North East Scotland Together Aberdeen and Aberdeenshire Structure Plan 2001-2016 (July 2002).

SEERAD (2006). June Agricultural Census.