

LXRA Summary of Environmental Investigations

January 2016

Flora and Fauna

To inform the options assessment described in Chapter 6, desktop flora and fauna studies have been undertaken for all 50 sites, and detailed assessments, including field surveys are underway. The detailed assessments will inform the project/ works package proposals, and will be prioritised according to the proposed delivery program.

A standard approach to assessing flora and fauna has been undertaken for each site. This includes desktop reviews followed by field investigation, where required, which identifies the presence of native vegetation, threatened ecological communities and threatened flora and fauna. This work informs the design of each level crossing removal, and the approvals that are required under *Federal (Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act)*, or *State Flora and Fauna Guarantee Act 1988 (FFG Act)* and *Planning & Environment Act 1987 (P&E Act)*.

As of January 2016, for all Work Packages except 1 and 2, LXRA is seeking to enter into a Memorandum of Understanding with the Department of Environment, Land, Water and Planning (DELWP) in accordance with clause 52.17 of the Victoria Planning Provisions. The effect being that the removal of native vegetation to the extent necessary for the Project will not require a planning permit. The agreement will include conditions to be adhered to, and an upfront offset payment for the project. The agreement will not affect permit requirements for the removal of non-native vegetation (where they exist) or approvals required under the FFG Act and EPBC Act.

As of January 2016, Flora and fauna assessments have been undertaken for the 19 sites currently under delivery are described below:

- Work Package 1 (Burke Road, North Road, Centre Road, Bentleigh, McKinnon Road):

Native vegetation to be removed has been identified and offsets purchased. Permits under FFG Act have been issued where required, and site specific provisions have been included in the relevant planning schemes. No EPBC Act referrals are required.

- Work Package 2 (Main Road, Furlong Road, Blackburn Road, Heatherdale Road):

Native vegetation to be removed has been identified and offsets purchased. An EPBC Act referral was required for removal of the level crossing at Main Road, St Albans, which is a controlled action.

- Work Package 3 (CD9):

Flora and fauna assessments have been undertaken for the entire corridor. The extent of vegetation removal and permits required will be confirmed as part of the tender process and subsequent detailed design.

- Work Package 4 (Mountain Highway and Scoresby Road):

Flora and fauna assessments have been undertaken. An EPBC Act referral is not required.

As of January 2016, for the remaining sites, desktop assessments have commenced. This assessment identifies the ecological values at each site and provides recommendations for further field studies. This work will identify potential impacts on flora and fauna protected under Victorian legislation and matters of national environmental significance protected under Commonwealth legislation.

Aboriginal Cultural Heritage

As of January 2016, based on preliminary investigations, some of the level crossing sites have been identified as having areas of potential aboriginal cultural sensitivity, which will be investigated further as detailed design is undertaken.

The requirements of the Aboriginal Heritage Act 2006 will apply to all packages of work and where required, a Cultural Heritage Management Plan (CHMP) will be developed for each study area. The current status of aboriginal cultural heritage investigations is summarised below:

Work Package 1:	Based on desktop assessments, a CHMP is not required.
Work Package 2:	CHMPs have been prepared for the crossings at Main Road and Blackburn Road. Based on desktop assessments, a CHMP is not required at Furlong Road or Heatherdale Road.
Work Package 3:	CHMPs have been prepared. Investigations are underway regarding potential additional areas identified by the tenderers that were not previously included within the relevant activity area.
Work Package 4:	A CHMP has been prepared.

As of January 2016, for the remaining sites, cultural heritage desktop assessments will be undertaken to inform any recommendations regarding requirements for CHMP's. Further work including complex assessments (sub-surface testing) will be undertaken if required.

Post-Settlement Heritage and Archaeology

Desktop investigations have informed the options assessments for all sites and field investigations will be carried out where required. A limited number of places either on the Victorian Heritage Register or Victorian Heritage Inventory have been identified. All will be subject to the requirements of the Heritage Act 1995, and discussions have commenced with Heritage Victoria in relation to the engineering options being considered.

A strategic approach to heritage approvals and permit conditions is being considered and will be discussed with Heritage Victoria.

There will be heritage places of local significance that will be impacted by the Project. Each of these will be discussed with the relevant municipal council and other stakeholders on a case-by-case basis. Approvals are managed via the relevant planning scheme under the Planning and Environment Act 1987.

Soil Contamination

Typically, and based on investigations undertaken to date, soils along the proposed rail alignment are generally classified as Fill Material and Category C Contaminated Soil. However, there will be isolated areas containing some Category B or Category A Contaminated Soil. The potential re-use of excavated soils is being discussed with the EPA, in order to minimise the costs of disposal of spoil to landfill. The potential re-use of excavated soils should will be considered, in particular soils classified as Fill Material and Category C contaminated soil if they do not present a risk to human health and the receiving environment. An effective disposal strategy will be formulated in consultation with EPA prior to the commencement of the proposed excavation.

Noise and Vibration

The management of non-construction noise impacts from rail and road infrastructure is governed by two policies:

- The Department of Economic Development, Jobs, Transport and Resources (DEDJTR) "Passenger Rail Infrastructure Noise Policy (PRINP)", April 2013; and
- VicRoads "Noise Policy" (VNP)

The PRINP defines the types of works to which it applies and includes level crossing removal activities.

The PRINP applies to projects where a planning scheme amendment is required under the Planning & Environment Act 1987 to facilitate the works. The majority of the LXRA works will proceed under the provisions of an Incorporated Document which will be put in place by a planning scheme amendment under s.20(4) of the P&E Act. In the event that no planning scheme amendment is required, the Minister for Transport can still direct that the PRINP be applied to a project.

Whilst LXRA works need to take the PRINP into consideration, there is no actual requirement to provide attenuation should any predicted noise levels exceed the investigation thresholds by 3dBA or more. Rather, there are a set of policy principles which are to be considered. Whilst this flexibility exists, there are a number of decisions in the application of the Policy, including timelines for assessment, levels to which attenuation might be provided and associated costs. LXRA could develop its own Guidelines on these matters in order to provide consistency across the program.

The PRINP will be applied to all projects (even where no planning scheme amendment is required) in order to maintain a consistent approach to noise mitigation across the program of works. LXRA will develop a Guide on noise attenuation requirements to provide a consistent approach to noise attenuation across the LXRA program of works, and apply the VicRoads noise policy where relevant. The application of these policies will result in a project cost, which at this stage is inestimable.

Furthermore, there may be noise and vibration disturbances during the construction phase which will need to be managed with appropriate on-site practices in accordance with an approved Construction Environment Management Plan for the project.

Air and Water Quality

Dust and fumes generated by construction machinery will be managed by the relevant delivery package as part of the Contractor's Construction Environmental Management Plan for each site. Protection of adjacent water courses and run-off from the site will also be managed by the Construction Environmental Management Plans developed for each site. All Plans will be developed to address EPA Guidelines and Melbourne Water requirements, where applicable.

Asbestos

Asbestos fibres were not detected in any of the selected analysed soil samples investigated to date. However, asbestos investigation will continue during the planning and delivery stages of all projects. There is some potential for asbestos to be found within the existing station buildings and these will be contained and treated in accordance with EPA requirements.

Environment Effects Statement (EES)

It is unlikely that any component of the project will be of the complexity or scale that will require an Environmental Effects Statement under the Environment Effects Act 1978. Self-assessments against the Ministerial Guidelines have been undertaken for the packages in delivery, and will be undertaken for all future packages.

Sustainability

Sustainability

One of the key objectives of the *Transport Integration Act 2010* is environmental sustainability in developing and managing the Victorian transport system. As part of its Sustainability Policy, the LXRA has adopted four guiding principles:

- Deliver urban design solutions which connect and enhance local communities;
- Manage resources efficiently through embedding energy, water and material saving initiatives into the design and construction of the assets;
- Protect and enhance natural assets by minimising the LXRP's environmental footprints; and
- Future-proof the infrastructure so it is resilient to projected effects from changes in climate.

LXRA has become a member of the Infrastructure Sustainability Council of Australia (ISCA) and the Green Building Council of Australia (GBCA) and is requiring the LXRA projects to obtain independent certification using their respective sustainability rating tools. To ensure the projects deliver infrastructure that is recognised as best practise the projects are required to achieve, as a minimum, an ISCA IS rating of 'Excellent' and a GBCA Green Star for Above Ground Rail rating of '4 Star Green Star'. In doing this, our projects will:

- be undertaken by contractors that have accreditation to ISO 14001 (Environment), ISO 9001 (Quality) and AS/NZS 4801 (OH&S) and who regularly monitor their performance;
- undertake a climate change risk assessment and respond to any extreme or high priority climate change risks
- reduce Greenhouse Gas Emissions by 15-25%
- minimise the use of potable water wherever possible
- minimise waste by using the waste hierarchy of avoidance, reduction, reuse and recycling.

LXRA Sustainability Policy

Our Sustainability Vision is to achieve excellent environmental, social and economic outcomes across all phases of the Level Crossing Removal Project (Project) in order to deliver an integrated Project that connects the community in an environmentally sustainable manner.

To achieve this Sustainability Vision, the Level Crossing Removal Authority is committed to:

- Optimising the Project's design to ensure it is delivered to operate sustainably;
- Managing resources efficiently through embedding energy, water and material saving initiatives into the design, construction and operation of the Project;
- Avoiding, minimising and offsetting harm to the environment and the loss of biodiversity;
- Protecting and conserving the natural environment; and
- Preparing for the challenges presented by climate change.

To give effect to this Policy, our people will:

- Demonstrate leadership in the commitment to a prosperous and integrated economic, social and environmental sustainable future;
- Demonstrate commitment to sustainable procurement;
- Protect and maintain ecosystems and biological diversity, while seeking opportunities to enhance the value of these natural systems within the context of our works;
- Facilitate economic prosperity and development and provide a resilient local workforce;
- Support and enhance social, cultural and community wellbeing;
- Encourage the pioneering of innovation in sustainable design, process or advocacy that seeks continuous improvement to promote new ideas and thinking;
- Embed environmental and sustainability outcomes by establishing robust sustainability objectives and targets; and
- Report on sustainability performance and be accountable for meeting environmental and social responsibilities.

Mandatory Sustainability Criteria

MANDATORY CRITERIA	REQUIREMENT	ISCA CRITERIA & LEVEL
Organisational Structure Roles and Responsibilities Aim: To reward the allocation of responsibility for sustainability appropriately.	<ul style="list-style-type: none"> - equivalent member of the senior management team has central responsibility for managing sustainability. <p>AND</p> <ul style="list-style-type: none"> - A principal participant in the team is an IS Accredited Professional whose role is to provide sustainability advice 	Management – 3 Level 1
INSPECTION AND AUDITING Aim: To reward regular inspection of on-site performance and auditing of the management system.	<p>Internal sustainability inspections of site management are undertaken at least weekly during construction and monthly during operation</p> <p>AND</p> <p>Internal sustainability audits of the management system are undertaken at least quarterly</p> <p>AND</p> <p>External sustainability audits of the management system are undertaken least annually</p>	Management – 4 Level 2
CLIMATE CHANGE RISK ASSESSMENT Aim: To reward assessment of climate change risks.	<p>A number of readily available climate change projections are identified and adopted for the asset region over the forecast useful life of the asset</p> <p>AND</p> <p>Direct climate change risks to the asset over the forecast useful life are identified and assessed</p> <p>AND</p> <p>The climate change risk assessment also considered indirect climate change risks to the asset</p> <p>AND</p> <p>A multi-disciplinary team participated in identifying climate change risks and issues</p>	Climate – 1 Level 2
CLIMATE CHANGE ADAPTION OPTIONS To reward the assessment and implantation of climate change adaption measures.	<p>Adaptation options to treat all extreme and high priority climate change risks are identified and implemented</p> <p>AND</p> <p>After treatment there are no extreme priority residual climate change risks</p> <p>AND</p> <p>Adaptation options to treat all medium priority climate change risks are identified and implemented</p>	Climate – 2 Level 2

MANDATORY CRITERIA	REQUIREMENT	ISCA CRITERIA & LEVEL
ENERGY AND CARBON MONITORING AND REDUCTION To reward monitoring and minimising of energy use and GHG emissions across the infrastructure lifecycle.	Monitoring and modelling of energy use and Greenhouse Gas emissions, and actions taken to reduce them are undertaken, covering at least Scope 1, Scope 2 and land clearing across the infrastructure lifecycle AND Monitoring and modelling report is subject to internal auditing AND Monitoring and modelling demonstrates reduction of GHG emissions by 15 – 25% below a reference footprint, for Scope 1, Scope 2 and land clearing AND Monitoring and modelling report is subject to external auditing	Energy – 1 Level 2
REPLACE POTABLE WATER To reward replacing potable water where this makes economic and environmental sense across the infrastructure lifecycle.	Identify potential non-potable sources that match demand AND Identify optimal (in economic and environmental terms) option for sourcing water AND Monitoring and modelling demonstrates no potable water use except for drinking or justify why this is not economically or environmentally feasible	Water – 2 Level 2
WASTE MANAGEMENT To reward sustainable waste management plans and practices.	Predictions for waste quantities and types have been developed for construction and operation AND Measures to minimise waste during construction and operation have been identified and implemented. The measures must apply the waste hierarchy – avoidance, reduction, reuse and recycling AND Tracking of all wastes us undertaken during construction and operation	Waste – 1 Level 1
DIVERSION FROM LANDFILL To reward diversion of spoil, inert, non-hazardous and office waste from landfill.	All of the following targets for landfill diversion have been achieved or bettered: <ul style="list-style-type: none"> • 70 to <80% by volume of spoil • 25 to <50% by volume of inert and non-hazardous waste • 25 to <40% by volume of office waste 	Waste – 2 Level 1