

OPERATIONAL WORKS STAGE 2 No. 35701-02

		SCHEDULE O	F DRAV	VINGS	
NUMBER	REV.	NO. TITLE	NUMBER	REV.	NO. TITLE
GENERAL			ROADS: LINEMARKIN	IG AND SIGNAG	jE
35701-02-000	F	COVER SHEET	35701-02-420	Α	PLAN SHEET 01
35701-02-005	Α	ROAD HIERARCHY & STAGING PL.	AN RETAINING WALL A	ND DETAIL GRA	ADING
EARTHWORKS: DEM	OLITION PLAN		35701-02-450	С	PLAN-SHEET
35701-02-020	Δ	PLAN SHEET 01	35701-02-460	В	RETAINING WALL DETAILS
35701-02-020	A	PLAN SHEET UT	35701-02-461	Α	FINAL TRIM DETAILS
EARTHWORKS: EAR	THWORKS		SEWER RETICULATION	ON: SEWER	
		CUT TO FILL PLAN SHEET 01 OF	35701-02-500	E	PLAN SHEET 01 OF 02
35701-02-040	С	02	35701-02-501	С	PLAN SHEET 02 OF 02
	-	CUT TO FILL PLAN SHEET 02 OF	35701-02-510	В	DETAILS SHEET 01
35701-02-041	C	02	SEWER RETICULATION	ON: PROFILES	
35701-02-042	A	EARTHWORKS SECTIONS	35701-02-530	D	PROFILES SHEET 01 OF 04
35701-02-043	A	EARTHWORKS SECTIONS 2	35701-02-531	D	PROFILES SHEET 02 OF 04
EARTHWORKS: SEDI	IMENT AND ERG	SION	35701-02-532	E	PROFILES SHEET 03 OF 04
35701-02-070	С	PLAN SHEET 01 OF 02	35701-02-533	С	PROFILES SHEET 04 OF 04
35701-02-071	С	PLAN SHEET 02 OF 02	SEWER RETICULATION	ON: HOUSE CON	NECTION PROFILE
EARTHWORKS: COM	BINED SERVICES	5	35701-02-550	E	HC PROFILES SHEET 01 OF 02
35701-02-090	E	PLAN SHEET 01	35701-02-551	С	HC PROFILES SHEET 02 OF 02
ROADS: ROADWORK	·c	•	STORMWATER: DRA	INAGE	<u>'</u>
			35701-02-600	Α	PLAN SHEET 01
35701-02-100	A	PLAN SHEET 01	STORMWATER: PROI	STORMWATER: PROFILES	
35701-02-120	В	DETAILS SHEET 01	35701-02-620	Α	PROFILES SHEET 01 OF 03
ROADS: LONGITUDIN	IAI CECTIONS		35701-02-621	A	PROFILES SHEET 02 OF 02
RUADS: LUNUITUDIN	IAL SECTIONS	ROAD (02) & ROAD (03) SHEET 0	35701-02-622	A	PROFILES SHEET 03 OF 03
35701-02-200	A	OF 02	STORMWATER: PIT	DETAILS	<u> </u>
35701-02-201	A	ROAD (04) SHEET 02 OF 02	35701-02-640	Α	DETAILS SHEET 01
ROADS: CROSS SEC	TIONS		STORMWATER: CAT	CHMENT PLANS	5
35701-02-300	A	ROAD (02) SHEET 01 OF 03	35701-02-670	A	CATCHMENT PLAN SHEET 01
35701-02-301	A	ROAD (03) SHEET 02 OF 03	STORMWATER: CALC	CULATION TABL	-ES
35701-02-302	A	ROAD (04) SHEET 03 OF 03	35701-02-680	A	MINOR & MAJOR
ROADS: INTERSECTI	ON GRADING	1	WATER: WATER RE	TICULATION	
35701-02-400	A	DETAILS SHEET 01	35701-02-700	D	PLAN SHEET 01
ROADS: JOINTING D	ETAILS		35701-02-701	A	DETAIL SHEET 01
35701-02-410	I A	DETAILS PLAN SHEET 01			·





CLIENT

ORMEAU DEVELOPMENT PTY LTD







Lot 4 RP883725 , LOT 4 DALMA STREET
ORMEAU HILLS
LOCALITY OF ORMEAU
LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

35701-02-000

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

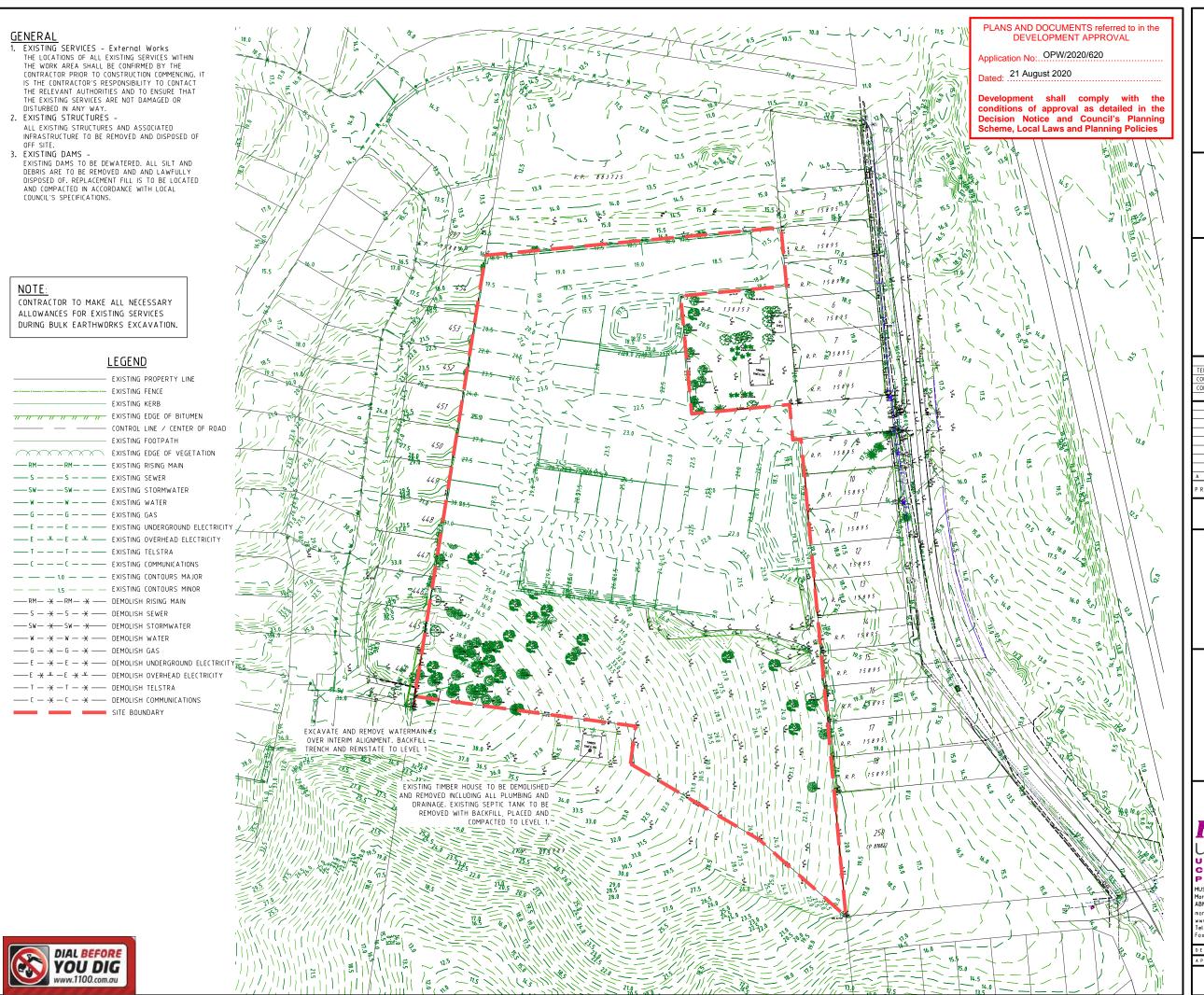
conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

Application No: OPW/2020/620

Development shall comply

Dated: August 2020





DALMA

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4 DALMA STREET ORMEAU HILLS LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

ORMEAU DEVELOPMENTS PTY LTD



- 1	ISSUES		DATE	
TENDER				
COUN	CIL		30-04-20	
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DRAWING TITLE

EXISTING FEATURES AND DEMOLITION PLAN SHEET 01



MUS Pty Ltd T/As: Mortons-Urban Solutions ABN: 39 116 375 065 ortons@urbansolutions.net.au

Postal Addres

Gold Coast Office Suite 9, 19 Short S Southport QLD 421

DESIGNED RB

RPEQ 4706 DATE 29-04-20 35701-02-020

EARTHWORKS

1. TOPSOIL STRIPPING

TOPSOIL SHALL BE STRIPPED ACROSS THE ENTIRE LIMIT OF THE EARTHWORKS CUT AND FILL AREAS AND SHALL BE STOCKPILED IN A LOCATION APPROVED BY THE SUPERINTENDENT. THE EXISTING STRATA IS TO BE TREATED IN ACCORDANCE WITH THE SPECIFICATION PRIOR TO PLACING ANY FILL.

2. EARTHWORKS LEVELS

EARTHWORKS LEVELS SHOWN ON DRAWINGS ARE TO FINISHED SURFACE LEVELS AND INCLUDE 100mm OF TOPSOIL.

3. COMPACTION STANDARD

SITE FILLING AND TRENCH BACKFILL SHALL BE COMPACTED TO THE STANDARDS OUTLINED IN THE LOCAL AUTHORITY'S SPECIFICATIONS.

4. PAVEMENT DEPTHS
THE DESIGN PAVEMENT DEPTHS ALLOWED IN EARTHWORKS CALCULATIONS ARE BASED ON THE DEPTHS SHOWN IN THE SCHEDULE OF PAVEMENT DEPTHS. THE PAVEMENT DEPTHS GIVEN ARE DESIGN DEPTHS ONLY AND MAY BE VARIED AFTER SUB GRADE TESTS ARE TAKEN AND AUTHORITY APPROVAL.

5. TESTING AND CERTIFICATION

ALL COMPACTION TESTING SHALL BE CARRIED OUT BY AN APPROVED N.A.T.A. TESTING AUTHORITY. ALL SITE FILLING SHALL BE TESTED AT LEVEL 1 REQUIREMENTS. THE CONTRACTOR IS TO PROVIDE ALL REQUIRED EARTHWORKS CERTIFICATIONS IN ACCORDANCE WITH THE APPROVAL CONDITIONS.

6. TOPSOIL REPLACEMENT

ALL FOOTPATHS, BATTERS AND ALLOTMENT CUT & FILL AREAS SHALL BE TOPSOILED WITH TOPSOIL FROM ONSITE STOCKPILES.

7. GRASSING

ALL CUT/FILL AREAS, DISTURBED AREAS AND TRENCHED AREAS SHALL BE GRASSED TO THE SATISFACTION OF THE SUPERINTENDENT AND AUTHORITY. 8. ROCK

THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR EARTHWORKS

9. EARTHWORKS ZONE

THE FOLLOWING ACTIVITIES ARE PROHIBITED OUTSIDE THE EARTHWORKS ZONE . STORAGE AND MIXING OF MATERIALS, VEHICLE PARKING, LIQUID DISPOSAL, MACHINERY REPAIRS/REFUELING, PLACEMENT OF SITE OFFICES OR SHEDS, COMBUSTION OF ANY MATERIAL, STOCKPILING OF SOIL, RUBBLE OR DEBRIS, ANY FILLING OR EXCAVATION INCLUDING TRENCHES, TOPSOIL, SKIMMING AND/OR SURFACE EXCAVATION UNLESS OTHERWISE APPROVED BY THE RELEVANT AUTHORITY.

10. CONSTRUCTION - STOCKPILING

TEMPORARY SILT FENCE TO BE ERECTED 5m FROM TOE OF BATTER ON LOW SIDE OF STOCKPILING. STOCKPILE SITE TO BE CLEAR OF ADJACENT PROPERTY BOUNDARIES SO AS NOT TO CAUSE A NUISANCE TO ADJOINING PROPERTIES. NO STOCKPILES ARE TO BE LOCATED WITHIN THE TREE PROTECTION ZONE, REFER VEGETATION MANAGEMENT PLAN FOR MORE DETAILS. THE CONTRACTOR SHALL NOT CREATE STOCKPILES OF SURPLUS MATERIALS UNLESS DIRECTED BY THE SUPERINTENDENT. ALL MATERIALS ARISING FROM THE WORKS SHALL BE COMPACTED TO FUTURE FILL AREAS AS NOMINATED.

11. TOPSOIL SCREENING

TOPSOIL SHALL BE SCREENED BY THE CONTRACTOR WHEN DIRECTED BY THE SUPERINTENDENT. ALL UNSUITABLE MATERIAL SCREENED FROM THE TOPSOIL WILL BE TAKEN TO AN OFFSITE TIP BY THE CONTRACTOR AT THE CONTRACTORS EXPENSE.

CONTRACTOR TO MAKE ALL NECESSARY ALLOWANCES FOR EXISTING SERVICES DURING ALL WORKS.

LEGEND

EXISTING PROPERTY LINE

EXISTING KERB (INVERT) - - FUTURE KERR (INVERT)

- FUTURE PROPERTY LINE

SITE BOUNDARY

STAGE BOUNDARY

PROPOSED PROPERTY LINE

PROPOSED KERB (INVERT)

BULK EARTHWORKS FILL CONTOUR — — -0.5 — BULK EARTHWORKS CUT CONTOUR

BULK EARTHWORKS INTERFACE CONTOUR

/		
>	STRUCTURAL EART	HWORKS VOLUMES
>	CUT	6m²
>	FILL	3,151m ²
	BORROW/SPOIL	3,145m²

DISTRIBUTION PRIOR TO SIGNING THE CONTRACT.

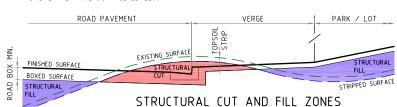
NOTES:

FARTHWORKS VOLUMES ARE APPROXIMATE ONLY CONTRACTOR TO VERIEY

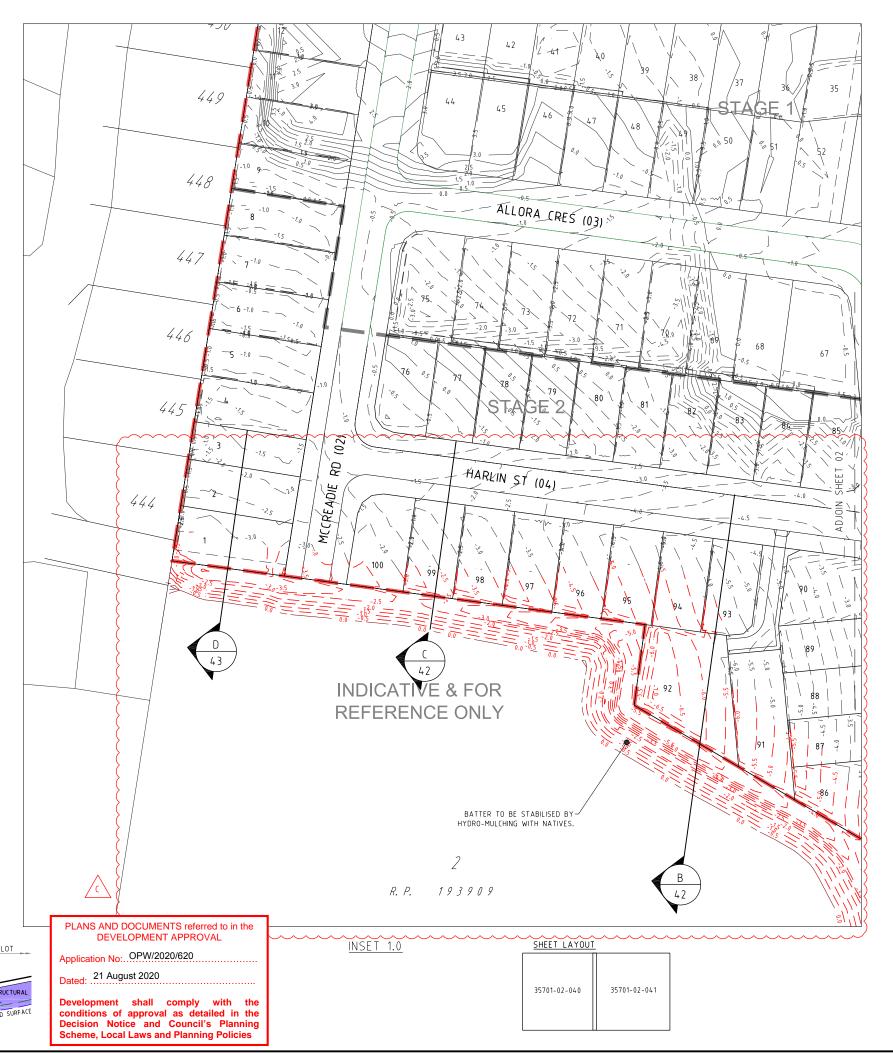
VOLUMES INDICATE THE STRUCTURAL QUANTITY OF EARTHWORKS, IE BETWEEN THE EXISTING SURFACE STRIP SURFACE AND THE UNDERSIDE OF THE MINIMUM BOX AND UNDERSIDE OF THE TOPSOIL, AS PRESCRIBED IN THE CONTRACT DOCUMENTATION.

NO ALLOWANCE FOR COMPACTION OR BULKING FACTOR IS INCLUDED.
THE CONTRACTOR IS TO VERIFY EXISTING SURFACE AND TOPSOIL

THE CONTRACTOR IS REQUIRED TO EXPORT / IMPORT AS NEEDED TO ACHIEVE THE FINAL SURFACE LEVELS.



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DALMA

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4 DALMA STREET ORMEAU HILLS LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

ORMEAU DEVELOPMENTS PTY LTD



- 1	ISSUES		DATE	
TEND	ER		10-01-20	
COUN	CIL		30-04-20	
CONS	TRUCTION			
C	16-07-20	CUT AND I	ILL, SECTIONS AND NOTE A	MENDED
В	30-06-20	CUT AND FILL AMENDED		
Α	16-09-19	ISSUE FOR	INFORMATION	
PRE	DATE		A M E N D M E N	Ī

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DRAWING TITLE

EARTHWORKS CUT TO FILL PLAN SHEET 01 OF 02



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APPROVEDA.K.

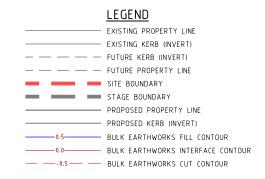
PO Box 248 Gold Coast Offic

Southport QLD 421 DESIGNED RB DRAWN

35701-02-040

С

RPEQ 4706 DATE 04-07-18



NOTE:

CONTRACTOR TO MAKE ALL NECESSARY ALLOWANCES FOR EXISTING SERVICES DURING ALL WORKS.



SHEET LAYOUT

35701-02-040 35701-02-041

Application No: OPW/2020/620 12 Dated: .21 August 2020 15895 Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies 13 15895 0.0 14 15895 15 ADJOIN 15895 16 15895 R. P. 60\ -ALLORA CRES 17 15895 62 18 -1603) 15895 63 % 250 (P 810822 McCREADIE ROAD 00

<u>INSET 1.0</u>

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

PROJECT NAME **DALMA**

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4
DALMA STREET ORMEAU HILLS
LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

ORMEAU DEVELOPMENTS PTY LTD



1	ISSUES		DATE	
TEND	ER		10-01-20	
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Α	16-09-19	9-19 ISSUE FOR INFORMATION		
PRE	DATE	AMENDMENT		

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ASSOCIATED CONSULTANTS



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EARTHWORKS CUT TO FILL PLAN SHEET 02 OF 02



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Postal Addres PO Box 2484 Southport QLD 4215

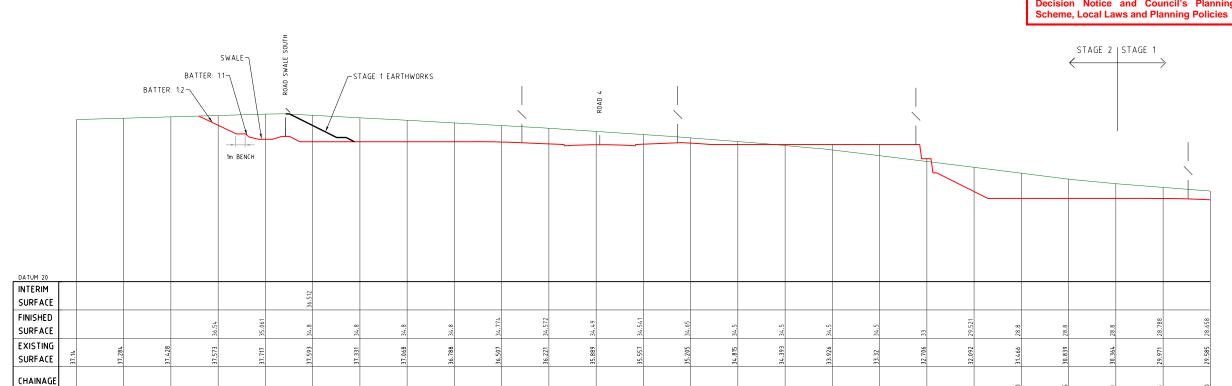
Gold Coast Office Suite 9, 19 Short S Southport QLD 4219

DESIGNED RB

APPROVEDA.K. Morto RPEQ 4706 DATE 04-07-18

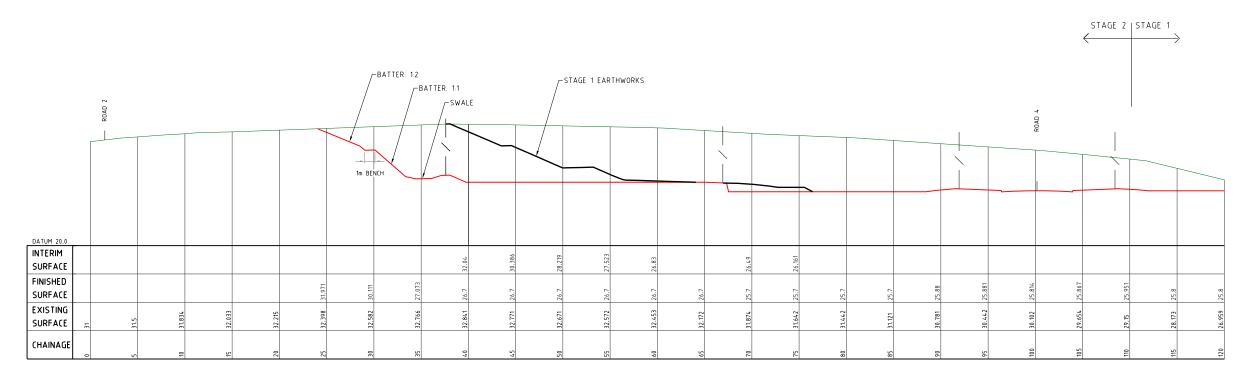
35701-02-041

С



LONGITUDINAL SECTION C

Horizontal scale 1:200 Vertical scale 1:200



LONGITUDINAL SECTION B

Horizontal scale 1:200 Vertical scale 1:200

PLANS AND DOCUMENTS referred to in the **DEVELOPMENT APPROVAL**

Application No: OPW/2020/620

Dated: 21 August 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning

PROJECT NAME **DALMA**

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4 DALMA STREET ORMEAU HILLS LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

ORMEAU DEVELOPMENTS PTY LTD

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ASSOCIATED CONSULTANTS





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EARTHWORKS CUT TO FILL SECTIONS SHEET 01 OF 02



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mortons@urbansolutions.net.au www.urbansolutions.net.au Tel 07 5571 1099 Fax 07 5571 1088

Gold Coast Office Suite 9, 19 Short S Southport QLD 4219

A M E N D.

Α

Postal Addres

DESIGNED RB DRAWN APPROVEDALE MATE RPEQ 4706 DATE 16-07-20

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL Application No: OPW/2020/620 Dated: .21 August 2020 Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning

STAGE 2 | STAGE 1 SWALE -STAGE 1 EARTHWORKS BATTER: 1:1-BATTER: 1:2-1m BENCH DATUM 20 INTERIM SURFACE FINISHED SURFACE EXISTING SURFACE CHAINAGE

LONGITUDINAL SECTION D

Horizontal scale 1:200 Vertical scale 1:200

Scheme, Local Laws and Planning Policies

PROJECT NAME

DALMA

OPERATIONAL WORKS

LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

STAGE 2 RP DESCRIPTION: Lot 4 RP883725 , LOT 4
DALMA STREET ORMEAU HILLS
LOCALITY OF ORMEAU

ORMEAU DEVELOPMENTS PTY LTD

ISSUES		S	DATE	
TENDER			10-01-20	
COUNCIL			30-04-20	
CONSTRUCTION				
Α	16-07-20	ISSUE FOR	INFORMATION	
PRE	DATE		AMENDMENT	

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EARTHWORKS CUT TO FILL SECTIONS SHEET 02 OF 02



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Postal Address

Gold Coast Office Suite 9, 19 Short St Southport QLD 4215

DESIGNED RB DRAWN APPROVEDALK MATE RPEQ 4706 DATE 16-07-20

35701-02-043

A M E N D. Α

SEDIMENT AND EROSION

THE EROSION AND SEDIMENT CONTROL DEVICES SHOWN ON THESE DRAWINGS ARE INDICATIVE AND PROVIDED FOR SUBMISSION TO LOCAL AUTHORITY ONLY. NOTWITHSTANDING THE EROSION AND CONTROL DEVICES SHOW ON THESE DRAWINGS, THE CONTRACTOR MUST PREPARE AND FOLLOW A SITE SPECIFIC EROSION AND SEDIMENT CONTROL PLAN TO MEET ALL LOCAL AND STATE GOVERNMENT LEGISLATION INCLUDING BUT NOT LIMITED TO:

a. ENVIRONMENTAL PROTECTION ACT WITH SPECIFIC REFERENCE TO PARTS \$440G AND \$319 b. STATE PLANNING POLICY

PRESCRIBED WATER CONTAMINANTS (AS DEFINED IN THE ENVIRONMENTAL PROTECTION ACT 1994) MUST NOT BE RELEASED FROM THE SITE OR TO WATERS WITHIN THE SITE, OR BE LIKELY TO BE RELEASED SHOULD RAINFALL OCCUR, UNLESS ALL REASONABLE AND PRACTICABLE MEASURES ARE TAKEN TO PREVENT OR MINIMISE THE RELEASE AND CONCENTRATION OF CONTAMINATION. THE ESC PLAN MUST BE DESIGNED, IMPLEMENTED AND MAINTAINED IN ACCORDANCE WITH "BEST PRACTICE EROSION AND SEDIMENT CONTROL" PUBLISHED BY THE INTERNATIONAL EROSION CONTROL ASSOCIATION (AUSTRALASIAN CHAPTER)

- TO COMPLY WITH THE REQUIREMENTS OF THE EP ACT AND BEST PRACTICE DESIGN. THE SEDIMENT BASINS ON THE SITE MUST BE DESIGNED AND IMPLEMENTED TO ACHIEVE THE FOLLOWING:
 - SEDIMENT BASINS ARE TO BE DESIGNED, IMPLEMENTED AND MAINTAINED TO A STANDARD WHICH WOULD ACHIEVE AT LEAST 80% OF THE AVERAGE ANNUAL RUNOFF VOLUME OF THE CONTRIBUTING CATCHMENT TREATED (I.E. 80% HYDROLOGIC EFFECTIVENESS) TO 50MG/L TSS OR LESS AND PH IN THE RANGE 6.5-8.5

THIS WILL REQUIRE THE INSTALLATION AND OPERATION OF A HIGH-EFFICIENCY SEDIMENT BASIN(S) DESIGNED IN ACCORDANCE WITH THE SPECIFICATIONS CONTAINED IN THE "BEST PRACTICE EROSION AND SEDIMENT CONTROL - APPENDIX B SEDIMENT BASIN DESIGN AND OPERATION" PUBLISHED BY THE INTERNATIONAL EROSION CONTROL ASSOCIATION (AUSTRALASIAN CHAPTER) (IECA, 2016, DRAFT)

- THE EROSION AND SEDIMENT CONTROL PLAN MUST BE PREPARED AND CERTIFIED BY A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL AND FOLLOW THE REQUIREMENTS OUTLINED IN IECA'S BEST PRACTICE EROSION AND SEDIMENT CONTROL DOCUMENT AND THE QUEENSLAND URBAN DRAINAGE
- PRIOR TO THE COMMENCEMENT OF WORKS ONSITE THE CONTRACTOR MUST MAKE THEMSELVES AWARE OF ALL PREVIOUS GEOTECHNICAL REPORTS AND DETERMINE THE DISPERSIVE CHARACTERISTICS OF THE SOIL (INCLUDING PERFORMING ANY SOIL TESTS IF REQUIRED). THE RESULTS OF THIS REVIEW AND ANY TESTS MUST BE INCLUDED IN THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN. A COPY OF ALL TEST RESULTS MUST BE PROVIDED TO THE SUPERINTENDENT
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO CONTROL EROSION AND DOWNSTREAM SEDIMENTATION DURING ALL STAGES OF CONSTRUCTION (INCLUDING THE MAINTENANCE PERIOD). NOTWITHSTANDING THE CONTROL MEASURES OR FINISHED EARTHWORKS DESIGN SHOWN ON THESE DRAWINGS, THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING ADDITIONAL OR ALTERNATIVE EROSION
- & SEDIMENT CONTROL MEASURES TO MINIMISE SEDIMENT ACROSS OR LEAVING THE SITE. AT ALL TIMES THE CONTRACTOR SHALL MONITOR THE PREVAILING WEATHER CONDITIONS (INCLUDING WEEKENDS AND PUBLIC HOLIDAYS) AND AT ALL TIMES REMAINS RESPONSIBLE TO:

 a) CLEAN AND REPAIR CONTROL DEVICES WHENEVER THE ACCUMULATED SEDIMENT REDUCES THEIR
- CAPACITY BY 50%
- MAINTAIN POSITIVE GRADES OF ALL PERIMETER BANKS AND SWALES TO AN OUTLET.
- PROTECT ANY DOWNSTREAM CONSTRUCTION.
- CONTROLLING DUST.
- MEASURES HAVE BEEN INSTALLED IN ACCORDANCE WITH DETAILS OUTLINED IN THEIR EROSION AND SEDIMENT CONTROL PLAN AND AS DIRECTED BY THE SUPERINTENDENT.
- THE CONTRACTOR'S PLAN SHALL ALLOW FOR SUITABLE ACCESS TO ALLOW MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES. NO ADDITIONAL VEGETATION CLEARING IS PERMITTED FOR GAINING ACCESS UNLESS APPROVED BY THE SUPERINTENDENT.
 THE CONTRACTOR MAY REQUEST APPROVAL FROM THE SUPERINTENDENT TO REUSE THE STOCKPILED.
- MULCH FOR STABILISING BATTERS ONLY IN LOCATIONS WHERE THE APPROVED LANDSCAPE OPW DESIGN REQUIRES MULCH ULTIMATELY
- CONSTRUCTION STOCKPILING a) TOPSOIL SHALL BE STRIPPED AND STOCKPILED IN LOCATIONS NOMINATED ON THE CONSTRUCTION DRAWINGS OR IN LOCATIONS AGREED WITH THE SUPERINTENDENT.
- DRAWINGS OR IN LOCATIONS AGREED WITH THE SUPERINTENDENT.
 ADDITIONAL VEGETATION CLEARING IS NOT PERMITTED TO FACILITATE THE STOCKPILING OF
 MATERIALS UNLESS SHOWN ON THE APPROVED VEGETATION MANAGEMENT PLAN.
- ANY STOCKPILE SITE MUST BE CLEAR OF ADJACENT PROPERTY BOUNDARIES SO AS NOT TO CAUSE A NUISANCE TO ADJOINING PROPERTIES.
- A NOSANCE TO ADJUNING PROPERTIES.

 NO STOCKPILES ARE TO BE LOCATED WITHIN THE TREE PROTECTION ZONE OF VEGETATION.

 A TEMPORARY SILT FENCE IS TO BE ERECTED APPROXIMATELY 5m FROM TOE OF BATTER ON LOW
- SIDE OF STOCKPILING.

 10. NOTWITHSTANDING THE DETAILS SHOWN IN THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN,
- DURING CONSTRUCTION THE CONTRACTOR MUST:
 a) SIZE ALL TEMPORARY SEDIMENT BASINS APPROPRIATELY TO TREAT THE UPSTREAM CATCHMENT.
 - NOTE THAT THE PERMANENT BIO BASINS SHOWN ON THESE DRAWINGS ARE SIZED FOR THI ULTIMATE CATCHMENT NOT FOR THE CONSTRUCTION PHASE.
 - PLACE A ROCK BUND AROUND ALL HEADWALLS DURING CONSTRUCTION.
 - PROVIDE KERB INLET PROTECTION TO ALL GUILLIES.
- PLACE A MINIMUM 1.0m WIDE TURF STRIP BEHIND ALL KERBS AND IN A HERRINGBONE LAYOUT WITHIN THE ROAD VERGE.
- MAINTENANCE (INCLUDING FLOCCULATION IF REQUIRED AND PUMP OUT) OF ALL CONSTRUCTION
- SEDIMENT BASINS (WHETHER EXISTING OR NEW). CLEAN OUT OF ALL GROSS POLLUTANT TRAPS, SEDIMENT FOREBAYS AND ALL OTHER PERMANENT SEDIMENT CONTROL DEVICES AT BOTH ON AND OFF MAINTENANCE.

 11. CONTRACTOR TO CONFIRM THE EXTENTS OF REQUIRED GRASSING TREATMENTS WITH THE
- SUPERINTENDENT AT LEAST 7 DAYS PRIOR TO FINAL TRIMMING.

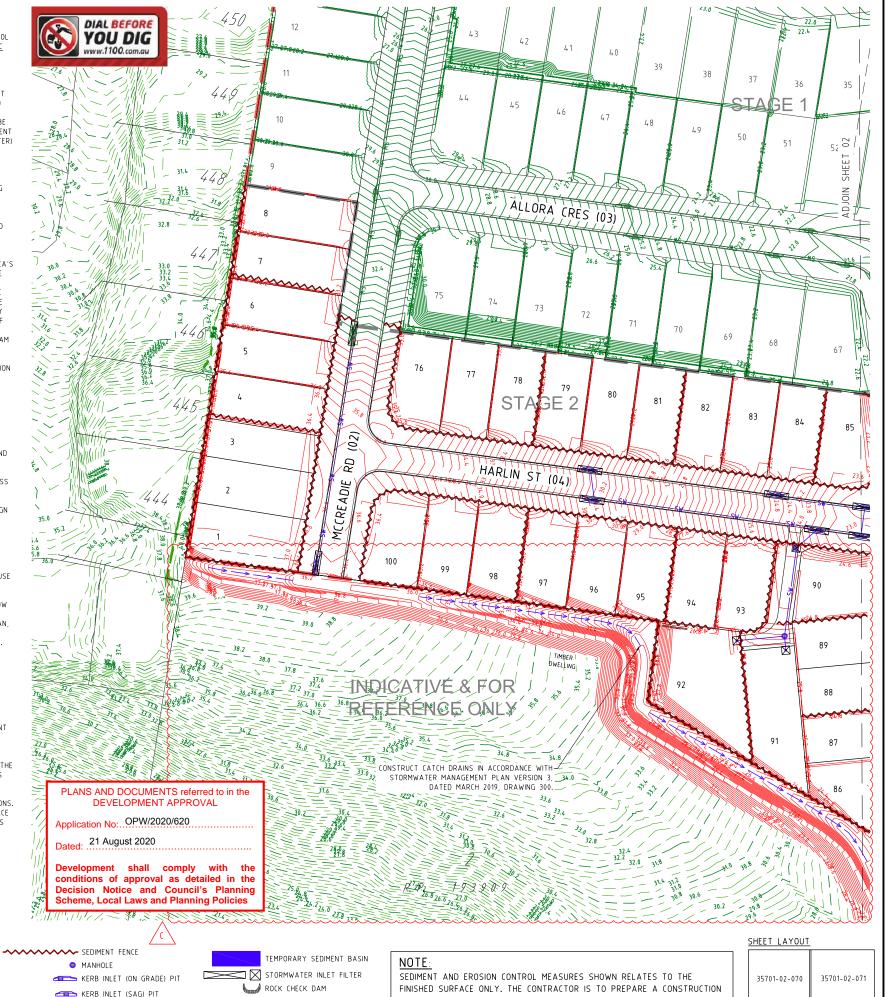
 12. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT GRASSING STRIKE RATES ARE ACHIEVED AT THE ON AND OFF MAINTENANCE INSPECTIONS IN ACCORDANCE WITH COUNCIL REQUIREMENTS. THIS INCLUDES THE SUPPLY AND INSTALLATION OF ANY REQUIRED CHEMICAL/FERTILISER AMELIORATION TO ACHIEVE
- THE SPECIFIED GRASS STRIKE RATES.

 13. GEOFABRIC LINING OF CHANNELS AND CHECK DAMS MAY BE REQUIRED SUBJECT TO THE SITE CONDITIONS. BATTERS WITHIN PUBLIC OPEN SPACE TO BE VEGETATED IN ACCORDANCE WITH APPROVED OPEN SPACE MANAGEMENT PLAN AND LANDSCAPING OPW. CONTRACT DOCUMENTATION WILL SPECIFY WHETHER THIS THE CIVIL CONTRACTOR OR THE LANDSCAPE CONTRACTOR'S RESPONSIBILITY TO SUPPLY AND INSTALL. THE CIVIL CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUITABLE ACCESS FOR THE
- LANDSCAPE CONTRACTOR TO PERFORM THEIR WORKS. 15. MAINTENANCE PERIOD (PRE TO POST CONSTRUCTION)
- a) ALL PROTECTION MEASURES ARE TO BE INSPECTED AND MAINTAINED REGULARLY
- REPAIRS ARE TO BE EFFECTED IMMEDIATELY. SILT AFTER RAIN IS TO BE CLEANED FROM STREETS AND ALLOTMENTS IMMEDIATELY AND
- CORRECTIVE ACTION TAKEN TO AVOID A RE-OCCURRENCE.

 AT OFF-MAINTENANCE AND ONLY WHEN DIRECTED BY COUNCIL, REMOVE AND DISPOSE OFFSITE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES.

LEGEND





PHASE SEDIMENT AND EROSION CONTROL PLAN.

VEHICLE SHAKEDOWN

(·) TREES

T HEADWALL

SCOUR PROTECTION

DALMA

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4 DALMA STREET ORMEAU HILLS LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

ORMEAU DEVELOPMENTS PTY LTD



1	SSUE	S	DATE						
TEND	ER		10-01-20						
COUN	CIL		30-04-20						
CONS	TRUCTION								
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В	23-06-20	NOTES AN	NOTES AND FLOW PATH ADDED						
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DO NOT SCALE FROM THIS DRAWING.





DRAWING TITLE

FINAL SURFACE AND SEDIMENT AND EROSION PLAN SHEET 01 OF 02



MUS Pty Ltd T/As: Mortons-Urban Solutions ABN: 39 116 375 065 rtons@urbansolutions.net.au

DESIGNED RB

PO Box 248 Southport QLD 421

Gold Coast Offic Southport QLD 421 DRAWN

APPROVEDANK MOTO RPEQ 4706 DATE 04-07-18 35701-02-070

C



PROJECT NAME

DALMA

DALIVIA

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4

DALMA STREET ORMEAU HILLS

LOCALITY OF ORMEAU

LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

CLIEN

ORMEAU DEVELOPMENTS PTY LTD



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I S S U E S						
COUNCIL 30-04-20 CONSTRUCTION C 16-07-20 CONTOURS AMENDED B 23-06-20 FLOW PATH ADDED A 16-09-19 ISSUE FOR INFORMATION	ISSUES		S	DATE		
CONSTRUCTION C 16-07-20 CONTOURS AMENDED B 23-06-20 FLOW PATH ADDED A 16-09-19 ISSUE FOR INFORMATION	TEND	ER		10-01-20		
C 16-07-20 CONTOURS AMENDED B 23-06-20 FLOW PATH ADDED A 16-09-19 ISSUE FOR INFORMATION	COUN	CIL		30-04-20		
B 23-06-20 FLOW PATH ADDED A 16-09-19 ISSUE FOR INFORMATION	CONS	TRUCTION				
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	PRE	DATE	AMENDMENT			

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DRAWING TITLE

FINAL SURFACE AND SEDIMENT AND EROSION PLAN SHEET 02 OF 02



MUS Pty Ltd T/As: Mortons-Urban Solutions ABN 39 116 375 065 mortons@urbansolutions.net.au www.urbansolutions.net.au Tel 07 5571 1099 Fax 07 5571 1088

Postal Address PO Box 2484 Southport QLD 4215 Gold Coast Office

net.au Gold Coast Offic. Suite 9, 19 Short S Southport QLD 421!

DESIGNED RB DRAWN JB

APPROVEDALK: MATE RPEQ 4706 DATE 04-07-18

35701-02-071

C

CONSTRUCTION SERVICES

CONSTRUCTION OF
SEWER/ROOFWATER/STORMWATER/SERVICES EXCAVATED MATERIAL TO BE PLACED ON HIGH SIDE OF TRENCH AND TO PROTECT PIPE WORK AND DIRECT SURFACE MATERIAL AWAY FROM

EXCAVATIONS.
TOPSOIL AND GRASS SEED AREAS IN ALLOTMENTS IMMEDIATELY AFTER COMPLETING THE SEWER AND ROOFWATER DRAINAGE CONSTRUCTION. DEPRESS GROUND AROUND TEMPORARY FIELD INLETS TO CREATE SILT POND.

INLETS TO CREATE SILT POND.

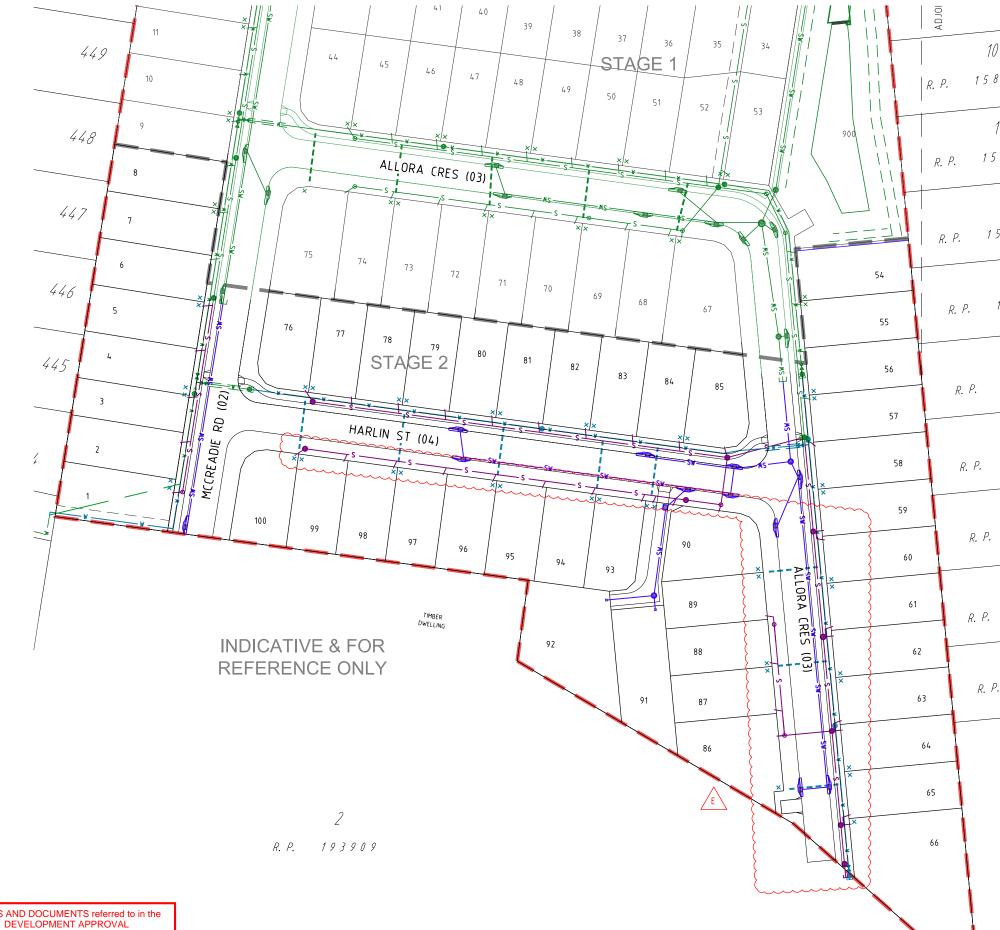
2. TRIP HAZARD

MANHOLES OR STRUCTURES INSTALLED IN THE
ROAD, FOOTPATH OR VERGE MUST MATCH NEATLY
WITH NO TRIP HAZARD.

2. XISTING SERVICES - EXTERNAL WORKS
THE LOCATIONS OF ALL EXISTING SERVICES WITHIN
THE WORK AREA SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION COMMENCING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE RELEVANT AUTHORITIES AND TO ENSURE THAT THE EXISTING SERVICES ARE NOT DAMAGED OR DISTURBED IN ANY WAY.

LEGEND

	EXISTING PROPERTY LINE
	EXISTING KERB (INVERT)
	EXISTING FOOTPATH
	EXISTING FOUTFAILI
SS	EXISTING RISING PIAIN
	EXISTING SEWER
	EXISTING STURMWATER
	EXISTING ROOFWATER
——SS———SS———	EXISTING SUBSOIL
	EXISTING WATER
	EXISTING WATER CONDUIT
	PROPOSED PROPERTY LINE
-	PROPOSED KERR (INVERT)
	PROPOSED KEND (MIVERT)
DM	PROPOSED RISING MAIN
S	DDODOCED CEMED
- S	PROPOSED STORMWATER
DW	DDODOGED DOOEL LATED
SSw100	PROPOSED ROUFWATER
	PROPOSED SUBSUIL
	PROPOSED WATER
	PROPOSED WATER CONDUIT
	FUTURE PROPERTY LINE
	FUTURE KERB (INVERT)
- $ -$	FUTURE FOOTPATH
	FUTURE RISING MAIN
s	FUTURE SEWER
SW	FIITHDE STODMWATED
RW	FITTIPE PONEWATER
	FITTIDE CHRONI
W100W100	ELITUDE WATER
W100W100	
	FUTURE WATER
	FUTURE WATER
	FUTURE WATER CONDUIT
	SITE BOUNDARY
	STAGE BOUNDARY
	STAGE BOOKBANT





PLANS AND DOCUMENTS referred to in the

Application No: OPW/2020/620

Dated: August 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies



PROJECT NAME **DALMA**

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4 DALMA STREET ORMEAU HILLS LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

ORMEAU DEVELOPMENTS PTY LTD



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Ū	D	06-07-20	SEWER AM	IENDED		
(C	30-06-20	SEWER AN	SEWER AND WATER AMENDED		
E	В	04-06-20	SEWER AMENDED			
	A	16-09-19	ISSUE FOR INFORMATION			
P	RE	DATE	AMENDMENT			

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DRAWING TITLE

COMBINED SERVICES PLAN SHEET 01



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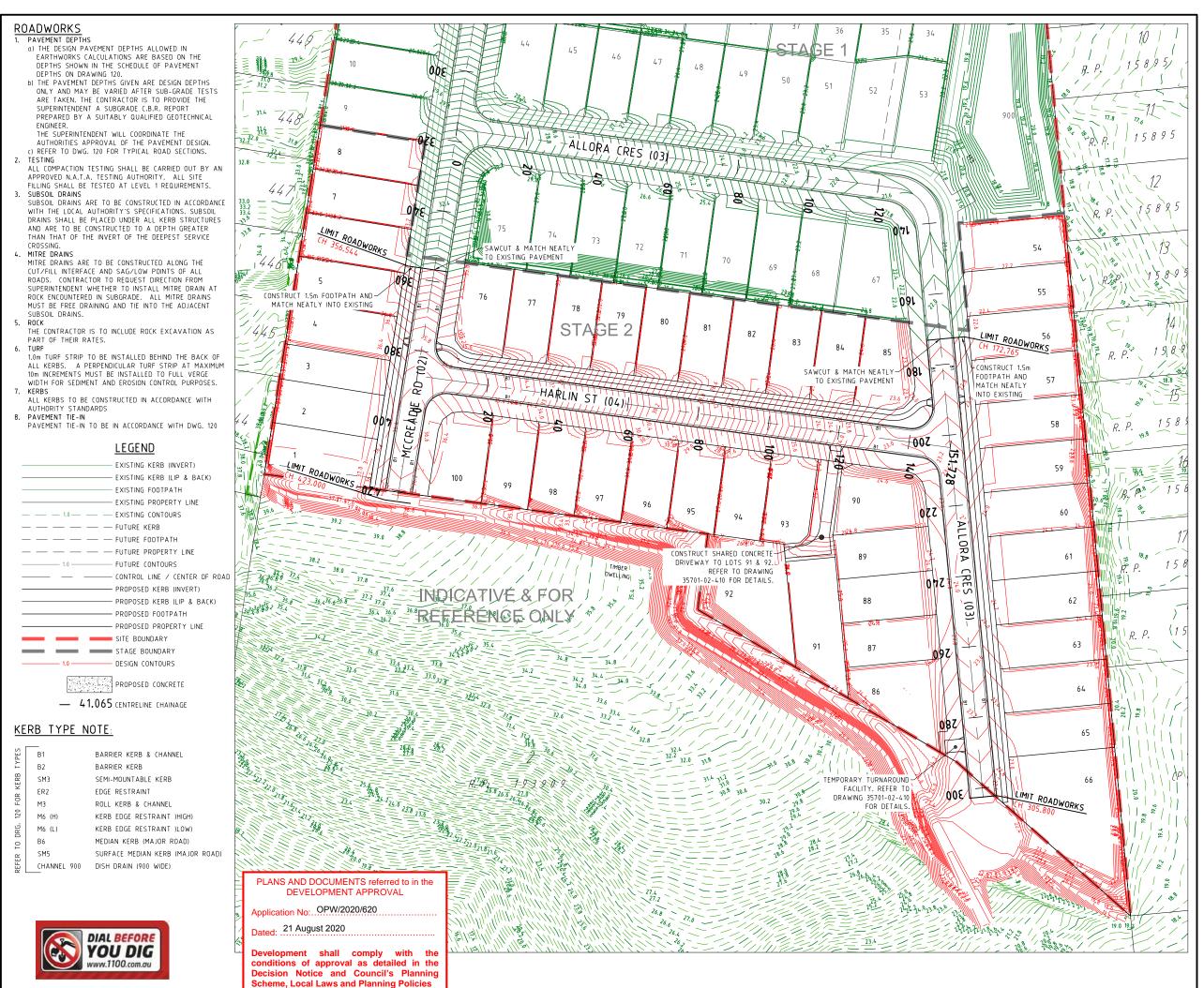
Postal Addres

Gold Coast Office Suite 9, 19 Short S Southport QLD 4219

DESIGNED RB APPROVEDA.K. MOTO RPEQ 4706 DATE 04-07-18

35701-02-090

Ε



PROJECT NAME

DALMA

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION LOT 4 RP883725 , LOT 4
DALMA STREET ORMEAU HILLS
LOCALITY OF ORMEAU
LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

CLIENT

ORMEAU DEVELOPMENTS PTY LTD



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COUNCIL		30-04-20	
CONSTRUCTION		:	
A 16-09-19	ISSUE FOR	INFORMATION	
PRE DATE	AMENDMENT		

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DRAWING TITLE

ROADWORKS PLAN SHEET 01



MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065
mortons@urbansolutions.net.au
www.urbansolutions.net.au
Tel 07 5571 1099

Postal Addres
PO Box 2480
Southport QLD 421
Gold Coast Offic

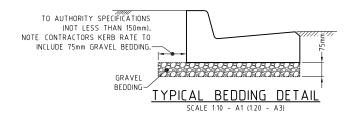
Suite 9, 19 Short St Southport QLD 4215

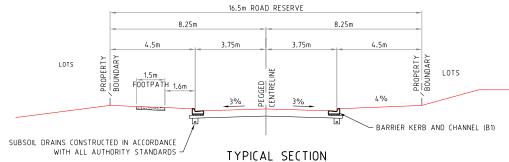
Α

DESIGNED RB DRAWN JB
APPROVEDAK, MATE 78-06-18

SCHEDULE OF PAVEMENT DEPTHS								
ROAD NAME	BASE	SUB-BASE	LOWER SUB-BASE	CLASSIFICATION	DESIGN GUIDE			
MCCREADIE ROAD (02), ALLORA CRES (03), HARLIN ST (04)	25mm DG10	100mm TYPE 2.1 (CBR 60)	100mm TYPE 2.3 (CBR 35)	100mm TYPE 2.5 (CBR 15)	RESIDENTIAL ACCESS ST	401-750 VPD	COUNCIL TABLE 2.11	

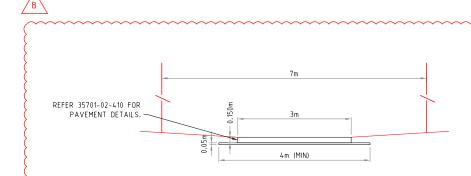
NOTE: THE PAVEMENT DEPTHS ARE GIVEN AS A GUIDE ONLY AND FINAL PAVEMENT DESIGN WILL BE DETERMINED AFTER CBR TESTING IS UNDERTAKEN, AND COUNCIL HAVE APPROVED THE DESIGN. PLEASE NOTE CBR10 IS MAXIMUM INSITU CBR VALUE.





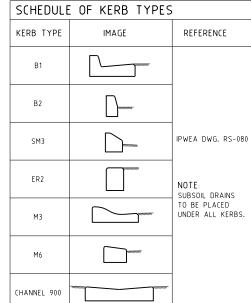
7.5m ROAD-16.5m ROAD RESERVE MCCREADIE ROAD (02), ALLORA CRES (03) & HARLIN ST (04)

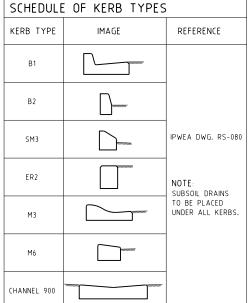
SCALE 1:100 - A1 (1:200 - A3)

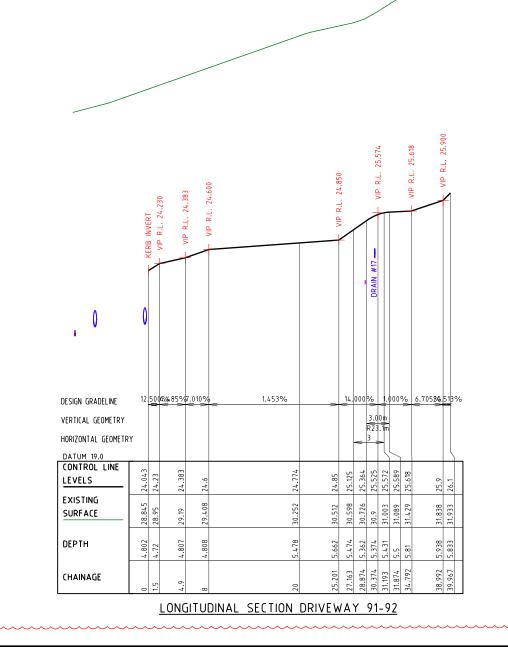


TYPICAL SECTION LOTS 91-92 DRIVEWAY

NOT TO SCALE







PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No:...OPW/2020/620

Dated: 21 August 2020

Development shall comply with conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

PROJECT NAME **DALMA**

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4 DALMA STREET ORMEAU HILLS LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

ORMEAU DEVELOPMENTS PTY LTD

0.1 0.2 0.3 0.4 0.5m Scale 1:10 - A1 (1:20 - A3) Scale 1:20 - A1 (1:40 - A3) 0.5 1.0 1.5 2.0 2.5m

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CONSTRUCTION							
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ROADWORKS DETAILS SHEET 1



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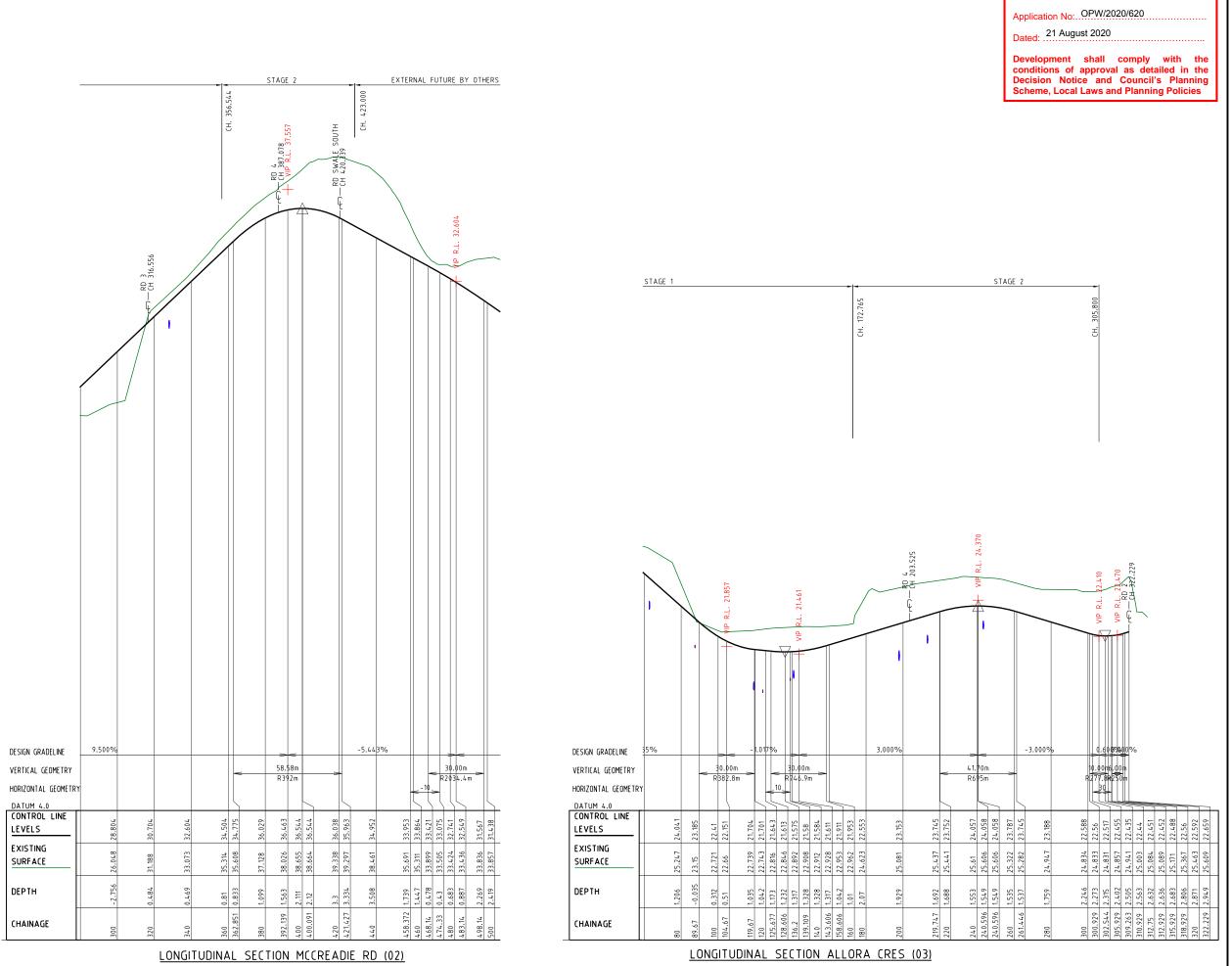
Postal Addres PO Box 248 Southport QLD 421

Gold Coast Office Suite 9, 19 Short S Southport QLD 4219

DESIGNED RB DRAWN APPROVEDA.K. MOTO RPEQ 4706 DATE 28-06-18

35701-02-120

AMEND В



PLANS AND DOCUMENTS referred to in the **DEVELOPMENT APPROVAL**

PROJECT NAME

DALMA

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4 DALMA STREET ORMEAU HILLS LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

ORMEAU DEVELOPMENTS PTY LTD

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DRAWING TITLE

LONGITUDINAL SECTIONS ROAD 02 & ROAD 03 SHEET 01 OF 02



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Postal Addres Gold Coast Office

Α

Suite 9, 19 Short S Southport QLD 421

DESIGNED RB APPROVEDA.K. MONTO RPEQ 4706 DATE 04-07-18

PLANS AND DOCUMENTS referred to in the **DEVELOPMENT APPROVAL**

Application No: OPW/2020/620

Dated: 21 August 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

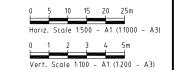
DALMA

PROJECT NAME

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4 DALMA STREET ORMEAU HILLS LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

ORMEAU DEVELOPMENTS PTY LTD



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LONGITUDINAL SECTIONS ROAD 04 SHEET 02 OF 02



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Gold Coast Office

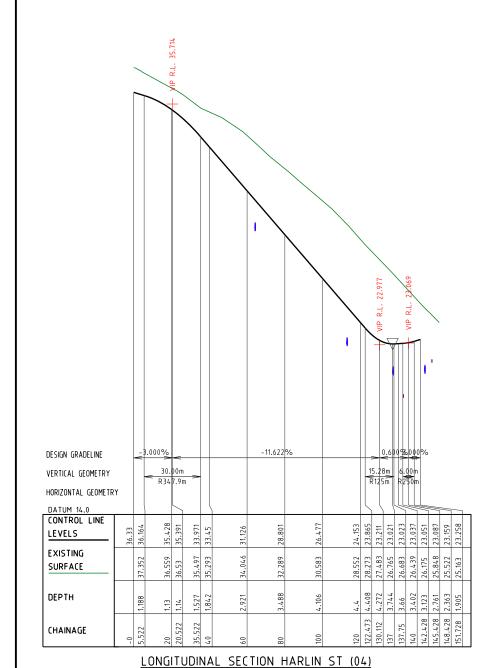
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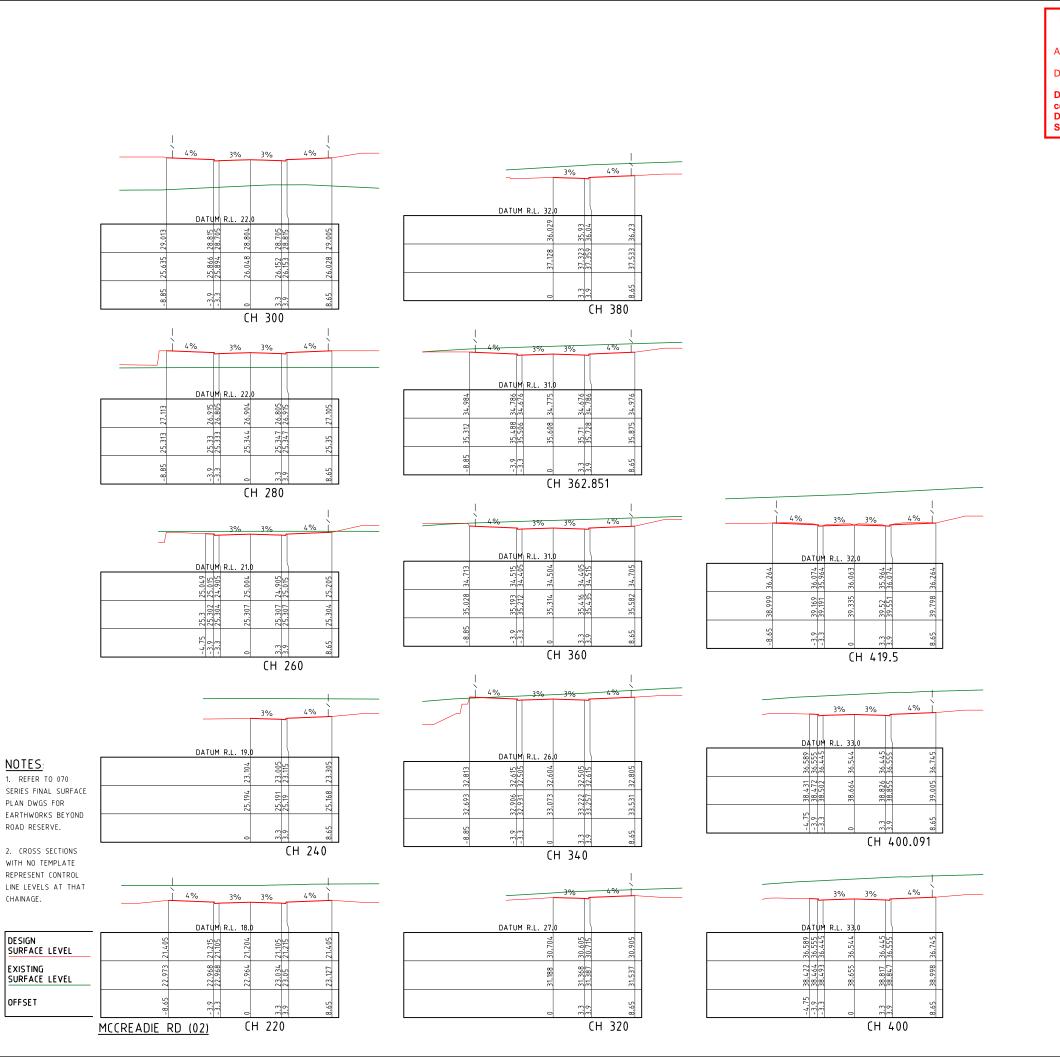
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Suite 9, 19 Short S Southport QLD 4219

DESIGNED RB DRAWN APPROVEDA.K. MOTO RPEQ 4706 DATE 04-07-18

DRAWING NUMBER 35701-02-201





PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: OPW/2020/620

Dated: 21 August 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

PROJECT NAME

DALMA

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4 DALMA STREET ORMEAU HILLS LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

ORMEAU DEVELOPMENTS PTY LTD

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PRE DATE

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DRAWING TITLE

CROSS SECTIONS ROAD (02) SHEET 01 OF 03



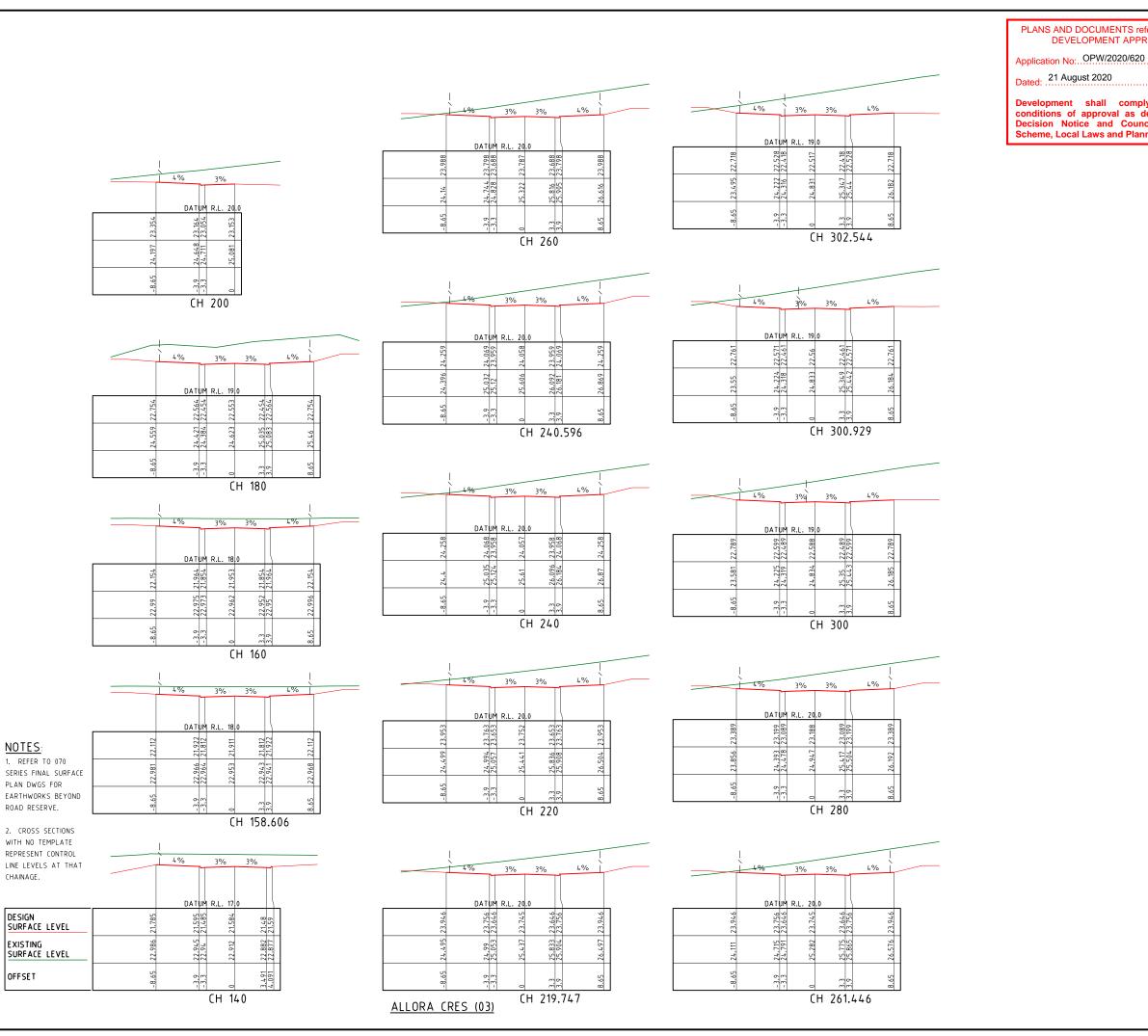
MUS Pty Ltd T/As: Mortons-Urban Solutions ABN: 39 116 375 065 mortons@urbansolutions.net.au www.urbansolutions.net.au Tel 07 5571 1099 Fax 07 5571 1088

Gold Coast Office Suite 9, 19 Short S Southport QLD 4219

APPROVEDA.K. MOTO RPEQ 4706 DATE 04-07-18

35701-02-300

Α



PLANS AND DOCUMENTS referred to in the **DEVELOPMENT APPROVAL**

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

PROJECT NAME **DALMA**

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4 DALMA STREET ORMEAU HILLS LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

ORMEAU DEVELOPMENTS PTY LTD

- 1	SSUE	S	DATE	
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CROSS SECTIONS ROAD (03) SHEET 02 OF 03



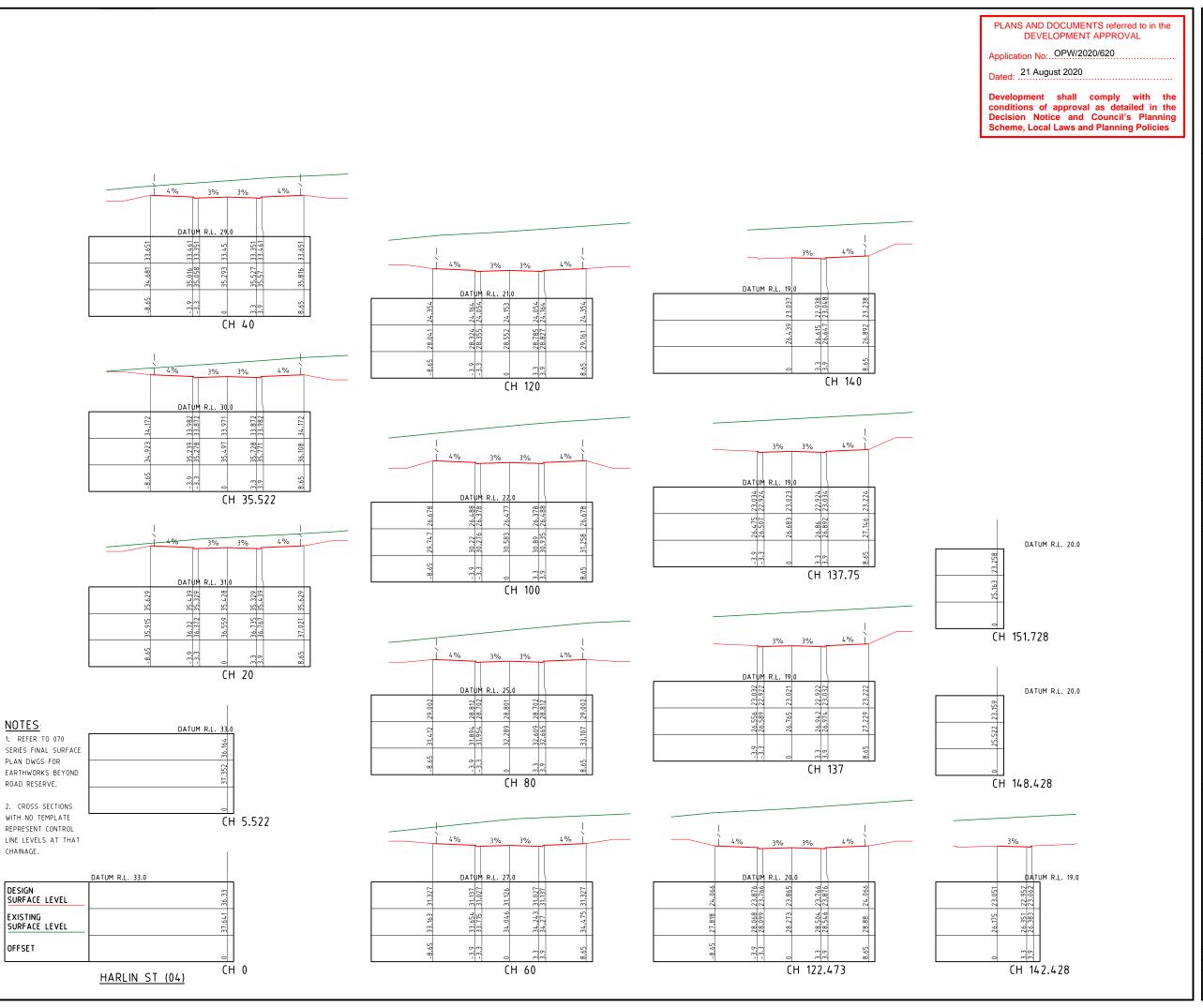
MUS Pty Ltd T/As: Mortons-Urban Solutions ABN: 39 116 375 065 mortons@urbansolutions.net.au www.urbansolutions.net.au Tel 07 5571 1099 Fax 07 5571 1088

Gold Coast Office Suite 9, 19 Short S Southport QLD 4219

APPROVEDA.K. MONTO RPEQ 4706 DATE 04-07-18

35701-02-301

Α



PROJECT NAME **DALMA**

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4 DALMA STREET ORMEAU HILLS LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

ORMEAU DEVELOPMENTS PTY LTD

TEND	ER	10-01-20
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CROSS SECTIONS ROAD (04) SHEET 03 OF 03



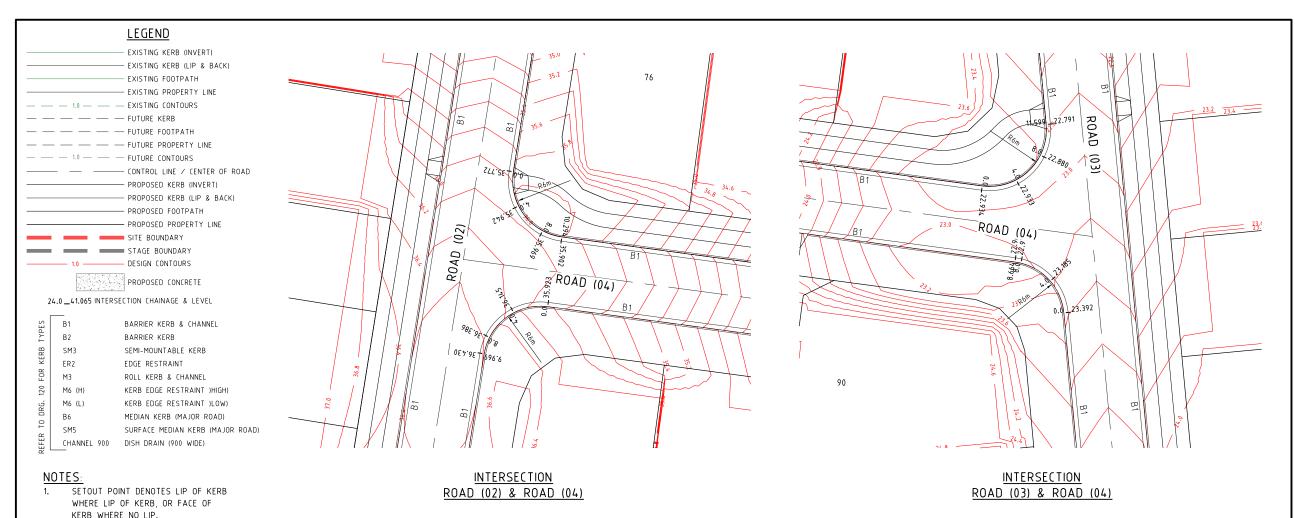
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Gold Coast Office

Α

Suite 9, 19 Short S Southport QLD 4219

DESIGNED RB APPROVEDA.K. MONTO RPEQ 4706 DATE 04-07-18



2. FOR KERB TYPES REFER TO DWG. 120

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: OPW/2020/620

Dated: 21 August 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

PROJECT NAME **DALMA**

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4 DALMA STREET ORMEAU HILLS LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

ORMEAU DEVELOPMENTS PTY LTD



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DRAWING TITLE

INTERSECTION **GRADING DETAILS** SHEET 1



Project Coordination MUS Pty Ltd T/As: Mortons-Urban Solutions ABN: 39 116 375 065

mortons@urbansolutions.net.au www.urbansolutions.net.au Tel 07 5571 1099 Fax 07 5571 1088

Postal Addres PO Box 248 Southport QLD 421

Α

Gold Coast Office Suite 9, 19 Short S Southport QLD 4219

DESIGNED RB DRAWN APPROVEDA.K. MOTO RPEQ 4706 DATE 04-07-18

CONCRETE PAVEMENT DRIVEWAY:

1. CONCRETE MIX

THE CONCRETE SHALL HAVE A MINIMUM 28 DAY CHARACTERISTIC COMPRESSIVE STRENGTH AS SPECIFIED IN THE SCHEDULE OF CONCRETE PAVEMENTS TABLE MAXIMUM WATER/CEMENT RATIO OF 0.45 AND A MINIMUM CEMENT CONTENT OF 300kg/m³.

2. SUBGRADE PREPARATION

THE SUBGRADE TO THE CONCRETE PAVEMENT AREAS SHALL BE PREPARED THE SAME AS CONVENTIONAL ROADS. REFER TO SCHEDULE OF CONCRETE PAVEMENTS TABLE.

3. TRAFFIC

TRAFFIC SHALL NOT BE ALLOWED ON THE FINISHED CONCRETE PAVEMENT FOR AT LEAST 14 DAYS AFTER COMPLETION OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING MEASURES TO PREVENT UNAUTHORISED ACCESS.

4. JOINTS

ALL JOINTS SHALL BE LOCATED GENERALLY PERPENDICULAR TO THE CENTRELINE. ALL CONTROL JOINTS TO BE COMPLETED AS SOON AS CONCRETE HAS CURED SUFFICIENTLY SO AS NOT TO DAMAGE THE SLAB SURFACE.

ALL JOINTS ARE TO BE INSTALLED AS DETAILED ON IPWEAD STD DWG RS-065.

5. GENERAL

THE GRAVEL PAVEMENT SHALL BE NEATLY PROFILED AND TRIMMED TO ENSURE CONSTANT CONCRETE DEPTHS AND PROFILES ACTUAL CONSTRUCTION REQUIREMENTS MAY VARY FROM THE DETAILS SHOWN AND THEREFORE ALL CONSTRUCTION DETAILS SHOULD BE VERIFIED BY THE SUPERINTENDENT PRIOR TO CONSTRUCTION COMMENCING. PROVIDE ABELFLEX BETWEEN KERB AND DRIVEWAY.

6. COMPLIANCE STANDARDS

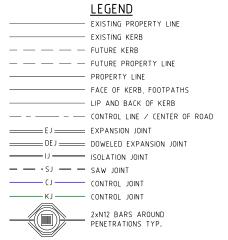
SLIP RESISTANCE OF SURFACE MATERIALS IN ACCORDANCE WITH AUSTRALIAN STANDARDS. AS/NZS 4586: 2013 SLIP RESISTANCE OF NEW

PEDESTRIAN SURFACE MATERIALS. AS/NZS 4663: 2013 SLIP RESISTANCE MEASUREMENT OF

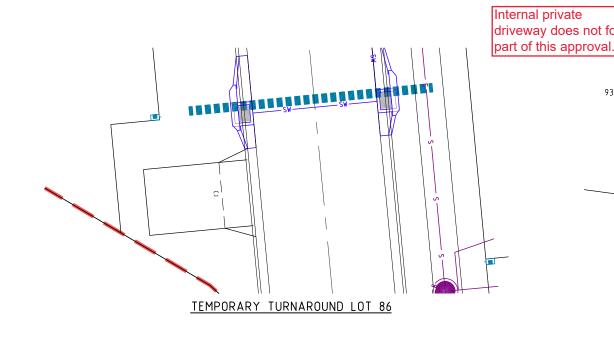
EXISTING PEDESTRIAN SURFACES HB:A:A 197: 1999 "AN INTRODUCTORY GUIDE TO THE SLIP RESISTANCE OF PEDESTRIAN SURFACE MATERIALS"

SCHEDULE OF CONCRETE PAVEMENTS **FUNCTION** SURFACING SUBGRADE PREPARATION THICKNESS 'T' STRENGTH REINCORCING 50mm SAND BLINDING DRIVEWAY BROOM FINISH 32 mPa SL 82 MESH 3m WIDE LAYER OR 100mm (CBR 15)

NOTE: FOOTPATH JOINTING TO BE IN ACCORDANCE WITH IPWEAU DRG RS-065







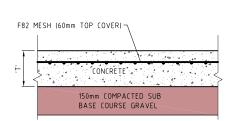
8m

TYPICAL CONCRETE PAVEMENT DETAIL FOR DRIVEWAYS AND ROADS

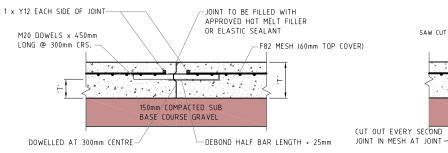
SCALE 1:50 - A1 (1:100 - A3)

driveway does not form 93 DRIVEWAY TO LOTS 91 & 92

1 x Y12 EACH SIDE OF JOINT



TYPICAL BROOM FINISHED CONCRETE PAVEMENT DETAIL SCALE 1:10 - A1 (1:20 - A3)







150mm COMPACTED SUB BASE COURSE GRAVEL

SAW CUT 35mm DEEP

PLANS AND DOCUMENTS referred to in the

DEVELOPMENT APPROVAL

Development shall comply with the

conditions of approval as detailed in the

Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

OINT TO BE FILLED WITH APPROVED HOT

INDUCED CRACK

Application No:..OPW/2020/620

Dated: ... 21 August 2020



EXPANSION JOINT DETAIL (24m SPACING) E.J.

SCALE 1:10 - A1 (1:20 - A3)

DAI MA

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4 DALMA STREET ORMEAU HILLS LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

ORMEAU DEVELOPMENTS PTY LTD



15 20 25m Scale 1:50 - A1 (1:100 - A3) Scale 1:100 - A1 (1:200 - A3)

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TEND	ER	10-01-	20	

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DRAWING TITLE

CONCRETE JOINTING PLAN AND DETAILS SHEET 1 OF 1

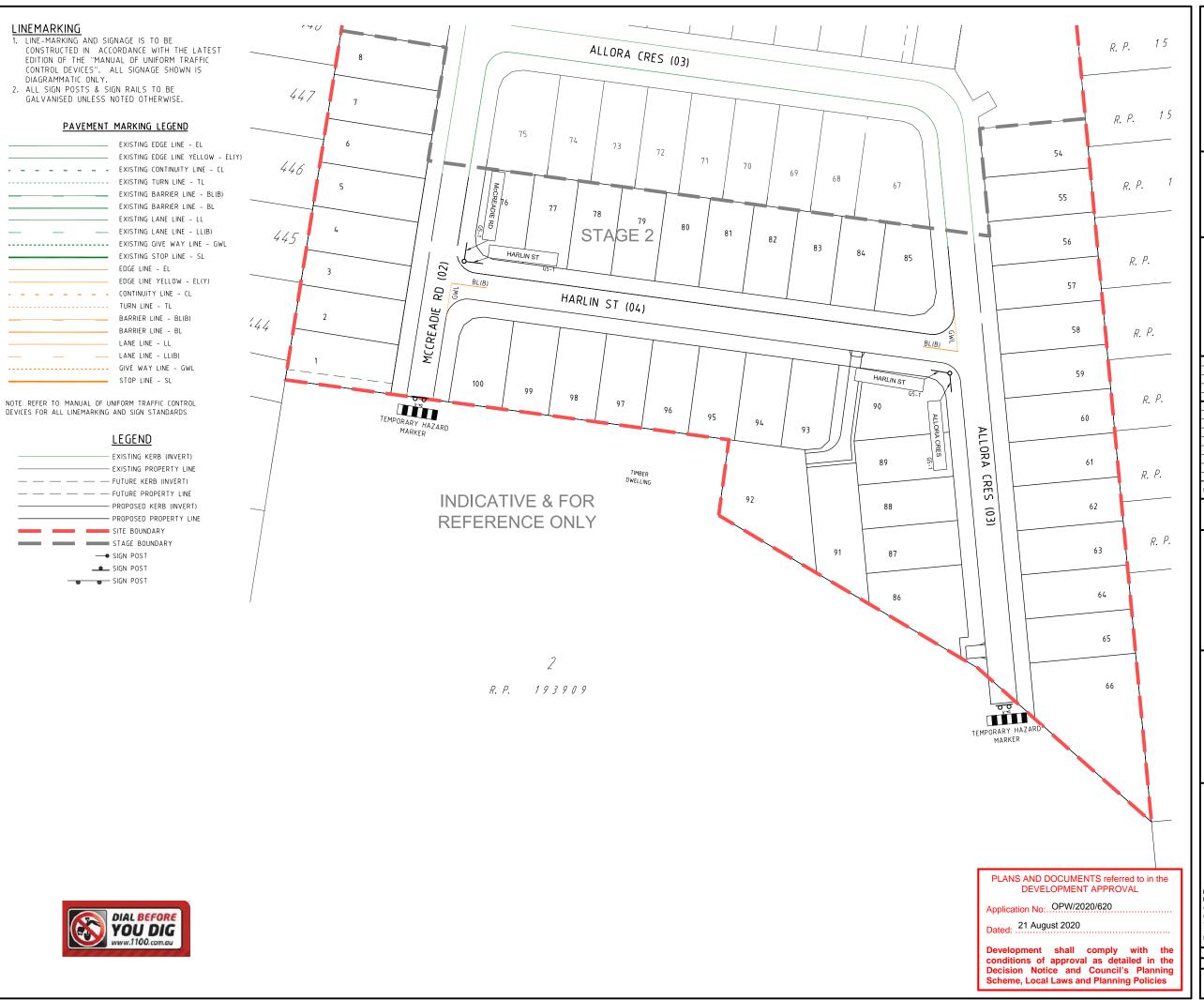


MUS Pty Ltd T/As: Mortons-Urban Solutions ABN: 39 116 375 065 rtons@urbansolutions.net.au

PO Box 2488 Southport QLD 421

Gold Coast Offic Southport QLD 421

DESIGNED RB DRAWN APPROVEDA.K. MONTO RPEQ 4706 DATE 03-07-18



PROJECT NAME

DALMA

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4

DALMA STREET ORMEAU HILLS

LOCALITY OF ORMEAU

LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

CLIENT

ORMEAU DEVELOPMENTS PTY LTD



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DRAWING TITLE

LINEMARKING & SIGNAGE PLAN SHEET 1



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www.urbansolutions.net.au
Tal 07 5571 1099

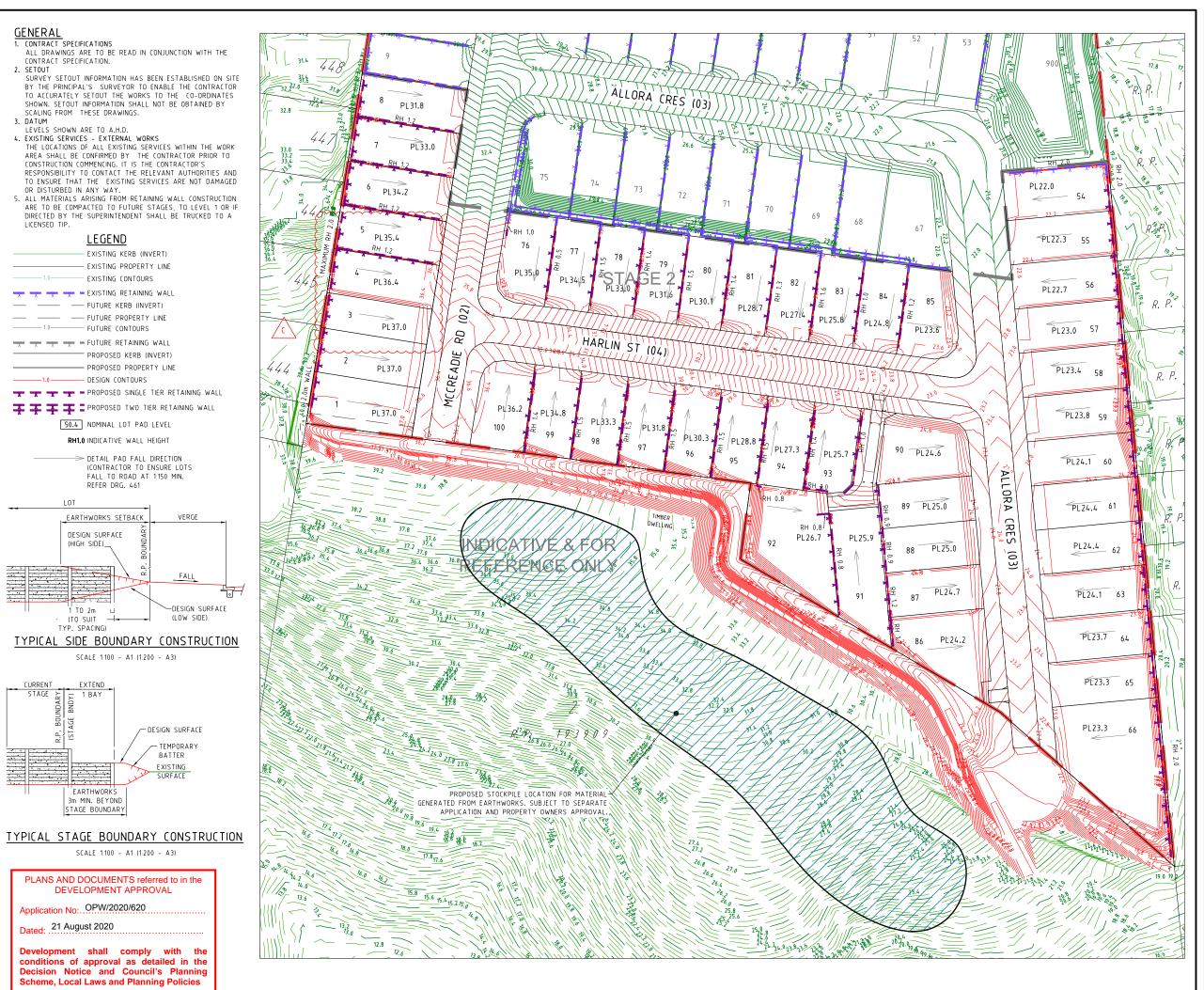
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urions.ner.au Gold Coast Office s.net.au Gold Coast Office Suite 9, 19 Short SI Southport QLD 4215

DESIGNED RB ORAWN JB

APPROVEDALK MATE RPEG 4706 DATE 04-07-18



PROJECT NAME

DALMA

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4

DALMA STREET ORMEAU HILLS

LOCALITY OF ORMEAU

LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

CLIENT

ORMEAU DEVELOPMENTS PTY LTD



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Α	16-09-19	ISSUE FOR	INFORMA	TION					
PRE	DATE	·	AMENDMENT						

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ASSOCIATED CONSULTANTS



DRAWING TITLE

RETAINING WALL AND DETAIL GRADING PLAN SHEET 01



MUS Pty Ltd T/As: Mortons-Urban Solutions ABN: 39 116 375 065 mortons@urbansolutions.net.au www.urbansolutions.net.au

PO Box 2484 Southport QLD 4215 Gold Coast Office

Postal Addres

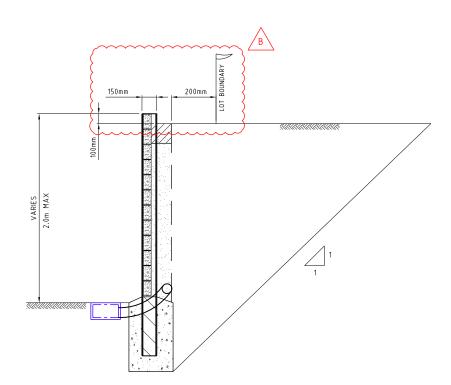
Www.mounscriptons.inc.uu
Tel 07 5571 1099 | Suite 9, 19 Short St
Fax 07 5571 1088 | Southport QLD 4215

DESIGNED RB | DRAWN JB

APPROVEDENCE TO RESEA 4706 PATE 04-07-18

ORAWING NUMBER AMEND

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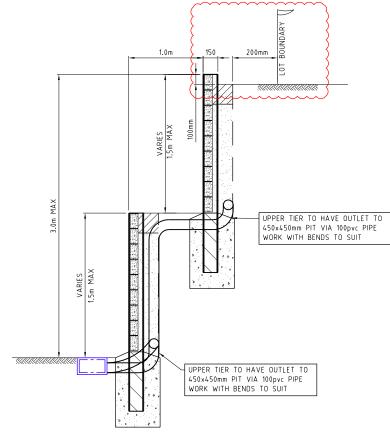


CROSS SECTION OF CONCRETE RETAINING WALL

SCALE 1:20 - A1 (1:40 - A3)

NOTES:

- 1. RETAINING WALL DETAILS ARE INDICATIVE ONLY.
- 2. CONTRACTOR TO ARRANGE FOR DESIGN AND CONSTRUCTION OF WALLS BY RPEQ STRUCTURAL ENGINEER. CONTRACTOR TO PROVIDE STRUCTURAL CERTIFICATION OF DESIGN AND FINAL CONSTRUCTION.
- ALLOW FOR 5KPa LOADING TO WALLS EXCEPT ADJACENT TO ROADS WHICH REQUIRE A 10kPa LOADING.
- CONTRACTOR TO CONFIRM LOCATION OF LOT BOUNDARY PRIOR TO COMMENCING WALL CONSTRUCTION.
- THE BUILDING ON THE HIGHER SIDE OF THE RETAINING WALL MUST MAINTAIN AN OFFSET OR APPROPRIATE FOUNDATION STRUCTURES (EG; PIERS) IN ORDER TO ENSURE THE ENTIRE DEPTH OF THE RETAINING WALL IS FREE FROM THE ZONE OF INFLUENCE OF THE BUILDING/OVERBURDEN LOAD UNLESS OTHERWISE SPECIFIED BY STRUCTURAL ENGINEER.
- STRUCTURAL ENGINEER TO DESIGN SLAB AND PIER.
 AGRICULTURAL DRAIN TO DISCHARGE TO 300x300mm STORMWATER
 PIT. HOUSE BUILDER TO CONNECT 300x300mm STORMWATER PIT TO ROOFWATER SYSTEM.
- RETAINING WALL DESIGN TO ALLOW FOR ALL SERVICES
- (ADJACENT OR BELOW) AND HAVE NO IMPACT.
 200mm TO BACK OF DRAINING MATERIAL OR FOOTING FROM
- PROPERTY BOUNDARY.



CROSS SECTION OF SPLIT CONCRETE RETAINING WALL

RETAINING WALL COLOUR AND FACE FINISH NOTE:

1. RETAINING WALL COLOUR AND FINISH IS TO BE AS PER LANDSCAPE CONSULTANTS SPECIFICATION

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: OPW/2020/620

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

Dated: .21 August 2020

mortons@urbansolutions.net.au www.urbansolutions.net.au Tel 07 5571 1099 Fax 07 5571 1088

Gold Coast Office

DESIGNED RB DRAWN



AORTONS lurban**solutions** Urban & Regional Planning Civil Engineering **Project Coordination**

PROJECT NAME

DALMA

OPERATIONAL WORKS STAGE 2 RP DESCRIPTION: Lot 4 RP883725 , LOT 4 DALMA STREET ORMEAU HILLS LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

> ORMEAU DEVELOPMENTS PTY LTD

> > 0.2 0.4 0.6 0.8 1.0m

10-01-20 30-04-20

AMENDMENT

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ASSOCIATED CONSULTANTS

BIOME

DRAWING TITLE

RETAINING WALL DETAILS

TENDER

CONSTRUCTION

PRE DATE

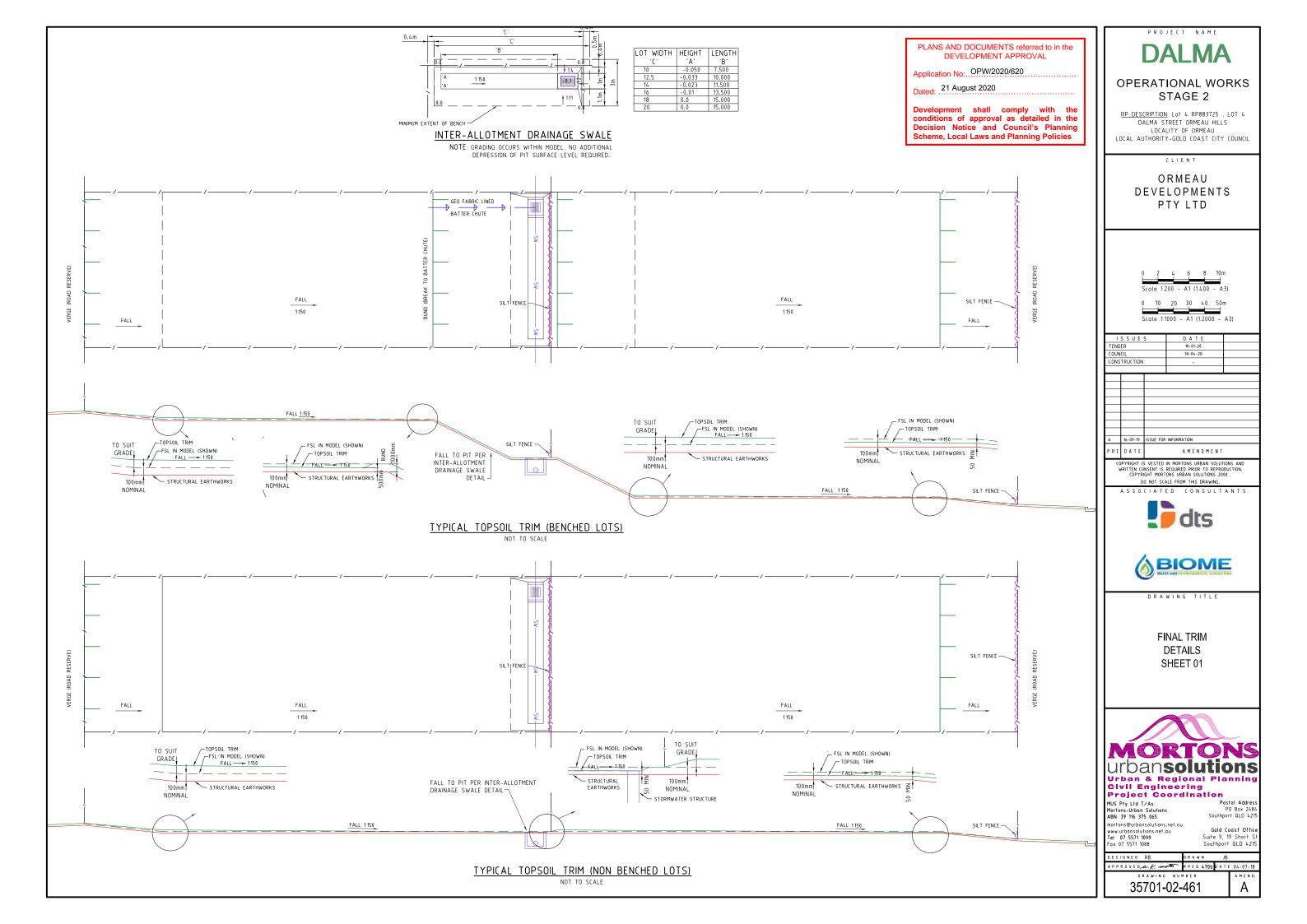
B 23-06-20 NOTES AMENDED

A 16-09-19 ISSUE FOR INFORMATION

MUS Pty Ltd T/As: Mortons-Urban Solutions ABN: 39 116 375 065 Postal Addres PO Box 248 Southport QLD 421

Suite 9, 19 Short S Southport QLD 421

APPROVEDA.K. MOTO RPEQ 4706 DATE 04-07-18 35701-02-460 В



SEQ CODE SEWER NOTES

SEQ CODE NOTES COPIED DIRECTLY FROM DRAWING SEQ-SEW-1101-3.

VEGETATION PROTECTION

- TREES LOCATED ALONG THE FOOTPATH SHALL BE, TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
- WHEN WORKING WITHIN 4m OF TREES RUBBER OR HARDWOOD GIRDLES SHALL BE CONSTRUCTED WITH 1.8 m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES SHALL BE STRAPPED TO
- TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
 TREE ROOTS SHALL BE TUNNELLED 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. ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.

SOIL

- TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY. CARE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE
- PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES. IF ACID SULPHATE SOILS EXIST IN THE WORKS AREA. THE CONTRACTOR MUST PREPARE A RISK ASSESSMENT BASED ON THE QUEENSLAND ACID SULPHATE SOIL TECHNICAL MANUAL AND MANAGE THE ACID SULPHATE SOILS AS PER THE MANUAL.

CREEK CROSSINGS

- SILTATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.

 APPROPRIATE SEDIMENT CONTROLS SHALL BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.

NO SOIL SHALL BE STOCKPILED WITHIN 5 m OF THE CREEK.

REHABILITATION

- PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS SHALL BE REINSTATED.
- PREDISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.

- SAFETY

 A. THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION. <u>GENERAL</u>
- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT SOUTH EAST QUEENSLAND SEWERAGE CODE SPECIFICATIONS AND STANDARDS.
- UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
- THE CONSTRUCTION OF THE SEWERAGE WORK SHOWN ON THIS DRAWING SHALL BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. SEWERAGE WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO THE SEQ SERVICE PROVIDER SEWERAGE SYSTEM.
- ALL WORK ASSOCIATED WITH LIVE SEWERS OR MAINTENANCE HOLES SHALL BE CARRIED OUT BY DEVELOPER'S APPROVED CONTRACTOR UNDER THE SUPERVISION OF SEQ'S AGENT AT THE DEVELOPER'S COST.
- ALL PIPES AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE "ACCEPTED PRODUCTS AND MATERIALS" LIST.
- EACH ALLOTMENT SHALL BE SERVED BY A DN100 PVC PROPERTY CONNECTION. FOR ALLOTMENTS OTHER THAN SINGLE RESIDENTIAL, A DN160 PE (OR DN150 PVC) PROPERTY CONNECTION SHALL BE PROVIDED.
- PROPERTY CONNECTIONS SHALL BE LOCATED WITHIN THE PROPERTY AS SHOWN IN THE DRAWINGS.
- PROPERTY CONNECTION BRANCHES SHALL EXTEND INTO THE PROPERTY A MINIMUM OF 300 mm AND A MAXIMUM 750 mm. UNITYWATER REQUIRES MINIMUM EXTENSION OF 500 mm INTO PROPERTY.
- WHERE PIPES ARE LAID IN FILL, THE FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300 mm (LOOSE) IN DEPTH AND SHALL BE COMPACTED UNTIL THE COMPACTION IS NOT LESS THAN 95% OF THE MATERIALS. MAXIMUM COMPACTION 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 THE SEQ SERVICE PROVIDER UNLESS CERTIFICATES ARE PRODUCED CERTIFYING THAT THE RECUIRED COMPACTION HAS BEEN ACHIEVED
- WHERE SEWERS HAVE A GRADE OF 1 IN 20 OR STEEPER, BULKHEADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SEQ SEWER CODE.
- THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING SERVICES WITH 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. THE EXISTING DWELLING ON LOT 3, REFER SEQ-SEW-1100, SERVED BY A SEPTIC SYSTEM, SHALL BE CONNECTED TO THE NEW SEWER BY A LICENCED PLUMBER IN ACCORDANCE WITH THE RELEVANT STATUTORY AND COUNCIL REQUIREMENTS. THE SEPTIC SYSTEM, INCLUDING TRENCHES, SHALL BE REMOVED AT THE DEVELOPER'S COST. ALL FIXTURES SHALL BE UPGRADED IF REQUIRED BY PLUMBING CODE. STANDARD NOTE NOT APPLICABLE AND THEREFORE DELETED.
- 15. EXISTING ALLOTMENTS REQUIRING A PROPERTY CONNECTION FROM EXISTING SEWERS SHALL BE PROVIDED BY THE SEQ SERVICE PROVIDER AT THE DEVELOPERS COST.

PROJECT SPECIFIC SEWER NOTES

- a. ALL SEWER MAINS TO BE AS PER SEWER PIPE SPECIFICATIONS TABLE.
 b. NOTWITHSTANDING THE STANDARD SEQ NOTES ABOVE, ALL MATERIALS AND WORKS MUST BE IN
- ACCORDANCE WITH THE SERVICE PROVIDER'S APPROVAL CONDITIONS AND THE SEQ WS&S D&C CODE.
 THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR SEWER RATES UNLESS SCHEDULED OTHERWISE WITHIN THE CONTRACT.
- THE CONTRACTOR TO PROVIDE CALCAREOUS CONCRETE WHERE SPECIFIED IN THE SEQ CODE BY THE RELEVANT AUTHORITY.
- WATER AND ELECTRICAL CROSSING LOCATIONS ARE INDICATIVE ONLY. REFER TO PLANS TO DETERMINE PRECISE CROSSING LOCATIONS. WHERE SERVICE INDICATES CLASH WITH SEWER SEWER TO TAKE PRECEDENCE, SERVICE TO BE CONSTRUCTED OVER OR UNDER SEWER ACCORDING TO SUPERINTENDENTS
- ALL BENDS TO BE LONG RADIUS BEND 3m RADIUS U.N.O.

LEGEND EXISTING SEWER

— FUTURE SEWER

SITE BOUNDARY

STAGE BOUNDARY

__ __ _ _ _ _ FIITURE KERR (INVERT)

EXISTING RISING MAIN

EXISTING CONTOURS

- FUTURE RISING MAIN

- - FUTURE PROPERTY LINE

- FUTURE CONTOURS

DESIGN CONTOURS

PROPOSED SEWER

PROPOSED RISING MAIN

- PROPOSED KERB (INVERT)

- PROPOSED PROPERTY LINE

EXISTING KERB (INVERT)

FXISTING PROPERTY LINE

EXISTING RETAINING WALL

-S - - - - - -

- CONTRACTOR TO VERIFY DOWNSTREAM EXISTING PIPE LEVELS PRIOR TO COMMENCEMENT OF WORKS ON-SITE
- 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 1.5m. UNLESS OTHERWISE STATED. REFER SEQ STD. DWGS SEQ-SEW-1106-01 TO SEQ-SEW-1106-7 FOR JUNCTION DETAILS.

EXISTING BESSER BLOCK RETAINING WALL SEWER PUMP STATION

SHEET LAYOUT

35701-02-500

• SEWER MANHOLE

→ SEWER END CAP

35701-02-501

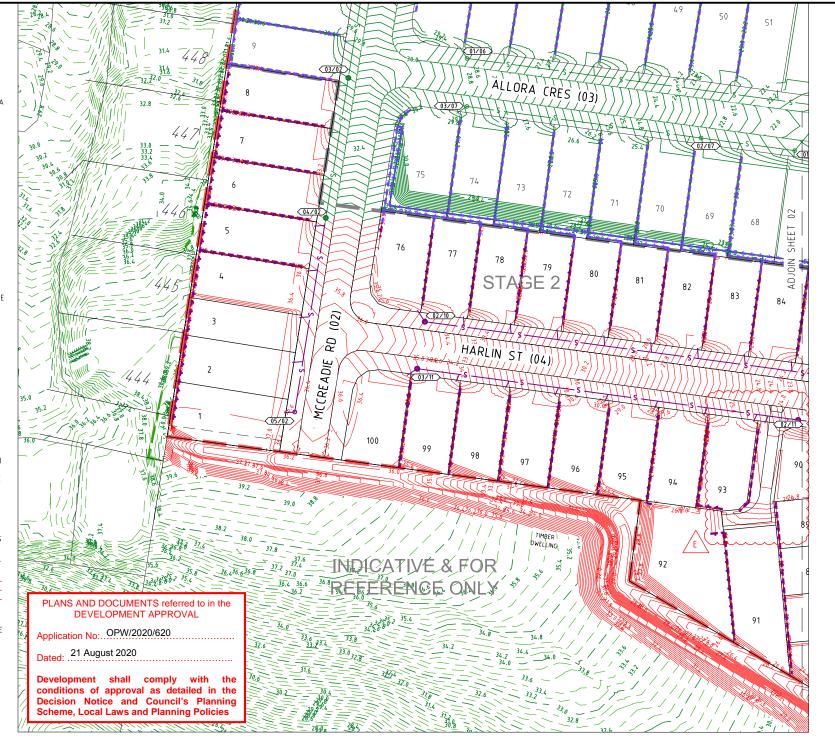
3(C)

• SEWER BEND

(01-10) SEWER PIT NO/LINE

SEWER RODDING END

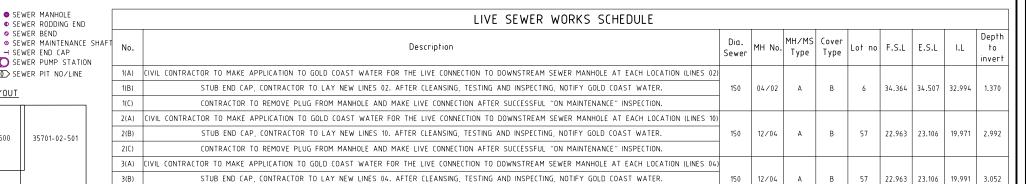
CONTRACTOR TO PAY ALL FEES AND CHARGES ASSOCIATED WITH CONNECTIONS



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

CONTRACTOR TO REMOVE PLUG FROM MANHOLE AND MAKE LIVE CONNECTION AFTER SUCCESSFUL "ON MAINTENANCE" INSPECTION





DAI MA

OPERATIONAL WORKS

STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4 DALMA STREET ORMEAU HILLS LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

ORMEAU DEVELOPMENTS PTY LTD



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DRAWING TITLE

SEWER RETICULATION PLAN AND NOTES SHEET 01 OF 02



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Postal Addres Southport QLD 42

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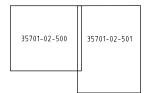
Gold Coast Offic Southport QLD 421

DESIGNED RB DRAWN APPROVEDALE MA RPEQ 4706 DATE 04-07-18

LEGEND EXISTING SEWER EXISTING RISING MAIN EXISTING KERB (INVERT) - EXISTING PROPERTY LINE EXISTING RETAINING WALL EXISTING BESSER BLOCK RETAINING WALL EXISTING CONTOURS —⊕— FUTURE SEWER ---- FUTURE RISING MAIN — — FUTURE KERB (INVERT) - - FUTURE PROPERTY LINE SITE BOUNDARY STAGE BOUNDARY PROPOSED KERB (INVERT) — PROPOSED PROPERTY LINE PROPOSED RETAINING WALL — DESIGN CONTOURS PROPOSED SEWER PROPOSED RISING MAIN SEWER MANHOLE • SEWER RODDING END SEWER BEND • SEWER MAINTENANCE SHAFT → SEWER END CAP SEWER PUMP STATION 01-10 SEWER PIT NO/LINE

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

SHEET LAYOUT



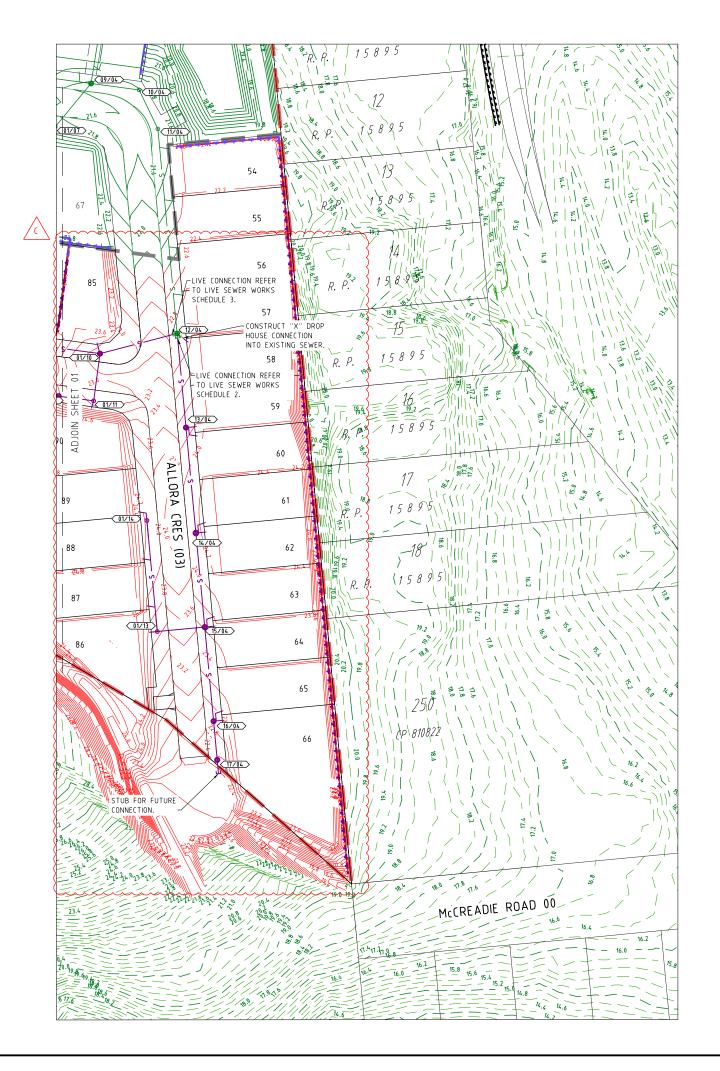


PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: OPW/2020/620

Dated: 21 August 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies



DALMA

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4

DALMA STREET ORMEAU HILLS

LOCALITY OF ORMEAU

LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

CLIEN

ORMEAU DEVELOPMENTS PTY LTD



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DRAWING TITLE

SEWER RETICULATION PLAN AND NOTES SHEET 02 OF 02



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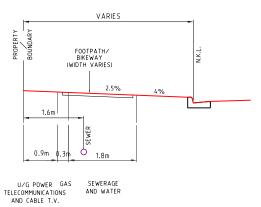
DESIGNED RB DRAWN JB

APPROVEDANK MATE 04-07-18

DRAWING NUMBER AMEND.

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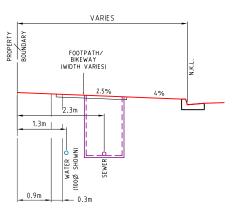


G.C.C.C. TYPICAL SERVICES

SEWER RETICULATION ONLY SCALE 1:50 - A1 (1:100 - A3)

- PUBLIC UTILITIES ALLOCATIONS ARE MEASURED FROM THE REAL PROPERTY BOUNDARY.

 2. LIGHT POLE, TREE ALLOCATIONS AND FOOTPATHS
- ARE MEASURED FROM THE NOMINAL KERB LINE.



U/G POWER GAS TELECOMMUNICATIONS AND CABLE T.V.

G.C.C.C. TYPICAL POTABLE WATER AND SEWER RETICULATION (SAME SIDE)

SCALE 1:50

PROJECT NAME

DALMA

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4
DALMA STREET ORMEAU HILLS
LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

ORMEAU DEVELOPMENTS PTY LTD



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B 20-06-29 DETAIL REMOVED A 16-09-19 ISSUE FOR INFORMATION

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DRAWING TITLE

SEWER RETICULATION DETAILS SHEET 1 OF 1



Project Coordination MUS Pty Ltd T/As: Mortons-Urban Solutions ABN: 39 116 375 065

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Gold Coast Office Suite 9, 19 Short S Southport QLD 4219

В

DESIGNED RB DRAWN APPROVEDA.K. MOTO RPEQ 4706 DATE 04-07-18

35701-02-510

PLANS AND DOCUMENTS referred to in the **DEVELOPMENT APPROVAL** Application No: OPW/2020/620

Dated: 21 August 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

RIGSS SEWER STRUCTURE TYPES PRECAST CONCRETE SEWER MAINTENANCE STRUCTURE REFER TO SEQ STD DWG SEQ-SEW-1300-1 TYPE 'A' 1050mm DIA. MAINTENANCE STRUCTURE REFER TO SEQ STD DWGS SEQ-SEW-1307-1 TYPE 'B' 1200mm DIA. MAINTENANCE STRUCTURE В REFER TO SEQ STD DWGS SEQ-SEW-1307-1 TYPE 'C' 1500mm DIA. MAINTENANCE STRUCTURE C REFER TO SEQ STD DWGS SEQ-SEW-1307-1 TYPE 'J1' MAINTENANCE STRUCTURE J1 REFER TO SEQ STD DWGS SEQ-SEW-1314-2 (300mm DIA SHAFT) BEND BND REFER TO SEQ STD DWGS SEQ-SEW-1314-3 RODDING END MAINTENANCE STRUCTURE RE REFER TO SEQ STD DWGS SEQ-SEW-1314-1 END PROPRIETORY END CAP SEWER PUMP STATION REFER TO RELEVANT SEQ STD DWGS RECEIVING MAINTENANCE STRUCTURE REFER TO RELEVANT SEQ STD SEWER PUMP STATION DWGS TYPE 'G6' TERMINAL MAINTENANCE SHAFT REFER TO SEQ STD DWGS SEQ-SEW-1314-1

	RIGSS SEWER STRUCTURE DROPS
V	STRAIGHT THROUGH SEWER REFER TO SEQ STD DWG SEQ-SEW-1303-1
W	OBLIQUE BACKDROP REFER TO SEQ STD DWG SEQ-SEW-1303-1
×	INTERNAL BACKDROP REFER TO SEQ STD DWG SEQ-SEW-1303-1
Y	EXTERNAL BACKDROP REFER TO SEQ STD DWG SEQ-SEW-1303-1

STRUCTURE TYPE LID CLASS DROP TYPE

* CONSTRUCT BRIDGING STRUCTURE SPANNING THE SEWER TRENCH REFER TYPICAL SECTIONS & DETAILS FOR BRIDGING STRUCTURE DETAILS TRENCHSTOPS, BULKHEADS & CONCRETE ENCASEMENTS TO BE INSTALLED IN ACCORDANCE WITH SEQ SEWER CODE NOTES 1.IF SHOWN, WATER AND

ELECTRICAL CROSSING

LOCATIONS ARE INDICATIVE ONLY. REFER TO PLANS TO DETERMINE CROSSING LOCATIONS. WHERE SERVICE INDICATES CLASH WITH SEWER, SEWER TO TAKE PRECEDENCE, SERVICE TO BE CONSTRUCTED OVER OR UNDER SEWER ACCORDING TO SUPERINTENDENTS INSTRUCTION 2.ALL GRAVITY uPVC SEWER PIPE TO BE CLASS SN8 U.N.O. 3.ALL PRESSURE MAIN uPVC SEWER PIPE TO BE CLASS SN16 U.N.O. 4.ALL EMBEDMENT TYPE IS TO BE TYPE 3 U.N.O 5.ALL BENDS TO BE LONG RADIUS BEND, 3m RADIUS 6.CONTRACTOR TO VERIFY DOWNSTREAM EXISTING

PIPE LEVELS PRIOR TO COMMENCEMENT OF

7.PROTECTIV COATING IS TO BE INSTALLED TO MAINTENANCE STRUCTURES (WHERE

PIPFWORK

REQUIRED) IN ACCORDANCE WITH CLAUSE 4.7.2 OF SEQ SEWERAGE CODE.

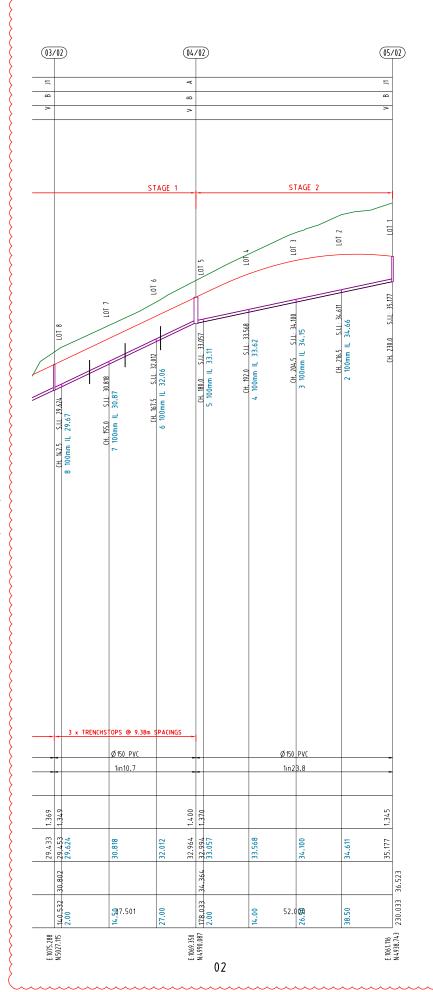
PIPE DIAMETER (mm) PIPE GRADE

DATUM R.L.

DEPTH TO INVERT PIPE INVERT LEVELS DESIGN SURFACE LEVELS

LINE NO.

CHAINAGE



PLANS AND DOCUMENTS referred to in the

Application No: OPW/2020/620

Dated: 21 August 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

DEVELOPMENT APPROVAL

ORMEAU DEVELOPMENTS PTY LTD

PROJECT NAME **DALMA**

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4

DALMA STREET ORMEAU HILLS

LOCALITY OF ORMEAU

LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

Vert. Scale 1:100 - A1 (1:200 - A3)

TENDER 10-01-20 30-04-20 CONSTRUCTION

C 30-06-20 SEWER PROFILES AMENDED
B 04-06-20 SEWER PROFILES AMENDED A 16-09-19 ISSUE FOR INFORMATION

PRE DATE AMENDMENT

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DRAWING TITLE

SEWER RETICULATION PROFILES SHEET 01 OF 04



Project Coordination Postal Addres

MUS Pty Ltd T/As: Mortons-Urban Solutions ABN: 39 116 375 065 ortons@urbansolutions.net.au

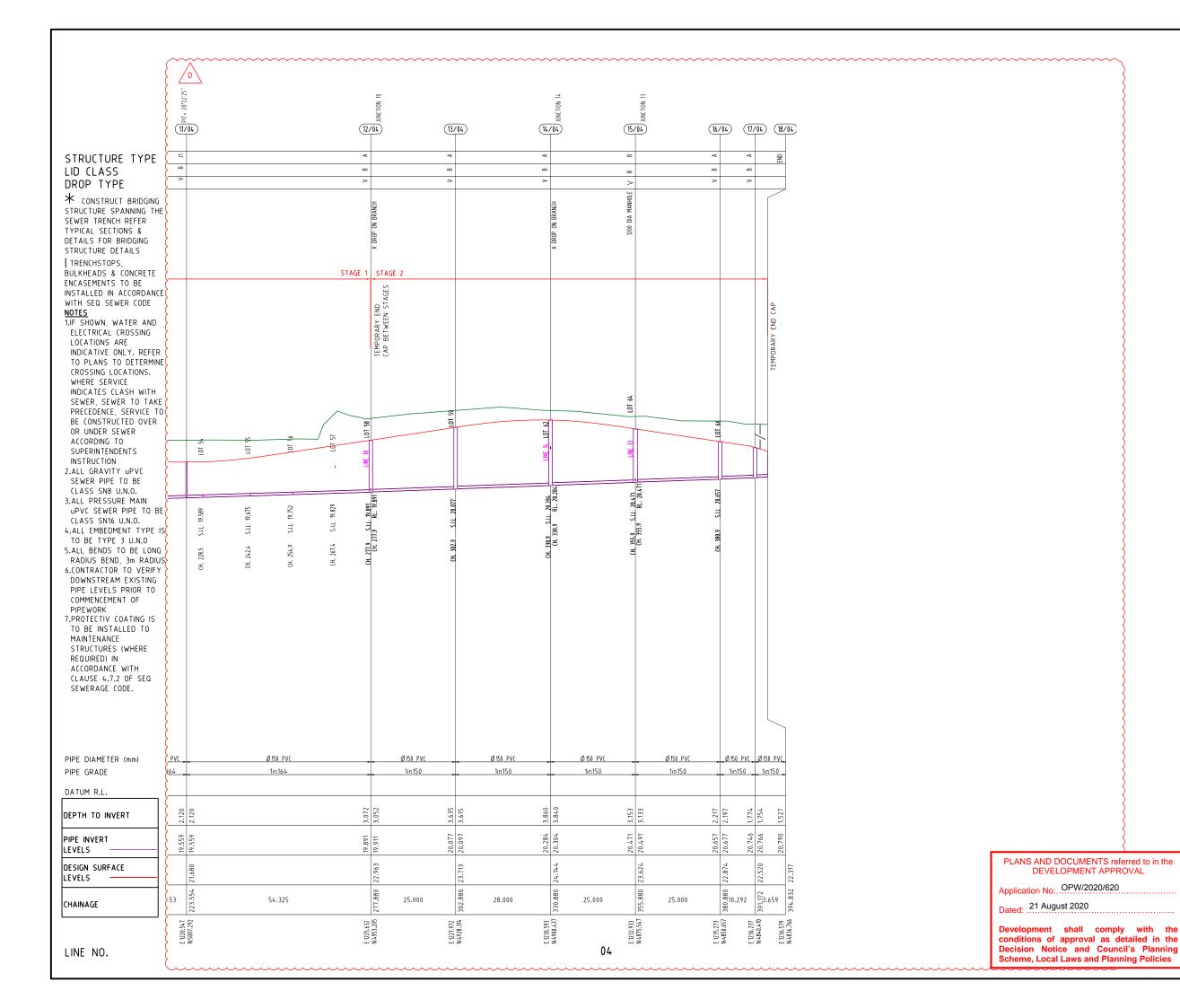
PO Box 248 Southport QLD 421 Gold Coast Office

Suite 9, 19 Short S Southport QLD 421

DESIGNED RB DRAWN APPROVEDA.K. MONTO RPEQ 4706 DATE 04-07-18

35701-02-530

D



PROJECT NAME

DALMA

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4

DALMA STREET ORMEAU HILLS

LOCALITY OF ORMEAU

LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

CLIENT

ORMEAU DEVELOPMENTS PTY LTD

0 5 10 15 20 25m Horiz. Scale 1:500 - A1 (1:1000 - A3)

Vert. Scale 1:100 - A1 (1:200 - A3)

- 1	SSUE	S		DATE		
TEND	ER			10-01-20		
COUN	CIL			30-04-20		
CONS	TRUCTION					
D	06-07-20	SEWER PR	OFILES	AMENDED		
C	30-06-20	SEWER PR	OFILES	AMENDED		
В	04-06-20	SEWER PR	OFILES	AMENDED		
	47 00 40			MA TION		

PRE DATE

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AMENDMENT

ASSOCIATED CONSULTANTS





DRAWING TITLE

SEWER RETICULATION PROFILES SHEET 02 OF 04



Project Coordinate
MUS Pty Ltd T/As:
Mortons-Urban Solutions
ABN: 39 116 375 065

ABN: 39 116 375 065 mortons@urbansolutions.net.au www.urbansolutions.net.au Tel 07 5571 1099 PO Box 2484 Southport QLD 4215 Gold Coast Office

1 5571 1099 Suite 9, 19 Short S 5571 1088 Southport QLD 421

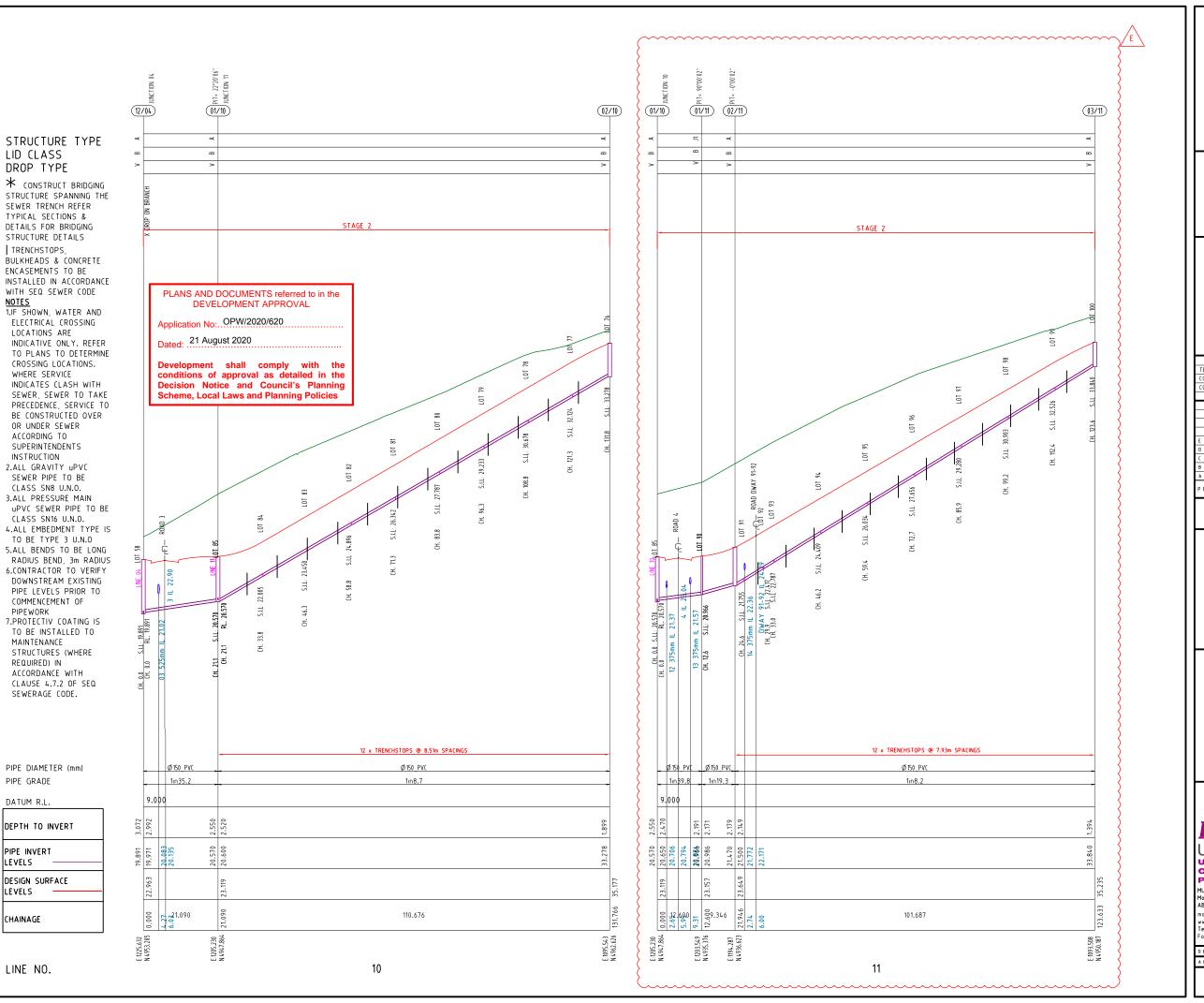
DESIGNED RB DRAWN JB

APPROVED SALK STATE RPEQ 4706 DATE 04-07-18

DRAWING NUMBER AMEND.

35701-02-531

D



PROJECT NAME

DALMA

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION Lot 4 RP883725 , LOT 4

DALMA STREET ORMEAU HILLS

LOCALITY OF ORMEAU

LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

CLIEN

ORMEAU DEVELOPMENTS PTY LTD

0 5 10 15 20 25m Horiz. Scale 1:500 - A1 (1:1000 - A)

Vert. Scale 1:100 - A1 (1:200 - A3)

E 05-08-20 PROFILE AMENDED
D 06-07-20 SEWER PROFILES AMENDED
C 30-08-20 SEWER PROFILES AMENDED
B 04-08-20 SEWER PROFILES AMENDED
A 16-09-19 ISSUE FOR INFORMATION
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DRAWING TITLE

SEWER RETICULATION PROFILES SHEET 03 OF 04



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PO Box 2484
Southport QLD 4215
Gold Coast Office

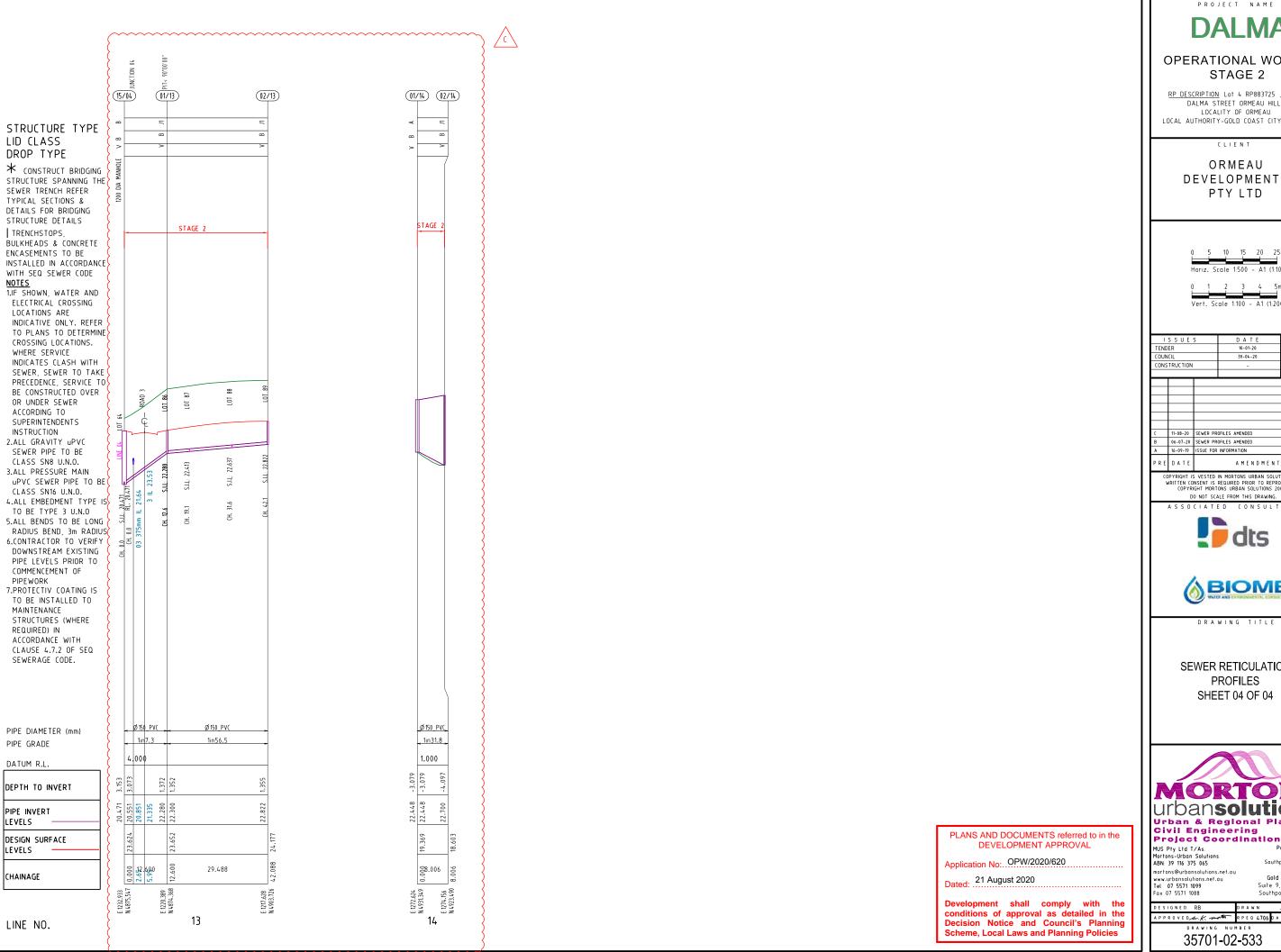
Suite 9, 19 Short St Southport QLD 4215

DESIGNED RB DRAWN JB

APPROVEDANK MARKET

35701-02-532

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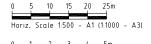
DALMA

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4 DALMA STREET ORMEAU HILLS LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

CLIENT

ORMEAU DEVELOPMENTS PTY LTD



TEND	ER		10-01-20								
COUN	CIL		30-04-20								
CONS	TRUCTION		**								
C	11-08-20	SEWER PR	OFILES AMENDED								
В	06-07-20	SEWER PR	OFILES AMENDED								
Α	16-09-19	ISSUE FOR	INFORMATION								





DRAWING TITLE

SEWER RETICULATION **PROFILES** SHEET 04 OF 04



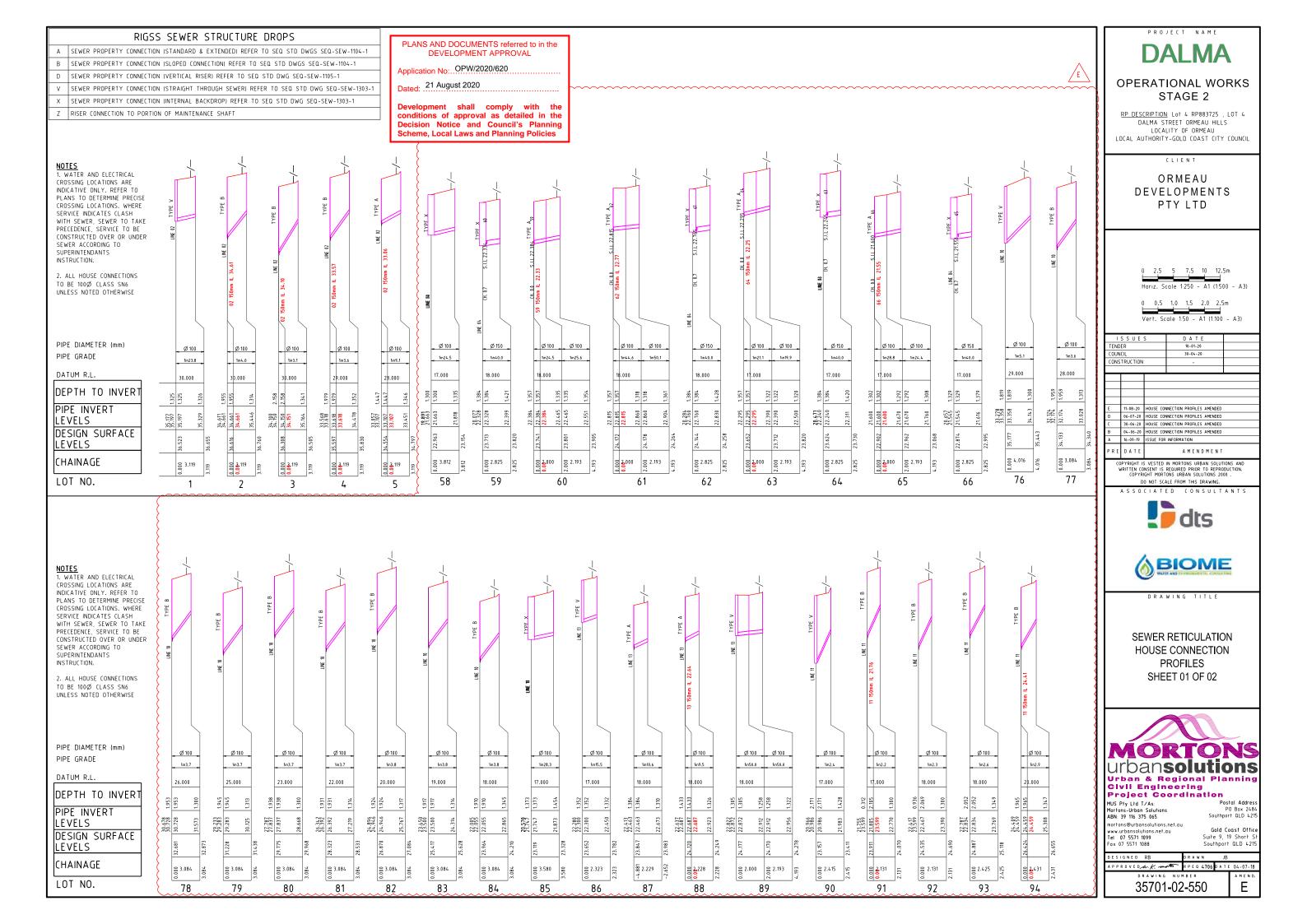
Project Coordination

PO Box 2489 Southport QLD 421

Gold Coast Office

Suite 9, 19 Short S Southport QLD 4219

С



PLANS AND DOCUMENTS referred to in the **DEVELOPMENT APPROVAL**

Application No: OPW/2020/620

Dated: 21 August 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

DALMA

PROJECT NAME

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4 DALMA STREET ORMEAU HILLS LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

ORMEAU DEVELOPMENTS PTY LTD

0 2.5 5 7.5 10 12.5m

0 0.5 1.0 1.5 2.0 2.5m

Vert. Scale 1:50 - A1 (1:100 - A3)

TEND	ER		10-01-20							
COUN	CIL		30-04-20							
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В	30-06-20	HOUSE COM	NNECTION PROFILES AMENDED							
Α	16-09-19	ISSUE FOR	INFORMATION							
PRE	DATE		AMENDMENT							

ISSUES DATE

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DRAWING TITLE

SEWER RETICULATION HOUSE CONNECTION **PROFILES** SHEET 02 OF 02



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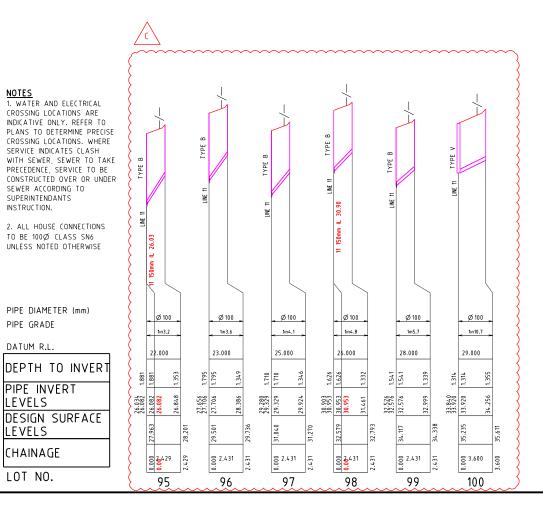
Postal Addres PO Box 248 Southport QLD 421

С

Gold Coast Office Suite 9, 19 Short S Southport QLD 4219

DESIGNED RB DRAWN

APPROVEDA.K. MOTO RPEQ 4706 DATE 04-07-18 35701-02-551



SEWER ACCORDING TO

TO BE 100Ø CLASS SN6

PIPE DIAMETER (mm)

PIPE GRADE

DATUM R.L.

LEVELS

LEVELS

CHAINAGE

LOT NO.

PIPE INVERT

SUPERINTENDANTS INSTRUCTION.

STORMWATER 1. ALL FIELD GULLIES SHALL CONTAIN A 150mm DIA STUB 600mm BELOW GRADE LEVEL FOR FUTURE ROOFWATER DRAINAGE. 2. MANHOLES TO BE IN ACCORDANCE WITH IPWEAQ STANDARD DRAWING No DS-010, DS-015, DS-018, DS-019, DS-020, DS-021 OR STRUCTURAL DRAWINGS (STRUCTURAL 448 DRAWINGS TAKE PRECEDENCE). OUTLET HEADWALLS TO BE IN ACCORDANCE WITH LOCAL COUNCIL STANDARD DRAWINGS. 32.6 4. ALL HEADWALLS WITH A FALL GREATER THAN 900mm HIGH REQUIRE INSTALLATION OF PEDESTRIAN SAFETY FENCES. PEDESTRIAN SAFETY FENCES. 5. ALL PIPES 600mm DIA OR LESS TO BE SOCKETED CONCRETE PIPES WITH RUBBER RING JOINTS. PIPED GREATER THAN 600mm DIA SHALL BE BUTT OR FLUSH JOINTED. 6. ALL ALLOTMENTS TO BE GRADED SUCH THAT FUTURE ROOFWATER DRAINAGE DISCHARGES TO KERB OR TO PIPED DRAINAGE SYSTEM. 44 7. ALL PIPE 300mm DIA AND GREATER SHALL BE CONSTRUCTED USING SRC OR FRC PIPES. CONTRACTOR MAY ELECT TO USE PVC PIPES WITHIN ALLOTMENTS FOR PIPES SMALLER THAN 300mm DIA. THAN 300mm DIA. 8. FOR SETOUT DETAILS REFER TO 640 SERIES DRAWINGS (PROFILES AND PIT DETAILS). 9. GULLY PITS TO BE IN ACCORDANCE WITH IPWEAQ STANDARD DRAWING No DS-060, DS-061, DS-062, DS-063. WHERE PITS ARE CONSTRUCTED AS DRAINWAY PITS, TO BE IN ACCORDANCE WITH IPWEAQ STANDARD DRAWINGS No 05-068. IN ACCURDANCE WITH IMPEAU STANDARD DRAWINGS NO 05-068. 10. LOTS WHICH CAN DRAIN OVERLAND FLOW TO THE STREET SWALE / DRAINAGE WITHOUT FLOWING THROUGH ADJOINING PROPERTIES NEED TO PROVIDE FOR Q100 OVERLAND FLOW TO THE ROAD 11. LOT EARTHWORKS DURING BUILDING CONSTRUCTION MUST NOT CHANGE FLOW PATH DIRECTION UNLESS IT IS REPLACED WITH ANOTHER FLOW PATH DRAINING TO THE ROAD SWALE / DRAINAGE. 12. THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR STORMWATER 13. PIPE CLASS - PIPE CLASSES/TRENCH BEDDING SHOWN ON THE DRAWINGS ARE SUBJECT TO THE CONTRACTORS PREFERRED INSTALLATION METHOD. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE APPROPRIATE PIPE CLASSES AND BEDDING. 14. KERB ADAPTORS ARE TO BE INSTALLED TO AUTHORITIES REQUIREMENTS. LEGEND EXISTING KERB (INVERT) - EXISTING KERB (LIP & BACK) - EXISTING PROPERTY LINE EXISTING RETAINING WALL - EXISTING BESSER BLOCK RETAINING WALL - EXISTING STORMWATER -RW- - FXISTING ROOFWATER -SS-- EXISTING SUBSOIL — 1.0— — EXISTING CONTOURS - — FUTURE KERB --- FUTURE PROPERTY LINE FFFFFFFFFFFUTURE RETAINING WALL - FUTURE STORMWATER - FUTURE ROOFWATER - FUTURE SUBSOIL SITE BOUNDARY STAGE BOUNDARY - CONTROL LINE / CENTER OF ROAD PROPOSED KERB (INVERT) - PROPOSED KERB (LIP & BACK) - PROPOSED PROPERTY LINE PROPOSED RETAINING WALL — DESIGN CONTOURS PROPOSED STORMWATER PROPOSED RODEWATER PROPOSED SUBSOIL MANHOLF KERB INLET (ON GRADE) PIT KERB INLET (SAG) PIT T HEADWALL SCOUR PROTECTION (10/001) DRAINAGE PIT & LINE NO. REFERENCE POINT LOCATION FOR DRAINAGE STRUCTURES STRUCTURE HORIZONTAL CONTROL VERTICAL CONTROL (Reference Point Location) FINISHED SURFACE MANHOLE LEVEL CENTRE OF MANHOLE FINISHED SURFACE GULLY PIT

LEVEL (LIP OF CHANNEL) LIP AT CENTRE OF PIT INTERSECTION OF HEADWALL ACE & PIPE CENTRELINE INVERT LEVEL HEADWALL

REFER TO DWG SERIES 640 FOR ALL DRAINAGE STRUCTURE SETOUT AND/OR CUSTOM DETAILS.





DEVELOPMENT APPROVAL

Application No: OPW/2020/620

Dated: .21 August 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

DALMA

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4 DALMA STREET ORMEAU HILLS LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

CLIENT

ORMEAU DEVELOPMENTS PTY LTD



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DRAWING TITLE

STORMWATER DRAINAGE PLAN SHEET 01



MUS Pty Ltd T/As: Mortons-Urban Solutions ABN: 39 116 375 065 rtons@urbansolutions.net.au

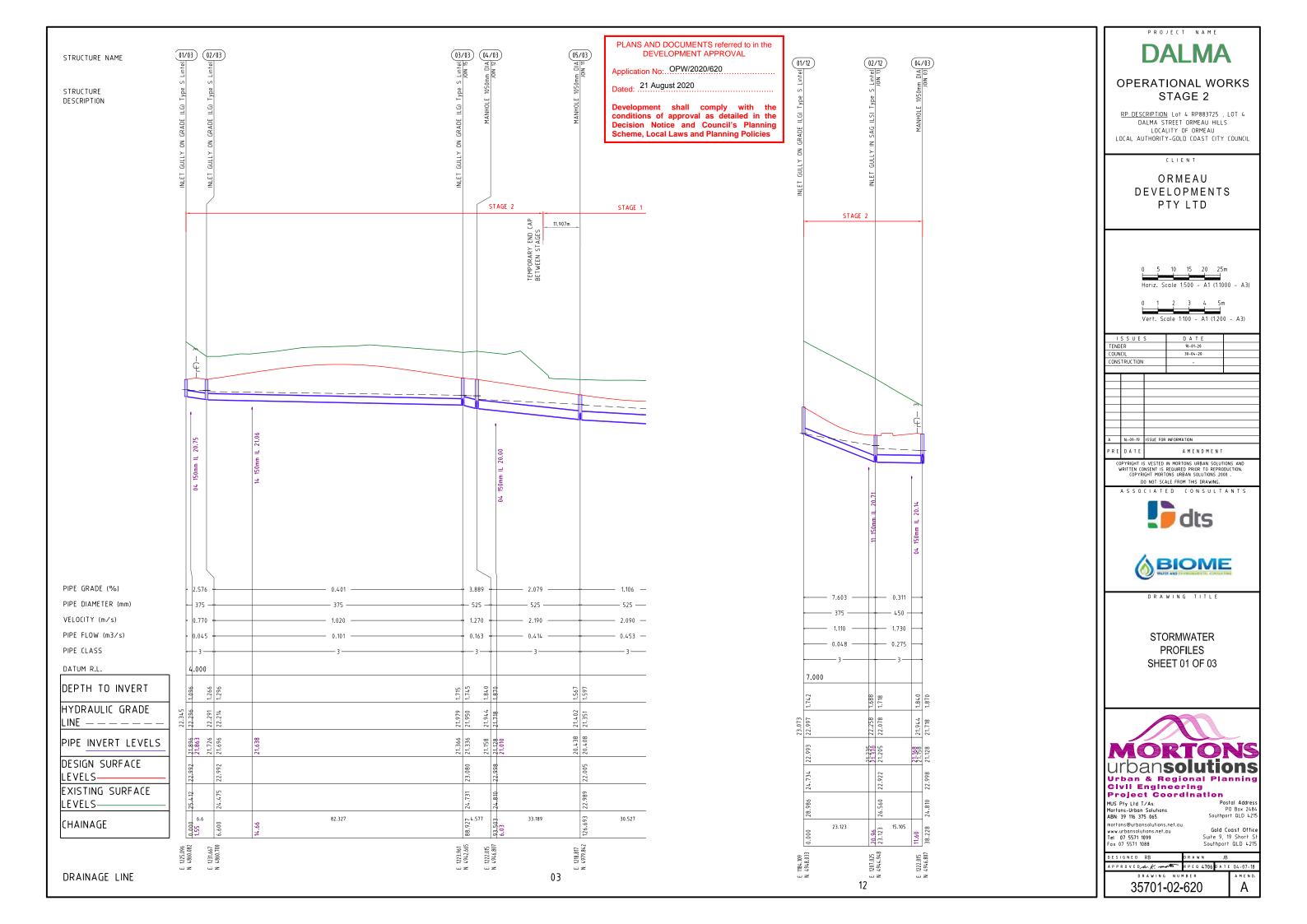
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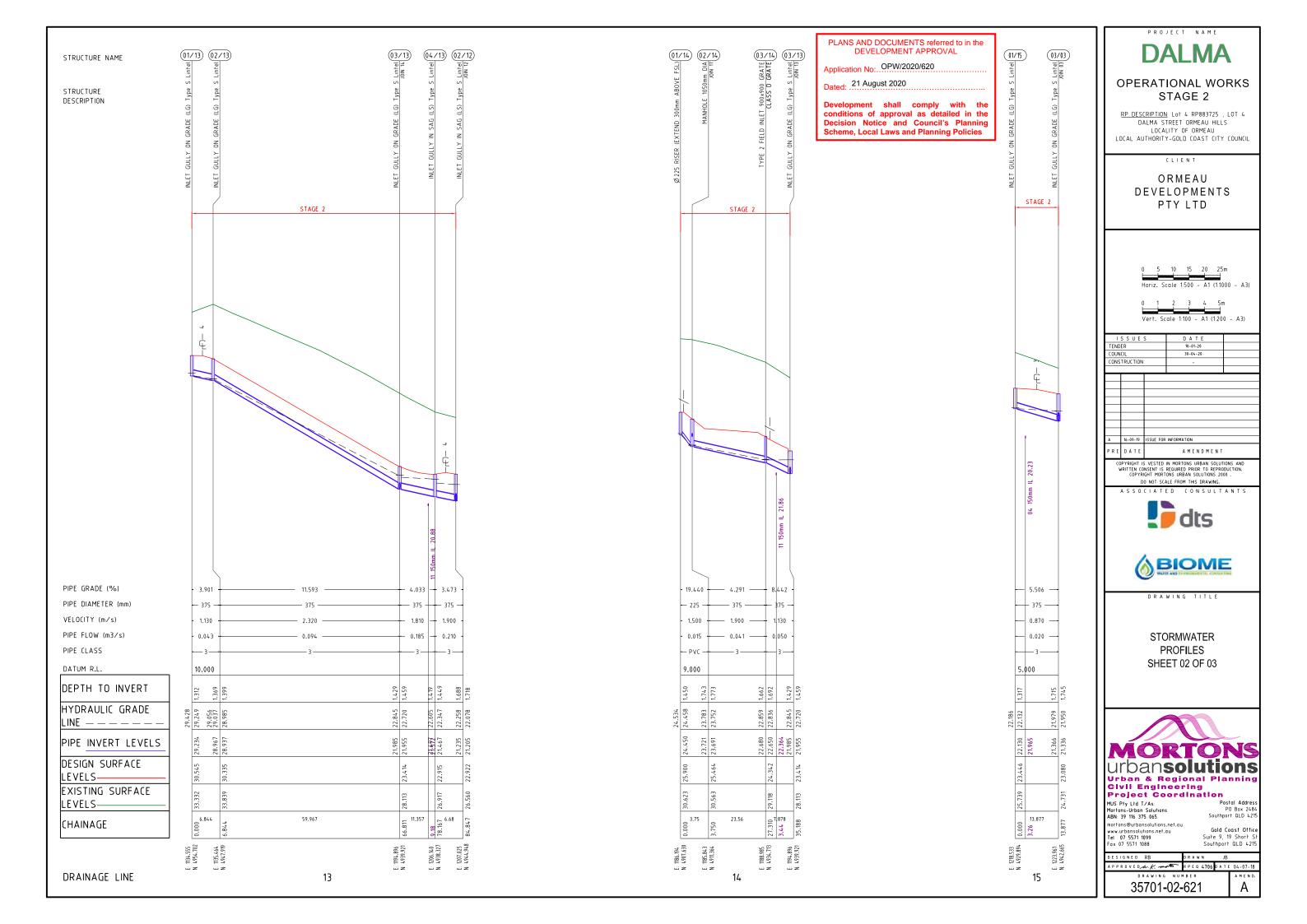
Southport QLD 421

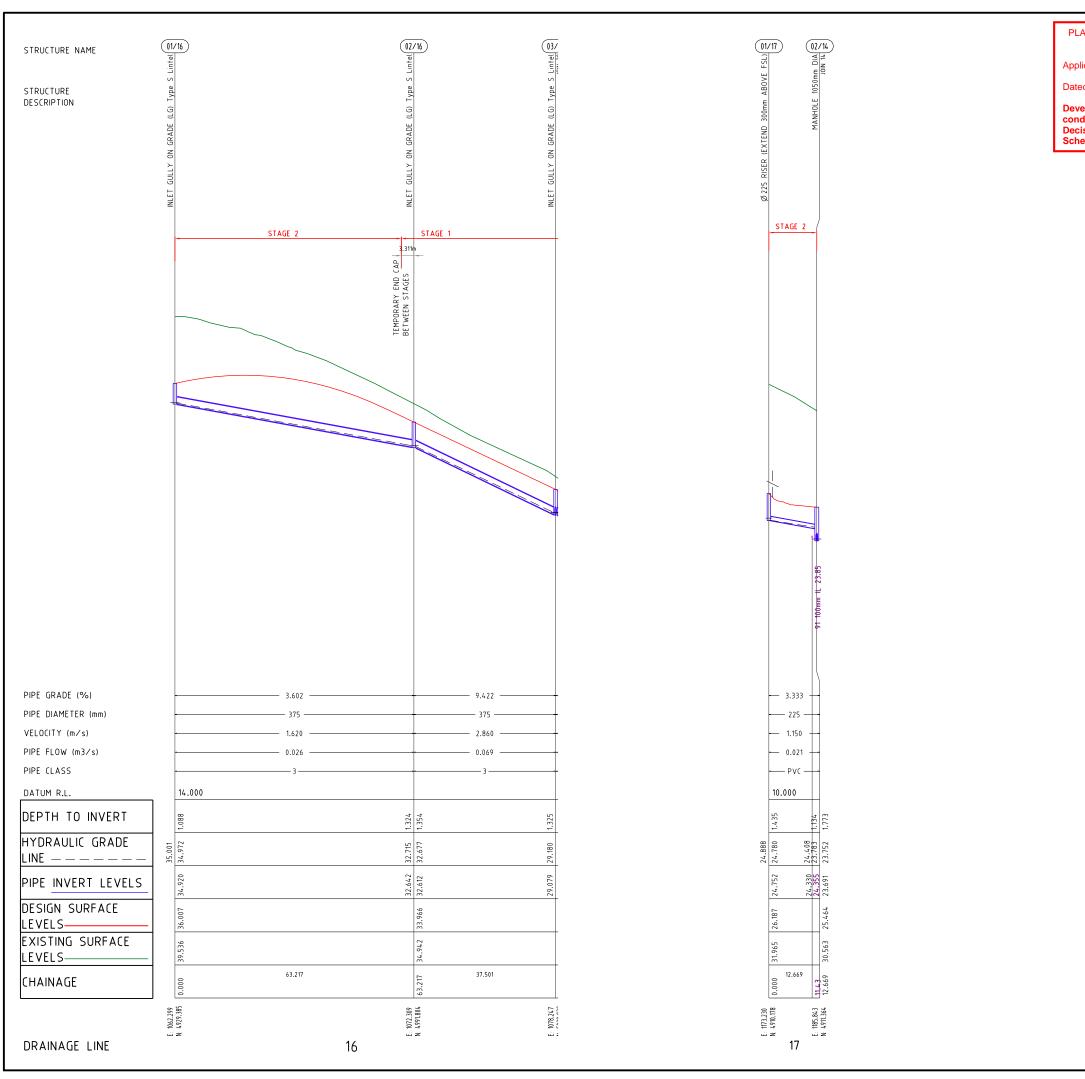
DESIGNED RB DRAWN APPROVEDALK MONTO RPEQ 4706 DATE 04-07-18

35701-02-600

Α







PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: OPW/2020/620

Dated: .21 August 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

DALMA

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4
DALMA STREET ORMEAU HILLS
LOCALITY OF ORMEAU
LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

CLIEN

ORMEAU DEVELOPMENTS PTY LTD

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Horiz	7.	Scale	1:500	-	Α1	(1:1000	-	A3)

Vert. Scale 1:100 - A1 (1:200 - A3)

TEND	ER	10-01-	20	
COUN	CIL	30-04	-20	
CONS	TRUCTION			

A 16-09-19 ISSUE FOR INFORMATION

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DRAWING TITLE

STORMWATER PROFILES SHEET 03 OF 03



MUS Pty Ltd T/As: Mortons-Urban Solutions ABN 39 116 375 065 mortons@urbansolutions.net.au www.urbansolutions.net.au Tel 07 5571 1099 Fax 07 5571 1088

PO Box 2484 uthport QLD 4215

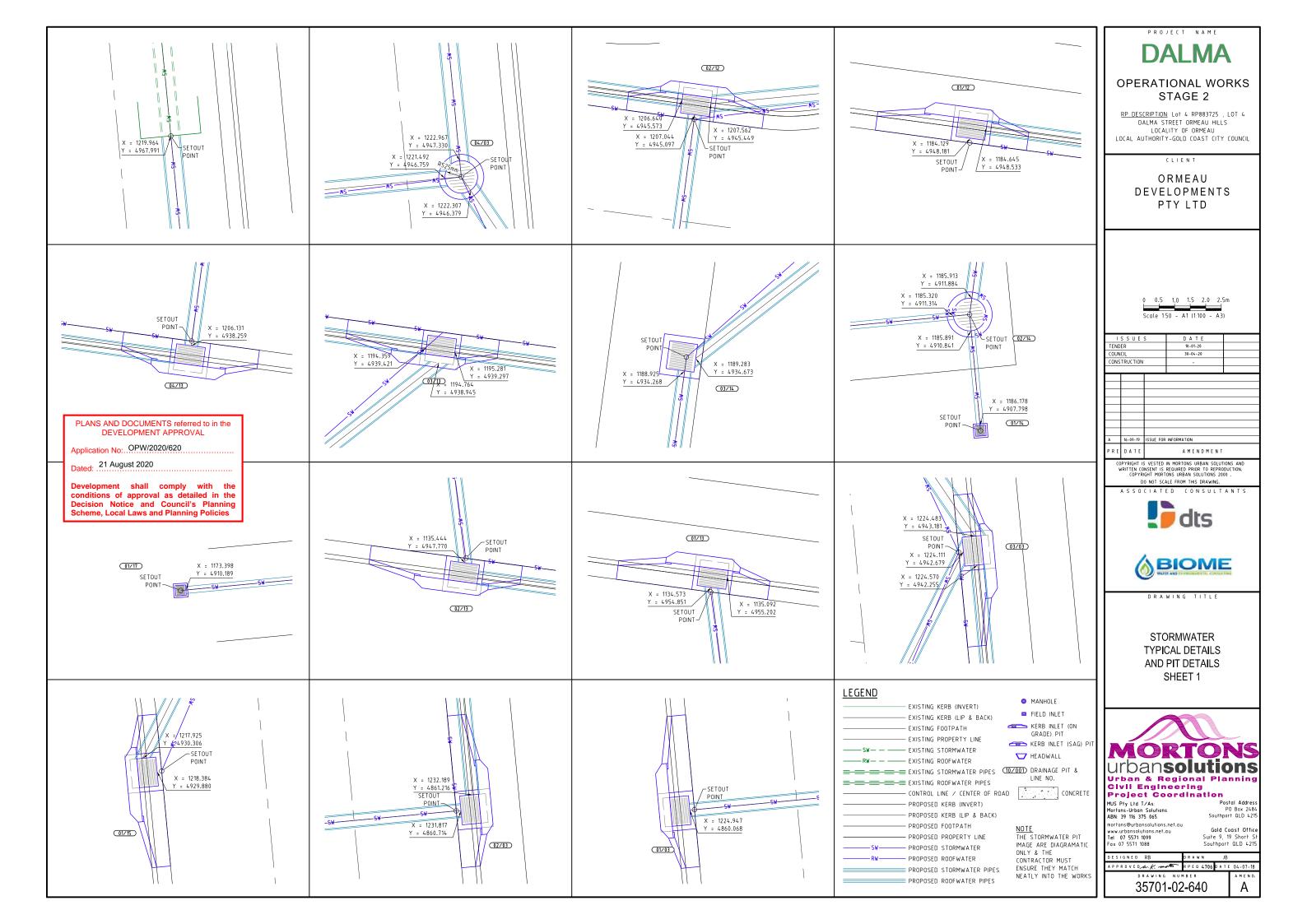
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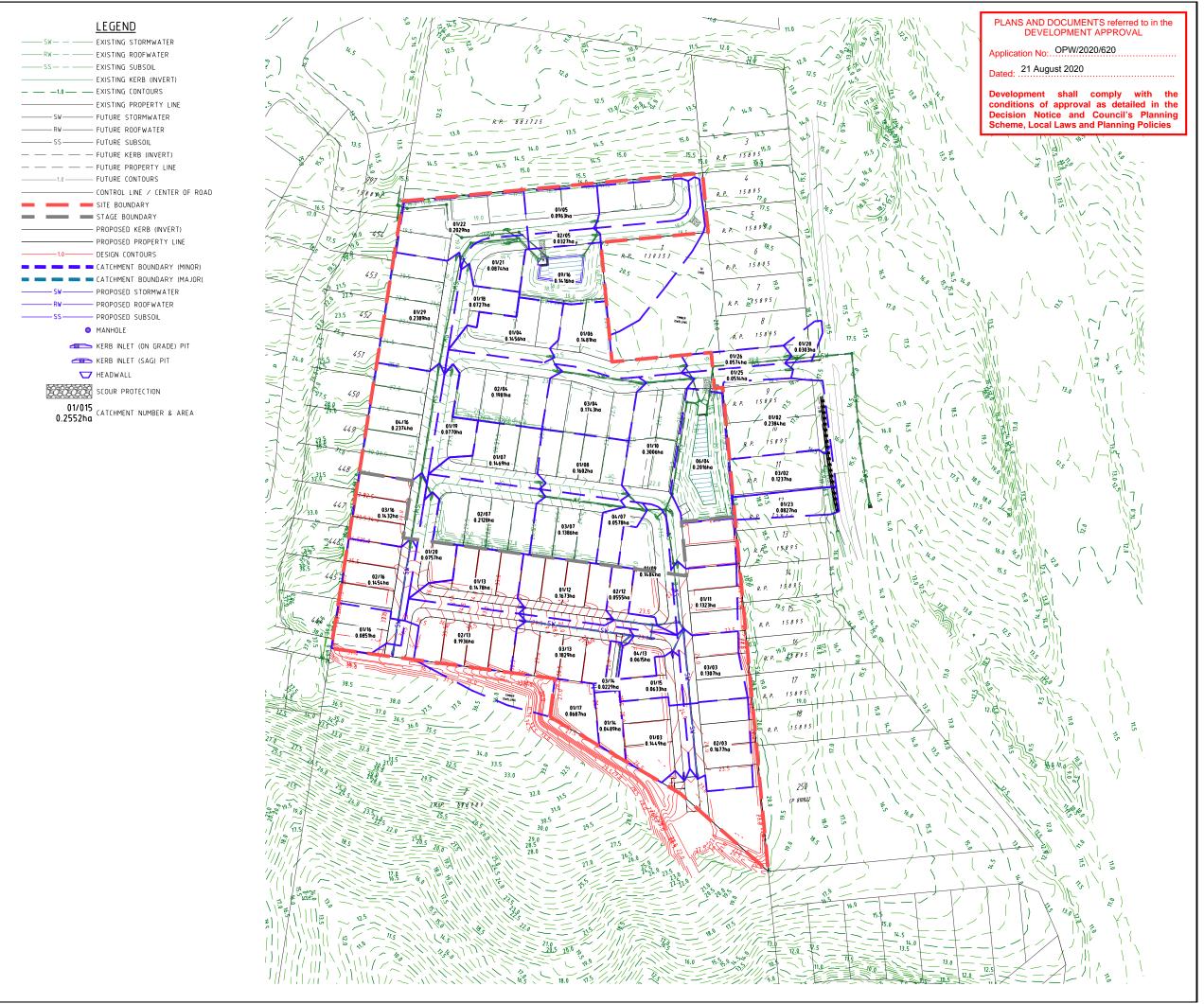
solutions.net.au Gold Coast Office ions.net.au Gold Coast Office 199 Suite 9, 19 Short SI 88 Southport QLD 4215

DESIGNED RB DRAWN JB

APPROVEDANK: NOTE PEQ 4706 DATE 04-07-18

DRAWING NUMBER





PROJECT NAME

DALMA

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4 DALMA STREET ORMEAU HILLS LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

ORMEAU DEVELOPMENTS PTY LTD



- 1	SSUE	S	DATE									
TEND	ER		10-01-20									
COUN	CIL		30-04-20									
CONS	TRUCTION											
Α	16-09-19	ISSUE FOR	NFORMATION									
PRE	DATE		AMENDMENT									

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STORMWATER **CATCHMENT PLAN** SHEET 1



MUS Pty Ltd T/As: Mortons-Urban Solutions ABN: 39 116 375 065 mortons@urbansolutions.net.au www.urbansolutions.net.au Tel 07 5571 1099 Fax 07 5571 1088

Postal Addres

Gold Coast Office Suite 9, 19 Short S Southport QLD 4219

APPROVEDA.K. MOTO RPEQ 4706 DATE 04-07-18

35701-02-670

Α

0.5 ARI (Q2) MINOR FLOW - 12D DYNAMIC DRAINAGE RESULTS	0.5 ARI (02) MINOR FLOW - 12D DYNAMIC DRAINAGE RESULTS * REFER TO IFD TABLE FOR MAXIMUM INTENSITY DURING STORM																																
NOTE: NEGATIVE FLOW VALUES INDICATE REVERSE FLOWS		CATCHME	NT AREA	RAINFALL	VOLUME*	RAINFAL	L Coef.	CATO	CHMENTE	LOW			APPROAC	H FLOW		F	LOWATPI	Т			PIT		HGL			PIPE	HE	ADLOSS	S				
NODE	A1	A2	A.3	CRITICAL	INTENSITY		CURRENT	A1	A2	A3	CRITICAL	GRADE		FLOW		CAPTURED		BYPASS GR		GRADE	GRADE GRATE		PIT PIPE			FLOW	COEFFIC	CIENT	HEADLOS	SS	CAPACITY	VELOCITY	NODE
FROM: TO: NODE TYPE	HA	HA	HA	STORM	MWHR	10 YR	Storm	HA	HA	HA	ARI MIN.	%	L/S	WIDTH	DxV	L/S	L/S	DxV	NODE	96	RL.	RL	U/S RL.	D/S RL.	%	M3/S	Ku	Kw	Ku	Kw	RATIO	MS	La constantina
01/03 02/03 INLET GULLY ON GRADE (LG) Type S Lintel	0.145			60	49.0	0.891	0.852	0.045			25	3.0	45			45				3.000	22.992	22.35	22.30	22.29	0.06	0.05	7.0	7.0	0.2	0.1	0.16	0.77	01/03
02/03 03/03 INLET GULLY ON GRADE (LG) Type S Lintel	0.168		6	60	49.0	0.891	0.852	0.053			60	3.0	53			53				3,000	22.992	22.29	22.21	21.98	0.28	0.10	3.3	3.0	0.1	0.1	0.91	1.02	02/03
03/03 04/03 INLET GULLY ON GRADE (LG) Type S Lintel	0.131			60	49.0	0.891	0.852	0.041			25	3.0	41	0.00	0.00	41	0	0.00	01/11	3.000	23.080	21.98	21.95	21.95	0.13	0.16	1.4	1.4	0.2	0.0	0.19	1.27	03/03
04/03 05/03 MANHOLE 1050mm DIA											25		0			0					22.998	21.95	21,72	21.40	0.95	0.41	1.5	1.4	0.2	0.2	0.67	2.16	04/03
01/12 02/12 INLET GULLY ON GRADE (LG) Type S Lintel	0.167			60	49.0	0.891	0.852	0.052			60	11.6	55	0.36	0.03	48	6	0.03	02/12	11.622	24.734	23.07	23.00	22.26	3.20	0.05	7.0	7.0	0.1	0.1	0.1	1.11	01/12
02/12 04/03 INLET GULLY IN SAG (LS) Type S Lintel	0.056			60	49.0	0.891	0.852	0.017			60	2.6	23	0.00	0.00	23	0	0.00	01/09	2.590	22.922	22.26	22.08	21.95	0.88	0.28	1.4	1.4	0.2	0.2	1.73	1.73	02/12
04/03]																20170000		22.998												04/03
01/13 02/13 INLET GULLY ON GRADE (LG) Type S Lintel	0.148			60	49.0	0.891	0.852	0.046			25	11.6	46	0.24	0.02	43	2	0.01	01/12	11.622	30.545	29.43	29.25	29.06	2.82	0.04	9.2	9.2	0.2	0.1	0.12	1.13	01/13
02/13 03/13 INLET GULLY ON GRADE (LG) Type S Lintel	0.194			60	49.0	0.891	0.852	0.061	-		60	11.6	61	0.40	0.05	51	9	0.04	03/13	11,622	30.335	29.04	28.99	22.85	10.24	0.09	2.7	3.0	0.1	0.1	0.16	2.32	02/13
03/13 04/13 INLET GULLY ON GRADE (LG) Type S Lintel	0.183			60	49.0	0.891	0.852	0.057			60	11.1	67	0.54	0.04	54	10	0.04	04/13	11.140	23.414	22.85	22.72	22.61	1.00	0.19	1.5	1.3	0.2	0.2	0.53	1.81	03/13
04/13 02/12 INLET GULLY IN SAG (LS) Type S Lintel	0.062		1	60	49.0	0.891	0.852	0.019			60	2.6	29	0.00	0.00	30	0	0.00	02/12	2.585	22.915	22.61	22.35	22.26	1.33	0.21	1.6	1.9	0.3	0.4	0.64	1.9	04/13
02/12									-						-						22.922			1						- 3			02/12
01/14 02/14 %%C225 RISER (EXTEND 300mm ABOVE FSL)	0.049			60	49.0	0.891	0.852	0.015			25	1.9	15	0.00	0.00	15	0	0.00	03/14	1.872	25.900	24.53	24.46	23.78	18.00	0.02	9.7	9.7	0.1	0.1	0.08	1.5	01/14
02/14 03/14 MANHOLE 1050mm DIA											25	0.0	0			0				0.000	25.464	23.78	23.75	22.86	3.79	0.04	2.1	2.7	0.0	0.0	0.11	1.9	02/14
03/14 03/13 TYPE 2 FIELD INLET 900x600 GRATE	0.023			60	49.0	0.891	0.852	0.007			25	11.6	7	0.00	0.00	7	0	0.00	03/13	11.622	24.342	22.86	22.84	22.85	-0.10	0.05	1.1	1.1	0.1	0.0	0.1	1.12	03/14
03/13	3		9																		23.414			3		à l				- 3			03/13
01/15 03/03 INLET GULLY ON GRADE (LG) Type S Lintel	0.063		J.	60	49.0	0.891	0.852	0.020			25	3.0	20	0.00	0.00	20	0	0.00	04/13	3.000	23.446	22.19	22.13	21.98	1.10	0.02	7.8	7.8	0.1	0.0	0.05	0.87	01/15
03/03																					23.080												03/03
01/16 02/16 INLET GULLY ON GRADE (LG) Type S Lintel	0.085			60	49.0	0.891	0.852	0.027			60	2.1	27			27				2.071	36.272	35.06	35.03	32.72	4.10	0.03	7.0	7.0	0.0	0.0	0.07	1.66	01/16
02/16 03/16 INLET GULLY ON GRADE (LG) Type S Lintel	0.145			60	49.0	0.891	0.852	0.046			60	9.5	46	0.23	0.02	43	2	0.02	03/16	9.500	33.966	32.72	32.68	29.18	9.33	0.07	3.4	3.4	0.0	0.1	0.13	2.86	02/16
01/17 02/14 %%C225 RISER (EXTEND 300mm ABOVE FSL)	0.069			60	49.0	0.891	0.852	0.022			60	4.1	22	0.00	0.00	22	0	0.00	03/14	4.058	26.187	24.89	24.78	24.41	2.94	0.02	8.9	8.9	0.1	0.1	0.26	1.15	01/17
02/14			3			5	-				9									3	25.464			0 9					1				02/14

0.01 ARI (Q100) Major	FLOW - 12D DYNAMIC DRAINAGE RESULTS				* REFER T	O IFD TABLE	FOR MA	XIMUM INTE	NSITY DUF	RING STOR	RM																						
NOTE: NEGATIVE FLO	DW VALUES INDICATE REVERSE FLOWS		CATCHME	NT AREA	RANFALL	VOLUME*	RAINFA	LL Coef.	CAT	CHMENTE	LOW			APPROAC	HFLOW			FLOW AT P	T	- 9		PIT		HGL			PIPE	HE	ADLOSSE	S			
NODE	Authorities Constitution	A1	A2	A3	CRITICAL	INTENSITY	2000	CURRENT	A1	A2	A3	CRITICAL	GRADE		FLOW	755 NO. 15	CAPTURED		BYPASS	a-na saanki	GRADE	GRATE	PIT	PIPE		GRADE	FLOW	COEFFIC	JENT	HEADLOSS	CAPACITY	VELOCITY	NODE
FROM: TO:	NODE TYPE	HA	HA	HA	STORM	MWHR	10 YR	Storm	HA	HA	HA	ARI MIN.	%	L/S	WDTH	DxV	L/S	L/S	DxV	NODE	%	RL.	RL	U/S RL.	D/S RL.	%	M3/S	Ku	Kw	Ku Kw	RATIO	WS	
01/03 02/03	INLET GULLY ON GRADE (LG) Type S Lintel	0.145			60	97.7	0.891	0.924	0.076		3	25	3.0	76		0	76				3.000	22.992	22.99	22.96	22.99	-0.52	0.05	7.0	7.0	0.2 0.1	0.19	0.81	01/03
02/03 03/03	INLET GULLY ON GRADE (LG) Type S Lintel	0.168			60	97.7	0.891	0.924	0.088			25	3.0	88			88			000010000	3.000	22,992	22.99	22.90	22.68	0.27	0.12	3.3	3.4	0.1 0.2	1.07	1.08	02/03
03/03 04/03	INLET GULLY ON GRADE (LG) Type S Lintel	0.131			60	97.7	0.891	0.924	0.069			25	3.0	69	0.69	0.04	58	11	0.02	01/11	3.000	23.080	22.68	22.64	22.63	0.20	0.19	1.3	1.1	0.2 0.0	0.23	1.52	03/03
04/03 05/03	MANHOLE 1050mm DIA				4							25		0			0					22.998	22.63	22.42	22.00	1.27	0.47	1.5	1.4	0.2 0.3	0.75	2.16	04/03
01/12 02/12	INLET GULLY ON GRADE (LG) Type S Lintel	0.167			60	97.7	0.891	0.924	0.088			25	11.6	107	1.15	0.09	69	37	0.07	02/12	11.622	24.734	23.26	23.03	23.04	-0.05	0.07	7.0	7.0	0.2 0.1	0.14	1.22	01/12
02/12 04/03	INLET GULLY IN SAG (LS) Type S Lintel	0.056			60	97.7	0.891	0.924	0.029			25	2.6	334	3.22	0.15	157	201	0.07	01/09	2.590	22.922	23.04	22.76	22.63	0.85	0.31	1.8	1.9	0.3 0.3	1.93	1.93	02/12
04/03										1						13	ž.			2		22.998		5			-						04/03
01/13 02/13	INLET GULLY ON GRADE (LG) Type S Lintel	0.148			60	97.7	0.891	0.924	0.078			25	11.6	78	0.65	0.07	57	20	0.05	01/12	11.622	30.545	29.47	29.25	29.07	2.63	0.06	9.2	9.2	0.2 0.1	0.16	1.18	01/13
02/13 03/13	INLET GULLY ON GRADE (LG) Type S Lintel	0.194			60	97.7	0.891	0.924	0.102	3		25	11.6	102	0.98	0.09	67	34	0.05	03/13	11.622	30,335	29.05	29.00	23.50	9.17	0.12	2.6	3.0	0.1 0.2	0.21	2.27	02/13
03/13 04/13	INLET GULLY ON GRADE (LG) Type S Lintel	0.183			60	97.7	0.891	0.924	0.096	5		25	11.1	129	2.13	0.13	69	104	0.06	04/13	11.140	23,414	23.50	23.30	23.12	1.59	0.24	1.7	1.0	0.2 0.2	0.68	2.18	03/13
04/13 02/12	INLET GULLY IN SAG (LS) Type S Lintel	0.062			60	97.7	0.891	0.924	0.032			25	2.6	136	7.49	0.16	-144	270	0.08	02/12	2.585	22.915	23.12	23.06	23.04	0.21	0.25	2.2	1.8	0.3 0.4	0.75	2.22	04/13
02/12										3				1			4			10	-1	22.922		9 0			Ş.						02/12
01/14 02/14	%%C225 RISER (EXTEND 300mm ABOVE FSL)	0.049			60	97.7	0.891	0.924	0.026			25	1.9	26	0.00	0.00	26	0	0.00	03/14	1.872	25,900	25.26	25.18	23.80	36.99	0.03	8.3	8.3	0.1 0.2	0.09	1.96	01/14
02/14 03/14	MANHOLE 1050mm DIA											25	0.0	0			0				0.000	25.464	23.80	23.75	23.54	0.90	0.06	0.5	0.6	0.0 0.0	0.17	2.15	02/14
03/14 03/13	TYPE 2 FIELD INLET 900x600 GRATE	0.023			60	97.7	0.891	0.924	0.012			25	11.6	12	0.00	0.00	12	0	0.00	03/13	11.622	24.342	23.54	23.52	23.50	0.17	0.10	1.0	1.0	0.1 0.0	0.2	1.18	03/14
03/13												77.00.0		2001								23,414	20000000				757071						03/13
01/15 03/03	INLET GULLY ON GRADE (LG) Type S Lintel	0.063			60	97.7	0.891	0.924	0.033			25	3.0	33	0.00	0.00	33	0	0.00	04/13	3.000	23,446	22.72	22.69	22.68	0.04	0.03	7.8	7.3	0.1 0.0	0.08	0.92	01/15
03/03										4						4				1		23.080		1 1									03/03
01/16 02/16	INLET GULLY ON GRADE (LG) Type S Lintel	0.085			60	97.7	0.891	0.924	0.045			25	2.1	45			45		4.4.		2.071	36.272	35.08	35.03	32.74	4.08	0.04	7.0	7.0	0.0 0.1	0.12	1.86	01/16
02/16 03/16	INLET GULLY ON GRADE (LG) Type S Lintel	0.145			60	97.7	0.891	0.924	0.076			25	9.5	76	0.62	0.06	59	17	0.05	03/16	9.500	33.966	32.74	32.69	29.21	9.26	0.10	2.9	2.9	0.1 0.1	0.19	3.06	02/16
03/16 04/16	INLET GULLY ON GRADE (LG) Type S Lintel	0.143			60	97.7	0.891	0.924	0.075			25	9.5	92	0.82	0.07	68	24	0.05	04/16	9.500	30,403	29.21	29.18	23.11	9.79	0.21	1.4	1.4	0.0 0.2	0.38	4.07	03/16
01/17 02/14	%%C225 RISER (EXTEND 300mm ABOVE FSL)	0.069			60	97.7	0.891	0.924	0.036			25	4.1	36	0.00	0.00	36	0	0.00	03/14	4.058	26.187	25.29	25.20	23.80	11.11	0.04	6.2	6.2	0.1 0.3	0.24	2.21	01/17
02/14	70 (0)													3			8			1		25.464		1 1			5		1	18			02/14

PLANS AND DOCUMENTS referred to in the DEVELOPMENT APPROVAL

Application No: OPW/2020/620

Dated: .21 August 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning Scheme, Local Laws and Planning Policies

	IIVIE	NSIIT - F	REQUENT	CY - DURA	TION (IF	D) TABLE						
DURATION	ARI INTENSITY (YEAR)											
MINUTES	TREAT	1	2	5	10	20	50	100				
5	62.0	124.0	157.0	191.0	210.0	237.0	271.0	297.0				
6	58.0	116.0	147.0	179.0	197.0	223.0	255.0	280.0				
10	47.6	95.2	120.0	147.0	162.0	183.0	211.0	231.0				
20	34.9	69.8	88.5	109.0	120.0	136.0	156.0	171.0				
30	28.5	56.9	72.2	88.9	98.3	111.0	128.0	141.0				
60	19.3	38.5	49.0	60.7	67.4	76.6	88.6	97.7				
120	12.4	24.8	31.6	39.6	44.2	50.4	58.6	64.9				
180	9.4	18.8	24.1	30.4	34.0	38.9	45.4	50.4				
360	5.9	11.7	15.1	19.2	21.7	25.0	29.3	32.6				

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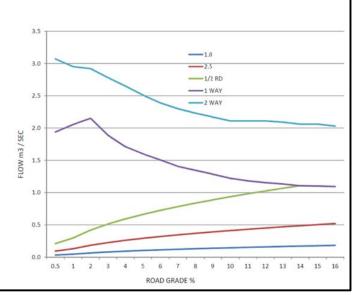
NOTES:

- 1. THESE CALCULATIONS ARE BASED ON IISAX2 DYNAMIC DRAINAGE ANALYSIS USING 12D SOFTWARE ANALYSIS.
 2. INDIVIDUAL TIMES OF CONCENTRATION ARE GENERATED FOR EACH NODE AND CATCHMENT TYPE USING TEMPORAL PATTERNS DETERMINED FROM THE RELEVANT AUTHORITY.
 3. "TREAT" IN THE IFD TABLE REFERS TO 0.5x1 YEAR ARI, USED TO DETERMINE WATER QUALITY TREATMENT FLOWS.
- 4. CATCHMENT 1 REFERS TO TYPICAL URBANISED CATCHMENTS WITH LOTS <1000m2. THE IMPERVIOUS PORTION OF THE CATCHMENT TIME OF CONCENTRATION (TC) IS TYPICALLY 5 MINUTES AND THE PERVIOUS PORTION OF THE CATCHMENT TYPICALLY HAS AN 8 MINUTE TC.
- 5. CATCHMENT 2 IS TYPICALLY USED TO MODEL LOTS >1000m2, WITH INDIVIDUAL PERCENTAGES OF IMPERVIOUS SURFACE AND TC'S.
- 6. CATCHMENT 3 IS TYPICALLY USED TO MODEL OPEN SPACE AND RURAL CATCHMENTS WITH INDIVIDUAL PERCENTAGES OF IMPERVIOUS SURFACE AND TC'S.

	KR	LANE	1/2 RD	1 WAY	2 WAY
MAX. WIDTH	1.0	2.5	3.75	11.175	14.8
MAX. AREA m2	0.021	0.101	0.219	1.421	2.104
Rd Grade %					
0.5	0.032	0.092	0.209	1.938	3.070
1	0.046	0.130	0.296	2.054	2.950
2	0.064	0.184	0.418	2.150	2.920
3	0.079	0.225	0.512	1.886	2.780
4	0.091	0.260	0.591	1.711	2.650
5	0.102	0.291	0.661	1.600	2.510
6	0.112	0.318	0.724	1.505	2.390
7	0.120	0.344	0.782	1.407	2.300
8	0.129	0.368	0.836	1.345	2.230
9	0.137	0.390	0.887	1.285	2.170
10	0.144	0.411	0.935	1.220	2.110
11	0.151	0.431	0.981	1.180	2.110
12	0.158	0.450	1.024	1.154	2.110
13	0.164	0.469	1.066	1.133	2.090
14	0.170	0.486	1.106	1.105	2.060
15	0.176	0.503	1.101	1.101	2.060
16	0.182	0.520	1.093	1.093	2.030

NOTES: FLOW CONSTRAINED TO 0.4 DxV

FLOW CONSTRAINED TO 250mm DEEP MAX.
CAPACITY COMPOUND CROSS SECTION (ARR 1987 , 4.38) (n varies)



PROJECT NAME DALMA

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4
DALMA STREET ORMEAU HILLS
LOCALITY OF ORMEAU
LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

CLIENT

ORMEAU DEVELOPMENTS PTY LTD

- 1	SSUE	S	DATE						
TEND	ER		10-01-20						
COUN	CIL		30-04-20						
CONS	TRUCTION								
A	16-09-19	ISSUE FOR	INFORMATION						
PRE	DATE		AMENDMENT						
((PYRIGHT IS	VESTED I	IN MORTONS URBAN SOLUTIONS AND						

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DRAWING TITLE

STORMWATER
CALCULATION TABLES
MINOR STORM EVENT &
MAJOR STORM EVENT



MUS Pty Ltd T/As: Mortons-Urban Solutions ABN: 39 116 375 065 mortons@urbansolutions.net.au www.urbansolutions.net.au Tel 07 5571 1099 Fax 07 5571 1088

Postal Address PO Box 2484 Southport QLD 4215

bansalutions.net.au olutions.net.au Gold Coast Office 1 1099 Suite 9, 19 Short SI 1 1088 Southport QLD 4215

DESIGNED RB ORAWN JB

APPROVEDALK MATERIAL RPEG 4706 DATE 04-07-18

35701-02-680

A M E N D.

SEQ CODE WATER NOTES

SEQ CODE NOTES COPIED DIRECTLY FROM DRAWING SEQ-WAT-1101-3.

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 SHALL BE CONSTRUCTED WITH 1.8m BATTENS (LOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GRDLES SHALL BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
 TREE ROOTS SHALL BE TUNNELLED 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

- TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY. CARE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.
- C. IF ACID SULPHATE SOILS EXIST IN THE WORKS AREA, THE CONTRACTOR MUST PREPARE A RISK ASSESSMENT BASED ON THE QUEENSLAND ACID SULPHATE SOIL TECHNICAL MANUAL AND MANAGE THE ACID SULPHATE SOILS AS PER THE MANUAL.

REEK CROSSINGS

- A SILITATION 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 SHALL BE STOCKPILED WITHIN 5m OF THE CREEK.

REHABILITATION

- A. PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS SHALL BE REINSTATED
- B. PREDISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.

GENERAL NOTES

- ILNERAL NOTES

 1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH
 CURRENT SOUTH EAST QUEENSLAND WATER SUPPLY CODE SPECIFICATIONS AND STANDARDS
- 2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS
- ADOPT LIP OF KERB OR SHOULDER OF ROAD AS PERMANENT LEVEL. COVER ON MAINS FROM PERMANENT LEVEL TO BE AS SHOWN IN
- CONDUITS TO BE INSTALLED IN ACCORDANCE WITH THE STANDARD
- DRAWINGS. 6. A WATER METER SUPPLIED AT THE DEVELOPER'S COST. IS TO BE INSTALLED AT THE SERVICE POINT OF EACH LOT IN ACCORDANCE
- WITH THE STANDARD DRAWING FOR THE SEQ-SP.
 ALL MATERIALS USED IN THE WORKS SHALL COMPLY WITH THE SEQ-SP's ACCEPTED PRODUCTS AND MATERIALS LIST OR BE APPROPRIATELY SHOWN, LISTED AND DEFINED IN THE ENGINEERING SUBMISSION SO THAT THE ALTERNATIVE PRODUCT OR MATERIAL CAN BE ASSESSED AND IF APPROPRIATE, APPROVED BY THE
- ALL CONCRETE FOOTPATHS TO BE CLEAR OF WATER MAINS.
- TEST/CHLORINATION POINTS TO BE INSTALLED IN ACCORDANCE WITH STANDARD DRAWING NO.SEQ-WAT-1410-1.
- 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

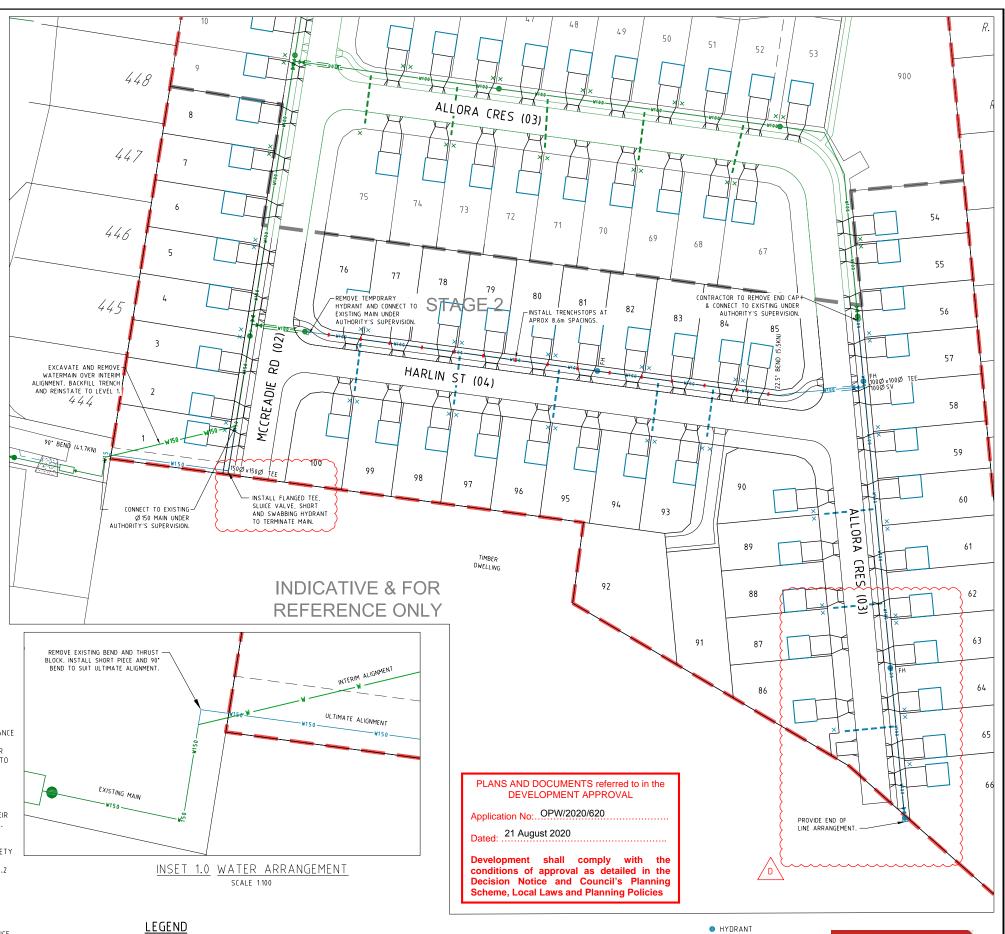
ALL ENVIRONMENT PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK, INCLUDING CLEARING COMMENCING.

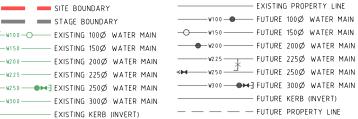
PROJECT SPECIFIC WATER NOTES

- a. ALL PROPERTY CONNECTION ROAD CROSSINGS TO BE SLEEVED WITH DN100 mPVC CONDUIT
- b. ALL MATERIALS ARE TO BE SUPPLIED AND CONSTRUCTED IN ACCORDANCE WITH SEQ CODE.
- WATER METERS ARE TO BE SUPPLIED AND INSTALLED AT ALL WATER SERVICE / CONNECTION POINTS IN ACCORDANCE WITH SEQ-WAT-1106 TO SEQ-WAT-1110-2.
 THRUST BLOCKS TO BE LOCATED AND INSTALLED BY CONTRACTOR IN
- ACCORDANCE WITH SEQ CODE.
 TRENCH STOPS AND BULKHEADS TO BE IN ACCORDANCE WITH WATER
- AUTHORITY REQUIREMENTS.
 THE CONTRACTOR IS TO INCLUDE ROCK EXCAVATION AS PART OF THEIR
- WATER RATES UNLESS SCHEDULED OTHERWISE WITHIN THE CONTRACT. FOOTPATHS SHOWN FOR INFORMATION PURPOSES ONLY.
 ALL WATER CONSTRUCTION WORK UNDERTAKEN BY THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE WORKPLACE HEALTH AND SAFETY LEGISLATION.
- MINIMUM WATERMAIN COVER TO BE IN ACCORDANCE WITH SECTION 7.4.2 TABLE 7.2 OF THE SEQ AMENDMENT TO WATER SUPPLY CODE OF AUSTRALIA
- CONTRACTOR TO PAY ALL FEES AND CHARGES ASSOCIATED WITH
- CONNECTIONS.
- END OF LINE ARRANGEMENTS (EG. CUL-DE-SAC HEADS) TO BE
- CONSTRUCTED IN ACCORDANCE WITH SEQ-WAT-1104-1.
- TEMPORARY CONSTRUCTION HYDRANTS TO BE PROVIDED IN ACCORDANCE WITH SEQ-WAT-1303-1 AT ALL CONNECTIONS.
- m. ALL LIVE CONNECTIONS ARE TO BE ORGANISED BY THE CIVIL CONTRACTOR AND UNDERTAKEN BY COUNCIL AT THE DEVELOPERS EXPENSE

WATER PIPE SPECIFICATIONS

WATER MAIN LOCATION	PIPE MATERIAL SPECIFICATION
FOOTPATH VERGE	PVC-M SERIES 2 PN16
ROAD CROSSING	DICL PN35





- TEE > REDUCER

TRENCHSTOPS

PROPOSED KERB (INVERT)

- PROPOSED PROPERTY LINE

— PROPOSED 100∅ WATER MAIN

PROPOSED 150Ø WATER MAIN

PROPOSED 200Ø WATER MAIN

PROPOSED 250Ø WATER MAIN

- PROPOSED 300Ø WATER MAIN

- PROPOSED 225Ø WATER MAIN

M SLUICE VALVE

→ SCOUR VALVE

[ENDCAP

O AIR VALVE × METER LOCATION

--- SERVICE CONDUIT ==== DICL ROAD CROSSING DIAL BEFORE

YOU DIG www.1100.com.au

Postal Addres PO Box 2484 Southport QLD 421

Gold Coast Offic urbansolution Southport QLD 421

DESIGNED RB DRAWN APPROVEDA.K. RPEQ 4706 DATE 04-07-18 AMENO 35701-02-700

PROJECT NAME

DALMA

OPERATIONAL WORKS

STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4

DALMA STREET ORMEAU HILLS

LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

ORMEAU

DEVELOPMENTS

PTY LTD

Scale 1:100 - A1 (1:200 - A3)

Scale 1:500 - A1 (1:1000 - A3

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ASSOCIATED CONSULTANTS

dts

BIOME

DRAWING TITLE

WATER

RETICULATION

PLAN

SHEET 01

urbansolutions

AOR1

Civil Engineering

MUS Pty Ltd T/As: Mortons-Urban Solutions ABN: 39 116 375 065

ortons@urbansolutions.net.au

Project Coordination

23-06-20 NOTES AND WATER ALIGNMENT AMENDED

16-09-19 ISSUE FOR INFORMATION

ENDER

ONSTRUCTION

PRE DATE

10 15 20 25m

10-01-20

30-04-20

AMENDMENT

D

THRUST BLOCK LENGTH THRUST BLOCK LENGTH & GRAVEL NTED WITH 200KPa. 240kPa B 퓜 PIPI PIPE THRUST FITTING FITTING DN DN. SAND 90° BEND 19.8 1000 • • 90° BEND 241.9 * 2220 1510 1260 • 1070 60° BEND 700 60° BEND 171.0 2140 1430 890 14.0 • • 820 680 45° BEND 10.7 • 45° BEND 130.9 1640 1090 • • 400 800 375 1670 22.5° BEND 5.5 • • • • . 22.5° BEND 66.7 840 . • • 11.25° BEND 2.7 • • • 11.25° BEND 33.5 840 . • • 700 • • • 2140 1430 1070 890 TEE OR CLOSED END 14.0 TEE OR CLOSED END 171.0 1860 930 • • * 2540 1590 90° BEND 41.7 • 90° BEND 342.6 1900 660 * 60° BEND 29.5 1320 • 60° BEND 242.3 2690 1350 • • 1800 1120 45° BEND 22.6 1000 • • • • 45° BEND 185.4 2060 1375 1030 860 450 450 150 22.5° BEND 11.5 • • 22.5° BEND 94.5 2100 1050 700 • . • 11.25° BEND 5.8 11.25° BEND 47.5 1060 • • • • 1300 660 • TEE OR CLOSED END 242.3 2690 1800 1120 TEE OR CLOSED END 29.5 • . * 1350 90° BEND 1300 870 650 • 90° BEND 418 2790 2090 1740 71.7 1850 920 1970 1480 1230 60° BEND 50.7 . • • 60° BEND 295.6 * 45° BEND 38.8 1410 700 • • • 45° BEND 226.2 2260 1510 1130 940 550 500 200 19.8 115.3 2310 • 22.5° BEND 720 • • • • 22.5° BEND 1150 770 • 11.25° BEND 9.9 • • • • 11.25° BEND 58.0 1160 • • • • 1480 1230 TEE OR CLOSED END 50.7 1850 920 • • • TEE OR CLOSED END 295.5 * 1970 1500 1000 750 * 2700 2250 90° BEND 89 4 . 90° BEND 593 2110 1060 2540 700 • 1910 60° BEND 63.2 • 60° BEND 419 1590 45° BEND 48.4 1620 810 • . . 45° BEND 320 * 2920 1950 1460 1220 600 600 225 22.5° BEND 24.6 830 • • • 22.5° BEND 164 2980 1490 990 750 620 11.25° BEND 12.4 11.25° BEND 82.2 1500 750 . TEE OR CLOSED EN 63.2 700 • TEE OR CLOSED END 419 2540 210 1060 1910 1590 90° BEND 109.0 1700 1120 840 700 90° BEND 909 * 2920 2400 1200 800 • * * 2480 2060 60° BEND 77.1 . 60° BEND 643 59.0 492 1890 1580 45° BEND 1820 10 • • . 45° BEND 2530 650 1300 750 22.5° BEND 30.1 930 • • 22.5° BEND 251 1930 1290 970 810 • . 15.1 126.1 11.25° BEND • 11.25° BEND 1940 • • • 970 650 . • TEE OR CLOSED END 77.1 2400 1200 800 . TEE OR CLOSED END 643 2480 2060 . 2270 1510 1140 950 3420 90° BEND 158.6 90° BEND 1.228 * * 1600 1070 800 670 * 2900 2420 60° BEND 112.2 60° BEND 868 45° BEND 85.9 700 2453 1230 820 45° BEND 664 1500 * 2960 2220 1850 • • 900 300 Ø960 22.5° BEND 43.8 1250 630 • • • 22.5° BEND 339 * 2260 1510 1130 940 SCL 11.25° BEND 170 11.25° BEND 22.0 630 • • • 2270 1140 760 • • TEE OR CLOSED END 112.2 1600 1070 750 TEE OR CLOSED END 868 3300 2650 800

THRUST BLOCK DIMENSIONS - 1200kPa

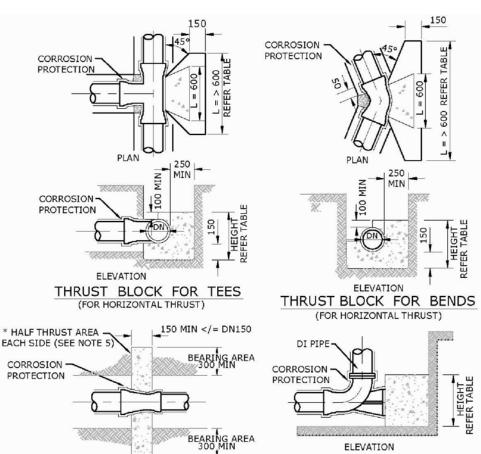
- INDICATES BLOCK LENGTH OF 600
- * = SPECIAL DESIGN

PLANS AND DOCUMENTS referred to in the **DEVELOPMENT APPROVAL**

Application No: OPW/2020/620

Dated: August 2020

Development shall comply with the conditions of approval as detailed in the Decision Notice and Council's Planning me, Local Laws and Planning Policies



NOTES

ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.

TAPER THRUST BLOCK

(FOR HORIZONTAL THRUST)

CAST THE THRUST AREA OF ALL THRUST BLOCKS AGAINST A CLEAN FACE OF UNDISTURBED NATURAL SOIL. SOIL CLASSIFICATIONS USED ON THIS DRAWING ARE EXPLAINED IN SEQ-WAT-1200-1. DO NOT USE STANDARD THRUST BLOCKS AS SPECIFIED IN THIS DRAWING IN SOILS WITH < 50kPa BEARING CAPACITY EG:

FLUSHING/WASHOUT BEND

THRUST BLOCK (FOR HORIZONTAL THRUST) (MINIMUM

REQUIRED THRUST AREA AS PER TEE

OR CLOSED END)

- VERY SOFT, SOFT OR FIRM CLAY.
- LOOSE CLEAN SAND.
- UNCOMPACTED FILL OR REFUSE.
- A GEOTECHNICAL ASSESSMENT AND INDIVIDUAL DESIGN IS REQUIRED FOR THESE SOILS. THRUST BLOCKS NOT TO INTERFERE WITH OTHER SERVICES OR BE LOCATED OUTSIDE THE WATER MAIN ALLOCATION WITHOUT WATER AGENCY APPROVAL.
- ALL CONCRETE GRADE N20. TABLE OF DIMENSIONS BASED ON REQUIRED TEST PRESSURE OF 1200kPa AND ACTUAL DICL PIPE DIAMETERS.
- THE MINIMUM THRUST AREA FOR TAPER THRUST BLOCKS TO BE EQUAL TO THE DIFFERENCE BETWEEN THE THRUST AREAS FOR TEES OR CLOSED ENDS OF EQUIVALENT DIAMETER TO THOSE EACH SIDE OF TAPER. THE DETAIL SHOWN IS FOR < OR = DN150 MAINS. FOR LARGER MAINS, THE TAPER THRUST BLOCK SHALL BE REINFORCED AND OF A SIZE AS SHOWN IN SEQ-WAT-1206-1.
- FOR DOWNWARD VERTICAL THRUST, THE ALLOWABLE BEARING PRESSURES FOR VARIOUS SOILS MAY BE TAKEN AS TWICE THAT FOR HORIZONTAL THRUST SHOWN.
- WHEN POURING CONCRETE AGAINST FITTINGS PLACE A MEMBRANE OF POLYETHYLENE, PVC OR FELT BETWEEN THE FITTING AND CONCRETE TO PREVENT DAMAGE TO THE FITTING. PIPE JOINTS TO BE CLEAR OF CONCRETE.
- CONCRETE THRUST BLOCK ANCHORS FOR VALVES TO BE AS DETAILED ON SEQ-WAT-1206-1.

PROJECT NAME DAI MA

OPERATIONAL WORKS STAGE 2

RP DESCRIPTION: Lot 4 RP883725 , LOT 4 DALMA STREET ORMEAU HILLS LOCALITY OF ORMEAU LOCAL AUTHORITY-GOLD COAST CITY COUNCIL

ORMEAU DEVELOPMENTS PTY LTD

-	SSUE	S	DATE						
TEND	ER		10-01-20						
COUN	CIL		30-04-20						
CONS	TRUCTION								
				,					
Α	16-09-19	ISSUE FOR	INFORMATION						
PRE	DATE		AMENDMENT						

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DRAWING TITLE

WATER RETICULATION DETAIL SHEET 01



ortons@urbansolutions.net.au

Gold Coast Offic

Α

RPEQ 4706 DATE 03-07-18

Southport QLD 421 DESIGNED RB DRAWN