



West Angelas NVCP 3

Ten Clearing Principles Assessment

Rio Tinto Iron Ore

152-158 St Georges Tce
Perth, WA 6000

Prepared by:

SLR Consulting Australia

SLR Project No.: 675.072156.00003

24 September 2025

Revision: 2.0

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
1.0	5 June 2025	Y. Li, G. Buller	G. Buller	S. Walker
2.0	24 September 2025	Y. Li, G. Buller	B. Mason	S. Walker

Basis of Report

This report has been prepared by SLR Consulting Australia (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Rio Tinto Iron Ore (the Client). Information reported herein is based on the interpretation of data provided by RTIO and relevant government departments, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.



1.0 Assessment against the Ten Clearing Principles

The proposed clearing has been assessed against the Ten Clearing Principles as defined in Department of Water and Environment Regulation (DWER)'s (then Department of Environment and Regulation (DER)) Guide to Assessment: of Applications to Clear Native vegetation under the EP Act (Environmental Protection Act, 1986), considering the current extent and condition of the native vegetation on the Site. The assessment is presented in **Table 1**.

Table 1: Assessment against the 10 Clearing Permits.

Principle	Assessment
Principle (a) – Native vegetation should not be cleared if it comprises a high level of biological diversity.	<p>Assessed Outcome: The proposed clearing of native vegetation is <u>unlikely</u> to be at variance with this principle.</p> <p>The Application Area occurs on the Hamersley (PIL03) subregion. This is a mountainous area of Proterozoic sedimentary ranges and plateaux, dissected by gorges (basalt, shale, and dolerite). The subregion is dominated by Mulga low woodland over bunch grasses on fine textured soils in valley floors, and <i>Eucalyptus leucophloia</i> over <i>Triodia brizoides</i> on skeletal soils of the ranges. Drainage occurs into either the Fortescue to the north, the Ashburton to the south, or the Robe to the west (Kendrick, 2001).</p> <p>Vegetation</p> <p>Biologic (2023) identified and described a total of 15 vegetation types for the Application Area across four broad landforms. A total of three vegetation types were described from drainages, two from gorges and gullies, five from hills and five from plains. Vegetation condition within the Application Area ranged from Excellent to Very Good condition, with the majority of vegetation (67.12%) being in Excellent condition. Disturbed areas, largely associated with cleared mining tracks, comprised 2.25% of the Application Area.</p> <p>No State or Commonwealth listed TECs were identified within the Application Area by the database searches (Department of Biodiversity Conservation and Attractions, 2023).</p> <p>Two State listed PECs and their buffers, West Angelas Cracking-Clays (Priority 1) and the Coolibah – Lignum Flats (Priority 3), were identified by the database searches; neither were found to intersect the Application Area.</p> <p>Flora</p> <p>From the supplied RTIO and DBCA databases, previous field surveys recorded a total of 334 confirmed native taxa from 141 genera across 47 families. The most abundant genus was <i>Acacia</i> (29 taxa), and the most diverse families were Fabaceae (61 taxa), Poaceae (59 taxa), and Malvaceae (40 taxa).</p> <p>Database and literature searches identified 43 significant flora species occurring within 20 km of the Application Area comprising:</p> <ul style="list-style-type: none"> Two Priority 1 species



Principle	Assessment
	<ul style="list-style-type: none"> • 10 Priority 2 species • 26 Priority 3 species, and • Five Priority 4 species <p>The likelihood of occurrence assessment identified that of the 43 significant flora species identified by the desktop assessment:</p> <ul style="list-style-type: none"> • 13 taxa had previously been recorded within the Application Area • 13 were considered to have a high likelihood of occurrence • Seven were considered to have a medium likelihood of occurrence, and • 10 were considered to have a low likelihood of occurrence. <p>No Threatened flora taxa pursuant to the EPBC Act and/or gazetted as Threatened pursuant to the BC Act were recorded within the Application Area.</p> <p>Thirteen Priority flora taxa were recorded during the field survey within the Application Area, comprising:</p> <p>One Priority 2 flora:</p> <ul style="list-style-type: none"> • <i>Hibiscus</i> sp. Gurinbiddy Range (M.E. Trudgen MET 15708) <p>Twelve Priority 3 flora:</p> <ul style="list-style-type: none"> • <i>Acacia subtiliformis</i> • <i>Aristida jerichoensis</i> var. <i>subspinulifera</i> • <i>Aristida lazaridis</i> • <i>Eremophila naaykensis</i> • <i>Indigofera gilesii</i> • <i>Oxalis</i> sp. Pilbara (M.E. Trudgen 12725) • <i>Pilbara trudgenii</i> • <i>Rostellularia adscendens</i> var. <i>latifolia</i> • <i>Solanum kentrocaule</i> • <i>Triodia</i> sp. Mt Ella (M.E. Trudgen 12739) • <i>Vittadinia</i> sp. Coondewanna Flats (S. van Leeuwen 4684) <p><i>Rhagodia</i> sp. Hamersley (M. Trudgen 17794), which had been previously recorded in the Application Area as a Priority 3, was delisted in early 2025.</p>



Principle	Assessment																																																												
	<p>All known populations of Priority 2 listed flora taxa within the Survey Area will be avoided. A 30 m buffer will be applied to Priority 2 flora taxa in the ARCS to further reduce the risk of potential indirect and inadvertent impacts from new exploration works on these taxa. Priority flora is often recorded alongside roads or tracks due to increased visibility in these areas. Altering existing tracks to provide buffers in such cases would result in additional clearing and higher environmental impacts. Areas of existing disturbance within the buffers, such as existing tracks and service corridors, will continue to be accessed and maintained where necessary.</p> <p>Table 2. Priority Flora recorded locations within NVCP 3 Application Area from the RTIO regional database.</p> <table><tr><th>Status</th><th>Taxon</th><th>Total Desktop Study Recorded locations</th><th>AA # of Recorded Locations</th></tr><tr><td>P1</td><td><i>Isotropis forrestii</i></td><td>1</td><td>-</td></tr><tr><td>P1</td><td><i>Sida</i> sp. Turee Creek (P.-L.de Kock PLDK1116)</td><td>187</td><td>-</td></tr><tr><td>P2</td><td><i>Eremophila pusilliflora</i></td><td>427</td><td>-</td></tr><tr><td>P2</td><td><i>Hibiscus</i> sp. Gurinbiddy Range (M.E. Trudgen MET 15708)</td><td>443</td><td>8</td></tr><tr><td>P2</td><td><i>Pentalepis trichodesmoides</i> subsp. <i>hispida</i></td><td>1</td><td>-</td></tr><tr><td>P2</td><td><i>Tetradlea fordiana</i></td><td>114</td><td>-</td></tr><tr><td>P3</td><td><i>Acacia dawsoniana</i></td><td>3</td><td>-</td></tr><tr><td>P3</td><td><i>Acacia effusa</i></td><td>222</td><td>-</td></tr><tr><td>P3</td><td><i>Acacia subtiliformis</i></td><td>32</td><td>4</td></tr><tr><td>P3</td><td><i>Aristida jerichoensis</i> var. <i>subspinulifera</i></td><td>247</td><td>4</td></tr><tr><td>P3</td><td><i>Aristida lazaridis</i></td><td>423</td><td>4</td></tr><tr><td>P3</td><td><i>Dampiera metallorum</i></td><td>50</td><td>-</td></tr><tr><td>P3</td><td><i>Dolichocarpa</i> sp. Hamersley Station (A.A. Mitchell PRP 1479)</td><td>66</td><td>-</td></tr><tr><td>P3</td><td><i>Eremophila magnifica</i> subsp. <i>velutina</i></td><td>7</td><td>-</td></tr></table>	Status	Taxon	Total Desktop Study Recorded locations	AA # of Recorded Locations	P1	<i>Isotropis forrestii</i>	1	-	P1	<i>Sida</i> sp. Turee Creek (P.-L.de Kock PLDK1116)	187	-	P2	<i>Eremophila pusilliflora</i>	427	-	P2	<i>Hibiscus</i> sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	443	8	P2	<i>Pentalepis trichodesmoides</i> subsp. <i>hispida</i>	1	-	P2	<i>Tetradlea fordiana</i>	114	-	P3	<i>Acacia dawsoniana</i>	3	-	P3	<i>Acacia effusa</i>	222	-	P3	<i>Acacia subtiliformis</i>	32	4	P3	<i>Aristida jerichoensis</i> var. <i>subspinulifera</i>	247	4	P3	<i>Aristida lazaridis</i>	423	4	P3	<i>Dampiera metallorum</i>	50	-	P3	<i>Dolichocarpa</i> sp. Hamersley Station (A.A. Mitchell PRP 1479)	66	-	P3	<i>Eremophila magnifica</i> subsp. <i>velutina</i>	7	-
Status	Taxon	Total Desktop Study Recorded locations	AA # of Recorded Locations																																																										
P1	<i>Isotropis forrestii</i>	1	-																																																										
P1	<i>Sida</i> sp. Turee Creek (P.-L.de Kock PLDK1116)	187	-																																																										
P2	<i>Eremophila pusilliflora</i>	427	-																																																										
P2	<i>Hibiscus</i> sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	443	8																																																										
P2	<i>Pentalepis trichodesmoides</i> subsp. <i>hispida</i>	1	-																																																										
P2	<i>Tetradlea fordiana</i>	114	-																																																										
P3	<i>Acacia dawsoniana</i>	3	-																																																										
P3	<i>Acacia effusa</i>	222	-																																																										
P3	<i>Acacia subtiliformis</i>	32	4																																																										
P3	<i>Aristida jerichoensis</i> var. <i>subspinulifera</i>	247	4																																																										
P3	<i>Aristida lazaridis</i>	423	4																																																										
P3	<i>Dampiera metallorum</i>	50	-																																																										
P3	<i>Dolichocarpa</i> sp. Hamersley Station (A.A. Mitchell PRP 1479)	66	-																																																										
P3	<i>Eremophila magnifica</i> subsp. <i>velutina</i>	7	-																																																										



Principle	Assessment			
	P3	<i>Eremophila naaykensis</i>	1485	8
	P3	<i>Eremophila</i> sp. West Angelas (S. van Leeuwen 4068)	174	2
	P3	<i>Euphorbia clementii</i>	1	-
	P3	<i>Euphorbia stevenii</i>	1	-
	P3	<i>Euphorbia inappendiculata</i> var. <i>inappendiculata</i>	12	-
	P3	<i>Geijera salicifolia</i>	1	-
	P3	<i>Goodenia lyrata</i>	1	-
	P3	<i>Goodenia</i> sp. East Pilbara (A.A. Mitchell PRP 727)	473	-
	P3	<i>Grevillea saxicola</i>	130	-
	P3	<i>Indigofera gilesii</i>	526	4
	P3	<i>Ipomoea racemigera</i>	83	-
	P3	<i>Isotropis parviflora</i>	247	-
	P3	<i>Neptunia longipila</i>	2	-
	P3	<i>Olearia mucronata</i>	13	-
	P3	<i>Oxalis</i> sp. Pilbara (M.E. Trudgen 12725)	113	22
	P3	<i>Pilbara trudgenii</i>	281	24
	P3	<i>Rostellularia adscendens</i> var. <i>latifolia</i>	30	6
	P3	<i>Sida</i> sp. Hamersley Range (K. Newbey 10692)	2	-
	P3	<i>Solanum kentrocaule</i>	756	22
	P3	<i>Streptoglossa</i> sp. Cracking clays (S. van Leeuwen et al. PBS 7353)	4	-
	P3	<i>Swainsona thompsoniana</i>	56	-
	P3	<i>Themeda</i> sp. Hamersley Station (M.E. Trudgen 11431)	68	-



Principle	Assessment			
	P3	<i>Triodia</i> sp. Mt Ella (M.E. Trudgen 12739)	1889	135
	P3	<i>Vittadinia</i> sp. Coondewanna Flats (S. van Leeuwen 4684)	8	1
	P4	<i>Acacia bromilowiana</i>	46	-
	P4	<i>Eremophila magnifica</i> subsp. <i>magnifica</i>	112	-
	P4	<i>Lepidium catapycnon</i>	19	-
	P4	<i>Ptilotus mollis</i>	19	-
	P4	<i>Sida</i> sp. Barlee Range (S. van Leeuwen 1642)	78	-
	(PSI)	<i>Dolichocarpa</i> sp. nov.	25	-
	(PSI)	<i>Eremophila</i> aff. <i>magnifica</i>	1	-
	(PSI)	<i>Eremophila</i> sp. x ?	2	-
	Total		8881	244
	<p>*Records at Phase 2 sites (i.e. rescores) have been counted once only to avoid duplication.</p> <p>The Application Area is considered to have a typical level of floristic diversity, based on comparisons of floristic diversity captured in other flora and vegetation surveys conducted in the locality.</p> <p>Fauna</p> <p>Eight fauna habitats (excluding disturbed areas) extending across the Application Area were identified from the desktop assessment – Alluvial Plain (0.18% of AA), Claypan (0.04% of AA), Gorge/Gully (3.5% of AA), Major Drainage (1.06% of AA), Minor Drainage (1.01% of AA), Mulga Woodland (22.32% of AA), Rocky Hill (18.23% of AA), and Stony Plain (51.07% of AA). These habitat types extend beyond the Application Area and are common throughout the Pilbara region and are therefore unlikely to support a greater localised level of faunal diversity than that of the surrounding areas.</p> <p>The database searches and literature review within the AA and including a 20km buffer had identified 278 terrestrial vertebrate fauna taxa that have the potential to occur in the area based on the known habitat preferences and regional distribution records. These comprised:</p> <ul style="list-style-type: none"> • Six amphibians from three families, of which none are significant. • 125 birds from 47 families, of which 18 are significant. 			



Principle	Assessment
	<ul style="list-style-type: none"> 41 mammals from 15 families, of which seven are significant. 106 reptiles from 10 families, of which five are significant. <p>Of these taxa, 42 were recorded within the Application Area during previous surveys, one taxon, the Western Pebble-mound Mouse (<i>Pseudomys chapmani</i>) – listed as Priority 4 by DBCA is significant.</p> <p>Seven significant fauna taxa were assessed as having a high likelihood of occurring within the Application Area:</p> <ul style="list-style-type: none"> Northern Quoll (<i>Dasyurus hallucatus</i>), listed as Endangered under the BC Act and EPBC Act. Ghost Bat (<i>Macroderma gigas</i>), listed as Vulnerable under the BC Act and EPBC Act. Pilbara Leaf-nosed Bat (<i>Rhynonictis aurantia</i> Pilbara form), listed as Vulnerable under the BC Act and EPBC Act. Pilbara Olive Python (<i>Liasis olivaceus barroni</i>), listed as Vulnerable under the BC Act and EPBC Act. Pacific Swift, Fork-tailed Swift (<i>Apus pacificus</i>), listed as Migratory under the BC Act and EPBC Act. Gane's Blind Snake (<i>Anilius ganei</i>), listed as Priority 1 by DBCA. Pilbara Barking Gecko (<i>Underwoodisaurus seorsus</i>), listed as Priority 2 by DBCA. <p>Four significant fauna taxa were assessed as having a medium likelihood of occurring within the Application Area:</p> <ul style="list-style-type: none"> Common Greenshank (<i>Tringa nebularia</i>), listed as Migratory under the BC Act, and Migratory and Endangered under the EPBC Act. Peregrine Falcon (<i>Falco peregrinus</i>), listed as Other Specially Protected Fauna under the BC Act. Brush-tailed Mulgara, Ampurta (<i>Dasycercus blythi</i>), listed as Priority 4 by DBCA. Letter-winged Kite (<i>Elanus scriptus</i>), listed as Priority 4 by DBCA. <p>A further 18 significant fauna taxa were assessed as having a low likelihood of occurring within the Application Area.</p> <p>Two fauna habitats were found to contain microhabitats that were of importance to significant fauna species – Gorge/Gully and Major Drainage. Both habitats are likely to be of importance to Northern Quoll, Pilbara Leaf-nosed Bat, Ghost Bat, and Pilbara Olive Python.</p> <p>RTIO's designated exclusion zones protect the majority of the Gorge/Gully and Major Drainage habitats within the Application Area from clearing activities. Whilst approximately 2.5 ha of the Major Drainage habitat is not protected under the current exclusion zones, direct impacts may be further minimised or potentially avoided, subject to final track alignment and micro-siting, which would eliminate the risk of being at variance with this principle.</p>
Principle (b) – Native vegetation should not be cleared if it comprises	<p>Assessed Outcome: The proposed clearing is <u>unlikely</u> to be at variance with this principle.</p> <p>Eight fauna habitats (excluding disturbed areas) extending across the Application Area were identified from the desktop assessment – Alluvial Plain (0.18% of AA), Claypan (0.04% of AA), Gorge/Gully (3.5% of AA), Major Drainage (1.06% of AA),</p>



Principle	Assessment
the whole or part of or is necessary for the maintenance of a significant habitat for fauna indigenous to Western Australia.	<p>Minor Drainage (1.01% of AA), Mulga Woodland (22.32% of AA), Rocky Hill (18.23% of AA), and Stony Plain (51.07% of AA). These habitat types extend beyond the Application Area and are common throughout the Pilbara region and are therefore unlikely to support a greater localised level of faunal diversity than that of the surrounding areas.</p> <p>Alluvial Plain habitat is associated with the flood plain adjacent to drainage lines. It often contains tussock grasses and has a high vegetation cover. Substrate consists of alluvial, silt loamy/clay, and topography is characterized by low lying areas that have a very slight to no gradient. This habitat is of little value to most significant fauna, but may be utilised when animals are moving through the area to different landscapes.</p> <p>Claypan habitat is characterised by open and sparse low vegetation with approximately half of its area being bare ground. Isolated shrubs of <i>Salsola australis</i>, <i>Boerhavia paludosa</i> and <i>Ptilotus exaltatus</i> occur over open tussock grass. This habitat is of little value to most significant fauna, but the tussocks may be utilised when animals are moving through the area to different landscapes. This area may also be seasonally inundated with water which will be utilised by all fauna species, and it will become suitable foraging habitat for migratory shorebirds.</p> <p>Gorges and gullies are rugged, steep-sided valleys incised into the surrounding landscape. Gorges tend to be deeply incised, with vertical cliff faces, while gullies are more open (but not as open as Drainage Area or Valleys). This habitat may contain cave systems which are able to support Ghost Bats and potentially Pilbara Leaf-nosed Bat, as well as suitable cave habitat for Northern Quoll dens and Pilbara Olive Python hunting and denning areas. The Gorge/Gully habitats also have areas which would be suitable for Gane's Blind Snake, and the airspace will also be utilised by birds of prey (e.g. Peregrine Falcon) while hunting. These birds of prey will typically nest on cliff faces and rock ledges which may also be found in the Gorge/Gully habitats.</p> <p>Major and Minor Drainage habitats comprise densely vegetated plains occurring on low-lying deeply alluvial plains, with a moderate-high amount of leaf litter and woody debris. Vegetation often consists of <i>Eucalyptus victrix</i> woodland over <i>Acacia citrinoviridis</i> shrublands and various sedges and grasses fringing the channel. These habitats become seasonally inundated with water after heavy rain events, which flows through the channels from higher altitude areas into nearby rivers, streams, and occasional ephemeral pools. The desktop assessment found that the Major Drainage habitat contain suitable creek systems and wetland areas which can be used as foraging habitat for Pilbara Olive Pythons, Northern Quolls, Ghost Bats, and Pilbara Leaf-nosed Bats. This habitat can also act as dispersion corridors for Pilbara Olive Pythons and Northern Quolls.</p> <p>Mulga Woodland habitat is characterized by having stands of Mulga over clay or stony substrates. Differs from other plains that contain Mulga, by having a monoculture of Mulga, instead of having a diversity of other <i>Acacia</i> species. This habitat may provide supporting foraging habitat for Ghost bat and Pilbara Leaf-nosed Bat. Additionally, the Short-tailed Mouse and Southern Whiteface may use this habitat for breeding, foraging and dispersal.</p> <p>Rocky Hill habitat comprises hills and undulating stony plains of higher elevation, often supporting hard-type <i>Triodia</i> spp. with a mantle of gravel and larger rocks. Scattered areas of minor outcropping and breakaway, particularly atop hillcrests. The Western Pebble-mound Mouse has previously been recorded within this habitat. This habitat may also support foraging for Brush-tailed Mulgara, Short-tailed Mouse, Western Pebble-mound Mouse and Pilbara Olive Python. This habitat is widely distributed both</p>



Principle	Assessment
	<p>locally and throughout the Hamersley sub-region and clearing within this habitat is unlikely to cause a detrimental impact to any of the listed species potentially occurring within it.</p> <p>Stony Plain habitat comprises areas where vegetation is a dense mix of Acacia, with a mixture of Mulga (<i>Acacia aneura</i>), <i>A. maitlandii</i> and <i>A. pruinocarpa</i> over a mixture of sparse small shrubs and grasses, such as <i>Triodia</i> spp. and <i>Senna</i> spp. This habitat may be suitable for Short-tailed Mouse, Bilby, Pilbara Barking Gecko, and woodland birds such as the Southern Whiteface. These fauna species are not considered to have a critical reliance on this habitat, rather using it for foraging. This habitat is widely distributed both locally and throughout the Hamersley sub-region.</p> <p>RTIO has provided exclusion zones that protect most of the Gorge/Gully and Major Drainage habitats within the Application Area from clearing, except for one area of Major Drainage habitat (2.5 ha) in the northwest corner of the Application Area. Although this area comprises a small portion (less than 0.1%) of the Application Area, the disturbance could be avoided by including this area into the exclusion zone and would eliminate the risk of being at variance with this principle.</p>
Principle (c) – Native vegetation should not be cleared if it includes or is necessary for the continued existence of rare flora.	<p>Assessed Outcome: The proposed clearing is <u>not</u> at variance with this principle.</p> <p>No Threatened flora taxa pursuant to the EPBC Act and/or gazetted as Threatened pursuant to the BC Act have been recorded within the Application Area or are likely to occur.</p>
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 (TEC).	<p>Assessed Outcome: The proposed clearing is <u>not</u> at variance with this principle.</p> <p>No TECs pursuant to the Commonwealth EPBC Act or TECs listed under the BC Act were recorded within the Application Area and none are likely to occur.</p>
Principle (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.	<p>Assessed Outcome: The proposed clearing is <u>not</u> at variance with the principle.</p> <p>Fifteen natural vegetation types were described and mapped by Biologic (2023) within the Application Area.</p> <p>The majority of the Pilbara region has not been extensively cleared. However grazing, inappropriate fire regimes and weed invasion have greatly altered the vegetation in some areas. The national target and objective for biodiversity conservation of ecological communities is to retain at least 30% of their pre-European extent (DEH, 2001).</p> <p>The Application Area is mapped over three broad vegetation associations:</p>



Principle	Assessment
	<ul style="list-style-type: none"> Hamersley 18 which is characterised as: low woodland, open low woodland, or sparse woodland: Mulga (<i>Acacia aneura</i>) and associated species Hamersley 29 which is characterised as: low woodland, open low woodland, or sparse woodland: Mulga (<i>Acacia aneura</i>) and associated species Hamersley 82 which is characterised as: low tree-steppe: Hummock grassland with scattered bloodwoods and snappy gum. <i>Triodia</i> spp., <i>Corymbia</i> spp., <i>Eucalyptus leucophloia</i>. <p>The Hamersley 18 vegetation type has 99.3% of its pre-European representation across the Pilbara Bioregion and 99.75% across Western Australia.</p> <p>The Hamersley 29 vegetation type has 99.87% of its pre-European representation across the Pilbara Bioregion and 99.94% across Western Australia.</p> <p>The Hamersley 82 vegetation type has 99.43% of its pre-European representation across the Pilbara Bioregion and 99.51% across Western Australia.</p> <p>The proposed clearing will not significantly alter the extents of the three broad vegetation associations. All four are well above the 30% threshold. The proposed clearing would not be at variance with this principle.</p>
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.	<p>Assessed Outcome: The proposed clearing is <u>not</u> to be at variance with this principle.</p> <p>Whilst there were minor drainages recorded and mapped within the Application Area, the nearest watercourse is Turee Creek to the north of the Application Area, and there were no wetlands or permanent sources of water identified.</p>
Principle (g) – Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.	<p>Assessed Outcome: The proposed clearing is <u>not</u> at variance with this principle.</p> <p>Seven weed species: <i>*Bidens bipinnata</i>, <i>*Cenchrus ciliaris</i>, <i>*Chloris virgata</i>, <i>*Flaveria trinervia</i>, <i>*Malvastrum americanum</i>, <i>*Setaria verticillata</i>, and <i>*Sigesbeckia orientalis</i> were identified within the Application Area, none of which represent Declared Pests under the BAM Act (DPIRD, 2024), or listed as Weeds of National Environmental Significance (CISS, 2024).</p> <p>The Application Area contains the following six land systems, as mapped and described by Van Vreeswyk (2004). The land system and susceptibility to erosion are listed below:</p> <ul style="list-style-type: none"> Boolgeeda System: Vegetation is generally not prone to degradation and the system is not susceptible to erosion. Newman System: Some erosional surfaces, however, 99% of this land system has nil erosion. Pindering System: Not susceptible to erosion. Platform System: Not susceptible to erosion.



Principle	Assessment
	<ul style="list-style-type: none"> Spearhole System: Not susceptible to erosion. Wannamunna System: Generally, the system has low susceptibility to erosion. Disturbances to overland flow processes by inappropriate positioning or construction of infrastructure such as roads can have adverse effects on vegetation (Van Vreeswyk A.M.E, 2004). <p>Of the six mapped land systems, the majority (five) were not susceptible to erosion, and one was identified as having a low potential of erosion. All six systems were generally non-saline, with either a low or negligible risk of inundation in low lying areas or nil risk of inundation or flooding (Van Vreeswyk A.M. E, 2004). Therefore clearing of vegetation within the Application Area would not be at variance with this principle.</p>
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.	<p>Assessed Outcome: The proposed clearing is <u>not</u> at variance with this principle.</p> <p>No Environmentally Sensitive Areas (ESAs) or Conservation Areas intersect the Application Area, however Karijini National Park is located approximately 14km northwest of the northwestern-most polygon of the Application Area. A 50 m buffer exclusion zone is applied around the perimeter of the national park, therefore clearing of the ESA will be avoided.</p>
Principle (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	<p>Assessed Outcome: The proposal is <u>not</u> to be at variance with this principle.</p> <p>There are no wetlands, permanent sources of surface water, or areas of public drinking water identified within the Application Area. A minor watercourse (Turee Creek) flows to the north of the Application Area and represents a significant area of surface drainage (DWER, 2018).</p> <p>The Application Area overlays the Hamersley Fractured Rock Aquifer (Johnson, 2016).</p> <p>Minor Drainages within the Application Area are identified as Rio Tinto exclusion avoidance areas in which clearing is prohibited and given the small scale of Proposal, there is no reason to expect that the Proposal would affect groundwater or surface water quality in the region.</p>
Principle (j) – Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding	<p>Assessed Outcome: The proposal is <u>unlikely</u> to be at variance with this principle.</p> <p>Local flooding occurs seasonally in the Pilbara region as a result of cyclonic activity and sporadic thunderstorm activity. The minor drainages intersecting the Application Area would naturally be subject to seasonal localised flooding. When considering broad land systems mapped for the area, all six land systems had a low to negligible risk of inundation or flooding in low lying areas (Van Vreeswyk A.M.E, 2004). It is therefore not anticipated that clearing within the Application Area would influence this process, under the provision that surface drainage flow is maintained.</p>



1.1 Summary

An assessment against the ten clearing principles found the proposed clearing of a maximum of 147 ha may have some impact. However, vegetation within the Application Area has already been impacted by disturbances from mining (i.e., historical clearing, infrastructure, road networks, drill pads).

Proposed clearing is **unlikely** to be at variance with three principles:

- Principle (a) - The proposed clearing is unlikely to be variance with this principal, as the level of diversity was within the expected range for the Pilbara, and the significant flora and fauna identified within the Application Area are typical for the region.
- Principle (b) - Given the presence of significant fauna species and moderate coverage of suitable habitat for endemic species, the Application Area is likely to provide significant habitat for fauna indigenous to Western Australia.
- Principle (j) - The proposed clearing is unlikely to be at variance with this principle as all broad land systems mapped within the Application Area had either a moderate or low risk of inundation or flooding in low lying areas (SLR, 2022). No areas with a high risk of flooding were identified.

Proposed clearing is **not** at variance with seven principles:

- Principle (c) - The proposed clearing is not at variance with this principle due to the low likelihood of Threatened flora occurring within the Application Area.
- Principle (d) - The proposed clearing is not at variance with this principle as no TECs pursuant to the Commonwealth EPBC Act or listed for the State were recorded within the Application Area.
- Principles (e) – The proposed clearing is not at variance with this principle as it represents a small fraction of the Hamersley 18, Hamersley 29 and Hamersley 82 broad vegetation types mapped by (Beard, 1975).
- Principle (f) - The proposed clearing is not at variance with this principle as there are no major watercourses or wetlands that intersects the Application Area; the nearest water course to the Application Area, Turee Creek, is protected by an exclusion zone.
- Principle (g) - The proposed clearing of native vegetation is not at variance with this principle as no appreciable land degradation would occur.
- Principle (h) - The proposed clearing is not at variance with this principle as the Application Area does not intersect any ESAs or Conservation Areas.
- Principle (i) - The proposed clearing is not at variance with this principal as no negative impact to surface or groundwater is predicted.

2.0 Closing

We trust this meets your requirements currently. Should you have any questions or require further action please do not hesitate to contact Grant Buller or Yanlin Li on (08) 9388 8360. We look forward to hearing from you.

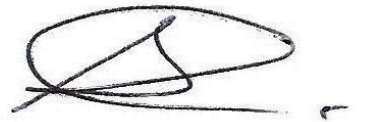
Sincerely,



SLR Consulting Australia



Grant Buller
Senior Botanist
gbuller@slrconsulting.com
M: 0405 576 230



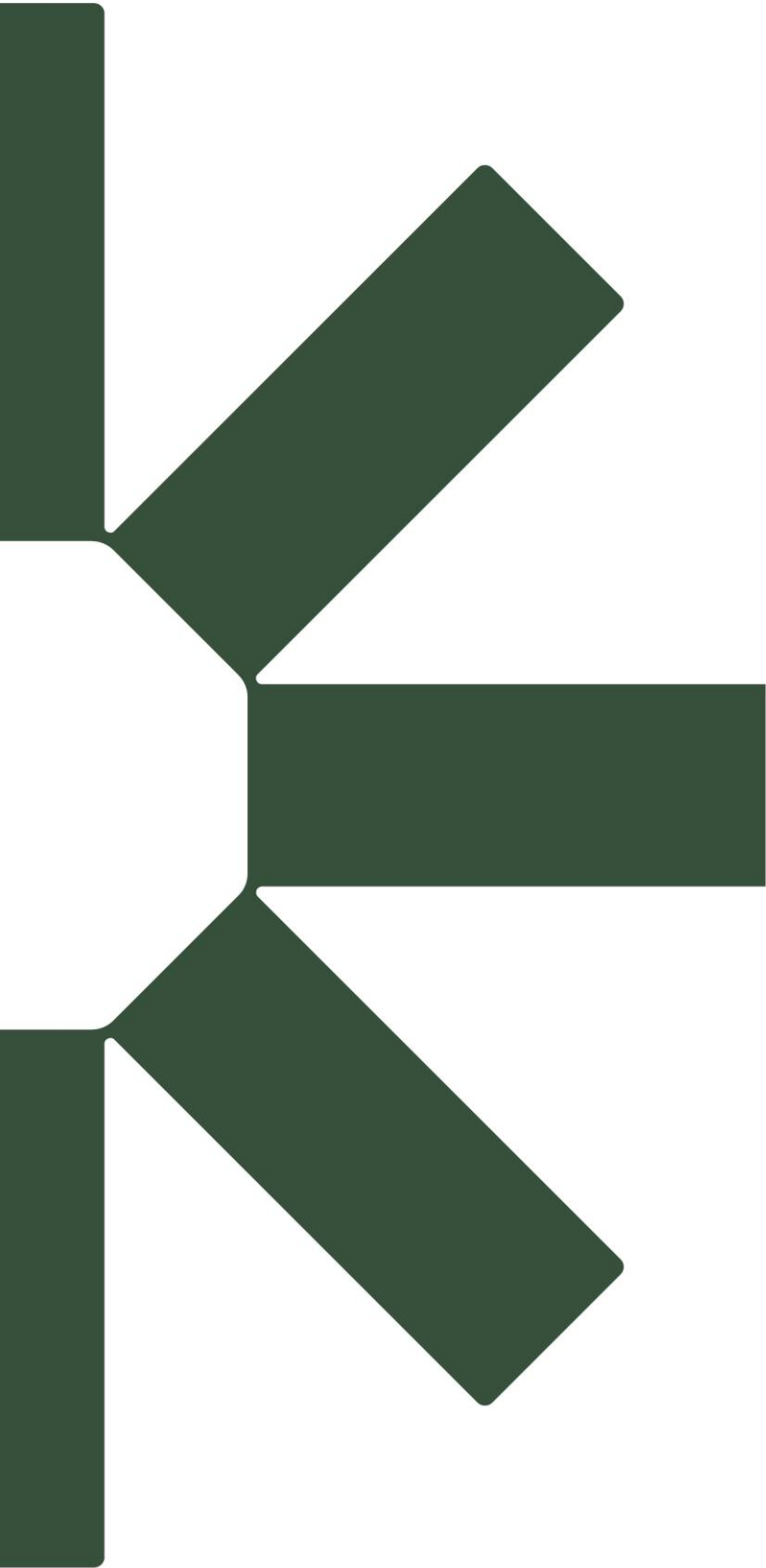
Technical Director, MBA, BSc(Hons)
snwalker@slrconsulting.com
M: 0419 997 140



3.0 References

- Beard, J.S. (1975) *Pilbara, 1:1 000,000 vegetation series: explanatory notes to sheet 5*. Perth, Australia: University of Western Australia Press.
- Biologic (2023) *Angelo River Project Detailed Flora and Vegetation Survey*. Available at: www.biologicenv.com.au.
- CISS (2025) *Government weed strategies and lists*. Available at: <https://weeds.org.au/>.
- DBCA (2023) *Threatened and Priority Ecological Communities (custom search)*.
- DPIRD (2025) *Declared plants*. Available at: <https://www.agric.wa.gov.au>.
- DWER (2018) *Hydrography, Linear (Hierarchy) (DWER-031)*. Perth, Australia: Landgate. Available at: <https://catalogue.data.wa.gov.au>.
- Government of Western Australia (1986) *Environmental Protection Act 1986*. Available at: www.legislation.wa.gov.au.
- Kendrick, P. (2001) *Pilbara 3 (PIL3 - Hamersley subregion)*.
- SLR Consulting (2022) *Greater West Angelas Baseline Groundwater Dependent Ecosystem Assessment*.
- Van Vreeswyk A.M.E, P.A.L.L.K.A. and H.P. (2004) *An Inventory and condition survey of the pilbara region, Western Australia*. Available at: https://researchlibrary.agric.wa.gov.au/cgi/viewcontent.cgi?article=1006&context=tech_bull.





Making Sustainability Happen