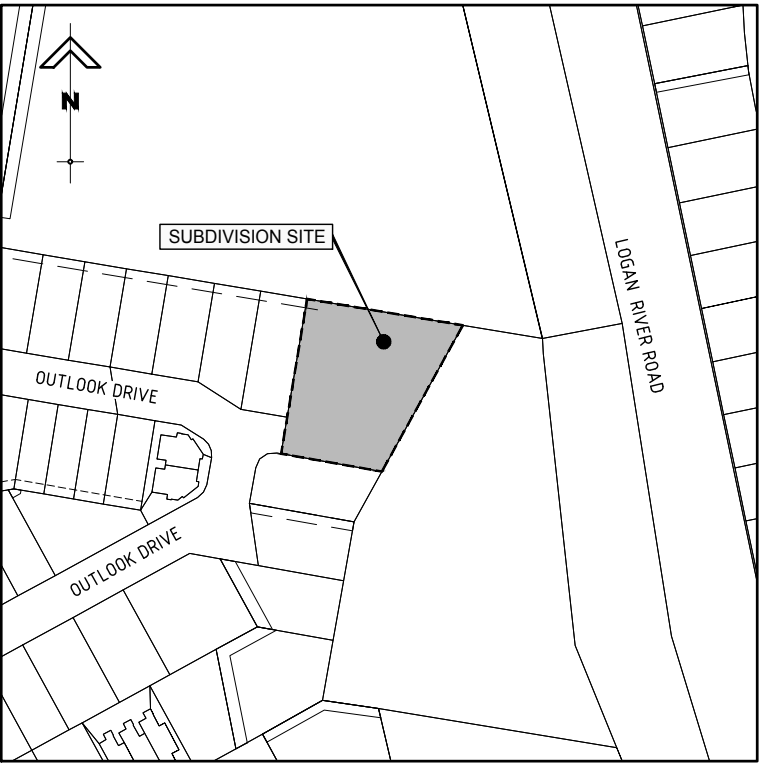


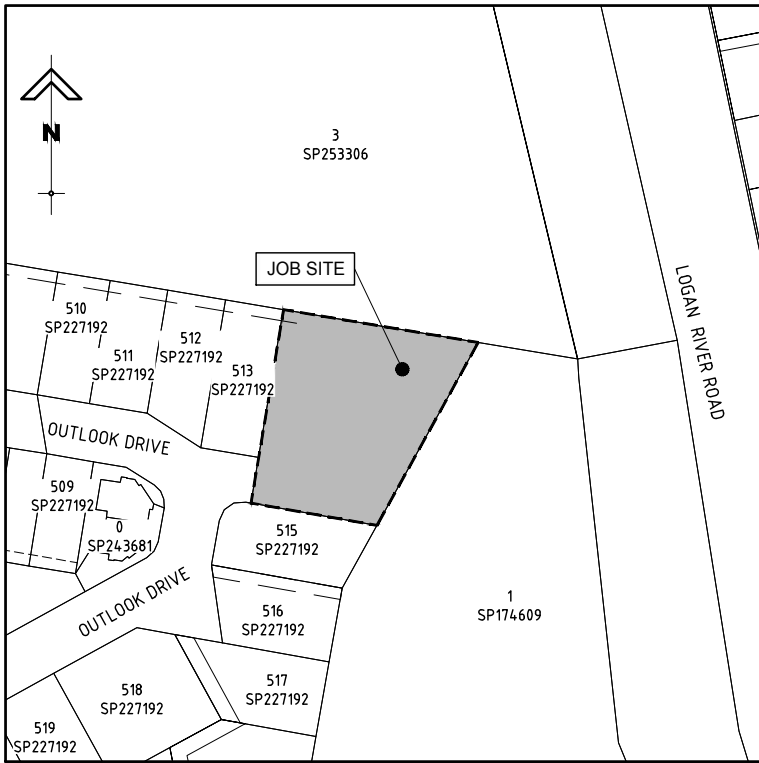
# PROPOSED RESIDENTIAL LOT 514 SP227192, 82 OUTLOOK DRIVE WATERFORD, QUEENSLAND

## CIVIL WORKS CONTRACT BE170054-01



LOCALITY PLAN  
NOT TO SCALE

SCHEDULE OF DRAWINGS			
Drawing No.	Drawing Title	Version	Date
BE170054-01-C000	DRAWING COVER SHEET AND SCHEDULE OF DRAWINGS	B	30-04-18
BE170054-01-C100	OVERALL SITE LAYOUT PLAN	B	30-04-18
BE170054-01-C101	ROADWORKS TYPICAL CROSS SECTIONS	B	30-04-18
BE170054-01-C200	EARTHWORK LAYOUT PLAN	B	30-04-18
BE170054-01-C210	SEDIMENT AND EROSION CONTROL PLAN	B	30-04-18
BE170054-01-C211	SEDIMENT AND EROSION CONTROL DETAILS AND NOTES	A	16-03-18
BE170054-01-C300	ROADWORKS LAYOUT PLAN	B	30-04-18
BE170054-01-C301	ROADWORKS LONGITUDINAL SECTIONS	A	16-03-18
BE170054-01-C310	ROADWORKS CROSS SECTIONS	B	30-04-18
BE170054-01-C320	CONCRETE JOINTING LAYOUT PLAN	B	30-04-18
BE170054-01-C350	ROADWORKS INTERSECTION DETAIL PLANS	B	30-04-18
BE170054-01-C400	STOMWATER CATCHMENT LAYOUT PLAN	B	30-04-18
BE170054-01-C410	STORMWATER DRAINAGE LONGITUDINAL SECTION	B	30-04-18
BE170054-01-C420	STORMWATER DRAINAGE CALCULATION	B	30-04-18
BE170054-01-C500	WATER RETICULATION LAYOUT PLAN	B	30-04-18
BE170054-01-C600	SEWERAGE RETICULATION LAYOUT PLAN	B	30-04-18



NEIGHBOURHOOD PLAN  
NOT TO SCALE

PREPARED FOR

ROUBAIX PROPERTIES

LOGAN CITY COUNCIL

APPROVED PLAN OF DEVELOPMENT

This is the approved plan of development for Development Application

OW/103/2018

PREPARED BY



Level 2, Connaught Centre  
26 Marine Parade, Southport QLD 4215  
PO Box 3766, Australia Fair, Southport QLD 4215  
Phone: +61 7 5509 6400  
Fax: +61 7 5509 6411  
Email: admin@burchills.com.au  
Coote Burchills Engineering Pty Ltd  
ABN 76 166 942 365

DATE : 30-04-18

PROJECT No.:	DRAWING No.:	VERSION:
BE170054-01	C000	B



3  
SP253306

LOGAN CITY COUNCIL

APPROVED PLAN OF DEVELOPMENT

This is the approved plan of development for Development Application  
OW/103/2018

GENERAL NOTES:

- CONTRACT DOCUMENTATION**  
ALL DRAWINGS UNDER THIS CONTRACT ARE TO BE READ IN CONJUNCTION WITH THE PROJECT SPECIFICATION.
- SURVEY INFORMATION**  
CONTROL SURVEY INFORMATION WILL BE ESTABLISHED ON SITE BY THE PRINCIPAL'S SURVEYOR. SETOUT INFORMATION SHALL NOT BE OBTAINED BY SCALING FROM THESE DRAWINGS.
- DATUM**  
ALL LEVELS SHOWN ON DRAWINGS ARE A.H.D. (DERIVED).
- EXISTING SURVEY CONTROL STATIONS**  
THE CONTRACTOR IS TO ENSURE THAT SURVEY CONTROL STATIONS ARE NOT DAMAGED OR DISTURBED IN ANY WAY BY CONSTRUCTION ACTIVITIES.
- EXISTING SERVICES**  
EXISTING SERVICES LOCATIONS WHERE SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY. THE CONTRACTOR SHALL CONTACT THE RELEVANT AUTHORITIES TO ASCERTAIN THE EXACT LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORK AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING SERVICES. CONTRACTOR IS TO UNDERTAKE A DIAL-BEFORE-YOU-DIG SEARCH PRIOR TO COMMENCEMENT.
- SITE ACCESS**  
THE CONTRACTOR SHALL GAIN ACCESS TO THE SITE AT LOCATIONS APPROVED BY THE SUPERINTENDENT. FREEDOM OF ACCESS TO OTHER WORK AREAS ON THE SITE SHALL BE MAINTAINED AT ALL TIMES.
- PROVISION FOR TRAFFIC**  
PROVISION FOR TRAFFIC ON EXISTING LOCAL ROADS IS TO BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND LOCAL AUTHORITY REQUIREMENTS. THE CONTRACTOR IS TO TAKE PARTICULAR CARE TO ENSURE THAT VEHICULAR AND PEDESTRIAN ACCESS TO EXISTING RESIDENCES IN LOCAL STREETS IS MAINTAINED AT ALL TIMES THROUGHOUT THE COURSE OF THE WORKS.
- WORK BOUNDARIES**  
THE CONTRACTOR IS TO RESTRICT ACTIVITIES TO THOSE AREAS DESIGNATED AS WORK AREAS UNDER THIS CONTRACT. AT NO TIME SHALL THE CONTRACTOR ENTER ADJOINING PROPERTIES OR CONTRACT WORK AREAS ON THE SITE WITHOUT WRITTEN AUTHORISATION FROM THE SUPERINTENDENT.
- SITE CLEARING**  
CLEARING AND GRUBBING SHALL BE CARRIED OUT TO ALL WORK AREAS AS SPECIFIED AND SHALL INCLUDE THE REMOVAL OF ALL REMAINING TREES (UNLESS NOMINATED TO BE PRESERVED), EXISTING VEGETATION, SURFACE MULCH, TIMBER, FENCES AND ANY OTHER DEBRIS.
- TOPSOIL STRIPPING**  
ALL TOPSOIL STRIPPED FROM WORK AREAS SHALL BE TEMPORARILY STOCKPILED FOR LATER RE-SPREADING TO ALL FOOTPATHS, ROAD VERGES, BATTERS, ALLOTMENTS AND PARK AREAS.
- EARTHWORKS (GENERAL)**  
ALL FILL MATERIAL PLACED SHALL BE COMPACTED AND TRIMMED TO FINAL EARTHWORKS LEVELS AND PROFILES SHOWN ON THE CONTRACT DRAWINGS AND TESTED IN ACCORDANCE WITH THE PROJECT SPECIFICATION.
- COMPACTION STANDARDS**  
ALL FILL MATERIAL PLACED UNDER THIS CONTRACT SHALL BE COMPACTED IN ACCORDANCE WITH THE LOGAN CITY COUNCIL STANDARD SPECIFICATION
- STORMWATER DRAINAGE**  
LOCATION AND ALIGNMENT OF ALL STORMWATER DRAINLINES IS TO BE VERIFIED ON SITE WITH THE SUPERINTENDENT PRIOR TO EXCAVATION. THE DESIGN SURFACE LEVELS OF MANHOLES AND OTHER STRUCTURES ARE TO BE VERIFIED ON SITE WITH THE SUPERINTENDENT. ALL DRAINAGE CONSTRUCTION SHALL BE IN ACCORDANCE WITH LOGAN CITY COUNCIL STANDARD DRAWINGS AND SPECIFICATION.
- SEWERAGE RETICULATION**  
THE DESIGN SURFACE LEVELS OF SEWER MANHOLES ARE TO BE VERIFIED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION. ALL SEWERAGE RETICULATION SHALL BE CONSTRUCTED IN ACCORDANCE WITH SEQ WATER SUPPLY AND SEWERAGE DESIGN AND CONSTRUCTION CODE.
- WATER RETICULATION**  
ALL WATER RETICULATION SHALL BE CONSTRUCTED IN ACCORDANCE WITH SEQ WATER SUPPLY AND SEWERAGE DESIGN AND CONSTRUCTION CODE.
- ELECTRICAL RETICULATION**  
ALIGNMENTS OF ALL CONDUIT CROSSINGS ARE TO BE VERIFIED ON SITE WITH THE SUPERINTENDENT PRIOR TO EXCAVATION. ALL TRENCHING AND CONDUIT WORKS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT CONSULTANT'S DRAWINGS AND ENERGEX SPECIFICATION "UNDERGROUND DISTRIBUTION CONSTRUCTION."
- TOPSOIL REPLACEMENT AND GRASSING**  
FOLLOWING COMPLETION OF ROADWORKS CONSTRUCTION AND BULK EARTHWORKS OPERATIONS, THE FULL EXTENT OF FOOTPATHS, ROAD VERGES, BATTERS, ALLOTMENTS AND PARK AREAS IS TO BE RE-TOPSOILED TO A MINIMUM DEPTH OF 100mm AND GRASSED AS FURTHER DETAILED IN THE SPECIFICATION.
- TESTING**  
ALL TESTING SHALL BE CARRIED OUT BY AN APPROVED N.A.T.A. TESTING AUTHORITY IN ACCORDANCE WITH THE PROJECT SPECIFICATION.
- "AS CONSTRUCTED" SURVEY**  
"AS CONSTRUCTED" SURVEY SHALL BE CARRIED OUT BY THE PRINCIPAL'S SURVEYOR AS WORK PROCEEDS.
- MAINTENANCE OF SITE CONDITION**  
AT THE COMPLETION OF WORKS THE SITE IS TO BE LEFT IN A CLEAN AND TIDY CONDITION TO THE SATISFACTION OF THE SUPERINTENDENT AND LOGAN CITY COUNCIL.

RESIDENTIAL  
DEVELOPMENT

AT LOT 514 SP227192  
82 OUTLOOK DRIVE,  
WATERFORD

FOR

ROUBAIX PROPERTIES

A1 ORIGINAL SIZE BEFORE REDUCTION

B	PLAN AMENDMENTS	30-04-18
A	ORIGINAL ISSUE	16-03-18
VER.	DESCRIPTION	DATE

**COPYRIGHT** ©  
This drawing is copyright and the property of Burchills Engineering Solutions. It must not be retained, copied or used without the authority of Burchills Engineering Solutions.

**DISCLAIMER**  
This drawing and its contents are electronically generated, are confidential and may only be used for the purpose for which they were intended.  
Burchills Engineering Solutions will not accept responsibility for any consequences arising from the use of the drawing for other than its intended purpose or where the drawing has been altered, amended or changed either manually or electronically by any third party.

**NOTE**  
This is an uncontrolled document issued for information purposes only, unless the checked sections are signed or completed. Figured dimensions take precedence over scale. Do not scale reduced size drawings. Verify dimensions prior to commencing any on-site or off-site works or fabrication.



Level 2, Connaught Centre  
26 Marine Parade, Southport QLD 4215  
PO Box 3766, Australia Fair, Southport QLD 4215  
Phone: +61 7 5509 6400  
Fax: +61 7 5509 6411  
Email: admin@burchills.com.au  
**Coote Burchills Engineering Pty Ltd**  
ABN 76 166 942 365

PROJECT:

ROADWORKS & SERVICES

DRAWING TITLE:

OVERALL SITE  
LAYOUT PLAN

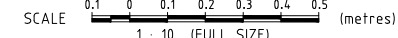
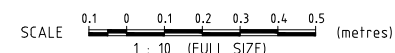
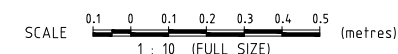
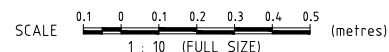
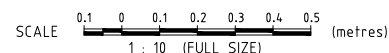
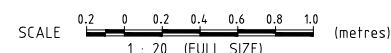
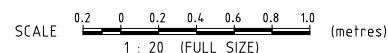
DEVEL. APPLIC. No. : -	DATE : 30-04-18
PROJECT LEADER : LUCAS FAULKNER	
DESIGNER : THUY VU	
DRAFTSPERSON : THUY VU	
CHECKED : ADAM COOPER	
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365	
RPEQ No. : 8093	
SCALE : AS NOTED	DATUM : AHD
PROJECT No. : BE170054-01	DRAWING No. : C100
	VERSION: B

FILENAME: Z:\CIVIL\1. PROJECTS\2017\035 82 OUTLOOK DRIVE, WATERFORD\Area\BETWEEN-81 Earthworks\BETWEEN-81-100-B.dwg  
PLOTTED: 30-04-2018 at 09:13



OVERALL SITE LAYOUT PLAN

SCALE 1 : 200 (FULL SIZE)



DEVEL. APPLIC. No. : -		DATE : 30-04-18	
PROJECT LEADER : LUCAS FAULKNER			
DESIGNER : THUY VU			
DRAFTSPERSON : THUY VU			
CHECKED : ADAM COOPER			
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 30			
RPEQ No. : 8093			
SCALE : AS NOTED		DATUM : AHD	FULL SIZE : 1
PROJECT No. : <b>BE170054-01</b>		DRAWING No. : <b>C101</b>	VERSION : <b>B</b>

GENERAL EARTHWORKS NOTES :

1. ALL EARTHWORKS CONSTRUCTION UNDER THIS CONTRACT IS TO BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PRINCIPAL'S GEOTECHNICAL CONSULTANT.
2. ALL COMPACTION TESTING UNDER THIS CONTRACT IT TO BE CARRIED OUT TO AS3798 LEVEL 1 STANDARD BY A NATA-ACCREDITED TESTING AUTHORITY CERTIFICATION FOR ALL EARTHWORKS CONSTRUCTION AND TESTING IS TO BE PROVIDED BY A REGISTERED PROFESSIONAL ENGINEER QUEENSLAND (RPEQ) ENGAGED BY THE CONTRACTOR.
3. ALL DESIGN LEVELS SHOWN ON THE CONTRACT DRAWINGS ARE FINISHED SURFACE LEVELS FOLLOWING TOPSOIL REPLACEMENT.
4. ALL STRUCTURAL, ALL MATERIAL PLACED SHALL BE COMPACTED TO THE FOLLOWING MINIMUM DENSITY IN ACCORDANCE WITH THE SPECIFICATION AND GEOTECHNICAL REPORT:
  - a) 95% DENSITY RATIO FOR GENERAL STRUCTURAL FILL (COHESIVE MATERIAL)
  - b) 98% DENSITY RATIO FOR THE TOP 300mm DEPTH BELOW PAVEMENT SUBGRADE LEVEL (COHESIVE MATERIAL).
5. ALL EARTHWORKS BATTERS STEEPER THAN 1 IN 4 ARE TO BE LANDSCAPED IN ACCORDANCE WITH LANDSCAPE INTENT PLAN.
6. ALL UNSUITABLE OR SATURATED MATERIAL IS TO BE REMOVED AN REPLACED WITH SELECTED ON-SITE STRUCTURAL FILL MATERIAL AND COMPACTED AS SPECIFIED.
7. PROVIDE CONITION SURVEY OF ADJACENT RESIDENTIAL BUILDINGS FOR ALL PROPERTIES IF REQUIRED LOCATED WITHIN NOMINAL 100m OF EARTHWORKS OPERATIONS WHERE VIBRATORY EQUIPMENT IS TO BE USED. CONITION SURVEY TO BE UNDERTAKEN BY QUALIFIED PERSONNEL WITH BUILDING EXPERIENCE.

NOTE :

ALL DESIGN/SETOUT INFORMATION SHOWN ON THIS DRAWING IS AVAILABLE IN DIGITAL FORMAT FROM THE OFFICE OF THE SUPERINTENDENT UPON REQUEST BY THE CONTRACTOR.

WARNING : UNDERGROUND SERVICES

UNDERGROUND SERVICES EXIST IN THIS VICINITY. THE CONTRACTOR IS TO CONTACT THE RELEVANT AUTHORITIES TO CONFIRM EXACT LOCATION OF SERVICES ON SITE PRIOR TO ANY EXCAVATION OR CONSTRUCTION COMMENCING.

EARTHWORKS SUMMARY

STRUCTURAL FILLING		
AREA	NETT SOLID FILL	incl.COMPACTION FACTOR (0.85)
OVERALL FILLING	92 cu.m.	
TOTAL FILL	92 cu.m.	108 cu.m.
EXCAVATION		
AREA	NETT SOLID CUT	NETT CUT
OVERALL EXCAVATION	469 cu.m.	
TOTAL CUT	469 cu.m.	469 cu.m.

SUMMARY:

EXCESS MATERIAL TO BE 'UTILISED ON-SITE FOR ALLOTMENT IMPROVEMENTS OR TO BE EXPORTED'.  
i.e. 469 cu.m. - 108 cu.m. = 361 cu.m.

RESIDENTIAL DEVELOPMENT

AT LOT 514 SP227192  
82 OUTLOOK DRIVE,  
WATERFORD

FOR

ROUBAIX PROPERTIES

A1 ORIGINAL SIZE BEFORE REDUCTION

B	PLAN AMENDMENTS	30-04-18
A	ORIGINAL ISSUE	16-03-18
VER.	DESCRIPTION	DATE

COPYRIGHT ©

This drawing is copyright and the property of Burchills Engineering Solutions. If must not be retained, copied or used without the authority of Burchills Engineering Solutions.

DISCLAIMER

This drawing and its contents are electronically generated, are confidential and may only be used for the purpose for which they were intended.  
Burchills Engineering Solutions will not accept responsibility for any consequences arising from the use of the drawing for other than its intended purpose or where the drawing has been altered, amended or changed either manually or electronically by any third party.

NOTE

This is an uncontrolled document issued for information purposes only, unless the checked sections are signed or completed.  
Figured dimensions take precedence over scale. Do not scale reduced size drawings. Verify dimensions prior to commencing any on-site or off-site works or fabrication.



Level 2, Connaught Centre  
26 Marine Parade, Southport QLD 4215  
PO Box 3766, Australia Fair, Southport QLD 4215  
Phone: +61 7 5509 6400  
Fax: +61 7 5509 6411  
Email: admin@burchills.com.au  
Coote Burchills Engineering Pty Ltd  
ABN 76 166 942 365

PROJECT:

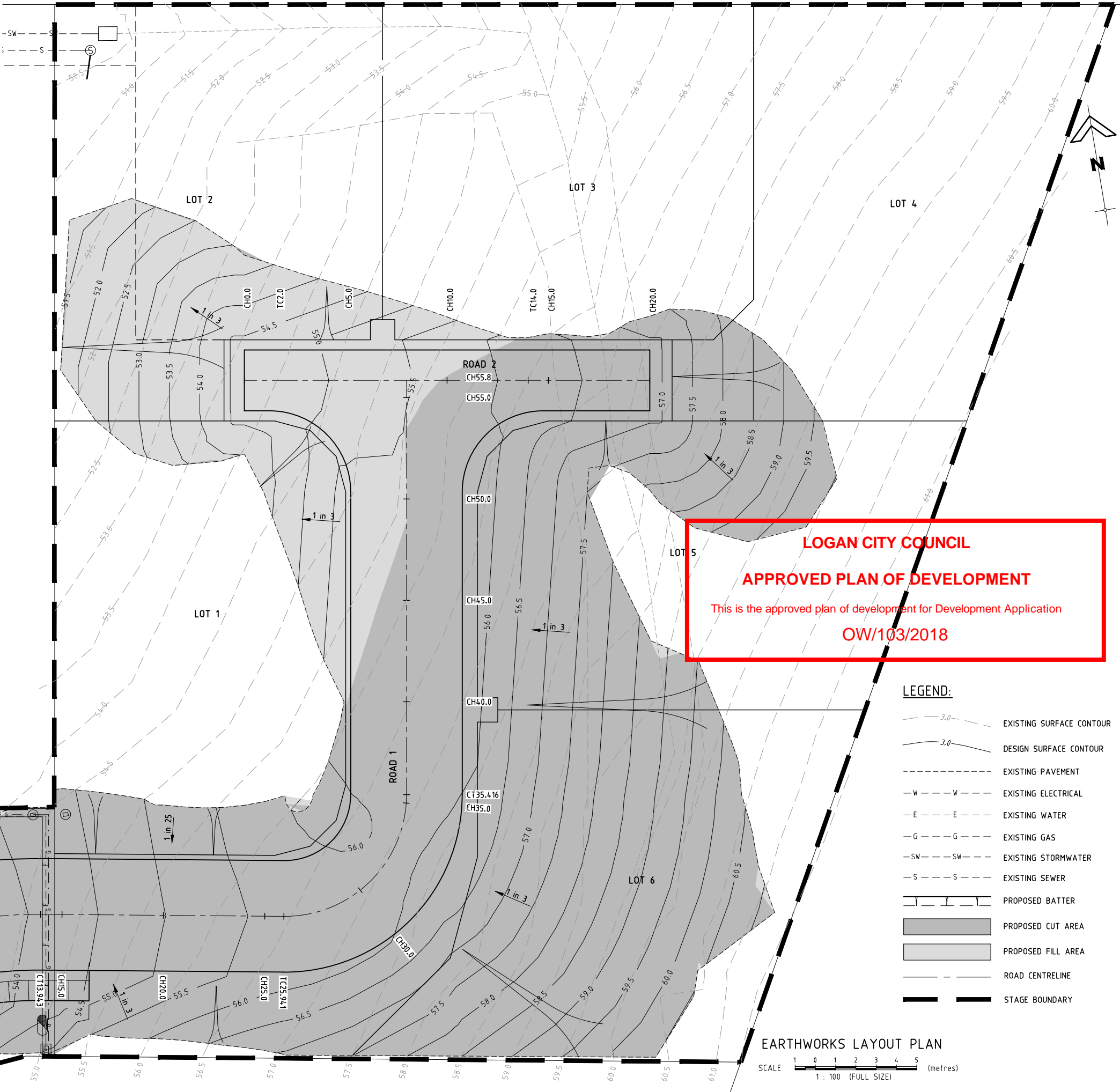
ROADWORKS & SERVICES

DRAWING TITLE:

EARTHWORKS  
LAYOUT PLAN

DEVEL. APPLIC. No. : -	DATE : 30-04-18
PROJECT LEADER : LUCAS FAULKNER	
DESIGNER : THUY VU	
DRAFTSPERSON : THUY VU	
CHECKED : ADAM COOPER	
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365	
RPEQ No. : 8093	
SCALE : AS NOTED	DATUM : AHD
PROJECT No. : BE170054-01	DRAWING No. : C200
	VERSION: B

FILENAME: Z:\CIVIL\1. PROJECTS\2018\035 82 OUTLOOK DRIVE, WATERFORD\ASAP\BENCH-01 Earthworks\SETUP\01-C200-B.dwg  
PLOTTED: 30-04-2018 at 09:14



LOGAN CITY COUNCIL

APPROVED PLAN OF DEVELOPMENT

This is the approved plan of development for Development Application

OW/103/2018

LEGEND:

- EXISTING SURFACE CONTOUR
- DESIGN SURFACE CONTOUR
- EXISTING PAVEMENT
- EXISTING ELECTRICAL
- EXISTING WATER
- EXISTING GAS
- EXISTING STORMWATER
- EXISTING SEWER
- PROPOSED BATTER
- PROPOSED CUT AREA
- PROPOSED FILL AREA
- ROAD CENTRELINE
- STAGE BOUNDARY

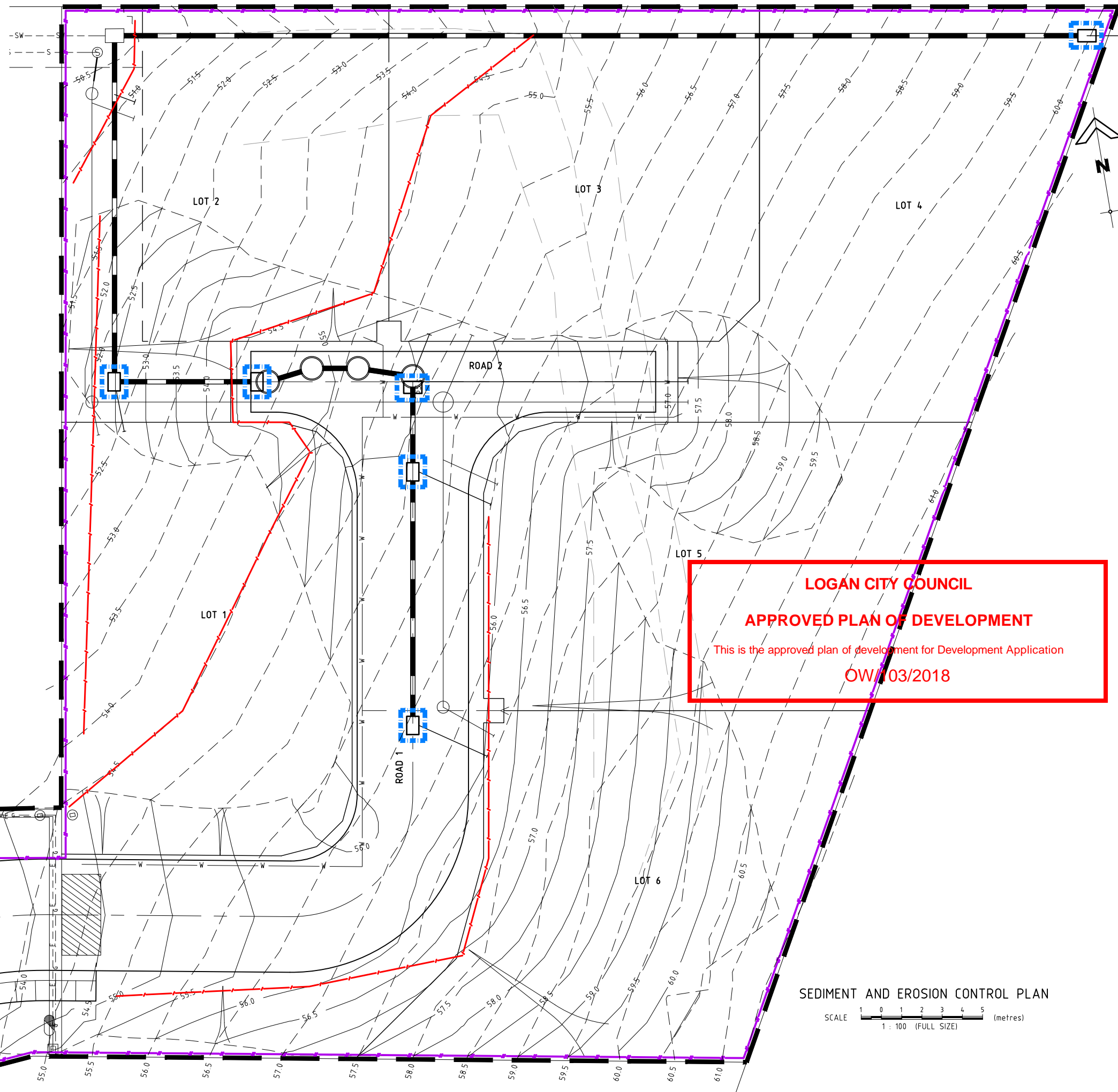
EARTHWORKS LAYOUT PLAN

SCALE 1 : 100 (FULL SIZE) (metres)

- LEGEND :**
- STAGE BOUNDARY
  - DUST FENCE
  - SILT FENCE
  - SHAKE-DOWN AREA
  - INLET PROTECTION
  - EXISTING WATER
  - EXISTING ELECTRICAL
  - EXISTING GAS
  - EXISTING STORMWATER
  - EXISTING SEWER
  - PROPOSED STORMWATER
  - PROPOSED WATER
  - PROPOSED SEWER
  - ROAD CENTRELINE
  - CONTOUR EXISTING

**NOTE :**  
ALL SEDIMENT AND EROSION CONTROL DETAILS AND NOTES  
REFER TO DWG BE170054-00-C211

FILENAME: Z:\CIVIL\1. PROJECTS\2018\05 03 OUTLOOK DRIVE, WATERFORD\Area\BETWEEN-01 Earthworks\BETWEEN-01-C210-B.dwg  
PLOTTED: 30-04-2018 at 09:14



**SEDIMENT AND EROSION CONTROL PLAN**  
SCALE 1 : 100 (FULL SIZE) (metres)

## RESIDENTIAL DEVELOPMENT

AT LOT 514 SP227192  
82 OUTLOOK DRIVE,  
WATERFORD

FOR  
ROUBAIX PROPERTIES

**A1** ORIGINAL SIZE BEFORE REDUCTION

B	PLAN AMENDMENTS	30-04-18
A	ORIGINAL ISSUE	16-03-18
VER.	DESCRIPTION	DATE

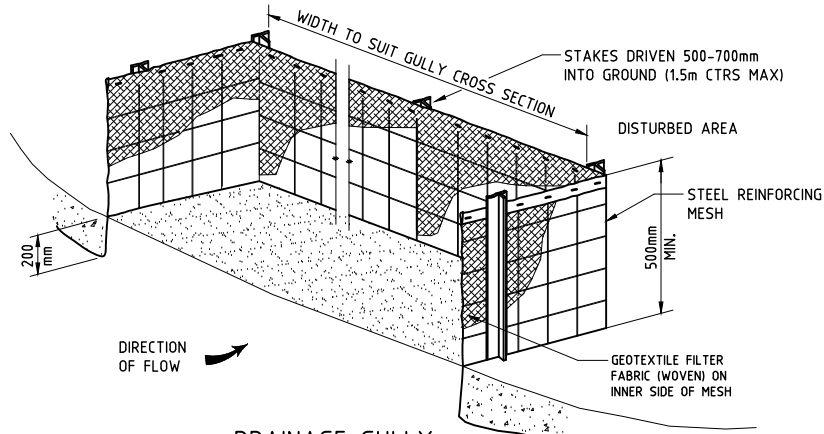
**COPYRIGHT ©**  
This drawing is copyright and the property of Burchills Engineering Solutions. It must not be retained, copied or used without the authority of Burchills Engineering Solutions.  
**DISCLAIMER**  
This drawing and its contents are electronically generated, are confidential and may only be used for the purpose for which they were intended.  
Burchills Engineering Solutions will not accept responsibility for any consequences arising from the use of the drawing for other than its intended purpose or where the drawing has been altered, amended or changed either manually or electronically by any third party.  
**NOTE**  
This is an uncontrolled document issued for information purposes only, unless the checked sections are signed or completed. Figured dimensions take precedence over scale. Do not scale reduced size drawings. Verify dimensions prior to commencing any on-site or off-site works or fabrication.

**BURCHILLS**  
ENGINEERING SOLUTIONS  
Level 2, Connaught Centre  
26 Marine Parade, Southport QLD 4215  
PO Box 3766, Australia Fair, Southport QLD 4215  
Phone: +61 7 5509 6400  
Fax: +61 7 5509 6411  
Email: admin@burchills.com.au  
Coote Burchills Engineering Pty Ltd  
ABN 76 166 942 365

PROJECT:  
**ROADWORKS & SERVICES**

DRAWING TITLE:  
**SEDIMENT AND EROSION CONTROL PLAN**

DEVEL. APPLIC. No. : -	DATE : 30-04-18
PROJECT LEADER : LUCAS FAULKNER	
DESIGNER : THUY VU	
DRAFTSPERSON : THUY VU	
CHECKED : ADAM COOPER	
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365	
RPEQ No. : 8093	
SCALE : AS NOTED	DATUM : AHD
PROJECT No. : BE170054-01	DRAWING No. : C210
	VERSION : B

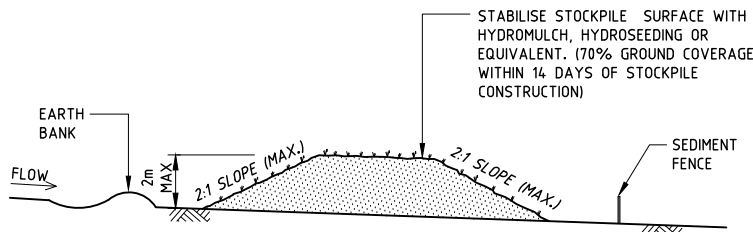


DRAINAGE GULLY  
SEDIMENT TRAP

N.T.S.

LOGAN CITY COUNCIL  
APPROVED PLAN OF DEVELOPMENT

This is the approved plan of development for Development Application  
OW/103/2018

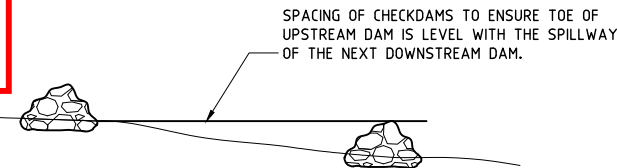


TYPICAL STOCKPILE CONFIGURATION

N.T.S.

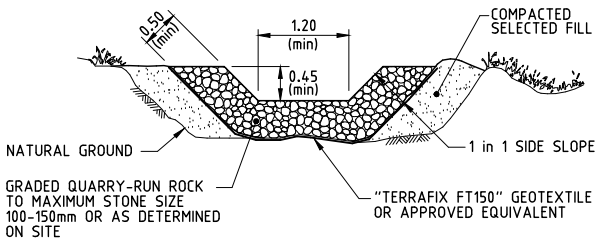
NOTES:

1. LOCATE TEMPORARY STOCKPILES AT TOP OF CATCHMENT ON FLAT GROUND AND NOT WITHIN 5m OF CONCENTRATED FLOW PATHS.
2. TEMPORARY STOCKPILES SHOULD HAVE EARTH BANKS UPSLOPE FOR DIVERSION OF UPSTREAM WATER AROUND STOCKPILE AND SEDIMENT FENCES PLACED 1-2m DOWNSLOPE.



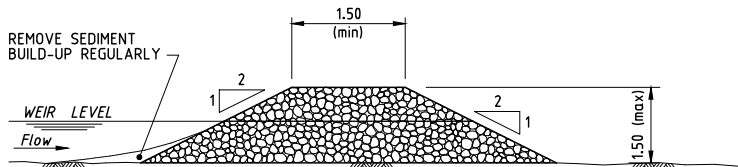
TYPICAL LONGITUDINAL SECTION

N.T.S.



DRAIN CROSS SECTION

N.T.S.

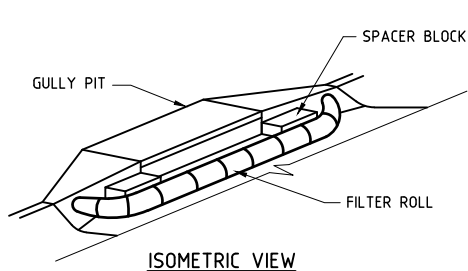


DRAIN LONGITUDINAL SECTION

SCALE 1:50

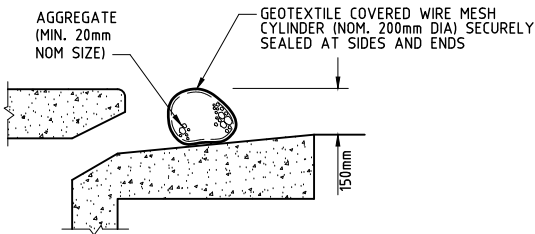
ROCK FILTER DAM

SCALE 1:50



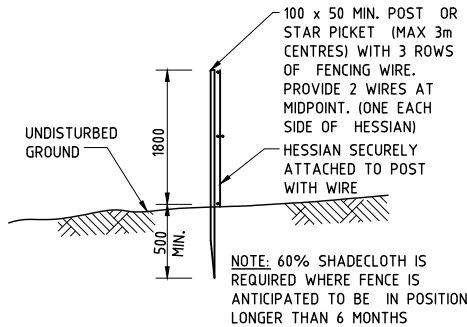
FILTER ROLL

N.T.S.



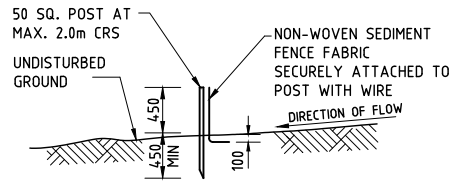
SECTION

NOTE:  
FOR SEDIMENT AND EROSION CONTROL  
SITE LAYOUT PLAN REFER DRAWING C202.



DUST CONTROL FENCE

N.T.S.



SILT FENCE

N.T.S.

GENERAL NOTES:

1. THIS DRAWING HAS BEEN PREPARED AS A GUIDE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MANAGE SITE SEDIMENT AND EROSION CONTROL MEASURES AND DURING THE CONSTRUCTION PERIOD INSTALL ADDITIONAL MEASURES WHERE SCOUR OR SEDIMENT TRANSPORT IS LIKELY TO OCCUR.
2. DELAY CLEARING, GRUBBING AND TOPSOIL STRIPPING UNTIL NECESSARY.
3. COMMENCE WORK ON SITE ONLY AFTER SEDIMENT AND EROSION CONTROL MEASURES ARE IN PLACE.
4. MANAGE SITE ENTRY/EXIT POINTS TO ENSURE SEDIMENT IS NOT TRACKED OFF SITE.
5. **SHAKEDOWN AREA:** PROVIDES FOR CONSTRUCTION, SERVICE AND STAFF VEHICLES ENTERING PUBLIC ROADS. CONTRACTOR SHALL LOCATE TO SUIT SITE ACTIVITIES. CONSTRUCTED AS 250mm THICK LAYER OF COARSE (150mm - 200mm) RIVER GRAVEL OVER A SINGLE LAYER OF HIGH STRENGTH GEOTEXTILE (15m x 5m).
6. THE CONTRACTOR SHALL INSTALL EITHER STORMWATER INLET SEDIMENT TRAPS OR THE EXCAVATED INLET ARRANGEMENT AT ALL STORMWATER STRUCTURES DURING THE CONSTRUCTION.
7. FILTER ROLLS SHALL BE INSTALLED AT GULLY PITS IMMEDIATELY AFTER GULLY PIT CONSTRUCTION AND LEFT IN PLACE DURING THE MAINTENANCE PERIOD. OPERATION OF ROLLS DURING PERIODS OF HEAVY RAIN TO BE MONITORED TO PREVENT FLOODING AND EROSION DAMAGE ELSEWHERE.
8. ARRANGE FOR EROSION CONTROL MEASURES TO BE INSTALLED AS CLOSE AS POSSIBLE TO THE SOURCE OF EROSION.
9. ENSURE STOCKPILED TOPSOIL AND EARTHWORKS ARE NOT ERODED BY WIND AND STORMWATER RUN-OFF AND ARE PROVIDED WITH A SILT FENCE AROUND THE LOW SIDE. LIMIT STOCKPILE TO 2.0m HEIGHT.
10. ERECT SILT FENCES WHERE SHOWN ON THE DRAWINGS, GENERALLY ALONG THE LOW SIDE OF THE CONSTRUCTION SITE AND ALONG A LINE OF CONSTANT LEVEL. AS AN ALTERNATIVE TO BURYING THE SILT FENCE LOWER EDGE, THE CONTRACTOR MAY ELECT TO PLACE 200mm OF THE FABRIC ON THE GROUND UP-SLOPE OF THE FENCE AND COVER WITH 100mm MIN LAYER OF AGGREGATE.
11. TO PREVENT EROSION, TOPSOIL AND SEED IMMEDIATELY AFTER COMPLETION OF BULK EARTHWORKS TO FINISHED PROFILES.
12. PROVIDE TURF STRIP ADJACENT TO KERB FOR FULL LENGTH OF NEW ROAD AND TURF STRIP PLACED AT 90° TO KERB EVERY 10m FOR FULL WIDTH OF VERGE.
13. PRIOR TO COMPLETION OF CONSTRUCTION OF PAVEMENT AND SEALING, PLACE SANDBAGS AT 45° TO ARREST SCOUR AGAINST KERB AND CHANNEL AS FOLLOWS:  
ROAD GRADE 0.5% - 5% - 25m MAX CRS.  
5% - 10% - 10m MAX CRS.  
10% - 15% - 15m MAX CRS.  
15% - 20% - 5m MAX CRS.
14. SWEEP EXTERNAL ROADS WHERE SEDIMENT HAS BEEN DROPPED FROM CONSTRUCTION VEHICLES. DO NOT WASH SILT INTO THE STORMWATER SYSTEM
15. ALL SEDIMENT AND EROSION CONTROL STRUCTURES, TRENCHES ETC. SHALL BE REGULARLY MAINTAINED AND INSPECTED FOR EFFECTIVENESS.
16. THE USE OF POTABLE WATER IS NOT PERMITTED IN SITE EARTHWORKS OPERATIONS, ROAD AND PAVEMENT CONSTRUCTION OR DUST SUPPRESSION. RECYCLED WATER IS REQUIRED TO BE USED AND IS TO BE IN ACCORDANCE WITH LOGAN CITY COUNCIL GUIDELINES.

RESIDENTIAL  
DEVELOPMENT

AT LOT 514 SP227192  
82 OUTLOOK DRIVE,  
WATERFORD

FOR

ROUBAIX PROPERTIES

A1 ORIGINAL SIZE BEFORE REDUCTION

**COPYRIGHT ©**  
This drawing is copyright and the property of Burchills Engineering Solutions. It must not be retained, copied or used without the authority of Burchills Engineering Solutions.  
**DISCLAIMER**  
This drawing and its contents are electronically generated, are confidential and may only be used for the purpose for which they were intended.  
Burchills Engineering Solutions will not accept responsibility for any consequences arising from the use of the drawing for other than its intended purpose or where the drawing has been altered, amended or changed either manually or electronically by any third party.  
**NOTE**  
This is an uncontrolled document issued for information purposes only, unless the checked sections are signed or completed. Figured dimensions take precedence over scale. Do not scale reduced size drawings. Verify dimensions prior to commencing any on-site or off-site works or fabrication.



Level 2, Connaught Centre  
26 Marine Parade, Southport QLD 4215  
PO Box 3766, Australia Fair, Southport QLD 4215  
Phone: +61 7 5509 6400  
Fax: +61 7 5509 6411  
Email: admin@burchills.com.au  
**Coote Burchills Engineering Pty Ltd**  
ABN 76 166 942 365

PROJECT:

ROADWORKS & SERVICES

DRAWING TITLE:

SEDIMENT AND EROSION  
CONTROL DETAIL AND NOTES

DEVEL. APPLIC. No.: - DATE: 16-03-18

PROJECT LEADER: LUCAS FAULKNER

DESIGNER: THUY VU

DRAFTSPERSON: THUY VU

CHECKED: ADAM COOPER

APPROVED FOR AND ON BEHALF OF  
BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365

RPEQ No.: 8093

SCALE: AS NOTED DATUM: AHD FULL SIZE: A1

PROJECT No.: DRAWING No.: VERSION:

BE170054-01 C211 A

ROADWORKS NOTES :

1. THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING SERVICES. ANY DAMAGE TO EXISTING SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE RECTIFIED AT HIS EXPENSE.
2. ALL WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH IPWEAQ STANDARD DRAWINGS AND L.C.C STANDARD SPECIFICATIONS AND DRAWINGS.
3. THE CONTRACTOR SHALL HAVE AN APPROVED SET OF CONSTRUCTION PLANS AND ALL RELEVANT CURRENT IPWEAQ AND L.C.C STANDARD DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES DURING THE CONSTRUCTION PHASE.
4. THE CONTRACTOR SHALL MAINTAIN 300mm MINIMUM VERTICAL CLEARANCE FROM ALL EXISTING UTILITIES WHERE CROSSINGS OCCUR.
5. FOR LOCATIONS OF ELECTRICAL ROAD CROSSING CONDUITS REFER ELECTRICAL CONSULTANT'S DRAWINGS.
6. THE CONTRACTOR'S CONSTRUCTION TRAFFIC MANAGEMENT PLAN IS TO MAINTAIN VEHICULAR ACCESS TO ALL EXISTING ALLOTMENTS DURING THE COURSE OF THE WORKS. ANY DISRUPTIONS TO NORMAL ACCESS TO BE MINIMISED AS MUCH AS POSSIBLE.
7. ALL ROAD CENTRELINES TO BE PEGGED BY THE PRINCIPAL'S SURVEYOR.

NOTE :

ALL DESIGN/SETOUT INFORMATION SHOWN ON THIS DRAWING IS AVAILABLE IN DIGITAL FORMAT FROM THE OFFICE OF THE SUPERINTENDENT UPON REQUEST BY THE CONTRACTOR.

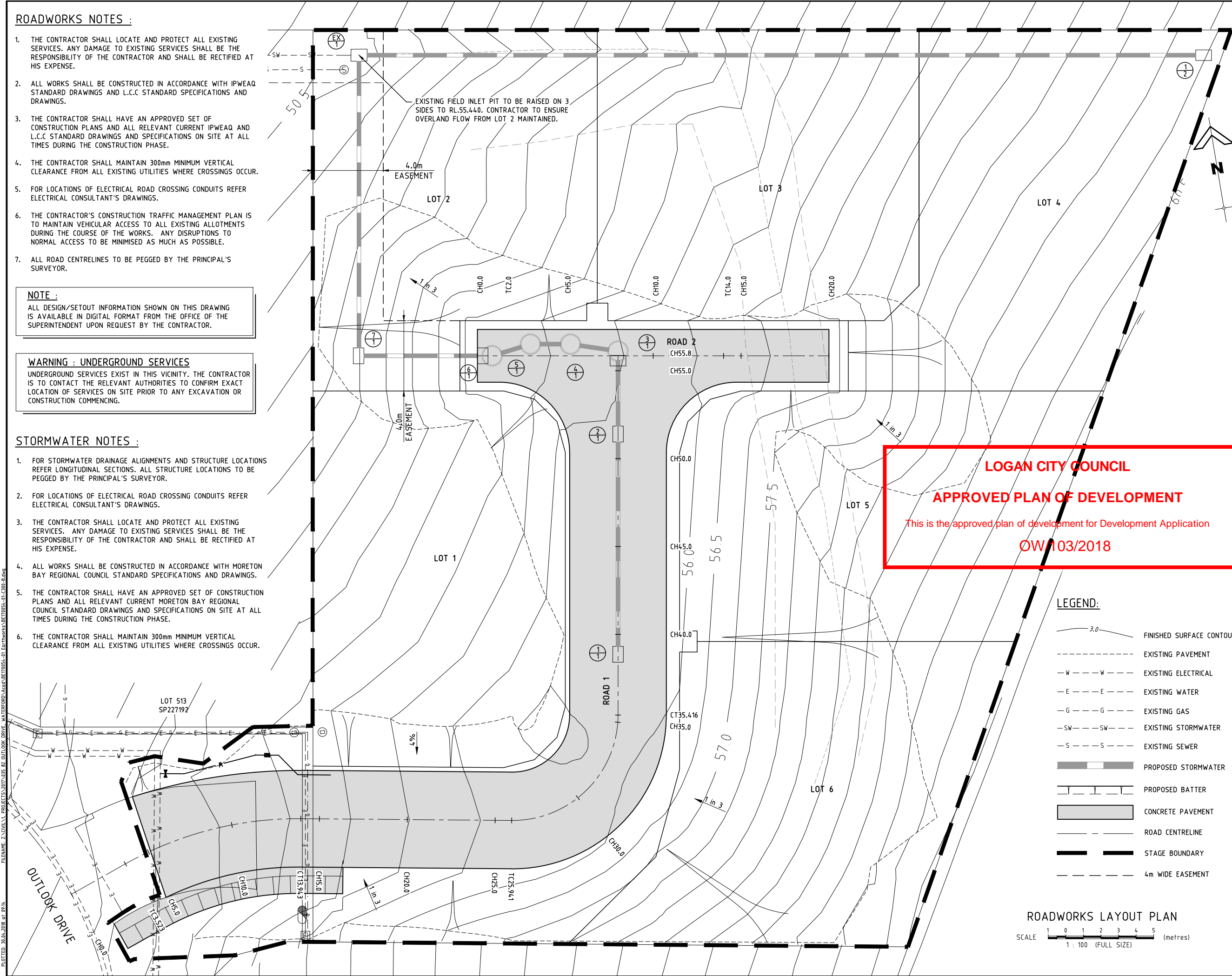
WARNING : UNDERGROUND SERVICES

UNDERGROUND SERVICES EXIST IN THIS VICINITY. THE CONTRACTOR IS TO CONTACT THE RELEVANT AUTHORITIES TO CONFIRM EXACT LOCATION OF SERVICES ON SITE PRIOR TO ANY EXCAVATION OR CONSTRUCTION COMMENCING.

STORMWATER NOTES :

1. FOR STORMWATER DRAINAGE ALIGNMENTS AND STRUCTURE LOCATIONS REFER LONGITUDINAL SECTIONS. ALL STRUCTURE LOCATIONS TO BE PEGGED BY THE PRINCIPAL'S SURVEYOR.
2. FOR LOCATIONS OF ELECTRICAL ROAD CROSSING CONDUITS REFER ELECTRICAL CONSULTANT'S DRAWINGS.
3. THE CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING SERVICES. ANY DAMAGE TO EXISTING SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE RECTIFIED AT HIS EXPENSE.
4. ALL WORKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH MORETON BAY REGIONAL COUNCIL STANDARD SPECIFICATIONS AND DRAWINGS.
5. THE CONTRACTOR SHALL HAVE AN APPROVED SET OF CONSTRUCTION PLANS AND ALL RELEVANT CURRENT MORETON BAY REGIONAL COUNCIL STANDARD DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES DURING THE CONSTRUCTION PHASE.
6. THE CONTRACTOR SHALL MAINTAIN 300mm MINIMUM VERTICAL CLEARANCE FROM ALL EXISTING UTILITIES WHERE CROSSINGS OCCUR.

FILENAME: Z:\CIVIL\1. PROJECTS\2017\035 82 OUTLOOK DRIVE, WATERFORD\Area\BETWEEN-01 Earthworks\SETUP-01-030-B.dwg  
PLOTTED: 30-04-2018 at 09:14



LOGAN CITY COUNCIL

APPROVED PLAN OF DEVELOPMENT

This is the approved plan of development for Development Application

OW/103/2018

LEGEND:

- 3.0 FINISHED SURFACE CONTOUR
- EXISTING PAVEMENT
- W - - - - W - - - - EXISTING ELECTRICAL
- E - - - - E - - - - EXISTING WATER
- G - - - - G - - - - EXISTING GAS
- SW - - - - SW - - - - EXISTING STORMWATER
- S - - - - S - - - - EXISTING SEWER
- PROPOSED STORMWATER
- PROPOSED BATTER
- CONCRETE PAVEMENT
- ROAD CENTRELINE
- STAGE BOUNDARY
- 4m WIDE EASEMENT

ROADWORKS LAYOUT PLAN

SCALE 1 0 1 2 3 4 5 (metres)  
1 : 100 (FULL SIZE)

RESIDENTIAL DEVELOPMENT

AT LOT 514 SP227192  
82 OUTLOOK DRIVE,  
WATERFORD

FOR

ROUBAIX PROPERTIES

A1 ORIGINAL SIZE BEFORE REDUCTION

B	PLAN AMENDMENTS	30-04-18
A	ORIGINAL ISSUE	16-03-18
VER.	DESCRIPTION	DATE

COPYRIGHT ©  
This drawing is copyright and the property of Burchills Engineering Solutions. If must not be retained, copied or used without the authority of Burchills Engineering Solutions.

DISCLAIMER  
This drawing and its contents are electronically generated, are confidential and may only be used for the purpose for which they were intended.  
Burchills Engineering Solutions will not accept responsibility for any consequences arising from the use of the drawing for other than its intended purpose or where the drawing has been altered, amended or changed either manually or electronically by any third party.

NOTE  
This is an uncontrolled document issued for information purposes only, unless the checked sections are signed or completed. Figured dimensions take precedence over scale. Do not scale reduced size drawings. Verify dimensions prior to commencing any on-site or off-site works or fabrication.



Level 2, Connaught Centre  
26 Marine Parade, Southport QLD 4215  
PO Box 3766, Australia Fair, Southport QLD 4215  
Phone: +61 7 5509 6400  
Fax: +61 7 5509 6411  
Email: admin@burchills.com.au  
Coote Burchills Engineering Pty Ltd  
ABN 76 166 942 365

PROJECT:

ROADWORKS & SERVICES

DRAWING TITLE:

ROADWORKS  
LAYOUT PLAN

DEVEL. APPLIC. No. : - DATE : 30-04-18

PROJECT LEADER : LUCAS FAULKNER

DESIGNER : THUY VU

DRAFTSPERSON : THUY VU

CHECKED : ADAM COOPER

APPROVED FOR AND ON BEHALF OF  
BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365

RPEQ No. : 8093

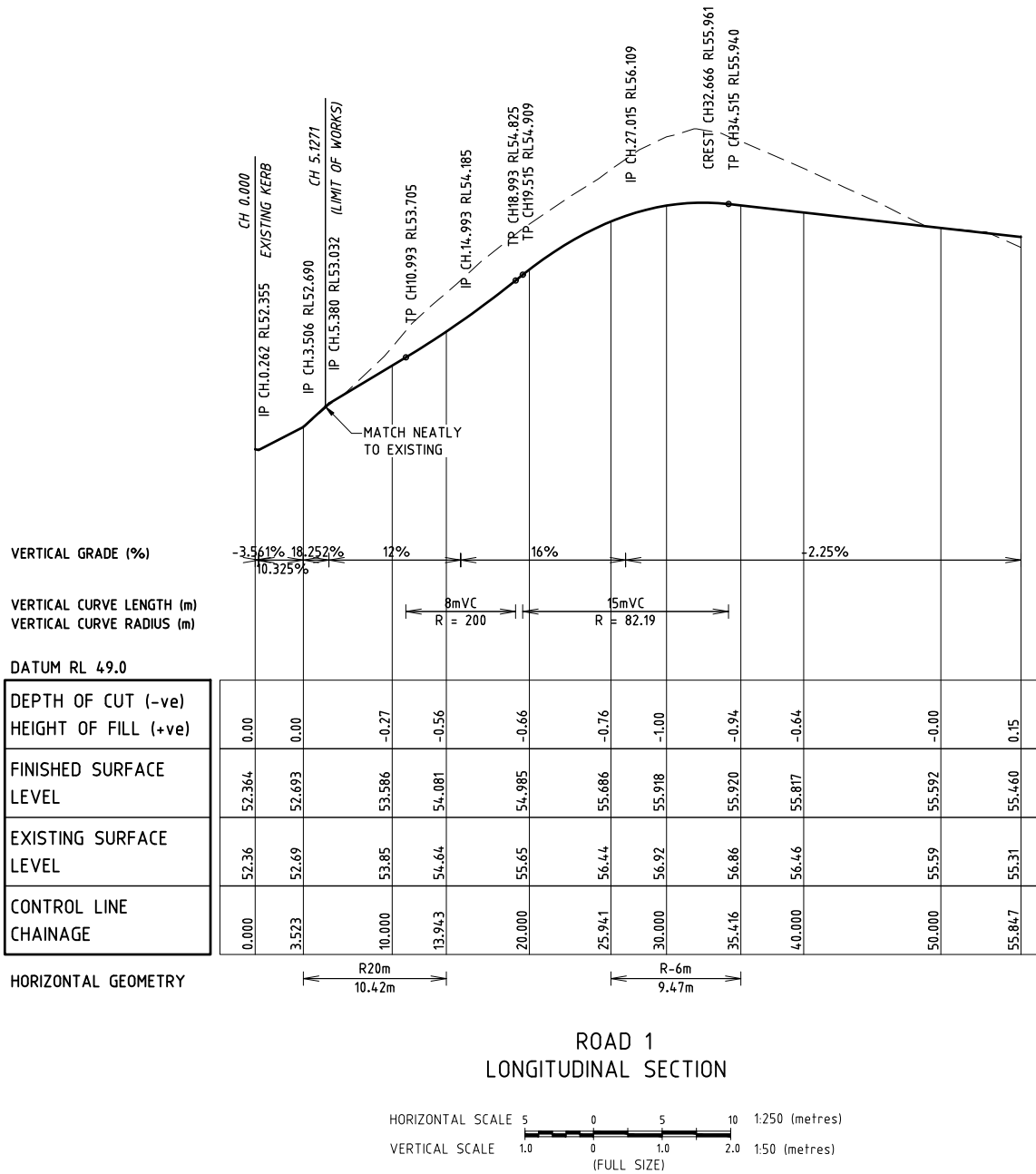
SCALE : AS NOTED DATUM : AHD FULL SIZE : A1

PROJECT No. : BE170054-01 DRAWING No. : C300 VERSION : B

FILENAME: Z:\CIVIL\1. PROJECTS\2017\035 R2 OUTLOOK DRIVE - WATERFORD\Acad\BET0054-01 Earthworks\BET0054-01-C301-A.dwg  
PLOTTED: 30-04-2018 at 08:14

LEGEND :

- EXISTING SURFACE  
— DESIGN SURFACE

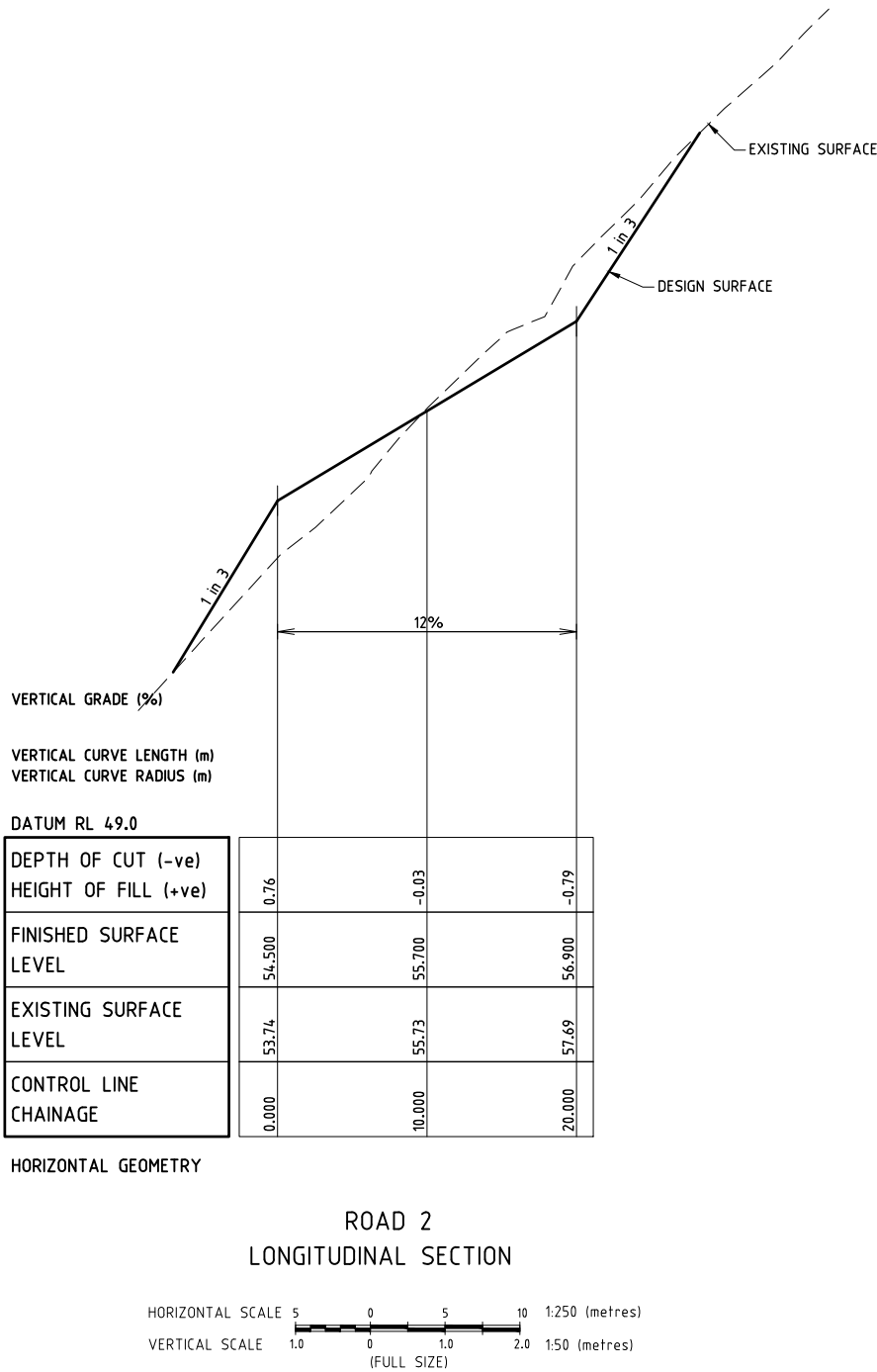


ROAD 1 CENTRELINE SETOUT								
PT	CHAINAGE	EASTING	NORTHING	LEVEL	BEARING	RAD/SPIRAL	A.LENGTH	D.ANGLE
IP1	0	4981.674	1990.748	52.364	70°08'57.21"			
TC	3.523	4984.988	1991.945	52.693	70°08'57.21"			
IP2	8.733	4990.002	1993.755	53.434		20	10.42	29°51'02.79"
CT	13.943	4995.252	1992.829	54.081	100°00'00.00"			
TC	25.941	5007.069	1990.746	55.686	100°00'00.00"			
IP3	30.679	5013.027	1989.695	55.937		-6	9.475	90°28'40.00"
CT	35.416	5014.028	1995.662	55.92	9°31'20.00"			
IP4	55.847	5017.408	2015.812		9°31'20.00"			

LOGAN CITY COUNCIL

APPROVED PLAN OF DEVELOPMENT

This is the approved plan of development for Development Application  
OW/103/2018



ROAD 2 CENTRELINE SETOUT					
PT	CHAINAGE	EASTING	NORTHING	LEVEL	BEARING
IP1	0	5009.518	2017.135	54.5	99°31'20.00"
IP2	20	5029.242	2013.826	56.9	99°31'20.00"

RESIDENTIAL  
DEVELOPMENT

AT LOT 514 SP227192  
82 OUTLOOK DRIVE,  
WATERFORD

FOR

ROUBAIX PROPERTIES

A1 ORIGINAL SIZE BEFORE REDUCTION		
A	ORIGINAL ISSUE	16-03-18
VER.	DESCRIPTION	DATE

**COPYRIGHT (C)**

This drawing is copyright and the property of Burchills Engineering Solutions. If must not be retained, copied or used without the authority of Burchills Engineering Solutions.

**DISCLAIMER**

This drawing and its contents are electronically generated, are confidential and may only be used for the purpose for which they were intended.

Burchills Engineering Solutions will not accept responsibility for any consequences arising from the use of the drawing for other than its intended purpose or where the drawing has been altered, amended or changed either manually or electronically by any third party.

**NOTE**

This is an uncontrolled document issued for information purposes only, unless the checked sections are signed or completed. Figured dimensions take precedence over scale. Do not scale reduced size drawings. Verify dimensions prior to commencing any on-site or off-site works or fabrication.

**BURCHILLS**  
ENGINEERING SOLUTIONS

Level 2, Connaught Centre  
26 Marine Parade, Southport QLD 4215  
PO Box 3766, Australia Fair, Southport QLD 4215  
Phone: +61 7 5509 6400  
Fax: +61 7 5509 6411  
Email: admin@burchills.com.au  
**Coote Burchills Engineering Pty Ltd**  
ABN 76 166 942 365

PROJECT:

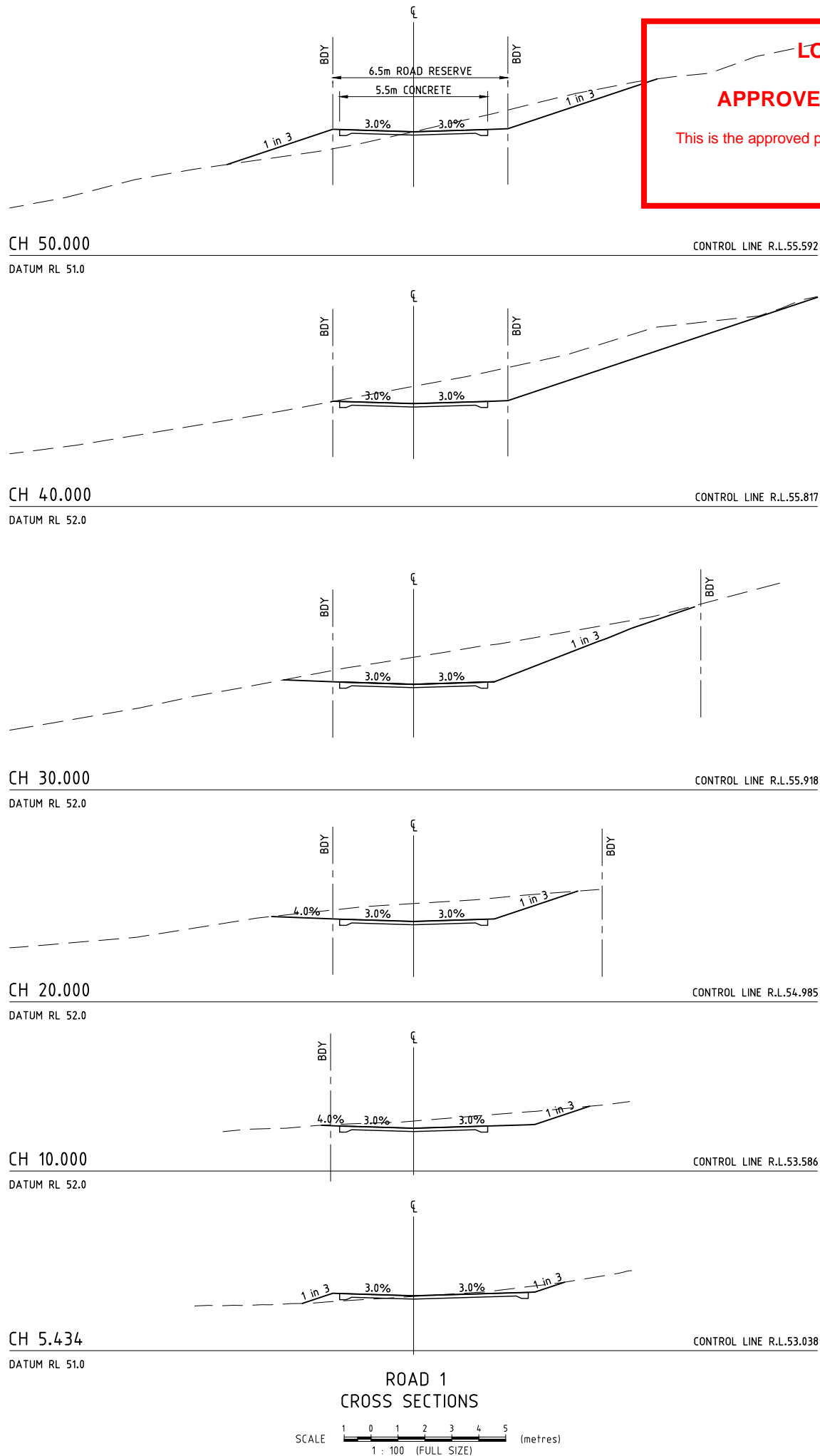
ROADWORKS & SERVICES

DRAWING TITLE :

ROADWORKS  
LONGITUDINAL  
SECTIONS

DEVEL. APPLIC. No. : -	DATE : 16-03-18
PROJECT LEADER : LUCAS FAULKNER	
DESIGNER : THUY VU	
DRAFTSPERSON : THUY VU	
CHECKED : ADAM COOPER	
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS	ABN 76 166 942 365
RPEQ No. : 8093	
SCALE : AS NOTED	DATUM : AHD
PROJECT No. : BE170054-01	DRAWING No. : C301
	VERSION: A

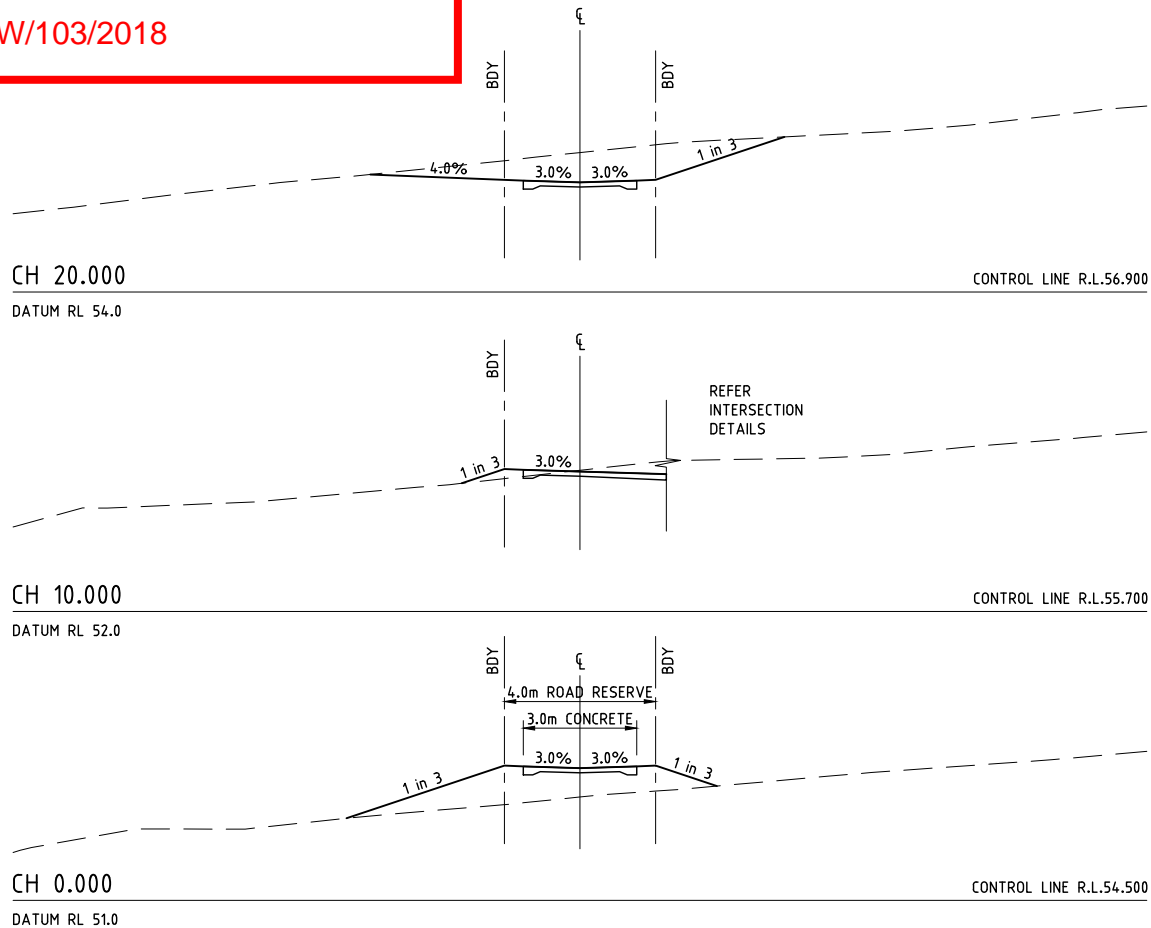
FILENAME: Z:\CIVIL\1. PROJECTS\2017\035 82 OUTLOOK DRIVE - WATERFORD\ASAP\BETWEEN-81 C310-B.dwg  
PLOTTED: 30-04-2018 at 09:14



**LOGAN CITY COUNCIL**

**APPROVED PLAN OF DEVELOPMENT**

This is the approved plan of development for Development Application  
**OW/103/2018**



**RESIDENTIAL DEVELOPMENT**

**AT LOT 514 SP227192  
82 OUTLOOK DRIVE,  
WATERFORD**

FOR  
**ROUBAIX PROPERTIES**

A1 ORIGINAL SIZE BEFORE REDUCTION		
B	PLAN AMENDMENTS	30-04-18
A	ORIGINAL ISSUE	16-03-18
VER.	DESCRIPTION	DATE

**COPYRIGHT ©**  
This drawing is copyright and the property of Burchills Engineering Solutions. It must not be retained, copied or used without the authority of Burchills Engineering Solutions.

**DISCLAIMER**  
This drawing and its contents are electronically generated, are confidential and may only be used for the purpose for which they were intended.  
Burchills Engineering Solutions will not accept responsibility for any consequences arising from the use of the drawing for other than its intended purpose or where the drawing has been altered, amended or changed either manually or electronically by any third party.

**NOTE**  
This is an uncontrolled document issued for information purposes only, unless the checked sections are signed or completed.  
Figured dimensions take precedence over scale. Do not scale reduced size drawings. Verify dimensions prior to commencing any on-site or off-site works or fabrication.

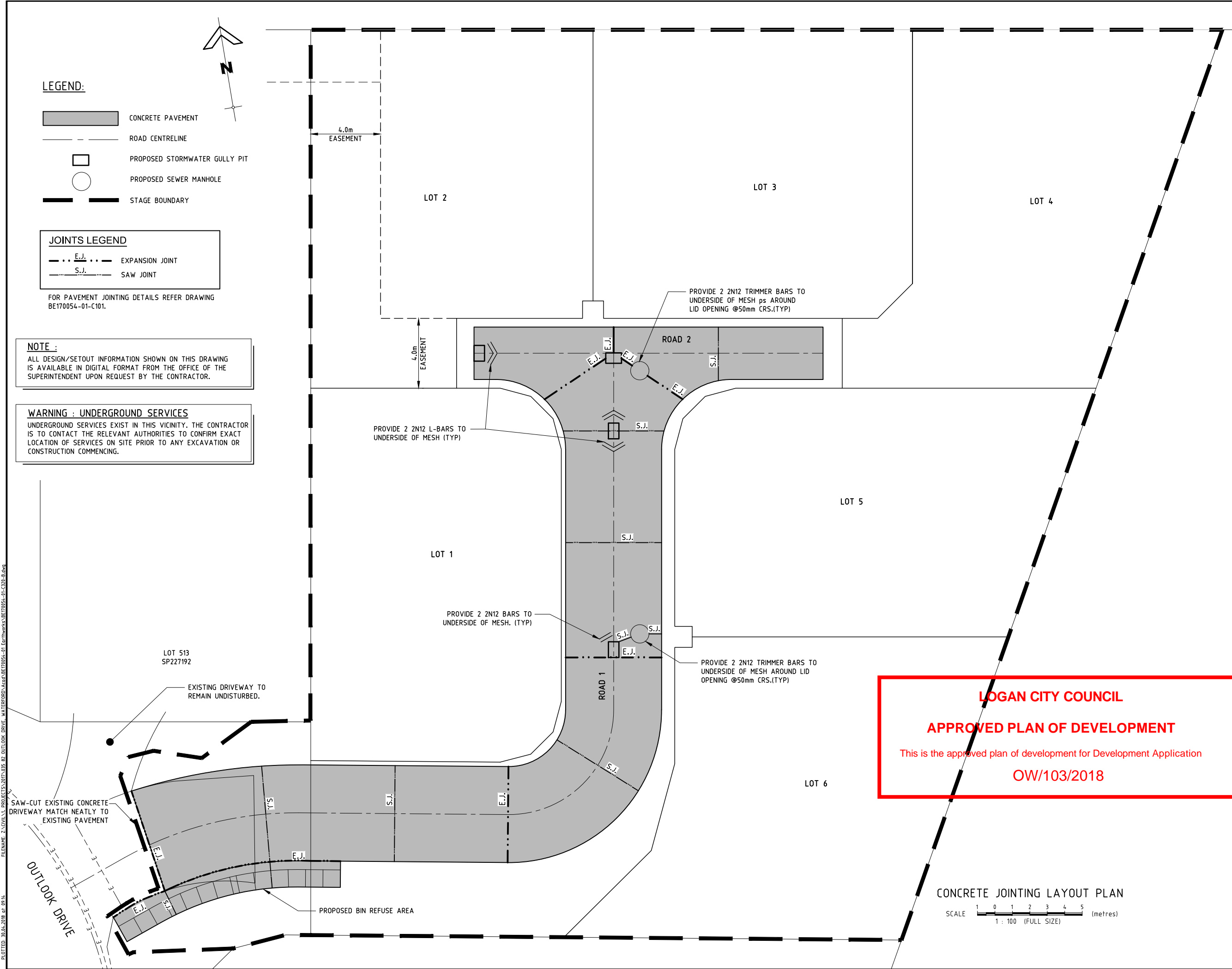
**BURCHILLS ENGINEERING SOLUTIONS**

Level 2, Connaught Centre  
26 Marine Parade, Southport QLD 4215  
PO Box 3766, Australia Fair, Southport QLD 4215  
Phone: +61 7 5509 6400  
Fax: +61 7 5509 6411  
Email: admin@burchills.com.au  
**Coote Burchills Engineering Pty Ltd**  
ABN 76 166 942 365

PROJECT:

**ROADWORKS & SERVICES**

DRAWING TITLE		
ROADWORKS CROSS SECTIONS		
DEVEL. APPLIC. No. : -		DATE : 30-04-18
PROJECT LEADER : LUCAS FAULKNER		
DESIGNER : THUY VU		
DRAFTSPERSON : THUY VU		
CHECKED : ADAM COOPER		
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365		
RPEQ No. : 8093		
SCALE : AS NOTED	DATUM : AHD	FULL SIZE : A1
PROJECT No. : BE170054-01	DRAWING No. : C310	VERSION : B



LEGEND:

- CONCRETE PAVEMENT
- ROAD CENTRELINE
- PROPOSED STORMWATER GULLY PIT
- PROPOSED SEWER MANHOLE
- STAGE BOUNDARY

JOINTS LEGEND

- E.J. EXPANSION JOINT
- S.J. SAW JOINT

FOR PAVEMENT JOINTING DETAILS REFER DRAWING BE170054-01-C101.

NOTE :

ALL DESIGN/SETOUT INFORMATION SHOWN ON THIS DRAWING IS AVAILABLE IN DIGITAL FORMAT FROM THE OFFICE OF THE SUPERINTENDENT UPON REQUEST BY THE CONTRACTOR.

WARNING : UNDERGROUND SERVICES

UNDERGROUND SERVICES EXIST IN THIS VICINITY. THE CONTRACTOR IS TO CONTACT THE RELEVANT AUTHORITIES TO CONFIRM EXACT LOCATION OF SERVICES ON SITE PRIOR TO ANY EXCAVATION OR CONSTRUCTION COMMENCING.

RESIDENTIAL DEVELOPMENT

AT LOT 514 SP227192  
82 OUTLOOK DRIVE,  
WATERFORD

FOR

ROUBAIX PROPERTIES

A1 ORIGINAL SIZE BEFORE REDUCTION

B	PLAN AMENDMENTS	30-04-18
A	ORIGINAL ISSUE	16-03-18
VER.	DESCRIPTION	DATE

COPYRIGHT ©

This drawing is copyright and the property of Burchills Engineering Solutions. It must not be retained, copied or used without the authority of Burchills Engineering Solutions.

DISCLAIMER

This drawing and its contents are electronically generated, are confidential and may only be used for the purpose for which they were intended. Burchills Engineering Solutions will not accept responsibility for any consequences arising from the use of the drawing for other than its intended purpose or where the drawing has been altered, amended or changed either manually or electronically by any third party.

NOTE

This is an uncontrolled document issued for information purposes only, unless the checked sections are signed or completed. Figured dimensions take precedence over scale. Do not scale reduced size drawings. Verify dimensions prior to commencing any on-site or off-site works or fabrication.



Level 2, Connaught Centre  
26 Marine Parade, Southport QLD 4215  
PO Box 3766, Australia Fair, Southport QLD 4215  
Phone: +61 7 5509 6400  
Fax: +61 7 5509 6411  
Email: admin@burchills.com.au  
Coote Burchills Engineering Pty Ltd  
ABN 76 166 942 365

PROJECT:

ROADWORKS & SERVICES

DRAWING TITLE:

CONCRETE JOINTING  
LAYOUT PLAN

LOGAN CITY COUNCIL

APPROVED PLAN OF DEVELOPMENT

This is the approved plan of development for Development Application

OW/103/2018

CONCRETE JOINTING LAYOUT PLAN

SCALE 1 : 100 (FULL SIZE) (metres)

DEVEL. APPLIC. No. : -	DATE : 30-04-18
PROJECT LEADER : LUCAS FAULKNER	
DESIGNER : THUY VU	
DRAFTSPERSON : THUY VU	
CHECKED : ADAM COOPER	
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365	
RPEQ No. : 8093	
SCALE : AS NOTED	DATUM : AHD
PROJECT No. : BE170054-01	DRAWING No. : C320
	VERSION : B

GENERAL NOTES :

- ALL KERB SETOUT INFORMATION SHOWN ON THIS DRAWING REFERS TO THE NOMINAL KERB LINE AS SHOWN ON TYPICAL KERB/EDGE DETAILS ON DRAWING BE170054-01-C30.
- LEVELS SHOWN THUS:  
P8.42 - FINISHED ROAD PAVEMENT LEVEL

NOTE :

ALL DESIGN/SETOUT INFORMATION SHOWN ON THIS DRAWING IS AVAILABLE IN DIGITAL FORMAT FROM THE OFFICE OF THE SUPERINTENDENT UPON REQUEST BY THE CONTRACTOR.

LEGEND

- — — 30.0 — — — PROPOSED DESIGN CONTOUR  
— — — — — PROPOSED ROAD CENTRELINE  
▬ ▬ ▬ ▬ ▬ PROPOSED FUTURE STORMWATER  
— — — — — FUTURE LOT BOUNDARIES

SCHEDULE OF KERB/EDGE SETOUT		
POINT	EASTING	NORTHING
1	5009.766	2018.614
2	5009.270	2015.656
3	5010.503	2015.449
4	5013.786	2010.842
5	5019.210	2009.932
6	5023.817	2013.216
7	5028.994	2012.347
8	5029.491	2015.306
9	4983.790	1988.681
10	4984.334	1987.176
11	4986.481	1987.951
12	4993.979	1988.729
13	4996.901	1988.223
14	4997.161	1989.700
15	4994.775	1990.121
16	4986.95	1989.683
17	4986.01	1995.642
18	4995.985	1995.492

RESIDENTIAL DEVELOPMENT

AT LOT 514 SP227192  
82 OUTLOOK DRIVE,  
WATERFORD

FOR  
ROUBAIX PROPERTIES

A1 ORIGINAL SIZE BEFORE REDUCTION

B	PLAN AMENDMENTS	30-04-18
A	ORIGINAL ISSUE	16-03-18
VER.	DESCRIPTION	DATE

COPYRIGHT ©

This drawing is copyright and the property of Burchills Engineering Solutions. It must not be retained, copied or used without the authority of Burchills Engineering Solutions.

DISCLAIMER

This drawing and its contents are electronically generated, are confidential and may only be used for the purpose for which they were intended. Burchills Engineering Solutions will not accept responsibility for any consequences arising from the use of the drawing for other than its intended purpose or where the drawing has been altered, amended or changed either manually or electronically by any third party.

NOTE

This is an uncontrolled document issued for information purposes only, unless the checked sections are signed or completed. Figured dimensions take precedence over scale. Do not scale reduced size drawings. Verify dimensions prior to commencing any on-site or off-site works or fabrication.



Level 2, Connaught Centre  
26 Marine Parade, Southport QLD 4215  
PO Box 3766, Australia Fair, Southport QLD 4215  
Phone: +61 7 5509 6400  
Fax: +61 7 5509 6411  
Email: admin@burchills.com.au  
Coote Burchills Engineering Pty Ltd  
ABN 76 166 942 365

PROJECT:

ROADWORKS & SERVICES

DRAWING TITLE:

ROADWORKS INTERSECTION  
DETAIL PLANS

DEVEL. APPLIC. No.: - DATE: 30-04-18

PROJECT LEADER: LUCAS FAULKNER

DESIGNER: THUY VU

DRAFTSPERSON: THUY VU

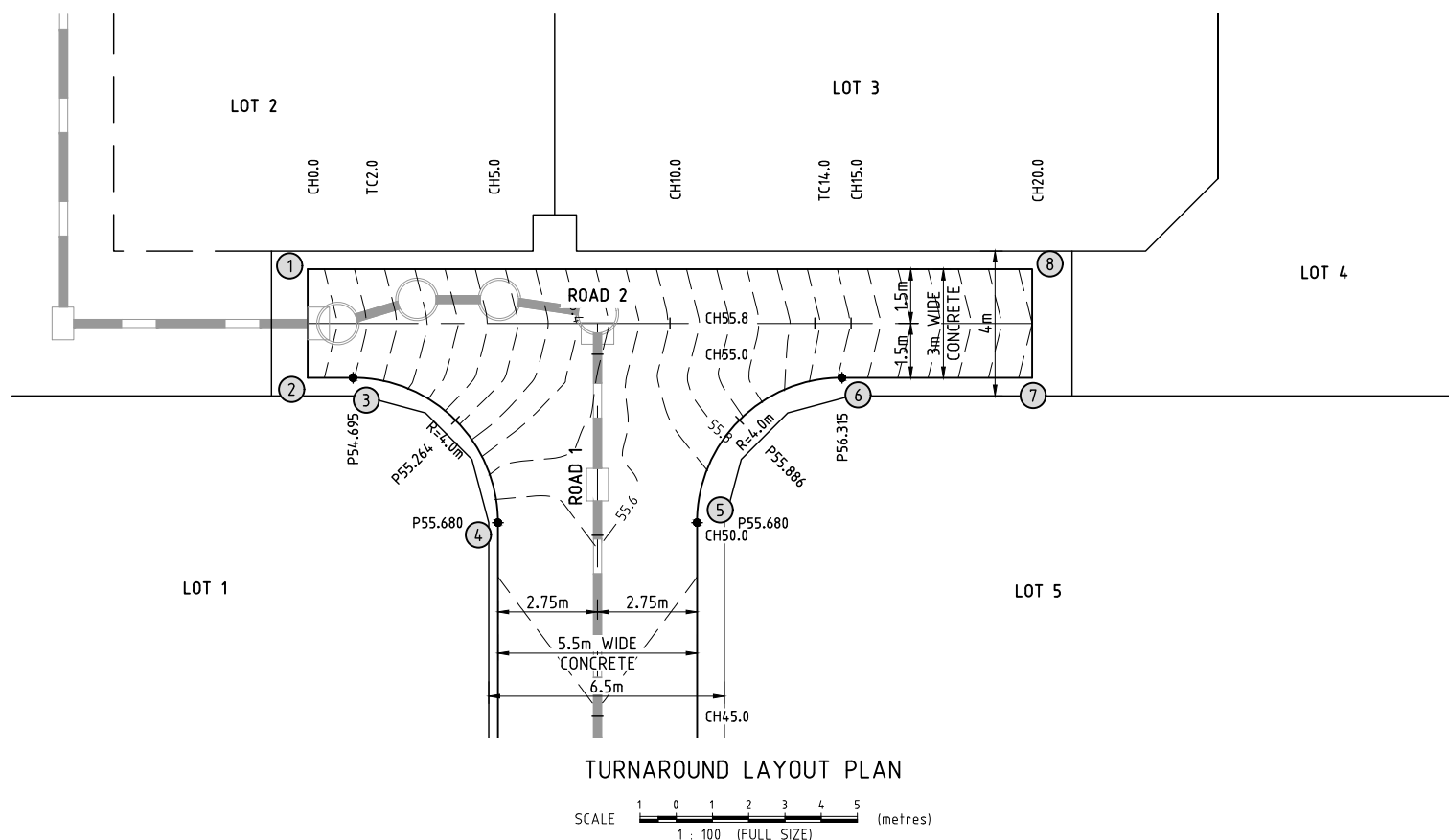
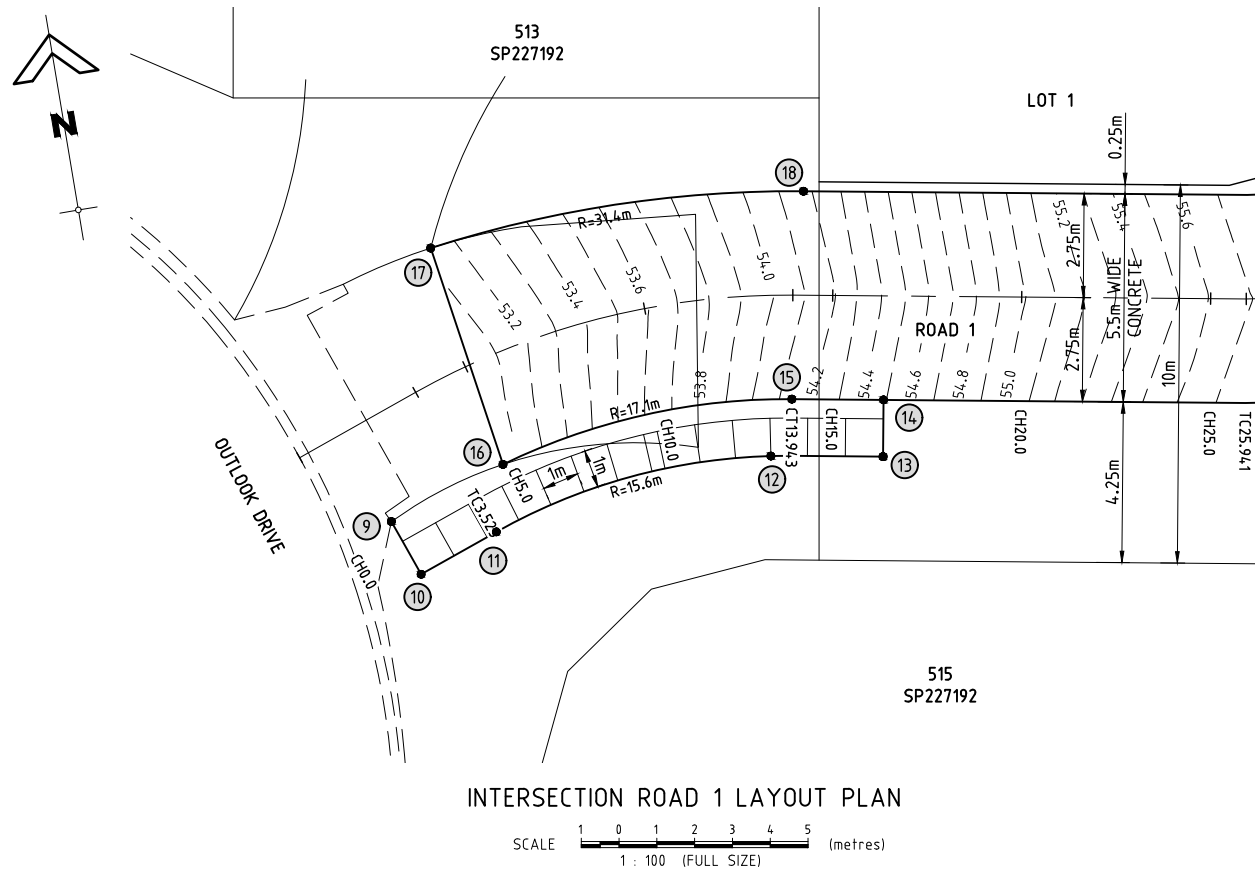
CHECKED: ADAM COOPER

APPROVED FOR AND ON BEHALF OF  
BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365

RPEQ No.: 8093

SCALE: AS NOTED DATUM: AHD FULL SIZE: A1

PROJECT No.: BE170054-01 DRAWING No.: C350 VERSION: B

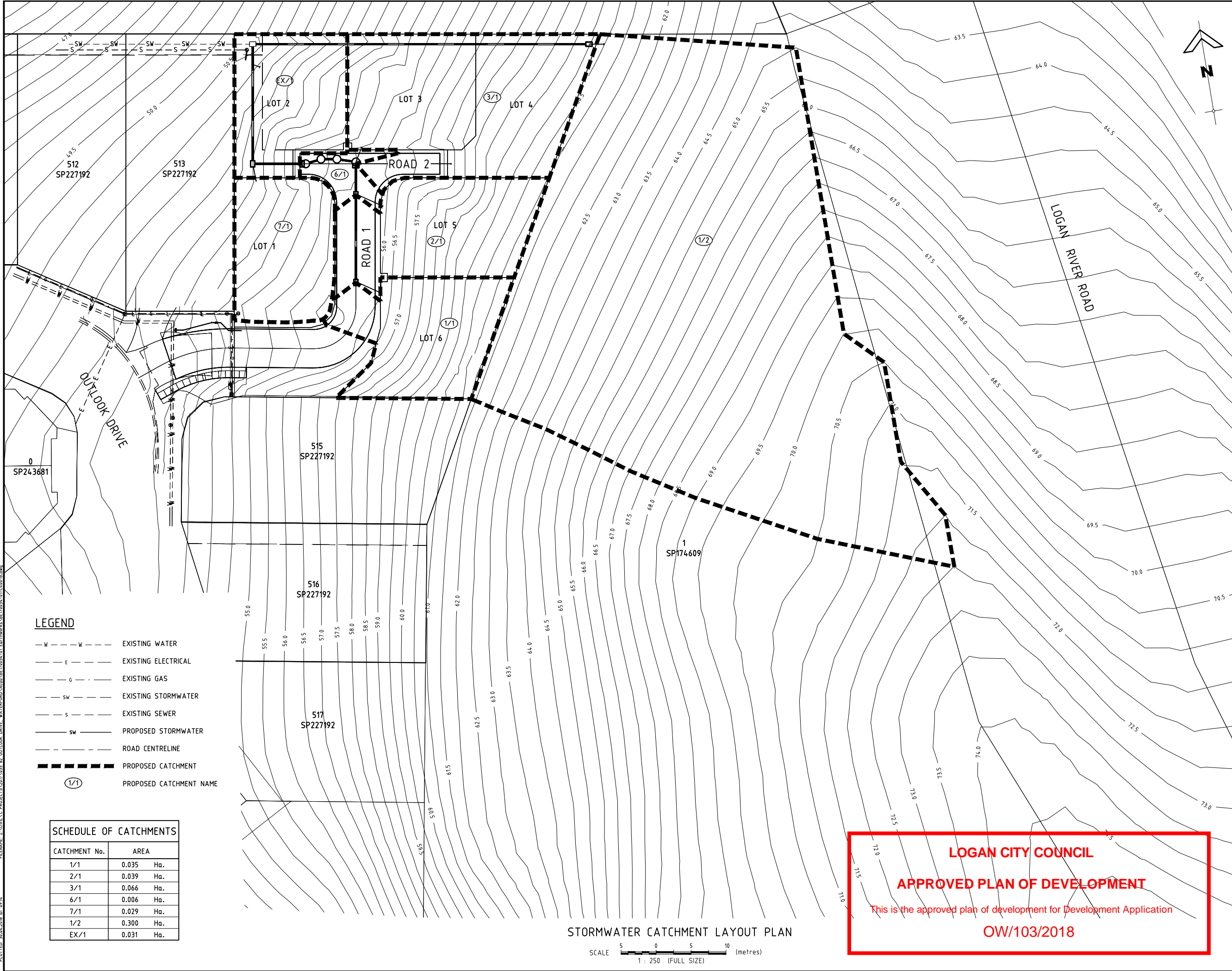


LOGAN CITY COUNCIL

APPROVED PLAN OF DEVELOPMENT

This is the approved plan of development for Development Application

OW/103/2018



RESIDENTIAL  
DEVELOPMENT

AT LOT 514 SP227192  
82 OUTLOOK DRIVE,  
WATERFORD

FOR  
ROUBAIX PROPERTIES

A1 ORIGINAL SIZE BEFORE REDUCTION

B	PLAN AMENDMENTS	30-04-18
A	ORIGINAL ISSUE	16-03-18
VER.	DESCRIPTION	DATE

COPYRIGHT ©

This drawing is copyright and the property of Burchills Engineering Solutions. It must not be retained, copied or used without the authority of Burchills Engineering Solutions.

DISCLAIMER

This drawing and its contents are electronically generated, are confidential and may only be used for the purpose for which they were intended. Burchills Engineering Solutions will not accept responsibility for any consequences arising from the use of the drawing for other than its intended purpose or where the drawing has been altered, amended or changed either manually or electronically by any third party.

NOTE

This is an uncontrolled document issued for information purposes only, unless the checked sections are signed or completed. Figured dimensions take precedence over scale. Do not scale reduced size drawings. Verify dimensions prior to commencing any on-site or off-site works or fabrication.



Level 2, Connaught Centre  
26 Marine Parade, Southport QLD 4215  
PO Box 3766, Australia Fair, Southport QLD 4215  
Phone: +61 7 5509 6400  
Fax: +61 7 5509 6411  
Email: admin@burchills.com.au  
Coote Burchills Engineering Pty Ltd  
ABN 76 166 942 365

PROJECT:  
  
ROADWORKS & SERVICES

DRAWING TITLE:  
  
STORMWATER DRAINAGE  
LAYOUT PLAN

DEVEL. APPLIC. No.: - DATE: 30-04-18

PROJECT LEADER: LUCAS FAULKNER

DESIGNER: THUY VU

DRAFTSPERSON: THUY VU

CHECKED: ADAM COOPER

APPROVED FOR AND ON BEHALF OF  
BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365

RPEQ No.: 8093

SCALE: AS NOTED DATUM: AHD FULL SIZE: A1

PROJECT No.: BE170054-01 DRAWING No.: C400 VERSION: B

LOGAN CITY COUNCIL

APPROVED PLAN OF DEVELOPMENT

This is the approved plan of development for Development Application

OW/103/2018

STORMWATER CATCHMENT LAYOUT PLAN

SCALE 5 0 5 10 (metres)  
1 : 250 (FULL SIZE)

LEGEND

- W — W — EXISTING WATER
- E — E — EXISTING ELECTRICAL
- G — G — EXISTING GAS
- SW — SW — EXISTING STORMWATER
- S — S — EXISTING SEWER
- SW — SW — PROPOSED STORMWATER
- — — — ROAD CENTRELINE
- — — — PROPOSED CATCHMENT
- (1/1) PROPOSED CATCHMENT NAME

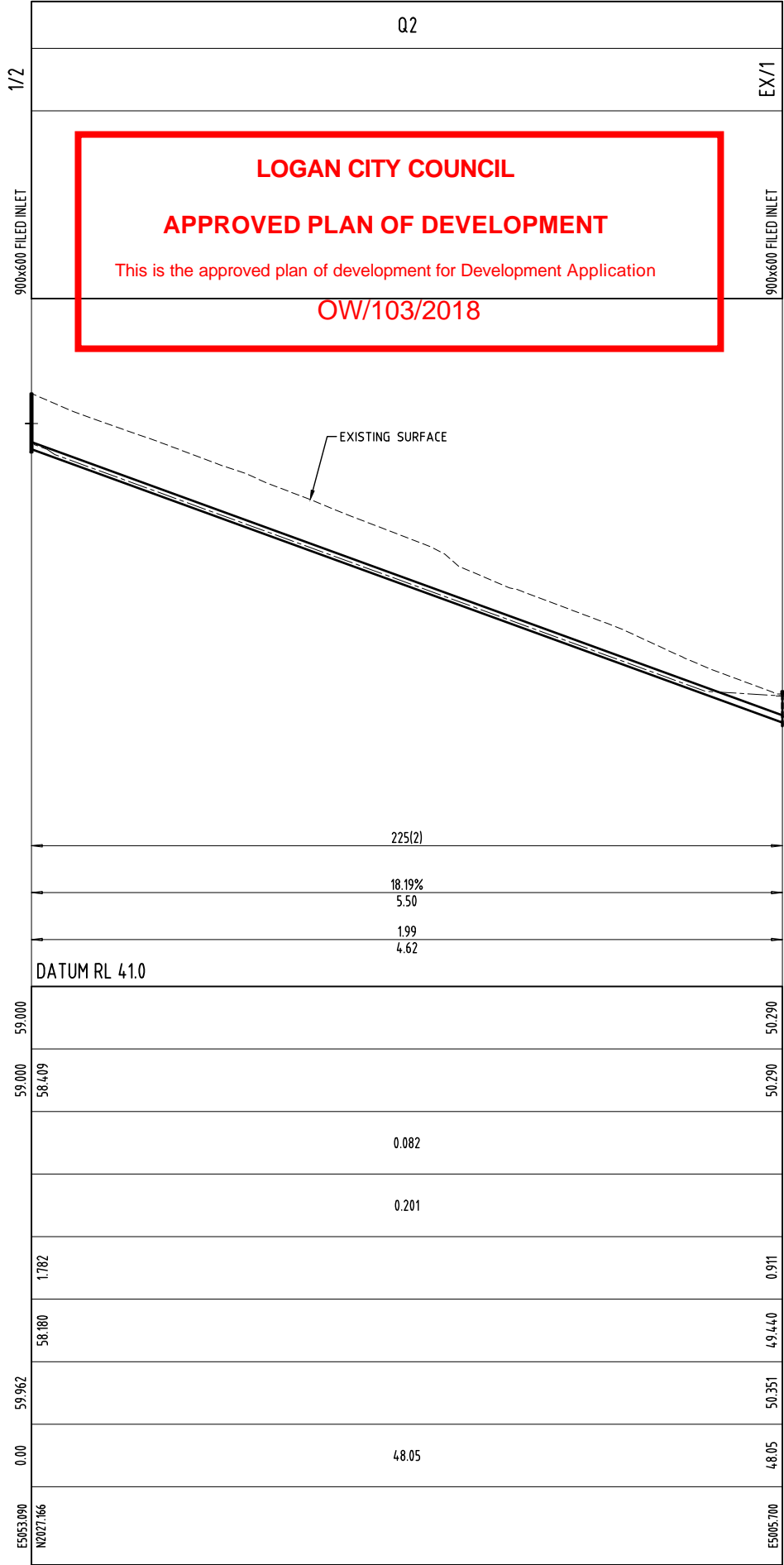
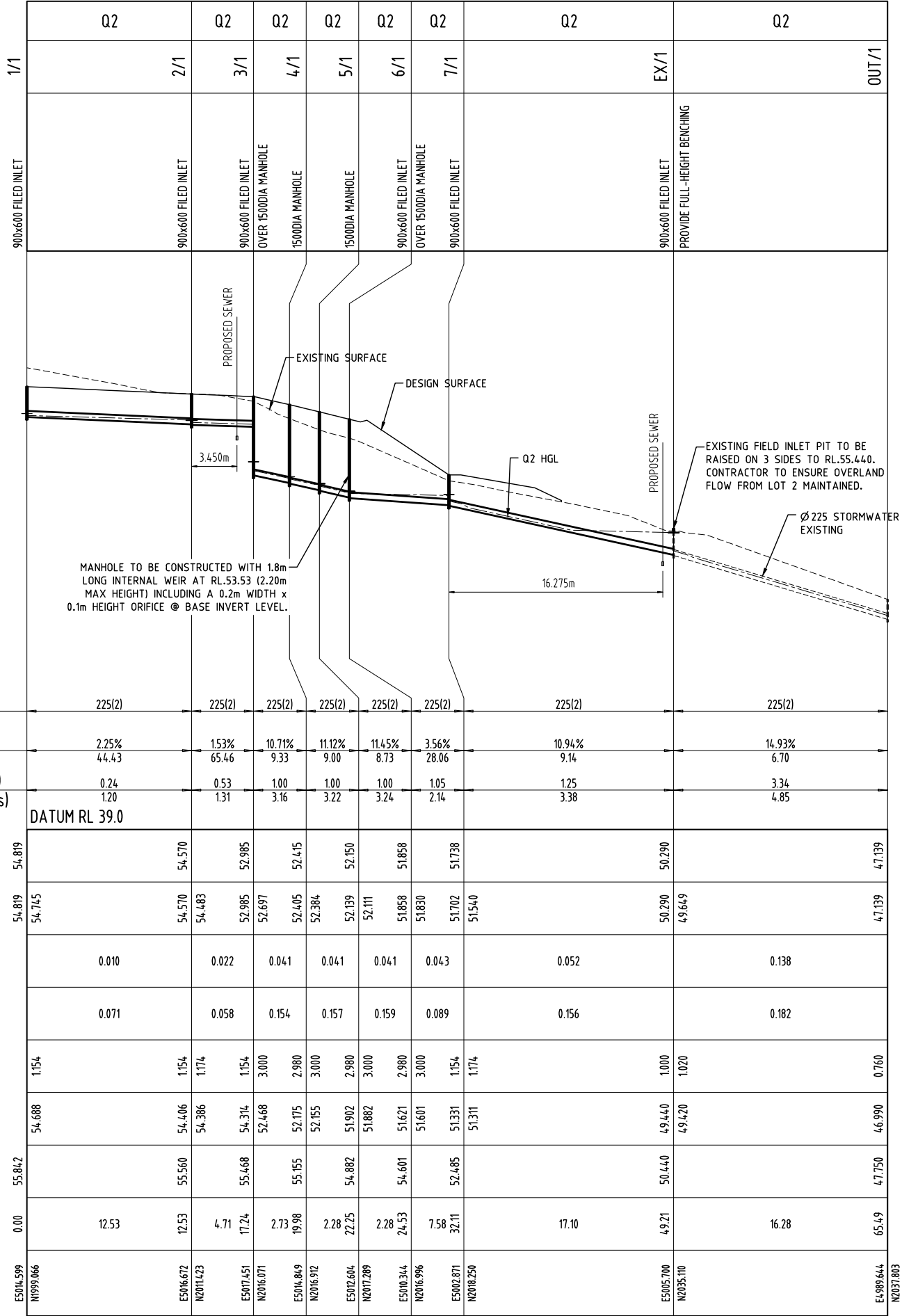
SCHEDULE OF CATCHMENTS

CATCHMENT No.	AREA
1/1	0.035 Ha.
2/1	0.039 Ha.
3/1	0.066 Ha.
6/1	0.006 Ha.
7/1	0.029 Ha.
1/2	0.300 Ha.
EX/1	0.031 Ha.

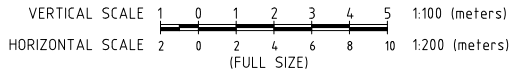
DESIGN EVENT
STRUCTURE NAME
STRUCTURE DESCRIPTION

PIPE SIZE	mm (Class)
PIPE GRADE	%
PIPE SLOPE	1 in X
FULL PIPE FLOW VELOCITY	(m/s)
PART FULL FLOW VELOCITY	(m/s)

WATER LEVEL IN STRUCTURE
HYDRAULIC GRADE LEVEL
PIPE FLOW (Cumecs)
PIPE CAPACITY AT GRADE (Cumecs)
DEPTH TO INVERT
INVERT LEVEL OF DRAIN
DESIGN SURFACE LEVEL
RUNNING CHAINAGE
SETOUT COORDINATES



STORMWATER DRAINAGE LONGITUDINAL SECTIONS



RESIDENTIAL DEVELOPMENT

AT LOT 514 SP227192  
82 OUTLOOK DRIVE,  
WATERFORD

FOR  
ROUBAIX PROPERTIES

A1 ORIGINAL SIZE BEFORE REDUCTION

B	STORMWATER AMENDMENTS	30-04-18
A	ORIGINAL ISSUE	16-03-18
VER.	DESCRIPTION	DATE

**COPYRIGHT ©**  
This drawing is copyright and the property of Burchills Engineering Solutions. It must not be retained, copied or used without the authority of Burchills Engineering Solutions.

**DISCLAIMER**  
This drawing and its contents are electronically generated, are confidential and may only be used for the purpose for which they were intended.  
Burchills Engineering Solutions will not accept responsibility for any consequences arising from the use of the drawing for other than its intended purpose or where the drawing has been altered, amended or changed either manually or electronically by any third party.

**NOTE**  
This is an uncontrolled document issued for information purposes only, unless the checked sections are signed or completed.  
Figured dimensions take precedence over scale. Do not scale reduced size drawings. Verify dimensions prior to commencing any on-site or off-site works or fabrication.



Level 2, Connaught Centre  
26 Marine Parade, Southport QLD 4215  
PO Box 3766, Australia Fair, Southport QLD 4215  
Phone: +61 7 5509 6400  
Fax: +61 7 5509 6411  
Email: admin@burchills.com.au  
**Coote Burchills Engineering Pty Ltd**  
ABN 76 166 942 365

PROJECT:  
  
**ROADWORKS & SERVICES**

DRAWING TITLE:  
  
**STORMWATER DRAINAGE  
LONGITUDINAL SECTIONS**

DEVEL. APPLIC. No.: - DATE: 30-04-18

PROJECT LEADER: LUCAS FAULKNER

DESIGNER: THUY VU

DRAFTSPERSON: THUY VU

CHECKED: ADAM COOPER

APPROVED FOR AND ON BEHALF OF  
BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365

RPEQ No.: 8093

SCALE: AS NOTED DATUM: AHD FULL SIZE: A1

PROJECT No.: BE170054-01 DRAWING No.: C410 VERSION: B

FILENAME: Z:\CIVIL\1. PROJECTS\2017\035 82 OUTLOOK DRIVE - WATERFORD\Area\BENCH-31 Earthworks\SETUP\051-C428-B.dwg  
PLOTTED: 30-04-2018 at 09:14

LOCATION					TIME		SUB-CATCHMENT RUNOFF					INLET DESIGN					DRAIN DESIGN										HEADLOSSES										PART FULL				DESIGN LEVELS											
DESIGN ARI	STRUCTURE No.	DRAIN SECTION	SUB-CATCHMENTS CONTRIBUTING	LAND USE	SLOPE OF CATCHMENT	SUB-CATCHMENT TIME OF CONC.	RAINFALL INTENSITY	10yr RUNOFF CO-EFFICIENT	CO-EFFICIENT OF RUNOFF	SUB-CATCHMENT AREA	EQUIVALENT AREA	SUM OF (C x A)	SUB-CATCHMENT DISCHARGE	FLOW IN K&C (INC. BYPASS)	ROAD GRADE AT INLET	MINOR FLOW ROAD CAPACITY	INLET TYPE	FLOW INTO INLET	BYPASS FLOW	BYPASS STRUCTURE No.	CRITICAL TIME OF CONC.	RAINFALL INTENSITY	TOTAL (C x A)	MAJOR TOTAL FLOW	MAJOR SURFACE FLOW CAPACITY	MAJOR SURFACE FLOW	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE / BOX DIMENSIONS (CLASS)	FLOW VELOCITY FULL (PIPE GRADE VELOCITY)	TIME OF FLOW IN REACH	STRUCTURE CHART No.	STRUCTURE RATIOS FOR 'K' VALUE CALCULATIONS	VELOCITY HEAD	U/S HEADLOSS COEFFICIENT	U/S PIPE STRUCT. HEADLOSS	LAT. HEADLOSS CO-EFFICIENT	LAT. PIPE STRUCT. HEADLOSS	W.S.E CO-EFFICIENT	CHANGE IN W.S.E	PIPE FRICTION SLOPE	PIPE FRICTION HEADLOSS (L x Sf)	DEPTH	VELOCITY	OVERT LEVELS	DRAIN SECTION H.G.L.	UPSTREAM H.G.L.	LAT. H.G.L.	W.S.E.	SURFACE OR K&C INVERT LEVEL	STRUCTURE No.
YRS					%	min	mm/h			ha	ha	ha	L/s	L/s	%	L/s		L/s	L/s		min	mm/h	ha	L/s	L/s	L/s	L/s	m	%	mm	m/s	min			m		m		%	m	m/s	m	m	m	m	m	m					
2 100	1/1	1/1 to 2/1	1/1			5.00 5.00	151 303	0.72 1.00	0.035 0.035	0.025 0.035	0.025 0.035	10 29	10 29	2.25 0.025m	230		100	10	0	2/1	5.00 5.00	151 303	0.025 0.035	29		10 (Pipe flow= Grate flow)	2.25	225(2	0.24 (1.71)	0.21		Qg 0.010 Qo 0.010 Do 225 CHRT 32: Vo2/2gDo 0.01 H/Do Kg side flow 10.49 end flow 7.37 Part full downstream pipe	0.003	1.00	0.074			1.00 0.074	0.05	0.006	0.057	1.20	54.917 54.635	54.745 54.570	54.819		54.819	55.842	1/1			
2 100	2/1	2/1 to 3/1	1/2/1			5.00 5.00	151 303	0.72 1.00	0.039 0.039	0.028 0.039	0.028 0.039	12 33	12 33	2.25 0.026m	230		100	12	0	3/1	5.21 5.21	149 299	0.053 0.074	61		22 (Pipe flow= Sum upstr after flows)	4.713 153	225(2	0.53 (1.41)	0.08		Qg 0.012 Qo 0.022 Do 225 CHART 33 Angle 0 S/Do 2.5 Du/Do 100 Qg/Qo 0.55 K 1.59 S/Do 1.15 cor 0.86 Ku 2.45 Kw 2.45	0.014	1.00	0.087			1.00 0.087	0.21	0.010	0.097	1.31	54.615 54.543	54.483 54.415	54.570		54.570	55.560	2/1			
2 100	3/1	3/1 to 4/1	1/2/1/3/1			5.00 5.00	151 303	0.72 1.00	0.066 0.066	0.048 0.066	0.048 0.066	20 56	20 56	12.00 0.023m	531		100	20	0	6/1	5.29 5.29	148 298	0.101 0.140	116		41 (Pipe flow= Sum upstr after flows)	2.735 10.71	225(2	1.00 (3.74)	0.05		Qg 0.020 Qo 0.041 Do 225 Flow 2/1 made eqv grate flow CHRT 32: Vo2/2gDo 0.22 H/Do Kg side flow 5.65 end flow 4.67 K vals above for stepped pipes as grate flow	0.051	5.65	0.288			5.65 0.288	0.77	0.021	0.081	3.16	52.697 52.404	52.697 52.405	52.985		52.985	55.468	3/1			
2 100	4/1	4/1 to 5/1	1/2/1/3/1													M					5.34 5.34	148 297	0.101 0.140	116		41 (Pipe flow= Sum upstr after flows)	2.276 11.12	225(2	1.00 (3.81)	0.04		Qo 0.041 Do 225 CHART 50 Du/Do100 alpha 8 K'w 0.17 Vu 104 WSE 0.93 Ku 0.42 Kw 0.60	0.051	0.42	0.021			0.60 0.031	0.77	0.017	0.081	3.22	52.384 52.31	52.384 52.139	52.405		52.415	55.155	4/1			
2 100	5/1	5/1 to 6/1	1/2/1/3/1													M					5.38 5.38	147 296	0.101 0.140	115		41 (Pipe flow= Sum upstr after flows)	2.279 11.45	225(2	1.00 (3.86)	0.04		Qo 0.041 Do 225 CHART 50 Du/Do100 alpha 17 K'w 0.20 Vu 104 WSE 0.84 Ku 0.54 Kw 0.76	0.051	0.54	0.028			0.76 0.039	0.77	0.017	0.080	3.24	52.111 51.850	52.111 51.858	52.139		52.150	54.882	5/1			
2 100	6/1	6/1 to 7/1	1/2/1/3/1/6/1			5.00 5.00	151 303	0.72 1.00	0.006 0.006	0.004 0.006	0.004 0.006	2 5	2 5	12.00 0.010m	531		100	2	0		5.42 5.42	147 295	0.105 0.146	120		43 (Pipe flow= Sum upstr after flows)	7.577 3.56	225(2	1.05 (2.15)	0.12		Qg 0.002 Qo 0.043 Do 225 CHART 34 Angle 17 Case 3 S/Do 2.5 Du/Do 100 Qg/Qo 0.85 K 0.43 S/Do 1.12 cor 0.07 Ku 0.50 Kw 0.50	0.056	0.50	0.028			0.50 0.028	0.84	0.064	0.113	2.14	51.830 51.560	51.830 51.702	51.858		51.858	54.601	6/1			
2 100	7/1	7/1 to EX/1	1/2/1/3/1/6/1/7/1			5.00 5.00	151 303	0.72 1.00	0.029 0.029	0.021 0.029	0.021 0.029	9 24	9 24	1.00 0.028m	153		100	9	0		5.54 5.54	146 293	0.126 0.175	142		52 (Pipe flow= Sum upstr after flows)	17.096 10.94	225(2	1.25 (3.78)	0.23		Qg 0.009 Qo 0.052 Do 225 Angle 90 Chart 41 S/Do 2.5 chart Du/Do 100 K0 1.92 K0.5 2.12 Qu/Do 0.83 Cg 0.41 K 2.01 S/Do 2.0 K0 2.44 K0.5 2.40 K 2.42 S/Do 1.5 K0 2.67 K0.5 2.58 K 2.63	0.080	2.04	0.162			2.48 0.198	1.20	0.205	0.090	3.38	51.540 49.669	51.540 50.290	51.702		51.738	52.485	7/1			
2 100	1/2	1/2 to EX/1	1/2			5.00 5.00	151 303	0.65 1.00	0.300 0.300	0.195 0.300	0.195 0.300	82 253	82 253	0.00			100	82	0		5.00 5.00	151 303	0.195 0.300	253		82 (Pipe flow= Grate flow)	48.051 18.19	225(2	1.99 (4.87)	0.40		Qg 0.082 Qo 0.082 Do 225 CHRT 32: Vo2/2gDo 0.88 H/Do Kg side flow 2.93 end flow 2.72	0.202	2.93	0.591			2.93 0.591	3.04	1.462	0.102	4.62	58.409 49.669	58.409 50.290	59.000		59.000	59.962	1/2			
2 100	EX/1	EX/1 to OUT/1	1/2/1/3/1/6/1/7/1/2/EX/1			5.00 5.00	151 303	0.72 1.00	0.031 0.031	0.022 0.031	0.022 0.031	9 26	9 26	1.00 0.028m	153		100	9	0		5.77 5.77	144 289	0.343 0.506	406		138 (Pipe flow= Sum upstr after flows)	16.280 14.93	225(2	3.34 (4.41)	0.08		Qg 0.009 Qo 0.138 Do 225 Routine 2.1 CHART 48 Du/Do 100 Qg/Qo 0.57 K 1.35 d/Do 2.0 chrt Qg/Qo 0.06 Kg 0.06 d/Do 1.5 chrt Qg/Qo 0.06 Kg 0.06 d/Do 100 Interp value Kg 0.05 Ku=(Kw= 1.41 Combined pipes in line case Join Pipes: 1/2 and 7/1	0.569	1.13	0.641			1.13 0.641	8.56	1.394	0.149	4.85	49.649 47.219	49.649 47.143	50.290		50.290	50.351	EX/1			

CALCULATIONS TABLE

LOGAN CITY COUNCIL

APPROVED PLAN OF DEVELOPMENT

This is the approved plan of development for Development Application

OW/103/2018

RESIDENTIAL DEVELOPMENT

AT LOT 514 SP227192  
82 OUTLOOK DRIVE,  
WATERFORD

FOR

ROUBAIX PROPERTIES

A1 ORIGINAL SIZE BEFORE REDUCTION

B	STORMWATER AMENDMENTS	30-04-18
A	ORIGINAL ISSUE	16-03-18
VER.	DESCRIPTION	DATE

COPYRIGHT ©

This drawing is copyright and the property of Burchills Engineering Solutions. It must not be retained, copied or used without the authority of Burchills Engineering Solutions.

DISCLAIMER  
This drawing and its contents are electronically generated, are confidential and may only be used for the purpose for which they were intended. Burchills Engineering Solutions will not accept responsibility for any consequences arising from the use of the drawing for other than its intended purpose or where the drawing has been altered, amended or changed either manually or electronically by any third party.

NOTE  
This is an uncontrolled document issued for information purposes only, unless the checked sections are signed or completed. Figured dimensions take precedence over scale. Do not scale reduced size drawings. Verify dimensions prior to commencing any on-site or off-site works or fabrication.



Level 2, Connaught Centre  
26 Marine Parade, Southport QLD 4215  
PO Box 3766, Australia Fair, Southport QLD 4215  
Phone: +61 7 5509 6400  
Fax: +61 7 5509 6411  
Email: admin@burchills.com.au  
Coote Burchills Engineering Pty Ltd  
ABN 76 166 942 365

PROJECT:

ROADWORKS & SERVICES

DRAWING TITLE:

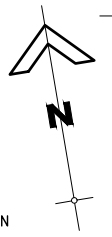
STORMWATER DRAINAGE  
CALCULATIONS

DEVEL. APPLIC. No. : -	DATE : 30-04-18
PROJECT LEADER : LUCAS FAULKNER	
DESIGNER : THUY VU	
DRAFTSPERSON : THUY VU	
CHECKED : ADAM COOPER	
APPROVED FOR AND ON BEHALF OF BURGCHILLS ENGINEERING SOLUTIONS	ABN 76 166 942 365
RPEQ No. : 8093	
SCALE : AS NOTED	DATUM : AHD
PROJECT No. : BE170054-01	DRAWING No. : C420
	VERSION: B

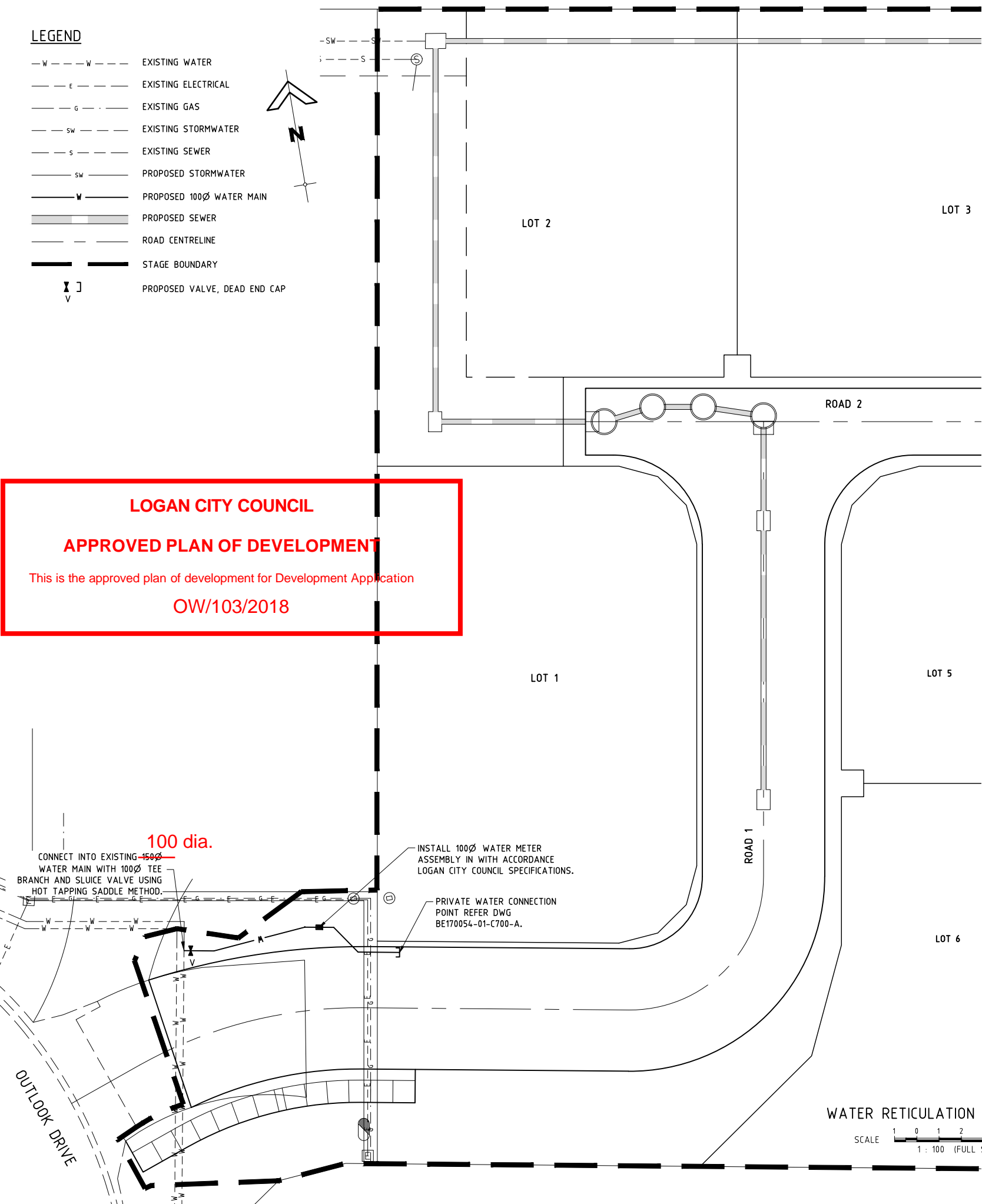
FILENAME: Z:\CIVIL\1. PROJECTS\2018\035 82 OUTLOOK DRIVE, WATERFORD Area\BENCH-01 Earthworks\BENCH-01 CS00-B.dwg  
PLOTTED: 30-04-2018 at 09:15

LEGEND

- W — — — — — EXISTING WATER
- E — — — — — EXISTING ELECTRICAL
- G — — — — — EXISTING GAS
- SW — — — — — EXISTING STORMWATER
- S — — — — — EXISTING SEWER
- SW — — — — — PROPOSED STORMWATER
- W — — — — — PROPOSED 100Ø WATER MAIN
- — — — — PROPOSED SEWER
- — — — — ROAD CENTRELINE
- — — — — STAGE BOUNDARY
- ⌋ V PROPOSED VALVE, DEAD END CAP



**LOGAN CITY COUNCIL**  
**APPROVED PLAN OF DEVELOPMENT**  
This is the approved plan of development for Development Application  
OW/103/2018



NOTES:

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT SOUTH EAST QUEENSLAND WATER SUPPLY CODE SPECIFICATIONS AND STANDARDS.
- UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
- ALL POTABLE WATER MAINS ARE TO BE PVC-M SERIES 2 PN 16 (RRJ). ALL POTABLE WATER MAIN ROAD CROSSINGS TO BE D1CL CLASS PN35 POLYETHYLENE SLEEVED AS SPECIFIED. MINIMUM COVER TO WATERMAINS SHALL BE:
  - a) FOOTPATH 600mm TO TOP OF PIPE
  - b) ROAD CROSSING 600mm TO TOP OF PIPE
- CONDUITS TO BE INSTALLED IN ACCORDANCE WITH THE STANDARD DRAWINGS.
- 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 DRAWINGS FOR THE SEQ-SP.
- ALL MATERIALS USED IN THE WORKS SHALL COMPLY WITH THE SEQ-SP's ACCEPTED PRODUCTS AND MATERIALS LIST.
- TEST/CHLORINATION POINTS TO BE INSTALLED IN ACCORDANCE WITH STANDARD DRAWINGS No.SEQ-WAT-1410-1.
- THE CONSTRUCTION OF THE WATER RETICULATION WORK SHOWN ON THIS DRAWING MUST BE SUPERVISED BY AN ENGINEER WHO HAS AN RPEQ REGISTRATION. WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT TO THE RETICULATION SYSTEM.
- ALL BEDDING AND BACKFILL TO BE CONSTRUCTED IN ACCORDANCE WITH S.E.Q STD DWGS SEQ-WAT-1200-1 TO SEQ-WAT-1204-1 INCLUSIVE.
- ALL THRUST BLOCKS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH S.E.Q STD DWGS SEQ-WAT-1205-1 TO SEQ-WAT-1207-1 INCLUSIVE.
- ALL ROAD CROSSINGS ARE TO BE IN CONSTRUCTED IN ACCORDANCE WITH STANDARD DRAWING SEQ-WAT-1108-1.
- FOR LOCATIONS OF ELECTRICAL ROAD CROSSING CONDUITS REFER ELECTRICAL CONSULTANT'S DRAWINGS.
- WATER SERVICE LOCATIONS SHALL BE IN CONFLICT WITH ELECTRICAL PILARS. SUPERINTENDENT TO BE NOTIFIED PRIOR TO CONSTRUCTION IF CONFLICT IS APPARENT.
- ALL HYDRANTS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH S.E.Q. STD DWGS SEQ-WAT-1300-1 TO SEQ-WAT-1303-01 INCLUSIVE.
- LIVE CONNECTION TO EXISTING WATER MAIN TO BE CARRIED OUT BY LOGAN CITY COUNCIL (OR AS DIRECTED BY LCC) AT DEVELOPERS EXPENSE. CONTRACTOR TO CONTACT LCC TO REQUEST QUOTATION AND ARRANGE FOR LIVE CONNECTIONS.

ENVIRONMENTAL CONDITIONS NOTES

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 1.8m 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 TUNNELED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED THE DAMAGED AREA SHALL BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT RELEVANT COUNCIL ARBORIST FOR FURTHER ADVICE.
- 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.
- ACID SULPHATE SOIL  
A SUITABILITY QUALIFIED GEOTECHNICAL ENGINEER SHOULD BE ON SITE DURING THE TRENCH EXCAVATION AND THE PRESENCE OF ACID SULPHATE SOILS BE CONSIDERED FROM VISUAL ASSESSMENT ONLY. IF ACID SULPHATE SOILS ARE CONSIDERED PRESENT, A 0.5KG SOIL SAMPLE IS TO BE TAKEN FROM THE TRENCH AND TESTED.

REHABILITATION

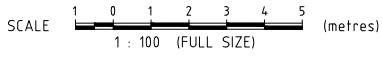
- PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS SHALL BE REINSTATED.
- PREDISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.

SAFETY

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

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

WATER RETICULATION LAYOUT PLAN



RESIDENTIAL DEVELOPMENT

AT LOT 514 SP227192  
82 OUTLOOK DRIVE,  
WATERFORD

FOR  
ROUBAIX PROPERTIES

A1 ORIGINAL SIZE BEFORE REDUCTION

B	PLAN AMENDMENTS	30-04-18
A	ORIGINAL ISSUE	16-03-18
VER.	DESCRIPTION	DATE

**COPYRIGHT ©**  
This drawing is copyright and the property of Burchills Engineering Solutions. It must not be retained, copied or used without the authority of Burchills Engineering Solutions.  
**DISCLAIMER**  
This drawing and its contents are electronically generated, are confidential and may only be used for the purpose for which they were intended.  
Burchills Engineering Solutions will not accept responsibility for any consequences arising from the use of the drawing for other than its intended purpose or where the drawing has been altered, amended or changed either manually or electronically by any third party.  
**NOTE**  
This is an uncontrolled document issued for information purposes only, unless the checked sections are signed or completed. Figured dimensions take precedence over scale. Do not scale reduced size drawings. Verify dimensions prior to commencing any on-site or off-site works or fabrication.



Level 2, Connaught Centre  
26 Marine Parade, Southport QLD 4215  
PO Box 3766, Australia Fair, Southport QLD 4215  
Phone: +61 7 5509 6400  
Fax: +61 7 5509 6411  
Email: admin@burchills.com.au  
**Coote Burchills Engineering Pty Ltd**  
ABN 76 166 942 365

PROJECT:  
**ROADWORKS & SERVICES**

DRAWING TITLE:  
**WATER RETICULATION LAYOUT PLAN**

DEVEL. APPLIC. No. : -	DATE : 30-04-18
PROJECT LEADER : LUCAS FAULKNER	
DESIGNER : THUY VU	
DRAFTSPERSON : THUY VU	
CHECKED : ADAM COOPER	
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365	
RPEQ No. : 8093	
SCALE : AS NOTED	DATUM : AHD
PROJECT No. : BE170054-01	DRAWING No. : C500
	VERSION : B

LEGEND

- W

---

E

---

G

---

SW

---

S

---

W

---

S
- EXISTING WATER
- EXISTING ELECTRICAL
- EXISTING GAS
- EXISTING STORMWATER
- EXISTING SEWER
- PROPOSED STORMWATER
- PROPOSED WATER MAIN
- PROPOSED SEWER MAIN
- STAGE BOUNDARY

N

SERVICE PROVIDER AND CONSTRUCTOR LIVE SEWER WORKS SCHEDULE

No.	DESCRIPTION	DIA. SEWER	MH No.	MH/MS TYPE	COVER TYPE	LOT No.	F.S.L.	E.S.L.	I.L.	DEPTH TO INVERT
1(A)	AGENCY TO BREAK INTO EXISTING MAINTENANCE HOLE 1/EX AND CONSTRUCT 150mm STUB (TEMPORARILY END CAPPED) PRIOR TO START OF CONSTRUCTION.	150	1/EX	P2	(B) (EXISTING D/S OUTLET)		50.379	50.379	49.093	1.286
1(B)	CONSTRUCTOR TO LAY NEW LINE EX. AFTER CLEANSING, TESTING AND INSPECTING, NOTIFY AGENCY.	150	1/EX	P2	(LINE EX)		50.379	50.379	48.360	2.019
1(C)	AGENCY TO REMOVE TEMPORARY END CAP AND STUB & LINE 101 AND MAKE LIVE CONNECTIONS AFTER SUCCESSFUL "ON MAINTENANCE" INSPECTION.									

NOTES:

1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT SOUTH EAST QUEENSLAND SEWERAGE SUPPLY CODE SPECIFICATIONS AND STANDARDS.
2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
3. THE CONSTRUCTION OF THE SEWERAGE WORK SHOWN ON 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.
4. ALL WORK ASSOCIATED WITH LIVE SEWERS OR MAINTENANCE HOLES SHALL BE CARRIED OUT BY THE SEQ SERVICE PROVIDER AT THE DEVELOPER'S COST.
5. ALL PIPES AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE "ACCEPTED PRODUCTS AND MATERIALS" LIST.
6. EACH ALLOTMENT SHALL BE SERVED BY A DN100 PVC PROPERTY CONNECTION. FOR ALLOTMENTS OTHER THAN SINGLE RESIDENTIAL, A DN150 PVC PROPERTY CONNECTION SHALL BE PROVIDED.
7. PROPERTY CONNECTIONS SHALL BE LOCATED WITHIN THE PROPERTY AS SHOWN IN THE DRAWINGS.
8. PROPERTY CONNECTION BRANCHES SHALL EXTEND INTO THE PROPERTY A MINIMUM OF 300mm AND A MAXIMUM OF 1000mm. ALL PROPERTY CONNECTION BRANCHES TO BE CONSTRUCTED IN ACCORDANCE WITH STANDARD DRAWINGS SEQ-SEW-1104-1 AND SEQ-SEW-1105-1.
9. WHERE PIPES ARE LAID IN FILL, THE FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300mm (LOOSE) IN DEPTH AND SHALL BE COMPACTED UNTIL THE COMPACTION IS NOT LESS THAN 95% OF THE MATERIAL MAXIMUM COMPACTION WHEN TESTED IN ACCORDANCE WITH A.S.1289 (MODIFIED COMPACTION). TESTING WILL BE CARRIED OUT AFTER EACH ALTERNATIVE 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 REQUIRED COMPACTION HAS BEEN ACHIEVED.
10. WHERE SEWERS HAVE A GRADE OF 1 IN 20 OR STEEPER, BULKHEADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SEQ SEWER CODE.
11. THE CONTRACTOR 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. FOR SEWERAGE RETICULATION ALIGNMENTS AND STRUCTURE LOCATIONS REFER LONGITUDINAL SECTIONS.
15. THE CONTRACTOR SHALL MAINTAIN MINIMUM VERTICAL CLEARANCE FROM ALL EXISTING UTILITIES WHERE CROSSING OCCUR IN ACCORDANCE WITH THE SEQ SEWERAGE CODE SPECIFICATION.
16. THE CONTRACTOR SHALL HAVE AN APPROVED SET OF CONSTRUCTION DRAWINGS AND ALL RELEVANT STANDARD DRAWINGS AND STANDARD SPECIFICATIONS ON SITE AT ALL TIMES DURING THE CONSTRUCTION PHASE.
17. CONTRACTOR TO CONTACT LCC TO REQUEST QUOTATION AND ARRANGE FOR LIVE CONNECTIONS TO BE COMPLETED AT THE DEVELOPERS EXPENSE.
18. ANY DAMAGE TO EXISTING SEWER INFRASTRUCTURE IS TO BE RECTIFIED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
19. CONTRACTOR IS TO PROVIDE 24 HOUR ACCESS TO LCC FOR EXISTING LIVE MAINS FOR GENERAL MAINTENANCE PURPOSES.

RESIDENTIAL DEVELOPMENT

AT LOT 514 SP227192  
82 OUTLOOK DRIVE,  
WATERFORD

FOR

ROUBAIX PROPERTIES

A1 ORIGINAL SIZE BEFORE REDUCTION

B	PLAN AMENDMENTS	30-04-18
A	ORIGINAL ISSUE	16-03-18
VER.	DESCRIPTION	DATE

COPYRIGHT ©

This drawing is copyright and the property of Burchills Engineering Solutions. It must not be retained, copied or used without the authority of Burchills Engineering Solutions.

DISCLAIMER

This drawing and its contents are electronically generated, are confidential and may only be used for the purpose for which they were intended.

Burchills Engineering Solutions will not accept responsibility for any consequences arising from the use of the drawing for other than its intended purpose or where the drawing has been altered, amended or changed either manually or electronically by any third party.

NOTE

This is an uncontrolled document issued for information purposes only, unless the checked sections are signed or completed. Figured dimensions take precedence over scale. Do not scale reduced size drawings. Verify dimensions prior to commencing any on-site or off-site works or fabrication.

BURCHILLS  
ENGINEERING SOLUTIONS

Level 2, Connaught Centre  
26 Marine Parade, Southport QLD 4215  
PO Box 3766, Australia Fair, Southport QLD 4215  
Phone: +61 7 5509 6400  
Fax: +61 7 5509 6411  
Email: admin@burchills.com.au  
Coote Burchills Engineering Pty Ltd  
ABN 76 166 942 365

PROJECT:

ROADWORKS & SERVICES

DRAWING TITLE:

SEWERAGE RETICULATION LAYOUT PLAN

DEVEL. APPLIC. No. : -	DATE : 30-04-18
PROJECT LEADER : LUCAS FAULKNER	
DESIGNER : THUY VU	
DRAFTSPERSON : THUY VU	
CHECKED : ADAM COOPER	
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365	
RPEQ No. : 8093	
SCALE : AS NOTED	DATUM : AHD
PROJECT No. : BE170054-01	DRAWING No. : C600
	VERSION : B

LOGAN CITY COUNCIL

APPROVED PLAN OF DEVELOPMENT

This is the approved plan of development for Development Application  
OW/103/2018

SEWERAGE RETICULATION LAYOUT PLAN

SCALE 1 : 100 (FULL SIZE)

FILENAME: Z:\CIVIL\1. PROJECTS\2018\335 82 OUTLOOK DRIVE WATERFORD Area\BETWEEN-91 Earthworks\BETWEEN-91 CAD-B.dwg  
PLOTTED: 30-04-2018 at 09:15