

Part Two

2/2 Land Use

2/2.1 Introduction

This section addresses the potential effects of the scheme on existing and future land use within the vicinity of the proposed scheme. In particular, it considers the effects of demolition of property and any associated land-take, the loss of agricultural and development land and the loss of land (but not property) used by the community.

This section is not concerned with the range of other potential impacts such as the loss of facilities, services or employment that may result from any loss of land. The compensation due to the demolition of private property is addressed in the economic appraisal of the scheme.

The assessment of impacts on development land is intended to address the effects of the scheme on future land changes (i.e., on development land) that would be likely to occur in the absence of the scheme. This includes land that is covered by Fife Council's land use planning designations as well as any planning proposals lodged with the planning authority.

Due to the increasing efficiency of agriculture, the protection of agricultural land is no longer the top priority that it once was. However, there is still a need to protect the best and most versatile land as a national resource in accordance with National Planning Guideline on Agricultural Land (1987) and SDD Circular 18/1987 on Development involving Agricultural Land.

The impacts resulting from the loss of public buildings are addressed in [Section 2/8](#). This section is concerned with the loss of land used by the public that is common or open space. '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 recreation, or land which is a disused burial ground.

Impacts on land of ecological importance and of cultural heritage interest are addressed in [Sections 2/5](#) and [2/8](#) respectively. The impacts on landscape resulting from changes in land use are discussed in Section 2/6.

2/2.2 Methods

The study area for the assessment of impacts on existing and proposed land use includes the built-up area of Kincardine and extends through the agricultural land to the east of Kincardine across which the proposed scheme passes. It is shown in [Figure 2/2.1](#). The study area for the assessment of impacts on agricultural land was restricted to cover those land units and agricultural concerns directly affected by the proposals. This is shown in [Figure 2/2.2](#).

The assessment was undertaken through:

- consultations, both with the planning authority and other governmental representatives, and with local owners/occupiers who may be affected by the scheme;
- a literature review, notably a review of the current Local Plan;

- site visits, undertaken in January and February 2001; and
- professional judgement.

A specialist assessment of effects on agricultural land was undertaken by the Scottish Agricultural College. The assessment was based on a pre-construction soil survey along the proposed route. Auger samples were taken at approximately 100m intervals, from which Land Capability for Agriculture was established. Some sections of the route were not surveyed due to later route realignments and restrictions on fieldwork due to the outbreak of Foot and Mouth Disease. Information on the existing drainage system was obtained from the present occupier. Further details on the assessment methods, particularly with respect to the determination of Land Capability for Agriculture, are provided in [Appendix 2](#).

2/2.3 Baseline Conditions

Existing land uses within the study area are shown in [Figure 2/2.1](#) and have been categorised into the following land use classes:

- agricultural land;
- housing and residential land (including shops and farms where there is also a residence);
- industry and commercial properties (including indoor leisure facilities);
- public open space (including children's playgrounds, cemeteries and disused burial grounds);
- educational facilities;
- woodland and forestry;
- derelict or vacant land;
- public utilities and infrastructure (including live and disused railway lines, the trunk road network and service facilities such as Kincardine sewage treatment works and electrical sub-stations).

All but educational facilities are found in the immediate vicinity of the proposed Eastern Link Road.

Agriculture

Agricultural land comprises the majority of the study area outside the village of Kincardine. The land in the immediate vicinity of the scheme forms part of Inch Farm, which extends to approximately 126 hectares.

For the purpose of assessment, the fields along the route corridor were numbered 1 to 11 from west to east (see [Figure 2/2.2](#)). The results of the soil survey are shown in Table 2/2.1. Of the seven fields sampled during the soil survey, field No. 7 was assessed to be Class 3.1 land. This is Prime Quality Land. The other fields were assessed to be Class 3.2 land, or Non-prime Quality Land. Further details and definitions of soil classes are provided in [Appendix 2](#).

Table 2/2.1 Land Capability for Agriculture

Field No	Minimum topsoil depth (m)	Natural drainage Class (wetness)	Main Land Capability Class Assessment	Greatest Limitations to agricultural production
1	300	Imperfect (IV)	3.2sw	Subsoil wetness & soil texture
2	300	Imperfect (IV)	3.2sw	Subsoil wetness & soil texture
3	300	Imperfect (IV)	3.2sw	Subsoil wetness & soil texture
4	300	Imperfect (IV)	3.2w	Subsoil wetness
5	No survey carried out			
6	250	Imperfect (IV)	3.2w	Subsoil wetness
7	350	Free or Imperfect (III)	3.1g or 3.1w	Gradient or subsoil wetness
8	350	Imperfect (III)	3.2g	Gradient
9 to 11	No survey carried out			

The small size of the farm indicates that it is currently on the margin of being able to justify the employment of a full time member of staff. However, the farm currently employs one full-time employee in addition to the farm owner who works on the farm on a part-time basis. Additional temporary labour is taken on to cover peak periods such as harvest time.

Records of the drainage system were obtained from the current occupier of Inch Farm. It is likely that older unrecorded drainage systems exist and are working today. It appears that the leader field drains are limited to the ditch systems in or on the perimeter of fields to the south of Walker Street, or to the cundie passing along the A985 and through the hollows in the field south of Tulliallan Cemetery. All fields may have lateral field drains except Field 4 and Fields 7 and 8 to the immediate west of Longannet Road. The lateral drains of the other fields are likely to be aligned to drain towards to estuary, collecting first in the leader drains before discharge to the estuary.

Of the total area of 126ha, a small area (approximately 6.2ha) towards the west is used for cattle and horse grazing (see [Figure 2/2.2](#)). Ninety to one hundred cattle are housed on the farm during the winter. Approximately 20 cattle are summered on the farm, making use of the permanent pasture and rough grazing land. The remainder of the farm is currently used for arable production and is cropped under a typical arable rotation comprising winter wheat, winter barley, spring barley, winter oilseed rape, set-aside timothy hay and temporary grass leys.

At present, each field has access directly off a metalled road except Field 5, which has indirect access. The main water supply passes through two fields, but only one has a water trough.

All the cropped area is eligible for Arable Aid Payment Scheme, but no part of the study area is an Environmentally Sensitive Area, or has any other statutory designation of relevance to farming.

Housing

The housing and residential land comprises the south and east boundaries of Kincardine, a number of properties at New Row (known as 'The Holdings') on the A985 and the isolated properties of Inch House, The Sycamores, Inch Farm and Inch Farm Cottages.

Industry and Commerce

The main industry in the locality comprises Longannet Power Station located on the banks of the Forth to the east of Kincardine. Kincardine Power Station, located to the

northwest of Kincardine on the Bank of the Forth, has recently been demolished. Commercial activity is predominantly restricted to the centre of the village, comprising shops, cafes, take-away food outlets, a bank and a post office. A haulage business is located at Inch Farm.

Public Open Space

Public open space is represented by a bowling green located along Walker Street and Forth Street, a football ground off Riverside Terrace and Standalane, Tulliallan Cemetery at the eastern edge of Kincardine on the A985, and open greens with children's playgrounds on Standalane, Priory Square and to the north of properties at New Row.

Woodland and Forestry

There is little tree cover in the immediate vicinity of the scheme. Narrow bands of scrub are associated with the railway line passing along the bank of the Forth (see below) and with the embankments along Longannet Road. There are relatively small areas of woodland to the north of Longannet Power Station, east of Longannet Road. There are a small number of trees surrounding Inch Farm.

Derelict and Vacant Sites

The largest derelict or vacant site in the vicinity of Kincardine is Kincardine Power Station, which lies to the northwest of Kincardine Bridge and is now partially vacant. The site of the former cement works is located close to the proposed scheme at the south-eastern edge of the village on Walker Street. There are few remains of the former works, except some building rubble and the site is mainly covered by rough grassland.

Public Utilities and Infrastructure

Kincardine sewage treatment works is located southeast of Kincardine Bridge, on the bank of the estuary. In addition, there are overhead power cables and a pipeline that cross the open agricultural land between the northern approach of Kincardine Bridge and Longannet Power Station. Roads within the study area comprise the network of streets in Kincardine, the A985 to Dunfermline, the A977 to Alloa, the A876 North Approach Road and the C5 (Walker Street). The Kincardine to Dunfermline railway runs along the riverbank and is used for the delivery of coal to Longannet Power Station. Railtrack are committed to the development and reopening of the Stirling-Alloa-Kincardine line. This would operate primarily as a freight route that, together with the Kincardine to Dunfermline line would provide an alternative and less restrictive method of accessing Fife from the south and west.

Planning Proposals

Planning proposals included in the Local Plan comprise proposals for housing and public open space. One site at Braeburn has been allocated to provide for 43 homes (some of which have been constructed), while another on Dewar Avenue has been allocated for 8 homes. A further site on Walker Street at the former cement works has been allocated to provide 19 homes. A site on Glebe Road to the northwest has been allocated for 9 homes. A new 0.8 hectare play park is proposed on Osborne Drive.

2/2.4 Mitigation

The alignment of the route has been designed to avoid the demolition of residential and commercial properties. Measures to mitigate for visual impacts, dust and noise impacts, during both construction and operation have been included in scheme design (see Sections [2/8](#), [2/9](#) and [2/10](#) of this report). The maintenance building for Kincardine Bridge will be replaced by a smaller alternative building, possibly in the form of a port-a-cabin.

Measures to mitigate the potential severance of access to the coastal path from Silver Street comprise provision of a signalised pedestrian crossing across the proposed road and a ramp connecting to Silver Street (see [Section 2/11](#) for details).

A road drainage system has been incorporated into scheme design to comply with requirements of a Sustainable Urban Road Drainage System (see [Section 2/4](#) and [Figure 2/5.2](#) for details). Existing field drains and any leader drains severed by the route will be linked to this system. Pumps will be installed where appropriate to ensure that no backing up of the system or waterlogging of fields occurs. A general plan of the drainage system is provided in [Figure 2/4.1](#).

The permanent loss of land to agriculture will be reduced by the provision of suitable access, and the return of land to agricultural purposes wherever possible, given that some land will be required for other forms of mitigation (for example, for landscaping or construction of noise barriers). Access will be provided to all field units from Longannet Road, the A985 or from tracks to prevent crop damage in adjacent fields. Field boundaries will be realigned where appropriate to increase some field sizes to facilitate arable operations. Fence lines, pipes, ditches and stone dykes will be moved or removed and/or replaced, where appropriate. The details of restoration and/or compensation for any loss of farm revenue will be subject to discussion with the farm owner.

Damage to the agricultural capability of soils will be avoided by the adoption of procedures relating to soil stripping, handling and storage during road construction and reinstatement (see [Section 2/3](#) for further details). A mains water supply will be provided with associated troughs and fittings where stock access to existing supplies are cut off. Financial compensation will be provided for the loss of any areas of land that will be lost to agriculture.

Should any further geo-technical investigations be required as discussed in [Section 2/3](#), an environmental appraisal will be undertaken. This will assess the impact of investigations on sensitive sites, including agricultural land and propose mitigation measures to be implemented.

A summary of the mitigation measures and their place within the mitigation hierarchy is provided in Table 2/2.2.

Table 2/2.2 Summary of Measures Employed to Address Potential Impacts on Land Use

Type of Measure	Description
Prevent	<p>Road aligned to avoid demolition of residential and commercial properties.</p> <p>Field drains to be linked to a Sustainable Urban Drainage System with installation of pumps to prevent the system backing up or waterlogging of fields.</p> <p>Adoption of procedures relating to soil stripping, handling and storage during road construction and reinstatement will avoid damage to the agricultural capability of soils.</p> <p>Provision of mains water supply with associated troughs and fittings where stock access to existing supplies is cut off.</p>
Reduce	<p>Maximising the return of available land to agriculture and the provision of access to field units will reduce the permanent loss of agricultural land.</p>
Offset	<p>Provision of smaller building to replace existing maintenance building for Kincardine Bridge.</p> <p>Provision of a signalised pedestrian crossing and ramp connecting to Silver Street to offset severance of access to coastal path from Silver Street.</p> <p>Provision of financial compensation for the loss of any areas of land that will be lost to agriculture.</p>
Enhance	<p>None provided.</p>

2/2.5 Predicted Impacts

Demolition

No residential properties will be demolished by the proposals. One non-residential property will require to be demolished, namely the maintenance building for Kincardine Bridge. The maintenance building (currently owned by the Scottish Executive Development Department) is not listed and Historic Scotland does not consider any adverse impact on cultural heritage to result. The function of the building will be maintained through the provision of alternative facilities.

Community Land

Open space used by the public comprises the bowling green, the football ground, Tulliallan Cemetery and the coastal path. None of these sites will be directly affected by the proposals. Ambient noise levels at the football ground are 47.3 dBL_{A10(18hr)}. These are predicted to rise to 55.0 dBL_{A10(18hr)} in 2003, representing a Moderate/Substantial adverse effect and to 56.7 dBL_{A10(18hr)} in 2018 with the scheme in place. Ambient noise levels at the Coastal Path are 43.0 dBL_{A10(18hr)}, with these noise levels predicted to increase to 57.2 dBL_{A10(18hr)} in 2003, representing a Moderate/Substantial adverse effect and to 59.1 dBL_{A10(18hr)} in 2018. (see Section 10 for details). Ambient noise levels at Tulliallan Cemetery, where there is existing noise from traffic on the A985, is 62.1 dBL_{A10(18hr)}. With the opening of the scheme in 2003, noise levels at this location are predicted to reduce to 55.5 dBL_{A10(18hr)}, representing a moderate/substantial benefit, and by 2018, these will rise slightly to 56.6 dBL_{A10(18hr)}. No impact on usage is envisaged.

The existing access to the coastal footpath from Silver Street will be severed, but continued access will be provided for pedestrians and cyclists via the signalised pedestrian crossing and ramp. Access for equestrians will be provided via the adapted signalised crossing across the A876 North Approach Road or along existing back streets

through the village. No significant impacts on journey lengths are envisaged (see [Section 2/11](#) for details).

Development Land

The area allocated to housing to the south east of Kincardine on Walker Street will not be directly affected by the proposals. Access from the A876 North Approach Road and the centre of Kincardine will be available from Walker Street as it is at present but, in common with other properties along that street, there will be no vehicular access from the east. However, the proposed access arrangements are considered by the transport authority to be at least adequate for the number of homes proposed and will benefit from the reduced traffic flows to result on Walker Street. Construction of the proposed road will cause some degree of adverse visual impact on views from the site. The impact on neighbouring properties is discussed in [Section 2/7](#). Without design details, it is not feasible to determine the extent of impact on any new homes, but it would be usual for any such homes to have appropriate landscaping included as part of their design, just as the noise environment would also be considered. No other development site will be affected by the proposals.

Agricultural Land

The proposed scheme will pass through arable and grazing land at Inch Farm. Following the reinstatement of soils and drainage (see [Figure 2/5.2](#)) disturbed during construction, no adverse impact on Land Capability for Agriculture is envisaged. However, the proposed road will result in both severance and loss of land from the farm.

Approximately 25% of the land beneath the proposed route comprises Class 3.1 (prime agricultural quality) land. The remainder is Class 3.2 (non-prime agricultural quality) land. Direct landtake, following the reinstatement of land disturbed during construction, will result in a loss of approximately 10 ha of land from Inch Farm, comprising both arable and grazing land. The occupier may wish to reallocate an arable area to grazing, otherwise, it will no longer be feasible to support the summer grazing of cattle or the winter grazing of horses.

The loss of 10 ha of land equates to approximately 8% of the total farm area. If this figure is adjusted for areas made obsolete and weighted to account for land lost being of relatively better quality, then a reduction in business output of 10 to 12% is a reasonable estimate. Given the small size of the farm unit, this will represent a significant reduction in the profit. The fixed costs in terms of labour and machinery will become difficult to justify. It may be necessary to restructure the labour force.

The new road will effectively bisect the farm. Access will be provided to severed pockets of land wherever feasible (see [Figure 2/5.2](#)), but the severance will still lead to major inconvenience, and many of the resultant fields will be of an irregular shape. This will result in increased downtime during all field operations. Overall, it is anticipated that even with the proposed mitigation measures, the future viability of the farm business will be compromised by the proposed scheme. This represents a significant impact on the farm unit. However, any loss of farm revenue will be compensated for, subject to discussions with the farm owner.