



LAND AT THE INTERSECTION OF THE M8 MOTORWAY AND GREENOCK ROAD,  
INCHINNAN, ERSKINE

CONSTRUCTION OF MOTORWAY JUNCTION

## **ENVIRONMENTAL STATEMENT**

### **NON-TECHNICAL SUMMARY**

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## **1 Introduction to the Environmental Statement**

- 1.1 The new motorway junction development is directly linked to the redevelopment of the Royal Ordnance site at Bishopton. This redevelopment is detailed in a current outline planning application (reference 06/0602/PP) for the “regeneration of the site to form a mixed use community growth area”.
- 1.2 The proposed works involve the construction of a new motorway interchange on the M8 between junctions 29 and 30. The interchange lies at the point of intersection between Greenock Road (A8) and the motorway, to the east of the village of Bishopton.
- 1.3 An Environmental Impact Assessment (EIA) for these works has been undertaken in accordance with the Environmental Impact Assessment (Scotland) Regulations 1999. This non-technical summary is an outline of the Environmental Statement which is the output of the EIA process.

## **2 Key Issues**

- 2.1 The assessment of impacts has been progressed for each of the primary environmental topics at two stages : the construction of the new junction and the impact at the point when the junction is in operation.
- 2.2 For each environmental topic the significance of impacts at the two stages has been appraised according to measures such as how sensitive the receptor is to change, the scale of change or the duration of change.

## **3 Description of the Site and Surroundings and the Project**

- 3.1 The M8 motorway, which emerges from the west of Glasgow then turns north toward the River Clyde, is a dominant element in the landscape. The immediate surrounding areas are mostly open fields, which are used for pasture and some arable farming. There are a number of scattered small areas of woodland associated with the corners of field boundaries and farms and elements of forestry, typically on steeper ground. The field boundaries comprise hedgerows, fencing and dry-stone walls.
- 3.2 The immediate land at and around the new junction is gently undulating but the dominant feature in the landscape is the M8 corridor itself (Figure 3.1). The construction of the motorway created a physical barrier. Some roads and tracks that previously ran across the path of the motorway are now either on elevated bridges or are truncated.
- 3.3 There are scattered farmsteads and houses in the vicinity of the junction. Craigmuir Farm and Lochranza Cottage are the nearest neighbours (Figure 3.1).
- 3.4 In essence the design of the motorway junction comprises the construction of two east facing ramps to enter and leave the motorway together with roundabouts at the locations where the ramps meet the existing Greenock Road (Figure 3.2).
- 3.5 The most significant physical constraint for the design of the junction has been the presence of Southbar Landfill to the south and west of the new junction. The ramp for traffic leaving the motorway has been aligned to minimise intrusion into the landfill.

3.6 Drainage from the new hard surfaces will be regulated through the use of specifically designed ponds which will regulate the rate of flow into the receiving watercourse – Lin Burn to the east of the M8.

## 4 Planning Context

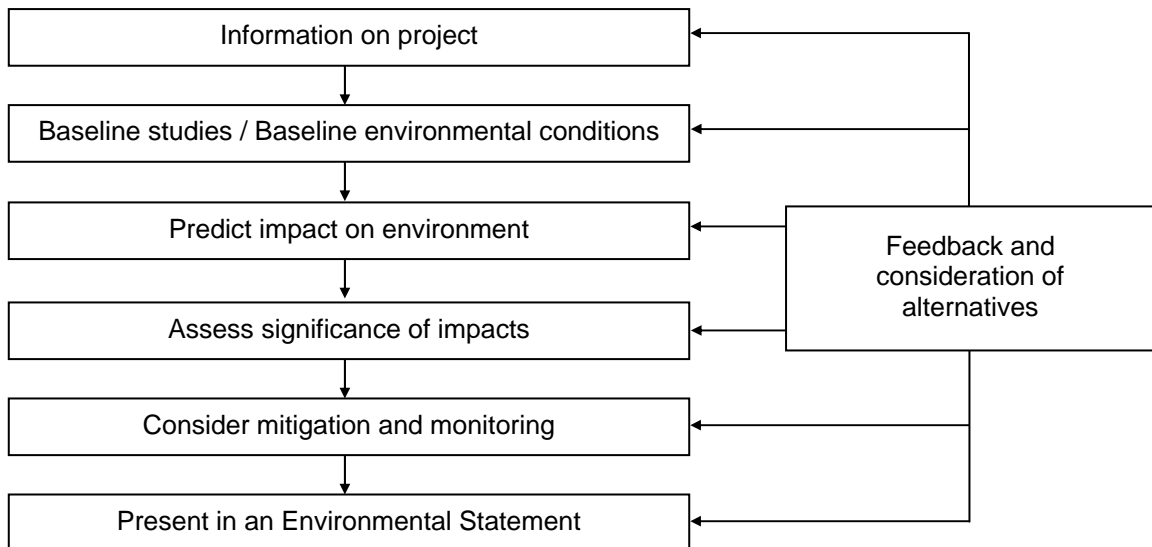
4.1 Planning policy at national, regional and local level places an emphasis on the integration of landuse and transportation. The overall aim is to reduce the number and length of trips by private car.

4.2 The Access Strategy for the Royal Ordnance site redevelopment as a whole places a strong emphasis on improving all modes of transport – for pedestrians, cyclists, users of public transport as well as road vehicle users. The Access Strategy requires a new link to the motorway network to complement other improvements to the transport network.

4.3 The new junction falls in the Green Belt. There is a specific need for the junction to have a Green Belt location. The proposed design aims to minimise the impacts on the Green Belt within the limits imposed by other constraints such as the presence of the nearby landfill site.

## 5 Introduction to the Assessment of Environmental Effects by Topic

5.1 The EIA process which has been followed can be summarised in a flow diagram :



5.2 In this instance, the EIA process and the project design has progressed in parallel. The relationship between the two has been iterative and interactive to ensure that design decisions have been informed by knowledge of environmental consequences.

## **6 Effects on Air and Climate**

- 6.1 A study of road traffic emissions in the vicinity of the Royal Ordnance site for the new development has been carried out. The study used current best practice techniques to estimate levels of air pollutants at sensitive receptors surrounding the proposed development site and specifically at the location of the proposed M8 junction.
- 6.2 A Review and Assessment of Air Quality carried out by Renfrewshire Council has concluded that the traffic pollutants potentially significant in the Renfrewshire area are nitrogen dioxide (NO<sub>2</sub>) and particulate matter (PM<sub>10</sub>).
- 6.3 A detailed modelling study indicated that the forecast levels of NO<sub>2</sub> and PM<sub>10</sub> for 2022 would not exceed the Air Quality Objectives at any of the sensitive receptors assessed within the surrounding area.
- 6.4 Assessments of the impact on air quality resulting from increases in road traffic movements associated with the Royal Ordnance redevelopment and the proposed M8 junction showed that both are unlikely to lead to a significant impact on local air quality.
- 6.5 In the absence of reliable and comprehensive dust emission data in relation to the proposed construction programme, the assessment has been carried out on a qualitative basis with reference to the site's location in relation to sensitive receptors; the planned process; site characteristics; material handling procedures and prevailing winds. The assessment concluded that if construction activities are not controlled for dust emissions, the development would have a minor adverse impact on air quality for the period of construction. Mitigation measures suggested promote best practicable means of controlling dust emissions from site construction.

## **7 Effects on Noise and Vibration**

- 7.1 Road traffic noise emissions in the vicinity of the site have been assessed. This compared noise levels in 2002 with and without the proposed development which included a new M8 junction.
- 7.2 The assessment indicated that changes in noise levels as a result of the development on existing roads are likely to be inaudible on most roads close to receptors. On existing roads close to receptors where the change may be audible, the noise levels are likely to be well below the Noise Insulation Regulations trigger value for noise abatement schemes.
- 7.3 It can be concluded that noise from the proposed junction development will not have a significant impact on the noise levels at nearby sensitive receptors.

## **8 Effects on Cultural Heritage**

- 8.1 A desk-based assessment has identified known and suspected archaeological and cultural heritage remains in the vicinity of the development area. Only one archaeological site, Lin Burn, is known to exist within the development area. This site has been judged to be of low cultural heritage value, given its unknown extent of survival and the fact that any remains may have been disturbed by works associated with the construction of the M8 and A8. Preservation *in-situ* is, therefore, not perceived to be appropriate in this instance. However, given the possibility of encountering archaeological remains it is recommended, in accordance with national and local planning policies, that an archaeological evaluation be carried out prior to any ground breaking works associated with the development. Trial trenching should target those areas that have been least disturbed and particular attention should be given to identifying any remains associated with the known farmstead at Lin Burn and/or any prehistoric remains associated with the enclosure at Southbar immediately east.
- 8.2 The impact of the setting of one Listed Building, Dargavel House, to the west of the site, is likely to be negligible. Topographic and vegetative conditions render inter-visibility between the monument and the proposed development site as almost non-existent. Also, it should be noted that the visual setting of this site has already been compromised by the construction of the Royal Ordnance Factory and other modern developments in the surrounding area. Visual impacts upon a further 59 Listed Buildings and nine Scheduled Ancient Monuments in the area up to 5 km away have been assessed and judged as negligible as topographic conditions and modern buildings and population centres prevent direct views between the development site and protected cultural heritage monuments.

## **9 Effects on Fauna and Flora**

- 9.1 The ecological assessment was simplified by the nature of the area to be disturbed, which is largely farmed fields and managed roadside planting adjacent to the A8 and M8, but with disturbance and loss of a small section of the eastern boundary of established reedbeds and the northern tip of a Site of Interest for Nature Conservation (SINC, a non-statutory designation). Not all of the impacts will be negative, with drainage ponds to be installed to treat runoff from the junction slip roads and roundabouts. Specific mitigation measures are proposed where appropriate.
- 9.2 The predicted impacts on the range of local habitats – including the SINC, the reedbeds of the treatment ponds, the hedgerows and local woodland – are predicted to be of low significance throughout the construction stage. Following the construction of the new junction there will be positive benefits for flora and fauna – not least the potential in the new drainage ponds to improve biodiversity.
- 9.3 In relation to fauna, there will be impact on the feeding habitat of bats and birds. This will be largely associated with the construction of the new junction. As new planting and new water bodies become established this impact will turn from negative to positive. There will also be a degree of impact on the feeding habitat of badgers. Whilst this impact is of low significance, there could be a need for passes beneath the new section of road to accommodate badger movements.

## **10 Effects on Landscape and Visual Impacts**

- 10.1 The changes brought to the landscape by the new junction development will have an influence upon the landform, cover and features which comprise the landscape character. There will be a loss of particular landscape features such as hedgerows, some trees and open fields but the area in general is not particularly sensitive to change by virtue of the proximity of the dominant motorway corridor itself.
- 10.2 There are different groups who will experience the changes in landscape and visual character. These are the visual receptors.
- 10.3 In summary, the impacts on significant visual receptors are as follows :
- (a) People driving along the M8: will have near views of the new slip roads and junctions
  - (b) People driving along and pedestrians on the A8: will have views of the new roundabouts, dual carriageways and slip roads
  - (c) Residents of the farm at Craigmuir: will have near views of the off-ramp roundabout and associated dual carriageway.
  - (d) Residents of Lochranza Cottage: will have near views of the off-ramp roundabout and associated section of dual carriageway.
  - (e) People at a viewpoint off the B775 southwest of Paisley: will have distant views of both junctions.
  - (f) Residents/visitors to the area south of Johnstone and Paisley will have limited, distant views.
  - (g) Residents at Barrangary farm: will have middle-distance views of the off-ramp slip road, roundabout and dual carriageway.
  - (h) Residents at North Commonsides: will have filtered views of the on-ramp access road and associated roundabout.
  - (i) Residents at Nether Southbar will have limited, distant views of the north-bound slip road roundabout.
- 10.4 The most significant visual impacts will be experienced by the receptors at Craigmuir Farm and Lochranza Cottage. There is a need for the design of the junction to mitigate these impacts – firstly, by ensuring that embankment heights are minimised and, secondly, through the use of appropriate new planting.

## **11 Effects on Water**

- 11.1 The impacts on the water environment which could be detrimental relate to the construction stage of the development. Once the junction is in operation, the associated drainage ponds will provide a net positive benefit.
- 11.2 The potential impacts on groundwater and the existing drainage ditches at and around the development site are predicted to be of low significance through the construction stage. The local watercourse of Lin Burn (Figure 3.2) and the treatment ponds associated with the adjacent landfill site are more sensitive to change and pollution prevention measures and emergency procedures through the construction stage are recommended. Particular and

specific measures are recommended in the event that landfill material needs to be excavated. These measures relate to the prevention of contaminants being released to the water environment.

## **12 Effects on Geology and Soils**

- 12.1 A site investigation has been carried out to allow the geology and soils to be characterised. In addition, samples of soil have been analysed to determine its composition. This showed that, for the development proposed, there was no exceedence of human health assessment criteria.
- 12.2 The construction of the off ramp is such that the majority of the road will be on the line of the existing tarmac road and so there will be negligible impact on surface soils. The soft verge between the existing M8 carriageway and the settlement ponds is likely to be impacted already by air borne pollutants from the M8 traffic. The off-ramp will be placed on an embankment and therefore there will be impacts on underlying soils due to loading although these are likely to be of a beneficial nature.
- 12.3 The road alignment has been designed with the landfill in mind so that it is avoided. In the event that landfill wastes are uncovered during the course of the construction works, then there may be impacts on surrounding soils. However, suitable mitigation measures can be employed to minimise these potential impacts.

## **13 Effects on Pedestrians, Cyclists, Equestrians and Road Safety**

- 13.1 The catchment area for key facilities within Bishopton will be the extent of the village and consequently existing pedestrian movement along the A8 Greenock Road is low and infrequent. Observations have shown that leisure cyclists do use the A8 Greenock Road particularly at weekends. There is no obvious use of Greenock Road by equestrians.
- 13.2 The main pedestrian movement in the vicinity of the proposed interchange will be linear along Greenock Road to/from Bishopton. There are no attractions or key facilities adjacent to Greenock Road which would create a demand to cross the road. The level of pedestrian movement is low and the scheme would increase walking distances marginally. The amenity of the route would be enhanced by the increase in footway width, segregation from traffic, the provision of street lighting and the reduction in traffic speed. However, these benefits would be off-set by the increase in traffic flow. In summary, the effect of the scheme on pedestrians could be considered slightly positive or at worst neutral.
- 13.3 Similarly, the main cycle movement will be linear along Greenock Road to/from Bishopton. Cyclist use will generally be low and only of any significance at the weekend when traffic flows are light. The amenity of the route will be enhanced by the provision of street lighting and the reduction in traffic speed. In contrast cyclists will have to negotiate two new roundabout junctions. However, due to the configuration of the junction, conflict will be minimised and the entries properly designed to maintain low speed at entry. In summary, the effect of the scheme on cyclists could be considered slightly positive or at worst neutral.

## **14 Inter-Relationships and Conclusions**

- 14.1 There is a direct link between the proposed motorway junction and the comprehensive regeneration of the Royal Ordnance site at Bishopton. The regeneration of this site is of strategic importance in Scotland as is highlighted in the National Planning Framework and in the Glasgow and the Clyde Valley Joint Structure Plan 2000.
- 14.2 The impacts on the environment associated with this development have been examined at the stage of construction and through the operation of the new motorway junction. There will be both positive and negative impacts. Some of the negative benefits will be of short duration through the construction stage of the development.

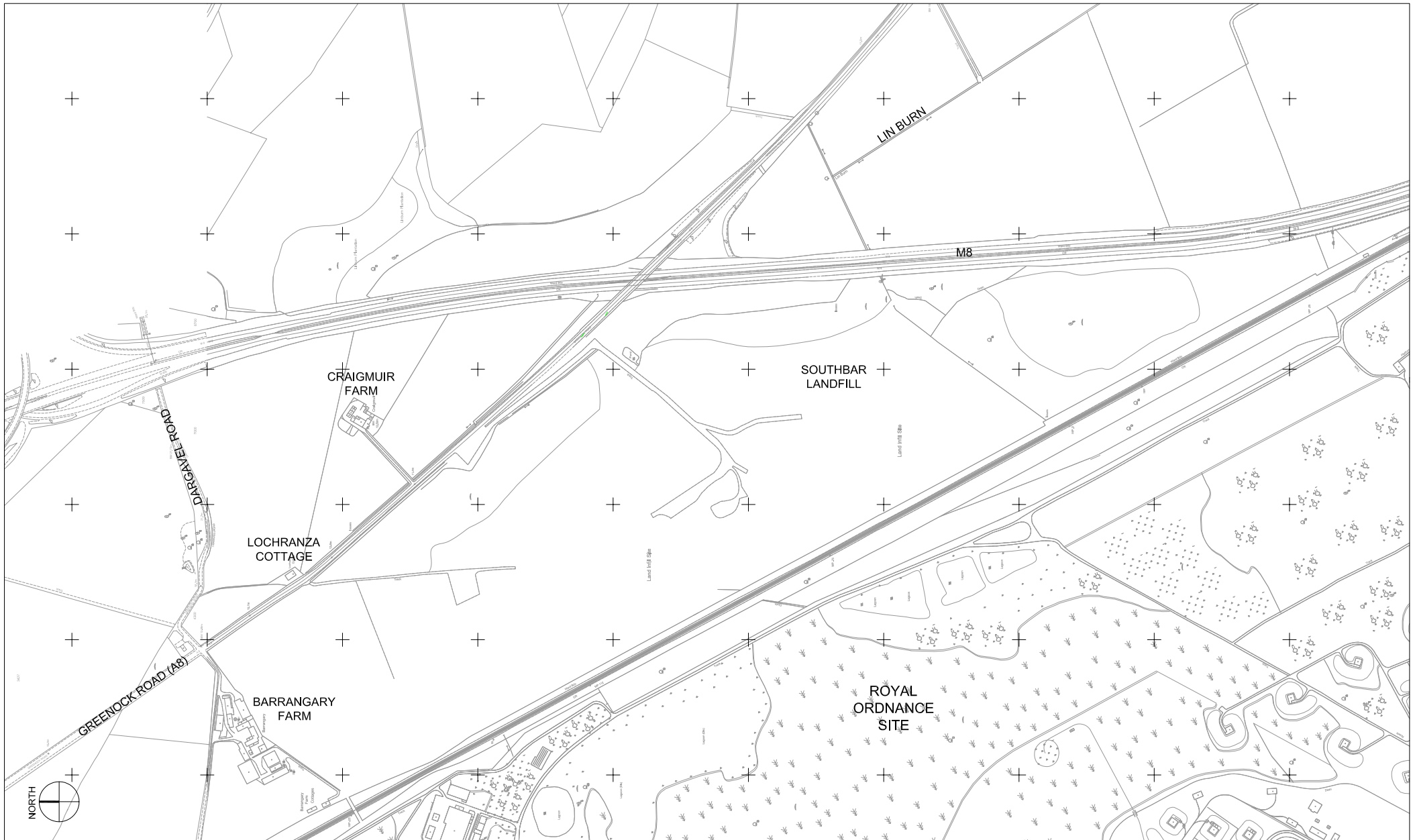
### **Construction Stage**

- 14.3 At the construction stage there will be a range of environmental implications associated with engineering activities. In a general sense, the majority of the impacts can be addressed through a rigorous approach to construction design and management. This is particularly the case with potential short duration, negative impacts arising from dust or noise generation and impacts on the water and soils environment. In relation to the latter, the significance of the impact will increase according to the level of disturbance (if any) of contaminated material contained in the adjacent landfill. Specific mitigation measures are required should there be disturbance of landfill material.
- 14.4 The construction of the development will have a temporary negative impact on flora and fauna. This will be particularly associated with the severance and destruction of habitats and the disturbance to the treatment ponds for the landfill facility. These impacts as a whole are not regarded to have high significance. There will be negligible impact on the SINC which lies to the immediate south-west of the development site.
- 14.5 The construction stage could also have an impact on buried archaeological remains in the vicinity of the proposed new junction. The known archaeological remains have been judged to be of low cultural heritage value. Preservation in situ is not appropriate but evaluation of any remains – if found – should be undertaken.
- 14.6 The construction of the development will have a permanent impact on the character of the landscape. This impact arises from changes in the localised landform, in landuse, in effect on trees and arable pasture land and on the overall landscape character. The magnitude of these changes is seen to be low to moderate as the landscape as a whole is already dominated by the motorway itself.
- 14.7 Impacts on visual receptors in the vicinity of the new junction will be of greater significance, particularly the visual impacts on the occupiers of Craigmuir Farm which lies within 50 metres of the development. In mitigation of visual impacts, the design has been progressed with modest embankments to support roundabouts and slip roads and a scheme of planting to screen and filter significant (negative) changes from receptor viewpoints.

### **Operational Stage**

- 14.8 At the operational stage the nature, magnitude and duration of impacts change. In general, there is progressive lessening of the magnitude and significance of impacts. This is particularly the case in relation to the water environment where the surface water drainage network will provide positive environmental benefits. The same network will also improve biodiversity over time, particularly if ponds receive plant material arising from the changes to treatment ponds.

- 14.9 There will also be improvement to the impacts caused to landscape character and visual receptors as the screen planting at the edge of the development matures. This planting will also give ecological benefit, over and above that currently present at the site.
- 14.10 Whilst the junction is little used by pedestrians and only occasionally used by cyclists, the design of the junction will bring positive benefits. The amenity of the route for non-vehicle users will be enhanced by increases in footway width, segregation from traffic, the provision of street lighting and overall reductions in traffic speed.
- 14.11 There will be negative impacts at the operational stage, largely associated with changes in air quality and noise associated with the increase in traffic generation. However, these impacts – particularly for the nearby sensitive receptors – would not exceed recognised objectives for air quality and be below the Noise Insulation Regulations trigger value for noise abatement schemes.



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drawing title  
**LOCATION OF JUNCTION**

**LAND AT THE INTERSECTION OF M8  
 MOTORWAY AND GREENOCK ROAD,  
 INCHINNAN, ERSKINE**

scale 1:7500 @ A4

date 26.09.06

dm SW

**FIG 3.1**



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drawing title  
**GENERAL ARRANGEMENT DRAWING  
 OF JUNCTION**

**LAND AT THE INTERSECTION OF THE M8  
 MOTWAY AND GREENOCK ROAD,  
 INCHINNAN, ERSKINE**

scale 1:2500@A2/ 1:5000@A4  
 date 26.09.06  
 drn CC

**FIG 3.2**