

Midland Metro

3.5 Impact Assessment

Scope of the Environmental

3.5.1 Technical Scope

The range of environmental topics addressed in the EIA is referred to as the technical scope.

A scoping exercise has been undertaken to determine whether any environmental issues might be wholly or partially omitted from the EIA on the grounds that they were unlikely to give rise to significant environmental effects (ie 'scoped out'). The findings of this exercise were reported in a Scoping Report ⁽¹⁾. Although the undertaking of a scoping exercise is not a requirement of the Transport and Works Act, it is generally recognised as good EIA practice ⁽²⁾ and was fully supported by Centro.

Schedule 1 to the Applications Rules specifies a range of environmental issues, the significant effects of which should be addressed as part of an EIA. These issues comprise effects on population (human beings), fauna, flora, soil, water, air, climatic factors, material assets (including the architectural and archaeological heritage), landscape and the interactions between these factors. For the purpose of the scoping exercise, this list of issues was refined and adapted with reference to good EIA practice, particularly in the context of urban surface rail infrastructure. This has included consideration of guidance recently produced by the Environment Agency on the scoping of EIA projects, which includes specific guidance notes on a range of project types, including light transit systems and tramways ⁽³⁾. The refined list is as follows:

- planning policy;
- land use;
- socio-economics;
- traffic and transport;
- noise and vibration;
- air quality and dust;
- landscape/townscape and visual effects;
- ecology and nature conservation;
- aquatic environment;
- archaeology and cultural heritage;
- contaminated land and land quality;
- non-hazardous waste;
- climate change; and
- electromagnetic effects and stray current.

The outcome of the scoping exercise was that the issues set out in *Table 3.1* below, reproduced from the Scoping Report, should form the technical scope of the EIA. This is the technical scope that has been addressed in the EIA and reported in this ES.

Table 3.1 Environmental Issues included in the Scope of the EIA

Environmental Issue	Phase	
	Temporary Construction	Permanent/Long-term
Planning	s	s+
Land Use	s -	s+
Socio-Economic Effects	s+	s+
Traffic and Transport	s -	s+/-
Noise and Vibration	s -	s+/-
Air Quality and Dust	s -	s+/-
Climate Change	x	s+/-
Landscape and Visual	s -	s+/-
Ecology	s -	s -

Water Resources	s -	x
Archaeology/Cultural Heritage	s -	s -
Contaminated Land/Land Quality	s -	x
Non-Hazardous Waste	s -	x
Electromagnetic Effects and Stray Current	x	x
s=Significant effect possible + positive impact		
x= Significant effect not anticipated - negative impact		

Issues associated with stray current and electromagnetic effects were scoped out of the EIA as a result of the scoping exercise.

In addition, potential impacts with respect to aquatic resources, contaminated land and non-hazardous waste were scoped out for the operational phase of the scheme only. Impacts relating to climate change have been scoped out of for the construction phase.

The rationale for scoping out these issues is described below in *Box 3.1*.

Box 1.1 Rationale for Scoped Out Issues

- **Climate Change** (construction) – the operational scheme will involve the emission of greenhouse gases through the generation of electricity used to power it, but may also reduce greenhouse gas emissions from road vehicles where it can affect a modal transfer from the private car. However, no significant impacts relating to climate changes are expected to occur during the construction of the project and this has therefore been scoped out of the EIA.
- **Electromagnetic Effects and Stray Current** – two issues that are sometimes raised with regard to electrically powered railways are electro-magnetic fields (EMFs) and stray current effects. Electro-magnetic radiation can be found naturally as well as associated with power generation and transmission systems. EMFs can interfere with electrical equipment and affect the human population, although all national and international review bodies have concluded that there is no health risk posed by EMFs. Stray currents are currents that leak into the ground, rather than returning to the substation via the rails and return conductor cables. Stray current cannot be entirely eliminated in electrical systems but it can be minimised by reducing the magnitude of the traction supply current in the rails and by providing a suitable return path to direct the stray current back to the substation. This is facilitated by good design and rigorous control of construction of the track slab collector mat (Faraday cage) to intercept stray current. The issue of electro-magnetic effects and stray current has therefore, been scoped out of the EIA.
- **Water Resources** (operation) – the operation of the scheme is not expected to give rise to any significant impacts on water resources and this has been scoped out of the EIA. Impacts during construction are considered in *Section 7.9*.
- **Non-hazardous Waste** (operation) – the construction of the scheme will give rise to spoil. However, non-hazardous waste generated by the operation of the scheme is not expected to give rise to any significant effects and this issue was scoped out of the EIA, although measures for its disposal are described. Contaminated land is an issue that has been included in the scope of the EIA and is addressed separately (see *Section 7.10* and below).
- **Contaminated Land** (operation) - the operation of the scheme will have no interaction with contaminated land and will not constitute a significant issue. However, the handling and disposal of contaminated waste encountered during the construction phase has been included in the EIA (see *Section 7.10*).

As discussed in *Section 1.6* a range of bodies was consulted on the Scoping Report. Responses to this consultation have served to confirm the technical scope

as set out in *Table 3.1* above. Responses are summarised in *Appendix B*.

It should be noted that although the potential for environmental effects associated with EMF and stray current have been scoped out of the EIA, impacts of associated with EMF and stray current from tram systems, together with the compatibility of the system with the effective operation of neighbouring systems along the route are considered in a separate report ⁽¹⁴⁾.

3.5.2 Spatial Scope

The geographical scope of the EIA takes into account the following factors:

- the physical extent of the proposed works, defined by order limits;

- the nature of the baseline environment;
- the pattern of governmental units (local/regional/national) which provide the planning and policy context for the project.

For example, any potential effects on archaeology would be confined to those areas physically disturbed by the works, whilst the effects of noise or visual intrusion could potentially be experienced at some distance. The significance of effects also varies spatially – many effects will only be significant locally (ie in the immediate vicinity of the site) whilst others may be significant at a scheme-wide level as described above.

3.5.3 Temporal Scope

The temporal scope of the EIA with regard to the construction phase will be 2006 to 2008 as described in *Section 2*.

For the operational phase, the temporal scope relates to scheme opening in 2008. For certain environmental topics, where effects are dependant on longer term considerations (eg operational noise and operational traffic) the temporal scope is extended beyond the scheme opening to take account of the longer term nature of effects which might occur.

[About Centro](#) | [Contact Us](#) | [Links](#) | [How to Find Us](#)
Copyright © 2002 Centro. All rights reserved.