

PROPOSED SUB-SURFACE
IRRIGATION AREAS
TOTAL AREA = 4710m²

2m BUILDING AND
BOUNDRY
CLEARANCE LINE



EXISTING WATERWAY

RIVERINE WETLAND

PROP. WASTE-WATER
TREATMENT PLANT

EXISTING SOAKAGE
TRENCH

EXISTING WATERWAY

SITE AREA-19,440 m²



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ISSUE	AMENDMENT	APPROV.	DATE
01	PRELIMINARY LAYOUT	MMCK	10/08/20
02	SS. IRRIGATION AREAS REVISED	MMCK	03.12.20
03	DWG. RETITLED	MMCK	02.11.22

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SCALE: 1 : 1000 @ A3	DRAWN: TJT	DATE: 13/08/20
CHECKED: DATE:	APPROVED: MMCK	DATE: 13/08/20
CLIENT : APEX CAMPS		
PROJECT : MAGNETIC ISLAND OSMS ASSESMENT	DRAWING No: MAG.IS. - LN/L - 002.	ISSUE: 03
	A3	

**SITE PLAN
NATURAL WATERWAY
CLEARANCE**

ENGINEERING SPECIFICATION

GENERAL

Engineering drawings are to be read in conjunction with the architectural drawings, other consultants drawings and specification.

All work to be done in accordance with AS2870 U.N.O.

For your maximum protection, footing trenches and prepared slabs should be inspected by the Engineer before pouring concrete.

All footings are to be placed into firm, natural, undisturbed ground unless otherwise approved. The builder is to check for soft spots that may exist under footings and contact the engineer if in doubt to the foundation quality. All vegetation and soft soil beneath slabs and footings are to be removed before construction of filling commences. In the circumstance where trees beneath or close to the building pad are to be removed, they shall be removed wholly (including the main roots). Holes that are created due to removal of vegetation should be filled with soil matching the composition of the existing surrounding soil. If in doubt about the requirements for backfilling excavations resulting from removal of soft spots or tree stumps, contact the engineer.

Fill beneath slabs is to be granular of minimum CBR 10 and compacted in layers of 150mm maximum to a minimum of 98% minimum dry density ratio (based on standard compaction) for cohesive soils, and to a minimum density index of 70% for cohesion less soils. It is the builder's responsibility to test the compaction to ensure compliance. For deep fill, testing should be carried out at least every 300mm of depth. All earth work to be in accordance with AS3798-2007.

The Contractor shall allow for structural deflections, expansions and contractions when placing finishes or services. Finishes shall not be fixed across structural joints. Joints shall be provided in ceilings at wall joint locations and as recommended by the ceiling manufacturer.

To reduce cracking in brittle floor finishes caused by inevitable concrete shrinkage, flexible mortars and glues should be used and tiles should be placed as long as possible after slab construction or slab wetting. Expansion joints must be provided in the tiling to suit the tiles. It is advisable to use SL92 mesh or additional layer of slab mesh in the slab beneath these finishes.

Refer to AS1684.3 for NON-Load bearing internal walls & nominal connections.

Temporary bracing panels to be installed at least 60% of permanent bracing required during construction.

CONCRETE

Minimum strength, Footings N32 MPa, Internal Slabs N25 MPa, Exposed Slabs N32 MPa. Maximum slump to be 80mm, max. 20mm aggregate. All concrete is to be mechanically vibrated and cured by an approved method for a minimum of 3 days. We recommend curing of slabs with ULTRA-CURE liquid membrane forming curing compound.

Where reinforcement has been cut to provide for services, an equivalent amount of trimming reinforcement is to be placed each side of the service. Provide 2-N16 bars 2000mm long to u/s of mesh adjacent re-entrant corners.

Reinforcement Splice lengths: N12 - 500mm
N16 - 800mm

Fabric laps are to be a minimum of one grid overlap.
Trench Mesh: - 500mm splice.

Where dowels are required in joints they are to be parallel and aligned perpendicular to the joint.

Concrete NOT to be poured in temperatures below 5°C OR above 35°C.

No construction joints shall be placed unless approved by the engineer.

SERVICES

The following are important, especially for sites classified as M, H, E or P:

Avoid services beneath slabs wherever possible. Where services are placed beneath slabs:

- Provide 40mm of flexible sealant / lagging between pipes and penetrated concrete.
- Provide a flexible joint each side of the concrete and another within 500mm upstream and downstream, creating a short length of pipe each side of the short pipe through the concrete.

Services shall NOT penetrate footings.

Service trench inverts are to slope away from the footings and be backfilled and compacted with soil from the site. For example, on clay sites excavations should only be backfilled with compacted clay. Porous material such as sand, gravel or 'crusher dust' should not be used.

All service trenches parallel to footings to be located at least 1500mm away from the footing.

Provide tolerance for vertical movements in vertical pipes entering the ground, e.g. slip joints.

Surface drainage shall NOT be located within 1.5m of building.

STORMWATER - SURFACE GRADES

The ground adjacent to the building is to be graded at 1:20 away from the building for 1000mm and then at 1:200 to an outfall. Downpipes and tap outlets should be provided with a concrete splash pad to avoid ponding and excessive wetting of the soil. Air-conditioning condensate outlets, toilet overflow pipes and hot water system pressure relief outlets are also potential drip producing sources that must be watched.

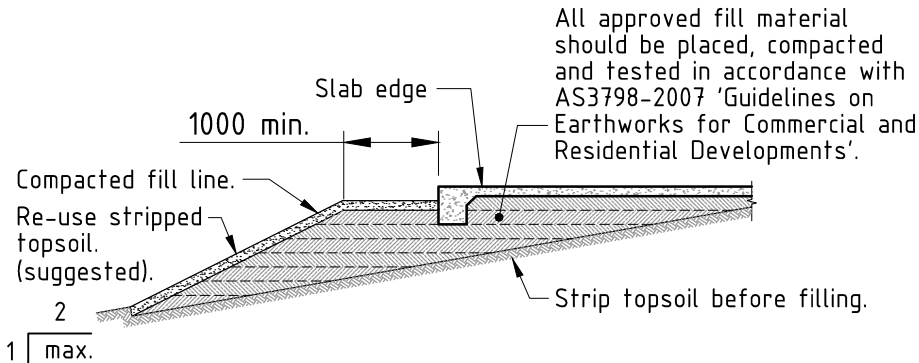
LANDSCAPING & MAINTENANCE

Trees must be kept well away from the building. Recommended minimum distance of at least the height of a mature tree and 1.5 times this for a group of trees.

The builder should instruct the owner of his/her responsibility for maintenance of the area around the building in accordance with CSIRO sheet No. 10-91, especially with respect to surface water, trees and plumbing leaks.

NCC TABLE 3.4.4.7

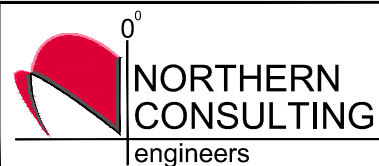
PROTECTIVE COATINGS FOR STEELWORK			
ENVIRONMENT	LOCATION	MINIMUM PROTECTIVE COATING	
Severe	External	Option 1:	Inorganic zinc primer plus 2 coats vinyl gloss finishing coats
		Option 2:	Hot dip galvanised 300 g/m ² min.
		Option 3:	Hot dip galvanised 100 g/m ² min. plus: a. 2 coats solvent based vinyl primer; -or- b. 2 coats vinyl gloss or alkyd.



FILL AND SLAB EDGE FOR LOW SIDE OF SLOPED SITES
IF DEEP EDGE FOOTING IS NOT PROVIDED
Not to Scale

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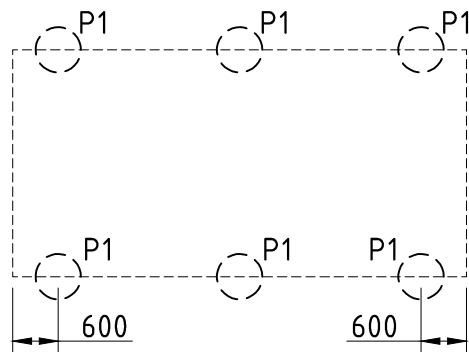
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A	ISSUED FOR CONSTRUCTION			19/09/2023	
Issue	Description			Date	
Drawn JSB	IN ASSOCIATION WITH RAPAW			ENGINEERING SPECIFICATION AND DETAIL	
Date 19/09/2023					
Checked AO	APEX CAMP 37 BIRT STREET PICNIC BAY, QLD			DRAWING NUMBER MJ2455/0	
Approved KJM					
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FOOTING PLAN

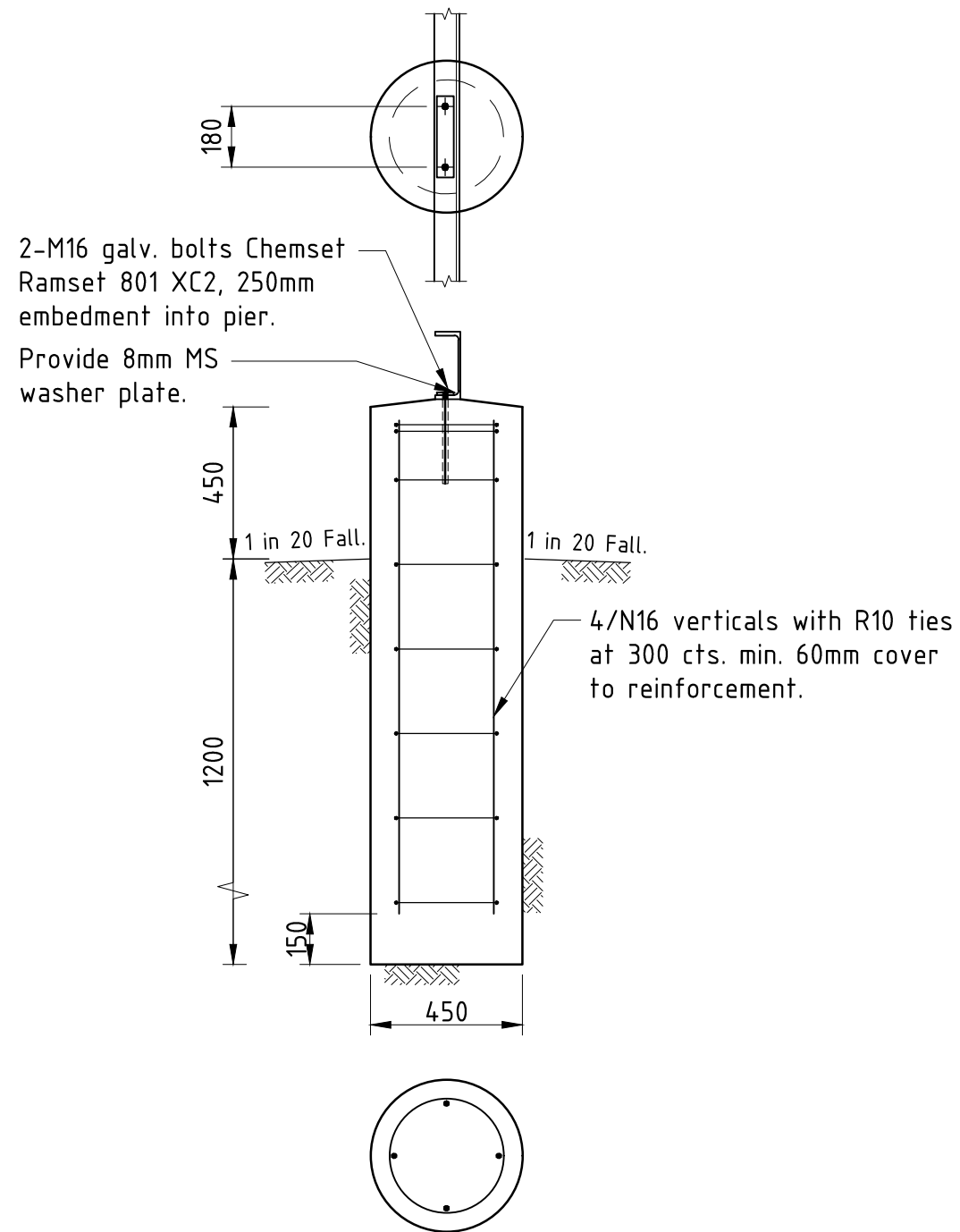
Scale 'A'

Site Classification: Assumed S Class site 100kPa bearing

NOTES:

1. This drawing shall be read in conjunction with the Architectural Drawings, the Engineering Report MJ2455.
2. Site maintenance starts at the footing construction stage.
3. At all times during construction water must be drained away from the building.
4. Ponding must not be allowed to remain along the sides of the building or in trenches close to the building.
5. All downpipes, tap outlets, condensate, drains etc. are to be drained away from the building and discharged to an outfall or an area remote from the building.

P1 - 450mm x 1200. Refer to detail.

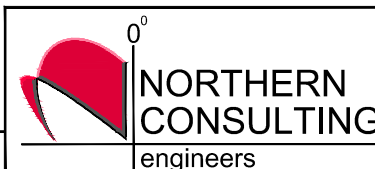


TYPICAL PIER FOOTING (P1)

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Scale
0 500 1000 1500 2000

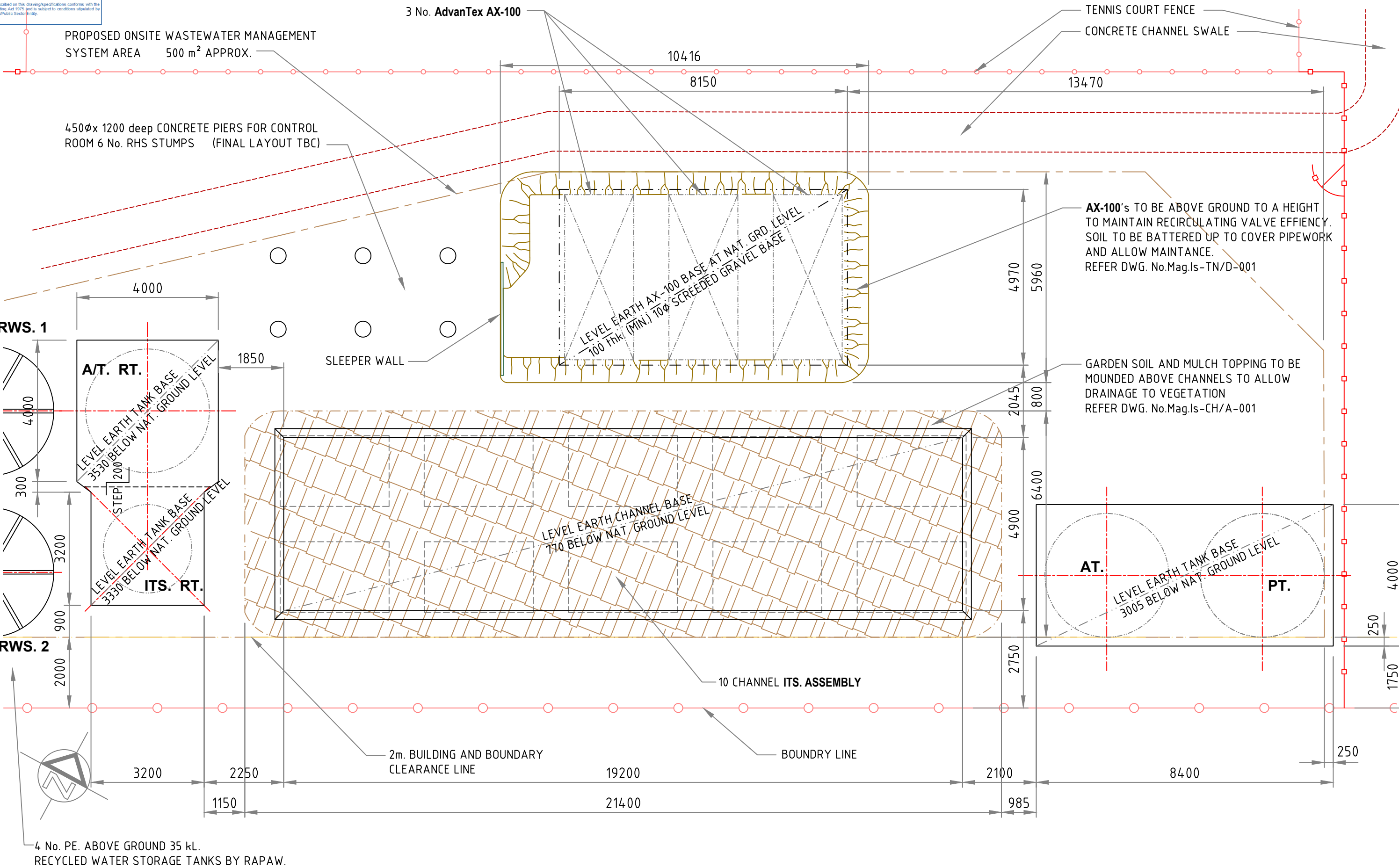
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Drawn JSB Date 19/09/2023		IN ASSOCIATION WITH RAPAW		FOOTING PLAN	
Checked AO		APEX CAMP			
Approved KJM		37 BIRT STREET PICNIC BAY, QLD			
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ISSUE	AMENDMENT	APPROV.	DATE
01	ORENCO SUBMISSION	MMcK	22.08.23

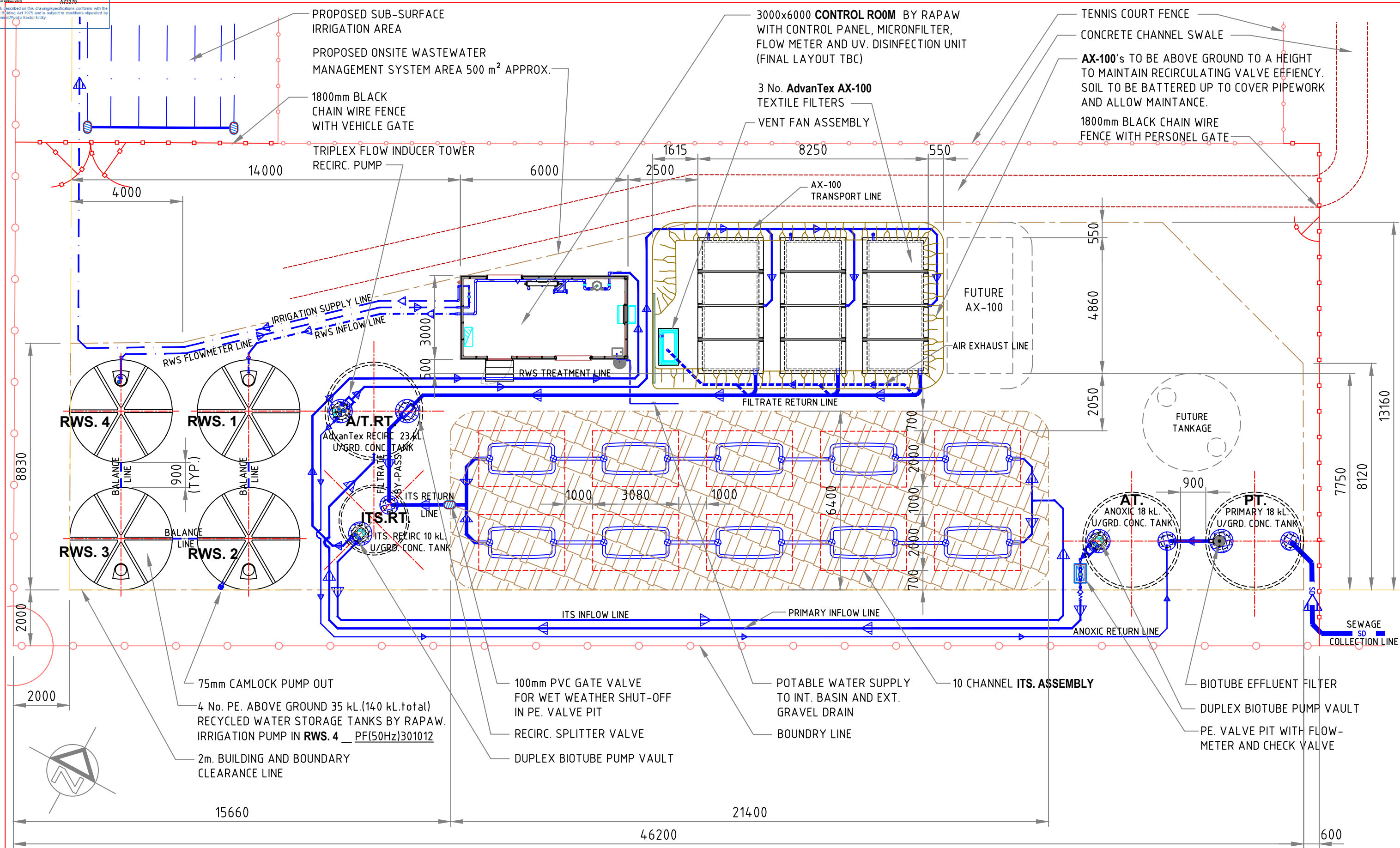
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OSMS UPGRADE

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APPROVED: DATE:
DRAWING No:
MAG.IS. - LN/L - 004.
A3 ISSUE: 01

OSMS TREATMENT AREA
CIVIL WORKS
PLAN



ISSUE	AMENDMENT	APPROV.	DATE
01	ORENCO SUBMISSION	MMcK	11. 08. 21
02	ORENCO RE-SUBMISSION WITH PIPING REDIRECTED AND NAMED	MMcK	20. 08. 21
03	ORENCO FINAL SUBMISSION	MMcK	27. 08. 21
04	Micron Filter added	MMcK	20. 09. 21
05	DWG. RETITLED	MMcK	02. 11. 22
06	RE-ARRANGE EQUIPMENT	MMcK	22. 04. 23
07	RE-ARRANGE EQUIPMENT	MMcK	06. 05. 23
08	GENERAL UPDATE	MMcK	11. 08. 23

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