

# Proposed Management, Risk Mitigation, Monitoring and Reporting matrices

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Management matrix for TEC vegetation

MANAGEMENT ACTIONS	RELEVANT PROTOCOLS	RESPONSIBLE AGENCY	LOCATION	PERFORMANCE TARGET / OUTCOME	PERFORMANCE INDICATOR	COMPLETION CRITERIA	POTENTIAL RISKS / THREATS	RISK MITIGATION	MONITORING	REPORTING
<b>Prior to construction</b>										
<b>Avoid:</b> Design refinement to minimise area of TEC vegetation needed to be cleared for the Proposal	Detailed design	DAWE / DWER	Within Proposal Area	Minimise amount of TEC vegetation requiring clearing	Amount of TEC vegetation required to be cleared	Not more than 24.9 ha of Banksia Woodlands TEC and 4.4 ha of Tuart Woodlands TEC cleared	Not applicable	Not applicable	Not applicable	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Mitigate:</b> As part of the contractor's CEMP, the construction contractor will prepare a Hygiene Management Plan to prevent the spread of dieback and weeds to adjacent vegetation. The Plan will include procedures such as machinery / vehicle clean down, weed treatments and restrictions on vehicle / machinery movements	Standard construction protocols in accordance with CEMP	DAWE / DWER	Within Proposal Area	Declared Plants and WONS within the Proposal Area and in adjacent TEC vegetation (in reserve or on land owned by Main Roads) is removed or treated with herbicide	CEMP and associated plans prepared	Baseline condition of TEC vegetation adjacent to the Proposal Area is maintained	Plans not prepared	Review and / or revise management procedures  Update training of relevant personnel	<p><b>Parameters:</b> WoNS or Declared Plants in retained TEC vegetation and revegetation and landscaping within the Proposal Area</p> <p><b>Methodology:</b> Visual assessment</p> <p><b>Frequency:</b> Prior to construction: Baseline monitoring to determine pre-construction conditions comprising</p> <ul style="list-style-type: none"> <li>Quarterly vegetation photopoints</li> <li>Bi-annual drainage photopoints</li> <li>Annual vegetation transects and plots</li> </ul> <p>During construction: As above and opportunistically</p> <p>Post construction: As above for two years post-construction with an optional third year</p> <p>Refer to the Vegetation Monitoring Program included in Appendix J of the Southern Section Additional Information for Preliminary Documentation</p>	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Mitigate:</b> As part of the CEMP, the construction contractor will prepare a Fire Management Plan to minimise risk of ignition from construction activities and effectively manage any resulting fire / wildfire	Standard construction protocols in accordance with CEMP and Fire Management Plan	DAWE / DWER	Within Proposal Area	Avoid indirect impacts to WRP in adjacent habitat	Preparation of Fire Management Plan	Fire Management Plan prepared	Fire Management Plan not prepared  Fire Management Plan not implemented or effective	Review and / or revise management procedures  Update training of relevant personnel	Not applicable	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Mitigate:</b> Infestations of Declared Plants and WoNS within the Proposal Area and in adjacent vegetation (in reserve or on land owned by Main Roads) will be removed or treated with herbicide	In accordance with CEMP, Hygiene Management Plan and Vegetation Monitoring Program	DAWE / DWER	Within and adjacent to Proposal Area	No new WONS or Declared Plants identified in monitored TEC vegetation in reserve or under Main Roads jurisdiction as a result of	Presence of WONS or Declared Plants in monitored TEC vegetation	Baseline condition of TEC vegetation adjacent to the Proposal Area is maintained	Presence of WONS or Declared Plants not identified  Control measures not implemented	Review and / or revise management procedures  Update training of relevant personnel	<p><b>Parameters:</b> WoNS or Declared Plants in retained TEC vegetation and revegetation and landscaping within the Proposal Area</p> <p><b>Methodology:</b> Visual assessment</p> <p><b>Frequency:</b> Prior to construction: Baseline monitoring to determine pre-construction conditions comprising</p>	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold

MANAGEMENT ACTIONS	RELEVANT PROTOCOLS	RESPONSIBLE AGENCY	LOCATION	PERFORMANCE TARGET / OUTCOME	PERFORMANCE INDICATOR	COMPLETION CRITERIA	POTENTIAL RISKS / THREATS	RISK MITIGATION	MONITORING	REPORTING
				Proposal implementation					<ul style="list-style-type: none"> <li>Quarterly vegetation photopoints</li> <li>Bi-annual drainage photopoints</li> <li>Annual vegetation transects and plots</li> </ul> <p>During construction: As above and opportunistically</p> <p>Post construction: As above for two years post-construction with an optional third year</p> <p>Refer to the Vegetation Monitoring Program included in Appendix J of the Southern Section Additional Information for Preliminary Documentation</p>	
<b>During construction</b>										
<b>Avoid:</b> Prior to clearing, the final road design will be assessed against the proposed clearing area to ensure the required clearing area is no more than the approved area	Standard construction protocols in accordance with CEMP	DAWE / DWER	Within Proposal Area	Avoid clearing outside the approved footprint	Extent of TEC vegetation clearing required	Not more than 24.9 ha of Banksia Woodlands TEC and 4.4 ha of Tuart Woodlands TEC cleared	Not applicable	Not applicable	Not applicable	Area of TEC vegetation cleared recorded by construction contractor and reported to Manager Environment monthly  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Low impact temporary fencing will be installed on the active construction front of TEC vegetation areas prior to clearing and maintained during construction phase	Standard construction protocols in accordance with CEMP	DAWE / DWER	Within Proposal Area	Avoid clearing outside the approved footprint	Clearing of TEC vegetation outside of approved clearing area	Not more than 24.9 ha of Banksia Woodlands TEC and 4.4 ha of Tuart Woodlands TEC cleared	Temporary fence not installed or ineffective	Daily inspections during clearing operations  Review and / or revise management procedures  Update training of relevant personnel	<b>Parameters:</b> Presence and effectiveness of temporary fence <b>Methodology:</b> Visual assessment <b>Frequency:</b> During construction: Daily during clearing operations Post construction: Not applicable	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> The Proposal Area boundary will be fenced to restrict access. The fence will be installed inside the approved Proposal Area.	Standard construction protocols in accordance with CEMP	DAWE / DWER	Within Proposal Area	Minimise disturbance of and impact to monitored TEC vegetation	Access to TEC vegetation	Fence installed per specification  Access controlled	Fence not installed  Fence ineffective	Review and / or revise management procedures, including fence design and installation  Update training of relevant personnel	<b>Parameters:</b> Presence and effectiveness of Proposal Area boundary fence <b>Methodology:</b> Visual assessment <b>Frequency:</b> During construction: After installation of Proposal Area boundary fence Post construction: Quarterly for five years	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Contractor induction will include familiarisation with and discussion of TEC vegetation, <i>Phytophthora</i>	Standard construction protocols in accordance with CEMP	DAWE / DWER	Within Proposal Area	Minimise disturbance of and impact to monitored TEC vegetation	Contractors adhere to relevant plans and procedures	Baseline condition of TEC vegetation adjacent to the	Familiarisation not included in induction materials	Review and / or revise management procedures	Not applicable	Report annually to DAWE and DWER as part of annual compliance reporting or in response to

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dieback management and hygiene management						Proposal Area is maintained	Contractor not compliant with requirements	Update training of relevant personnel		exceedance of an agreed trigger or threshold
<b>Avoid:</b> As far as practical, clearing activities will occur during the dry months to reduce the risk of spreading <i>Phytophthora</i> dieback	In accordance with CEMP and Hygiene Management Plan	DAWE / DWER	Within Proposal Area	Minimise disturbance of and impact to monitored TEC vegetation	Timing of clearing operations	Baseline condition of TEC vegetation adjacent to the Proposal Area is maintained	Clearing operations unable to occur during the dry months	Not applicable	Not applicable	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Movement of machines and other vehicles to be restricted to the limits of the areas cleared within the Proposal Area or on designated tracks outside the area	Standard construction protocols in accordance with CEMP and Hygiene Management Plan	DAWE / DWER	Within Proposal Area	Minimise disturbance of and impact to monitored TEC vegetation	Vehicle access and movement	Baseline condition of TEC vegetation adjacent to the Proposal Area is maintained	Access is not restricted as required	Daily inspections during clearing operations  Review and / or revise management procedures  Update training of relevant personnel	<b>Parameters:</b> Machinery and vehicle access and movement within the Proposal Area and on designated tracks outside the area  <b>Methodology:</b> Visual assessment  <b>Frequency:</b> During construction: Daily during clearing operations. Weekly during construction Post construction: Not applicable	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> No re-fuelling of equipment will be conducted within 100 m of TEC vegetation	In accordance with CEMP	DAWE / DWER	Within Proposal Area	Minimise disturbance of and impact to monitored TEC vegetation	Location of re-fuelling equipment	Baseline condition of TEC vegetation adjacent to the Proposal Area is maintained	Re-fuelling equipment is installed within 100 m of TEC vegetation  Hydrocarbon contamination of TEC vegetation	Review and / or revise management procedures  Update training of relevant personnel	<b>Parameters:</b> Hydrocarbon storage and re-fuelling locations  <b>Methodology:</b> Visual assessment  <b>Frequency:</b> During construction: Weekly and opportunistically Post construction: Not applicable	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> All Department of Fire and Emergency Services (DFES) and LGA restrictions on fire and machinery movement will be strictly adhered to	Standard construction protocols in accordance with CEMP	DAWE / DWER	Within Proposal Area	Minimise disturbance of and impact to monitored TEC vegetation	Adherence to DFES and LGA fire restrictions	Baseline condition of TEC vegetation adjacent to the Proposal Area is maintained	Fire restrictions not observed	Review and / or revise management procedures  Update training of relevant personnel	<b>Parameters:</b> DFES and LGA fire restrictions  <b>Methodology:</b> Visual assessment  <b>Frequency:</b> During construction: Daily and opportunistically Post construction: Not applicable	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Implement Drainage Strategy and ground and surface water management measures to avoid impact to monitored TEC vegetation	In accordance with CEMP, Drainage Strategy and Hygiene Management Plan	DAWE / DWER	Within and adjacent to Proposal Area	Avoid indirect impacts to monitored TEC vegetation	Monitored TEC vegetation quality / condition (function and value)	Quality / condition (function and value) of monitored TEC vegetation adjacent to the Proposal Area is maintained at baseline or any change is commensurate with that at reference site	Groundwater drawdown impacts on, or changes in hydrology of, monitored TEC vegetation	Review and / or revise management procedures including modification of drainage infrastructure as required	<b>Parameters:</b> Monitored TEC vegetation quality / condition (function and value)  <b>Methodology:</b> Visual assessment  <b>Frequency:</b> Prior to construction: Baseline monitoring to determine pre-construction conditions comprising <ul style="list-style-type: none"> <li>Quarterly vegetation photopoints</li> <li>Bi-annual drainage photopoints</li> <li>Annual vegetation transects and plots</li> </ul>	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold

MANAGEMENT ACTIONS	RELEVANT PROTOCOLS	RESPONSIBLE AGENCY	LOCATION	PERFORMANCE TARGET / OUTCOME	PERFORMANCE INDICATOR	COMPLETION CRITERIA	POTENTIAL RISKS / THREATS	RISK MITIGATION	MONITORING	REPORTING
									<p>During construction: As above and opportunistically</p> <p>Post construction: As above for two years post-construction with an optional third year</p> <p>Refer to the Vegetation Monitoring Program included in Appendix J of the Southern Section Additional Information for Preliminary Documentation</p>	
<p><b>Mitigate:</b>  <b>Infestations of Declared Plants and WONS in retained TEC vegetation and revegetation and landscaping within the Proposal Area will be removed or treated with herbicide</b></p>	<p>In accordance with CEMP, Hygiene Management Plan and Vegetation Monitoring Program</p>	<p>DAWE / DWER</p>	<p>Within and adjacent to Proposal Area</p>	<p>No new WONS or Declared Plants identified in monitored TEC vegetation in reserve or under Main Roads jurisdiction as a result of Proposal implementation</p>	<p>Presence of WONS or Declared Plants in monitored TEC vegetation</p>	<p>Baseline condition of TEC vegetation adjacent to the Proposal Area is maintained</p>	<p>Presence of WONS or Declared Plants not identified</p> <p>Control measures not implemented</p>	<p>Review and / or revise management procedures</p> <p>Update training of relevant personnel</p>	<p><b>Parameters:</b>  WONS or Declared Plants in retained TEC vegetation and revegetation and landscaping within the Proposal Area</p> <p><b>Methodology:</b>  Visual assessment</p> <p><b>Frequency:</b>  Prior to construction: Baseline monitoring to determine pre-construction conditions comprising</p> <ul style="list-style-type: none"> <li>• Quarterly vegetation photopoints</li> <li>• Bi-annual drainage photopoints</li> <li>• Annual vegetation transects and plots</li> </ul> <p>During construction: As above and opportunistically</p> <p>Post construction: As above for two years post-construction with an optional third year</p> <p>Refer to the Vegetation Monitoring Program included in Appendix J of the Southern Section Additional Information for Preliminary Documentation</p>	<p>Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold</p>
<p><b>Post construction</b></p>										
<p><b>Mitigate:</b>  <b>For three years post construction, undertake control of Declared Plants and WONS in monitored TEC vegetation in reserve or under Main Roads jurisdiction, as well as in revegetation and landscaping within the Proposal Area</b></p>	<p>In accordance with CEMP and Vegetation Monitoring Program</p>	<p>DAWE / DWER</p>	<p>Within and adjacent to Proposal Area</p>	<p>No new WONS or Declared Plants identified in monitored TEC vegetation in reserve or under Main Roads jurisdiction as a result of Proposal implementation</p>	<p>Presence of WONS or Declared Plants in monitored TEC vegetation</p>	<p>Baseline condition of TEC vegetation adjacent to the Proposal Area is maintained</p>	<p>Presence of WONS or Declared Plants not identified</p> <p>Control measures not implemented</p>	<p>Review and / or revise management procedures</p> <p>Update training of relevant personnel</p>	<p><b>Parameters:</b>  WONS or Declared Plants in retained TEC vegetation and revegetation and landscaping within the Proposal Area</p> <p><b>Methodology:</b>  Visual assessment and field survey</p> <p><b>Frequency:</b>  Post construction: Quarterly for three years post-construction with an optional third year</p>	<p>Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold</p>

Management maxtrix for Black Cockatoos

MANAGEMENT ACTIONS	RELEVANT PROTOCOLS	RESPONSIBLE AGENCY	LOCATION	PERFORMANCE TARGET / OUTCOME	PERFORMANCE INDICATOR	COMPLETION CRITERIA	POTENTIAL RISKS / THREATS	RISK MITIGATION	MONITORING	REPORTING
For more information on the proposed management of potential impacts to Black Cockatoos, refer to the Black Cockatoo Action Management Plan (Appendix L of the Southern Section Additional Information for Preliminary Documentation)										
<b>Prior to construction</b>										
<b>Avoid:</b> Design refinement to minimise area of Black Cockatoo habitat needed to be cleared for the Proposal	Detailed design	DAWE / DWER	Within Proposal Area	Minimise amount of Black Cockatoo habitat requiring clearing	Amount of Black Cockatoo habitat required to be cleared	Not more than 65.4 ha of Black Cockatoo foraging habitat cleared	Not applicable	Not applicable	Not applicable	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Black Cockatoo habitat to be cleared within Proposal Area will be demarcated in the field to ensure clearing only occurs within the approved clearing area	Standard construction protocols in accordance with CEMP and Fauna AMP	DAWE / DWER	Within Proposal Area	Avoid direct impacts to Black Cockatoos  Avoid clearing outside the approved footprint  Reduce clearing of Black Cockatoo habitat to the extent practicable in final design	Clearing of Black Cockatoo habitat outside of approved clearing area	Not more than 65.4 ha of Black Cockatoo foraging habitat cleared	Demarcation damaged or ineffective resulting in clearing of Black Cockatoo habitat outside of approved clearing area	Daily inspection during clearing operations	<b>Parameters:</b> Clearing area (ha) of Black Cockatoo foraging habitat  Number of trees with a DBH ≥ 500 mm containing a potentially suitable nesting hollow(s) cleared  <b>Methodology:</b> Field survey of cleared areas with comparison to approved clearing area, mapped Black Cockatoo habitat areas and known Black Cockatoo nest hollow locations  <b>Frequency:</b> During construction: Daily inspection of demarcation; weekly assessment against approved clearing area  Post construction: Not applicable	Area of Black Cockatoo habitat cleared recorded by construction contractor and reported to Manager Environment monthly  Number of suitable DBH trees cleared recorded by construction contractor and reported to Manager Environment monthly  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> The final design will avoid trees with suitable nest hollows where possible	Clearing protocols in accordance with Fauna AMP	DAWE / DWER	Within Proposal Area	Avoid direct impacts to Black Cockatoos  Reduce clearing of Black Cockatoo habitat to the extent practicable in final design	Number ≥ 500 mm DBH trees containing a potentially suitable nesting hollow(s) cleared	Not more than 13 large trees (DBH 500 mm) which contain a potentially suitable nesting hollow(s) cleared				Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Where any of the thirteen trees with suitable nest hollows for Black Cockatoo will require clearing for the Proposal, the hollow will be visually inspected where safe and practicable. Where not in use the hollow will be 'blocked' to prevent breeding	Clearing protocols in accordance with Fauna AMP	DAWE / DWER	Within Proposal Area	Preclude potential breeding within Proposal Area prior to construction	Number of Black Cockatoos injured or killed	No Black Cockatoo mortalities as a consequence of construction activity	Hollow not able to be inspected  Hollow not able to be blocked  Blocking of hollow not effective	Pre-clearing fauna assessment	<b>Parameters:</b> Black Cockatoo access to potentially suitable nesting hollow(s)  <b>Methodology:</b> Visual inspection  <b>Frequency:</b> During construction: Pre-clearing and post each clearing event and opportunistically  Post construction: Not applicable	Injury or death of Black Cockatoos recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Number of potentially suitable nesting hollow(s) blocked prior to construction recorded by construction contractor and reported to Manager Environment monthly  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Where blocking of the nest hollows cannot be undertaken (e.g. timing, access), a pre-clearing fauna assessment will be undertaken by a suitably experienced person to determine if the hollows are being used by Black Cockatoos	Clearing protocols in accordance with Fauna AMP	DAWE / DWER	Within Proposal Area	Preclude potential breeding within Proposal Area prior to construction	Number of Black Cockatoos injured or killed	No Black Cockatoo mortalities as a consequence of construction activity	Pre-clearing fauna assessment fails to identify Black Cockatoos present	Sensitive clearing protocols		Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>During construction</b>										
<b>Avoid:</b> A suitably experienced zoologist / environmental scientist will be on-site at all times during clearing of	Clearing protocols in accordance	DAWE / DWER	Within Proposal Area	Avoid direct impacts to Black Cockatoos	Presence of suitably experienced zoologist /	N/A	Suitably experienced zoologist / environmental	Early engagement	N/A	Report annually to DAWE and DWER as part of annual compliance reporting or in

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breeding habitat for Black Cockatoos and must maintain radio communication with machinery operators	with Fauna AMP				environmental scientist during BC habitat clearing operations Consistency of radio communications		scientist not available Radio contact not or not able to be maintained	Alternative personnel identified Radio equipment maintained Deliver appropriate training		response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Where a suitable nest hollow within the area of the Proposal has been blocked prior to the Black Cockatoo breeding season, the tree may be felled as part of the standard vegetation clearing process	Standard construction protocols in accordance with CEMP and Fauna AMP	DAWE / DWER	Within Proposal Area	Avoid clearing outside the approved footprint	Number of potential nest hollows blocked	No Black Cockatoo mortalities as a consequence of construction activity	Blocking of hollow not effective	Pre-clearing fauna assessment	<b>Parameters:</b> Black Cockatoo access to potentially suitable nesting hollow(s) <b>Methodology:</b> Visual inspection <b>Frequency:</b> During construction: Pre-clearing and post each clearing event and opportunistically Post construction: Not applicable	Injury or death of Black Cockatoos recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Number of potentially suitable nesting hollow(s) blocked prior to construction recorded by construction contractor and reported to Manager Environment monthly  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Where a suitable nest hollow within the area of the Proposal has not been blocked and the pre-clearing fauna assessment has not identified Black Cockatoo occupation of the nest hollow, prior to clearing the tree, the tree will be 'bumped gently' with a machine with the machine operator and zoologist then to wait and observe the tree for a short time after. If no Black Cockatoo appears to be present then the tree may be pushed over slowly to minimise risk of injury to any undetected animal (if present)	Sensitive clearing protocols in accordance with Fauna AMP	DAWE / DWER	Within Proposal Area	Avoid direct impacts to Black Cockatoos	Number of trees with potentially suitable hollows 'bumped gently' prior to felling	No Black Cockatoo mortalities as a consequence of construction activity	Trees with potentially suitable hollows not identified prior to clearing or not clearly demarcated in the field	Daily inspection during clearing operations	<b>Parameters:</b> Black Cockatoo access to potentially suitable nesting hollow(s) <b>Methodology:</b> Visual inspection <b>Frequency:</b> During construction: Pre-clearing and post each clearing event and opportunistically Post construction: Not applicable	Injury or death of Black Cockatoos recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Number of potentially suitable nesting hollow(s) blocked prior to construction recorded by construction contractor and reported to Manager Environment monthly  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Where suitable nest hollows within the Proposal Area have not been blocked and the pre-clearing fauna assessment identifies Black Cockatoo occupation of the nest hollow (which may include chicks), the tree with the nest hollow will	Sensitive clearing protocols in accordance with Fauna AMP	DAWE / DWER / DBCA	Within Proposal Area	Avoid direct impacts to Black Cockatoos  Avoid abandonment of breeding hollows within the Proposal Area	Chick presence in nest  Maintenance of 10 m clearing exclusion zone around active nest	No clearing of trees with active nest hollows  No clearing within 10 m of	Black Cockatoo presence not detected	Weekly inspection during clearing operations	<b>Parameters:</b> Black Cockatoo access to potentially suitable nesting hollow(s)  Black Cockatoo nesting activity <b>Methodology:</b>	Injury or death of Black Cockatoos recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring

MANAGEMENT ACTIONS	RELEVANT PROTOCOLS	RESPONSIBLE AGENCY	LOCATION	PERFORMANCE TARGET / OUTCOME	PERFORMANCE INDICATOR	COMPLETION CRITERIA	POTENTIAL RISKS / THREATS	RISK MITIGATION	MONITORING	REPORTING
not be cleared until after the chick/s have left the nest. No vegetation within 10 m of the tree will be cleared until after the hollow is vacant.						an active nest hollow  No Black Cockatoo mortalities as a consequence of construction activity			Visual inspection  <b>Frequency:</b> During construction: Pre-clearing and post each clearing event and opportunistically  Post construction: Not applicable	Number of potentially suitable nesting hollow(s) blocked prior to construction recorded by construction contractor and reported to Manager Environment monthly  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Mitigate:</b> Any Black Cockatoos observed within the Proposal Area showing signs of injury or illness will be promptly taken to an experienced wildlife veterinarian or approved wildlife rehabilitation facility	Sensitive clearing protocols in accordance with Fauna AMP	DAWE / DWER / DBCA	Within Proposal Area	Avoid direct impacts to Black Cockatoos	Where injured or ill Black Cockatoos are taken to	All injured and ill Black Cockatoos are taken to an experienced wildlife veterinarian or approved wildlife rehabilitation facility	Suitably experienced wildlife veterinarian not available	Early engagement  Alternative personnel identified	N/A	Injury or death of Black Cockatoos recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Mitigate:</b> A post-clearing survey shall be undertaken to ensure no injured Black Cockatoo individuals are present	Sensitive clearing protocols in accordance with Fauna AMP	DAWE / DWER / DBCA	Within Proposal Area	Avoid direct impacts to Black Cockatoos	Number of Black Cockatoos injured or killed	No Black Cockatoo mortalities as a consequence of construction activity	Post-clearing survey not undertaken  Survey fails to identify injured Black Cockatoos	Review and / or revise management procedures  Engage suitably experienced zoologist / environmental scientist	<b>Parameter:</b> Presence of injured Black Cockatoos in cleared area  <b>Methodology:</b> Visual assessment  <b>Frequency:</b> During construction: After each clearing event of Black Cockatoo habitat  Post construction: Not applicable	Injury or death of Black Cockatoos recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Mitigate:</b> Implement WoNS, Declared Plant, surface water, and <i>Phytophthora</i> dieback management measures within Proposal Area vegetation	In accordance with CEMP and Hygiene Management Plan	DAWE / DWER	Within Proposal Area	Avoid indirect impacts to adjacent Black Cockatoo habitat	Black Cockatoo habitat quality / condition (function and value)	Quality / condition (function and value) of Black Cockatoo habitat adjacent to the Proposal Area is maintained at baseline or any change is commensurate with that at reference site habitat	Reduction in habitat function and value	Review and / or revise management procedures	<b>Parameters:</b> Black Cockatoo habitat quality / condition (function and value)  <b>Methodology:</b> Visual assessment  <b>Frequency:</b> During construction: Bi-annually  Post construction: Bi-annually for three years	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Mitigate:</b> As part of the CEMP, the construction contractor will prepare a Fire Management Plan to minimise	Standard construction protocols in accordance	DAWE / DWER	Within Proposal Area	Avoid indirect impacts to adjacent	Preparation of Fire	Fire Management Plan prepared	Fire Management Plan not prepared	Review and / or revise	N/A	Report annually to DAWE and DWER as part of annual compliance reporting or in

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risk of ignition from construction activities and effectively manage any resulting fire / wildfire	with CEMP and Fire Management Plan			Black Cockatoo habitat	Management Plan		Fire Management Plan not implemented or effective	management procedures Update training of relevant personnel		response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Implement Drainage Strategy and ground and surface water management measures to avoid impact to adjacent Black Cockatoo habitat	In accordance with CEMP, Drainage Strategy and Hygiene Management Plan	DAWE / DWER	Within and adjacent to Proposal Area	Avoid indirect impacts to adjacent Black Cockatoo habitat	Black Cockatoo habitat quality / condition (function and value)	Quality / condition (function and value) of Black Cockatoo habitat adjacent to the Proposal Area is maintained at baseline or any change is commensurate with that at reference site habitat	Groundwater drawdown impacts on, or changes in hydrology of, Black Cockatoo habitat	Review and / or revise management procedures including modification of drainage infrastructure as required	<b>Parameters:</b> Black Cockatoo habitat quality / condition (function and value) <b>Methodology:</b> Visual assessment <b>Frequency:</b> During construction: Bi-annually Post construction: Bi-annually for three years	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Post construction</b>										
<b>Mitigate:</b> Where space and access allows, revegetation and landscaping of cleared areas within the Proposal Area with suitable endemic native species will be undertaken to provide foraging habitat for Black Cockatoos (excluding 10 m buffer from nearest traffic lane).	In accordance with CEMP and Fauna AMP, Main Roads Road Reserve Revegetation Guideline (MRWA, 2013)	DAWE / DWER	Within Proposal Area	Rehabilitation provides suitable Black Cockatoo foraging habitat within 10 years of completion	Presence of Black Cockatoo foraging habitat in identified rehabilitation areas	Provision of suitable Black Cockatoo foraging habitat within 10 years of completion	Failure of rehabilitation	Refine species lists and methodologies Update training of relevant personnel Repeat rehabilitation works or conduct infill planting in failed areas	<b>Parameter:</b> Presence / absence and quality of foraging habitat available in rehabilitated areas <b>Methodology:</b> Field survey by suitably experienced personnel <b>Frequency:</b> Post construction: Bi-annually after rehabilitation	Recorded by construction contractor and reported to Manager Environment bi-annually once rehabilitation works are completed  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold

Management matrix for Western Ringtail Possum (WRP)

MANAGEMENT ACTIONS	RELEVANT PROTOCOLS	RESPONSIBLE AGENCY	LOCATION	PERFORMANCE TARGET / OUTCOME	PERFORMANCE INDICATOR	COMPLETION CRITERIA	POTENTIAL RISKS / THREATS	RISK MITIGATION	MONITORING	REPORTING
For more information on the proposed management of potential impacts to WRP, refer to the Conservation Significant Fauna Action Management Plan (Appendix M of the Southern Section Additional Information for Preliminary Documentation)										
<b>Prior to construction</b>										
<b>Avoid:</b> Design refinement to minimise area of WRP habitat needed to be cleared for the Proposal	Detailed design	DAWE / DWER	Within Proposal Area	Minimise amount of WRP habitat requiring clearing	Amount of WRP habitat required to be cleared	Not more than 65.4 ha of WRP habitat cleared	Not applicable	Not applicable	Not applicable	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Prior to clearing, the final road design will be assessed against the proposed clearing area to ensure the required clearing area is no more than the approved area	Standard construction protocols in accordance with CEMP and Fauna AMP	DAWE / DWER	Within Proposal Area	Avoid clearing outside the approved footprint	Extent of clearing of WRP habitat required	Not more than 65.4 ha of WRP habitat cleared	Not applicable	Not applicable	Not applicable	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> All WRP habitat to be retained within the development envelope will be surveyed and delineated with temporary fencing prior to site works to ensure it is conserved	Standard construction protocols in accordance with CEMP and Fauna AMP	DAWE / DWER	Within Proposal Area	Avoid clearing outside the approved footprint  Reduce clearing of WRP habitat to the extent practicable in final design	Clearing of WRP habitat outside of approved clearing area	Not more than 65.4 ha of WRP habitat cleared	Demarcation damaged or ineffective resulting in clearing of WRP habitat outside of approved clearing area	Daily inspection during clearing operations	<b>Parameters:</b> Clearing area (ha) of WRP habitat <b>Methodology:</b> Field survey of cleared areas with comparison to approved clearing area and mapped WRP habitat areas <b>Frequency:</b> During construction: Daily inspection of demarcation; weekly assessment against approved clearing area Post construction: Not applicable	Area of WRP habitat cleared recorded by construction contractor and reported to Manager Environment monthly  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>During construction</b>										
<b>Avoid:</b> No night time clearing of vegetation will occur	Standard construction protocols in accordance with CEMP and Fauna AMP	DAWE / DWER	Within Proposal Area	Avoid direct impacts to WRP individuals	Timing of clearing operations	No night time clearing operations undertaken	Not applicable	Not applicable	Not applicable	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Cleared vegetation will be chipped immediately or transported at least 100 m from WRP habitat before further processing	Standard construction protocols in accordance with CEMP and Fauna AMP	DAWE / DWER	Within Proposal Area	Avoid direct impacts to WRP individuals  Preclude use of refuge sites within the Proposal Area prior to construction	Presence of unchipped cleared vegetation within 100 m of WRP habitat	No unchipped cleared vegetation within 100 m of WRP habitat	Cleared vegetation not chipped or removed	Review and / or revise management procedures  Update training of relevant personnel	<b>Parameters:</b> Injury or death of WRP Timing of clearing stockpile movement / disturbance <b>Methodology:</b> Visual assessment <b>Frequency:</b> During construction: After each clearing event and opportunistically during clearing Post construction: Not applicable	Injury or death of WRP recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Main Roads to consult with DBCA of the WRP injury or mortality occurring  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of
<b>Avoid:</b> Movement / disturbance of clearing stockpiles will be	Clearing protocols in accordance	DAWE / DWER	Within Proposal Area	Avoid direct impacts to	Timing of clearing stockpile	Movement / disturbance of clearing	Clearing stockpiles moved / disturbed outside of			

MANAGEMENT ACTIONS	RELEVANT PROTOCOLS	RESPONSIBLE AGENCY	LOCATION	PERFORMANCE TARGET / OUTCOME	PERFORMANCE INDICATOR	COMPLETION CRITERIA	POTENTIAL RISKS / THREATS	RISK MITIGATION	MONITORING	REPORTING
confined to the period one hour after sunrise and / or one hour prior to sunset	with Fauna AMP			WRP individuals	movement / disturbance	stockpiles confined to the period one hour after sunrise and / or one hour prior to sunset	approved timeframes			an agreed trigger or threshold
<b>Avoid:</b> All buildings requiring demolition for the Proposal will be inspected for WRP for two days prior to demolition works	Clearing protocols in accordance with Fauna AMP	DAWE / DWER	Within Proposal Area	Avoid direct impacts to WRP individuals	Pre-demolition inspections undertaken	All buildings requiring demolition are inspected for two days prior to demolition works	Inspections not undertaken Inspections fail to identify WRP present	Engage suitably experienced zoologist / environmental scientist  Review and / or revise management procedures  Update training of relevant personnel  Sensitive clearing protocols	<b>Parameters:</b> Injury or death of WRP  <b>Methodology:</b> Visual assessment  <b>Frequency:</b> Prior to construction: bi-monthly baseline monitoring to determine pre-construction conditions including WRP abundance and distribution  During construction: Daily for two days prior to each demolition event  Post construction: Not applicable	Injury or death of WRP recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Main Roads to consult with DBCA of the WRP injury or mortality occurring  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Where WRP are observed or suspected to be in any building to be demolished, attempts shall be made to capture the animal prior to the demolition works commencing	Clearing protocols in accordance with Fauna AMP	DAWE / DWER	Within Proposal Area	Avoid direct impacts to WRP individuals	Number of WRP injured or killed	No WRP mortalities as a consequence of construction activity	Animals not able to be captured	Engage suitably experienced zoologist / environmental scientist  Sensitive clearing protocols		Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> An experienced zoologist / environmental scientist / fauna-spotter will be on-site at all times during the demolition of buildings suspected or observed to house WRP	Clearing protocols in accordance with Fauna AMP	DAWE / DWER	Within Proposal Area	Avoid direct impacts to WRP individuals	Presence of suitably experienced zoologist / environmental scientist during WRP habitat clearing operations	Not applicable	Suitably experienced zoologist / environmental scientist not available	Early engagement  Alternative personnel identified	Not applicable	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Machinery operators will maintain radio communication with their spotter	Clearing protocols in accordance with Fauna AMP	DAWE / DWER	Within Proposal Area	Avoid direct impacts to WRP individuals	Consistency of radio communications	Not applicable	Radio contact not or not able to be maintained	Radio equipment maintained  Update training of relevant personnel	Not applicable	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Any pest animal baits used in buildings to be demolished will be in bait stations	Clearing protocols in accordance with Fauna AMP	DAWE / DWER	Within Proposal Area	Avoid direct impacts to WRP individuals	Number of WRP injured or killed	All pest animal baits used in buildings to be demolished are in bait stations	Bait stations not used	Review and / or revise management procedures  Update training of relevant personnel	<b>Parameters:</b> Presence of bait not in bait stations  <b>Methodology:</b> Visual assessments  <b>Frequency:</b> During construction: Daily during demolition activities  Post construction: Not applicable	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold

MANAGEMENT ACTIONS	RELEVANT PROTOCOLS	RESPONSIBLE AGENCY	LOCATION	PERFORMANCE TARGET / OUTCOME	PERFORMANCE INDICATOR	COMPLETION CRITERIA	POTENTIAL RISKS / THREATS	RISK MITIGATION	MONITORING	REPORTING
<b>Avoid:</b> Spotlighting of potential WRP habitat will be undertaken by a suitably experienced person for two nights immediately prior to clearing (component of sensitive clearing protocols)	Sensitive clearing protocols in accordance with Fauna AMP	DAWE / DWER	Within Proposal Area	Avoid direct impacts to WRP individuals	Pre-clearing spotlighting of potential WRP habitat undertaken	Potential WRP habitat inspected via spotlighting for two nights immediately prior to clearing	Spotlighting not undertaken Inspections fail to identify WRP present	Engage suitably experienced zoologist / environmental scientist  Review and / or revise management procedures  Update training of relevant personnel  Sensitive clearing protocols	<b>Parameters:</b> Injury or death of WRP <b>Methodology:</b> Visual assessment via spotlighting <b>Frequency:</b> Prior to construction: bi-monthly baseline monitoring to determine pre-construction conditions including WRP abundance and distribution  During construction: Daily for two days immediately prior to each clearing event of WRP habitat  Post construction: Not applicable	Injury or death of WRP recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Main Roads to consult with DBCA of the WRP injury or mortality occurring  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Pre-clearing fauna searches shall be conducted immediately prior to and during clearing operations and will include hollows, dreys, ground debris, dense ground-level vegetation, fallen timber and logs (component of sensitive clearing protocols)	Sensitive clearing protocols in accordance with Fauna AMP	DAWE / DWER	Within Proposal Area	Avoid direct impacts to WRP individuals	Pre-clearing fauna searches are undertaken	Potential WRP habitat is searched immediately prior to and during clearing operations	Searches not undertaken Inspections fail to identify WRP present	Engage suitably experienced zoologist / environmental scientist  Review and / or revise management procedures  Update training of relevant personnel  Sensitive clearing protocols	<b>Parameters:</b> Injury or death of WRP <b>Methodology:</b> Visual assessment <b>Frequency:</b> Prior to construction: bi-monthly baseline monitoring to determine pre-construction conditions including WRP abundance and distribution  During construction: immediately prior to and during each clearing event of WRP habitat  Post construction: Not applicable	Injury or death of WRP recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Main Roads to consult with DBCA of the WRP injury or mortality occurring  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Clearing will be conducted congruent with the habitat clearing categories as detailed in Appendix M of the Southern Section Additional Information for Preliminary Documentation	Sensitive clearing protocols in accordance with Fauna AMP	DAWE / DWER	Within Proposal Area	Avoid direct impacts to WRP individuals	Clearing activities in relation to identified habitat clearing categories	Clearing is conducted congruent with identified habitat clearing categories	Clearing not congruent with habitat clearing categories	Review and / or revise management procedures  Update training of relevant personnel	<b>Parameters:</b> Clearing activities in relation to identified habitat clearing categories <b>Methodology:</b> Visual assessment <b>Frequency:</b> Prior to construction: bi-monthly baseline monitoring to determine pre-construction conditions including WRP abundance and distribution  During construction: Post each clearing event and opportunistically  Post construction: Not applicable	Injury or death of WRP recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Vacant dreys will be removed prior to clearing where they are	Sensitive clearing protocols in accordance	DAWE / DWER / DBCA	Within Proposal Area	Avoid direct impacts to WRP individuals	Number of WRP injured or killed	No WRP mortalities as a consequence of	Drey not able to be inspected Drey not able to be blocked	Pre-clearing fauna assessment	<b>Parameters:</b> WRP access to dreys within clearing area <b>Methodology:</b>	Injury or death of WRP recorded by construction contractor and reported to Manager Environment

MANAGEMENT ACTIONS	RELEVANT PROTOCOLS	RESPONSIBLE AGENCY	LOCATION	PERFORMANCE TARGET / OUTCOME	PERFORMANCE INDICATOR	COMPLETION CRITERIA	POTENTIAL RISKS / THREATS	RISK MITIGATION	MONITORING	REPORTING
accessible (component of sensitive clearing protocols)	with Fauna AMP			Preclude use of refuge sites within the Proposal Area prior to construction		construction activity	Blocking of drey ineffective		Visual assessment <b>Frequency:</b> Prior to construction: bi-monthly baseline monitoring to determine pre-construction conditions including WRP abundance and distribution During construction: Pre-clearing and post each clearing event and opportunistically Post construction: Not applicable	within 24 hours of incident occurring  Number of accessible vacant dreys blocked prior to construction recorded by construction contractor and reported to Manager Environment monthly  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Vacant tree hollows suitable for WPR will be removed or blocked prior to clearing where they are accessible (component of sensitive clearing protocols)	Sensitive clearing protocols in accordance with Fauna AMP	DAWE / DWER	Within Proposal Area	Preclude use of refuge sites within the Proposal Area prior to construction	Number of WRP injured or killed	No WRP mortalities as a consequence of construction activity	Hollow not able to be inspected Hollow not able to be blocked Blocking of hollow not effective	Pre-clearing fauna assessment	<b>Parameters:</b> WRP access to hollows within clearing area <b>Methodology:</b> Visual assessment <b>Frequency:</b> Prior to construction: bi-monthly baseline monitoring to determine pre-construction conditions including WRP abundance and distribution During construction: Pre-clearing and post each clearing event and opportunistically Post construction: Not applicable	Injury or death of WRP recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Number of potentially suitable hollow(s) blocked prior to construction recorded by construction contractor and reported to Manager Environment monthly  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> If WRP are observed during clearing operations, the tree containing the animal shall be left for up to 48 hours to allow for the animal to vacate, while clearing continues in adjacent vegetation. If the tree continues to be occupied after 48 hours, the animal will be coerced / moved to a safe area outside of the clearing footprint by the appointed zoologist / environmental scientist / fauna spotter (component of sensitive clearing protocols)	Sensitive clearing protocols in accordance with Fauna AMP	DAWE / DWER / DBCA	Within Proposal Area	Avoid direct impacts to WRP individuals	Number of WRP injured or killed	No WRP mortalities as a consequence of construction activity	WRP present are not able to be coerced / moved Inspections fail to identify WRP present	Daily inspection during clearing operations  Engage suitably experienced zoologist / environmental scientist	<b>Parameters:</b> WRP presence in tree(s) within clearing area <b>Methodology:</b> Visual assessment <b>Frequency:</b> During construction: Pre-clearing and post each clearing event and opportunistically Post construction: Not applicable	Injury or death of WRP recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Number of potentially suitable hollow(s) blocked prior to construction recorded by construction contractor and reported to Manager Environment monthly  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of

MANAGEMENT ACTIONS	RELEVANT PROTOCOLS	RESPONSIBLE AGENCY	LOCATION	PERFORMANCE TARGET / OUTCOME	PERFORMANCE INDICATOR	COMPLETION CRITERIA	POTENTIAL RISKS / THREATS	RISK MITIGATION	MONITORING	REPORTING
										an agreed trigger or threshold
<b>Avoid:</b> Trees, as noted above, that are observed to support WRP after 48 hours will be ‘bumped gently’ with a machine prior to felling. The operator and spotter will wait and observe the tree for a short time. If the animal remains in the tree it shall be pushed over slowly onto vegetation within the clearing area that is yet to be cleared. The ‘soft felling’ of habitat trees will provide a ‘cushion’ for the vegetation being felled, minimising the risk of injury to the animal and allowing any WRP present with the opportunity to safely vacate (component of sensitive clearing protocols)	Sensitive clearing protocols in accordance with Fauna AMP	DAWE / DWER / DBCA	Within Proposal Area	Avoid direct impacts to WRP individuals	Number of trees with potentially suitable hollows ‘bumped gently’ prior to felling  Number of WRP injured or killed	No WRP mortalities as a consequence of construction activity	Trees with resident WRP present not identified prior to clearing or not clearly demarcated in the field  WRP present are not able to be coerced / moved  Inspections fail to identify WRP present	Daily inspection during clearing operations  Engage suitably experienced zoologist / environmental scientist  Review and / or revise management procedures  Update training of relevant personnel  Sensitive clearing protocols	<b>Parameters:</b> WRP access to potentially suitable nesting hollow(s) <b>Methodology:</b> Visual inspection <b>Frequency:</b> During construction: Pre-clearing and post each clearing event and opportunistically Post construction: Not applicable	Injury or death of WRP recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Felled trees with hollows will be checked immediately for fauna after felling and prior to further processing. If it is not possible to fully inspect the hollow the tree will be left on the ground overnight to allow time for any undetected fauna to vacate (component of sensitive clearing protocols)	Sensitive clearing protocols in accordance with Fauna AMP	DAWE / DWER / DBCA	Within Proposal Area	Avoid direct impacts to WRP individuals	Number of felled trees checked for resident fauna  Number of felled trees left on the ground overnight  Number of WRP injured or killed	No WRP mortalities as a consequence of construction activity	Inspections fail to identify WRP present	Engage suitably experienced zoologist / environmental scientist  Review and / or revise management procedures  Update training of relevant personnel	<b>Parameters:</b> WRP presence in felled trees <b>Methodology:</b> Visual inspection <b>Frequency:</b> During construction: Post each clearing event and opportunistically Post construction: Not applicable	Injury or death of WRP recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Habitat clearing is to be staged, commencing from existing edge lines / roads and progressing towards habitat that will be retained to direct WRP towards these areas as detailed in Appendix M of the Southern Section Additional Information for Preliminary Documentation	Sensitive clearing protocols in accordance with Fauna AMP	DAWE / DWER	Within Proposal Area	Avoid direct impacts to WRP individuals	Implementation of clearing staging process	No WRP mortalities as a consequence of construction activity	Clearing staging process not implemented	Review and / or revise management procedures  Update training of relevant personnel	<b>Parameters:</b> Implementation of clearing staging process <b>Methodology:</b> Visual inspection <b>Frequency:</b> Prior to construction: bi-monthly baseline monitoring to determine pre-construction conditions including WRP abundance and distribution  During construction: Prior to, during and post each clearing event and opportunistically Post construction: Not applicable	Injury or death of WRP recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b>	Sensitive clearing protocols in accordance	DAWE / DWER / DBCA	Within Proposal Area	Avoid direct impacts to	Number of WRP injured or killed	No WRP mortalities as a consequence of	Vacant dreys within felled trees are not destroyed	Review and / or revise management procedures	Not applicable	Injury or death of WRP recorded by construction contractor and reported to Manager Environment

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<b>Vacant dreys within felled trees will be destroyed immediately to prevent animals re-entering them</b>	with Fauna AMP			WRP individuals Preclude use of refuge sites within the Proposal Area prior to construction		construction activity		Update training of relevant personnel		within 24 hours of incident occurring  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid: A post-clearing survey shall be undertaken immediately following each day's clearing operations and the following morning to identify the presence of any injured animals (component of sensitive clearing protocols)</b>	Sensitive clearing protocols in accordance with Fauna AMP	DAWE / DWER / DBCA	Within Proposal Area	Avoid direct impacts to WRP individuals	Number of WRP injured or killed	No WRP mortalities as a consequence of construction activity	Post-clearing survey not undertaken  Survey fails to identify injured WRP	Review and / or revise management procedures  Engage suitably experienced zoologist / environmental scientist	<b>Parameter:</b> Presence of injured WRP in cleared area  <b>Methodology:</b> Visual assessment  <b>Frequency:</b> During construction: After each clearing event of WRP habitat  Post construction: Not applicable	Injury or death of WRP recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid: Possum fencing (temporary and permanent) will be installed adjacent at known habitat areas to exclude WRP moving onto the road as detailed in Appendix M of the Southern Section Additional Information for Preliminary Documentation. The fencing will be 1.5 m high and be constructed to prevent possums being able to climb it or dig under it (component of sensitive clearing protocols)</b>	Sensitive clearing protocols in accordance with Fauna AMP and in accordance with CEMP	DAWE / DWER	Within Proposal Area	Avoid direct impacts to WRP individuals	Number of WRP injured or killed	No WRP mortalities as a consequence of construction activity	Possum fence not installed  Possum fence ineffective	Review and / or revise fence design and / or construction  Review and / or revise management procedures  Update training of relevant personnel	<b>Parameters:</b> Presence and effectiveness of possum fence  <b>Methodology:</b> Visual assessment  <b>Frequency:</b> Prior to construction: bi-monthly baseline monitoring to determine pre-construction conditions including WRP abundance and distribution  During construction: After installation of possum fence  Post construction: Not applicable	Injury or death of WRP recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Mitigate: Fauna handling will only be conducted by a suitably experienced persons i.e. zoologist / fauna spotter (component of sensitive clearing protocols)</b>	Sensitive clearing protocols in accordance with Fauna AMP	DAWE / DWER / DBCA	Within Proposal Area	Avoid direct impacts to WRP individuals	Handling of fauna	All fauna handling conducted by suitably experienced persons	Fauna handled by inexperienced persons  Suitably experienced persons not available	Review and / or revise management procedures  Update training of relevant personnel  Early engagement  Alternative personnel identified	Not applicable	Injury or death of WRP recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Mitigate: Any WRP showing signs of injury or illness will be caught, bagged and taken to an experienced wildlife</b>	Sensitive clearing protocols in accordance	DAWE / DWER / DBCA	Within Proposal Area	Avoid direct impacts to	Number of WRP injured or killed	All injured and ill WRP are taken to an experienced	Suitably experienced wildlife	Early engagement  Alternative personnel identified	Not applicable	Injury or death of WRP recorded by construction contractor and reported to Manager Environment

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veterinarian or approved wildlife rehabilitation facility (component of sensitive clearing protocols)	with Fauna AMP			WRP individuals		wildlife veterinarian or approved wildlife rehabilitation facility No WRP mortalities as a consequence of construction activity	veterinarian not available			within 24 hours of incident occurring  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Mitigate:</b> If an injured WRP has not already been captured, then the appointed fauna-spotter must attempt to capture the animal for the purposes of veterinary assessment and treatment	Sensitive clearing protocols in accordance with Fauna AMP	DAWE / DWER / DBCA	Within Proposal Area	Avoid direct impacts to WRP individuals	Number of WRP injured or killed	Veterinary assessment and treatment is undertaken for all injured WRP No WRP mortalities as a consequence of construction activity	Injured WRP are not able to be captured	Engage suitably experienced zoologist / environmental scientist	Not applicable	Injury or death of WRP recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Mitigate:</b> All treatment of injured fauna will be undertaken by a veterinarian	Sensitive clearing protocols in accordance with Fauna AMP	DAWE / DWER / DBCA	Within Proposal Area	Avoid direct impacts to WRP individuals	Number of WRP injured or killed	All injured and ill WRP are taken to an experienced wildlife veterinarian or approved wildlife rehabilitation facility No WRP mortalities as a consequence of construction activity	Suitably experienced wildlife veterinarian not available	Early engagement Alternative personnel identified	Not applicable	Injury or death of WRP recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Mitigate:</b> Where clearing operations abut existing roads, in addition to standard traffic management measures, visual message boards will be installed to warn drivers of the potential for fauna to cross the road during clearing operations	Sensitive clearing protocols in accordance with Fauna AMP	DAWE / DWER / DBCA	Within Proposal Area	Avoid direct impacts to WRP individuals	Presence of visual message boards	Visual message boards are installed where clearing operations abut existing roads No WRP mortalities as a consequence of construction activity	Visual message boards not installed Drivers fail to heed visual message board	Review and / or revise management procedures, including traffic management Update training of relevant personnel	<b>Parameters:</b> Presence and effectiveness of visual message boards <b>Methodology:</b> Visual assessment <b>Frequency:</b> During construction: During clearing when operations abut existing roads Post construction: Not applicable	Injury or death of WRP recorded by construction contractor and reported to Manager Environment within 24 hours of incident occurring  Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold

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<b>Mitigate:</b> Install permanent possum rope bridges / underpasses at key location(s) to enable fauna including WRP to move between retained habitat areas, as detailed in Appendix M of the Southern Section Additional Information for Preliminary Documentation	In accordance with Fauna AMP and CEMP	DAWE / DWER	Within Proposal Area	Avoid direct impacts to WRP individuals  Maintain connectivity between known WRP habitat areas	Presence of possum rope bridges / underpasses	Installation of possum rope bridges / underpasses as per specifications	Possum rope bridges / underpasses are not installed  Possum rope bridges / underpasses are ineffective	Review and / or revise management procedures, including rope bridge / underpass design, installation and connectivity to surrounding habitat  Update training of relevant personnel	<b>Parameters:</b> Presence and effectiveness of possum rope bridges / underpasses  WRP scat presence / absence  WRP filmed using rope bridge or underpass  <b>Methodology:</b> Visual assessment, motion sensor cameras  <b>Frequency:</b> Prior to construction: bi-monthly baseline monitoring to determine pre-construction conditions including WRP abundance and distribution  During construction: Bi-annually after installation of possum rope bridges / underpasses  Post construction: Visual assessment: Quarterly for five years  Motion sensor camera: Intermittently for five years	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Mitigate:</b> The size and design of all movement devices will be based on MRWA Design of Fauna Underpasses (MRWA, 2010), topography at the site, expert advice (Barbara Jones, pers. comm.), information from relevant studies and reports (QDMR, 2000; Harper, M., Mccarthy, M. & van der Ree, R., 2008) and in line with the concept designs. Refer to Appendix M of the Southern Section Additional Information for Preliminary Documentation	In accordance with Fauna AMP and CEMP	DAWE / DWER	Within Proposal Area	Avoid direct impacts to WRP individuals  Maintain connectivity between known WRP habitat areas	Engineered movement structures are effective	Installation of engineered movement structures as per specification	Engineered movement structures are ineffective	Review and / or revise management procedures, including rope bridge / underpass design, installation and connectivity to surrounding habitat  Update training of relevant personnel	<b>Parameters:</b> Presence and effectiveness of engineered movement structures  WRP scat presence / absence  WRP filmed using rope bridge or underpass  <b>Methodology:</b> Visual assessment, motion sensor cameras  <b>Frequency:</b> During construction: Bi-annually after installation of engineered movement structures  Post construction: Visual assessment: Quarterly for five years  Motion sensor camera: Intermittently for five years	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Mitigate:</b> Underpass dimensions will be based on the fauna recorded or expected to occur in the vicinity, as detailed in Appendix M of the Southern Section Additional Information for Preliminary Documentation	In accordance with Fauna AMP and CEMP	DAWE / DWER	Within Proposal Area	Avoid direct impacts to WRP individuals  Maintain connectivity between	Presence of underpasses suitable for use by recorded fauna taxa	Installation of underpass structures as per specification	Underpass structures are ineffective	Review and / or revise management procedures, including rope bridge / underpass design, installation and connectivity to surrounding habitat	<b>Parameters:</b> Presence and effectiveness of underpass structures  WRP scat presence / absence  WRP filmed using rope bridge or underpass	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold

MANAGEMENT ACTIONS	RELEVANT PROTOCOLS	RESPONSIBLE AGENCY	LOCATION	PERFORMANCE TARGET / OUTCOME	PERFORMANCE INDICATOR	COMPLETION CRITERIA	POTENTIAL RISKS / THREATS	RISK MITIGATION	MONITORING	REPORTING
				known WRP habitat areas				Update training of relevant personnel	<p><b>Methodology:</b> Visual assessment, motion sensor cameras</p> <p><b>Frequency:</b> During construction: Bi-annually after installation of underpass structures</p> <p>Post construction: Visual assessment: Quarterly for five years</p> <p>Motion sensor camera: Intermittently for five years</p>	
<p><b>Mitigate:</b> The final underpass designs will incorporate the following features known to encourage use by fauna and reduce the risk of predation:</p> <ul style="list-style-type: none"> <li>• Connection to nearby habitat via overhead rope hawsers and poles (minimum 2.5 m high)</li> <li>• Objects for fauna to shelter on, under or in (furniture) will be locally sourced and will include sand, mulch, logs and rocks</li> <li>• Revegetation using fast growing species at underpass entrances to provide cover for animals approaching, entering and leaving the underpasses</li> <li>• Natural flooring such as sand or gravel</li> <li>• Possum fencing to direct fauna towards the underpass entrance</li> <li>• Dual-use underpasses will have a concrete substrate and will not contain furniture (furniture would be washed away by drainage flows)</li> </ul>	In accordance with Fauna AMP and CEMP	DAWE / DWER	Within Proposal Area	<p>Avoid direct impacts to WRP individuals</p> <p>Maintain connectivity between known WRP habitat areas</p>	Presence of underpasses incorporating the stated features	Installation of underpass structures as per specification	Underpass structures are ineffective	<p>Review and / or revise management procedures, including rope bridge / underpass design, installation and connectivity to surrounding habitat</p> <p>Update training of relevant personnel</p>	<p><b>Parameters:</b> Presence and effectiveness of underpass structures</p> <p>WRP scat presence / absence</p> <p>WRP filmed using rope bridge or underpass</p> <p><b>Methodology:</b> Visual assessment, motion sensor cameras</p> <p><b>Frequency:</b> During construction: Bi-annually after installation of underpass structures</p> <p>Post construction: Visual assessment: Quarterly for five years</p> <p>Motion sensor camera: Intermittently for five years</p>	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<p><b>Mitigate:</b> Road construction activities (i.e. activities undertaken after clearing has been completed) adjacent to WRP habitat will only be undertaken during daylight hours</p>	In accordance with Fauna AMP and CEMP	DAWE / DWER	Within Proposal Area	Avoid direct impacts to WRP individuals	Timing of road construction activities	No night time construction activities undertaken	Not applicable	Not applicable	Not applicable	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<p><b>Mitigate:</b> The Proposal Area boundary will be fenced according to the detailed design to restrict</p>	In accordance with Fauna AMP and CEMP	DAWE / DWER	Within Proposal Area	Avoid direct impacts to WRP individuals	Presence of Proposal Area boundary fence	Pedestrian and vehicular access to retained WRP	Fence not installed Fence ineffective	Review and / or revise management procedures, including	<p><b>Parameters:</b> Presence and effectiveness of Proposal Area boundary fence</p> <p><b>Methodology:</b></p>	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of

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pedestrian and vehicular access to retained WRP habitat						habitat is restricted		fence design and installation  Update training of relevant personnel	Visual assessment  <b>Frequency:</b> During construction: After installation of Proposal Area boundary fence  Post construction: Visual assessment: Bi-annually for five years	an agreed trigger or threshold
<b>Mitigate:</b> Implement WONS and Declared Plant control, and surface water and <i>Phytophthora</i> dieback management measures within Proposal Area vegetation to prevent potential indirect impacts to WRP habitat	In accordance with CEMP and Hygiene Management Plan	DAWE / DWER	Within Proposal Area	Avoid indirect impacts to WRP in adjacent habitat	WRP presence / absence, abundance and distribution	Quality / condition (function and value) of WRP habitat adjacent to the Proposal Area is maintained at baseline or any change is commensurate with that at reference site habitat	Reduction in habitat function and value	Review and / or revise management procedures  Review and / or revise management measures	<b>Parameters:</b> WRP presence/ absence, abundance and distribution  <b>Methodology:</b> Visual assessment  <b>Frequency:</b> During construction: Bi-annually  Post construction: Bi-annually for three years	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Mitigate:</b> As part of the CEMP, the construction contractor will prepare a Fire Management Plan to minimise risk of ignition from construction activities and effectively manage any resulting fire / wildfire	Standard construction protocols in accordance with CEMP and Fire Management Plan	DAWE / DWER	Within Proposal Area	Avoid indirect impacts to WRP in adjacent habitat	Preparation of Fire Management Plan	Fire Management Plan prepared	Fire Management Plan not prepared  Fire Management Plan not implemented or effective	Review and / or revise management procedures  Update training of relevant personnel	Not applicable	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Avoid:</b> Implement Drainage Strategy and ground and surface water management measures to avoid impact to adjacent WRP habitat	In accordance with CEMP, Drainage Strategy and Hygiene Management Plan	DAWE / DWER	Within and adjacent to Proposal Area	Avoid indirect impacts to adjacent WRP habitat	WRP habitat quality / condition (function and value)	Quality / condition (function and value) of WRP habitat adjacent to the Proposal Area is maintained at baseline or any change is commensurate with that at reference site habitat	Groundwater drawdown impacts on, or changes in hydrology of, WRP habitat	Review and / or revise management procedures including modification of drainage infrastructure as required	<b>Parameters:</b> WRP habitat quality / condition (function and value)  <b>Methodology:</b> Visual assessment  <b>Frequency:</b> During construction: Bi-annually  Post construction: Bi-annually for three years	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of an agreed trigger or threshold
<b>Post construction</b>										
<b>Mitigate:</b> Post construction, undertake targeted rehabilitation and install design features at engineered	In accordance with CEMP and Fauna AMP	DAWE / DWER	Adjacent to	Maintain connectivity between	Rehabilitation provides effective connectivity	Habitat and engineered movement structure	Failure of rehabilitation	Refine species lists and methodologies	<b>Parameters:</b> Success of rehabilitation	Report annually to DAWE and DWER as part of annual compliance reporting or in response to exceedance of

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movement structure locations (adjacent to the Proposal Area) to ensure access to water is maintained, and to make utilisation of the structures attractive and effective for WRP			Proposal Area	known WRP habitat areas Avoid direct impacts to WRP individuals	between habitat and engineered movement structure access points	access points are effectively connected for WRP use		Update training of relevant personnel Repeat rehabilitation works or conduct infill planting in failed areas	Effective connectivity between rehabilitation / vegetation and engineered movement structures  <b>Methodology:</b> Visual assessment  <b>Frequency:</b> Post construction: Bi-annually for three years after rehabilitation	an agreed trigger or threshold