



Amendment Notice 1

Licence Number	L7882/1992/14
Licence Holder	Water Corporation
Registered business address	629 Newcastle Street LEEDERVILLE WA 6007
Date of amendment	16 February 2016
Prescribed Premises	Category 54 Sewage facility premises and Category 61 Liquid waste facility.
Premises	Beenyup Wastewater Treatment Plant Part of Lot 8278 on Plan 30778 Ocean Reef Road CRAIGIE WA 6025

Amendment

The Chief Executive Officer (CEO) of the Department of Environment Regulation (DER) has amended the above licence in accordance with section 59 of the *Environmental Protection Act 1986* as set out in this Amendment Notice.

Date signed: 16 February 2017

Alan Kietzmann

Manager Licensing – Waste Industries

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

Amendment Notice

This notice is issued under section 59 of the *Environmental Protection Act* 1986 (EP Act) to amend the 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.

Amendment Description

On 29 July 2016 Water Corporation (Licence Holder) submitted an Application to DER for an amendment to the Beenyup Wastewater Treatment Plant (WWTP) licence (L7882/1992/14). On the 23 September 2016 the Licence Holder submitted a revised supporting document to the Application titled CS01093 *Beenyup Wastewater Treatment Plant Sludge Thickening Upgrade* (Water Corporation, September 2016). The revised supporting document superseded the original supporting document.

The Application relates to proposed upgrades to sludge treatment facilities at the WWTP with the construction of a new screening and thickening facility.

The operational aspect of the proposed facilities are activities that fall within the categories of the existing Beenyup licence, being Category 54 Sewage facility premises and Category 61 Liquid waste facility. The Application indicates that there will be no increase required to current production/treatment capacity as part of the licence amendment. Table 1 provides a summary of the applicable prescribed premises categories.

Table 1 – Proposed design capacity requested in amendment application

Category	Current Design Capacity	Proposed Design Capacity	Description of proposed extent
54	135,000 cubic metres	135,000 cubic metres	No Change
61	50,000 tonnes per annual period	50,000 tonnes per annual period	No Change

Process description

A description of current sludge processing operations, as outlined in Section 1.5 of the supporting document of the Application and as updated through the 21 day comment period, is provided below:

The current sludge process at the WWTP treats three streams of sludge: excess activated sludge from the Dissolved Air Flotation Thickeners (DAFT), raw primary sludge from the primary sedimentation tanks and liquid thickened sludge tankered from Alkimos WWTP.

All screened sludge is mixed before it is pumped through the six anaerobic digesters. The raw primary sludge is pumped un-thickened, which increases the overall volume of sludge in the digesters, which has the effect of reducing the overall sludge retention time, and can affect the quality of digestion.

Using this current operating strategy, the plant will not be able to meet the minimum 15 day digester retention time as required by biosolids guidelines in the event that the upgrade doesn't occur and the inflow increases.

The *Beenyup WWTP – Sludge Handling Schematic*, as provided in Appendix A of the Application, has been included in Attachment 1 to this Amendment Notice.

The upgraded infrastructure is being constructed to ensure the Licence Holder meets the minimum 15 day sludge retention time in the digesters by reducing the volume of sludge entering the digesters. The Licence Holder has determined that the proposed upgrade works will not result in an increase to the existing authorised design capacity of the WWTP.

Proposed Construction Works and Design

The Application indicates that the new screening facility will operate at a peak design capacity of 80 m³/ hr (at 2% Dry Solids) and the thickening facility will operate at a peak design capacity of 78 m³/ hr (at 2% Dry Solids).

The following works and infrastructure will be constructed:

- Excavation of an area approximately 50x20x2.5m south of the existing DAFT's 4-6, for the new thickening plant;
- Excavation works will include all of the base earthworks, sumps, drainage and concrete for the new building, as well as installation of underground pipework and electrical conduits;
- Drainage works include individual bunding with a fall of 1:100 in process areas. These drainage areas are directed underground to drainage sumps with the following dimensions:
 - Screw thickener area: 400mm wide floor drain, 13m in length (approximately);
 - Polymer silo: 0.8m by 1.2m sump;
 - Polymer dosing area: 0.8m by 1.2m sump;
 - Strain presses area: 400mm wide floor drain, 13m in length (approximately);
 - Biosolids collection area: approximately 500mm by 500mm sump.
 - The central drainage sump has been designed with a total volume of 110% of the volumes of the polymer mixing and holding tanks which feeds into the existing premises drainage system.
- A new building to house the sludge thickening plant. The building will be a steel frame structure with skillion roof on a 200mm reinforced concrete base with a 250m wide by 250mm high bund. This building will house the mechanical equipment required for the sludge thickening;
- Two new Huber Strain Presses;
- Two 10 m³ Spirotainers;
- Two Huber rotary screw thickeners;
- Two thickened RPS feed progressive cavity pumps;
- New polymer plant complete with control panel and including:
 - Dry powder polymer silo;
 - Polymer mixing tank;
 - Polymer batching tank;
 - Three polymer dosing pumps;
 - Two polymer transfer pumps that feed the batching tank from the mixing tank.
- Buried service connections for the potable water, recycled effluent and compressed air, as well as drainage for the new equipment;

- Connection to the existing odour control system;
- Existing DAFT Motor Control Centre (MCC) MC71103 modified to supply power to sludge upgrade; and
- Installation of various electrical equipment and instrumentation required to power and provide remote monitoring and control.

The Licence Holder has indicated that the listed infrastructure and equipment, as detailed above, are preliminary specifications and that the final design may vary through the detailed design and construct phase of the project.

Minimal clearing of native vegetation is required for construction (0.15ha); clearing will be undertaken in accordance with Water Corporations state-wide clearing permit CPS185/7 authorised under the EP Act.

The Engineering Design of the proposed infrastructure, as presented in Appendix B of the supporting document of the Application, is depicted in Attachment 2 to this Amendment Notice.

Ministerial Statement – assessment of regulatory duplication

In regulating the premises under Part V, Division 3 of EP Act, DER will seek to avoid duplication of requirements imposed under Part IV. Pursuant to section 59B(7) of the EP Act, DER will also not amend a Part V licence that is contrary to, or otherwise than in accordance with, an implementation agreement or decision.

The Licence Holder holds the Part IV approvals listed in Table 2.

Table 2 – Relevant Ministerial Statements

Legislation	Number	Approval
<i>Environmental Protection Act 1986 - Part IV</i>	Ministerial Statement 101	Assessed by the Environment Protection Authority (EPA) under a Public Environmental Review level of assessment. Conditions 2 to 8 regulate treated wastewater impacts to the marine environment. Report and Recommendations of the EPA – Bulletin 393
	Ministerial Statement 382	Change of environmental conditions; Ministerial Statement (MS) 382 replaced MS 101. Ministerial Statement 382 included improvements to condition wording, removal of redundant conditions and allowed for changes to deadlines to reporting studies on predicted impacts of continued marine disposal of treated wastewater. Conditions 2 to 8 regulate treated wastewater impacts to the marine environment. Report and Recommendations of the EPA – Bulletin 393

Legislation	Number	Approval
	Ministerial Statement 569	<p>Outlined amendments to MS 382; condition 2-1 was deleted and replaced with wording that approved an increase to discharged phosphorus loadings.</p> <p>Report and Recommendations of the EPA – Bulletin 1012</p>

Bulletin 393 outlines the original assessment of the proposal and considered the following environmental considerations (Factors) relevant to the proposed marine disposal of treated wastewater which required detailed evaluation:

- Effects of nutrient loadings on the local marine communities of Marmion Marine Park;
- The effect of bacterial contamination of waters in relation to public health and ecological considerations;
- Heavy metal and pesticide contamination of local biota;
- Alternative ocean outfalls; and
- Alternatives to ocean disposal.

MS 382 and 569 includes conditions as outlined in Table 2 relating to the above environmental considerations. The 'Procedure' in MS 382 also includes details on verifying conditions outlined in this Statement.

Planning Approval

The Licence Holder has advised that under Section 137 of the *Water Services Act 2012*, Water Corporation is exempt from the requirement to obtain development approvals for Public Water Works under a Local Planning Scheme (LPS).

The Licence Holder has advised that they will issue a 'Notice of Proposal' to the local government (City of Joondalup) after approvals have been obtained as required by section 6 of the *Planning and Development Act 2005*.

Location, environmental siting and potential receptors

The Beenyup WWTP has been operating at the site since 1972. Lot 8278 is confined by the Mitchell Freeway to the east, Ocean Reef Road and the Water Corporation's Advanced Water Replenishment Plant immediately to the north, the residential suburb of Craigie to the west and Bush Forever site 303 to the south.

The premises is located within a P3 priority Public Drinking Water Source Area (PDWSA) named *Perth Coastal and Gwelup Underground Water Pollution Control Area*. The premises is also within in a proclaimed groundwater area under the Rights in Water Irrigation Act 1914 named *Perth Groundwater Area*.

The Application indicates that the new facility will be located to the south of the existing DAF Tanks 4-6 (refer to Attachment 2 for the Engineering Design/ General Arrangement).

Table 4 below lists the relevant sensitive human-health receptors in the vicinity of the

proposed sludge thickening facility.

Table 4: Sensitive Premises and distance from prescribed activity

Residential and Sensitive Premises	Distance from Prescribed Activity
Residential premises within suburb of Craigie	100m to the west of the prescribed premises boundary and approximately 400m to west of the proposed sludge screening and thickening facility.
Residential premises within suburb of Woodvale	260m to the east of the prescribed premises boundary and approximately 380m to east of the proposed sludge screening and thickening facility.
Craigie Leisure Centre – 751 Whitfords Avenue, Craigie	470m to the south of the prescribed premises boundary and approximately 650m to south of the proposed sludge screening and thickening facility.

Table 5 below lists the relevant sensitive environmental receptors in the vicinity of the proposed sludge thickening facility.

Table 5: Environmental receptors and distance from prescribed activity

Environmental receptors	Distance from Prescribed Activity
Bush Forever site 303 - <i>Whitfords Avenue Bushland, Craigie/ Padbury.</i>	Immediately adjacent to the south and east

Risk Assessment

Table 6 and 7 below applies a basic risk assessment to the potential emissions which may arise from the amendment application. Both tables identify whether these emissions present a material risk requiring regulatory controls.

Table 6: Risk assessment for proposed amendment during construction

			Potential Emissions	Potential Receptors	Potential Pathway	Potential Impacts	Material risk	Reasoning
Source	Cat 54 – Sewage facility Cat 61 – Liquid waste facility	Construction of sludge screening and thickening facility	Dust: associated with construction activities	Vegetation within Bush Forever site 303 - Whitfords Avenue Bushland, Craigie/ Padbury.	Air: Particulate matter (dust)	Smothering of vegetation	No	<p>Bulk earthworks are forecast to occur over a three month period from May 2018 – June 2018. The Application indicates that water Carts will be used during construction if necessary to minimise dust emissions.</p> <p>The Delegated Officer considers that dust may impact on plant health but given the proposed controls and short-term nature of earthworks dust is unlikely to cause plant death.</p> <p>Based on this information the Delegated Officer has determined the consequence is slight and likelihood of adverse impacts on vegetation survival will be rare. The Delegated Officer therefore considers the overall risk of dust emissions to be low.</p>
				Sensitive residential and recreational receptors within Craigie and Woodvale Vehicle movements along Mitchell Freeway		Amenity and health Nuisance impacts to vehicles travelling on Mitchell Freeway	Yes	<p>Bulk earthworks are forecast to occur over an eleven month period from May 2018 – March 2019. The Application indicates that water Carts will be used during construction if necessary to minimise dust emissions.</p> <p>The Delegated Officer considers that dust may impact upon the amenity and health of sensitive residential receptors within Craigie and Woodvale and may potentially cause nuisance impacts to vehicle movements along Mitchell Freeway.</p> <p>Based on this information the Delegated Officer has determined the consequence is minor and likelihood of adverse impacts on health and amenity will be possible. The Delegated Officer therefore considers the overall risk of dust emissions to be medium.</p> <p>Condition 1.2.8 has been included in this Amendment Notice to specify infrastructure and operational requirements that relate to dust suppression and requires the Licence Holder to operate in accordance with the specified requirements.</p>
			Noise: associated with construction activities	Sensitive residential receptors within Craigie and Woodvale	Air: Noise generated by the operation of vehicles and equipment	Amenity	Yes	<p>Construction works are forecast to occur over an eleven month period from May 2018 – March 2019. Within this period bulk earthworks are forecast to occur from May 2018 – June 2018 with underground services, civil and structural works to be carried out from July 2018 to October 2018. The mechanical and electrical fit-out of the facility is then forecast to occur from November 2018 – March 2019.</p> <p>The Application indicates that noise levels during the construction phase will be similar to those associated with normal construction projects involving use of earthmoving machinery and building construction plant, equipment and power tools.</p> <p>The Application indicates that noise emitting activities are to be limited to normal working hours and if construction works are required outside standard working hours the Water Corporation will implement a noise management plan, including notifying nearby residents and the relevant local government.</p> <p>The activities at the premises will need to comply with the <i>Environmental Protection (Noise) Regulations 1997</i> (EP Noise Regulations). Regulation 13 of the EP Noise Regulations provides that, subject to a number of requirements, construction sites are not required to meet the assigned noise levels set out in Regulation 7 of the EP Noise Regulations.</p> <p>Based on this information the Delegated Officer has determined the consequence is minor and likelihood of adverse impacts on amenity will be possible. The Delegated Officer therefore considers the overall risk of noise emissions to be medium.</p>

Table 7: Risk assessment for proposed amendment during operation

			Potential Emissions	Potential Receptors	Potential Pathway	Potential Impacts	Material risk	Reasoning
Source	Cat 54 – Sewage facility Cat 61 – Liquid waste facility	Operation of sludge screening and thickening facility	Noise: associated with ongoing operational activities	Sensitive residential and recreational receptors within Craigie and Woodvale	Air: Noise generated by the operation of plant and equipment	Amenity	No	<p>The Application did not outline potential impacts of noise from the operational aspect of the proposal however supplementary information from the Licence Holder has stated that the site is constructed and operated to comply with the EP Noise Regulations and the <i>Code of Practice for Managing Noise at Workplaces (2002)</i>. The Licence Holder has specified that mechanical equipment emits noise levels at less than 85 dB within 1 metre distance of the plant equipment.</p> <p>The Delegated Officer considers noise emissions from the operation of the new sludge screening and thickening facility to be consistent with existing operations at the WWTP and is not likely to exacerbate existing noise emissions.</p> <p>Based on this information the Delegated Officer has determined the consequence is minor and likelihood of adverse impacts on amenity will be unlikely. The Delegated Officer therefore considers the overall risk of noise emissions to be medium.</p> <p>The activities at the premises will need to comply with the EP Noise Regulations.</p>
			Odour: generated from sludge screening and thickening process	Sensitive residential and recreational receptors within Craigie and Woodvale	Air	Amenity and health	Yes	<p>There are three main systems of odour control and treatment at the Beenyp WWTP which together comprises the odour control system (OCS). Extracted foul air from the treatment processes system is treated in the bio scrubber and chemical scrubber or through the activated carbon system.</p> <p>The Application indicates that the proposed rotary screw thickener and the screening collection bin are fully enclosed units which can be readily connected to the existing OCS to minimise H₂S accumulation. Foul air emitted from each 10m³ Spirotainer will be approximately 300m³/hr and odour air flow from each of the screw thickeners will be approximately 120m³/hr. The total foul air flow introduced to the existing OCS from one new Spirotainer and two operational screw thickeners will therefore equate to 540 m³/hr.</p> <p>The Application indicates that odour from the new sludge thickening system will be connected to the existing extraction system to the Bioscrubber. The air will then be treated in the Stage 2 Chemical Scrubber system. Pre-treatment in the Bioscrubber will reduce the potential high H₂S concentration accumulated in the thickening system.</p> <p>Existing licence conditions 2.1.1, 2.1.2 and 3.2.1 regulate air emissions from the two on-site stacks; the activated carbon scrubber stack and chemical scrubber stack. Condition 2.1.2 specifies H₂S emission limits from respective stacks.</p> <p>The Application indicates there is existing capacity within the existing OCS to extract and treat additional odour from the new sludge thickening system and that proposed works will not affect existing licence conditions relating to odour control.</p> <p>Based on this information the Delegated Officer has determined the consequence is moderate and likelihood of adverse impacts on amenity will be unlikely. The Delegated Officer therefore considers the overall risk of odour emissions to be medium.</p>
			Wastes: associated with leaks and spills of waste and/or chemicals (polymer) from processing and storage infrastructure	Land and underlying groundwater	Run-off to land and potential seepage to groundwater	Land contamination and reduction in groundwater quality	No	<p>The entire facility is surrounded by a 250mm wide by 250mm high concrete bund with 200mm reinforced concrete hardstand, with each separate process area also having a concrete banded hardstand of these dimensions. The hardstands are designed with a 1:100 fall towards sumps which divert any spills into the existing drainage system for processing through the wastewater treatment system.</p> <p>Based on the information provided by the Licence Holder, the Delegated Officer has determined the consequence is moderate and likelihood of adverse impacts on amenity will be unlikely. The Delegated Officer therefore considers the overall risk of waste emissions to be medium.</p>

Decision

Having considered the proposed amendment to the licence, the Delegated Officer has determined that the construction and operation of the sludge screening and thickening facility will not result in emissions which are unacceptable to public health or the environment.

Conditions will be included on the licence to authorise the construction of infrastructure or equipment as specified by the Licence Holder (conditions 1.2.5-1.2.7). Dust controls specified by the Licence Holder will also be conditioned on the licence to ensure that dust emissions are controlled during construction (condition 1.2.8 and 1.2.9).

Conditions 1.2.3 on the licence have been updated to reflect the new infrastructure. Conditions 2.1.1, 2.1.2 and 3.2.1, currently on the licence, capture operational emissions relating to odour – no changes are proposed to these conditions.

The Delegated Officer has also determined that it is appropriate for DER to avoid the duplication of conditions that relate to an Environmental Factor/Consideration that is already regulated under Part IV of the EP Act.

The Delegated Officer has reviewed the conditions of licence L7882/1992/14 and has determined that there are several conditions that duplicate requirements imposed under MS 382 and MS 569 with regards to the disposal of treated wastewater to the marine environment. As a result the Delegated Officer has determined to remove licence conditions 2.2.1 and 3.3.1 from L7882/1992/14 to avoid regulatory duplication. Condition 4.2.1 will also be amended to remove the requirement to report on marine discharge monitoring.

There are no other changes to the licence.

Amendment History

Instrument	Issued	Amendment
L7882/1991/14	01/11/2011	Licence granted
L7882/1991/14	31/03/2016	Licence amended to new licence format, premises boundary updated and duration of licence extended.
L7882/1991/14	16/02/2017	Amendment Notice 1 Authorisation to construct sludge screening and thickening facility and removal of Part IV/V regulatory duplication.

Licence Holder's Comments

The Licence Holder was provided with the draft Amendment Notice on 25 January 2017. Comments received from the Licence Holder have been considered by the Delegated Officer as shown in Appendix 1.

Amendment

- The licence is amended by the insertion of conditions 1.2.5, 1.2.6, 1.2.7, 1.2.8 and 1.2.9 below:

1.2.5 *The Licensee must construct the Infrastructure specified in Column 1 at the Location specified in Column 2 in accordance with the Requirements set out in Column 3 and prior to the Completion date specified in Column 4 of Table 1.2.4 below.*

Table 1.2.4: Infrastructure Requirements Table			
Column 1	Column 2	Column 3	Column 4
Infrastructure	Location	Requirements (design and construction)	Completion date
Screening and thickening facility	South of the existing DAF Tanks 4-6 (refer to Engineering Design of the Sludge Screening and Thickening Facility in Schedule 1)	<ol style="list-style-type: none"> Excavation of an area approximately 50x20x2.5m south of the existing DAFT's 4-6. Excavation works to include all of the base earthworks, sumps, drainage and concrete for the new building, and the installation of underground pipework and electrical conduits. Construction of the following drains and sumps: <ol style="list-style-type: none"> Screw thickener area: 400mm wide floor drain, 13m in length (approximately); Polymer silo: 0.8m by 1.2m sump; Polymer dosing area: 0.8m by 1.2m sump; Strain presses area: 400mm wide floor drain, 13m in length (approximately); and Biosolids collection area: approximately 500mm by 500mm sump. Construction of a steel frame structure with skillion roof to house the sludge thickening plant (herein referred to as the sludge screening and thickening facility). Construction of a 200mm reinforced concrete hardstand with concrete bunding that is 250mm wide by 250mm high to the sludge screening and thickening facility. Construction of sumps and drainage infrastructure as specified in the Engineering Design of the 	Saturday 15 February 2020

Table 1.2.4: Infrastructure Requirements Table

Column 1	Column 2	Column 3	Column 4
Infrastructure	Location	Requirements (design and construction)	Completion date
		<p><i>Sludge Screening and Thickening Facility in Schedule 1.</i></p> <p>7. <i>The concrete floor of the sludge screening and thickening facility must be graded to direct captured spills and leaks to on-site sumps and drainage infrastructure as specified in the Engineering Design of the Sludge Screening and Thickening Facility in Schedule 1.</i></p> <p>8. <i>Construction and installation of the following mechanical and other equipment within the sludge screening and thickening facility, including:</i></p> <p>9. <i>Two Huber Strain Presses;</i></p> <p>10. <i>Two 10m³ Spirotainers;</i></p> <p>11. <i>Two Huber rotary screw thickeners;</i></p> <p>12. <i>Two thickened raw primary sludge (RPS) feed progressive cavity pumps; and the</i></p> <p>13. <i>New polymer plant complete with control panel and the following infrastructure:</i></p> <p style="margin-left: 20px;"><i>a. Dry powder polymer silo;</i></p> <p style="margin-left: 20px;"><i>b. Polymer mixing tank;</i></p> <p style="margin-left: 20px;"><i>c. Polymer batching tank;</i></p> <p style="margin-left: 20px;"><i>d. Three polymer dosing pumps; and</i></p> <p style="margin-left: 20px;"><i>e. Two polymer transfer pumps that feed the batching tank from the mixing tank.</i></p> <p>14. <i>Construction and installation of service connections for potable water, recycled effluent and compressed air.</i></p> <p>15. <i>Construction and installation of connections for the two Huber rotary screw thickeners and the two 10m³ Spirotainers to the existing odour control system.</i></p> <p>16. <i>Modifications to the existing DAFT Motor Control Centre (MCC) MC71103 to supply power to sludge screening and thickening facility.</i></p> <p>17. <i>Installation of electrical equipment and instrumentation required to</i></p>	

Table 1.2.4: Infrastructure Requirements Table			
Column 1	Column 2	Column 3	Column 4
Infrastructure	Location	Requirements (design and construction)	Completion date
		power and provide remote monitoring and control to the sludge screening and thickening facility.	

- 1.2.6 The Licensee must not depart from the specifications in Table 1.2.4 except:
- a) where such departure is minor in nature and does not materially change or affect the infrastructure; or
 - b) where such departure improves the functionality of the infrastructure and does not increase risks to public health, public amenity or the environment; and
 - c) in accordance with all other conditions in this Licence.

- 1.2.7 The Licensee shall submit a compliance document to the CEO, following the construction of the works. The compliance document shall:
- (a) certify that the works were constructed in accordance with conditions 1.2.5 and 1.2.6; and
 - (b) be signed by a person authorised to represent the Licensee and contain the printed name and position of that person within the company.

- 1.2.8 The Licensee must ensure that the infrastructure and equipment specified in column 1 of Table 1.2.5 are maintained and operated in accordance with the requirements specified in column 2 of Table 1.2.5.

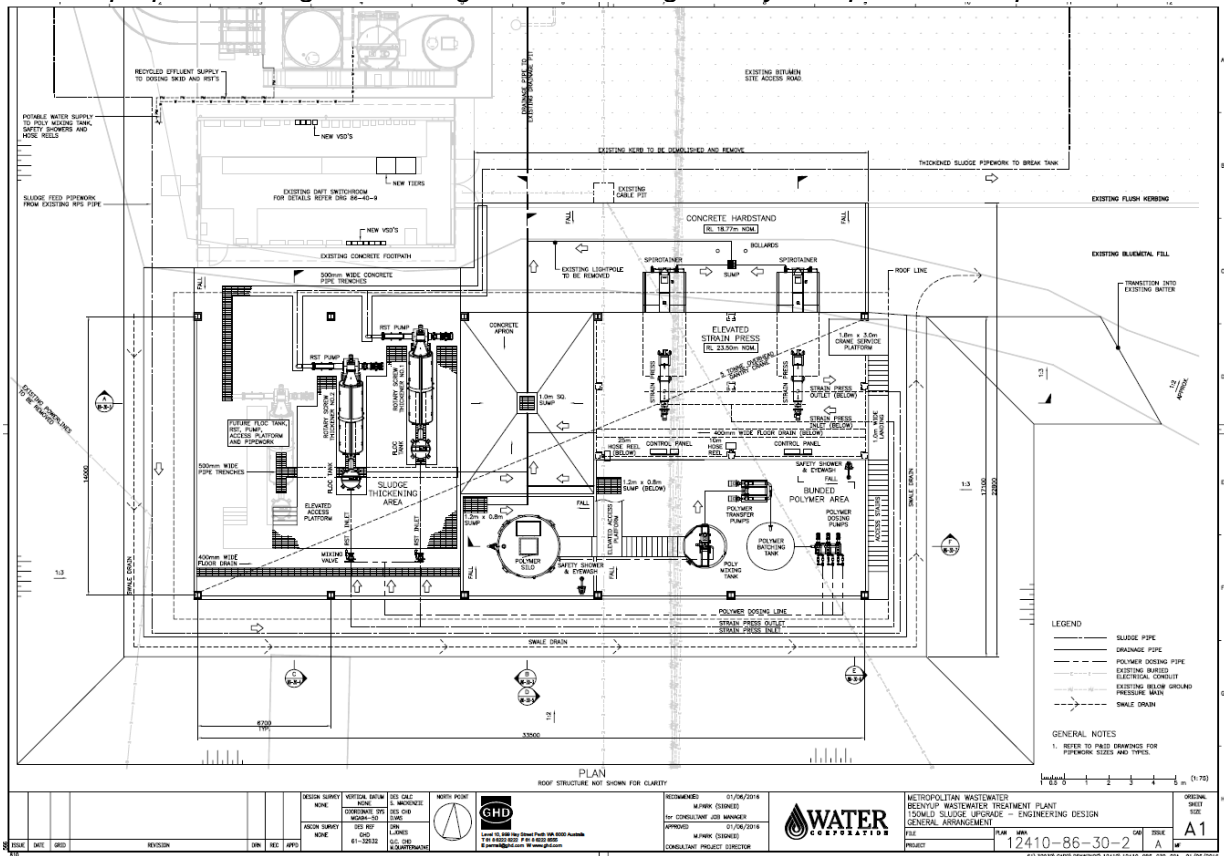
Table 1.2.5: Operational infrastructure (Dust controls)	
Column 1	Column 2
Site infrastructure	Operation details
1 Water cart	<p>Applicable only to construction activities specified in Condition 1.2.5.</p> <p>The water truck must be fitted with high volume side and rear sprays bars to ensure complete coverage of construction work and laydown areas and internal access /haul roads associated with the construction of the infrastructure specified in Table 1.2.4.</p> <p>Must be maintained in good working order.</p>

- 1.2.9 The Licensee must operate the infrastructure as specified in Table 1.2.5 to ensure:
- (a) all unsealed internal access roads to the construction area; and
 - (b) the construction work and associated laydown areas are maintained in a damp state, or otherwise stabilised using spray binders or provided with wind breaks to prevent dust lift-off.

2. Schedule 1 of the licence is amended by the inclusion of the Engineering Design for the proposed Sludge Screening and Thickening Facility as shown below:

Engineering Design – Sludge Screening and Thickening Facility

The Engineering Design and schematic of the general arrangement of infrastructure at the proposed Sludge Screening and Thickening Facility is depicted in the plan below.



3. Condition 1.2.3 of the licence is amended by the by the deletion of the text shown in strikethrough below and the insertion of the red text shown in underline below:

1.2.3 The Licensee shall ensure that material is only stored and/or treated within vessels or compounds provided with the infrastructure detailed in Table 1.2.3.

Table 1.2.3: Containment infrastructure

Storage vessel or compound	Material	Requirements
<i>Inlet/preliminary works: Mechanical Step Screens and Grit Removal Tanks</i>	<i>Screenings and Grit</i>	<i>Recovered screenings and grit to be stored in a sealed bin which is stored within a bunded hardstand area or a hardstand area that is graded to a collection drain which returns sludge leachate to the start of the treatment process.</i>

Table 1.2.3: Containment infrastructure

Storage vessel or compound	Material	Requirements
Primary Sedimentation Tanks	Wastewater	Ensure that the covers on the primary and aeration tank areas of the plant are kept in place at all times except when removal is required for maintenance operations or during emergency situations.
Aeration Treatment		
Secondary Sedimentation Tanks		None specified
Sludge blending tanks <u>Sludge screening and thickening facility</u>	Sludge and leachate	Returns sludge leachate to the start of the treatment process.

4. The licence is amended by the insertion of the following definitions in condition 1.1.2 shown in red text and underlined below:

'Damp' means wet enough that dust cannot be visibly generated;

'Sludge screening and thickening facility' means any sludge treatment and storage infrastructure associated with sludge screening and thickening;

5. The licence is amended by the deletion of condition 2.2.1 and 3.3.1 shown in strikethrough below:

~~2.2 Point source emissions to surface water~~

~~2.2.1 The Licensee shall ensure that where waste is emitted to surface water from the emission points in Table 2.2.1 it is done so in accordance with the conditions of this Licence.~~

Table 2.2.1: Emission points to surface water

Emission point reference	Description	Source including abatement
Ocean Reef Ocean outlets	Discharge of treated wastewater via the Ocean Reef Outlets, one 1850 metres and one 1650 metres offshore.	Treated wastewater

~~3.3 Monitoring of point source emissions to surface water~~

~~3.3.1 The Licensee shall undertake the monitoring in Table 3.3.1 according to the specifications in that table.~~

Table 3.3.1: Monitoring of emissions to surface waters

Emission point	Monitoring point reference and location	Parameter	Units	Averaging period	Frequency
Ocean Reef Outlet	Magflow to Ocean Outfall	Volumetric flow rate	L/s m ³ /day	Monthly	Continuous
Ocean Reef Outlet	Effluent Discharge Pumping Station Sample point	pH ¹	-	Spot or composite sample	Monthly
		Total Nitrogen	mg/L		
		Total Phosphorus			
		E. Coli	cfu/100mL		Six-monthly
		Total Suspended Solids	mg/L		
		Total Dissolved Solids			
		Biochemical Oxygen Demand			
		Oil and Grease			
		Arsenic			
		Cadmium			
		Copper			
		Chromium			
		Lead			
		Mercury			
Nickel					
Zinc					

Note 1: In-field non-NATA accredited analysis permitted.

6. Condition 4.2.1 of the licence is amended by the by the deletion of the text shown in strikethrough below:

4.2.1 ~~The Licensee shall submit to the CEO an Annual Environmental Report within 63 calendar days after the end of the annual period. The report shall contain the information listed in Table 4.2.1 in the format or form specified in that table.~~

Table 4.2.1: Annual Environmental Report

Condition or table (if relevant)	Parameter	Format or form¹
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents, that have occurred during the annual period and any action taken	None specified
Table 1.2.1	Summary of any treatment capacity exceedances and any action taken.	None specified
3.2.1	Monitoring of emissions to air	None specified

Table 4.2.1: Annual Environmental Report

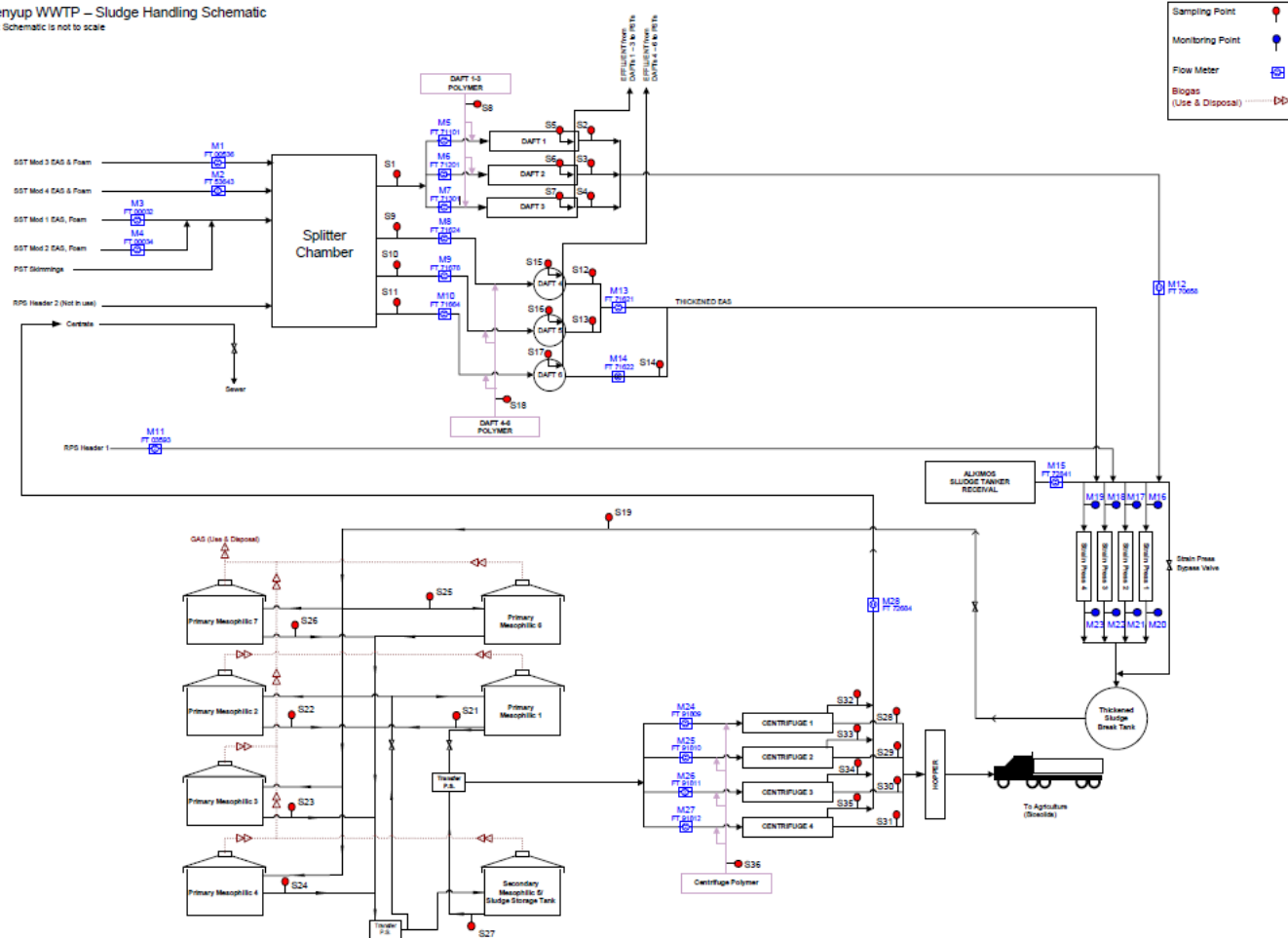
Condition or table (if relevant)	Parameter	Format or form¹
3.3.1	<i>Monitoring of emissions to surface waters</i>	<i>None specified</i>
	<i>Contaminant loading (kg/day – monthly average) to water of parameters monitored in Table 3.3.1 (except pH and Escherichia coli)</i>	<i>None specified</i>
	<i>Methodology and calculations used to estimate the daily volumetric flow rate of treated wastewater discharged to Ocean Reef Outlet and results of these calculations.</i>	
3.4.1	<i>Monitoring of inputs and outputs</i>	<i>None specified</i>
4.1.2	<i>Compliance</i>	<i>AACR</i>
4.1.3	<i>Complaints summary</i>	<i>None specified</i>
-	<i>Summary of any changes to site boundaries, or sampling point location/name</i>	<i>None specified</i>
-	<i>The quantity of sewage sludge removed from the Premises</i>	

Note 1: Forms are in Schedule 2

Attachment 1: Beenyup WWTP – Sludge Handling Process

Beenyup WWTP Sludge Handling Process Control Table

Beenyup WWTP – Sludge Handling Schematic
 Note: Schematic is not to scale



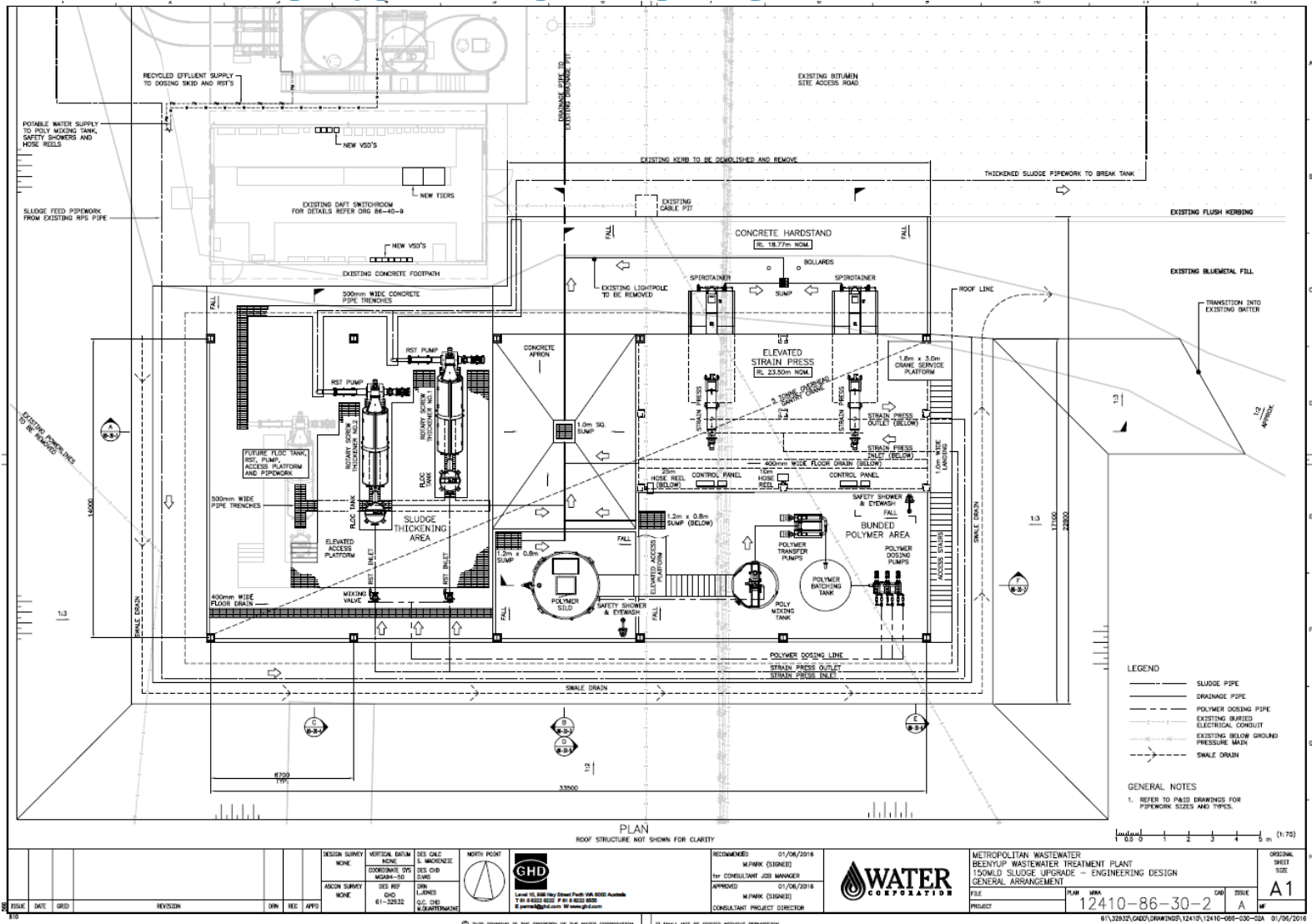
DEC requirements

PM # 8565451 v12
 Author: AGARWABO

Beenyup WWTP Process Control Table - Sludge Handling

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Attachment 2: Sludge Upgrade – Engineering Design



Amendment Notice 1
 Licence: L7882/1992/14
 File No: DER2015/002485
 Template: 1.3

Appendix 1: Summary of Licence Holder comments

The Licence Holder was provided with the draft Amendment Notice on 25 January 2017 for review and comment. The Licence Holder responded on 13 February 2017. The following comments were received on the draft Amendment Notice.

Comments received	DER consideration of risk
<p>General comments:</p> <p>1) The Amendment Notice is too prescriptive in relation to documented details of proposed infrastructure and equipment which may increase the risk of non-compliance for the Licence Holder.</p>	<p>DER's assessment of the Application has been based on the proposed equipment and infrastructure as specified in the Application.</p>
<p>Process description (page 2 of Amendment Notice):</p> <p>2) Refinement of process description as provided in the Application – minor edits.</p>	<p>Wording updated, as advised.</p>
<p>Proposed Construction Works and Design (pages 3-4):</p> <p>3) <i>The proposed Construction Works and Design (and other parts of this document) need to clearly identify that the listed infrastructure and equipment are preliminary specifications and that the final design will be refined during the design and construct phase of the project.</i></p>	<p>Section has been updated to include the following statement:</p> <p><i>'The Licence Holder has indicated that the listed infrastructure and equipment, as detailed above, are preliminary specifications and that the final design may vary through the detailed design and construct phase of the project.'</i></p>
<p>Risk Assessment (pages 6-8):</p> <p>4) Errors in wording.</p>	<p>Wording updated, as advised.</p>
<p>Amendment (pages 11-18)</p> <p>5) Conditions 1.2.5 – 1.2.7 Infrastructure Requirements</p> <p><i>Emphasis is to be given to the preliminary design nature of the infrastructure and equipment specified in Column 3 of Table 1.2.4. The preliminary design focuses on creating an early general framework to build the project on whilst the Detailed Design phase, which will be delivered through the Design and Construct Contract, will further elaborate each aspect of the project by complete description through solid drawings and specifications. The infrastructure and equipment listed in Column 3 will therefore change.</i></p> <p><i>The Water Corporation has identified that Condition 1.2.6 provides a departure from the Specifications listed in Column 3 under strict exceptions, however, it does not take into consideration the equipment and infrastructure are still to be finalised at the higher level detailed design phase. The provision of the final commissioning report which will contain final design specifications will be submitted by the Water Corporation in accordance with Condition 1.2.7.</i></p>	<p>As indicated above DER's assessment of the Application has been based on the proposed equipment and infrastructure as specified in the Application. As a result sufficient detail has been specified within Licence Conditions to ensure construction activities/works can be audited appropriately.</p> <p>Condition 1.2.6 sets the criteria for variations to proposed works and states that the Licence Holder must not depart from the specifications in Table 1.2.4 except:</p> <ul style="list-style-type: none"> a) where such departure is minor in nature and does not materially change or affect the infrastructure; or b) where such departure improves the functionality of the infrastructure and does not increase risks to public health, public amenity or the environment; and c) in accordance with all other conditions in this Licence. <p>Condition 1.2.7 requires the Licence Holder to submit a compliance document to the CEO, following the construction of the works to certify that the works were constructed in accordance with Conditions 1.2.5 and 1.2.6. Any variations to the proposal from that outlined in the assessed Application must be documented in the compliance document.</p> <p>If changes to the proposal do not meet the</p>

Comments received	DER consideration of risk
	<p>provisions of Condition 1.2.6 then the Licence Holder has the option to submit an application to amend the Licence.</p> <p>Please note that DER has amended Table 1.2.4 to also include a completion date for the proposed works and has allowed for a three year period. Based on the information provided in the Application construction works are forecast to be complete by March 2019.</p>
<p>Amendment (pages 10-17)</p> <p>5) Conditions 1.2.8 - Operational infrastructure (Dust controls):</p> <p><i>Table 1.2.5 should clearly state that the dust controls are only applicable to the construction phase, not during operational.</i></p> <p><i>Within Table 6 (Page 7), it is clearly stated that dust is associated with construction activities.</i></p>	<p>Wording in Table 1.2.5 has been updated to state that the operation of the water cart only relates to construction activities as specified in Condition 1.2.5.</p>
<p>Attachment 2 (page 19)</p> <p><i>7) Please be aware this is a preliminary design drawing only and updated drawings will be provided by the Water Corporation as part of commissioning.</i></p>	<p>Noted.</p>