Appendix I Risk assessment

I.1 Risk assessment

The risk assessment for this OMP follows a standard qualitative risk assessment framework, evaluating potential risks based on likelihood and consequence to determine overall risk levels. This approach is used to identify, prioritise, and manage key threats that could impact the conservation outcomes of the Offset Area.

The risk matrix (Table H.1) is based on established environmental risk assessment methodologies, considering industry best practices, site-specific conditions, and past offset performance data. The likelihood and consequence ratings have been informed by:

- baseline ecological surveys and site assessments
- existing environmental management guidelines and legislation; and
- expected environmental pressures and adaptive management strategies.

Each identified risk in Tables H.2 and H.3 is assigned an initial risk rating, followed by proposed management actions to mitigate the risk. A residual risk rating is then determined, reflecting the anticipated risk level after management measures have been implemented.

Tables J.2 and J.3 outline identified risks, their mitigation measures, performance criteria, and corrective actions to ensure that all threats to the Offset Area are actively managed over the course of the offset lifespan.

Table H.1. Risk assessment matrix

Qualitative measure of likelihood (how likely is it that this event/circumstance will occur after management activities are implemented)	
Highly likely	Is expected to occur in most circumstances
Likely	Will probably occur during the life of the offset
Possible	Might occur during the life of the offset
Unlikely	Could occur but considered unlikely or doubtful
Rare	May occur in exceptional circumstances

Qualitative measure of consequences (what will be the consequence/result if the issue does occur)	
Minor	Minor incident of environmental damage that can be reversed (e.g. short-term delays to achieving OMP objectives, implementing low-cost, well-characterised corrective actions)
Moderate	Isolated but substantial instances of environmental damage that could be reversed with intensive efforts (e.g. short-term delays to achieving plan objectives, implementing well-characterised, high cost/effort corrective actions)
High	Substantial instances of environmental damage that could be reversed with intensive efforts (e.g. medium-long term delays to achieving objectives, implementing uncertain, high-cost/effort corrective actions)
Major	Major loss of environmental amenity and real danger of continuing (e.g. OMP objectives are unlikely to be achieved, with significant legislative, technical, ecological and/or administrative barriers to attainment that have no evident mitigation strategies)
Critical	Severe widespread loss of environmental amenity and irrecoverable environmental damage (e.g. OMP objectives are unable to be achieved, with no evident mitigation strategies)

Consequences					
	Minor	Moderate	High	Major	Critical
Highly	Medium	High	High	Severe	Severe
Likely	Low	Medium	High	High	Severe
Possible	Low	Medium	Medium	High	Severe

Qualitative measure of likelihood (how likely is it that this event/circumstance will occur after management activities are implemented)					
Unlikely	Low	Low	Medium	High	High
Rare	Low	Low	Low	Medium	High

Table H.2. Standard risk assessment

Risk event	Risk description	Initial risk rating			Management actions	Residual risk rating			Performance criteria	Management triggers	Corrective actions	Monitoring
		Likelihood	Consequence	Results		Likelihood	Consequence	Results				
Overgrazing	• Gilgai and wetland area soil compaction. • Reduced habitat quality for Julia Creek dunnart, plains death adder and Australian painted snipe. • Hindered regeneration of vegetation.	Possible	High	Medium	• Livestock grazing will only occur in the Offset Area as a management tool for fire. • Where grazing is to occur, it will consist of a low intensity grazing regime using existing and new fencing and natural barriers and will be monitored through biomass monitoring.	Unlikely	Minor	Low	• No evidence of soil impacts in gilgai and wetland areas. • Relevant BioCondition site assessment score attributes increase (particularly ground cover). • Biomass levels do not fall below 1,000kg/ha after the dry season.	• Evidence of soil impacts in gilgai and wetland areas. • Relevant BioCondition site assessment score attributes decrease (particularly ground cover). • Biomass levels fall below 1,000 kg/ha after the dry season.	• Investigate cause of habitat degradation. • Management of livestock grazing in Offset Area (especially during wet season.	• Biomass monitoring. • Habitat quality assessments.
Pest fauna proliferation	• Gilgai and wetland area soil compaction.	Possible	Moderate	Medium	• Introduction of pest animals and control of existing	Possible	Minor	Low	• No evidence of increased pest fauna activity from	• Increase in pest fauna activity from	• Increased frequency and/or extent of feral pest	• Maintenance inspections and feral

Risk event	Risk description	Initial risk rating			Management actions	Residual risk rating			Performance criteria	Management triggers	Corrective actions	Monitoring
		Likelihood	Consequence	Results		Likelihood	Consequence	Results				
	• Predation of Julia Creek dunnart, from feral cats. • Reduced habitat quality for Julia Creek dunnart, plains death adder and Australian painted snipe.				populations will be minimised in accordance with the Biosecurity Act and through the development of property based feral animal management. • Excluding pest species using existing fencing and natural barriers will be employed. • The Property Manager may also remove any individuals encountered during other monitoring events.				baseline observations. • No evidence of soil impacts, particularly in gilgai and wetland areas.	baseline observations • Evidence of soil impacts (feral pig rooting) on gilgai and wetland areas. • Significant decrease in threatened species (Julia Creek dunnart) abundance.	management activities.	pest monitoring. • Habitat quality assessments.

Risk event	Risk description	Initial risk rating			Management actions	Residual risk rating			Performance criteria	Management triggers	Corrective actions	Monitoring
		Likelihood	Consequence	Results		Likelihood	Consequence	Results				
Vegetation clearing	• Painted honeyeater, Julia Creek dunnart and plains death adder habitat loss. • Hindered regeneration of vegetation.	Unlikely	Major	High	• Offset will be legally secured as a covenant pursuant to the Land Title Act 1994 (Qld). • Vegetation clearing within the Offset Area is prohibited.	Rare	Major	Medium	No vegetation clearing to occur within the Offset Area.	Vegetation is intentionally cleared within the Offset Area.	Investigate cause of vegetation clearing to mitigate potential for future clearing events.	Habitat quality assessments.
Erosion	• Reduced groundcover. • Hindered regeneration of vegetation.	Unlikely	Minor	Low	Livestock grazing and maintenance is only undertaken in accordance with this OMP.	Rare	Minor	Low	No significant erosion activity is observed.	Significant erosion activity is observed.	Cause of erosion identified and remedied via investigation.	• Habitat quality assessments. • General maintenance inspections
Failed vegetative regeneration	• No increase in habitat quality observed over time.	Rare	Critical	High	• Natural regeneration. • Reducing livestock grazing	Rare	Major	Medium	• Offset achieves interim and final completion criteria.	• Offset does not achieve interim or final completion criteria.	• Investigate cause of failed regeneration to determine suitable	• Habitat quality assessments. • General maintenanc

Risk event	Risk description	Initial risk rating			Management actions	Residual risk rating			Performance criteria	Management triggers	Corrective actions	Monitoring
		Likelihood	Consequence	Results		Likelihood	Consequence	Results				
	• Failure to meet completion/interim criteria.				within the Offset Area • Control of feral animals and weeds.				• Habitat quality improves over time.	• Habitat quality decreases over time.	management approach. • Example: corrective actions may include active regeneration or rehabilitation.	e inspections
Introduction and spread of weeds	• Increased abundance and spread of existing weeds from baseline surveys impacting habitat quality scores observed over time. • Introduction of new weeds since baseline surveys impacting habitat quality scores observed over time.	Possible	Moderate	Medium	• Weed management. • Weed hygiene protocols.	Unlikely	Moderate	Low	• Non-native cover remains consistent with baseline or reduces over time. • Offset achieves interim and final habitat quality completion criteria. • Habitat quality	• Non-native cover increases from baseline over time. • Offset does not achieve interim and final completion criteria. • Habitat quality decreases over time.	Active weed control (chemical spraying, mechanical removal).	• Habitat quality assessments. • Pest flora monitoring

Risk event	Risk description	Initial risk rating			Management actions	Residual risk rating			Performance criteria	Management triggers	Corrective actions	Monitoring
		Likelihood	Consequence	Results		Likelihood	Consequence	Results				
									improves over time.			
High fuel loads resulting in high intensity fire	• Hindered regeneration of vegetation from high intensity fire. • Painted honeyeater, Julia Creek dunnart and plains death adder habitat loss.	Possible	Moderate	Medium	Low intensity livestock grazing regime and maintenance is undertaken in accordance with this OMP.	Possible	Minor	Low	No unplanned fires occur within the Offset Area.	Uncontrolled fire occurs within Offset Area.	Adhering to the Fire Management Plan for management of fuel loads.	• Habitat quality assessments. • General maintenance inspections
Fence failure	• Unauthorised access to offset vehicles (vehicles and people). • Increased access by stock and feral animals resulting in predation of threatened species (Julia Creek dunnart), or degradation of threatened species habitat.	Possible	Minor	Low	Quarterly maintenance inspections of fences and gates.	Unlikely	Minor	Low	• No unauthorised access to Offset Area. • Offset Area appropriately fenced. Fencing is intact. • No breaches in fencing from livestock and pest control.	• Unauthorised access to Offset Area. • Fencing falls into disrepair. • Increased stock and pest breaches through fence failure.	Upon being notified or becoming aware of an unsecured Offset Area, fence maintenance and repairs to resecure the Offset Area as soon as possible and within a month.	Quarterly maintenance inspections and all monitoring actions.

Table J.3 Force majeure risk assessment

Risk event	Risk description	Initial risk rating			Management actions	Residual risk rating			Performance criteria	Management triggers	Corrective actions	Monitoring
		Likelihood	Consequence	Result		Likelihood	Consequence	Result				
Drought	• Decreased groundcover and vegetative dieback. • No increase in habitat quality observed over time. • Failure to meet completion / interim criteria.	Likely	Minor	Low	Limited mitigation measures can be implemented.	Likely	Minor	Low	• Offset achieves interim and final completion criteria. • Habitat Quality improves over time.	• Offset does not achieve interim or final completion criteria. • Habitat Quality decreases over time.	Limited correction measures can be implemented.	• Habitat quality assessments. • General maintenance inspections
Bushfire	• Moderate to severe intensity bushfires (incl. lightning strike) impacting regeneration of vegetation. • Julia Creek dunnart	Possible	Major	High	• In the event of a fire approaching or within the Offset Area, the Property Manager will coordinate with relevant fire and	Possible	High	Medium	• Fuel loads will be managed and kept as low as practicable (but not fall below 1,000 kg/ha). • Firebreaks established	• Fire impacts the Offset Area. • Fuel loads are deemed too high (in excess of 1,500 kg/ha) by land manager or suitably	• If fire impacts the offset site, fire breaks and control lines will be re-established. • If unauthorised access to the site is detected (or notified to the Property Manager), within two weeks, identify and repair fencing or other	• Habitat quality assessments. • General maintenance inspections.

Risk event	Risk description	Initial risk rating			Management actions	Residual risk rating			Performance criteria	Management triggers	Corrective actions	Monitoring
		Likelihood	Consequence	Result		Likelihood	Consequence	Result				
	and plains death adder (*Astrebla* spp. dominated grassland) habitat loss. • Loss of mistletoe for painted honeyeater.				emergency services. • Fuel loads will be managed and kept as low as practicable at all times, and firebreaks will be established and maintained. Fire will not be used as a tool for management (only for asset protection purposes). • To prevent arson, only authorised persons will be permitted on site, and site access will be restricted				and maintained. • No unplanned fire occurs.	qualified professional. • Unauthorised access to the site is detected or notified to the Property Manager.	barriers to prevent future access. • Restoration/revegetation measures to support recovery of habitat quality.	

Risk event	Risk description	Initial risk rating			Management actions	Residual risk rating			Performance criteria	Management triggers	Corrective actions	Monitoring
		Likelihood	Consequence	Result		Likelihood	Consequence	Result				
					through fencing and other barriers. • Surveys undertaken as soon as possible following unplanned fire to measure impacts to habitat quality.							
Flooding	• Flooding of vegetation and impacts to habitat quality.	Possible	Minor	Low	• Determine the extent of damage to infrastructure (such as fence lines) and habitat quality caused by the event. • Weed cover in areas disturbed by the weather event to be	Possible	Minor	Low	• Offset achieves interim and final completion criteria. • Habitat Quality improves over time. • No evidence of soil compaction in low lying wet areas or	• Offset does not achieves interim or final completion criteria. • Groundcover falls below baseline as a result of prolonged inundation or soil	• All infrastructure is re-instated as soon as practicable. • Active weed management.	• Habitat quality assessments. • General maintenance inspections.

Risk event	Risk description	Initial risk rating			Management actions	Residual risk rating			Performance criteria	Management triggers	Corrective actions	Monitoring
		Likelihood	Consequence	Result		Likelihood	Consequence	Result				
					monitored to ensure progress / measure outcomes are still maintained.				watercourses.	compaction. • Habitat Quality decreases over time.		
Severe storm/tropical low	• Flooding of vegetation and impacts to habitat quality.	Possible	Minor	Low	• Determine the extent of damage to infrastructure (such as fence lines) and habitat quality caused by the event. • Weed cover in areas disturbed by the weather event to be monitored to ensure progress / measure outcomes are still maintained.	Possible	Minor	Low	• Offset achieves interim and final completion criteria. • Habitat Quality improves over time. • Species still detected within Offset Area. • No evidence of soil compaction in low lying wet areas or watercourses.	• Offset does not achieve interim or final completion criteria. • Habitat Quality decreases over time.	• All infrastructure is re-instated as soon as practicable. • Active weed management.	• Habitat quality assessments. • General maintenance inspections.