

Appendix G

## Cost Estimate Summary Table

(as included in Conceptual Design Options Report)

Hospital Prince of Wales Reservoir Cost Estimate Summary Table  
**Option R1.0**

Item	Description	Lower Bound	Estimated Cost	Upper Bound
1.0	Services diversions and demolition	\$ 190,000	\$ 190,000	\$ 190,000
2.0	Inlet and outlet pipework (in trench)	\$ 380,000	\$ 380,000	\$ 380,000
3.0	Topsoil removal (upper park) and disposal	\$ 12,000	\$ 12,000	\$ 12,000
4.0	Bulk excavation to stockpile and off site disposal	\$ 970,000	\$ 970,000	\$ 970,000
5.0	Subsoil drainage	\$ 225,000	\$ 225,000	\$ 225,000
6.0	Pipe tunnel structure	\$ 615,000	\$ 615,000	\$ 615,000
7.0	Reservoir structure	\$ 7,000,000	\$ 7,000,000	\$ 7,000,000
8.0	Pipework and valves	\$ 1,050,000	\$ 1,050,000	\$ 1,050,000
9.0	Electrical and Control System (Capacity Estimate)	\$ 340,000	\$ 340,000	\$ 340,000
10.0	Backfill and Access Driveway	\$ 300,000	\$ 300,000	\$ 300,000
11.0	Topsoiling and Landscaping	\$ 285,000	\$ 285,000	\$ 285,000
12.0	Overflow/Stormwater Drainage	\$ 230,000	\$ 230,000	\$ 230,000
13.0	Upper Sports Ground Resurfacing	\$ 130,000	\$ 130,000	\$ 130,000
14.0	Rolleston Street Pavement Repairs	\$ 150,000	\$ 150,000	\$ 150,000
	Estimating Contingency (approx.9.5, 12 & 17%)	\$ 1,130,000	\$ 1,450,000	\$ 2,030,000
	<b>Subtotal</b>	<b>\$ 13,007,000</b>	<b>\$ 13,327,000</b>	<b>\$ 13,907,000</b>
	Add Preliminary and General (12%)	\$ 1,560,840	\$ 1,599,240	\$ 1,668,840
	<b>Subtotal</b>	<b>\$ 14,567,840</b>	<b>\$ 14,926,240</b>	<b>\$ 15,575,840</b>
	Add Off-site Overheads and Profit (8%)	\$ 1,165,427	\$ 1,194,099	\$ 1,246,067
	<b>Total Base Estimate</b>	<b>\$ 15,733,268</b>	<b>\$ 16,120,339</b>	<b>\$ 16,821,907</b>
15.0	Consenting (preparation of AEE; Consultation and preparation of consent applications)	\$ 172,000	\$ 172,000	\$ 172,000
16.0	Engineering (Concept, Preliminary and Detail Design and Construction Management & Observation)	\$ 700,000	\$ 700,000	\$ 700,000
	<b>Total Expected Estimate</b>	<b>\$ 16,605,268</b>	<b>\$ 16,992,339</b>	<b>\$ 17,693,907</b>
	Contract Contingency (approx. 2.5%, 5.5% & 11.5%)	\$ 394,733	\$ 907,661	\$ 2,006,093
	<b>Total Comparison</b>	<b>\$ 17,000,000</b>	<b>\$ 17,900,000</b>	<b>\$ 19,700,000</b>
		-5%	0%	+10%

**Note 1:** Main Contractor Preliminary & General (P&G) costs covers the cost of on-site overheads such as site supervision / management, site offices, stores, hoardings, amenities, plant cranes , temporary works, etc.

**Note 2:** Main Contractor Off-site overheads and Profit (OH&P) Margins covers the cost of contributions to the Main Contractor's Profit and off-site overhead costs.

**Note 3:** The Estimating Contingency sum is integral to the estimate total and is a general allowance for residual cost risk including design development, omissions, sundry measured items and assumptions made for construction details not shown. This is not a project contingency which is expected to be held in addition to this estimating contingency. Typically the estimating Contingency decreases throughout the design development process.

**Note 4:** The Recommended Contract Contingency is a sum proposed to be held by the Client available to cover post contract variation works to the contract, such as unforeseen ground conditions and construction risk.

**Note 5:** The lower and upper bound estimates represent probable variances in assumed adjustments to the estimated value of the current design, they do NOT represent a guaranteed or maximum / minimum price.

**Note 6:** The estimate is based upon rates and prices current as at October 2012 and no allowance has been included for increases (escalation) in labour, materials or plant beyond this date.

**Note 7:** All values within this report and included in the attached Estimate Details are GST exclusive.

**Note 8:** Current market assumed rates and sums based on a traditional procurement route, ie. fully designed and competitively tendering for lump sum tenders from at least three suitable selected tenderers.

**Note 9:** Items 15.0 and 16.0 records the values included in the accepted consultant's commission.

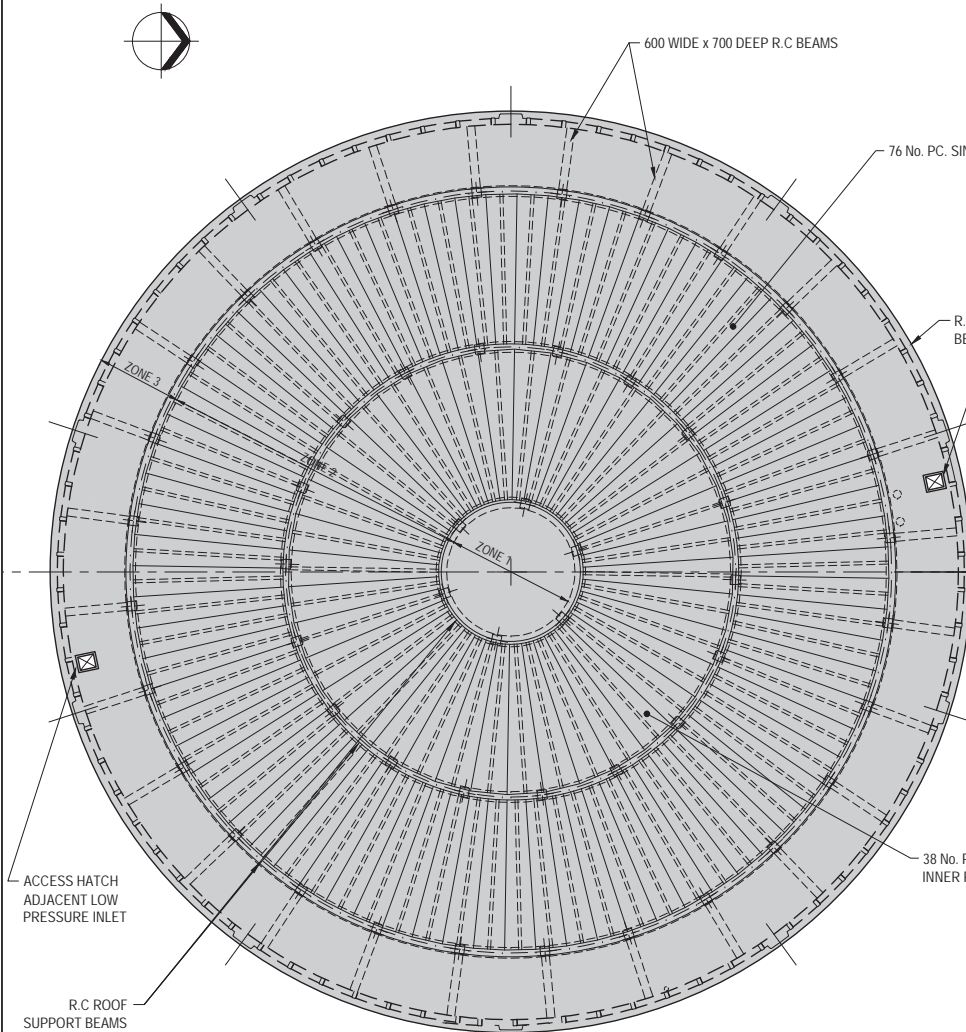
**Note 10:** The percentage adjustments noted as "approx." have been adjusted to give rounded number totals to reflect the high level nature of the estimating at this time

Appendix H

## Drawings

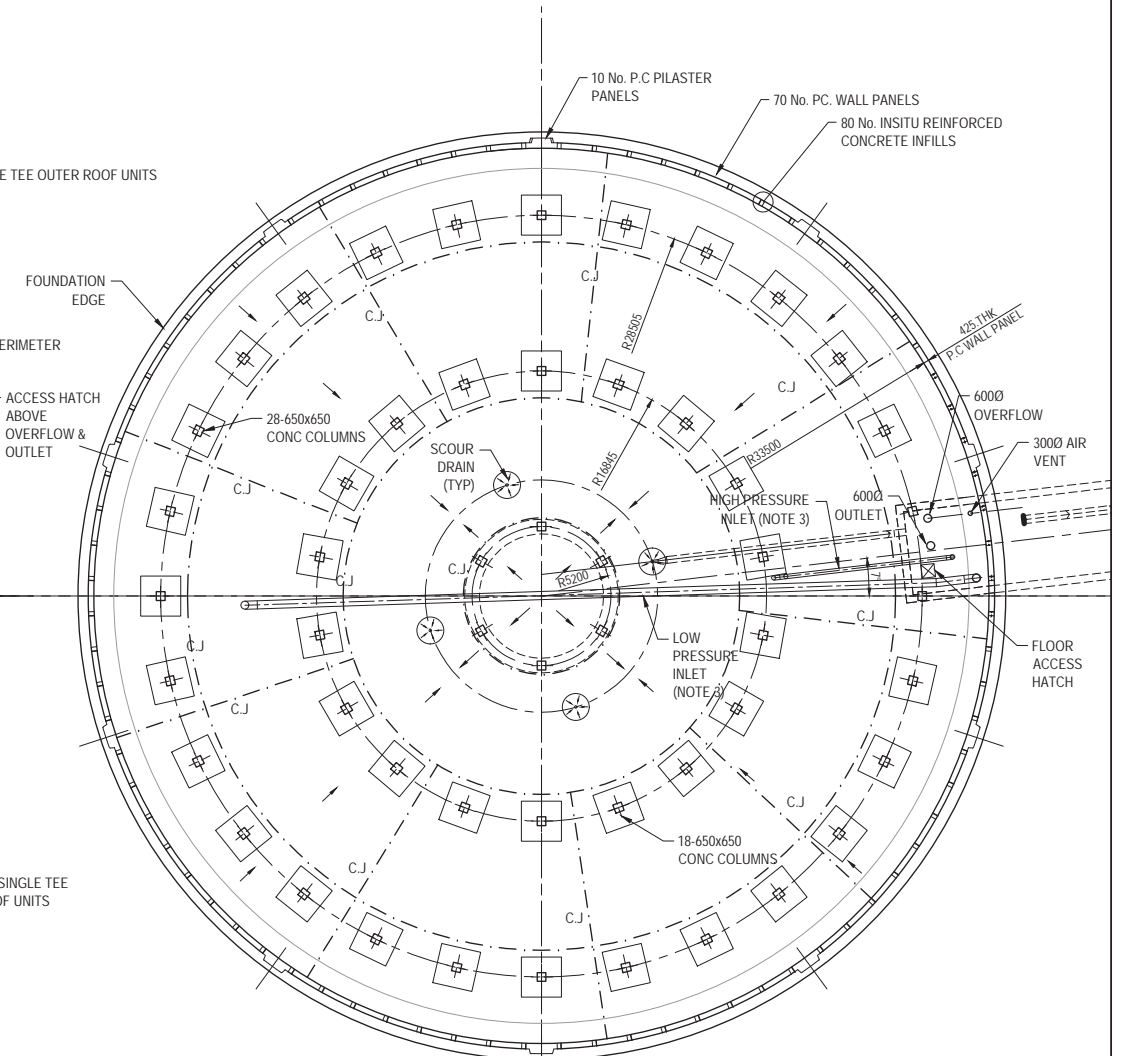
Drawings are contained in separate Volume 2





**ROOF PLAN**  
1:200 (A1)

ROOF ZONE	STRUCTURE
1	250mm REINF CONCRETE SLAB.
2	150mm REINF CONCRETE TOPPING ON SINGLE TEES
3	250mm REINF CONCRETE SLAB



**FLOOR PLAN AT RL 83.0**  
1:200 (A1)

**NOTES:**

1. CJ = CONSTRUCTION JOINT
2. REFER DRAWING CE-K23 FOR TYPICAL STRUCTURAL DETAILS
3. THESE PIPES ARE MOUNTED ABOVE FLOOR LEVEL

A	ISSUED FOR PDR	AJP	SAE	SAE	18.04.13
		By			



Original Scale (A1)	1:250 (A1)	Designed	SAE	04.13	Approved For Construction*
Drawn	AJP	07.12			
Orig. Mtdr	DMH	04.13			
Orig. Chk	DMH	04.13			
Scale (A3)	1:500 (A3)	Date			



Client: **HOSPITAL PRINCE OF WALES RESERVOIR**

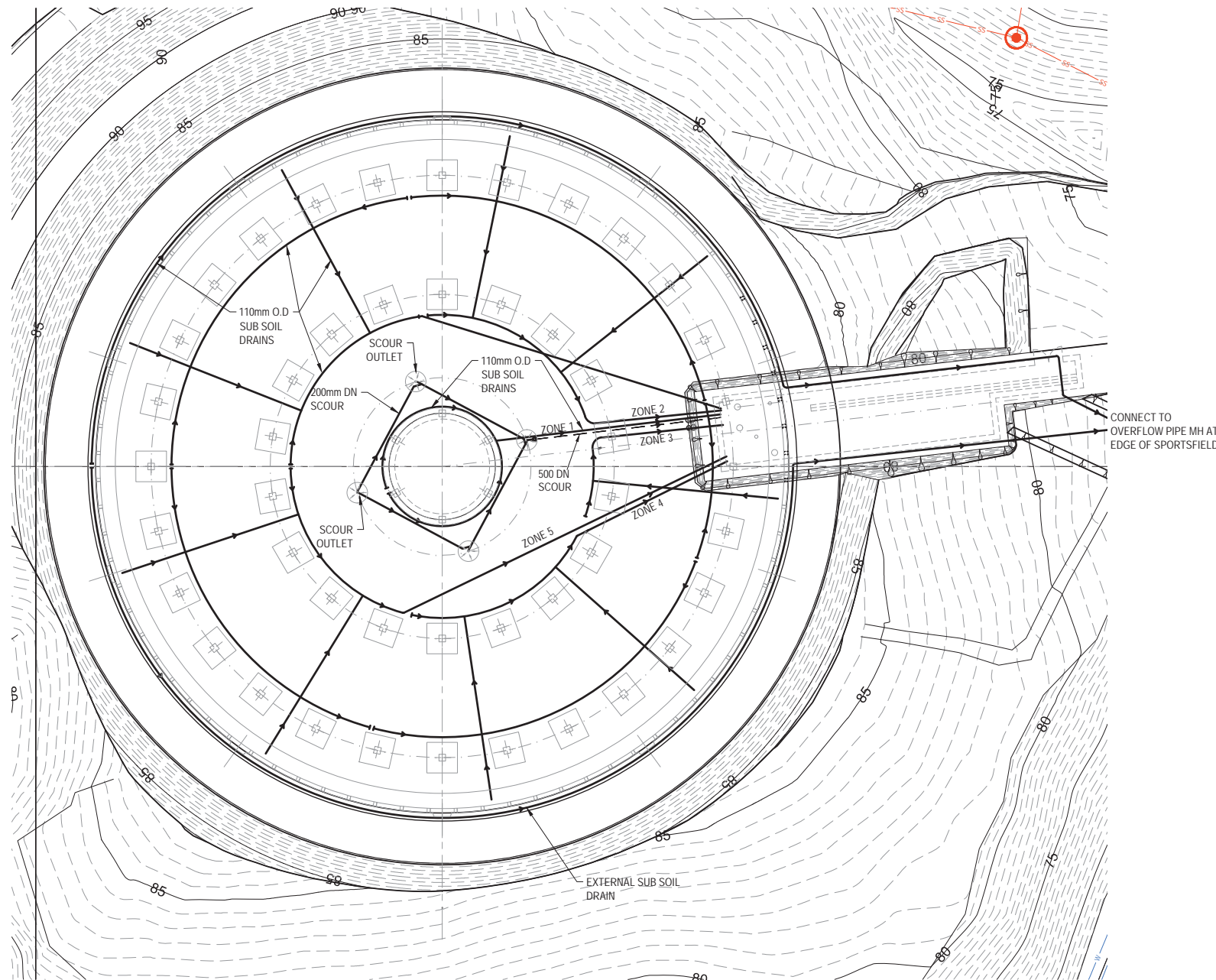
Project: **RESERVOIR ROOF AND SLAB SETOUT PLANS**

Discipline: **CIVIL**  
Drawing No: **6517439-CE-K19**  
Rev: **A**

**FOR INFORMATION NOT FOR CONSTRUCTION**



NOTE:  
ZONES - REFER TO FLOOR AREAS  
FOR SUBSOIL DRAINAGE.



A		ISSUED FOR PDR		AJP	SAE	SAE	18.04.13
No.	Revision	By	Chk	Appd	Date		

Drawing Originator:




Original Scale (A1)	1:250 (A1)	Designed	SAE	04.13	Approved For Construction*
Drawn	AJP	01.13			
Orig. Verifier	DMH	04.13			
Orig. Check	DMH	04.13			
Reduced Scale (A3)	1:500 (A3)	* Refer to Revision 1 for Original Signature			

Client:

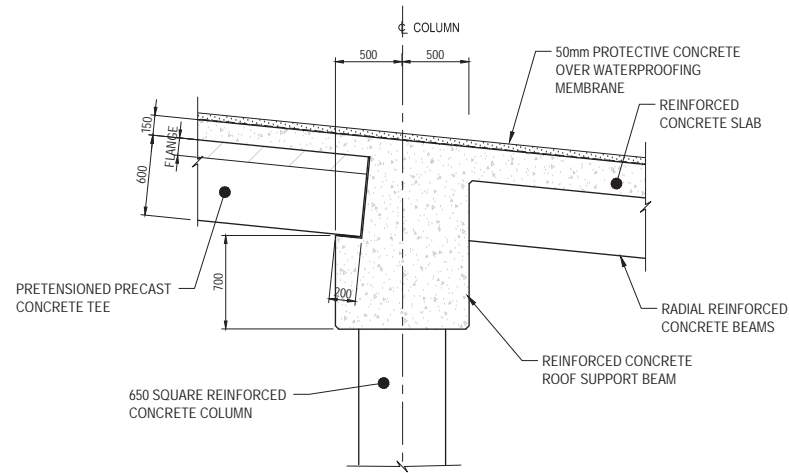


Project: HOSPITAL PRINCE OF WALES RESERVOIR

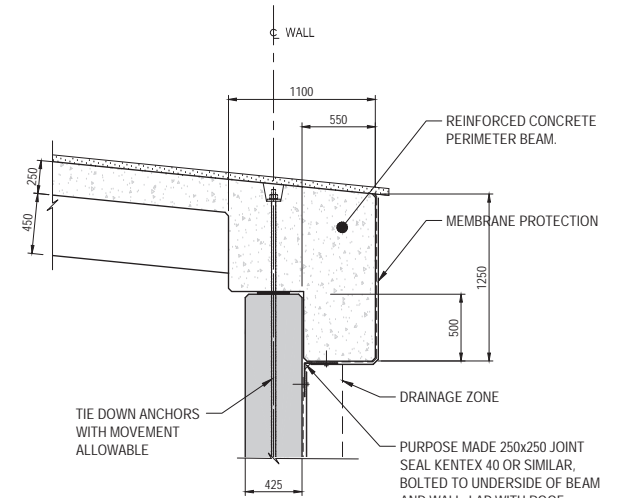
Title: RESERVOIR UNDER FLOOR DRAINAGE PLAN

**FOR INFORMATION**  
**NOT FOR CONSTRUCTION**

Discipline:	CIVIL
Drawing No.:	6517439-CE-K22
Rev.:	A

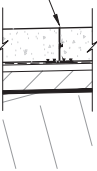


**COLUMN BEAM JOINT**  
1:20 (A1)

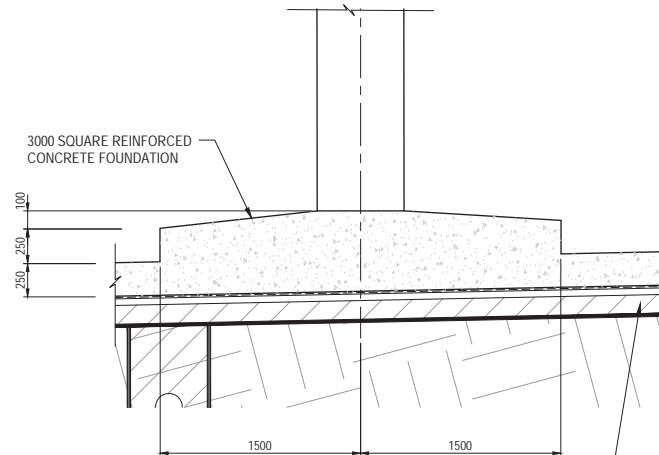


**WALL TO ROOF JOINT**  
1:20 (A1)

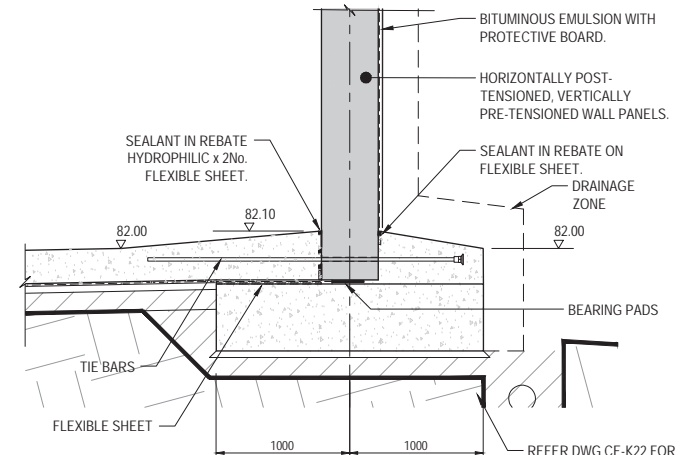
TYPICAL C.J WITH CENTRAL HYDROPHILIC WATERSTOP AND PVC BACKSTOP TO UNDERSIDE OF SLAB. REINFORCING CONTINUOUS THROUGH JOINT.



**FLOOR CONSTRUCTION JOINT**  
1:20 (A1)



**COLUMN FOUNDATION**  
1:20 (A1)



**BASE OF WALL JOINT**  
1:20 (A1)

**NOTES:**

1. REINFORCING STEEL AND TENDONS/DUCTS NOT DRAWN FOR CLARITY OF JOINT DETAILING.

No.	Revision	By	Chk	Appd	Date
A	ISSUED FOR PDR	AJP	SAE	SAE	18.04.13

Drawing Originator:

Original Scale (A1)	1:10 (A1)	Designed	SAE	04.13	Approved For Construction*
Drawn	AJP	01.13			
Drawn	DMH	04.13			
Drawn	DMH	04.13			

\* Refer to Revision 1 for Original Signature

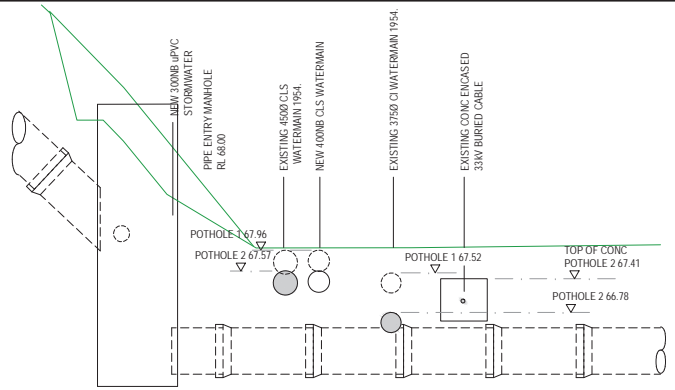
Client:

Project: **HOSPITAL PRINCE OF WALES RESERVOIR**

Title: **RESERVOIR TYPICAL STRUCTURAL SECTIONS AND DETAILS**

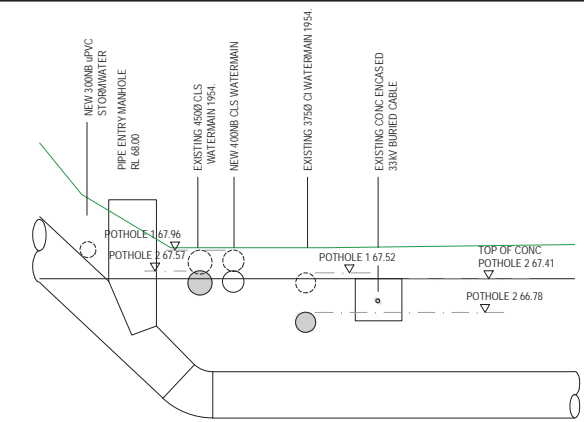
Discipline:	CIVIL
Drawing No:	6517439-CE-K23
Rev:	A

**FOR INFORMATION NOT FOR CONSTRUCTION**



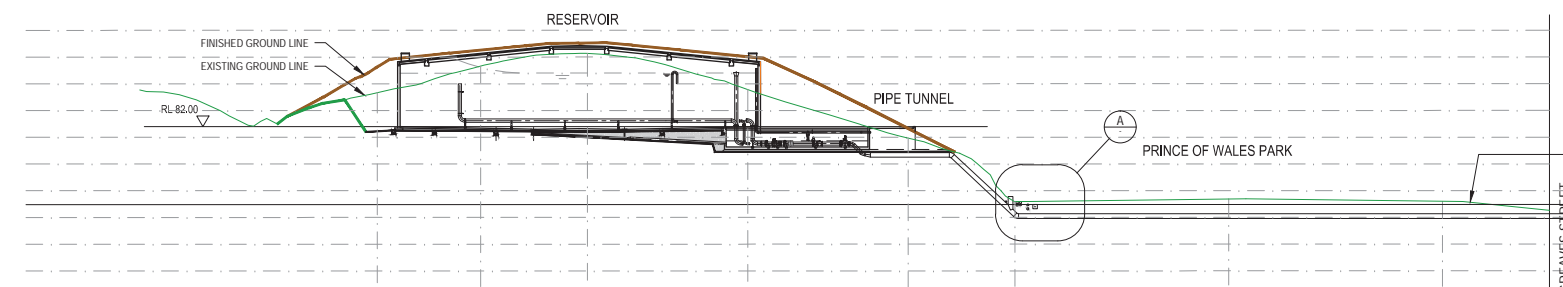
NOTE:  
REFER DWG 6517439-GS-104 FOR POTHOLE LOCATIONS

**A** SCOUR PIPE  
1:50 (A1)



NOTE:  
REFER DWG 6517439-GS-104 FOR POTHOLE LOCATIONS

**A** INLET / OUTLET  
1:50 (A1)



NOTES:  
PIPE MINIMUM GRADIENT TO BE 0.2% FALL AND IF POSSIBLE LIMIT COVER TO 1m TO 2m RANGE.

Datum 45.00	220.00	210.00	200.00	190.00	180.00	170.00	160.00	150.00	140.00	130.00	120.00	110.00	100.00	90.00	80.00	70.00	60.00	50.00	40.00	30.00	20.00	10.00	0.00	
Existing Ground		88.33	93.29	95.67		88.90		79.84		68.00		68.50		68.00		68.00		68.00		68.00		67.00		67.00
PIPE I/L (m)			82.81	82.81		78.52		76.24		64.80		64.80		64.80		64.80		64.80		64.80		64.80		64.80
Chainages (m)		220.00	210.00	200.00	190.00	180.00	170.00	160.00	150.00	140.00	130.00	120.00	110.00	100.00	90.00	80.00	70.00	60.00	50.00	40.00	30.00	20.00	10.00	0.00

**2** SECTION  
NM-K01/ 1:500 (A1)

Revised	By	Chk	Appd	Date
B	AJP	DRH	SAE	04.06.13
A	AJP	DRH	SAE	18.04.13

Drawing Originator:

Original Scale (A1)	1:500 (A1)
Designed	SAE
Drawn	AJP
01.13	
Checked	
Date	

Client:

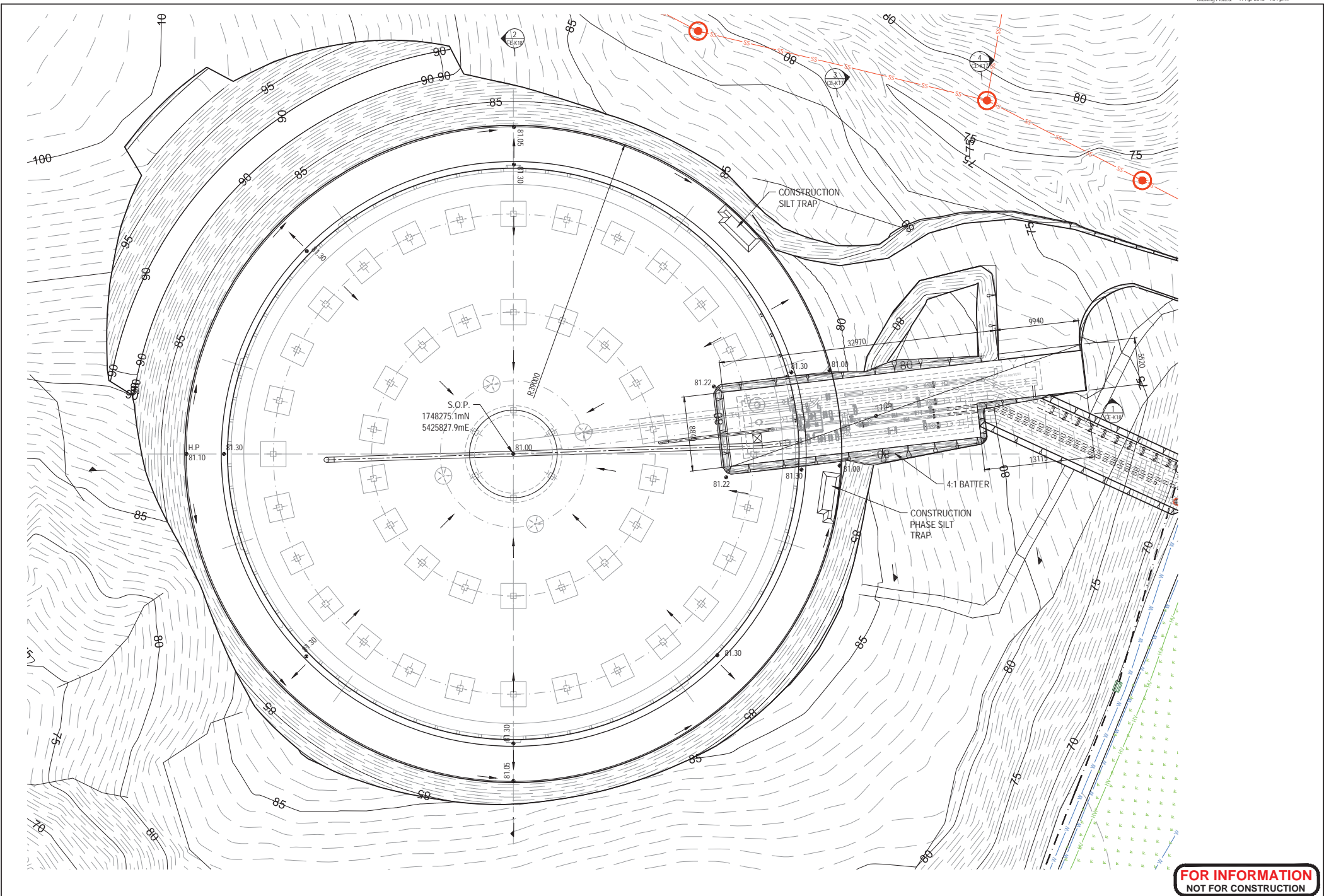
Project: HOSPITAL PRINCE OF WALES RESERVOIR

Title: RESERVOIR TUNNEL / PIPELINE LONG SECTION

Discipline: CIVIL  
Drawing No: 6517439-CE-K24  
Rev: B

**FOR INFORMATION  
NOT FOR CONSTRUCTION**





C	ISSUED FOR PDR	AJP	SAE	SAE	18.04.13
B	UPDATE FINAL ISSUE CDOR	AJP	SAE	SAE	01.02.13
A	FOR GEOTECH REPORT ADDENDUM	AJP	SAE	SAE	18.01.13
No.	Revision	By	Chk	Appd	Date

Drawing Originator:

Original Scale (A1)	1:250 (A1)	Designed	SAE	Approved For Construction*
Drawn	AJP	01.13		
Orig. Writer	DMH	04.13		
Diag. Check	DMH	04.13		
Scale (A2)	1:500 (A3)	Date		

\* Refer to Revision 1 for Original Signature

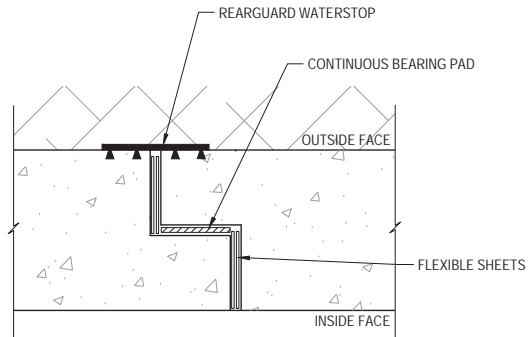
Client:

Project: HOSPITAL PRINCE OF WALES RESERVOIR

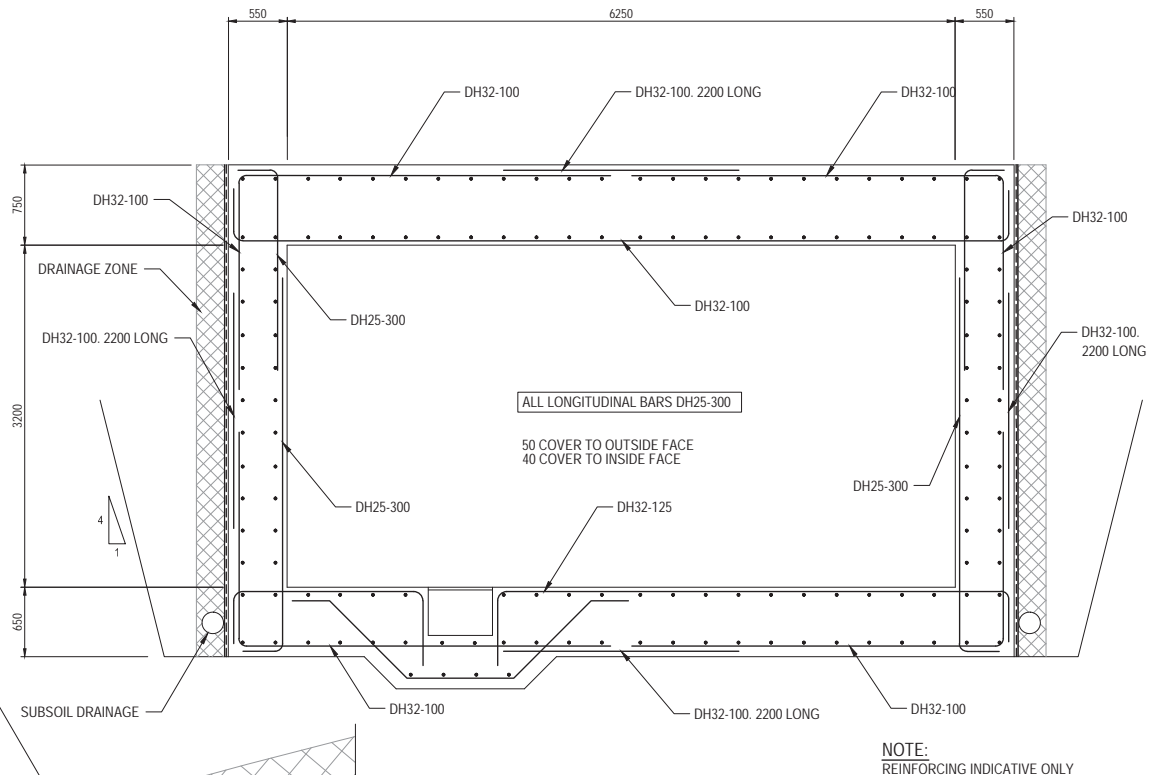
Title: PLAN OF RESERVOIR OPTION - R1.0 EARTHWORKS

Discipline: CIVIL  
 Drawing No: 6517439-CE-K25  
 Rev: C

**FOR INFORMATION  
 NOT FOR CONSTRUCTION**

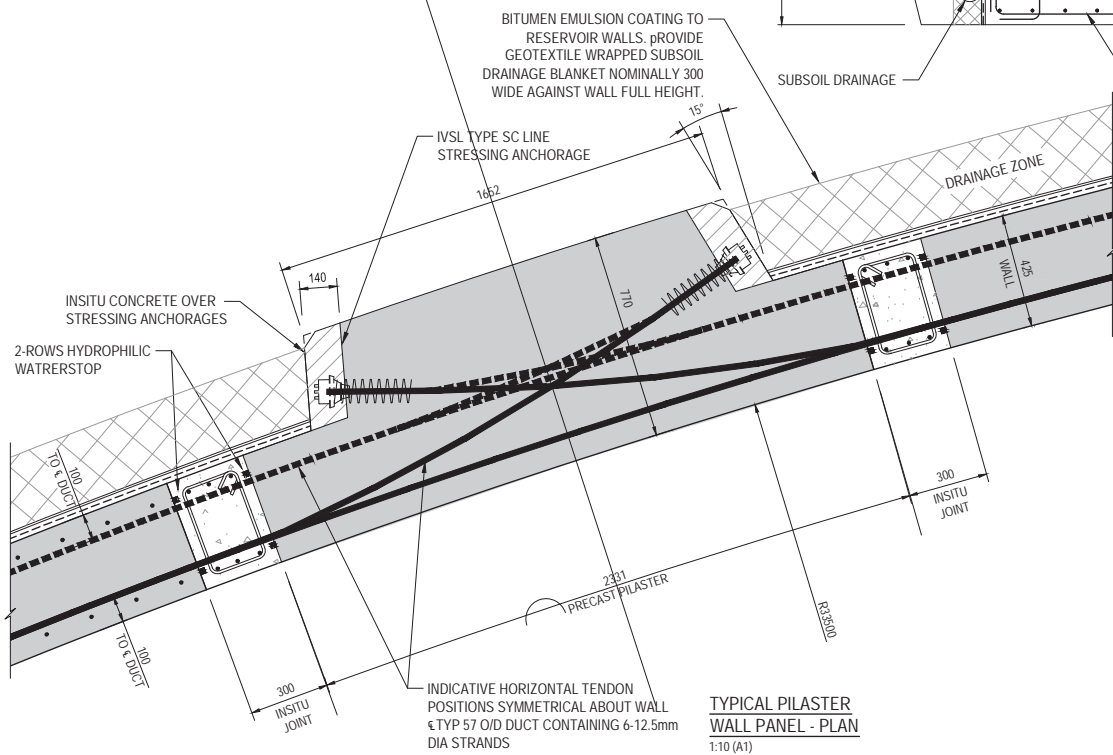


**1** PIPE TUNNEL ISOLATION JOINT  
CE-K18 1:5 (A1)

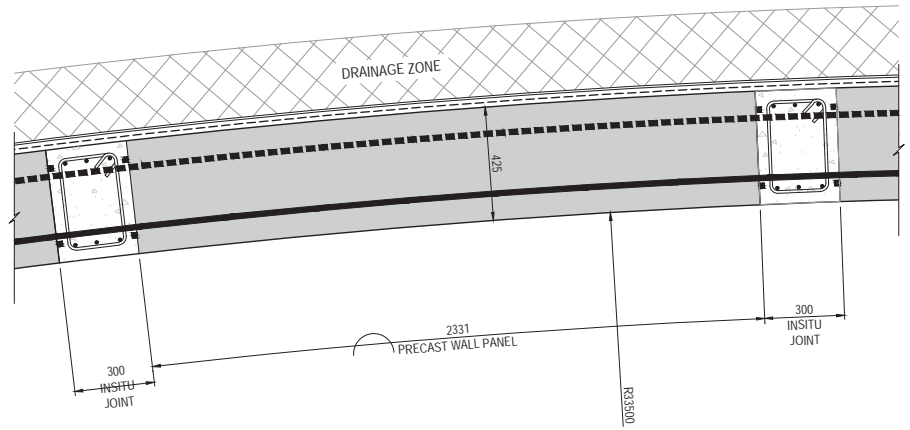


TYPICAL SECTION THROUGH PIPE TUNNEL  
1:250 (A1)

NOTE:  
REINFORCING INDICATIVE ONLY



TYPICAL PILASTER WALL PANEL - PLAN  
1:10 (A1)



TYPICAL WALL PANEL - PLAN  
1:10 (A1)

**FOR INFORMATION**  
**NOT FOR CONSTRUCTION**

A ISSUED FOR PDR		NAM	SAE	SAE	19.04.13
No.	Revision	By	Ck	Appd	Date

Drawing Originator:

Original Scale (A1)	1:10 (A1)	Designed	SAE	01.13	Approved For Construction
Drawn	AJP	01.13			
Orig. Checker	JVP	01.13			
Drawn Scale (A0)	1:20 (A3)	Drawn Check	SAE	01.13	Date

Client:

Project: **HOSPITAL PRINCE OF WALES RESERVOIR**







Title: **RESERVOIR WALL AND PIPE TUNNEL SECTIONS**

Discipline: **CIVIL**  
Drawing No: **6517439-CE-K26**  
Rev: **A**





**LEGEND**

-  HIGH VALUE REGENERATING NATIVE
-  MODERATE VALUE MIXED EXOTIC AND NATIVE
-  LOW VALUE EXOTIC PLANTING
-  RECENT PLANTING
-  EXISTING FORMED WALKING TRACKS
-  EXISTING UNFORMED WALKING TRACKS

**FOR INFORMATION  
NOT FOR CONSTRUCTION**

B ISSUED FOR PDR		PRG	WR	SAE	19.04.13
A ISSUED FOR CDOR		HLY	SRW	SAE	01.02.13
No.	Revision	By	CHK	Appd	Date

Drawing Originator:




Original Scale (A1)	500	Design	JDB	Approved For Issue*
Reduced Scale (A3)	1000	Drawn	HLY	26.07.12
		Checked	JDB	26.06.12
		Design Check	SAE	27.06.12
		* Refer to Revision 1 for Original Signature		

Client:

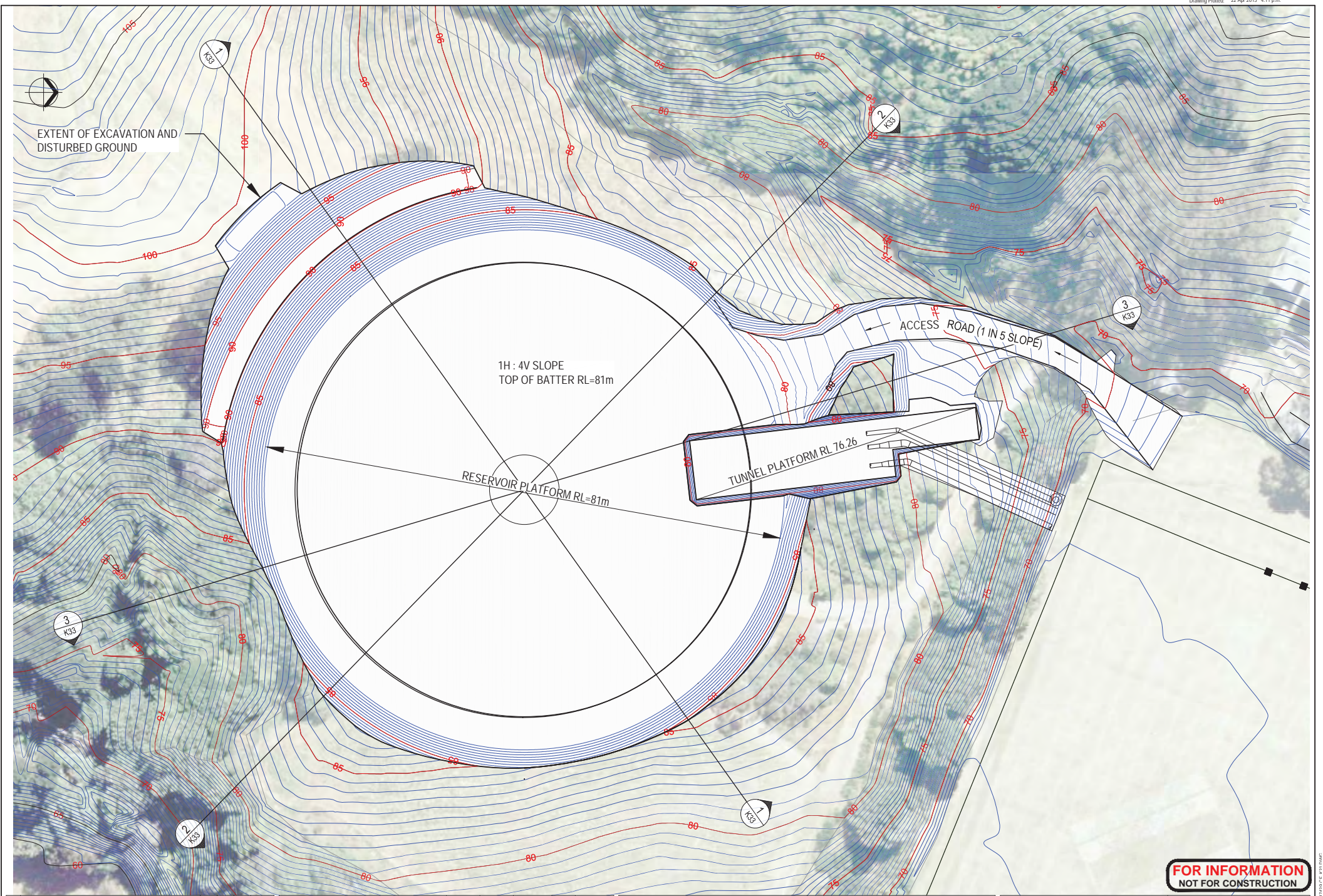


Project: **HOSPITAL PRINCE OF WALES RESERVOIR**

Title: **EXISTING SITE FEATURES**

Discipline: **CIVIL**  
Drawing No: **6517439-CE-K30**  
Rev: **B**





No.	Revision	By	Chk	Appd	Date
A	ISSUED FOR PDR	AJP	CJM	SAE	18.04.13

Drawing Originator:

Original Scale (A1)	1:250 (A1)	Designed	CJM	Approved For Construction	09.12
Reduced Scale (A2)	1:500 (A3)	Drawn	AJP		
		Orig. Verifier	SAE		
		Orig. Check	SAE		

Refer to Revision 1 for Original Signature

Client:

Project:

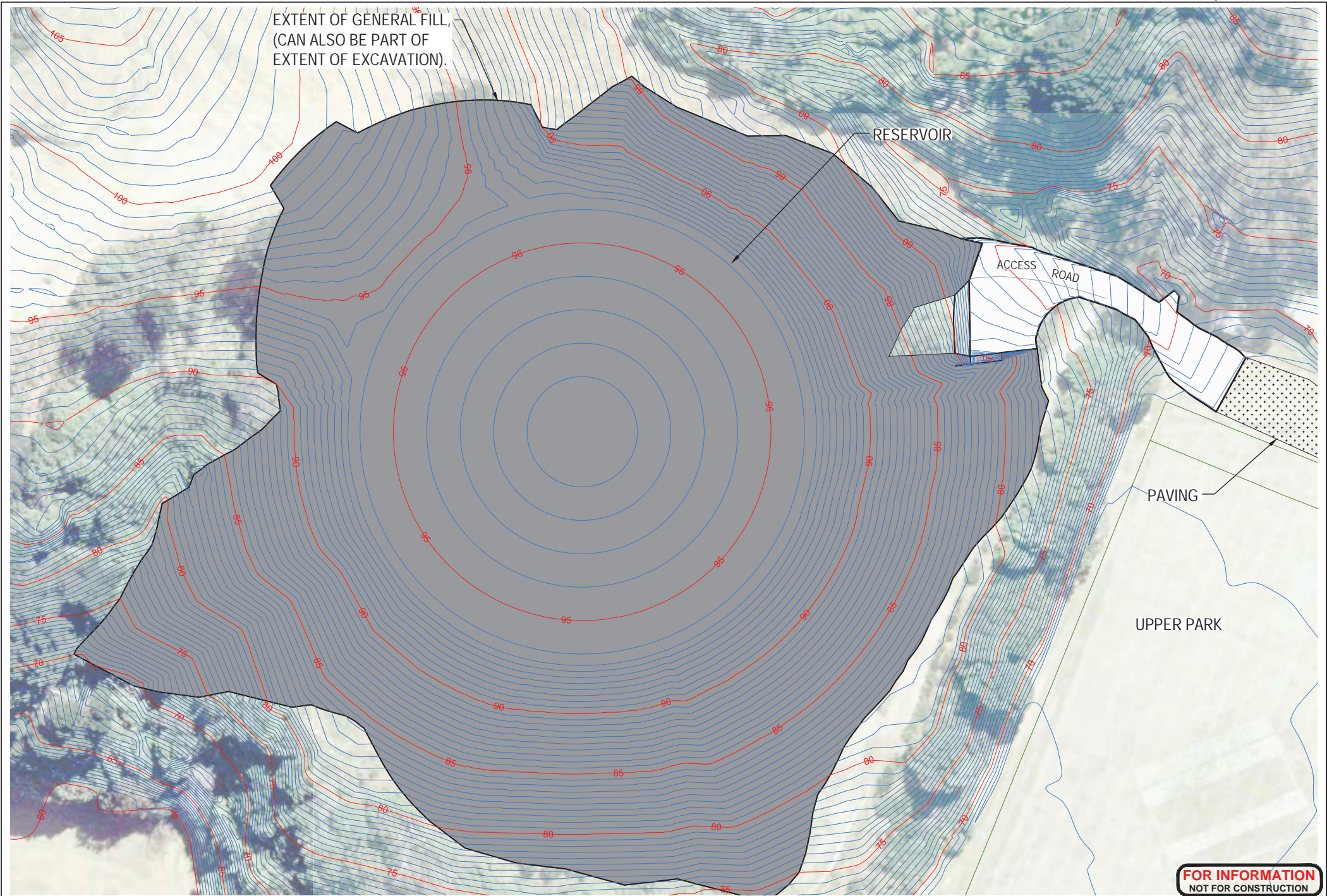
HOSPITAL  
PRINCE OF WALES  
RESERVOIR

Site:  
RESERVOIR  
OPTION - R.1.0  
EXTENT OF EXCAVATIONS

Discipline	ALL DISCIPLINES
Drawing No.	6517439-CE-K31
Rev.	A

**FOR INFORMATION**  
**NOT FOR CONSTRUCTION**





**FOR INFORMATION**  
NOT FOR CONSTRUCTION

No.	Revision	By	Chk	Appd	Date
A	ISSUED FOR PDR	LB	CJM	SAE	18.04.13
A	ISSUED FOR PDR	AJP	CJM	SAE	18.04.13

Drawing Originator:

Original Scale (A0)	1:250(A1)	Designed	CJM	31.07.12	Approved For Construction
Reduced Scale (A0)	1:500(A3)	Drawn	AJP	31.07.12	Date
		Drig Verifier	BS		
		Drig Check			

Refer to Revision 1 for Original Signature

Client:

Project: HOSPITAL PRINCE OF WALES RESERVOIR

Title: PLAN OF RESERVOIR OPTION - R1 COMPLETED WORKS

Discipline: CIVIL  
Drawing No: 6517439-CE-K32  
Rev: B







Legend

FEATURE	DESCRIPTION
	Bottom of Bank
	Top of Bank
	Building
	Edge of Concrete
	Centreline of Ditch
	Breakline
	Fence
	Gate
	Edge of Track
	Edge of Seal
	Road Centreline
	Post
	Manhole
	Power Pole
	Fire Hydrant
	Sign
	Spot Height
	Water Meter
	Sluice Valve
	Major Contour 5m
	Minor Contour 1m

**FOR INFORMATION**  
NOT FOR CONSTRUCTION

No.	Revision	By	CHK	Appd	Date
A	ISSUED FOR PDR	SY	BJS	GR	18.04.13

Drawing Originator:

Original Scale (A1)	1:500	Designed	BJS	18.04.13	Approved For Issue
		Drawn	SY	18.04.13	
		Checked	GR	18.04.13	
		Drawn Check	BJS	18.04.13	

Refer to Revision 1 for Original Signatures.

Client:

Project: **HOSPITAL PRINCE OF WALES RESERVOIR**

Title: **CONSTRUCTION PHASE PEDESTRIAN ROUTES**

Discipline	CIVIL
Drawing No.	6517439-CE-K34
Rev	A





**Legend**

FEATURE	DESCRIPTION
--- ---	Bottom of Bank
--- ---	Top of Bank
=====	Building
-----	Edge of Concrete
-----	Centreline of Ditch
-----	Breakline
-----	Fence
-----	Gate
-----	Edge of Track
-----	Edge of Seal
-----	Road Centreline
■	Post
○	Manhole
⊙	Power Pole
⊕	Fire Hydrant
⊙	Sign
⊙	Spot Height
⊙	Water Meter
⊙	Sluice Valve
-70.0-	Major Contour 5m Minor Contour 1m

**Notes:**  
 Height Datum: New City Datum  
 Origin of Heights: Wellington Primary TGRM  
 11.58m Wellington VD 1953  
 (New City Datum = Wellington V.D. 1953)  
 Coordinate Datum: NZTM2000  
 Origin of Coordinates: Wellington Airport  
 (WGTN) LINZ continuous tracking station  
 Pot holing survey programmed for September

Survey Area

**FOR INFORMATION  
 NOT FOR CONSTRUCTION**

No.	Revision	By	Chk	Appd	Date
A	FOR CLIENT APPROVAL	AWG	SRW	SRW	26.06.12

Drawing Originator:

Original Scale (A1)	500	Surveyed	AXG	22.06.12	Approved For Issue*
Reduced Scale (A3)	1000	Drawn	SRW	26.06.12	SE
		Checked	SE	26.06.12	Date
		Deep Check	SE	26.06.12	Date

\* Refer to Revision 1 for Original Signature

Client:

Project: **HOSPITAL PRINCE OF WALES RESERVOIR**

Title: **TOPOGRAPHIC SURVEY CONTOUR MODEL**

Discipline: **GEOSPATIAL**

Drawing No: **6517439-GS-101**

Rev: **A**