Government of Western Australia
Department of Water and Environmental Regulation

Amendment Notice 2

Licence Number	L6862/1997/11
Licence Holder	Shire of Denmark
File Number:	2011/008056-1
Premises	McIntosh Road Waste Management Facility 46 McIntosh Road DENMARK WA 6333 Lot 326 on Plan 403090 Certificate of Title Volume LR3165 Folio 353
Date of Amendment	15 March 2019

Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Licence in accordance with section 59 of the *Environmental Protection Act 1986* (EP Act) 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.

Rebecca Kelly
Digitally signed by Rebecca Kelly
Date: 2019.03.15 10:02:49 +08'00'

Rebecca Kelly

A/ Senior Manager Waste Industries

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

1. Definitions

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

Table 1: Definitions

Term	Definition
Amendment Notice	refers to this document
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the *Environmental Protection Act 1986* Locked Bag 33 Cloisters Square PERTH WA 6850 info@dwer.wa.gov.au
Delegated Officer	an officer under section 20 of the EP Act
Department	means the department established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
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 Denmark
m AHD	Means metres Australian Height Datum
Occupier	has the same meaning given to that term under the EP Act.
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.
Primary Activities	refer to the Prescribed Premises activities listed in Table 2 of this Amendment Notice.
Risk Event	being events that involve all of the following: (a) an emission occurring; and (b) a receptor being exposed to the emission through an identified actual or likely pathway; and (c) potential adverse effects to the receptor from exposure to the emission

2. Amendment Description

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Existing 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.

The Licence Holder applied for an amendment to the Existing Licence on 28 September 2018 to expand the existing approved footprint for the burial of special waste type 1 (asbestos), being activities relating to the Category 63 Class I inert landfill site.

The proposal will require the clearing of native vegetation and result in an expansion to the existing approved active landfill area, as depicted in Appendix 1 (Amendment Application). The expanded landfill is to provide 500 m^3 of landfill capacity over a five year period.

The clearing of approximately 0.27 hectares of native vegetation proposed in the Amendment Application is assessed in Appendix 2 of the Amendment Notice.

The overarching legislative framework of this assessment is the EP Act and EP Regulations. Guidance Statements and documents that inform this assessment under Part V of the EP Act are detailed in Table2, including documents submitted by the Licence Holder.

Table2: Documents used during assessment process.

	Document title	In text ref
1.	*Environmental Protection Act 1986, Part V Shire of Denmark Licence L6862/1997/11* (granted 12 November 2015)	Existing Licence
2.	*Environmental Protection Act 1986, Part V Shire of Denmark Licence L6862/1997/11 Amendment Notice 1* (granted 13 June 2018)	Amendment Notice 1
3.	Email from Shire of Denmark to DWER dated 28 September 2018, *License Amendment Application- L6862/1997/11 - Denmark Waste Management & Reuse Facility, McIntosh Rd*	Amendment Application (ref A1724374)
4.	Email from Shire of Denmark to DWER dated 4 January 2019, *Re: application for an amendment to licence (L6862/1997/11) – request for further information*	Amendment Application (ref A1753734)
5.	Email from Shire of Denmark to DWER dated 4 January 2019, *Re: L6862 Shire of Denmark McIntosh Road WMF further information submitted*	Amendment Application (ref A1754515)
6.	Department of Water and Environmental Regulation 2018, *Regulatory best practice principles*	*Regulatory best practice principles*
7.	Department of Environment Regulation October 2015, *Guidance Statement: Setting conditions*	*Guidance Statement: Setting conditions*
8.	Department of Environment Regulation August 2016, *Guidance Statement: Licence duration*	*Guidance Statement: Licence duration*
9.	Department of Environment Regulation February 2017, *Guidance Statement: Risk Assessments*	*Guidance Statement: Risk Assessments*
10.	Department of Environment Regulation February 2017, *Guidance Statement: Decision Making*	*Guidance Statement: Decision Making*
11.	Department of Environment Regulation 2014, *Contaminated Sites Guidelines: Assessment and management of contaminated sites*	*Assessment and management of contaminated sites*

3. Emission sources, pathways and receptors

3.1 Emissions

The proposed extension to the asbestos burial area encompasses land previously containing two liquid waste facility ponds. Decommissioning of the liquid waste facility ponds was assessed under Amendment Notice 1, granted 13 June 2019.

Emissions assessed in this Amendment Notice are for fugitive dust, noise and potential emission of asbestos fibers during the acceptance and burial of waste and the maintenance of cover material and capping of the landfilled waste.

3.2 Pathways

The pathway for all emissions is through the local air shed and prevailing winds. Prevailing winds at the location vary throughout the year and under different conditions with predominantly prevail from the north west, south west and south east with a southwest to south east dominance in the afternoons when condition are driest and the likelihood of fugitive dust emission are greatest.

3.2 Receptors

Table 3: Relevant receptors and distance from boundary of Premises.

Residential and sensitive premises	Distance from Prescribed Premises
Residences	*500 m south, 180 m and 1.6 km west, 470 m east and 500 m southeast of the boundary of the Premises.*
Surface water/ agricultural dams	*80 m east of the boundary of the Premises.*

4 Other approvals

The granting of this Amendment Notice does not absolve the Licence Holder from ensuring that all other statutory approvals to operate the Primary Activities at the Premises are in place.

5 Contaminated Sites

Category 62 (solid waste depot) and category 63 (inert landfill sites) are listed as potentially contaminating industries, activities and land uses in the document, *Assessment and management of contaminated sites*. The premises is not known to have been reported and has not been classified under the *Contaminated Sites Act 2003* at this time.

6. EP Act Part V amendment history

Table 4: History of licence versions and amendments for L6862/1997/11.

Instrument	Issued	Amendment
L6862/1997/11	12/11/2015	New version of licence granted.
L6862/1997/11	13/6/2018	Amendment Notice 1 granted: remove Category 61 from the Existing Licence and extend the asbestos landfill area.
L6862/1997/11	14/03/2019	Amendment Notice 2: expansion of the Class I inert landfill asbestos disposal area.

7. Risk assessment

Table 5 below describes the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. The table identifies whether the emissions present a material risk to public health, water or the environment and requires regulatory controls.

Table 5: Risk assessment for proposed amendments[1].

Risk Event					Consequence	Likelihood	Risk rating	Reasoning	Regulatory controls
Source/ activities	**Potential emissions**	**Potential receptors**	**Potential pathway & receptor (impact)**	**Applicant controls**					
Landfill cell construction	Dust, noise and residual contaminants from the liquid waste facility	Residences and users of adjacent agricultural lands and Groundwater	Air / wind dispersion and potential impacts to amenity and/ or human health (off-Premises)	As per Amendment Notice 1 granted 13 June 2018					
Acceptance and disposal of asbestos waste	Dust (fugitive)	Residences and users of adjacent agricultural lands	Air / wind dispersion and potential impacts to amenity	None specified	Minor	Rare	Low	Siting of Premises and distance to receptors; scale and type of operations; no known significant emission sources or history of dust emission impacts	Adequately regulated by the general provisions of the EP Act
	Dust (asbestos – handling and disposal)		Air / wind dispersion and potential impacts to human health (off-Premises)	None specified	Severe	Rare	High	Siting of Premises and distance to receptors; scale and type of operations; potential for asbestos to result in high level ongoing medical treatment.	Conditions 1.3.2, 1.3.3, 1.3.4, 1.3.6 of the Existing Licence Requirement to install final capping to prevent asbestos exposure - Section 10 of this Amendment Notice General provisions of the EP Act
	Noise		Air / wind dispersion and potential impacts to amenity	None specified	Minor	Rare	Low	Siting of Premises and distance to receptors; scale and type of operations; no known significant emission sources or history of dust emission impacts	Adequately regulated by the Environmental Protection (Noise) Regulations 1997

Risk Event					Consequence	Likelihood	Risk rating	Reasoning	Regulatory controls
Source/ activities	**Potential emissions**	**Potential receptors**	**Potential pathway & receptor (impact)**	**Applicant controls**					
Landfilled waste (secondary exposure)	Dust (asbestos – via erosion of cover or mechanical excavation)	Residences and users of adjacent agricultural lands	Air / wind dispersion and potential impacts to human health (off-Premises)	None specified	Severe	Rare	High	Siting of Premises and distance to receptors; scale and type of operations; potential for asbestos to result in high level ongoing medical treatment.	Conditions, 1.3.5 and 4.1.5 of the Existing Licence Requirement to install final capping to prevent asbestos exposure - Section 10 of this Amendment Notice General provisions of the EP Act

Note 1: Risk assessment for the clearing of native vegetation is attached in Appendix 2.

8. Decision

The Delegated Officer, consistent with the *Regulatory best practice principles*, *Guidance Statement: Decision Making* and *Guidance Statement: Setting conditions* grants approval for the Amendment Application subject to the Conditions of this Amendment Notice, Amendment Notice 1 and the Existing Licence. The risk-based assessment for this determination is set out in Table 5 above and in Appendix 2.

Controls for the landfilling of asbestos waste are conditioned on the Existing Licence in Conditions 1.3.2, 1.3.3, 1.3.4, 1.3.5, 1.3.6 and 4.1.5. Controls of the Existing Licence are amended in accordance with Section 10 of this Amendment Notice to ensure that the risk to human health, water resources and the environment are controlled. The Conditions of this Amendment Notice are generally consistent with the controls stated by the Licence Holder in the Amendment Application.

The Delegated Officer has determined that in the absence of any independent professional validation of landfill stability being suitable at a gradient of 25 degrees that the maximum slope of the landfill cannot exceed 20 degrees at this time. Failure in the eastern slope of the landfill could result in the uncontrolled exposure of asbestos. As a high risk event, management controls are appropriate in accordance with the *Guidance Statement: Risk Assessments.*

Commensurate controls for the clearing of native vegetation are listed within Section 10 of this Amendment Notice.

Consistent with the *Guidance Statement: Licence duration* no change is proposed to the duration of the Existing Licence, expiring on 24 November 2025.

9. Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 19 February 2019 for review and comment. The Licence Holder responded on 1 March and 11 March 2019. Comments received from the Licence Holder have been considered by the Delegated Officer as summarised below:

Shire of Denmark comment		DWER response
1	Query regarding restrictions to the landfill beyond the estimated 500 m^3 / 5 year capacity in the Application.	Future approvals to landfill asbestos will be subject to factors not limited to, a risk assessment of the proposal at the time, any changes to the proposed activity, controls, pathways and receptors and compliance with the conditions of previous approvals. Also refer to DWER's response to the Licence Holder's query on landfill profile below.
2	Query regarding the limit under 1.3.5(b) regarding the maximum gradient of the landfill profile being ≤20 degrees, less that the 25 degrees requested in the Application.	The Delegated Officer considers that any proposed final landfill contour gradients which exceed 20 degrees (1H:5V) would require further consideration and validation by a geotechnical engineer to ensure the factor of safety is appropriate and that the long-term stability of the landfill can be achieved.
3	Correction to the maximum landfill elevation contours defined under Condition 1.3.5(d).	Identified as an administrative error. The maximum landfill elevation contours were corrected from '*35 to 45 m AHD*' to '*35 to 48.5 m AHD'* consistent with the Application. The maximum elevation of 48.5 m AHD was noted to also be bound by the maximum gradient of the landfill profile specified under Condition 1.3.5(b) and subsequently, the maximum elevation is not expected to be reached under this approval.

10. Amendment

1. Definitions of the Existing Licence are amended by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:

   'Amendment Notice' means an amendment granted under s.59 of the EP Act in accordance with the procedure set out in s.59B of the EP Act.

   Premises means the area defined in the Premises Map in Schedule 1 and listed as the Premises address on page 1 of ~~the Licence~~ Amendment Notice 2.

2. Condition 1.3.5 of the Existing Licence is amended by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:

   1.3.5 The Licensee must manage the landfilling activities to ensure:

   (b) waste is placed and compacted to ensure that the final landfill profile including capping does not exceed a slope steeper than 20 degrees.

   (d) the final profile of the approved Active landfill area for the disposal of asbestos, inclusive of the final 2 metres of capping, must not exceed the elevation contours ranging from 35 to 48.5 m AHD as defined in Attachment 1 of this Amendment Notice.

3. The Existing Licence is amended by the insertion of the map in Attachment 1 of this Amendment Notice that replaces the approved Active landfill area for the disposal of asbestos defined in Schedule 1 of the Existing Licence and referred to as the designated asbestos waste active landfill area in Condition 1.3.4, Table 1.3.3, process requirement e).

4. New Conditions on the Existing Licence are shown by the insertion of the red text shown in underline below:

   5.1 The Licence Holder must not clear more than 0.27 hectares of native vegetation within the area cross-hatched yellow on Plan 8224/1 in Appendix 2 of this Amendment Notice.

   5.2 When undertaking any clearing of native vegetation authorised under this Amendment Notice, the Licence Holder must take the following actions to minimise the risk of the 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.

Appendix 1: Asbestos waste active landfill area

Licence: L6862/1991/11

Appendix 2: CPS 8224-1 Assessment Report

Government of Western Australia
Department of Water and Environmental Regulation

Assessment Report

1. Application details

1.1. Permit application details

Permit application No.: 8224/1
Permit type: Works Approval / Licence Assessment

1.2. Applicant details

Applicant's name: Shire of Denmark

Application received date: 23 October 2018

1.3. Property details

Property: Lot 326 on Plan 403090
Local Government Authority: SHIRE OF DENMARK
Localities: HAY

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
0.27		Mechanical Removal	Waste disposal/management

2. Site Information

Clearing Description: The application is for a Purpose Permit to clear 0.27 hectares of native vegetation within Lot 326 on Plan 403090, Hay, for the purpose of expansion of the existing landfill site. The application area is indicated in Figure 1.

Vegetation Description: The application area is mapped as the following Mattiske vegetation complex:

'S7: Woodland of *Banksia attenuata-Banksia grandis-Allocasuarina fraseriana* on mild slopes with some *Eucalyptus staeri*, mixture of low woodland of *Melaleuca preissiana* and open heath of Myrtaceae-Proteaceae spp. on valley floors in perhumid and humid zones (Mattiske and Havel, 1998).

Vegetation Condition: The condition of the vegetation within the application area is considered to be:

- Completely Degraded: the structure of the vegetation is no longer intact and the area is completely or almost completely without native species (Keighery, 1994) to
- Very Good: vegetation structure altered, obvious signs of disturbance (Keighery, 1994).

Soil/Landform Type: The application area is mapped within the following land subsystem:

'*Minor Valleys (Kentdale) slope phase* subsystem is described as slopes of broad valleys in sedimentary rocks, 30 m relief, smooth slopes, deep sands and iron podzols on slopes; Albany blackbutt-jarrah-sheoak woodland. Podzols and yellow duplex soils on floors (Schoknecht et al., 2004).

Comments: The local area considered in the assessment of this application is defined as a 10 kilometre radius around the perimeter of the application area. According to available aerial imagery, the local area retains approximately 70 per cent native vegetation cover.

3. Assessment of application against clearing principles

According to available databases, one rare flora species and 31 priority flora species have been recorded within the local area. Based on the mapped soil and vegetation types, one Priority 3 flora species could potentially occur within the application area:

- *Andersonia* sp. Amabile (N. Gibson & M. Lyons 355) – known from one record within the local area, 3.92 kilometres from the application area within the same soil/landform type.

Priority 3 species are known from several locations and do not appear to be under imminent threat. Noting that the majority of the application area is in a degraded to completely degraded condition, the proximity of similar vegetation type in similar or better condition to that present within the application area, and the extent of the proposed clearing, it is unlikely the application area incudes, or is necessary for the continued existence of rare flora.

Noting the extent of the proposed clearing, and the vegetation cover in the vicinity of the application area (as indicated in Figure 1) which is expected to be of similar type and in similar or better condition to that present within the application area, the application area is unlikely to comprise a high level of biological diversity.

According to available databases, 16 threatened fauna species, nine priority fauna species, two specially protected fauna species, and 25 fauna species protected under international agreement have been recorded within the local area. From site photographs it does not appear that there are any trees with hollows suitable for black cockatoo breeding within the application area. Given the extent of the surrounding vegetation, and the proximity to the existing landfill site, the application area is not likely to contain significant fauna habitat and is not likely to be significant as a wildlife corridor.

According to available databases, no threatened or priority ecological communities have been recorded within the local area. The nearest ecological community of conservation significance is '*Melaleuca spathulata*/*Melaleuca viminea* Swamp Heath' (Priority 1), located approximately 5.6 kilometres from the application area. Noting that the mapped vegetation type within the application area is widespread within the local area. Based on the mapped soil and vegetation types and the condition of the vegetation within application area, and the distance to known occurrences of ecological communities of conservation significance, it is unlikely that the application area comprises or is necessary for the maintenance of, a threatened or priority ecological community.

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 Warren Interim Biogeographic Regionalisation of Australia bioregion retains approximately 79 per cent of the pre-European extent of native vegetation (Government of Western Australia, 2018). The mapped S7 Mattiske vegetation complex retains approximately, 64 per cent (approximately 3065.6 hectares) of the pre-European extent (Government of Western Australia, 2018). Noting that the application area represents approximately 0.27 hectares, and noting the extent of native vegetation cover in the local area, the application area is not considered to be significant as a remnant of native vegetation in an area that has been extensively cleared.

According to available databases, the nearest watercourse is approximately 250 metres from the application area. The application area does not contain any wetlands or watercourses, and as such the proposed clearing will not impact native vegetation growing in association with wetlands or watercourses.

According to available databases, the nearest conservation area is the MckIntosh Road Nature Reserve located approximately 260 metres north of the application area. Noting this, and given the size of the application area, the proposed clearing is unlikely to impact on the environmental values of nearby conservation areas.

Noting the extent of the proposed clearing, and the mapped soil type within the application area, the proposed clearing is not likely to cause appreciable land degradation, or cause deterioration in the quality of surface or underground water, or cause or exacerbate the incidence or intensity of flooding.

The application area is adjacent to remnant vegetation, and the proposed clearing is likely to increase the risk of introduction or spread of weeds and dieback into adjacent vegetation. Weed and dieback management with assist in managing this risk.

The assessment has found that the proposed clearing is not likely to be at variance to any of the clearing principles.

Planning instruments and other relevant matters

No Aboriginal sites of significance have been mapped within the application area.

The clearing permit assessment is being undertaken in conjunction with an assessment for a Licence amendment by DWER.

4. Recommendations

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 or Licence to prevent, control, abate or mitigate pollution or environmental harm. Recommended conditions are as follows:

1. Clearing authorised:

The Licence holder shall not clear more than 0.27 hectares of native vegetation within the area cross-hatched yellow on attached Plan 8224/1.

2. Dieback and weed control:

When undertaking any clearing or other activity authorised under this Permit, the Licence Holder must take the following steps to minimise the risk of the 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.

5. References

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

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. Available from: https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics

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.

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.

GIS Databases:

- Aboriginal Sites of Significance
- DBCA Managed Estate
- Directory of Important Wetlands
- Geomorphic Wetlands Augusta to Walpole
- Groundwater salinity
- Hydrography, hierarchy
- Hydrography, linear
- Land Degradation datasets
- SAC Bio Datasets
- Soils, Statewide
- Topographic contours
- Vegetation Complexes south west forest

Plan 8224/1

Legend

- Roads - Main Road
- Roads - Local and Others
- Imagery
- Cadastre
- Clearing Instruments Activities
- Local Government Authority

N

0 100m

1:3,523

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

..... Date .....

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

GOVERNMENT OF WESTERN AUSTRALIA