

Room Name	Plant - Water Treatment	Room Number PLNT-WT
<b>Revision</b>	4	
<b>Issue Date</b>	26.04.2021	
<b>BRIEFING</b>		
<b>Briefed Area</b>	18.00 m <sup>2</sup>	
<b>Hours of Operation</b>	24 Hours	
<b>Occupancy</b>	1 - 2 staff	
<b>Acoustics</b>	High level sound isolation	
<b>Remarks</b>		
<b>Description / Special Requirements</b>	<p>The Plant - Water Treatment is a lockable room for water treatment systems, including particle filters, water softeners, carbon filters and reverse osmosis (RO) water plant/systems, for the provision of safe water for patients receiving haemodialysis therapy. The Water Treatment Plant Room should be located in close proximity to the Renal Dialysis Unit to permit short tubing runs to each Treatment Bay, and permit staff to monitor and service the water treatment systems.</p> <p>Refer to manufacturer's specifications for details of RO water treatment plant equipment. In particular, this equipment will incorporate a heat disinfection function, and water saving features. The final components of the system will be determined by the quality of feed water and the ability of the overall system to produce and maintain appropriate water quality. Water treatment requirements to be confirmed by a dialysis water treatment specialist.</p> <p>Special Design Requirements:</p> <ul style="list-style-type: none"> <li>• High level sound isolation is required to ensure noise generated from this room does not invade treatment spaces.</li> <li>• Structural engineer's assessment must be sought for floor load bearing capacity with respect to water treatment and pre-treatment plant equipment.</li> <li>• Ventilation, exhaust and/or air-conditioning must be designed to accommodate the heat loads of the specified equipment.</li> <li>• Light is to be minimised; there are to be no windows provided.</li> <li>• Service access will be required around the perimeter of plant equipment, clearances will be determined by manufacturer's specifications.</li> <li>• A second door may be provided for separate deliveries and maintenance access if located in the patient treatment area.</li> <li>• Pipework and components installed after the water inlet in this room shall not contain brass or copper.</li> <li>• Options for cooling of high temperature (circa 90°C) waste water discharged from RO plant is to be considered.</li> <li>• Where chilled water is not available, a chiller may be required outside the plant room. The maximum temperature of the feed water to be assessed to allow determination of any requirement for a heat exchanger or chiller design as determined by expert. The intent of this is ensure the temperature at the dialysis point for patient care is between 30-37°C.</li> <li>• Redundancy within the pre-treatment and treatment devices/filters should be considered based on the hospitals service criticality level, the feed water quality or risk around quality, and the hospital location where supply of replacement equipment is difficult.</li> </ul>	
<b>SERVICES</b>		
<b>Electrical</b>	BODY PROTECTED <input type="checkbox"/>	CARDIAC PROTECTED <input type="checkbox"/>
<b>HVAC</b>	AIRCONDITIONING <input checked="" type="checkbox"/>	AIRCONDITIONING: hepa filtered <input type="checkbox"/>
	AIRCONDITIONING: positive pressure <input type="checkbox"/>	AIRCONDITIONING: negative pressure <input type="checkbox"/>
	EXHAUST: room exhaust <input checked="" type="checkbox"/>	VENTILATION <input type="checkbox"/>
<b>Lighting</b>	LIGHTING: colour corrected <input type="checkbox"/>	LIGHTING: dimmable <input type="checkbox"/>
	LIGHTING: downlights <input type="checkbox"/>	LIGHTING: downlights, dimmable <input type="checkbox"/>
	LIGHTING: fluorescent/LED, downlights <input type="checkbox"/>	LIGHTING: fluorescent/LED, flush with ceiling, tamper proof <input type="checkbox"/>
	LIGHTING: fluorescent/LED, general <input checked="" type="checkbox"/>	LIGHTING: indirect <input type="checkbox"/>

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**Security / Nurse Call**

NURSE CALL SYSTEM


**Room Fabrics**

AusHFG code	Description	Comment
CLFS-009	CEILING: plasterboard, water resistant, flush set, suspended, paint, washable	
CLCN-008	CORNICE: square set flush between wall and ceiling, paint	
DWSC-027	DOOR: 1600mm c/o, 1 1/2 leaf, solid core, paint	lockable
DWSC-027	DOOR: 1600mm c/o, 1 1/2 leaf, solid core, paint	optional secondary access door, lockable
DWPR-005	DOOR PROTECTION: protection plate to 900 AFFL	
DWPR-010	DOOR PROTECTION: to door frame, PVC, prefinished	optional
FLGE-003	FLOOR FINISH: concrete, sealed, trowel	
FLSK-002	SKIRTING: concrete, coved to 150 AFFL, sealed	
WLWA-004	WALL FINISH: paint, acrylic, washable	

**Fittings, Furniture and Equipment (FF&E) Items**

AusHFG code	Description	Group	Qty	Comment
FQDW-051	DESK: adj height, 1500W x 600D x 900H nom.	3	1	optional
HYGE-027	DEVICE: UV irradiator	2	1	
MEGE-010	HEAT EXCHANGER: supplied by mechanical chilled water	3	1	as required; may be necessary to cool feed water where high temperatures are expected, refer to technical expert for required outlet temperature (generally <25°C)
FQSN-138	PALLET: half size	3	1	
HYGE-016	PUMP: pressure booster	3	2	to suit water pressure drop through pre-filtration train where building water pressure and flow is inadequate
FQBS-051	STOOL: mobile, adj height	3	1	optional
HYGE-012	WATER TREATMENT: reverse osmosis plant	3	1	details according to manufacturer's specifications

**Engineering Services**

AusHFG code	Description	Group	Qty	Comment
ITBU-024	ALARM: chlorine meter	1	1	optional, dependent on local operational policies
ITBU-002	ALARM: equipment monitoring, water treatment malfunction	1	1	connected to BMS and staff station in unit
HYGE-028	DEVICE: backflow prevention	1	1	
HYDR-004	DRAIN: floor waste	1	1	floor waste must be capable of handling high flow rates and high temperature water (up to 90°C) from the RO water plant
HYDR-017	DRAIN: floor waste, 300 x 300	1	1	floor waste must be capable of handling high flow rates and high temperature water (up to 90°C) from the RO water plant

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AusHFG code	Description	Group	Qty	Comment
HYDR-006	DRAIN: tundish	1	2	
HYDR-018	DRAIN: tundish, floor drain	1	1	tundish must be capable of handling high flow rates and high temperature water (up to 90°C) from the RO water plant
ELGP-223	GPO: emergency power, double, wall mounted	1	8	for water treatment equipment, high level (power tools to be on a separate circuit)
ELGP-123	GPO: emergency power, single, wall mounted	1	1	optional, dependent on equipment
HYTP-008	OUTLET: cold water	1	1	
ITIN-026	OUTLET: data, double RJ45, wall mounted	1	1	
ELBO-010	SWITCH: light, 2-way	1	1	optional
ELBO-015	SWITCH: light, single	1	1	
HYGE-019	WATER TREATMENT: brine tank	1	1	size/quantity based on feed water quality and confirmed by a dialysis water pre-treatment expert
HYGE-020	WATER TREATMENT: carbon filter	1	3	1 is optional; size/quantity based on feed water quality and confirmed by a dialysis water pre-treatment expert
HYGE-021	WATER TREATMENT: multimedia tank	1	1	size/quantity based on feed water quality and confirmed by a dialysis water pre-treatment expert
HYGE-022	WATER TREATMENT: particle filter, 1 micron	1	1	size/quantity based on feed water quality and confirmed by a dialysis water pre-treatment expert
HYGE-023	WATER TREATMENT: particle filter, 5 microns	1	1	size/quantity based on feed water quality and confirmed by a dialysis water pre-treatment expert
HYGE-024	WATER TREATMENT: softener tank	1	1	size/quantity based on feed water quality and confirmed by a dialysis water pre-treatment expert