



Ref: 2021820

25 July 2018

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Attention: Cameron McClement

RE: NEPEAN HOSPITAL REDEVELOPMENT – INTEGRATED WATER MANAGEMENT PLAN

Bonacci Group (NSW) have been engaged by Health Infrastructure NSW to provide Civil and Structural Engineering services for the above project. The Secretary's Environmental Assessment Requirements have identified –

SEARs Requirements

9. Prepare an Integrated Water Management Plan detailing any proposed alternative water supplies, proposed end uses of potable and non-potable water and water sensitive urban design

We make the following comments with regard to the elements of the Integrated Water Management Plan identified in the Secretary's Environmental Assessment Requirements that have been designed by Bonacci:

- The site stormwater management strategy has been designed using Water Sensitive Urban Design principles. Where possible, stormwater runoff will be allowed the opportunity to infiltrate. This will be achieved by directing runoff to pervious areas, which are to be maximized.
- Water quality treatment measures are proposed to ensure that site runoff complies with Penrith City Councils water quality requirements. These treatment measures include proprietary systems such as Enviropods and Stormfilter cartridges. Vegetated swales and bio-retention may also be used to ensure that the stormwater discharge from the proposed site meets the water quality targets. MUSIC modelling has been undertaken to confirm that the water quality targets are met.

Yours Sincerely

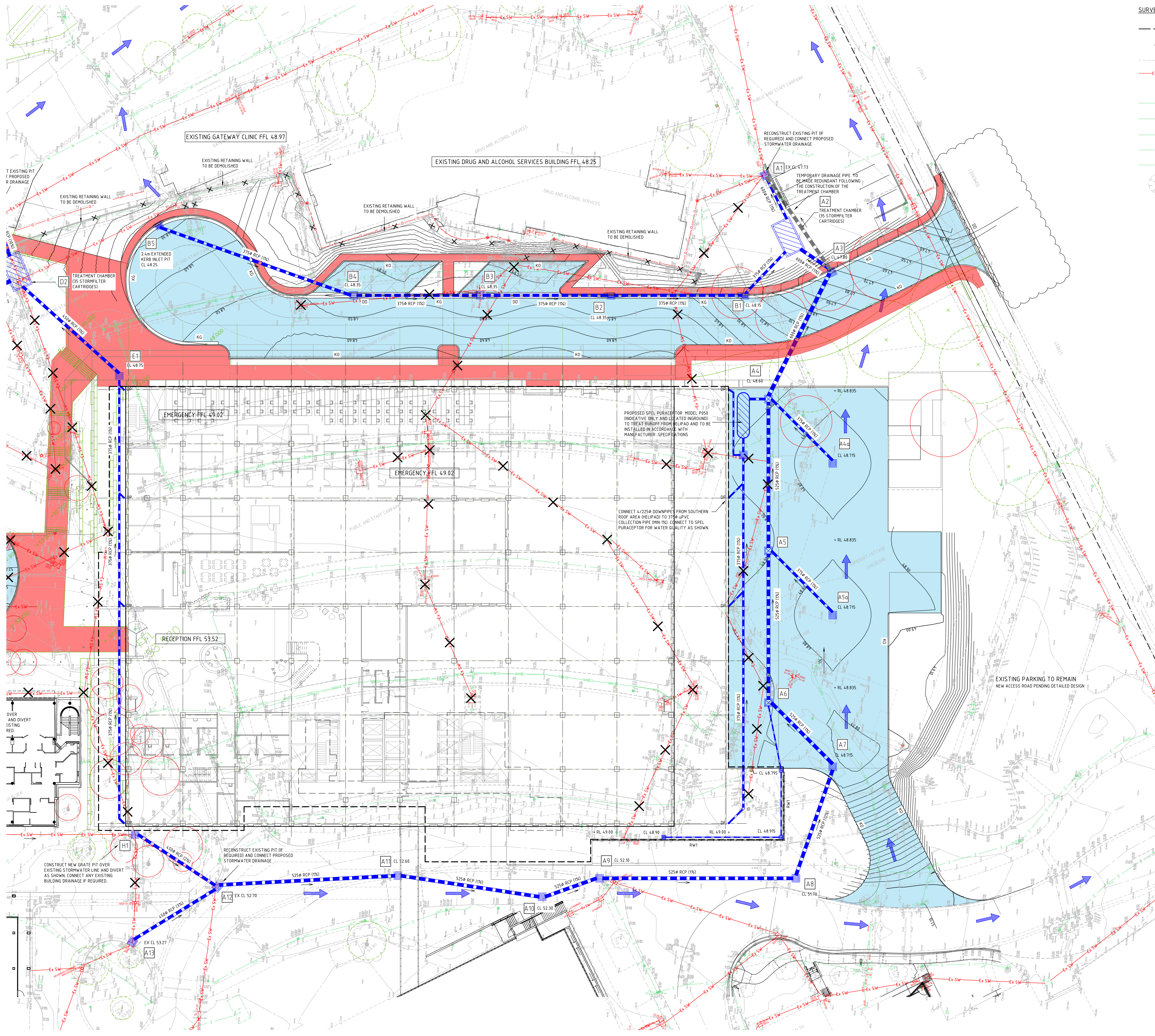
BONACCI GROUP (NSW) PTY LTD

John Williams MIEAust NER
CPEng No. 453501 Director

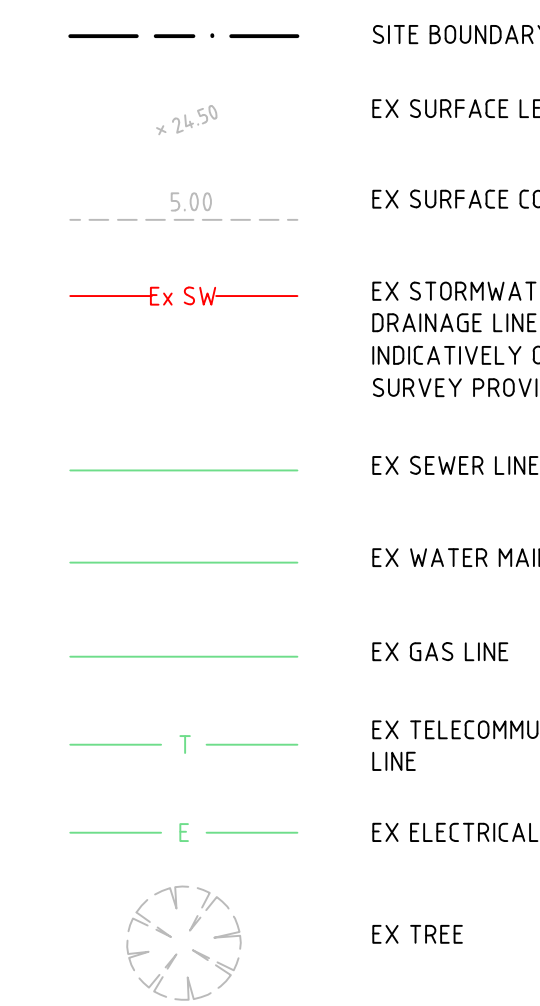
Stephen Naughton BE MIEAust
Associate Director

Enc. Figure 1 Civil Drawing NHR-BON-DRW-CIV-TB1-ALL-0003001[B]
Figure 2 Civil Drawing NHR-BON-DRW-CIV-TB1-ALL-0003002[C]

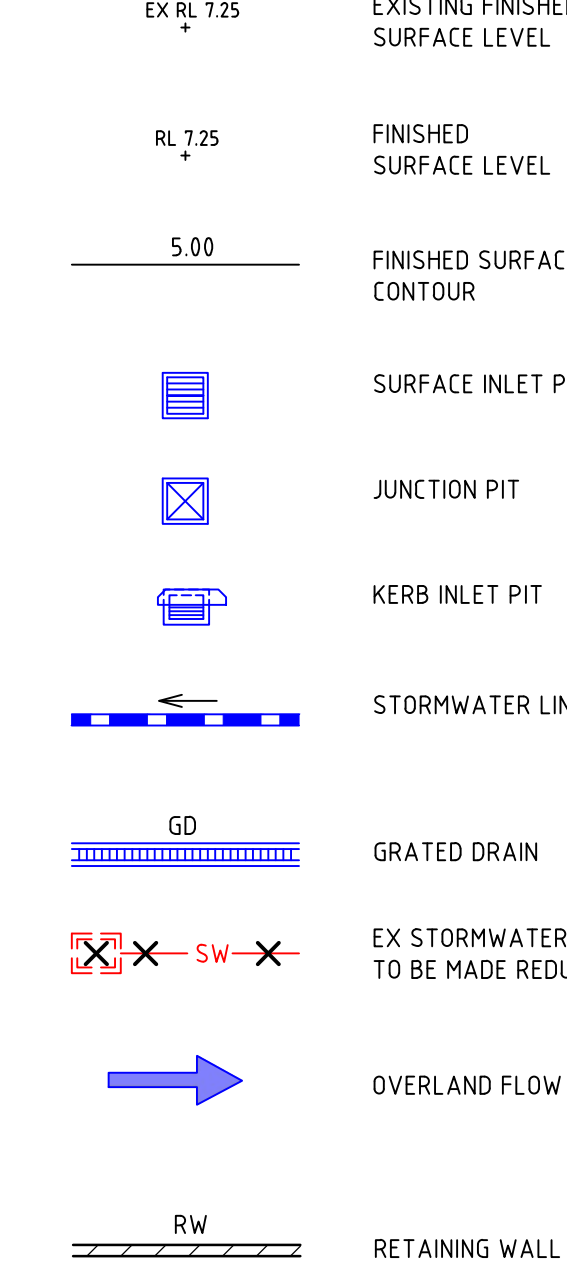
FOR CONTINUATION REFER TO DRAWING NHR-BON-DRW-CIV-TB1-ALL-0003001



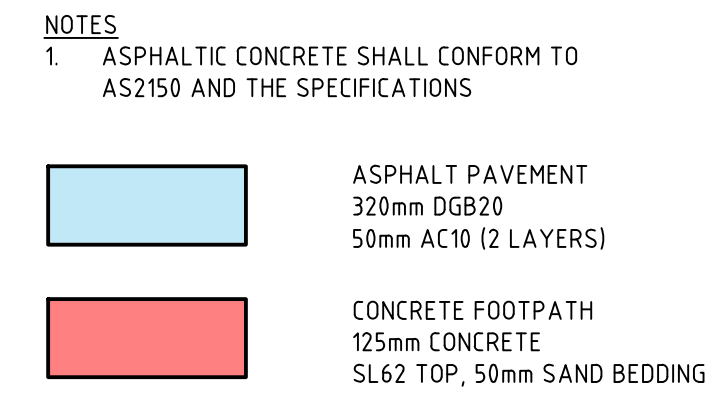
SURVEY LEGEND



SITeworks LEGEND



PAVEMENT LEGEND



STORMWATER NOTES

1. GRATE SIZE DOES NOT NECESSARILY REFLECT PIT SIZE, AND SHOULD BE READ IN CONJUNCTION WITH THE PIT TYPE DETAILS FINAL INTERNAL PIT DIMENSIONS ARE TO COMPLY WITH AS 3500.
2. PITS TO BE 900x900 UNO
3. ALL PITS TO BE LOCKABLE AND FRAME TO BE BOLTED TO PIT.
4. ALL CAST IRON LIDS TO BE BOLTED TO PIT WITH M12 4.6/S BOLTS.
5. ENVIROPODS MUST BE ADDED TO ALL EXTERNAL PITS. ENVIROPODS MUST BE INSTALLED 150mm MIN UNDER THE GRATE. IF THE PIT HAS A RECEIVING GRATED DRAIN CHANNEL THE PLASTIC SKIRTING AROUND THE ENVIROPOD MUST BE BELOW THE CHANNEL INVERT AND THE TOP FRAME 100mm MIN BELOW THE CHANNEL INVERT.

ALL EXISTING PROPERTY SERVICES' LOCATIONS AND DEPTHS ARE APPROXIMATE AND MUST BE VERIFIED ON SITE. THE CONTRACTOR SHOULD SUPPLY PRECISE LOCATIONS AND DEPTHS TO THE ENGINEER FOR REVIEW PRIOR TO ANY WORKS THAT MAY AFFECT THESE SERVICES.

WARNING
NO DRAINAGE WORKS SHALL COMMENCE UNTIL THE CONTRACTOR CONFIRMS THE I.L. OF ALL EXISTING DRAINS, AND CONFIRMS IN WRITING WITH THE ENGINEERING SUPERVISOR.

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES SHOWN ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE.

ISSUE	DATE	FOR
P1	18/12/17	ISSUED FOR INFORMATION
P2	19/12/17	ISSUED FOR INFORMATION
P3	18/12/17	ISSUED FOR INFORMATION
P4	19/12/17	ISSUED FOR INFORMATION
P5	19/12/17	ISSUED FOR SD
P6	23/01/18	ISSUED FOR SDA

NOTE:
ALL DRAWINGS TO BE READ IN CONJUNCTION WITH THE TRADE PACKAGE COVER SHEET AND NOTES

Designed: JF
Drawn: JF
Project Director Approved: Date

CLIENT
NSW Health
Infrastructure
Health Infrastructure NSW

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STEENSEN VARMING
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HYDRAULIC

WSP
TEL 02 9299 1312 FAX 02 9290 1295
BOA/DOA/FIRE

BOI/GREEN STAR

FIRE SERVICES

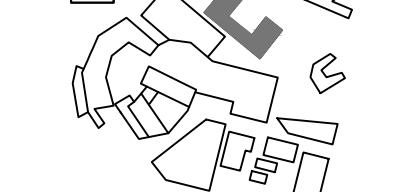
LANDSCAPE

MEDICAL GAS

PROJECT

BONACCI PROJECT NUMBER

DRAWING KEY



TRUE NORTH
PROJECT NORTH

SCALE
1:200 @A0 DO NOT SCALE

STATUS
PRELIMINARY

SITeworks AND
STORMWATER DRAINAGE
PLAN - SHEET 2

DRAWING NUMBER
NHR-BON-DRW-CIV-TB1
0003002

ISSUE
C