

7 Land Use

7.1 Introduction

This chapter provides an assessment of the potential effects of the proposed scheme on existing and future land use based on the guidelines set out in DMRB Volume 11, Section 3, Part 6 (incorporating Amendment No 1 dated August 2001).

The main effects considered are land-take and the effects on private property and agricultural land. The impact of the scheme upon other land uses including the loss of land used by the community and the effects on development land are also assessed. This assessment has been divided according to land use for ease of reference. These comprise private property, community land, development land, agricultural land, forestry land, waterways and public utilities.

A summary of the effects on the various public utilities present in the scheme area is also included. Full details of the effects on the public utilities will be contained in the Stage 3 Engineering, Traffic and Economic Assessment Report (Mouchel / Scottish Borders Council, 2007).

Any temporary disruption due to construction activities which refers to the effects on people and the natural environment is assessed within Chapter 15 (Disruption Due to Construction).

7.2 Methods

7.2.1 Baseline Information

Information relating to agricultural land classifications was provided by the Macaulay Land Use Research Institute (MLURI) map data.

Information relating to farm holdings was initially obtained by land ownership searches and confirmed by consultation with the relevant landowners.

Information relating to development and community land provisions was obtained from the Midlothian Local Plan (adopted in 2003).

7.2.2 Impact Assessment

As outlined in Chapter 3, impacts were considered in terms of both the site value and the magnitude of impact. The significance of predicted impacts was then determined through a combination of value and magnitude.

Site Value

The site value and sensitivity of each site was determined as detailed in Table 7.1 below by reference to the quality of agricultural land (refer to section 7.3.4), the presence of forestry, private property, community land and development land.

Table 7.1. Definition of Site Value for Land Use.

Value or Sensitivity	Criteria
High	Private residential buildings, forestry of national commercial or recreational importance, community and development land of high national value. Agricultural land of Prime Quality, including Grade 1 to Grade 3.1.
Medium	Land associated with private property. Forestry, community and development land of value regionally/locally. Agricultural land assessed to be of Grades 3.2 to 5.3.
Low	Forestry, community and other land of no specific importance. Agricultural land assessed to be of Grades 6.1 to 7.

Impact Magnitude

The magnitude of impact was assessed independently of the site value and assigned to one of the categories presented in Table 7.2 based on professional judgement.

Table 7.2. Impact Magnitude Criteria for Land Use.

Criteria	Definition
Major	A major loss or alteration of land use or where there would be complete severance of important parts of a site such as to significantly affect the post-development value of the site.
Moderate	A loss, alteration or severance of land use such that the post-development value of a site would be diminished but to a lesser degree.
Slight	Minimal loss, alteration or severance of land use such that there would be a measurable change but this would not significantly affect the use of land from pre-construction conditions.
Negligible	Very little appreciable effect on existing land use or where there are impacts, which are not considered relevant to the existing use of the land and would not effect its value.

Impact Significance

The significance of impact (beneficial and adverse) was determined by a combination of the value of the site and the magnitude of impact as shown in Table 7.3.

Table 7.3. Assessment of Significance Criteria for Land Use.

Site Value	Magnitude of Impact			
	Major	Moderate	Slight	Negligible
High	Major	Major	Moderate	Slight
Medium	Major	Moderate	Slight	Negligible
Low	Moderate	Slight	Negligible	Negligible

The impacts upon features of archaeological and ecological importance are assessed in Chapters 6 and 8, respectively.

7.3 Baseline Conditions

7.3.1 Private Property

There are eight residential properties in close proximity to the proposed scheme as shown in Figure 7.1.

Longfaugh Cottages are situated to the west of the A68 and comprise a group of old farm cottages previously linked with Longfaugh Farm. They are located over 400m from the A68. Alterations to the public access road, U60 Longfaugh, are proposed as part of the scheme but these are restricted to an area close to the A68.

On the east side of the A68 there are five residential properties; Marldene, Old Crichton Dean, Haugh Head House, Routhenhill and 2 Fala Dam Cottages. With the exception of Marldene all these properties sit along side the U77 Fala Dam road and they can be accessed from the A68 via the U77 or the U78 Costerton road. Marldene sits slightly further back from the A68, around 100m, and is reached via a private access track, which crosses Salters Burn via an old stone arch bridge. Access routes to all these properties will be affected by the proposed scheme, although none of the properties are directly affected by the scheme.

There two residential properties, with associated outbuildings, to the north of the scheme at Hope. The properties are located over 250m from the northern scheme tie-in, but only 50m from the existing A68 trunk road. Access to Hope is gained from the disused loop lay-by, adjacent to the A68, and the proposed scheme will not alter the current access arrangements.

7.3.2 Community Land

One area of land within the extent of the proposed scheme has been identified as community land. This area of land is the land associated with Magazine Wood lay-by situated adjacent to the southbound carriageway just to the north of the U60 Longfaugh junction, as shown on Figure 7.2. Although this land is owned by the Scottish Executive, it is perceived as being community land due to the fact it is performing a function for the community at present in terms of providing a suitable and safe place for vehicles to stop. Another public lay-by, Hope lay-by, is situated further north of the proposed scheme adjacent to the northbound carriageway.

The presence of public footpaths/bridleways and cycle routes is discussed in Chapter 11 (Pedestrians, Cyclists, Equestrians and Community Effects).

7.3.3 Development Land

No proposed development land has been identified within the study area.

7.3.4 Agricultural Land

The land capability of the area for agriculture between just north of Longfaugh junction and Fala Tunnel is shown on Figure 7.1 (Land Capability Plan based on the Macaulay Land Use Research Institute [MLURI], Soil Survey of Scotland, Sheet 7 – South East Scotland, Land Capability for Agriculture). The proposed scheme is located within MLURI Land Capability for Agriculture Classes 3.1, 3.2 and 4.1, which are described in Table 7.4 below.

Table 7.4. Land Capability Classifications and Descriptions.

Category	Description
3	Land capable of producing a moderate range of crops.
3 ₁	Sub-category 3.1 is land capable of producing consistently high yields of a narrow range of crops.
3 ₂	Sub-category 3.2 is land capable of average production, but high yields of barley, oats and grass are often obtained.
4	Land capable of producing a narrow range of crops.
4 ₁	Sub-category 4.1 is suited to rotation, which although based on ley grassland includes forage crops and cereals for stock feed. Yields of grass are high, while other crop yields are very variable and usually below the national average.

The land on either side of the road is a mixture of pasture and arable as would be expected from the land capability classification descriptions above. Field boundaries are defined by post and wire fences and generally poor / defunct hawthorn hedges. A number of field access gates are located along these field boundaries and they provide access into various fields along the length of the proposed scheme. Due to the speed of traffic on the A68 and the lack of set back, some of these gates are not used.

Land Use and the location of field accesses are shown on Figure 7.2. The main farm holdings are Longfaugh, Saughland and Whitburgh.

7.3.5 Forestry Land

Two long established woodlands exist within the scheme area, Magazine and Marl Law sit on the east side of the road opposite Longfaugh Farm. These woods are connected by a strip of semi-mature woodland which has been planted more recently and as such is classified as non-inventory woodland. All this land belongs to Whitburgh Estates as shown on Figure 7.2. These woods are operated on a commercial basis and the trees will be felled and re-planted at some point in the future.

Another semi-mature wooded area is situated close to the A68 on the site where Crichton Dean cottages used to sit. These properties were demolished some years ago and the area landscaped by the owners, Midlothian Council. The landscaping is now well established and consists of maturing trees regularly spaced.

7.3.6 Waterways

There are no navigable, disused or abandoned waterways within the study area and therefore this aspect is not discussed any further.

7.3.7 Public Utilities

There are several utilities present within the scheme corridor. These consist mainly of telecommunications apparatus owned by British Telecom, Thus, Cable and Wireless, Telewest and Global Crossing. Also present are Scottish Power, Scottish Water and Scotland Gas Networks.

The majority of the telecommunications apparatus sits in the trunk road verge. A high voltage 400kV overhead power line crosses the A68 approximately 260 metres north of the U60 Longfaugh junction and then travels south roughly parallel to the trunk road at a distance of around 70 – 150 metres southwest of the A68. This overhead line crosses the B6458 Tynehead road approximately 70 metres from the junction with the A68. Scottish Water has a concentration of valves on their water mains network adjacent to the A68. These are serviced off a small lay-by which is situated approximately 240 metres north of the B6458 Tynehead junction. A high pressure gas main also runs parallel to the trunk road at a distance of around 100 – 150 metres southwest of the A68.

7.4 Predicted Impacts

7.4.1 Private Property

No buildings are to be demolished as part of the proposed scheme.

The existing private access to Marldene will be closed as part of the scheme. A new access will be formed from the U77 to service the property. Access to the property will be maintained during the works until the new access is available. The access road associated with Marldene is assessed as being of medium value in terms of land use and the impact magnitude is considered slight. Therefore the impact significance is considered to be **slight adverse**.

There will be some loss of agricultural land associated with this access road and this impact is considered in Section 7.4.4 below.

The effects on pedestrians, cyclists and vehicle users are discussed in Chapter 11 (Pedestrian, Cyclists, Equestrians and Community Effects).

7.4.2 Community Land

The proposed widening of the A68 will result in the removal of the existing southbound lay-by at Magazine Wood. Referring to Table 7.1 the value of this land is considered to be medium as the lay-by serves a useful purpose for the community. Lay-bys provide

convenient places for drivers to stop. They serve as stopping places on long journeys, for the enjoyment of places of scenic interest, for safe parking whilst making telephone calls and for broken down vehicles.

On this particular site a northbound lay-by, Hope lay-by, is situated just north of the proposed scheme. In combination these two lay-bys provide a convenient stopping place for both north and southbound traffic and they are both well used. If Magazine Wood lay-by is closed off there is a risk that southbound traffic will turn right into Hope lay-by which would increase the risk of an accident. A replacement southbound lay-by is proposed as part of the scheme and it will be located just north of the existing Magazine Wood lay-by. The magnitude of the impact is still considered to be slight adverse as the new lay-by will be slightly smaller than the existing large disused loop lay-by at Magazine Wood. Therefore the impact significance is considered to be **slight adverse**.

7.4.3 Development Land

There will be no impact on development land as part of the proposed scheme.

7.4.4 Agricultural Land

Whitburgh Farm is a large mainly arable farm (684ha) with land on the east of the A68. Longfagh and Saughland Farms, which operate as a mixture of pasture and arable, have land holdings on both sides of the A68, within the scheme limits. The extent of these holdings can be seen on Figure 7.2. Longfagh Farm is situated to the west of the A68, but has one field on the east side of the A68. Saughland Farm is also situated to the west of the A68, but has a number of fields on the east side of the trunk road. All field accesses on the A68 are to be closed as part of the proposed scheme.

A table summarising the agricultural land take required by the proposed scheme is shown below. A breakdown of the amount of land required per land class and the amount of land taken from each of the main farm holdings is also shown.

Table 7.5. Agricultural Land Take.

	Land Classification 3 ₁ (m ²)	Land Classification 3 ₂ (m ²)	Total (m ²)
Proposed Scheme	41,581	25,252	66,833
Whitburgh Farm	-	10,993	10,993
Longfagh Farm	-	14,259	14,259
Saughland Farm	41,581	-	41,581

As shown above, the proposed scheme will result in the loss of 6.6ha of agricultural land, consisting of 4.1ha (Class 3₁) and 2.5ha (Class 3₂). Although this is a sizeable

area, in comparison to the amount of surrounding medium quality agricultural land, it is relatively small. Most of the land take is adjacent to the existing A68 road corridor and as such involves no severance.

Whitburgh Farm would lose 1.0ha grazing land (Class 3₂) adjacent to the existing A68. The value of this land is determined to be medium and the magnitude of the impact upon the farm it is considered to be negligible and therefore the overall impact significance is assessed as being **negligible**.

Longfauth Farm is a relatively small tenant farm of 132ha. It would lose around 1.4ha of land mostly from its single long narrow field to the east of the A68. This 3.0ha arable field would be reduced in size to around 2.0ha which could potentially affect its agricultural viability, but this has not been indicated by the tenant farmer or owner. The value of this land (Class 3₂) is considered to be medium and the magnitude of the impact upon the farm is considered to be slight and therefore the overall impact significance is assessed as being **slight adverse**.

Saughland Farm is a larger farm with around 314ha of pasture and arable land. It would lose 4.1ha of land as a result of the proposed scheme. With the exception of the land required to accommodate the new side road which connects the A68 with the U77 Fala Dam road this land is adjacent to the existing A68 corridor. In relation to the new side road, the line has been specifically designed after discussions with the farmer to minimise the effect on these fields by utilising the steeper less productive land within them. In addition, the proposed line of the new side road has been located adjacent to the small unnamed watercourse which runs north through the fields in a ditch. This will minimise any severance associated with the new road. The value of this land (Class 3₁) is considered to be high but due to the size of the farm the magnitude of the impact upon it is considered to be slight and therefore the overall impact significance is assessed as being **moderate adverse**.

Longfauth farm buildings are situated on the west side of the A68 and although the majority of its land is on this side of the road it does have one field on the east side of the road, known locally as the Haugh field. This field is accessed via field gates A2 and A7, see Figure 7.2. As part of the scheme it is proposed to stop up all field accesses onto the A68. Stopping up these field gates will remove all possible access points into the Haugh field. A new access is proposed as part of the scheme but due to the nature of the scheme this is to be located as part of a formal junction format. It will take the form of a left / right stagger junction incorporating the relocated U60 Longfauth side road and the new access into the Haugh field, as shown on Figure 7.2. The value of this field (2.0ha of Class 3.2) is considered to be medium and the magnitude of the impact upon it is considered to be negligible and therefore the overall impact significance is assessed as being **negligible**.

Longfauth Farm also regularly uses field access A8 (Figure 7.2) to access the field which is separated from the main body of the farm by Salters Burn. An alternative access route to this field is available through adjacent fields crossing the burn at grade

close to its issue point, see location on Figure 7.2. The value of this field (3.0ha of Class 3.2) is considered to be medium and the magnitude of the impact upon it is considered to be slight and therefore the overall impact significance is assessed as being **slight adverse**.

Whitburgh Farm has a field access, denoted as A1 on Figure 7.2 which it is able to use access its field close to Magazine Wood. However Whitburgh Farm is able to access all its agricultural fields from points on the local road network and due to the speed of traffic on the A68 this is its policy. Thus removing this access point will have **negligible** impact on the farm. Although, the farm's Factor has indicated that when cattle escape from adjacent grazing land onto the A68, the animals are ushered into the nearest gated field to removed the danger from the road.

Saughland Farm has several field accesses on the A68. Again due to the difficulties of manoeuvring into them due to lack of set back and the speed of traffic these are not regularly used. Alternative access points are available for most of its field. However access to the set aside land via A19 is not easily available and also access to land via A18 is difficult, so tracks are proposed through the adjacent fields. Thus removing these access points will have **negligible** impact on the farm.

7.4.5 Forestry Land

Widening of the A68 to create the proposed new road configuration will result in a small amount of land take within Magazine Wood. In addition, the new field access required to serve the long narrow field belonging to Longfaugh Farm will result in more of the wood being removed. Trees to be felled would need to be taken back to a suitable 'green line' within the wood in an attempt to reduce the possibility of wind blow and a safety zone would have to be left between the trees and the new field access to remove the possibility of any fallen tree landing on the new access road. Thus the area of trees to be removed would be around 0.6ha with the permanent land take area being 0.3ha. The area of existing mature Magazine woodland amounts to 3.6ha, therefore 15% of this will be felled as part of the works. However, Magazine Wood connects with the younger Marl Law Wood to the east and combined they cover 17.5ha, so only 3% of this area will be affected. The value of the land is classed as medium and the magnitude of the impact considered slight, therefore it is deemed that the overall significance of the impact is **slight adverse**.

Access to Magazine Wood will also be affected as access point A2 would be closed up. However the new access track proposed for the Haugh field will also serve as an access point for Magazine Wood.

A sizeable portion of the Crichton Dean landscaped area is also affected by the proposed scheme. Trees in this area are less mature / more widely spaced and wind blow is unlikely to be an issue. As such trees will be felled only within the area to be acquired, 0.5 ha, the value of this land is classed as low and the magnitude of impact

considered moderate, therefore it is deemed that the overall significance of the impact is **slight adverse**.

7.4.6 Public Utilities

The proposed scheme does not directly affect the high voltage 400kv overhead power line. The scheme comes closest to the line at the B6458 Tynehead road where the proposed alterations do move the road slightly closer to the large steel pylons which carry the high voltage wires. The high pressure gas main is also unaffected by the proposed scheme.

The majority of the diversionary work evolves around the proposed widening of the A68. This affects the various telecommunication apparatus, Scottish water plant and an 11kv overhead power supply all of which will be diverted into the new verges.

7.5 Mitigation

Mitigation measures to reduce the impacts of the scheme upon the various land uses of the study area include the following:

- Minimisation of land-take where possible.
- Minimisation of public utility diversion where possible.
- Reducing degree of severance by following existing boundary lines where possible.
- Re-use of excavated agricultural soils in earth mounding and landscape mitigation.
- Restoration of disturbed areas to original use wherever possible.
- Compensation for the loss of land and the relocation of existing access arrangements.
- Provision of access tracks for the Saughland Farm field at Fala Tunnel and the fields to the south-west of the A68.
- Improvements to existing at grade crossing of Salters Burn, which will include stock holding pens for Longfaugh Farm.
- Woodland planting to replace trees felled in Magazine Wood to combat the effects of wind-blow.

7.6 Residual Impacts

Whilst the design of the proposed scheme options will minimise agricultural land take wherever possible, a degree of adverse impact remains unavoidable. The new access tracks will provide safer access to fields. Table 7.6 below presents the residual impacts and enables comparison of the anticipated impacts with and without mitigation.

Table 7.6. Land Use Impacts With and Without Mitigation.

Land Use	Impact Without Mitigation	Impact With Mitigation (Residual Impact)
Private Property Marldene access track	Slight adverse	Slight adverse
Community Land Magazine Wood lay-by	Slight adverse	Slight adverse
Agricultural Land		
Land Take		
Whitburgh Farm	Negligible	Negligible
Longfaugh Farm	Slight adverse	Slight adverse
Saughland Farm	Moderate adverse	Moderate adverse
Access Arrangements		
Whitburgh Farm	Negligible	Negligible
Longfaugh Farm – Haugh field	Negligible	Negligible
Longfaugh Farm – Field access A8	Slight adverse	Negligible
Saughland Farm – Field access A18,19	Negligible	Negligible
Forestry Land		
Magazine Wood	Slight adverse	Slight adverse
Crichton Dean Wooded Area	Slight adverse	Slight adverse