



# GENERAL NOTES

## GENERAL

- G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- G2. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT AND CURRENT SAA CODES, AND WITH THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITIES EXCEPT WHERE VARIED BY THESE DRAWINGS AND THE SPECIFICATION.
- G3. ALL SETOUT DIMENSIONS SHOWN SHALL BE VERIFIED BY THE CONTRACTOR ON SITE BEFORE WORK COMMENCES. DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS.
- G4. DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED. TEMPORARY BRACING, BATTERS AND MEANS OF FLOATATION PREVENTION FOR INGROUND TANKS SHALL BE PROVIDED BY THE CONTRACTOR TO KEEP THE WORKS AND EXCAVATIONS STABLE AT ALL TIMES.
- G5. ALL DIMENSIONS ARE IN MILLIMETRES U.N.O.
- G6. PRECAST ELEMENTS HAVE BEEN DESIGNED FOR IN-SERVICE LOADS. EXTRA REINFORCEMENT TO CATER FOR LIFTING, HANDLING & PROPPING LOADS IS TO BE DESIGNED BY THE PRECAST SUBCONTRACTOR.

## BACKFILL AROUND STRUCTURES

- B1. UNLESS NOTED OR SHOWN OTHERWISE IN THE DRAWINGS OR SPECIFICATION, ALL WORKMANSHIP & MATERIALS FOR EARTHWORKS SHALL BE IN ACCORDANCE WITH AS.3798 CURRENT EDITION WITH AMENDMENTS, EXCEPT FOR WHERE VARIED BY DS502 OF THE TENDER DOCUMENTS. BACKFILL TO STRUCTURES (UP TO 1m FROM WALL) TO CONSIST OF CLEAN GRANULAR FILL PLACED IN 300mm THICK LAYERS AND COMPACTED USING HAND HELD MECHANICAL COMPACTORS, EXCEPT AT ROADS WHERE THE TOP 400mm OF FILL CAN BE COMPACTED USING A NON VIBRATING ROLLER. VIBRATING ROLLERS SHALL NOT BE USED WITHIN 3m OF STRUCTURES.

## FOUNDATIONS & GEOTECHNICAL REPORTS

- F1. PROOF ROLLING THE FORMATION SHALL CONSIST OF A MINIMUM OF 10 PASSES WITH A 10 TONNE VIBRATING ROLLER. REPLACE SOFT WET LOOSE MATERIAL WITH APPROVED GRANULAR MATERIAL, COMPACT GRANULAR MATERIAL IN LAYERS AS SPECIFIED.
- F2. NOT USED.
- F3. AN APPROVED GEOTECHNICAL ENGINEER SHALL BE ENGAGED BY THE CONTRACTOR TO INSPECT THE FOUNDATIONS AND EXCAVATION BATTERS AND REPORT ON THEIR SUITABILITY FOR THIS PROJECT.
- F4. FOOTINGS HAVE BEEN DESIGNED FOR A SITE REACTIVITY CLASSIFICATION OF 'CLASS M', UNLESS NOTED OTHERWISE. REFER TO FOOTING DRAWINGS FOR DESIGN PARAMETERS.
- F5. DO NOT CHANGE SPECIFIED FOOTING LEVELS UNLESS AUTHORISED TO DO SO BY THE ENGINEER. WHERE OVER EXCAVATION IS REQUIRED TO ACHIEVE THE SPECIFIED BEARING PRESSURES, BACKFILL THE ADDITIONAL EXCAVATION WITH N20 MIX CONCRETE.
- F6. NOT USED.

- C3. FINISHED CONCRETE SHALL BE A DENSE HOMOGENEOUS MASS, COMPLETELY FILLING THE FORMWORK, THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE OF STONE POCKETS AND VOIDS. CONCRETE SHALL BE COMPACTED WITH MECHANICAL VIBRATORS.
- C4. UNLESS NOTED OTHERWISE CLEAR COVER TO REINFORCEMENT SHALL BE 50mm.  
  
MAINTAIN COVER TO REINFORCEMENT AT CHAMFERS, DRIP GROOVES, REGLETS, ETC.
- C5. NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER.
- C6. CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO THE APPROVAL OF THE ENGINEER.
- C7. DURING AND IMMEDIATELY FOLLOWING POURING, THE CONCRETE SHALL BE PROTECTED FROM WIND AND SUN. AWINGS AND WIND BREAKS ARE TO BE UTILISED FOR THIS PURPOSE. FOR ACCEPTABLE CURING METHODS AND MINIMUM CURING TIMES REFER TO CONCRETE SPECIFICATION.
- C8. CONCRETE ELEMENT SIZES DO NOT INCLUDE APPLIED FINISHES
- C9. ALL STRUCTURES CAST AGAINST GROUND SHALL BE LAID ON 50 BLINDING CONCRETE WITH POLYETHYLENE ON TOP, UNLESS NOTED OTHERWISE.
- C10. THE MAXIMUM SLUMP SHALL BE 80mm.
- C11. NO ADMIXTURES SHALL BE USED WITHOUT THE WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER EXCEPT IN STANDARD CONTROLLED GRADE CONCRETE. CALCIUM CHLORIDE ADMIXTURES WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.
- C12. COMPACT ALL CONCRETE DURING PLACEMENT USING MECHANICAL VIBRATORS.
- C13. PROVIDE A 20X20 CHAMFER TO ALL CORNERS INCLUDING RE-ENTRANT CORNERS AND EDGES OF ALL EXPOSED CONCRETE U.N.O.

## FORMWORK

- FW1. UNLESS NOTED OTHERWISE ALL CONCRETE FORMWORK SHALL BE AS PER THE SPECIFICATION.
- FW2. DESIGN AND CONSTRUCTION AND STRIPPING TIMES SHALL COMPLY WITH AS 3610 AND AS 3600 UNLESS OTHERWISE NOTED OR APPROVED BY THE ENGINEER.
- FW3. THE DESIGN, CERTIFICATION, CONSTRUCTION AND PERFORMANCE OF THE FORMWORK AND FALSEWORK IS THE RESPONSIBILITY OF THE CONTRACTOR.
- FW4. FOR DETAILS ON WALL TIES/REPAIR PLUGS REFER TO THE TECHNICAL SPECIFICATION.
- FW5. FINISH CONCRETE SURFACES ASA SHOWN BELOW:

(A) FORMED SURFACES:  
EXPOSED SURFACES 2  
HIDDEN SURFACES 2

(B) FINISHES AS LAID:  
EXPOSED SURFACES STEEL TROWEL  
HIDDEN SURFACES WOOD FLOAT

## CONCRETE REINFORCEMENT

### CR1. REINFORCEMENT SYMBOLS:

- N DENOTES DEFORMED GRADE 500 N BARS TO AS 4671
- R DENOTES GRADE 250 R HOT ROLLED PLAIN BARS TO AS 1302
- SL DENOTES HARD-DRAWN WIRE SQUARE REINFORCING FABRIC TO AS 4671



CR2. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY IN TRUE PROJECTION.

CR3. THE FOLLOWING MINIMUM COG LENGTHS SHALL APPLY TO ALL REINFORCEMENT.

BAR	COG(C)
N12	200
N16	200
N20	300
N24	300
N28	350
N32	350

CR4. SLAB REINFORCEMENT SHALL EXTEND AT LEAST 12 BAR DIAMETERS ONTO SUPPORTS AND 50 PERCENT OF BOTTOM REINFORCEMENT SHALL BE COGGED TO ACHIEVE ANCHORAGE AT SIMPLY SUPPORTED ENDS.

CR5. SPLICE REINFORCEMENT ONLY AT LOCATIONS SHOWN ON DRAWINGS OR AS APPROVED BY THE SUPERINTENDENT. LAP LENGTHS TO COMPLY WITH AS 3600 OR FOLLOWING UNLESS NOTED OTHERWISE. THE MINIMUM LAP FOR ALL FABRICS SHALL BE TWO CROSS WIRES ONE MESH + 50mm.

(LAP LENGTHS IN BRACKETS TO BE USED FOR HORIZ BARS WITH MORE THAN 300mm OF CONCRETE CAST BELOW BAR)

NOTES : DO NOT INTERPOLATE INTERMEDIATE VALUES OF LAP LENGTHS . STAGGER LAPS WHERE POSSIBLE. WHERE MORE THAN 50% OF BARS ARE LAPPED AT THE ONE LOCATION LAP LENGTHS SHOWN IN THE TABLE ABOVE SHALL BE INCREASED BY 30%.

CR6. JOGGLES TO BARS SHALL BE 1 BAR DIAMETER OVER A LENGTH OF 12 BAR DIAMETERS.

CR7. THE FOLLOWING NOTATIONS MAY HAVE BEEN USED ON THE DRAWINGS:

- LV : LENGTH VARIES
- CV : COG VARIES
- EW : EACH WAY
- EF : EACH FACE
- SV : SHAPE VARIES
- B1 : BOTTOM REINFORCEMENT - LAID FIRST
- B2 : BOTTOM REINFORCEMENT - LAID SECOND
- T1 : TOP REINFORCEMENT - LAID FIRST
- T2 : TOP REINFORCEMENT - LAID SECOND
- T & B : TOP AND BOTTOM

CR8. REINFORCEMENT SHALL BE SUPPLIED AND BENT IN ACCORDANCE WITH AS3600. REBENDING OF REINFORCEMENT WITH OR WITHOUT HEATING IS NOT PERMITTED WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER.

CR9. USE MECHANICAL SPLICES ONLY WHERE SPECIFIED OR APPROVED BY THE STRUCTURAL ENGINEER.

CR10. DO NOT WELD REINFORCEMENT WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER.

CR11. SUPPORT ALL REINFORCEMENT SECURELY IN ITS CORRECT POSITION DURING CONCRETING BY APPROVED PLASTIC TIPPED BAR CHAIRS, SPACERS OR SUPPORT BARS. SUPPORT SPACINGS SHALL BE SUCH AS TO POSITION AND MAINTAIN THE REINFORCEMENT TO THE TOLERANCES OF AS3600 AND SHALL BE AT 800mm MAXIMUM CENTRES IN SLABS AND 1000mm IN WALLS.

LOCATION	BAR SIZE						
	f'c	N12	N16	N20	N24	N28	N32
BARS IN SLABS/WALLS WITH CLEAR DISTANCE BETWEEN PARALLEL BARS NOT LESS THAN 150mm	40	300 (375)	400 (500)	500 (625)	600 (750)	700 (875)	825 (1050)
LONGITUDINAL BARS IN BEAMS AND COLUMNS	40	300 (375)	400 (500)	500 (625)	650 (825)	850 (1075)	1075 (1350)
ALL OTHER LONGITUDINAL BARS	40	300 (375)	400 (500)	500 (625)	700 (875)	925 (1175)	1175 (1475)

## CONCRETE

C1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY AS 3735 AND DS505 OF THE TECHNICAL CONTRACT DOCUMENT.

C2. CONCRETE MIXES TO COMPLY WITH



MIX N20 FOR BLINDING LAYERS, FILLING UP OVER EXCAVATIONS BENEATH STRUCTURES AND UNREINFORCED CONCRETE

MIX N25 FOR REINFORCED FOOT PATHS, THRUST BLOCKS AND NON-CRITICAL ELEMENTS

MIX N32 STRUCTURAL CONCRETE FOR BUILDINGS AND NON-WATER RETAINING STRUCTURES

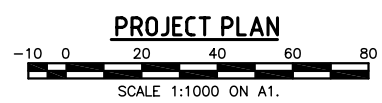
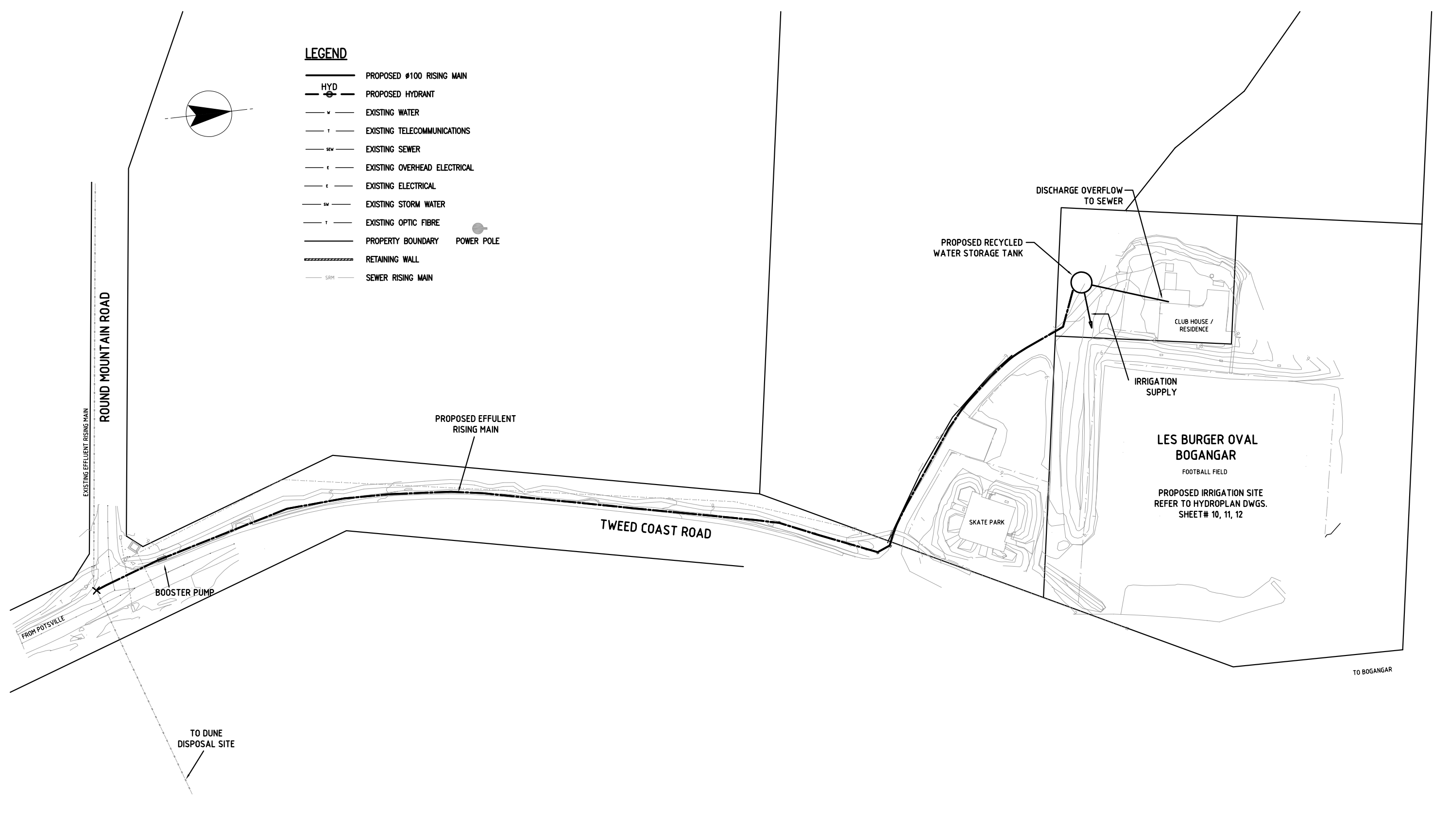
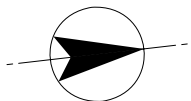
MIX S40 FOR WATER RETAINING STRUCTURES.

PRELIMINARY ISSUE

 <p>COUNCIL OFFICES TUMBULGUM ROAD, MURWILLUMBAH, NEW SOUTH WALES, 2484 PHONE 02 66702400 FAX 02 66727513 www.tweed.nsw.gov.au</p>				 <p>SUITE 4/60 NERANG STREET GOLD COAST QLD 4211 Telephone: (07) 5596 9600 Facsimile: (07) 5578 4295 www.mwhglobal.com</p>				<p>OFFICE MANAGER: <i>P. Morgan</i> RPEQ No.1..... DATE: APRIL 2009</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DESIGNED</td> <td>G.H</td> <td>1.2007</td> <td>DESIGN NO.</td> <td>A1055100-C-002</td> </tr> <tr> <td>DRAWN</td> <td>N.D.B</td> <td>1.2007</td> <td>SURVEY NO.</td> <td></td> </tr> <tr> <td>CHECKED</td> <td>N.T</td> <td>1.2007</td> <td>PROGRAM NO.</td> <td></td> </tr> <tr> <td>HORIZONTAL DATUM</td> <td>MGA</td> <td></td> <td>REDUCTION RATIO</td> <td></td> </tr> <tr> <td>VERTICAL DATUM</td> <td>AHD</td> <td></td> <td></td> <td></td> </tr> </table>		DESIGNED	G.H	1.2007	DESIGN NO.	A1055100-C-002	DRAWN	N.D.B	1.2007	SURVEY NO.		CHECKED	N.T	1.2007	PROGRAM NO.		HORIZONTAL DATUM	MGA		REDUCTION RATIO		VERTICAL DATUM	AHD				<p>PROJECT: HASTINGS POINT RECYCLED WATER IRRIGATION SCHEME</p> <p>PLAN TITLE: GENERAL NOTES</p>		<p>DRAWING NUMBER: WT06031/02</p> <p>SHEET 2 OF 12 SHEETS ISSUE A</p>	
DESIGNED	G.H	1.2007	DESIGN NO.	A1055100-C-002																																		
DRAWN	N.D.B	1.2007	SURVEY NO.																																			
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HORIZONTAL DATUM	MGA		REDUCTION RATIO																																			
VERTICAL DATUM	AHD																																					
<p>A ORIGINAL ISSUE N.D.B 1.2007</p>		<p>ISSUE AMENDMENT DETAILS INITIALS DATE</p>		<p>NOTE: FULL SIZE ON ORIGINAL.</p>				<p>G:\_AUTOCAD DRAWINGS\JacquiF\WT06031- Hastings Point\WT06031-01 to 09.dwg</p>																														

**LEGEND**

- PROPOSED #100 RISING MAIN
- HYD — PROPOSED HYDRANT
- v — EXISTING WATER
- T — EXISTING TELECOMMUNICATIONS
- SEW — EXISTING SEWER
- e — EXISTING OVERHEAD ELECTRICAL
- e — EXISTING ELECTRICAL
- SW — EXISTING STORM WATER
- T — EXISTING OPTIC FIBRE
- — PROPERTY BOUNDARY
- SRM — SEWER RISING MAIN
- POWER POLE
- RETAINING WALL



**PRELIMINARY ISSUE**

B	GENERAL AMENDMENTS	N.R.	2.2008
A	ORIGINAL ISSUE	N.D.B	1.2007
ISSUE	AMENDMENT DETAILS	INITIALS	DATE

**TWEED**  
TWEED SHIRE COUNCIL

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OFFICE MANAGER: *P. Morgan* RPEQ No.:  
DATE: *APRIL 2007*

DESIGNED	G.H	1.2007	DESIGN NO.	A1055100-C-003
DRAWN	N.D.B	1.2007	SURVEY NO.	
CHECKED	N.T	1.2007	PROGRAM NO.	
HORIZONTAL DATUM	MGA		REDUCTION RATIO	
VERTICAL DATUM	AHD			

PROJECT: **HASTINGS POINT RECYCLED WATER IRRIGATION SCHEME**

PLAN TITLE: **PROJECT SITE PLAN**

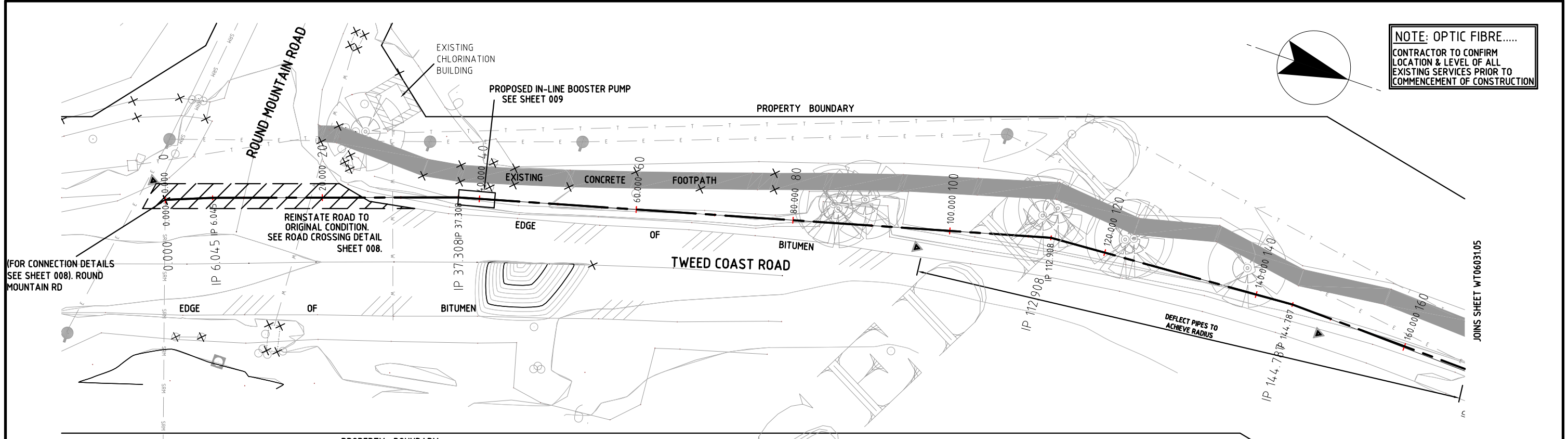
DRAWING NUMBER: **WT06031/03**

SHEET 3 OF 12 SHEETS

ISSUE **A B**



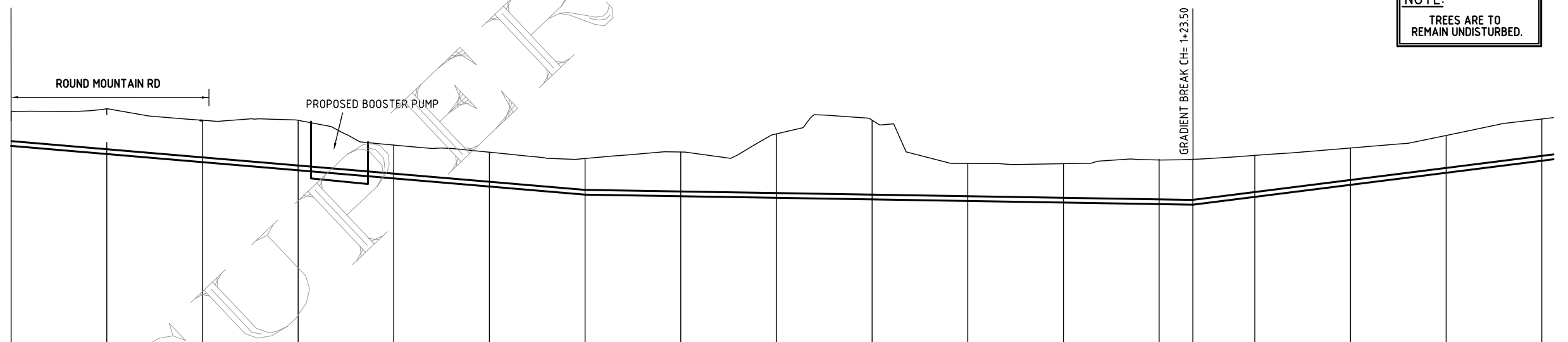
**NOTE: OPTIC FIBRE.....**  
 CONTRACTOR TO CONFIRM  
 LOCATION & LEVEL OF ALL  
 EXISTING SERVICES PRIOR TO  
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**PRELIMINARY ISSUE**

- LEGEND**
- PROPOSED #100 RISING MAIN
  - HYD — PROPOSED HYDRANT
  - EXISTING WATER
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  - EXISTING OPTIC FIBRE
  - PROPERTY BOUNDARY
  - RETAINING WALL
  - SRM — SEWER RISING MAIN
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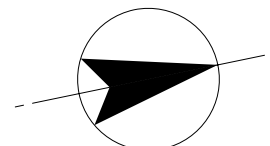
**NOTE:**  
 TREES ARE TO  
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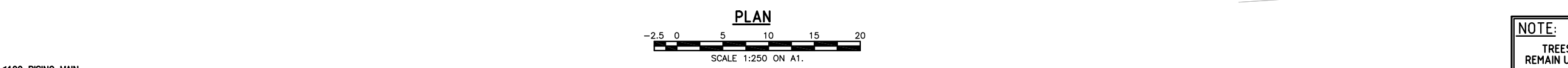
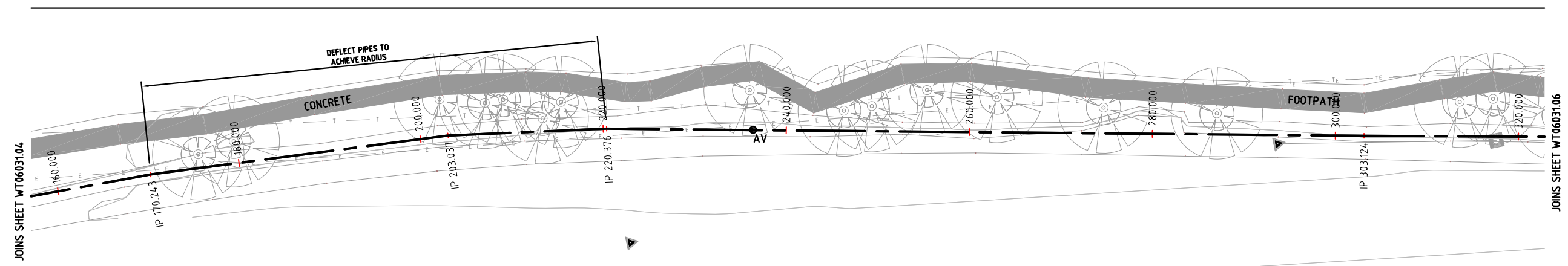
VERTICAL GEOMETRY	L = 60.00m G = -1.7% 100Ø DI CL K90RK12										L = 63.50m G = -0.33% 100Ø uPVC CLASS 12 EFFLUENT RISING MAIN										L = 46.5 m G = 2.52%				
DEPTH TO INVERT	-0.71	-0.94	-0.87	-1.04	-0.70	-0.72	-0.75	-0.92	-1.34	-1.65	-0.78	-0.92	-0.94	-0.87	-0.77	-0.78	-0.784								
INVERT LEVELS	6.12	5.95	5.78	5.61	5.44	5.27	5.10	5.07	5.03	5.00	4.97	4.93	4.90	4.89	5.05	5.30	5.56	5.896							
NATURAL SURFACE LEVELS	6.83	6.89	6.65	6.65	6.14	5.99	5.85	5.99	6.37	6.65	5.75	5.75	5.84	4.89	5.92	6.07	6.34	6.68							
CHAINAGES	0+00.00	0+10.00	0+20.00	0+30.00	0+40.00	0+50.00	0+60.00	0+70.00	0+80.00	0+90.00	0+90.79	1+00.00	1+10.00	1+20.00	1+23.50	1+30.00	1+40.00	1+50.00	1+60.00						

LONGITUDINAL SECTION CH 0.000 TO 160.000 CL1 SCALES: HORIZ 1:250 VERT 1:50

<p>COUNCIL OFFICES        TUMBULGUM ROAD,        MURWILLUMBAH,        NEW SOUTH WALES, 2484        PHONE 02 66702400        FAX 02 66727513        www.tweed.nsw.gov.au</p>		<p>SUITE 4/60 NERANG STREET        GOLD COAST QLD 4211        Telephone: (07) 5596 9600        Facsimile: (07) 5578 4295        www.mwhglobal.com</p>		OFFICE MANAGER: ..... RPEQ No.: ..... DATE: ..... DESIGNED G.H. 1.2007 DESIGN NO. A1055100-C-004 DRAWN N.D.B. 1.2007 SURVEY NO. CHECKED N.T. 1.2007 PROGRAM NO. HORIZONTAL DATUM MGA REDUCTION RATIO VERTICAL DATUM AHD		PROJECT: <b>HASTINGS POINT        RECYCLED WATER IRRIGATION SCHEME</b> PLAN TITLE: <b>PROJECT PLAN SHEET 1 OF 4        LONGITUDINAL SECTION</b>		DRAWING NUMBER: <b>WT06031/04</b> SHEET 4 OF 12 SHEETS ISSUE <b>A B</b>	
B GENERAL AMENDMENTS N.R. 2.2008 A ORIGINAL ISSUE N.D.B. 1.2007 ISSUE AMENDMENT DETAILS INITIALS DATE		NOTE: FULL SIZE ON ORIGINAL.		0 10 20 30 40 50 100 150 200 250 mm		ACAD FILE No		G:\RICHARD\ALL JOBS BACK UP\DWG	

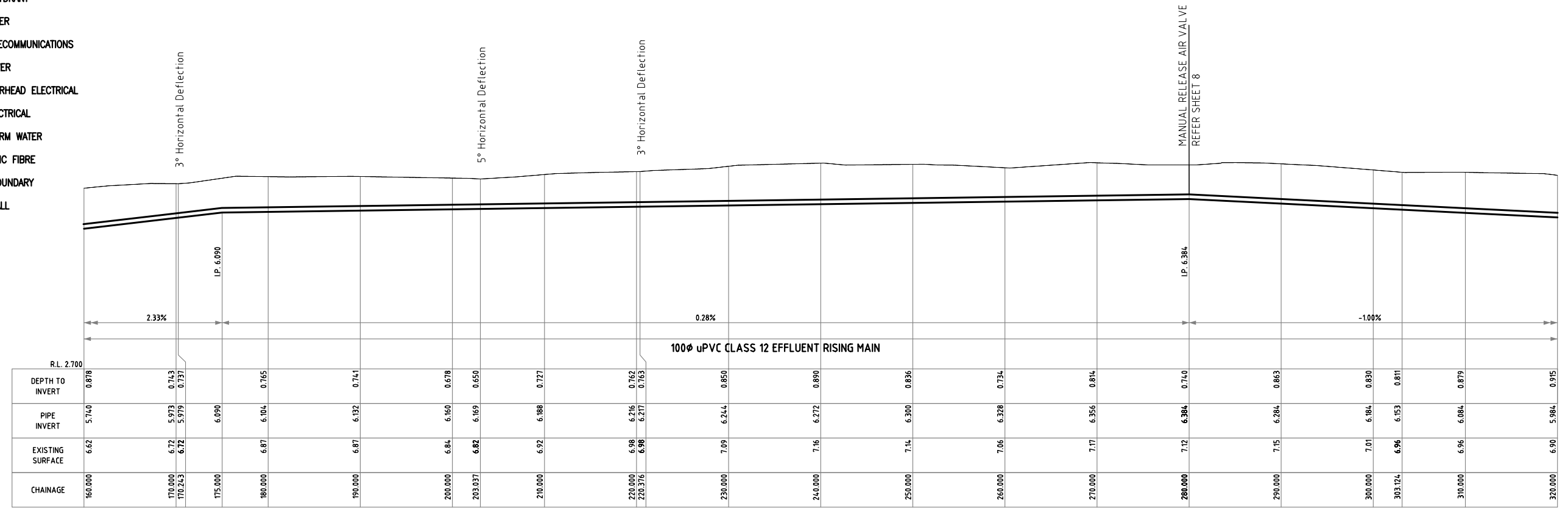


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- LEGEND**
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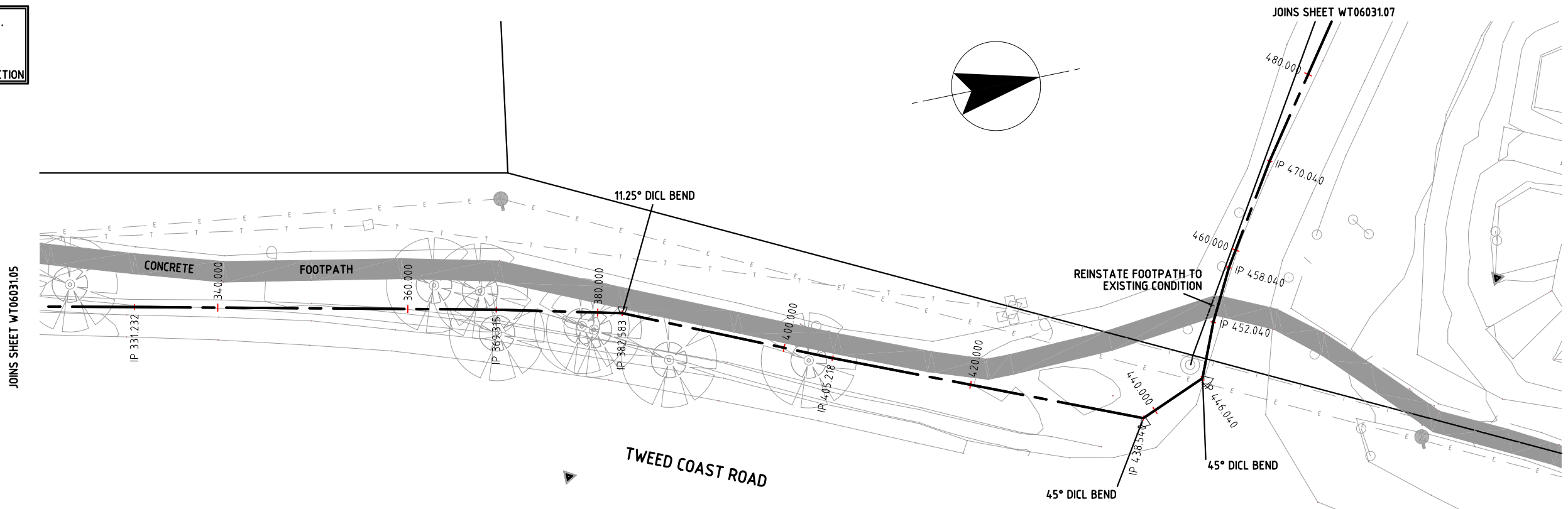
**LONGITUDINAL SECTION CH 160.000 TO 320.000**

HORIZONTAL A3 1:500, A1 1:250  
 VERTICAL A3 1:100, A1 1:50

**PRELIMINARY ISSUE**

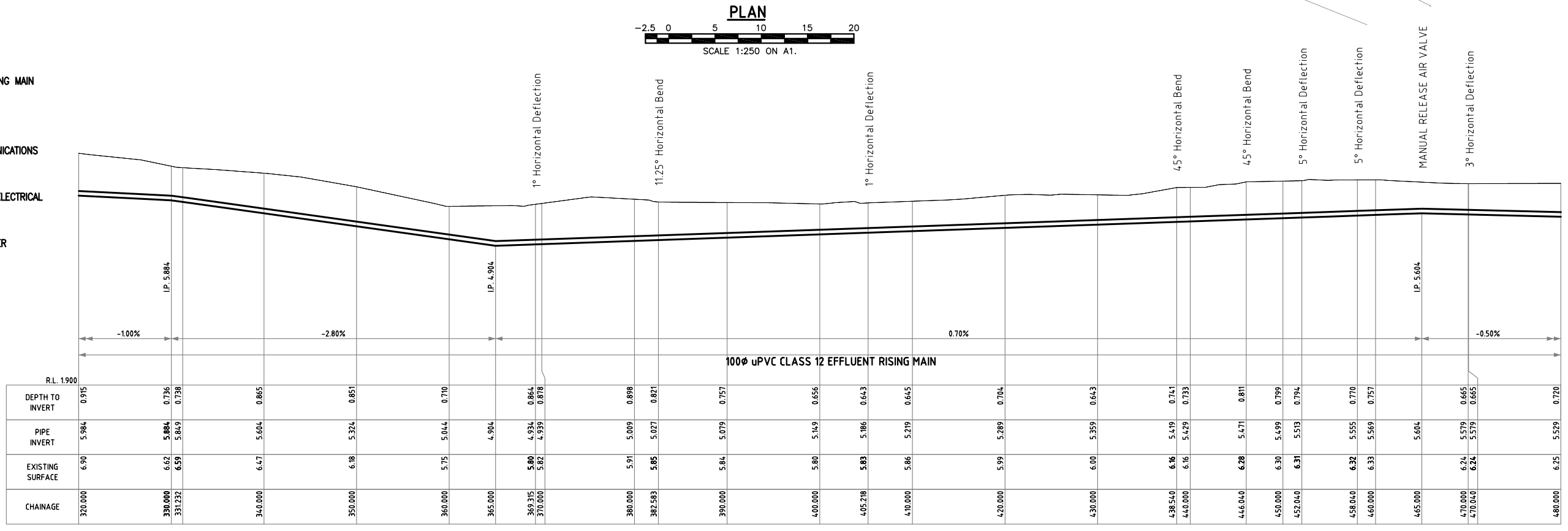
<p>C AMEND 100mmØ ALIGNMENT J.L.T. 9.2008</p> <p>B GENERAL AMENDMENTS N.R. 2.2008</p> <p>A ORIGINAL ISSUE N.D.B 1.2007</p> <p>ISSUE AMENDMENT DETAILS INITIALS DATE</p>		<p>COUNCIL OFFICES        TUMBULGUM ROAD,        MURWILLUMBAH,        NEW SOUTH WALES, 2484</p> <p>PHONE 02 66702400        FAX 02 66727513        www.tweed.nsw.gov.au</p>	<p>SUITE 4/60 NERANG STREET        GOLD COAST QLD 4211</p> <p>Telephone: (07) 5596 9600        Facsimile: (07) 5578 4295        www.mwhglobal.com</p>	<p>OFFICE MANAGER: P. Morgan        DATE: APRIL 2007</p> <table border="1"> <tr><td>DESIGNED</td><td>G.H</td><td>1.2007</td><td>DESIGN NO.</td><td>A1055100-C-005</td></tr> <tr><td>DRAWN</td><td>N.D.B</td><td>1.2007</td><td>SURVEY NO.</td><td></td></tr> <tr><td>CHECKED</td><td>N.T</td><td>1.2007</td><td>PROGRAM NO.</td><td></td></tr> <tr><td>HORIZONTAL DATUM</td><td>MGA</td><td></td><td>REDUCTION RATIO</td><td></td></tr> <tr><td>VERTICAL DATUM</td><td>AHD</td><td></td><td></td><td></td></tr> </table>	DESIGNED	G.H	1.2007	DESIGN NO.	A1055100-C-005	DRAWN	N.D.B	1.2007	SURVEY NO.		CHECKED	N.T	1.2007	PROGRAM NO.		HORIZONTAL DATUM	MGA		REDUCTION RATIO		VERTICAL DATUM	AHD				<p>PROJECT: HASTINGS POINT RECYCLED WATER IRRIGATION SCHEME</p> <p>PLAN TITLE: PROJECT PLAN SHEET 2 OF 4 LONGITUDINAL SECTION</p>	<p>DRAWING NUMBER: WT06031/05</p> <p>SHEET 5 OF 12 SHEETS</p> <p>ISSUE A B C</p>
DESIGNED	G.H	1.2007	DESIGN NO.	A1055100-C-005																											
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NOTE: FULL SIZE ON ORIGINAL.		0 10 20 30 40 50		100 150 200 250	ACAD FILE No	G:\_AUTOCAD DRAWINGS\JacquiF\WT06031- Hastings Point\WT06031-01 to 09.dwg																									

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**LONGITUDINAL SECTION CH 320.000 TO 480.000**

HORIZONTAL A3 1:500, A1 1:250  
 VERTICAL A3 1:100, A1 1:50

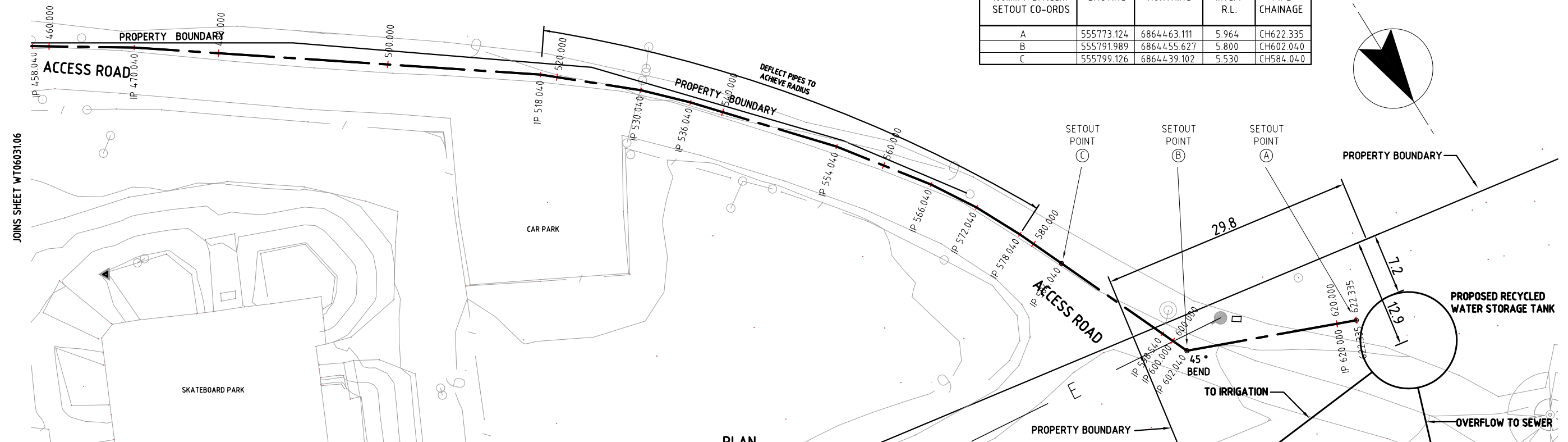
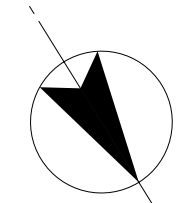
**PRELIMINARY ISSUE**

<p>C AMEND 100mmØ ALIGNMENT J.L.T. 9.2008</p> <p>B GENERAL AMENDMENTS N.R. 2.2008</p> <p>A ORIGINAL ISSUE N.D.B 1.2007</p> <p>ISSUE AMENDMENT DETAILS INITIALS DATE</p>		<p>COUNCIL OFFICES        TUMBULGUM ROAD,        MURWILLUMBAH,        NEW SOUTH WALES, 2484        PHONE 02 66702400        FAX 02 66727513        www.tweed.nsw.gov.au</p>	<p>SUITE 4/60 NERANG STREET        GOLD COAST QLD 4211        Telephone: (07) 5596 9600        Facsimile: (07) 5578 4295        www.mwhglobal.com</p>	<p>OFFICE MANAGER: P. Morgan        DATE: APRIL 2007        DESIGNED G.H. 1.2007 DESIGN NO. A1055100-C-006        DRAWN N.D.B 1.2007 SURVEY NO.        CHECKED N.T. 1.2007 PROGRAM NO.        HORIZONTAL DATUM MGA REDUCTION RATIO        VERTICAL DATUM AHD</p>	<p>PROJECT: HASTINGS POINT RECYCLED WATER IRRIGATION SCHEME        PLAN TITLE: PROJECT PLAN SHEET 3 OF 4 LONGITUDINAL SECTION</p>	<p>DRAWING NUMBER: WT06031/06        SHEET 6 OF 12 SHEETS        ISSUE A B C</p>
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NOTE: FULL SIZE ON ORIGINAL.

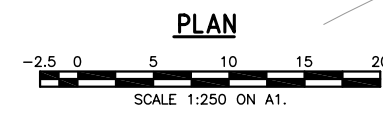
0|10|20|30|40|50|100|150|200|250| ACAD FILE No G:\\_AUTOCAD DRAWINGS\JacquiF\WT06031- Hastings Point\WT06031-01 to 09.dwg

100mm Ø Effluent SETOUT CO-ORDS	EASTING	NORTHING	Invert R.L.	PIPE CHAINAGE
A	555773.124	6864463.111	5.964	CH622.335
B	555791.989	6864455.627	5.800	CH602.040
C	555799.126	6864439.102	5.530	CH584.040



**LEGEND**

- PROPOSED #100 RISING MAIN
- HYD — PROPOSED HYDRANT
- EXISTING WATER
- EXISTING TELECOMMUNICATIONS
- EXISTING SEWER
- EXISTING OVERHEAD ELECTRICAL
- EXISTING ELECTRICAL
- EXISTING STORM WATER
- EXISTING OPTIC FIBRE
- PROPERTY BOUNDARY
- RETAINING WALL



CHAINAGE	EXISTING SURFACE	PIPE INVERT	DEPTH TO INVERT	GRADE (%)	REMARKS
480.000	6.25	5.529	0.720	-0.50%	
490.000	6.21	5.479	0.734		
500.000	6.19	5.429	0.759	-0.50%	
510.000	6.15	5.379	0.766		
518.040	6.04	5.339	0.702	0.60%	
520.000	6.03	5.329	0.698		
530.000	5.96	5.279	0.678	0.60%	
530.040	5.96	5.279	0.678		
536.040	5.96	5.249	0.713	0.60%	
540.000	5.97	5.229	0.739		
550.000	6.04	5.289	0.752	0.60%	
554.040	6.06	5.313	0.743		
560.000	6.12	5.349	0.767	0.60%	
566.040	6.15	5.385	0.764		
570.000	6.20	5.409	0.789	0.60%	
572.040	6.19	5.421	0.766		
578.040	6.24	5.451	0.782	0.60%	
580.000	6.27	5.449	0.796		
584.040	6.31	5.530	0.776	1.50%	Telstra Conduit RL 5.69 To be abandoned
590.000	6.37	5.619	0.747		
597.650	6.39	5.747	0.648	1.50%	Telstra Conduit RL 5.69 To be abandoned
598.540	6.39	5.747	0.648		
600.000	6.40	5.769	0.629	1.50%	Telstra Conduit RL 5.69 To be abandoned
602.040	6.42	5.800	0.619		
607.580				1.50%	Telstra Conduit RL 5.69 To be abandoned
608.070					
610.000	6.41	5.919	0.495	0.00%	Proposed Electrical Conduit RL 5.83 PROP. 375Ø SW INV RL 5.278
610.940					
611.800				0.00%	Proposed Electrical Conduit RL 5.83 PROP. 375Ø SW INV RL 5.278
613.000					
616.420				0.00%	Telstra Conduit RL 5.69 To be abandoned
620.000	6.44	5.964	0.471		
622.335	6.45	5.964	0.483	0.00%	

CH 590.000 - CH 622.335  
Proposed Effluent pipe has less than 600mm cover under the road reserve, therefore encase pipe with concrete

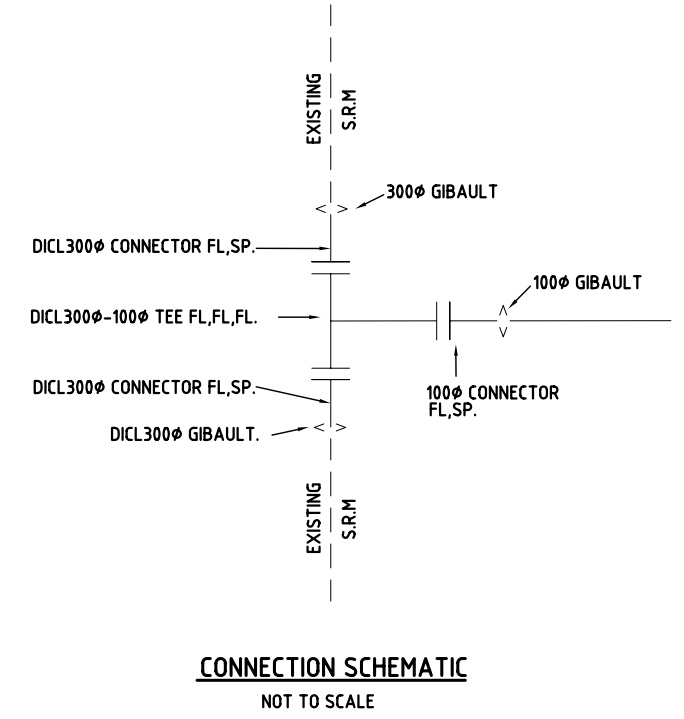
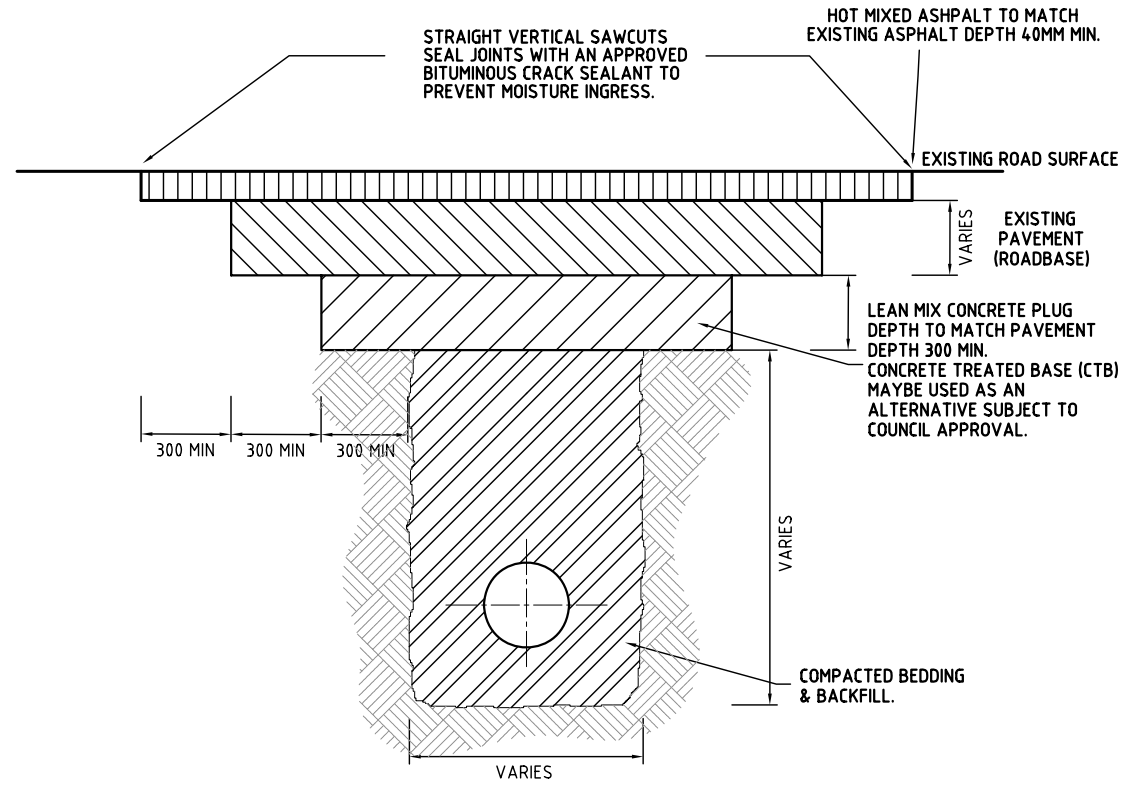
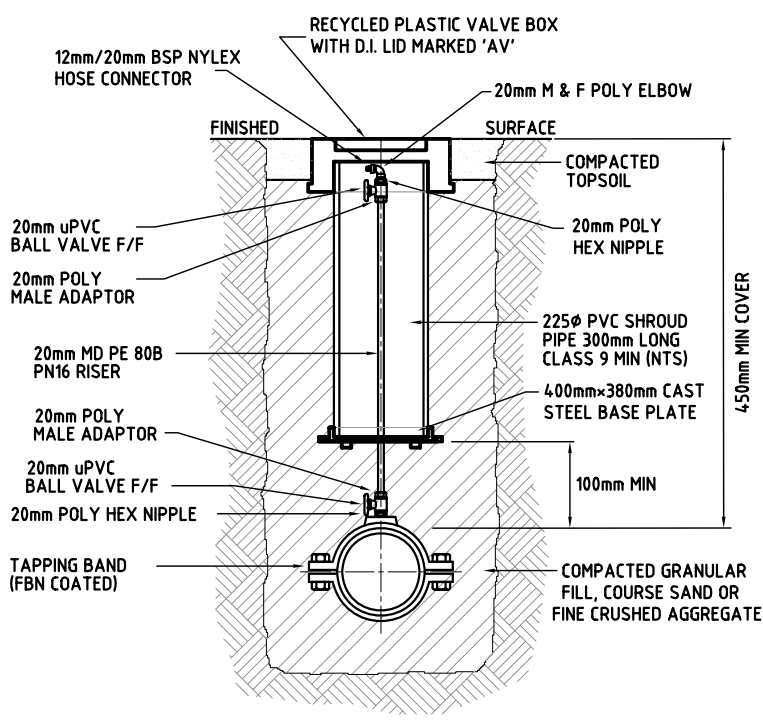
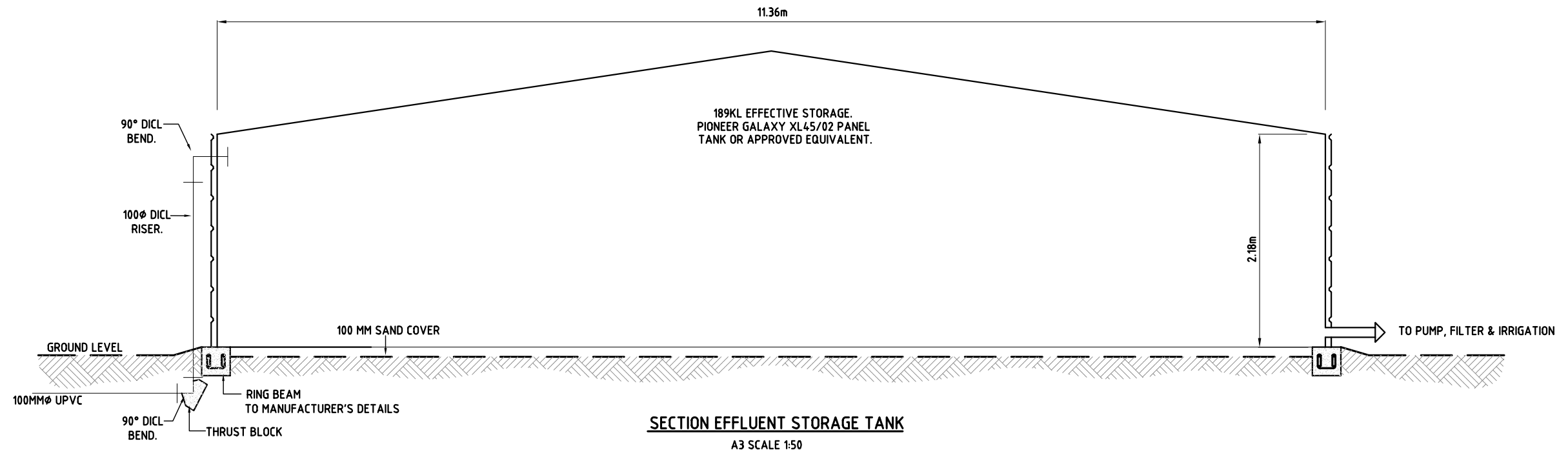
**LONGITUDINAL SECTION CH 480.000 TO 622.335**

HORIZONTAL A3 1:500, A1 1:250  
VERTICAL A3 1:100, A1 1:50

**PRELIMINARY ISSUE**

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%;">C</td> <td style="width: 75%;">AMEND 100mm Ø ALIGNMENT</td> <td style="width: 10%;">J.L.T.</td> <td style="width: 10%;">9.2008</td> </tr> <tr> <td>B</td> <td>GENERAL AMENDMENTS</td> <td>N.R.</td> <td>2.2008</td> </tr> <tr> <td>A</td> <td>ORIGINAL ISSUE</td> <td>N.D.B</td> <td>1.2007</td> </tr> <tr> <td>ISSUE</td> <td>AMENDMENT DETAILS</td> <td>INITIALS</td> <td>DATE</td> </tr> </table>	C	AMEND 100mm Ø ALIGNMENT	J.L.T.	9.2008	B	GENERAL AMENDMENTS	N.R.	2.2008	A	ORIGINAL ISSUE	N.D.B	1.2007	ISSUE	AMENDMENT DETAILS	INITIALS	DATE	<p><b>TWEED</b> TWEED SHIRE COUNCIL</p>	<p><b>COUNCIL OFFICES</b> TUMBLGUM ROAD, MURWILLUMBAH, NEW SOUTH WALES, 2484</p> <p>PHONE 02 66702400 FAX 02 66727513 www.tweed.nsw.gov.au</p>	<p><b>MWH</b></p> <p>SUITE 4/60 NERANG STREET GOLD COAST QLD 4211 Telephone: (07) 5596 9600 Facsimile: (07) 5578 4295 www.mwhglobal.com</p>	<p>OFFICE MANAGER: <i>P. Morgan</i> RPEQ No.: .....</p> <p>DATE: <i>APRIL 2009</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DESIGNED</td> <td>G.H</td> <td>1.2007</td> <td>DESIGN NO.</td> <td>A1055100-C-007</td> </tr> <tr> <td>DRAWN</td> <td>N.D.B</td> <td>1.2007</td> <td>SURVEY NO.</td> <td></td> </tr> <tr> <td>CHECKED</td> <td>N.T</td> <td>1.2007</td> <td>PROGRAM NO.</td> <td></td> </tr> <tr> <td>HORIZONTAL DATUM</td> <td>MGA</td> <td></td> <td>REDUCTION RATIO</td> <td></td> </tr> <tr> <td>VERTICAL DATUM</td> <td>AHD</td> <td></td> <td></td> <td></td> </tr> </table>	DESIGNED	G.H	1.2007	DESIGN NO.	A1055100-C-007	DRAWN	N.D.B	1.2007	SURVEY NO.		CHECKED	N.T	1.2007	PROGRAM NO.		HORIZONTAL DATUM	MGA		REDUCTION RATIO		VERTICAL DATUM	AHD				<p>PROJECT: <b>HASTINGS POINT RECYCLED WATER IRRIGATION SCHEME</b></p> <p>PLAN TITLE: <b>PROJECT PLAN SHEET 4 OF 4 LONGITUDINAL SECTION</b></p> <p>ACAD FILE No</p>	<p>DRAWING NUMBER: <b>WT06031/07</b></p> <p>SHEET 7 OF 12 SHEETS</p> <p>ISSUE <b>A B C</b></p>
C	AMEND 100mm Ø ALIGNMENT	J.L.T.	9.2008																																												
B	GENERAL AMENDMENTS	N.R.	2.2008																																												
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CHECKED	N.T	1.2007	PROGRAM NO.																																												
HORIZONTAL DATUM	MGA		REDUCTION RATIO																																												
VERTICAL DATUM	AHD																																														
NOTE: FULL SIZE ON ORIGINAL.		0 10 20 30 40 50 100 150 200 250		G:\_AUTOCAD DRAWINGS\JacquiF\WT06031- Hastings Point\WT06031-01 to 09.dwg																																											





**MANUAL AIR RELEASE VALVE DETAIL IN FOOTPATHS**  
NOT TO SCALE

**TRENCH DETAIL IN EXISTING ROAD**  
NOT TO SCALE

**CONNECTION SCHEMATIC**  
NOT TO SCALE

**PRELIMINARY ISSUE**

B	GENERAL AMENDMENTS	N.R.	2.2008
A	ORIGINAL ISSUE	N.D.B	1.2007
ISSUE	AMENDMENT DETAILS	INITIALS	DATE

**TWEED**  
TWEED SHIRE COUNCIL

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OFFICE MANAGER: *P. Morgan* RPEQ No.:  
DATE: *APRIL 2007*

DESIGNED	G.H	1.2007	DESIGN NO.	A1055100-C-008
DRAWN	N.D.B	1.2007	SURVEY NO.	
CHECKED	N.T	1.2007	PROGRAM NO.	
HORIZONTAL DATUM	MGA		REDUCTION RATIO	
VERTICAL DATUM	AHD			

PROJECT: **HASTINGS POINT RECYCLED WATER IRRIGATION SCHEME**

PLAN TITLE: **SCHEMATIC PLANS**

DRAWING NUMBER: **WT06031/08**

SHEET 8 OF 12 SHEETS

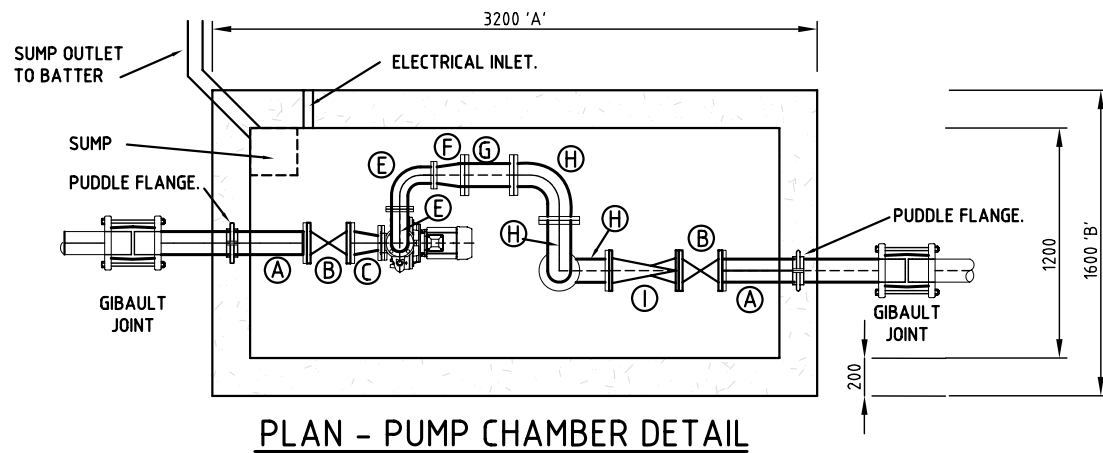
ISSUE	A	B	C
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NOTE: FULL SIZE ON ORIGINAL.

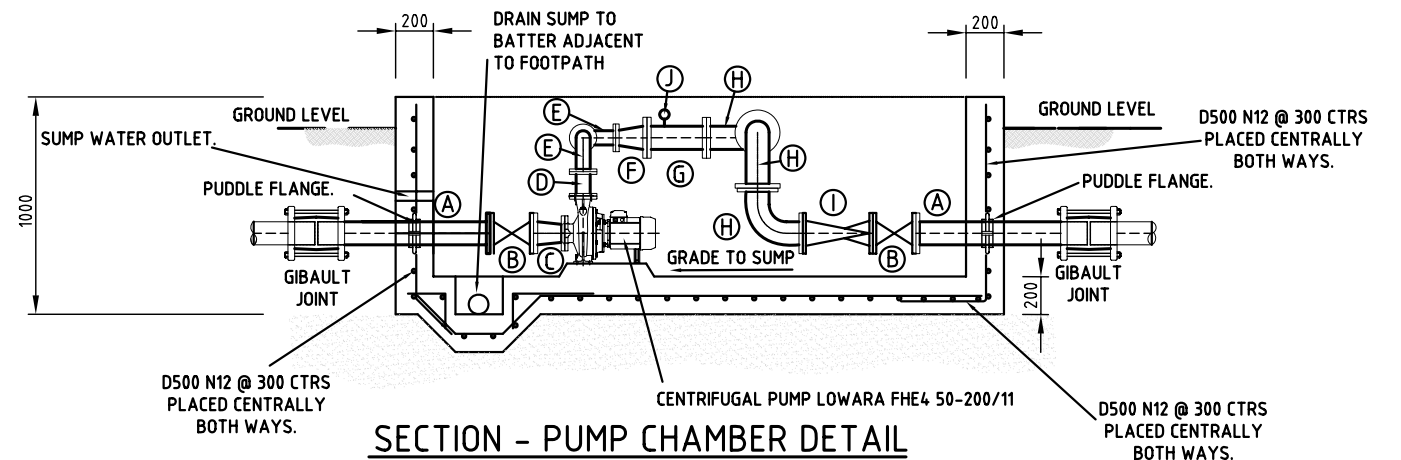


**NOTE:**

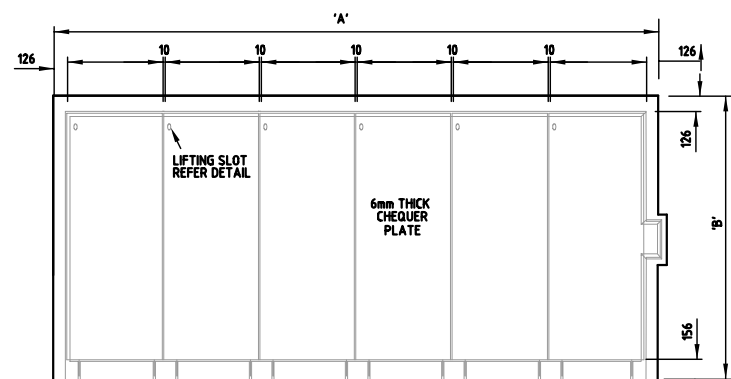
DISCHARGE SUMP WATER TO AN APPROPRIATE PLACE AS DETERMINED ON SITE AND AS AGREED WITH THE SUPERINTENDENT.



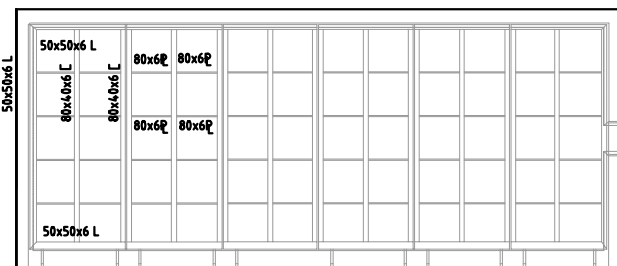
PLAN - PUMP CHAMBER DETAIL



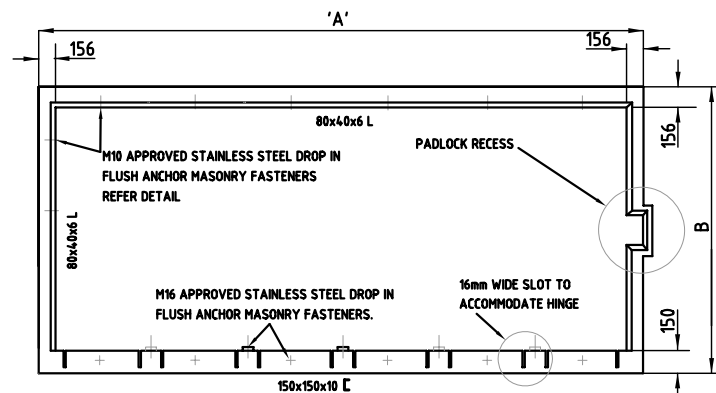
SECTION - PUMP CHAMBER DETAIL



PLAN - COVERS IN PLACE



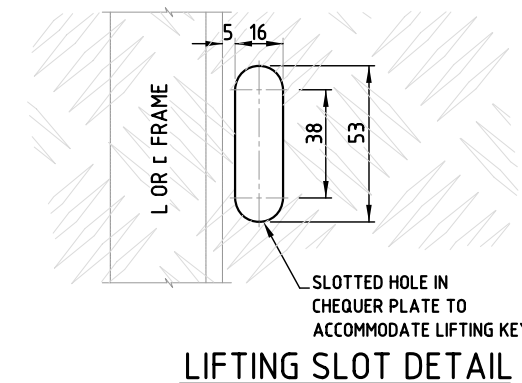
PLAN - COVER FRAMES



EXTERNAL FRAME

**FITTINGS SCHEDULE**

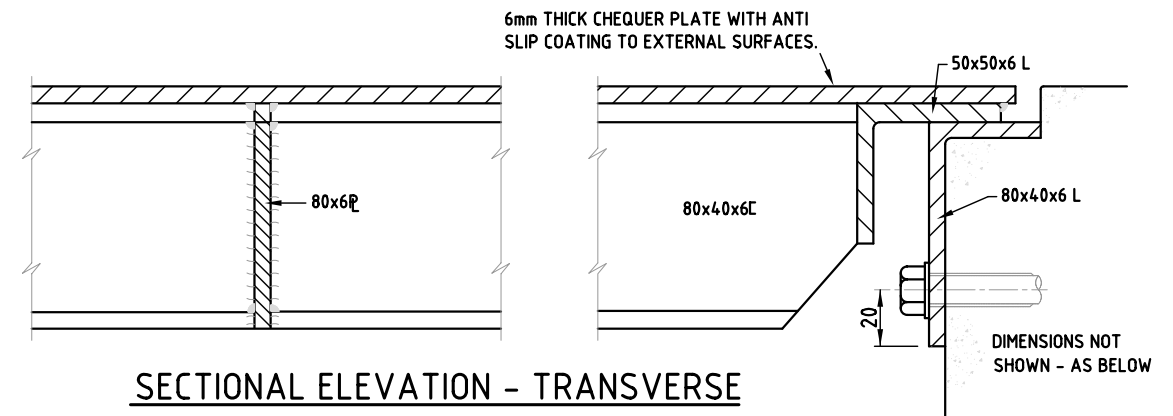
ITEM:	DESCRIPTION:	QTY:
A	DICL DN100 FL SC CONNECTOR (P.FLANGE)	2
B	DICL DN100 FL-FL SLUICE VALVE	2
C	DICL DN100x50 ECCENTRIC FL-FL TAPER	1
D	DICL DN65 FL-FL PIPE CONNECTOR	1
E	DICL DN 65 90° FL-FL BEND	2
F	DICL DN65x100 ECCENTRIC TAPER	1
G	DICL DN100 FL-FL CONNECTOR	1
H	DICL DN100 90° FL-FL BEND	3
I	DICL DN100 FL-FL NON RETURN VALVE	1
J	25 mm AIR VALVE x (x NOT DICL)	1



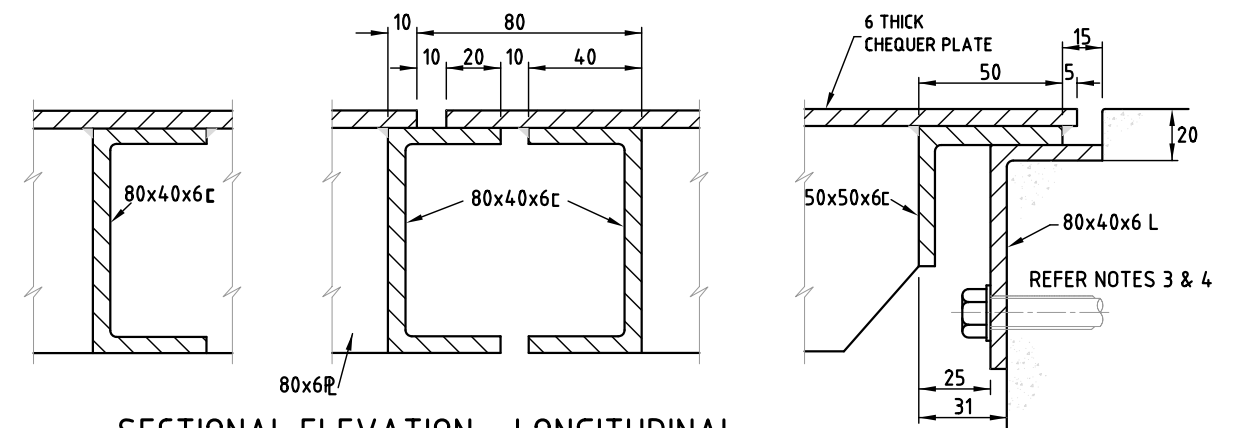
LIFTING SLOT DETAIL

**NOTES:**

1. ALL COMPONENTS SHALL BE ALLUMINIUM ALLOY 6061-T1 UNLESS SHOWN OTHERWISE
2. ALL CONNECTIONS SHALL BE WELDED WITH 6mm CONTINUOUS FILLET OR FULL STRENGTH BUTT WELDS UNLESS SHOWN OTHERWISE
3. ISOLATE FASTENERS FROM FRAME AND CONCRETE STRUCTURE WITH A BITUMINOUS PAINT TO BOLT SHANK AND TO FRAME.
4. M10 STAINLESS STEEL DROP IN FLUSH ANCHOR MASONRY FASTENERS TO BE POSITIONED AS DETAILED
5. DIMENSIONS ARE IN MILLIMETERS UNLESS SHOWN OTHERWISE.



SECTIONAL ELEVATION - TRANSVERSE



SECTIONAL ELEVATION - LONGITUDINAL COVER DETAILS

**PRELIMINARY ISSUE**

ISSUE	AMENDMENT DETAILS	INITIALS	DATE
B	GENERAL AMENDMENTS	N.R.	2.2008
A	ORIGINAL ISSUE	N.D.B	1.2007

**TWEED**  
TWEED SHIRE COUNCIL

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OFFICE MANAGER: *P. Morgan* RPEQ No.:

DATE: *APRIL 2007*

DESIGNED	G.H	1.2007	DESIGN NO.	A1055100-C-009
DRAWN	N.D.B	1.2007	SURVEY NO.	
CHECKED	N.T	1.2007	PROGRAM NO.	
HORIZONTAL DATUM	MGA		REDUCTION RATIO	
VERTICAL DATUM	AHD			

PROJECT: **HASTINGS POINT RECYCLED WATER IRRIGATION SCHEME**

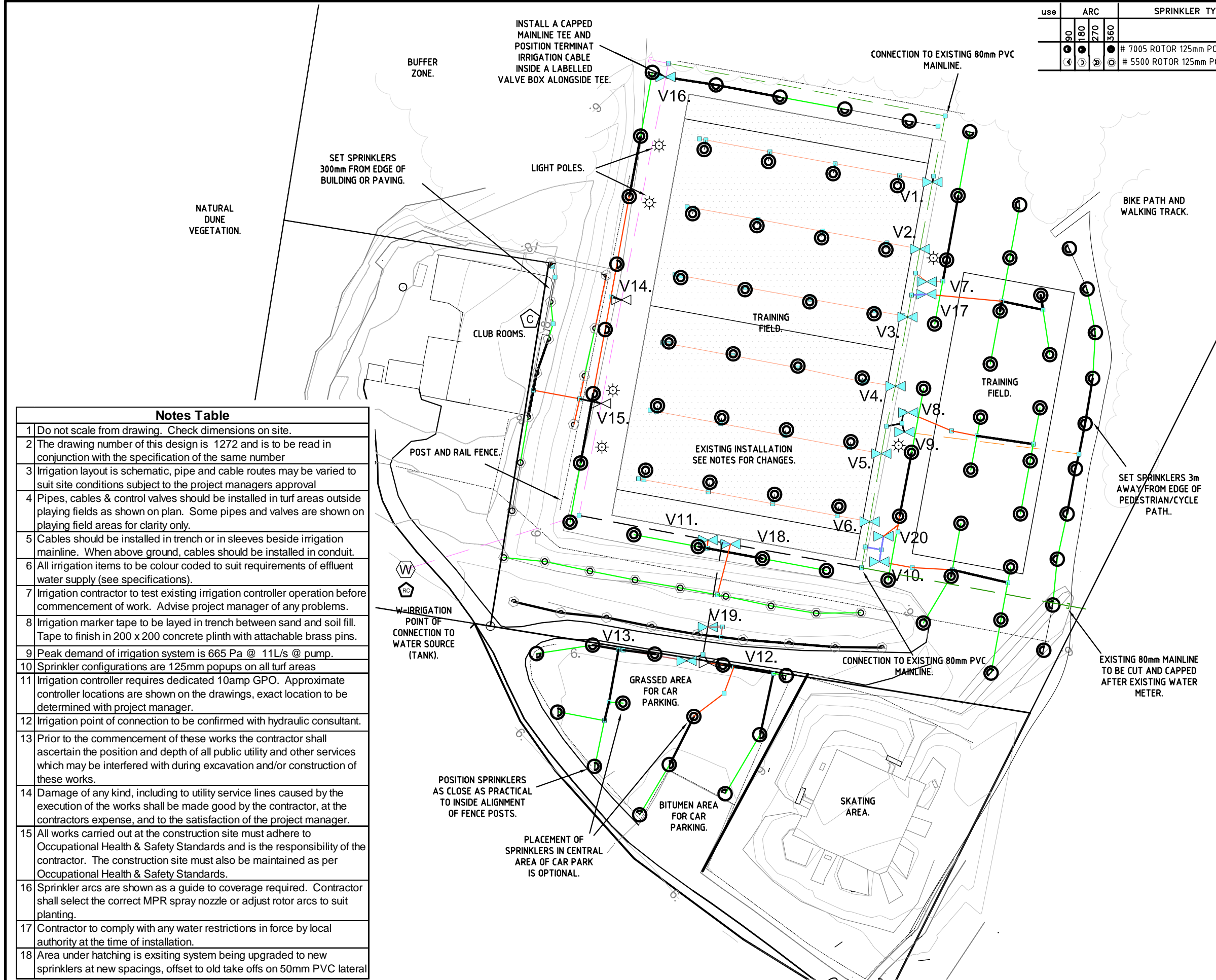
PLAN TITLE: **BOOSTER PUMP CHAMBER AND COVER DETAILED DRAWINGS**

DRAWING NUMBER: **WT06031/09**

SHEET **9** OF 12 SHEETS

ISSUE **A B C**

use	ARC	SPRINKLER TYPE LEGEND
90	180	# 7005 ROTOR 125mm POP-UP: RADIUS 19.7m at 400 kPa - STREAM HEIGHT 5.0m
270	360	
4	9	# 5500 ROTOR 125mm POP-UP: RADIUS 14.2m at 400 kPa - STREAM HEIGHT 2.5m



**LEGEND**

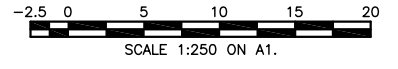
- EXISTING IRRIGATION CONTROLLER
- EXISTING RPZ VALVE
- WATER SUPPLY, PUMP AND FILTER
- IRRIGATION CONTROLLER
- QUICK COUPLING VALVE
- 40mm CONTROL VALVE
- 50mm CONTROL VALVE
- CONDUIT SLEEVE
- LIGHT POLE
- EXISTING SYSTEM

**MAINLINE PIPES PN12**

- 150 mm RRJ PVC PIPE CLASS 12
- 100 mm RRJ PVC PIPE CLASS 12
- 80 mm RRJ PVC PIPE CLASS 12

**LATERAL PIPES PN10**

- 90 mm MDPE LATERAL PIPE PN10
- 75 mm MDPE LATERAL PIPE PN10
- 63 mm MDPE LATERAL PIPE PN10
- 50 mm MDPE LATERAL PIPE PN10
- 40 mm MDPE LATERAL PIPE PN10
- 32 mm MDPE LATERAL PIPE PN10



**PRELIMINARY ISSUE**

**Notes Table**

- 1 Do not scale from drawing. Check dimensions on site.
- 2 The drawing number of this design is 1272 and is to be read in conjunction with the specification of the same number
- 3 Irrigation layout is schematic, pipe and cable routes may be varied to suit site conditions subject to the project managers approval
- 4 Pipes, cables & control valves should be installed in turf areas outside playing fields as shown on plan. Some pipes and valves are shown on playing field areas for clarity only.
- 5 Cables should be installed in trench or in sleeves beside irrigation mainline. When above ground, cables should be installed in conduit.
- 6 All irrigation items to be colour coded to suit requirements of effluent water supply (see specifications).
- 7 Irrigation contractor to test existing irrigation controller operation before commencement of work. Advise project manager of any problems.
- 8 Irrigation marker tape to be layed in trench between sand and soil fill. Tape to finish in 200 x 200 concrete plinth with attachable brass pins.
- 9 Peak demand of irrigation system is 665 Pa @ 11L/s @ pump.
- 10 Sprinkler configurations are 125mm popups on all turf areas
- 11 Irrigation controller requires dedicated 10amp GPO. Approximate controller locations are shown on the drawings, exact location to be determined with project manager.
- 12 Irrigation point of connection to be confirmed with hydraulic consultant.
- 13 Prior to the commencement of these works the contractor shall ascertain the position and depth of all public utility and other services which may be interfered with during excavation and/or construction of these works.
- 14 Damage of any kind, including to utility service lines caused by the execution of the works shall be made good by the contractor, at the contractors expense, and to the satisfaction of the project manager.
- 15 All works carried out at the construction site must adhere to Occupational Health & Safety Standards and is the responsibility of the contractor. The construction site must also be maintained as per Occupational Health & Safety Standards.
- 16 Sprinkler arcs are shown as a guide to coverage required. Contractor shall select the correct MPR spray nozzle or adjust rotor arcs to suit planting.
- 17 Contractor to comply with any water restrictions in force by local authority at the time of installation.
- 18 Area under hatching is existing system being upgraded to new sprinklers at new spacings, offset to old take offs on 50mm PVC lateral

ISSUE	AMENDMENT DETAILS	INITIALS	DATE
A	ORIGINAL ISSUE	R.H.	5.2007

**TWEED**  
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**HYDRO-PLAN**  
Irrigation and Water Resource Consultants

PO Box 2840  
Southport, Qld 4215  
Tel: (07) 55322244  
Fax: (07) 55323304  
Mobile: (04) 214 58256  
hne@hydroplan.com.au

OFFICE MANAGER: *P. Morgan* RPEQ No:.....  
DATE: *APRIL 2007*

DESIGNED	DESIGN NO.
DRAWN	SURVEY NO.
CHECKED	PROGRAM NO.
HORIZONTAL DATUM	MGA
VERTICAL DATUM	AHD
	REDUCTION RATIO

PROJECT: **HASTINGS POINT RECYCLED WATER IRRIGATION SCHEME**

PLAN TITLE: **SITE IRRIGATION LAYOUT PLAN**

ACAD FILE No: .....

DRAWING NUMBER: **WT06031/10**

SHEET 10 OF 12 SHEETS

ISSUE **A**

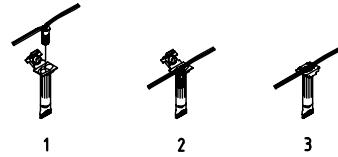
NOTE: FULL SIZE ON ORIGINAL.

CABLE PATHS					
Cable Path Route	Active Cores	Active Size (mm) & Conductor	Common Core	Common Size (mm) & Conductor	Route
A	13	1.5mm & 7 x 0.50	1	4mm & 7 x 0.85	Controller @ Tank to last valve on existing field, V1 via V 11 to V7
B	7	1.5mm & 7 x 0.50	1	2.5mm & 7 x 0.67	Controller @ Tank to V12 & V13 via V 11 & V17
C	7	1.5mm & 7 x 0.50	1	2.5mm & 7 x 0.67	Controller @ Tank to V16 via V 14 & V16
D	13	1.5mm & 7 x 0.50	1	6mm & 7 x 1.04	Controller @ Tank to Separate Valve box beside V16 for future extension

Irrigation Shift Operation					
Shift No.	Valves	Precipitation rate	Shift Flow	Duty Pressure	Shift Time for 5.3 mm
		mm/hr	lps	m	minutes
A	14,16	13.7	10.8		23.4
B	1,2	13.7	9		23.4
C	3,7	13.7	9		23.4
D	9,17	12.2	9.4		25.8
E	4,5	13.7	9		23.4
F	15,19	19.6	10.8		16.2
G	8,10	12.9	8.3		24.6
H	6,20	13.7	9		23.4
I	11,13	14.4	9.8		22.3
J	12,18	14.3	10.3		22.2
Totals					228.1

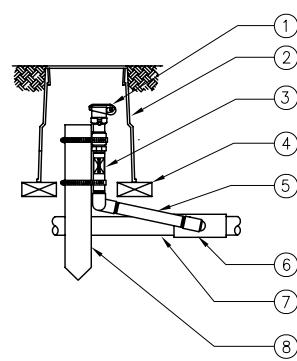
Valve Table									
Valve No	Valve size	Pressure	Sprinkler Type	Number of Sprinklers	Nozzle No.	Precipitation Rate	Valve Flow	Run Time for 5.3 mm	Shift No
	mm	kPa				mm/hr	lps	hrs	
1	40	410	7005	4	18	13.7	4.47	0.39	B
2	40	410	7005	4	18	13.7	4.47	0.39	B
3	40	410	7005	4	18	13.7	4.47	0.39	C
4	40	410	7005	4	18	13.7	4.47	0.39	E
5	40	410	7005	4	18	13.7	4.47	0.39	E
6	40	410	7005	4	18	13.7	4.47	0.39	H
7	40	410	7005	4	18	14.8	4.41	0.36	C
8	40	410	7005	5	12	12.9	3.78	0.41	G
9	40	410	7005	10	8	12.2	5.14	0.43	D
10	40	410	7005	6	12	12.9	4.54	0.41	G
11	40	410	7005	4	18	14.4	4.47	0.37	I
12	50	410	7005	7	18,16,12	13.7	6.98	0.39	J
13	40	410	7005	6	18,12,10	13.7	5.37	0.39	I
14	50	410	7005	8	18	13.7	8.23	0.39	A
15	50	410	5000	7	8,6	19.6	5.56	0.27	F
16	40	410	7005	4	10	14.8	2.54	0.36	A
17	40	410	7005	6	12	12.9	4.27	0.41	D
18	40	410	7005	9	6	14.3	3.34	0.37	J
19	40	410	7005	9	6	19.6	5.23	0.27	F
20	40	410	7005	4	18	14.8	4.41	0.36	H

DBY OR DBR CABLE JOINERS  
N.T.S



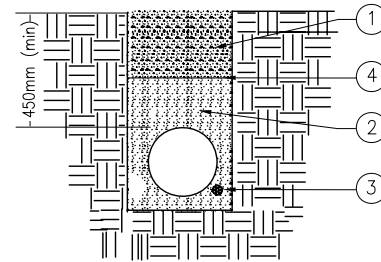
TYPICAL CONNECTION PROCESS WHEN CORRECTLY INSTALLED THE JOIN CAN NOT BE PULLED OUT OF THE GEL FILLED CAPSULE.

QUICK COUPLING DETAIL  
N.T.S



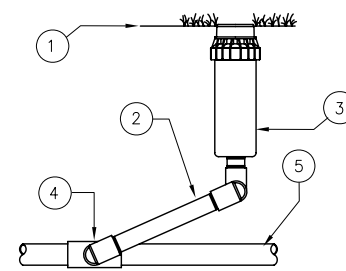
1. QUICK COUPLING VALVE
2. APPROVED VALVE BOX WITH LID
3. PVC SCHEDULE 80 NIPPLES AND BALL VALVES
4. BRICK SUPPORTS (4)
5. PVC SCHEDULE 80 "O" RING 25mm SWING JOINT RISER
6. COMPRESSION TEE, LINE SIZE WITH 1" BSPF SCREWED OUTLET
7. MAINLINE
8. 50mm x 50mm HARDWOOD STAKE STAINLESS GEAR CLAMP

MAINLINE TRENCH DETAIL  
N.T.S



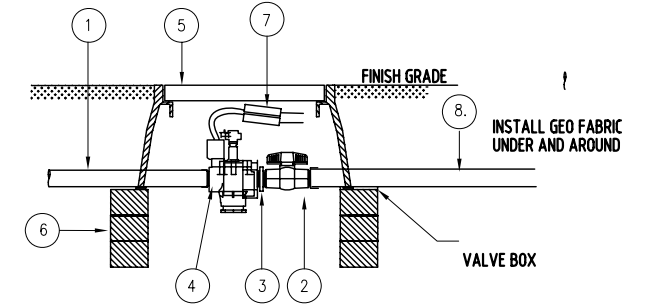
1. APPROVED BACK FILL
2. 100mm SAND BEDDING ABOVE PIPE AND 50mm BELOW PIPE
3. CONTROL OR DECODER CABLE
4. IRRIGATION MARKER TAPE

125mm POP UP ROTOR SPRINKLER  
N.T.S



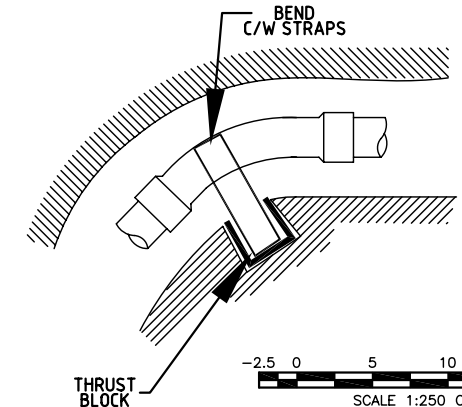
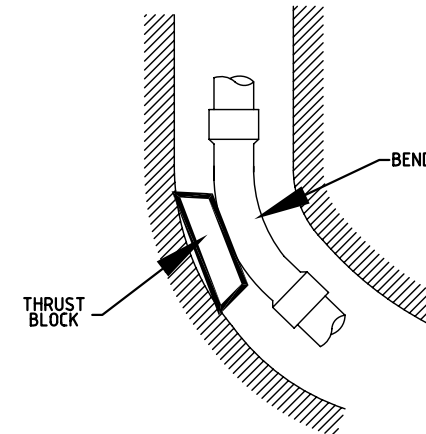
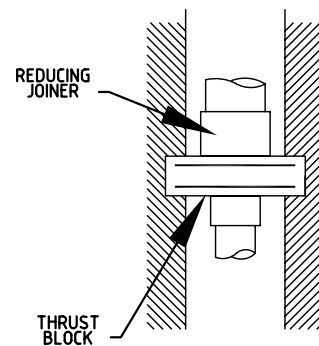
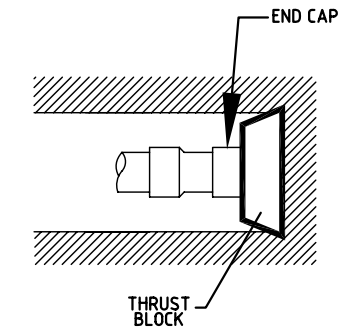
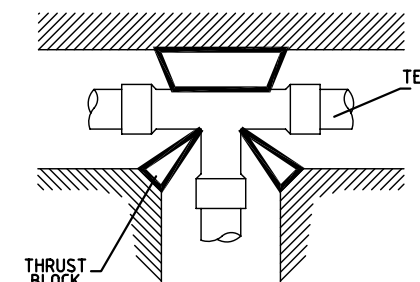
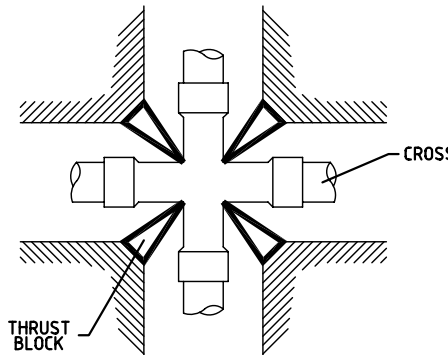
1. FINISH GRADE
2. SCHEDULE 80 PVC ARTICULATED RISER, 300mm SIZED TO MATCH SPRINKLER INLET
3. POP UP SPRINKLER
4. TAPPING SADDLE LINE SIZE WITH BSP SCREWED OUTLET STAINLESS BOLTS ETC.
5. LATERAL PIPE

CONTROL VALVE  
TYPICAL INSTALLATION DETAIL  
N.T.S



1. M.D.P.E. LATERAL PIPE.
2. 1400 KPa PLASTIC BALL VALVE.
3. H.D. POLY NIPPLE.
4. 24VAC 25mm SOLENOID VALVE - PRESSURE REGULATING (as specified)
5. RECTANGULAR VALVE BOX WITH BOLT DOWN LID (HR1419 OR EQUIVALENT).
6. BRICKS TO SUPPORT BOX.
7. 3M-DBY CABLE SPLICE JOINT.
8. M.D.P.E MAINLINE PIPE

TYPICAL THRUST BLOCK INSTALLATION DETAIL  
N.T.S



SCALE 1:250 ON A1.

PRELIMINARY ISSUE

ISSUE	AMENDMENT DETAILS	INITIALS	DATE
A	ORIGINAL ISSUE	R.H.	5.2007

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OFFICE MANAGER: <i>P. Morgan</i>	RPEQ No.:
DATE: APRIL 2007	
DESIGNED	DESIGN NO.
DRAWN	SURVEY NO.
CHECKED	PROGRAM NO.
HORIZONTAL DATUM	MGA
VERTICAL DATUM	AHD
	REDUCTION RATIO

PROJECT: HASTINGS POINT  
RECYCLED WATER IRRIGATION LAYOUT

PLAN TITLE: DETAILS SHEET 1

DRAWING NUMBER:	WT06031/11
SHEET 11 OF 12 SHEETS	
ISSUE A	

NOTE: FULL SIZE ON ORIGINAL.

0 100 200 300 400 500mm

100mm

150mm

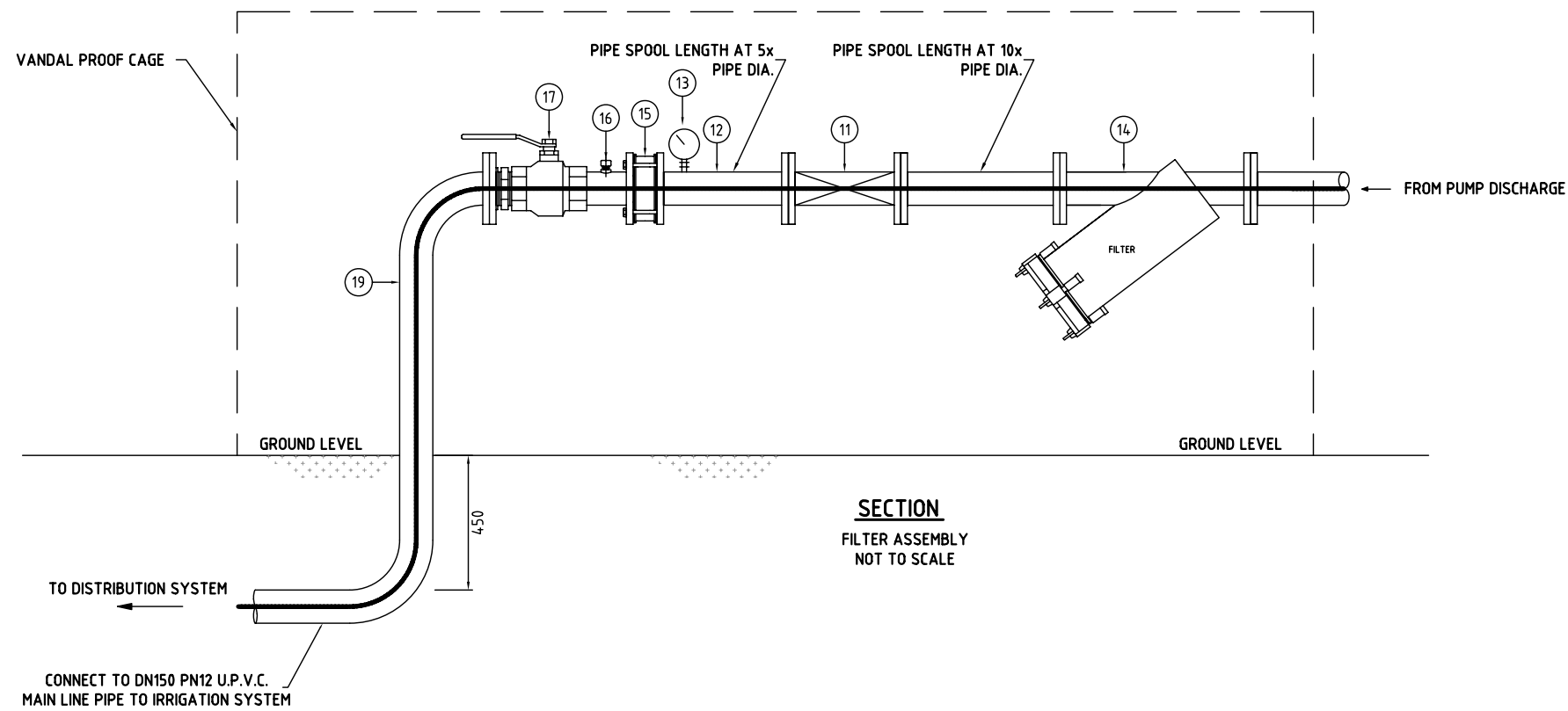
200mm

250mm

ACAD FILE No

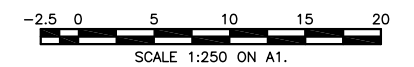
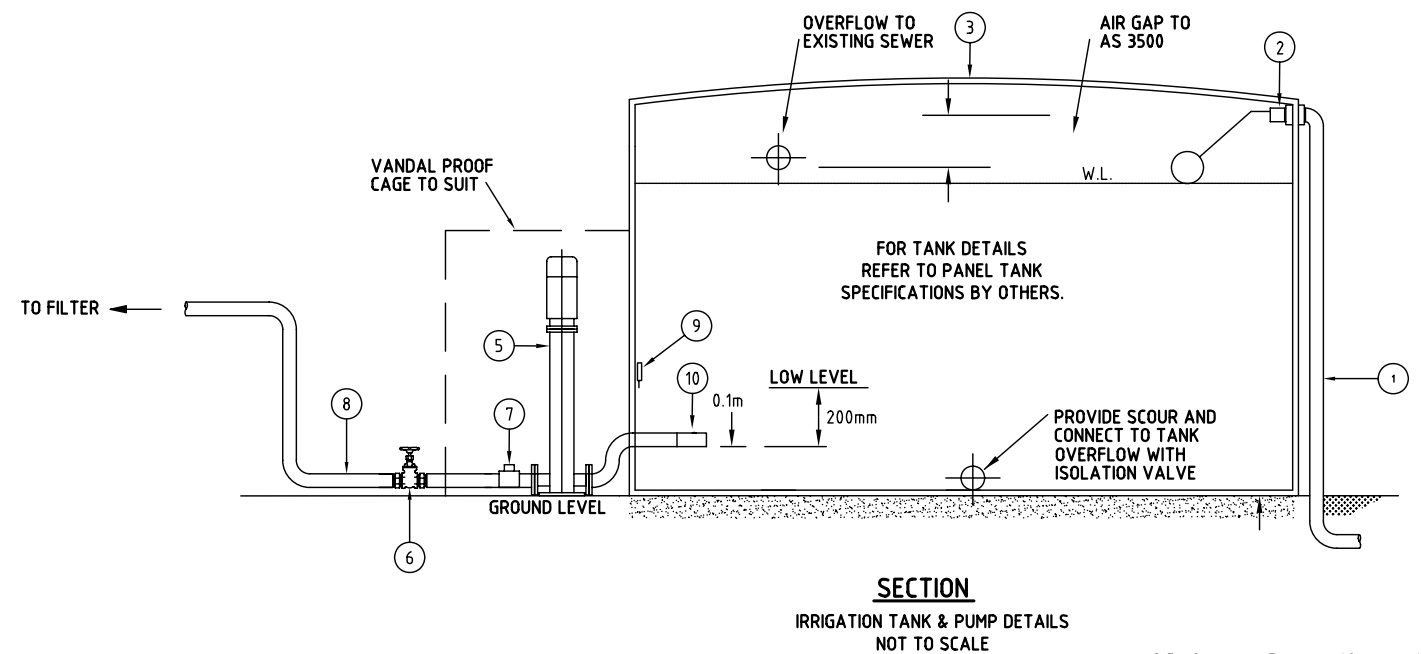
G:\\_AUTOCAD\_DRAWINGS\JACQUIE\WT06031-HASTINGSPOINT\WT06031-10T012.DWG





**LEGEND**

1. 100# DICL SUPPLY FROM RECYCLED WATER PIPELINE.
2. 1. 50mm PILOT ACTUATED FLOAT VALVE, 'BERMAD' OR EQUIVALENT.
3. STEEL PANEL TANK
4. CONCRETE SUPPORT AND STAINLESS STEEL CLAMP
5. SUBMERSIBLE PUMPING UNIT, 'GRUNDFOS' SP46-7 OR EQUIVALENT
6. 80mm JOHNS 59M GATE VALVE.
7. TEST TEE AND PLUG.
8. 110DN PN10 M.D.P.E. MAINLINE PIPE
9. LOW LEVEL PROBE.
10. 80mm MEDIUM G.W.I. PIPE.
11. DN100 'BERMAD' FLOW METER
12. DN100 SCHEDULE 40 FLANGED PIPE.
13. 1500 kPa RATED 100mm DIA. PRESSURE GAUGE WITH ON/OFF COCK.
14. DN100 'AMIAD' (OR EQUIVALENT) SCREEN FILTER WITH 120 MICRON MESH SCREEN.
15. DN100 1400 kPa RATED CHECK VALVE.
16. PRESSURE TRANSDUCER.
17. DN100 1400 kPa RATED LOCKABLE STAINLESS STEEL BALL VALVE.



**PRELIMINARY ISSUE**

**NOTE:**

LOCATE 13 AND 2 UNDER OR CLOSE TO MANHOLE OF TANK FOR EASY ACCESS

B	GENERAL AMENDMENTS	A.F.B	2.2008
A	ORIGINAL ISSUE	R.H	5.2007
ISSUE	AMENDMENT DETAILS	INITIALS	DATE

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OFFICE MANAGER: *P. Morgan* RPEQ No.: .....

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DESIGNED	DESIGN NO.
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CHECKED	PROGRAM NO.
HORIZONTAL DATUM	MGA
VERTICAL DATUM	AHD
	REDUCTION RATIO

PROJECT: HASTINGS POINT  
RECYCLED WATER IRRIGATION SCHEME

PLAN TITLE: DETAILS SHEET 2

DRAWING NUMBER: **WT06031/12**

SHEET 12 OF 12 SHEETS

ISSUE **A B**