Government of Western Australia
Department of Water and Environmental Regulation

Decision Report

Application for Works Approval

Division 3, Part V *Environmental Protection Act 1986*

Works Approval Number	W6184/2018/1
Works Approval Holder	Steel Mains Pty Ltd
ACN	004 843 056
File Number	DER2016/001399
Premises	Steel Mains Lot 6 Leath Road NAVAL BASE WA 6065 Legal description - Lot 6 on Diagram 71690
Date of Report	7 February 2019
Status of Report	Final

Table of Contents

Definitions of terms and acronyms

In this Decision Report, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
ACN	Australian Company Number
Applicant	means Steel Mains Pty Ltd
Application	Means the application lodged by the Applicant including supporting information (as listed in Appendix 1)
Category/ Categories/ Cat.	Categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
Concrete Batching Regulations	means *Environmental Protection (Concrete Batching and Cement Products Manufacture) Regulations 1998*
CS Act	*Contaminated Sites Act 2003* (WA)
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.
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
NEPM	National Environmental Protection Measure
Noise Regulations	*Environmental Protection (Noise) Regulations 1997* (WA)
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*
UDR	*Environmental Protection (Unauthorised Discharges) Regulations 2004* (WA)
µg/L	micrograms per litre

1. Purpose and scope of assessment

Steel Mains Pty Ltd holds a registration for cement products manufacturing for its premises in Leath Road, Naval Base (R302/1987/1). It lodged a works approval application to construct a process wastewater treatment plant and to discharge treated wastewater, together with stormwater, to the environment.

This report details assessment of the potential environmental risk of the proposed works and the treated wastewater disposal to the environment.

The application, key documents and guidance statements which inform this assessment are outlined in Appendix 1.

2. Background

The premises have been registered on the Department's database for about 30 years for cement products manufacturing (Category 77). The premises makes cement lined steel pipes for potable water systems, sewerage systems and wastewater treatment plants. It previously traded under the name, Tyco Water.

Currently, process wastewater is transported off site by licensed contractors for treatment and disposal. The Applicant is seeking approval to construct a process wastewater treatment plant and to discharge treated wastewater to the environment.

Table 2 lists the prescribed premises Category for the site.

Table 2: Prescribed Premises Categories

Classification of Premises	Description
Category 77	Concrete batching or cement products manufacturing: premises on which cement products or concrete are manufactured for use at places or premises other than those premises. More than 1,000 tonnes

3. Overview of Premises

3.1 Operational aspects

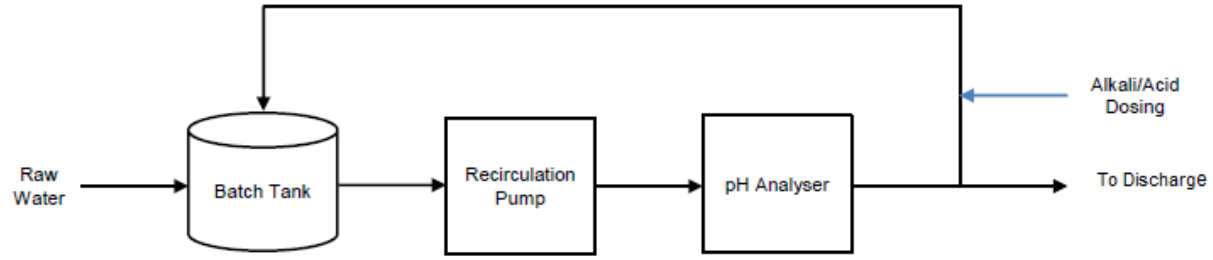
Steel Mains is a specialty supplier of pipelines (in varying sizes and lengths) to the Water Industry. It supplies the full range of pipelines, bends, tees and reducers. It also can provide protective coating to the exterior and interior of products to reduce corrosion and erosion.

One of the linings applied to pipelines at the Kwinana site is a cement mortar lining. Cement mortars are typically mixed with a cement sand ration of 0.30 to 0.40. They are mixed with water to form a slurry that is delivered to the rotating pipe in closely controlled quantities to meet customer specifications.

The cement mortar lining process generate waste from cement mixing for the liners. The Applicant is seeking approval to construct a process wastewater treatment plant and to discharge treated wastewater, together with stormwater, to the environment.

The proposed process wastewater treatment plant has been designed to treat process wastewater with an automated dosing system using a pH analyser and a recirculating pump. The treatment process is a batch process. Treated wastewater is to be discharge to on-site soak wells. A diagram of the equipment is depicted in Figure 1.

Figure 1 Water Treatment Process Diagram (from makwater.com.au)



At the completion of the process and when the pH is within control parameters an alarm will alert the operators that treated wastewater is ready for discharge. Treated water will also be filtered prior to discharge to existing drainage sump. The Applicant predicts it may discharge a maximum of 25,000 litres per week but on average would discharge about 5,000 litres per week.

3.2 Infrastructure

The proposed wastewater treatment plant infrastructure is detailed in Table 4 and marked on the Site Plan (attached in the Issued Works Approval).

Table 3 lists infrastructure associated with wastewater treatment plant.

Table 3: Wastewater treatment plant infrastructure

	Infrastructure
1	Process waste water batch treatment tank
2	90 m^3/hour recirculating pump
3	pH Analyser
4	Alkali/Acid dosing unit and reagent tanks with secondary containment.
5	Treated wastewater discharge to soakwell designated S1 on site map Schedule 1 of the issued Works Approval.

4. Legislative context

4.1 Contaminated sites

The majority of the site has not been reported as contaminated under the CS Act. A narrow strip of land on the southern boundary is included in a parcel of land deemed *contaminated, restricted use* because of elevated levels of nitrate detected in the groundwater.

The Application will not be affected by this classification.

4.2 Other relevant approvals

4.3 Part V of the EP Act

4.3.1 Applicable regulations, standards and guidelines

The overarching legislative framework of this assessment is the EP Act and EP Regulations.

Departmental Standards and Guidelines that inform this assessment of the Application are set out in Appendix 1.

5. Consultation

The Application was advertised for public comment from 23 November 2018 with submissions closing on 21 December 2018. No comments were received.

6. Location and siting

6.1 Siting context

The premises are long established industrial premises surrounded by other heavy industrial sites in the Kwinana Industrial Area (KIA). The western boundary of the premises is about 200 metres from Cockburn Sound.

6.2 Residential and sensitive Premises

The distances to residential and sensitive receptors are detailed in Table 4.

Table 4: Receptors and distance from activity boundary

Sensitive Land Uses	Distance from Prescribed Activity
Residential premises	The nearest residential premises are about 2.8 km to the north in Naval Base and 3.5 km to the south east in Medina

6.3 Groundwater and water sources

The distances to groundwater and water sources are shown in Table 5.

Table 5: Groundwater and water sources

Groundwater and water sources	Distance from Premises	Environmental value
There are no surface water bodies or drainage channels close to the site.	N/A	N/A
Marine environments – Cockburn Sound.	200m west of the premises. There is no surface water drainage to the Sound in the vicinity. The superficial aquifer interacts with seawater in the sound.	The Sound has conservation, recreation and food production values.
Groundwater is considered brackish to saline, 1,500 to 3,000 mg/L TDS.	Depth to groundwater is 1.0 to 1.8 metres	DWER's Perth Groundwater Atlas classes the water as not suitable for garden bores.

6.4 Soil type

DWER's GIS details that the soil at the location is a coastal dune formation in front of deposits of inlets and estuaries, chiefly of calcareous sand material.

7. Risk assessment

7.1 Determination of emission, pathway and receptor

In undertaking its risk assessment, DWER has identified all potential emissions pathways and potential receptors to establish whether there is a Risk Event which requires detailed risk assessment. The Department has not identified a risk event that needs detailed risk assessment.

The identification of the sources, pathways and receptors to determine Risk Events are set out in Table 6 and Table 7 below.

Table 6: Identification of key emissions during construction

	Potential Emissions	Potential Receptors	Potential Pathway	Potential Impacts	Continued to detailed risk assessment?	Reasoning
Construction of new infrastructure	Noise	Residential receptors – 2.8 km north	Air / wind dispersion	Amenity impacts	No	The Delegated Officer considers that the separation distance between the proposed plant and residential areas is sufficiently large for there to be minimal to no impacts. The Noise Regulations apply. Note: construction will occur over a short period and construction works are limited.
	Dust	Residential receptors – 2.8 km north	Air / wind dispersion	Amenity Impacts	No	

Table 7: Identification of emissions, pathway and receptors during operation

Risk Events					Continue to detailed risk assessment?	Reasoning
Sources/Activities	**Potential emissions**	**Potential receptors**	**Potential pathway**	**Potential adverse impacts**		
Treated wastewater disposal	treated and filtered wastewater	Soak well/ groundwater	Infiltration	Saline waste addition to groundwater	No	Low risk addressed by the *Environmental Protection (Unauthorised Discharge) Regulations 2004.* pH to be controlled to between pH 7 and pH 9 consistent with *Environmental Protection (Unauthorised Discharge) Regulations 2004.* Groundwater in the area is salty (TDS 1,500 to 3,000 mg/L).
	Noise	Residential receptors – 2.8 km north	Air / wind dispersion	Amenity Impacts	No	The Noise Regulation apply.

8. Determination of Works Approval conditions

The conditions in the issued Works Approval in Attachment 1 have been determined in accordance with the *Guidance Statement: Setting Conditions*.

The *Guidance Statement: Licence Duration* has been applied and the issued works approval expires in 3 years from date of issue.

Table 8 provides a summary of the conditions to be applied to this works approval.

Table 8: Summary of conditions to be applied

Condition Ref	Grounds
Infrastructure and Equipment – Conditions 1, 2, 3 and 4	These conditions are valid, risk-based and contain appropriate controls.
Emissions – Condition 5	This condition is valid, risk-based and consistent with the EP Act.
Information – Conditions 6 and 7	These conditions are valid and are necessary administration and reporting requirements to ensure compliance.

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 works approvals under the EP Act.

9. Operational stage regulation

The premises are currently registered and operating as a cement product manufacturing facility (Registration R302/1987/1). The premises will continue to operate during the works to install the wastewater treatment plant and, once completed the new infrastructure will be put into service without the need for further approval.

The facility will be subject to the Concrete Batching Regulations, the UDRs and the general provisions of the EP Act at all times during the construction and operation of the new wastewater treatment plant.

10. Applicant's comments

The Applicant was provided with a draft Decision Report and Works Approval on 5 February 2019. The Applicant replied on 7 February 2019 accepting the documents drafted.

11. 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 to grant a Works Approval subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

Paul Byrnes
MANAGER, PROCESS INDUSTRIES
REGULATORY SERVICES
Officer Delegated under section 20 of the *Environmental Protection Act 1986*

Appendix 1: Key documents

	Document title	In text ref	Availability
1.	Application for Works Approval	Application	DWER Records A1728740
2.	DER, July 2015. *Guidance Statement: Regulatory principles.* Department of Environment Regulation, Perth.	DER 2015a	accessed at www.dwer.wa.gov.au
3.	DER, October 2015. *Guidance Statement: Setting conditions.* Department of Environment Regulation, Perth.	DER 2015b	
4.	DER, August 2016. *Guidance Statement: Licence duration.* Department of Environment Regulation, Perth.	DER 2016a	
5.	DER, November 2016. *Guidance Statement: Risk Assessments*. Department of Environment Regulation, Perth.	DER 2016b	
6.	DER, November 2016. *Guidance Statement: Decision Making*. Department of Environment Regulation, Perth.	DER 2016c	

Attachment 1: Issued Works Approval W6184/2018/1