

## **Clearing Permit Decision Report**

### 1. Application details and outcomes

### 1.1. Permit application details

Permit number:	10741/1
Permit type:	Purpose Permit
Applicant name:	AngloGold Ashanti Australia Limited
Application received:	28 August 2024
Application area:	125 hectares
Purpose of clearing:	Mineral production associated activities
Method of clearing:	Mechanical Removal
Tenure:	Mining Lease 39/1116
Location (LGA area/s):	Shire of Laverton
Colloquial name:	Sunrise Dam Gold Mine

### **1.2.** Description of clearing activities

AngloGold Ashanti Australia Limited (from this point forward referred to as AAAL) proposes to clear up to 125 hectares of native vegetation within a boundary of approximately 1,258.5 hectares, for the purpose of mineral production and associated activities (AAAL, 2024b). The project is located approximately 52 kilometres south of Laverton, within the Shire of Laverton (GIS Database).

The application is to allow for the construction of insfrastructure and borrow pits to support the raising of the Sunrise Dam Gold Mine (SDGM) Centrally Thickened Discharge (CTD) Tailings Storage Facility (TSF) (AAAL, 2024b).

1.3. Decision on applie	cation and key considerations
Decision:	Grant
Decision date:	1 May 2025
Decision area:	125 hectares of native vegetation

### 1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed, and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) advertised the application for a public comment for a period of 21 days, and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix B), relevant datasets (Appendix F), the clearing principles set out in Schedule 5 of the EP Act (Appendix C), proposed avoidance and minimisation measures (Section 3.1), relevant planning instruments and any other matters considered relevant to the assessment (Section  $\Box$ ). The Delegated Officer also took into consideration the purpose of the clearing to to allow for the construction of insfrastructure and borrow pits to support the raising of the SDGM CTD TSF.

The assessment identified that the proposed clearing may result in:

- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values;
- the loss of native vegetation that is suitable habitat for malleefowl (*Leipoa ocellata*) or brush-tailed mulgara (*Dasycercus blythi*); and
- potential land degradation in the form of erosion.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (Section 3.1), the Delegated Officer determined the proposed clearing can be minimised and managed to be unlikely to lead to an unacceptable risk to environmental values.

The Delegated Officer decided to grant a clearing permit subject to conditions to:

- avoid, minimise to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds;

- undertake slow, progressive one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity;
- commence construction no later than three months after undertaking clearing to reduce the risk of erosion;
- undertake a fauna survey to identify Dasycercus blythi (brush-tailed mulgara) burrows;
- identify active (in use) malleefowl mounds and avoid clearing within 200 metres of any mounds from September to January; and
- avoid clearing riparian vegetation where practicable.

### 2. Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (Clearing Regulations).

In addition to the matters considered in accordance with section 510 of the EP Act (Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- Biodiversity Conservation Act 2016 (WA) (BC Act)
- Biosecurity and Agriculture Management Act 2007 (BAM Act)
- Conservation and Land Management Act 1984 (WA) (CALM Act)
- Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act)
- Mining Act 1978 (WA)

Relevant agreements (treaties) considered during the assessment include:

- Japan-Australia Migratory Bird Agreement
- China-Australia Migratory Bird Agreement
- Republic of Korea-Australia Migratory Bird Agreement

The key guidance documents which inform this assessment are:

- A guide to the assessment of applications to clear native vegetation (DER, December 2014)
- Procedure: Native vegetation clearing permits (DWER, October 2021)
- Technical guidance Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016)
- Technical guidance Terrestrial Fauna Surveys for Environmental Impact Assessment (EPA, 2020)

### 3. Detailed assessment of application

### 3.1. Avoidance and mitigation measures

Evidence was submitted by the applicant, demonstrating that efforts have been made to avoid clearing native vegetation, by:

- expanding the CTD TSF vertically by increasing facility height, rather than an outward expansion of the footprint;
- utilising existing cleared areas where possible; and
- following the SDGM internal ground disturbance procedure (AAAL, 2024b).

Furthermore, the applicant outlined the following management measures:

- Rehabilitation of borrow pits (the main disturbance activity) after completion;
- Implementing vehicle hygiene measures to minimise risk of spreading weeds;
- Stripping and stockpiling topsoil for use in future rehabilitation; and
- Respreading topsoil over the surface during rehabilitation to provide a seed source (AAAL, 2024b).

The Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values.

### 3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix A) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles identified that the impacts of the proposed clearing present a risk to biological values. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

### 3.2.1. Biological values - Clearing Principle (a)

### <u>Assessment</u>

### Vegetation diversity

The survey conducted by Mattiske (2022) identified a total of 132 vascular plants from 51 genera and 28 families within the survey area. Areas closer to Lake Carey had a higher diversity of vegetation communities due to increased soil diversity

(Mattiske, 2022). However, the vegetation communities present within the application area are widespread in the local area, and therefore the proposed clearing is unlikely to result in a significant loss of vegetation diversity (GIS Database).

### **Priority flora species**

No priority flora were located within the application area (Mattiske, 2013, 2018, 2022). *Tecticornia mellarum* and *Melaleuca apostiba* were located outside the application area in the survey by Mattiske (2022). These species were recorded in vegetation associations C5 and C9; and M2, respectively (Mattiske, 2022). These vegetation associations are not mapped within the application area, and therefore *Tecticornia mellarum* and *Melaleuca apostiba* are unlikely to occur within the application area (Appendix E).

Other Priority flora with suitable habitat were not located in several surveys of the SDGM area (Mattiske, 2022). Therefore, Priority flora species are unlikely to occur within the application area (Appendix B.3).

Additionally, due to the degraded vegetation condition within the application area (approximately 56 percent in completely degraded condition), and the presence of similar habitat outside of the application area, the application is unlikely to be critical habitat for priority flora, if they were to occur (GIS Database).

### **Priority Ecological Communities (PECs)**

No PECs were identified during the flora and vegetation surveys (Mattiske, 2018, 2022).

There are three Priority Ecological Communities (PECs) mapped within a 50 kilometre radius of the application area (GIS Database). These are:

- the Mount Linden Range vegetation complex (banded ironstone formation) PEC (Priority 3);
- the Mount Jumbo Range vegetation complex (banded ironstone formation) PEC (Priority 3);
- and the Mount Morgan calcrete groundwater assemblage type on Carey palaeodrainage on Mt Weld Station PEC (Priority 1) (GIS Database).

As banded ironstone ranges do not occur within the application area, the Mount Linden Range and Mount Jumbo Range PECs are unlikely to occur within the application area (Mattiske, 2022).

The Mount Morgan calcrete groundwater PEC is threatened by hydrological changes associated with mining (DBCA, 2023a). The proposed clearing is unlikely to cause a significant impact to this PEC.

### Weeds

There were two introduced (weed) species identified in the survey conducted by Mattiske (2022). Both species were listed as Permitted (s11) pursuant to the Biosecurity and Agriculture Management Act 2007 according to the Department of Primary Industries and Regional Development (Mattiske, 2022). However, weeds are known disturbance invaders, and there is a risk that weeds can be spread into the area and become established as they have the potential to out-compete native flora and reduce the biodiversity of an area.

#### **Conclusion**

Based on the above assessment, the proposed clearing may result in biodiversity loss due to the introduction or spread of weeds. Vegetation diversity, priority flora and PECs are unlikely to be impacted by the proposed clearing.

### **Conditions**

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

take hygiene steps to minimise the risk of the introduction and spread of weeds.

### 3.2.2. Biological values (fauna) - Clearing Principles (a) and (b)

### Assessment

Kingfisher Environmental (2022) identified the following seven habitat types within the application area:

- Cleared Land (465 hectares);
- Mulga shrubland (on stony slopes and clay-loam plains) (291 hectares);
- Chenopod shrubland (Atriplex / Maireana dominant) (240 hectares);
- Mulga over Triodia basedowii (sandy-loam plains) (96 hectares);
- Mulga shrubland (on sandy-loam plains) (68 hectares);
- Mallee over Triodia basedowii (sandy-loam plains) (61 hectares); and
- Hakea, Acacia shrublands (low plains, rises) (35 hectares).

The following conservation significant fauna species were identified in the desktop assessment as known, likely, or possible to occur within the application area:

- Dasycercus blythi (brush-tailed mulgara) Priority 4
- Leipoa ocellata (malleefowl) Vulnerable
- Acanthiza iredalei iredalei (slender-billed thornbill) Locally significant
- Falco peregrinus (peregrine falcon) Other Specially Protected

### **Brush-tailed mulgara**

Remote cameras have recorded brush-tailed mulgara within the application area. An active burrow with scats and tracks was detected approximately 250 metres from the application area (Kingfisher Environmental, 2022).

Mulgara are generally found in arid regions that support *Triodia* grasslands (DEC, n.d.). There is 157 hectares of habitat described as mulga or mallee over *Triodia basedowii* on sandy-loam plains within the application area, which is habitat suitable for mulgara (Kingfisher Environmental, 2022).

### Malleefowl

Secondary evidence (tracks) of Malleefowl was detected during the fauna survey conducted by Kingfisher Environmental (2022), approximately 7.25 kilometres east of the application area. No Malleefowl mounds or individuals were located (Kingfisher Environmental, 2022).

Suitable habitat for Malleefowl includes a sandy substrate, leaf litter, and shrubs to provide horizontal cover (DCCEEW, 2024). Suitable species include mallee, mulga and other acacias (DCCEEW, 2024). Based on the habitat descriptions provided by Kingfisher Environmental (2022), the application may have up to 260 hectares of suitable Malleefowl habitat. Breeding habitat may be restricted to areas with dense shrub thickets and sandy soils (DCCEEW, 2024; Kingfisher Environmental, 2022).

### **Slender-billed thornbill**

The slender-billed thornbill was previously listed as Vulnerable but was delisted in 2013 (DBCA, 2010; DEWHA, 2008). The species is considered significant to this application due to its restricted habitat, being Chenopod shrub steppe vegetation, fringing major inland salt lakes (EPA, 2016; Johnstone and Storr, 2004; Kingfisher Environmental, 2022).

The slender-billed thornbill was detected during the fauna survey conducted by Kingfisher Environmental (2022), approximately 1.4 kilometres west of the application area, on the fringe of Lake Carey.

There is 240 hectares of chenopod shrubland within the application area. Similar contiguous habitat is extensive (likely to exceed 100,000 hectares) at Lake Carey, so the proposed clearing makes up a relatively small proportion (less than one percent) of suitable habitat for the slender-billed thornbill in the local area (Kingfisher Environmental, 2022).

### Peregrine falcon

The peregrine falcon is a global species that migrates long distances and occurs in a wide range of habitats on every continent except Antarctica (NWF, n.d.). This species may use the application area as a wider home range, but the area is not considered critical habitat.

### **Conclusion**

Based on the above assessment, the proposed clearing may result in impacts to brush-tailed mulgara, malleefowl, and their habitats. The slender-billed thornbill and peregrine falcon are unlikely to be impacted by the proposed clearing.

For the reasons set out above, it is considered that the impacts of the proposed clearing on brush-tailed mulgara and malleefowl can be managed by slow directional clearing to allow fauna to move into adjacent vegetation and conducting pre-clearance surveys for these species.

The applicant may have notification responsibilities under the EPBC Act for impacts to malleefowl and their habitats, as set out in the EPBC Act. The applicant has been advised to contact the federal Department of Climate Change, Energy, the Environment and Water (DCCEEW) to discuss EPBC Act referral requirements.

### **Conditions**

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- Conduct pre-clearance surveys for malleefowl mounds and brush-tail mulgara burrows; and
- undertake slow, progressive one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity.

### 3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 6 December 2024 by the Department of Energy, Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim (WCD2023/002 - Nyalpa Pirniku) over the area under application (DPLH, 2025). This claim has been determined by the Federal Court on behalf of the claimant group. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no registered Aboriginal Sites of Significance within the application area (DPLH, 2025). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

It is noted that the proposed clearing may impact on malleefowl (*Leipoa ocellata*), which is a protected matter under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act). The proponent may be required to refer the project to the (Federal) Department of Climate Change, Environment and Water for environmental impact assessment under the EPBC Act. The proponent is advised to contact the Department of Climate Change, Energy, the Environment and Water and the Environment for further information regarding notification and referral responsibilities under the EPBC Act.

Other relevant authorisations required for the proposed land use include:

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• A Programme of Work approved under the *Mining Act 1978*.

It is the proponent's responsibility to liaise with the Department of Water and Environmental Regulation and the Department of Biodiversity, Conservation and Attractions, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

End

Appendix A. Additional information provided by applicant						
Summary of comments	Consideration of comment					
Two flora and vegetation surveys (Mattiske, 2013, 2018) were provided following submission.	These IBSA packages and associated surveys were used during the assessment of Principle (a), (c), (d) and (f).					
New spatial date provided of consolidated flora and vegetation survey information from the SDGM project area.	New spatial date provided was used during the assessment of Principles (a) and (f).					

## Appendix B. Site characteristics

## B.1. Site characteristics

Characteristic	Details							
Local context	extensive land	use zone of		expansive tract of native vegetation in the It is located within the Eastern Murchison tabase).				
	The proposed clearing area is within the Mt Weld Pastoral Lease. It is also surrounded by predominantly gold and nickel mining operations. Approximately 99% of the local area (50 kilometre radius from the application area) remains uncleared (GIS Database).							
Ecological linkage	The application	n area is not	known to be an imp	portant ecological linkage (GIS Database).				
Conservation areas	The application area is not located within any DBCA legislated conservation areas (GIS Database). The nearest legislated conservation area is the Goongarrie National Park, located approximately 110 kilometres southwest of the application area (GIS Database).							
Vegetation description	associations: 8: Low woodla	nd; mulga (A	Acacia aneura); and					
	<ul> <li>389: Saltbush and/or bluebush with scattered low trees (GIS Database).</li> <li>Three flora and vegetation surveys were conducted over parts of the application area by Mattiske over the periods 2-5 July 2013, 24-29 September 2018, and 8-15 June 2022. When consolidated, these surveys cover the entire application area. The following nine vegetation</li> </ul>							
	Associations w Vegetation association	Area mapped	Percentage of application area	ion area (Mattiske, 2013, 2018, 2022): Abbreviated description (Kingfisher Environmental, 2022)				
	CL	(ha) 464.93	(%) 36.99	Cleared land				
	A2	291.52	23.19	Mulga shrubland (on stony slopes and clay-loam plains)				
	C1	240.39	19.13	Chenopod shrubland (Atriplex / Maireana dominant)				
	A3	95.93	7.63	Mulga over Triodia basedowii (sandy-loam plains)				
	E1	61.00	4.85	Mallee over Triodia basedowii (sandy-loam plains)				
	A12	59.28	4.72	Mulga shrubland (on sandy-loam plains)				
	C2	35.07	2.79	Hakea, Acacia shrublands (low plains, rises)				
	A1 A4	7.74	0.62	Mulga shrubland (on sandy-loam plains) Mulga shrubland (on sandy-loam plains)				
Vegetation condition	greater than re percent of the s Full description The vegetation	ported in the application a ns of vegetat survey (Ma	e flora and vegetation area) (GIS Database tion associations are ttiske, 2022) and ac	icer has determined that the area of cleared land on surveys and is approximately 700 hectares (56 e). e available in Appendix E. erial imagery indicated the proposed clearing area en, 1991) condition, described as:				
		A	Development of					
	Vegetation condition	Area mapped (ha)	Percentage of application area (%)	Abbreviated description				
		mapped	application area	Areas that are completely or almost completely without native species in the structure of their vegetation				
	Completely	mapped (ha)	application area (%)	Areas that are completely or almost completely without native species in the structure of their				
	condition Completely degraded	mapped (ha) 704.40	application area (%) 55.96	Areas that are completely or almost completely without native species in the structure of their vegetation Severely impacted by grazing, very frequent fires,				

Characteristic	Details							
Climate and landform	(Yundamindra) re	The climate of the Murchison bioregion is described as arid, with the nearest weather station (Yundamindra) recording an average rainfall of approximately 239.4 millimetres per year (BoM, 2025; CALM, 2002).						
	Database). Land	rea is mapped at elevations of 380-420 metres Australian height datum (GIS system mapping broadly describes the application area as gently undulating and hardpan plains (DPIRD, 2025; GIS database).						
Soil description	The soils within th GIS database):	ne application area are broadly mapped as the following (DPIRD, 2024, 2025;						
	SYSTEM	DESCRIPTION						
	279Ca (438 ha)	Salt lakes with fringing saline alluvial plains, kopi dunes and sandy banks, supporting halophytic shrublands and acacia tall shrublands						
	279Rb (368 ha)	Hardpan plains supporting mulga tall shrublands						
	274Ki (220 ha)	Gently undulating sandplains, with scattered granite outcrop supporting spinifex hummock grasslands, mulga shrublands and mallees						
	279Gu (218 ha)	Extensive, gently undulating calcareous stony plains supporting bluebush shrublands						
	279Vi (15 ha)	Gently undulating gravelly plains on greenstone, laterite and hardpan, with low stony rises and minor saline plains; supporting groved mulga and bowgada shrublands and occasionally chenopod shrublands						
Land degradation risk	susceptible to win	Soil mapping indicates that the Carnegie, Rainbow and Gundockerta land systems are susceptible to wind and water erosion when the soil surface is disturbed or shrub cover is removed (DPIRD, 2024)						
Waterbodies	The application a (AAAL, 2024a; G	rea is located on the eastern foreshore of Lake Carey, a non-perennial salt lake S Database).						
	(AAAL, 2024a; G	pond associated with the existing TSF located within the application area S Database). Minor ephemeral drainage lines flows east to west through the AAAL, 2024a; GIS Database). One of these drainage lines discharges into the Database).						
Hydrogeography	The application area is not within any mapped Public Drinking Water Source Areas (PDW legislated surface water areas. The nearest PDWSA is the Laverton Water Reserve and Catchment Area located approximately 56 kilometres to the north of the application area Database).							
		rea is located within the Goldfields Groundwater Area proclaimed under the <i>nd Irrigation Act 1914</i> (GIS Database).						
		salinity level is recorded as 3,000-7,000 total dissolved solids milligrams per cribed as brackish water quality (NWGA, 2023; GIS Database).						
Flora	with three of these	s of 17 priority flora species within a 50 kilometre radius of the application area, e species occurring on soil systems present within the application area (GIS earest record is approximately two kilometres from the application area (GIS						
Ecological communities	the application and (banded ironstone (banded ironstone assemblage type These PECs are area respectively							
		cological community (TEC) occurs in the Murchison bioregion, being the Depot na community (DBCA, 2023b).						
-		s were identified during the flora and vegetation surveys (Mattiske, 2018, 2022).						
Fauna	radius of the appl	s of ten conservation significant fauna species recorded within a 50 kilometre ication area (GIS Database). The nearest records (brush-tailed mulgara and are located within the application area (GIS Database).						
Fauna habitat	Environmental (20	eld assessment was conducted from 23 March to 1 April 2022 by Kingfisher 022). Seven broad habitat types were identified within the application area: land (465 hectares);						

Characteristic	Details
	Chenopod shrubland (Atriplex / Maireana dominant) (240 hectares);
	<ul> <li>Mulga over Triodia basedowii (sandy-loam plains) (96 hectares);</li> </ul>
	<ul> <li>Mulga shrubland (on sandy-loam plains) (68 hectares);</li> </ul>
	Mallee over Triodia basedowii (sandy-loam plains) (61 hectares); and
	<ul> <li>Hakea, Acacia shrublands (low plains, rises) (35 hectares) (Kingfisher Environmental, 2022).</li> </ul>

## B.2. Vegetation extent

	Pre-European area (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current extent in all DBCA Managed Land (proportion of pre- European extent) (%)
IBRA Bioregion - Murchison	28,120,587	28,044,823	~99	293,505	1.04
Beard vegetation as - State	sociations				
8	694,638.14	346,425.77	~50	47,035.60	6.77
389	642,356.85	640,468.79	~99	22,954.79	3.57
Beard vegetation as - Bioregion	sociations				
8	961.99	961.99	~99	0	0
389	493,977.54	492,089.49	~99	22,954.79	4.65

Government of Western Australia (2019)

## B.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix F.1), and biological survey information, impacts to the following conservation significant flora required further consideration (Mattiske, 2013, 2018, 2022).

The likelihood of occurrence for these species were determined by potentially suitable habitat within the application area and known regional records (Mattiske, 2013, 2018, 2022; Obbens, 2018; Western Australian Herbarium, 1998-; GIS Database).

Species name	Conservation status	Suitable habitat? [Y/N]	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]	Likelihood of occurrence
Tecticornia mellarium	P1	Ν	<2	Y	Unlikely – discussed in Section 3.2.1
Melaleuca apostiba	P3	Y	<12	Y	Unlikely – discussed in Section 3.2.1
<i>Eremophila</i> sp. Lake Carey (E. Mattiske LM 197)	P1	N	<16	Y	Unlikely
Calandrinia quartzitica	P1	Ν	<21	Y	Unlikely
<i>Eragrostis</i> sp. Lake Carey (J. Paterson & J. Warden WB 40825)	P1	N	<21	Y	Unlikely
Calandrinia sp. Menzies (F. Hort et al. FH 4100)	P3	Y	<24	Y	Unlikely
Hemigenia exilis	P4	Y	<24	Y	Unlikely
Pigea sp. Chloroxantha (E. Bennett & D. Bright EUC 1810) (formerly <i>Hybanthus</i> <i>floribundus</i> subsp. <i>chloroxanthus</i> )	P3	N	<25	Y	Unlikely
Goodenia modesta	P3	Y	<26	Y	Unlikely
Lysiandra baeckeoides (formerly Phyllanthus baeckeoides)	P3	N	<31	Y	Unlikely

Species name	Conservation status	Suitable habitat? [Y/N]	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]	Likelihood of occurrence
<i>Tecticornia</i> sp. Lake Way (P. Armstrong 05/961)	P1	N	<37	Y	Unlikely
Bossiaea eremaea	P3	Ν	<39	Y	Unlikely
Calytrix praecipua	P3	N	<39	Y	Unlikely
Olearia mucronata	P3	N	<41	Y	Unlikely
Tecticornia cymbiformis	P3	N	<43	Y	Unlikely
Placynthium nigrum	P3	N	<43	Y	Unlikely
Goodenia lyrata*	P3	Y	<63	Y	Unlikely

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority, \*Mattiske (2013, 2018, 2022) record only

### B.4. Fauna analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix F.1), and biological survey information, impacts to the following conservation significant fauna required further consideration (Kingfisher Environmental, 2022).

The likelihood of occurrence for these species were determined by potentially suitable habitat within the application area, species distribution, and known regional records (CALM, n.d.; DCCEEW, 2024; DOTE, 2025a, 2025b, 2025c, 2025d; DPAW, 2017; Kingfisher Environmental, 2022; NESP, 2021; NFW, n.d.; Timms, 2008; van Dyke & Strahan, 2008; GIS Database).

Species name	Cons statu	ervation s	Suitable habitat features? [Y/N]	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]	Likelihood of occurrence
	WA	EPBC				
Dasycercus blythi (brush-tailed mulgara)	P4	-	Y	0.0	Y	Recorded in application area – discussed in Section 3.2.2
Acanthiza iredalei iredalei (slender-billed thornbill)	-	-	Y	1.4	Y	Likely – discussed in Section 3.2.2
Leipoa ocellata (malleefowl)	VU	VU	Y	4.9	Y	Likely – discussed in Section 3.2.2
<i>Falco peregrinus</i> (peregrine falcon)	OS	-	Y	0.0	Y	Possible – discussed in Section 3.2.2
Calidris ruficollis (red-necked stint)	MI	MI	N	5.2	Y	Unlikely
Sminthopsis longicaudata (long-tailed dunnart)	P4	-	N	15.5	Y	Unlikely
<i>Tringa glareola</i> (wood sandpiper)	MI	MI	Ν	29.3	Y	Unlikely
Branchinella apophysata (a fairy shrimp)	P1	-	Ν	43.0	Ν	Highly unlikely
Branchinella denticulata (a fairy shrimp)	P3	-	Ν	26.0	Ν	Highly unlikely
Branchinella simplex (a fairy shrimp)	P1	-	Ν	9.2	Ν	Highly unlikely
<i>Myrmecobius fasciatus</i> (numbat)	EN	EN	Y	45.3	Y	Highly unlikely

CR: critically endangered, EN: endangered, VU: vulnerable, P: priority, MI: migratory, CD: conservation dependent, OS: other specially protected

# Appendix C. Assessment against the clearing principles Assessment against the clearing principles Variance level Is further consideration required?

### Environmental value: biological values

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Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (a): "Native vegetation should not be cleared if it comprises a high level of biodiversity."	May be at variance	Yes Refer to Section
Assessment:		3.2.1, above.
The biodiversity of the application area may be reduced by the introduction or spread of weeds, or the loss of habitat for conservation significant fauna.		
Principle (b): "Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."	May be at variance	Yes Refer to Section
Assessment:		3.2.2, above.
The area proposed to be cleared contains potentially significant habitat for conservation significant fauna.		
Principle (c): "Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."	Not likely to be at variance	No
Assessment:		
There are no known records of threatened flora within a 50 kilometre radius of the application area (GIS Database). The flora surveys in the vicinity the application area did not record any species of threatened flora (Mattiske, 2013, 2018, 2022).		
Principle (d): "Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."	Not likely to be at variance	No
Assessment:		
No threatened ecological communities (TECs) were identified during the flora and vegetation surveys (Mattiske, 2018, 2022).		
There are no known TECs located within or in close proximity to the application area (GIS Database).		
The proposed clearing is unlikely to impact Depot Springs Stygofauna Community and is unlikely to have any impact on stygofaunal communities that may be present within ocal groundwater.		
Environmental value: significant remnant vegetation and conservation areas		
<u>Principle (e):</u> "Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."	Not at variance	No
Assessment:		
The local area has not been extensively cleared (GIS Database). The extent of the native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia (Commonwealth of Australia, 2001; Appendix B.2).		
Principle (h): "Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."	Not likely to be at variance	No
Assessment:		
Given the distance (110 kilometres) to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.		
Environmental value: land and water resources		
Principle (f): "Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."	At variance	No
Assessment:		
Given an ephemeral drainage line flows through the application area, the proposed clearing is likely to impact riparian vegetation.		
<ul> <li><u>Condition</u></li> <li>To address the above impact, the following management measure will be required as a condition on the clearing permit:         <ul> <li>Avoid clearing riparian vegetation where practicable.</li> </ul> </li> </ul>		
Avoid cleaning inparian vegetation where practicable.  PS 10741/1	1	Page 10

Assessment against the clearing principles	Variance level	Is further consideration required?
<u>Principle (g):</u> "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."	May be at variance	No
Assessment:		
Soil mapping indicates that the Carnegie, Rainbow and Gundockerta land systems are susceptible to wind and water erosion when the soil surface is disturbed or shrub cover is removed (DPIRD, 2024). The proposed clearing may, therefore, increase soil erosion, particularly in drainage areas.		
<ul> <li><u>Condition</u></li> <li>To address the above impact, the following management measure will be required as a condition on the clearing permit: <ul> <li>A staged clearing condition to minimise erosion.</li> </ul> </li> </ul>		
<u>Principle (i):</u> "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."	May be at variance	No
Assessment:		
An ephemeral drainage line flows through the application area, discharging into the adjacent Lake Carey (GIS Database). As soils in the application area are susceptible to wind and water erosion when native vegetation is removed, the proposed clearing may lead to increased sedimentation in watercourses within the application area and Lake Carey (DPIRD, 2024).		
<u>Condition</u> To address the above impact, the following management measure will be required as a condition on the clearing permit:		
A staged clearing condition to minimise erosion.		
<u>Principle (j):</u> "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."	Not likely to be at variance	No
Assessment:		
The application area has an arid climate (CALM, 2002). With average annual evaporation rate (approximately 2,800 millimetres per year) exceeding average annual rainfall (239.4 millimetres per year) there is likely to be little surface flow during normal seasonal rains (BoM, 2006, 2025). Whilst large rainfall events may result in flooding of the area, the proposed clearing is not likely to lead to an increase in incidence or intensity of flooding.		

### Appendix D. Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Trudgen, M.E. (1991) *Vegetation condition scale* in National Trust (WA) 1993 Urban Bushland Policy. National Trust of Australia (WA), Wildflower Society of WA (Inc.), and the Tree Society (Inc.), Perth.

### Measuring vegetation condition for the Eremaean and Northern Botanical Provinces (Trudgen, 1991)

Condition	Description		
Excellent	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.		
Very good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.		
Good	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.		
Poor	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.		

Condition	Description	
Very poor	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.	
Completely degraded	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.	

## Appendix E. Vegetation associations

### Vegetation associations mapped within the application area, with descriptions (Mattiske, 2013, 2018, 2022)

Vegetation association	Area mapped (ha)	Percentage of application area (%)	Abbreviated description (Kingfisher Environmental, 2022)	Full description
A1	7.74	0.62	Mulga shrubland (on sandy-loam plains)	low woodland of Acacia aneura var. aneura and Acacia ayersiana over Acacia tetragonophylla, Acacia burkittii and Ptilotus obovatus var. obovatus in sandy- loam soils
A2	291.52	23.19	Mulga shrubland (on stony slopes and clay- loam plains)	open low woodland to woodland of Acacia aneura and Acacia ayersiana over Acacia ramulosa var. linophylla, Acacia tetragonophylla, Hakea preissii, Eremophila latrobei subsp. latrobei, Eremophila spp., Maireana spp., Atriplex vesicaria, Senna artemisioides subsp. filifolia, Solanum lasiophyllum, Ptilotus obovatus var. obovatus and Eragrostis eriopoda on sandy-loam soils
A3	95.93	7.63	Mulga over <i>Triodia</i> basedowii (sandy-loam plains)	open low woodland of Acacia ayersiana and Acacia aneura over Grevillea sarissa subsp. sarissa, Senna artemisioides subsp. filifolia, Eremophila latrobei subsp. glabra over Rhagodia drummondii and denser patches of Triodia spp. on sandy-loam soils
A4	1.05	0.08	Mulga shrubland (on sandy-loam plains)	Acacia sp. Section Juliflorae, Acacia tysonii, Acacia tetragonophylla mid open shrubland over Maireana pyramidata, Senna artemisioides, Ptilotus obovatus low sparse shrubland over Eragrostis laniflora sparse grassland on red-brown sandy-loam flats
A12	59.28	4.72	Mulga shrubland (on sandy-loam plains)	low woodland of Acacia ayersiana, Acacia ramulosa var. linophylla, Acacia aneura over Acacia burkittii and Acacia tetragonophylla, over Sida calyxhymenia, Maireana sedifolia, Eremophila latrobei subsp. glabra, Dodonaea lobulata, Maireana pyramidata over Solanum lasiophyllum, Ptilotus obovatus var. obovatus over Triodia spp. on red clay-loam soils
C1	240.39	19.13	Chenopod shrubland (Atriplex / Maireana dominant)	shrubland of Chenopod species dominated by Maireana sedifolia, Maireana pyramidata, Maireana glomerifolia and Atriplex vesicaria with occasional emergent Acacia ayersiana and Acacia aneura over Acacia ? kalgoorliensis and Hakea preissii and patches of Cratystylis subspinescens on clay loam soils
C2	35.07	2.79	Hakea, Acacia shrublands (low plains, rises)	Pittosporum angustifolium, Acacia tysonii, Hakea preissii open shrubland over Exocarpos aphyllus, Eremophila miniata, Cratystylis subspinescens low shrubland over Atriplex vesicaria, Maireana aphylla, Rhagodia drummondii low sparse chenopod shrubland on clay-loam flats
E1	61.00	4.85	Mallee over <i>Triodia</i> <i>basedowii</i> (sandy-loam plains)	low open woodland of Eucalyptus horistes, Brachychiton gregorii, Acacia aneura, Acacia pteraneura, Acacia tetragonophylla over Duboisia hopwoodii, Eremophila longifolia, Eremophila margarethae over Maireana spp., Ptilotus obovatus var. obovatus, Solanum lasiophyllum, partothamnella teucriiflora over Triodia species on red clay loams
CL	464.93	36.99	Cleared land	cleared

## Appendix F. Sources of information

### F.1.GIS databases

Publicly available GIS Databases used (sourced from <u>www.data.wa.gov.au</u>): CPS 10741/1

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Clearing Regulations Environmentally Sensitive Areas (DWER-046)
- Clearing Regulations Schedule One Areas (DWER-057)
- DBCA Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- DBCA Fire History (DBCA-060)
- Esri World Imagery
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments Catchments (DWER-028)
- Hydrography Inland Waters Waterlines
- Hydrography, Linear (DWER-031)
- IBRA Vegetation Statistics
- Native Title (ILUA) (LGATE-067)
- Native Vegetation Extent (DPIRD-005)
- Pre-European Vegetation (DPIRD-006)
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping Best Available (DPIRD-027)
- Soil Landscape Mapping Rangelands (DPIRD-064)
- WA Now Aerial Imagery

Restricted GIS Databases used:

- Threatened and Priority Flora (TPFL)
- Threatened and Priority Flora (WAHerb)
- Threatened and Priority Fauna
- Threatened and Priority Ecological Communities
- Threatened and Priority Ecological Communities (Buffers)

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### 4. Glossary

### Acronyms:

BC Act BoM	Biodiversity Conservation Act 2016, Western Australia Bureau of Meteorology, Australian Government
DAA DAFWA	Department of Aboriginal Affairs, Western Australia (now DPLH) Department of Agriculture and Food, Western Australia (now DPIRD)
DCCEEW	Department of Climate Change, Energy, the Environment and Water, Australian Government
DBCA	Department of Biodiversity, Conservation and Attractions, Western Australia
DEMIRS	Department of Energy, Mines, Industry Regulation and Safety
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia (now DEMIRS)
DMP	Department of Mines and Petroleum, Western Australia (now DEMIRS)
DoEE	Department of the Environment and Energy (now DCCEEW)

DoW	Department of Water, Western Australia (now DWER)
DPaW DPIRD	Department of Parks and Wildlife, Western Australia (now DBCA) Department of Primary Industries and Regional Development, Western Australia
DPLH	Department of Planning, Lands and Heritage, Western Australia
DRF	Declared Rare Flora (now known as Threatened Flora)
DWER	Department of Water and Environmental Regulation, Western Australia
EP Act	Environmental Protection Act 1986, Western Australia
EPA	Environmental Protection Authority, Western Australia
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
PEC	Priority Ecological Community, Western Australia
RIWI Act	Rights in Water and Irrigation Act 1914, Western Australia
TEC	Threatened Ecological Community

### **Definitions:**

{DBCA (2023) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia}:

### T <u>Threatened species:</u>

Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the Biodiversity Conservation Act 2016 (BC Act).

*Threatened fauna* is the species of fauna that are listed as critically endangered, endangered or vulnerable threatened species.

*Threatened flora* is the species of flora that are listed as critically endangered, endangered or vulnerable threatened species.

The assessment of the conservation status of threatened species is in accordance with the BC Act listing criteria and the requirements of <u>Ministerial Guideline Number 1</u> and <u>Ministerial Guideline</u> <u>Number 2</u> that adopts the use of the International Union for Conservation of Nature (IUCN) <u>Red List</u> of <u>Threatened Species Categories and Criteria</u>, and is based on the national distribution of the species.

### CR Critically endangered species

Threatened species considered to be "facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines".

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines.

### EN Endangered species

Threatened species considered to be "facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines".

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines.

### VU Vulnerable species

Threatened species considered to be "facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines".

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines.

### Extinct Species:

EX Extinct species

Species where "there is no reasonable doubt that the last member of the species has died", and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).

### EW Extinct in the wild species

Species that "is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form", and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild.

### Specially protected species:

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered or vulnerable) or extinct species under the BC Act cannot also be listed as Specially Protected species.

### MI Migratory species

Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).

Migratory species include birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) or The Republic of Korea (ROKAMBA), and fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

### CD Species of special conservation interest (conservation dependent fauna)

Species of special conservation need that are dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act).

Currently only fauna are listed as species of special conservation interest.

### OS Other specially protected species

Species otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).

Currently only fauna are listed as species otherwise in need of special protection.

### P <u>Priority species:</u>

Priority is not a listing category under the BC Act. The Priority Flora and Fauna lists are maintained by the department and are published on the department's website.

All fauna and flora are protected in WA following the provisions in Part 10 of the BC Act. The protection applies even when a species is not listed as threatened or specially protected, and regardless of land tenure (State managed land (Crown land), private land, or Commonwealth land).

Species that may possibly be threatened species that do not meet the criteria for listing under the BC Act because of insufficient survey or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of prioritisation for survey and evaluation of conservation status so that consideration can be given to potential listing as threatened.

Species that are adequately known, meet criteria for near threatened, or are rare but not threatened, or that have been recently removed from the threatened species list or conservation dependent or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.

Assessment of priority status is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

P1 Priority One - Poorly-known species – known from few locations, none on conservation lands Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, for example, agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation.

Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements for threatened listing and appear to be under immediate threat from known threatening processes. These species are in urgent need of further survey.

P2 Priority Two - Poorly-known species – known from few locations, some on conservation lands Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, for example, national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements for threatened listing and appear to be under threat from known threatening processes. These species are in urgent need of further survey.

### P3 Priority Three - Poorly-known species – known from several locations

Species that are known from several locations and the species does not appear to be under imminent threat or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat.

Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. These species need further survey.

### P4 Priority Four - Rare, Near Threatened and other species in need of monitoring

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands.

(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as a conservation dependent specially protected species.

(c) Species that have been removed from the list of threatened species or lists of conservation dependent or other specially protected species, during the past five years for reasons other than taxonomy.

(d) Other species in need of monitoring.

### Principles for clearing native vegetation:

- (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.
- (b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.
- (d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.
- (e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.
- (f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.
- (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.
- (h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.
- (i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.
- (j) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.