



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 9240/1
File Number: DWERVT7676
Duration of Permit: From 2 August 2021 to 2 August 2023

PERMIT HOLDER

Newmont Boddington Gold Pty Ltd & Saddleback Investments Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE

Lot 703 on Deposited Plan 228490, Marradong

AUTHORISED ACTIVITY

The permit holder must not clear more than 0.084 hectares of native vegetation within the area cross-hatched yellow in Figure 1 of Schedule 1.

CONDITIONS

1. Avoid, minimise, and reduce impacts and extent of clearing

In determining the native vegetation authorised to be cleared under this permit, the permit holder must apply the following principles, set out in descending order of preference:

- (a) avoid the clearing of native vegetation;
- (b) minimise the amount of native vegetation to be cleared; and
- (c) reduce the impact of clearing on any environmental value.

2. Weed and dieback management

When undertaking any clearing authorised under this permit, the permit holder must take the following measures to minimise the risk of introduction and spread of *weeds* and *dieback*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;

- (b) ensure that no known dieback or weed-affected soil, *mulch*, *fill*, or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

3. Records that must be kept

The permit holder must maintain records relating to the listed relevant matters in accordance with the specifications detailed in Table 1.

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	<ul style="list-style-type: none"> (a) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings; (b) the date that the area was cleared; (c) the size of the area cleared (in hectares); and (d) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 1; and (e) actions taken to minimise the risk of the introduction and spread of weeds and dieback in accordance with condition 2; and

4. Reporting

The permit holder must provide to the *CEO* the records required under condition 3 of this permit when requested by the *CEO*.

DEFINITIONS

In this permit, the terms in Table have the meanings defined.

Table 2: Definitions

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the <i>Environmental Protection Act 1986</i> .
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
fill	means material used to increase the ground level, or to fill a depression.
dieback	means the effect of <i>Phytophthora</i> species on native vegetation.
department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	<i>Environmental Protection Act 1986</i> (WA)
mulch	means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation.
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
weeds	means any plant – (a) that is a declared pest under section 22 of the <i>Biosecurity and Agriculture Management Act 2007</i> ; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS



Meenu Vitarana
A/MANAGER

NATIVE VEGETATION REGULATION

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

9 July 2021

SCHEDULE 1

The boundary of the area authorised to be cleared is shown in the map below (Figure 1)

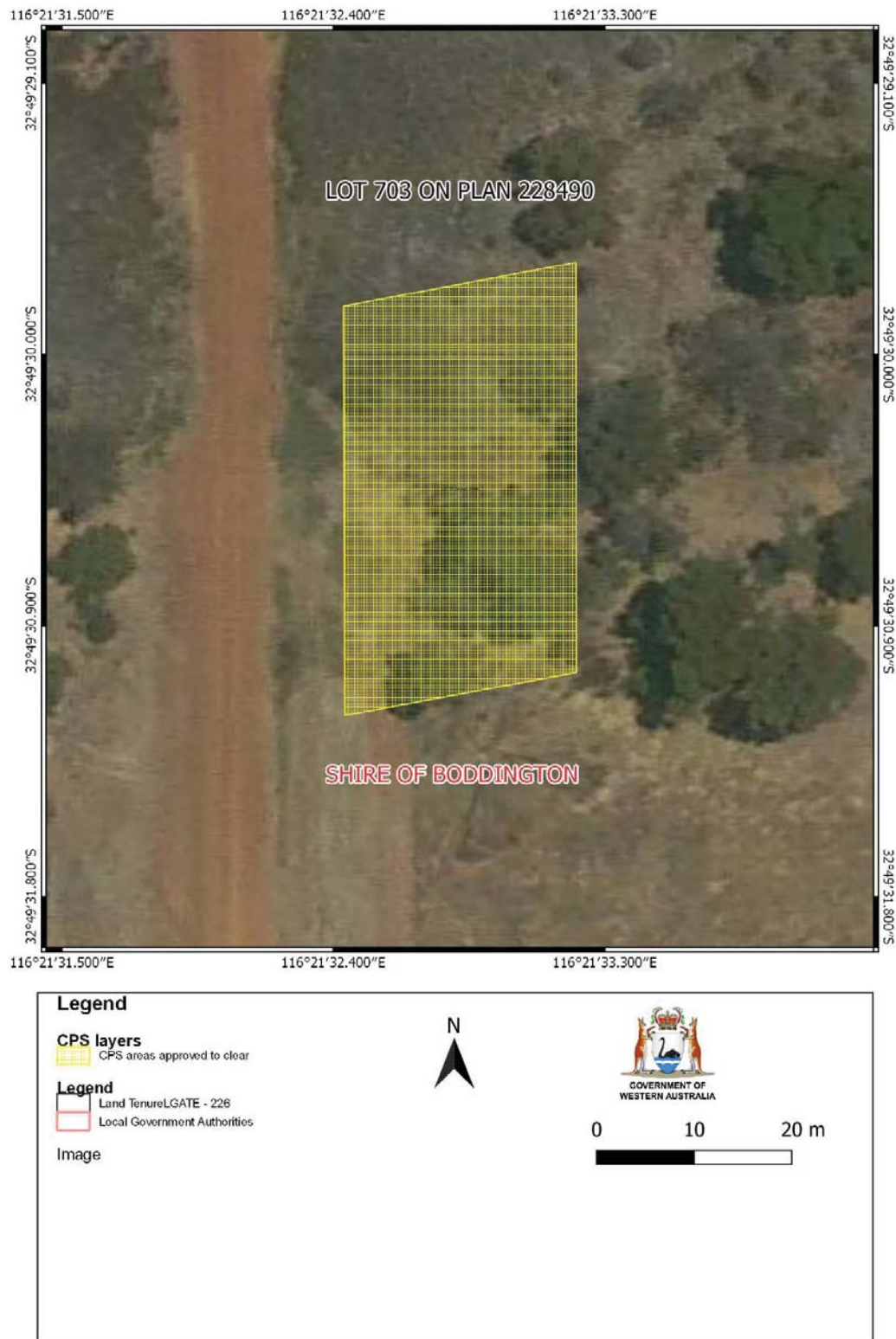


Figure 1: Map of the boundary of the area within which clearing may occur



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 9240/1
Permit type:	Area permit
Applicant name:	Newmont Boddington Gold Pty Ltd & Saddleback Investments Pty Ltd
Application received:	18 March 2021
Application area:	0.084 hectares of native vegetation
Purpose of clearing:	Power Installation
Method of clearing:	Mechanical removal
Property:	Lot 703 on Deposited Plan 228490
Location (LGA area/s):	Shire of Boddington
Localities (suburb/s):	Marradong

1.2. Description of clearing activities

The vegetation proposed to be cleared is contained within a single contiguous area (see Figure 1, Section 1.5). the application is to clear trees and shrubs to allow for the construction of power line infrastructure for the permanent connection to the local shearing shed.

1.3. Decision on application

Decision:	Granted
Decision date:	9 July 2021
Decision area:	0.084 hectares of native vegetation, as depicted in Section 1.5, below.

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 Water and Environmental Regulation (DWER) advertised the application for 21 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see 0A), relevant datasets (see Appendix E.1.), the clearing principles set out in Schedule 5 of the EP Act (see Appendix B), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3.3). The Delegated Officer also took into consideration the purpose of the clearing being for a Western Power connection.

The assessment identified that the proposed clearing will 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.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the proposed clearing is unlikely to have long-term adverse impacts on environmental values. Impacts can be minimised and managed to an to mitigate the 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

1.5. Site map

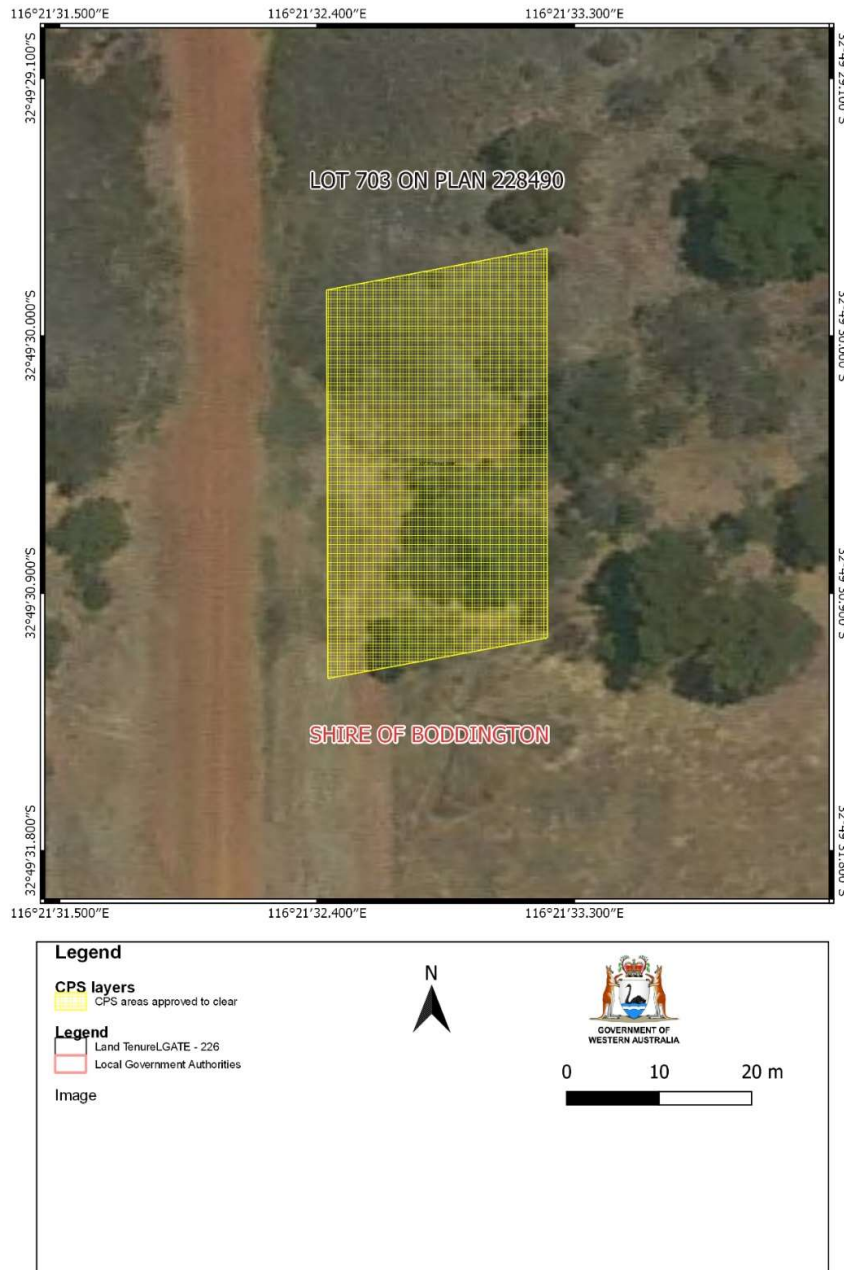


Figure 1 Map of the application area

The area crosshatched yellow indicate the area authorised to be cleared under the granted clearing permit.

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 51O of the EP Act (see 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)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

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 0) 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 identified that the proposed clearing:

- May result in the potential introduction and spread of weeds and dieback into adjacent vegetation, which could impact on the quality of the vegetation and its habitat values; and
- Is not likely to result in loss of habitat significant for fauna species, including threatened *Calyptorhynchus banksii naso* (forest red-tailed cockatoo; vulnerable), *Calyptorhynchus latirostris* (Carnaby's cockatoo; endangered) and *Calyptorhynchus baudinii* (Baudin's cockatoo; endangered).

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 (Fauna) - Clearing Principles (b)

Assessment

According to available datasets, seven threatened, three Priority 4, one specially protected species (migratory) and one specially protected species (conservation dependent) have been recorded from the local area. None of these records intersect the application area. Of these species the forest red-tailed black cockatoo, Baudin's cockatoo and Carnaby's cockatoo (collectively known as black cockatoos), have been identified as having the potential to occur within the application area.

Carnaby's cockatoos and Baudin's cockatoos are listed as endangered, and forest red-tailed cockatoo are listed as vulnerable under the commonwealth EPBC Act. Carnaby's cockatoo is known from 26 records within the local area, with the nearest recorded approximately 5.5 kilometres from the application area. Forest red-tailed cockatoo is known from 103 records within the local area, the nearest of which was recorded approximately 1.8 kilometres within the application area. Baudin's cockatoos have been recorded five times in the local area.

Black cockatoos nest in hollows in live or dead trees of karri, marri, jarrah, wandoo, tuart, salmon gum, flooded gum, york gum, powder bark, bullich and blackbutt (DSEWP&C, 2012). Photographs provided by the applicant indicate that the vegetation within the application area is not likely to comprise hollows or significant breeding habitat for black cockatoos (Appendix D). There are three confirmed roosts in the local area, the closest being three kilometres from the application area. Noting the absence of tall trees within the application area and the small

extent of the proposed clearing, the application area is unlikely to provide significant roosting habitat for black cockatoos.

Black cockatoos prefer foraging habitat that includes proteaceous species such as *Banksia* sp, *Hakea* sp and *Grevillea* sp. (DSEWPaC, 2012). Aerial imagery and photographs provided by the applicant suggest the application area primarily comprises of native shrubs, jarrah trees and weed species (Appendix D). Given the vegetation in the application area lacks proteaceous species and is in a degraded condition, it is unlikely to provide significant foraging habitat for black cockatoos. The application area is unlikely to support significant habitat for other conservation significant fauna and individuals are likely to be transient within the landscape.

Conclusion

For the reasons set out above, it is considered that the proposed clearing is not likely to result in significant impacts to conservation significant fauna.

3.3. Relevant planning instruments and other matters

The Shire of Boddington was invited to provide comment on the application as a direct interest party and had no objections to the proposed clearing.

No Aboriginal sites of significance have been mapped within the application area. It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972 (WA)* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

End

Appendix A. Site characteristics

A.1. Site characteristics

Characteristic	Details						
Local context	<p>The area proposed to be cleared is a 0.084 hectare part of an expansive tract of native vegetation in the intensive land use zone of Western Australia. It is surrounded by remnants of Jarrah Forest and cleared land.</p> <p>Aerial imagery indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 60 per cent of the original native vegetation cover.</p>						
Ecological linkage	<p>A South west regional ecological linkage axis line is mapped 3.8 km east of the proposed clearing area (Molloy et al.,2009). The proposed clearing area is not likely to be part of this ecological linkage.</p>						
Conservation areas	<p>The application area is not located within any mapped conservation areas. The closest conservation area to the proposed clearing area is a DBCA Covenant approximately 2 km to the west. Dwellingup State Forest is located approximately 4 kilometres west of the application area.</p>						
Vegetation description	<p>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of an open forest of <i>Eucalyptus marginata</i> (jarrah) over a weedy understorey. Representative photos and maps are available in Appendix D.</p> <p>This is consistent with the mapped vegetation type(s):</p> <ul style="list-style-type: none"> Darling Plateau, Pindalup vegetation complex, which is described as Open forest of <i>Eucalyptus marginata</i> subsp. <i>thalassica</i>-<i>Corymbia calophylla</i> on slopes and open woodland of <i>Eucalyptus wandoo</i> with some <i>Eucalyptus patens</i> on the lower slopes in semiarid and arid zones (Mattiske, 1998). <p>The mapped vegetation type retains approximately 76.79 per cent of the original extent (Government of Western Australia, 2019).</p>						
Vegetation condition	<p>Photographs supplied by the applicant and aerial imagery indicate the vegetation within the proposed clearing area is in Degraded (Keighery, 1994) condition, described as:</p> <ul style="list-style-type: none"> Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing. <p>The full Keighery (1994) condition rating scale is provided in 0. Representative photos are available in Appendix D.</p>						
Climate and landform	<p>Rainfall 900 mm</p> <p>Evapotranspiration 800 mm</p>						
Soil description	<p>The soil is mapped as Williams Subsystem (Quindanning) 253QdWL Valley floor subtended by the steep slopes of the Michibin unit; yellow duplex soils and a lower sandy terrace (DPIRD, 2019).</p>						
Land degradation risk	<p>Land degradation risk ratings for the soils type mapped over the application area are provided in the table below.</p> <table border="1"> <thead> <tr> <th>Risk Categories</th> <th>Risk Rating</th> <th>Williams Subsystem (Quindanning)</th> </tr> </thead> <tbody> <tr> <td>Wind erosion</td> <td>M1</td> <td>10-30% of map unit has high to extreme wind erosion risk</td> </tr> </tbody> </table>	Risk Categories	Risk Rating	Williams Subsystem (Quindanning)	Wind erosion	M1	10-30% of map unit has high to extreme wind erosion risk
Risk Categories	Risk Rating	Williams Subsystem (Quindanning)					
Wind erosion	M1	10-30% of map unit has high to extreme wind erosion risk					

Characteristic	Details		
	Water erosion	L1	< 3% if map unit has a high to extreme water erosion risk
	Salinity	M1	10-30% of map unit has a moderate to high salinity risk or is presently saline
	Subsurface Acidification	H2	>70% of map unit has a high subsurface acidification risk or is presently acid,
	Flood risk	M1	10-30% of the map unit has a moderate to high flood risk
	Waterlogging	M1	10-30% of map unit has a moderate to very high waterlogging risk
	Phosphorus export risk	M1	10 – 30% of map unit has a high to extreme phosphorus export risk
Waterbodies	The desktop assessment and aerial imagery indicated that a high value wetland creek occurs approximately 25 metres away from the application area and a dam 590 metres to the south west.		
Hydrogeography	The application area intersects the Murray River system Surface water area proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> . No public drinking water source areas are located within or adjacent to the application area. Based on topography and land degradation risk mapping, the soils within the application area have a moderate to high risk of flooding and salinity.		
Flora	There are 5 records of priority flora within the local area (10 Kilometres), the nearest of which is <i>Gastrolobium sp. Prostrate Boddington</i> 3.4 kilometres north east of the application area.		
Ecological communities	No PEC/TEC records in the local area, the nearest record is the Priority 1 Mount Saddleback heath communities 10.9 kilometres from the application area		
Fauna	According to available databases seven mammals, five birds and one reptile of conservation significance have been recorded within ten kilometres of the application area. These comprise of four Priority 4, three Endangered, two Vulnerable, one specially protected -conservation dependent and one specially protected - other specially protected species. None of these records are from within the application area. There is a total of 303 threatened fauna records in the local area (10 kilometres). The nearest record being of a <i>Calyptorhynchus banksii naso</i> (forest red tailed cockatoo) is within 2 kilometres of the application area and has been recorded 103 times in the local area.		

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> “Native vegetation should not be cleared if it comprises a high level of biodiversity.”</p> <p><u>Assessment:</u> The proposal to clear 0.084 hectares of native vegetation for the purpose of a power connections is not likely to contain locally significant flora or fauna within the application area. There are only 5 records of conservation significant flora in the local area (10 kilometres). Of the species recorded in the local area, one Priority 1 species occurs on the same soil type as the type mapped in the application area; <i>Gastrolobium sp. Prostrate Boddington</i>. However, noting the condition of the vegetation and the size of application area, the proposed clearing is not likely to impact significant habitat for this species.</p>	Not likely to be at variance	No
<p><u>Principle (b):</u> “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.”</p> <p><u>Assessment:</u></p> <p>There are records of 13 species of native fauna of conservation significance in the local area (10 kilometre radius). The closest record to the application area is the vulnerable <i>Calyptorhynchus banksii naso</i> (forest red-tailed black cockatoo) recorded within 2 kilometres of the application area.</p> <p>The area proposed to be cleared is mapped as confirmed breeding habitat for conservation significant <i>Calyptorhynchus latirostris</i> (Carnaby’s cockatoos), feeding habitat requiring investigation and may contain suitable habitat for <i>Calyptorhynchus banksii naso</i> (forest red-tailed black cockatoo) and <i>Calyptorhynchus baudinii</i> (Baudin’s black cockatoo) which have all been recorded in the local area.</p> <p>Considering the extent of the proposed clearing, the lack of hollow bearing trees and the condition of the vegetation, it is not likely the area under application contains significant or suitable habitat and fauna are likely to be transient.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (c):</u> “Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared is unlikely to contain habitat for flora species listed under the BC Act.</p>	Not likely to be at variance	No
<p><u>Principle (d):</u> “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.”</p> <p><u>Assessment:</u></p> <p>According to available databases, there are no state listed TECs mapped within the local area (10-kilometre radius). The proposed clearing is not likely to be part of or necessary for the maintenance of a state listed TEC.</p>	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		

Assessment against the clearing principles	Variance level	Is further consideration required?												
<p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u></p> <p>Mattiske (1998) defines the vegetation under application as ‘Pindalup’ vegetation complex of which there is 76.79 per cent of pre-European extent remaining (Shepherd, 2007).</p> <p>The local area (10-kilometre radius) has approximately 60 per cent pre-European extent remaining. This is in line with the national objective and targets for biodiversity conservation in Australia.</p> <p>The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.</p>	Not likely to be at variance	No												
<p><u>Principle (h):</u> <i>“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></p> <p><u>Assessment:</u></p> <p>The distance to the nearest conservation area is a DBCA covenant two kilometres west and the Dwellingup State Forest 4.2 kilometres west of the application area. The proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.</p>	Not at variance	No												
Environmental value: land and water resources														
<p><u>Principle (f):</u> <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u></p> <p>A high value wetland mapped as ‘Creek NSCP’ is recorded within 45 metres and the application area is within the Murray river surface water and irrigation district. Considering the extent of the clearing, as it is not mapped within the high value wetland and the amount of remaining riparian vegetation, the proposed clearing is not likely to impact on or off-site hydrology and water quality.</p>	May be at variance	No												
<p><u>Principle (g):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u></p> <p>The mapped soils in the application area are Williams Subsystems (Quindanning) described as valley floor subtended by the steep slopes of the Michibin unit; yellow duplex soils and a lower sandy terrace (Schoknecht, 2004).</p> <p>Table 1: Land degradation risk categories for Williams subsystem (Schoknecht, 2004)</p> <table border="1" data-bbox="186 1587 1045 1850"> <thead> <tr> <th data-bbox="186 1587 618 1612">Risk Categories</th> <th data-bbox="618 1587 1045 1612">Williams Subsystem (Quindanning)</th> </tr> </thead> <tbody> <tr> <td data-bbox="186 1612 618 1661">Wind Erosion</td> <td data-bbox="618 1612 1045 1661">10-30% of map unit has a high to extreme wind erosion risk</td> </tr> <tr> <td data-bbox="186 1661 618 1709">Water Erosion</td> <td data-bbox="618 1661 1045 1709">10-30% of map unit has a high to extreme water erosion risk</td> </tr> <tr> <td data-bbox="186 1709 618 1757">Salinity</td> <td data-bbox="618 1709 1045 1757">30-50% of map unit has a moderate to high salinity risk or is presently saline</td> </tr> <tr> <td data-bbox="186 1757 618 1806">Flood risk</td> <td data-bbox="618 1757 1045 1806"><3% of the map unit has a moderate to high flood risk</td> </tr> <tr> <td data-bbox="186 1806 618 1850">Water logging</td> <td data-bbox="618 1806 1045 1850"><3% of map unit has a moderate to very high water logging risk</td> </tr> </tbody> </table>	Risk Categories	Williams Subsystem (Quindanning)	Wind Erosion	10-30% of map unit has a high to extreme wind erosion risk	Water Erosion	10-30% of map unit has a high to extreme water erosion risk	Salinity	30-50% of map unit has a moderate to high salinity risk or is presently saline	Flood risk	<3% of the map unit has a moderate to high flood risk	Water logging	<3% of map unit has a moderate to very high water logging risk	Not likely to be at variance	No
Risk Categories	Williams Subsystem (Quindanning)													
Wind Erosion	10-30% of map unit has a high to extreme wind erosion risk													
Water Erosion	10-30% of map unit has a high to extreme water erosion risk													
Salinity	30-50% of map unit has a moderate to high salinity risk or is presently saline													
Flood risk	<3% of the map unit has a moderate to high flood risk													
Water logging	<3% of map unit has a moderate to very high water logging risk													

Assessment against the clearing principles	Variance level	Is further consideration required?
The main land degradation risk associated with the removal of vegetation on the identified soil type is salinity. Noting the extent of the application area and the condition of the vegetation, the proposed clearing is not likely to have an appreciable impact on salinity levels.		
<p><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."</p> <p><u>Assessment:</u></p> <p>The nearest watercourse is a surface water stream named 'Creek NSCP' 45 metres north of the application area. It is in the Murray River surface water and irrigation district but is not located within a Public Drinking Water Source Area.</p> <p>The area under application has a medium to high risk of salinity, groundwater salinity within the application area is mapped between 500-1000 total dissolved solids, milligrams per litre. This level of groundwater salinity is classified as 'fresh'. The proposed clearing is not likely to have a significant impact on surface water or underground water quality.</p>	Not likely to be at variance	No
<p><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."</p> <p><u>Assessment:</u></p> <p>The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding.</p>	Not likely to be at variance	No

Appendix C. 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:

Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Measuring vegetation condition for the South West and Interzone Botanical Province (Keighery, 1994)

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.
Very good	Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.

Condition	Description
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.
Completely degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

Appendix D. Photographs of the vegetation



Figure 2 Photo of the application area facing north-east (Newmont Boddington Gold Pty Ltd, 2021)



Figure 3: Photo of the application area facing east (Newmont Boddington Gold Pty Ltd, 2021)

Appendix E. Sources of information

E.1. GIS databases

Publicly available GIS Databases used (sourced from www.data.wa.gov.au):

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics

- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems

Restricted GIS Databases used:

- ICMS (Incident Complaints Management System) – Points and Polygons
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

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