

MODIFIED CONSTRUCTION CERTIFICATE

CERTIFICATE NO: CC140503-4M1**Date of Certificate:** 22 January 2015**Description of the Proposed development:** **Administration & Blower Building**
Separated into 2 Fire Compartments
Associated with Water Recycling Plant
Modification to include retaining wall in the area known as Recycled Water Plant**Classification under the Building Code of Australia:** 5 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:** Ros Pascoe**Signature:** **Accreditation No:** BPB 2220**Accred:** Building Professionals Board

CC: CC CC140503-4M1

CERTIFICATION

Ros Pascoe 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-G403 rev B 12, G404 B G405 AS400 1S401 1 S402 1S403 1S405 S4061 S407 1 SS412 1 S412 1 S413 1 S414 1 dated 11/12/14
Retaining wall details	MWH ref No: 83502156-01-S027 028 028 B dated 19/12/15

The Conditions of Certificate

Description:	Administration & blower building
Building Classification:	5 & 8
Rise in Storeys:	1
Type of Construction:	C

Attached are the approved plans for your project at the above address. The plans have been assessed and approved subject to compliance with the Deemed-to-Satisfy Provisions of the Building Code of Australia.

To ensure compliance with the requirements of the BCA the following advice is provided.

Fire Resistance

- The fire hazard properties of materials, linings and surface finishes used are to comply with Specification C1.10.
- A fire wall (90/90/90) is required between the two uses in the building providing compartment under 500m².

Services and Equipment

- Portable fire extinguishers are to be provided in accordance with Part E1.6 of the BCA.
- Emergency lighting and exit signs are to be provided in accordance with Part E4 of the BCA.

Access and egress

- Access and egress from the building is to comply with Part D of the BCA.
- Steps, landings and balustrades are to comply with Part D of the BCA. A stairway shall not have more than 18 risers in each flight in accordance with Part D2.13 of the BCA.
- The operation of door latches, are to comply with Part D2.21 of the BCA.
- Access for people with disabilities is to be provided to and within the building by means of a continuous path of travel in accordance with AS 1428.1 and Part D3.2 of the BCA.
- Tactile ground indicators are to be in accordance with Part D3.8 of the BCA.
- **NOTE: Handrails complying with AS1428.1-2009 must be provided to all stairs.**

Health & Amenity



building approvals, certification and compliance

- Water proofing of wet areas are to comply with Part F1.7 of the BCA.
- Lighting system is to comply with Part F4.4 of the BCA and AS1680.0.
- Ventilation system is to comply with Part F4.5 of the BCA and AS1668.2 and AS3666.1
- The construction and layout of facilities provided for people with disabilities must comply with AS1428.1.

Energy Efficiency

- Building fabric must be designed and constructed in accordance with Part J1 of the BCA.
- External glazing must be designed and installed in accordance with Part J2 of the BCA.

Note:

- Upon completion of the project, certificates as per Schedule A must be submitted prior to the release of Occupancy Certificate.
- Inspections, as per Schedule B are required.

Schedule A

Certificates Required

Note* All Certificates are required to be presented on the relevant companies letterhead (with company contact details, including ABN), signed by a suitably qualified person and dated.

1. A Survey Certificate is required (Identifying as built boundary setbacks)
2. **Structural Engineers Certification certifying that-**
The building as constructed complies with Part B of the BCA and the
3. Certification that Emergency Lighting complies with Part E4.2 and is installed in accordance with AS/NZS 2293.1.
4. Certification that Exit Signs comply with Part E4.5 & 4.6 and are installed in accordance with AS/NZS 2293.1. & Certification that the Portable Fire Extinguishers are provided in accordance with Part E1.6 and Table E1.6 of the BCA, and that have been selected, located and distributed in accordance with AS 2444.
5. Certification for waterproofing to all wet areas, identifying the product used and stating compliance with AS3740.
6. Certification that all glazing complies with AS1288 where applicable. (Note: Certification must itemize the type of glazing and the applicable section of AS1288 to which it complies).

7. Certification that the fire hazard properties of materials, lin
 finishes used (ie; Carpet, Vinyl, Etc), comply with Specification C1.10.
building approvals, certification and compliance

Schedule B

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 framework for any floor, wall, roof or other building element.
- Prior to covering waterproofing in any wet areas.
- 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,

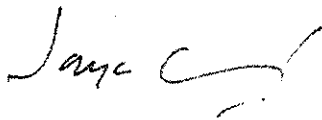
**Googong WRP Project – Structural Design of Retaining Walls
Certificate of Compliance**

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

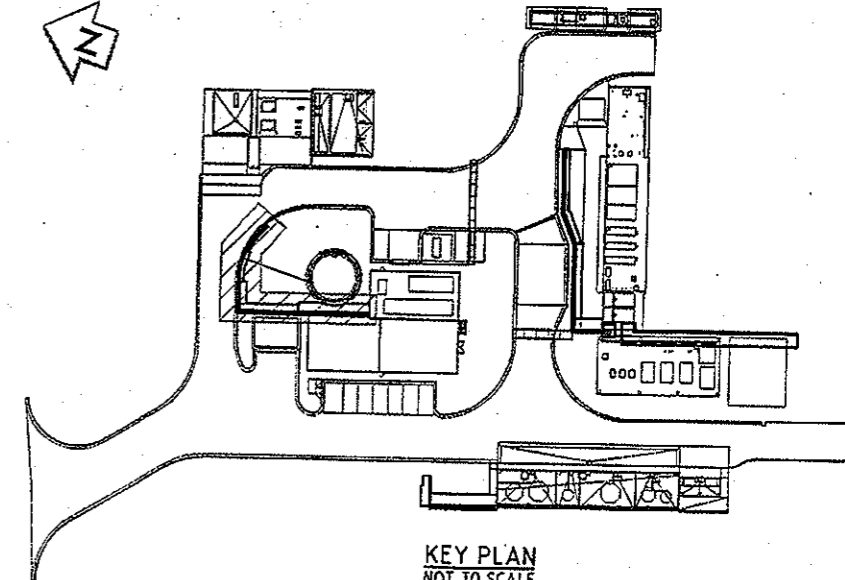
BUILDING A BETTER WORLD

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



RETAINING WALL SETOUT

POINT	EASTING	NORTHING	REDUCED LEVELS		REMARKS
			TOP OF FOOTING	TOP OF WALL	
SP1	703640.45	6078306.20	725.60	726.15	
SP2	703637.49	6078307.59	725.61	726.15	726.35
SP3	703634.29	6078308.30	725.62	726.35	726.55
SP4	703631.10	6078308.30	725.63	726.55	726.75
SP5	703627.99	6078307.61	725.64	726.75	726.95
SP6	703625.94	6078306.93	725.64	726.95	727.15
SP7	703623.88	6078306.24	725.65	727.15	727.35
SP8	703622.56	6078305.80	725.65	727.35	
SP9	703622.37	6078305.73	725.65	727.55	
SP10	703626.22	6078294.20	725.65	727.55	WALL TRANSITION
SP11	703630.73	6078280.74	725.65	727.55	



KEY PLAN
NOT TO SCALE

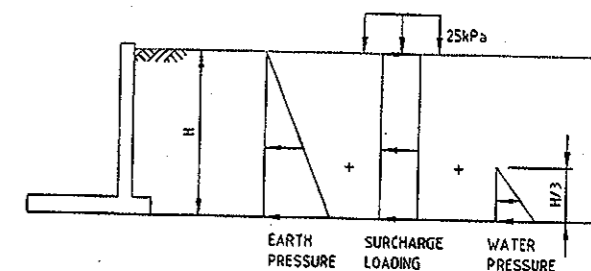
BCA certifiers
 ABN: 58 119 755 751
 CONSTRUCTION CERTIFICATE
 MODIFIED
 CC140503-4M1 22/01/2015
 Principal Certifying
 Authority
 Ros Pascoe BPB2220

NOTES

- FOR GENERAL NOTES REFER DRG G003 & G004.
- MINIMUM ALLOWABLE SAFE BEARING CAPACITY = 200kPa
- GRADE OF CONCRETE = M32.
- THE NW/SW ROCK PROFILE SHOWN IS BASED ON LINEAR INTERPOLATION BETWEEN AVAILABLE BORE LOGS. ACTUAL ROCK PROFILE MAY VARY. ANY VARIATION SHALL BE NOTIFIED TO THE SUPERINTENDENT FOR DESIGN VERIFICATION PRIOR TO CONSTRUCTION.
- THE GEOTEXTILE/SEPERATION LAYER SHALL BE BIOM 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	81
	WALL (CONCRETE)	-	-	40	40	81

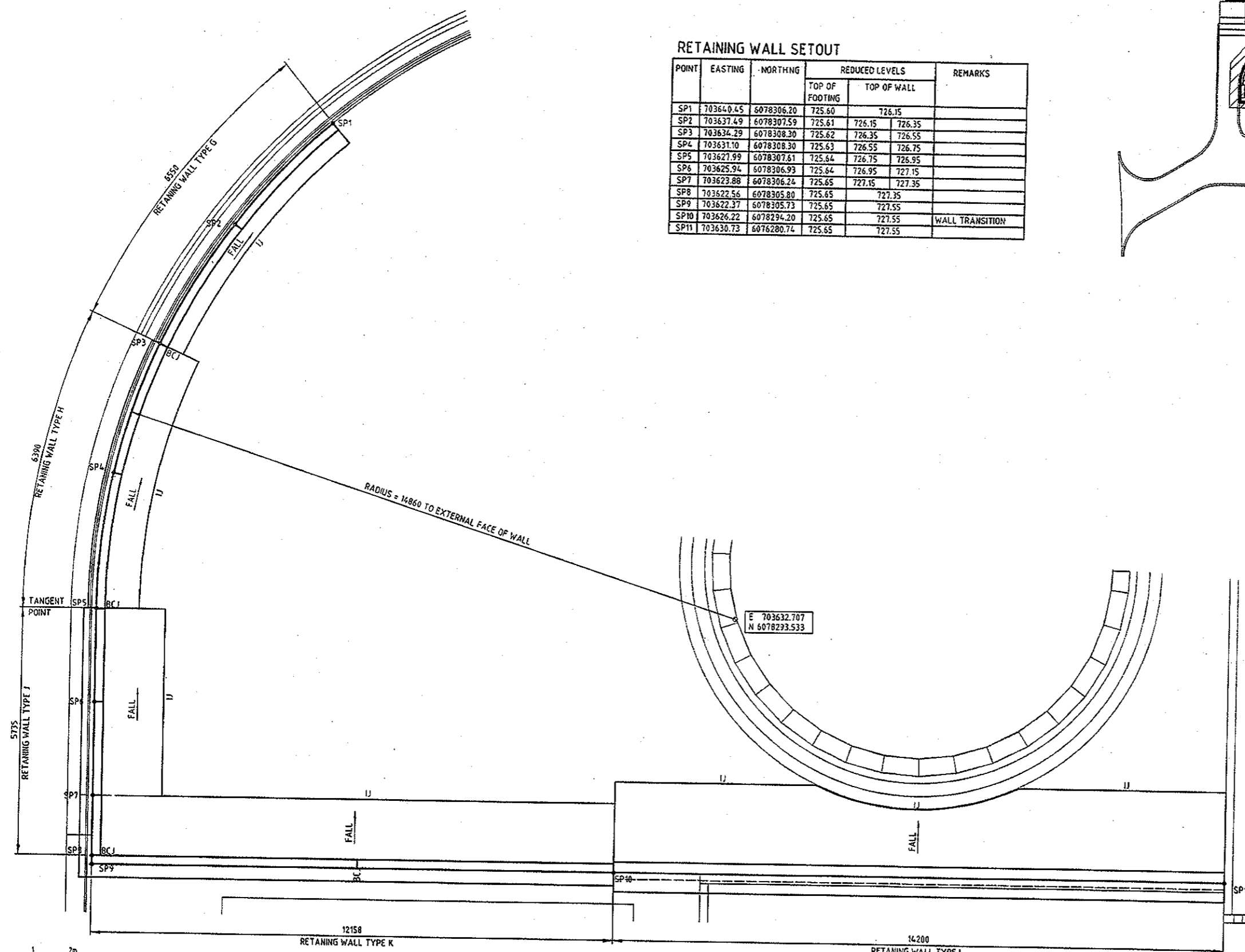


DESIGN LOADING SCENARIO

ORIGINAL SIZE A1

DO NOT SCALE - IF IN DOUBT, ASK

SCALE 1:50



PLAN
SCALE 1:50

<table border="1"> <tr><td>DESIGNED</td><td>Amogh Deshpande</td><td>24.10.14</td></tr> <tr><td>DRAWN</td><td>Steve Coyle</td><td>24.10.14</td></tr> <tr><td>CAD REVIEW</td><td>Alan Gilbert</td><td>28.10.14</td></tr> <tr><td>DESIGN CHECK</td><td>Amogh Deshpande</td><td>28.10.14</td></tr> <tr><td>DESIGN REVIEW</td><td>Jaya Weerasinghe</td><td>28.10.14</td></tr> <tr><td>APPROVED</td><td>Stephen Chapman</td><td>19.12.14</td></tr> </table>		DESIGNED	Amogh Deshpande	24.10.14	DRAWN	Steve Coyle	24.10.14	CAD REVIEW	Alan Gilbert	28.10.14	DESIGN CHECK	Amogh Deshpande	28.10.14	DESIGN REVIEW	Jaya Weerasinghe	28.10.14	APPROVED	Stephen Chapman	19.12.14			GOOGONG WATER RECYCLING PLANT STAGE AB		NOT FOR CONSTRUCTION						
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<table border="1"> <tr><td>DATE FOR REVIEW</td><td>SBC</td><td>JW</td><td>SC</td><td>19.12.14</td></tr> <tr><td>ISSUED FOR 90% REVIEW</td><td>SBC</td><td>JW</td><td>SC</td><td>21.10.14</td></tr> <tr><td>REV</td><td>DRN</td><td>CHK</td><td>APP</td><td>DATE</td></tr> </table>		DATE FOR REVIEW	SBC	JW	SC	19.12.14	ISSUED FOR 90% REVIEW	SBC	JW	SC	21.10.14	REV	DRN	CHK	APP	DATE	RETAINING WALLS - RECYCLED WATER PLAN AND SETOUT DETAILS		<table border="1"> <tr><td colspan="2" style="text-align: center;">FOR REVIEW</td></tr> <tr><td>Date Stamp</td><td style="text-align: center;">19.12.14</td></tr> <tr><td>Scale</td><td style="text-align: center;">AS SHOWN</td></tr> <tr><td>Drawing No.</td><td style="text-align: center;">83502156-01-001-S027</td></tr> <tr><td>Sheet</td><td style="text-align: center;">B</td></tr> </table>		FOR REVIEW		Date Stamp	19.12.14	Scale	AS SHOWN	Drawing No.	83502156-01-001-S027	Sheet	B
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DO NOT SCALE - IF IN DOUBT, ASK

300mm

200mm

150mm

100mm

75mm

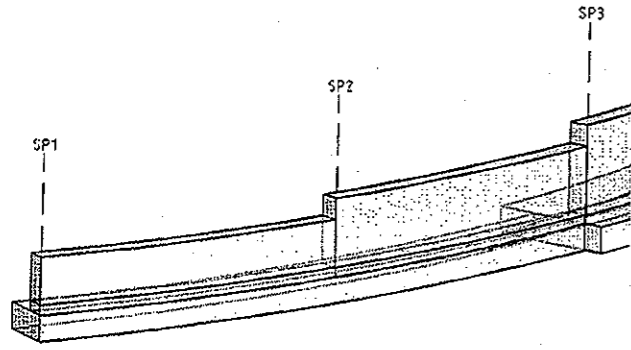
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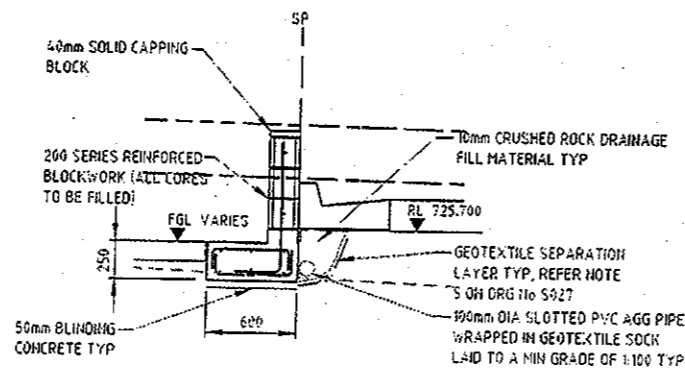
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ORIGINAL SIZE A1

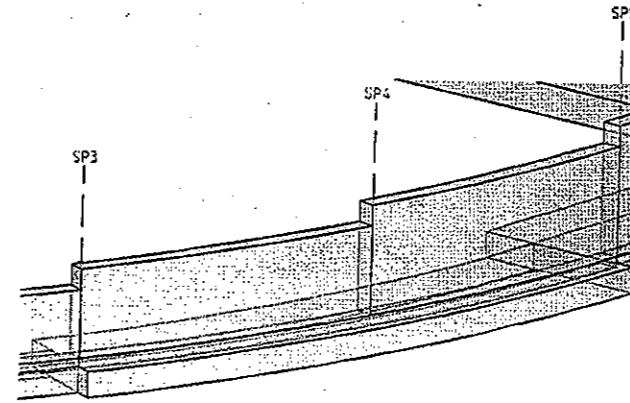
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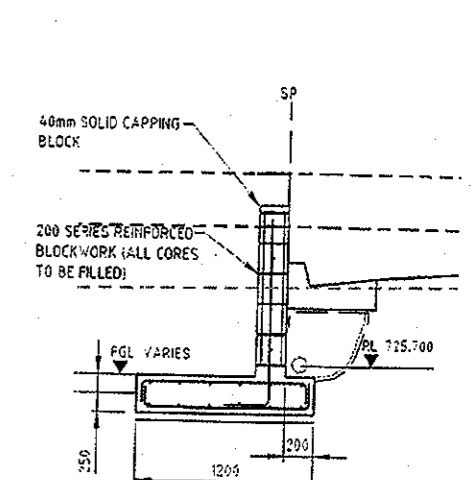
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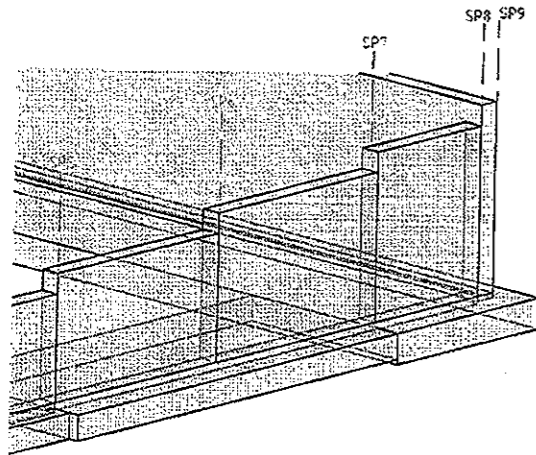
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SCALE 1:25



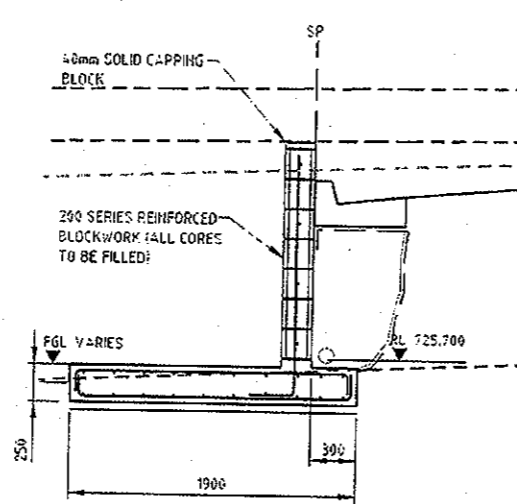
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NOT TO SCALE



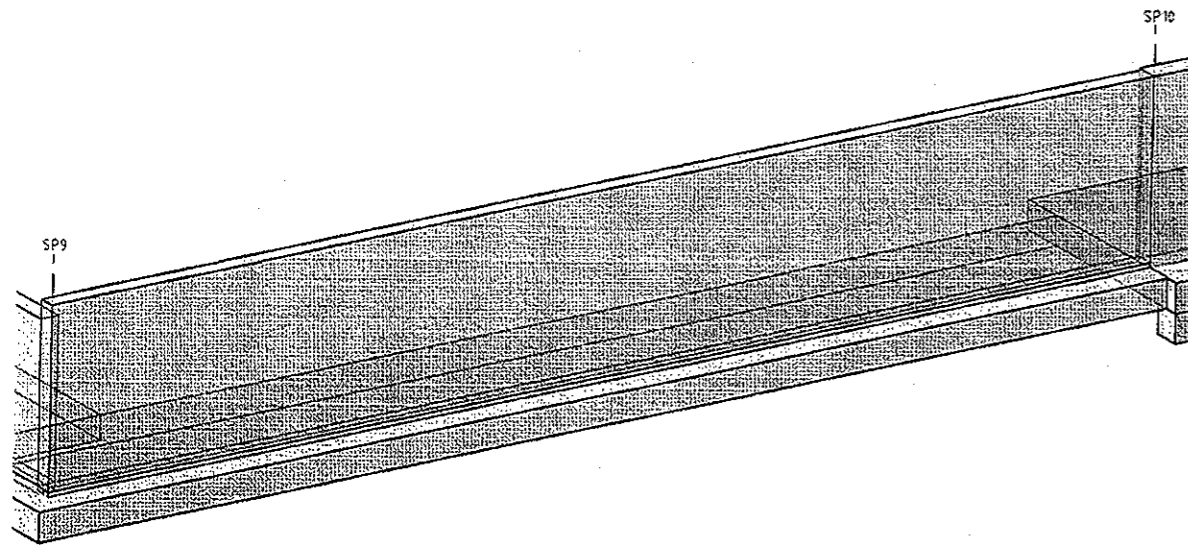
RETAINING WALL TYPE H CROSS SECTION
SCALE 1:25



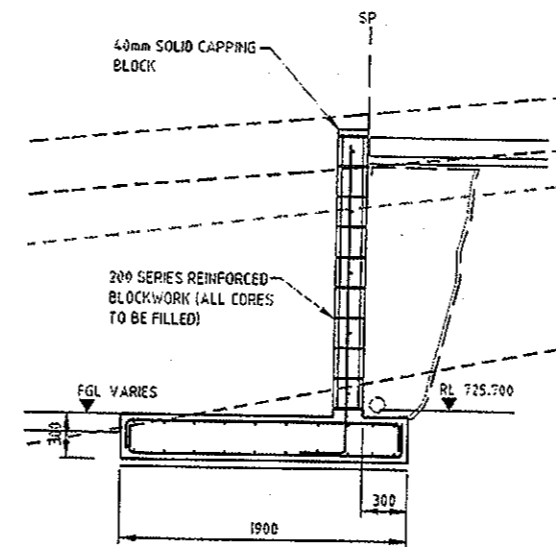
RETAINING WALL TYPE J PERSPECTIVE
NOT TO SCALE



RETAINING WALL TYPE J CROSS SECTION
SCALE 1:25



RETAINING WALL TYPE K PERSPECTIVE
NOT TO SCALE
BCJ NOT SHOWN



RETAINING WALL TYPE K CROSS SECTION
SCALE 1:25

BCA certifiers
AEN: EB 119 755 731
CONSTRUCTION CERTIFICATE
MODIFIED
CC140503-4M1 22/01/2015
Principal Certifying
Authority
Ros Pascoe BPB2220

REINFORCEMENT TABLE

RETAINING WALL TYPE	BASE SLAB	WALLS		REMARKS
		VERTICAL	HORIZONTAL	
G	N12-200 EW T&B	N12-20C	N12-400	BLOCK WALL
H	N16-200 EW T&B	N16-20C	N16-400	BLOCK WALL
J	N16-200 EW T&B	N16-20C	N16-400	BLOCK WALL
K	N16-200 EW T&B	N16-20C	N16-400	BLOCK WALL

PROVIDE CONTINUITY OF BLOCKWALL HORIZONTAL REINFORCEMENT AT ALL WALL JUNCTIONS

FOOTING TO BE CAST DIRECTLY ON BLINDING CONCRETE

NOTES

1. FOR NOTES REFER DRG S027

LEGEND

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

NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE	BY	CHECKED	APP	DATE
B	IPC FOR REVIEW					
A	ISSUED FOR 70% REVIEW	19.12.14	SBC	JW	SC	19.12.14
		23.10.14	SBC	JW	SC	23.10.14
			DRH	CHK	APP	DATE

ROLE	NAME	DATE
SURVEYED		
DESIGNED	Amogh Deshpande	24.10.14
DRAWN	Steve Coyle	24.10.14
CAD REVIEW	Alan Gilbert	28.10.14
DESIGN CHECK	Amogh Deshpande	28.10.14
DESIGN REVIEW	Jaya Weerasingha	28.10.14
APPROVED	Stephen Chapman	19.12.14



GOOGONG WATER RECYCLING PLANT STAGE AB

RETAINING WALLS - RECYCLED WATER
SECTIONS AND DETAILS - SHEET 1

STATUS: FOR REVIEW

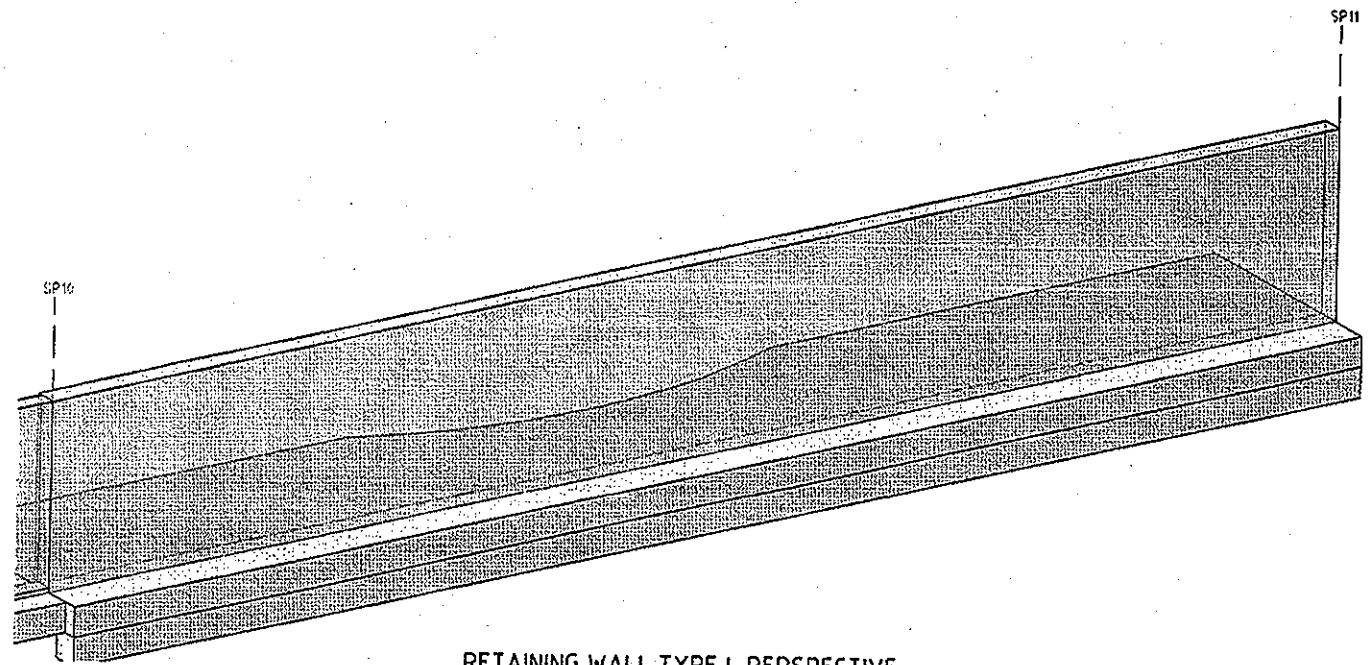
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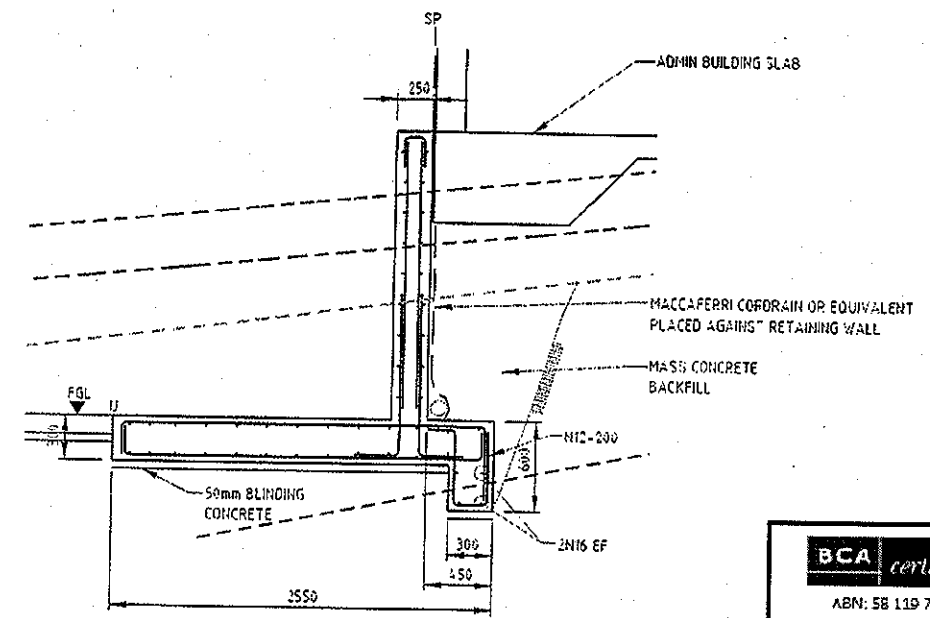
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REV: B

ORIGINAL SIZE A1



RETAINING WALL TYPE L PERSPECTIVE
NOT TO SCALE
BCJ NOT SHOWN



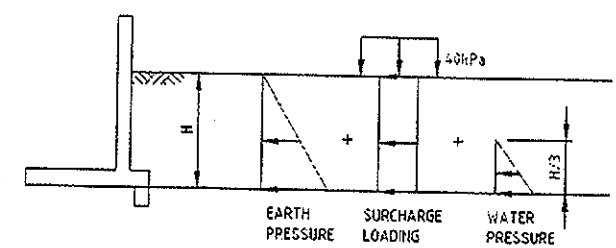
RETAINING WALL TYPE L CROSS SECTION
SCALE 1:25

BCA certifiers
ABN: 58 119 755 731
CONSTRUCTION CERTIFICATE MODIFIED
CC140503-4M1 22/01/2015
Principal Certifying Authority
Ros Pascoe BPB2220

REINFORCEMENT TABLE

RETAINING WALL TYPE	BASE SLAB	WALLS		REMARKS
		VERTICAL	HORIZONTAL	
L	N16-200 EW T&B	N16-200 EF	N16-200 EF	CONCRETE WALL

FOOTING TO BE CAST DIRECTLY ON BLINDING CONCRETE



DESIGN LOADING SCENARIO

NOTES

1 FOR NOTES REFER DRG S027

LEGEND

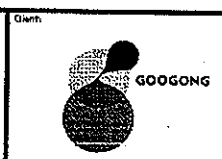
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- RESIDUAL SOIL
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NOT FOR CONSTRUCTION



REV	DATE	BY	CHK	APP	DATE	DESCRIPTION
B	19.12.14	SBC	JW	SC	19.12.14	IFC FOR REVIEW
A	22.10.14	SBC	JW	SC	22.10.14	ISSUED FOR 2012 REVIEW

STATUS	DATE	BY	CHK	APP	DATE
SURVEYED					
DESIGNED	24.10.14	Amogh Deshpande			
DRAWN	24.10.14	Steve Coyle			
CAD REVIEW	28.10.14	Alan Gilbert			
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APPROVED	19.12.14	Stephen Chapman			



GOOGONG WATER RECYCLING PLANT STAGE AB

RETAINING WALLS - RECYCLED WATER SECTIONS AND DETAILS - SHEET 2

Status Stamp	FOR REVIEW
Date Stamp	19.12.14
Scales	AS SHOWN
Drawing No.	83502156-01-001-S029
Rev.	B