



MOLONEY & SONS™
ENGINEERING

New Beginning Church Blackall

Infrastructure Report

Tourist Park

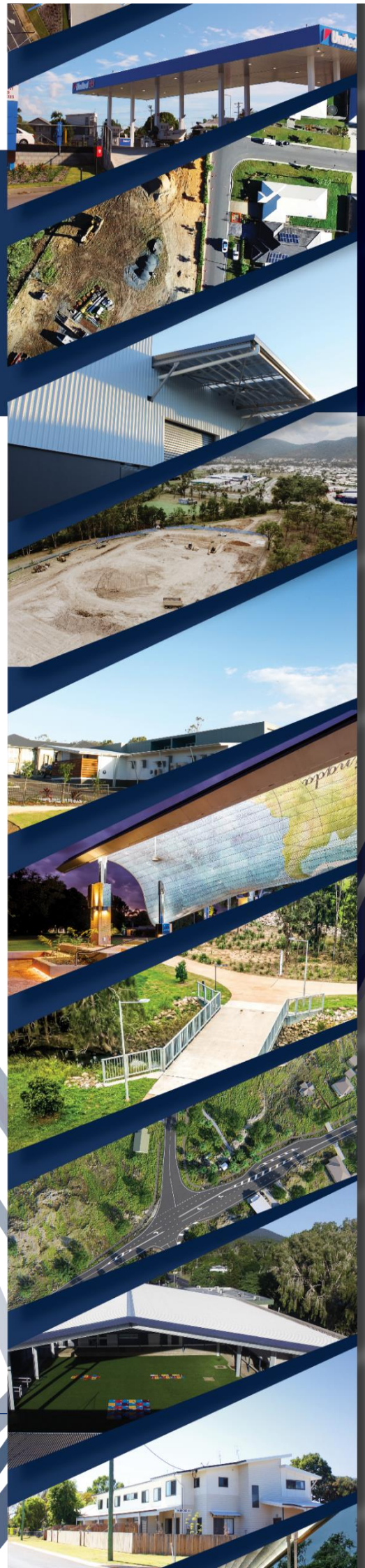
18 Leek St Blackall Q

14 October 2022

FP/001.CE22056 Infrastructure Report Rev A

Contract No. CE22056

A/ PO BOX 3203 RED HILL ROCKHAMPTON Q 4701
MOLONEY & SONS
ABN: 39 133 970 689





COMMERCIAL IN CONFIDENCE

All intellectual property rights, including copyright, in designs developed and documents created by Moloney & Sons Engineering remain the property of this organization. Any use made of such design or document without the prior written approval of Moloney & Sons Engineering will constitute an infringement of the rights of the company which reserves all legal rights and remedies in respect of any such infringement.

The information, including any intellectual property, contained in this proposal is confidential and proprietary to the Company. It may only be used by the person to whom it is provided for the stated purpose for which it is provided and must not be imparted to any third person without the prior written approval of the Company. The Company reserves all legal rights and remedies in relation to any infringement of its rights in respect of its confidential information.

Moloney & Sons Engineering™
Po Box 3203
ROCKHAMPTON QLD 4701
Ph: +614 88 434 954
2022

DOCUMENT CONTROL:

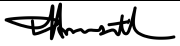
<i>Issue</i>	<i>Date</i>	<i>Issue Description</i>	<i>Author</i>	<i>Checked</i>	<i>Approved</i>
A	14/10/22	Issued for Approval	LM	DA	 RPEQ 7637



TABLE OF CONTENTS

COMMERCIAL IN CONFIDENCE.....	2
Executive Summary.....	4
1. Introduction and Background.....	5
2. Site Characteristics and Civil Works.....	6
2.1. Terrain.....	6
2.2. Preparatory Siteworks.....	6
2.3. Internal Roadworks.....	6
2.4. External Roadworks.....	6
3. Wastewater Treatment/Sewerage Reticulation.....	6
3.1. Design Flows.....	7
4. Potable Water Reticulation.....	8
5. Stormwater Quantity Assessment.....	9
5.1. Introduction.....	9
5.2. Site Characteristics.....	9
5.3. Proposed Development and Associated Issues.....	10
5.4. Stormwater Mitigation.....	10
5.5. External Catchments.....	10
5.6. Lawful Point of Discharge.....	10
5.7. ICM1/XP-STORM Rainfall Parameters.....	10
5.8. Pre-Development Hydrology.....	10
5.9. Post-Development Hydrology.....	11
5.10. Modelling Assumptions & Methodology.....	12
5.11. Design Flow Verification.....	12
5.12. Detention System.....	13
5.13. Stormwater Conclusion and Recommendations.....	14
6. Electrical & Telecommunication Services.....	14
7. Waste and Recycling Collection.....	14
APPENDIX A – Engineering Drawings.....	15
APPENDIX B – Concept Site Plan.....	16
APPENDIX C – Sewer Infrastructure.....	17
APPENDIX D – Water Infrastructure.....	18



EXECUTIVE SUMMARY

Moloney & Sons Engineering (MSE) have been engaged by New Beginning's Church Blackall to prepare an Engineering Infrastructure Report in response to the Further Information Request dated 23 August 2022 issued by the Blackall-Tambo Regional Council for Material Change of Use and Reconfiguring a Lot at 18 Leek St Blackall.

This report addresses the impacts associated with the proposed development specifically in relation to the existing water and sewerage network capacities and proposed site stormwater management methodologies.

The Water and Sewer assessment completed indicates that the low level of demand generated by the site will have a negligible to no impact on the existing water and sewer networks in the local area.

In respect to the stormwater quantity objectives, the developments intent was to demonstrate that there is a no net increase in peak discharges from the subject site. This objective included storm events up to and including the 1% AEP storm event. The purpose is to ensure that the existing infrastructure and/or downstream properties are not adversely affected. The above-mentioned objectives are achieved through the use of detention storage measures.

To achieve the water quantity objectives, the proposed strategy involves providing a total detention volume of 40.2m³ for the site. The storage devices will have a sized outlet to detain stormwater flows generated from the development and will discharge to the respective Lawful Point of Discharge (LPD).



1. INTRODUCTION AND BACKGROUND

Moloney & Sons Engineering (MSE) have been engaged by New Beginning Church Blackall to prepare the following Infrastructure Report in support of the proposed Tourist Park to be developed on 18 Leek St Blackall.

The intent of the Infrastructure Report is to provide guidelines and recommendations to be incorporated into Operational Works detailed design documentation, to ensure existing network services are available and suitable for the subject development and also minimise the impact of the subdivision on the surrounding environment, infrastructure, and property owners. The property is zoned for mixed use under the Blackall-Tambo Region Planning Scheme.



Figure 1 Site Locality

The total area of the site is approximately 1.002 hectares and currently exists as a community church.

The existing site conditions are detailed on drawing CE22056-201-AL included in **Appendix A**.

This report will present a general overview on the Infrastructure that exists in the immediate area and where any upgrading or augmenting needs to be undertaken to ensure that the development can be completed without causing any adverse impacts on existing and future infrastructure.

This report will address Preparatory Site works, Internal Roadworks, Wastewater Treatment/Sewerage Reticulation, Potable Water Reticulation, and provide preliminary confirmation that the development will not create adverse stormwater impacts on external properties.



2. SITE CHARACTERISTICS AND CIVIL WORKS

The proposed development is located at the intersection of Leek Street and Thistle Street in Blackall, Qld; *Figure 1* shows the location of the proposed development.

The proposal is for reconfiguring 1 lot into two lots to provide for a 17 site tourist park with site manager residence.

2.1. Terrain

The general terrain for the property is considered to be generally of a flat nature with shallow saddle towards the centre of the property and extremely gentle slopes in all directions.

2.2. Preparatory Siteworks

The preparatory works for the development will consist of the following:

- Erosion and Sediment Controls, and
- Clearing and Grubbing.

Erosion and sediment control will be installed and maintained in accordance with statutory requirements.

2.3. Internal Roadworks

The internal road network does not fall under any specific council plan requirement, however, with the public use nature of the internal roads it is considered that their design and construction will be in accordance with the IPWEAQ standards and specifications. The concept design layout, DWG-S01 (prepared by Intelli Draft) attached as **Appendix B** shows the proposed internal layout of the Tourist Park and the proposed connection point to Thistle Street.

2.4. External Roadworks

The external roadworks will comprise construction of Thistle Street from the proposed Tourist Park entrance to the intersection of Leek Street, the works will include the construction of an intersection between Thistle Street and Leek Street. Concept design for the proposed works are included in **Appendix A**.

3. WASTEWATER TREATMENT/SEWERAGE RETICULATION

There is an existing 100mm AC gravity sewer main, manhole number 7065, that currently services the existing property located in Leek Street, *Figure 2*. The submitted proposal is for all sites to be provided with individual site ensuite facilities, there is no provision for the emptying and/or cleaning of chemical toilets.

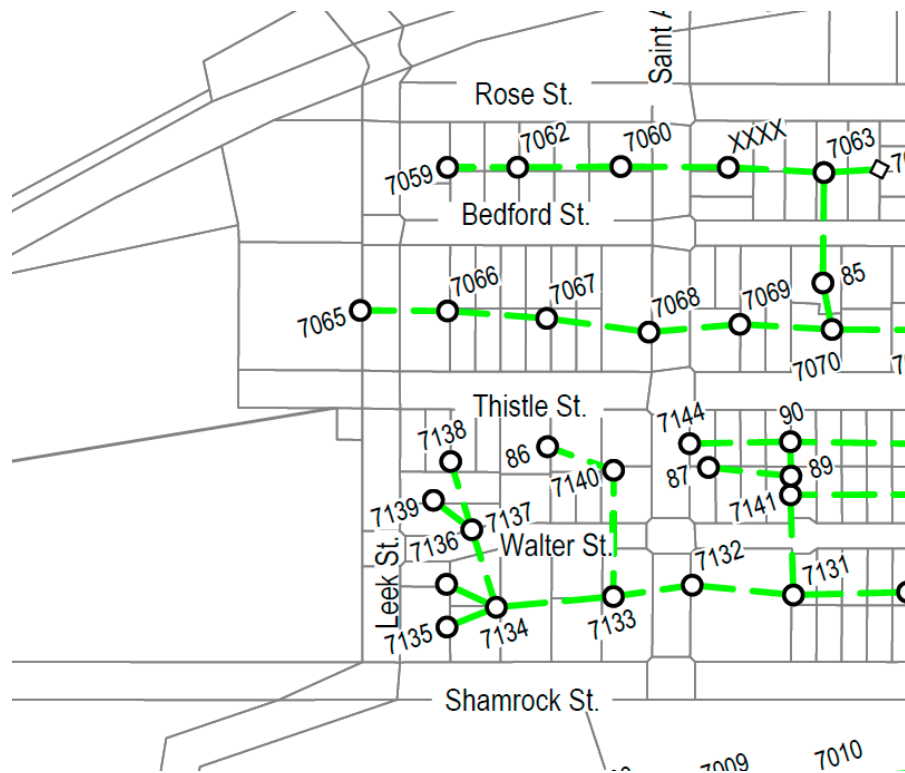


Figure 2 Sewer Infrastructure, refer Appendix C for the full plan and legend

3.1. Design Flows

Sewerage flows for the Tourist Park have been calculated in accordance with ‘Planning Guidelines for Water Supply and Sewerage (Qld Government) as follows:

The indicative average flows contained in Table A show for a Caravan Park – Van the flows as be 300-675 L/day per site, and for a 1 bed apartment or home the flows of 225-450 L/day. The concept plan makes allowance for 16 sites as a mixture of small (10) and large (6) caravans all with an ensuite shower/toilet provided and no chemical toilet facilities it would therefore be reasonable to adopt the upper flow value for a 1 bed apartment of 450 L/day which is reasonably comparable to the Caravan Park flows.

- Average Dry Weather Flow as assumed 450 L/site/day ADWF = 7,200L/day
- Peak Dry Weather Flow (from SEQ WS&S D&C Code ¹table 10) $C2 \times ADWF$ where $C2 = 4.7 \times (EP)^{-0.105}$. Assuming 2 persons per caravan the EP at maximum occupancy would be 32. PDWF = 5,003L/day

The underground pipe network in accordance with Table 10 would comprise DN160 PE100 sewer for the entire network, the addition of the transient population and calculated flows to the existing Blackall gravity sewer network is not likely to generate any wider community impacts. However, there is the option for considering a small storage tank and pump installation to ensure that the site generated flows can be added to the existing sewer network outside of peak usage hours, for example after 12am each evening.

¹ SEQ WS&S D&C Code is the SEQ Water Supply and Sewerage Design & Construction Code that has been adopted in the absence of any applicable local codes, the PDWF adopts the criteria for Gold Coast, Logan, Redland, and Unity Water and is anticipated to provide a very conservative result.



4. POTABLE WATER RETICULATION

There is an existing 100mm PVC water main that currently provides a service along Thistle Street crossing to the western side of Leek Street, this main also provides a connection point for water drawn from Blackall Bore No. 4. refer *Figure 3*. The submitted proposal is for all sites to be provided with potable water to each of the site ensuite facilities.

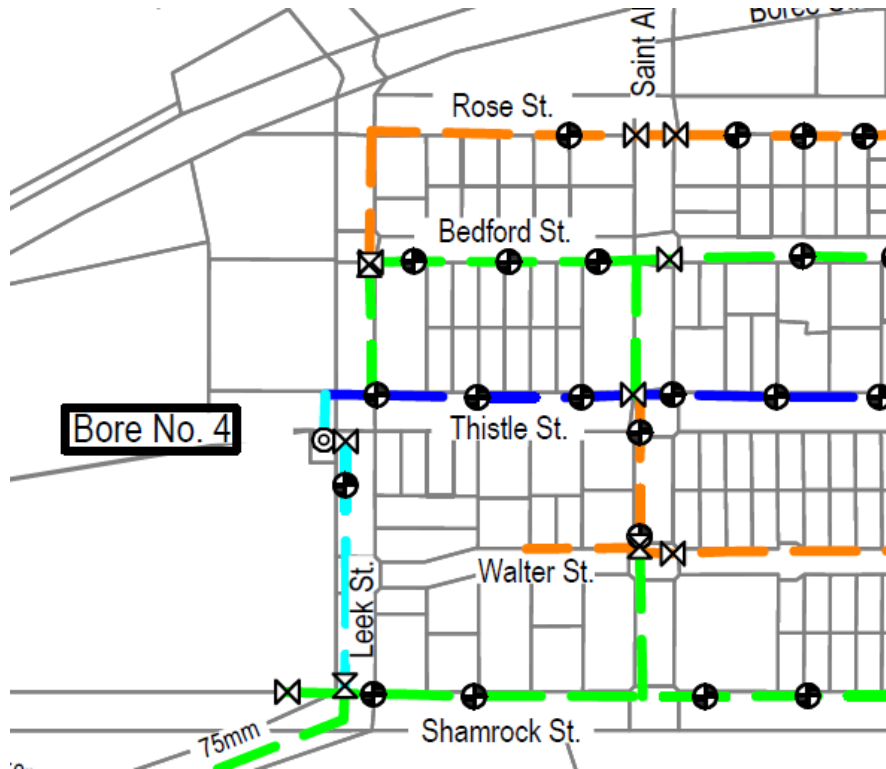


Figure 3 Water Infrastructure, refer Appendix D for the full plan and legend

In the absence of any data on available water main pressure it is expected that the existing water network has capacity available to provide supply to a transient estimated maximum additional population of 32 persons.



5. STORMWATER QUANTITY ASSESSMENT

5.1. Introduction

The stormwater quantity objective was to demonstrate a no net nuisance in peak discharges from the subject site. This objective included storm events up to and including the 1% AEP storm event. The purpose is to ensure that the existing infrastructure and/or downstream properties are not adversely affected.

The aim of the stormwater quantity assessment is to ensure that the development shall impose no adverse effects on downstream properties or receiving water bodies and that the conveyance of flows will be in a safe manner with minimal risk of human endangerment as well as the following objectives:

- Address the need for stormwater quantity control measures.
- Ensure there is no increase in peak discharges from the subject site for events up to and including the 1% AEP event; and
- Ensure proposed quantity control measures detain and convey flows in accordance with QUDM minimum freeboard recommendations.

5.2. Site Characteristics

The topography of the Tourist Park development site is based on Masters Surveying DTM, which details an existing developed site with a total area of 10,017m² across one Lot (Lot 1 CP900484). Whereby the existing site pertains to approx. 6% of impervious roof and building area, when the remaining portion of the site is a mixture of gravel access and grassed/landscaped areas.

The current topography is formed in such that it maintains a 'saddle' type land formation at the centre of the property, whereby the sites stormwater runoff is conveyed via overland flow and falls towards Leek St, Thistle St and the Western and Northern property boundaries (four sub catchments). It is noted a neighbouring residential residence abutting the Northern boundary; however, the western boundary adjoins the Town Common.

It is noted there is no pre-existing underground stormwater network in the Leek or Thistle St frontage and there is no available outlook of any future plan to extend any underground stormwater network infrastructure to these properties. This will play a significant part in the post-developed stormwater management strategy of the site.

The subject site maintains at its low point an AHD level of 282.5m. In accordance the Blackall-Tambo Regional Council Planning Scheme Schedule 4 the 1% AEP Flood Level is advised to be 282m AHD, therefore proposing the site is currently above the 1% AEP Flood Level. It is noted however, the Letter from DHI Water & Environment (DHI Water & Environment, 2014)² claims the 1% AEP to be an 8m reading on Gauge #036155, suggesting an AHD level of 283m.

For the purpose of this stormwater management plan, this report has adopted a 1% AEP Flood Level of 282m AHD in accordance with the Blackall-Tambo Regional Council Planning Scheme Schedule 4. However, in support of any potential change in flood level, the proposed development will ensure all habitable buildings will maintain a 300mm freeboard to this level as defined by Schedule 4 of the Planning Scheme. As will all bulk earthworks maintain a zero net increase in any filling works.

² DHI Water & Environment, 2014. Additional Level 2 GIS Flood Mapping for Blackall.



Refer **Appendix A** for the pre-developed site characteristics.

5.3. Proposed Development and Associated Issues

One of the implications of an increase in impervious area is that the total volume and flow rate of stormwater runoff from the catchment will increase. It is essential that these increases are mitigated such that post-developed peak flows do not exceed those for the pre-developed case.

5.4. Stormwater Mitigation

Stormwater runoff within the site will be directed to a detention system before being discharged via staged outlets to the respective Lawful Point of Discharge (LPD). Stormwater flow generated from the new development will be discharged to the LPDs at flow rates equal to or below predevelopment rates.

Major & Minor Systems have been classified and adopted in accordance with CMDG Stormwater Drainage Design Guidelines in the absence of any specific Blackall-Tambo Regional Council guidelines under “Urban Residential (Low Density)” Table D05-04.1 as 1% AEP & 20% AEP respectively.

5.5. External Catchments

NIL

5.6. Lawful Point of Discharge

As the current site falls in four directions, two of which fall to the northern neighbouring property and west to the adjacent Council owned common land. The proposed post-development scenario will see that a LPD being Thistle & Leek St table drainage will be utilised as the adopted lawful Point of Discharge. Refer to CE22056-301-GA within **Appendix A** for the post-developed site characteristics.

5.7. ICM1/XP-STORM Rainfall Parameters

An Infoworks ICM One/XP-STORM Hydraulic and Runoff model was created to analyse the pre-development and post-development scenarios. The models include a typical 1D node-link connectivity identifying the catchments and hydraulic parameters.

IFD data for the Blackall-Tambo Region produced by the Bureau of Meteorology (<http://www.bom.gov.au/water/designRainfalls/revise-ifd/?multipoint> – Lat -24.418 Long 145.453) was used for the hydrologic analysis for the determination of the ICM One/XP-STORM.

In accordance with the AR&R & TMR Hydrologic & Hydraulic Modelling Guidelines, for each AEP event the full range of storm durations with associated temporal pattern ensembles were assessed in order to determine the critical durations, flow rates and temporal patterns.

5.8. Pre-Development Hydrology

The subject development site is made up of a single lot, with a total area of 10,017m².



The subject site is advantaged by maintaining a topographic landfall whereby all stormwater runoff falls away from the site. As previously outlined under Section 5.2 the site can be further split into four (4) sub-catchments, where the sites overland stormwater runoff sheet flows from the centre of the site in all four cardinal directions, the key catchment parameters are outlined in the Table 1.

The pre-development catchment plan (CE22056-201-AL) for the subject site is demonstrated in **Appendix A** of this report.

The hydrology of the pre-developed catchments has been assessed in accordance with QUDM Section 4.0 using the rational method. From QUDM Section 4.0, the theoretical calculated peak discharge for storm events ranging from the 63% to 1% AEP has been calculated.

The Coefficient of discharge (C_{10}) values were derived from QUDM Table 4.05.3 (a) and Table 4.05.3 (b).

Table 1 Pre-Development Catchment Parameters

Catchment ID	Area (ha)	Avg Slope (%)	Fraction Imp (f_i)	Co-efficient of Runoff (C_{10}) ¹	Time of Concentration (T_c)
A – Total Site	1.0	0.8	0.060	0.46	17min
a.1 – sub-catchment	0.300	0.6	0.018	0.46	18min
a.2 – sub-catchment	0.355	1.0	0.021	0.46	15min
a.3 – sub-catchment	0.200	1.0	0.012	0.46	14min
a.4 – sub-catchment	0.145	0.9	0.008	0.46	12min

¹Good grass cover with Medium Soil Permeability

5.9. Post-Development Hydrology

The proposed development will in effect maintain the pre-development scenario catchment extents.

The proposed post-development intent is to develop an internal un-sealed gravel access road and van parking sites with added impervious areas such as 17 roofed amenity structures (~4sqm) and 1 new additional overseer's residence (~137sqm). Resulting in a very low marginal increase of fraction impervious from pre- to post-development of 6% to 8% respectively.

The post-development catchment plan (CE22056-301-GA) is attached within **Appendix A** for further information.

A standard time of concentration of 10 minutes (QUDM Table 4.06.2) and additional pipe flow was obtained for the post-development time of concentration for each catchment.



Table 2 Post-Development Catchment Parameters

Catchment ID	Area (ha)	Avg Slope (%)	Fraction Imp (f _i)	Co-efficient of Runoff (C ₁₀) ¹	Time of Concentration (T _c)
A1	1.0	0.5	0.08	0.58	16min

¹Good grass cover with Low Soil Permeability

5.10. Modelling Assumptions & Methodology

The following modelling assumptions were used to create the ICM One/XP-STORM Models

- Two (2) separate scenarios were generated, which were:
 - ○ Pre-Development (which included all points of discharge); and
 - ○ Post-Development (which included all points of discharge).
- Each model included runoff nodes for each contributing sub-catchment
- The sub-catchment areas were split into Rural Residential and Urban Residential Land Uses with absolute values adopted for percentages impervious as specified in the above Tables 1 & 2.
- Infiltration uniform losses were applied to the pervious areas of the sub-catchments
- The models were run at various durations for a constant ARI to determine the critical storm event.

5.11. Design Flow Verification

A comparison between the peak discharge values obtained for the 1% through to the 50% AEP storm events using the ICM One/XP-STORM model is contained in Table 3. As can be seen, the peak discharges generated by the ICM One model mostly compare well with a minor increase in runoff of ~20% as a result of the proposed developments minor impervious area increase from 6 to 8% respectively.

Table 3 ICM/XP-STORM Generated Peak Discharges

PRE-DEVELOPMENT					POST-DEVELOPMENT			
Event (ARI)	Event (AEP %)	Critical storm & temp pattern	Catch id	ICM1/XP-Storm (m3/s)	Critical storm & temp pattern	Catch id	ICM1/XP-Storm (m3/s)	Increase (%)
100	1	ECN_1pct_10min_6	A	0.246	ECN_1pct_10min_8	A1	0.301	18
50	2	ECN_2pct_10min_6	A	0.186	ECN_2pct_10min_8	A1	0.236	21
20	5	ECN_5pct_15min_1	A	0.118	ECN_5pct_15min_1	A1	0.159	26
10	10	ECN_10pct_15min_1	A	0.070	ECN_10pct_15min_2	A1	0.098	29
5	20	ECN_20pct_10min_5	A	0.034	ECN_20pct_1hr_5	A1	0.044	23
2	50	ECN_50pct_10min_7	A	0.015	ECN_0.5EY_10min_7	A1	0.015	0



5.12. Detention System

It is proposed to have a single detention basin within the proposed development. The detention basin will collect all overland runoff from Catchment A1 (roof, ground and road). All Major & Minor stormwater flows will be conveyed overland to the detention basin via open swale drain traversing the western boundary as detailed in **Appendix A**. This will ensure that runoff from the subject Catchment A1 are mitigated and discharge to the downstream network without causing a nuisance to surrounding properties.

When modelling the proposed basin in ICM one/XP-STORM, the detention volume was calculated by incorporating the use of the Unit Hydrograph method between the two pre & post-development storm events. This is shown in the table for the relevant catchment basin below.

The storage volume for the modelled detention system is presented in the table below.

Table 4 Detention System Volumes & Water Levels

I.D	Design Storm	Detention Volume (m ³)	Basin Area (m ²)	Depth (m)
Catchment A1	1%	40.2	315	0.2 MAX

A summary of the modelled outlet configuration is provided in the table below.

Table 5 Detention System Outlet Configuration

I.D	Pit Detail	Minor Event 20% Outlet Pipe	Major Event 1% Overflow Weir
Catchment A1	NA	4/100mm uPVC @ 1%	2.0m W x 0.1m D @ 1.0m above basin invert

A pre-development versus post-development comparison of the peak discharge for all storm events for the proposed system is presented in the table below.

Table 6 ICM1/XP-STORM Modelling Results

EVENT (ARI)	EVENT (AEP %)	DESIGN STORM (AEP %)	CATCH ID	PRE-DEV FLOWS ICM1 (m ³ /s)	POST-DEV FLOWS ICM1 (m ³ /s)	TOTAL POST-DEV MITIGATED FLOWS (m ³ /s)	FLOW DIFFERENCE (m ³ /s)
100	1	1pct	A1	0.246	0.301	0.238	-0.008
5	20	20pct	A1	0.034	0.044	0.036	0.002

The proposed detention system successfully mitigates the post-development flows to below pre-development conditions at the basin outlet.



5.13. Stormwater Conclusion and Recommendations

As outlined in Section 5 of this report, a total detention volume of 40.2m³ is required to mitigate the developments peak stormwater flows for storm events up to and including the 1% AEP storm event to pre-development flow rates for all catchments.

It is our opinion that if the abovementioned recommendations are implemented, the proposed development will comply with the intent of Blackall-Tambo Regional Council requirements for stormwater management.

6. ELECTRICAL & TELECOMMUNICATION SERVICES

Existing overhead electrical service is currently throughout Blackall which can provide appropriate connections for the proposed development. There is no proposal to provide any site with a telecommunication connection other than the likelihood of sitewide WiFi through Tourist Park management.

7. WASTE AND RECYCLING COLLECTION

Waste and recycling collection for the proposed development is to occur in accordance with the Blackall Tambo Regional Council waste collection policy and cycle, the Tourist Park will be serviced by commercial waste and recycling bins.



APPENDIX A – Engineering Drawings

NEW BEGINNINGS CHURCH TOURIST PARK DEVELOPMENT 18 LEEK STREET - BACKALL, QLD



LOCALITY PLAN N.T.S

CAR PARKING DEVELOPMENT

DESIGN FILE No: CE22056
DESIGN STANDARD: AUSTRROADS, TMR DESIGN GUIDELINES & IPWEA STANDARD DRAWINGS

DESIGN TRAFFIC

ROAD CLASSIFICATION: URBAN LOCAL ROAD
PAVEMENT DESIGN LIFE: 30 YRS
DESIGN SPEED: 50KM/H

STORMWATER/FLOOD DATA

NEW STRUCTURES & NETWORK, COMPLY WITH THE FOLLOWING:

MAJOR SYSTEM: 1% AEP
MINOR SYSTEM: 20% AEP
BLOCKAGE FACTOR: 0.5 ON INLETS

REFERENCE DESIGN REPORTS

INFRASTRUCTURE INPUT: INFRASTRUCTURE REPORT dated 13/10/2022 Prepared by " MOLONEY & SONS ENGINEERING "



GENERAL

- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS.
- BEFORE PROCEEDING WITH THE WORK ANY DISCREPANCIES IN THE CONTRACT DOCUMENTS SHALL BE REFERRED FOR DECISION TO THE SUPERINTENDENT.
- DO NOT SCALE FROM DRAWINGS.
- CONTRACTOR SHALL VERIFY ALL LOCATIONS OF SERVICES, ALL DIMENSIONS AND LEVELS PRIOR TO CONSTRUCTION.
- ALL MATERIALS/CONSTRUCTION & WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS AND THE LOCAL AUTHORITY'S STANDARD DRAWINGS AND BY-LAWS.
- THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL RELEVANT APPROVALS PRIOR TO COMMENCEMENT OF WORKS.
- UNDERGROUND SERVICE LOCATIONS SHOWN ON THIS PLAN HAVE BEEN DETERMINED BY FIELD SURVEY AND/OR OFFICE RECORDS, AND MAY NOT REPRESENT ALL SERVICES OR EXACT LOCATIONS. THE CONTRACTOR MUST ACCURATELY LOCATE AND DEPTH ALL SERVICES LIKELY TO BE ENCOUNTERED DURING CONSTRUCTION, PRIOR TO COMMENCING ANY EXCAVATION WORKS.
- DISPERSIVE SOILS ARE NOT TO BE USED AS FILL/EMBANKMENT MATERIAL. ALL CONSTRUCTION TO BE DONE IN ACCORDANCE WITH CURRENT NATSPEC SPECIFICATIONS AND TECHNICAL STANDARDS.

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.
- WHERE ACID SULFATE SOILS HAVE BEEN IDENTIFIED WITHIN THE PROJECTED AREA THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL RELATED STATUTORY REQUIREMENTS AND SHALL REFER TO SWMS FOR MANAGEMENT AND TREATMENT OF ACID SULFATE SOILS.

ENVIRONMENT:

- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT CONSTRUCTION WORKS DO NOT RESULT IN THE CONTAMINATION OF ADJACENT WATERWAYS, WETLANDS AND/OR ECOSYSTEMS.
- THE CONSTRUCTION WORKS WILL BE IMPLEMENTED IN ACCORDANCE WITH THE CONTRACTORS CONSTRUCTION EMP (C). THIS EMP(C) SHOULD ADDRESS ISSUES SUCH AS, BUT NOT LIMITED TO; WATER QUALITY, EROSION AND SEDIMENTATION, CULTURAL HERITAGE, NOISE, VIBRATION AIR QUALITY, ACID SULFATE SOILS, CONTAMINATED SITES, FLORA AND FAUNA, VEGETATION, PEST MANAGEMENT, WASTE, AND CHEMICALS AND FUELS.

CONSTRUCTION SPECIFICATIONS

NATSPEC CONSTRUCTION SPECIFICATIONS:

- 1101 CONTROL OF TRAFFIC
- 1102 CONTROL OF EROSION & SEDIMENTATION
- 1111 CLEARING & GRUBBING
- 1112 EARTHWORKS (ROAD RESERVE)
- 1121 OPEN DRAINS
- 1131 ROLLER COMPACTED CONCRETE SUBBASE
- 1133 PLAIN AND REINFORCED CONCRETE BASE
- 1135 CONTINUOUSLY REINFORCED CONCRETE BASE
- 1141 FLEXIBLE PAVEMENT BASE AND SUBBASE
- 1142 COLD MIX ASPHALT
- 1143 SPRAYED BITUMINOUS SURFACING
- 1144 ASPHALT (ROADWAYS)
- 1145 SEGMENTAL PAVING
- 1146 MICROSURFACING
- 1172 SUBSOIL AND FORMATION DRAINS
- 1191 PAVEMENT MARKINGS
- 1192 SIGNPOSTING
- 1193 GUIDE POSTS
- 1351 STORMWATER DRAINAGE
- 1352 PIPE DRAINAGE
- 1354 DRAINAGE STRUCTURES

STANDARD DRAWINGS

IPWEA STANDARD DRAWINGS:

- DS-010 STORMWATER ACCESS CHAMBER DETAIL
- DS-030 EXCAVATION, BEDDING & BACKFILLING RIGID & FLEXIBLE DRAINAGE PIPES
- DS-040 SEDIMENT CONTROL DEVICES - ENTRY EXIT - SEDIMENT TRAP
- DS-041 SEDIMENT CONTROL DEVICES - KERB & FIELD INLETS
- DS-050 DRAINAGE PITS FIELD INLET TYPE 1 AND TYPE 2
- DS-069 DRAINAGE PITS - FIELD INLET PIT - DOME TOP COVER
- RS-056 RURAL DRIVEWAY
- RS-131 TRAFFIC SIGN INSTALLATION DETAIL
- RS-140 SUBSOIL DRAIN - DETAIL AND LOCATION
- RS-141 SUBSOIL DRAIN - ACCESS POINT
- RS-170 PAVEMENT - TRENCHING AND WIDENING

DRAWING SCHEDULE

DOCUMENT TITLE	DOCUMENT NO.
COVER SHEET, LOCALITY PLAN & DRG. SCHEDULE	CE22056-001-CO
LEGEND	CE22056-002-CO
TYPICAL SECTION & DETAILS	CE22056-101-TC
EXISTING SITE LAYOUT	CE22056-201-AL
GENERAL ARRANGEMENT	CE22056-301-GA
LONGITUDINAL SECTION THISTLE ST	CE22056-401-LS
TYPICAL CROSS SECTION SHEET 1 OF 2	CE22056-501-XS
TYPICAL CROSS SECTION SHEET 2 OF 2	CE22056-502-XS

DETAIL SURVEY BY:

MASTERS SURVEYING
DATE SURVEYED 18/02/22
SURVEY: GDA2020 ZONE 56

ELVIS MAPPING DIGITAL ELEVATION MODEL DATA @ 1 METRE
DATE SURVEYED 14/12/11
SURVEY: GDA94 MGA56

STANDARD DRAWINGS:

AUSTRROADS DESIGN & TMR GUIDELINES / INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALIA (IPWEA)



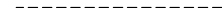








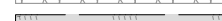








FIRST ISSUE	LM	AB	10/22	AMENDMENT DETAILS	DESIGN CHECK	COPYRIGHT © MOLONEY SOLUTIONS PTY LTD 2022 These designs and drawings are copyright and are not to be used or reproduced without the written permission of the above. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing. Verify dimensions prior to commencing any works.	DATUM	CLIENT NEW BEGINNING CHURCH	PROJECT 18 LEEK ST CAR PARK DEVELOPMENT BACKALL QLD	DRAWING TITLE COVERSHEET & LOCALITY PLAN DRAWING SCHEDULE	DRAWING NUMBER CE22056-001-CO	ISSUE A
	LM	AB	19/10/22									

ISSUED FOR APPROVAL





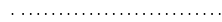


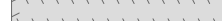











LEGEND

PROPOSED

-  Proposed Road Centre Line
-  Proposed Edge of Shoulder
-  Proposed Interface
-  Proposed Catchments Area
-  Proposed Open V Channel Control Line
-  Proposed Water Line
-  Proposed Sewer Line
-  Proposed Drainage Line
-  Proposed Table Drain Tadpoles
-  Proposed Table Drain
-  Design Surface Contours
-  Proposed Rock Protection
-  Proposed Sealed Pavement
-  Proposed Gravel Pavement
-  Proposed Basin Area
-  Proposed Building Footprint
-  Proposed Water Meter
-  Proposed Water Hydrant
-  Proposed Water Valve
-  Proposed Sewer Mainhole



EXISTING SURVEY

-  Existing Lot Boundary
-  Existing Catchments Area
-  Existing to be Demolished
-  Existing Edge of Bitumen
-  Existing Track Edge
-  Existing Fence Line
-  Existing Bitumen Surface
-  Existing Building Structure
-  Existing Water Line (TBC)
-  Existing Sewer Line (TBC)
-  Existing Electrical Line
-  Existing Surface Contours
-  Existing Power Pole
-  Existing Water Tap
-  Existing Water Meter
-  Existing Sewer Mainhole
-  Existing Tree

FIRST ISSUE	CALCS DRAWN	DATE	AMENDMENT DETAILS
A	LM AB	10/22	PRELIMINARY ISSUE FOR APPROVAL
	LM AB	19/10/22	

DESIGN CHECK	COPYRIGHT
	© MOLONEY SOLUTIONS PTY LTD 2022 These designs and drawings are copyright and are not to be used or reproduced without the written permission of the above. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing. Verify dimensions prior to commencing any works.
DRAWN CHECK	

DATUM

PROJECT No.
CE22056

FOR & ON BEHALF OF MOLONEY & SONS ENGINEERING

ISSUED FOR APPROVAL

APPROVED

CLIENT
NEW BEGINNING CHURCH

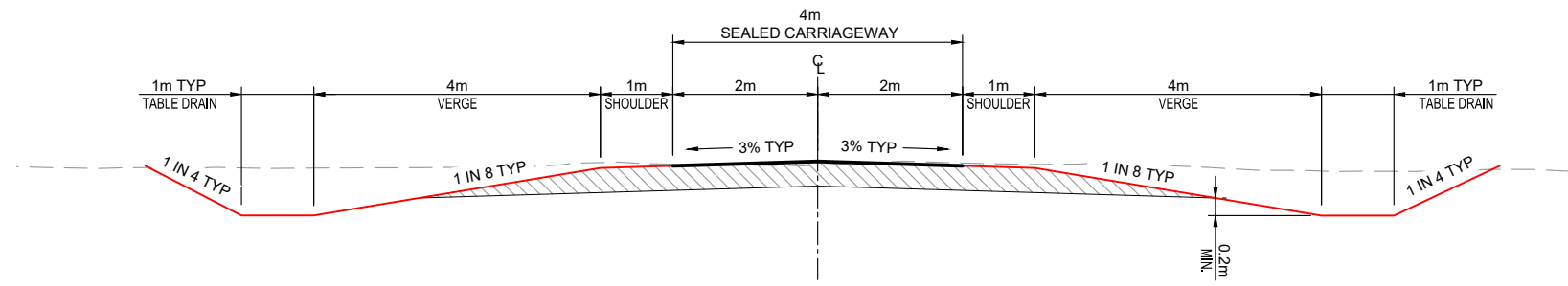
PROJECT
**18 LEEK ST
CAR PARK DEVELOPMENT
BACKALL QLD**



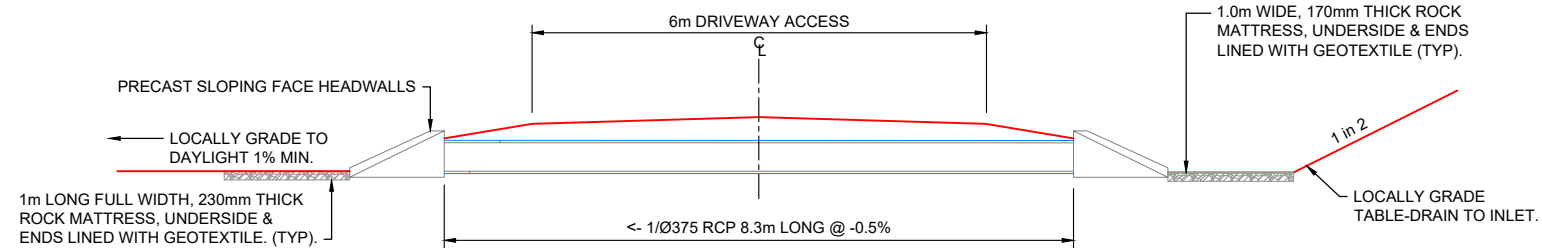
**MOLONEY & SONS
ENGINEERING**

EXCELLENCE - INTEGRITY - INNOVATION
P.O. Box 3203 RED HILL ROCKHAMPTON, Q 4701
www.moloneyandsons.com.au
ROCKHAMPTON • GLADSTONE • ROMA • MILES • CHINCHILLA • BRISBANE
GOLD COAST • COFFS HARBOUR • SYDNEY

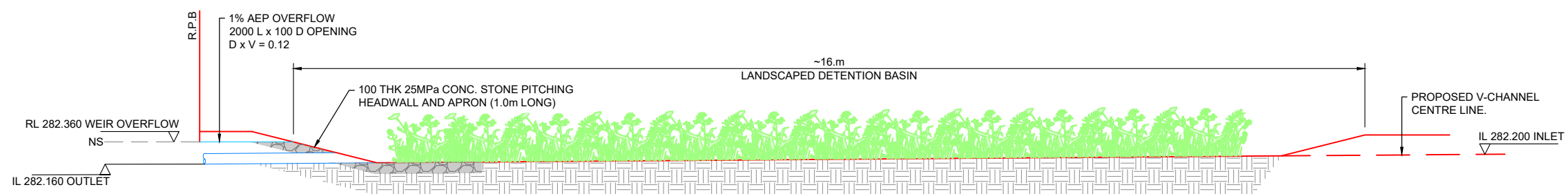
DRAWING TITLE	
LEGEND & NOTES	
DRAWING NUMBER	ISSUE
CE22056-002-CO	A



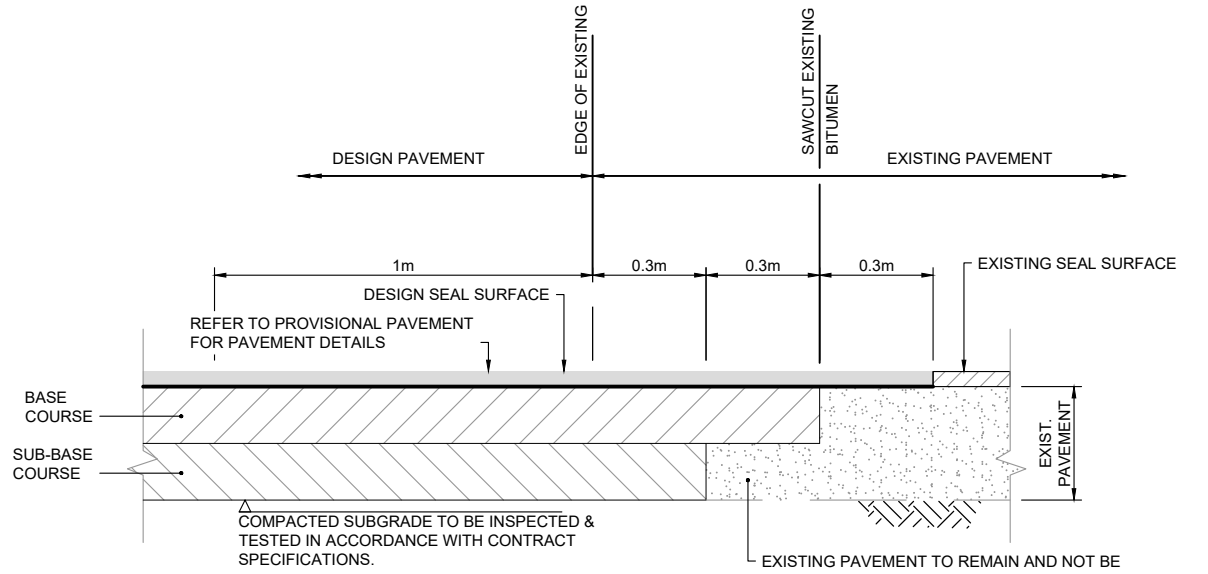
SECTION 01 - TYPICAL SECTION
DRG CE22056-301-GA
SCALE 1:100



CULVERT TYP. SECTION - NETWORK 1
DRG CE22056-301-GA
SCALE 1:100



SECTION 02 - TYPICAL BASIN DETAIL
DRG CE22056-301-GA
N.T.S



TYPICAL LONGITUDINAL PAVEMENT TIE-IN DETAIL
SCALE 1:20

STORAGE CHARACTERISTICS

ID	DETENTION DEPTH (mm)	BASIN FLOOR AREA (m ²)	STORED VOLUME (m ³)
COMBINED SWALE/BASIN	200 MAX	315.000	40.000

NOTES:

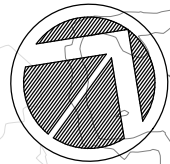
- ALL PAVEMENT PROFILES ARE SUBJECT TO SUBGRADE TESTING OF ALL AREAS PRIOR TO COMMENCING WORKS AND APPROVED BY BLACKALL TAMBO REGIONAL COUNCIL AND SUPERINTENDENT.
- EXISTING IN-SITU CUT MATERIAL MAY BE USED FOR EMBANKMENT/SELECT FILL LAYERS, HOWEVER MUST COMPLY WITH SPECIFICATION TESTING REQUIREMENTS AND ENSURE DISPERSIVE SOILS ARE NOT TO BE USED. ALL CONSTRUCTION TO BE DONE IN ACCORDANCE WITH CONTRACT SPECIFICATIONS AND TECHNICAL STANDARDS.
- ALL FILL BATTERS TO BE 1 IN 4, 1 IN 2 MAY BE ADOPTED IN CONSTRAINED ENVIRONMENTS SUBJECT TO SUPERINTENDENTS APPROVAL.
- ALL BATTER SECTIONS ARE INDICATIVE ONLY. GEOTECHNICAL ENGINEERING ADVICE SHALL BE REQUIRED FOR ALL BATTER SLOPES TO ASSESS THE SUITABILITY OF EITHER THE CUT FACE OR FILL EMBANKMENT GEOMETRY. THE INSPECTIONS SHALL BE UNDERTAKEN BY REGISTERED GEOTECHNICAL ENGINEER. FLATTER OR STEEPER SLOPES MAY BE ADOPTED BASED ON THE RECOMMENDATIONS.

PRELIMINARY PAVEMENT DESIGN:

TYPE	AREA	BASE COURSE	SUB-BASE	TOTAL PAVEMENT THICKNESS	COMMENTS
1	510 m ²	100mm TYPE 2.1	100mm TYPE 2.3	200mm	COMPLETE BOX OUT AND PREP SUBGRADE

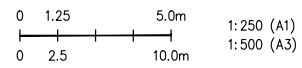
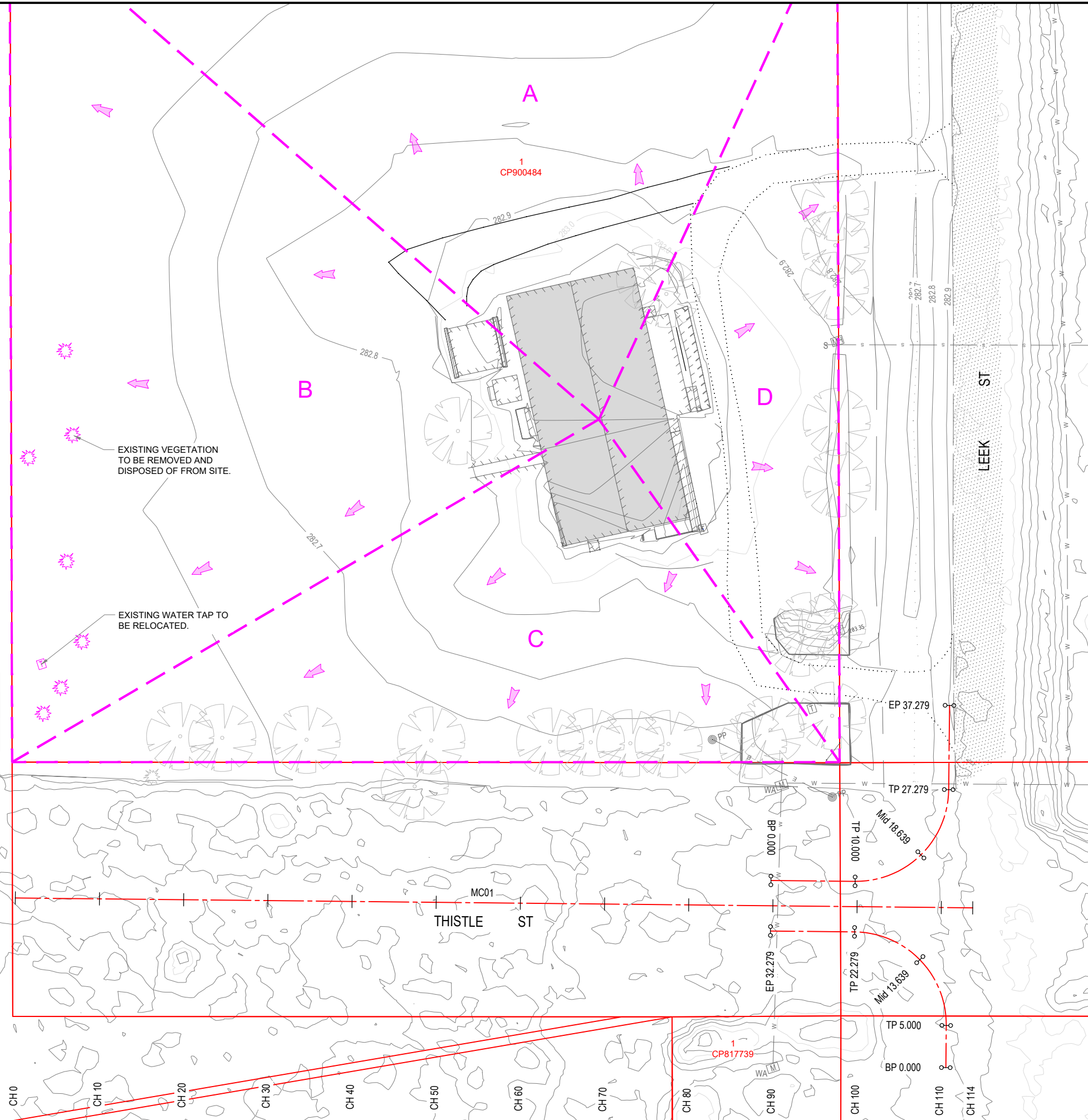
SEAL SPECIFICATIONS:
 - 14mm SEAL - POLYSEAL (S15E) 1.0L/m² @ 170m²/m³
 - 10mm PRIMER SEAL - AMC6 1.4L/m² @ 99m²/m³ WITH 5mm AGGREGATE SCATTER @ 400m²/m³.

FIRST ISSUE LM AB 10/22 AMENDMENT DETAILS PRELIMINARY ISSUE FOR APPROVAL	DESIGN CHECK COPYRIGHT MOLONEY SOLUTIONS PTY LTD 2022 These designs and drawings are copyright and are not to be used or reproduced without the written permission of the above. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing. Verify dimensions prior to commencing any works.	DATUM PROJECT No. CE22056	CLIENT NEW BEGINNING CHURCH PROJECT 18 LEEK ST CAR PARK DEVELOPMENT BACKALL QLD	MOLONEY & SONS ENGINEERING EXCELLENCE - INTEGRITY - INNOVATION P.O. Box 3203 RED HILL ROCKHAMPTON, Q 4701 www.moloneyandsons.com.au ROCKHAMPTON • GLADSTONE • ROMA • MILES • CHINCHILLA • BRISBANE GOLD COAST • COFFS HARBOUR • SYDNEY	DRAWING TITLE TYPICAL SECTION & DETAILS DRAWING NUMBER CE22056-101-TC ISSUE A
	DRAWN CHECK APPROVED ISSUED FOR APPROVAL	FOR & ON BEHALF OF MOLONEY & SONS ENGINEERING	FOR & ON BEHALF OF MOLONEY & SONS ENGINEERING	FOR & ON BEHALF OF MOLONEY & SONS ENGINEERING	FOR & ON BEHALF OF MOLONEY & SONS ENGINEERING



CATCHMENT PARAMETERS

CONDITION	CATCH ID	AREA (ha)	FRACTION IMP %
PRE-DEVELOPMENT	A	0.300	1.80
	B	0.355	2.13
	C	0.200	1.20
	D	0.145	0.87



www.dialbeforeyoudig.com.au

ALL UNDERGROUND SERVICES SHOULD BE LOCATED ON SITE BEFORE ANY WORK IS COMMENCED

DIAL 1100 BEFORE YOU DIG

FIRST ISSUE	CALCS DRAWN	DATE	AMENDMENT DETAILS
A	LM AB	10/22	
	LM AB	19/10/22	PRELIMINARY ISSUE FOR APPROVAL

DESIGN CHECK

COPYRIGHT
© MOLONEY SOLUTIONS PTY LTD 2022
These designs and drawings are copyright and are not to be used or reproduced without the written permission of the above. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing. Verify dimensions prior to commencing any works.

DRAWN CHECK

DATUM

PROJECT No.
CE22056

FOR & ON BEHALF OF MOLONEY & SONS ENGINEERING

ISSUED FOR APPROVAL

APPROVED

CLIENT
NEW BEGINNING CHURCH

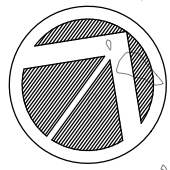
PROJECT
**18 LEEK ST
CAR PARK DEVELOPMENT
BACKALL QLD**

MOLONEY & SONS ENGINEERING
EXCELLENCE - INTEGRITY - INNOVATION
P.O. Box 3203 RED HILL ROCKHAMPTON, Q 4701
www.moloneyandsons.com.au
ROCKHAMPTON • GLADSTONE • ROMA • MILES • CHINCHILLA • BRISBANE
GOLD COAST • COFFS HARBOUR • SYDNEY

DRAWING TITLE
EXISTING SITE LAYOUT

DRAWING NUMBER
CE22056-201-AL

ISSUE
A



CATCHMENT PARAMETERS

CONDITION	CATCH ID	AREA (ha)	FRACTION IMP %
POST-DEVELOPMENT	A1	1.000	8.00

IMPORTANT:
ALL CONNECTIONS TO EXISTING LIVE SEWER AND WATER LINES ARE TO BE CARRIED OUT BY BLACKALL - TAMBO REGIONAL COUNCIL FOLLOWING THE APPLICATION AND APPROVAL FOR LIVE WORKS.

A1

1 CP900484

38 B1388

2 SP293539

PROPOSED BASIN AREA REFER DRG CE22056-101-TC.

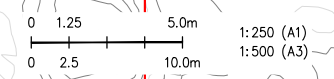
GRAVEL ACCESS ROAD IN ACCORDANCE WITH IPWEA STD DRG RS-056.

PROPOSED Ø100mm PVC DWV SN10 GRAVITY SEWER MAIN EXTENSION & HOUSE CONNECTION TO NEW ALLOTMENT

PROPOSED Ø100mm PVC-U PN16 WATER MAIN, HYDRANT & METERED TAPPING SERVICE CONNECTION

TYP. NEATLY TIE-IN TABLE DRAIN TO EXISTING & MAINTAIN POSITIVE FALL

JOIN SMOOTHLY TO EXISTING.



www.dialbeforeyoudig.com.au

DIAL 1100 BEFORE YOU DIG

ALL UNDERGROUND SERVICES SHOULD BE LOCATED ON SITE BEFORE ANY WORK IS COMMENCED

- NOTES:**
- ALL CONSTRUCTION SET-OUT IS TO BE VERIFIED AND SET-OUT BY A REGISTERED CONSTRUCTION SURVEYOR BASED ON THE 3D ELECTRONIC FILES PROVIDED, ANY DISCREPANCIES BETWEEN MODEL & CERTIFIED DRAWINGS IS TO BE CLARIFIED BY THE CERTIFYING ENGINEER PRIOR TO CONSTRUCTION.
 - EXISTING IN-SITU CUT MATERIAL MAY BE USED FOR EMBANKMENT/SELECT FILL LAYERS, HOWEVER MUST COMPLY WITH SPECIFICATION TESTING REQUIREMENTS AND ENSURE DISPERSIVE SOILS ARE NOT TO BE USED. ALL CONSTRUCTION TO BE DONE IN ACCORDANCE WITH CONTRACT SPECIFICATIONS AND TECHNICAL STANDARDS.
 - ALL FILL BATTERS TO BE 1 IN 4, 1 IN 2 MAY BE ADOPTED IN CONSTRAINED ENVIRONMENTS SUBJECT TO SUPERINTENDENTS APPROVAL.
 - WHERE WORKS ABUTS EXISTING, ALL WORK SHALL BE NEAT, SMOOTH, WORKMANLIKE AND TO THE SUPERINTENDENTS SATISFACTION.

FIRST ISSUE	CALCS DRAWN	DATE	AMENDMENT DETAILS
A	LM AB	10/22	
A	LM AB	19/10/22	PRELIMINARY ISSUE FOR APPROVAL

DESIGN CHECK

COPYRIGHT © MOLONEY SOLUTIONS PTY LTD 2022

These designs and drawings are copyright and are not to be used or reproduced without the written permission of the above. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing. Verify dimensions prior to commencing any works.

DRAWN CHECK

DATUM

PROJECT No. CE22056

FOR & ON BEHALF OF MOLONEY & SONS ENGINEERING

ISSUED FOR APPROVAL

APPROVED

CLIENT: NEW BEGINNING CHURCH

PROJECT: 18 LEEK ST CAR PARK DEVELOPMENT BACKALL QLD

MOLONEY & SONS ENGINEERING

EXCELLENCE - INTEGRITY - INNOVATION

P.O. Box 3203 RED HILL ROCKHAMPTON, Q 4701

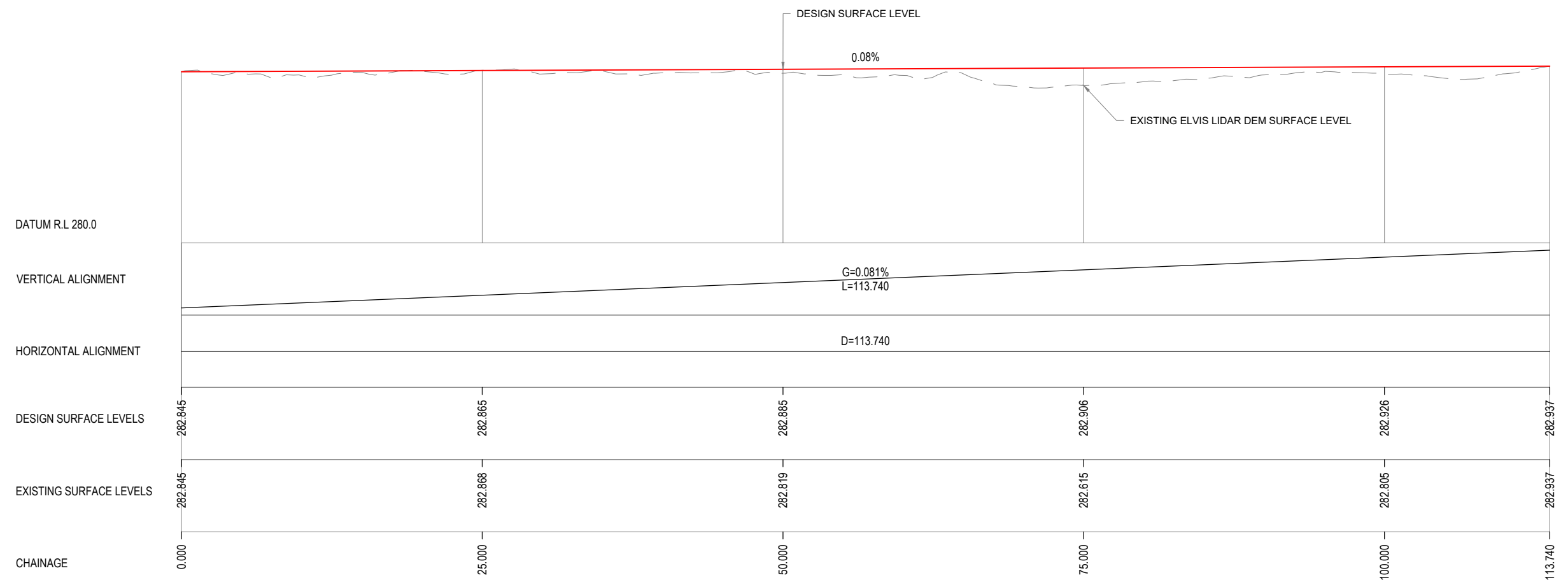
www.moloneyandsons.com.au

ROCKHAMPTON • GLADSTONE • ROMA • MILES • CHINCHILLA • BRISBANE
GOLD COAST • COFFS HARBOUR • SYDNEY

DRAWING TITLE: GENERAL ARRANGEMENT

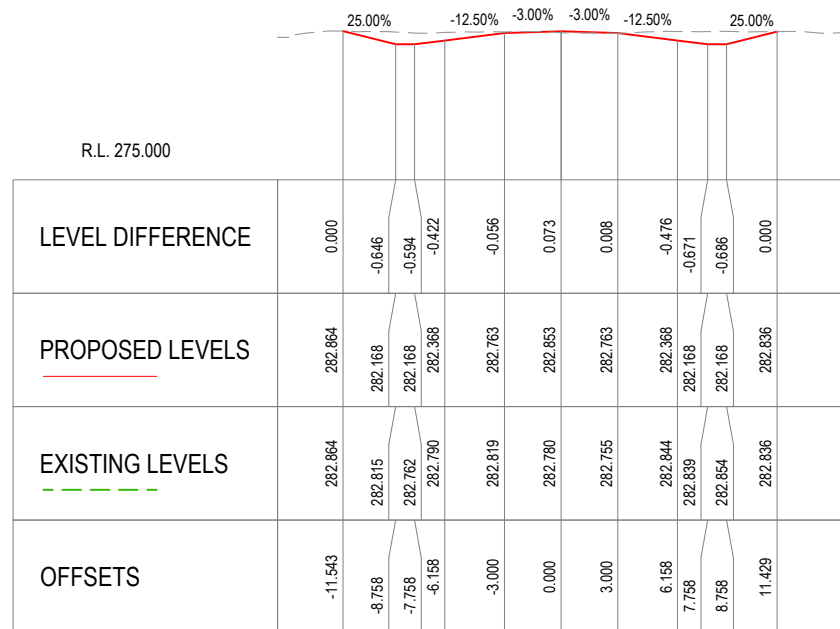
DRAWING NUMBER: CE22056-301-GA

ISSUE: A

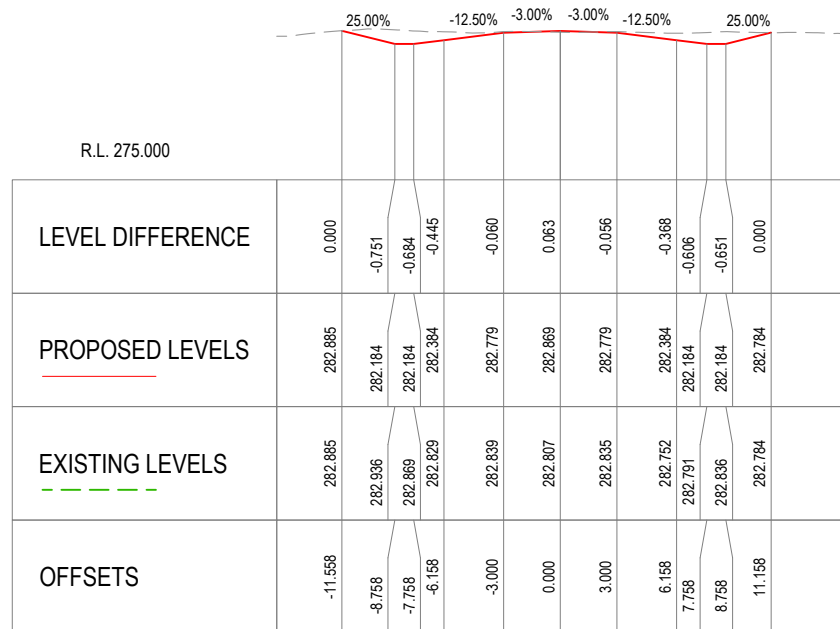


LONGITUDINAL SECTION - MC01 Thistle St
SCALE - HORIZ 1:400.000, VERT. 1:80.000

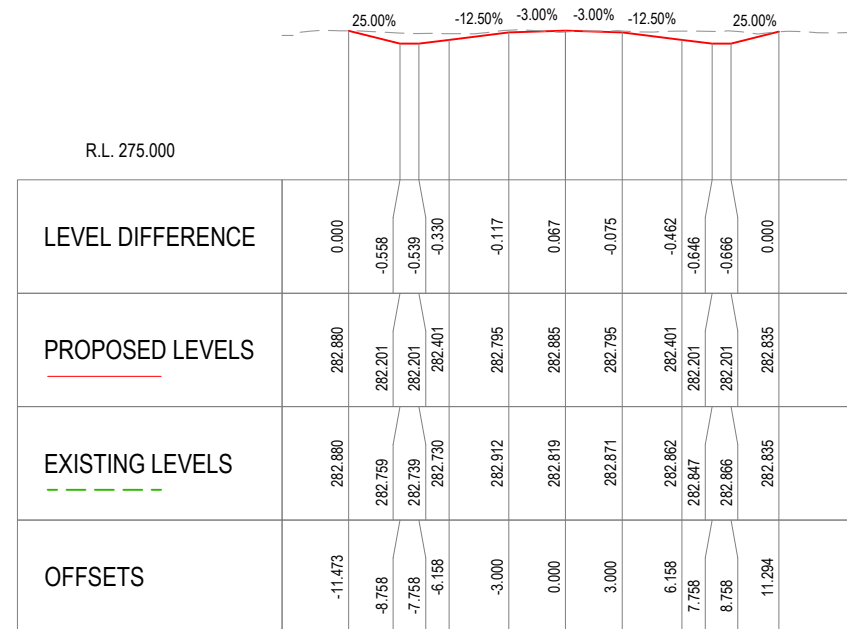
FIRST ISSUE A SECOND ISSUE B	CALCS LM DRAWN AB DATE 10/22	AMENDMENT DETAILS PRELIMINARY ISSUE FOR APPROVAL	DESIGN CHECK DRAWN CHECK	COPYRIGHT MOLONEY SOLUTIONS PTY LTD 2022 These designs and drawings are copyright and are not to be used or reproduced without the written permission of the above. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing. Verify dimensions prior to commencing any works.	DATUM PROJECT No. CE22056	ISSUED FOR APPROVAL APPROVED	CLIENT NEW BEGINNING CHURCH PROJECT 18 LEEK ST CAR PARK DEVELOPMENT BACKALL QLD	MOLONEY & SONS ENGINEERING EXCELLENCE - INTEGRITY - INNOVATION P.O. Box 3203 RED HILL ROCKHAMPTON, Q 4701 www.moloneyandsons.com.au ROCKHAMPTON • GLADSTONE • ROMA • MILES • CHINCHILLA • BRISBANE GOLD COAST • COFFS HARBOUR • SYDNEY	DRAWING TITLE LONGITUDINAL SECTIONS THISTLE ST DRAWING NUMBER CE22056-401-LS ISSUE A
	FOR & ON BEHALF OF MOLONEY & SONS ENGINEERING								



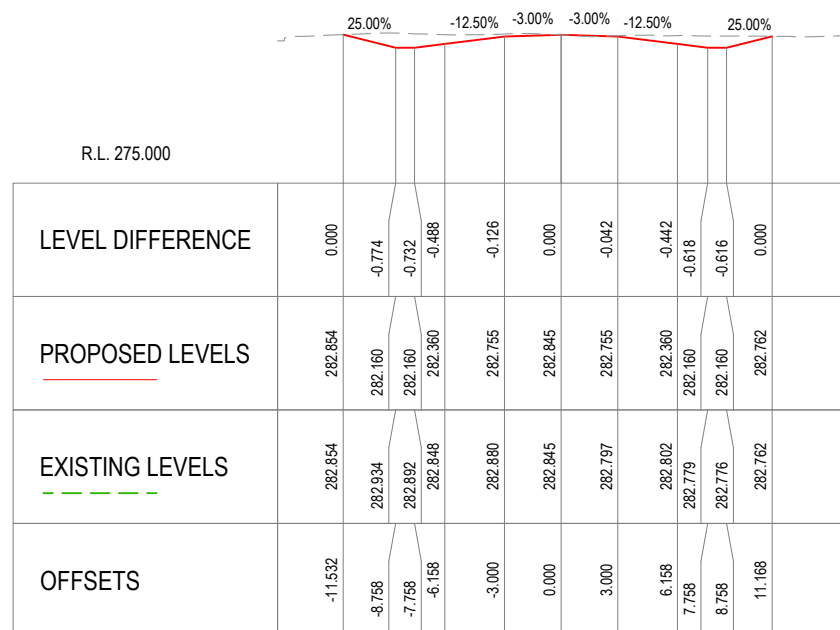
CH10.000



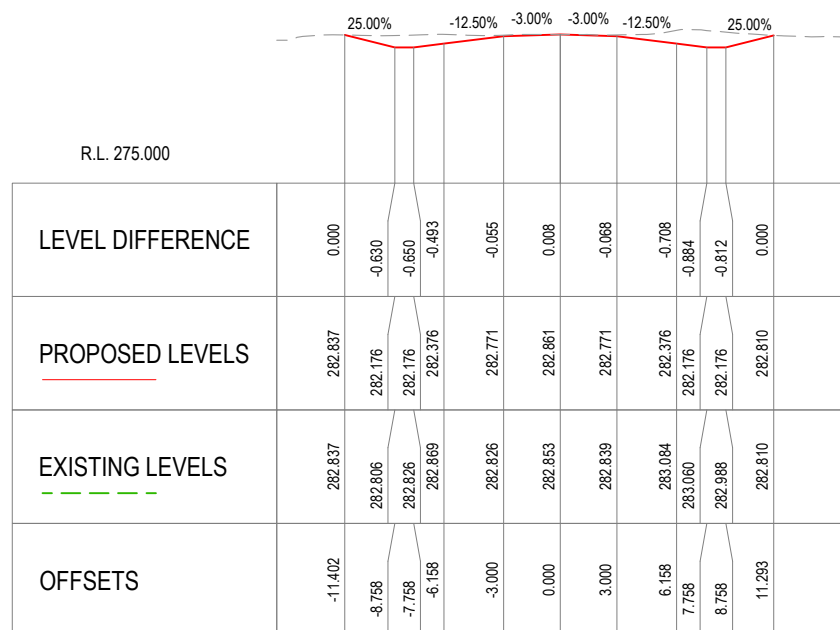
CH30.000



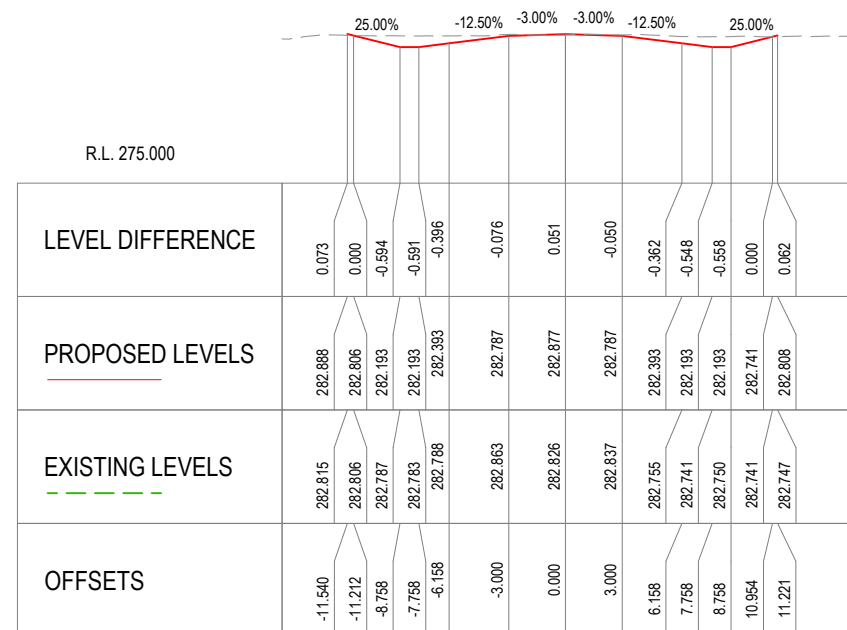
CH50.000



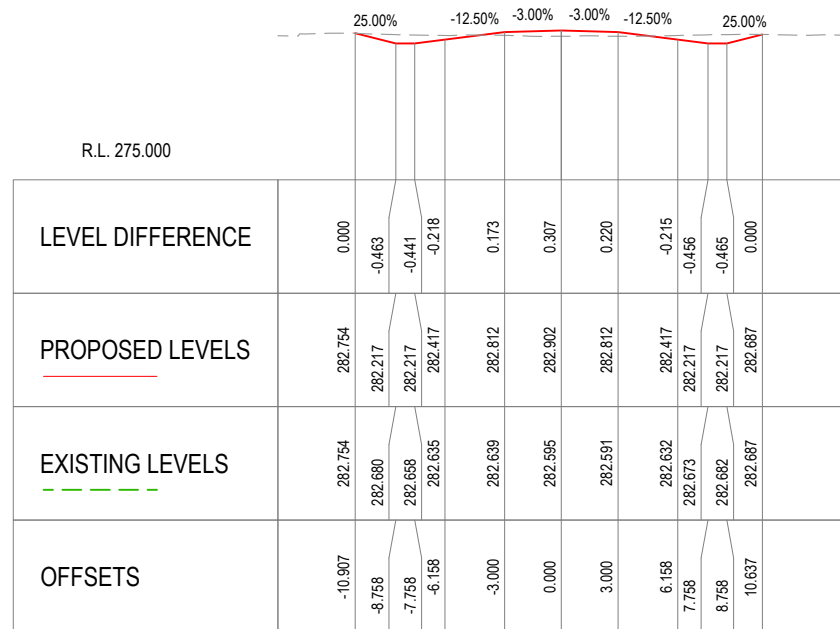
CH00.000



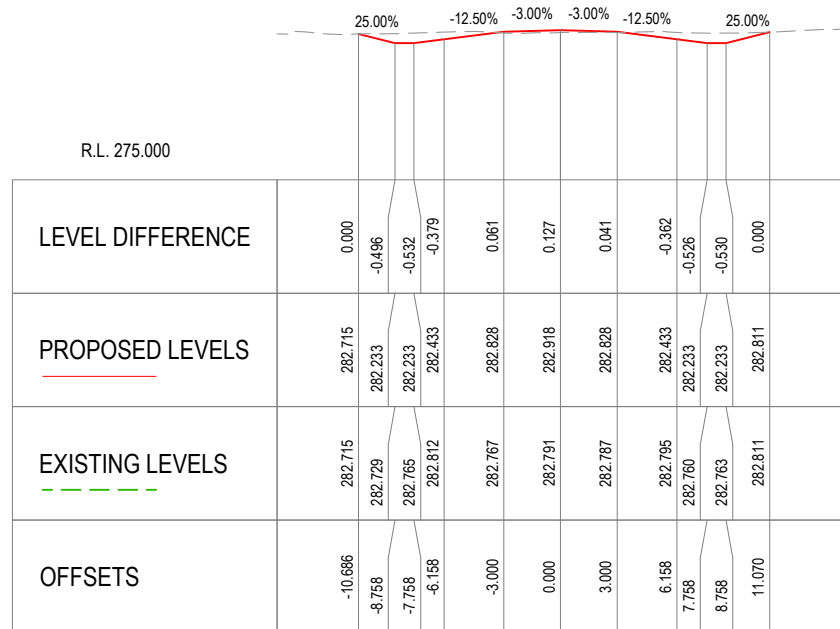
CH20.000



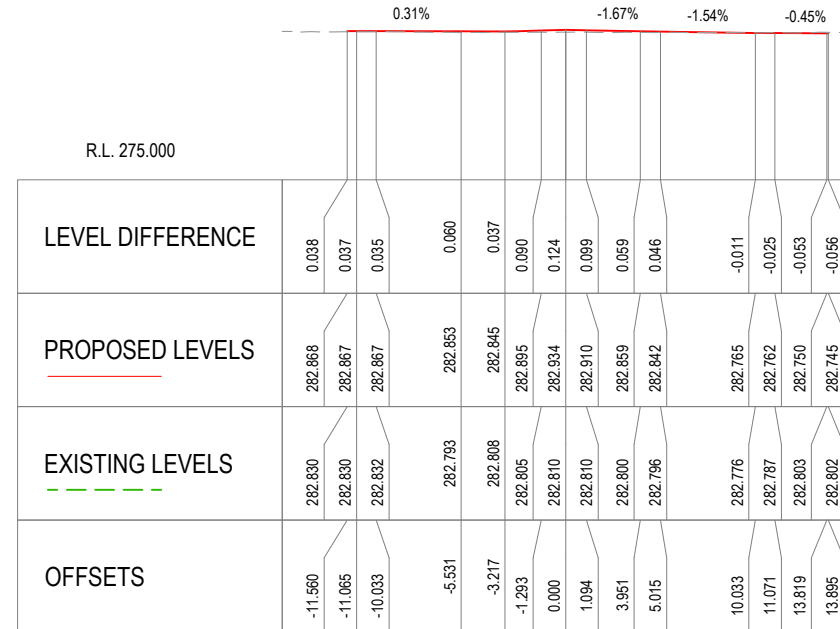
CH40.000



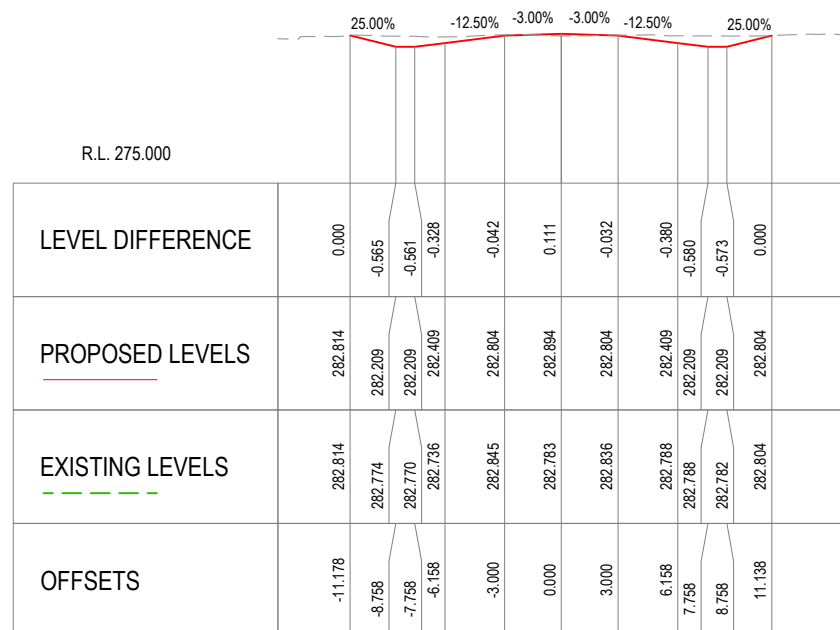
CH70.000



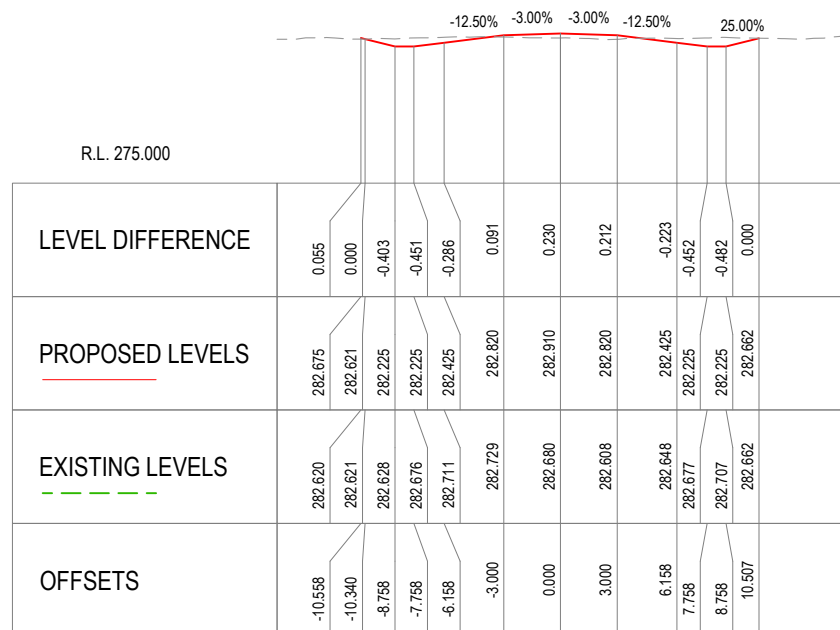
CH90.000



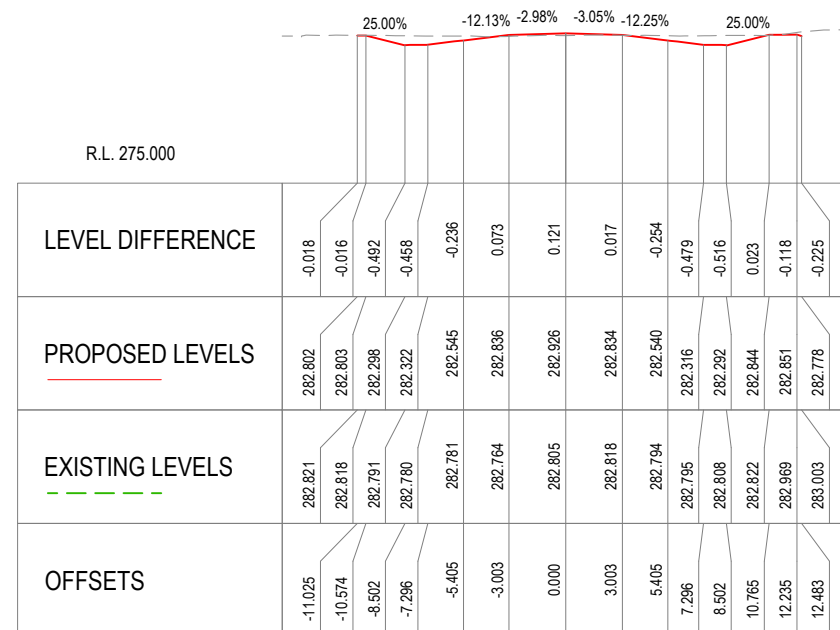
CH110.000



CH60.000



CH80.000



CH100.000

FIRST ISSUE	CALCS DRAWN	DATE	AMENDMENT DETAILS
A	LM AB	10/22	PRELIMINARY ISSUE FOR APPROVAL
DESIGN CHECK	LM AB	19/10/22	
DRAWN CHECK			

COPYRIGHT
 MOLONEY SOLUTIONS PTY LTD 2022
 These designs and drawings are copyright and are not to be used or reproduced without the written permission of the above. The contents of this drawing are electronically generated, are confidential and may only be used for the purpose for which they were intended. This is an uncontrolled document issued for information purposes only, unless the checked sections are signed and approved. Figured dimensions take precedence over scale. Do not scale from this drawing. Verify dimensions prior to commencing any works.

DATUM

PROJECT No. **CE22056**

ISSUED FOR APPROVAL

APPROVED

FOR & ON BEHALF OF MOLONEY & SONS ENGINEERING

CLIENT
NEW BEGINNING CHURCH

PROJECT
**18 LEEK ST
 CAR PARK DEVELOPMENT
 BACKALL QLD**

MOLONEY & SONS ENGINEERING
 EXCELLENCE - INTEGRITY - INNOVATION
 P.O. Box 3203 RED HILL ROCKHAMPTON, Q 4701
 www.moloneyandsons.com.au
 ROCKHAMPTON • GLADSTONE • ROMA • MILES • CHINCHILLA • BRISBANE
 GOLD COAST • COFFS HARBOUR • SYDNEY

DRAWING TITLE
**CROSS-SECTIONS
 SHEET 2 OF 2**

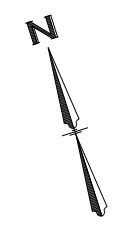
DRAWING NUMBER
CE22056-502-XS

ISSUE
A



APPENDIX B – Concept Site Plan

2
SP293539



THISTLE STREET

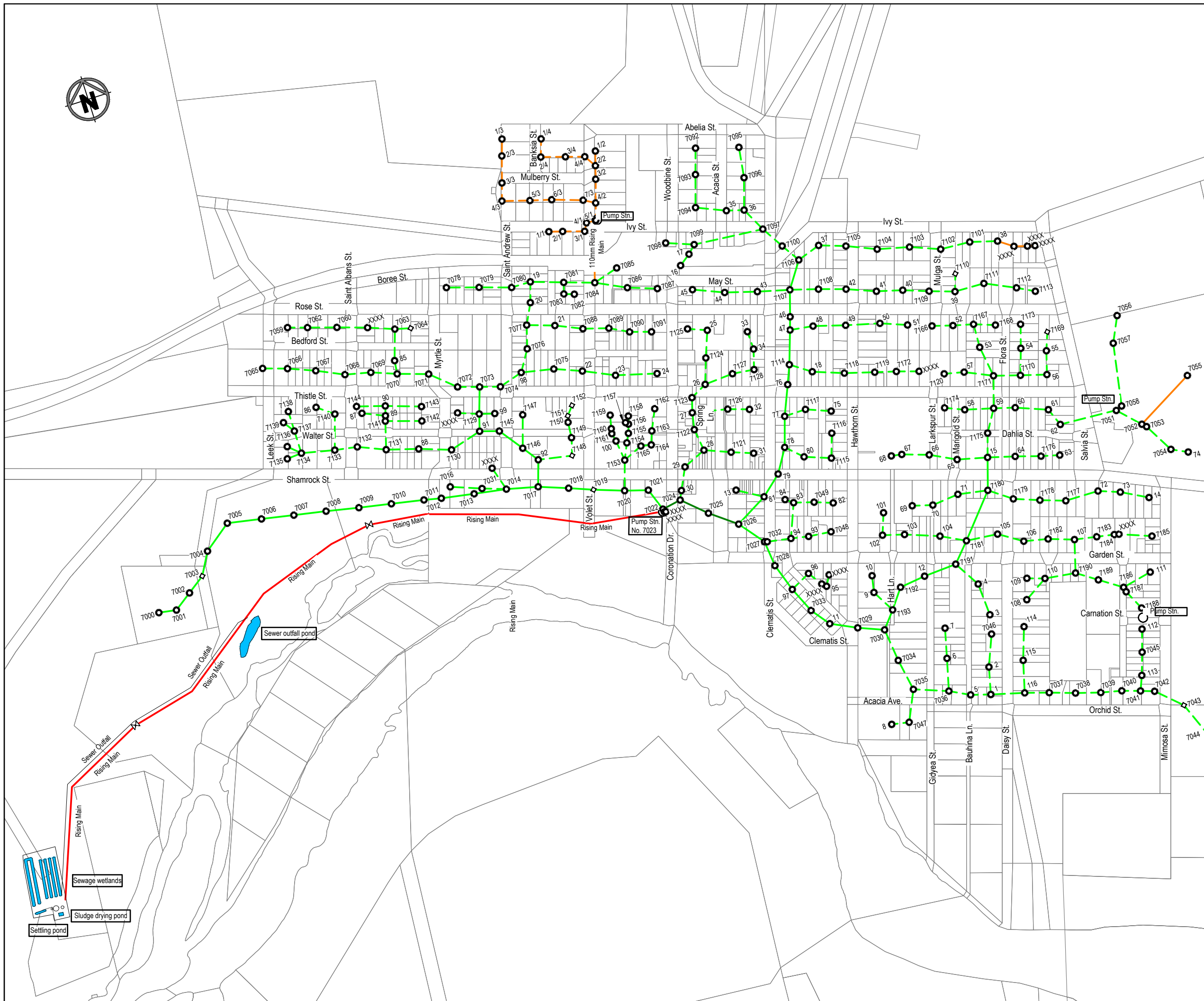
LEEK STREET

AMENDMENTS	REVISION	DATE
A	DEVELOPMENT APPROVAL	26-09-2022
REV	SUBJECT	





APPENDIX C – Sewer Infrastructure



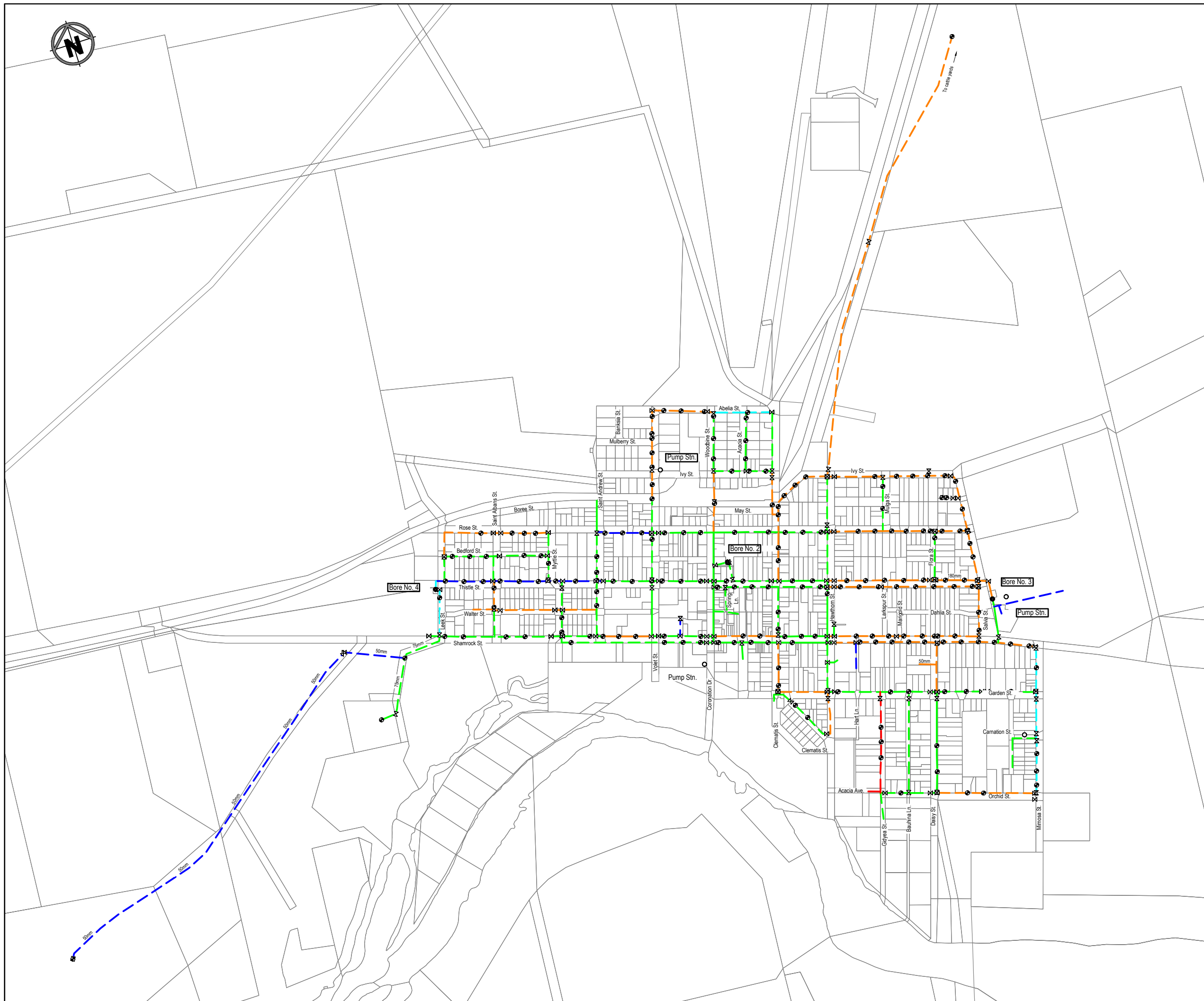
LEGEND

	Exist. Bore
	Exist. Valve
	Exist. Hydrant
	Exist. Pump Station
	Exist. >Ø100mm AC Main
	Exist. Ø100mm AC Main
	Exist. Ø150mm AC Main
	Exist. Ø100mm BB Main
	Exist. >Ø100mm PE Main
	Exist. Ø125mm PE Main
	Exist. <Ø150mm PE Main
	Exist. Ø50mm PVC Main
	Exist. Ø100mm PVC Main
	Exist. Ø100mm UPVC Main

Blackall Tambo Regional Council	
Project:	BTRC - Water
Title:	LIVE DATA
Category: Water; Sewerage	
Project-Set: Blackall	Sheet: 01 OF 01
Drawing No.	Scale: 1:10 000
BCK-S1	Size: A3



APPENDIX D – Water Infrastructure



LEGEND

	Exist. Bore
	Exist. Valve
	Exist. Hydrant
	Exist. Pump Station
	Exist. >Ø100mm AC Main
	Exist. Ø100mm AC Main
	Exist. Ø150mm AC Main
	Exist. Ø100mm BB Main
	Exist. >Ø100mm PE Main
	Exist. Ø125mm PE Main
	Exist. <Ø150mm PE Main
	Exist. Ø50mm PVC Main
	Exist. Ø100mm PVC Main
	Exist. Ø100mm UPVC Main

Client: Blackall Tambo Regional	
Project: BTRC - Water	
Title: LIVE DATA	
Category: Water; Sewerage	
Project-Set: Blackall	Sheet: 01 OF 01
Drawing No. BCK-W1	Scale: NTS
	Size: A3



Appendix A - Need for another Caravan Park in Blackall.

The position in the central west outback Queensland is that the tourist season is only six to seven months, so during the non-tourist season it could be argued that another caravan park is not required. However, during the busy tourist season the existing amenities are over stretched and often tourist will spend a day without an overnight stay; or they will stay only one night if they are able to find a vacant van site in Blackall. They will then move on to accommodation in other nearby towns.

ECONOMICALLY - Many Blackall business operators rely on the income generated during tourist season to help them stay afloat in the non-tourist season. From the economic perspective of local businesses remaining in Blackall, it demonstrates the need for another caravan park. In Ian Kinsey letter of support, he, as a local business man underscores the need for different accommodation in Blackall and the generation of income and I quote, “the positive economic and social impacts that our community will appreciate for years to come.” (Refer attached letter of the 4/04/2022)

PROVIDES MORE CHOICE - The proposed caravan park provides an alternative style of a boutique van park with more room for caravans and the added bonus of the ensuite accommodation which will attract other visitors that generally are not looking for free sites. With a price structure to attract visitors to stay for 3 or more nights it will mean greater spending in the local shops and community. Tourists looking for the style of van park we would offer are cashed up gray nomads looking for something more luxurious, a glamping camping experience.

REALISTICALLY - During the peak tourism season we have noted caravans jammed in at the back of the Barcoo pub and very few spaces in the caravan park near the Cultural Centre and The Lodge on Hawthorne. Blackall is missing out on a greater cash flow during the tourist season and there is a need to accommodate more tourists and the providing of a more diverse range of options will generate a greater number of tourists without duplicating existing services.

We believe the proposed Van Park serves the needs of local residents, residents of the surrounding area and the visitors and tourists visiting Blackall.

Appendix B – Amenity / Privacy

The proposed Van Park has only **one adjoining neighbor** who we offered to talk through the plans and any areas of concern they may have. They declined the offer but we have endeavored to address the issues through our planning process. These include:

1. **Stormwater run off.** It needs to be cited that water run off during storm and irrigating by the adjoining neighbor presently runs onto our property. However, the civil engineer has addressed this issue and has designed a V drain to move water down the northern fence line to Leek Street.
2. **Privacy.** The landscape architect has visited the site and designed trees that will provide a green screen and provide privacy for the neighbor. The boundary has an existing 1.8-Meter-high fence. **Our commitment to landscaping and improving the image of Blackall can be seen in the front of the church.**
The caravan park design also has a 10 meter + buffer between the caravans and the adjoining neighbor
For the close neighbors the church and Leek Street are a clear buffer zone.
3. **Entry** to the Van Park is via Leek Street with entry to the park from Thistle Street. The journey down Leek Street (Off Shamrock Street) passes 5 houses only. The entry to the van park does not go past the only adjoining neighbor. The reason we chose not to bring the entry through our existing church area was to provide protection for our church members and remove extra traffic from the local residents beyond Thistle Street.
4. **Road design** for Thistle Street. The gazette road on Thistle Street runs to the end of our block. If the road is constructed to the end of our property with a cul-de-sac at the end that would be all we require. The cul-de-sac would make it easy for a car and caravan to exit if they did not wish to enter the park as well as make it easy for rubbish collection. The 6 meter gravel road with a 4 meter sealed road as cited by council meets our requirements.

APPENDIX C. Infrastructure and Stormwater

This required civil engineering plans to demonstrate this can be achieved and the van park adequately serviced. **PLEASE REFER to the CIVIL ENGINEERS REPORT.**

APPENDIX D – photo of letter from Ian Kinsey

[REDACTED]

SPAR



[REDACTED]

4/4/2022

To Whom it May Concern

Re: Sunset Boutique Van Park, Cnr Leek & Thistle Street, Blackall 4472

I wish to extend my support to New Beginnings Church and this new venture "Sunset Boutique Van Park", Blackall. We all look forward to the positive economic and social flow-on effects produced from offering improved accommodation for town visitors and will extend our support to the New Beginnings Church in establishing this new and exciting venture. I believe these proposed 16 Van Sites will bring a whole new accommodation experience for visitors and think it will add so much to our small community.

I own 2 businesses in Blackall, my Pharmacy and also Spar Supermarket, Blackall (a 364 day 7 day a week Supermarket), and see getting visitors to stay extra time in Blackall will bring economic benefits that our town surely needs. I was born in Blackall and operated many business ventures over 40 years and can only see this new addition to Blackall having positive economic and social impacts that our community will appreciate for years to come. I absolutely support this venture and give it my full recommendation.

Regards,

[REDACTED]