

SDP Capital Works 5-year Plan



REF	Asset Types	Proposed Scope	Category	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
1	Control System Upgrade	Major upgrade of site wide control system consistent with SCADA and control system asset design life of 10 and 15 years respectively. This project comprises the complete upgrade of the SCADA system, including replacing servers (and relocating some to provide further resilience), replacing programmable logic controllers (PLCs) in all switchrooms with the latest models, upgrading software, upgrading the communication interface between the control system and field assets (Fieldbus Network) and upgrading the data logging and reporting system (Historian).	Plant						
2	RO Membrane Replacement	Replacement of Reverse Osmosis (RO) membranes to maintain Average Membrane Life (AML) of 4yrs for 1st Pass RO membranes and 6yrs for 2nd Pass RO membranes in line with performance warranty. FY23 - procurement of 1 train to ensure production continuity under long procurement lead times FY24 - 4662 1st pass membranes installation FY25 - 5388 1st pass membranes installation FY26 - 4580 1st pass + 1666 2nd pass installation FY27 - 3772 1st pass + 1372 2nd pass installation FY28 - 3502 1st pass + 1176 2nd pass installation	Membranes						
3	ERD Assembly	Overhaul of 13 Energy Recovery Device (ERD) Assemblies in line with Original Equipment Manufacturer (OEM) recommendation, including: non-destructive testing inspections of welds and subsequent repairs, replacement of piston flappers, gaskets, and seals. Inspection and refurbishment of lynx pistons and check valves. Inspection and replacement of Victaulic couplings. Overhauls of hydraulic pack and replacement of fuses. Requires significant disassembly and scaffolding access.	Periodic Maintenance						
4	Piedmont Couplings	Replacement of all existing bolts on the RO Piedmont Couplings with new bolts (in line with updated Piedmont design) with duplex as the material. Couplings and gaskets will be inspected at the same time, however it is not expected these will be replaced but some will be procured as spares if required. The primary driver is safety of personnel and equipment based on a technical bulletin from the OEM which recommends change of material and the replacement of bolts every 10 years or when showing signs of corrosion, and in addition to the numerous bolt failures across the industry. Consistent with works on other Australian Desalination Plants.	Periodic Maintenance						
5	Fire Suppression	Upgrade of the Pyrozone system to a non-lethal alternative. Pyrozone low pressure carbon dioxide (CO2) gas extinguishing systems are installed in the thirteen electrical switch rooms throughout the site, which discharge CO2 in the room and under the floor as a means of suppressing and potentially extinguishing any fire source that may become present within the room. The Pyrozone system is now obsolete, and is no longer utilised in the industry due to the safety risk of uncontrolled discharge (the CO2 displaces oxygen in the room) and environmental impacts. Over the recent operational periods of the Plant, there have been several incidents that resulted in uncontrolled discharge. This project is to move to a non-lethal/inert gas system.	Plant						
6	RO Booster Pump Assembly	Overhaul of pump and motor, replacement of wearing parts and check for corrosion. Pump to be internally inspected and mechanically overhauled. O&M Manual calls for a four-yearly overhaul, given the period of operation this is overdue but has been deferred due to consideration of asset performance, condition and run-time.	Periodic Maintenance						
7	ERD Booster Pump Assembly	Overhaul of pump and motor, replacement of wearing parts and check for corrosion. Pump to be internally inspected and mechanically overhauled. O&M Manual calls for a four-yearly overhaul, given the period of operation this is overdue but has been deferred due to consideration of asset performance, condition and run-time.	Periodic Maintenance						
8	2nd Pass Pump Assembly	Overhaul of pump and motor, replacement of wearing parts and check for corrosion. Pump to be internally inspected and mechanically overhauled. Check the condition of the bearings, casing wear rings and impeller. O&M Manual calls for a four-yearly overhaul, given the period of operation this is overdue but has been deferred due to consideration of asset performance, condition and run-time. Overhauls on 3 x 2nd Pass Pump Assembly completed in FY22. Findings are indicative of condition of similar pumps, being: minor crevice corrosion, motor cooling circuit showed significant blockage and required multiple acid cleans.	Periodic Maintenance						
9	Expansion Bellows	There are around 200 non-metallic expansion bellows across site. The expansion bellows are a flexible connector fabricated of natural or synthetic elastomers, fluoroplastics and fabrics and, if necessary, metallic reinforcements to provide stress relief in piping systems due to thermal and mechanical vibration and/or movements. A recent audit of the condition of all expansion bellows has been completed, including inspection and hardness testing. The audit identified a large number of bellows with a hardness indicator (Shore A) above specification, indicating the asset is reaching end of life and replacement is recommended. Only expansion bellows above 30k have been allowed for.	Plant						

SDP Capital Works 5-year Plan

REF	Asset Types	Proposed Scope	Category	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
10	RO Stainless Steel Ball Valves	Inspect and refurbishment of stainless steel ball valves. Involves the progressive removal of ball valves for renewal/refurbish. The strategy involves selecting groups of valves and completing over several years. Seals are Viton seals. Seals are deteriorating and valves require refurbishment with seal kit. Condition of balls to be assessed and where required refurbished.	Periodic Maintenance						
11	ERD Recirc Pump Assembly	Overhaul of pump and motor, replacement of wearing parts and check for corrosion. Pump to be internally inspected and mechanically overhauled. O&M Manual calls for a five-yearly overhaul, given the period of operation this is overdue but has been deferred due to consideration of asset performance, condition and run-time.	Periodic Maintenance						
12	Admin Air Conditioner Replacement	One of the three plantrooms have had a standalone unit installed to replace the failed multiroom unit. The other air plant units are nearing end of serviceable life with nil like for like units available. Multi-room units are to be replaced with single room units or modifications and replacement to the existing ducted design are required.	Plant						
13	DWPS Delivery Pump Assembly	Project to dismantle and recondition components of pump and motor based on OEM recommendations (5yr overhaul) and internal borescope inspection, which found pump coating requires repair and motor heat exchanger fouling. Proposal includes inspecting spare rotating assembly and spare motor and changing out one DWPS Pump with the inspected spares (to minimise downtime). Then the removed rotating assembly and motor will be reconditioned and swapped with the remaining pump the following year for overhaul. These pumps are currently duty/duty.	Periodic Maintenance						
14	UPS & Battery Replace	Periodic maintenance on Uninterruptible Power Supplies (UPS) & replacement of batteries on UPS equipment (4) sets of 40 batteries. The UPS assets are 12 years old and although regularly maintained and kept in a clean environment are experiencing failures due to age. Several components are no longer in production and parts are getting harder to source. All UPS contain a number of electrolytic capacitors and these have a lifespan of about 8-9 years. We are experiencing a number of failures of the capacitors and this is affecting the reliability of the units.	Periodic Maintenance						
15	Transformer Refurbishments	Transformer radiator fins are showing signs of corrosion. Potential production and environmental risk. It is proposed to carry out intermediate repairs/replacements to the transformer fins/tank. The radiator fins are welded to the tank body, as part of this project these radiator fins should be redeveloped to be isolated and removable from the transformer tank to minimise the onset of corrosion.	Periodic Maintenance						
16	Pit Dewatering Program	Inspections on the SDP pipeline and associated assets in 2017, 2018, and 2022 identified that most of the air valve pits (16 out of 19) contained water to within approximately 500mm of the surface when opened, leaving the AV fully submerged for significant periods. There are risks associated with submerged air valves such as potential to contaminate the drinking water within the pipeline, surface corrosion of fitting and coating defects. Air valves have been constructed in concrete pits with a 100mm PVC drainage pipe. The drainage pipe discharges into an aggregate layer external to the pit. The cause of the pits filling with water are associated with ground water levels, pits not sealing and drains not functional. This project comprises investigations into permanent drainage options that will minimise water accumulation in air valve pits by redesigning and modifying the pit's drainage.	Pipeline						
17	RO Sampling Panels	This project will significantly reduce the amount of "hazard facing" time for technicians associated with RO train conductivity mapping (required to assess and troubleshoot train performance) and reduce the amount of time required to sample/analyse a whole train. RO sampling panels are becoming industry standard as they allow fast, accurate and safe ways to identify trouble areas in RO membrane arrays. Installation of one (1) sampling panel on a 1 st pass RO train within the RO building will be completed first in 2022-23. The construction of the first panel will then be used to evaluate the design and collect sufficient information to enable competitive submissions (quotes or tender) for delivery of the remaining 19 panels over the following 2 years.	Plant						
18	Admin building improvements	Replace/renew the meeting room walls in admin building. Removal of the existing partition stack wall at reception and replace with a fixed powder coated aluminium shop front wall with laminated safety glass. Removal of the existing partition wall that separates the two meeting rooms and replace with powder coated aluminium bi-fold stacker door system. Double glaze the existing window system at the top of the partition wall that separates the two rooms.	Plant						
19	Cathodic Protection DWPS Pipework	Install Impressed Current Cathodic Protection (ICCP) on pipework at the DWPS. Condition reports on the ICCP system have found a deterioration in the system at the DWPS end. The subject matter expert has recommended installation of an impressed current system to prevent damage to the assets and pipeline at the DWPS.	DWPS						

SDP Capital Works 5-year Plan



REF	Asset Types	Proposed Scope	Category	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
20	Chem Unloading Bays E-Stops	Install additional E-stops and whip checks in chemical loading bays as per outcomes of safety investigation. The installation of additional E-stops at either end of each unloading bay. This is a safety improvement recommendation to remove technicians from the location of any possible chemical leak whilst supervising the transfer of chemicals from a delivery tanker into the bulk storage tanks. Includes the installation of whip check devices to restrain pressurised hoses during chemical deliveries, so that in the event of failure the technicians and equipment are not struck.	Plant						
21	Installation of Standby Drinking Water Pump	Installation of a standby drinking water pump to improve the availability of the plant. Currently, there is no redundancy for the drinking water pumps, with both required to operate to meet the 250ML/d average supply requirement. As such, should one pump fail the remaining duty pump can only deliver a maximum flow of around 185ML/d (depending on system resistance). Inherent in the original plant design, the drinking water pumping station (DWPS) capacity presents a risk that has the potential to impact on water security during operations. The DWPS was constructed by an Alliance between Sydney Water Corporation and other private sector constructors/designers and was designed to a lower availability (85%) than the overall plant (94%). Therefore, the DWPS has a higher probability of failure than the overall plant and can potentially restrict the plant from achieving an average annual water production rate of 250ML/d or responding to emergency flow request from Sydney Water.	DWPS						
22	Warehouse Expansion	The original plant design and installation included a warehouse store for spare parts and equipment. Over the last decade of operation the site has accumulated 10 additional shipping containers, spread around the site to store spares. In addition, the change in operating regime to operate the plant at nominally 50MLD up to 250MLD depending on demand from Sydney Water will need an increased level of certainty regarding plant availability. Plant availability will be impacted by availability of critical spares for quick rectification of unforeseen failures as well as availability of spares required for the planned maintenance activities. The recent international events such as, COVID lockdowns ongoing in China and the conflict in the eastern Europe has had a significant impact on global supply chains. These events have impacted the delivery times of spares, it is not clear whether these conditions will persist. These new risks warrant a review of the level of spares maintained at the plant to support the plant's availability requirements. Additional spares will require additional space for storage. This project is to modify/extend the existing warehouse to allow additional site storage.	Plant						
23	HP Pumps	Overhaul of pump, replacement of wearing parts and check for corrosion. Pump to be dismantled and internally inspected. Based on findings, components such as bearings, seals and sleeves will be replaced. Condition of pumps casing impeller shaft and bearings to be assessed. Pump lubrication system to be refurbished due to obsolescence of various components. O&M Manual calls for a four-yearly overhaul. Motors have been overhauled in 2018 and pumps inspected in 2019.	Periodic Maintenance						
24	DWPS Elec Building Cooling	Inherent in the original design and construction of DWPS electrical building an excessively hot environment for electrical assets is created in the summer months and has contributed to historical failures of the DWPS, primarily via the Variable Speed Drives (VSDs) overheating. The option to improve the building and ventilation was considered in 2019 but put on hold as the costs had not been identified in the RP2 capital forecast and the Expansion planning presented uncertainty in that the building may change appreciably as a result of the Expansion. As a result since returning to operation in 2019, temporary air conditioning was installed during the warmer months to reduce risk and allow the Plant to meet its Emergency Response and water supply requirements. Along with the overheating issues experienced, due to design and construction of the shed like building, salt laden air can enter the building and enter the electrical equipment, which is likely to reduce the life of the assets. This project is to install an air conditioning system in DWPS electrical building and is propose to be aligned with the installation of the third drinking water pump.	DWPS						
25	Sea Water Intake (SWI) Pumps	Project to dismantle and inspect mechanical components of pump and recondition motor. Components such as bearings, seals and sleeves will be replaced. Condition of pumps casing impeller shaft and wear rings to be assessed.	Periodic Maintenance						

SDP Capital Works 5-year Plan

REF	Asset Types	Proposed Scope	Category	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
26	Lime System Improvements	Improvements to the lime system pertaining to reliability, maintenance, efficiency, equipment obsolescence, and operability particularly in relation to new operating conditions in which the Plant will be requested to run more flexibly and at below full capacity (low flow). The lime plant produces lime water (calcium hydroxide solution close to saturation) from powdered hydrated lime for the purposes of remineralising the blended RO permeate. The proposed improvements present opportunities to increase efficiency at the Plant by reducing lime consumption, reducing lime waste disposal, reducing time required for maintenance activities during shutdowns, increase reliability of the plant and increase accuracy of plant operation.	Plant						
27	Outfall Low Flow Efficiencies	This project is proposed to investigate potential improvements to the low flow operation of the Plant by assessing and implementing efficiencies relating to the seawater bypass and make-up water required for the outfall diffusers during low flow operation. Current outfall design requires alternative outfall diffusers to be installed at low and high production, but this arrangement does not allow flexible operation between these extremes.	Plant						
28	PT Backwash Pump Assembly	Overhaul of pump and motor, replacement of wearing parts and check for corrosion. Pump to be internally inspected and mechanically overhauled. O&M Manual calls for a five-yearly overhaul, given the period of operation this periodic maintenance is due.	Periodic Maintenance						
29	PT Recirc Pump Assembly	Overhaul of pump and motor, replacement of wearing parts and check for corrosion. Pump to be internally inspected and mechanically overhauled. O&M Manual calls for a five-yearly overhaul, given the period of operation this periodic maintenance is due.	Periodic Maintenance						
30	Plant Flow Meters	Replace the flow meter transmitters at the end of life and assessment of mag-flow element. Design life for instrumentation and controls assets is 15 years.	Periodic Maintenance						
31	CIP Pump Assembly	Overhaul of pump and motor, replacement of wearing parts and check for corrosion. Pump to be internally inspected and mechanically overhauled. O&M Manual calls for a four-yearly overhaul, given the period of operation this periodic maintenance is overdue.	Periodic Maintenance						
32	Remote monitoring 132kv switchyard	This opportunity for improvement would include installation of new instrumentation assets to allow for continuous monitoring on our single point of failure of the plant, the incoming 132kv supply installation. Partial discharge and transient earth voltage are the most effective way of predicting any future failures within a cable or switchgear	Plant						
33	Thickened Sludge Holding Tank	Replacement of failed sealant on laps. Identified through internal inspection of tanks, repairs required.	Periodic Maintenance						
34	Lamella Scrappers	Full overhaul of the lamella scrapers, including the motor and gearbox overhauls and replacement of sacrificial anodes. O&M Manual calls for a four-yearly overhauls and anode replacement, however this has been deferred based on site observations and condition.	Periodic Maintenance						
35	RO Neutralisation Eductor and Tank	Periodic Maintenance of neutralisation tank and eductor. This involves confined space entry into the tank and the inspection and repairs to the tank coatings. Based on previous 5-yearly inspections the tank roof will require full recoating and the walls may require patch repairs.	Periodic Maintenance						
36	Environmental monitoring of switchboards DWPS	This opportunity for improvement is for 24/7 monitoring of the DWPS HV and LV Switchboards these are predictive analytics to determine the health of the switchboards. This would replace once a year thermography, allow remote switching and thus improve electrical safety for the operator.	DWPS						
37	Surge Vessel Valve	Inspection and overhaul of surge vessel isolation valves, include valve stem refurbishment and recoating as required. Based on site observations and current condition, periodic maintenance should be performed on these valves to ensure proper operation and design life can be achieved.	Periodic Maintenance						
38	Pilot trial condition monitoring dips pumps and motors	This opportunity for improvement is to conduct a pilot trial of new analytics for pump and motor condition. Data can be used to improve the condition monitoring of these assets similar to motor current signature analysis.	DWPS						

SDP Capital Works 5-year Plan

REF	Asset Types	Proposed Scope	Category	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
39	Ongoing Efficiency Projects	Allowance to pursue improvement projects to increase efficiency, reliability, availability or safety for the Plant, particularly in relation to new operating conditions in which the Plant will be requested to run more flexibly (increasing and decreasing production) and at below full capacity. The Plant was designed predominantly as a baseload supply and assets and processes are sized for full production and operate most reliably and efficiently at higher production levels rather than at their maximum turn-down at low production. We have identified some constraints while operating at low production during recent emergency response periods and have proposed some improvements to be delivered in FY23 and FY24 (e.g. #26. Lime System improvements, #27. Outfall Efficiency). However, as we operate under new licence conditions and understand the challenges more fully, we will need to implement capital improvements to allow sustainable and efficient operation at the lower end of production capabilities for customer benefit – reliability and cost.	Plant						
40	Botany Bay Inspection	Inspection of the Botany Bay Pipeline. This section of pipe runs across the Bay on the sea floor and has a different risk environment i.e. an aggressive marine environment. The pipe's design life is 100 years, however the design layout of the pipeline provided little or no direct means of monitoring the pipe for condition (corrosion or other damage) that would reduce asset life or risk pipe operation. The entire length of the Pipeline has been internally inspected during the 2017-2023 Regulatory Period. It is proposed that a pipeline condition assessment of the Bay crossing would provide SDP with more complete asset management information and assist in future planning for the pipeline. This proposal is to complete an internal inspection of the two barrels of the pipe crossing the bay using remote technology that will provide vision of the pipe cement lining, any defects to the lining and signs of underlying corrosion of the steel pipe. It will also cover the two bifurcation pieces which are specially fabricated parts of the pipeline.	Pipeline						
41	Delivery Flow Meter	Replace the flow meter transmitters at the end of life and assessment of mag-flow element.	Periodic Maintenance						
42	Centrifuges	Overhaul of the wastewater centrifuges in line with OEM recommendations, including replacement of belts, bearings, seals, etc. and overhaul of gearbox. This item has been pushed back assuming reduced run-time due to production at less than capacity.	Periodic Maintenance						
43	Plant HV / LV Switchboards	Major inspection and testing of electrical switchboards. Inspection of all accessories such as switchboard, power meters, lamps/indicators, control wiring, surge protection, batteries. Carry out periodic maintenance on vacuum circuit breakers/air circuit breakers, protection relays and busbars, including ductor tests, earth continuity, protection settings, etc. O&M Manual calls for a four-yearly service at minimum.	Periodic Maintenance						
44	132kV Transformers	Major inspection, testing and periodic maintenance of the 132kV power transformers, including air vents, heater, tanks, etc. and recoating to transformers.	Periodic Maintenance						
45	Penstocks	Overhaul seals and replace grease in valve actuators in accordance with the operating instructions. For penstock multi-turn gearbox (AUMA GK30.2), seals must be changed when changing the grease. A grease and seal change is recommended after 10-12 years if operated seldom, after 6-8 years if operated frequently. This was raised in 2020 and has been reviewed/deferred during the annual renewal planning. Condition will continue to be monitored however it is assumed after 15 years will necessary but may be brought forward if required.	Periodic Maintenance						
46	WWHT Sump Pump	Inspect and general overhaul of pumps in line with OEM recommendations, includes dismantling pump, mechanical seal and motor and full overhaul of all components. These pumps have previously been replaced (under warranty) in 2019 with a higher grade stainless steel, however due to the extremely aggressive environment in which these pumps operate, the overhauls are unlikely to be deferred. O&M Manual calls for a five-yearly overhaul.	Periodic Maintenance						
47	DWPS Isolation Valve	Inspect and refurbishment of DN1200 isolation valves and actuators, including replacement of seals and limits and patch repairs or recoating as required. Based on site observations and current condition, periodic maintenance should be performed on these valves to ensure proper operation and design life can be achieved.	Periodic Maintenance						
48	WW Centrate Pump	Overhaul of pump and motor, replacement of wearing parts and check for corrosion. Pump to be internally inspected and mechanically overhauled including replacement of bearings and seals. O&M Manual calls for a five-yearly overhaul, given the period of operation this is now due.	Periodic Maintenance						
49	DWPS Air Compressors	Inspect and full overhaul of compressors to achieve design life. Major intervention to refurbish compressors mid-way through life cycle.	Periodic Maintenance						

SDP Capital Works 5-year Plan

REF	Asset Types	Proposed Scope	Category	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
50	DWPS Non-Return Valve	Inspect and refurbishment of DN1200 non-return valves. Based on site observations and current condition, periodic maintenance should be performed on these valves to ensure proper operation and design life can be achieved.	Periodic Maintenance						
51	132kV / 11kV Protection & Control Board	Major inspection and testing of electrical switchboards (de-energised) including review/replacement of obsolescent instrumentation (relays etc.). O&M Manual recommends functional tests performed 3-yearly. For efficiency, it is proposed this be aligned with the HV/LV switchboard periodic maintenance (4-yearly).	Periodic Maintenance						
52	DWPS HV / LV Switchboards	Major inspection and testing of electrical switchboards. Inspection of all accessories such as switchboard, power meters, lamps/indicators, control wiring, surge protection, batteries. Carry out periodic maintenance on vacuum circuit breakers/air circuit breakers, protection relays and busbars, including ductor tests, earth continuity, protection settings, etc. O&M Manual calls for a four-yearly service at minimum.	Periodic Maintenance						
53	132kV duplication	The 132kV feeder provides the full operational load of the plant in its present configuration (250ML/day). In the event of planned or unplanned outages of the 132kV feeder (91P), the plant will lose all drinking water production. This project will provide an additional 132kV supply from the Ausgrid Kurnell South Zone Substation (ZS) to the existing 132kV busbar on site. The project will provide redundancy for the Plant power supply and increase availability (by reducing maintenance windows). It has the secondary advantage of completing risky works that would be required for any future expansion.	Plant						
54	Filter Media	Replacement of end-of-life of sand (filter media). There are 24 banks of gravity Dual Media Filters (DMF) across both modules. The function of the DMF is to provide removal capability of solid matter from the seawater prior to the Reverse Osmosis process. The DMF process involves passing seawater through a bed of filter media. The bed consists of two active layers (coal and sand) and a coarse gravel support layer. Suspended solids in the seawater are trapped in the filter bed. The filtered water flows through an underdrain system to the Outlet Weir Box and to the Filtered Water Tank. Over time the filter media breaks down to the point where filter operations are constrained, water quality is compromised or downstream stream processes (e.g. wastewater) are impaired. The filter media is regularly sampled and tested to monitor the condition of the filter media. Whilst there currently is no immediate need to replace the media this project has been included as a placeholder based on typical media age at replacement. The operation of the plant will ultimately determine the rate of change and hence when the media requires replacement.	Periodic Maintenance						
55	Concrete Tanks & Bunds	Inspection and renewal of concrete tanks and bunds, including replacement/renewal of protective coatings and any required concrete injection/repairs.	Periodic Maintenance						
57	PT Blower	Overhaul of rotary displacement blower, including replacement of wearing parts and bearings. Blower to be internally inspected and mechanically overhauled. Blower to be fully externally recoated.	Periodic Maintenance						
58	RFC & Outfall ROV	Diver/ROV Inspection of outfall tunnel. There is long term risk of increased biological growth and increased operating costs as a result of the plant's long-term operation at lower production. This is due to the Plant design requiring seawater bypass during lower production with a resultant lower salinity outfall stream that does not inhibit bio-growth on the tunnel. Completion of this project will contribute further to our understanding of how biological growth develops in the outfall tunnels under low flow operations.	Periodic Maintenance						
59	Fibreglass Tanks	Internal inspection of all fibreglass tanks using specialist contractor, including draining, cleaning and ultrasonic testing.	Periodic Maintenance						
60	Intermediate Permeate Tanks (IPT) ICCP	The 1st pass permeate fluid within the IPTs is considered as a moderately aggressive fluid that will corrode unprotected steel which is electrically connected to the base slab concrete reinforcement. Provided continuity exist between any tank substrates with breached coating and the reinforcement, an impressed current cathodic protection (ICCP) system would protect the tank and ensure the design life can be achieved or exceeded. The thickened sludge holding tanks are constructed from the same material as the ITPs. These tanks have already had cathodic protection installed due to corrosion and this has successfully protected the tanks from premature failure. The ITPs are higher value and more process critical assets and warrant the same protection.	Plant						
61	Neutralisation Effluent Pumps	Overhaul of pump and motor, replacement of wearing parts and check for corrosion. Pump to be internally inspected and mechanically overhauled.	Periodic Maintenance						
62	PT Emergency Sump Pumps	Overhaul of pump and motor, replacement of wearing parts and check for corrosion. Pump to be internally inspected and mechanically overhauled.	Periodic Maintenance						

SDP Capital Works
5-year Plan



REF	Asset Types	Proposed Scope	Category	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28
63	SWI Drum Screen	Replacement of drum screen anodes, while doing this check condition of screen structure (visual / non-destructive testing - NDT) and wear in drive chain. Measure side seal rubber strips for wear. Requires divers and scaffolding. Inspect GRP/fibreglass hoppers for condition. Carry out preventive maintenance on gearbox and drive.	Periodic Maintenance						
64	Emergency Generator	Upgrade of the emergency generator control system and protection settings. Replacement of batteries.	Periodic Maintenance						