

A report on behalf of Transport Scotland and in association with Natural Capital

Forth Replacement Crossing

Sustainability Appraisal and Carbon Management Report

Appendix 9:

Glossary

November 2009

Appendix 9: Glossary

<i>Adverse weather conditions</i>	Includes wind, precipitation, ice, mist, and fog.
<i>Aggregate</i>	Materials used in construction, including sand, gravel, crushed stone, slag, or recycled crushed concrete.
<i>Air Quality Management Area (AQMA)</i>	A non-permanent designation created if monitoring reveals that statutory air quality thresholds are being exceeded or will be exceeded in the near future.
<i>Allocation</i>	A proposal for land for housing, industry or other uses within a Local Plan that identifies a specific area of land to be developed within the time period of the plan.
<i>Amenity value</i>	Defined as the relative pleasantness of a journey and relates in particular to exposure of pedestrians and others to traffic.
<i>Ancient Woodland</i>	Areas of land that appear as wooded on maps dated pre-1750 (in Scotland) and are considered likely to have been continuously wooded from this date.
<i>Annual Average Daily Traffic (AADT)</i>	It is the total volume of vehicle traffic in both directions of a highway or road for a year divided by 365 days. AADT is a useful and simple measurement of how busy the road is.
<i>Appropriate assessment</i>	An assessment of likely impacts associated with a development on a European Protected Site. An Appropriate Assessment is required by law under Regulation 48 of the Habitats Regulations (1994), implementing Article 6(3) of the Habitats Directive (92/43/EEC)
<i>Area of Great Landscape Value (AGLV)</i>	An area designated by a local authority in development plans as being of outstanding scenic quality and character and requiring special protection against inappropriate forms of development. (The requirement to designate AGLVs is set out in Circular 2/1962).
<i>Area of Outstanding Landscape Quality (AOLQ)</i>	An area designated by a local authority as being of exceptional landscape quality and requiring special protection against inappropriate forms of development.
<i>Biodiversity</i>	Biological diversity, or richness of living organisms present in representative communities and populations.
<i>Broadleaved woodland</i>	An area of woodland with predominantly deciduous tree species (less than 10% coniferous trees in the canopy).
<i>Brownfield</i>	Industrial or commercial property or land that is abandoned or underused and often environmentally contaminated, especially one considered as a potential site for redevelopment.
<i>Carbon dioxide (CO₂)</i>	Considered to be one of the most important greenhouse gases. CO ₂ emissions result from the combustion of fuel, from land use changes and from some industrial processes.
<i>Carbon dioxide equivalent (CO₂e)</i>	There are six main greenhouse gases which cause climate change and are limited by the Kyoto Protocol. Each gas has a different global warming potential. For simplicity of reporting, the mass of each gas emitted is commonly translated into a carbon dioxide equivalent (CO ₂ e) amount so that the total impact from all sources can be summed to one figure.
<i>Community severance</i>	Defined here as the separation of residents from facilities and services they use within their community caused by new or improved roads or by changes in traffic flows.
<i>Coniferous woodland</i>	An area of woodland with predominantly coniferous tree species (less than 10% deciduous trees in the canopy).
<i>Contaminated land</i>	Land in such condition by reason of substances on or under the significant harm is being caused, there is a significant possibility of such harm being caused or pollution of controlled water is being, or likely to be caused.

Appendix 9: Glossary

<i>Controlled Activity Regulations (Scotland) 2005</i>	Controls all engineering activity in or near watercourses.
<i>Culvert</i>	A metal, wooden, plastic, or concrete conduit through which surface water can flow under or across roads.
<i>Deprived communities</i>	Defined as those living within the 20% most deprived areas within Scotland, based on income, employment, health, education, housing, geographic access and crime. These areas, or data zones, are identified and ranked in the Scottish Index of Multiple Deprivation (SIMD). Those within the bottom 20% of the overall rankings are defined as most deprived.
<i>Do-minimum</i>	The base situation where there are no modifications to the existing road network. May also refer to the minimum modifications, which will necessarily take place in the absence of a proposed scheme.
<i>Earthworks</i>	Works created through the moving of quantities of soil or unformed rock.
<i>Ecology</i>	The branch of biology concerned with the relations of organisms to one another and to their physical surroundings.
<i>Ecological receptor</i>	An ecological element that is affected (either directly or indirectly) by an ecological driver that causes a change in an organism, community, ecosystem, or other ecological component of the landscape.
<i>Ecosystem</i>	A biological community of organisms interacting with one another and their physical environment.
<i>Embodied carbon</i>	The embodied carbon of a material refers to the total amount of carbon dioxide emissions released over its life cycle.
<i>Embodied energy</i>	The embodied energy of a material can be taken as the total primary energy consumed over its life cycle.
<i>Emissions Factor</i>	When calculating emissions from energy use it is common to know what quantity of energy was used, either in kWh or by volume or mass of input material. Emissions factors enable a conversion to be made from the input measure of energy to the amount of carbon dioxide emissions that will result.
<i>Environmental Impact Assessment (EIA)</i>	The process by which information about the environmental effects of a project is evaluated and mitigation measures are identified.
<i>Environmental Statement (ES)</i>	Document provided by the Developer to the Competent Authority, containing environmental information required under Article 5 of Directive 85/337/EEC as amended.
<i>FETA</i>	Forth Estuary Transport Authority.
<i>Geomorphology</i>	The branch of geology concerned with the structure, origin and development of topographical features on the earth's crust.
<i>GHG</i>	Greenhouse Gases (GHG) are those which contribute to the greenhouse effect when present in the atmosphere. Six greenhouse gases are regulated by the Kyoto Protocol, as they are emitted in significant quantities by human activities and contribute to climate change. The six regulated gases are Carbon Dioxide (CO ₂), Methane (CH ₄), Nitrous oxide (N ₂ O), Hydrofluorocarbon (HFCs), Perfluorocarbon (PFCs) and Sulphur hexafluoride (SF ₆).
<i>Green Belt</i>	The green belt is an area of countryside around the edge of an urban area where new building is not normally allowed and planning is strictly controlled. The aims are to prevent urban expansion, allow easy access to the countryside and protect attractive landscapes.
<i>Groundwater</i>	Water below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

Appendix 9: Glossary

<i>Habitat</i>	Term most accurately meaning the place in which a species lives, but also used to describe plant communities or agglomerations of plant communities, as used, for example in a Phase 1 Habitat Survey.
<i>Hydrogeology</i>	The branch of geology that deals with the occurrence, distribution, and effect of ground water.
<i>Hydrological</i>	The exchange of water between the atmosphere, the land and the oceans.
<i>Intelligent Transport System (ITS)</i>	Technology based systems or a collection of equipment that assists network operators in providing an efficient, reliable and safe transport network by providing a suite of tools to deploy temporary traffic control measures at a strategic or local level.
<i>KPI</i>	Key Performance Indicator.
<i>Landscape</i>	Human perception of the land, conditioned by knowledge and identity with a place.
<i>Land-take</i>	Acquired land which is necessary to construct the scheme and associated infrastructure and to undertake the essential environmental mitigation measures
<i>Lane closures</i>	This refers to one or more lanes on the bridge being closed to traffic (hard shoulder not included).
<i>Lane-hours</i>	One lane-hour represents one lane open to traffic for one hour.
<i>Local people</i>	Those living within Fife, West Lothian and Edinburgh.
<i>Locally sourced</i>	Materials sourced within 10km and 80km of the FRC Scheme using Beamer Rock as the focal point.
<i>Mitigation</i>	Term used to indicate avoidance, remediation or alleviation of adverse impacts.
<i>Noise levels</i>	'Noise levels with the potential to reduce amenity value in open space will be defined as noise levels of >50 dB LAeq. This is based on WHO Guidelines which provide indicative values for the onset of health effects from noise exposure.
<i>Non-motorised Users (NMUs)</i>	Pedestrians, cyclists and equestrians.
<i>Non-prime land</i>	Agricultural land of Land Capability for Agriculture (LCA) classes 3.2 to 7.
<i>Open space</i>	Any land laid out as public parks or used for the purpose of public recreation, or land which is a disused burial ground.
<i>Park and Choose</i>	Refers to car-bus, car-rail, car-car sharing.
<i>Planned closures</i>	Refers to pre-programmed inspection and maintenance activities.
<i>Predicted closures</i>	Refers to extrapolated trends from historic data obtained from the Forth Road Bridge Authority, FETA.
<i>Prime agricultural land</i>	Agricultural land of Land Capability for Agriculture (LCA) classes 1, 2, and 3.
<i>Receptor</i>	A dwelling, workplace, school or other building, outdoor space, viewpoint, road or footpath affected by a proposed development through changes in views, air quality or noise levels.
<i>Renewable energy</i>	Refers to electricity supplied from renewable energy sources, such as wind and solar power, geothermal, hydropower and biomass. These energy sources are considered renewable sources because their fuel sources are continuously replenished.
<i>Restrictions</i>	This means imposition of reduced speed limit or closure of the bridge to a class of vehicle.

Appendix 9: Glossary

<i>Semi-improved grassland</i>	Grassland that has been modified by fertilizers, drainage or intensive grazing. Contain less species diversity than unimproved grasslands.
<i>Semi-natural Ancient Woodland</i>	Areas that appear as wooded on 1860 maps but not maps from 1750 i.e. woodland that appeared between these two dates.
<i>Semi-natural woodland</i>	Woodland that does not obviously originate from planting. The distribution of species will generally reflect the variations in the site and the soil. Planted trees must account for less than 30% of the canopy composition.
<i>Severance</i>	The separation of communities from facilities and services they use within their community. Alternatively, in relation to agricultural land, the division of plots of land into separate land parcels, potentially affecting access or creating areas that may be impractical for agricultural use.
<i>SDEF</i>	Scottish Disability Equality Forum.
<i>SIMD</i>	Scottish Index of Multiple Deprivation.
<i>Site of Importance to Nature Conservation (SINC)</i>	Non-statutory designation which seeks to protect areas of high wildlife value at a local level.
<i>Sites of Special Scientific Interest (SSSI)</i>	Areas of national importance. The aim of the SSSI network is to maintain an adequate representation of all natural and semi-natural habitats and native species across Britain. The site network is protected under the provisions of Sections 28 and 19 of the Wildlife and Countryside Act 1981 as well as the Amendment Act 1985 and the Environmental Protection Act 1990.
<i>Soil nailing</i>	Reinforcement and strengthening of the existing ground by installing closely spaced steel bars (nails) into a slope or excavation.
<i>Special Area of Conservation (SAC)</i>	An area designated under the EC Habitats Directive to ensure that rare, endangered or vulnerable habitats or species of community interest are either maintained at or restored to a favourable conservation status.
<i>Special Protection Area (SPA)</i>	An area designated under the Wild Birds Directive (Directive 74/409/EEC) to protect important bird habitats. Implemented under the Wildlife and Countryside Act 1981. Under the Habitats Directive, all SPAs will be proposed Special Areas of Conservation.
<i>Sustainable drainage systems (SUDS)</i>	A sequence of management practices and control structures designed to drain surface water in a more sustainable fashion than some conventional techniques.
<i>Terrestrial</i>	The environment above the mean high water spring.
<i>Viaduct</i>	A bridge that carries a road, railroad etc. over a valley.
<i>Water quality</i>	The chemical and biological status of various parameters within the water column and their interactions, for example dissolved oxygen, indicator metals such as dissolved copper, or suspended solids (the movement of which is determined by hydrological process and forms geomorphological landforms).