

MODIFIED CONSTRUCTION CERTIFICATE

CERTIFICATE NO: CC140503-3M1

Date of Certificate: 22 January 2015

Description of the
Proposed development: **Chemical Storage Area (Modification to include Retaining Walls known as Transformer area)**
Associated with Water Recycling Plant

Classification under the
Building Code of Australia: 8 & 10b

APPLICANT

Name: Mr S Merange

Address: John Holland Pty Ltd
Project Manager, Specialist Engineering
Googong WRP
PO Box 812 Queanbeyan NSW 2620

PROPERTY (The Land)

Address: Lot 4 Googong Dam Road GOOGONG

Lot/Sec/DP: lot 4 DP 1179941

DEVELOPMENT CONSENT

Development Consent Number: MP 08-0236

Date of Consent: 24/11/2011 modified 09/07/14

Consent authority: NSW Planning & Environment Director of
Infrastructure Projects as a delegate for the Minister
for Planning

CERTIFYING AUTHORITY

Name: Annette Owen

Signature: 

Accreditation No: **BPB 1771**

Accred: **Building Professionals Board**

CC: CC140503-3M1

CERTIFICATION

Annette Owen of BCA Certifiers Australia Pty Ltd certifies

That work completed in accordance with the documentation accompanying the application for this certificate (with such modifications, if any, verified by me as may be shown on that documentation) will comply with the requirements of the *Environmental Planning & Assessment Regulation 2000* as referred to in s.81A(5) of the *Environmental Planning & Assessment Act 1979*.

The documents listed below accompanied the application for this certificate.

Note: The certificate is to be endorsed upon all relevant plans and specifications.

ATTACHMENTS

(Tick as appropriate)

- Schedule of Approved Plans and Specifications
- The conditions of the certificate
- Fire Safety Schedule

SCHEDULE OF APPROVED PLANS AND SPECIFICATIONS

	Prepared By
Architectural Plans	Site Plan MWH ref no: 83500349-01-001G102 dated 11/08/14
Structural Plans	MWH ref no: 83502156-01-001-G206 12rev D, G207 B 208B 209B G300A G301 A G302 A G303 A G406D G404B M200B M201B M400B S209B S210B S300D S301D S302C S303D S304D S305B S306B S307B S308B S309AS420C dated 27/11/14 28/11/14 & 02/12/14
Retaining Wall details (22/01/15)	MWH ref no: 8350215-01-001-S030 031 dated 19/12/14

Inspections

The builder is to notify BCA Certifiers upon reaching each inspection stage outlined below by telephoning 62851199. **The builder is not to proceed beyond an inspection stage until written approval to proceed has been given by BCA Certifiers.**

The stages are:

- After excavation for, and prior to the placement of any footings.
- Prior to the pouring of any in-situ reinforced concrete building element.
- Prior to the covering of any stormwater drainage connections.
- After the building work has been completed and prior to any occupation certificate being issued in relation to the building.

MWH Ref. 83502156-LT-DM-005

16th January 2015

John Holland Pty Ltd
Level 3, 65 Pirrama Road,
Pyrmont NSW 2009

Steve Merange
Project Manager

Dear Sir,

**Googong WRP Project – Structural Design of Retaining Walls
Certificate of Compliance**

This is to certify that the Structural Design of the Retaining Walls detailed on drawings 83502156-01-001-S023 to S031 and 83502156-01-001-G004 have been carried out in accordance with the current editions of the following Australian Standards and other relevant standards referred to therein, BCA: Building Code of Australia, where applicable, and in accordance with good engineering practice and principles.

- AS 3600 – Concrete structures
- AS 3700 – Masonry Structures
- AS/NZS 1170.0 – Structural design actions – General principles
- AS/NZS 1170.1- Structural design actions – Permanent Imposed and Other Actions
- AS/NZS 1170.1- Structural design actions – Wind Actions

I also confirm that that the design calculations and drawings have been checked and reviewed in accordance with our ISO 9001 certified Quality Assurance System.

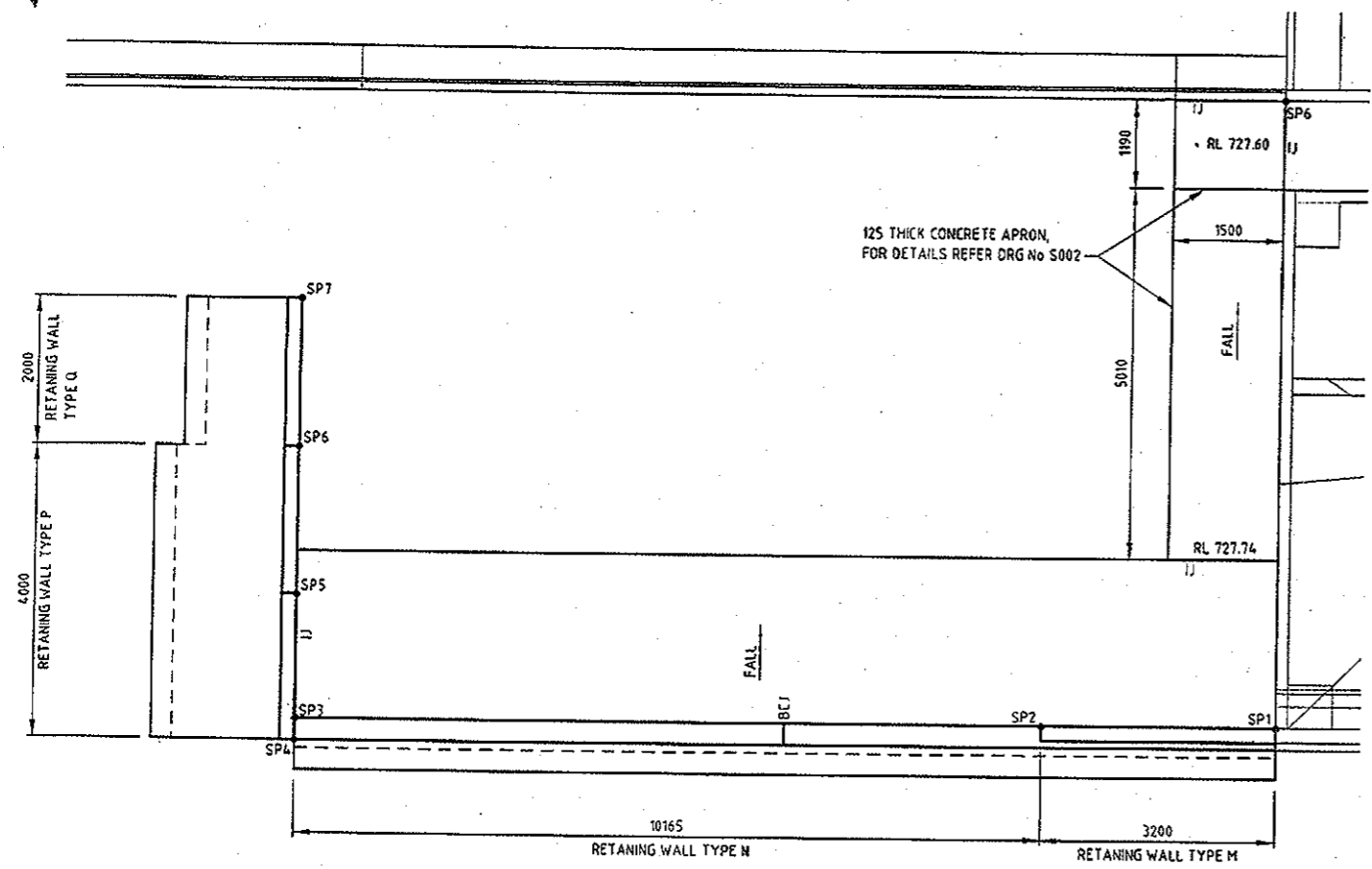
Yours Sincerely,



MWH

BUILDING A BETTER WORLD

Jaya Weerasinghe
BSc(Eng), FIEAust, CPEng, NPER & RPEQ (Civil & Structural), MICE CEng
Chief Engineer (Structural) Asia Pacific

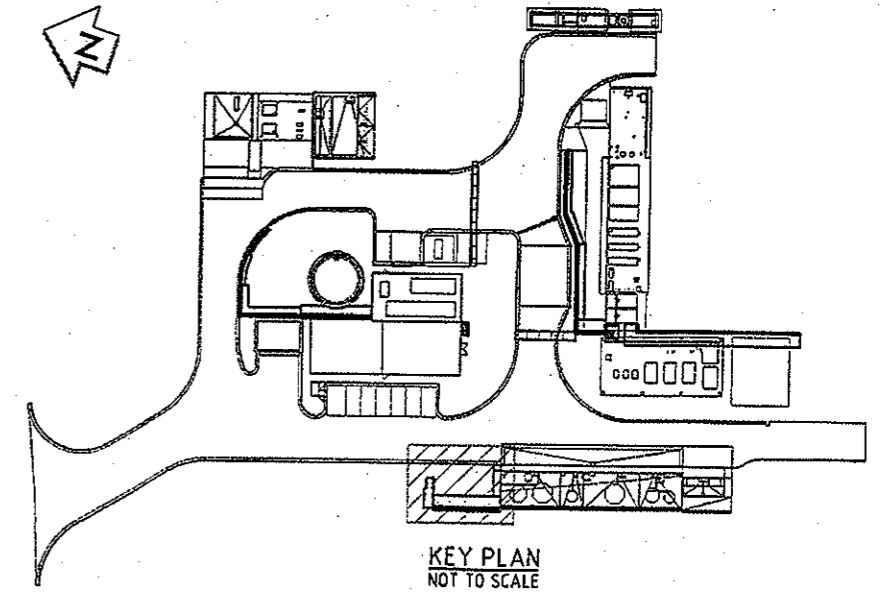


PLAN
SCALE 1:50

RETAINING WALL SETOUT

POINT	EASTING	NORTHING	REDUCED LEVELS		REMARKS
			TOP OF FOOTING	TOP OF WALL	
SP1	703603.63	607824.32	#	731.65	
SP2	703602.61	607824.86	#	731.65	729.85
SP3	703599.39	6078256.50	#	729.85	
SP4	703599.10	6078256.41	727.60	729.85	
SP5	703600.99	6078257.05	727.60	729.85	729.10
SP6	703602.90	6078257.68	727.60	729.10	728.45
SP7	703604.79	6078258.32	727.60	728.45	

- SEE DETAILS ON DRG No S031



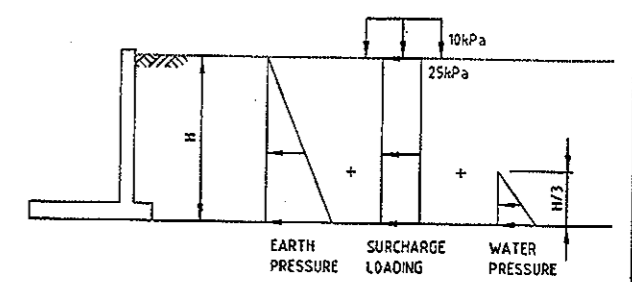
BCA certifiers
 ABN: 53 119 755 734
CONSTRUCTION CERTIFICATE MODIFIED
 CC140503-3M1
 22 January 2015
 Principal Certifying Authority
 Annette Owen BPB1771

NOTES

- FOR GENERAL NOTES REFER DRG G003 & G004.
- THE MINIMUM ALLOWABLE SAFE BEARING CAPACITY SHALL BE 5000kPa
- GRADE OF CONCRETE = N32.
- THE ROCK PROFILE SHOWN ARE BASED ON LINEAR INTERPOLATION BETWEEN AVAILABLE BORE LOGS. ACTUAL ROCK LEVELS MAY VARY. ALL MATERIAL ABOVE THE "EW/HW & HW DACITE" ROCK LEVEL SHALL BE REMOVED AND REPLACED WITH MASS CONCRETE TO ENSURE UNIFORM SUBGRADE. WHEN PREPARING FOUNDATION, THE CONTRACTOR SHALL ENGAGE A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER TO VERIFY THE EW/HW & HW DACITE" ROCK LEVEL PRIOR TO FILLING WITH MASS CONCRETE.
- THE GEOTEXTILE/SEPERATION LAYER SHALL BE BIDIM A29, STRENGTH CLASS C OR APPROVED EQUIVALENT.
- BCJ - DENOTES BLOCKWORK CONTROL JOINT, REFER DRG No S309.

CONCRETE COVER TO REINFORCEMENT

STRUCTURE	MEMBER	TOP	BOTTOM	SIDE		EXPOSURE CLASSIFICATION
				EXT	INT	
RETAINING WALL	BASE SLAB	40	40	40	40	B1
	WALL (CONCRETE)	-	-	40	40	B1



DESIGN LOADING SCENARIO

ORIGINAL SIZE A1

DO NOT SCALE - IF IN DOUBT, ASK



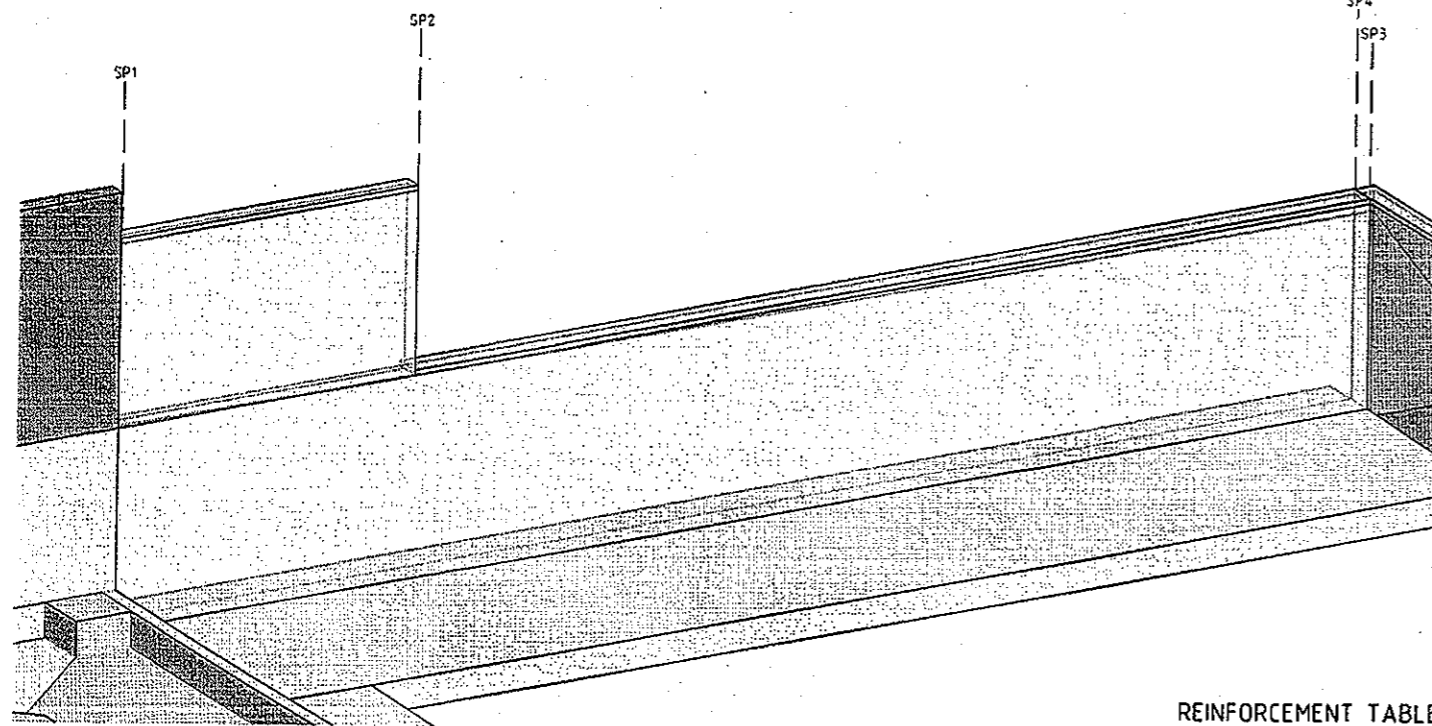
<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>BY</th> <th>CHK</th> <th>APP</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>19.12.14</td> <td>SC</td> <td>JW</td> <td>SC</td> <td>19.12.14</td> </tr> </tbody> </table>		REV	DATE	BY	CHK	APP	DATE	A	19.12.14	SC	JW	SC	19.12.14	<p>SURVEYED</p> <p>DESIGNED Amogh Deshpande 04.11.14</p> <p>DRAWN Steve Coyle 04.11.14</p> <p>CAD REVIEW Alan Gilbert 19.12.14</p> <p>DESIGN CHECK Jaya Weerasinghe 19.12.14</p> <p>DESIGN REVIEW Jaya Weerasinghe 19.12.14</p> <p>APPROVED Stephen Chapman 19.12.14</p> <p>PROF REGISTRATION:</p>	<p>MWH</p> <p>GOOGONG</p>	<p>GOOGONG WATER RECYCLING PLANT STAGE AB</p> <p>RETAINING WALLS - TRANSFORMER AREA</p> <p>PLAN AND SETOUT DETAILS</p>	<p>NOT FOR CONSTRUCTION</p> <p>FOR REVIEW</p> <p>Date Stamp 19.12.14</p> <p>Status AS SHOWN</p> <p>Drawing No. 83502156-01-001-S030</p> <p>Rev. A</p>
REV	DATE	BY	CHK	APP	DATE												
A	19.12.14	SC	JW	SC	19.12.14												

ORIGINAL SCALE - IF IN DOUBT, AS SHOWN

ORIGINAL SCALE - IF IN DOUBT, AS SHOWN

ORIGINAL SIZE A1

500 0 500mm 1m
SCALE 1:25



RETAINING WALL TYPE M & N PERSPECTIVE
NOT TO SCALE
BCJ NOT SHOWN

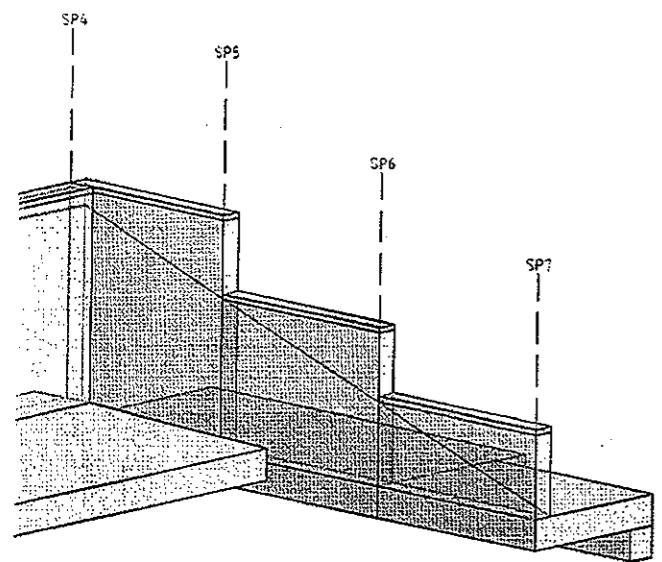
BCA certifiers
AEN: 58 119 755 754
CONSTRUCTION CERTIFICATE
MODIFIED
CC140503-3M1
22 January 2015
Principal Certifying
Authority
Annette Owen BPB1771

REINFORCEMENT TABLE

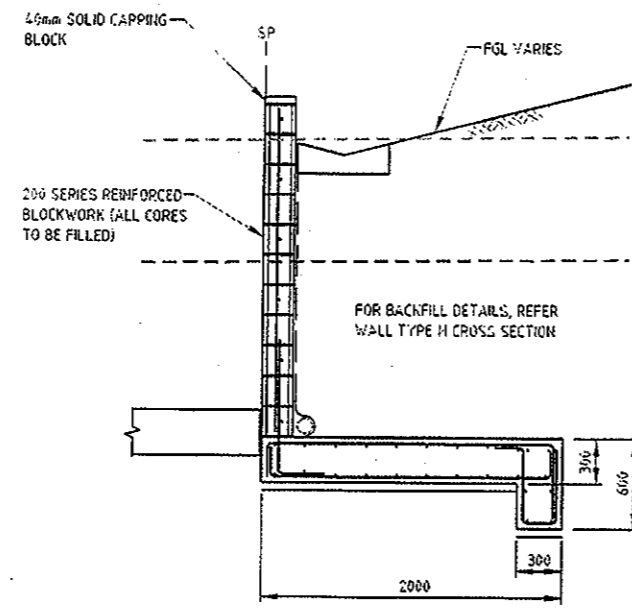
RETAINING WALL TYPE	BASE SLAB	WALLS		REMARKS
		VERTICAL	HORIZONTAL	
M	N16-200 EW T&B	N16-200	N16-400	BLOCK WALL
N	N16-200 EW T&B	N16-200	N16-400	BLOCK WALL
P	N12-200 EW T&B	N16-200	N16-400	BLOCK WALL
Q	N12-200 EW T&B	N16-200	N16-400	BLOCK WALL

PROVIDE CONTINUITY OF BLOCKWALL HORIZONTAL REINFORCEMENT AT ALL WALL JUNCTIONS

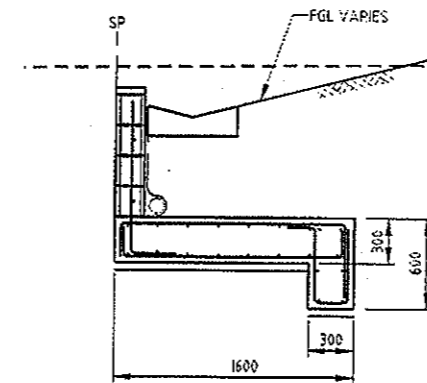
FOOTING TO BE CAST DIRECTLY ON BLINDING CONCRETE



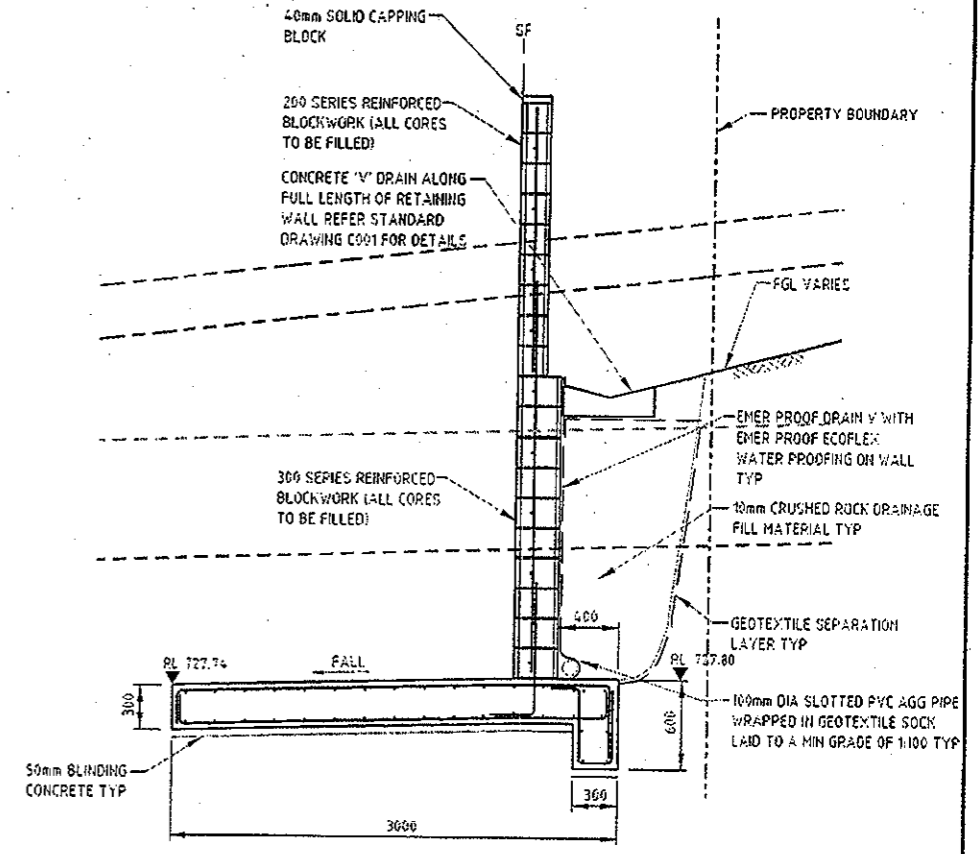
RETAINING WALL TYPES P & Q PERSPECTIVE
NOT TO SCALE



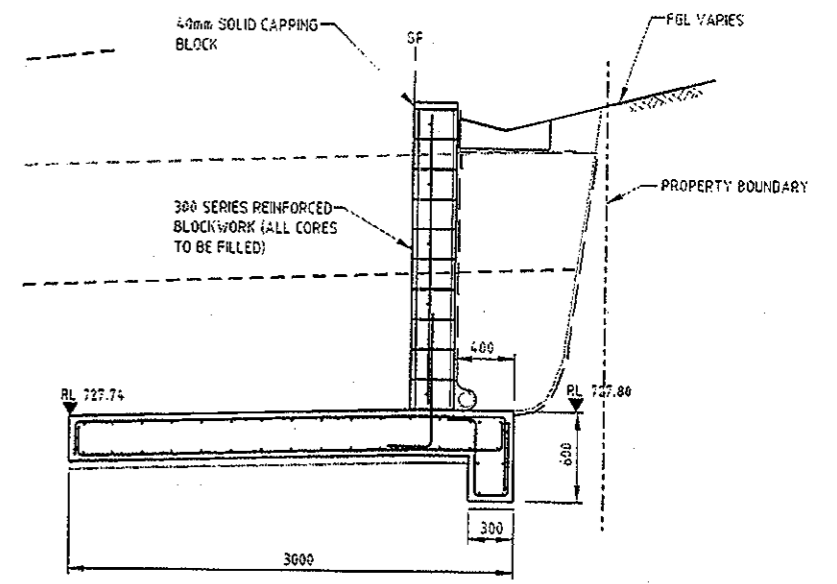
RETAINING WALL TYPE P CROSS SECTION
SCALE 1:25



RETAINING WALL TYPE Q CROSS SECTION
SCALE 1:25



RETAINING WALL TYPE M CROSS SECTION
SCALE 1:25



RETAINING WALL TYPE N CROSS SECTION
SCALE 1:25

NOTES
1. FOR NOTES REFER ORG S030.

LEGEND
--- TOPSOIL/SLOPEWASH
--- RESIDUAL SOIL
--- EW/HW & HW ROCK
--- HW/SW & LESS WEATHERED ROCK

NOT FOR CONSTRUCTION

REV	DATE	BY	CHK	APP	DATE
1	19.12.14	JW	SC		
2	19.12.14	SC			
3	19.12.14	SC			
4	19.12.14	SC			
5	19.12.14	SC			
6	19.12.14	SC			
7	19.12.14	SC			
8	19.12.14	SC			
9	19.12.14	SC			
10	19.12.14	SC			
11	19.12.14	SC			
12	19.12.14	SC			
13	19.12.14	SC			
14	19.12.14	SC			
15	19.12.14	SC			
16	19.12.14	SC			
17	19.12.14	SC			
18	19.12.14	SC			
19	19.12.14	SC			
20	19.12.14	SC			
21	19.12.14	SC			
22	19.12.14	SC			
23	19.12.14	SC			
24	19.12.14	SC			
25	19.12.14	SC			
26	19.12.14	SC			
27	19.12.14	SC			
28	19.12.14	SC			
29	19.12.14	SC			
30	19.12.14	SC			
31	19.12.14	SC			
32	19.12.14	SC			
33	19.12.14	SC			
34	19.12.14	SC			
35	19.12.14	SC			
36	19.12.14	SC			
37	19.12.14	SC			
38	19.12.14	SC			
39	19.12.14	SC			
40	19.12.14	SC			
41	19.12.14	SC			
42	19.12.14	SC			
43	19.12.14	SC			
44	19.12.14	SC			
45	19.12.14	SC			
46	19.12.14	SC			
47	19.12.14	SC			
48	19.12.14	SC			
49	19.12.14	SC			
50	19.12.14	SC			

SURVEYED		
DESIGNED	Anoah Deshpande	15.12.14
DRAWN	Shave Coyle	15.12.14
CAD REVIEW	Alan Gilbert	19.12.14
DESIGN CHECK	Jaya Weerasinghe	19.12.14
DESIGN REVIEW	Jaya Weerasinghe	19.12.14
APPROVED	Staphon Chapman	19.12.14
PROF REGISTRATION		



GOOGONG WATER RECYCLING PLANT STAGE AB
RETAINING WALLS - TRANSFORMER AREA
SECTIONS AND DETAILS - SHEET 1

Status Stamp	FOR REVIEW
Date Stamp	19.12.14
Scale	AS SHOWN
Drawing No.	83502156-01-001-S031
Rev.	A