



## Application for Works Approval Amendment

### Part V Division 3 of the *Environmental Protection Act 1986*

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<b>Works Approval Number</b>	W6124/2018/1
<b>Works Approval Holder</b>	Shire of Northam
<b>File Number</b>	DER2017/002145-1
<b>Premises</b>	Inkpen Road Waste Management Facility COPLEY WA 6562  Legal description –  Lot 28734 on Deposited Plan 215405  Certificate of Title Volume LR3023 Folio 181  As defined by the Premises maps attached to the Revised Works Approval
<b>Date of Report</b>	14 April 2021
<b>Proposed Decision</b>	Revised works approval granted

**MANAGER WASTE INDUSTRIES  
REGULATORY SERVICES**

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

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## 1. Decision summary

Works Approval W6124/2018/1 is held by the Shire of Northam (Works Approval Holder) for the Inkpen Road Waste Management Facility (the Premises), located at Lot 28734 on Deposited Plan 215405, Copley.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the construction and operation of the Premises. As a result of this assessment, Revised Works Approval W6124/2018/1 has been granted.

## 2. Scope of assessment

### 2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the department has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

### 2.2 Application summary

On 16 December 2021, the Works Approval Holder submitted an application to the department to amend Works Approval W6124/2018/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The Works Approval Holder is seeking changes to the size and shape of the landfill pit to optimise the available landfill airspace within the pit.

The Application deals only with the excavation of Pit 1. All other waste management activities onsite, including Pits 2 and 3 remain the same.

No changes are required to the clearing component of the works approval, the changes are located within a previously disturbed portion of the site.

## 3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guidance Statement: Risk Assessments* (DER 2017).

To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

## 4. Source-pathways and receptors

### 4.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises construction and operation which have been considered in this Amendment Report are detailed in Table 1 below. Table 1 also details the proposed control measures the Works Approval Holder has proposed to assist in controlling these emissions, where necessary.

**Table 1: Works Approval Holder controls**

Emission	Sources	Potential pathways	Proposed controls
Noise	Construction works	Air	<ul style="list-style-type: none"> <li>• Restricted vehicle speed and minimise vehicle movements</li> </ul>
	Landfill operations		
Dust	Construction works	Air / windblown	<ul style="list-style-type: none"> <li>• Restricted vehicle speed and minimise vehicle movements</li> <li>• Water sprays if required</li> <li>• Cease operation if required</li> </ul> <p>The current Works Approval includes a condition requiring no visible dust generated by the Premises activities to cross the premises boundary.</p>
	Landfill operations		
Odour	Construction works – exposure of previously buried wastes	Air / windblown	None specified. The current Works Approval includes a condition requiring covering of any waste which is exposed during excavation.
	Landfill operations		Covering of tipped waste
Leachate	Construction works – exposure of previously buried wastes	Seepage to soils and groundwater	<ul style="list-style-type: none"> <li>• Low permeability in-situ soils</li> <li>• Covering of tipped wastes</li> <li>• Final cover</li> </ul> <p>The current Works Approval includes a condition requiring covering of any waste which is exposed during excavation.</p>
	Landfill operations		
Landfill Gas	Landfill operations	Lateral migration through soil or passive venting to air	None specified

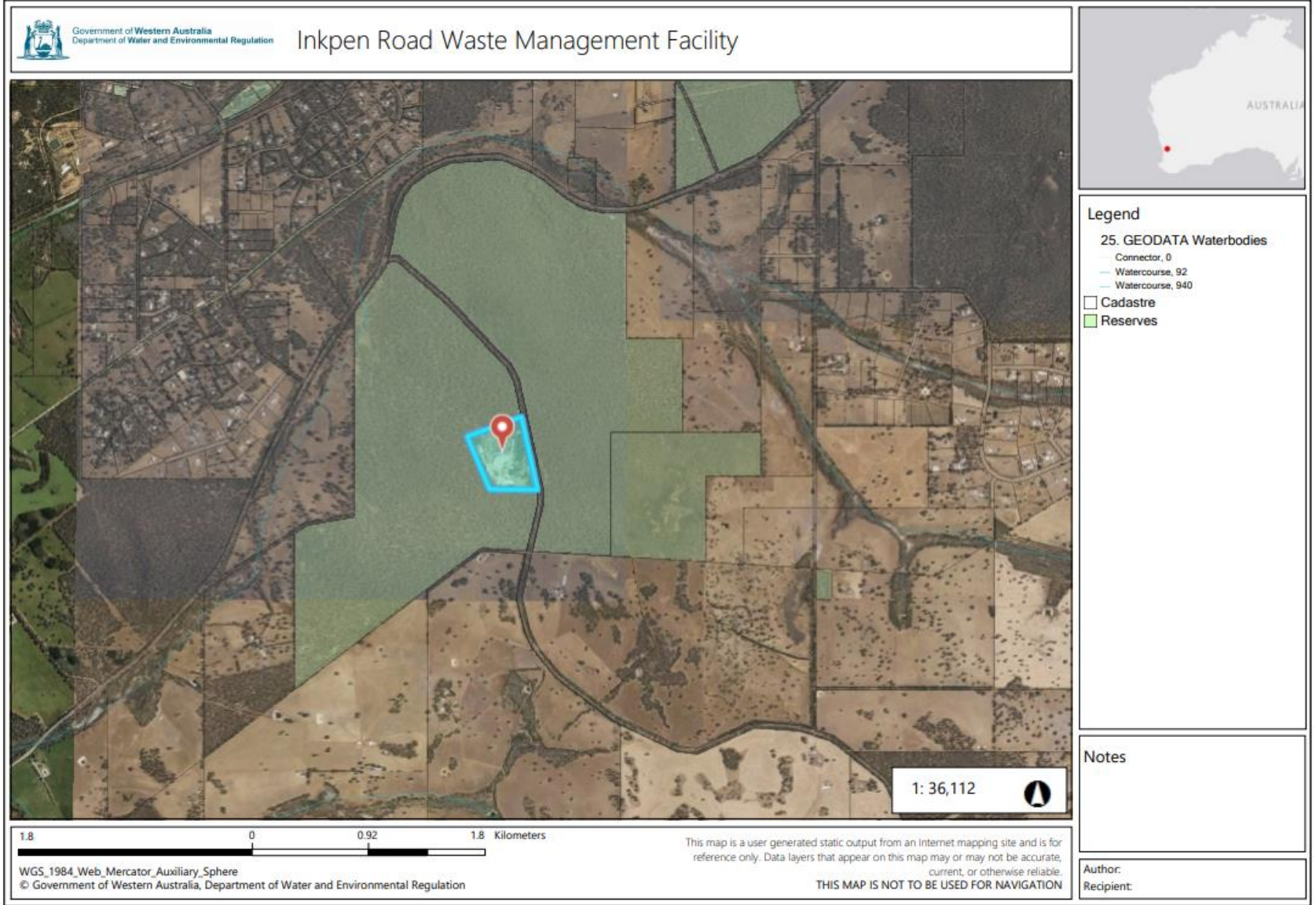
## 4.2 Receptors

In accordance with the *Guidance Statement: Risk Assessment* (DER 2017), the Delegated Officer has excluded employees, visitors and contractors of the Works Approval Holder's from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 2 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises (*Guidance Statement: Environmental Siting* (DER 2016)).

**Table 2: Sensitive human and environmental receptors and distance from prescribed activity**

Human receptors	Distance from prescribed activity
Single residential premises	Approximately 670 m south-east of Premises boundary
Single residential premises	Approximately 870 m south-east of Premises boundary
Wundowie residential area	Approximately 1,300 m north-west of Premises boundary
Environmental receptors	Distance from prescribed activity
Kwolyinine Nature Reserve (Parks and Wildlife Managed Land)	Immediately surrounding Premises boundary
Threatened and Priority Flora	1.2 km north-west of Premises boundary
Threatened Fauna	1.1 km north-west of Premises boundary
Coates Gully (minor, non-perennial watercourse)	Approximately 1km north-west of Premises boundary (downgradient)
Underlying groundwater (non-potable purposes)	Located in the Swan River System Proclaimed Surface Water Area. Groundwater salinity (TDS) 3000-7000 mg/L. Bores drilled within the Premises in August 2017, to a depth of up to 41.7m did not encounter groundwater (Talis Consultants 2017).
Private groundwater bores	Three bores located approximately 1.6km south-west of the Premises. Two private bores located approximately 1.7km north-east of the Premises.



**Figure 1: Regional location of premises**

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### 4.3 Risk ratings

Risk ratings have been assessed in accordance with the *Guidance Statement: Risk Assessments* (DER 2017) for those emission sources which are proposed to change and takes into account potential source-pathway and receptor linkages as identified in Section 4. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the Works Approval Holder has proposed mitigation measures/controls (as detailed in Section 4), these have been considered when determining the final risk rating. Where the Delegated Officer considers the Works Approval Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the works approval as regulatory controls.

Additional regulatory controls may be imposed where the Works Approval Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3.

The Revised Works Approval W6124/2018/1 that accompanies this Amendment Report authorises construction only. The conditions in the Revised Works Approval have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence amendment is required to authorise emissions associated with the ongoing operation of the Premises i.e. landfilling activities. A risk assessment for the operational phase has been included in this Amendment Report, however licence conditions will not be finalised until the department assesses the licence application.



**Table 3. Risk assessment of potential emissions and discharges from the Premises during construction and operation**

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
<b>Construction</b>								
Vehicle movements during construction	Noise	Air/windborne pathway causing impacts to health and amenity	Residential premises 670m south-east & 870m south-east	Refer to Section 4.1	C = Slight L = Unlikely <b>Low Risk</b>	Y	N/A	N/A - Due to the relatively limited works required within the Premises and the minimum 670m separation distance to the nearest receptor, the Delegated Officer considers that the risk of amenity impacts from noise emissions is low.  Any potential noise emissions can be managed through the <i>Environmental Protection (Noise) Regulations 1997</i> .
	Dust			Refer to Section 4.1	C = Slight L = Unlikely <b>Low Risk</b>	Y	Existing Works Approval condition 11	Existing Works Approval Condition 11 requires the Works Approval Holder to ensure that no visible dust generated from the works crosses the boundary of the Premises.
Excavation and movement of soils during construction of landfill pits	Noise	Air/windborne pathway causing impacts to health and amenity	Residential premises 670m south-east & 870m south-east	Refer to Section 4.1	C = Slight L = Unlikely <b>Low Risk</b>	Y	N/A	N/A - Due to the relatively limited noise generating activities within the Premises and the minimum 670m separation distance to the nearest receptor, the Delegated Officer considers that the risk of amenity impacts from noise emissions is low.  Any potential noise emissions can be managed through the <i>Environmental Protection (Noise) Regulations 1997</i> .
	Dust			Refer to Section 4.1	C = Slight L = Unlikely <b>Low Risk</b>	Y	N/A	Existing Works Approval Condition 11 requires the Works Approval Holder to ensure that no visible dust generated from the works crosses the boundary of the Premises.



Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
Accidental exposure of previously landfilled waste during excavation of landfill pits	Odour	Air/windborne pathway causing impacts to health and amenity	Residential premises 670m south-east & 870m south-east	Refer to Section 4.1	C = Minor L = Rare <b>Low Risk</b>	Y	Existing Works Approval condition 12	Exposure of previously buried wastes during construction is not intended to occur as part of the works.  Existing Works Approval Condition 12 requires covering of any waste which is exposed during excavation.
	Landfill leachate	Seepage through soil and transport through groundwater causing contamination of groundwater	Groundwater greater than 40mbgl	Refer to Section 4.1	C = Moderate L = Rare <b>Medium Risk</b>	Y	Existing Works Approval condition 12	Exposure of previously buried wastes during construction is not intended to occur as part of the works. As such, leachate emissions from uncovered wastes are only expected to occur in exceptional circumstances.  Existing Works Approval Condition 12 requires covering of any waste which is exposed during excavation.
		Seepage through soil and movement downgradient causing soil contamination and impact to flora and fauna health	Adjacent nature reserve	Refer to Section 4.1	C = Moderate L = Rare <b>Medium Risk</b>	Y	Existing Works Approval condition 12	
		Seepage through soil and movement downgradient impacting surface waters at the point of interflow expression	Minor watercourse ~1km north-west	Refer to Section 4.1	C = Moderate L = Rare <b>Medium Risk</b>	Y	Existing Works Approval condition 12	
<b>Operation (limited to changes relating to proposed amendment)</b>								
Wastes landfilled during operations	Landfill leachate	Seepage through soil and transport	Groundwater greater than	Refer to Section 4.1	C = Moderate	Y	Licence conditions – cover	Changes proposed through the Application relate to the size and shape of Pit 1. The changes are not

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Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
		through groundwater causing contamination of groundwater	40mbgl		L = Possible <b>Medium Risk</b>		requirements	considered to significantly alter the location of the landfill, as such changes to the original assessment of leachate risk are minor in nature.  Previous technical advice during the works approval assessment indicated that while the in-situ soils appear to have a low permeability, there may also be natural pathways within the soils which have a higher permeability.
		Seepage through soil and movement downgradient causing soil contamination and impact to flora and fauna health	Adjacent nature reserve	Refer to Section 4.1	C = Moderate L = Possible <b>Medium Risk</b>	Y	Licence conditions – cover requirements	Conditions will be included in the Licence requiring cover material to be applied to animal carcasses daily (300mm cover depth) and other wastes (100mm cover depth) within three days of being deposited. A final landfill cover of at least 1m will also be required. These generally replicate the Applicant's controls.
		Seepage through soil and movement downgradient impacting surface waters at the point of interflow expression	Minor watercourse ~1km north-west	Refer to Section 4.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	Licence conditions – cover requirements	
	Landfill gas generated through the decomposition of waste within the landfill	Lateral migration through soil or passive venting causing health impacts and explosion risk from high methane concentration	Residential premises 670m south-east & 870m south-east	Refer to Section 4.1	C = Minor L = Slight <b>Low Risk</b>	Y	N/A	Due to the relatively small quantities of waste being accepted, the Delegated Officer considers the risk of landfill gas emissions to be low.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guidance Statement: Risk Assessments* (DER 2017).

Note 2: Proposed Works Approval Holder's controls are depicted by standard text. **bold and underline text** depicts additional regulatory controls imposed by department.

## 5. Consultation

Table 4 provides a summary of the consultation undertaken by the department.

**Table 4: Consultation**

Consultation method	Comments received	Department response
Works Approval Holder was provided with draft amendment (9/4/2021)	On 12 April 2021 the Shire confirmed that they accept the conditions of the draft Works Approval and waive the consultation period.	Noted.

## 6. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Works Approval will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

### 6.1 Summary of amendments

Table 5 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Works Approval as part of the amendment process.

**Table 5: Summary of works approval amendments**

Condition no.	Proposed amendments
9, Table 2	Infrastructure location revised to reference the revised excavation plan for Pit 1.
Schedule 2: Maps	New plans included in Schedule 2 for the revised Pit 1 location and sections.

## References

1. Department of Environment Regulation (DER) 2016, *Guidance Statement: Environmental Siting*, Perth, Western Australia.
2. DER 2017, *Guidance Statement: Risk Assessments*, Perth, Western Australia.
3. DER 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.

## Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)			
<b>Application type</b>			
Amendment to works approval	<input checked="" type="checkbox"/>	Current works approval number:	W6124/2018/1
Date application received		16 December 2020	
<b>Applicant and Premises details</b>			
Applicant name/s (full legal name/s)		Shire of Northam	
Premises name		Inkpen Road Waste Management Facility	
Premises location		Inkpen Road, Copley WA 6562 Being Lot 2873 on Deposited Plan 215405 Certificate of Title Volume LR3023 Folio 181	
Local Government Authority		Shire of Northam	
<b>Application documents</b>			
HPCM file reference number:		DER2017/002145-1 (DWERDT392599)	
Key application documents (additional to application form):		Works Approval Amendment Application – Pit 1 Design Amendments Supporting Documentation	
<b>Scope of application/assessment</b>			
Summary of proposed activities or changes to existing operations.		Amendment to the size and shape of the waste pit to be excavated.	
Category number/s (activities that cause the premises to become prescribed premises)			
<b>Table 1: Prescribed premises categories</b>			
Prescribed premises category and description	Assessed production or design capacity	Proposed changes to the production or design capacity	
Category 57: Used tyre storage (general)	200 tyres per year	N/A – no changes proposed	
Category 62: Solid waste depot	3,000 tonnes per year	N/A – no changes proposed	
Category 64: Class II or III putrescible landfill site	5,000 tonnes per year	Changes to throughput are not proposed as part of this amendment. The current works approval relates to 5,000 tonnes per year.	
<b>Legislative context and other approvals</b>			
Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: N/A Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>	
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: N/A EPA Report No: N/A	
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Reference No: N/A	

Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Certificate of title <input checked="" type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input type="checkbox"/> Expiry: Other evidence <input type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Approval: N/A Expiry date: N/A If N/A explain why?
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	CPS No: Clearing Permit 9453 (application number 7921/1) is held by the Shire of Northam No further clearing is proposed as part of this amendment
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A Licence / permit not required.
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Type: N/A Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Regional office: N/A
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Priority: N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to <a href="#">WQPN 25</a> )? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx</i> )	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Classification: Awaiting classification Date of classification: Reported by the Shire of Northam in 2007