



# Amendment Notice 1

<b>Licence Number</b>	L6944/1997/13
<b>Licence Holder</b>	Shire of Carnamah
<b>Registered business address</b>	PO Box 80 CARNAMAH WA 6517
<b>File Number:</b>	DER2014/001475
<b>Prescribed Premises</b>	Category 64: Putrescible landfill (Class II)
<b>Premises</b>	Carnamah Waste Disposal Site Lot 100 on Deposited Plan 407451 Certificate of Title Volume 2909 Folio 286 Bunjil-Carnamah Road
<b>Date of Amendment</b>	12 July 2018

## Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environment Regulation (DWER) has amended the above Licence in accordance with section 59 of the *Environmental Protection Act 1986* as set out in this Amendment Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B(9) of the EP Act and follows.

Date signed: 12 July 2018

**Stephen Checker**  
**MANAGER WASTE INDUSTRIES**

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

## Definitions and interpretation

### Definitions

In this Amendment Notice, the terms in Table 1 have the meanings defined.

**Table 1: Definitions**

Term	Definition
Annual period	01 January to 31 December each year
Category/ Categories/ Cat.	categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
DWER	Department of Water and Environment Regulation
Delegated Officer	an officer under section 20 of the EP Act
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of and during this Review
Licence Holder	Shire of Carnamah
Noise Regulations	<i>Environmental Protection (Noise) Regulations 1997 (WA)</i>
Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report.
Risk Event	as described in <i>Guidance Statement: Risk Assessment</i>

## Amendment Notice

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is given under section 59B(9) of the EP Act.

This notice is limited only to an amendment for Category 64 landfill extension and construction of new landfill trenches. No changes to the aspects of the original Licence relating to Category 64 have been requested by the Licence Holder. The Licence Holder has requested in the Amendment Application the concurrent assessment of Clearing and the Clearing assessment has been incorporated into this Amendment Notice.

The following DWER guidance statements have informed the decision made on this amendment:

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Setting Conditions (October 2015)*
- *Guidance Statement: Land Use Planning (February 2017)*
- *Guidance Statement: Licence Duration (August 2016)*
- *Guidance Statement: Decision Making (November 2016)*
- *Guidance Statement: Risk Assessment (November 2016)*
- *Guidance Statement: Environmental Siting (November 2016)*

## Amendment description

The Licence Holder currently operates the Carnamah landfill site under Existing Licence L6944/1997/13 for the Category 64 Class II unlined putrescible landfill and currently accepts approximately 500 tonnes of putrescible waste per annual period. The landfill site has been operating for about 30 years and a neighbouring property owner has provided land adjacent to the current landfill to allow for the landfill extension and the land tenure has been vested in the Shire. The Licence Holder has now applied for a licence amendment to incorporate the whole premises boundary and extend the operation of the landfill to meet future waste disposal requirements.

No changes are proposed to existing landfilling operations as part of the landfill extension. Current landfill management incorporates the use of a trench for waste disposal with overburden and topsoil stockpiled on site for rehabilitation. Rehabilitation is proposed to occur as soon as the trench is full of waste. Trench depth is approximately 6m below ground level, giving an approximate 25m separation from the base of the trench to the highest known water table.

The landfill is unmanned and fenced. No machinery or infrastructure is currently located on site. Machinery reports to the landfill from the Shire depot in Carnamah Townsite.. The Licence Holder is not proposing to construct any additional infrastructure or locate any machinery at the landfill as part of this amendment application. Civil works such as constructing new access roads will be constructed at the landfill as required parallel to the construction of new trenches over time.

Clearing of native vegetation is required to allow construction and operation of the new trenches and associated landfill activities over time. The Licence Holder has applied for clearing approval as part of the licence amendment application.

## Amendment history

Table 3 provides the amendment history for L6944/1997/13.

**Table 3:** Licence amendments

Instrument	Issued	Amendment
L6944/1997/13	29/04/2016	Extend licence expiry to 21 August 2028
L6944/1997/13	12/07/2018	Amend premises boundary to extend landfill and allow construction of new landfill trenches.

## Location and receptors

Table 4 below lists the relevant sensitive land uses in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

**Table 4: Receptors and distance from activity boundary**

Residential and sensitive premises	Distance from Prescribed Premises
Residential premises	330m north west
Residential premises	650m north west
Residential premises	850m north east
Carnamah Townsite residential premises	1000m east

Table 5 below lists the relevant environmental receptors in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

**Table 5: Environmental receptors and distance from activity boundary**

Environmental receptors	Distance from Prescribed Premises
Ephemeral creek	550m south west
Ephemeral creek	1100m north
Ephemeral creek	750m north west

## Risk assessment

Tables 6 and 7 below describe the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. Both tables identify whether the emissions present a material risk to public health or the environment, requiring regulatory controls.

**Table 6: Risk assessment for proposed amendments during construction**

Source/Activities		Risk Event				Consequence rating	Likelihood rating	Risk	Reasoning
		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts				
Cat 64 Class II unlined putrescible landfill	Construction new landfill trench	Dust: associated with construction of trench	Residential premises 330m north west	Air / wind dispersion	Health and amenity impacts	Slight	Unlikely	Low	The Delegated Officer has considered the separation distance between the source and receptors as a guide to inform the risk of dust emissions as low.  Dust can be adequately regulated by section 49 of the EP Act.
		Noise: associated with construction of trench	Residential premises 330m north west	Air / wind dispersion	Amenity impacts causing nuisance	Slight	Rare	Low	The Delegated Officer has considered the separation distance between the source and receptors as a guide to inform the risk of noise emissions as low.  Noise can be adequately regulated by the Noise Regulations.

**Table 7: Risk assessment for proposed amendments during operation**

Risk Event					Consequence rating	Likelihood rating	Risk	Reasoning	
Source/Activities	Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts					
Cat 64 Class II unlined putrescible landfill	Operation new landfill trench	Dust: associated with delivery, disposal and compaction of putrescible waste	Residential premises 330m north west	Air / wind dispersion	Health and amenity impacts	Slight	Unlikely	Low	<p>The Delegated Officer has considered the separation distance between the source and receptors as a guide to inform the risk of dust emissions as low.</p> <p>Dust can be adequately regulated by section 49 of the EP Act. No additional conditions are required on the licence as a result of the amendment application.</p>
		Noise: associated with delivery, disposal and compaction of putrescible waste	Residential premises 330m north west	Air / wind dispersion	Amenity impacts causing nuisance	Slight	Rare	Low	<p>The Delegated Officer has considered the separation distance between the source and receptors as a guide to inform the risk of noise emissions as low.</p> <p>Noise can be adequately regulated by the Noise Regulations.</p>
		Leachate: decomposing of putrescible waste	Groundwater with beneficial use (Groundwater Dependent Ecosystem)	Seepage of leachate	Adverse impacts to the health and survival of vegetation dependent upon groundwater	Slight	Rare	Low	<p>The Licence Holder disposes less than 500 tonnes of putrescible waste per annual period and depth to groundwater is greater than 30m below the maximum depth of the trench (the maximum depth of the trench is 6m below ground level).</p> <p>The Delegated Officer has considered the separation distance between the source and receptors as a guide to inform the risk of leachate emissions as low.</p>

Licence: L6945/1997/13  
File Number: DER2014/001475

									No additional conditions are required on the licence as a result of the amendment application.
		Odour: associated with disposal and decomposing of putrescible waste	Residential premises 330m north west	Air / wind dispersion	Health and amenity impacts	Slight	Rare	Low	<p>The Delegated Officer has considered the separation distance between the source and receptors as a guide to inform the risk of odour emissions as low.</p> <p>Odour can be adequately regulated by section 49 of the EP Act. No additional conditions are required on the licence as a result of the amendment application.</p>
		Stormwater: contamination with leachate (metals, heavy metals and organics) associated with disposal and decomposing of putrescible waste	Ephemeral Creeks 550m south west, 750m and 1100m north west	Overflow into surface water creeks / rivers and infiltration into groundwater	Adverse impacts to the health and survival of vegetation, flora and fauna dependent upon surface water and groundwater	N/A	N/A	N/A	<p>No receptor present.</p> <p>Contaminated stormwater is not expected to overflow from the trench as it is 6m deep.</p> <p>The Delegated Officer has considered the separation distance between the source and receptors as a guide to inform the risk of contaminated stormwater emissions as not foreseeable.</p> <p>No additional conditions are required on the licence as a result of the amendment application.</p>

## Decision

The Delegated Officer has determined that an amendment be made to the Licence to extend the landfill premises and authorise construction and operation of new landfill trenches.

The Delegated Officer considers the amended conditions as appropriate and in line with other premises as assessed across the State, and in accordance with DWER's regulatory approach.

The Premises map has been amended to incorporate the new premises boundary.

Licence condition G1(a) and G1(b) have been included to detail the approved work requirements for each new putrescible landfill trench at the Premises resulting from the amendment application.

Licence condition G7(b) (vi) has been amended to ensure that a updated map identifying each new trench constructed during the annual period is submitted to DWER in the Annual Environmental Report after construction of a new trench has been completed.

Licence conditions C1 and C2 relating to the clearing of native vegetation have been included. DWER's assessment and decision making in relation to this matter is detailed in the assessment report in Appendix 3. Definitions relating to these conditions have also been included.

The Delegated Officer has considered DWER's *Guidance Statement: Regulatory Principles*, *Guidance Statement: Setting Conditions* and *Guidance Statement: Risk Assessment* in granting this amendment, and does not consider that this amendment will impact the risk profile of the premises, which is currently considered as Low.

## Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 18 June 2018. The Licence Holder provided advice on 9 July 2018 that they had no comment.

## Amendment

### 1. The 'Definitions' section of the Licence is amended by the insertion of the following terms:

**CEO** means the Chief Executive Officer of the Department responsible for administering the *Environmental Protection Act 1986*;

**direct seeding** means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

**environmental specialist:** means a person who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Licence, or who is approved by the CEO as a suitable environmental specialist.

**local provenance** means native vegetation seeds and propagating material from natural sources within 50 kilometres and the same Interim Biogeographic Regionalisation for Australia (IBRA) subregion of the area cleared.

**optimal time** means the period from April to May for undertaking *direct seeding*, and the period from May to June for undertaking *planting*;

**planting** means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

**regenerate/ed/ion** means re-establishment of vegetation from in situ seed banks and propagating material (such as lignotubers, bulbs, rhizomes) contained either within the topsoil or seed-bearing *mulch*;

**rehabilitate/ed/ion** means actively managing an area containing native vegetation in order to improve the ecological function of that area;

**revegetate/ed/ion** means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as natural *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area;

**2. Condition G1(a) of the licence is amended by the insertion of the condition below:**

- G1(a) The License Holder must construct the works for the infrastructure and equipment:
- (a) specified in Column 1,
  - (b) to the requirements specified in Column 2, detailed in Table 1.1.1.

**Table 1.1.1 Work requirements for Premises**

Column 1	Column 2
Site Infrastructure	Requirements
New Putrescible Landfill Trench	The License Holder must ensure that the Landfill Trench: <ol style="list-style-type: none"> <li>1. is not constructed within 35m of the premises boundary;</li> <li>2. is not more than 6m in depth from ground level;</li> <li>3. is bunded to mitigate inflow of uncontaminated stormwater into the trench; and</li> <li>4. ensure that the overburden and topsoil excavated during construction is stockpiled adjacent to the new trench so that is can be used in rehabilitation of the trench once the trench is completely full.</li> </ol>

**3. Condition G1(b) of the licence is amended by the insertion of the condition below:**

- G1(b) The License Holder must not depart from the requirements in Column 2 of Table 1.1.1 except;
- (a) where such departure is minor in nature and does not materially change or affect the infrastructure; or
  - (b) where such departure improves the functionality of the infrastructure and reduces the risk to public health and the environment; and
  - (c) and all other conditions in this Licence are still satisfied.

**4. Condition G7 (b) (vi) of the Licence is amended by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:**

- G7(b) (vi) Provide a detailed site cadaster plan that includes but not limited to site boundaries, former and any new putrescible landfill cell constructed during the Annual period ~~future cell locations~~ and monitoring bores in the region.

**5. The Licence is amended by the insertion of Clearing conditions C1 to C3 below:**

- C1 Clearing authorised  
The Licence Holder shall not clear more than 4.5 hectares of native vegetation within the area cross-hatched yellow on Plan 7607/1 as shown in Attachment 1.
- C2 The Licence Holder shall:
- (a) retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.
  - (b) at an *optimal time* following clearing authorised under this Licence, *revegetate* and *rehabilitate* the area(s) that are no longer required for the purpose for which they were cleared under this Licence by:

- (i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land;
  - (ii) laying the vegetative material and topsoil retained under condition 2(a) on the cleared area(s);
  - (iii) deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area; and
  - (iv) ensuring only *local provenance* seeds and propagating material are used to *revegetate* and *rehabilitate* the area.
- (c) within 18 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 2(b) of this Licence:
- (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
  - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 2(c)(i) of this Licence will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, *revegetate* the area by deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.
- (d) Where additional *planting* or *direct seeding* of native vegetation is undertaken in accordance with condition 2(c)(ii) of this Licence, the Licence Holder shall repeat condition 2(c)(i) and 2(c)(ii) within 18 months of undertaking the additional *planting* or *direct seeding* of native vegetation.
- (e) Where a determination by an *environmental specialist* that the composition, structure and density within areas *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, as determined in condition 2(c)(i) and (ii) of this permit, that determination shall be submitted for the CEO's consideration. If the CEO does not agree with the determination made under condition 2(c)(ii), the CEO may require the Licence Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 2(c)(ii).

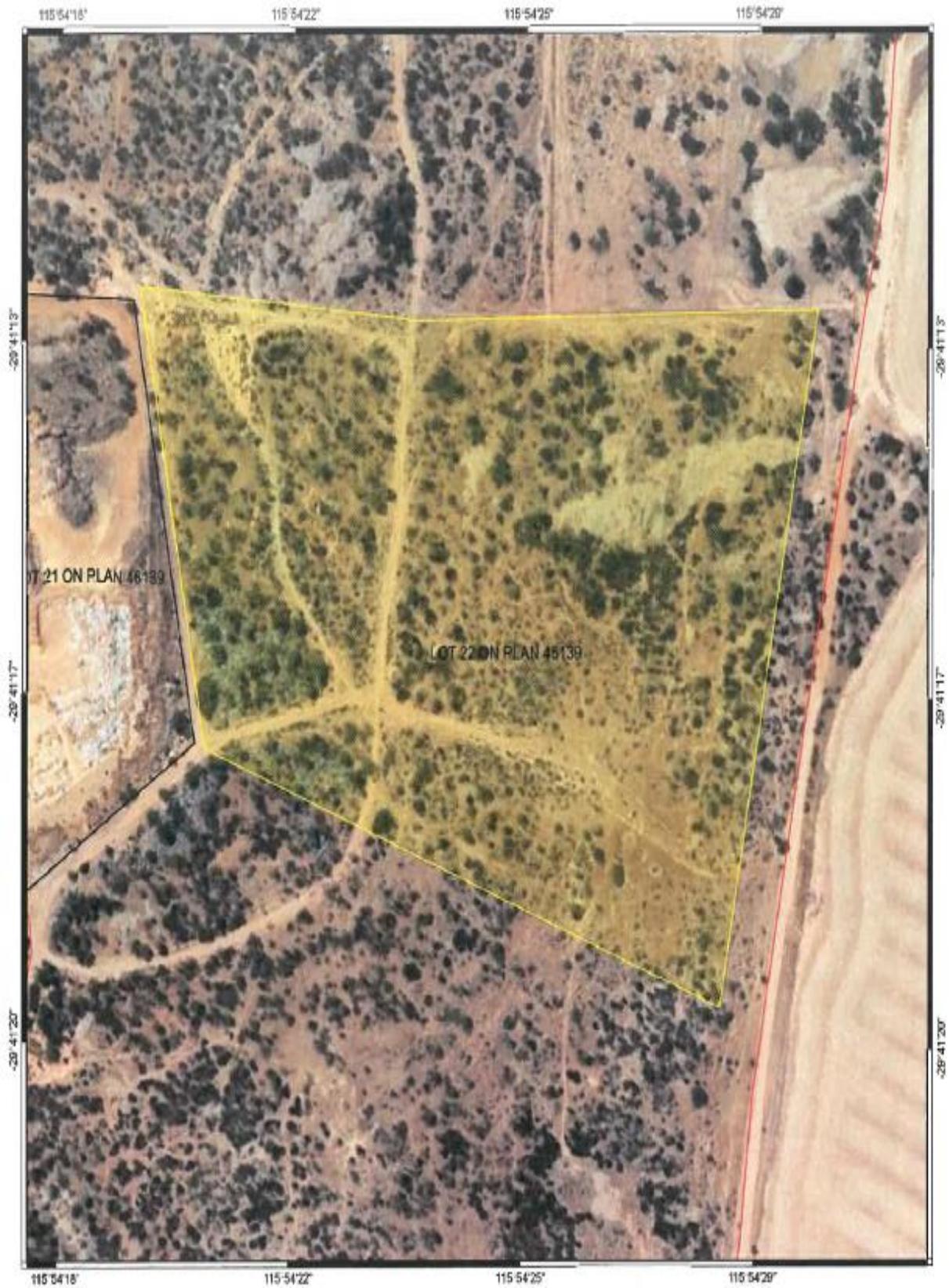
**6. Attachment 1 of the Licence is amended by the replacement of the Premises boundary map and the inclusion of Plan 7606/1 as shown over:**

## Attachment 1

The Premises is shown in the map below, the red line depicts the premises boundary.



The area authorised to be cleared is shown in yellow hatching in Plan 7607/1 below.



## Appendix 1: Key documents

	Document title	In text ref	Availability
1	Licence L6944/1997/13 – Carnamah Waste Disposal Site	L6944/1997/13	accessed at <a href="http://www.der.wa.gov.au">www.der.wa.gov.au</a>
2	Shire of Carnamah, Carnamah Landfill Extension Environmental Scoping Document April 2017	Application	DER records (A1425019)
3	DER, July 2015. <i>Guidance Statement: Regulatory principles</i> . Department of Environment Regulation, Perth.	DER 2015a	accessed at <a href="http://www.der.wa.gov.au">www.der.wa.gov.au</a>
4	DER, October 2015. <i>Guidance Statement: Setting conditions</i> . Department of Environment Regulation, Perth.	DER 2015b	
5	DER, August 2016. <i>Guidance Statement: Licence duration</i> . Department of Environment Regulation, Perth.	DER 2016a	
6	DER, November 2016. <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.	DER 2016b	
7	DER, November 2016. <i>Guidance Statement: Decision Making</i> . Department of Environment Regulation, Perth.	DER 2016c	

# Appendix 3: Clearing Permit Assessment Report



### 1. Application details

#### 1.1. Permit application details

Permit application No.: 7607/1  
Permit type: Works Approval / Licence Assessment

#### 1.2. Applicant details

Applicant's name: Shire of Camamah  
Project name: Camamah landfill

#### 1.3. Property details

Property: Lot 22 on Plan 46139, Camamah  
Local Government Authority: Camamah, Shire of  
Localities: Camamah

#### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
4.5	-	Mechanical Removal	Waste disposal/management

### 2. Site Information

#### 2.1. Existing environment and information

##### 2.1.1. Description of the native vegetation under application

<b>Clearing Description</b>	The application is to clear 4.5 hectares of native vegetation within Lot 22 on Plan 46139, Camamah for the purpose of extending the Camamah landfill site.
<b>Vegetation Description</b>	The vegetation under application is mapped within Beard Vegetation Association 551, described as <i>Allocasuarina campestris</i> thicket (Shepherd et al., 2001).  A flora survey of the application area undertaken by Williams and Son (2017) described the application area as Very Open <i>Acacia acuminata</i> and <i>Acacia acuaria</i> , over a degraded understorey dominated by introduced species with <i>Melaleuca fulgens</i> , <i>Waitzia acuminata</i> and <i>Waitzia acuminata</i> var. <i>acuminata</i> .  Large areas of the application area were recorded with little to no native vegetation and the application area was considered to be highly impacted by intensive grazing and historic extraction (Williams and Son, 2017).
<b>Vegetation Condition</b>	Degraded; Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).
<b>Comment</b>	The local area is defined as a 10 kilometre radius measured from the outside of the application area.



Fig 1: Vegetation within the local area.



Fig 2: Application area.

### 3. Avoidance and mitigation

The site of the proposed landfill has been chosen in order to limit environmental impacts to remnant vegetation in better condition located adjacent to an existing landfill.

#### 4. Assessment of application against clearing principles

##### (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

###### **Proposed clearing is not likely to be at variance to this Principle**

A flora survey of the application area was undertaken by Williams and Son on 10 October 2017. Large areas of the application area were recorded with little to no native vegetation and the application area was considered to be highly impacted by grazing and historic extraction (Williams and Son, 2017). The flora survey did not record any threatened or priority flora within the application area (Williams and Son, 2017).

As discussed under Principle (c), the application area may contain the rare flora species *Darwinia polychroma* as it has been recorded one kilometre from the application area (DBCA, 2017). The flora survey of the application area specifically targeted this species and was undertaken within the peak flowering time of the species (Williams and Son, 2017). Given this, it is not likely to be impacted by the proposed clearing.

As assessed within Principle (b), the proposed clearing is not likely to contain significant habitat for fauna indigenous to Western Australia.

Two threatened ecological communities (TECs) and no priority ecological communities (PEC's) are mapped within the local area. As the vegetation type does not align with these TEC's, and given the degraded (Keighery, 1994) condition of the vegetation within the application area, the proposed clearing is not likely to contain or impact on a PEC or TEC.

Given the above, the proposed clearing is not likely to be at variance to this 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 indigenous to Western Australia.

###### **Proposed clearing is not likely to be at variance to this Principle**

One fauna species listed as rare or likely to become extinct under the *Wildlife Conservation Act 1950* has been recorded within the local area being the Western Spiny-tailed Skink (*Egernia stokesii* subsp. *badia*) (DBCA, 2007-).

The Western Spiny-tailed Skink prefers open eucalypt woodlands and Acacia-dominated shrublands in semi-arid areas of Western Australia (DEC, 2012). Noting this, the degraded (Keighery, 1994) condition of the application area and grazing impacts, the application area is not likely to contain significant habitat for this species.

As native vegetation surrounds the application area, the proposed clearing is not likely to have a significant impact on fauna dispersal capabilities between the application area and remnant vegetation located within the local area.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

##### (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

###### **Proposed clearing is not likely to be at variance to this Principle**

As assessed under Principle (a), the flora survey of the application area recorded little to no native vegetation and the application area was considered to be highly impacted by grazing and historic extraction activities (Williams and Son, 2017). The flora survey did not record any threatened flora within the application area (Williams and Son, 2017).

Department of Biodiversity, Conservation and Attractions (DBCA) advised that the application area may contain the rare flora species *Darwinia polychroma* as it has been recorded one kilometre from the application area (DBCA, 2017). The flora survey of the application area specifically targeted this species and was undertaken within the peak flowering time of the species (Williams and Son, 2017). Given this, it is not likely to be impacted by the proposed clearing.

Given the above, the proposed clearing is not likely to be at variance to this 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.

###### **Proposed clearing is not likely to be at variance to this Principle**

Two TECs are mapped within the local area, with the closest TEC known as the Eucalypt woodlands of the Western Australian Wheatbelt mapped approximately 1.6 kilometres from the application area. As the vegetation type does not align with these TEC's, and given the degraded (Keighery, 1994) condition of the vegetation, the proposed clearing is not likely to contain or impact on a TEC.

Given the above, the proposed clearing is not likely to be at variance to this 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.**

**Proposed clearing may be at variance to this Principle**

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 percent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

As indicated in Table 1, the remaining extents of native vegetation within the mapped IBRA Bioregion and Beard vegetation association 551 within the IBRA Bioregion are below the 30 per cent representation threshold (19.7 per cent and 18.5 per cent respectively) (Government of Western Australia, 2018). The local area retains approximately 11.5 per cent native vegetation cover. Given this, the application area is located within an area that has been extensively cleared.

However, as the vegetation within the application area is not representative of Beard vegetation association 551, is in a degraded condition impacted by grazing, is considered regrowth and does not contain any conservation significant flora, fauna or communities, it is not considered a significant remnant within an area that has been extensively cleared. Noting the low vegetation extent within the IBRA bioregion and local area, the requirement to revegetate the application area to good or better condition (Keighery, 1994) following landfill activities will ensure that there is no net loss of native vegetation.

Given the above, the proposed clearing may be at variance to this Principle.

**Table 1: Vegetation extents**

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Current extent in all DBCA managed lands (ha)	Extent remaining in all DBCA managed lands (proportion of Pre-European extent) (%)
<b>IBRA Bioregion*</b>					
Avon Wheatbelt	9,517,110	1,761,227	18.5	174,961	1.8
<b>Beard Vegetation Association in Bioregion*</b>					
551	257,692	50,715	19.7	3,439	1.3

**(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.**

**Proposed clearing is not likely to be at variance to this Principle**

No watercourses or wetlands have been recorded within the application area. The closest hydrological feature is a minor, non-perennial watercourse mapped approximately 120 metres from the application area. Given the distance to the closest watercourse, the application area is not likely to impact on riparian vegetation growing in association with this hydrological feature. No riparian vegetation was identified within the application area (Williams and Son, 2017).

Given the above, the proposed clearing is not likely to be at variance to this Principle.

**(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.**

**Proposed clearing is not likely to be at variance to this Principle**

The application area has been mapped within the Inering Hill 1 Subsystem subsystems described as, hillcrests and slopes from weathered granite, Shallow red stony soils and rock outcrops (Schoknecht et al., 2004).

As indicated within table 2, the Department of Primary Industries and Regional Development (DPIRD) mapping indicates that the wind erosion risk, phosphorus export risk, water logging risk, flood risk, wind erosion and the water erosion risk of the soil unit that covers the application area is low. The risk of land degradation through salinity is mapped as low to moderate (Schoknecht et al., 2004).

Given the degraded nature of the vegetation and lack of large deep rooted trees, the proposed clearing is not likely to cause or exacerbate land degradation through salinity.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

**Table 2: Mapped land degradation risk categories (Schoknecht et al., 2004).**

Risk categories	Inering Hill 1 Subsystem
Wind erosion	10-30% of map unit has a high to extreme wind erosion risk
Water erosion	<3% of map unit has a high to extreme water erosion risk
Salinity	30-50% of map unit has a moderate to high salinity risk or is presently saline
Water logging	<3% of map unit has a moderate to very high waterlogging risk
Phosphorus export risk	<3% of map unit has a high to extreme phosphorus export risk
Flood Risk	<3% of the map unit has a moderate to high flood risk

**(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.**

**Proposed clearing is not likely to be at variance to this Principle**

The closest conservation reserve to the application area is the Yarra lakes conservation area located approximately 5.5 kilometres West of the application area.

The application area is not connected to this reserve through a vegetated corridor.

Given the distance to the closest conservation area, the proposed clearing is not likely to have an impact on the environmental values of any conservation areas. Therefore, the proposed clearing is not likely to be at variance to this 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.**

**Proposed clearing is not likely to be at variance to this Principle**

No watercourses or wetlands have been recorded within the application area. As assessed within Principle (g), the proposed clearing is not likely to cause land degradation through water erosion, eutrophication or salinity. Given this and the degraded, sparse condition of the vegetation, the application area is not likely to deteriorate the quality of surface or ground water.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

**(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.**

**Proposed clearing is not likely to be at variance to this Principle**

There are no watercourses or wetlands within the application area. As assessed within principle (g) the application area has a low flood risk.

The proposed clearing is not likely to be at variance to this Principle.

**Planning instruments and other relevant matters.**

There are no Aboriginal Sites of Significance mapped within the application area.

The clearing permit assessment is being undertaken in conjunction with a Works Approval assessment within the Department of Water and Environmental Regulation.

**5. Recommendation**

An assessment of the environmental impacts of the proposed clearing has been undertaken in accordance with DWER's Regulatory Principles, taking into consideration the clearing principles contained in Schedule 5 of the *Environmental Protection Act 1986* (EP Act). Section 62(1) of the EP Act provides for conditions to be placed on a works approval to prevent, control, abate or mitigate pollution or environmental harm. Recommended conditions are as follows:

1. Clearing authorised  
The works approval holder shall not clear more than 4.5 hectares of native vegetation within the area cross-hatched yellow on attached Plan 7607/1.
2. The Permit Holder shall:
  - (a) retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.
  - (b) at an *optimal time* following clearing authorised under this Permit, *revegetate* and *rehabilitate* the area(s) that are no longer required for the purpose for which they were cleared under this Permit by:
    - (i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land;
    - (ii) laying the vegetative material and topsoil retained under condition 2(a) on the cleared area(s);
    - (iii) deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area; and
    - (iv) ensuring only *local provenance* seeds and propagating material are used to *revegetate* and *rehabilitate* the area.

- (c) within 18 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 2(b) of this Permit:
- (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
  - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 2(c)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, *revegetate* the area by deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.
- (d) Where additional *planting* or *direct seeding* of native vegetation is undertaken in accordance with condition 2(c)(ii) of this permit, the Permit Holder shall repeat condition 2(c)(i) and 2(c)(ii) within 18 months of undertaking the additional *planting* or *direct seeding* of native vegetation.
- (e) Where a determination by an *environmental specialist* that the composition, structure and density within areas *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, as determined in condition 2(c)(i) and (ii) of this permit, that determination shall be submitted for the CEO's consideration. If the CEO does not agree with the determination made under condition 2(c)(ii), the CEO may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 2(c)(ii).

**Permit Definitions**

The following meanings are given to terms used in the above conditions:

**CEO** means the Chief Executive Officer of the Department responsible for administering the *Environmental Protection Act 1986*;

**direct seeding** means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

**environmental specialist**: means a person who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit, or who is approved by the CEO as a suitable environmental specialist.

**local provenance** means native vegetation seeds and propagating material from natural sources within 50 kilometres and the same Interim Biogeographic Regionalisation for Australia (IBRA) subregion of the area cleared.

**optimal time** means the period from April to May for undertaking *direct seeding*, and the period from May to June for undertaking *planting*;

**planting** means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

**regenerate/ed/ion** means re-establishment of vegetation from in situ seed banks and propagating material (such as lignotubers, bulbs, rhizomes) contained either within the topsoil or seed-bearing *mulch*;

**rehabilitate/ed/ion** means actively managing an area containing native vegetation in order to improve the ecological function of that area;

**revegetate/ed/ion** means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as natural *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area;

Mathew Gannaway  
MANAGER  
CLEARING REGULATION

16 May 2018

**6. References**

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

Department of Biodiversity, Conservation and Attractions (DBCA) (2007- ) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <http://naturemap.dpaw.wa.gov.au/>. Accessed May 2017

Department of Biodiversity, Conservation and Attractions (DBCA) (2017) Species and Communities Flora advice received in relation to clearing permit application CPS 7607/1, received 5 July 2017, Department of Biodiversity, Conservation and Attractions, Western Australia (DWER Ref: A1478170).

Department of Environment and Conservation (2012) Western Spiny-tailed Skink (*Egernia stokesii*) Recovery Plan. Accessed on 9 May 2018 by <http://www.environment.gov.au/system/files/pages/3d0cd490-4dd1-47ed-95f0-1d3f88d00cfc/files/e-stokesii.pdf>

Government of Western Australia (2018) 2017 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017. WA Department of Biodiversity, Conservation and Attractions, Perth.

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

Schoknecht, N., Tille, P. and Purdie, B. (2004) Soil-landscape mapping in South-Western Australia – Overview of Methodology and outputs' Resource Management Technical Report No. 280. Department of Agriculture.

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

Williams, D and Son (2017) Shire of Carnamah. Report on flora and other environmental factors relating to application to clear native vegetation within an area and shown on map in report. Proposed Lot 100. Badgingarra, Western Australia (DWER Ref: A1670160).