

NORTHERN INTERCEPTOR PHASE 2

WESTGATE TO HOBSONVILLE

KEY PLAN



ORIGINAL DRAWING
IN COLOUR

FOR TENDER
NOT FOR CONSTRUCTION

ISSUE	DATE	AMENDMENT	BY	APPD.	DESIGNED	C. UNDERDOWN	DES. APPROVED	T. HAARHOFF	DRAWN	F. MISPLON	DWG. APPROVED	T. HAARHOFF	WSL DESIGN MGMT.	WSL PROJ. LEAD	BY	DATE
—	04-23	ISSUED FOR TENDER	FM	TH												
2	11-22	DETAIL DESIGN — FOR REVIEW	FM	TH												
1	07-22	PRELIMINARY DESIGN — FOR REVIEW	FM	TH												

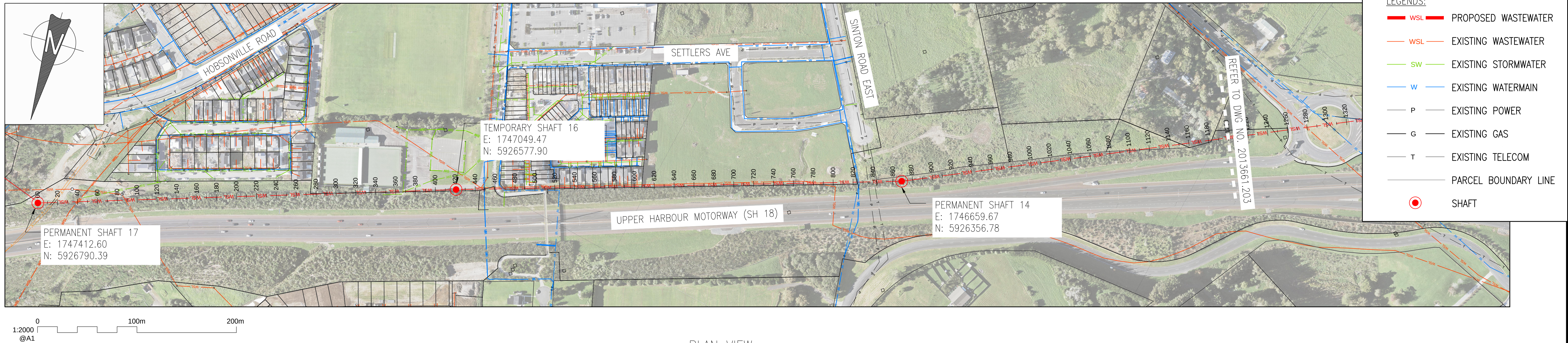
**Watercare**

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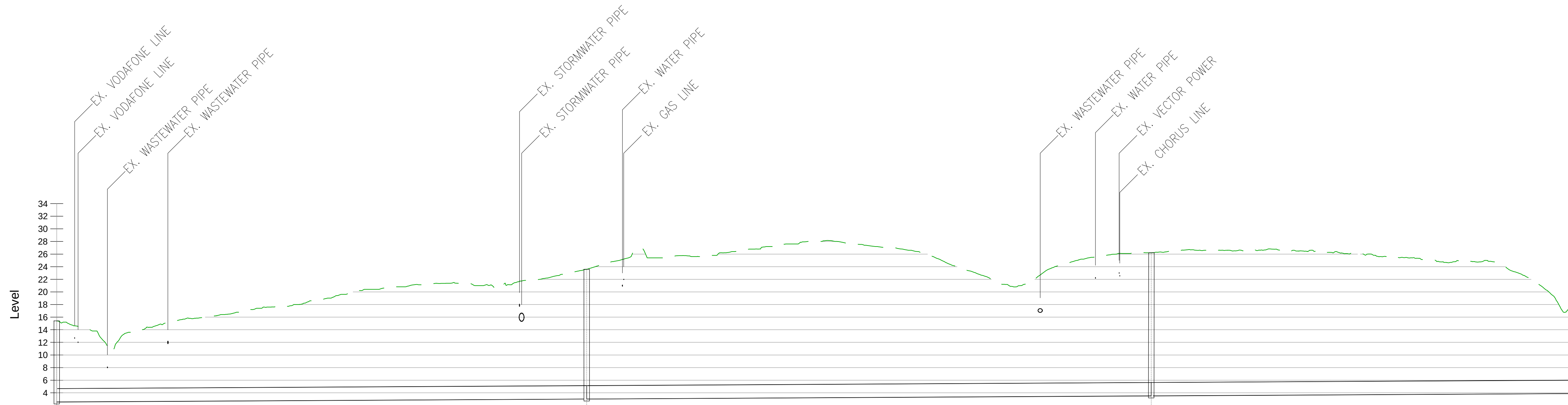
M
MOTT
MACDONALD

NORTHERN INTERCEPTOR PHASE 2
WESTGATE TO HOBSONVILLE
TITLE PAGE

CAD FILE	2013661.001	DATE	04-04-23
ORIGINAL SCALE	A1	CONTRACT No.	—
	AS SHOWN		
REF. No.	417039-MMD-00-XX-DR-Z-0001		
DWG. No.	2013661.001	ISSUE	—



PLAN VIEW
1:2000



Chainage (m)	000	050	100	150	200	250	300	350	400	421	450	500	550	600	650	700	750	800	850	869	900	950	1000	1050	1100	1150	1200	
Existing Ground Levels	15.41	12.55	15.65	16.92	18.46	20.40	21.33	21.22	22.75	23.59	25.20	25.74	26.79	28.00	27.20	25.24	21.22	24.39	26.10	26.21	26.67	26.67	26.52	25.59	24.77	23.98		
Pipe Gradient	1.900										1.900										1.900							
Cover	Min	10.74			5.78				18.45					15.28					20.57				9.17					
	Max				18.45				18.45					22.81					20.57				21.09				13.91	
Invert Level		2.55							3.02	3.02									3.52	3.52						3.91		
Inside Pipe Dia.		2100 Ø GRP										2100 Ø GRP										2100 Ø GRP						
MH Name,Internal dia	HAFT 17 12000											HAFT 16											HAFT 14 7500					

LONG SECTION
1:2000 V
1:400 H

ORIGINAL DRAWING
IN COLOUR

FOR TENDER
NOT FOR CONSTRUCTION

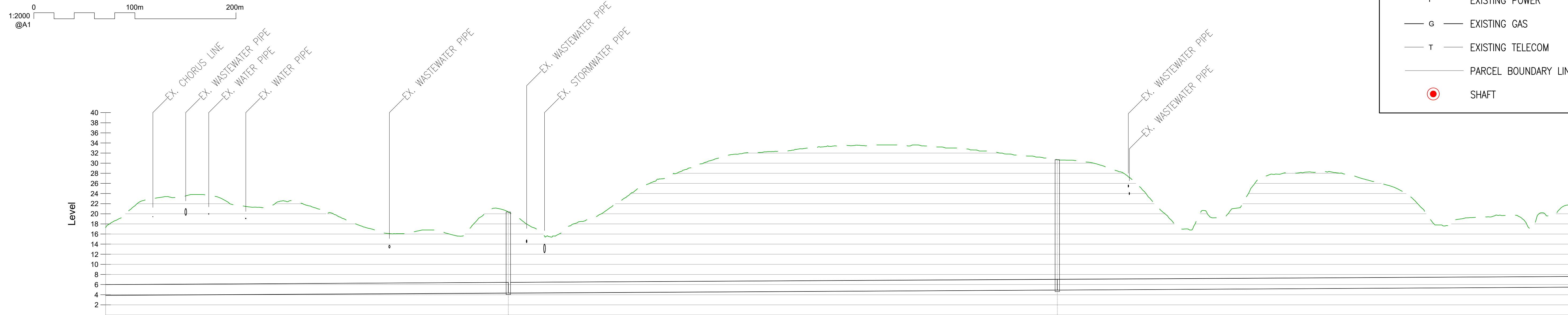
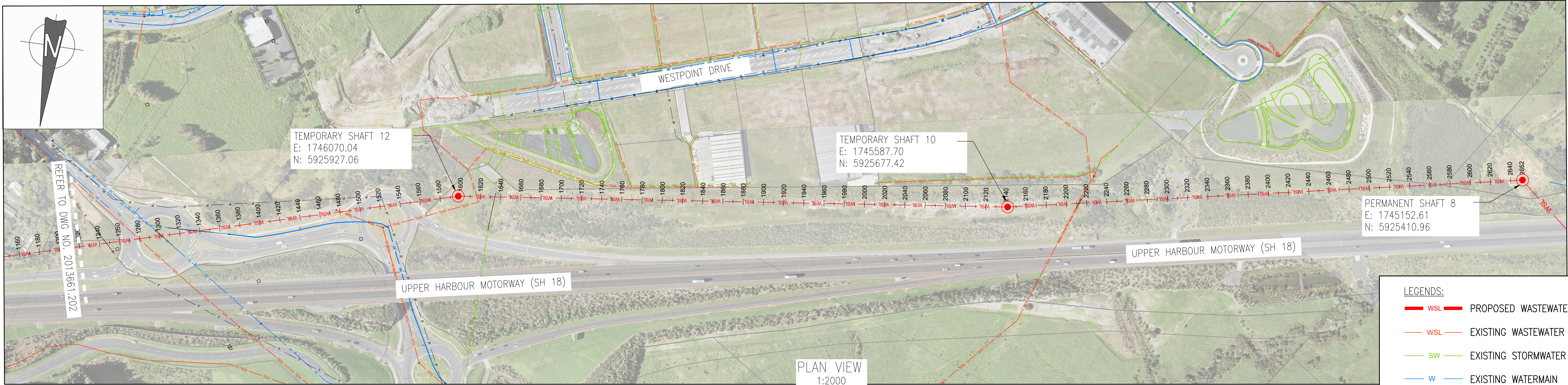
–	04-23	ISSUED FOR TENDER	FM	TH	DESIGNED	C. UNDERDOWN	11-22
4	11-22	DETAIL DESIGN – FOR REVIEW	FM	TH	DES. APPROVED	T. HAARHOFF	11-22
3	07-22	PRELIMINARY DESIGN – FOR REVIEW	FM	TH	DRAWN	F. MISPLON	11-22
2	02-22	FOR INFORMATION	FM	PC	DWG. APPROVED	T. HARRHOFF	11-22
1	02-22	FOR INFORMATION	FM	PC	WSL DESIGN MGMT.		
			FM	PC	WSL PROJ. LEAD		
ISSUE	DATE	AMENDMENT	BY	APPD.		BY	DATE

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MACDONALD

NORTHERN INTERCEPTOR PHASE 2
WESTGATE TO HOBSONVILLE
NI TUNNEL PLAN AND LONG SECTION (1 OF 2)

CAD FILE	417039-MMD-03-XX-DR-C-0100	DATE	04-04-23
ORIGINAL SCALE	A1	CONTRACT No.	–
REF. No.	417039-MMD-03-XX-DR-C-0100		
DWG. No.	2013661.202	ISSUE	–

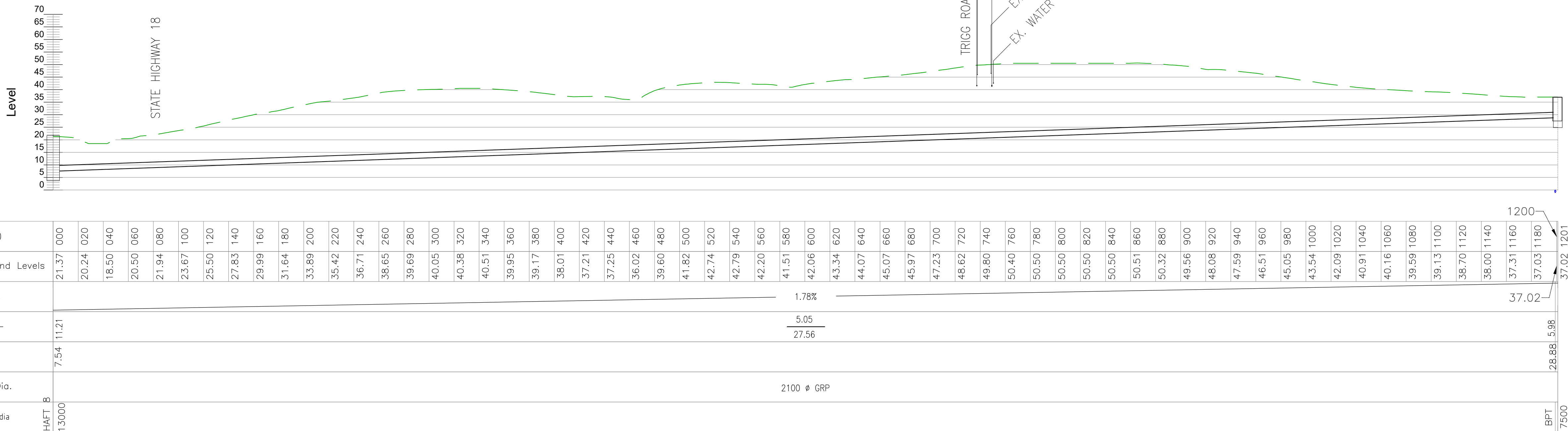
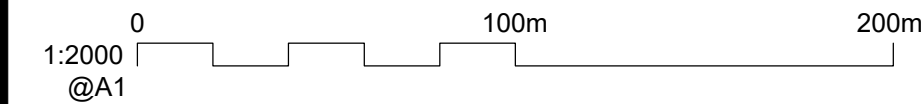


Chainage (m)	17.27	1200		23.11	1250		23.70	1300		21.28	1350		21.63	1400		17.80	1450		16.24	1500		15.58	1550		20.36	1598		20.18	1600		16.13	1650		21.30	1700		26.91	1750		30.61	1800		32.14	1850		33.09	1900		33.49	1950		33.60	2000		32.82	2050		31.61	2100		30.69	2141		30.60	2150		28.52	2200		19.70	2250		19.21	2300		27.60	2350		28.29	2400		26.61	2450		21.60	2500		19.24	2550		19.30	2600		21.73	2650
Existing Ground Levels	17.27	1200		23.11	1250		23.70	1300		21.28	1350		21.63	1400		17.80	1450		16.24	1500		15.58	1550		20.36	1598		20.18	1600		16.13	1650		21.30	1700		26.91	1750		30.61	1800		32.14	1850		33.09	1900		33.49	1950		33.60	2000		32.82	2050		31.61	2100		30.69	2141		30.60	2150		28.52	2200		19.70	2250		19.21	2300		27.60	2350		28.29	2400		26.61	2450		21.60	2500		19.24	2550		19.30	2600		21.73	2650
Pipe Gradient	1.900										1.900										1.900										21.73																																																																
Cover	Min	20.57	9.17										8.89										9.43										14.11																																																														
	Max	21.09	21.09										26.75										23.63										5.50																																																														
Invert Level		3.91	4.33										4.93										4.93										5.50																																																														
Inside Pipe Dia.		2100 Ø GRP										2100 Ø GRP										2100 Ø GRP										13000																																																															
MH Name/Internal dia		SHAFT 12										SHAFT 10										SHAFT 8																																																																									

				DESIGNED		C. UNDERDOWN		11-22		 Watercare COPYRIGHT – This drawing, the design concept, remain the exclusive property of Watercare Services Limited and may not be used without approval. Copyright reserved.	 MOTT MACDONALD	NORTHERN INTERCEPTOR PHASE 2 WESTGATE TO HOBSONVILLE NI TUNNEL PLAN AND LONG SECTION (2 OF 2)				CAD FILE		417039-MMD-03-XX-DR-C-0101		DATE		04-04-23			
4		11-22		DES. APPROVED		T. HAARHOFF		11-22								ORIGINAL SCALE		A1 1:2000		CONTRACT No.		—			
3		06-22		PRELIMINARY DESIGN – FOR REVIEW		FM		TH								DWG. APPROVED		T. HARRHOFF		11-22		REF. No.		417039-MMD-03-XX-DR-C-0101	
2		02-22		FOR INFORMATION		FM		PC								WSL DESIGN MGMT.						DWG. No.			
1		02-22		FOR INFORMATION		FM		PC								WSL PROJ. LEAD						ISSUE		—	
ISSUE		DATE		AMENDMENT				BY		APPD.				BY		DATE									



PLAN VIEW
SCALE: 1:2000

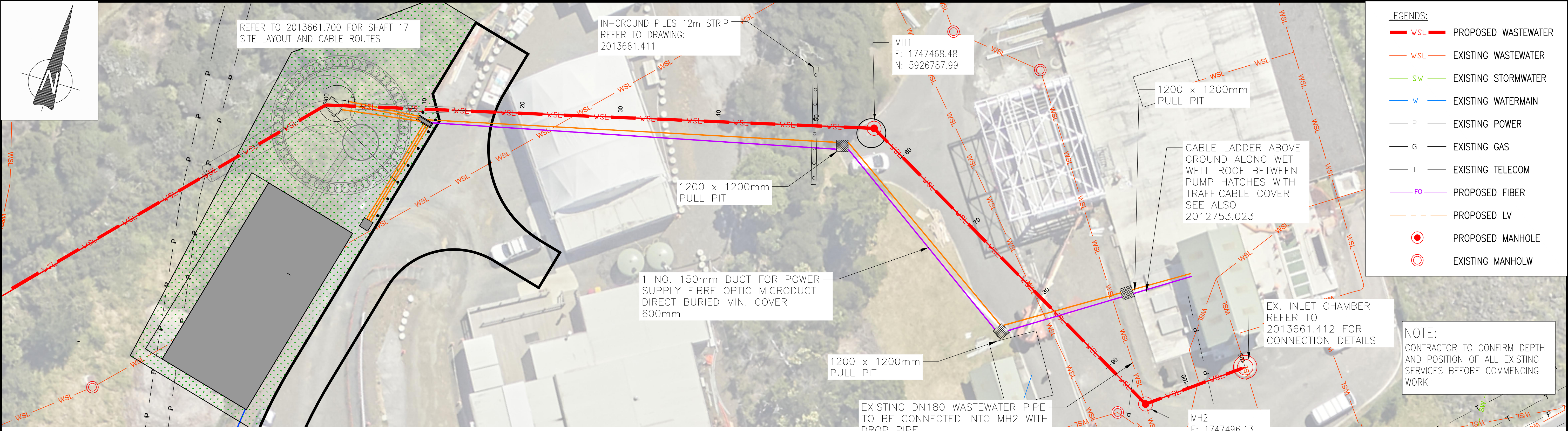


LONG SECTION
SCALE: H 1:1000; V 1:2000

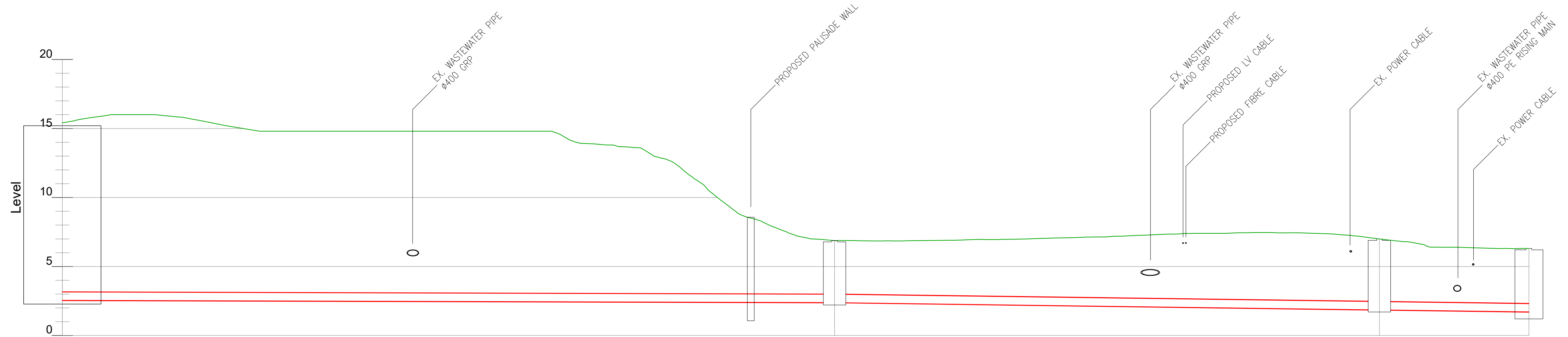


FOR TENDER
NOT FOR CONSTRUCTION

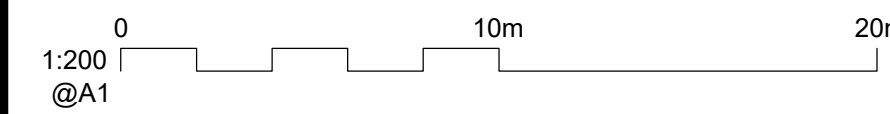
					DESIGNED	C. UNDERDOWN	11-22	 Watercare COPYRIGHT — This drawing, the design concept, remain the exclusive property of Watercare Services Limited and may not be used without approval. Copyright reserved.	 MOTT MACDONALD	NORTHERN INTERCEPTOR PHASE 2 WESTGATE TO HOBSONVILLE MASSEY CONNECTOR PLAN AND LONG SECTION	CAD FILE	2013661.302	DATE	04-04-23
4	11-22	ISSUED FOR TENDER	FM	TH	DES. APPROVED	T. HARRHOFF	11-22				ORIGINAL SCALE	A1 1:2000	CONTRACT No.	—
3	05-22	DETAIL DESIGN — FOR REVIEW	FM	TH	DRAWN	F. MISPLON	11-22				REF. No.	417039-MMD-01-XX-DR-C-0100		
2	02-22	PRELIMINARY DESIGN — FOR REVIEW	FM	PC	DWG. APPROVED	T. HARRHOFF	11-22				DWG. No.	2013661.302	ISSUE	—
1	10-21	SHAFT 8 REVISED	FM	PC	WSL DESIGN MGMT.									
		SKETCH FOR DISCUSSION	FM	PC	WSL PROJ. LEAD									
ISSUE	DATE	AMENDMENT			BY	APPD.	BY	DATE						



PLAN VIEW
1:200



Chainage (m)	000	10.00	20.00	30.00	40.00	50.00	55.92	60.00	70.00	80.00	90.00	95.37	100.00			
Existing Ground Levels	15.41	15.57	14.80	14.80	13.77	8.47	6.88	6.86	7.01	7.34	7.43	6.99	6.40			
Pipe Gradient	1:343						1:74					1:74				
Cover	Min	12.24	3.87		3.87		3.87	3.87	3.87	4.89	4.52	4.52	3.94	3.98		
	Max		12.85										4.52			
Invert Level		2.55					2.39	2.39				1.86	1.86	1.71		
Inside Pipe Dia.		600Ø GRP					600Ø GRP								600Ø	
MH Name, Internal dia	SHAFT 17						MH1	1500						MH2	1500	

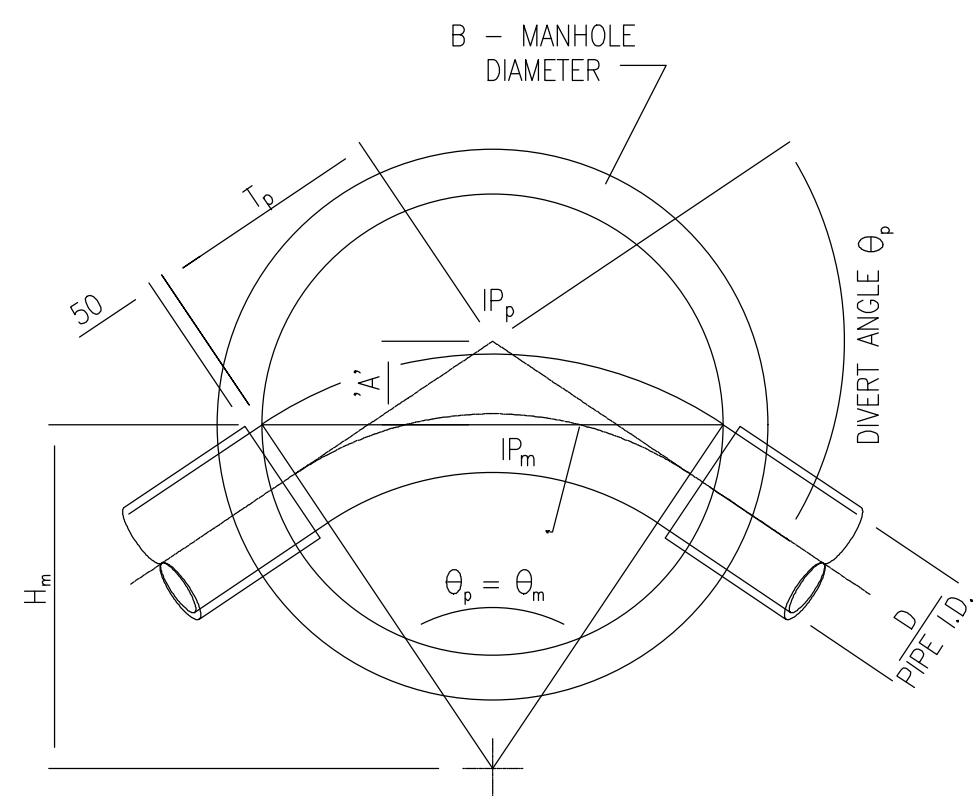


LONG SECTION
1:200 V
1:200 H

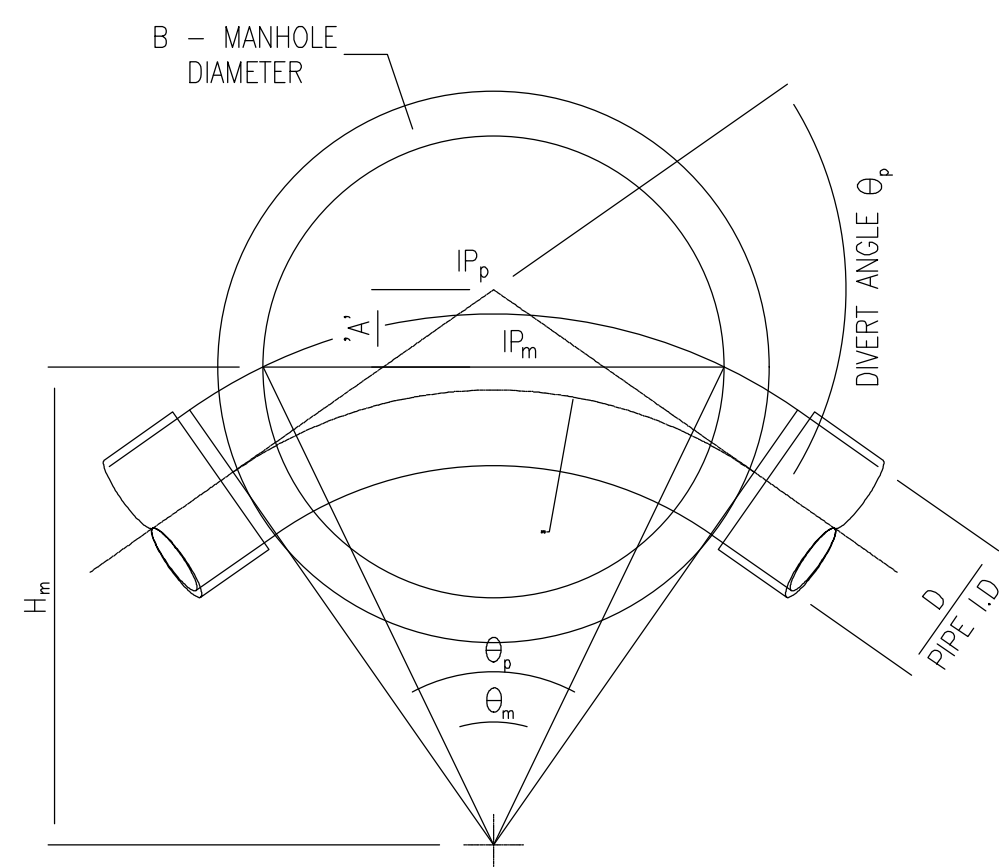
ORIGINAL DRAWING
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						DESIGNED	C. UNDERDOWN		 Watercare COPYRIGHT – This drawing, the design concept, remain the exclusive property of Watercare Services Limited and may not be used without approval. Copyright reserved.	 MOTT MACDONALD	NORTHERN INTERCEPTOR PHASE 2 WESTGATE TO HOBSONVILLE EXISTING HOBSONVILLE PS CONNECTION PLAN AND LONGITUDINAL SECTION	CAD FILE	2013661.400	DATE	04-04-23
						DES. APPROVED	T. HAARHOFF					ORIGINAL SCALE	A1	CONTRACT No.	—
						DRAWN	F. MISPLON								
						DWG. APPROVED	T. HAARHOFF								
–	04-23	ISSUED FOR TENDER			FM	TH						REF. No.	417039-MMD-07-XX-DR-C-0101		
2	11-22	DETAIL DESIGN – FOR REVIEW			FM	TH	WSL DESIGN MGMT.					DWG. No.	2013661.400	ISSUE	—
1	07-22	PRELIMINARY DESIGN – FOR REVIEW			FM	TH	WSL PROJ. LEAD								
ISSUE	DATE	AMENDMENT			BY	APPD.			BY	DATE					



MH1 – TRANSLATED MANHOLE (TYPE A1)



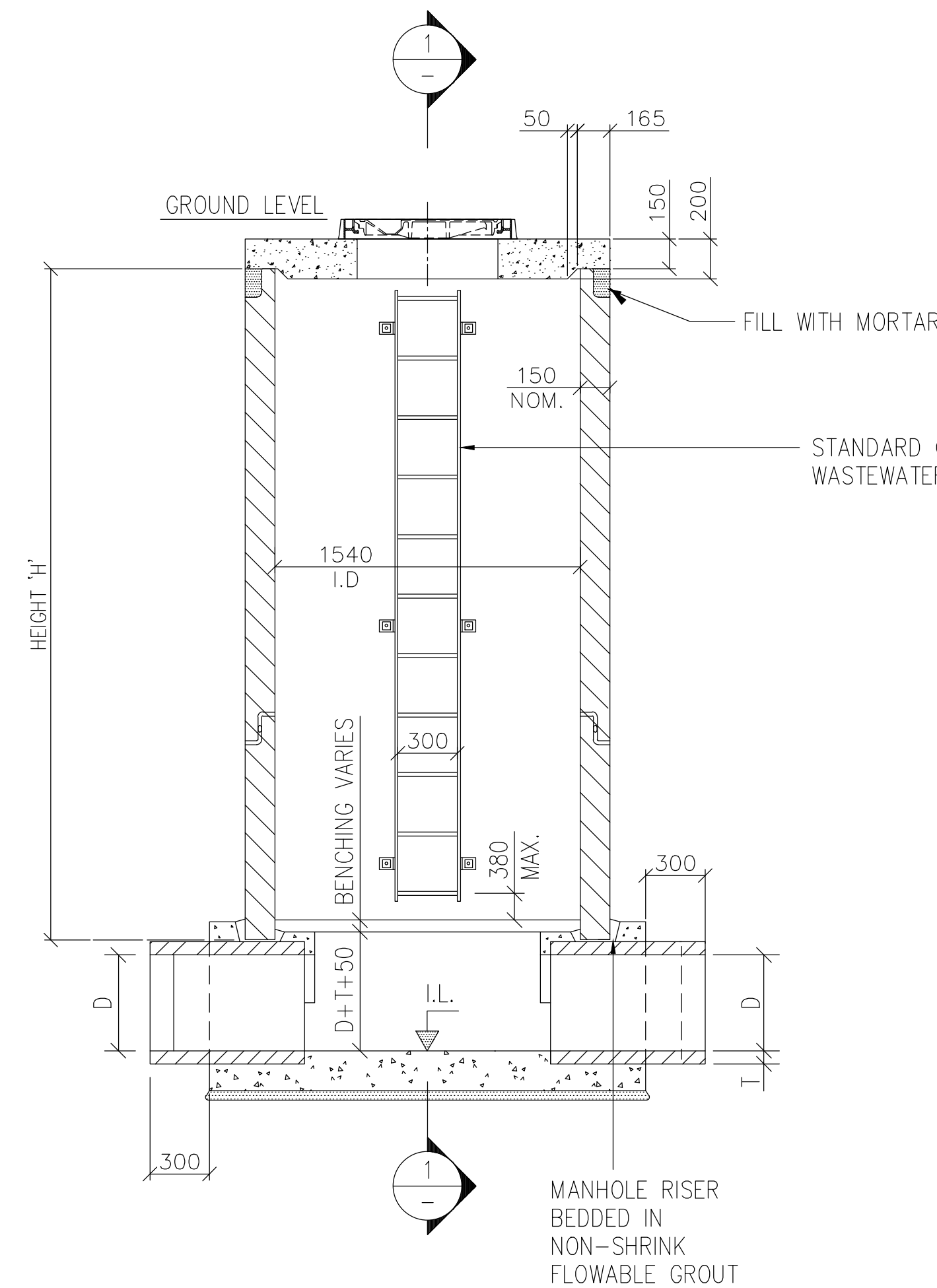
MH2 – TRANSLATED MANHOLE (TYPE A2)

TABLE SHOWING DIMENSIONS FOR MANHOLE CONSTRUCTION

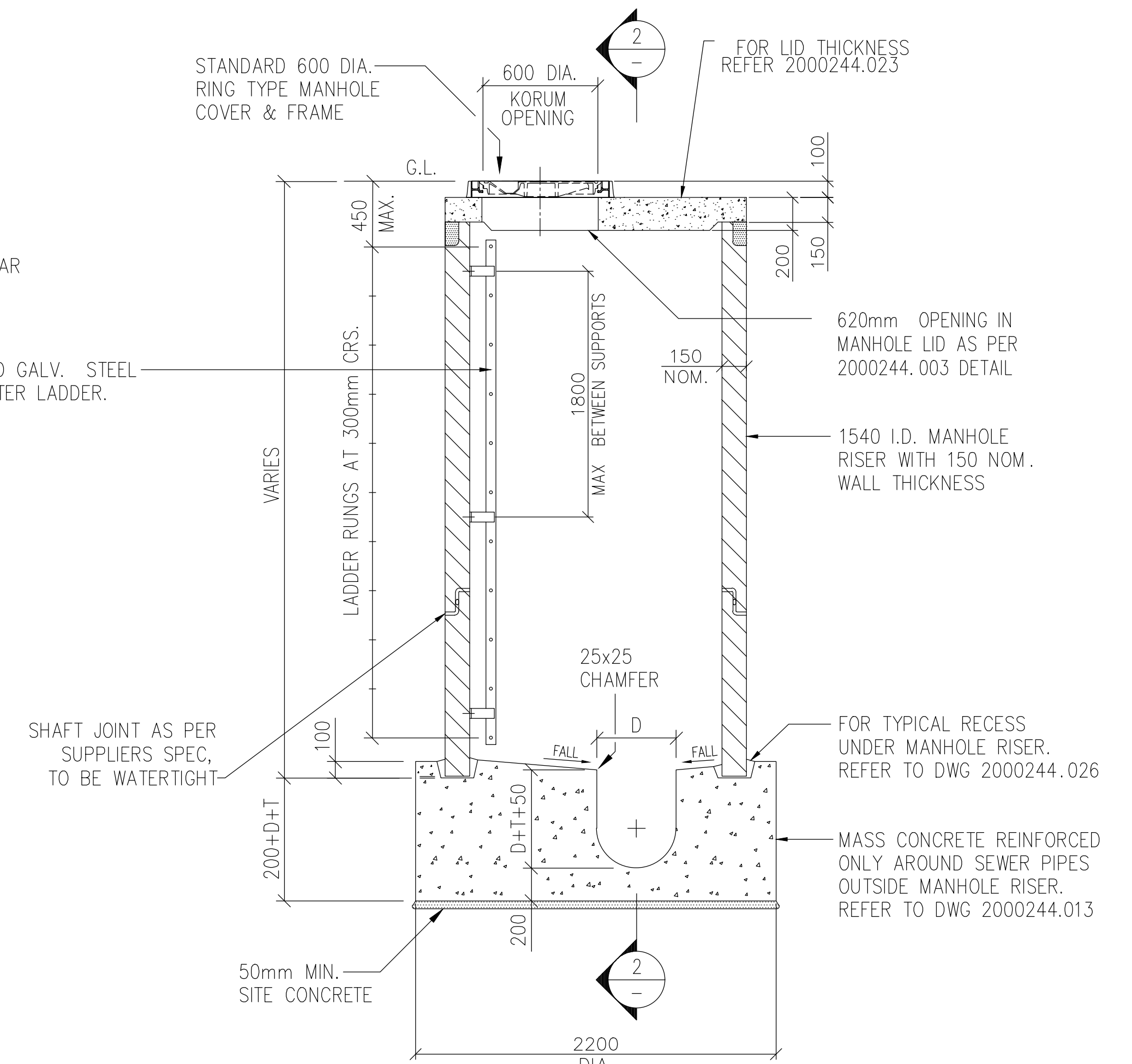
MANHOLE NUMBER	TYPE	B (mm)	D (mm)	θ_p	θ_m	R (mm)	Hp (mm)	Hm (mm)	A (mm)
MH1	TA1	1540	570	0.750	0.793	1810	1943	1882	64
MH2	TA2	1540	570	1.152	0.793	1743	2424	1882	543

NOTES

1. BASED ON WATERCARE STANDARD DRAWING 2000244.025.
2. THE MINIMUM REQUIRED SHEAR STRENGTH OF THE SOIL BELOW THE STRUCTURAL BASE IS 50KPA. THE SOIL IS TO BE INSPECTED AND TESTED BY THE GEOTECHNICAL ENGINEER TO CONFIRM THAT IT MEETS THE MINIMUM REQUIRED SHEAR STRENGTH.
3. ANY ORGANIC OR SOFT CLAY ENCOUNTERED ON THE EXCAVATED GROUND IS TO BE NOTIFIED TO THE GEOTECHNICAL ENGINEER.
4. LADDERS, CHAMBER LIDS AND DROP PIPE STRUCTURES TO BE INSTALLED IN ACCORDANCE WITH WATERCARE STANDARD DRAWINGS
5. MH2 TO CONNECT TO EXISTING DN180 WASTEWATER PIPE WITH INTERNAL DROP PIPE AS PER WATERCARE STANDARD DRAWING 2000244.028



SECTION 2
SCALE: N.T.S.



SECTION 1
SCALE: N.T.S.

MANHOLE NUMBER	LOCATION		EXISTING OR NEW	LL (ELEV)	FLOW TYPE	SIZE (mm)	SCHEMATIC LAYOUT	PIPE DETAIL		
	EASTING (m)	NORTHING (m)						No	ϕ (mm)	IL(ELEV)
MH1	1747468.47	5926788.00	NEW	6.88	WW	ϕ 1500 CLASS V		1	600 NEW	2.39
								2	600 NEW	2.39
MH2	1747496.13	5926759.87	NEW	7.00	WW	ϕ 1500 CLASS V		1	600 NEW	1.86
								2	600 NEW	1.86
								3	180 EXTG	TBC ON SITE

ORIGINAL DRAWING
IN COLOUR

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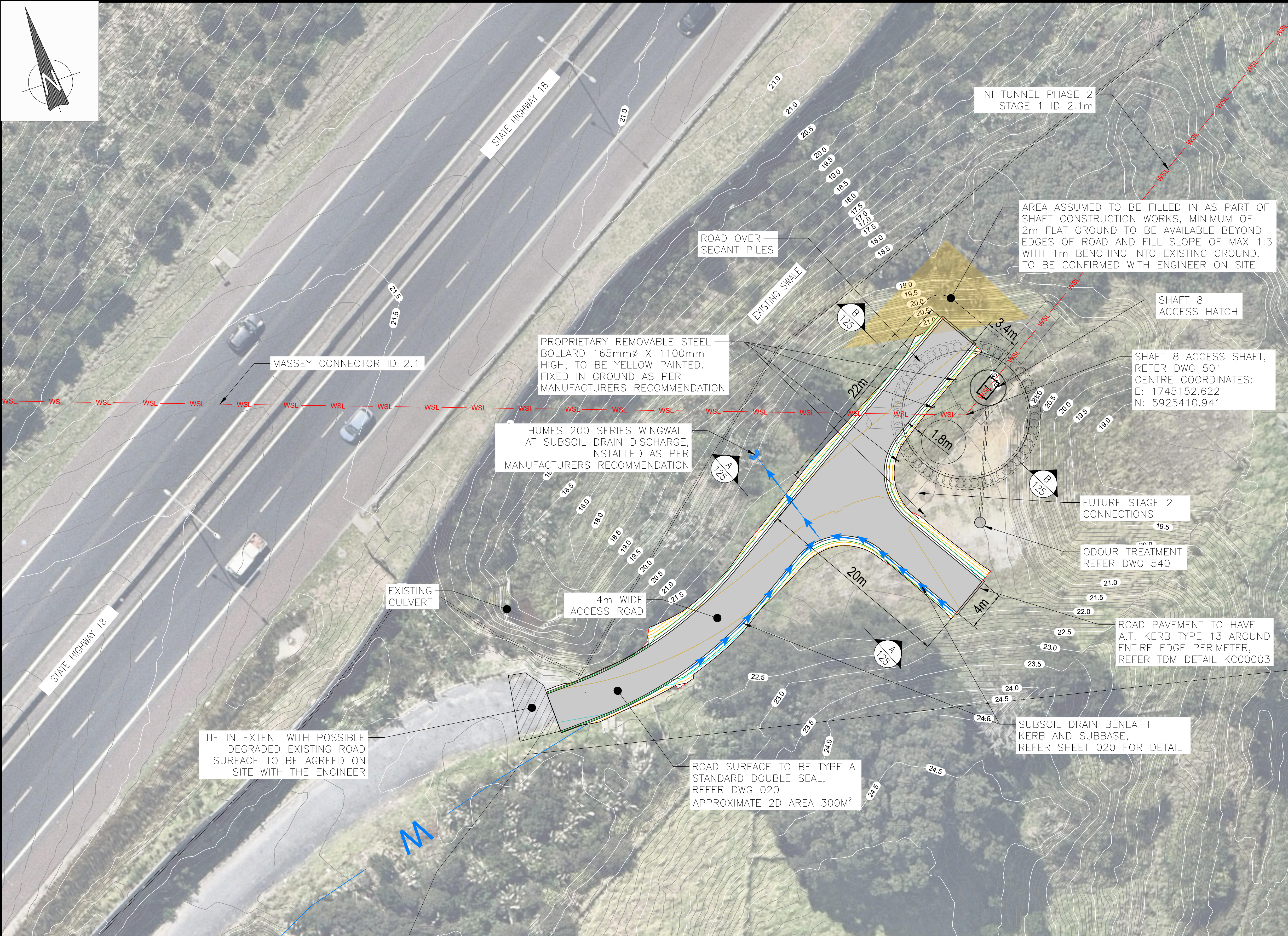
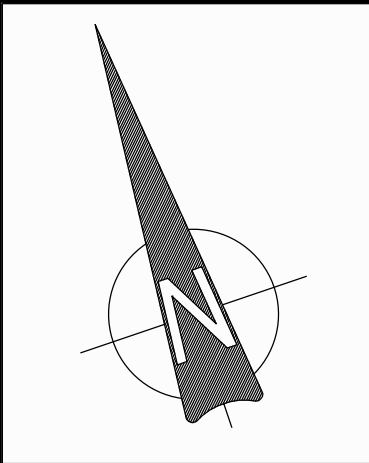
						DESIGNED	J. LATINA	11-22
						DES. APPROVED	T. HAARHOFF	11-22
						DRAWN	F. MISPLON	11-22
						DWG. APPROVED	T. HAARHOFF	11-22
						WSL DESIGN MGMT.		
						WSL PROJ. LEAD		
–	04-23	ISSUED FOR TENDER			FM	TH		
1	11-22	DETAIL DESIGN – FOR REVIEW			FM	TH		
ISSUE	DATE	AMENDMENT	BY	APPD.			BY	DATE

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NORTHERN INTERCEPTOR PHASE 2
WESTGATE TO HOBSONVILLE
MANHOLE 1 AND 2 LAYOUT AND SECTION

CAD FILE	2013661.410	DATE	04-04-23
ORIGINAL SCALE	A1 1:2000	CONTRACT No.	–
REF. No.	417039-MMD-07-XX-DR-C-0001		
DWG. No.	2013661.410	ISSUE	–



- NOTES:
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL SUPPLIED DRAWINGS AND DESIGN DOCUMENTATION.
 2. DO NOT OBTAIN DIMENSIONS FROM SCALING.
 3. CHAINAGES SHOWN ON PLANS ARE IN METRES.
 4. DRAWING PROJECTION AND COORDINATES ARE IN TERMS OF NEW ZEALAND TRANSVERSE MERCATOR CIRCUIT (NZTM) 2000.
 5. HEIGHTS/ELEVATIONS ARE IN TERMS OF AUCKLAND VERTICAL DATUM 1946.
 6. BACKGROUND AERIAL IMAGES DISPLAYED ON THIS DRAWING SOURCED FROM NEARMAP. IMAGE CAPTURED IN MARCH 2022.
 7. THE EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN EXTRACTED FROM MULTIPLE SOURCES, INCLUDING AUCKLAND COUNCIL GEOMAPS, SURVEY DATA, BEFOREUDIG ENQUIRIES, AND PLANS PROVIDED BY UTILITIES OWNERS. THE EXACT POSITION AND EXTENT OF THE EXISTING UTILITIES MAY NOT BE ACCURATE, THEREFORE ON-SITE VERIFICATION IS REQUIRED.
 8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEARCH FOR, LOCATE AND CONFIRM POSITIONS OF ALL EXISTING UTILITIES, PRIOR TO COMMENCEMENT OF WORKS, WHETHER SHOWN ON THE DRAWINGS OR NOT. THE CONTRACTOR SHALL PROVIDE SUITABLE PROTECTION AND MAINTAIN RESPONSIBILITY FOR ALL UTILITIES DUE TO MINIMAL CHANGE TO FINISHED GROUND LEVEL, NO ISOPAC DRAWING HAS BEEN PROVIDED AS IT IS DEEMED UNNECESSARY.

LEGEND

- SUBSOIL DRAIN FLOW DIRECTION
- SUBSOIL DRAIN WINGWALL
- PROPOSED TUNNEL
- PARCEL BOUNDARY
- EXISTING WATER
- EXISTING CONTOUR MAJOR (0.5m)
- EXISTING CONTOUR MINOR (0.1m)
- PROPOSED CONTOUR MAJOR (0.5m)
- PROPOSED CONTOUR MINOR (0.1m)

PLAN VIEW
SCALE: 1:200

1:200 (A1) 0 4 8 12m



FOR TENDER
NOT FOR CONSTRUCTION

				DESIGNED	C. UNDERDOWN	11-22
				DES. APPROVED	P. CORRIS	11-22
				DRAWN	F. MISPLON	11-22
				DWG. APPROVED	P. CORRIS	11-22
				WSL DESIGN MGMT.		
				WSL PROJ. LEAD		
ISSUE	DATE	AMENDMENT	BY	APPD.	BY	DATE
—	04-23	ISSUED FOR TENDER	FM	TH		
2	11-22	DETAILED DESIGN – FOR REVIEW	TL	TH		
1	05-22	PRELIMINARY DESIGN – FOR REVIEW	FM	PC		

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NORTHERN INTERCEPTOR PHASE 2
WESTGATE TO HOBSONVILLE
SHAFT 8 SITE LAYOUT

CAD FILE	2013661.500	DATE	04-04-23
ORIGINAL SCALE	A1 1:200	CONTRACT No.	—
REF. No.	417039-MMD-04-XX-DR-C-0100		
DWG. No.	2013661.500	ISSUE	—

NOTES:

- DESIGN PHASE IS DETAILED DESIGN. DRAWING NOT FOR CONSTRUCTION
- DO NOT OBTAIN DIMENSIONS BY SCALING FROM THE DRAWING
- LEVELS ARE IN TERMS OF DATUM AUCKLAND 1946
- SECANT PILES 900MM DIAMETER WITH MINIMUM 200MM OVERLAP. SEE DWG. NO. 2013666.673 FOR DETAILS
- TBM CUTTER DIAMETER ASSUMED = 2325 TO 2575MM
- GENERAL ARRANGEMENT OF GRP ACCESS SHAFTS SHOWN. DETAILED DESIGN TO BE COMPLETED BY SUPPLIER IN ACCORDANCE WITH PARTICULAR SPECIFICATION – CIVIL
- BACKFILL AROUND FUTURE TUNNEL OPENING TO BE POLYSTYRENE OR OTHER LOW STRENGTH MATERIAL SUBJECT TO APPROVAL BY ENGINEER
- MASSEY CONNECTOR TOP PIPE TO PROTRUDE INTO CHAMBER WITH SUFFICIENT SPACE TO AFFIX BLANK FLANGE IN FUTURE. PIPE FLANGE SHALL BE SUPPLIED IN ACCORDANCE WITH WATERCARE MATERIAL SUPPLY STANDARD
- HYDROPHILIC SEALS TO BE PROVIDED AROUND ALL PIPE PENETRATIONS

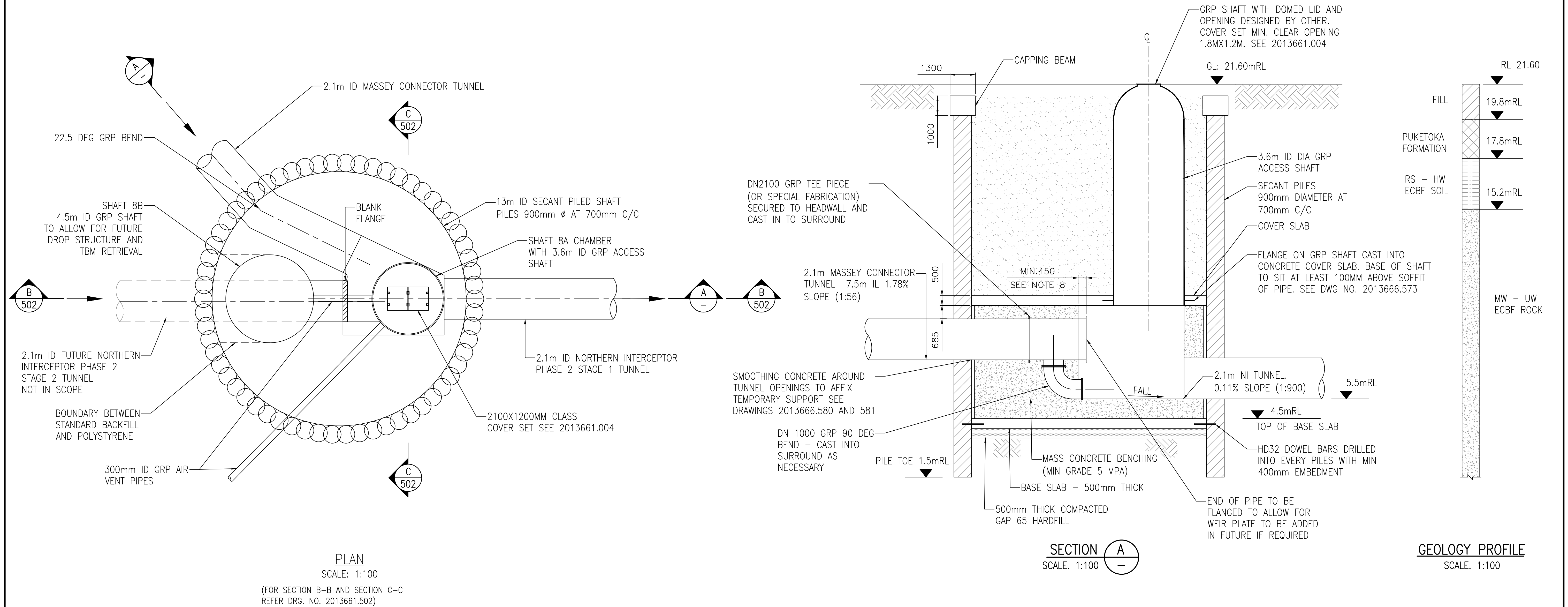
GEOTECHNICAL NOTES:

- FROM GEOTECHNICAL INVESTIGATION, SHAFT IS TO BE FOUNDED ON ECBF, THE EXCAVATED GROUND IS TO BE INSPECTED BY WATERCARE'S ENGINEER TO CONTRACT PRIOR TO CONSTRUCTION.
- GEOLOGICAL CONDITIONS BASED ON GEOLOGICAL PROFILE. REFER TO GBR FOR DETAILS. GROUNDWATER TABLE ASSUMED AT SURFACE.
- REFER TO PARTICULAR SPECIFICATION – GEOTECHNICAL FOR BACKFILL REQUIREMENTS

SAFETY IN DESIGN NOTES:



- PRESSURE RELIEF MUST REMAIN IN PLACE UNTIL BACKFILL REACHES REQUIRED HEIGHT. SEE 2013661.590 INDICATIVE CONSTRUCTION SEQUENCE.



ORIGINAL DRAWING
IN COLOUR

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NOT FOR CONSTRUCTION

				DESIGNED	C. UNDERDOWN	05-22	 Watercare COPYRIGHT – This drawing, the design concept, remain the exclusive property of Watercare Services Limited and may not be used without approval. Copyright reserved.	 MOTT MACDONALD	NORTHERN INTERCEPTOR PHASE 2 WESTGATE TO HOBSONVILLE SHAFT 8 GENERAL ARRANGEMENT PLAN AND SECTION A				CAD FILE	2013661.501	DATE	04-04-23			
-	04-23	ISSUED FOR TENDER		FM	TH	DES. APPROVED							P. CORRIS	05-22	ORIGINAL SCALE	A1	1:2000	CONTRACT No.	-
3	11-22	DETAIL DESIGN – FOR REVIEW		FM	TH	DRAWN							F. MISPLON	05-22	REF. No.	417039-MMD-04-XX-DR-C-0001			
2	07-22	PRELIMINARY DESIGN – FOR REVIEW. MINOR AMENDMENTS		FM	PC	DWG. APPROVED							P. CORRIS	05-22	DWG. No.	2013661 .501			
1	05-22	PRELIMINARY DESIGN – FOR REVIEW				WSL DESIGN MGMT.									ISSUE	-			
ISSUE	DATE	AMENDMENT		BY	APPD.			BY	DATE										

NOTES:

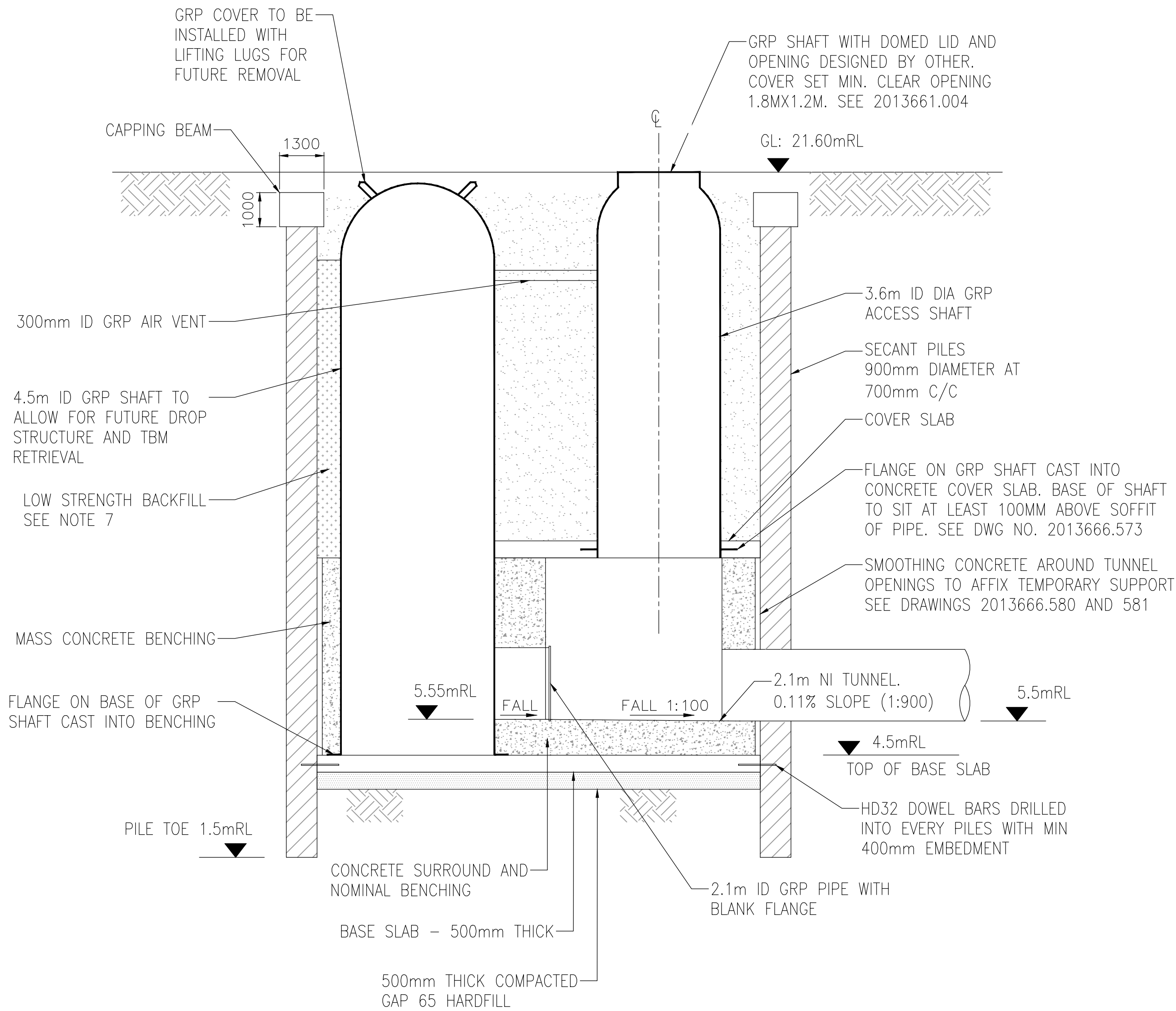
- DESIGN PHASE IS DETAILED DESIGN. DRAWING NOT FOR CONSTRUCTION
- DO NOT OBTAIN DIMENSIONS BY SCALING FROM THE DRAWING
- LEVELS ARE IN TERMS OF DATUM AUCKLAND 1946
- SECANT PILES 900MM DIAMETER WITH MINIMUM 200MM OVERLAP. SEE DWG. NO. 2013666.673 FOR DETAILS
- TBM CUTTER DIAMETER ASSUMED = 2325 TO 2575MM
- GENERAL ARRANGEMENT OF GRP ACCESS SHAFTS SHOWN. DETAILED DESIGN TO BE COMPLETED BY SUPPLIER IN ACCORDANCE WITH PARTICULAR SPECIFICATION – CIVIL
- BACKFILL AROUND FUTURE TUNNEL OPENING TO BE POLYSTYRENE OR OTHER LOW STRENGTH MATERIAL SUBJECT TO APPROVAL BY ENGINEER
- HYDROPHILIC SEALS TO BE PROVIDED AROUND ALL PIPE PENETRATIONS

GEOTECHNICAL NOTES:

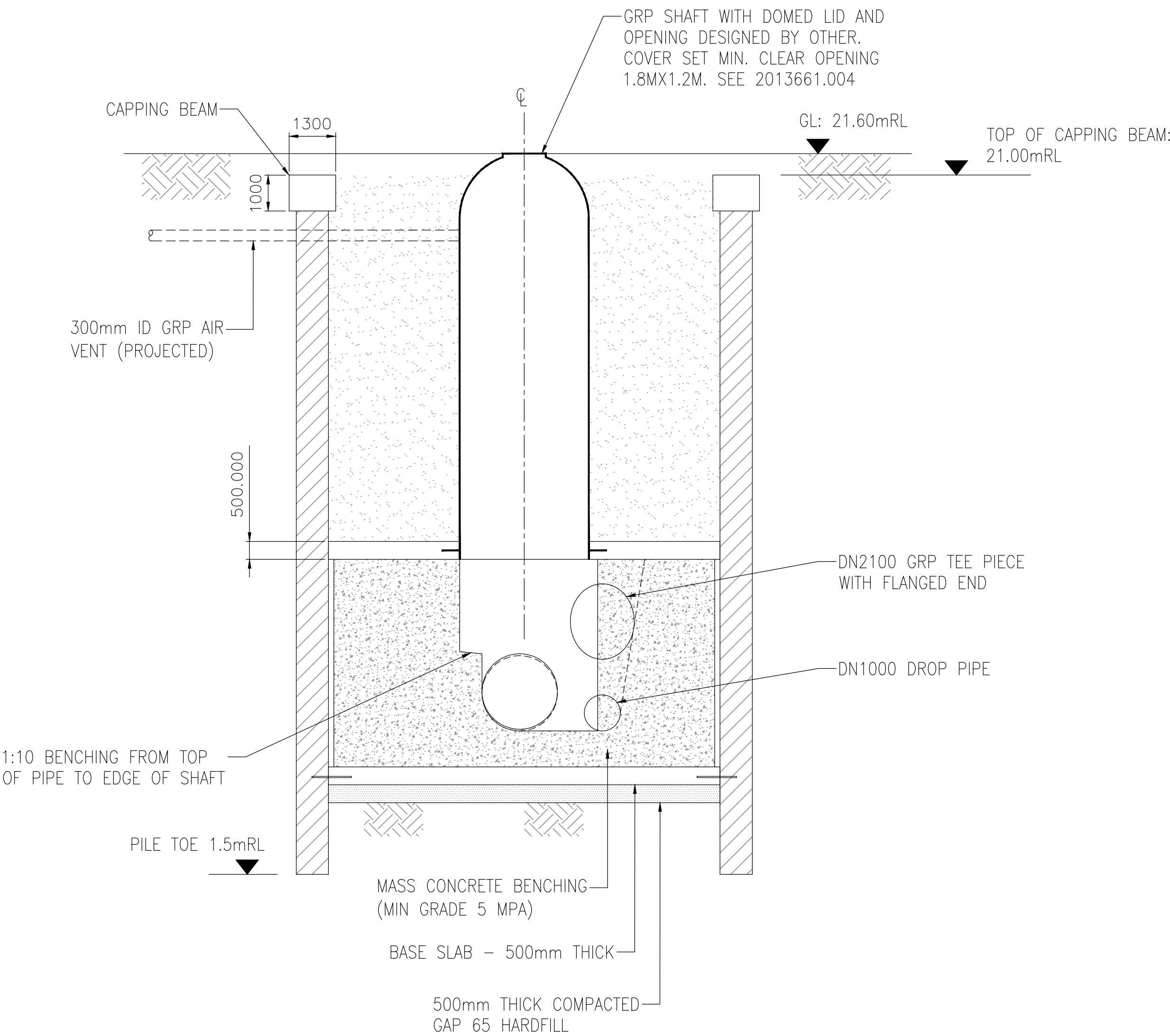
- FROM GEOTECHNICAL INVESTIGATION, SHAFT IS TO BE FOUNDED ON ECBF, THE EXCAVATED GROUND IS TO BE INSPECTED BY WATERCARE'S ENGINEER TO CONTRACT PRIOR TO CONSTRUCTION.
- GEOLOGICAL CONDITIONS BASED ON GEOLOGICAL PROFILE. REFER TO GBR FOR DETAILS. GROUNDWATER TABLE ASSUMED AT SURFACE.
- REFER TO PARTICULAR SPECIFICATION – GEOTECHNICAL FOR BACKFILL REQUIREMENTS

SAFETY IN DESIGN NOTES:

- 
- PRESSURE RELIEF MUST REMAIN IN PLACE UNTIL BACKFILL REACHES REQUIRED HEIGHT. SEE 2013661.590 INDICATIVE CONSTRUCTION SEQUENCE.



SECTION B
SCALE: 1:100
501



SECTION C
SCALE: 1:100
501

ORIGINAL DRAWING
IN COLOUR

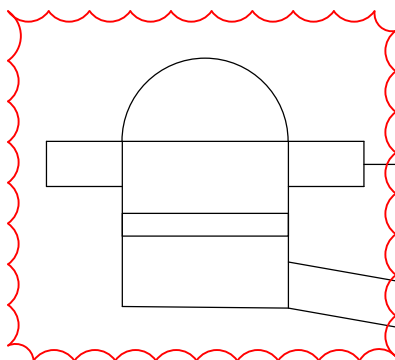
FOR TENDER
NOT FOR CONSTRUCTION

					DESIGNED	C. UNDERDOWN	11-22	 COPYRIGHT – This drawing, the design concept, remain the exclusive property of Watercare Services Limited and may not be used without approval. Copyright reserved.	M MOTT MACDONALD	NORTHERN INTERCEPTOR PHASE 2 WESTGATE TO HOBSONVILLE SHAFT 8 GENERAL ARRANGEMENT SECTION B AND C	CAD FILE	2013661.501	DATE	04-04-23
					DES. APPROVED	T. HAARHOFF	11-22				ORIGINAL SCALE	A1 1:2000	CONTRACT No.	—
					DRAWN	F. MISPLON	11-22				REF. No.	417039-MMD-04-XX-DR-C-0002	ISSUE	
					DWG. APPROVED	T. HAARHOFF	11-22				DWG. No.	2013661 .502		
—	04-23	ISSUED FOR TENDER		FM	TH	WSL DESIGN MGMT.								
1	11-22	DETAIL DESIGN – FOR REVIEW		FM	TH	WSL PROJ. LEAD								
ISSUE	DATE	AMENDMENT		BY	APPD.			BY	DATE					

NOTES:

1. DESIGN STAGE IS DETAILED DESIGN. DRAWING NOT TO BE USED FOR CONSTRUCTION.
2. DO NOT OBTAIN DIMENSIONS BY SCALING FROM THE DRAWING
3. LOCATION OF FILTER AS PER DRAWING 2013661.500
4. ODOUR FILTRATION UNIT SIZE AND CIVIL INTERFACE REQUIREMENTS TO BE CONFIRMED BY OCU SUPPLIER IN ACCORDANCE WITH 417039-MMD-00-XX-SP-M-0007 PARTICULAR SPECIFICATION – ODOUR CONTROL UNIT
5. DETAILED DESIGN OF FOUNDATION FOR FILTER TO BE COMPLETED BY CONTRACTOR

HOLD: ODOUR FILTRATION
UNIT TO BE CONFIRMED BY SUPPLIER



300mm NB AIR VENT
PIPE (PROJECTED)
MIN. COVER 900mm
SEE 2013661.030

MIN 1:100 FALL

PIPE FALL TO BE
CONFIRMED BY
CONTRACTOR ON SITE

FGL

CONNECTION STUB TO
BE FORMED ON MAIN
GRP ACCESS SHAFT

ODOUR FILTER DETAILS
SCALE: 1:50

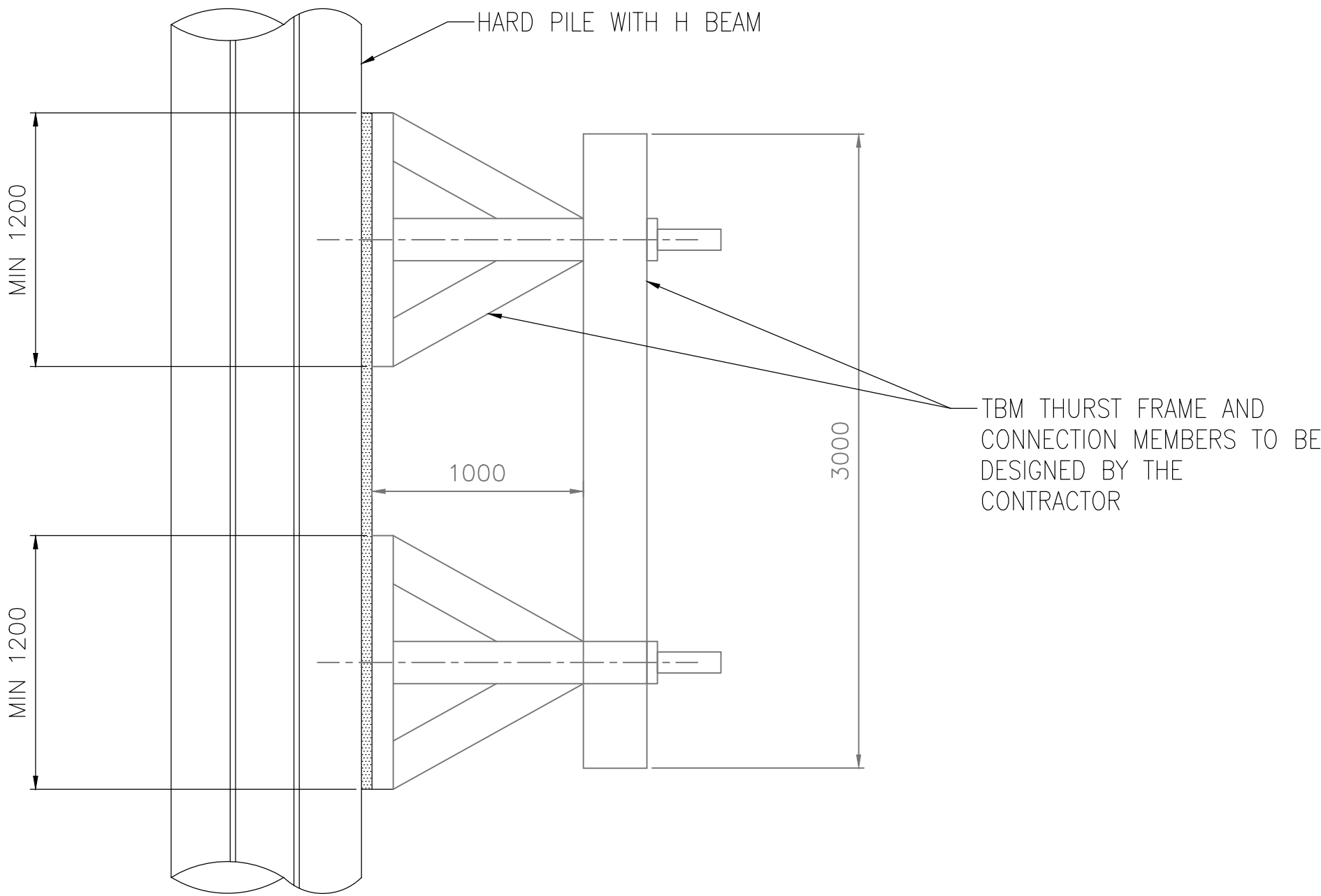
ORIGINAL DRAWING
IN COLOUR

FOR TENDER
NOT FOR CONSTRUCTION

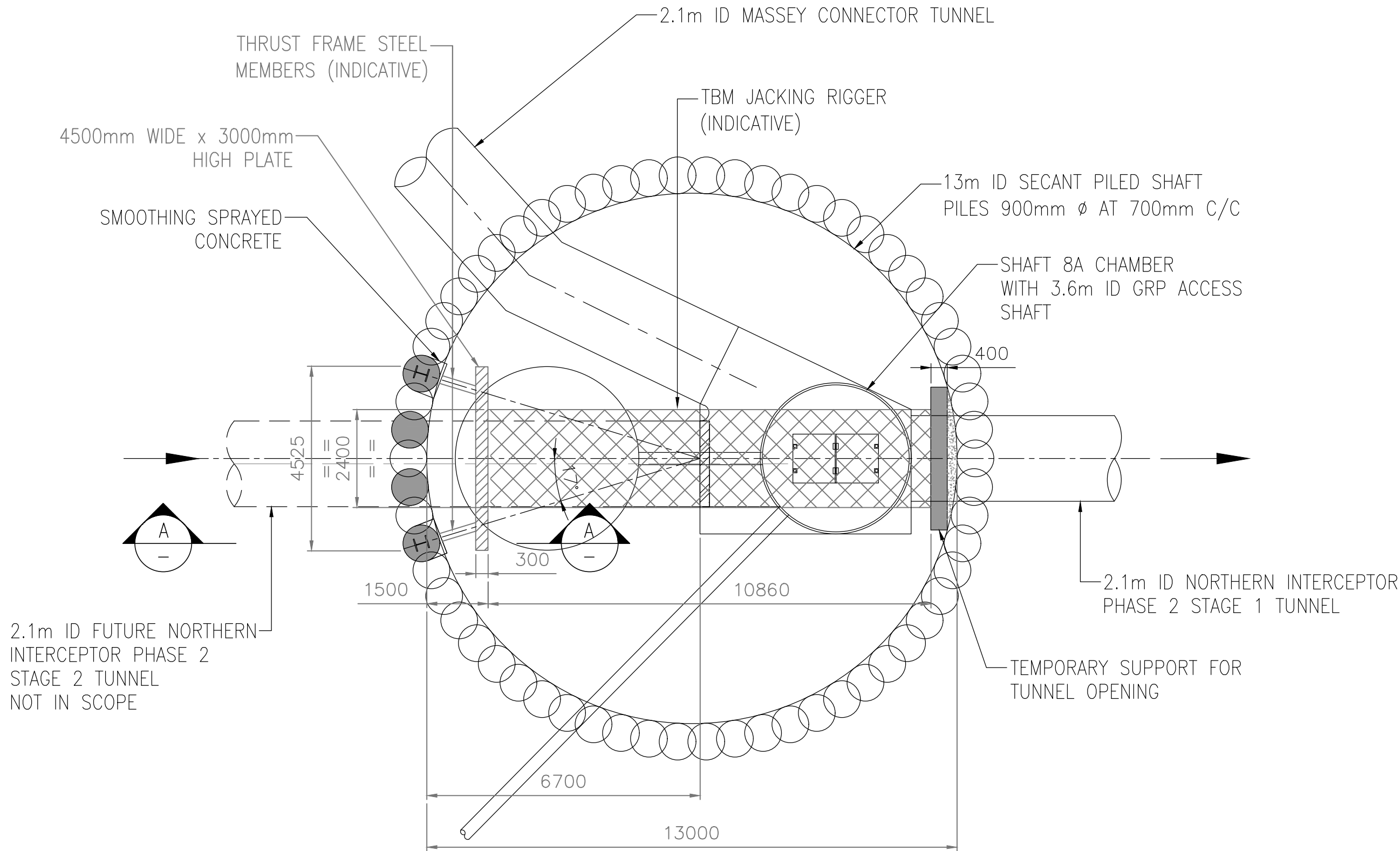
						DESIGNED	C. UNDERDOWN		 Watercare COPYRIGHT – This drawing, the design concept, remain the exclusive property of Watercare Services Limited and may not be used without approval. Copyright reserved.	 MOTT MACDONALD	NORTHERN INTERCEPTOR PHASE 2 WESTGATE TO HOBSONVILLE SHAFT 8 ODOUR FILTER DETAILS	CAD FILE	2013661.500	DATE	04-04-23	
						DES. APPROVED	T. HAARHOFF					ORIGINAL SCALE	A1	CONTRACT No.	—	
						DRAWN	S. POWAR					REF. No.			417039-MMD-04-XX-DR-C-0300	
						DWG. APPROVED	T. HAARHOFF									
—	04-23	ISSUED FOR TENDER			FM	TH	WSL DESIGN MGMT.									
1	11-22	DETAILED DESIGN – FOR REVIEW			SP	TH	WSL PROJ. LEAD									
ISSUE	DATE	AMENDMENT			BY	APPD.			BY	DATE						

NOTES:

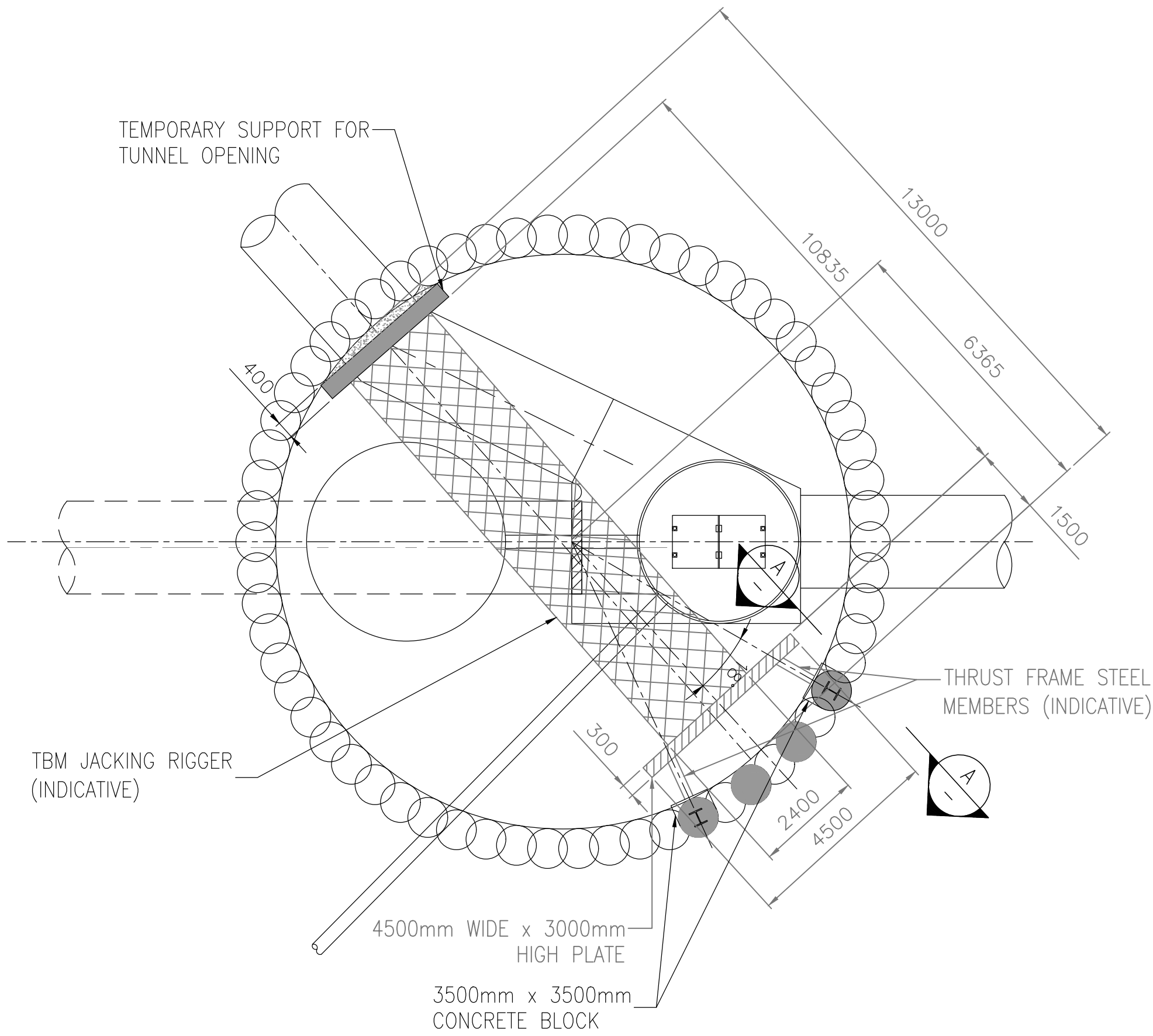
1. THE JACKING ARRANGEMENT SHOWN ON THIS DRAWING IS INDICATIVE ONLY AND SHALL BE DESIGNED BY THE CONTRACTOR.
2. HARD PILES ON EITHER SIDE OF THE OPENING FOR PIPE CONNECTIONS SHALL BE INSTALLED WITH AN ADDITIONAL STEEL H SECTION AS SHOWN (EXACT LOCATION SHALL BE DETERMINED ON SITE)
3. THE THRUST LOAD FROM TBM SHALL ACT DIRECTLY ON THE HARD PILES WITH THE ADDITIONAL STEEL H SECTION AS SHOWN PERPENDICULAR TO THE FLANGE OF THE STEEL SECTION.
4. THE THRUST LOAD SHALL BE DISTRIBUTED VERTICALLY OVER MIN 1200mm AT TWO DISTINCT LOCATIONS AS SHOWN ON SECTION A.
5. THE HARD PILES FALLING WITHIN THE FUTURE STAGE 2 OPENING SHALL USE GFRP BARS FOR REINFORCEMENT.
6. JACKING THRUST LOAD SHALL NOT EXCEED 1500TONNE.



SECTION A
SCALE: 1:25



JACKING ARRANGEMENT FOR NORTHERN
INTERCEPTOR PHASE 2 STAGE 1 (INDICATIVE)
SCALE: 1:100



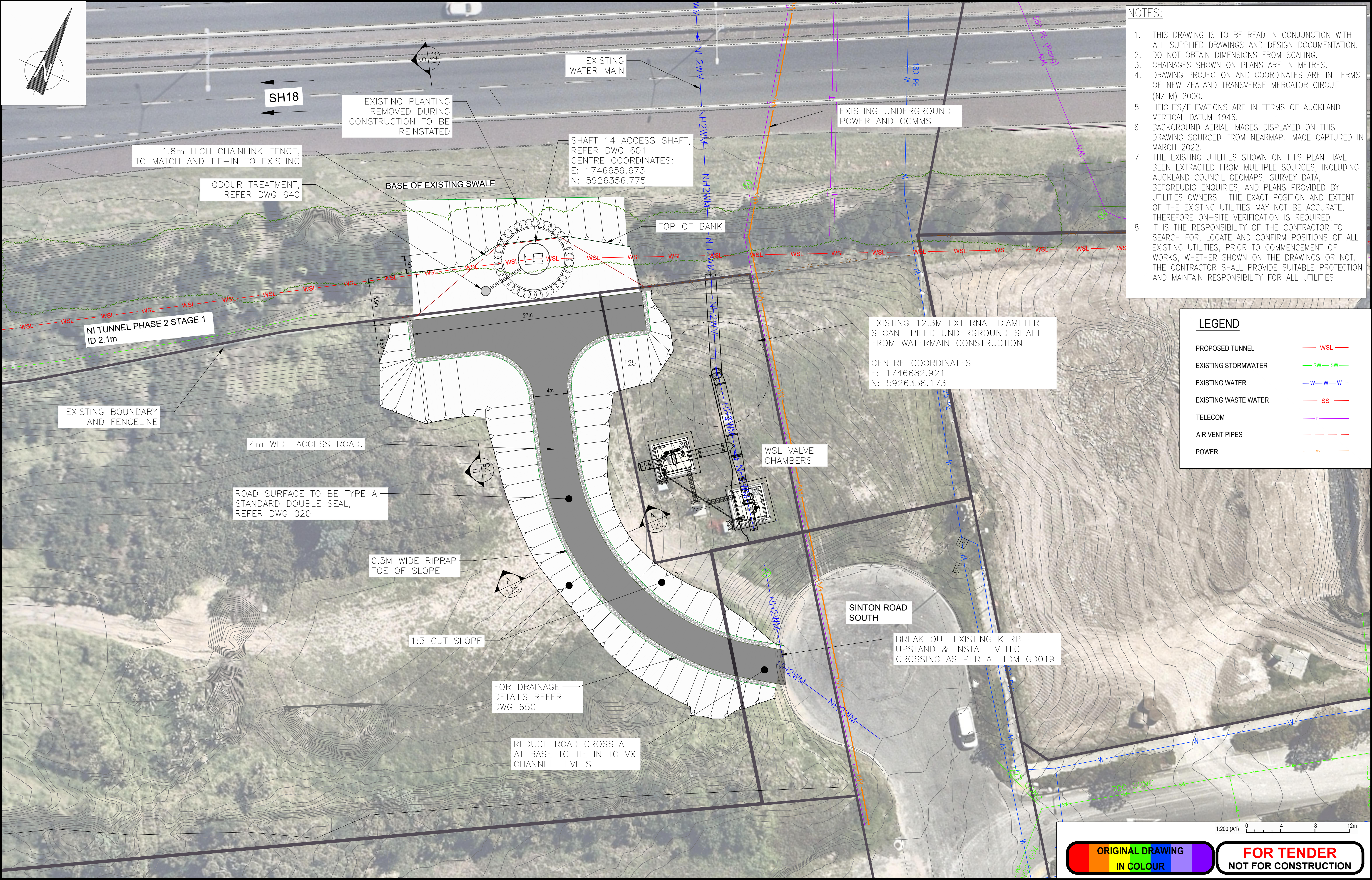
JACKING ARRANGEMENT FOR MASSEY
CONNECTOR TUNNEL (INDICATIVE)
SCALE: 1:100

- HARD PILE WITH GFRP REBAR (INDICATIVE)
- HARD PILE WITH STEEL REBAR AND H BEAM (INDICATIVE)

ORIGINAL DRAWING
IN COLOUR

FOR TENDER
NOT FOR CONSTRUCTION

						DESIGNED	C. YUEN	11-22	 Watercare COPYRIGHT – This drawing, the design concept, remain the exclusive property of Watercare Services Limited and may not be used without approval. Copyright reserved.	 MOTT MACDONALD	NORTHERN INTERCEPTOR PHASE 2 WESTGATE TO HOBSONVILLE SHAFT 8 INDICATIVE TBM JACKING ARRANGEMENT DETAILS AND ASSUMED JACKING ARRANGEMENT	CAD FILE	2013666.574	DATE	04-04-23	
					DES. APPROVED	Y. CHAN	11-22	ORIGINAL SCALE				A1 1:2000	CONTRACT No.	—		
					DRAWN	S. POWAR	11-22	REF. No.				417039-MMD-04-XX-DR-S-0204				
					DWG. APPROVED	T. HAARHOFF	11-22	DWG. No.				2013666.574				
					WSL DESIGN MGMT.			ISSUE								
—	04-23	ISSUED FOR REVIEW			FM	TH	WSL PROJ. LEAD									
1	11-22	DETAILED DESIGN – FOR REVIEW			SP	TH										
ISSUE	DATE	AMENDMENT			BY	APPD.			BY	DATE						



- NOTES:
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL SUPPLIED DRAWINGS AND DESIGN DOCUMENTATION. DO NOT OBTAIN DIMENSIONS FROM SCALING.
 2. CHAINAGES SHOWN ON PLANS ARE IN METRES.
 3. DRAWING PROJECTION AND COORDINATES ARE IN TERMS OF NEW ZEALAND TRANSVERSE MERCATOR CIRCUIT (NZTM) 2000.
 4. HEIGHTS/ELEVATIONS ARE IN TERMS OF AUCKLAND VERTICAL DATUM 1946.
 5. BACKGROUND AERIAL IMAGES DISPLAYED ON THIS DRAWING SOURCED FROM NEARMAP. IMAGE CAPTURED IN MARCH 2022.
 6. THE EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN EXTRACTED FROM MULTIPLE SOURCES, INCLUDING AUCKLAND COUNCIL GEOMAPS, SURVEY DATA, BEFOREUDIG ENQUIRIES, AND PLANS PROVIDED BY UTILITIES OWNERS. THE EXACT POSITION AND EXTENT OF THE EXISTING UTILITIES MAY NOT BE ACCURATE, THEREFORE ON-SITE VERIFICATION IS REQUIRED.
 7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEARCH FOR, LOCATE AND CONFIRM POSITIONS OF ALL EXISTING UTILITIES, PRIOR TO COMMENCEMENT OF WORKS, WHETHER SHOWN ON THE DRAWINGS OR NOT. THE CONTRACTOR SHALL PROVIDE SUITABLE PROTECTION AND MAINTAIN RESPONSIBILITY FOR ALL UTILITIES

LEGEND	
PROPOSED TUNNEL	— WSL —
EXISTING STORMWATER	— SW — SW —
EXISTING WATER	— W — W — W —
EXISTING WASTE WATER	— SS —
TELECOM	— T —
AIR VENT PIPES	— A —
POWER	— P —

						DESIGNED	T. LYNCH-WATSON	11-22	 Watercare COPYRIGHT - This drawing, the design concept, remain the exclusive property of Watercare Services Limited and may not be used without approval. Copyright reserved.	 MOTT MACDONALD	NORTHERN INTERCEPTOR PHASE 2 WESTGATE TO HOBSONVILLE SHAFT 14 SITE LAYOUT	CAD FILE	2013661.600	DATE	04-04-23	
					DES. APPROVED	S. DE'ATH	11-22	ORIGINAL SCALE				A1	CONTRACT No.	—		
					DRAWN	T. LYNCH-WATSON	11-22									
—	04-23	ISSUED FOR TENDER			FM	TH	DWG. APPROVED	T. HAARHOFF				11-22	REF. No.	417039-MMD-05-XX-DR-C-0100		
2	11-22	DETAILED DESIGN - FOR REVIEW			TL	TH	WSL DESIGN MGMT.						DWG. No.	2013661.600	ISSUE	—
1	07-22	PRELIMINARY DESIGN - FOR REVIEW			FM	TH	WSL PROJ. LEAD									
ISSUE	DATE	AMENDMENT			BY	APPD.			BY	DATE						

1. DESIGN PHASE IS DETAILED DESIGN. DRAWING NOT FOR CONSTRUCTION
2. DO NOT OBTAIN DIMENSIONS BY SCALING FROM THE DRAWING
3. LEVELS ARE IN TERMS OF DATUM AUCKLAND 1946
4. SECANT PILES 900MM DIAMETER WITH MINIMUM 200MM OVERLAP.
SEE DWG. NO. 2013666.673 FOR DETAILS
5. TBM CUTTER DIAMETER ASSUMED = 2325 TO 2575MM
6. GENERAL ARRANGEMENT OF GRP ACCESS SHAFTS SHOWN. DETAILED
DESIGN TO BE COMPLETED BY SUPPLIER IN ACCORDANCE WITH
PARTICULAR SPECIFICATION – CIVIL
7. HYDROPHILIC SEALS TO BE PROVIDED AROUND ALL PIPE PENETRATIONS

1. FROM GEOTECHNICAL INVESTIGATION, SHAFT IS TO BE FOUNDED ON ECBF, THE EXCAVATED GROUND IS TO BE INSPECTED BY WATERCARE'S ENGINEER TO CONTRACT PRIOR TO CONSTRUCTION.
2. GEOLOGICAL CONDITIONS BASED ON GEOLOGICAL PROFILE. REFER TO GBR FOR DETAILS. GROUNDWATER TABLE ASSUMED AT SURFACE.
3. REFER TO PARTICULAR SPECIFICATION – GEOTECHNICAL FOR BACKFILL REQUIREMENTS

 1. PRESSURE RELIEF MUST REMAIN IN PLACE UNTIL BACKFILL REACHES REQUIRED HEIGHT. SEE 2013661.690 INDICATIVE CONSTRUCTION SEQUENCE.

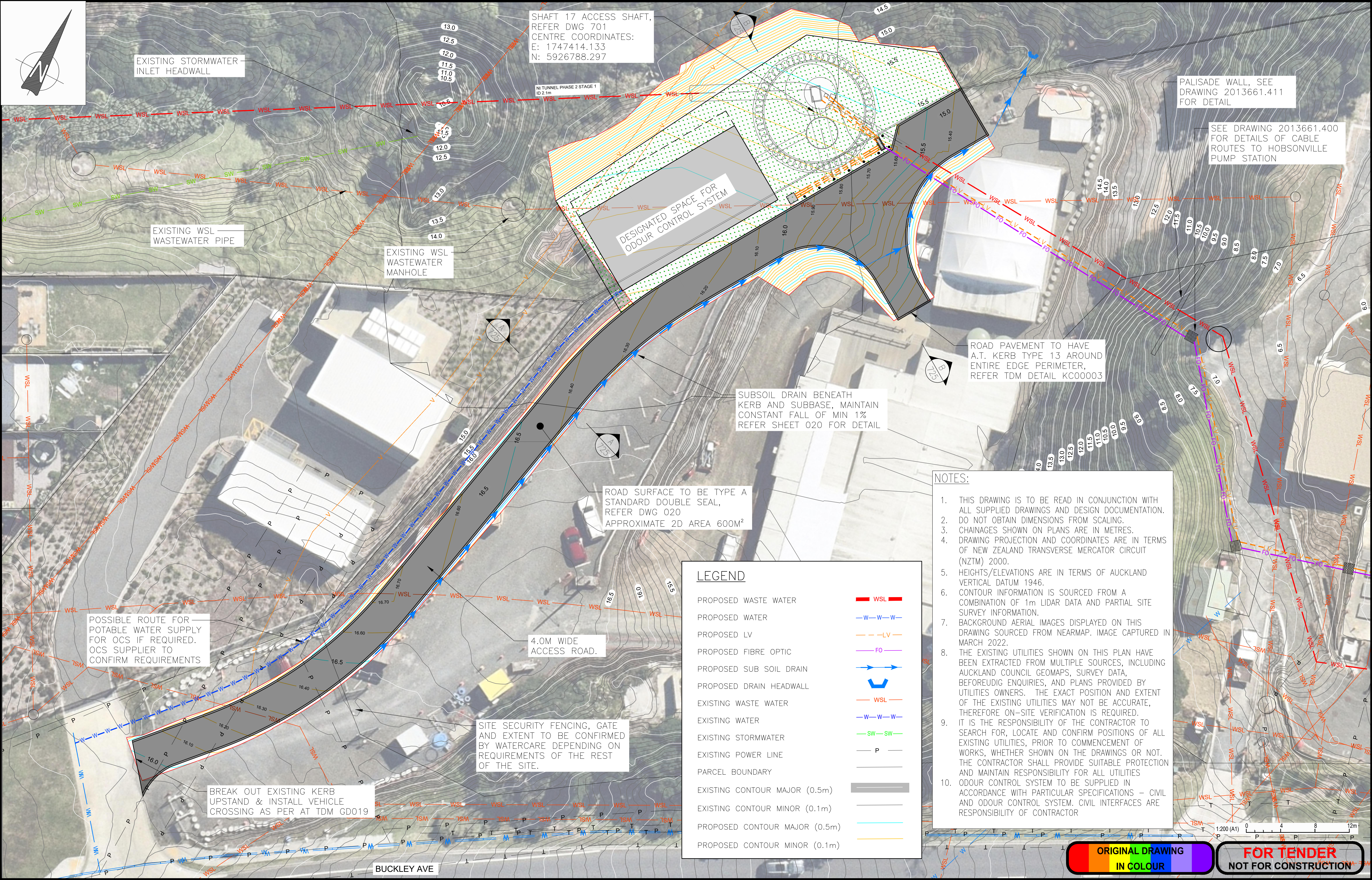


					DESIGNED	C. UNDERDOWN		 Watercare	 MOTT MACDONALD	NORTHERN INTERCEPTOR PHASE 2 WESTGATE TO HOBSONVILLE SHAFT 14 GENERAL ARRANGEMENT	CAD FILE	2013661.601	DATE	04-04-23
					DES. APPROVED	T. HAARHOFF					ORIGINAL SCALE	A1	CONTRACT No.	—
					DRAWN	F. MISPLON					REF. No. 417039-MMD-05-XX-DR-C-0001			
					DWG. APPROVED	T. HAARHOFF					DWG. No.	2013661.601	ISSUE	—
—	04-23	ISSUED FOR TENDER	FM	TH	DRAWN	F. MISPLON		COPYRIGHT — This drawing, the design concept, remain the exclusive property of Watercare Services Limited and may not be used without approval. Copyright reserved.						
2	11-22	DETAILED DESIGN – FOR REVIEW	FM	TH	WSL DESIGN MGMT.									
1	07-22	PRELIMINARY DESIGN – FOR REVIEW	FM	TH	WSL PROJ. LEAD									
ISSUE	DATE	AMENDMENT	BY	APPD.		BY	DATE							

1. DESIGN STAGE IS DETAILED DESIGN. DRAWING NOT TO BE USED FOR CONSTRUCTION.
2. DO NOT OBTAIN DIMENSIONS BY SCALING FROM THE DRAWING
3. LOCATION OF FILTER AS PER DRAWING 2013661.501
4. ODOUR FILTRATION UNIT SIZE AND CIVIL INTERFACE REQUIREMENTS TO BE CONFIRMED BY OCU SUPPLIER IN ACCORDANCE WITH 417039-MMD-00-XX-SP-M-0007 PARTICULAR SPECIFICATION – ODOUR CONTROL UNIT
5. DETAILED DESIGN OF FOUNDATION FOR FILTER TO BE COMPLETED BY CONTRACTOR



						DESIGNED	C. UNDERDOWN		 Watercare	 MOTT MACDONALD	NORTHERN INTERCEPTOR PHASE 2 WESTGATE TO HOBSONVILLE SHAFT 14 ODOUR FILTER DETAILS	CAD FILE 2013661.640		DATE 04-04-23	
						DES. APPROVED	T. HAARHOFF					ORIGINAL SCALE A1 AS SHOWN		CONTRACT No. —	
						DRAWN	S. POWAR					REF. No. 417039-MMD-05-XX-DR-C-0300			
						DWG. APPROVED	T. HAARHOFF					DWG. No. 2013661.640		ISSUE —	
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1	11-22	DETAILED DESIGN — FOR REVIEW			SP	TH	WSL PROJ. LEAD								
ISSUE	DATE	AMENDMENT			BY	APPD.		BY	DATE						

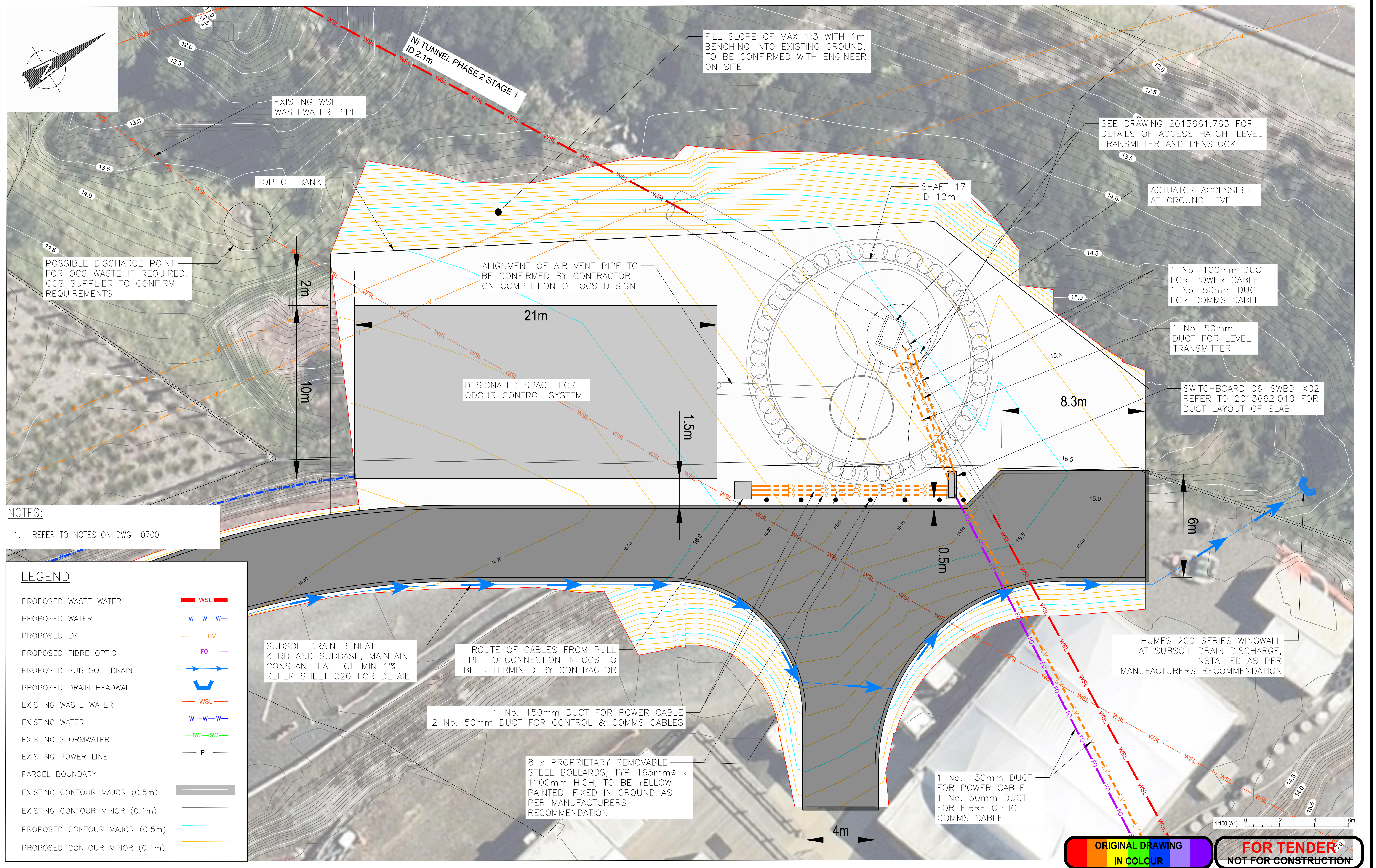


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 2. DO NOT OBTAIN DIMENSIONS FROM SCALING.
 3. CHAINAGES SHOWN ON PLANS ARE IN METRES.
 4. DRAWING PROJECTION AND COORDINATES ARE IN TERMS OF NEW ZEALAND TRANSVERSE MERCATOR CIRCUIT (NZTM) 2000.
 5. HEIGHTS/ELEVATIONS ARE IN TERMS OF AUCKLAND VERTICAL DATUM 1946.
 6. CONTOUR INFORMATION IS SOURCED FROM A COMBINATION OF 1m LIDAR DATA AND PARTIAL SITE SURVEY INFORMATION.
 7. BACKGROUND AERIAL IMAGES DISPLAYED ON THIS DRAWING SOURCED FROM NEARMAP. IMAGE CAPTURED IN MARCH 2022.
 8. THE EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN EXTRACTED FROM MULTIPLE SOURCES, INCLUDING AUCKLAND COUNCIL GEOMAPS, SURVEY DATA, BEFOREDUG ENQUIRIES, AND PLANS PROVIDED BY UTILITIES OWNERS. THE EXACT POSITION AND EXTENT OF THE EXISTING UTILITIES MAY NOT BE ACCURATE, THEREFORE ON-SITE VERIFICATION IS REQUIRED.
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 10. ODOUR CONTROL SYSTEM TO BE SUPPLIED IN ACCORDANCE WITH PARTICULAR SPECIFICATIONS - CIVIL AND ODOUR CONTROL SYSTEM. CIVIL INTERFACES ARE RESPONSIBILITY OF CONTRACTOR

LEGEND	
PROPOSED WASTE WATER	WSL
PROPOSED WATER	W-W-W
PROPOSED LV	LV
PROPOSED FIBRE OPTIC	FO
PROPOSED SUB SOIL DRAIN	
PROPOSED DRAIN HEADWALL	
EXISTING WASTE WATER	WSL
EXISTING WATER	W-W-W
EXISTING STORMWATER	SW-SW
EXISTING POWER LINE	P
PARCEL BOUNDARY	
EXISTING CONTOUR MAJOR (0.5m)	
EXISTING CONTOUR MINOR (0.1m)	
PROPOSED CONTOUR MAJOR (0.5m)	
PROPOSED CONTOUR MINOR (0.1m)	

						DESIGNED	T.LYNCH-WATSON	11-22	 Watercare COPYRIGHT - This drawing, the design concept, remain the exclusive property of Watercare Services Limited and may not be used without approval. Copyright reserved.	 MOTT MACDONALD	NORTHERN INTERCEPTOR PHASE 2 WESTGATE TO HOBSONVILLE SHAFT 17 OVERALL SITE LAYOUT
					DES. APPROVED	S.DE'ATH	11-22				
					DRAWN	T.LYNCH-WATSON	11-22				
					DWG. APPROVED	T.HARHOFF	11-22				
					WSL DESIGN MGMT.						
-	04-23	ISSUED FOR TENDER			FM	TH					
1	11-22	ISSUED FOR DETAIL DESIGN			TLW	TH					
ISSUE	DATE	AMENDMENT			BY	APPD.		BY	DATE		

CAD FILE	2013661.700	DATE	04-04-23
ORIGINAL SCALE	A1 1:200	CONTRACT No.	-
REF. No.	417039-MMD-06-XX-DR-C-0100		
DWG. No.	2013661.700	ISSUE	-



						DESIGNED	T.LYNCH-WATSON	11-22	 Watercare	 MOTT MACDONALD	NORTHERN INTERCEPTOR PHASE 2 WESTGATE TO HOBSONVILLE SHAFT 17 OVERALL SITE LAYOUT	CAD FILE	2013661.703	DATE	04-04-23	
						DES. APPROVED	S.DE'ATH	11-22				ORIGINAL SCALE	A1	CONTRACT No.	—	
						DRAWN	T.LYNCH-WATSON	11-22				REF. No.	417039-MMD-06-XX-DR-C-0101			
						DWG. APPROVED	T.HARHOFF	11-22				DWG. No.	2013661.703	ISSUE	—	
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1	11-22	ISSUED FOR DETAIL DESIGN			TLW	TH	WSL PROJ. LEAD									
ISSUE	DATE	AMENDMENT			BY	APPD.		BY	DATE							

NOTES:

1. DESIGN PHASE IS DETAILED DESIGN. DRAWING NOT FOR CONSTRUCTION
2. DO NOT OBTAIN DIMENSIONS BY SCALING FROM THE DRAWING
3. LEVELS ARE IN TERMS OF DATUM AUCKLAND 1946
4. SECANT PILES 900MM DIAMETER WITH MINIMUM 200MM OVERLAP. SEE DWG. NO. 2013666.773 FOR DETAILS
5. TBM CUTTER DIAMETER ASSUMED = 2325 TO 2575MM
6. GENERAL ARRANGEMENT OF GRP ACCESS SHAFTS SHOWN. DETAILED DESIGN TO BE COMPLETED BY SUPPLIER IN ACCORDANCE WITH PARTICULAR SPECIFICATION – CIVIL
7. BACKFILL AROUND FUTURE TUNNEL OPENING TO BE POLYSTYRENE OR OTHER LOW STRENGTH MATERIAL SUBJECT TO APPROVAL BY ENGINEER
8. HYDROPHILIC SEALS TO BE PROVIDED AROUND ALL PIPE PENETRATIONS
9. REFER TO DRAWING 2013661.763 FOR DETAILS OF CHAMBER LID, LEVEL TRANSMITTER AND PENSTOCK ACTUATOR INSTALLATION.

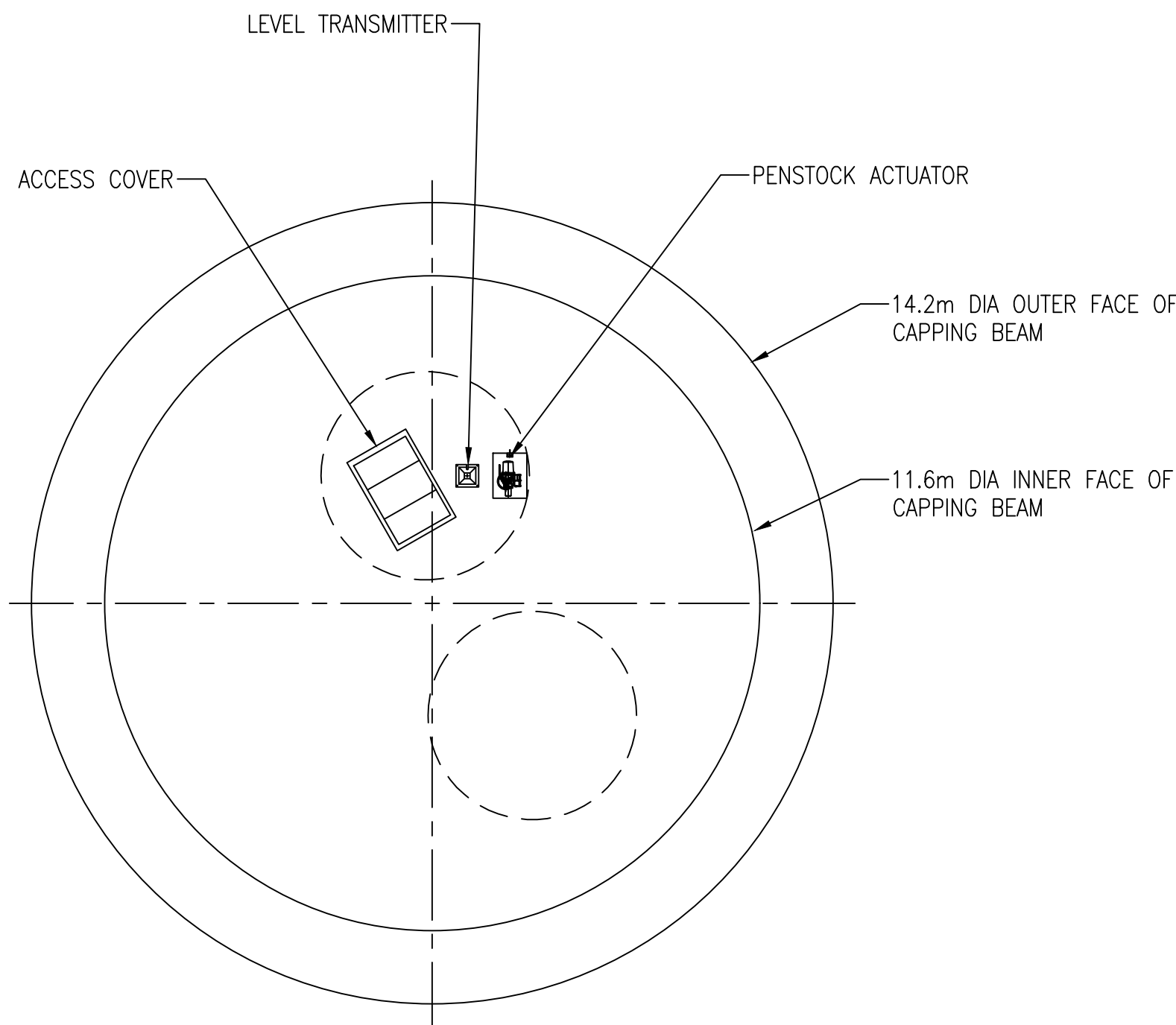
GEOTECHNICAL NOTES:

1. FROM GEOTECHNICAL INVESTIGATION, SHAFT IS TO BE FOUNDED ON PUKETOKA FORMATION, THE EXCAVATED GROUND IS TO BE INSPECTED BY WATERCARE’S ENGINEER TO CONTRACT PRIOR TO CONSTRUCTION.
2. GEOLOGICAL CONDITIONS BASED ON GEOLOGICAL PROFILE. REFER TO GBR FOR DETAILS. GROUNDWATER TABLE ASSUMED AT SURFACE.
3. REFER TO PARTICULAR SPECIFICATION – GEOTECHNICAL FOR BACKFILL REQUIREMENTS

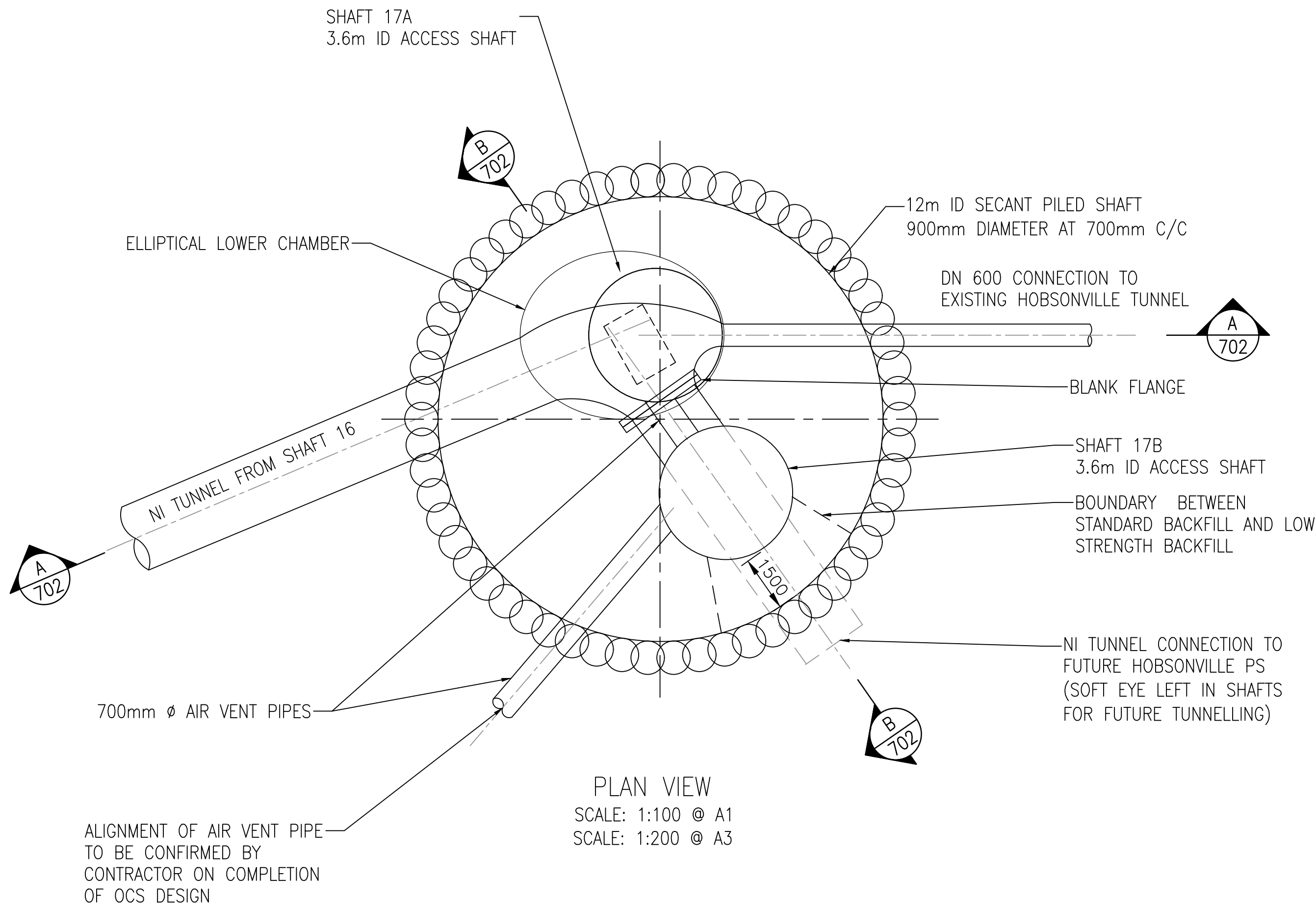
SAFETY IN DESIGN NOTES:



1. PRESSURE RELIEF MUST REMAIN IN PLACE UNTIL BACKFILL REACHES REQUIRED HEIGHT. SEE 2013661.790 INDICATIVE CONSTRUCTION SEQUENCE.



PLAN AT GROUND LEVEL
SCALE: 1:50



PLAN VIEW
SCALE: 1:100 @ A1
SCALE: 1:200 @ A3

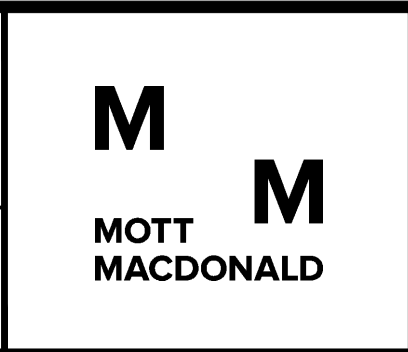


FOR TENDER
NOT FOR CONSTRUCTION

					DESIGNED	C. UNDERDOWN	
					DES. APPROVED	T. HAARHOFF	
					DRAWN	F. MISPLON	
-	04-23	ISSUED FOR TENDER	FM	TH	DWG. APPROVED	P. CORRIS	
2	11-22	DETAIL DESIGN – FOR REVIEW	FM	TH	WSL DESIGN MGMT.		
1	06-22	PRELIMINARY DESIGN – FOR REVIEW	FM	TH	WSL PROJ. LEAD		
ISSUE	DATE	AMENDMENT	BY	APPD.		BY	DATE



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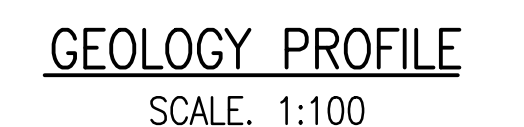
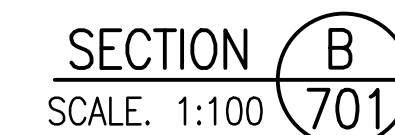
NORTHERN INTERCEPTOR PHASE 2
WESTGATE TO HOBSONVILLE
SHAFT 17 LAYOUT PLAN

CAD FILE	2013661.701	DATE	04-04-23
ORIGINAL SCALE	A1 AS SHOWN	CONTRACT No.	—
REF. No.	417039-MMD-06-XX-DR-C-0001	ISSUE	—
DWG. No.	2013661.701		

1. DESIGN PHASE IS DETAILED DESIGN. DRAWING NOT FOR CONSTRUCTION
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6. GENERAL ARRANGEMENT OF GRP ACCESS SHAFTS SHOWN. DETAILED
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PARTICULAR SPECIFICATION – CIVIL
7. BACKFILL AROUND FUTURE TUNNEL OPENING TO BE POLYSTYRENE OR
OTHER LOW STRENGTH MATERIAL SUBJECT TO APPROVAL BY ENGINEER
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9. REFER TO DRAWING 2013661.763 FOR DETAILS OF CHAMBER LID, LEVEL
TRANSMITTER AND PENSTOCK ACTUATOR INSTALLATION.

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2. GEOLOGICAL CONDITIONS BASED ON GEOLOGICAL PROFILE. REFER TO GBR FOR DETAILS. GROUNDWATER TABLE ASSUMED AT SURFACE.
3. REFER TO PARTICULAR SPECIFICATION – GEOTECHNICAL FOR BACKFILL REQUIREMENTS

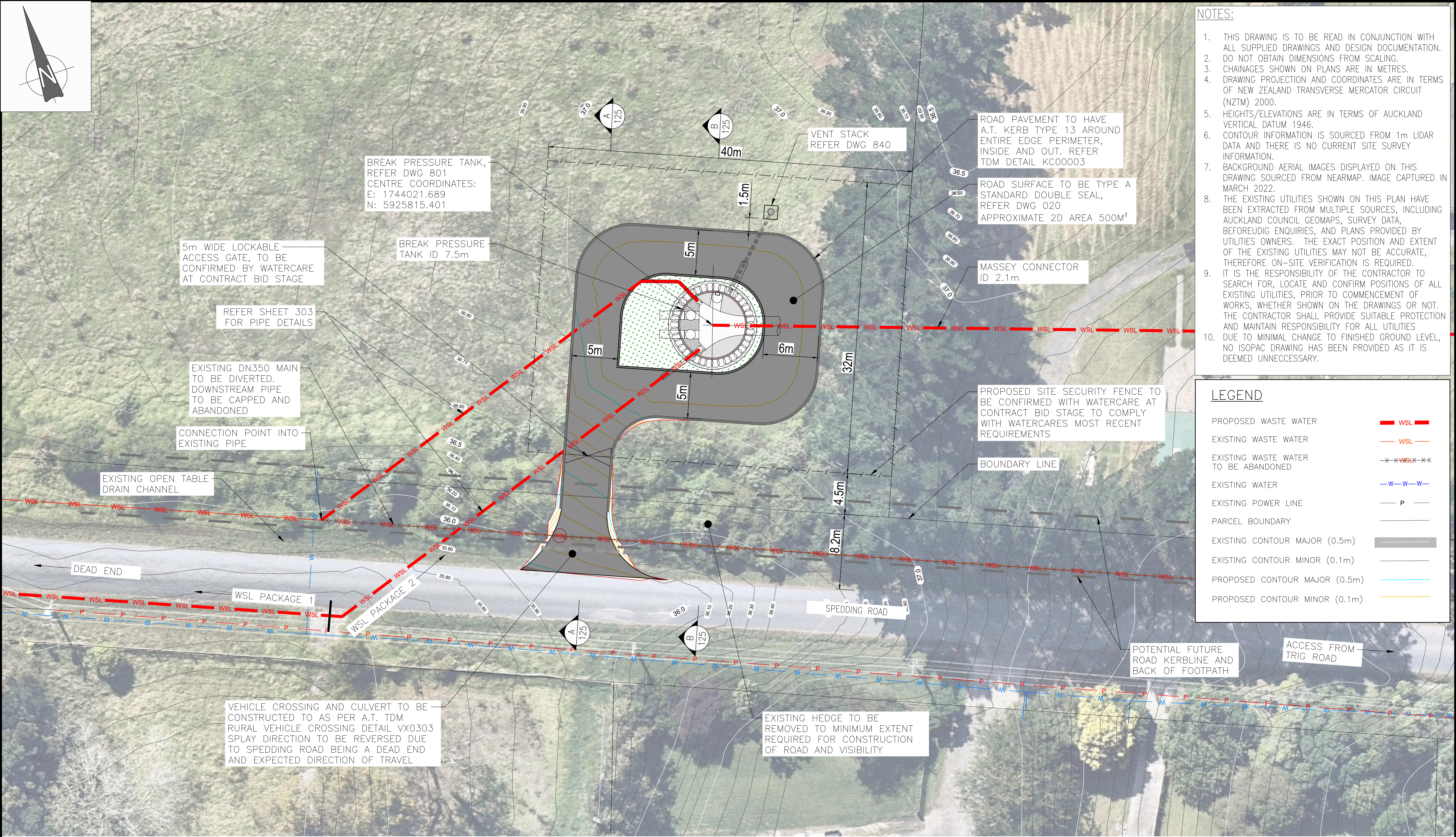
 1. PRESSURE RELIEF MUST REMAIN IN PLACE UNTIL BACKFILL REACHES REQUIRED HEIGHT. SEE 2013661.790 INDICATIVE CONSTRUCTION SEQUENCE.



FOR TENDER
NOT FOR CONSTRUCTION

					DESIGNED	C. UNDERDOWN		 Watercare	 MOTT MACDONALD	NORTHERN INTERCEPTOR PHASE 2 WESTGATE TO HOBSONVILLE SHAFT 17 SECTIONS	CAD FILE 2013661.701	DATE 04-04-23
				DES. APPROVED	T. HAARHOFF		ORIGINAL SCALE A1 AS SHOWN				CONTRACT No. —	
				DRAWN	F. MISPLON		REF. No. 417039-MMD-06-XX-DR-C-0002					
				DWG. APPROVED	P. CORRIS		DWG. No. 2013661.762				ISSUE —	
—	04-23	ISSUED FOR TENDER	FM	TH								
2	11-22	DETAIL DESIGN — FOR REVIEW	FM	TH	WSL DESIGN MGMT.			COPYRIGHT — This drawing, the design concept, remain the exclusive property of Watercare Services Limited and may not be used without approval. Copyright reserved.				
1	06-22	PRELIMINARY DESIGN — FOR REVIEW	FM	TH	WSL PROJ. LEAD							
ISSUE	DATE	AMENDMENT	BY	APPD.			BY	DATE				

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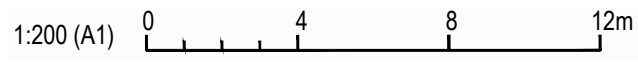


- NOTES:
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 3. CHAINAGES SHOWN ON PLANS ARE IN METRES.
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 5. HEIGHTS/ELEVATIONS ARE IN TERMS OF AUCKLAND VERTICAL DATUM 1946.
 6. CONTOUR INFORMATION IS SOURCED FROM 1m LIDAR DATA AND THERE IS NO CURRENT SITE SURVEY INFORMATION.
 7. BACKGROUND AERIAL IMAGES DISPLAYED ON THIS DRAWING SOURCED FROM NEARMAP. IMAGE CAPTURED IN MARCH 2022.
 8. THE EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN EXTRACTED FROM MULTIPLE SOURCES, INCLUDING AUCKLAND COUNCIL GEOMAPS, SURVEY DATA, BEFOREUDIG ENQUIRIES, AND PLANS PROVIDED BY UTILITIES OWNERS. THE EXACT POSITION AND EXTENT OF THE EXISTING UTILITIES MAY NOT BE ACCURATE, THEREFORE ON-SITE VERIFICATION IS REQUIRED.
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LEGEND

PROPOSED WASTE WATER	WSL
EXISTING WASTE WATER	WSL
EXISTING WASTE WATER TO BE ABANDONED	X-WSL-X
EXISTING WATER	W-W-W
EXISTING POWER LINE	P
PARCEL BOUNDARY	
EXISTING CONTOUR MAJOR (0.5m)	
EXISTING CONTOUR MINOR (0.1m)	
PROPOSED CONTOUR MAJOR (0.5m)	
PROPOSED CONTOUR MINOR (0.1m)	

PLAN VIEW
SCALE: 1:200



ORIGINAL DRAWING
IN COLOUR

FOR TENDER
NOT FOR CONSTRUCTION

						DESIGNED	T.LYNCH-WATSON	11-22	 Watercare COPYRIGHT – This drawing, the design concept, remain the exclusive property of Watercare Services Limited and may not be used without approval. Copyright reserved.	 MOTT MACDONALD	NORTHERN INTERCEPTOR PHASE 2 WESTGATE TO HOBSONVILLE BREAK PRESSURE TANK SITE LAYOUT	CAD FILE	2013661.800	DATE	04-04-23
					DES. APPROVED	S.DE'ATH	11-22	ORIGINAL SCALE				A1 1:200	CONTRACT No.	—	
					DRAWN	T.LYNCH-WATSON	11-22	REF. No.				417039-MMD-02-XX-DR-C-0100			
					DWG. APPROVED	T.HARHOFF	11-22	DWG. No.				2013661.800	ISSUE	—	
					WSL DESIGN MGMT.										
					WSL PROJ. LEAD										
—	04-23	ISSUED FOR TENDER			FM	TH									
2	11-22	ISSUED FOR DETAIL DESIGN			FM	TH									
1	05-22	PRELIMINARY DESIGN – FOR REVIEW			FM	PC									
ISSUE	DATE	AMENDMENT			BY	APPD.		BY	DATE						

1. DESIGN PHASE IS DETAILED DESIGN. DRAWING NOT FOR CONSTRUCTION
2. DO NOT OBTAIN DIMENSIONS BY SCALING FROM THE DRAWING
3. LEVELS ARE IN TERMS OF DATUM AUCKLAND 1946
4. SEANT PILES 900MM DIAMETER WITH MINIMUM 200MM OVERLAP. SEE DWG. NO. 2013666.873 FOR DETAILS
5. TM CUTTER DIAMETER=2325mm TO 2575
6. MINIMUM 600mm MANHOLE COVER, REFER TO WSL DRAWINGS WW35, 37 AND 40 FOR MANHOLE THROAT, COVER DETAILS AND SAFETY GRILL.
7. BENCHING SURFACE TO BE FINISHED SMOOTH TROWEL WITH A GRADIENT OF 1 IN 10.
8. CONCRETE COVER SLAB ON SHAFT SHALL BE HN-H0-72 RATED.
9. ALL ACCESS COVERS SHALL BE TRAFFICABLE AND HAVE IMPACT SAFETY GRILLES UNLESS OTHERWISE NOTED.
10. ALL ACCESS COVERS TO BE FITTED WITH CONCRETE SURROUNDING IN ACCORDANCE WITH WATERCARE STANDARDS.
11. SAFETY GRILLE SHALL COMPLY WITH AS3996 CLASS A.
12. GRILLE SHALL BE CONSTRUCTED FROM STAINLESS STEEL 316L GRADE OR AN APPROVED EQUIVALENT MATERIAL WITH ADEQUATE STRENGTH AND CORROSION PROPERTIES.
13. HYDROPHILIC SEALS TO BE PROVIDED AROUND ALL PIPE PENETRATIONS

1. FROM GEOTECHNICAL INVESTIGATION, SHAFT IS TO BE FOUNDED ON ECBF, THE EXCAVATED GROUND IS TO BE INSPECTED BY WATERCARE'S ENGINEER TO CONTRACT PRIOR TO CONSTRUCTION.
2. GEOLOGICAL CONDITIONS BASED ON GEOLOGICAL PROFILE. REFER TO GBR FOR DETAILS. GROUNDWATER TABLE ASSUMED AT SURFACE.
3. REFER TO PARTICULAR SPECIFICATION – GEOTECHNICAL FOR BACKFILL REQUIREMENTS



PIPE DETAILS							
SIZE	MATERIAL	STATUS	DESCRIPTION	PIPE PENETRATION CENTER POINT		INVERT LEVEL (mRL)	
				EASTING (m)	NORTHING (m)	TOP	BOTTOM
DN355	PE100 PN12.5	NEW	INCOMING (WITH DROP PIPE)	1744020.798	5925818.869	34.7	29.34
DN900	PE100 PN12.5	NEW	INCOMING (WITH DROP PIPE)	1744018.651	5925817.598	34.5	29.34
DN900	PE100 PN12.5	NEW	INCOMING (WITH DROP PIPE)	1744017.946	5925815.629	34.5	29.34
DN500	PE100 PN12.5	NEW	INCOMING (WITH DROP PIPE)	1744018.871	5925813.15	34.5	29.34
DN700	GRP PN16	NEW	OUTGOING AIR VENT PIPE	1744024.419	5925817.759	35.09	

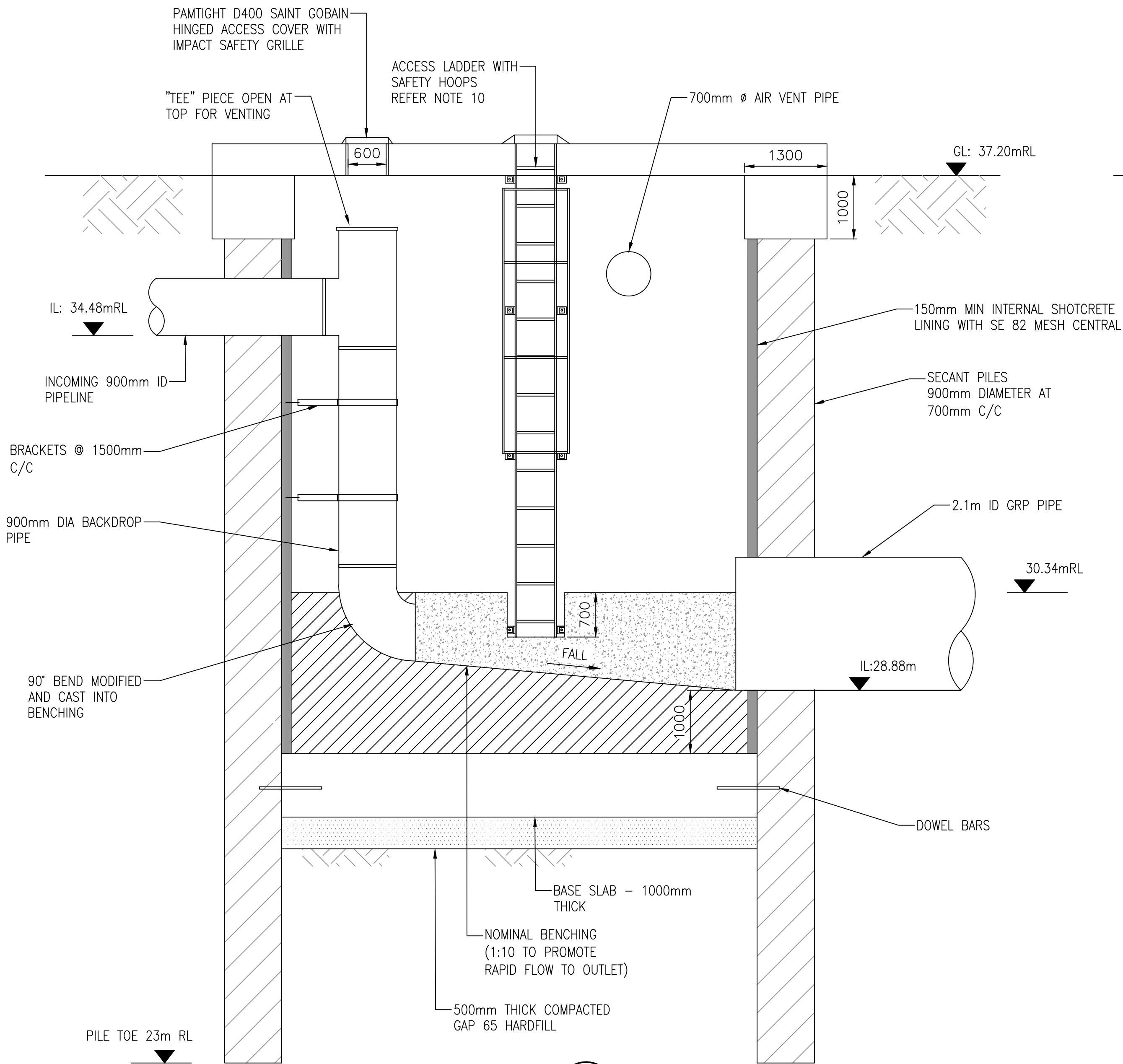
 ORIGINAL DRAWING
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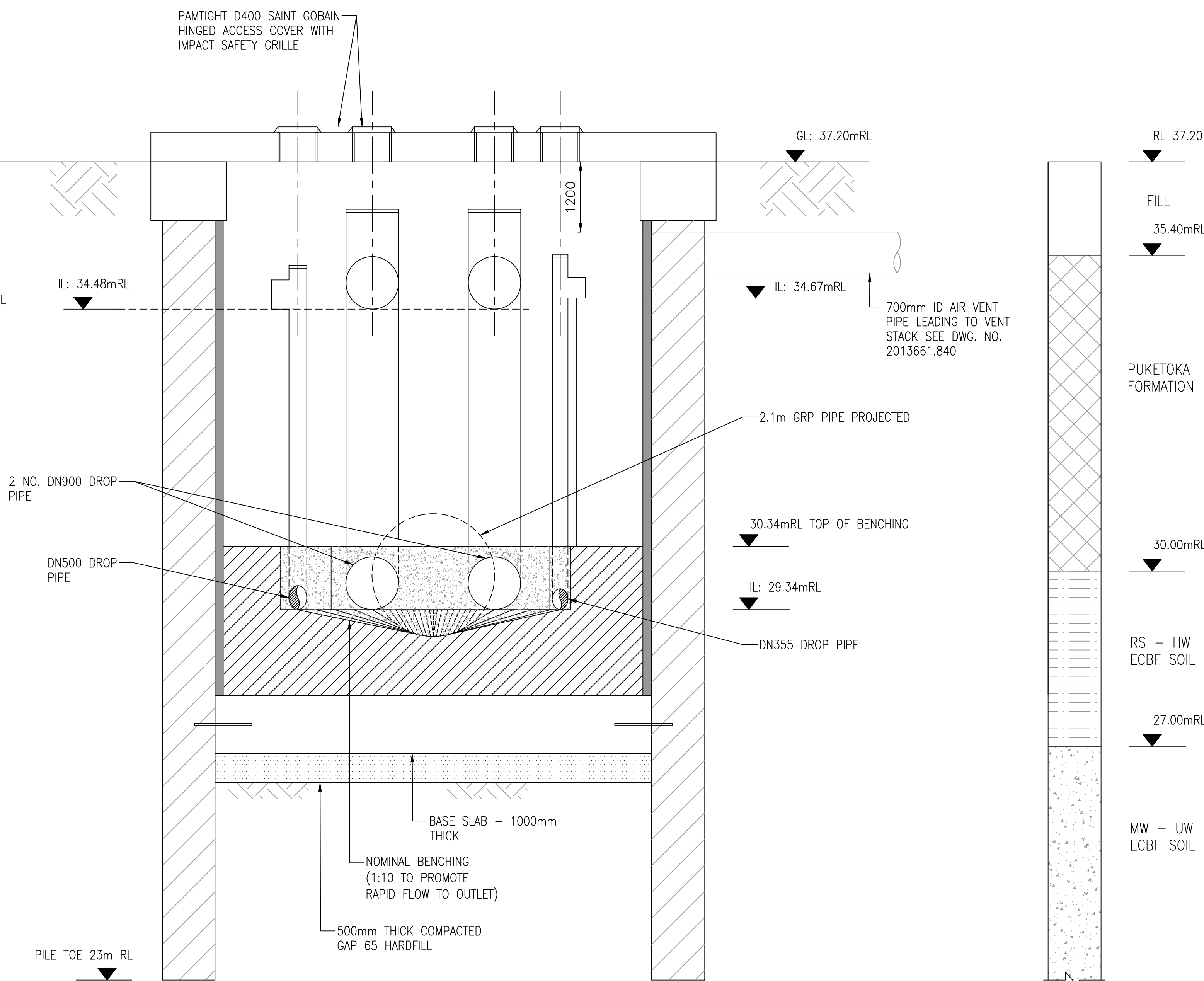
						DESIGNED	C. UNDERDOWN	11-22	 Watercare	 MOTT MACDONALD	NORTHERN INTERCEPTOR PHASE 2 WESTGATE TO HOBSONVILLE	BREAK PRESSURE TANK LAYOUT	CAD FILE	2013661.801	DATE	04-04-23	
					DES. APPROVED	T. HAARHOFF	11-22	ORIGINAL SCALE					A1 1:50	CONTRACT No.	—		
					DRAWN	F. MISPLON	11-22	REF. No.					417039-MMD-02-XX-DR-C-0001				
					DWG. APPROVED	T. HAARHOFF	11-22	DWG. No.					2013661.801	ISSUE	—		
—	04-23	ISSUED FOR TENDER			FM	TH											
2	11-22	DETAILED DESIGN — FOR REVIEW			SP	TH	WSL DESIGN MGMT.										
1	05-22	PRELIMINARY DESIGN — FOR REVIEW			FM	PC	WSL PROJ. LEAD										
ISSUE	DATE	AMENDMENT			BY	APPD.											
								BY	DATE								

NOTES:

- DESIGN PHASE IS DETAILED DESIGN. DRAWING NOT FOR CONSTRUCTION
- DO NOT OBTAIN DIMENSIONS BY SCALING FROM THE DRAWING
- LEVELS ARE IN TERMS OF DATUM AUCKLAND 1946
- SECANT PILES 900MM DIAMETER WITH MINIMUM 200MM OVERLAP. SEE DWG. NO. 2013666.873 FOR DETAILS
- TBM CUTTER DIAMETER = 2325 TO 2575MM
- MINIMUM 700MM AIR SEALED ACCESS COVER IN ACCORDANCE WITH WATERCARE MATERIAL SUPPLY STANDARD AND STANDARD DRAWINGS.
- ACCESS COVERS FOR DROP PIPE INSPECTION POINTS TO BE PAMTIGHT D400 HINGED ACCESS COVERS.
- ALL ACCESS COVERS TO BE TRAFFIC RATED AND HAVE IMPACT SAFETY GRILLES INSTALLED.
- ALL ACCESS COVERS TO BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION
- REFER TO WATERCARE STANDARD DRAWING 20000244.003 FOR DETAILS OF GALVANISED STEEL ACCESS LADDER. LADDER TO BE PROVIDED WITH EXTENSION IN ACCORDANCE WITH WATERCARE STANDARD DRAWING 2000244.046.
- HYDROPHILIC SEALS TO BE PROVIDED AROUND ALL PIPE PENETRATIONS



SECTION A
SCALE: 1:50 001



SECTION B
SCALE: 1:50 001

GEOLOGY PROFILE
SCALE: 1:50

ORIGINAL DRAWING
IN COLOUR

FOR TENDER
NOT FOR CONSTRUCTION

					DESIGNED	C. UNDERDOWN	11-22
					DES. APPROVED	T. HAARHOFF	11-22
					DRAWN	F. MISPLON	11-22
					DWG. APPROVED	T. HAARHOFF	11-22
					WSL DESIGN MGMT.		
					WSL PROJ. LEAD		
ISSUE	DATE	AMENDMENT	BY	APPD.	BY	DATE	
-	04-23	ISSUED FOR TENDER	FM	TH			
1	11-22	DETAILED DESIGN - FOR REVIEW	SP	TH			
1	05-22	PRELIMINARY DESIGN - FOR REVIEW	FM	PC			

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MOTT MACDONALD

**NORTHERN INTERCEPTOR PHASE 2
WESTGATE TO HOBSONVILLE
BREAK PRESSURE TANK SECTIONS**

CAD FILE	2013661.801	DATE	04-04-23
ORIGINAL SCALE	A1 1:50	CONTRACT No.	-
REF. No.	417039-MMD-02-XX-DR-C-0002		
DWG. No.	2013661.802	ISSUE	-