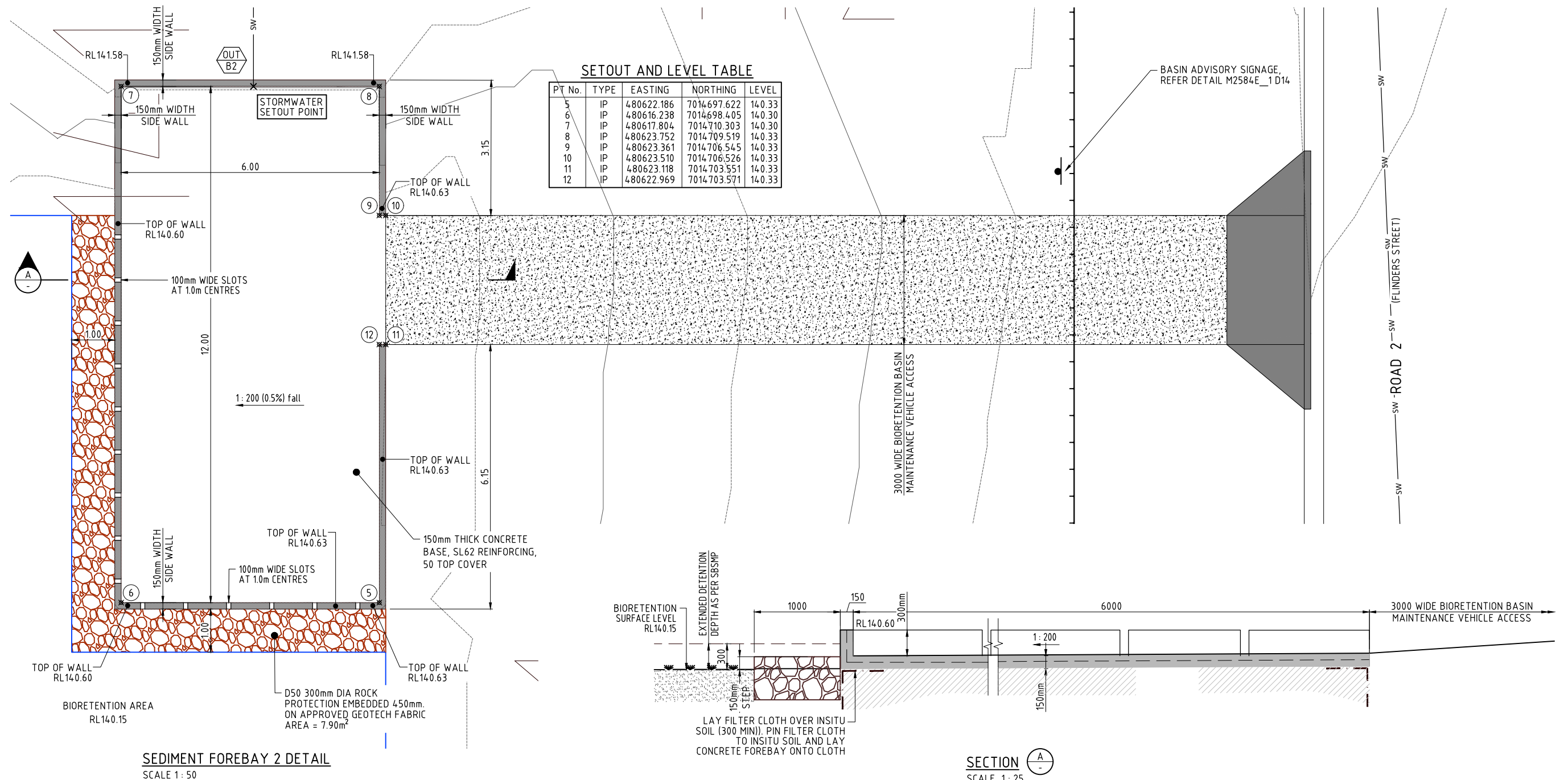
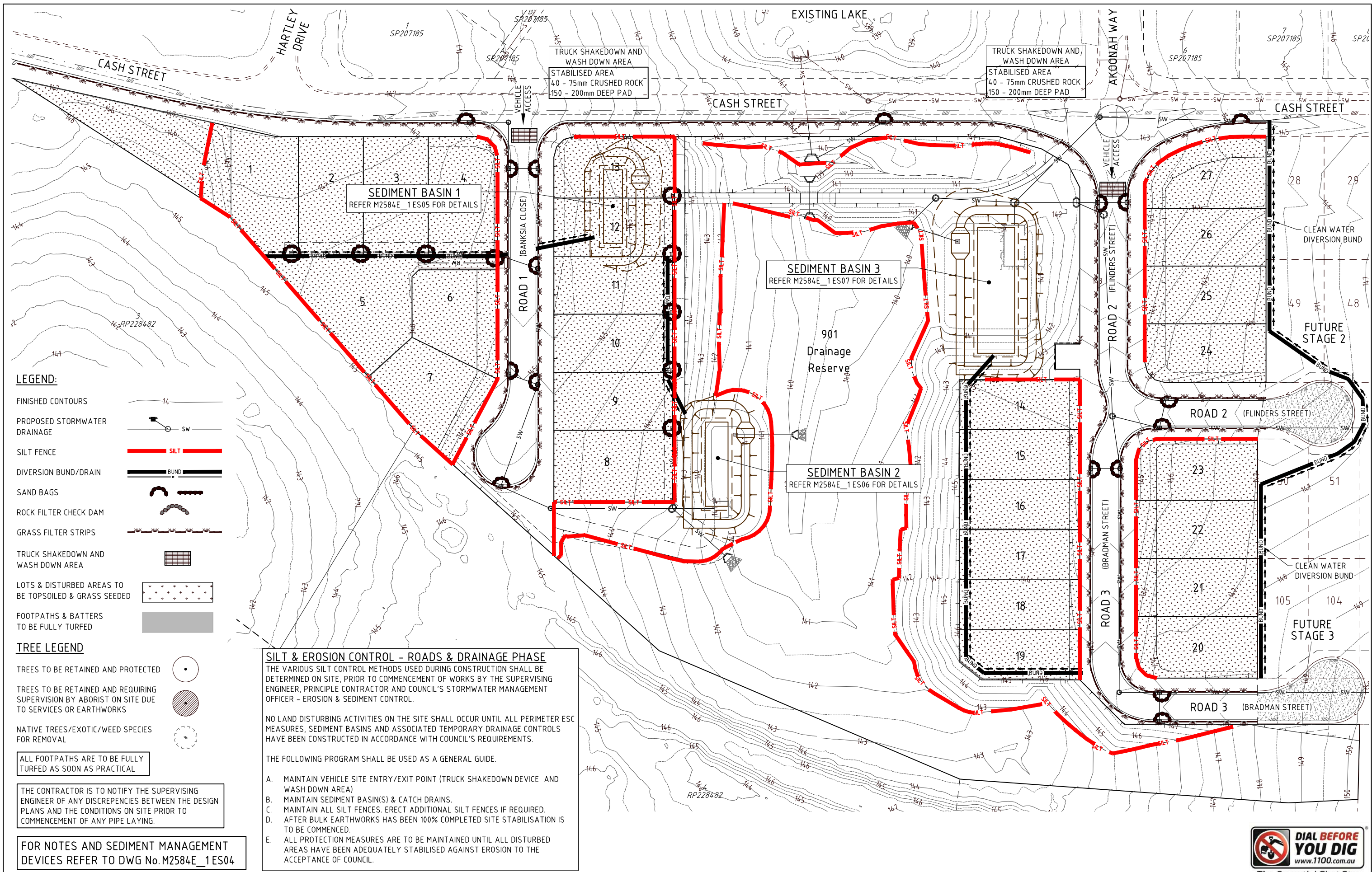
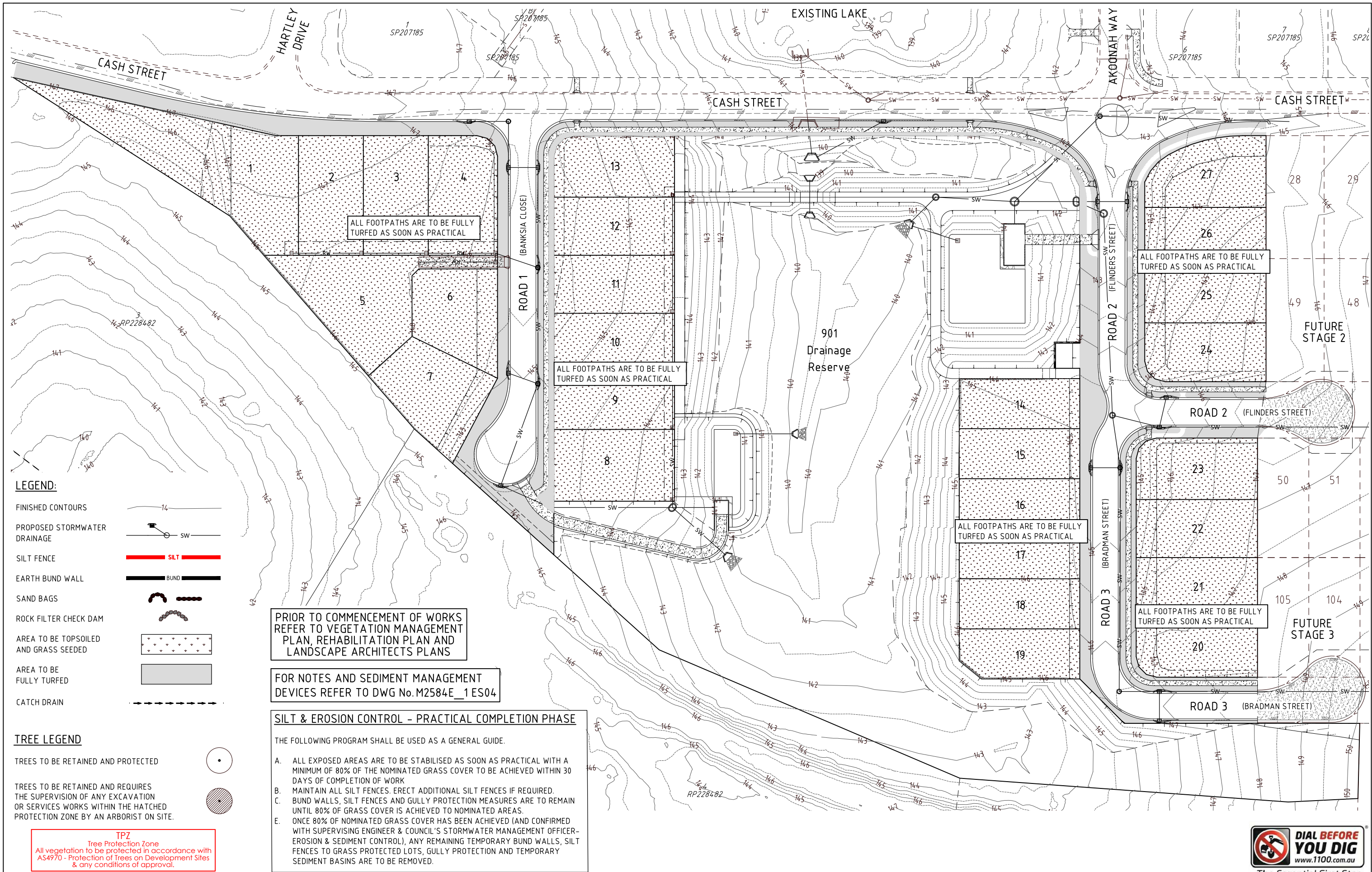
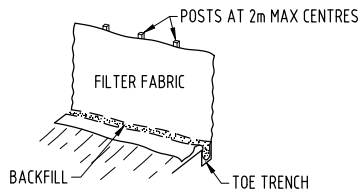








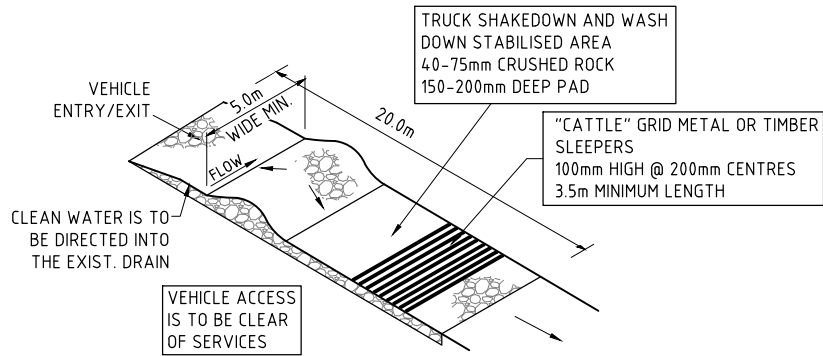
SILT FENCE
N.T.S.

MAINTENANCE PROGRAM FOR SILT FENCES

1. REGULAR INSPECTIONS WILL BE REQUIRED TO CONTROL DAMAGE CAUSED BY ON SITE VEHICLES OR MOVEMENT OF STOCKPILES.
2. INSPECTED AFTER EACH STORM EVENT THAT RESULTS IN RUN-OFF.
3. REMOVE EXCESS SEDIMENT DEPOSITS.
4. INVESTIGATE THE SOURCE OF ANY EXCESSIVE SEDIMENT. (REFER B.C.C. EBMP GROUP 5 FIG.5.6).

NOTE : SILT MANAGEMENT

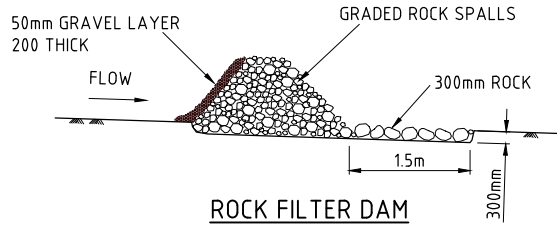
SILT FENCES ARE TO BE EMPLOYED WHERE CONDITIONS DURING CONSTRUCTION REQUIRE THE CONTROL OF ANY POSSIBLE SILT MOVEMENT ON THE SITE,AS DIRECTED BY THE SUPERVISOR.



TRUCK SHAKEDOWN DETAIL
N.T.S.

MAINTENANCE PROGRAM FOR TRUCK SHAKEDOWN

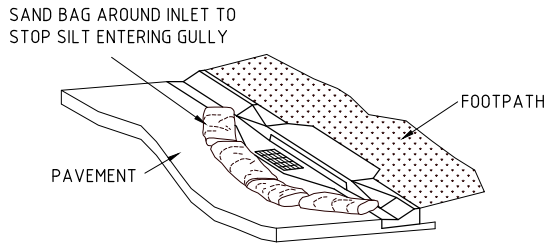
THE CONTRACTOR IS TO INSPECT THE ENTRY/EXIT AND WASH DOWN AREA TO ENSURE THAT IT IS NOT SILTED UP OR DAMAGED. ALL WATER USED DURING WASHING AND MAINTAINING THE AREA IS TO BE DIRECTED TO THE BUND.



ROCK FILTER DAM
N.T.S.

MAINTENANCE PROGRAM FOR ROCK FILTER DAM

1. INSPECTIONS TO BE CARRIED OUT AFTER EACH RUNOFF EVENT.
2. SILT BUILT UP TO BE REMOVED DURING CONSTRUCTION AS REQUIRED BY THE SUPERVISING ENGINEER
3. TO BE REMOVED WHEN THE EXPOSED AREAS HAVE BEEN STABILISED.

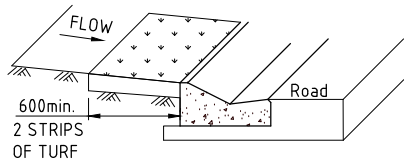


GULLY INLET PROTECTION
N.T.S.

MAINTENANCE PROGRAM FOR GULLY INLET PROTECTION

1. REGULAR INSPECTIONS AFTER EACH RUNOFF EVENT TO ENSURE THAT THE PROTECTION DEVICE IS STILL IN PLACE AND ANY EXCESSIVE SEDIMENT DEPOSITS ARE TO BE REMOVED.
2. THE TOP OF THE SANDBAGS ARE TO BE LOWER THAN THE TOP OF THE KERB AND CHANNEL.

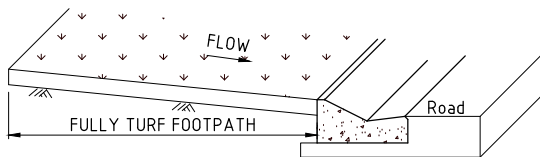
THIS FORM OF GULLY INLET PROTECTION WORK SHALL BE IMPLEMENTED ONCE BACKSTONES ARE IN PLACE. UPON SUCCESSFUL COMPLETION OF 'ON MAINTENANCE' INSPECTION, MEASURES ARE TO BE REMOVED.



GRASS FILTER STRIPS
(ROADS & DRAINAGE PHASE)
N.T.S.

MAINTENANCE PROGRAM FOR GRASS FILTER STRIPS

THE SIGNIFICANT BUILD UP ON FILTER STRIPS INDICATES INEFFICIENT ON SITE EROSION AND SEDIMENT CONTROLS. THE SOURCE OF ANY EXCESSIVE SEDIMENT DEPOSITS IS TO BE INVESTIGATED.



GRASS FILTER - FULL FOOTPATH TURFING
(PRACTICAL COMPLETION PHASE)
N.T.S.

MAINTENANCE PROGRAM FOR GRASS FILTER STRIPS

THE SIGNIFICANT BUILD UP ON FILTER STRIPS INDICATES INEFFICIENT ON SITE EROSION AND SEDIMENT CONTROLS. THE SOURCE OF ANY EXCESSIVE SEDIMENT DEPOSITS IS TO BE INVESTIGATED.

SILT MANAGEMENT DETAILS AND MAINTENANCE PROGRAMS.



BRISBANE - SUNSHINE COAST - CENTRAL QLD
SUNSHINE COAST
T209, Kon-Tiki Tower 1, 55 Plaza Parade,
Maroochydore Qld 4558
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JFP URBAN CONSULTANTS PTY. LTD. A.C.N. 050 414 045

PLANNERS
URBAN DESIGNERS
SURVEYORS
ENGINEERS
LANDSCAPE ARCHITECTS

NORTH:

SCALE:

NOT TO SCALE THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE

A1

DO NOT SCALE FROM THIS DRAWING - USE ONLY DIMENSIONS PROVIDED - IF IN DOUBT PLEASE ENQUIRE

APPROVED

FOR AND ON BEHALF OF JFP URBAN CONSULTANTS PTY LTD

T.M'KINNEY

RPEQ 5087

A.FRASER

RPEQ 5691

J.PAPPAS

RPEQ 6086

DESIGNED

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DATUM: AHD

ISSUE:

ISSUE FOR OPERATIONAL WORKS APPROVAL

A

ISSUE:

DETAILS:

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TITLE:

EROSION AND SEDIMENT CONTROL DETAILS

DFC (PROJECT MANAGEMENT) PTY LTD

'ARCHERS WAY' ESTATE - STAGE 1
AT 22-80 CASH STREET, D'AGUILAR



DETAILS:

PROJECT:

M2584E_1

LOCAL AUTHORITY REF:

MORETON BAY REGIONAL COUNCIL

COUNCIL REF:

DA/38032/2019/V3RL

FILE NAME:

EROSION.DWG

DATE:

INIT:



The Essential First Step

PLAN:

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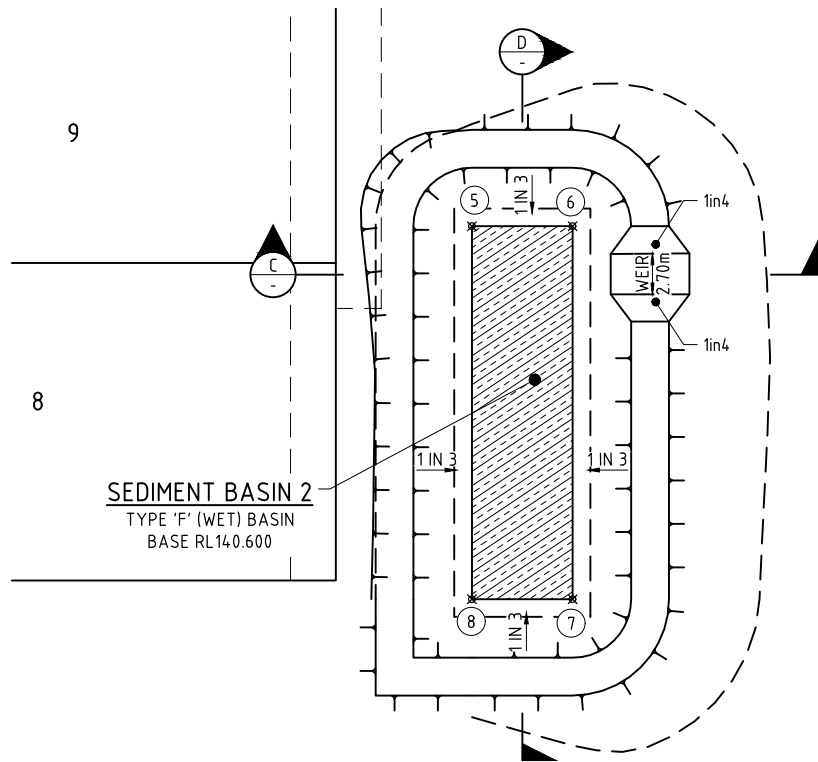
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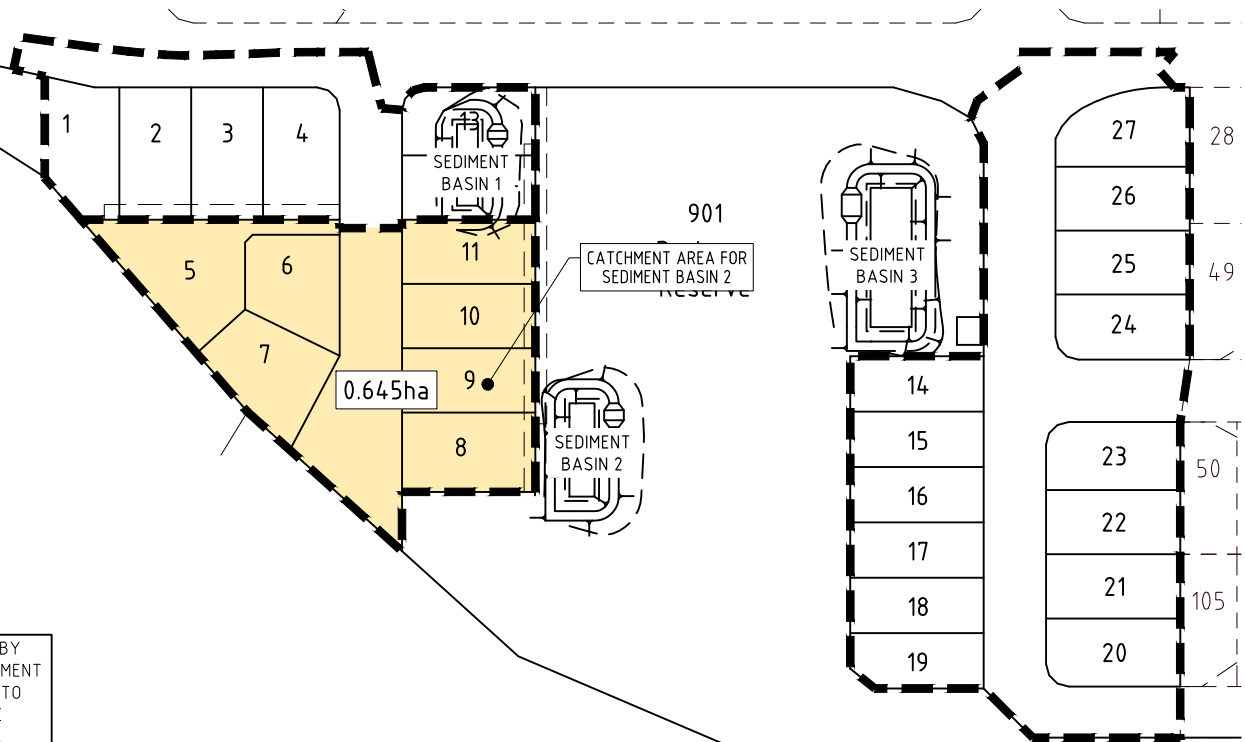


SEDIMENT BASIN No. 2.
SCALE 1 : 250

SETOUT AND LEVEL TABLE				
PT No.	TYPE	EASTING	NORTHING	LEVEL
5	IP	480523.577	7014664.544	140.600
6	IP	480530.180	7014663.675	140.600
7	IP	480526.962	7014639.226	140.600
8	IP	480520.359	7014640.095	140.600

THE CONTRACTOR IS TO NOTIFY THE SUPERINTENDENT OF ANY DISCREPANCIES BETWEEN THE DESIGN PLANS AND THE CONDITIONS ON SITE PRIOR TO COMMENCEMENT OF ANY WORK.

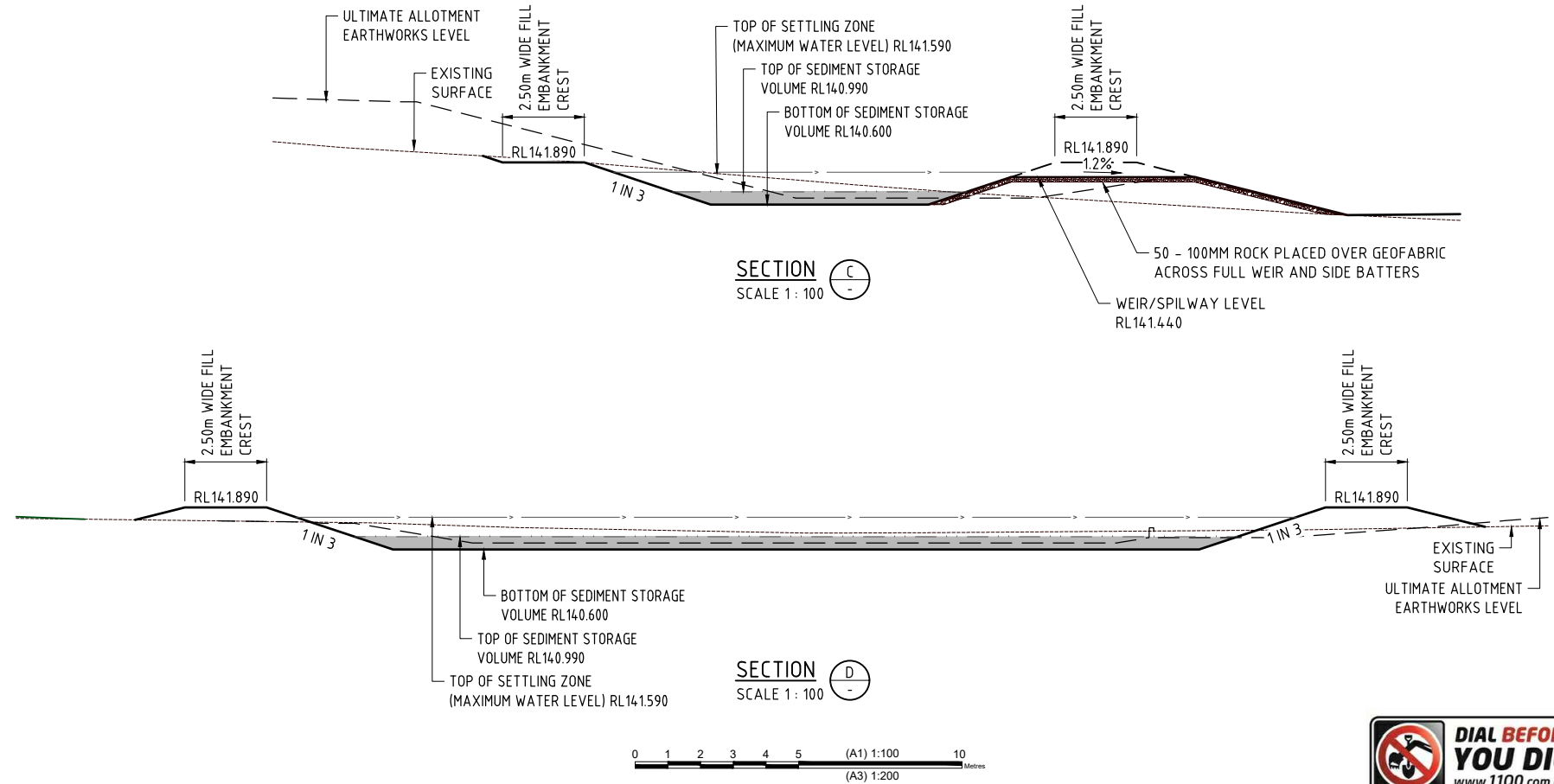
THE CONTRACTOR IS TO ENSURE THAT THE AREAS AFFECTED BY THE CONSTRUCTION AND MAINTENANCE OF THE TEMPORARY SEDIMENT BASIN ARE CONSTRUCTED TO THE PROPOSED DESIGN LEVELS, TO THE SATISFACTION OF THE SUPERINTENDENT. FILLING IS TO BE COMPLETED AND TESTED AS PER THE CONTRACTUAL DETAILS.



SEDIMENT BASIN CATCHMENT PLAN
SCALE 1 : 1000
0 10 20 30 40 50 (A1) 1:1000 100 (A3) 1:2000 Metres

SEDIMENT BASIN No. 2 DESIGN CRITERIA	
SETTLING VOLUME CALCULATIONS	
SEDIMENT BASIN TYPE	TYPE F (WET)
CHEMICAL FLOCCULATION TREATMENT AS REQUIRED TO ENSURE WATER QUALITY REQUIREMENTS ARE ACHIEVED.	
TOTAL CATCHMENT AREA (ha)	0.645 ha
ROAD PAVEMENT AREA (ha)	0.152ha
VERGE/ALLOTMENT AREA (ha)	0.493ha
SETTLING ZONE DEPTH (m)	0.6m
SETTLING VOLUME (m ³)	189
SEDIMENT STORAGE DEPTH (m)	0.39
SEDIMENT STORAGE VOLUME (m ³)	94
SEDIMENT BASIN LEVEL DETAILS	
TOP OF FILL EMBANKMENT CREST	141.890
MAXIMUM WATER LEVEL	141.590
WEIR/SPILLWAY LEVEL	141.440
TOP OF SEDIMENT STORAGE	140.990
BOTTOM OF SEDIMENT STORAGE	140.600
DESIGN CRITERIA BASED ON: - BCC - SEDIMENT BASIN DESIGN, CONSTRUCTION MAINTENANCE (January 2001) - Equation (4) - ICEA (Australasia)- BOOK 4 - SEDIMENT CONTROL FACTS SHEETS - SEDIMENT BASINS - VERSION 1	
WEIR/SPILLWAY DETAILS	
Q20 DISCHARGE (m ³ /sec)	0.313
WEIR/SPILLWAY BASE WIDTH (m)	2.70
SPILLWAY SLOPE (%)	1.2
MANNINGS (n)	0.04
WATER DEPTH (m)	0.150
VELOCITY (m/sec)	0.687

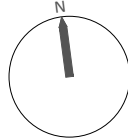
- SEDIMENT BASIN MAINTENANCE PROGRAM**
- FOLLOWING STORM EVENTS WATER SHOULD BE ALLOWED TO SETTLE, FOR THE TIME REQUIRED FOR SUSPENDED SILT TO SETTLE INTO THE SEDIMENT STORAGE ZONE IN THE BASIN.
 - IN LARGER STORM EVENTS WATER SHALL STILL BE DIRECTED INTO THE BASIN SO COARSE SEDIMENT CAN BE REMOVED.
 - PRIOR TO DE-WATERING OF THE BASIN, WATER QUALITY TESTING BY A NATA CERTIFIED LABORATORY MUST BE UNDERTAKEN TO ENSURE THE FOLLOWING WATER QUALITY REQUIREMENTS ARE ACHIEVED:
 - PH 6.5 to 8.5
 - TSS 50mg/l TOTAL SUSPENDED SOLIDSTHE SUPERINTENDENT IS TO ADVISE OF FLOCCULATION TREATMENT METHODS WHERE WATER QUALITY REQUIREMENTS ARE NOT ACHIEVED. ON EACH OCCASION WHEN A TYPE F OR TYPE D BASIN CANNOT BE DE-WATERED PRIOR TO BEING SURCHARGED BY A FOLLOWING RAINFALL EVENT, THE OPERATOR MUST RECORD SUCH AN EVENT AND REPORT IT TO THE APPROPRIATE REGULARITY AUTHORITY. WHERE APPROPRIATE, ALTERNATIVE OPERATING PROCEDURES MAY NEED TO BE ADOPTED IN CONSULTATION WITH THE REGULARITY AUTHORITY IN ORDER TO ACHIEVE OPTIMUM ENVIRONMENTAL PROTECTION.
 - A MARKER PEG SHALL BE INSTALLED FIRMLY INTO THE BASE OF THE BASIN WITH THE TOP OF THE PEG 390mm ABOVE THE BASIN INVERT. ONCE STORED SEDIMENT REACHES THIS MAXIMUM LEVEL THE SEDIMENT IS TO BE REMOVED.
 - AFTER REMOVAL THE SEDIMENT CAN BE DRIED IN AN APPROVED MANNER UPSTREAM OF THE BASIN/PONDED AREAS AND THEN REMOVED FROM SITE OR MIXED WITH ON-SITE SOILS (IN A MANNER THAT WILL NOT CAUSE EROSION) AND BURIED.
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 - ON SITE TRAFFIC MOVEMENT SHOULD BE MINIMISED. ROADS SHOULD BE SWEEPED OF SEDIMENT RATHER THAN WASHED.
 - DRAINAGE CONTROL SHOULD BE IMPLEMENTED ON THE UP-SLOPE SIDE OF STOCKPILES. SEDIMENT FENCES SHOULD BE PLACED AT THE DOWN-SLOPE SIDE OF ALL STOCKPILES.



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Maroochydore Qld 4558
P 07 5450 3900 W www.jfp.com.au
JFP URBAN CONSULTANTS PTY. LTD. A.C.N. 050 414 045

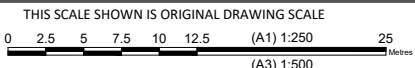
PLANNERS
URBAN DESIGNERS
SURVEYORS
ENGINEERS
LANDSCAPE ARCHITECTS

NORTH:



SCALE:

1:250
A1



DO NOT SCALE FROM THIS DRAWING - USE ONLY DIMENSIONS PROVIDED - IF IN DOUBT PLEASE ENQUIRE

APPROVED	T.M. KINNEY RPEQ 5087	A. FRASER RPEQ 5691	J. PAPPAS RPEQ 6086	DESIGNED	CDV
	S. MARSH RPEQ 8068			DRAWN	WN
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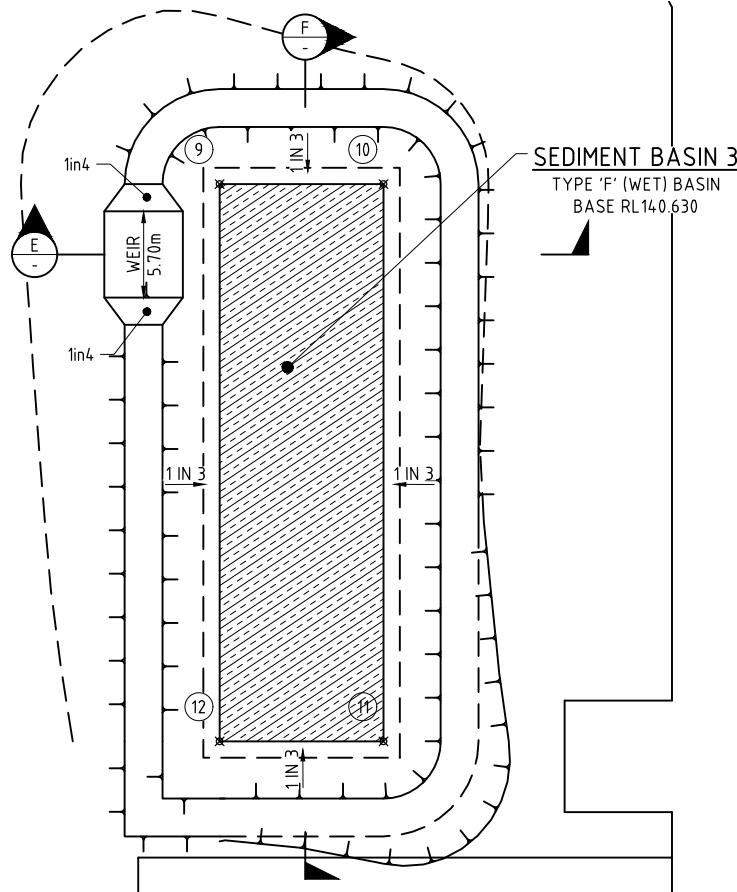
RESPONSE TO RFI DATED 2020/05/26
ISSUE FOR OPERATIONAL WORKS APPROVAL

TITLE:

EROSION AND SEDIMENT CONTROL DETAILS
SEDIMENT BASIN 2
DFC (PROJECT MANAGEMENT) PTY LTD
'ARCHERS WAY' ESTATE - STAGE 1
AT 22-80 CASH STREET, D'AGUILAR



DETAILS:
PROJECT: M2584E_1
PLAN: ES06
ISSUE: B
LOCAL AUTHORITY REF: MORETON BAY REGIONAL COUNCIL
COUNCIL REF: DA/38032/2019/V3RL
FILE NAME: EROSION TEMP SED BASINS.DWG

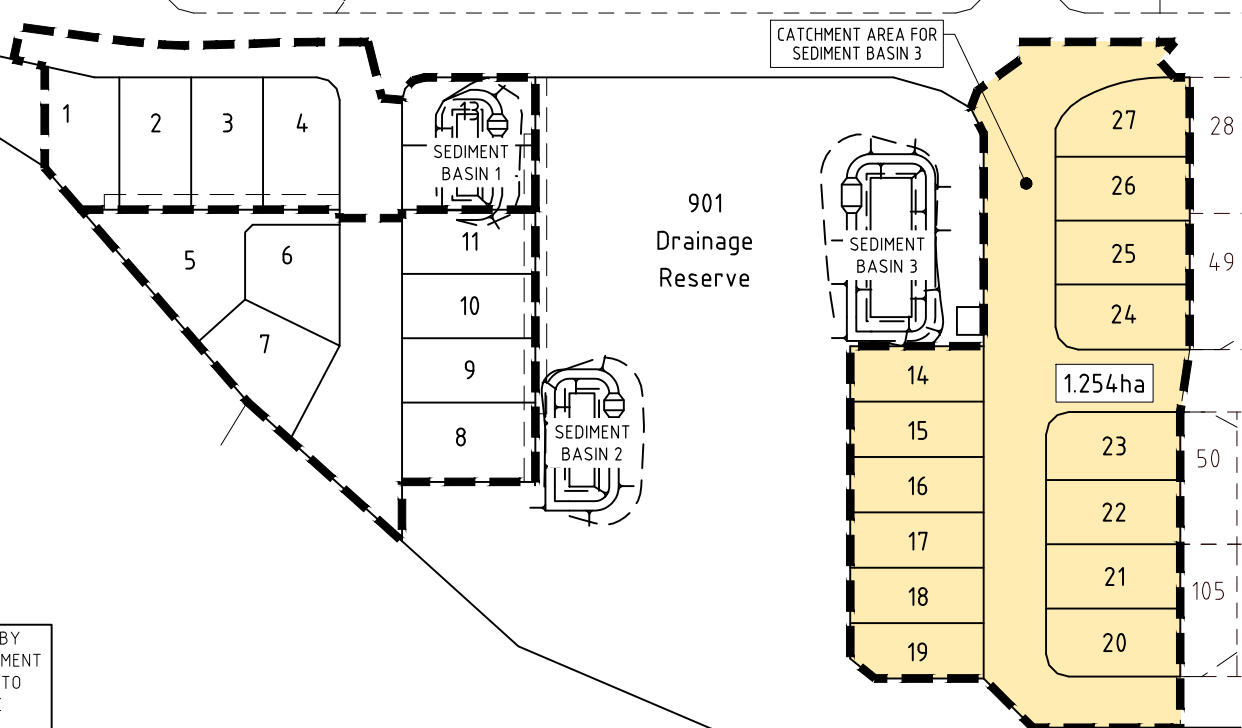


SEDIMENT BASIN No. 3.
SCALE 1 : 250

SETOUT AND LEVEL TABLE				
PT No.	TYPE	EASTING	NORTHING	LEVEL
9	IP	480610.011	7014710.642	140.630
10	IP	480620.759	7014709.228	140.630
11	IP	480615.951	7014672.703	140.630
12	IP	480605.203	7014674.118	140.630

THE CONTRACTOR IS TO NOTIFY THE SUPERINTENDENT OF ANY DISCREPANCIES BETWEEN THE DESIGN PLANS AND THE CONDITIONS ON SITE PRIOR TO COMMENCEMENT OF ANY WORK.

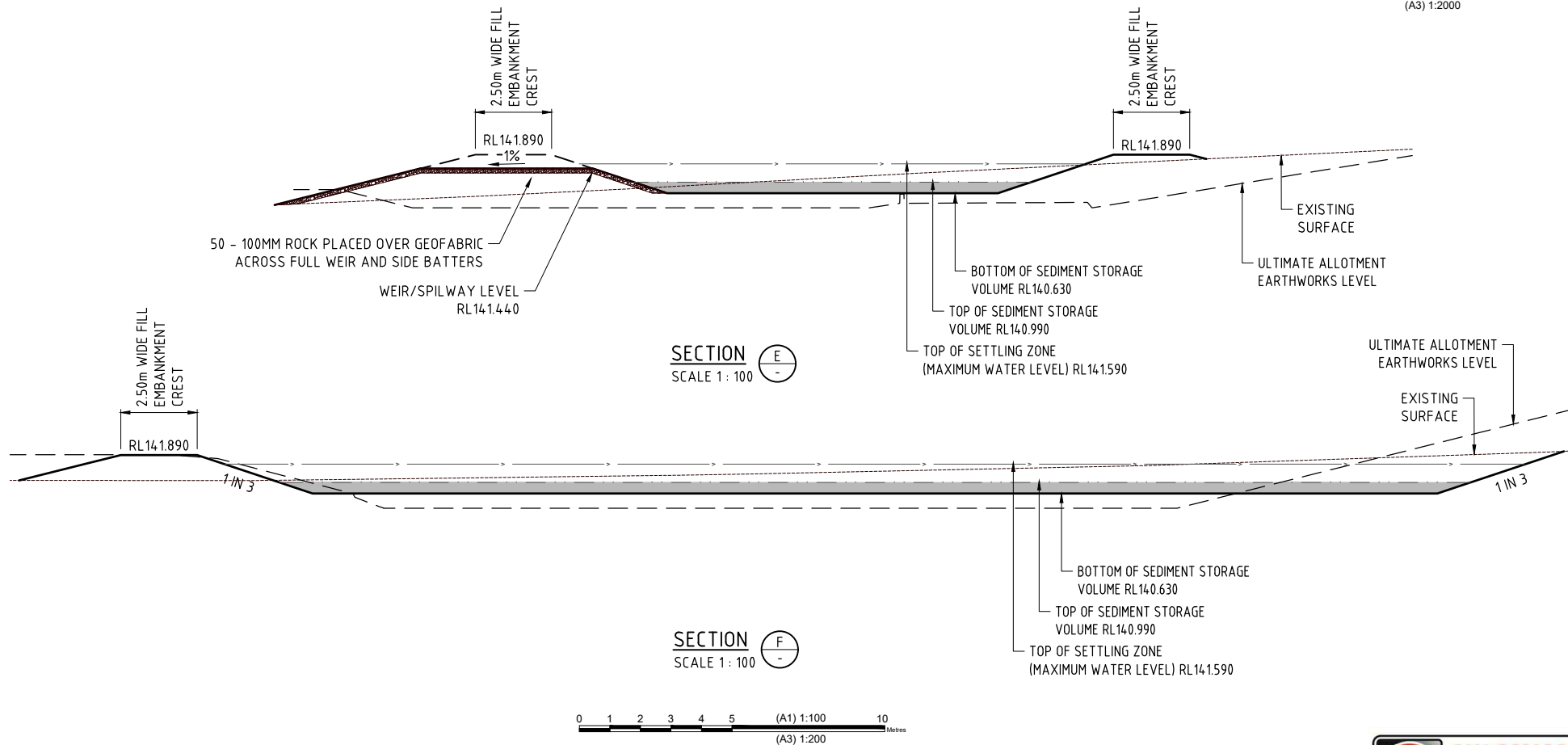
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SEDIMENT BASIN CATCHMENT PLAN
SCALE 1: 1000
0 10 20 30 40 50 (A1) 1:1000 100 Metres
(A3) 1:2000

SEDIMENT BASIN No. 3 DESIGN CRITERIA	
SETTLING VOLUME CALCULATIONS	
SEDIMENT BASIN TYPE	TYPE F (WET)
CHEMICAL FLOCCULATION TREATMENT AS REQUIRED TO ENSURE WATER QUALITY REQUIREMENTS ARE ACHIEVED.	
TOTAL CATCHMENT AREA (ha)	1.254 ha
ROAD PAVEMENT AREA (ha)	0.454ha
VERGE/ALLOTMENT AREA (ha)	0.800 ha
SETTLING ZONE DEPTH (m)	0.6m
SETTLING VOLUME (m³)	364
SEDIMENT STORAGE DEPTH (m)	0.36
SEDIMENT STORAGE VOLUME (m³)	182
SEDIMENT BASIN LEVEL DETAILS	
TOP OF FILL EMBANKMENT CREST	141.890
MAXIMUM WATER LEVEL	141.590
WEIR/SPILLWAY LEVEL	141.440
TOP OF SEDIMENT STORAGE	140.990
BOTTOM OF SEDIMENT STORAGE	140.630
DESIGN CRITERIA BASED ON: - BCC - SEDIMENT BASIN DESIGN, CONSTRUCTION MAINTENANCE (January 2001) - Equation (4) - ICEA (Australasia)- BOOK 4 - SEDIMENT CONTROL FACTS SHEETS - SEDIMENT BASINS - VERSION 1	
WEIR/SPILLWAY DETAILS	
Q20 DISCHARGE (m³/sec)	0.606
WEIR/SPILLWAY BASE WIDTH (m)	5.70
SPILLWAY SLOPE (%)	1.00
MANNINGS (n)	0.04
WATER DEPTH (m)	0.150
VELOCITY (m/sec)	0.662

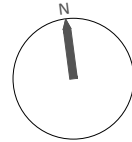
- SEDIMENT BASIN MAINTENANCE PROGRAM**
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 - IN LARGER STORM EVENTS WATER SHALL STILL BE DIRECTED INTO THE BASIN SO COARSE SEDIMENT CAN BE REMOVED.
 - PRIOR TO DE-WATERING OF THE BASIN, WATER QUALITY TESTING BY A NATA CERTIFIED LABORATORY MUST BE UNDERTAKEN TO ENSURE THE FOLLOWING WATER QUALITY REQUIREMENTS ARE ACHIEVED:
 - PH 6.5 to 8.5
 - TSS 50mg/l TOTAL SUSPENDED SOLIDSTHE SUPERINTENDENT IS TO ADVISE OF FLOCCULATION TREATMENT METHODS WHERE WATER QUALITY REQUIREMENTS ARE NOT ACHIEVED.
 - ON EACH OCCASION WHEN A TYPE F OR TYPE D BASIN CANNOT BE DE-WATERED PRIOR TO BEING SURCHARGED BY A FOLLOWING RAINFALL EVENT, THE OPERATOR MUST RECORD SUCH AN EVENT AND REPORT IT TO THE APPROPRIATE REGULARITY AUTHORITY. WHERE APPROPRIATE, ALTERNATIVE OPERATING PROCEDURES MAY NEED TO BE ADOPTED IN CONSULTATION WITH THE REGULARITY AUTHORITY IN ORDER TO ACHIEVE OPTIMUM ENVIRONMENTAL PROTECTION.
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JFP URBAN CONSULTANTS PTY. LTD. A.C.N. 050 414 045

PLANNERS
URBAN DESIGNERS
SURVEYORS
ENGINEERS
LANDSCAPE ARCHITECTS

NORTH:



SCALE:

1:250
A1
THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE
0 2.5 5 7.5 10 12.5 (A1) 1:250 25 Metres
(A3) 1:500

DO NOT SCALE FROM THIS DRAWING - USE ONLY DIMENSIONS PROVIDED - IF IN DOUBT PLEASE ENQUIRE

APPROVED	T.M. KINNEY RPEQ 5087	A. FRASER RPEQ 5691	J. PAPPAS RPEQ 6086	DESIGNED	CDV
	S. MARSH RPEQ 8068			DRAWN	WN
				CHECKED	ADF
				DATUM	AHD
				ISSUE	DETAILS:

FOR AND ON BEHALF OF JFP URBAN CONSULTANTS PTY LTD

ISSUE:

RESPONSE TO RFI DATED 2020/05/26
ISSUE FOR OPERATIONAL WORKS APPROVAL
15/06/20
24/04/20
DATE: 15/06/20
INIT: BJ WN

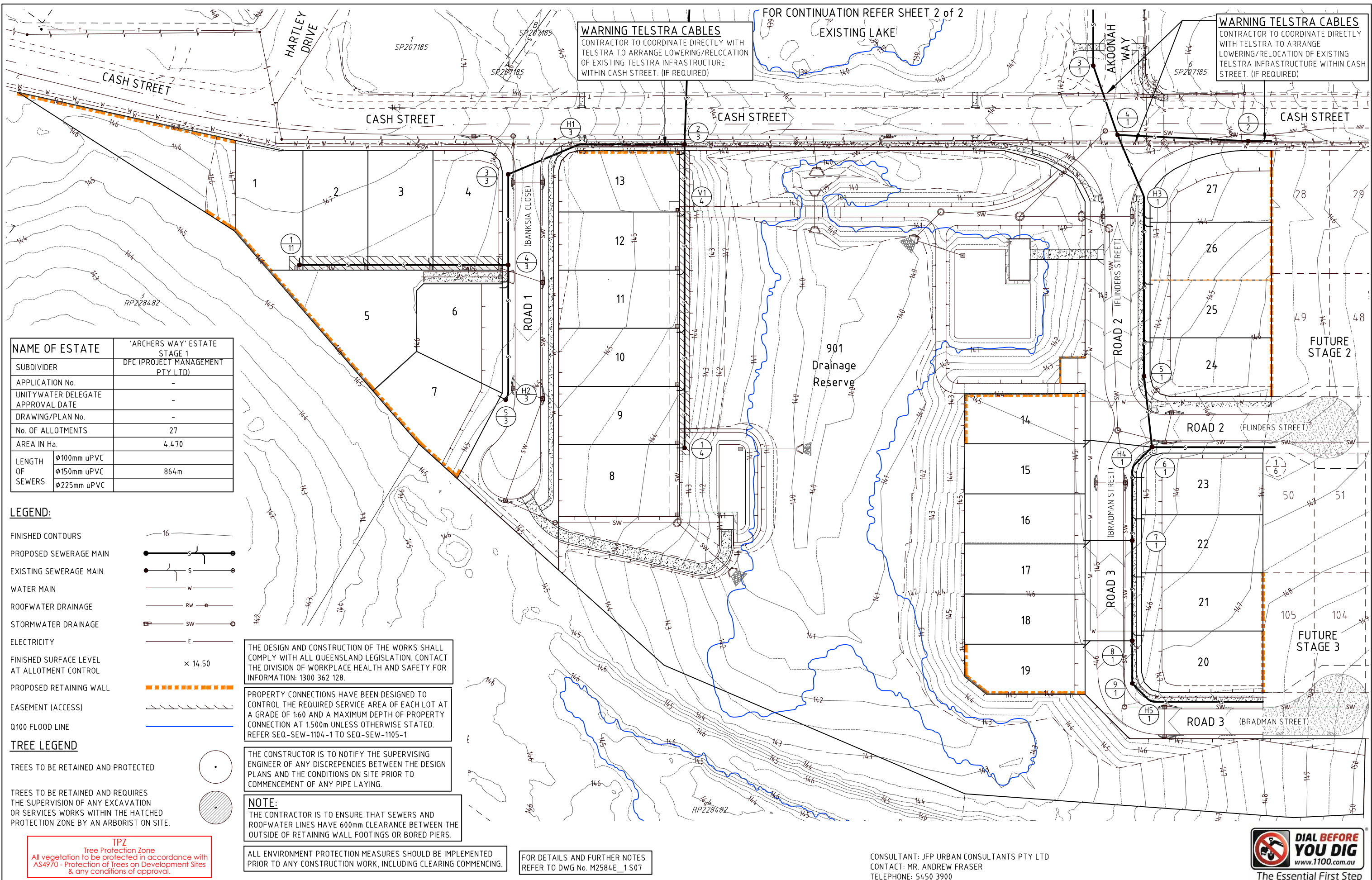
TITLE:

**EROSION AND SEDIMENT CONTROL DETAILS
SEDIMENT BASIN 3**
DFC (PROJECT MANAGEMENT) PTY LTD
'ARCHERS WAY' ESTATE - STAGE 1
AT 22-80 CASH STREET, D'AGUILAR



DETAILS:

PROJECT: M2584E_1
LOCAL AUTHORITY REF: MORETON BAY REGIONAL COUNCIL
COUNCIL REF: DA/38032/2019/V3RL
FILE NAME: EROSION TEMP SED BASINS.DWG
PLAN: ES07
ISSUE: B



LEGEND:

FINISHED CONTOURS	16
PROPOSED SEWERAGE MAIN	
EXISTING SEWERAGE MAIN	
WATER MAIN	
ROOFWATER DRAINAGE	
STORMWATER DRAINAGE	
ELECTRICITY	
FINISHED SURFACE LEVEL AT ALLOTMENT CONTROL	× 14.50
PROPOSED RETAINING WALL	
EASEMENT (ACCESS)	
Q100 FLOOD LINE	

TREE LEGEND

TREES TO BE RETAINED AND PROTECTED

TREES TO BE RETAINED AND REQUIRES
THE SUPERVISION OF ANY EXCAVATION
OR SERVICES WORKS WITHIN THE HATCHED
PROTECTION ZONE BY AN ARBORIST ON SITE.

TPZ
Tree Protection Zone
All vegetation to be protected in accordance with
AS4970 - Protection of Trees on Development Sites
& any conditions of approval.

THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL
COMPLY WITH ALL QUEENSLAND LEGISLATION. CONTACT
THE DIVISION OF WORKPLACE HEALTH AND SAFETY FOR
INFORMATION: 1300 362 128.

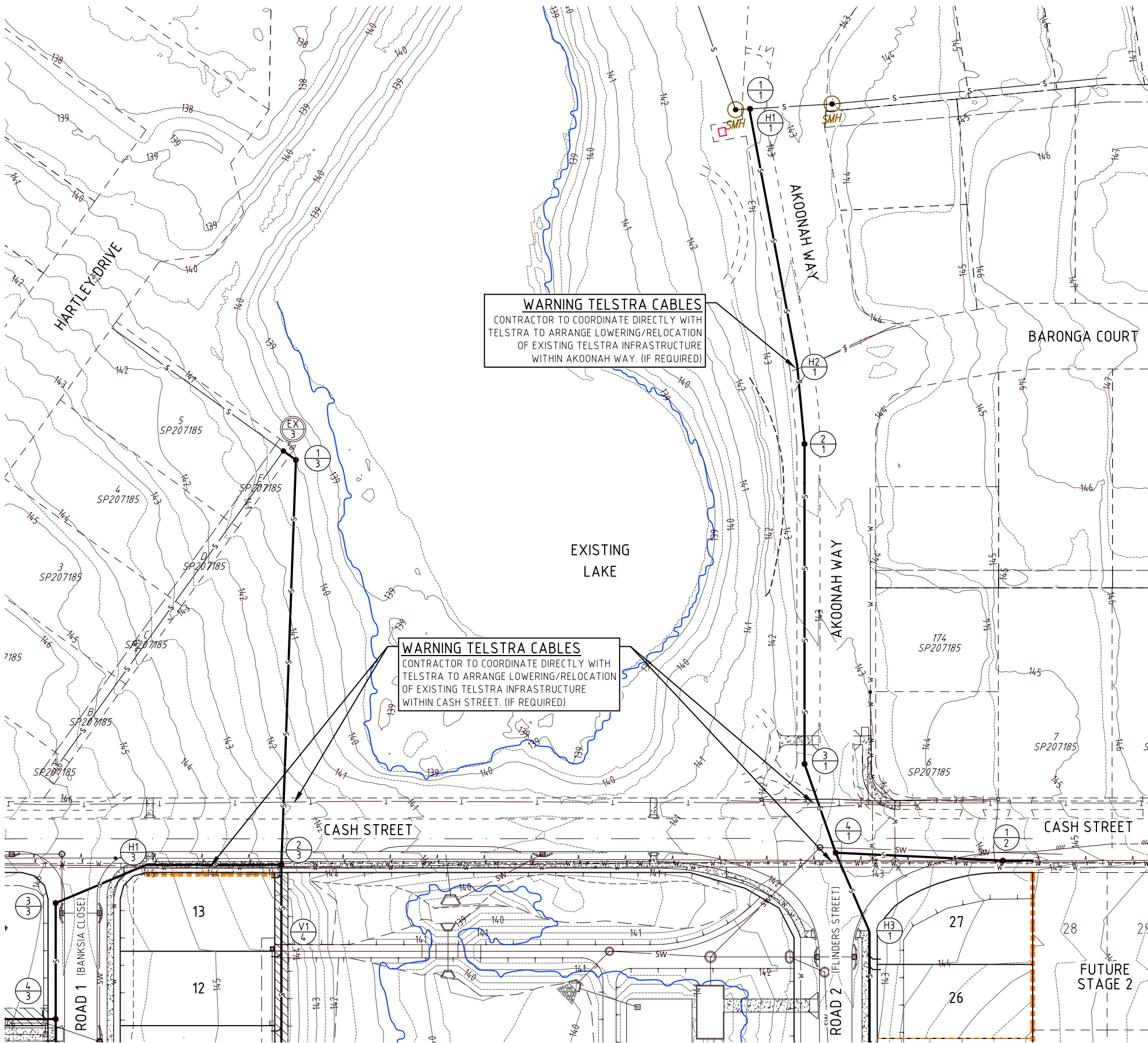
PROPERTY CONNECTIONS HAVE BEEN DESIGNED TO
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CONNECTION AT 1500m UNLESS OTHERWISE STATED.
REFER SEQ-SEW-1104-1 TO SEQ-SEW-1105-1

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NOTE:
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ROOFWATER LINES HAVE 600mm CLEARANCE BETWEEN THE
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FOR DETAILS AND FURTHER NOTES
REFER TO DWG No. M2584E_1 S07



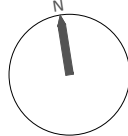
CONSULTANT: JFP URBAN CONSULTANTS PTY LTD
CONTACT: MR. ANDREW FRASER
TELEPHONE: 5450 3900



BRISBANE - SUNSHINE COAST - CENTRAL QLD
SUNSHINE COAST
T209, Kon-Tiki Tower 1, 55 Plaza Parade,
Maroochydore Qld 4558
P 07 5450 3900 W www.jfp.com.au
JFP URBAN CONSULTANTS PTY. LTD. A.C.N. 050 414 045

PLANNERS
URBAN DESIGNERS
SURVEYORS
ENGINEERS
LANDSCAPE ARCHITECTS

NORTH:



SCALE:

1:500
A1
THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE
0 5 10 15 20 25 30 35 40 45 50
(A1) 1:500
(A3) 1:1000

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APPROVED
FOR AND ON BEHALF OF JFP URBAN CONSULTANTS PTY LTD
DESIGNED
DRAWN
CHECKED
DATE: AHD
ISSUE: DETAILS

ISSUE:

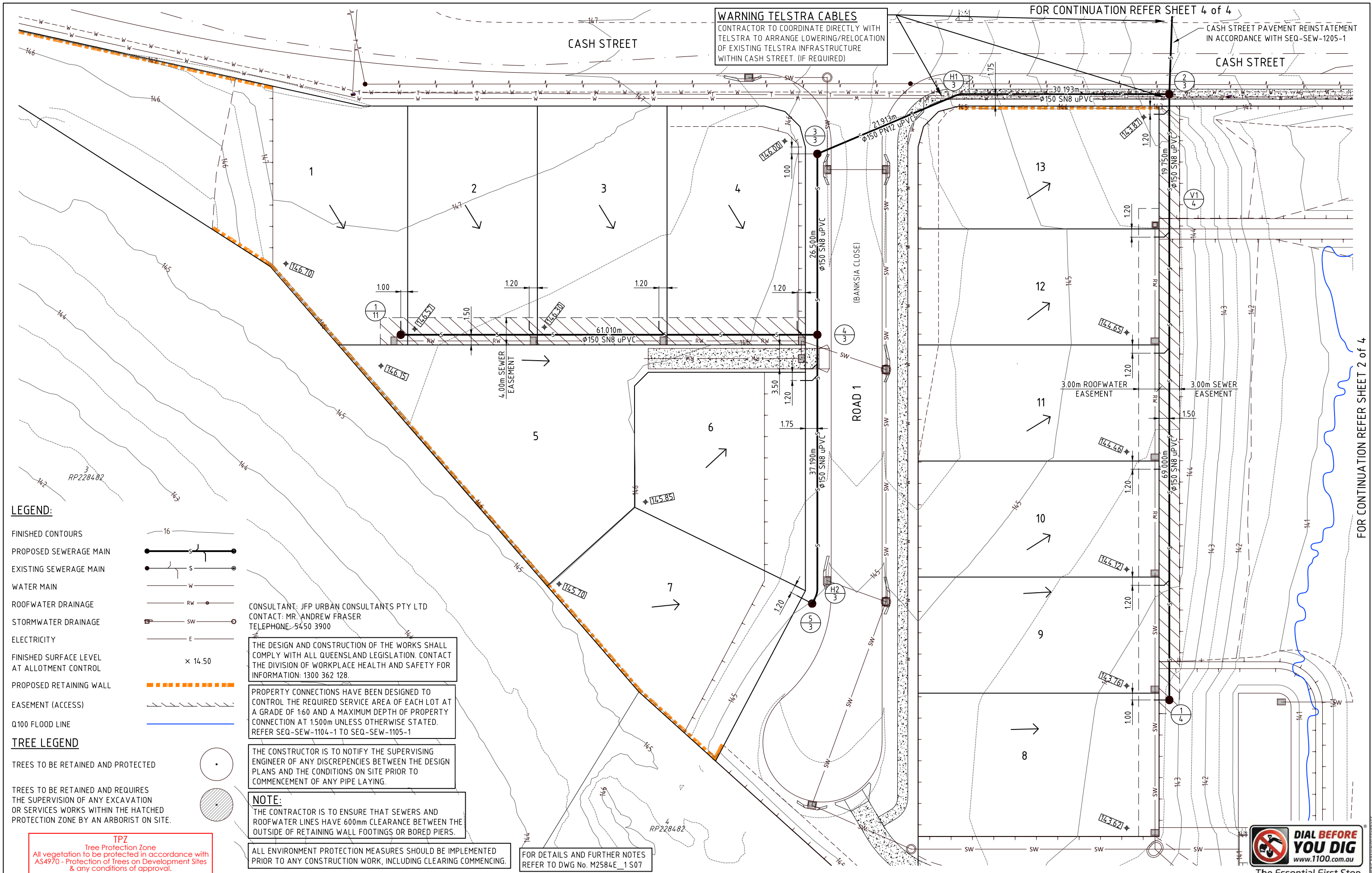
RESPONSE TO RFI DATED 2020/05/26
ISSUE FOR OPERATIONAL WORKS APPROVAL
15/06/20
24/04/20
DATE: INIT: BJ WN

TITLE:

SEWERAGE LAYOUT PLAN
SHEET 2 of 2
DFC (PROJECT MANAGEMENT) PTY LTD
'ARCHERS WAY' ESTATE - STAGE 1
AT 22-80 CASH STREET, D'AGUILAR

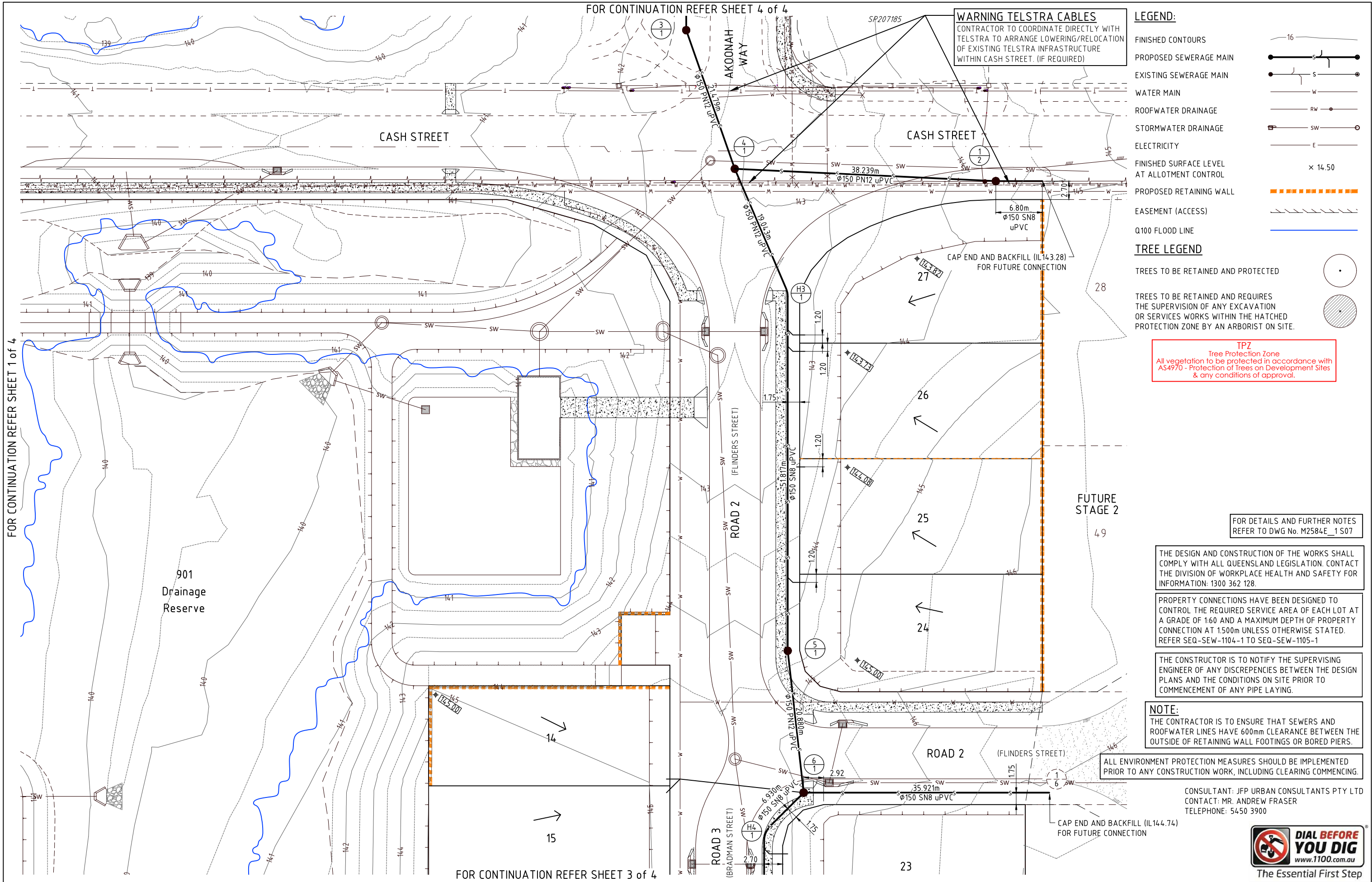


DETAILS:
PROJECT: M2584E_1
LOCAL AUTHORITY REF: MORETON BAY REGIONAL COUNCIL
COUNCIL REF: DA/38032/2019/V3RL
FILE NAME: SEWERAGE.DWG
PLAN: S02
ISSUE: B



 JFP URBAN CONSULTANTS	BRISBANE - SUNSHINE COAST - CENTRAL QLD SUNSHINE COAST T209, Kon-Tiki Tower 1, 55 Plaza Parade, Maroochydore Qld 4558 P 07 5450 3900 W www.jfp.com.au JFP URBAN CONSULTANTS PTY. LTD. A.C.N. 050 414 045	PLANNERS URBAN DESIGNERS SURVEYORS ENGINEERS LANDSCAPE ARCHITECTS	NORTH: 	SCALE: 1:250 A1 THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE 0 2.5 5 7.5 10 12.5 25 Metres (A1) 1:250 (A3) 1:500 DO NOT SCALE FROM THIS DRAWING - USE ONLY DIMENSIONS PROVIDED - IF IN DOUBT PLEASE ENQUIRE	ISSUE: B RESPONSE TO RFI DATED 2020/05/26 ISSUE FOR OPERATIONAL WORKS APPROVAL DATE: 15/06/20 INIT: BJ WN	TITLE: SEWERAGE DETAIL LAYOUT PLAN SHEET 1 of 4 DFC (PROJECT MANAGEMENT) PTY LTD 'ARCHERS WAY' ESTATE - STAGE 1 AT 22-80 CASH STREET, D'AGUILAR	DETAILS: PROJECT: M2584E_1 PLAN: S03 ISSUE: B LOCAL AUTHORITY REF: MORETON BAY REGIONAL COUNCIL COUNCIL REF: DA/38032/2019/V3RL FILE NAME: SEWERAGE.DWG
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15/06/2020 10:10:26:2019 V3RL SEWERAGE.DWG



WARNING TELSTRA CABLES
CONTRACTOR TO COORDINATE DIRECTLY WITH
TELSTRA TO ARRANGE LOWERING/RELOCATION
OF EXISTING TELSTRA INFRASTRUCTURE
WITHIN CASH STREET. (IF REQUIRED)

- LEGEND:**
- FINISHED CONTOURS
 - PROPOSED SEWERAGE MAIN
 - EXISTING SEWERAGE MAIN
 - WATER MAIN
 - ROOFWATER DRAINAGE
 - STORMWATER DRAINAGE
 - ELECTRICITY
 - FINISHED SURFACE LEVEL
AT ALLOTMENT CONTROL
 - PROPOSED RETAINING WALL
 - EASEMENT (ACCESS)
 - Q100 FLOOD LINE
- TREE LEGEND**
- TREES TO BE RETAINED AND PROTECTED
 - TREES TO BE RETAINED AND REQUIRES
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INFORMATION: 1300 362 128.

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CONSULTANT: JFP URBAN CONSULTANTS PTY LTD
CONTACT: MR. ANDREW FRASER
TELEPHONE: 5450 3900



JFP URBAN CONSULTANTS

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PLANNERS
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1:250
A1

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0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25

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APPROVED: [Signature] ADF
FOR AND ON BEHALF OF JFP URBAN CONSULTANTS PTY LTD

CHECKED: ADF
DATE: AHD

DESIGNED: CDV
DRAWN: WN
DATE: AHD

ISSUE: B
DETAILS: A

RESPONSE TO RFI DATED 2020/05/26
ISSUE FOR OPERATIONAL WORKS APPROVAL

15/06/20
24/04/20
DATE: BJ
INIT: WN

TITLE:
SEWERAGE DETAIL LAYOUT PLAN
SHEET 2 of 4

DFC (PROJECT MANAGEMENT) PTY LTD

'ARCHERS WAY' ESTATE - STAGE 1
AT 22-80 CASH STREET, D'AGUILAR

DENNIS FAMILY CORPORATION

DETAILS:
PROJECT: M2584E_1
PLAN: S04
ISSUE: B

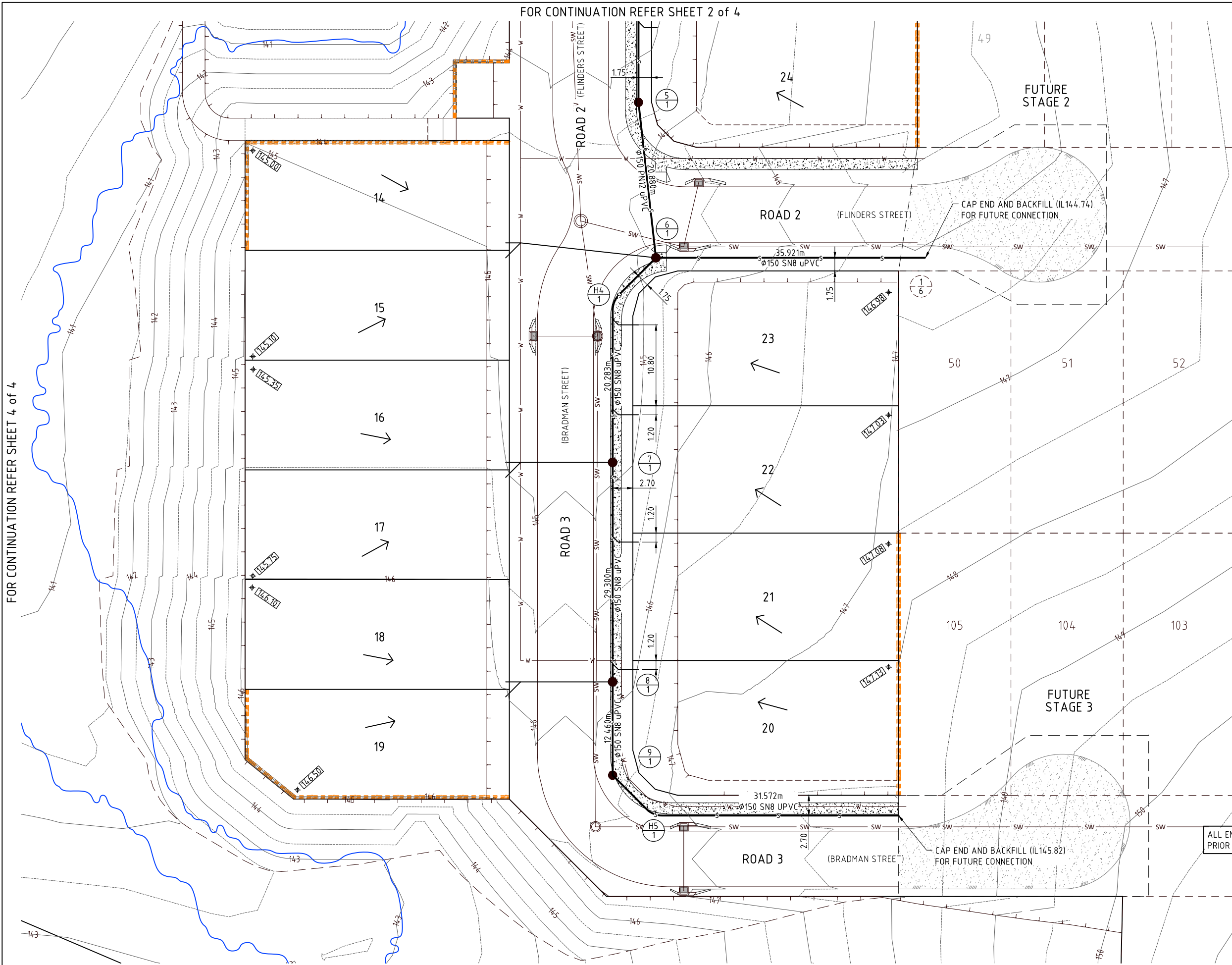
LOCAL AUTHORITY REF:
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COUNCIL REF:
DA/38032/2019/V3RL

FILE NAME:
SEWERAGE.DWG

FOR CONTINUATION REFER SHEET 2 of 4

FOR CONTINUATION REFER SHEET 4 of 4



LEGEND:

- FINISHED CONTOURS
PROPOSED SEWERAGE MAIN
EXISTING SEWERAGE MAIN
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ROOFWATER DRAINAGE
STORMWATER DRAINAGE
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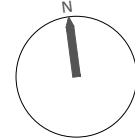
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APPROVED
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DESIGNED: CDV
DRAWN: WN
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DATE: AHD
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ISSUE:

RESPONSE TO RFI DATED 2020/05/26
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15/06/20
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DATE: INIT: BJ WN

TITLE:

SEWERAGE DETAIL LAYOUT PLAN
SHEET 3 of 4
DFC (PROJECT MANAGEMENT) PTY LTD
'ARCHERS WAY' ESTATE - STAGE 1
AT 22-80 CASH STREET, D'AGUILAR



DETAILS:
PROJECT: M2584E_1
PLAN: S05
ISSUE: B
LOCAL AUTHORITY REF:
MORETON BAY REGIONAL COUNCIL
COUNCIL REF:
DA/38032/2019/V3RL
FILE NAME: SEWERAGE.DWG

UNITYWATER AND CONSTRUCTOR LIVE SEWER WORKS

CONSULTING ENGINEERS ARE TO CONTACT UNITYWATER 24 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION TO ARRANGE FOR THIS WORK TO BE CARRIED OUT.
(EXCAVATION, SAFE SHORING & ASSOCIATED WORKS BY CONTRACTOR)

EXCAVATION WORKS CARRIED OUT BY CONSTRUCTORS AT DEPTHS OF 1.5m OR GREATER MUST PROVIDE A 'SAFE WORK PLAN' AS PER WORKPLACE HEALTH AND SAFETY LEGISLATION TO QUU PRIOR TO COMMENCING ANY WORKS.

IT IS THE DEVELOPERS RESPONSIBILITY TO ENSURE ALL LIVE SEWER WORKS ARE COMPLETE BEFORE ALLOWING PRIVATE DRAINAGE TO BE CONNECTED.

No.	DESCRIPTION	DIA SEWER	MH No.	MH/MS TYPE	COVER TYPE	LOT No.	F.S.L.	E.S.L.	I.L.	DEPTH
1a) 1b)	THE CONTRACTOR SHALL CONSTRUCT THE MH AND BENCHING OVER THE EXISTING PIPE; CONTRACTOR SHALL DEMOLISH THE CROWN OF EXISTING PIPE WITHIN THE MH AND MAKE GOOD THE BENCHING AFTER SUCCESSFUL ON MAINTENANCE UNDER UNITYWATER SUPERVISION.	150 SN8	1 / 1	P2	B	AKOONAH WAY	142.915	142.915	140.005	2.860
2a) 2b) 2c) 2d)	CONTRACTOR SHALL CONSTRUCT A STUB TO THE MH AND INSTALL A TEMPORARY PLUG IN THE STUB UNDER UNITYWATER SUPERVISION THE CONTRACTOR SHALL CONSTRUCT A SHORT PIPE WITH AN I.O. FROM THE STUB THEN LAY THE SEWER LINES AWAY FROM THE STUB; THE CONTRACTOR SHALL CONCRETE ENCASE THE I.O. AFTER COMPLETION OF TESTING PROCEDURES; UNITYWATER SHALL REMOVE THE TEMPORARY PLUG AFTER COMPLETION OF THE "ON MAINTENANCE" TESTING.	150 SN8	EX/ 3 (EXIST.)	-	-	5 SP 207185	140.259	140.259	138.040	2.219

ENVIRONMENTAL NOTES

VEGETATION PROTECTION

- A. TREES LOCATED ALONG THE FOOTPATH SHALL BE, TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
- B. WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES SHOULD BE CONSTRUCTED WITH 1.8m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES SHALL BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
- C. TREE ROOTS SHALL BE TUNNELED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED, THE DAMAGED AREA SHALL BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT RELEVANT COUNCIL ARBORIST FOR FURTHER ADVICE.
- D. ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.

SOIL

- A. TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY.
- B. CARE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.

CREEK CROSSINGS

- A. SILTATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.
- B. APPROPRIATE SEDIMENT CONTROLS SHALL BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.
- C. NO SOIL SHOULD BE STOCKPILED WITHIN 5m OF THE CREEK.

REHABILITATION

- A. PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS ARE TO BE REINSTATED.
- B. PREDISTURBANCE VEGETATION PATTERNS SHOULD BE RESTORED.

SAFETY

- A. THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION

GENERAL NOTES:

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT "SEQ GRAVITY SEWERAGE CODE V2.0-2019" SPECIFICATIONS AND STANDARDS.
2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
3. THE CONSTRUCTION OF THE SEWERAGE WORK SHOWN ON THESE DRAWINGS SHALL BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. SEWERAGE WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO UNITYWATER'S SEWERAGE SYSTEM.
4. ALL WORK ASSOCIATED WITH LIVE SEWERS OR MAINTENANCE HOLES SHALL BE CARRIED OUT BY UNITYWATER AT THE DEVELOPER'S COST UNO.
5. ALL PIPES AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE "ACCEPTED PRODUCTS AND MATERIALS" LIST.
6. EACH ALLOTMENT SHALL BE SERVED BY A DN110 PE (OR DN100 PVC) PROPERTY CONNECTION. FOR ALLOTMENTS OTHER THAN SINGLE RESIDENTIAL, A DN160 PE (OR DN150 PVC) PROPERTY CONNECTION SHALL BE PROVIDED.
7. PROPERTY CONNECTIONS SHALL BE LOCATED WITHIN THE PROPERTY AS SHOWN IN THE DRAWINGS.
8. PROPERTY CONNECTION BRANCHES SHALL EXTEND INTO THE PROPERTY A MINIMUM OF 500mm AND A MAXIMUM OF 750mm.
9. WHERE PIPES ARE LAID IN FILL. THE FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300mm (LOOSE) IN DEPTH AND SHALL BE COMPACTED UNTIL THE DRY DENSITY IS NOT LESS THAN 95% OF THE MATERIALS MAXIMUM DRY DENSITY WHEN TESTED IN ACCORDANCE WITH A.S. 1289 (MODIFIED COMPACTION). TESTING SHALL BE CARRIED OUT AFTER EACH ALTERNATE LAYER. IN ALL SUCH CASES APPROVAL OF CONSTRUCTED SEWERS WILL NOT BE ISSUED BY UNITYWATER UNLESS CERTIFICATES ARE PRODUCED CERTIFYING THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.
10. WHERE SEWERS HAVE A GRADE OF 1 IN 20 OR STEEPER, BULKHEADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SEQ SEWER CODE.
11. THE CONTRACTOR IS TO VERIFY LOCATIONS OF EXISTING SERVICES WITH ALL RELEVANT AUTHORITIES BEFORE COMMENCING WORKS.
12. SEWERS SHALL BE DISUSED/ABANDONED IN ACCORDANCE WITH PROCEDURES SET OUT IN THE SEQ SEWER CODE.
13. BENCH MARK AND LEVELS TO AHD
14. EXISTING ALLOTMENTS REQUIRING A PROPERTY CONNECTION FROM EXISTING SEWERS SHALL BE PROVIDED BY UNITYWATER AT THE DEVELOPERS COST.



LOCALITY PLAN
N.T.S.

STANDARD DRAWINGS

SEQ-SEW 1104-1 & 1105-1

PROPERTY CONNECTIONS

SEQ-SEW 1300-1 (PRE-CAST)
SEQ-SEW 1307-1 (CAST-IN-SITU)
SEQ-SEW-1308-1 & 1308-5 to 1308-11
SEQ-SEW-1314-1 & 1314-2

MAINTENANCE HOLES
MAINTENANCE HOLES
MAINTENANCE STRUCTURE COVERS
MAINTENANCE SHAFT

(LADDERS,STEP IRONS & LANDINGS ARE NOT PERMITTED)

MAINTENANCE STRUCTURE COVERS TO FOLLOW LOCAL GRADE AND BE 50mm ABOVE FINISHED SURFACE LEVEL OR FLUSH WITH PAVEMENTS,FOOTPATHS AND DRIVEWAYS.

MAINTENANCE HOLE BASE LINERS TO BE COMPLAS OR SIMILAR F.R.P.

SEQ-SEW 1302-1,1304-1,1305-1

BENCHING DETAILS

SEQ-SEW-1313-1
SEQ-SEW-1303-1 & 1306-1

PIPE CONNECTIONS
DROP TYPES

SEW-SEW 1206-1

BULKHEADS & TRENCH STOPS

TRENCH INSTALLATION

SEQ-SEW-1200-2,1201-1,1202-1,1203-1,1204-1,1205-1
PRIVATE PROPERTY TRENCH TYPE 3
FOOTPATHS TRENCH TYPE 3
NEW ROADS TRENCH TYPE 3
EXISTING SEALED ROADS TRENCH TYPE 14 (CROSSING SEALED ROAD)
TRENCH TYPE 15,17 (ALONG SEALED ROADS)

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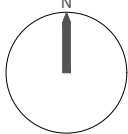
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PLANNERS
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LANDSCAPE ARCHITECTS

NORTH:



SCALE:

NOT TO SCALE THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE

A1

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APPROVED

FOR AND ON BEHALF OF JFP URBAN CONSULTANTS PTY LTD

T.M'KINNEY
RPEQ 5087

S.MARSH
RPEQ 8068

A.FRASER
RPEQ 5691

J.PAPPAS
RPEQ 6086

ISSUE:

DESIGNED CDV

DRAWN WN

CHECKED ADF

DATUM: AHD

ISSUE FOR OPERATIONAL WORKS APPROVAL

DATE: 24/04/20

INIT: WN

DETAILS:

TITLE:

SEWERAGE DETAILS PLAN

DFC (PROJECT MANAGEMENT) PTY LTD

'ARCHERS WAY' ESTATE - STAGE 1
AT 22-80 CASH STREET, D'AGUILAR



The Essential First Step

DETAILS:

PROJECT: M2584E_1

PLAN: S07

ISSUE: A

LOCAL AUTHORITY REF: MORETON BAY REGIONAL COUNCIL

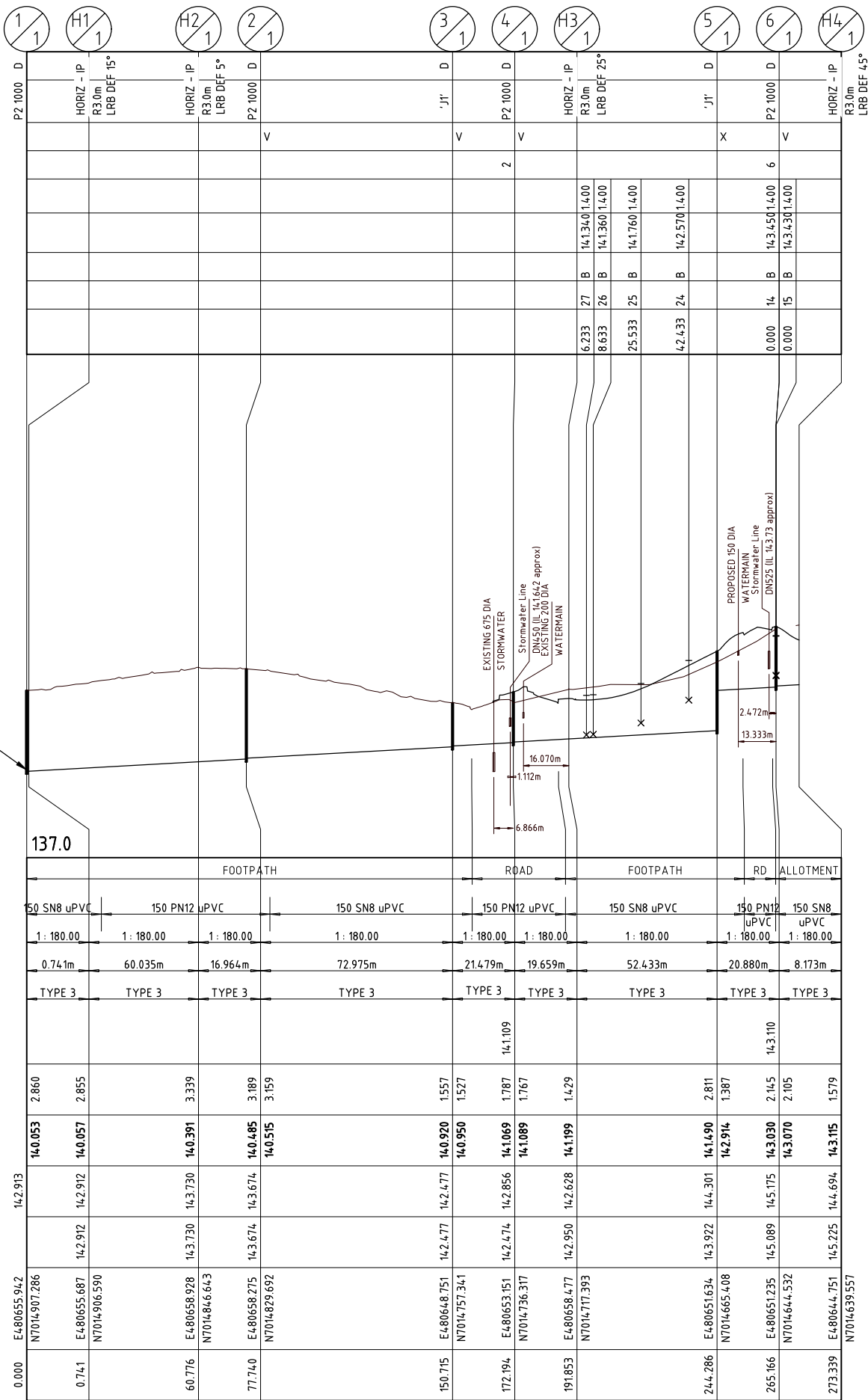
COUNCIL REF: DA/38032/2019/V3RL

FILE NAME: SEWERAGE.DWG

STRUCTURE No.
COVER TYPE
STRUCTURE TYPE
DROP TYPE
JUNCTION LINE No.
DEPTH TO HC
HC INVERT LEVEL
HC TYPE
HC LOT No
CH. FROM D/S STRUC.

PROP. DESCRIPTION
PIPE Dia, TYPE, CLASS
GRADE (1 IN X)
LENGTH
EMBEDMENT TYPE
JUNCTION INVERT LEVEL
DEPTH TO INVERT BELOW FSL
INVERT LEVEL (IL)
FINISHED SURFACE LEVEL (FSL)
EXISTING SURFACE LEVEL (ESL)
STRUCTURE SETOUT CO-ORDINATES
CHAINAGE (CH) (DISTANCE BETWEEN STRUCTURES)

LINE



STRUCTURES	
'J'1	MAINTENANCE SHAFT
P2/P3	MAINTENANCE HOLE
LRB	LONG RADIUS BEND (3.0m RADIUS)
Y JCT	45° JUNCTION
PIPES	
PN12	uPVC SERIES 12 R.R.J.
SN8	uPVC R.R.J.
HOUSE CONNECTIONS	
A	STANDARD CONNECTION
B	SLOPED CONNECTION
SV	'J'1 MAINTENANCE SHAFT WITH VERTICAL RISER
SZ	'J'1 MAINTENANCE SHAFT WITH AT BASE CONNECTION

FOR STANDARD DRAWINGS AND NOTES REFER M2438E2 S02

THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION. CONTACT THE DIVISION OF WORKPLACE HEALTH AND SAFETY FOR INFORMATION: 1300 362 128.

PROPERTY CONNECTIONS HAVE BEEN DESIGNED TO CONTROL THE REQUIRED SERVICE AREA OF EACH LOT AT A GRADE OF 1:60 AND A MAXIMUM DEPTH OF PROPERTY CONNECTION AT 1500m UNLESS OTHERWISE STATED. REFER SEQ-SEW-1104-1 TO SEQ-SEW-1105-1

THE CONSTRUCTOR IS TO NOTIFY THE SUPERVISING ENGINEER OF ANY DISCREPANCIES BETWEEN THE DESIGN PLANS AND THE CONDITIONS ON SITE PRIOR TO COMMENCEMENT OF ANY PIPE LAYING.

ALL ENVIRONMENT PROTECTION MEASURES SHOULD BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK, INCLUDING CLEARING COMMENCING.

LIVE WORKS MUST BE PERFORMED UNDER UNITYWATER SUPERVISION. REFER DRAWING M2584E_1 S07, UNITYWATER AND CONSTRUCTOR LIVE SEWER WORKS INSTRUCTION AND TABLE.

FOR DETAILS AND FURTHER NOTES REFER TO DWG No. M2584E_1 S07

CONSULTANT: JFP URBAN CONSULTANTS PTY LTD
CONTACT: MR. ANDREW FRASER
TELEPHONE: 5450 3900



PROP. DESCRIPTION
PIPE Dia, TYPE, CLASS
GRADE (1 IN X)
LENGTH
EMBEDMENT TYPE
JUNCTION INVERT LEVEL
DEPTH TO INVERT BELOW FSL
INVERT LEVEL (IL)
FINISHED SURFACE LEVEL (FSL)
EXISTING SURFACE LEVEL (ESL)
STRUCTURE SETOUT CO-ORDINATES
CHAINAGE (CH) (DISTANCE BETWEEN STRUCTURES)

1

FOR DETAILS AND FURTHER NOTES
REFER TO DWG No. M2584E_1 S07



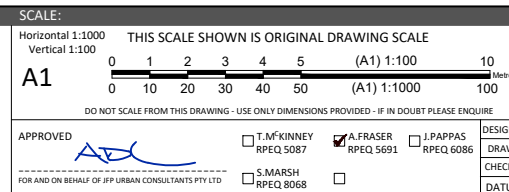
PROP. DESCRIPTION
PIPE Dia, TYPE, CLASS
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EXISTING SURFACE LEVEL (ESL)
STRUCTURE SETOUT CO-ORDINATES
CHAINAGE (CH) (DISTANCE BETWEEN STRUCTURES)

NORTH:



DENNIS
FAMILY
CORPORATION

DETAILS:		
PROJECT:	PLAN:	ISSUE:
M2584E_1	S10	B
LOCAL AUTHORITY REF:		
MORETON BAY REGIONAL COUNCIL		
COUNCIL REF:		
DA/38032/2019/V3RL		
FILE NAME:	SEWERAGE SECTIONS.DWG	



ISSUE:		
CDV		
WN	B	RESPONSE TO RFI DATED 2020/05/26
ADF	A	ISSUE FOR OPERATIONAL WORKS APPROVAL
HD	ISSUE: DETAILS:	

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LEGEND

ABANDONED MAIN	
EXISTING WATER MAIN	
PROPOSED MAIN	
STORMWATER DRAINAGE	
SEWERAGE	
U.G. ELECTRICITY	
ISOLATION VALVE TO REMAIN CLOSED PENDING CLEARANCE OF NEW MAIN	
PRIVATE SERVICE (FOR FUTURE INSTALLATION BY DEVELOPER)	
WATER SERVICE POINT	
ISOLATION VALVE	
SCOUR VALVE	
DEAD END	
FIRE HYDRANT	
TEST/CHLORINATION POINT	
REDUCER	
PIPE MATERIAL CHANGE	

SERVICE DETAILS

No.	SIZE	LOT NUMBERS
16	32mm	7
16	25mm	5, 6, 18, 19, 22-27
16	20mm	1-4, 8-13, 14-17, 20, 21

LIVE WATER WORKS

LOT	DESCRIPTION
1	NEW METERED SERVICE
2	NEW METERED SERVICE
3	NEW METERED SERVICE
4	NEW METERED SERVICE
3/4 SIDE BOUNDARY	CUT IN NEW HYDRANT TO Ø200 PVC MAIN

CONSULTANT: JFP URBAN CONSULTANTS PTY LTD
CONTACT: MR. ANDREW FRASER
TELEPHONE: 5450 3900

THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION. CONTACT THE DIVISION OF WORKPLACE HEALTH AND SAFETY FOR INFORMATION: 1300 362 128.

NOTE: STORMWATER AND SEWERAGE LINES HAVE BEEN DESIGNED TO ALLOW FOR WATER MAINS TO HAVE 1200mm COVER AT ROAD CROSSINGS UNLESS NOTED OTHERWISE

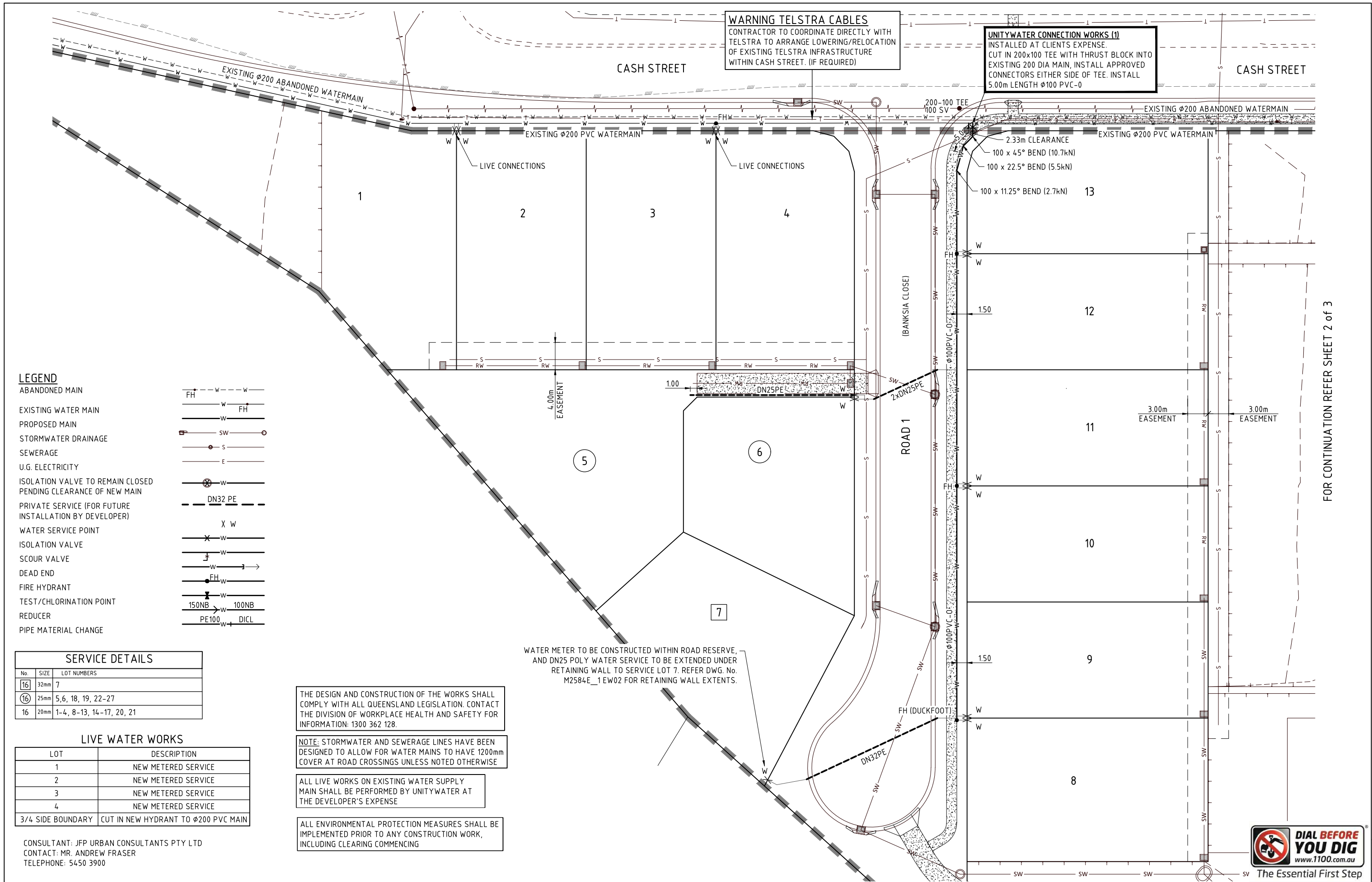
ALL LIVE WORKS ON EXISTING WATER SUPPLY MAIN SHALL BE PERFORMED BY UNITYWATER AT THE DEVELOPER'S EXPENSE

ALL ENVIRONMENTAL PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK, INCLUDING CLEARING COMMENCING

WATER METER TO BE CONSTRUCTED WITHIN ROAD RESERVE, AND DN25 POLY WATER SERVICE TO BE EXTENDED UNDER RETAINING WALL TO SERVICE LOT 7. REFER DWG. No. M2584E_1EW02 FOR RETAINING WALL EXTENTS.

WARNING TELSTRA CABLES
CONTRACTOR TO COORDINATE DIRECTLY WITH TELSTRA TO ARRANGE LOWERING/RELOCATION OF EXISTING TELSTRA INFRASTRUCTURE WITHIN CASH STREET. (IF REQUIRED)

UNITYWATER CONNECTION WORKS (1)
INSTALLED AT CLIENTS EXPENSE.
CUT IN 200x100 TEE WITH THRUST BLOCK INTO EXISTING 200 DIA MAIN, INSTALL APPROVED CONNECTORS EITHER SIDE OF TEE. INSTALL 5.00m LENGTH Ø100 PVC-0



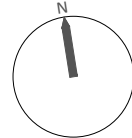
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PLANNERS
URBAN DESIGNERS
SURVEYORS
ENGINEERS
LANDSCAPE ARCHITECTS

NORTH:



SCALE:

1:250
A1

THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE
0 2.5 5 7.5 10 12.5 (A1) 1:250 25
(A3) 1:500

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A. FRASER RPEQ 5691
S. MARSH RPEQ 8068
J. PAPPAS RPEQ 6086

ISSUE:

B
A

RESPONSE TO RFI DATED 2020/05/26
ISSUE FOR OPERATIONAL WORKS APPROVAL

15/06/20
24/04/20

TITLE:

WATER RETICULATION LAYOUT PLAN 1
SHEET 1 of 3

DFC (PROJECT MANAGEMENT) PTY LTD

'ARCHERS WAY' ESTATE - STAGE 1
AT 22-80 CASH STREET, D'AGUILAR



DETAILS:

PROJECT: M2584E_1
LOCAL AUTHORITY REF: MORETON BAY REGIONAL COUNCIL
COUNCIL REF: DA/38032/2019/V3RL
FILE NAME: WATER.DWG



LEGEND

ABANDONED MAIN

EXISTING WATER MAIN

PROPOSED MAIN

STORMWATER DRAINAGE

SEWERAGE

U.G. ELECTRICITY

ISOLATION VALVE TO REMAIN CLOSED

PENDING CLEARANCE OF NEW MAIN

PRIVATE SERVICE (FOR FUTURE

INSTALLATION BY DEVELOPER)

WATER SERVICE POINT

ISOLATION VALVE

SCOUR VALVE

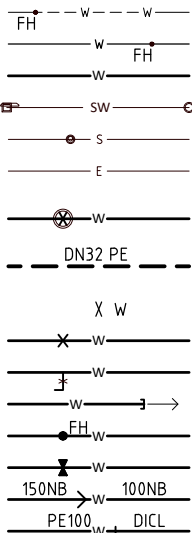
DEAD END

FIRE HYDRANT

TEST/CHLORINATION POINT

REDUCER

PIPE MATERIAL CHANGE



SERVICE DETAILS

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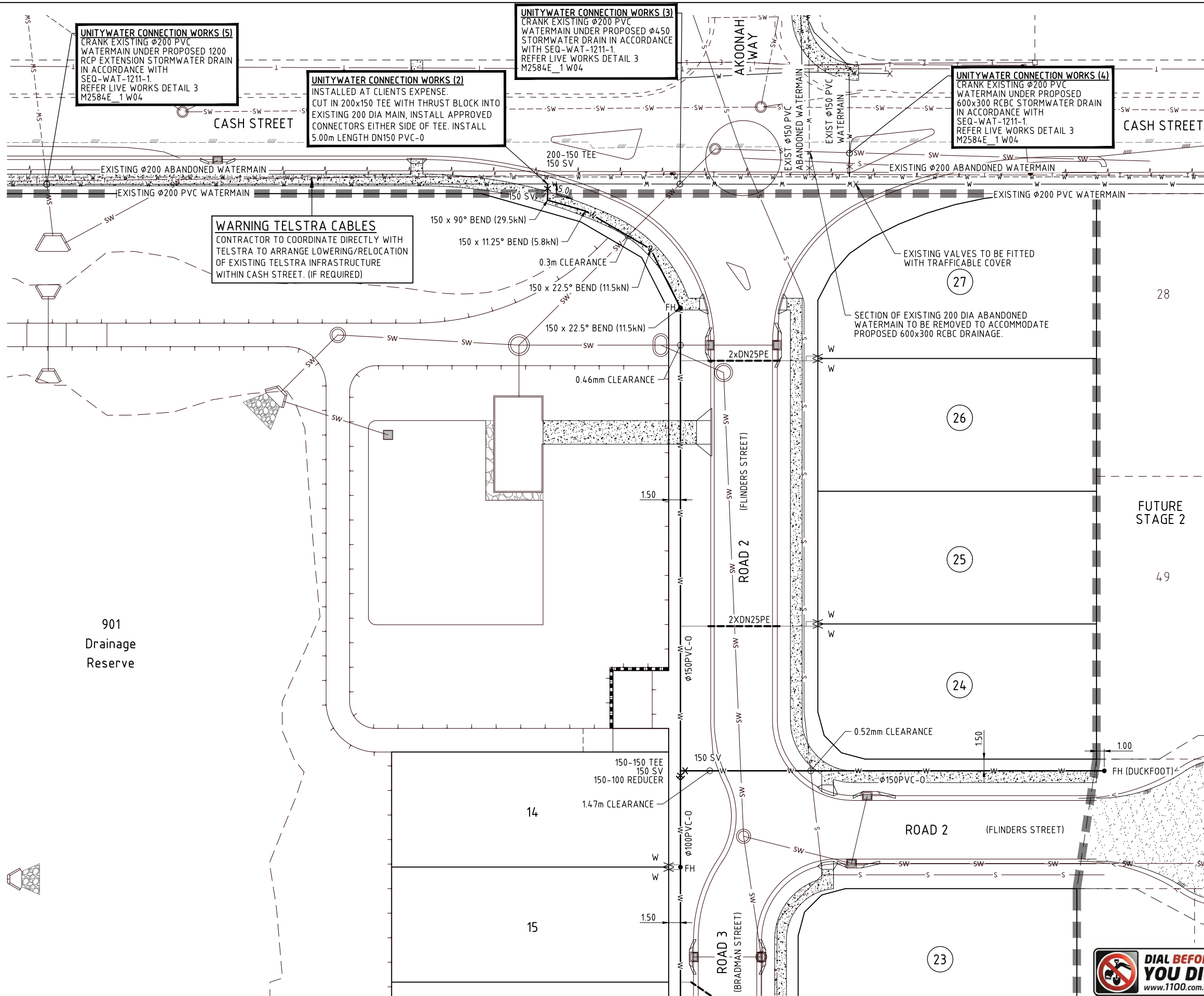
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FOR CONTINUATION REFER SHEET 1 of 3



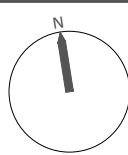
FOR CONTINUATION REFER SHEET 3 of 3



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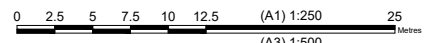
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SCALE:

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A. FRASER RPEQ 5691
J. PAPPAS RPEQ 6086
S. MARSH RPEQ 8068

ISSUE:

DESIGNED: CDV
DRAWN: WN
CHECKED: ADF
DATE: 15/06/20
24/04/20
INIT: CDV
WV
DATE: 15/06/20
24/04/20
INIT: CDV
WV

TITLE:

WATER RETICULATION LAYOUT PLAN 2
SHEET 2 of 3

DFC (PROJECT MANAGEMENT) PTY LTD

'ARCHERS WAY' ESTATE - STAGE 1
AT 22-80 CASH STREET, D'AGUILAR



DETAILS:

PROJECT: M2584E_1
LOCAL AUTHORITY REF: MORETON BAY REGIONAL COUNCIL
COUNCIL REF: DA/38032/2019/V3RL
FILE NAME: WATER.DWG



The Essential First Step

LEGEND

ABANDONED MAIN	
EXISTING WATER MAIN	
PROPOSED MAIN	
STORMWATER DRAINAGE	
SEWERAGE	
U.G. ELECTRICITY	
ISOLATION VALVE TO REMAIN CLOSED	
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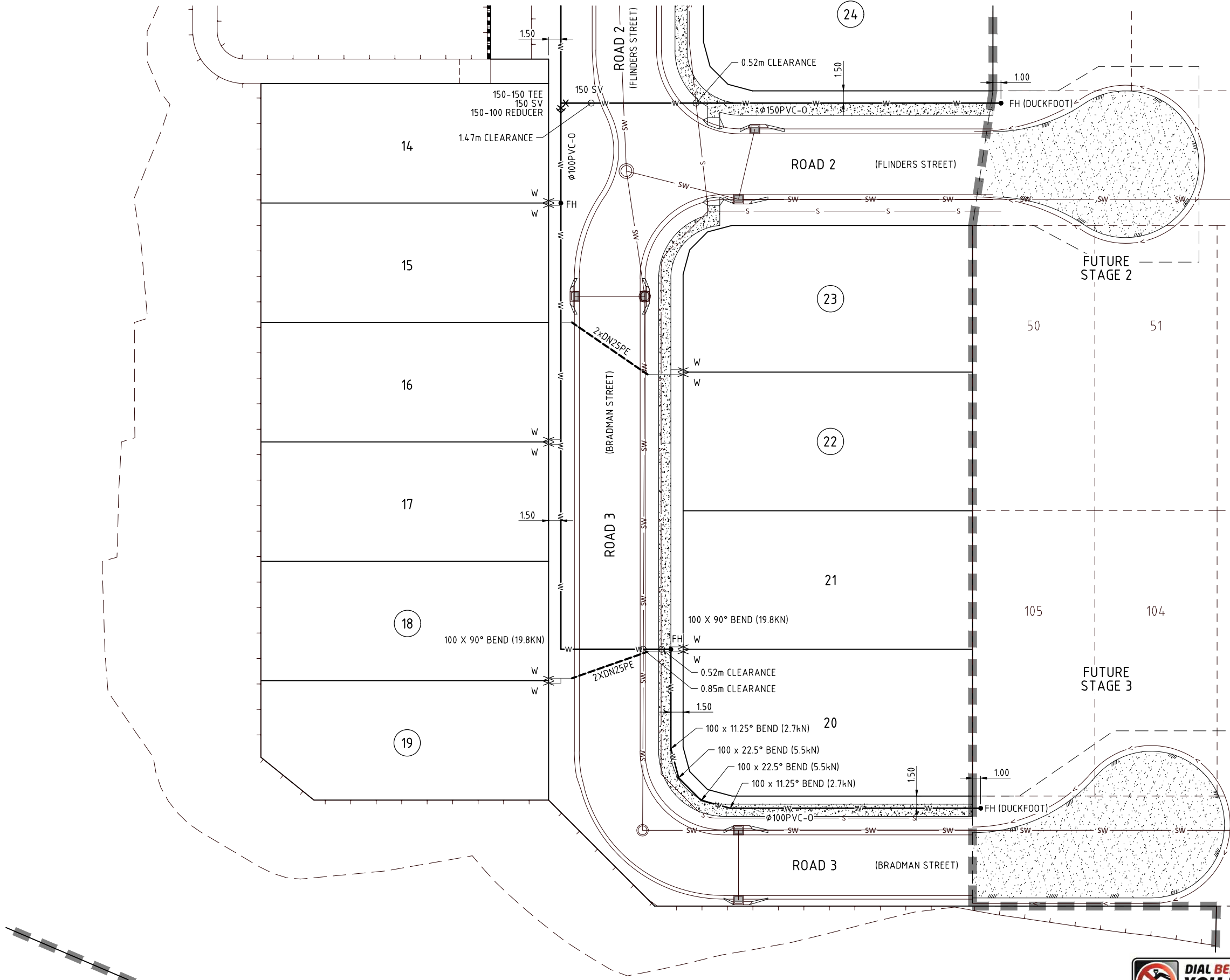
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FOR CONTINUATION REFER SHEET 2 of 3

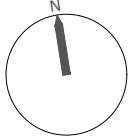
FOR CONTINUATION REFER SHEET 1 of 3



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NORTH:



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CHECKED ADF
DATUM: AHD
ISSUE: DETAILS

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TITLE:

WATER RETICULATION LAYOUT PLAN 3
SHEET 3 of 3

DFC (PROJECT MANAGEMENT) PTY LTD
'ARCHERS WAY' ESTATE - STAGE 1
AT 22-80 CASH STREET, D'AGUILAR



DETAILS:
PROJECT: M2584E_1
PLAN: W03
ISSUE: B
LOCAL AUTHORITY REF: MORETON BAY REGIONAL COUNCIL
COUNCIL REF: DA/38032/2019/V3RL
FILE NAME: WATER.DWG

WATER RETICULATION NOTES

1. ALL WORKS AND MATERIALS MUST BE IN ACCORDANCE WITH CURRENT UNITYWATER SPECIFICATIONS:

WATER SUPPLY CODE OF AUSTRALIA (WSA 03-2011 V3.1)
SEQ SERVICE PROVIDERS EDITION VERSION 1.3 (AUGUST 2019)
SEQ WS&S D&C CODE STANDARD DRAWINGS
SEQ WS&S D&C CODE CIVIL IPAM LIST

2. UNLESS NOTED OTHERWISE, WATER MAINS SHALL BE oPVC PN16, FITTINGS TO BE DI FBE PN16.

3. INSTALLATION OF PIPES AND FITTINGS SHALL COMPLY WITH THE FOLLOWING:
- PVC PIPES SHALL BE CUT AND LAID IN ACCORDANCE WITH PVC MANUFACTURERS REQUIREMENTS.
 - DUCTILE IRON OR CAST IRON SPIGOTS SHALL NOT BE JOINED TO PVC SOCKETS.
 - DICL PIPES SHALL NOT BE CUT WITHIN 1.5m OF THE SOCKET AND IN GENERAL THE MINIMUM LENGTH OF DICL PIPE SHALL BE 0.6m.
 - FOR oPVC PIPE, MINOR DEFLECTION MAY BE ACHIEVED BY CUMULATIVE DEFLECTIONS AT THE JOINT OF ELASTOMERIC RING SEAL JOINTED PIPES. LIMITS OF DEFLECTION TO BE IN ACCORDANCE WITH PIPE MANUFACTURER. TYPICAL DEFLECTION 5° FOR DN150 & DN200, 4° FOR DN200 & DN225, AND 3° FOR DN225 & DN300.
 - FBE COATED FLANGES SHALL BE JOINED BY GRADE 316 STAINLESS STEEL BOLTS, NUTS AND WASHERS. IN THIS CONFIGURATION, FLANGES DO NOT NEED TO HAVE CORROSION PROTECTION WRAPPING.
 - CURVING OF PVC PIPES IS NOT PERMITTED.
 - DISTANCE BETWEEN SOCKETED FITTINGS SHALL BE SEPARATED BY A STRAIGHT LENGTH OF MINIMUM LENGTH OF 600mm.
 - EMBEDMENT MATERIAL FOR WATER MAINS SHALL BE 5 OR 7mm NOMINAL SINGLE SIZED AGGREGATE AS PER WSA ps-351, 10mm NOMINAL SINGLE SIZED RECYCLED CONCRETE AGGREGATE AS PER WSA PS-366 OR BEDDING SAND AS PER TABLE G3 OF AS/NZS 2566.2.
 - WHERE THE WATER MAIN CROSSES OTHER SERVICES, THE SEPARATION SHALL BE FILLED WITH EMBEDMENT MATERIAL AND COMPACTED.

4. DUCTILE IRON FITTINGS SHALL BE PN16 COATED WITH A FUSION BONDED POLYMERIC COATING IN ACCORDANCE WITH AS/NZS 4158. ALL DUCTILE IRON OR CAST IRON FITTINGS SHALL BE INSTALLED IN A POLYETHYLENE SLEEVE, INCLUDING FITTINGS WITH FUSION BONDED COATINGS. PARTICULAR FITTINGS SUCH AS SLUICE VALVES, HYDRANTS AND PRE-TAPPED PROPERTY SERVICE FITTINGS SHALL BE SUPPLIED WITH AN INTERNAL AND EXTERNAL FUSION BONDED POLYMERIC COATING IN ACCORDANCE WITH AS/NZS 4158.

5. PIPES SHALL BE LAID IN TYPE C EMBEDMENT IN ACCORDANCE WITH STD. DWGS. SEQ-WAT-1200-2C AND 1201-1A.

6. ALL EXISTING ROAD CROSSINGS WHERE NEW SEWERS ARE TO BE LAID SHALL BE TUNNEL BORED (U.N.O.) IN ACCORDANCE WITH STD DWG SEQ-SEW-1402-1A & 1403-1B. IF OPEN TRENCH EXCAVATION IS SPECIFIED, TRENCHES AND BEDDING UNDER OR ALONG ROADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. DWG. SEQ-WAT-1204-1B. DETECTABLE MARKER TAPE TO BE INSTALLED ABOVE ALL NON-METALLIC PIPES. TYPE L, M, K AND N TO BE ADOPTED UNDER EXISTING ROADS. TYPE L TO BE ADOPTED FOR NEW ROADS WITHOUT LEAN MIX LAYER. ROAD BACKFILL TO BE IN ACCORDANCE WITH STD DWG RS-170F.

7. STANDARD WATER MAIN ALIGNMENT:-
FRONT: 1.5m OFFSET FROM PROPERTY BOUNDARY (IN VERGE)
8. MINIMUM PIPE COVERS DEPTHS SHALL BE AS LISTED BELOW:

LOCATION	≤ 200mm NB	> 200mmNB
NON-ROADWAYS	600mm	1000mm
SEALED ROADS	600mm	1000mm
MAJOR ROADWAYS/EMBANKMENT	750mm	1000mm
FREEWAYS	1200mm	1200mm

Partial extract from SEQ WATER SUPPLY CODE
V1.3-2019, S7.4.2, TABLE 7.2

- IN A ROAD CARRIAGEWAY, THE DEPTH OF COVER SHALL BE MEASURED FROM THE ROAD SHOULDER OR LIP OF KERB.
 - THE MAXIMUM DEPTH TO INVERT SHALL NOT EXCEED 1.5M FOR RETICULATION MAINS.
8. THRUST BLOCKS SHALL BE CONSTRUCTED ON ALL BENDS, TEES, VALVES, TAPERS, DEADENDS, DUCKFOOT HYDRANTS, AND TRANSITIONS TO UNRESTRAINED PIPEWORK IN ACCORDANCE WITH STD DWGS SEQ-WAT-1205-1A, 1206-1B AND 1207-1A.

9. PROPERTY SERVICES SHALL BE PE AND CONSTRUCTED IN ACCORDANCE WITH STD. DWG. SERIES SEQ-WAT-1108-1B,1108-2C, 1108-3C.
- PE WATER SERVICES SHALL HAVE DETECTABLE MARKING TAPE PLACED ABOVE THE PIPE EMBEDMENT.
 - FOR PE SYSTEMS, WATER SERVICES SHALL BE CONSTRUCTED TO THE NEW MAINS WITH ELECTROFUSION FITTINGS ONLY. FOR RENEWALS, EITHER ELECTROFUSION OR MECHANICAL TAPPING FITTINGS CAN BE USED.
 - WATER SERVICES UP TO DN63 PE LOCATED UNDER EXISTING OR FUTURE ROADWAYS, CONCRETE OR PAVED DRIVEWAYS, FOOTPATHS, BIKEWAYS OR OTHER HARD STAND AREAS SHALL BE INSTALLED IN A SOLVENT WELDED DN100 PVC CONDUIT. CONDUITS SHALL NOT BE INSTALLED IN THE SAME TRENCH AS ELECTRICAL CABLES.
 - MINIMUM COVER TO WATER SERVICES IN THE FOOTWAY SHALL BE 300MM AND UNDER ROAD WAYS 600MM MEASURED FROM THE LIP OF KERB.
10. STOP VALVES AND HYDRANTS, INSPECTION BOXES, MARGIN SETS, AND MARKERS SHALL BE INSTALLED IN ACCORDANCE WITH STD. DWGS. SEQ-WAT-1300-1C, 1300-2B, 1301-1C, 1302-1C, 1303-1B,1303-2B, 1304-1B, 1305-1B AND 1306-1C
- STOP VALVES SHALL BE RESILIENT SEATED GATE VALVES
 - FOR DICL AND PVC PIPES, STOP VALVES SHALL BE DOUBLE SOCKET TYPE ONLINE, EXCEPT WHERE THE VALVE IS CONNECTED TO A FLANGED BRANCH IN WHICH CASE THE VALVE SHALL BE OF THE FLANGE / SOCKET TYPE
 - HYDRANTS SHALL BE SWAB TYPE. 100mm FLANGES, 100mm RISERS AND SPRING HEADS
 - HYDRANT SURROUNDS TO BE LEFT 30-50mm PROUD OF TOPSOIL, 10-15mm PROUD OF TURF, OR FLUSH WITH CONCRETE SURFACE
 - PAINT VALVE BOXES WHITE AND HYDRANT BOXES YELLOW, INCORPORATING GLASS REFLECTIVE BEADING. DO NOT PAINT CONCRETE SURROUNDS
 - RRPMS FOR POTABLE WATER SUPPLY (VALVES YELLOW AND HYDRANTS BLUE) WITH DIRECTIONAL ARROW TO BE INSTALLED ON THE CENTRE LINE OF ALL ROADS UNLESS LINE MARKED. ALTERNATIVELY, RRPMS MINUS DIRECTIONAL ARROW ON THE VALVE / HYDRANT SIDE OF THE MARKER WHICH IS TO BE LOCATED ON THE CENTRE LINE OF THE ROAD UNLESS LINE MARKED
 - WATER SERVICE POINTS SHARING A BOUNDARY CORNER WITH AN ELECTRICAL PILLAR SHALL BE A MINIMUM 1M CLEAR OF THE ELECTRICAL PILLAR AND ASSOCIATED CONDUITS.
 - HYDRANT MARKER POSTS ARE ONLY REQUIRED IN RURAL RESIDENTIAL AREAS.
 - FLANGES TO BE CLASS 16 AND BE IN ACCORDANCE WITH SEQ-WAT-1313/1A. GRUB SCREWS OR SIMILAR TYPE FLANGES ARE NOT ACCEPTABLE IN THE WATER MAIN CONSTRUCTION

11. WHERE THE GRADE OF A WATER MAIN IS EQUAL TO OR GREATER THAN 5%, BULKHEADS OR TRENCH STOPS SHALL BE INSTALLED IN ACCORDANCE WITH STD DWGS 1209-1A & 1210-1A

12. CONNECTION OF NEW WATER MAINS TO THE EXISTING WATER RETICULATION SYSTEM SHALL BE COMPLETED BY UNITYWATER AT THE DEVELOPER'S COST.

13. INSPECTOR MUST BE NOTIFIED BY PHONE AND GIVEN THE OPPORTUNITY TO WITNESS THE FOLLOWING WHERE APPLICABLE :-
- EXPOSE EXISTING WATER MAIN AT CONNECTION POINT PRIOR TO COMMENCEMENT OF LAYING PIPE.ALL UNDER ROAD WPS, TAPPING BANDS AND FITTINGS BEFORE BACKFILLING.
 - ALL CONCRETE THRUST BLOCKS BEFORE POURING CONCRETE.
 - ALL CONCRETE THRUSTER PIPE AND CONDUITS BEFORE BACKFILLING.
 - ALL READYTAT BLOCKS AFTER POURING CONCRETE.
 - ALL WATER SERVICE CONNECTION LINES BEFORE BACKFILLING.
 - WATER PRESSURE TESTS (UNLESS CARRIED OUT BY NATA CERTIFIED TESTER - HOWEVER UNITYWATER INSPECTOR SHALL STILL BE NOTIFIED WHEN TESTING IS TO BE UNDERTAKEN AND MAY CONDUCT RANDOM INSPECTION OF NATA CERTIFIED TESTING).

14. PRIOR TO THE CONNECTION OF THE NEW MAIN TO EXISTING, THE PIPEWORK SHALL BE PRESSURE TESTED
- WHERE TESTING IS NOT CONDUCTED BY A NATA CERTIFIED TESTING ORGANISATION THE CERTIFYING ENGINEER SHALL BE PRESENT FOR THE TESTING PROCEDURE AND THE UNITYWATER INSPECTOR MUST BE NOTIFIED WITH 3 DAYS PRIOR NOTICE OF THE TEST OCCURRING. (SHALL BE DONE AFTER WATER SERVICES ARE CONNECTED AND ELECTRICAL CONDUITS INSTALLED)ALL DEAD END LINES ARE TO BE TESTED AND

- CHLORINATED. THIS MAY REQUIRE TEMPORARY HYDRANTS OR TAPPING BANDS. TEMPORARY TAPPING BANDS TO BE CUT OFF WHEN CONNECTION TO LIVE MAIN OCCURS.
- PRELIMINARY PRESSURISE THE MAINS TO 75% OF THE TEST PRESSURE FOR A MINIMUM OF TWELVE (12) HOURS
 - APPLY TEST PRESSURE (1200kPA) AT THE HIGHEST POINT OF THE WATER MAIN FOR FOUR (4) HOURS
 - IDEALLY THERE SHOULD BE NO PRESSURE LOSS AFTER FOUR (4) HOURS.

15. PRIOR TO THE CONNECTION OF THE NEW MAIN TO THE EXISTING, THE PIPEWORK SHALL BE FLUSHED CHLORINATED IN ACCORDANCE WITH UNITYWATER DOCUMENT PR9032 - PROCEDURE FOR MANAGING WATER QUALITY DURING MAINS COMMISSIONING

16. A WATER METER SUPPLIED AT THE DEVELOPERS COST, IS TO BE INSTALLED AT THE SERVICE POINT OF EACH LOT.

17. THE CONSTRUCTION OF THE WATER RETICULATION WORK SHOWN ON THIS DRAWING MUST BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT TO THE WATER RETICULATION STEM

18. TRENCH COMPACTION RESULTS TO BE IN ACCORDANCE WITH AS3798 AND MORETON BAY REGIONAL COUNCIL OPERATIONAL WORKS INSPECTION, MAINTENANCE AND BONDING PROCEDURES PLANNING SCHEME POLICY
- a) COMPACTION TO TRENCH BOTTOM - FIELD DENSITY 1 PER 40m (IF ORDERED)
- b) BACKFILL - FIELD DENSITY 1 PER 40m

19. MINIMUM COMPACTION TO BE IN ACCORDANCE WITH THE FOLLOWING:

MATERIAL TYPE	MINIMUM VALUE (%)			
	TRAFFICABLE AREAS		NON-TRAFFICABLE AREAS	
	EMBEDMENT	TRENCH	EMBEDMENT	TRENCH
NON-COHESIVE	70 (REFER NOTE BELOW)	70	60	60
COHESIVE	95	95	90	90
NOTE: SINGLE SIZE COARSE AGGREGATES OF SIZES 5, 7, 10 AND 14mm SHALL BE DEEMED "SELF COMPACTING" AND DO NOT REQUIRE COMPACTION TESTING WHEN USED FOR PIPE EMBEDMENT				

FOR ROAD PAVEMENTS THE FOLLOWING COMPACTION SHALL BE ACHIEVED:

- NATURAL SUBGRADE - 100% STANDARD MAXIMUM DRY DENSITY (MDD)
- PAVEMENT UPPER AND LOWER SUB BASE LAYERS - 100% STANDARD MAXIMUM DRY DENSITY (MDD)
- PAVEMENT BASE LAYER - 102% STANDARD MAXIMUM DRY DENSITY (MDD)

20. DURING ANY CONSTRUCTION ACTIVITY, AT LEAST ONE PERSON ON SITE MUST HAVE COMPLETED A PIPE LAYING TRAINING COURSE APPROVED BY THE SUPPLIER AND APPROPRIATE TO THE PIPE LINE UNDER CONSTRUCTION. THE TRAINING COURSE MUST HAVE BEEN COMPLETED WITH IN THE LAST 10 YEARS. DOCUMENTARY EVIDENCE TO BE PROVIDED BY THE CONTRACTOR PRIOR TO COMMENCEMENT

21. AS CONSTRUCTED DRAWINGS, ENGINEERING CERTIFICATION, PRESSURE TEST RESULTS, COMPACTION TEST RESULTS AND ASSOCIATED CONSULTANT'S REPORTS MUST BE DELIVERED AND RECEIVED 7 DAYS PRIOR TO AN ON-MAINTENANCE INSPECTION.

CLEARANCES BETWEEN WATER MAINS AND OTHER UNDERGROUND SERVICES

UTILITY (Existing Services)	Minimum horizontal clearance (mm)		Minimum Vertical Clearance mm
	New main size NB		
	≤200 mm	>200 mm	
WATER MAINS ≤375 mm	300 ³	600	150
WATER MAINS >375 mm	600	600	300
GRAVITY SEWERS ≤DN 300	1000 ⁵ 600	1000 ⁵ 600	500 ⁴
GRAVITY SEWERS >DN 300	1000 ⁵ 600	1000 ⁵ 600	500 ⁴
SEWERS – PRESSURE	1000 ⁵	1000 ⁵	500
SEWERS – VACUUM	300	600	500
GAS MAINS	300 ³	600	500 ⁴
TELECOMMUNICATIONS CONDUITS & CABLES	300 ³	600	300
ELECTRICITY CONDUITS & CABLES	500	1000	500 ^{4&7}
STORMWATER DRAINS ≤300 mm	300 ³	600	150 ⁴
STORMWATER DRAINS >300 mm	300 ³	600	300 ⁴
KERBS	150	600 ⁶	150

FOR NOTES, VARIATIONS TO CLEARANCES
AND ACCEPTABLE REASONS SEE TABLE 5.5

Partial extract from SEQ WATER SUPPLY CODE
V1.3-2019, S5.12.5.2, TABLE 5.5

ENVIRONMENTAL NOTES

VEGETATION PROTECTION

- A. TREES LOCATED ALONG THE FOOTPATH SHALL BE, TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
- B. WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES SHOULD BE CONSTRUCTED WITH 18m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES SHALL BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
- C. TREE ROOTS SHALL BE TUNNELED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED, THE DAMAGED AREA SHALL BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT RELEVANT COUNCIL ARBORIST FOR FURTHER ADVICE.
- D. ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.
- SOIL**
- A. TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY.
- B. CARE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.

CREEK CROSSINGS

- A. FILTRATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.
- B. APPROPRIATE SEDIMENT CONTROLS SHALL BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.
- C. NO SOIL SHOULD BE STOCKPILED WITHIN 5m OF THE CREEK.

REHABILITATION

- A. PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS ARE TO BE REINSTATED.
- B. PREDISTURBANCE VEGETATION PATTERNS SHOULD BE RESTORED.

SAFETY

- A. THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION



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PLANNERS

URBAN DESIGNERS

SURVEYORS

ENGINEERS

LANDSCAPE ARCHITECTS

NORTH:

SCALE:
THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE
A1
DO NOT SCALE FROM THIS DRAWING - USE ONLY DIMENSIONS PROVIDED - IF IN DOUBT PLEASE ENQUIRE

ISSUE:
APPROVED

FOR AND ON BEHALF OF JFP URBAN CONSULTANTS PTY LTD
T.M.KINNEY RPEQ 5087
A.FRASER RPEQ 5691
J.PAPPAS RPEQ 6086

DESIGNED: CDV
DRAWN: WN
CHECKED: ADF
DATUM: AHD
ISSUE: A
DETAILS:

24/04/20
DATE:
WN
INIT:

TITLE:
WATER RETICULATION NOTES
DFC (PROJECT MANAGEMENT) PTY LTD
'ARCHERS WAY' ESTATE - STAGE 1
AT 22-80 CASH STREET, D'AGUILAR



DETAILS:
PROJECT: M2584E_1
PLAN: W05
ISSUE: A
LOCAL AUTHORITY REF:
MORETON BAY REGIONAL COUNCIL
COUNCIL REF:
DA/38032/2019/V3RL
FILE NAME: WATER.DWG

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