Application for Works Approval

Division 3, Part V *Environmental Protection Act 1986*

Works Approval Number	W6165/2018/1
Applicant	Cleartech Waste Management Pty Ltd
ACN	143 715 459
File Number	DER2018/001157
Premises	Cleartech Transfer Station 2 40 Mulgul Road MALAGA WA 6090 Legal description - Part of Lot 200 on Plan 65633 As defined by the coordinates and Premises Map in Schedule 1 of the Works Approval
Date of Report	03 January 2020

1. Definitions

In this Decision Report, the terms in the Table below have the meanings defined.

Term	Definition
ACN	Australian Company Number
Category/ Categories/ Cat.	Categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
Decision Report	refers to this document.
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 As of 1 July 2017, the Department of Environment Regulation (DER), the Office of the Environmental Protection Authority (OEPA) and the Department of Water (DoW) amalgamated to form the Department of Water and Environmental Regulation (DWER). DWER was established under section 35 of the *Public Sector Management Act 1994* and is responsible for the administration of the *Environmental Protection Act 1986* along with other legislation.
Emission	has the same meaning given to that term under the EP Act.
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
Noise Regulations	*Environmental Protection (Noise) Regulations 1997* (WA)
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
Risk Event	As described in *Guidance Statement: Risk Assessment*
Works Approval Holder	Cleartech Waste Management Pty Ltd

2. Overview of premises

2.1 Classification of premises

Classification of Premises	Description	Approved Premises production or design capacity or throughput
Category 61	Liquid waste facility: premises on which liquid waste produced on other premises (other than sewerage waste) is stored, reprocessed treated or irrigated.	Combined limit of 5,000 tonnes per annual period
Category 61A	Solid waste facility: premises (other than premises within category 67A) on which solid waste produced on other premises is stored, reprocessed, treated, or discharged onto land.	

2.2 Description of proposed activity

The Applicant proposes to accept all categories of solid and liquid controlled wastes at the premises, excluding used tyres (controlled waste category code T140). The wastes received will be packaged wastes for inspection, assessment, processing, consolidation and storage prior to removal offsite. The proposed methods of treatment include absorption and neutralisation. No bulk wastes will be received onsite.

Up to 5,000 tonnes of wastes are proposed to be received annually with the intent to expand operations up to 10,000 after five years. This assessment has assessed the facility at the current throughput of 5,000 tonnes/year.

The main storage/processing building is an existing enclosed building onsite which has been constructed with a concrete floor. The premises has existing sealed asphalt roads. There are soak-wells present onsite which drain to the local compensation basins.

The following infrastructure is proposed to be installed as part of the works approval:

- Pallet racking inside building for storage of packaged waste;
- Internal bunding to segregate waste storage areas inside building (minimum 75mm high); and
- Bunding on vehicle loading/unloading areas and on access points into the building (minimum 50mm high).

The Applicant will not be installing a shredder at this stage. Additional Part V approval will be required to authorise the installation and use of a shredder should it be needed for future operations.

3. Legislative context and other approvals

Legislation	Number	Approval
Planning and Development Act 2005	DA-120/2019	The premises is situated in an area zoned 'General Industrial'. The Delegated Officer considers that the proposed activities fit within the definition of *Industry General*. Under the City of Swan's Local Planning Scheme No. 17, General Industrial activities are a permitted use within this area, however advice from the City of Swan (the City) has confirmed that planning approval is still required for permitted activities occurring in these areas. Approval to commence development was granted 13 November 2019 subject to conditions including: *8. Odour emission are to be mechanically ventilated and filtered so that neighbouring properties are not affected by such odours.* *9. Operations from the proposed business are not to impact neighbouring properties via the emissions of rubbish, or any other odours not related to the handling of liquid waste, noise or dust.* *10. No recyclable or waste material is to be stored outside of the buildings.* *14. Prior to a building permit being issued, a detailed Dust Management Plan for the operation is to be prepared by a suitably qualified consultant and submitted to the City of Swan for approval and must be complied with thereafter.* *15. Prior to a building permit being issued, a Water Management Plan prepared by a suitably qualified environmental consultant shall be submitted to an approved by the City in consultation with the Department of Water and Environmental Regulation. The water management plan shall:* *i. Detail the storage area bunding, operational area bunding and external bunding to be installed to prevent liquid or other waste from leaching into groundwater;* *ii. Storage procedures for materials to prevent liquid or other waste from leaching into groundwater;* *iii. Management of stormwater during construction and from carparks and internal driveways;* *iii. Management of irrigation and nutrients from landscaped areas.* *16. No contaminated stormwater is permitted to enter stormwater drains on-site or stormwater drains off-site.* The development must be substantially commenced within a period of two years after the date of the determination or the approval will lapse and be of no further effect.

Legislation	Number	Approval
Metropolitan Water Supply, Sewerage and Drainage Act 1909 (MWSSD Act)	N/A	The premises is situated within a Priority 3 Public Drinking Water Source Area (PDWSA) (Gnangara Underground Water Pollution Control Area) which is a declared area under this legislation. The Department's Water Quality Protection Note Np. 25, *Land use compatibility tables for public drinking water source areas,* April 2016, define P3 PDWSAs as protected areas "managed to maintain the quality of the drinking water source for as long as possible with the objective of risk management." Under this document, waste transfer stations and 'Industry General' activities are land uses which are compatible, subject to conditions required to manage risk to the P3 area. The Delegated Officer considers that this proposal fits within the definitions of 'Industry General' and waste transfer station and is therefore compatible with this area (subject to regulatory controls).

4. Emission sources, receptors, pathways and controls

4.1 Emissions

The potential for emissions to impact on sensitive receptors has been assessed in accordance with the Department's Risk Framework. The key emissions considered in this report are **dust and noise** from activities, including placement of site machinery, construction of bunding and use, of vehicle movements during construction.

The Applicant has proposed measures to assist in controlling these emissions, where necessary. The control measures have been considered when undertaking the risk assessment detailed in Section 5.

Following completion and compliance with this works approval, a prescribed premises category 61 and 61A licence under Part V of the EP Act will be required to authorise emissions associated with the operation of the premises i.e. loading, unloading and storage of materials, waste consolidation and treatment. The key emissions anticipated in regards to the operational phase include odour, noise and spills and seeps of leachate/liquid waste. A risk assessment for the operational phase has been included in this Decision Report, however licence conditions will not be finalised until DWER assesses the licence application.

4.2 Pathways

As dust, noise and odour are considered potential emissions, the prevailing wind direction has been considered. Using information available on the Bureau of Meteorology's website, the closest available weather station for climate data is Perth Metro (No. 009225). Based on the climate data for Perth Metro station (January 1994 to August 2018), the prevailing wind directions are easterly to north-easterly in the morning and south-westerly in the afternoon.

Given that leachate/liquid wastes are a key emission associated with operations, pathways to groundwater and surface waters have been considered. The surface geology has been identified as Bassendean Sands, which provides a readily permeable pathway to groundwater.

The Department's Perth Groundwater Map depicts that groundwater is located between 5.0 to 6.8m bgl with an inferred regional flow direction from north toward south, south-east (depicted in Figure 2). Groundwater provides a potential pathway to down-hydraulic gradient receptors

such as the compensation basin and Lightning Swamp/Bushforever area.

Overland runoff through both on and off site drainage are also considered to be pathways to both surface water and groundwater receptors. There are soak-wells situated within Lot 200 and these drain to the local compensation basins.

These pathways have been considered in the risk assessment table in Section 5.

4.3 Receptors

Risk is assessed as a combination of emission sources, the proximity and sensitivity of receptors to those emission sources and any pathways that can allow the emission to reach and potentially harm the receptor. Figure 1 provides an overview of human receptors in proximity to the premises and the table below provides a summary of the key human and environmental receptors in proximity to the premises. The risk assessment in Section 5 considers these receptors in the context of emissions and potential pathways.

Human receptors	**Distance from Prescribed Premises**
Residences	The closest residence is located approximately 680m north of the Premises boundary, which is within the Ballajura residential area
Commercial/retail premises	Adjacent to and surrounding the Premises
Light industrial premises	
Environmental receptors	**Distance from Prescribed Premises**
Groundwater in the 'Bassendean Sands' superficial aquifer. The aquifer is highly permeable. Groundwater is considered to be fresh drinking water quality (total dissolved solids less than 250 mg/L), with a moderate to low risk of iron staining and a moderate to low risk of acid sulfate soils. The Premises is situated within a Priority 3 Public Drinking Water Source Area (PDWSA) (Gnangara Underground Water Pollution Control Area) which is a proclaimed area under the MWSSD Act	Depth to groundwater ranges across the site from 5.0 to 6.8m bgl within Bassendean Sands. The inferred groundwater flow is predominately south to south-east.* The closest known abstraction bores are located 360m east of the Premises boundary (there is a total of 4 known abstraction bores within a radius of 500m). Three of these are allocated to third parties with the fourth allocated to the City of Swan. Drinking Water Source Areas are areas of Special Significance as specified in the Department's *Guidance Statement: Environmental Siting* (November 2016). Groundwater contours and bore locations are depicted in Figure 2 below.
Priority 1 PDWSA – proclaimed area under the MWSSD Act	Approximately 2.1 km north-east (up-gradient) of Premises
Bushforever areas	Approximately 500m south-west of Premises
Endangered Flora buffer area: Banksia Woodland Swan Coastal Plain	Closest area is located approximately100m east of the Premises boundary
Lightning Swamp Bushland	830m south (down-gradient) of Premises
Unnamed surface water body/swampland	600m south-west (cross-gradient) of Premises
Local infiltration basin	Closest down-gradient compensation basin is located approximately 640m south of Premises

*Note the Applicant's supporting documentation states a westerly inferred groundwater flow. No data or groundwater contour maps were provided to support this. The Department's available data, including use of regional contour maps, indicates a flow direction of south to south-east. Additional information provided by the Applicant in determining the location of groundwater bores indicated a southerly flow direction towards the Swan River based on review of the *Perth Groundwater Atlas* (DOW, 2004); however, noted that the actual groundwater flow direction may be influenced by Bennet Brook to the east or Indian Ocean to the West.

Figure 1: Proximity of Premises in relation to human and environmental receptors

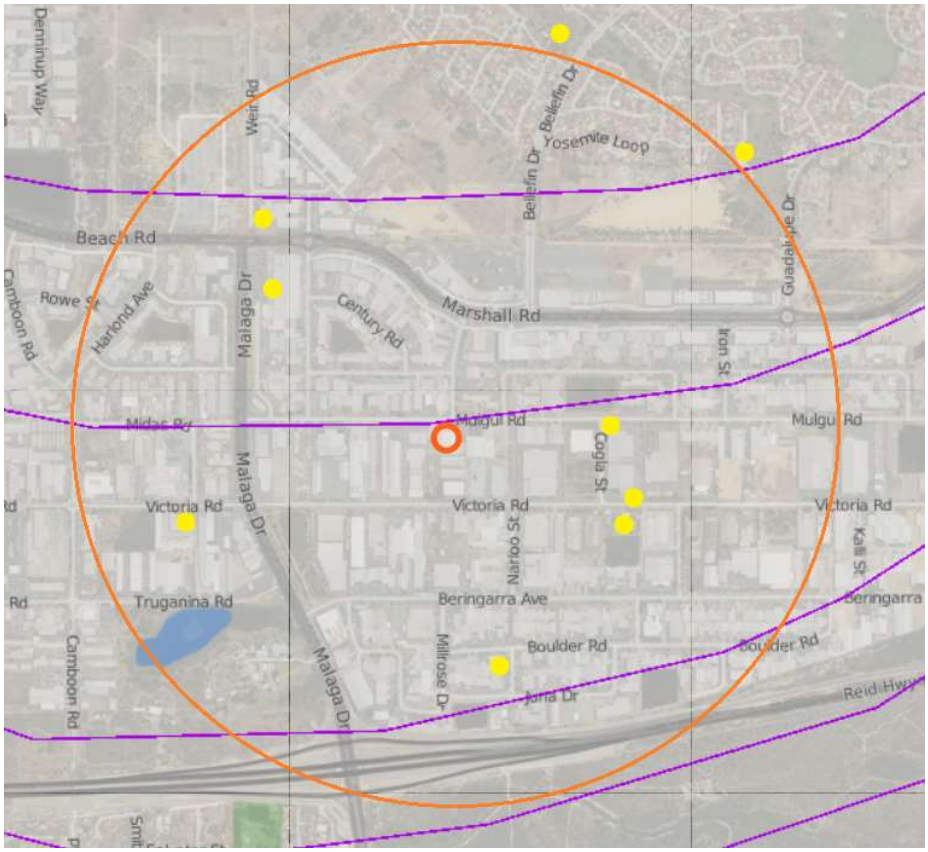

Figure 2: Groundwater flow direction and location of abstraction bores
The orange circle represents a 1km radius around the Premises and the yellow dots represent bores.

4.4 Applicant controls

The Applicant has proposed the following management measures/controls as part of the application:

Emission	Source	Proposed control
Dust	<u>Construction</u> Vehicle movements <u>Operation</u> No dust emissions anticipated during operation	Existing asphalt and concrete surfaces over premises and roadways.
Noise	<u>Construction</u> • Vehicle movements; • Placement and construction of key infrastructure and equipment. <u>Operations</u> • Vehicle movements; • Handling of waste, including offloading and loading activities;	<u>Construction</u> Onsite speed limit of 5 km/hr <u>Operation</u> • Processing activities to be undertaken within an enclosed building. • Onsite speed limits restricted to 5 km/hr.
Odour	<u>Construction</u> No odour emissions	All activities to be undertaken within an enclosed building.

	anticipated during construction Operations Waste acceptance, handling, processing and storage	
Leachate/liquid waste	Construction No liquid wastes received during construction therefore no emissions of leachate will occur at this time. Operations • Liquid waste acceptance, handling, processing and storage; • Spills.	• Premises overlain by asphalt. • All waste storage and processing activities to be undertaken within an enclosed building fitted with a concrete floor coated with Enviro HP1600 which is a spray polyurea elastomer system stated by the manufactures as being 'highly chemically resistant'. • The perimeter of all operational areas will be surrounded by 50mm steel bunding, also coated in Enviro HP1600, and all access points into the building will be fitted with drive over concrete bunds. • Each bunded storage area has a capacity of 3,230L. • All waste received onsite will be in sealed containers and drums. No bulk (un-packaged wastes) received onsite. • A maximum 200 tonnes of waste will be stored onsite at any one time (approximately 4% of the annual throughput). • The Applicant has provided the *Cleartech Emergency Response Plan* (April 2019). In the event of any spill/emergency incidents, all key personnel, regulators and response teams will be notified with Cleartech staff determining what equipment or PPE is required for the incident based on assessment of the spilled material and/or situation. Containment of the incident, including the use of absorbent materials or booms, and then clean-up of the material for disposal will be undertaken. A range of physical resources is proposed to be onsite at all times to respond to any incidents. These include neutralising agents, absorption materials, pumps, compressors, and recovery drums.
Smoke, noxious gases and particulates	Construction No storage or acceptance of waste will be brought onto the site during construction activities. Operations • Mixing of incompatible wastes; • Spills; • Arson; • Spontaneous combustion.	• Onsite procedures require all waste carriers to be logged into the system using a Waste Acceptance Form detailing waste category, waste description controlled waste tracking information and quantity of waste delivered to site. This assists in directing different wastes types to their designated areas and reduce likelihood of incompatible wastes being stored in the same area. • All materials proposed to be neutralised will be subject to review and approval by the Technical manager or Site Chemist. • Incident management as the *Cleartech Emergency Response Plan* outlined above.

5. Risk assessment

Risk ratings have been assessed for each key emission source and take into account potential source-pathway-receptor linkages. The mitigation measures / controls proposed by the Applicant have been considered in determining the risk rating. Emissions during construction and operation have been assessed separately. This is because separate approvals are needed for each. The works approval that accompanies this report authorises construction only. A licence is required to operate the premises.

5.1 Risk assessment – construction

Risk Event				**Consequence rating***	**Likelihood rating***	**Risk***	**Reasoning**	**Regulatory controls (refer to conditions of the granted instrument)**
Source/Activities	**Potential emissions**	**Potential receptors, pathway and impact**	**Applicant controls**					
Construction of Premises bunding; Placement of onsite equipment and machinery; Vehicle movements (including reversing beepers).	Dust	Air/windborne pathway causing impacts to health and amenity of closest human receptors being the adjacent light industrial/commercial premises and the residential community located approximately 680m north form the Premises boundary; impacts to surface water quality of swampland located in Bushforever area 500m from Premises boundary.	Refer to section 4.4	Slight	Rare	Low	The minor construction works are not expected to generate significant dust emissions and no earthworks are proposed. The proposed controls are expected to be sufficient at managing dust emissions.	Condition 1 (Table 2) has been included on the works approval requiring the infrastructure and equipment to be installed/placed onsite as specified in the application.
	Noise	Air/windborne pathway causing impacts to health and amenity of closest human receptors being the adjacent light industrial/commercial premises and the residential community located approximately 680m north form the Premises boundary.		Slight	Unlikely	Low	The minor construction works are not expected to generate significant noise emissions and are expected to be localised and of short duration. Noise Emissions are regulated under the *Environmental Protection (Noise) Regulations 1997*	

**Consequence ratings, likelihood ratings and risk descriptions are detailed in the Department's Guidance Statement: Risk Assessments (February 2017)*

5.2 Risk assessment – operation*

Risk Event				Consequence rating**	Likelihood rating**	Risk**	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities	**Potential emissions**	**Potential receptors, pathway and impact**	**Applicant controls**					
Liquid and solid waste acceptance, handling, storage, consolidation, processing and treatment Vehicle movements (including reversing beepers)	Noise	Air/windborne pathway causing impacts to health and amenity of closest human receptors being the adjacent light industrial/commercial premises and the residential community located approximately 680m north form the Premises boundary.	Refer to Section 4.4	**Minor:** human receptors may experience low-level amenity impacts on a local scale. The Noise Regulations are likely to be met.	Unlikely	Minor	Activities will predominantly be occurring within an enclosed shed The Applicant is not proposing to operate a shredder at this time.	To be finalised at the licensing stage* however it is likely that controls will be included on the licence in regards to maintenance of infrastructure and limiting processing to occur only within the enclosed shed. The Noise Regulations will also apply. Should the Applicant require a shredder in the future, this risk rating will be reviewed and additional regulatory controls may be required.
	Odour			**Moderate:** human receptors may experience mid-level impacts to amenity.	Unlikely	Medium	Some wastes proposed to be received can emit odours however it is likely that the Applicant's controls will be sufficient at mitigating these emissions.	To be finalised at the licensing stage* however it is likely that regulatory controls will be included on the licence in regards to waste types permitted to be received onsite, processing and storage requirements, including all waste storage and processing to be undertaken within the enclosed shed.
Liquid and solid waste acceptance, handling, storage, consolidation, processing and treatment	Leachate/liquid waste: liquid wastes may contain contaminants such as hydrocarbons, pathogens and nutrients.	Seepage through infrastructure and soil to cause degradation to groundwater with a P3 PDWSA located 5m bgl. The receptor may also be reached via infiltration of spills and seepage from overland runoff and from contaminants/runoff	Refer to Section 4.4	**Severe:** Mid to long term impacts in a P3 PDWSA. The specific consequence criteria (drinking water guidelines) are at risk of being exceeded. Mid-level impact	Unlikely	High	With the Applicant's controls in place, it is unlikely that a severe consequence will occur.	As Premises operations can pose a risk to the P3 PDWSA, three groundwater monitoring bores are required to be installed onsite as per works approval condition 1 (Table 2). Licence conditions will be finalised at the licensing stage* however the following controls are likely to be included: Ongoing requirements to monitor

Risk Event				Consequence rating**	Likelihood rating**	Risk**	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities	**Potential emissions**	**Potential receptors, pathway and impact**	**Applicant controls**					
		entering onsite soak-wells.		on a local scale for downgradient bore users (closest downgradient bore is located 450m from the Premises boundary.				groundwater quality; Restricting authorised waste types received onsite to those that pose less of a risk to human health, for example, not authorising wastes that may contain pathogens; Maintenance of containment infrastructure; Limiting capacity of wastes stored onsite at any one time; and Requiring all waste storage and processing to be undertaken in a bunded hardstand area.
Liquid and solid waste acceptance, handling, storage, consolidation, processing and treatment	Smoke, particulates and noxious vapors in the event of a fire or other incident	Air/windborne pathway causing impacts to health and amenity of closest human receptors being the adjacent light industrial/commercial premises and the residential community located approximately 680m north form the Premises boundary.	Refer to Section 4.4	**Major:** mid-level health impacts; mid to high level of impact to amenity	Rare	Medium	Although impacts to receptors are considered major, the major consequence would only occur in exceptional circumstances. The Applicant's proposed controls are generally suitable for mitigating fire and other incident risks.	Licence conditions will be finalised at the licensing stage* however the Applicant's proposed infrastructure controls will be included as regulatory controls on the works approval (condition 1) and conditions for waste acceptance, processing and storage will be included as regulatory controls on any Licence to reduce the likelihood of incompatible wastes mixing.

**The works approval that accompanies this Report authorises construction only. A licence is required for operations.*

***Consequence ratings, likelihood ratings and risk descriptions are detailed in the Department's Guidance Statement: Risk Assessments (February 2017)*

6. Consultation

Method	Comments received	DWER response
Application advertised on DWER website (20/08/2018)	None received	N/A
Local Government Authority advised of proposal (14/11/2018)	The City of Swan replied on 19/11/2018 confirming that a Change of Use application would likely be required for the proposal and noted that none had been received to date.	Noted, approval to commence development was granted by the City of Swan on 20 November 2019 (see Section 3).
Applicant referred draft documents (07/06/2019) as an 'Intent to Grant' package, pending evidence of planning consent.	Comments and additional information were received from the Applicant on 21 June 2019 as follows: • An assessment of the groundwater flow and revised groundwater monitoring bore positions were provided.	Noted, the groundwater monitoring bore locations provided by the Applicant have been based off information published in the *Perth Groundwater Atlas* (DOW, 2004). A corresponding map has been included in the licence to ensure wells are installed at the proposed locations.
	• An alternative to the Nitoflor N epoxy coating was requested to be used. The Applicant advised that: *"we would like to use a superior floor coating product which offers more chemical resistance and is also considered a membrane so will not crack and require less maintenance than epoxy coatings, specifically Nitoflor N".*	Noted, specification of the Nitoflor N epoxy coating was included based on information provided in the Application. The Delegated Officer considers that the alternative coating will still achieve the same environmental outcome.
	• A shredder will not be installed at this stage and is requested to be removed from the Application.	Noted, the Decision Report and Works Approval have been revised to reflect this. If a shredder is required to be installed at a later date, an amendment will be required.

7. Conclusion

This assessment of the risks of activities on the premises has been undertaken with due consideration of a number of factors, including the documents and policies specified in this decision report (summarised in Appendix 1).

Based on this assessment, it has been determined that the Issued Works Approval will be granted subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

DWER notes that it may review the appropriateness and adequacy of controls at any time and that, following a review, DWER may initiate amendments to the approval under the EP Act.

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Manager Waste Industries
Regulatory Services (Industry Regulation)
Delegated Officer under section 20 of the *Environmental Protection Act 1986*

Appendix 1: Key documents

Document title	Availability
Works Approval Application and Supporting Information – Cleartech Waste Management Pty Ltd	DWER records (A1701369; A1712069)
40 Mulgul Road (Eastern portion), Malaga. Contamination Due Diligence Assessment prepared by Western Environmental Pty Ltd, 21 September 2018.	DWER records (A1790372)
DER, July 2015. *Guidance Statement: Regulatory principles.* Department of Environment Regulation, Perth.	accessed at www.dwer.wa.gov.au
DER, October 2015. *Guidance Statement: Setting conditions.* Department of Environment Regulation, Perth.	
DER, February 2017. *Guidance Statement: Risk Assessments*. Department of Environment Regulation, Perth.	
DWER, June 2019. *Guideline: Decision Making*. Department of Water and Environmental Regulation, Perth.	
DOW, June 2016. Strategic Policy: *Protecting public drinking water source areas in Western Australia.* Department of Water, Perth.	
DOW, April 2016. *Water quality protection note no. 25: Land use compatibility tables for public drinking water source areas.* Department of Water, Perth.	
DOW, December 2004. *Perth Groundwater Atlas*. Department of Water, Perth.	
Western Australian Planning Commission, Statement of Planning Policy No. 2.7, *Public Drinking Water Source Policy,* June 2003	accessed at www.dplh.wa.gov.au