GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 10753/1
Permit Holder:	City of Swan
Duration of Permit:	From 2 April 2025 to 2 April 2030

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 realigning culverts.

2. Land on which clearing is to be done

Lot 501 on Deposited Plan 416416, Caversham

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	(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 2020 (GDA2020), 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); (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 2 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 *Environmental Protection Act 1986*.
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.
dieback	means the effect of *Phytophthora* species on native vegetation.
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	*Environmental Protection Act 1986* (WA)
fill	means material used to increase the ground level, or to fill a depression.
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 *Biosecurity and Agriculture Management Act 2007*; 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
Manager
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

10 March 2025

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

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 10753/1
Permit type:	Purpose permit
Applicant name:	City of Swan
Application received:	9 September 2024
Application area:	0.01 hectares of native vegetation
Purpose of clearing:	Realigning culverts
Method of clearing:	Cutting
Property:	Lot 501 on Deposited Plan 416416
Location (LGA area/s):	City of Swan
Localities (suburb/s):	Caversham

1.2. Description of clearing activities

The vegetation proposed to be cleared comprises four juvenile *Eucalyptus rudis* trees within 0.01 ha of weed infested understory area (see Figure 1, Section 1.5). The purpose of the proposed clearing is to realign culverts.

The proposed work includes craning of three crates of lining in front of the culverts. Each lining will be pulled through the culverts through cured infrared lighting and hardened (City of Swan, 2024a). Back in March 2022, city has worked on temporary measures to control the erosion from corrugated steel culverts to ensure the ongoing functionality of the culverts. The City's Project Management Team is tasked this project to have these culverts relined for the future functionality of the culverts (City of Swan, 2024b).

1.3. Decision on application

Decision:	Granted
Decision date:	10 March 2025
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 21 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see 0), relevant datasets (see Appendix E.1), the supporting photographs provided by the applicant (see 0), the clearing principles set out in Schedule 5 of the EP Act (see 0), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3).

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 and
- 0.01-hectare loss of riparian vegetation.

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 lead to have long-term adverse impacts on environmental values and can be minimised and managed to unlikely lead to an unacceptable risk to environmental values.

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

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

1.5. Site map

Figure 1 Map of the application area

The area crosshatched 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.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC 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

Evidence was submitted by the applicant, demonstrating that the proposed clearing was chosen because it had the least potential damage to the surrounding vegetation.

The assessment identified that the proposed clearing occurs within the bush forever site 305 and photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of four *Eucalyptus rudis* trees with understory weed infestation. Applicant's contractor has consulted the applicant to select the location with least potential damage to the surrounding vegetation by considering four different locations as represented in the excerpt from the avoidance and mitigation measures in the application form (see Appendix D). Area 4 has the least potential damage by providing good crane access and having minimum damage to the surrounding vegetation (City of Swan, 2024a).

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 0A) 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, conservation areas, 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). 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 mapped vegetation community over the application area is the Southern River Complex, which is described as Open woodland of *Corymbia calophylla* (Marri) - *Eucalyptus marginata* (Jarrah) - Banksia species with fringing woodland of *Eucalyptus rudis* (Flooded Gum) - *Melaleuca rhaphiophylla* (Swamp Paperbark) along creek beds.

(Government of Western Australia, 2019). This community is highly cleared, with 18.43 per cent vegetation remaining (Table A.2.).

The local area (10-kilometre radius from the centre of the area proposed to be cleared) has been extensively cleared with 14.84 per cent native vegetation remaining. However, it is consistent with the 10 per cent threshold level within the Perth Metropolitan region.

As the proposed clearing comprises of four juvenile *Eucalyptus rudis* trees with understory weed infestation adjacent a creek bed, it is not considered to contain significant environmental values. In addition, the proposed trees are not considered as suitable roosting or nesting habits for black cockatoos., as they are juvenile flooded gum trees.

The application area occurs within the Perth Regional Ecological linkage. However, the proposed clearing is not likely to sever this linkage, as only four juvenile trees will be cleared and vegetation will be allowed to grow once the culvert relining works are completed.

Conclusion

Noting the above, the proposed clearing is not considered to be significant as a remnant of native vegetation in an extensively cleared landscape.

Conditions

• no conditions required

3.2.2. Environmental value (conservation area) - Clearing Principle (h)

Assessment

The proposed clearing area is located within Bush Forever site 305. The proposed clearing will impact on the environmental values of this Bush Forever site through the direct removal of vegetation and through the potential introduction/spread of weeds. Weed and dieback management practices will assist in minimising these impacts and noting the extent of the proposed clearing and the purpose of the clearing to improve the function of the culvert, the proposed clearing is not likely to have a significant impact on Bush Forever site 305.

Conclusion

Based on the above assessment, the proposed clearing is unlikely to result in a significant impact on environmental values within Bush Forever site. However the proposed clearing has the potential to introduce weeds and pathogens into the area, which could impact on the quality of the adjacent vegetation and its habitat values. To address the above impacts, the following management measures will be required as conditions on the clearing permit.

Condition

- avoid and minimise clearing, to minimise the direct impacts to native vegetation
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback

3.2.3. Environmental value (water resources) - Clearing Principle (f)

The assessment noted that the proposed clearing of four *Eucalyptus rudis* trees is right next to the Bennett Brook minor non perennial watercourse. *Eucalyptus rudis* is considered as riparian vegetation, which is growing in, or in association with, an environment associated with a watercourse or wetland. Noting that the clearing is limited to four juvenile *Eucalyptus rudis* trees with a weed infested understory, and noting the purpose of the clearing is to reline an existing culvert to assist with water flow, impacts on the mapped watercourse from the proposed clearing are not likely to be significant.

However the proposed clearing has the potential to introduce weeds and pathogens into the area, which could impact on the quality of the vegetation associated with the watercourse and its habitat values. To address the above impacts, the following management measures will be required as conditions on the clearing permit:

Condition

- avoid and minimise clearing, to minimise the direct impacts to native vegetation
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback

3.3. Relevant planning instruments and other matters

City of Swan has been issued a permit to obstruct or interfere (s17) granted under section 17 of the *Rights in Water and Irrigation Act 1914* for the proposed work.

The department consulted the Department of Planning, Lands and Heritage (DPLH) on potential environmental impacts on Bush Forever site 305. No comments were received to date.

Under Clause 5.1.2.1 (i) (e) of SPP 2.8, proposals should support a general presumption against the clearing of regionally significant bushland or other degrading activities, except where a proposal or decision is consistent with the overall purpose and intent of the existing Crown reserve or can be reasonably justified with regard to wider environmental, social, economic or recreational needs, and all reasonable alternatives have been considered in order to avoid or minimise any direct loss of regionally significant bushland, and reasonable offset strategies are secured to offset any loss of regionally significant bushland, where appropriate and practical (WAPC, 2010). The Delegated Officer had regard for the extent of the proposed clearing and the avoid and minimisation measures proposed by the applicant (as outlined above) and determined that the proposed clearing of four juvenile flooded gum trees to improve the functionality of an existing culvert is not likely to have a significant environmental impact on Bush Forever site 305.

Lot 501 on Deposited Plan 416416 is owned by the Western Australian Planning Commission (WAPC) and WAPC has given written consent for City of Swan to proceed with the proposed work (City of Swan, 2024a).Further, Proposed work area is managed by Whiteman Park on behalf of the WAPC, as such Whiteman Park Management has given the written consent to proceed with the Proposed work (City of Swan, 2024b).

Several 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	The area proposed to be cleared is a part of a Bush Forever site vegetation in the intensive land use zone of Western Australia. It is adjacent to a Threaten Ecological Community Banksia Woodlands of the Swan Coastal Plain ecological community. Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 14.85 per cent of the original native vegetation cover.
Ecological linkage	The application area is within formally mapped Gnangara Ecological Linkage and Perth Regional Ecological Linkage.
Conservation areas	The application area is within Bush Forever site 305.
Vegetation description	Photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of four *Eucalyptus rudis* trees with understory weed infestation. Representative photos are available in 0. This is consistent with the mapped vegetation type of Southern River Complex, which is described as Open woodland of *Corymbia calophylla* (Marri) - *Eucalyptus marginata* (Jarrah) - Banksia species with fringing woodland of *Eucalyptus rudis* (Flooded Gum) - *Melaleuca rhaphiophylla* (Swamp Paperbark) along creek beds. The mapped vegetation type retains approximately 18.43 per cent of the original extent (Government of Western Australia, 2019).
Vegetation condition	Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in good (Keighery, 1994) condition, described as: • 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. The full Keighery (1994) condition rating scale is provided in 0. Representative photos are available in 0.
Climate and landform	The southwest of Western Australia has a mediterranean climate with mild wet winters and hot dry summers The highest mean maximum temperature is in February at 36.3°C, the lowest is in July at 16.2°C for 2024. The average annual rainfall is 584.6 mm for year 2022.
Soil description and Land degradation risk	The soil is mapped as VC - Valley complex (Bassendean) (212Bs__VC), described as variable soils associated with drainage lines. The mapped soil type has a high risk of land degradation resulting from water erosion, surface acidification, flooding, water logging and phosphorus export, but has a moderate to low risk of land degradation resulting from wind erosion, salinity and water repellence risk (DPIRD, 2019).
Waterbodies and hydrogeography	The desktop assessment and aerial imagery indicated that application area is right next to a minor, non-perennial river/watercourse called Bennett Brook.

Characteristic	Details
	The application area falls within the Swan River System Surface Water Area and the Swan Groundwater Area as proclaimed under the *Rights in Water and Irrigation Act 1914* (RIWI Act). The application area is not subject to an area protected under the *Country Water Supply Act 1917* or a Public Drinking water source area. The groundwater salinity level (Total Dissolved Solids) is mapped as 500-1000 milligrams per litter.
Flora	The desktop assessment identified that a total of 65 threatened or priority flora species have been recorded within the local area, comprising 8 Priority 1 (P1) flora, 8 Priority 2 (P2) flora, 26 Priority 3 (P3) flora, 13 Priority 4 (P4) flora and 10 threatened flora (Western Australian Herbarium, 1998-). None of these existing records occur within the application area, with the closest record being an occurrence of *Carex tereticaulis* (P3) approximately 890 metres from the application area.
Ecological communities	The desktop assessment identified that the closest state-listed threatened ecological community (TEC) is an occurrence of *Banksia attenuata* woodlands over species rich dense shrublands (floristic community type 20a as originally described in Gibson et al. 1994) TEC, approximately 2.48 kilometres from the application area. The closest priority ecological community (PEC) is an occurrence of the Banksia Woodlands of the Swan Coastal Plain IBRA Region, adjacent to the application area.
Fauna	The desktop assessment identified that a total of 48 threatened or priority fauna species have been recorded within the local area, including 16 threatened fauna species, 13 priority fauna species, 16 fauna species protected under international agreement, one other specially protected fauna species and two Specially protected – conservation dependant (DBCA, 2007-). None of these records occur within the application area, with the closest record being that of a quenda (*Isoodon fusciventer*) occurring approximately 20 metres from the application area. The application area is mapped with the distribution zone of all three species of black cockatoos.

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	1.60
Local area					
10km radius	30804.30	4576.92	14.85	-	-

*Government of Western Australia (2019a)

A.3. Fauna analysis table

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Zanda latirostris	EN	Y	Y	0.20	1446	N/A
Zanda baudinii	EN	Y	Y	2.45	34	N/A
Calyptorhynchus banksii naso	VU	Y	Y	0.34	82	N/A
Isoodon fusciventer	P4	Y	Y	0.02	662	N/A

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

A.4. Ecological community analysis table

Community name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Banksia Woodlands of the Swan Coastal Plain ecological community	P3	Y	Y	Y	0.001	574	N/A

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

A.5. Land degradation risk table

Land Qualities summary - % Map Unit

.	Land Quality	Most limiting	.	.	Least limiting
1	pH				
1	acidification risk	presently acid: 80%	high: 15%	moderate: 0%	low: 5%
1	0-10 acidity	very strongly acid: 0%	strongly acid: 20%		
1	0-10 alkalinity	strongly alkaline: 0%	alkaline: 0%		
1	50-80 acidity	very strongly acid: 0%	strongly acid: 0%		
1	50-80 alkalinity	strongly alkaline: 0%	alkaline: 0%		
2	SALINITY				
2	surface salinity	extreme: 0%	high: 0%	moderate: 0%	slight to nil: 100%
2	salinity risk	presently saline: 0%	high: 0%	moderate: 0%	nil or partial: 100%
3	SOME PLANT LIMITS				
3	sub surface compact	high: 30%	moderate: 70%	low: 0%	
3	rooting depth	very shallow: 0%	shallow: 15%	moderately shallow: 40%	very deep to mod: 45%
3	water repel	high: 10%	moderate: 0%	low: 0%	nil: 90%
3	water storage	extremely low: 25%	very low: 0%	low: 0%	high to moderate: 75%
4	EROSION				
4	water erosion	extreme: 0%	very high: 90%	high: 0%	nil to moderate: 10%
4	wind erosion	extreme: 0%	very high: 0%	high: 10%	nil to moderate: 90%
4	flood risk (water flow)	high: 90%	moderate: 0%	low: 0%	very low: 10%
4	instability	high: 0%	moderate: 0%	low: 0%	nil to very low: 100%
5	WATER & DRAINAGE				
5	waterlogging	very high: 40%	high: 50%	moderate: 0%	nil to low: 10%
5	site drainage	very poor: 40%	poor: 50%	moderate: 0%	high: 10%
5	phosphorus export	extreme: 90%	very high: 0%	high: 10%	low to moderate: 0%
6	OTHER QUALITIES				
6	excavation ease	very low: 0%	low: 40%	moderate: 50%	high: 10%
6	microbial purification	very low: 90%	low: 10%	moderate: 0%	high: 0%

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The area proposed to be cleared does not contain locally or regionally significant flora, fauna, habitats and assemblages of plants. The proposed clearing contains four juvenile *Eucalyptus rudis* trees with understory weed infestation. These juvenile are unlikely to be important as roosting or nesting habitats for black cockatoos. The application area is adjacent to the mapped Banksia Woodlands of the Swan Coastal Plain Ecological Community (priority 3). However, the proposed clearing does not represent this community.	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (b): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."* Assessment: The area proposed to be cleared includes four juvenile *Eucalyptus rudis* trees with understory weed infestation. *Eucalyptus rudis* provides roosting and nesting habitats for black cockatoos. It is not considered as an important foraging resource for all three species of black cockatoos (DBCA,2024). Given that the proposed trees are juvenile, it is unlikely to provide roosting and nesting habitats for threatened black cockatoos. There are some close records of *Isoodon fusciventer* closer to the application area. However, noting the small extent of clearing it is unlikely to be significant. The area proposed to be cleared is unlikely to contain significant habitats for conservation significant fauna species.	Not likely to be at variance	No
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The are proposed to be cleared is limited to four *Eucalyptus rudis* trees and therefore, is unlikely to contain habitats for flora species listed under the BC Act.	Not at variance	No
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."* Assessment: The area proposed to be cleared does not contain species that can indicate a threatened ecological community. The application area is right adjacent to the mapped occurrence of the Banksia woodlands of the Swan Coastal plain ecological community. However, the application area consisting of four *Eucalyptus rudis* trees is not representative of this ecological community and is unlikely to be significant for the maintenance of this ecological community.	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
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."* Assessment: The extent of native vegetation in the local area is less than the 30 per cent threshold set by the national objectives and targets for biodiversity conservation in Australia. However, it is within the Metropolitan Region Scheme which is subject to the EPA modified objective of 10 per cent vegetation retention within a constrained area. The local area retains 14 per cent vegetation. The vegetation proposed to be cleared is within the Perth Regional ecological linkage area. However, the proposed clearing is unlikely to be significant as a part of this linkage noting the extent of the clearing.	Not likely to be at variance	Yes *Refer to Section 3.2.1, above.*
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."* Assessment: Although the proposed clearing occurs within a Bush Forever area, (Bush Forever site 305). noting that the proposed clearing is limited to four juvenile *Eucalyptus rudis* trees with understory weed infestation, it is unlikely to have a significant impact on the environmental values within the Bush Forever site.	Not likely to be at variance	Yes *Refer to Section 3.2.2, above.*
Environmental value: land and water resources		

Assessment against the clearing principles	Variance level	Is further consideration required?
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."* Assessment: A minor non perennial watercourse (Bennett Brook) is recorded within 15 metres of the application area. Noting the small extent of the proposed clearing, it is unlikely to impact on- or off-site hydrology and water quality.	At variance	Yes *Refer to Section 3.2.3, above.*
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils are highly susceptible to water erosion, water logging, surface acidification and Phosphorus export risk. Noting the small extent of the application area, the proposed clearing is not likely to have an appreciable impact on land degradation.	Not likely to be at variance	No
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."* Assessment: Given that the small extent of clearing within weed infested understory area, the proposed clearing is unlikely to impact surface or ground water quality. Any impacts during the culvert realignment works are likely to be short term.	Not likely to be at variance	No
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: The mapped soil and topographic contours in the surrounding area do indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding. Noting the purpose of the clearing is to reline an existing culvert to maintain existing waterflow, the proposed clearing is unlikely to contribute to waterlogging or flooding.	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 and other supporting information

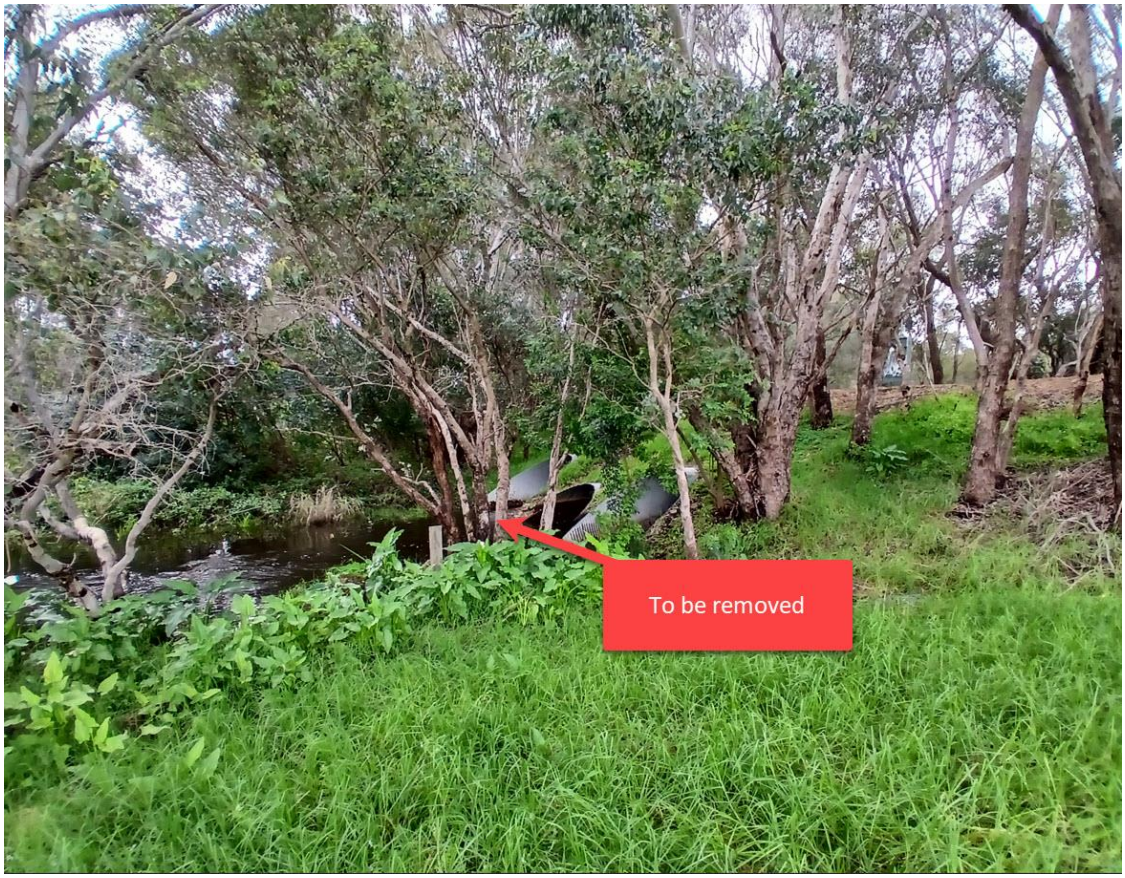

Figure 2: Representative photographs of the vegetation to be cleared

Provide the avoidance details (e.g. retention of vegetation on property)	Method: To crane in 3 x Crates of Lining in front of the culvert as see in figure 2: Lining Box Size. Each Lining is pulled through the culverts when cured with infrared lighting and hardened.  **Recommendation**; After consultation with Clean flow PTY (contractor) on site the path which has the least potential damage to the surrounding vegetation and tree is to Area 4: South east (Ref Figure 1: Smallbrook Markup) and to trim/remove the following trees,

please refer to Figure 3: Recommended Trees to be removed.

Area 4 (recommended)

- Good Crane Access
- Minium Damage to Vegetation and trees

Area 1 (not recommended)

- Not Recommended
- Poor Access for Crane
- Too Much Vegetation and trees which will need to be removed

Area 2 (Not Recommended)

- Not Recommended
- Poor Access for Crane
- Too Much Vegetation and trees which will need to be removed

	 Area 3 (not recommended) - Poor Access for Crane - Too Much Vegetation and trees which will need to be removed
Provide the mitigation details (e.g. management of weed spread, rehabilitation)	

Figure 3: Excerpts from avoidance and mitigation

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
- Wheatbelt Wetlands Stage 1 (DBCA-021)

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)

E.2. References

City of Swan (2024) *Clearing permit application CPS 10753/1*, received 9 September 2024 (DWER Ref: DWERDT1003289).

City of Swan (2024b) *Clearing permit application CPS 10753/1*, received 10 December 2024 (DWER Ref: DWERDT1048225).

Commonwealth of Australia (2001) *National Objectives and Targets for Biodiversity Conservation 2001-2005*, Canberra.

Department of Environment Regulation (DER) (2013). *A guide to the assessment of applications to clear native vegetation*. Perth. Available from: https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf.

Department of Primary Industries and Regional Development (DPIRD) (2019). *NRInfo Digital Mapping. Department of Primary Industries and Regional Development.* Government of Western Australia. URL: https://maps.agric.wa.gov.au/nrm-info/ (accessed 10 February 2025).

Department of Water and Environmental Regulation (DWER) (2019). *Procedure: Native vegetation clearing permits*. Joondalup. Available from: https://dwer.wa.gov.au/sites/default/files/Procedure_Native_vegetation_clearing_permits_v1.PDF.

Department of Water and Environmental Regulation (DWER) (Regulatory Services – Water) (2024) *Rights in Water and Irrigation Act 1914 advice for clearing permit application CPS 10753/1*, received 13 December 2024 (DWER Ref: DWERDT1078973).

Government of Western Australia (2019) *2018 South West Vegetation Complex Statistics. Current as of March 2019*. WA Department of Biodiversity, Conservation and Attractions, Perth, https://catalogue.data.wa.gov.au/dataset/dbca

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

Mattiske, E.M. and Havel, J.J. (1998) *Vegetation Complexes of the South-west Forest Region of Western Australia.* Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.

Molloy, S., Wood, J., Hall, S., Wallrodt, S. and Whisson, G. (2009) *South West Regional Ecological Linkages Technical Report*, Western Australian Local Government Association and Department of Environment and Conservation, Perth.

Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68) *Atlas of Australian Soils*, Sheets 1 to 10, with explanatory data. CSIRO and Melbourne University Press: Melbourne.

Western Australian Planning Commission (WAPC) (2010). *State Planning Policy 2.8 Bushland Policy for the Perth Metropolitan Region.* prepared under Section 26 of the *Planning and Development Act 2005.* Available from: State planning policy 2.8 bushland policy for the Perth Metropolitan region