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# Armadale Road to North Lake Road Bridge

## Project Environmental Management Plan

Prepared for
Main Roads Western Australia
by Strategen

August 2018

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# Armadale Road to North Lake Road Bridge

## Project Environmental Management Plan

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**Client: Main Roads Western Australia**

| Report Version | Revision No. | Purpose | Strategen author/reviewer | Submitted to Client | |
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# 1. Introduction

Main Roads Western Australian (Main Roads) are proposing to upgrade sections of Armadale Road and the Kwinana Freeway in the City of Cockburn (the Project). The Project intends to relieve congestion occurring because of the growth of Cockburn Gateway Shopping Centre, surrounding commercial, retail and residential development and the proximity to Cockburn Central Station and Kwinana Freeway.

The Project is to upgrade and construct a series of intersections and dual carriageways, as well as a flyover bridge and freeway on/off ramps.

Figure 1 presents the Project Development Envelope (DE).

## 1.1 Purpose and scope

The purpose of this Project Environmental Management Plan (PEMP) is to manage impacts associated with the Project as well as identify areas of responsibilities required for the implementation of management strategies. This PEMP has been developed to support the Environmental Review (ER) prepared to assess impacts of the Project and addresses specific issues identified within the ER.

The construction contractor appointed to construct the Project will develop their own Construction Environmental Management Plan (CEMP) for their works under the contract. The CEMP will consider the PEMP where applicable. Note that some elements of the PEMP will fall outside of the scope of CEMP.

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Armadale Road Extension to North Lake Road

Project Development Envelope

Figure 1

# 2. Communication Plan

Environmental issues specific to the project will be communicated through the avenues described in Table 1. The communication plan is to ensure all contractors and any other personnel involved in construction are aware of environmental site requirements and what their responsibilities are. The communication plan also outlines which government agencies are to be consulted with prior to construction, who will participate and who is responsible. Finally, the communication plan outlines the frequency of compliance audits, required personnel and who is responsible.

Table 1: Communication plan

| Method | Frequency | Participants | Reference | Responsibility |
|---|---|---|---|---|
| *Project Site* | | | | |
| Contract requirements | Prior to Work | MRWA appointed contractors and Contractor Project Manager | Construction Environmental Management Plan (CEMP) and Contractor Environmental Policy | Contractor |
| Induction | Prior to Work | All personnel and subcontractors | CEMP and Contractor Environmental Policy | Contractor |
| Toolbox Meetings | Weekly | Project Personnel | Contractor Safety Plan, CEMP | Contractor |
| *Agency consultation* | | | | |
| Department of Biodiversity, Conservation and Attractions | Prior to construction | MRWA Project Manager and Contractor Project Manager | Fauna handling licence | Contractor |
| Department of Water and Environment Regulation | Prior to construction, as required | MRWA Project Manager and Contractor Project Manager | Clearing permit<br>Groundwater abstraction licences<br>Dewatering licences | MRWA<br>Contractor |
| *Audit* | | | | |
| 1st party compliance audit | 3 monthly | Required contractors , project personnel and MRWA | CEMP | Contractor (as auditor) |
| 2nd party compliance audits | As required | Required contractors , project personnel and MRWA | CEMP | MRWA (as auditor)s |

### 2.1.1 Complaints Register

A complaints register will be maintained by the contractor. Information on all community complaints received, including the means by which they were addressed and whether resolution was reached and whether mediation was required or used, will be included in a complaints register.

All complaints received will be forwarded to the Main Roads' Project Manager for information and action by the contractor. The Main Roads' Project Manager will apply an adaptive approach to ensure that corrective actions are applied in consultation with the contractor to ensure modifications and improvements in the management of any environmental issues which have resulted in community complaints.

# 3. Environmental Management Plan

Table 2 presents the Environmental Management Plan components for the Project.

Table 2: Environmental Management Plan

| Project component | Management action | Monitoring/maintenance program | Responsible person | Timeframe |
|---|---|---|---|---|
| *Standard recorded keeping management* | | | | |
| Record keeping – Vegetation clearing | Maintain the following records for the area of clearing:<br>• a shapefile showing the location where the clearing occurred, recorded in an ESRI Shapefile in coordinate system GDA 94 MGA 50 as a polygon<br>• the size of the area cleared (in hectares)<br>• the dates on which the clearing was undertake in day/ month/ year format.<br>• shapefile is to be provided to Main Roads annually by no later than 28 February annually for clearing that occurred in the previous calendar year to 31 December. | Pre-construction and post-construction record maintenance. | Contractor | Within 4 weeks of clearing completion. |
| Record keeping – PEMP | Maintain on site a copy of the PEMP. | Construction record maintenance. | Contractor | During construction. |
| | Ensure environmental compliance checklist is completed. | | | |
| | Maintain the following records for the Project area:<br>• the location of the area to which the PEMP has had action applied<br>• a description of the management actions implemented<br>• the size of the area to which the management actions were applied (in hectares) | | | |
| Record keeping – Hygiene (refer to Dieback and Weed control section) | Maintain records of all earth moving machinery clean of soil and vegetation prior to entry. | Construction monitoring/Post-construction record maintenance. | Contractor | During construction |
| | Maintain a copy of the Dieback and Weed Hygiene Management Plan on site. | | | |
| | Maintain the following records for the Project area:<br>• advice from the environmental specialist regarding any pathogen other than dieback<br>• for any pathogen other than dieback, the appropriate steps taken to minimise the risk of the pathogen. | | | |
| Record keeping - European heritage | Maintain the following records for the Project area:<br>• record of liaison with City of Armadale regarding the Armadale/Fremantle Rail site | Construction monitoring/Post-construction record maintenance. | Main Roads PM | Ongoing. |
| *Project specific aspects* | | | | |
| Clearing of native vegetation | Provide clear drawings indicating areas approved to be cleared to the clearing contractor at pre-start meetings. | Pre-construction | Contractor | Prior to clearing commencing. |
| | Ensure on-site personnel are aware of any vegetation to be retained and the requirement to protect them | Pre-construction | Contractor | Prior to clearing commencing. |
| | Clearly demarcate and differentiate between vegetation onsite that is to be cleared and retained prior to clearing. | Pre-construction | Contractor | Prior to clearing commencing. |
| | Clearly demarcate areas of topsoil to be stripped and stockpiled or removed to spoil | Pre-construction | Contractor | Prior to clearing commencing. |

| Project component | Management action | Monitoring/maintenance program | Responsible person | Timeframe |
|---|---|---|---|---|
| | All vehicles, machinery and plant will be stored in a demarcated area, ensuring protection of vegetation. | Pre-construction | Contractor | Prior to clearing commencing. |
| | Ensure vehicle movements do not disturb vegetation and heavy vehicle turnaround is limited to designated areas. | Construction | Contractor | During construction |
| | Minimise vegetation clearing and the area of disturbance by utilising existing cleared areas where possible. | Pre-construction/ vegetation clearance monitoring. | Project Manager/ Contractor | Prior to clearing commencing. |
| | Clear vegetation only when necessary and treat areas requiring soil stabilisation as soon as practicable | Construction | Contractor | During construction |
| | Non-weed infested vegetation will be mulched and stockpiled in weed free areas within the limits of the project area for landscaping, along with topsoil. | Construction | Contractor | During construction |
| | Clearing of vegetation will not exceed the limits of clearing and mature trees will be conserved as far as practicable, and will not be disturbed for such temporary works as side tracks, access tracks, temporary storage areas, spoil areas or site offices | Construction/ vegetation clearance monitoring | Contractor | During construction |
| | Retained vegetation is not to be covered or buried with topsoil. | Construction | Contractor | During construction |
| | Damage caused (beyond the extent of approvals) during the construction to vegetation, landforms, or fauna habitat shall be rehabilitated to the pre-clearing condition. | Post-construction surveillance. | Project Manager/ Contractor | As soon as possible. |
| Dieback and weeds | Demarcate dieback infected areas (based on dieback mapping for the project area) with orange flagging tape with the knot facing the infested area, to ensure they are clearly demarcated. | Pre-construction | Contractor | Pre-construction, and during construction |
| | Identify suitable stockpile (for mulched material used for revegetation and unsuitable material to be disposed of) locations i.e. not near threatened flora, heritage site or close to a wetland. | Pre-construction | Project Manager/ Contractor | Pre-construction, and during construction |
| | Ensure all machinery is ‘clean on entry’ (free of soil, seeds and vegetation) and cleaned in designated areas, between operations to prevent the introduction and spread of weeds or dieback. | Construction | Contractor | During construction |
| | Topsoil and vegetation from identified weed infested areas will be stripped separately and deposited in the nominated spoil sites or authorised waste disposal sites. | Construction | Contractor | During construction |
| | Any subsequent weed growth (in spoil and stockpiles) should be sprayed until weed seed stocks are depleted | Construction | Contractor | During construction/ post construction |
| | Manage and maintain the topsoil stockpile sites, weed free. | Construction | Contractor | During construction/ post construction |
| | Dieback infested soil may be buried or respread within dieback infested area | Construction | Contractor | During construction/ post construction |

| Project component | Management action | Monitoring/maintenance program | Responsible person | Timeframe |
|---|---|---|---|---|
| | Dieback and Weed Hygiene Management Plan should be prepared by the construction contractor, including the following:<br>• map of infested, uninterpretable, unmappable and uninfested locations<br>• a comprehensive risk assessment of potential disease vectors and proposed activities within project corridor<br>• recommendations for hygiene management locations that consider the level of risk to biodiversity in the surrounding landscape<br>• a program to monitor and report on compliance with the hygiene protocols prescribed in the management plan<br>• a communication program to make personnel aware of the risk to biodiversity associated with spreading Dieback and weeds, and the importance of adhering to hygiene protocols<br>• earth-moving machinery will be clean prior to entering the Project Area (i.e. free of soil and vegetation)<br>• ensure no weed affected soil; mulch; fill or other material is brought into the area cleared during construction<br>• movement of soil in wet conditions will be avoided where practical<br>• movement of machines and other vehicles will be restricted to the limits of cleared areas and the areas to be cleared<br>• weeds within landscaped/ cleared areas will be controlled as required to ensure there is no seed set of weeds<br>• audit of hygiene practices to ensure compliance | Pre-construction/ construction | Project manager/ Contractor | Project lifespan/ ongoing. |
| Fauna | Inductions will be undertaken to ensure all contractors understand their obligations under the *Wildlife Conservation Act 1950* (or *Biodiversity Conservation Act 2016* once enacted). In particular, no venomous snakes or other fauna will be purposefully killed during construction works. | Pre-construction/ construction | Project manager/ Contractor | Project lifespan/ ongoing |
| | All reasonable precautions are to be taken during the works to avoid destruction of native fauna and demarcated protection areas. | Construction | Contractor | Project lifespan/ ongoing |
| | Minimise impacts on areas of vegetation where significant fauna has been recorded or may potentially occur. | Pre-construction/ construction | Contractor | Project lifespan/ ongoing |
| | No clearing of habitat to occur outside of approved clearing boundary. | Construction | Contractor | Project lifespan/ ongoing |
| | Commence clearing in such a way as to allow fauna to move out of the clearing area if possible. | Construction | Contractor | During construction |
| | No pets, traps or firearms are allowed within the project area. | Pre-construction/ construction | Contractor | Project lifespan/ ongoing |
| | Native fauna is not to be fed or intentionally harmed or killed. | Pre-construction/ construction | Project manager/ Contractor | Project lifespan/ ongoing |
| | If sick, injured or orphaned native wildlife are located on the project site, the WILDCARE Helpline ((08) 9474 9055) will be contacted for assistance. | Construction | Project manager/ Contractor | Project lifespan |
| | All Black Cockatoo potential breeding trees proposed to be retained will be marked and construction contractors will be made aware that these are not to be removed during construction. | Pre-construction/ construction | Contractor | Project lifespan |

| Project component | Management action | Monitoring/maintenance program | Responsible person | Timeframe |
|---|---|---|---|---|
| | Pre-clearing inspections of any potential breeding trees identified to have hollows | Pre-construction, prior to clearing potential breeding trees with hollows, or adjacent to these. | Project manager/ Contractor | Project lifespan |
| Wetlands and surface water | Use pollution control and containment strategies for project activities in Public Drinking Water Source Areas (PDWSAs) / Underground Water Pollution Control Areas (UWPCAs) and liaise with the DWER where necessary | Pre-construction/ construction | Project manager/ Contractor | Project lifespan |
| | Minimises clearing activities and soil disturbance near open surface water bodies to reduce the potential for sedimentation and adverse environmental harm. | Pre-construction/ vegetation clearance monitoring. | Contractor | Project lifespan |
| | Provision of erosion/ scour protection controls where necessary to prevent impacts to wetlands where necessary. | Pre-construction/ construction | Contractor | Project lifespan |
| | Manage potential stormwater drainage into wetlands through the construction of drainage structures. | Construction | Contractor | Project lifespan |
| | Apart from minor stationary plant, no vehicle or plant refuelling shall occur within 50 m of a watercourse or wetland. | Construction | Contractor | Project lifespan |
| | Existing natural drainage paths and channels along the road or the vicinity of the project area will not be unnecessarily blocked or restricted | Construction | Contractor | Project lifespan |
| | Drainage sumps will be regularly inspected for sediment and other contaminants, particularly following periods of rainfall | Construction | Contractor | Ongoing |
| | All water pumped from excavations or any part of the works will be disposed in such a manner that waste water will not interfere with the use of adjacent land by the public or other persons | Construction | Contractor | Project lifespan |
| Groundwater | Prior to dewatering operations, and unless an exemption applies, a licence will be obtained in accordance with the *Rights in Water and Irrigation Act 1914.* | Pre-construction | Project Manager/ Contractor | Prior to dewatering |
| | Construction contractor is responsible for obtaining suitable quantity and quality of water for construction. | Project planning/ pre-construction. | Contractor | Project planning. |
| | Water used in construction within a PDWSA must be of potable quality or abstracted from within the PDWSA | Construction | Contractor | Construction |
| | Construction and implementation of the Project should be undertaken in consideration of DWER advice and Water Quality Protection Notes, including:<br>• WQPN 10: Contaminant spills - emergency response<br>• WQPN 25: Land use compatibility tables for PDWSAs<br>• WQPN 44: Roads near sensitive water resources<br>• WQPN 60: Tanks for mobile fuel storage in PDWSAs<br>• WQPN 83: Infrastructure corridors near sensitive water resources<br>• WQPN 84: Rehabilitation of disturbed land in PDWSAs. | Pre-construction/ construction | Project Manager/ Contractor | Project lifespan/ ongoing |
| Acid Sulfate Soils | An ASS and Dewatering Management Plan will be prepared and implemented to manage ground-disturbance that may have the potential to disturb ASS. | Pre-construction/ construction | Project Manager/ Contractor | Project lifespan |
| | Determine locations where excess spoil will be disposed of or where spoil will be reused | Pre-construction | Contractor | Project lifespan |

| Project component | Management action | Monitoring/maintenance program | Responsible person | Timeframe |
|---|---|---|---|---|
| Spoil (topsoil, clean overburden) | Only suitable spoil is to be reused as fill. Spoil material suitable for use in revegetation and landscaping, must not contain contaminated materials, debris or rubbish or other deleterious materials that are considered hazardous | Construction | Contractor | Project lifespan |
| | All topsoil and vegetation from identified weed infested areas will be stripped separately to the nominated depth and deposited in the nominated spoil sites or authorised waste disposal site | Construction | Contractor | Project lifespan |
| | Unsuitable soils (salty or contaminated) should be kept isolated from all other works and disposed of in a manner and to a site in accordance with Specification 204 Environment | Construction | Contractor | Project lifespan |
| | Dispose of excess spoil at a location that has appropriate approval or licences to accept the material | Construction | Contractor | Project lifespan |
| Stockpile (pile or stack of material for future use) | Stockpiles of construction materials (other than clean fill, topsoil and mulch) are to be located more than 100 m from a watercourse or wetland | Construction | Contractor | Project lifespan |
| | Stockpile sites shall be located away from drainage lines and shall be positioned to allow for ease of transport of materials at any time | Construction | Contractor | Project lifespan |
| | Stockpiling operations will occur in a manner to ensure that the properties of the topsoil are not degraded or made unsuitable for use in revegetation | Construction | Contractor | Project lifespan |
| | Develop processes and procedures to prevent erosion and sediment transport within and adjacent to the works areas. | Pre-construction | Contractor | Project lifespan |
| | Ensure that the design slopes of batters are suitable for the proposed revegetation measures. | Pre-construction | Project Manager | Project lifespan |
| | Prevent soil export to surface water bodies through the use of windrows, silt fences and sediment traps, where applicable. | Construction | Contractor | Project lifespan |
| | Disturbed areas are to be re-instated and stabilised | Construction | Contractor | Project lifespan |
| | All batter surface protection of stockpiles using erosion control matting; mulch; seeding or hydro-mulching shall be in accordance with project specifications | Construction | Contractor | Project lifespan |
| Visual amenity | Stockpiles and other materials will be stored in designated areas and always kept in a neat and tidy condition. | Construction | Contractor | Project lifespan |
| Dust | Apply water for dust suppression to prevent dust lift from loose surfaces. | Construction | Contractor | Project lifespan |
| | Disturbed areas will be stabilised soon after construction activities are completed. | Construction | Contractor | Project lifespan |
| | Additives used to aid in dust suppression or binding are to be approved by Main Roads before use | Pre-construction/ construction | Contractor | Project lifespan |
| | Prescribe where vehicles, machinery and plant are going to be stored/parked during the works and install signage for suitable speed limits during vehicle movement | Pre-construction/ construction. | Contractor | Project lifespan |
| | Employ construction methods which will keep dust to a minimum and in accordance with DWER guidelines and OSH requirements | Construction | Contractor | Project lifespan |
| | Damp down or cover loads being transported to or from the site where windblown material may cause nuisance or become a traffic hazard | Construction | Contractor | Project lifespan |
| | Inform nearby sensitive receptors including adjoining communities of activities that may cause excessive dust and respond quickly to complaints by community members. | Pre-construction/ construction. | Contractor | Project lifespan |
| | Stabilise any stockpiles to prevent wind erosion and nuisance dust. | Construction | Contractor | Project lifespan |

| Project component | Management action | Monitoring/maintenance program | Responsible person | Timeframe |
|---|---|---|---|---|
| | Establish a complaints procedure to handle dust complaints from sensitive receivers. All complaints must be responded to within 24 hours | Construction | Contractor | Project lifespan |
| Noise and vibration | Limit construction activity to 7 am and 7pm Monday to Saturday, where possible. | Pre-construction/ construction. | Project Manager/ Contractor | Project lifespan |
| | Where out of hours works are required, a noise management plan is to be developed in accordance with the *Environmental Protection (Noise) Regulations 1997* for approval by the City of Cockburn (as the appropriate delegated authority) | Pre-construction/ construction. | Project Manager/ Contractor | Project lifespan |
| | Communicate the need to undertake out of hour's project activities to the community, as required. | Construction | Project Manager | Project lifespan |
| | A procedure is in place for recording all complaints regarding public nuisance, noise and vibration | Pre-construction | Project manager/ contractor | Project lifespan |
| | Develop a Construction Noise and Vibration Management Plan | Construction | Contractor | Construction |
| | Monitor vibration during construction activities | Construction | Contractor | Construction |
| | Ensure particle velocity does not exceed 5mm/s at vibration sensitive receivers during construction works | Construction | Contractor | Construction |
| Public safety and property condition | A procedure is in place for recording all complaints regarding vibration or property damage. | Pre-construction | Project manager/ contractor | Project lifespan |
| | Conduct property condition surveys including:<br>• pre-construction property inspections will be carried out on all properties within 100 metres of any construction activities (review for each project);<br>• any nearby properties of heritage significance; and<br>• any nearby bridges of heritage significance.<br>establish the condition of all properties and structures that may be affected by the activity | Pre-construction / post-construction | Contractor | Project lifespan |
| | Respond to any complaint or claim of alleged property damage arising from the Project at the earliest opportunity but no later than 24 hours after the complaint | Construction | Project manager/ contractor | Project lifespan |
| | Copies of post-construction survey reports provided to the owner of the building/structure | Construction | Project manager/ contractor | Project lifespan |
| Aboriginal heritage | Ensure the Project will not result in any disturbance to sites of Aboriginal heritage significance without prior approval. | Pre-construction/ construction | Project Manager/ Contractor | Project lifespan |
| | During induction make sure all personnel are aware of their obligations under the *Aboriginal Heritage Act 1972*, including:<br>• in the event of an Aboriginal heritage incident the EO/PHO should be contacted in addition to the DPLH<br>• in the event that artefacts or material of Aboriginal origin, including human skeletal material, is discovered, work will cease within 25 m of the material and a qualified archaeologist will investigate the item(s) and take appropriate actions (i.e. contact DPLH, EO and PHO or contact the Police in the case of human remains). | Pre-construction/ construction | Project Manager | Project lifespan |

| Project component | Management action | Monitoring/maintenance program | Responsible person | Timeframe |
|---|---|---|---|---|
| European heritage | Where necessary, develop, implement and maintain procedures that protect nominated sites | Pre-construction/ construction | Project Manager/ Contractor | Project lifespan |
| | Ensure on-site construction personnel are aware of European heritage sites and any requirements to protect them | Pre-construction/ construction. | Project Manager/ Contractor | Project lifespan |
| | Demarcate heritage sites for protection in accordance with the Demarcating Environmental or Heritage Areas on Site (if required) | Pre-construction | Contractor | Project lifespan |
| | If European heritage is disturbed, activities will be reported to the State Heritage Office or City of Cockburn. | Construction/ Post Construction | Project Manager/ Contractor | Project lifespan |
| | Remove area demarcation once project works are completed | Post Construction | Contractor | Project lifespan |
| Hazardous materials | Develop processes and procedures to prevent hydrocarbons, site erosion and sedimentation from polluting watercourses | Pre-construction | Project Manager/ Contractor | Project lifespan |
| | Chemicals and hazardous materials shall be stored in purpose built containers/tanks in accordance with their Safety Data Sheet | Construction | Contractor | Project lifespan |
| | All fuel or chemical storage will be compatible with water resource protection objectives and will:<br>• not be located within the Priority 1 PDWSA or WHPZ<br>• be above ground only<br>• be contained in double lined fuel storage tanks<br>• not exceed an individual storage tank capacity of 5,000 L<br>• be placed in bunds capable of storing 125% of the capacity of the largest storage tank. | Construction | Contractor | Project lifespan |
| | Ensure all personnel working with hazardous materials are familiar with procedures, spill control & clean-up | Pre-construction | Contractor | Project lifespan |
| | Identify licensing requirements for the transport, handling, storage and disposal material (e.g. sand, earth) to contain the spill | Pre-construction | Contractor | Project lifespan |
| | No major vehicle or plant servicing shall be undertaken on-site. | Construction | Contractor | Project lifespan |
| | Apart from minor stationary plant no vehicle or plant refuelling shall occur within 50 m of a watercourse or wetland. | Construction | Contractor | Project lifespan |
| | Spill trays and a spill kit will be maintained on-site, available near fuel storage and refuelling area and be utilised to contain and clear up any spills | Construction | Contractor | Project lifespan |
| | Any hazardous materials will be disposed of at an approved and certified facility | Construction | Contractor | Project lifespan |
| | Storage of THS within Priority 2 and Priority 3 PDWSAs will be avoided, or written approval obtained from the relevant authority. | Construction | Project Manager/ Contractor | Project lifespan |
| | Bulk fuel and hazardous material storage areas will be bunded and managed in compliance with applicable Australian Standards. | Pre- construction/ construction | Project Manager/ Contractor | Project lifespan |
| | Where necessary Dangerous Goods approvals will be obtained for the equipment & storage facilities for hazardous materials | Pre- construction | Project Manager/ Contractor | Project lifespan |
| | Ensure there is appropriate equipment on site to deal with a hydrocarbon or chemical spill (e.g. spill kit, sorbents, bags etc). | Pre-construction | Contractor | Project lifespan |
| | In the case of a spill: | | | |

| Project component | Management action | Monitoring/maintenance program | Responsible person | Timeframe |
|---|---|---|---|---|
| | Prevent spill from spreading by using booms/socks in spill kit or by making a make shift bund and control access to spill area | Construction | Contractor | Project lifespan |
| | Soak up the spill with absorbent material and ensure the surface is left clean. Collect used absorbent material in a heavy plastic bag or other suitable container and arrange for disposal at an appropriate facility | Pre- construction / construction | Contractor | Project lifespan |
| | Spills should be contained and removed within 24 hours to minimise the potential for contaminants to enter groundwater and/or adjacent wetland.<br>If a spill cannot be cleaned up immediately, ensure it is appropriately isolated and contained.<br>Report all spills as an environmental incident using Main Roads Environmental Incident Notification Form (D17#681519) | Construction | Contractor | Project lifespan |
| Waste management | Determine requirements for placards/signs on waste stockpiles | Pre-construction/ Construction | Contractor | Project lifespan |
| | Identify authorised waste disposal sites and ensure they meet the requirements of current WA state regulations and / or local government bylaws that will be used, prior to mobilisation to site | Pre-construction/ Construction | Contractor | Project lifespan |
| | All waste materials (including waste water, excess soil, cement, rubbish and any other deleterious matter) will be contained in bins with lids (where practicable), removed and disposed at a suitable waste-disposal facility. | Construction | Contractor | Project lifespan |
| | Oversize material is to be disposed at the spoil sites listed in Specification 301 Clearing. If no such sites are listed, oversize material shall be disposed to an authorised waste disposal site | Construction | Contractor | Project lifespan |
| | Remove area demarcation once project works are completed, and dispose of appropriately/ lawfully. | Post-construction | Contractor | Project lifespan |
| | All waste materials from the Project Area will be removed from the site upon completion of the project. | Post-construction | Contractor | Project lifespan |
| | Contaminated soil and all other wastes will be disposed of at authorised waste disposal sites meeting the requirements of current WA state regulations and/or local government bylaws. | Construction/ post-construction | Contractor | Project lifespan |
| | Asbestos to be managed and removed by appropriately qualified personnel in accordance with DWER and Department of Health guidelines (2009). | Construction/ post-construction | Contractor | Project lifespan |
| | Waste stockpiles will be bunded and managed in compliance with applicable Australian Standards | Construction | Contractor | Project lifespan |
| Fire | Site personnel shall be trained in the use of emergency fire fighting equipment. | Pre-construction/ Construction | Contractor | Project lifespan |
| | A water tanker/fire fighter unit will always be on site during project construction and personnel trained in their use. | Construction | Project Manager/ Contractor | Project lifespan |
| | No fires shall be lit within the Project area, and no smoking will be permitted in vehicle/ plant. | Construction | Contractor | Project lifespan |
| | Machinery will be fitted with approved spark arresting exhaust systems. | Pre-construction/ Construction maintenance | Project Manager/ Contractor | Pre-construction/ Construction |

| Project component | Management action | Monitoring/maintenance program | Responsible person | Timeframe |
|---|---|---|---|---|
| | Use of vehicle & equipment during Total Fire Ban Days (DFES) or vehicle movement bans (the City) to be avoided unless authorised by DFES and/or the City. | Construction | Contractor | Project lifespan |
| | All hot works will be undertaken in accordance with standard safety procedures, by those who are trained and hold an approved Hot Work Permit and a current competency certificate | Construction | Contractor | Project lifespan |
| | Hot works will not be undertaken on fire ban days. | Construction | Contractor | Project lifespan |
| | Construction personnel will extinguish and report fires occurring within the DE. | Construction | Contractor | Project lifespan |
| | All vehicles, plant and equipment to be fitted with fire extinguishers and restricted to designated cleared areas. | Pre-construction/ construction | Contractor | Project lifespan |