Decision Report

Application for Works Approval

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

Works Approval Number	W6686/2022/1
Applicant	Water Corporation
ACN	28 003 434 917
File Number	DER2021/000350
Premises	Lloyd Street North Wastewater Pumping Station Plant Lot 334 on Diagram 77554, and Part of Road Reserve, Lloyd Street, Middle Swan As defined by the coordinates in Schedule 1 of W6686/2022/1
Date of Report	27/09/2022
Decision	Works approval granted

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Date: 2022.09.27 09:38:06 +08'00'

Abbie Crawford
A/MANAGER WASTE INDUSTRIES
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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1. Decision summary

This Decision Report documents the assessment of potential risks to the environment and public health from emissions and discharges during the construction, commissioning and time limited operations associated with the additional row storage within the Lloyd Street Road Reserve. As a result of this assessment, Works Approval W6686/2022/1 has been granted.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this decision report, the Department of Water and Environmental Regulation (the department; DWER) 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.

3. Background

On 20 April 2022, the Water Corporation (the Applicant) submitted an application for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act), at the Lloyd Street North Sewerage Pumping Station for the construction of additional row storage.

The Lloyd Street North Waste Water Pump Station (WWPS) was constructed in 1989 and operates as a prescribed premise Category 85A under R1211/1996/1: Sewerage pumping station: *premises on which sewerage is pumped (other than to or from septic tanks) and where a discharge of waste from the station may enter the Swan River or Canning River* that is registered under Part V of the *Environmental Protection Act 1986* (EP Act). The WWPS is located adjacent to Lloyd Street in Middle Swan within Lot 334 on Diagram 77554 as depicted in Figure 1 below

Figure 1: Site layout

In the winter of 2021, the Water Corporation identified that 64% of the existing WWPS row storage was utilised (which has a 3.08-hour storage capacity). The Water Corporation stated that additional row storage must be installed into the Lloyd Street Road Reserve related to the WWPS before next Winter of 2023. The installation of additional row storage adjacent to the WWPS aims to prevent discharge of sewage during diurnal surges in winter, including potential stormwater ingress to the conveyance network. The Water Corporation is currently assessing conveyance assets to identify if the increasing inflow to the row storage is due to ingress into the conveyance network. Due to the process of identifying network deficiencies and rectifying any issues identified, the Water Corporation will need to establish additional row storage (2.2 hours) adjacent to the WWPS to prevent the discharge of sewage.

The WWPS currently discharges to the 305mm John St Collection Sewer in the Midland Sewer District. The WWPS has a 26 L/s capacity suitable for the sewer catchment size forecast up to 2035 and has an emergency discharge overflow pipe from the wet well to Blackadder Creek. To date, this emergency overflow pipe has not been used and no discharge of sewerage has occurred. Blackadder Creek is connected through drainage pathways to the Swan River (1.9km away).

The Acid Sulfate Soils (ASS) Investigation undertaken by Golder Associates (Golder, 2021) identified subsurface conditions primarily comprised clayey sand/sandy clay/clay with layers and zones of ferricrete/sandstone/claystone, summarised as:

- The Clayey SAND/Sandy CLAY/CLAY (SC/CI-CH) is typically medium to high plasticity, variably grey, orange, red and brown, stiff to hard.
- The FERRICRETE/SANDSTONE/ CLAYSTONE was encountered at most locations as shallow as about 1.6 m bgl, and up to greater than 3 m thick, the rock is variably cemented and is typically low to medium strength with high strength zones.

Groundwater beneath the premises was encountered as shallow as 1.1 m below ground level (mbgl) during the investigation. During winter there is the potential for near surface perched groundwater, or deeper confined groundwater to occur. The Midland area is known for having confined groundwater occurring in excavations at various levels as a result of groundwater flowing through higher permeability sandy or gravelly lenses/layers within the predominantly low permeability clayey soil profile.

Key findings:

- The near surface geology comprises clayey sand/sandy clay/clay with layers and zones of ferricrete/sandstone/claystone.
- Gorundwater beneath the premises is shallow with the potential for perched groundwater lenses to be seasonally present beneath the premises.
- The WWPS currently discharges to the John St Collection Sewer in the Midland Sewer District and has an emergency discharge overflow pipe to Blackadder Creek. Blackadder Creek is connected through drainage pathways to the Swan River (1.9km away).
- To date, this emergency overflow pipe has not been used and no discharge of sewerage has occurred.

3.1 Acid Sulfate Soils

Based on the Acid Sulfate Soils (ASS) indicators derived from field screening tests of 63 samples undertaken as part of both geotechnical investigations (Golder 2021 and Golder 2022a), the following ASS risks were identified:

- No samples were inferred to be actual acid sulfate soil (AASS);
- All samples were inferred to have a ‘Low’ potential acid sulfate soil (PASS) risk rating; and

- 21 of the 63 samples were considered to be ‘acidic soil’, i.e., pH less than 5.5.

Based on the results of these field screen tests, Chromium Reducible Sulfur (CRS) Suite laboratory analysis was undertaken on 38 samples. The CRS Suite analysis identified the following:

- No material was identified as PASS; and
- AASS was identified in 25 samples.

Material classified as Actual Acid Sulfate Soils (AASS) occurred across the alignment of the proposed works area. These materials reported net acidity results up to about 0.06%S and average net acidity of 0.05% (Golders, 2021).

Following the geotechnical, dewatering, and preliminary Acid Sulfate Soils (ASS) investigations undertaken by Golder for the Lloyd Street additional row storage works an Acid Sulfate Management Plan (Golder, 2022a) and a Dewatering Management Plan (Golder, 2022b) were developed to manage the disturbance of ASS that will occur during dewatering and earthworks activities undertaken during construction.

3.1.1 Acid Sulfate Soils Management Plan

An Acid Sulfate Soils Management Plan (ASSMP) was developed by Golder for the Lloyd Street additional row storage works (Golder, 2022). A summary of the ASSMP is presented below:

Non-ASS Materials

- Non-ASS material is limited to FILL material which may be present at isolated locations or may be present across the full extent of the excavation to a maximum depth of about 2.7 m.
- Removal of FILL during open trench techniques should be undertaken using conventional earthmoving equipment (i.e., excavators).
- FILL should be excavated separated from AASS materials.
- FILL should be either reused on site or disposed of to a suitably licensed landfill facility. For off-site disposal/re-use, testing in accordance with the Landfill Waste Classification and Waste Definitions 1996 will be required.
- Should suspected ASS materials be exposed during the excavation of areas designated as non-ASS, materials will need to be characterised to confirm their ASS potential.

PASS and AASS Material

- All material below the surficial FILL encountered during ground disturbance should be treated as ASS.
- Confirmed ASS materials should not be disturbed and trenchless technologies should be adopted.
- Where disturbance of ASS cannot be avoided, the material can be excavated through open trench techniques using conventional earthmoving equipment (i.e., excavators) and shall be managed through the addition of fine ground agricultural lime (or another approved neutralising agent) to the excavated soil within a bunded treatment area.
- Encountered or suspected ASS materials recovered should be stockpile separately from non-ASS materials on a limestone pad.
- Accurate records of materials movement shall be kept with respect to volumes recovered, material description, origin and destination, and date recovered.
- Materials that lay beyond the lithologies analysed during the preliminary investigation works at the premises should be assessed by conducting ASS field screening tests and laboratory CRS suite analysis.

- Treated ASS materials should not be used as backfill within excavations below the groundwater table. Only non-ASS materials shall be used to backfill below the watering table.
- ASS material to be removed from the premises must be disposed of to a suitably licensed waste disposal facility that is licensed to accept untreated ASS.

3.1.2 Dewatering Management Plan

A Dewatering Management Plan (DMP) was developed by Golder for the Lloyd Street additional row storage works (Golder, 2022). A summary of the DMP is as follows:

- Dewatering is to occur during the dry season due to seasonable variations and the possibility of perched or confined groundwater following periods of heavy rainfall.
- The maximum number of dewatering days is to be 10 days.
- The maximum depths of trenching excavations are about 4.0 m and the required groundwater level drawdown is 2.5 m (conservative based on wet season groundwater levels).
- Total dewatering volume for the proposed methodology is estimated to be up to 5,000 kL and the maximum discharge rate would be less than 5 L/s (conservative based on wet season groundwater levels).
- Dewatering is to be done by in-pit sump pumping.
- The radius of influence of the dewatering activities is estimated to be less than 40 m. There are no surface water bodies or bore water users within the radius of influence.
- Due to the potential change in the pH and water chemistry of the soils and shallow groundwater resulting from exposure to PASS, dewatering shall be undertaken so that the dewatering level is within natural seasonal variations.
- Dewatering discharge point to be decided. Disposal to sewer and infiltration is preferred with the contingency option for disposal being to stormwater. Dewatering effluent treatment will depend on the chosen disposal method. Laboratory analysis frequency and analytes will depend on disposal method.
- Flow meters will be installed on all discharge lines with discharge rates and cumulative volumes recorded daily.
- Field parameters (pH, electrical conductivity (EC), redox potential, dissolved oxygen (DO), total titratable acidity (TTA), total alkalinity (TALK) and temperature) must be measured and recorded every day pre- and post-treatment (if required).
- Dewatering may cease in order to prevent the discharge of poor-quality water back into the aquifer or into the stormwater drainage system until acceptable treatment options have been arranged. Provisions must be put in place to ensure that if dewatering ceases while excavations are open, the walls of these excavations can be safely retained under saturated soil conditions.

Key findings:

- Material classified as AASS are present across the alignment of the proposed works area.
- Non-ASS are limited to surficial FILL material which may be located up to a maximum depth of 2.7 m bgl.
- Where disturbance of ASS cannot be avoided, ASS material should be stockpiled separately to non-ASS and either treated within a bunded treatment area or removed off site to an appropriately licensed waste disposal facility.
- Treated ASS should not be used as backfill below the groundwater table.
- Dewatering is to occur during the dry season due to lower chance of encountering perched or confined groundwater.
- Dewatering level is to be maintained within natural seasonal fluctuations.
- The proposed dewatering level is 2.5 m.
- The estimated radius of influence from dewatering in 40 m. The impacts from the radius of influence are considered negligible.
- Discharge will occur either to sewer or by infiltration with the contingency being to discharge to stormwater.
- Dewatering will cease to prevent poor-quality water being discharged back into the aquifer or stormwater.

3.2 Proposed works

The Water Corporation have proposed the following works as part of the additional row storage installation:

- Construction works: 17 x 2.44m long DN1800 Class 4 concrete pipes (connected) buried adjacent to the existing row (which have existing storage of 198m3) and connected into the current access change MH X5215 which will provide a volume and additional volume 100m3. Total combined volume will be 298m3. The row storage pipes will be installed below ground between Lloyd St and Francis Street.
- Commissioning works: Once the connection is made to the access chamber, the row storage is deemed to be commissioned. Rows will be inspected before laying and activation for leaks or material defects. If a leak were identified during commissioning, the Rows would be isolated from the access chamber, Sewage pumped out to the conveyance network, and the row storage repaired or replaced.
- Time limited operations: Operation of the infrastructure to allow for time to submit an application for a registration or licence under the *Environmental Protection Act 1986.*

The site plan and location of infrastructure are depicted in Figure 2 below.

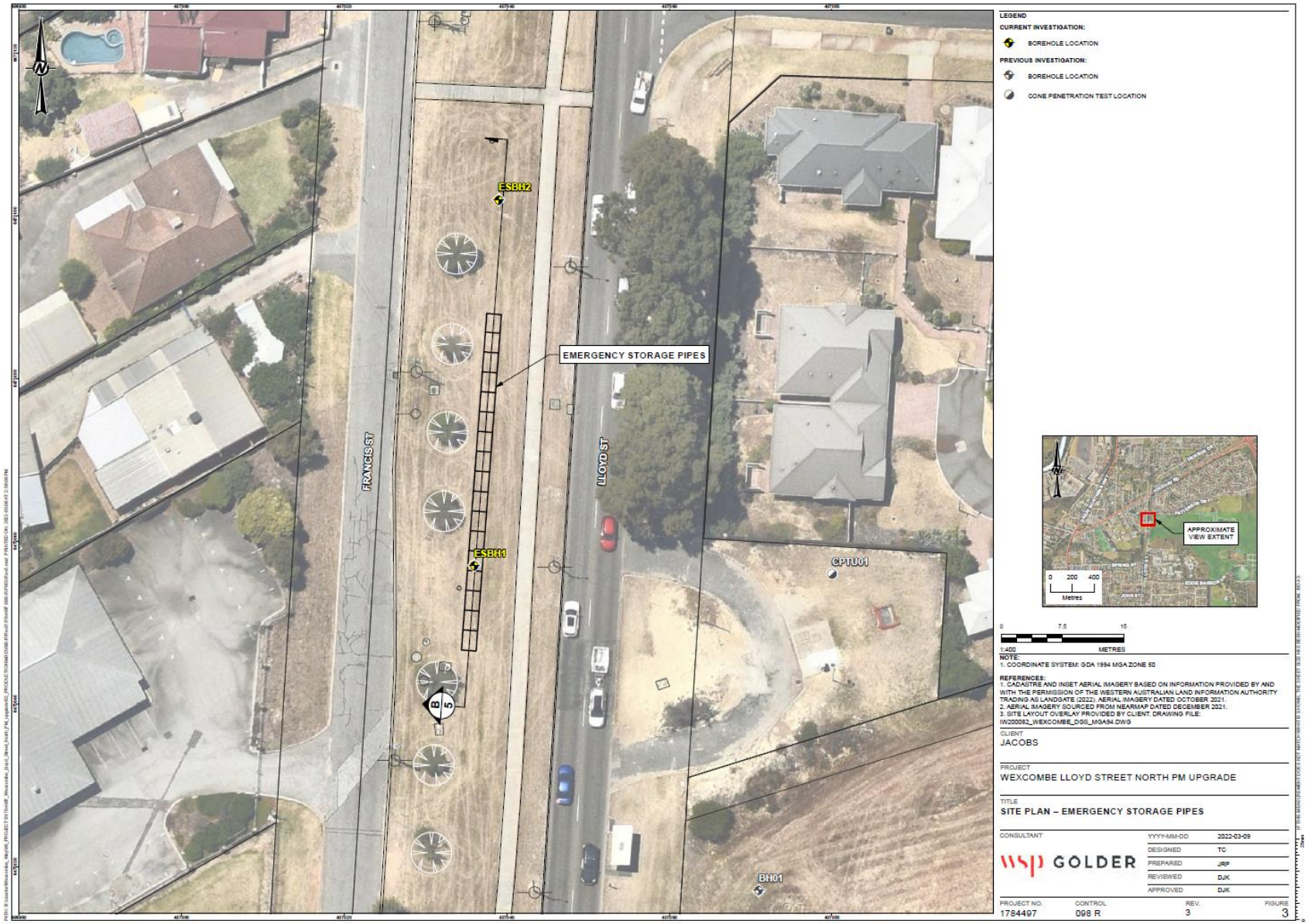

Figure 2 – Site plan

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3.3 Part V of the EP Act

The WWPS that is associated with the additional row storage works operates under a Category 85A activity under R1211/1996/1: Sewerage pumping station: *premises on which sewerage is pumped (other than to or from septic tanks) and where a discharge of waste from the station may enter the Swan River or Canning River* that is registered under Part V of the *Environmental Protection Act 1986* (EP Act).

3.4 *Swan and Canning Rivers Management Act 2006*

Planning, protection and management of the Swan-Canning River system is legislated under the *Swan River Trust Act 1988* that was repealed by the now *Swan and Canning Rivers Management Act 2006 (SCRM Act).* The SCRM Act aims to ensure that land use planning and development protects and enhances the ecological health, amenity and heritage value of the Swan Canning River system for the public benefit of Western Australia. The Swan River Trust statutory planning functions are to provide advice to the WAPC and local governments in relation to development proposals.

The SCRM defines the Swan Canning Development Control Area (DCA) under Schedule 3 of the SCRM Act as all land and waters. The WWPS and additional row storage premises are not located within the Swan-Canning River DCA and is not subject to the provisions of the Rivers & Estuaries Development Control Procedures (DPaW, 2016). However, the Emergency Discharge Overflow Environmental Discharge Point is connected to Blackadder Creek/ Drain and has the potential to flow into the Swan River. The Delegated Officer notes that no overflows have occurred at the premises to date.

3.5 State Planning Policy 2.10 Swan-Canning River System

State Planning Policy 2.10 (SPP 2.10) provides a regional framework for future development, provides a context for consistent and integrated planning and decision making and ensures activities, land uses and development will maintain and enhance the health, amenity and landscape values of the Swan and Canning rivers, including its recreational and scenic values.

3.6 Planning approval

Acting under the authority delegated to it by the Western Australian Planning Commission (WAPC), the City of Swan determined an application under the Metropolitan Region Scheme (MRS) on behalf of the WAPC for the proposed additional row storage works (DA-55/2022 – Public Works – Water Corporation Emergency Storage Upgrade Works – Lloyd Street Middle Swan). The City of Swan also provided referral advice to the WAPC that the City of Swan has no objection to the approval of the Public Works.

4. Risk assessment

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

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

4.1 Source-pathways and receptors

4.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises works, commissioning and time limited operations which have been considered in this Decision Report are detailed in Table 1 below. Table 1 also details the proposed control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 1: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Noise	Vehicle movement Use of machinery and equipment	Air/windborne pathway	All vehicles and equipment will be equipped with appropriate noise controls. All plant, equipment and vehicles will be regularly inspected and maintained. Construction activities will be undertaken between 7am to 5pm Monday to Saturday Night construction work is not anticipated to occur. Construction Environmental Management Plan (CEMP) to be prepared, and include details on noise contingency measures, dealing with noise complaints and exceedances of assigned noise levels, and measures to reduce excessive noise. The Contractor must document the manner in which this will be achieved in a CEMP prior to works commencing.

Emission	Sources	Potential pathways	Proposed controls
Dust	Vehicle movement and mobile plant Movement of soil, stockpiling of soil and other materials Construction activities	Air/windborne pathway	The project will utilise pre-cast pipes and structures that will reduce construction timeframes and limit the construction works conducted on site, thus reducing the potential for dust emissions; Existing hardstand areas will be utilised around infrastructure areas to reduce dust emissions during construction and operations from vehicle and machinery movement; Fencing the site prior to the commencement of any works to reduce potential dust migration; Reduce dust generation from concrete cutting or grinding using water to suppress dust or using a vacuum system to capture dust emissions. Roads and access paths shall be maintained to reduce the build-up of dirt and dust Opportunistic visual inspections of dust plumes and dust emissions on site will be undertaken during construction period on a daily basis to ensure dust control measures are implemented and effective; Wetting/dust suppression of unsealed surfaces using benign dust suppressants will be used on disturbed areas as required during construction; Weather forecasts will be checked daily and high-risk weather conditions (windy, hot and dry) will be monitored and additional wetting/dust suppressant used on unsealed surfaces during these conditions; Speed limits on site will be adhered to on unsealed and sealed roads/tracks. Construction Environmental Management Plan (CEMP) to be prepared detailing how dust emissions will be managed and mitigated.

Emission	Sources	Potential pathways	Proposed controls
Odour	Effluent	Air/windborne pathway	No odour emissions are expected during the construction phase. However, odour emissions are possible during tie-ins to access chambers. Construction Environmental Management Plan (CEMP) to be prepared to include the construction, commissioning and operation of the additional row storage works will be prepared by the engaged contractor. The proposed commissioning activities are likely to occur at night to further reduce potential impacts to surrounding sensitive receptors.
Uncontrolled discharge of chemical	Accidental spills or loss of containment Mishandling of chemicals Refuelling activities Leaks from machinery/vehicles	Seepage to soil and groundwater	All hazardous chemicals and hydrocarbons are to be kept in appropriately bunded areas compliant with *AS1940: The storage and handling of flammable and combustible liquid.* Appropriate spill kits, containment and recovery equipment will be kept and maintained on-site. Spill kits will be strategically situated throughout the site. Any spills will be controlled, contained and cleaned up in accordance with a Spill Management Procedure. Fuel will be stored within self-bunded tanks. Mobile equipment will be fitted with a spill kit. Staff and contractors involved in the handling of hazardous chemicals and fuels will be suitably trained. Hardstand areas created will be sufficiently graded and bunded to contain spills or accidental discharges to land/waters. Hydrocarbon and chemical storage areas will be inspected on a regular basis. Construction Environmental Management Plan (CEMP) to be prepared detailing the management of chemicals during the works.

Emission	Sources	Potential pathways	Proposed controls
Uncontrolled discharge of effluent (including liquid waste).	Accidental spills or loss of containment	Seepage to soil and groundwater	There will be no direct discharge of treated wastewater to the land during construction stage. No other discharges to land will occur during construction. Dewatering effluent from the project is likely to be treated and discharged to the sewerage network. Water Corporation's SCADA and alarm system will allow for operators to attend the metropolitan site in time to determine a solution before overflow will reach the Environment which could include bypass pumping or removal off site until normal operations is restored. Construction Environmental Management Plan (CEMP) to be prepared for the construction works.
Sulfates	Disturbance of PASS and ASS	Seepage to groundwater	Works to be conducted in accordance with the Acid Sulfate Soils Management Plan: • Confirmed ASS should not be disturbed where possible and trenchless technologies should be adopted; • Where disturbance of ASS cannot be avoided, ASS material should be stockpiled separately to non-ASS and either treated within a bunded treatment area or removed off site to an appropriately licensed waste disposal facility; • Encountered or suspected ASS materials recovered should be stockpile separately from non-ASS materials on a limestone pad; • Treated ASS should not be backfilled below the groundwater table; and • Materials that lay beyond the lithologies analysed during the preliminary investigation works at the premises should be assessed by conducting ASS field screening tests and laboratory CRS suite analysis. Dewatering level is to be maintained within natural seasonal fluctuations.

Emission	Sources	Potential pathways	Proposed controls
Light Emissions	During night works, if required.	Light spill	Construction Environmental Management Plan (CEMP) to be prepared detailing the management of light spill, should night works be required. Lighting will be restricted to that is necessary for safety requirements and will be designed to restrict light overspill, where possible
Wastes	Windblown waste	Air/windborne pathway	Waste materials from equipping/construction activities will be collected in skip bins in dedicated waste storage areas on-site and disposed at an appropriately licenced landfill facility or reused where possible.

Note 1: Under Section 53 of the EP Act, it is an offence to alter a prescribed premises, which causes an emission or alters the nature of volume of the waste, noise, odour or electromagnetic radiation emitted, otherwise than in accordance with a works approval, licence, closure notice or an environmental protection notice.

4.1.2 Receptors

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

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

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

Human receptors	Distance from prescribed activity
Residential Premises	located 20m east and west of the proposed premises boundary
Environmental receptors	**Distance from prescribed activity**
Swan and Canning River classified as a Conservation Category Wetland (CCW)	950m northwest and 1.9km west of the premises. The Emergency Discharge Overflow Environmental Discharge Point is connected to Blackadder Creek/ Drain and has the potential to flow the 1.9 km where it drains into the Swan River.
Underlying groundwater (non-potable purposes)	There are 13 licenced abstraction points within 500m of the proposed prescribed premises boundary

4.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guidance Statement: Risk Assessments* (DER 2017) for each identified emission source and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the applicant 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 applicant'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 applicant's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3.

Works Approval W6523/2021/1 that accompanies this Decision Report authorises construction and time-limited operations. The conditions in the issued Works Approval, as outlined in Table 3 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence is required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the Premises. A risk assessment for the operational phase has been included in this Decision Report, however licence conditions will not be finalised until the department assesses the licence application.

Table 3: Risk assessment of potential emissions and discharges from the Premises during construction and time limited operations

Risk Event					Risk rating[1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions[2] of works approval	Justification
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
Construction, mobilization and positioning of infrastructure Vehicle movement Use of machinery and equipment	Dust	Air/windborne pathway causing impacts to health and amenity	Residences 20m east and west of the premises Residences 20m east and west of the premises	Section 4.1.1	S = Minor L = Rare **Low Risk**	Y	**Conditions 1 & 2**	The works approval specifies the minimum requirements for the CEMP to manage dust emissions.
	Noise	Air/windborne pathway causing impacts to health and amenity		Section 4.1.1	C = Minor L = Possible **Medium Risk**	Y	**Conditions 1 & 2**	The applicant has committed to having a Construction Environmental Management Plan (CEMP) which will address the potential for noise emissions and provide mitigation measures. The works approval specifies the minimum requirements for the CEMP to manage noise emissions.

Risk Event					Risk rating[1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions[2] of works approval	Justification
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
	Odour	Air/windborne pathway causing impacts to health and amenity		Section 4.1.1	C = Minor L = Possible **Medium Risk**	Y	Conditions 1 & 2	The works approval specifies the minimum requirements for the CEMP to manage dust emissions. No odour emissions are expected during the construction phase as the works do not tie into the pumping station infrastructure. Tie-in works to the sewers may release some odours but will be localised, temporary and confined to the prescribed premise. There will be no odour emission from the additional row storage during operation they are a sealed system and installed below ground level.
	Light	Air/windborne pathway causing impacts to health and amenity		Section 4.1.1	S = Slight L = Unlikely **Low Risk**	Y	Conditions 1 & 2	The works approval specifies the minimum requirements for the CEMP to manage light emissions.
	Litter	Air/windborne pathway causing impacts to health and amenity		Section 4.1.1	S = Slight L = Unlikely **Low Risk**	Y	Conditions 1 & 2	The works approval specifies the minimum requirements for the CEMP to manage litter.

Risk Event					Risk rating[1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions[2] of works approval	Justification
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
Disturbance of potential acid sulfate soils	Oxidation and mobilisation of actual acid sulfate soils	Mobilisation of actual acid sulfate soils through groundwater beneath the premises causing ecosystem disturbance	Groundwater beneath the premises Blackadder Creek that has the potential to drain to the Swan River	Section 4.1.1	C = Moderate L = Possible **Medium Risk**	Y	Conditions 3 - 8	Acid sulfate soils can be adequately managed through the Acid Sulfate Soils Management Plan.
Accidental spills or loss of containment	Wastewater discharge to the environment	Overland flow and infiltration to soil and groundwater causing ecosystem disturbance	Groundwater beneath the premises Blackadder Creek that has the potential to drain to the Swan River	Refer to Section 4.1.1	C = Moderate L = Unlikely **Medium Risk**	Y	Conditions 1 - 8	The operation of the proposed infrastructure does not alter the risk as previously assessed for equivalent infrastructure for Licence L8434/2010/1.
	Chemical spill	Overland flow and infiltration to soil and groundwater causing ecosystem disturbance	Groundwater beneath the premises	Refer to Section 4.1.1	C = Minor L = Unlikely **Medium Risk**	Y	Conditions 1 & 2	Minor hydrocarbon and chemical spillages are adequately regulated by the *Environmental Protection (Unauthorised Discharges) Regulations 2004*.

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

Note 2: Proposed applicant controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

5. Consultation

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

Table 4: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website (28/06/2022)	None received	N/A
Local Government Authority advised of proposal (28/06/2022)	The City of Swan responded to the invitation to comment on 28/07/2022. Acting under the authority delegated to it by the Western Australian Planning Commission (WAPC), the City of Swan determined an application under the Metropolitan Region Scheme (MRS) on behalf of the WAPC for the proposed additional row storage works (DA-55/2022 – Public Works – Water Corporation Emergency Storage Upgrade Works – Lloyd Street Middle Swan). The City of Swan also provided referral advice to the WAPC that the City of Swan has no objection to the approval of the Public Works.	N/A
Applicant was provided with draft documents on 22/08/2022	Refer to Appendix 1	Refer to Appendix 1

6. Conclusion

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

References

1. Department of Environment Regulation (DER) 2016, Guidance Statement: Environmental Siting, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2019, Guideline: Decision Making, Perth, Western Australia
3. DER 2015, Guidance Statement: Setting Conditions, Perth, Western Australia.
4. DER 2017, Guidance Statement: Risk Assessments, Perth, Western Australia.
5. DWER 2019, Guideline: Industry Regulation Guide to Licensing, Perth, Western Australia
6. Golder Associates (Golder), 2021. Geotechnical, Dewatering, and Preliminary Acid Sulfate Soil Investigation

7. Golder Associates (Golder), 2022a Acid Sulfate Soils Management Plan Wexcombe Pump Station No.2 Emergency Storage (ES) Upgrade. March 2022.
8. Golder Associates (Golder), 2022b Dewatering Management Plan Wexcombe Pump Station No.2 Emergency Storage (ES) Upgrade. March 2022.
9. Water Corporation, CS00200 Lloyd Street North Pump Station Additional Row Storage Works Approval Application Supporting Information. April 2022

Appendix 1: Summary of applicant's comments on risk assessment and draft conditions

Condition	Summary of applicant's comment	Department's response
Condition 3	Typographical error. Suggest wording provided *"Provide an additional volume of 100 m3".*	Grammatical error amended
Condition 3	It is not practical to ensure the access chamber is sealed at all times. Water Corporation needs to open it and work inside it. When we do this, it may be under live flow conditions – this is business as usual for Water Corporation and will be managed as per a well-established process when live tapping assets.	The condition has been updated to ensure that the access chamber is sealed when tie in works and associated activities are not being undertaken.
Condition 13	Reword commissioning requirement to from "Must be hydraulically tested to the required pressure and deemed fit for purpose prior to use" to "Must be leak tested and deemed fit for purpose prior to use"	The condition has been updated and added to the infrastructure requirements table, condition 3. This change does not alter the risk assessment.
Conditions 11-15	Once Verified through the Leak Detection Test, the additional row storage will sit empty until it is required to be used in the event of emergency storage and balancing of the Pump Station. The asset, once constructed is operational effective immediately.	Conditions removed. Reporting requirements have been updated to reflect commissioning being undertaken during construction.
Conditions 11-15	Time Limited Operations are not applicable to this asset. It is not a licence but a registration. As this asset is a registration then once the construction and compliance report are submitted there is no further action on the proponent to obtain a licence as a registration already exist but there are no governing conditions (R1211/1996/1).	The Delegated Officer notes that the current registration does not extend to include the additional row storage. As such, the time limited operation conditions have been retained on the works approval, allowing the Water Corporation to operate the infrastructure for a period not exceeding 90 calendar days or until such time as a licence or registration for that item of infrastructure is granted in accordance with Part V of the Environmental Protection Act 1986.

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY					
Application type					
Works approval	☒	Related instrument:	R1211/1996/1		
Licence	☐	Relevant works approval number:		None	☐
		Has the works approval been complied with?	Yes No		
		Has time limited operations under the works approval demonstrated acceptable operations?	Yes No N/A		
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?	Yes No		
		Date Report received:			
Renewal	☐	Current licence number:			
Amendment to works approval	☐	Current works approval number:			
Amendment to licence	☐	Current licence number:			
		Relevant works approval number:		N/A	☐
Registration	☐	Current works approval number:		None	☐
Date application received		20/04/2022			
Applicant and Premises details					
Applicant name/s (full legal name/s)		Water Corporation			
Premises name		Lloyd Street Pumping Station			
Premises location		Lot 334 on Diagram 77554, Lloyd Street, Middle Swan			
Local Government Authority		City of Swan			
Application documents					
HPCM file reference number:		DER2015/001735-1			
Key application documents (additional to application form):		Lloyd Street North Pump Station Additional Row Storage Works Approval Application Supporting Information – April 2022 Geotechnical, Dewatering, and Preliminary Acid Sulfate Soil Investigation. Acid Sulfate Soils Management Plan Dewatering Management Plan			
Scope of application/assessment					

Summary of proposed activities or changes to existing operations.	Installation (Additional Row Storage) of 17 x 2.44m long at the Lloyd Street Wastewater Pumping Station (WWPS) adjacent to the existing row storage. The new storage pipes will be installed below ground between Lloyd St and Francis Street. The WWPS currently discharges to the 305mm John St Collection Sewer in the Midland Sewer District. The WWPS has a 26 L/s capacity suitable to a predicted sewer catchment size forecast up to 2035 presently and has an emergency discharge overflow pipe from the wet well to Blackadder Creek. To date, this emergency overflow pipe has not been used. Blackadder Creek is connected through drainage pathways to the Swan River (Situated 1.9km away).

Category number/s (activities that cause the premises to become prescribed premises)

Table 1: Prescribed premises categories

Prescribed premises category and description	Proposed production or design capacity
Category 85A: Sewage pumping station: premises on which sewage is pumped (other than to or from septic tanks) and where a discharge of waste from the station may enter the Swan River or the Canning River.	Not applicable for Category 85A activities

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 No	Referral decision No: Managed under Part V Assessed under Part IV
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes No	Ministerial statement No: EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes No	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes No	No evidence provided for the proposed row storage area. Certificate of title refers to the WWPS. The City of Swan municipality is the current landholder.
Has the applicant obtained all relevant planning approvals?	Yes No N/A	A Development Approval (DA) through the Metropolitan Regional Scheme (MRS) is being sought concurrently with this Works Approval application for the proposed Additional Row Storage Upgrade. The DA process will include referral of the application to the Swan River Trust under Clause 30A(2)(a) of the MRS.

Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes No	N/A
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes No	N/A
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes No	Water Corporation have applied for a licence to take groundwater for dewatering purposes, if required.
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes No	N/A
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes No	N/A
Is the Premises subject to any other Acts or subsidiary regulations (e.g. *Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx*)	Yes No	N/A
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes No	N/A
Is the Premises subject to any EPP requirements?	Yes No	N/A

Is the Premises a known or suspected contaminated site under the *Contaminated Sites Act 2003*?	Yes No	N/A