



Application for Works Approval Amendment

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

Works Approval Number	W6416/2020/1
Works Approval Holder	Department of Planning, Lands and Heritage
File Number	DER2020/000257~9
Premises	Former Wheal Ellen Mine Site Legal description – Lot 1146 on Deposited Plan 231889 Certificate of Title LR3164/799, Lot 11448 on Deposited Plan 184560 Certificate of Title LR3075/254, and Part of Lot 5680 on Deposited Plan 252078 Certificate of Title 1583/256 Sandy Gully WA
Date of Report	13 July 2021
Decision	Revised works approval granted

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REGULATORY SERVICES

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

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1. Decision summary

Works Approval W6416/2020/1 is held by The Department of Planning, Lands and Heritage (Works Approval Holder) for the Former Wheel Ellen Mine Site (the Premises), located at Lot 1146 on Deposited Plan 231889, Lot 11448 on Deposited Plan 184560 and Part of Lot 5680 on Deposited Plan 252078, Sandy Gully.

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 W6416/2020/1 has been granted. The Revised Works Approval issued as a result of this amendment consolidates and supersedes the existing Works Approval previously granted in relation to the Premises.

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 2 July 2021, the Works Approval Holder submitted an application to the department to amend Works Approval W6416/2020/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act).

There is insufficient material in the borrow pit on Lot 5680 for the construction of Stage 2 of the permanent containment cell (PCC) under the existing Works Approval. Therefore temporary use of a mobile crushing plant was included in a previous Works Approval amendment to crush and produce sufficient material for Stage 2 of Phase 2 Part B of the Northampton Lead Tailings Project (NLTP).

Crushing has been commenced at the Premises and although it is producing a good product for construction of Stage 2, the heavy and numerous rainfall events that have been occurring in the Northampton region are causing issues. This is predominantly due to the high level of fines which keeps clogging the JAW crusher due to the high moisture content and is only enabling production at 50% of the rate that it would in drier conditions.

In order to minimise this issue and increase production, the applicant has proposed to use a mobile screening plant to run a primary process to screen the wet fine clayey material out and only crush the rock using a JAW crusher. The screening process was not included in the previous Works Approval amendment application.

This amendment application includes the following works:

- Screen and then crush approximately 15,555m³ of material which, using a conversion factor of 2.25t/m³ will produce approximately 35,000 tonnes of material for Stage 2.
- It is expected the production rate will be approximately 2,000 tonnes per day.
- All plant and equipment will be the same as the previous Works Approval amendment with the addition of a Terex Finlay 595 Hydratrak mobile screening plant.

No amendment is being sought for the Premises Boundary as the screening plant will be located in close proximity to the JAW crusher within the existing Prescribed Premises boundary. No change is proposed to the overall Works Approval production capacity, and no changes to the

Category 65 operations are proposed.

2.3 Occupancy

In addition to Lots 1146 and 11448 already on the Works Approval, the requested additional Part of Lot 5680 on Deposited Plan 252078 is also crown land, with the Department of Planning, Lands and Heritage as the responsible agency. Therefore, the Applicant is deemed to have occupational control of the premises.

2.4 Planning

The Shire of Northampton issued planning approval for the proposal on the 17 August 2020. The Shire has confirmed that the scope of the amendment proposed is considered within the scope of the original planning approval and that no further approvals are required.

2.5 Contaminated Sites Act 2003

The site has been classified under the *Contaminated Sites Act 2003* as 'possibly contaminated – investigation required'. The classification is due to lead tailings that have been deposited on the lot from the adjacent historical lead tailings main. The proposed works are being carried out away from areas identified as contaminated by these lead tailings depositions. The construction of the PCC is part of the remediation works for the Premises.

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 *Guideline: Risk assessments* (DWER 2020).

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.

3.1 Source-pathways and receptors

3.1.1 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
Dust	Vehicle movements, installation of equipment, crushing and screening of material, stockpiling of material, movement of material.	Air/windborne pathway	<p>The proposed activity is temporary and will be undertaken within a short period of time.</p> <p>All works to be completed in accordance with Dust Management Plan.</p> <p>A water cart will be available during operations.</p> <p>Material will be sufficiently moist to prevent dust lift off.</p> <p>Haul roads and other areas of the site will be regularly sprayed if they are a source of dust.</p> <p>Site operations will cease on low soil moisture and high wind days</p> <p>If dust control measures are not effective, all works causing dust generation will cease</p> <p>Complaints management system.</p>
Noise	Vehicle movements, installation of equipment, crushing and screening of material.	Air/windborne pathway	<p>The proposed activity is temporary and will be undertaken within a short period of time.</p> <p>All works will be completed in accordance with the site Construction Environmental Management Plan</p> <p>Earthmoving machinery to be maintained in good working order with effective silencers where applicable.</p> <p>Additional controls such as noise attenuating screens will be placed where appropriate</p> <p>Complaints management system</p> <p>Compliance with the <i>Environmental Protection (Noise) Regulations 1997</i> and Shire of Northampton stipulated hours for construction work</p>
Sediment laden stormwater	Storage and movement of material	Overland flow to surface waters	All works to be carried out in accordance with the site Construction Environmental Management Plan

3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), 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 (*Guideline: Environmental siting (DWER 2020)*).

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

Human receptors	Distance from prescribed premises
Homestead	Approximately 370 m east north-east of the Premises
Homestead	Approximately 580 m north-east of the Premises
Homestead	Approximately 791 m east north-east of the Premises
Homestead	Approximately 930 m west of the Premises
Homestead	Approximately 1300 m east of the Premises
Environmental receptors	Distance from prescribed premises
Wheal Ellen Creek north (ephemeral)	<p>The creeks are located within the Premises, the north creek running through the Premises from east to west and the south creek running through only the south-western corner of the Premises.</p> <p>The creeks merge and discharge to Nokanena Brook approximately 1 km downstream of the western Premises boundary.</p>
Wheal Ellen Creek south (ephemeral)	

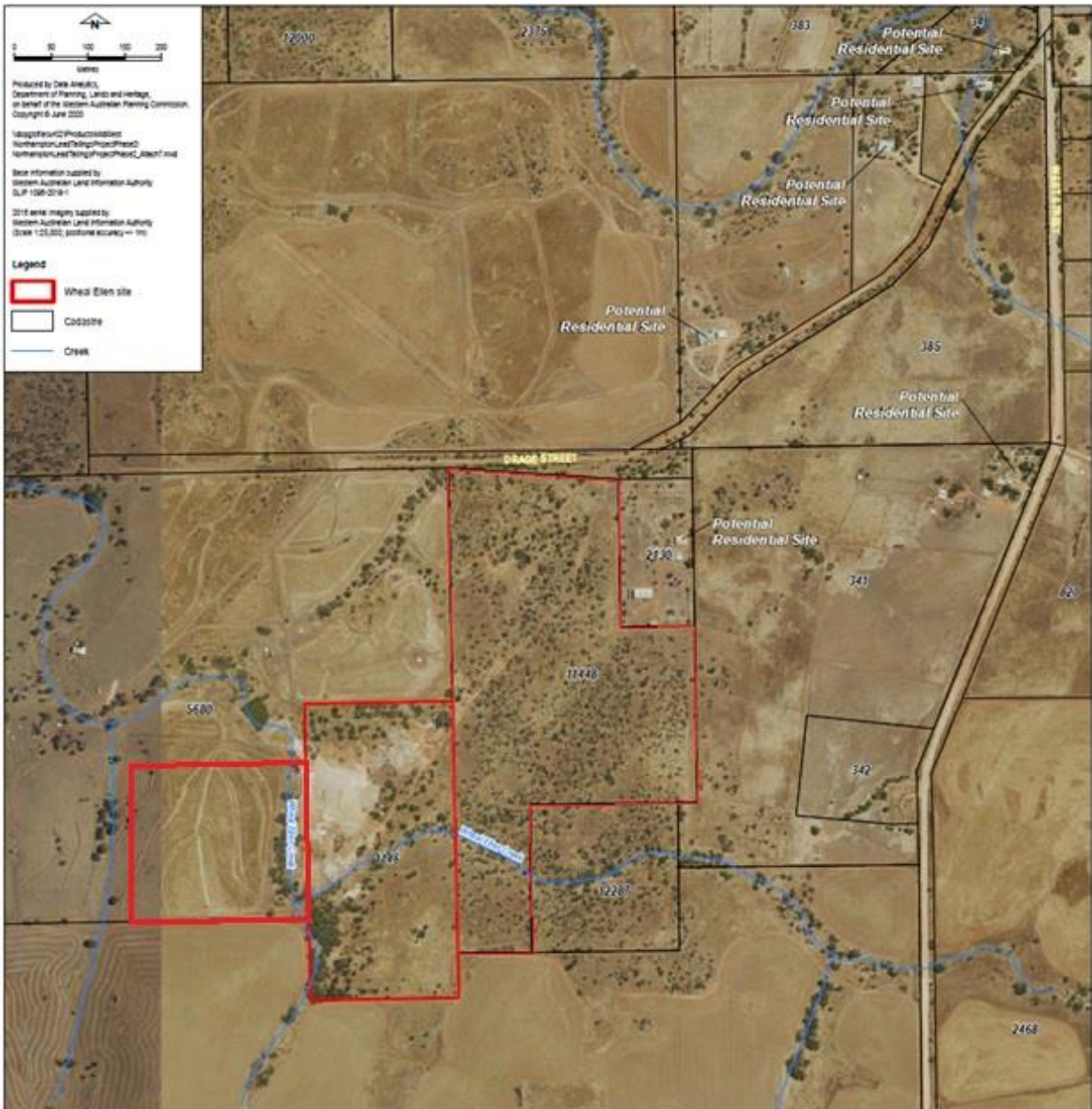


Figure 1: Distance to sensitive receptors

3.1.3 Wind direction and strength

The nearest BoM station with wind data is Geraldton Town (station number 008050) located approximately 47 km from the Premises.

Based on the climate data for the Geraldton station the prevailing wind directions are morning easterlies and afternoon southerlies. This is depicted in the wind roses shown in Figure 2. This data indicates that that aside from one residential property to the west, the residential receptors will predominately be down-wind from the proposed activities.

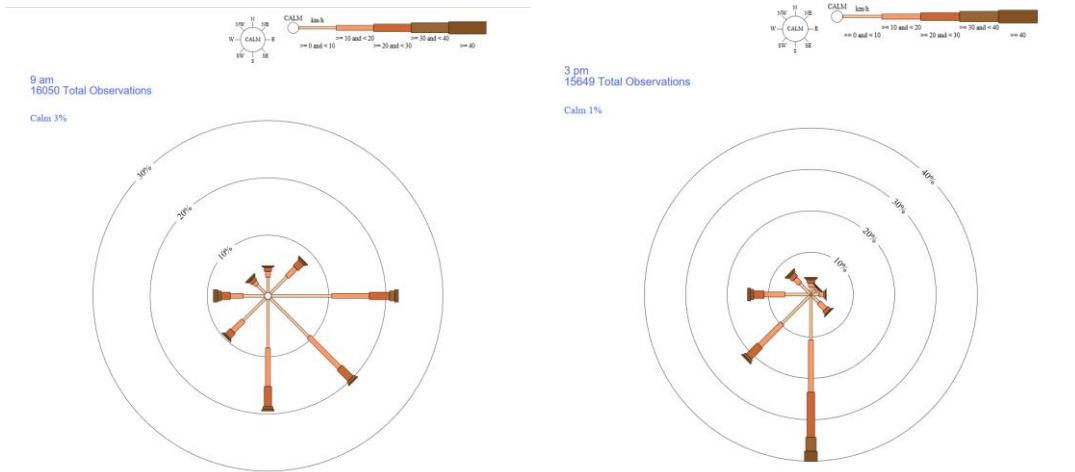


Figure 2: Geraldton Town 9 am and 3 pm wind direction and strength

It is important to note that these wind roses show historical wind speed and wind direction data for the Geraldton Town weather station and should not be used to predict future data.

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for those emission sources which are proposed to change and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are incomplete they have not been considered further in the risk assessment.

Where the Works Approval Holder has proposed mitigation measures/controls (as detailed in Section 3.1), 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 W6416/2020/1 that accompanies this Amendment Report authorises construction and time-limited operations. The conditions in the Revised Works Approval have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence would be required following the time-limited operational phase authorised under the works approval to authorise emissions associated with any ongoing operation of the Category 70 activities. A risk assessment for any ongoing operational phase has not been included in this Amendment Report.

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

Risk Event					Risk rating ¹ C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
Construction								
Placement of screen and associated equipment including vehicle movements (reversing beepers).	Dust	Air/windborne pathway causing impacts to health and amenity	Human receptors (Nearest residence is approximately 370 m east north-east)	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	N/A	N/A
	Noise			Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	N/A	N/A
Operation								
Crushing, unloading, loading and storage of material Vehicle movements	Dust	Air/windborne pathway causing impacts to health and amenity	Human receptors (Nearest residence is approximately 370 m east north-east)	Refer to Section 3.1	C = Slight L = Possible Low Risk	Y	Conditions 9, 13, 20, 21 and 22	N/A
	Noise	Air/windborne pathway causing impacts to health and amenity	Human receptors (Nearest residence is approximately 370 m east north-east)	Refer to Section 3.1	C = Slight L = Possible Low Risk	Y	Conditions 9, 13, 20, 21 and 22	N/A
	Sediment laden stormwater	Overland runoff potentially causing ecosystem disturbance or impacting	Wheal Ellen Creek located within the Premises	Refer to Section 3.1	C = Slight L = Possible Low Risk	Y	Conditions 9, 13, 20, 21 and 22	N/A

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Risk Event					Risk rating ¹ C = consequence L = likelihood	Works Approval Holder's controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Works Approval Holder's controls				
		surface water quality						

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020).

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

4. 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 on 13/07/2021	The Applicant requested the comment period be waived	N/A

5. 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.

5.1 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
Condition 9, Table 1 - 14	Inclusion of new Category 70 Infrastructure row – Mobile Screening Plant.

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.
4. Department of Water and Environmental Regulation 2019, *Industry Regulation Guide to Licensing*, Perth, Western Australia

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)					
Application type					
Works approval	<input type="checkbox"/>				
Licence	<input type="checkbox"/>	Relevant works approval number:		None	<input type="checkbox"/>
		Has the works approval been complied with?		Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Has time limited operations under the works approval demonstrated acceptable operations?		Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?		Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Date Report received:			
Renewal	<input type="checkbox"/>	Current licence number:			
Amendment to works approval	<input checked="" type="checkbox"/>	Current works approval number:	W6416/2020/1 Category 70		
Amendment to licence	<input type="checkbox"/>	Current licence number:			
		Relevant works approval number:		N/A	<input type="checkbox"/>
Registration	<input type="checkbox"/>	Current works approval number:		None	<input type="checkbox"/>
Date application received		02/07/2021			
Applicant and Premises details					
Applicant name/s (full legal name/s)		Government of Western Australia, Department of Planning, Lands and Heritage			
Premises name		Former Wheal Ellen Mine Site			
Premises location		Legal description – Lot 1146 on Deposited Plan 231889 Certificate of Title LR3164/799, Lot 11448 on Deposited Plan 184560 Certificate of Title LR3075/254, and Part of Lot 5680 on Deposited Plan 252078			
Local Government Authority		Shire of Northampton			

Application documents		
HPCM file reference number:	DER2020/000257	
Key application documents (additional to application form):	<i>Northampton Prescribed Premises Updated for screening – map</i> <i>PrescribedPremises.zip - shapefiles</i>	
Scope of application/assessment		
Summary of proposed activities or changes to existing operations.	Works approval amendment Installation of a mobile screening plant to screen the wet clayey material out and only use crushed rock using the JAW crusher. This screening process was not originally included in the Works Approval.	
Category number/s (activities that cause the premises to become prescribed premises)		
Table 1: Prescribed premises categories		
Prescribed premises category and description	Assessed production or design capacity	
Category 65: Class IV secure landfill site: premises (other than clean fill premises) on which waste of a type permitted for disposal for this category of prescribed premises in accordance with the Landfill Waste Classification and Waste Definitions 1996, is accepted for burial.	Maximum capacity of 38,780m ³	
Category 70: Screening etc of material: premises on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated.	46,305 tonnes per annual period	
Legislative context and other approvals		
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: 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: EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Reference No:

Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Certificate of title <input type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input type="checkbox"/> Expiry: Other evidence <input checked="" type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Approval: Expiry date: 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 type="checkbox"/> No <input checked="" type="checkbox"/>	CPS No: N/A No clearing is proposed.
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 No clearing is proposed.
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: Licence/permit No: 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: Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Regional office:
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 <u>WQPN 25</u>)? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004</i> , <i>Environmental Protection</i>)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

<i>(Controlled Waste) Regulations 2004, State Agreement Act xxxx</i>			
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: contaminated – remediation required	