

File Note

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Project title	Ken Rosewall Arena Redevelopment	Job number
		266402
cc	Andrew Johnson (Arup)	File reference
		HYD01
Prepared by	Jethro Dickens	Date
		25 February 2019
Subject	Ken Rosewall Arena Redevelopment - Stormwater DA Statement	

This file note presents a hydraulic stormwater assessment of impacts due to the redevelopment of the Ken Rosewall Arena, the centre court of the Sydney Olympic Park Tennis Centre, to support the submission of a Development Application.

The redevelopment involves the addition of a roof fabric across the stadium. The existing structure is a partial perimeter roof and does not fully enclose the arena. The intention of this roof fabric is to protect the stadium against the ingress of rainwater, so changes to the stormwater drainage strategy are necessary as part of this development.

The sitewide stormwater drainage is unaffected since the drainage that is added removes drainage load on the existing stormwater drainage internal to the stadium. Consequently, the existing stormwater pits around the stadium have the same stormwater load and so no increase in pit or pipe size for the site drainage is necessary. The change is that the court and bowl drainage are now being collected from the roof, an area of approximately 8200m² (a conservative estimate).

The concept design describing the new stormwater drainage strategy is attached below – it involves a 600mm x 250mm eaves gutter with 12 downpipes around the perimeter. These downpipes will circulate to the nearest existing stormwater pit in ground. This will be a siphonic drainage system with a flat gutter, sized for a 1 in 20 year storm. The existing stormwater drainage drawing is also attached, including pits and pipe runs.

The rainwater from the roof is required to be captured and reused as part of the SOPA stormwater management policy. However, this area is not within the existing stormwater harvesting catchment area, with the existing stormwater draining to nearby creeks and wetlands. Under the policy an 85kL rainwater reuse tank is required, causing large infrastructure upgrades for the building and nearby areas. Advice is sought from SOPA about whether rainwater reuse is required, and proposed use/s for the collected water. Currently it is not clear where the collected water could be used since updates to the uses noted in the Master Plan (toilets, irrigation, cooling towers) are not part of this DA submission.

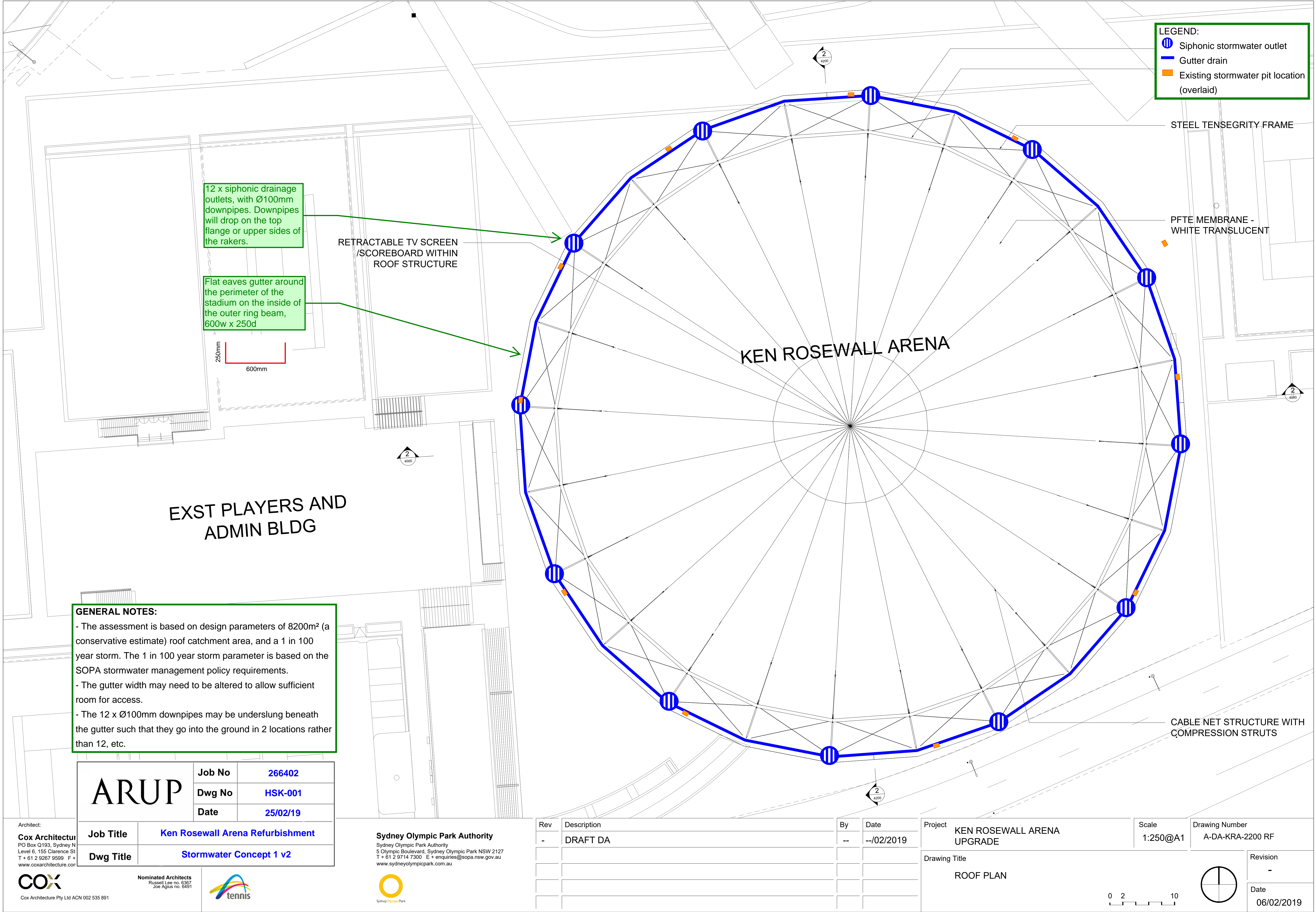
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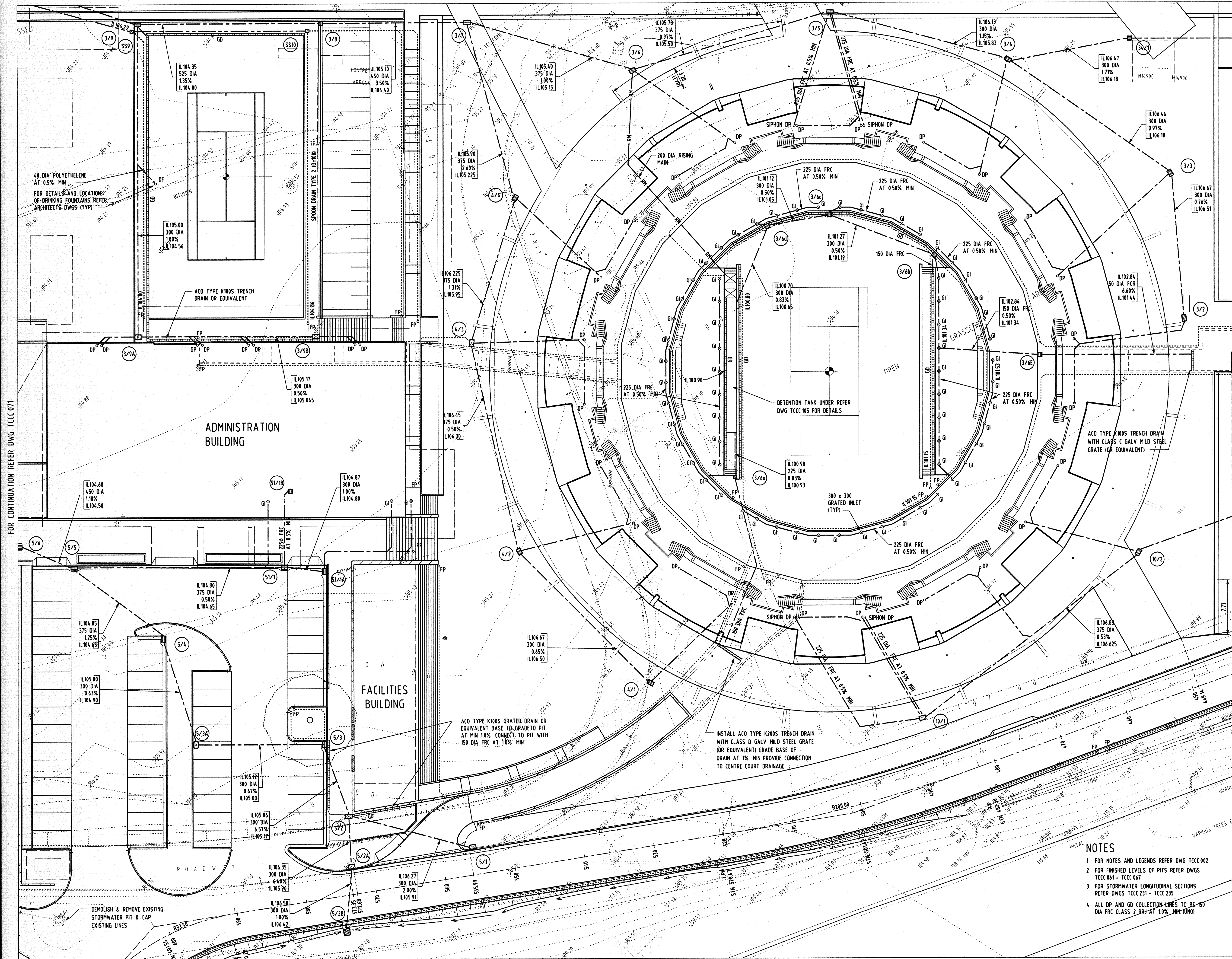
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25 February 2019

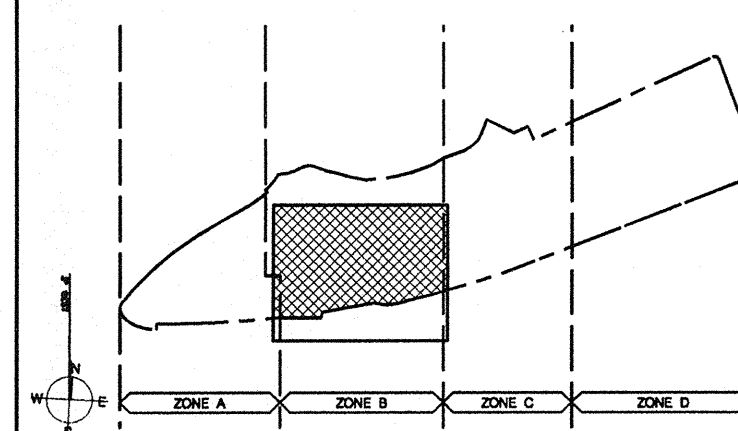
DOCUMENT CHECKING (not mandatory for File Note)

	Prepared by	Checked by	Approved by
Name	Jethro Dickens		
Signature			





KEY PLAN



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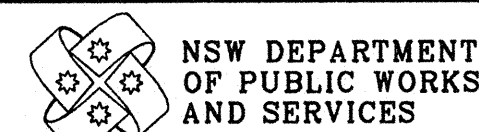
REV	REVISION DESCRIPTION	PROJ. MGR. CHECK	DATE
H	CONSTRUCTION ISSUE		2.11.98
G	PRELIMINARY CONSTRUCTION ISSUE		26.10.98
F	NOT USED		
E	CONTRACT ISSUE - DOWNPIPES AMENDED, SUBSOIL DRAINAGE DELETED, DRINKING FOUNTAIN ADDED		19.10.98
D	TENDER ISSUE		31.7.98

ORIGINAL ISSUE DATE: 28.4.98

REVISIONS



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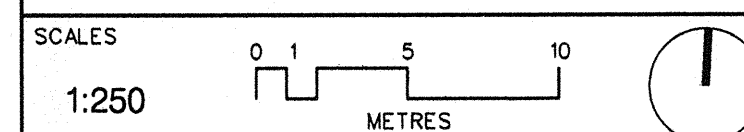
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DRAWN	DATE	PROJECT ENGINEER	DATE
DP	28.4.98	GH	19.6.98
CHECKED	DATE	PROJECT MANAGER	DATE
GH / AAK	09.11.98		

TITLE
TENNIS CENTRE HOMEBUSH
CIVIL WORKS

STORMWATER DRAINAGE LAYOUT
Sheet 3 of 7



DRG. NO.	REV.	
TCCC-073		H