



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 9262/1
Permit Holder:	Perth Airport Pty Ltd
Duration of Permit:	From 30 July 2021 to 30 July 2026

The permit holder is authorised to clear native vegetation subject to the following conditions of this permit.

PART I – CLEARING AUTHORISED

1. Clearing authorised (purpose)

The permit holder is authorised to clear native vegetation for the purpose of conducting maintenance and improvement works on a roadside basin and its associated drainage.

2. Land on which clearing is to be done

Lot 5 on Plan 15303, Perth Airport

3. Clearing authorised

The permit holder must not clear more than 0.01 hectares of native vegetation within the area cross-hatched yellow in Figure 1 of Schedule 1.

PART II – MANAGEMENT CONDITIONS

4. 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.

5. 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.

PART III - RECORD KEEPING AND REPORTING

6. 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 species composition, structure, and density of the cleared area; (b) 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; (c) the date that the area was cleared; (d) the size of the area cleared (in hectares); and (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 4; and (f) actions taken to minimise the risk of the introduction and spread of weeds and dieback in accordance with condition 5.

7. Reporting

The permit holder must provide to the *CEO* the records required under condition 6 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.

Term	Definition
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
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)
fill	means material used to increase the ground level, or fill a hollow.
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 – <ul style="list-style-type: none"> (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*

30 June 2021

Schedule 1

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

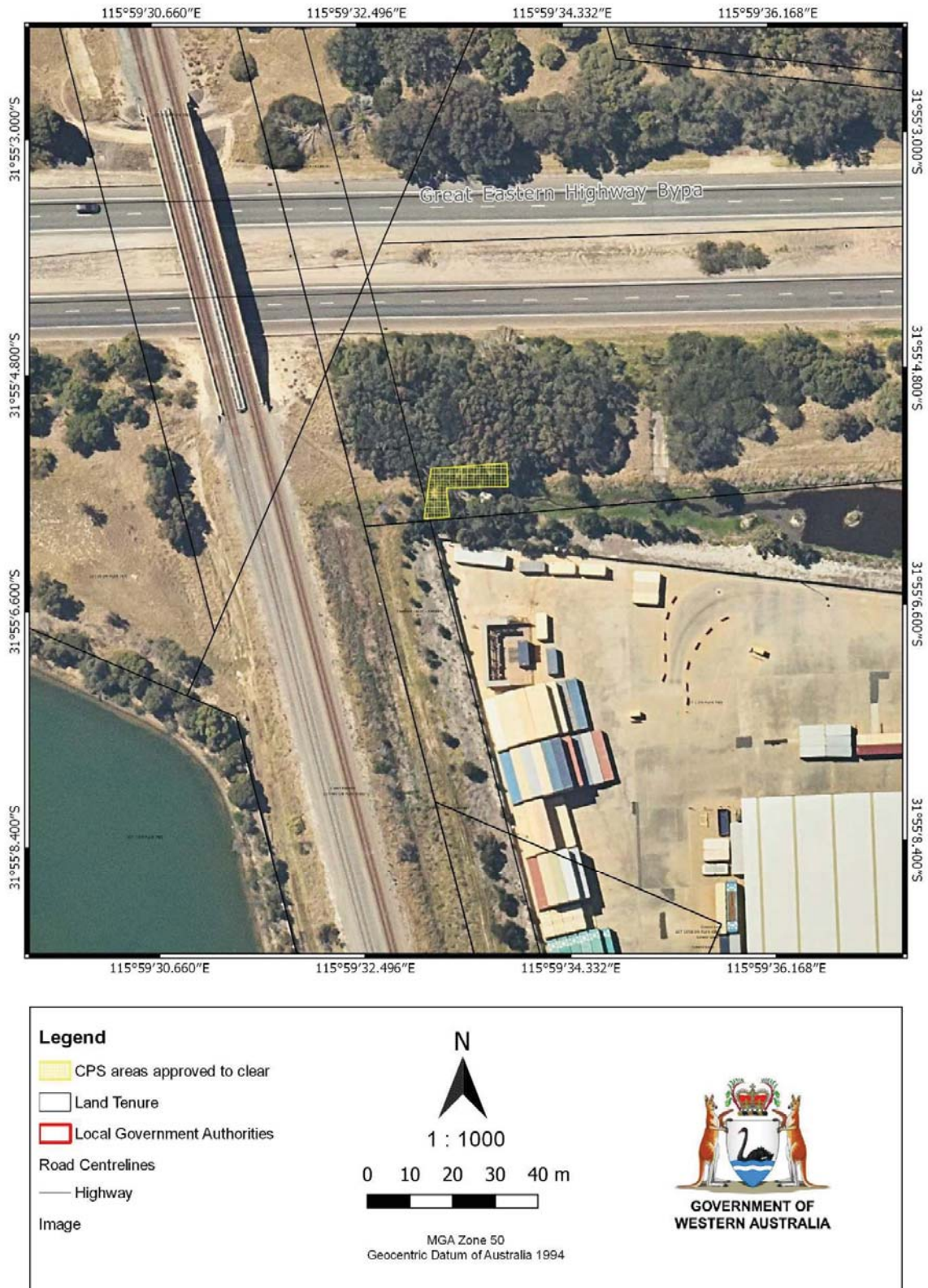


Figure 1).

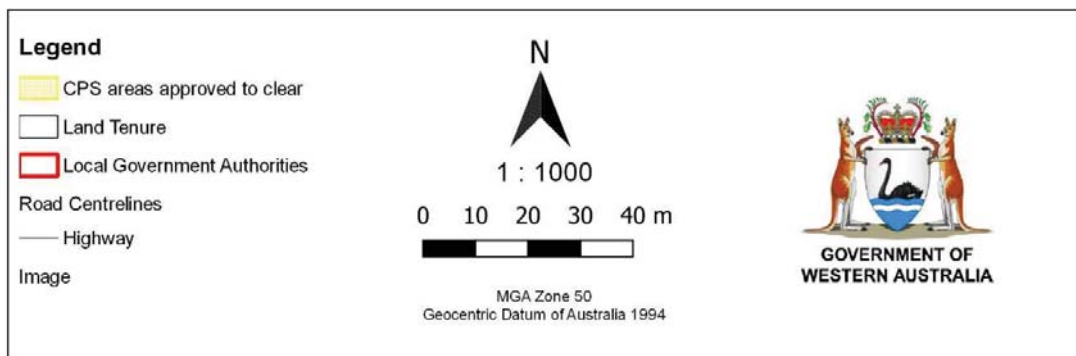


Figure 1: Map of the boundary of the area within which clearing may occur



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 9262/1
Permit type:	Purpose permit
Applicant name:	Perth Airport Pty Ltd
Application received:	14 April 2021
Application area:	0.01 hectares of native vegetation
Purpose of clearing:	Maintenance works on a roadside basin and drainage
Method of clearing:	Mechanical
Property:	Lot 5 on Plan 15303
Location (LGA area/s):	City of Swan
Localities (suburb/s):	Perth Airport

1.2. Description of clearing activities

The vegetation proposed to be cleared is contained within a single contiguous area adjacent to an existing roadside drainage basin (see Figure 1, Section 1.5). The proposed clearing is to allow for maintenance works on the roadside basin and associated drainage, to address the potential flood risk to properties downstream from the Perth Airport stormwater outlet from the Airport North (Precinct 3).

1.3. Decision on application

Decision:	Granted
Decision date:	30 June 2021
Decision area:	0.01 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 14 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix A), 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). The Delegated Officer also took into consideration that the maintenance works on the roadside basin and associated drainage are required to address the potential flood risk to properties downstream from the Perth Airport stormwater outlet from Airport North (Precinct 3) and protect the assets of downstream landowners.

The assessment identified that the proposed clearing has the potential to result in the introduction and spread of weeds and dieback into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its environmental values. However, given the condition of the vegetation, the extent of the proposed clearing, and the

adjacent land uses, the proposed clearing was not considered likely to constitute a significant residual impact to the adjacent vegetation or to any other biological, conservation, or land and water resource value.

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 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 standard avoid and minimise and weed and dieback management conditions.

1.5. Site map

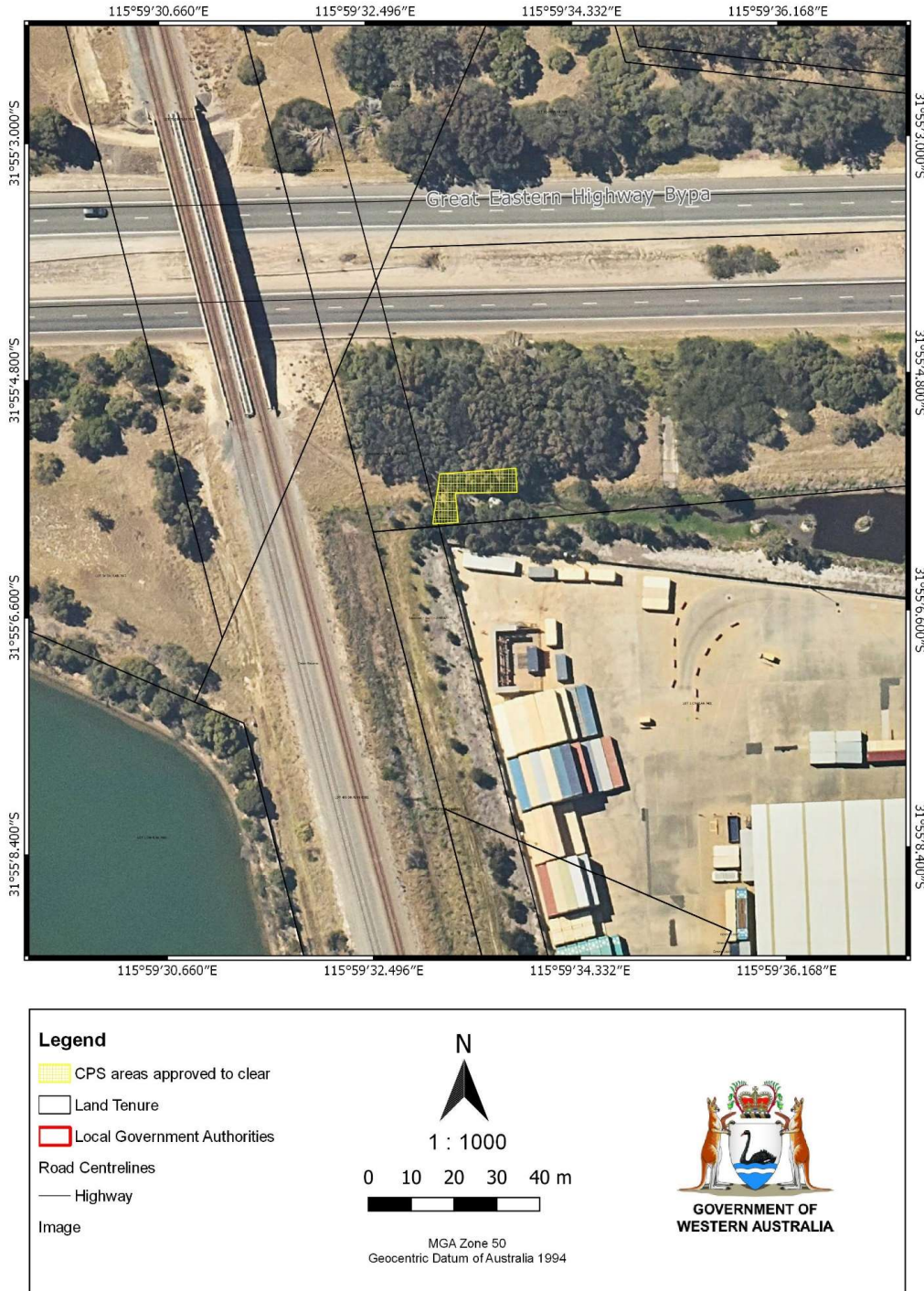


Figure 1 The area cross-hatched yellow indicates the area authorised to be cleared under the granted clearing permit.

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.

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 applicant has advised that the proposed clearing is only to the extent necessary for the maintenance works and includes all clearing required for access and earthworks associated with the reconstruction of the top bank of the detention basin and the installation of a low flow pipe (Perth Airport Pty Ltd, 2021). The applicant has also advised that the clearing area will be clearly demarcated by a surveyor prior to works, to ensure impacts to adjacent vegetation and underground services are avoided (Perth Airport Pty Ltd, 2021).

It is also noted that the maintenance works are necessary to address the potential flood risk to properties downstream from the Perth Airport stormwater outlet from Airport North (Precinct 3) and to protect the assets of downstream landowners (Perth Airport Pty Ltd, 2021). Given the above, 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 (see Appendix B) identified that the impacts of the proposed clearing present a risk to significant remnant vegetation and land and water resources. 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. Significant remnant vegetation - Clearing Principle (e)

Assessment

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). Noting that the current vegetation extent for the mapped Swan Coastal Plain vegetation complex (Southern River Complex) and vegetation extent within the local area fall below the 30 per cent threshold (see Appendix A.2), the application area is considered to be a remnant within an extensively cleared landscape.

However, the Environmental Protection Authority (EPA) recognises the Perth Metropolitan Region to be a constrained area, within which a minimum 10 per cent representation threshold for ecological communities is recommended (EPA, 2008). The current vegetation extent for the Swan Coastal Plain IBRA Bioregion, the Southern River Complex, and the local area are all above the 10 per cent threshold for constrained areas (see Appendix A.2). Further, the proposed clearing area comprises less than 0.0001 per cent of all vegetation remaining in the local area, the Southern River Complex, and the Swan Coastal Plain IBRA Bioregion. It is also noted that the application area comprises 0.1 hectares of *Melaleuca raphiophylla* and *Allocasuarina* sp. woodland in Degraded (Keighery, 1994) condition within an isolated patch of native vegetation adjacent to infrastructure in a highly developed local area, which is likely to be subject to ongoing disturbance and degradation. Noting the above, the proposed clearing is not considered likely to have a significant impact on vegetation extent within the extensively cleared local area.

Further, the application area does not comprise locally or regionally significant assemblages of plants and is not considered likely to contain significant habitat for flora, fauna, or ecological communities, given its composition and isolation from larger remnants of suitable habitat in the local area. Noting that the application area comprises 0.1 hectares on the edge of a 0.4-hectare isolated patch of native vegetation and is adjacent to road and railway reserves and established infrastructure, the application area is not considered to comprise a significant ecological linkage or to contribute significantly to fauna movement in the local area. Given the above, the application area is not considered to be significant as a remnant of native vegetation within the extensively cleared landscape.

Given that the application area forms part of a 0.4-hectare patch of remnant native vegetation, it is acknowledged that the proposed clearing has the potential to facilitate the spread of weeds and dieback to adjacent retained vegetation in the local area. Noting the extent and location of the proposed clearing, a weed and dieback management condition is considered to minimise this risk.

Conclusion

Based on the above assessment, the proposed clearing is unlikely to result in significant impacts to vegetation extent within an extensively cleared area or to significant remnant vegetation but may facilitate the spread of weeds and dieback into adjacent retained vegetation in the local area. For the reasons set out above, it is considered that the impacts of the proposed clearing can be managed to be environmentally acceptable by taking steps to minimise the risk of the introduction and spread of weeds and dieback and does not constitute a significant residual impact.

Conditions

To address the above impacts, the following management measure will be required as a condition on the clearing permit:

- Dieback and weed control, which ensures protocols are put in place to limit the introduction and transportation of dieback- and weed-affected materials.

3.2.2. Land and water resources - Clearing Principles (f) and (i)

Assessment

As the application area lies within a roadside basin and associated drainage line, is directly adjacent to a multiple use dampland, and consists of characteristic riparian species (*Melaleuca raphiophylla*), the vegetation is considered to be growing in, or in association with, an environment associated with a watercourse or wetland. However, it is noted that the proposed clearing will result in the loss of 0.1 hectares of riparian vegetation in Degraded (Keighery, 1994) condition within a 0.4-hectare isolated patch of native vegetation. It is also acknowledged that the application area occurs within the Perth Metropolitan Region and that the roadside basin and adjacent dampland have been highly modified thorough the development of road, railway, residential and industrial infrastructure in the local area. Given the extent and location of the proposed clearing, the condition of the vegetation, and that the application area occurs within a highly disturbed and developed local area, the proposed clearing is not considered likely to result in any significant or long-term impacts to the ecological values of the vegetation communities associated with the roadside drainage line or wetlands associated with the application area.

Noting that the application area includes vegetation within a roadside basin and associated drainage line that is likely to be seasonally inundated, there is the potential for the proposed clearing to initially increase turbidity and sedimentation of a surface water resource within the Swan River System. However, given the extent and location of the proposed clearing and the highly disturbed nature and condition of vegetation within the roadside basin, it is unlikely that the proposed clearing will result in any long-term or off-site impacts to surface water within the Swan River System. In regards to groundwater resources, groundwater salinity within the application area is fairly low and mapped at 500 to 1000 milligrams per litre total dissolved solids. Given the extent of the proposed clearing, that the vegetation is in Degraded (Keighery, 1994) condition, that the application area is mapped at a low risk of land degradation resulting from salinity, and that the local area is highly urbanised and developed, the proposed clearing is not considered likely to cause deterioration in groundwater quality within the Perth Groundwater Area.

Conclusion

Based on the above assessment, the proposed clearing will result in the loss of vegetation growing in, or in association with, an environment associated with a watercourse or wetland but is unlikely to result in any significant or long-term impacts to the ecological values of these riparian communities or to cause deterioration in the quality of surface or underground water. For the reasons set out above, it is considered that significant impacts to land and water resources are unlikely to result from the proposed clearing and that this does not constitute a significant residual impact.

Conditions

No land and water resource management conditions required.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on the Department of Water and Environmental Regulation's website on 7 May 2021, inviting submissions from the public within a 14-day period. No submissions were received in relation to this application.

The City of Swan (the City) advised DWER that it had no objections to the proposed clearing for the purposes of maintenance works on a roadside basin and its associated drainage (City of Swan, 2021). However, the City wished to advise the following:

- The subject site is owned and managed by Main Roads WA,
- The proposed works occur entirely within a Regional Road Reservation for Primary Regional Roads, and
- The proposed works are in close proximity to or within the Parmelia Natural Gas Pipeline easement. It is recommended the operators of the Parmelia Gas Pipeline are contacted to ascertain whether a Risk Management Plan is required to be prepared and approved prior to works commencing (City of Swan, 2021).

The applicant has been advised to liaise with the operators of the Parmelia Gas Pipeline to ensure any operational requirements are met prior to undertaking the proposed clearing and associated maintenance works on the roadside basin its associated drainage.

There are no Aboriginal sites of significance 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	The area proposed to be cleared is part of a 0.4-hectare isolated patch of native vegetation in the intensive land use zone of Western Australia. It is bordered by infrastructure and a railway reserve associated with the Perth Airport North (Precinct 3) to the east, west and south, and is adjacent to the Great Eastern Highway Bypass to the north. The proposed clearing area is a small, isolated remnant in a highly cleared metropolitan landscape. Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 18.3 per cent of the original native vegetation cover.
Ecological linkage	The application area is not mapped within any formal or informal ecological linkages. Noting that the application area comprises 0.1 hectares on the edge of a 0.4-hectare isolated patch of native vegetation adjacent to infrastructure, the application area is not considered to comprise a significant ecological linkage.
Conservation areas	The closest conservation area is Bush Forever Site 386, located 0.46 kilometres west of the application area, separated by infrastructure associated with the Perth Airport North (Precinct 3).
Vegetation description	<p>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of a canopy of <i>Melaleuca raphiophylla</i> and <i>Allocasuarina</i> sp., over a sparse weed understorey (Perth Airport Pty Ltd, 2021). Representative photos are available in Appendix D.</p> <p>This is broadly consistent with the mapped Swan Coastal Plain vegetation type; Southern River Complex, which is described as open woodland of either <i>Corymbia calophylla</i> (marri), <i>Eucalyptus marginata</i> (jarrah), <i>Banksia</i> species with fringing woodland of <i>Eucalyptus rudis</i> (flooded gum) or <i>Melaleuca raphiophylla</i> (swamp paperbark) along creek beds (Heddle et al., 1980).</p>
Vegetation condition	<p>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in Degraded (Keighery, 1994) condition (Perth Airport Pty Ltd, 2021), described as basic vegetation structure severely impacted by disturbance with scope for regeneration but not to a state approaching good condition without intensive management (Keighery, 1994).</p> <p>The full Keighery (1994) condition rating scale is provided in Appendix C. Representative photos are available in Appendix D.</p>
Climate and landform	<p>The proposed clearing area occurs within a Mediterranean climate, with an average annual rainfall of 800 millimetres and an average annual evapotranspiration rate of 800 millimetres. The mean annual maximum temperature is 24.6°C and the mean annual minimum temperature is 12.2°C.</p> <p>The topography of the proposed clearing area is flat, with no slopes or rises.</p>
Soil description and land degradation risk	<p>The soil within the application area is mapped as the EnvGeol S10 Phase (213Pj__S10), described as relatively thin veneer over sandy clay to clayey sand of eolian origin (DPIRD, 2021).</p> <p>The mapped soils have a low risk of land degradation resulting from water erosion, wind erosion, salinity, phosphorus export and flooding. However, the mapped soils are</p>

Characteristic	Details
	susceptible to land degradation resulting from subsurface acidification and waterlogging (Schoknecht et al., 2004).
Waterbodies and hydrogeography	<p>The desktop assessment and aerial imagery indicated that the application area does not transect any natural sources of surface water. However, the application area includes vegetation growing within a roadside basin and associated drainage line and is directly adjacent to a multiple use dampland (seasonally waterlogged basin).</p> <p>The application area is mapped within the Swan River System surface water area and the Perth Groundwater Area, both proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> (the RIWI Act). The application area does not intersect any water resources proclaimed under the <i>Country Areas Water Supply Act 1947</i> (the CAWS Act) or the <i>Metropolitan Water Supply, Sewerage, and Drainage Act 1909</i>.</p>
Flora	<p>The desktop assessment identified that a total of 71 rare flora species have been recorded within the local area, comprising six Priority 1 (P1) flora, six Priority 2 (P2) flora, 29 Priority 3 (P3) flora, 16 Priority 4 (P4) flora, and 14 threatened flora (Western Australian Herbarium, 1998-). None of these existing records occur within the application area, with the closest record being an occurrence of <i>Jacksonia sericea</i> (P4) approximately 0.7 kilometres from the application area.</p> <p>With consideration for the site characteristics set out above, relevant datasets (see Appendix E.1), the adjacent land uses, the habitat preferences of the aforementioned species, and the extent and distribution of existing records, impacts to conservation significant flora species or significant habitat for these species were not considered likely to result from the proposed clearing and did not require further consideration.</p>
Ecological communities	<p>The desktop assessment identified that the closest state-listed threatened ecological community (TEC) is an occurrence of the <i>Banksia attenuata</i> and/or <i>Eucalyptus marginata</i> woodlands of the eastern side of the Swan Coastal Plain (floristic community type 20b as originally described in Gibson et al. (1994)) (SCP20b), which occurs approximately 1.2 kilometres south-west of the application area, separated by road reserves and infrastructure.</p> <p>The desktop assessment identified that the closest mapped state-listed priority ecological community (PEC) is an occurrence of the Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region (Banksia Woodlands) PEC, located approximately 0.3 kilometres north-east of the application area, separated by road reserves and infrastructure.</p>
Fauna	<p>The desktop assessment identified that a total of 49 conservation significant fauna species have been recorded within the local area, including 14 threatened fauna species, 14 priority fauna species, 17 fauna species protected under international agreement, and three other specially protected fauna species (DBCA, 2007-). None of these records occur within the application area, with the closest record being <i>Isoodon fusciventer</i> (quenda) occurring approximately 75 metres from the application area, on the opposite side of the Great Eastern Highway Bypass.</p> <p>With consideration for the site characteristics set out above, the adjacent land uses, the habitat preferences of the aforementioned species and relevant datasets (see Appendix E.1), impacts to conservation significant fauna species or significant habitat for these species were not considered likely to result from the proposed clearing and did not require further consideration.</p>

A.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion**					
Swan Coastal Plain	1,501,221.93	579,813.47	38.62	222,916.97	14.85
Vegetation complex					
Southern River Complex*	58,781.48	10,832.18	18.43	940.36	1.6
Local area					
10-kilometre radius	31,046.77	5,682.84	18.30	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

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 area proposed to be cleared includes 0.1 hectares of degraded <i>Melaleuca raphiophylla</i> and <i>Allocasuarina</i> sp. woodland over weed understorey and is unlikely to contain locally or regionally significant flora, fauna, habitats, or assemblages of plants.</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> The area proposed to be cleared consists of 0.1 hectares of isolated and degraded <i>Melaleuca raphiophylla</i> and <i>Allocasuarina</i> sp. woodland along a roadside drain in the Perth Metropolitan Region and is unlikely to contain significant foraging, roosting, or breeding habitat for conservation significant fauna.</p>	Not likely to be at variance	No
<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> The area proposed to be cleared comprises 0.1 hectares of isolated and degraded <i>Melaleuca raphiophylla</i> and <i>Allocasuarina</i> sp. woodland over a sparse weed understorey along a roadside drain in the Perth Metropolitan Region. Noting the condition of the vegetation and that the application area has been subject to significant disturbance and fragmentation from the existing drainage infrastructure and adjacent land uses, the area proposed to be cleared is unlikely to provide significant habitat</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
for flora species listed under the BC Act or to be necessary for the continued existence of any threatened flora.		
<p><u>Principle (d)</u>: <i>“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.”</i></p> <p><u>Assessment</u>: The area proposed to be cleared includes 0.1 hectares of degraded <i>Melaleuca raphiophylla</i> and <i>Allocasuarina</i> sp. woodland over weed understorey and does not contain species that can indicate a threatened ecological community (TEC) listed under the BC Act. Noting this and the distance and separation from the nearest occurrence of a TEC, the application area is not considered to be necessary for the maintenance of any state-listed TEC.</p>	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
<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>: The extent of the mapped vegetation type and native vegetation in the local area is inconsistent with the national objectives and targets for biodiversity conservation in Australia.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<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>: Given the distance to the nearest conservation area and the isolation of the application area through surrounding infrastructure, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.</p>	Not likely to be 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>: Given the application area lies within a roadside basin and associated drainage line and is directly adjacent to a multiple use dampland, the vegetation is likely to be growing in, or in association with, an environment associated with a watercourse or wetland and the proposed clearing has the potential to impact on- or off-site hydrology and water quality.</p>	At variance	Yes <i>Refer to Section 3.2.2, above.</i>
<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>: The mapped soils are not susceptible to water erosion, wind erosion, salinity, phosphorus export or flooding, but may be prone to land degradation resulting from subsurface acidification and waterlogging. However, it is noted that the application area includes vegetation within a roadside drainage basin that is designed to capture water and experience a level of waterlogging. Given the extent of the application area, its proximity to existing infrastructure, the condition of the vegetation, and that the area will be developed into a reconstructed basin immediately following clearing, the proposed clearing is not considered likely to have an appreciable impact on land degradation.</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<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> Given the application area lies within a roadside basin and associated drainage line and is directly adjacent to a multiple use dampland that may be subject to inundation, the proposed clearing has the potential to result in short-term impacts to surface or ground water quality.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.2, above.</i>
<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> 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. Although the application area is located within a roadside drainage basin that may be subject to inundation, the purpose of the proposed clearing is to improve the functionality of the basin by facilitating drainage and managing flooding to downstream properties. Given the above, the proposed clearing is unlikely to cause, or exacerbate, the 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.
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 1. Looking south-west into clearing area, basin apron and low flow pipe to rail reserve (Perth Airport Pty Ltd, 2021).



Figure 2. Looking east into clearing area, basin spillway to rail reserve (Perth Airport Pty Ltd, 2021).



Figure 3. Looking north into clearing area, basin inlet from Chevron storage site (Perth Airport 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)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- CAWSA Part 2A Clearing Control Catchments (DWER-004)
- Consanguineous Wetlands Suites (DBCA-020)
- 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)
- Geomorphic Wetlands, Swan Coastal Plain (DBCA-019)
- 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
- Vegetation Complexes - Swan Coastal Plain (DBCA-046)

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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