Cloncurry Shire Council

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Our ref: DoIE:MA - TP06/22

23 September 2022

Cloncurry Shire Council
38-46 Daintree Street
PO Box 3
CLONCURRY QLD 4824
Email: council@cloncurry.qld.gov.au

Dear Sir/ Madam

DECISION NOTICE – DEVELOPMENT APPLICATION FOR OPERATIONAL WORKS - ROAD WORK, STORMWATER, WATER INFRASTRUCTURE, DRAINAGE WORK AND SEWERAGE INFRASTRUCTURE AT 23,30,32,34 AND 36 RAILWAY STREET, CLONCURRY DESCRIBED AS LOT 100 ON RP703329, LOT 101 ON RP703329, LOT 102 ON RP703329, LOT 103 ON RP703329, AND LOT 104 ON RP703329 – DEVELOPMENT PERMIT APPROVAL (WITH CONDITIONS)
(Given under section 63 of the *Planning Act 2016*)

The development application described below was properly made to the Cloncurry Shire Council on 12 August 2022.

Applicant details

Applicant name:	Cloncurry Shire Council
Applicant contact details:	Marc DeTert (Project Manager) PO Box 3 CLONCURRY QLD 4824

Application details

Application number:	TP06/22
Approval sought:	Development Permit
Nature of development proposed:	Operational Works
Details of proposed development:	Operational Works for Reconfiguring a lot (TP14/21) (5 Lots into 10 Lots)
Category of assessment:	Code Assessment

Location details

Street address:	28, 30, 32, 34 and 36 Railway Street, Cloncurry
Real property description:	Lots 100, 101, 102. 103 &-104 on RP703329
Local government area:	Cloncurry Shire Council

Decision

Date of decision:	20 September 2022
Decision details:	Approved in full with conditions. These conditions are set out in Attachment 1.

Details of the approval

Development permit:

Conditions

This approval is subject to the conditions in Attachment 1.

Properly made submissions

Not applicable—No part of the application required public notification.

Rights of appeal

The rights of applicants to appeal to a tribunal or the Planning and Environment Court against decisions about a development application are set out in chapter 6, part 1 of the *Planning Act 2016.* For particular applications, there may also be a right to make an application for a declaration by a tribunal (see chapter 6, part 2 of the *Planning Act 2016*).

A copy of the relevant appeal provisions is attached.

Currency period for the approval

This development approval will unless substantially started at the end of the period set out in section 85 of *Planning Act 2016* which is 2 years after this approval starts to take effect.
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Approved plans and specifications

Copies of the following plans are enclosed.

Drawing/report title	Prepared by	Date	Reference no.	Version/ issue
Perkins Street Subdivision – General Arrangement	Engeny Water Management	21.10.2019	M26000-015-DWG-0100	A
Perkins Street Subdivision – Cross Sections and Details	Engeny Water Management	21.10.2019	MS26000-015-DWG-0101	A
Drawing Index & Locality Plan	GHD	15.06.22	12584249-C001	0
General Notes	GHD	15.06.22	12584249-C002	0
Typical Sections & Details	GHD	15.06.22	12584249-C003	0
Siteworks Plan	GHD	15.06.22	12584249-C005	0
Earthworks and Grading	GHD	15.06.22	12584249-C010	0
Site Sections	GHD	15.06.22	12584249-C011	0
Setout Plan	GHD	15.06.22	12584249-C015	0
Road 01 Setout Table, Longitudinal Section & Cross Sections	GHD	15.06.22	12584249-C020	0
Stormwater Pit Schedule & Longitudinal Sections	GHD	15.06.22	12584249-C030	0
Sewer Reticulation Plan	GHD	15.06.22	12584249-C035	0

Water Reticulation Plan	GHD	12.07.22	12584249-C040	1
Electrical Layout	GHD	15.06.22	12584249-E001	0
Perkin Street Subdivision nbn co Pit and Pipe Design – Site Plan and Notes	GHD	15.06.22	12584249-E001	0
Environmental Management Plan	Gulf Civil	1.05.2022	P2020-021	A
Erosion and Sediment Control Plan	Gulf Civil	18.05.2022	No: P2020-021	A
Quality & Project Management Plan	Gulf Civil	15.05.2022	No: P2020-021	A
Safety Management Plan	Gulf Civil	10.05.2022	No: P2020-021	A
Traffic Management Plan	Gulf Civil	1.05.2022	No: P2020-021	A

Should you require any additional information in respect of this matter, please contact Council's Senior Town Planner, Larinda Turrell, at this office.

Yours faithfully

Philip Keirle
Chief Executive Officer

Enc: *Attachment 1—Assessment manager conditions*
Attachment 2 – Statement of Reasons
Attachment 3 - Appeal provisions
Attachment 4 - Approved plans and Reports

ATTACHMENT 1 – CONDITIONS OF APPROVAL

NATURE OF DECISION

A The Cloncurry Shire Council issues a development permit for Development application – Reference TP06-22 Operational Works for Reconfiguring a lot (TP14/21) (5 Lots into 10 Lots) under the *Planning Act 2016*.

GENERAL

1. Site Layout

The development must generally comply with the approved proposal plans, design drawings and reports as referenced in the table below, which forms part of this application, except as otherwise specified by any condition of this approval.

Title	Plan Number	Rev no	Date	Prepared by
Perkins Street Subdivision – General Arrangement	M26000-015-DWG-0100	A	21.10.2019	Engeny Water Management
Perkins Street Subdivision – Cross Sections and Details	MS2600-015-DWG-0101	A	21.10.2019	Engeny Water Management
Drawing Index & Locality Plan	12584249-C001	0	15.06.22	GHD
General Notes	12584249-C002	0	15.06.22	GHD
Typical Sections & Details	12584249-C003	0	15.06.22	GHD
Siteworks Plan	12584249-C005	0	15.06.22	GHD
Earthworks and Grading	12584249-C010	0	15.06.22	GHD
Site Sections	12584249-C011	0	15.06.22	GHD
Setout Plan	12584249-C015	0	15.06.22	GHD
Road 01 Setout Table, Longitudinal Section & Cross Sections	12584249-C020	0	15.06.22	GHD
Stormwater Pit Schedule & Longitudinal Sections	12584249-C030	0	15.06.22	GHD
Sewer Reticulation Plan	12584249-C035	0	15.06.22	GHD
Water Reticulation Plan	12584249-C040	1	1.07.22	GHD
Electrical Layout	12584249-E001	0	15.06.22	GHD
Perkin Street Subdivision nbn co Pit and Pipe Design – Site Plan and Notes	12584249-E001	0	15.06.22	GHD
Environmental Management Plan	P2020-021	A	1.05.2022	Gulf Civil
Erosion and Sediment Control Plan	No: P2020-021	A	18.05.2022	Gulf Civil
Quality & Project Management Plan	No: P2020-021	A	15.05.2022	Gulf Civil
Safety Management Plan	No: P2020-021	A	10.05.2022	Gulf Civil
Traffic Management Plan	No: P2020-021	A	1.05.2022	Gulf Civil

2. Compliance with conditions

(a) All conditions must be complied with prior to the commencement of the use, unless specified in an individual condition.

(b) The conditions of this development approval are to be read in conjunction with the approved plans /drawings/ documents at all times. Where a conflict occurs between the conditions of this approval and the approved plans / documents, the conditions of this development approval shall prevail.

OPERATIONAL WORKS

3. Erosion and Sediment Control

Erosion and sediment control is to be undertaken in accordance with the Erosion and sediment control plan prepared by Gulf Civil and dated the 18.05.2022. Erosion and sediment control devices are to be established and maintained at all times during construction. Erosion and sediment control devices are to remain in place until disturbed areas are rehabilitated, and natural drainage paths reinstated. Spoil material from excavation activities is to be removed from the site or used to rehabilitate and stabilise the final land form. The design and implementation of erosion and sediment control plan must ensure that no movement of sediment-laden stormwater from the construction site.

4. Fill and Excavation

(a) All fill material to be placed on the site is to comprise only natural earth and rock and is to be free of contaminants and noxious, hazardous, deleterious and organic materials.
(b) Provide RPEQ certification of compliance that the eal1hworks have been completed in accordance with the approved earthworks plan.

5. Fencing

Security fencing, suitable to prevent unauthorised persons entering the site, IS to be installed and maintained around the perimeter of the flood levee.

6. Storage Equipment

Equipment and machinery are stored in appropriate areas so as not to cause a nuisance to existing residence and neighbouring surrounds.

7. Waste Management

Waste storage areas for general waste and regulated waste are to be provided within the site at accessible locations to allow for collection and removal to approved facilities.

8. Stormwater Drainage

The development must generally comply with the approved proposal plans.

9. Noise Management

Noise mitigation measures shall be put in place to contain and manage noise levels so as not to give rise to unacceptable effects on nearby sensitive receiving land uses.

10. Dust Management

During construction and operation of the approved use, the operator is to put in place appropriate mitigation measures for the suppression of dust, so as not to cause a nuisance.

11. Landscaping

A Landscaping plan is to be submitted to Council for approval before commencement of works.

12. Works during construction

(a) Unless otherwise approved in writing by the assessment manager, hours of construction must not exceed 8.00 am to 6.00pm (Monday to Saturday).
(b) Unless otherwise approved in writing by the assessment manger, work must not be conducted from or on the premises outside the above hours or on Sundays or public holidays**.**

ADVICE – *Please note that these are not conditions*

A. The Applicant is responsible for securing all necessary approvals, permits and tenure, providing statutory notifications and complying with all relevant laws. Nothing in this development approval alleviates the need for the Applicant to comply with all relevant Local, State and Commonwealth laws and to ensure appropriate tenure arrangements have been made where the use of/reliance upon land

other than that owned by the Applicant is involved. Without limiting this obligation, the Applicant is responsible for:

(a) Obtaining all other/further necessary approvals, licences, permits, resource entitlements etc by whatever name called (this may include further development approvals under the "*Planning Act 2016"* and the planning scheme) required by law before the development the subject of this approval can be lawfully commenced and to carry out the activity for its duration;

(b) Providing any notifications required by law (by way of example only, to notify the administering authority pursuant to the "*Environmental Protection Act 1994"* of environmental harm being caused/threatened by the activity, and upon becoming aware the premises is being used for a 'notifiable activity'); and

(c) Ensuring the correct siting of structures on the land. An identification survey demonstrating correct siting and setbacks of structures may be requested of the Applicant to ensure compliance with this decision notice and applicable codes.

B. Indigenous Cultural Heritage Legislation and Duty of Care Requirement

The "*Aboriginal Cultural Heritage Act 200"* (ACHA) establishes a duty of care to take **all** reasonable and practicable measures to ensure any activity does not harm Aboriginal cultural heritage. This duty of care:

(a) Is not negated by the issuing of this development approval;

(b) Applies on all land and water, including freehold land;

(c) Lies with the person or entity conducting an activity; and

(d) If breached, is subject to criminal offence penalties.

Those proposing an activity involving surface disturbance beyond that which has already occurred at the proposed site must observe this duty of care. Details of how to fulfil this duty of care are outlined in the duty of care guidelines gazetted with the ACHA. The Applicant should contact NRW's Cultural Heritage Coordination Unit on (07) 3238 3838 for further information on the responsibilities of developers under the ACHA.

C. Limitation of Approval

The Council and its officers make no representations and provide no warranties as to the accuracy of the information contained in the development application including its supporting material provided to it by the Applicant.

The Council and its officers rely upon the applicant concerning the accuracy and completeness of the application and its supporting material and accepts the development application and supporting material as constituting a representation by the applicant as to its accuracy and completeness.

ATTACHMENT 2 – STATEMENT OF REASON – TP 06-22

NOTICE ABOUT DECISION - STATEMENT OF REASONS

The following information is provided in accordance with section 63(5) of *the Planning Act 2016*

Details of the Development

The proposed development application seeking Operational Works for Road work, Stormwater, Water infrastructure, Drainage work, and sewerage infrastructure on land at 28, 30, 32, 34 and 36 Railway Street, Cloncurry, described as Lot 100 on RP703329, Lot 101 on RP703329, Lot 102 on RP703329, Lot 103 on RP703329 and Lot 104 on RP703329

On 6 September 2022, the above development application was approved in full, with conditions.

Reasons for the decision

The development application seeking a development permit for Operational Works for Reconfiguring a lot (TP14/21) (5 Lots into 10 Lots) is code assessable under the planning scheme.

The proposed Operational Works allows for the construction of the approved Reconfiguration of a Lot (5 lots into 10 lots) The appropriate conditions have been included to ensure that relevant code requirements are implemented.

A detailed assessment of the application by Council assessing officers has been undertaken and it is concluded as documented in this Development Assessment Report that the applicant has satisfactorily demonstrated compliance with the applicable benchmarks of the relevant planning scheme codes to enable Council to support the proposed development in granting its approval, subject to reasonable and relevant conditions being imposed.

ATTACHMENT 3 - APPEAL PROVISIONS

Chapter 6 Dispute resolution

Part 1 Appeal rights

229 Appeals to tribunal or P&E Court

(1) Schedule 1 states—

(a) matters that may be appealed to—

(i) either a tribunal or the P&E Court; or

(ii) only a tribunal; or

(iii) only the P&E Court; and

(b) the person—

(i) who may appeal a matter (the ***appellant***); and

(ii) who is a respondent in an appeal of the matter; and

(iii) who is a co-respondent in an appeal of the matter; and

(iv) who may elect to be a co-respondent in an appeal of the matter.

(2) An appellant may start an appeal within the appeal period.

(3) The ***appeal period*** is—

(a) for an appeal by a building advisory agency—10 business days after a decision notice for the decision is given to the agency; or

(b) for an appeal against a deemed refusal—at any time after the deemed refusal happens; or

(c) for an appeal against a decision of the Minister, under chapter 7, part 4, to register premises or to renew the registration of premises—20 business days after a notice is published under section 269(3)(a) or (4); or

(d) for an appeal against an infrastructure charges notice—20 business days after the infrastructure charges notice is given to the person; or

(e) for an appeal about a deemed approval of a development application for which a decision notice has not been given—30 business days after the applicant gives the deemed approval notice to the assessment manager; or

(f) for any other appeal—20 business days after a notice of the decision for the matter, including an enforcement notice, is given to the person.

Note—

See the P&E Court Act for the court's power to extend the appeal period.

(4) Each respondent and co-respondent for an appeal may be heard in the appeal.

(5) If an appeal is only about a referral agency's response, the assessment manager may apply to the tribunal or P&E Court to withdraw from the appeal.

(6) To remove any doubt, it is declared that an appeal against an infrastructure charges notice must not be about—

(a) the adopted charge itself; or

(b) for a decision about an offset or refund—

(i) the establishment cost of trunk infrastructure identified in a LGIP; or

(ii) the cost of infrastructure decided using the method included in the local government's charges resolution.

230 Notice of appeal

(1) An appellant starts an appeal by lodging, with the registrar of the tribunal or P&E Court, a notice of appeal that—

(a) is in the approved form; and

(b) succinctly states the grounds of the appeal.

(2) The notice of appeal must be accompanied by the required

(f) for an appeal to the P&E Court—the chief executive; and

(g) for an appeal to a tribunal under another Act—any other person who the registrar considers appropriate.

(4) The ***service period*** is—

(a) if a submitter or advice agency started the appeal in the P&E Court—2 business days after the appeal is started; or

(b) otherwise—10 business days after the appeal is started.

(5) A notice of appeal given to a person who may elect to be a co-respondent must state the effect of subsection (6).

(6) A person elects to be a co-respondent by filing a notice of election, in the approved form, within 10 business days after the notice of appeal is given to the person.

(7) Despite any other Act or rules of court to the contrary, a copy of a notice of appeal may be given to the chief executive by emailing the copy to the chief executive at the email address stated on the department's website for this purpose.

231 Other appeals

(1) Subject to this chapter, schedule 1 and the P&E Court Act, unless the Supreme Court decides a decision or other matter under this Act is affected by jurisdictional error, the decision or matter is non-appealable.

(2) The *Judicial Review Act 1991*, part 5 applies to the decision or matter to the extent it is affected by jurisdictional error.

(3) A person who, but for subsection (1) could have made an application under the *Judicial Review Act 1991* in relation to the decision or matter, may apply under part 4 of that Act for a statement of reasons in relation to the decision or matter.

(4) In this section—

decision includes—

(a) conduct engaged in for the purpose of making a decision; and

(b) other conduct that relates to the making of a decision; and

(c) the making of a decision or the failure to make a decision; and

(d) a purported decision; and

(e) a deemed refusal.

non-appealable, for a decision or matter, means the decision or matter—

(a) is final and conclusive; and

(b) may not be challenged, appealed against, reviewed, quashed, set aside or called into question in any other way under the *Judicial Review Act 1991* or otherwise, whether by the Supreme Court, another court, any tribunal or another entity; and

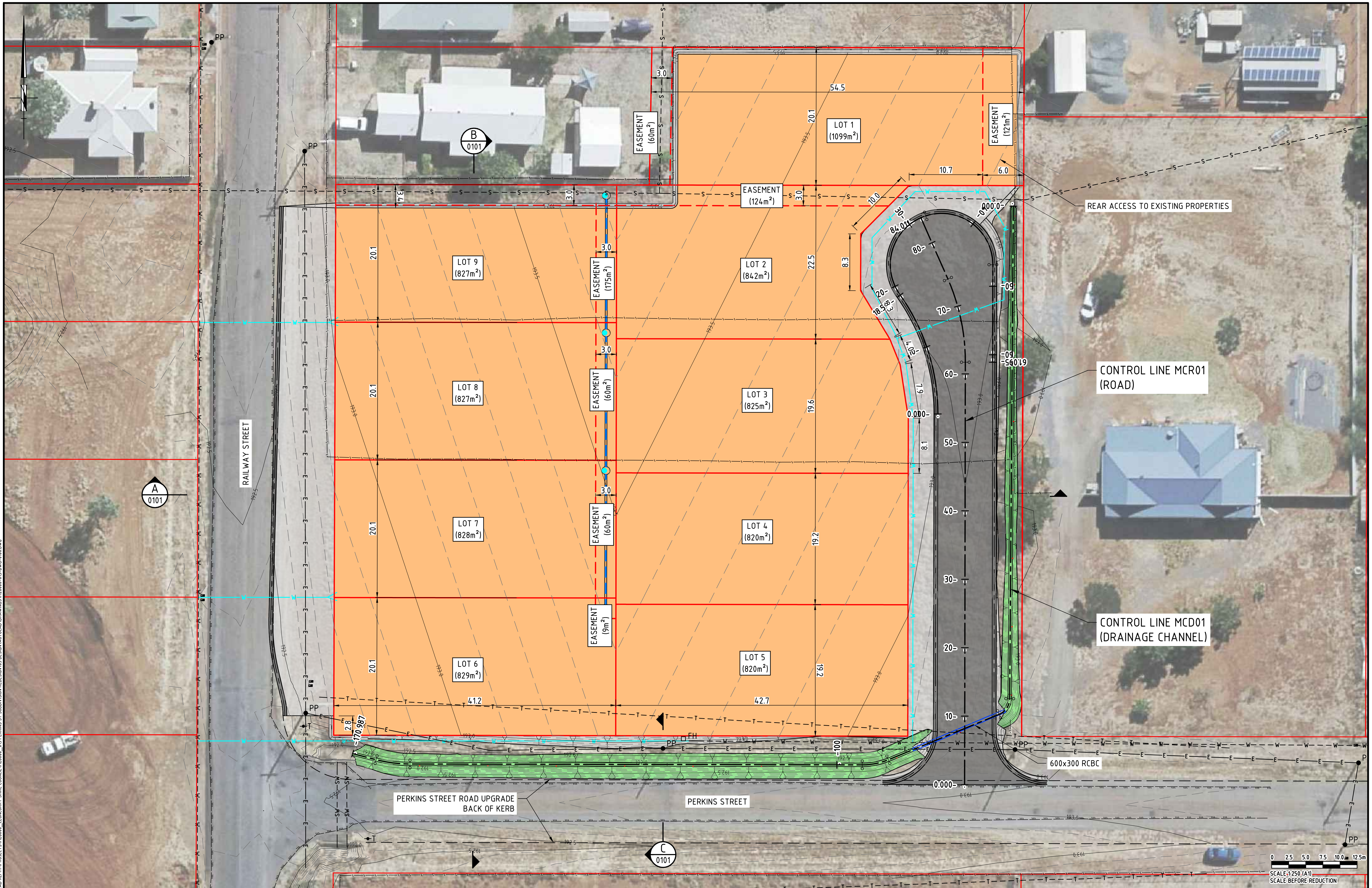
(c) is not subject to any declaratory, injunctive or other order of the Supreme Court, another court, any tribunal or another entity on any ground.

232 Rules of the P&E Court

(1) A person who is appealing to the P&E Court must comply with the rules of the court that apply to the appeal.

(2) However, the P&E Court may hear and decide an appeal even if the person has not complied with rules of the P&E Court.

ATTACHMENT 4 - APPROVED PLANS AND SPECIFICATIONS



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LAST MODIFIED: 11/7/2019 1:31 PM

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No.	BY	DATE	REVISION	APPD
A	RJM	21.10.19		

DOC. NUMBER	DOCUMENT TITLE
REFERENCE DOCUMENTS	

ENGENY WATER MANAGEMENT

Ph. 07 3221 7174

Level 7
500 Queen St
Brisbane QLD

www.engeny.com.au

Status: NOT FOR CONSTRUCTION - FOR REVIEW

DESIGNED		CHECKED	
DRAWN	RJM	CHECKED	
APPROVED		DATE	
RPEQ		RPEQ No.	

CLONCURRY SHIRE COUNCIL

PERKINS STREET SUBDIVISION
GENERAL ARRANGEMENT PLAN

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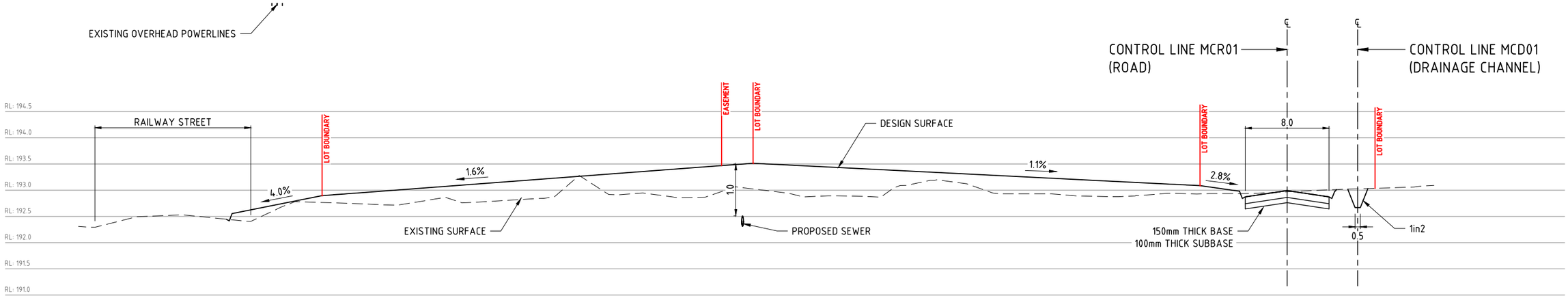

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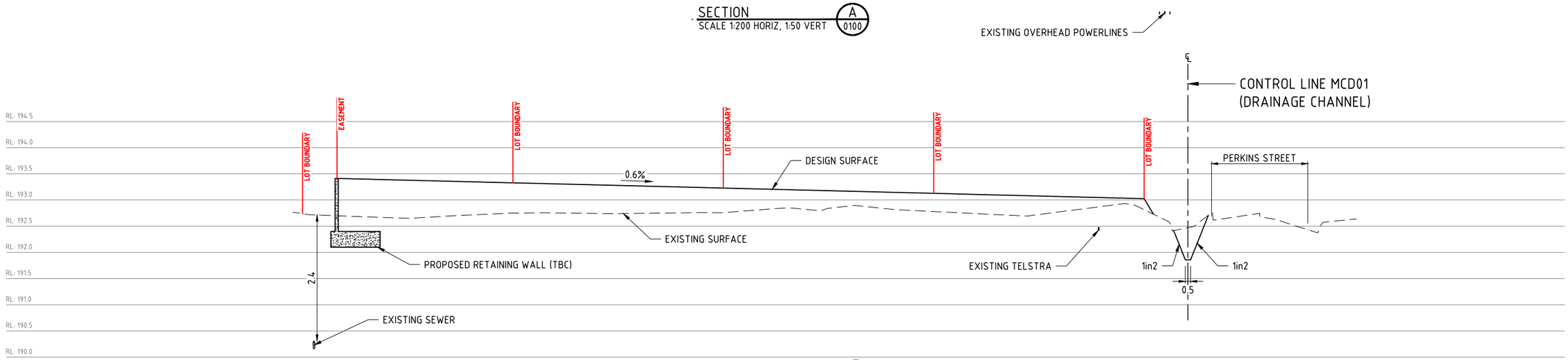

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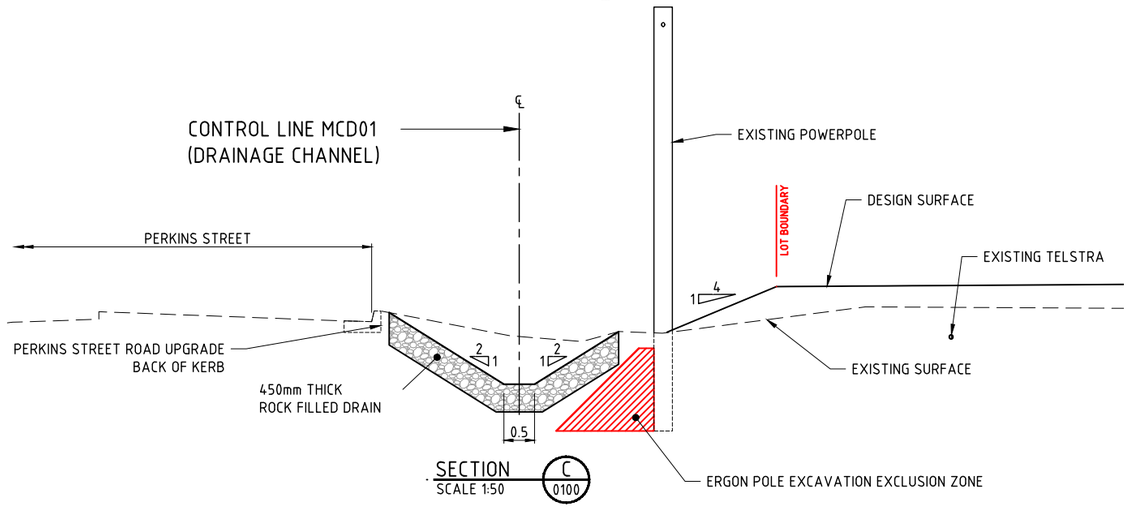

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LAST MODIFIED:10/10/2019 5:07 PM

No.	BY	DATE	REVISION	APPD
A	RJM	21.10.19		

DOC. NUMBER	DOCUMENT TITLE
REFERENCE DOCUMENTS	

ENGENY WATER MANAGEMENT
Ph. 07 3221 7174
Level 7
500 Queen St
Brisbane QLD
www.engeny.com.au

Status: NOT FOR CONSTRUCTION - FOR REVIEW

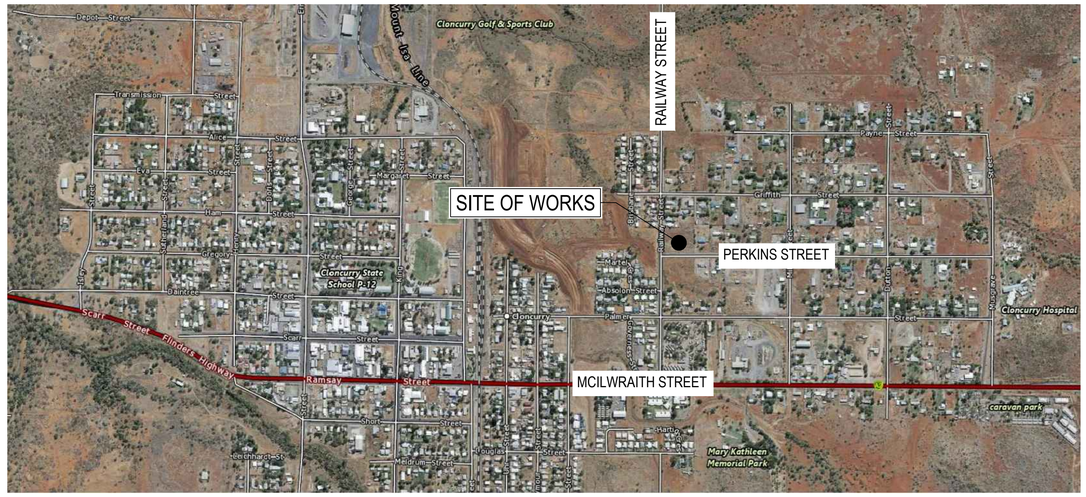
DESIGNED		CHECKED	
DRAWN	RJM	CHECKED	
APPROVED		DATE	
RPEQ		RPEQ No.	

CLONCURRY SHIRE COUNCIL

PERKINS STREET SUBDIVISION
CROSS SECTIONS AND DETAILS

Original Size: A1
Drg No.: M26000-015-DWG-0101
Rev.: A

PERKINS STREET SUBDIVISION
CLONCURRY, QLD
12584249



LOCALITY PLAN
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DRAWING INDEX	
DRAWING NUMBER	**DRAWING TITLE**
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12584249-C002	GENERAL NOTES
12584249-C003	TYPICAL SECTIONS & DETAILS
12584249-C005	SITEWORKS PLAN
12584249-C010	EARTHWORKS AND GRADING
12584249-C011	SITE SECTIONS
12584249-C015	SETOUT PLAN
12584249-C020	ROAD 01 SETOUT TABLE, LONGITUDINAL SECTION & CROSS SECTIONS
12584249-C030	STORMWATER PIT SCHEDULE & LONGITUDINAL SECTIONS
12584249-C035	SEWER RETICULATION PLAN
12584249-C040	WATER RETICULATION PLAN
12584249-E001	ELECTRICAL LAYOUT
12584249-E002	NBN CO PIT AND PIPE DESIGN SITE PLAN AND NOTES

THIS DRAWING INCLUDES COLOURED INFORMATION
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Rev	Description	Checked	Approved	Date
0	FOR CONSTRUCTION	JE*	JB*	15.06.22

Author S. FREWEN-LORD **Drafting Check** N. CARBIS
Designer S. FREWEN-LORD **Design Check** J. BROWN

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SCALE 1:10,000 AT ORIGINAL SIZE

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Project No. 12584249

Client GULF CIVIL
Project PERKINS STREET SUBDIVISION
Status FOR CONSTRUCTION
Status Code

Drawing Title DRAWING INDEX & LOCALITY PLAN
Drawing No. 12584249-C001
Size A1
Rev 0

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File Name: C:\12d\SW\data\P-00-12D-001\42-12584249 - Perkins Street Subdivision - D&C_1955\CADD\Drawings\12584249-C001.dwg

SURVEY CONTROL

1. REFER SURVEY PROVIDED BY AME SURVEYORS DATED 06/11/2021 FOR SURVEY BENCHMARKS AND LEVEL DATUM.
2. ALL LEVELS ARE IN m TO AHD.
3. HORIZONTAL DATUM IS GDA2020 / MGA ZONE 54

GENERAL NOTES

1. ALL WORKS MUST BE CARRIED OUT IN ACCORDANCE WITH THE NOTES ON THE PROJECT DRAWINGS.
2. THE LOCATIONS OF UNDERGROUND SERVICES HAVE BEEN APPROXIMATED FROM THE KNOWN POSITIONS OF VALVES, MANHOLES, ETC. PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION ON SITE, THE CONTRACTOR MUST CONTACT RELEVANT AUTHORITIES FOR POSSIBLE LOCATION OF FURTHER SERVICES AND DETAILED LOCATIONS OF ALL SERVICES.
3. EXISTING SERVICES ARE TO BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. WHERE NECESSARY THE CONTRACTOR SHALL CONFIRM THE DEPTH TO EXISTING SERVICES BY POTHOLING BEFORE COMMENCING WORKS. THE SUPERINTENDENT SHALL BE CONSULTED WHERE THE CONTRACTOR CONSIDERS SPECIFIC PROTECTION WORKS NECESSARY TO PROTECT THE SERVICE.
4. DEMOLITION AND REMOVAL OF SITE STRUCTURES, FENCES, HAZARDOUS MATERIALS, ROAD AND CONCRETE MATERIALS, ETC IN ACCORDANCE WITH AS2601.
5. ALL CONSTRUCTION TOLERANCES TO BE IN ACCORDANCE WITH IPWEAQ STANDARDS AND THE RELEVANT REFERENCED AUSTRALIAN STANDARDS.
6. ALL DIMENSIONS AND RADII ARE EXPRESSED IN METRES, UNLESS NOTED OTHERWISE.
7. WHERE REFERENCE IS MADE TO STANDARD DRAWINGS, THE CONTRACTOR SHALL ENSURE THAT THE LATEST VERSION ISSUED BY THE RELEVANT AUTHORITY, AT THE TIME OF CONSTRUCTION, IS USED.
8. THE CONCTRACTOR SHALL OBTAIN ALL LEVELS FROM ESTABLISHED BENCHMARKS AS PROVIDED BY THE PROJECT SURVEYOR. ALL BENCHMARKS ARE TO BE PROTECTED.
9. ALL CO-ORDINATES SHOWN ON THESE DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE REPORTED TO THE SUPERINTENDENT IMMEDIATELY.
10. DO NOT SCALE DRAWINGS, USE FIGURED DIMENSIONS.
11. CONTRACTOR TO SUBMIT INSPECTION TEST PLANS (ITPs) FOR APPROVAL PRIOR TO COMMENCEMENT OF WORKS. THE FOLLOWING HOLD POINTS SHALL BE INCLUDED AT MINIMUM:
    - APPROVAL OF EROSION AND SEDIMENT CONTROL PLAN
    - SUBGRADE COMPACTION
    - WORKING PLATFORM CONSTRUCTION
    - PAVEMENT LAYER COMPACTION
    - PRE-SEAL
    - CONCRETE MIX APPROVAL
    - FORMWORK AND REINFORCEMENT PRIOR TO PLACEMENT OF CONCRETE
    - WATERMAIN HYDRANT AND VALVE INSTALLATION

EROSION AND SEDIMENT CONTROL

1. PRIOR TO CONSTRUCTION COMMENCING, THE CONTRACTOR MUST PREPARE AN EROSION & SEDIMENT CONTROL PLAN (ESCP) TO MANAGE THE SITE DURING CONSTRUCTION AND THE DEFECT LIABILITY PERIOD.
2. THE ESCP SHALL TAKE INTO CONSIDERATION THE CONTRACTOR'S PROPOSED CONSTRUCTION METHODOLOGY AND PROGRAM.
3. NO EARTHWORKS SHALL COMMENCE ON ANY PART OF THE SITE PRIOR TO APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES BEING INSTALLED DOWNSTREAM OF THE SITE AND IN ACCORDANCE WITH THE APPROVED ESCP.
4. AT ALL TIMES THE CONTRACTOR SHALL MONITOR THE PREVAILING WEATHER CONDITIONS AND TAKE ALL NECESSARY PRECAUTIONS TO CONTROL EROSION AND DOWNSTREAM SEDIMENTATION DURING ALL STAGES OF CONSTRUCTION.
5. THE IMPACT ON THE ENVIRONMENT SHALL BE MINIMISED BY OBSERVING THE FOLLOWING CONSTRUCTION PRACTICES:
    - AREAS DISTURBED BY CONSTRUCTION TRAFFIC AND PROCEDURES SHALL BE MINIMISED.
    - MINIMISE TRAFFIC MOVEMENTS AND SPEEDS ON EXPOSED SURFACES.
    - REVEGETATION OF DISTURBED AREAS SHALL BE CARRIED OUT SOON AFTER THE COMPLETION OF TOPSOIL PLACEMENT.
    - FLOW DIVERSION SHALL BE CARRIED OUT BY EARLY INSTALLATION OF DRAINS ALONG TOPS OF BATTERS WITH APPROPRIATE SILTATION CONTROL DEVICES.
    - SEDIMENT INTERCEPTION BY THE PLACEMENT OF SUITABLE RETENTION SYSTEMS ACROSS DRAINAGE LINES AND AT INTERCEPTION POINTS FOR BOTH THE CONSTRUCTION AND STOCKPILE AREAS.
6. ALL ACCESS TO AND FROM THE SITE SHALL BE VIA A TEMPORARY CONSTRUCTION ENTRY/EXIT. THE CONTRACTOR SHALL NOMINATE A PROPOSED ACCESS LOCATION ON THE ESC PLAN FOR APPROVAL BY THE SUPERINTENDENT.
7. STOCKPILES SHALL ONLY BE LOCATED IN AREAS NOMINATED ON THE PROJECT DRAWINGS OR APPROVED BY THE SUPERINTENDENT. ALL STOCKPILES MUST HAVE APPROPRIATE ESC MEASURES INSTALLED TO PREVENT SEDIMENT TRANSPORT. THE MAXIMUM HEIGHT OF ALL STOCKPILES MUST BE LIMITED TO 2.0m
8. REFER TO IPWEAQ STANDARD DRAWING DS040 FOR EROSION AND SEDIMENT CONTROL DEVICE DETAILS AND CONSTRUCTION SPECIFICATION.
9. THE CONTRACTOR IS RESPONSIBLE FOR THE CONTROL OF DUST EMANATING FROM THE SITE AT ALL TIMES FOR THE DURATION OF CONSTRUCTION. WET SUPPRESSION METHODS TO BE USED.
10. EROSION AND SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL THE TREATMENT AREA IS SUITABLY STABILISED/VEGETATED.

EARTHWORKS NOTES

1. CONTRACTOR TO MAKE THEMSELVES AWARE OF GEOTECHNICAL REPORT COMPLETED BY CONSTRUCTION SCIENCES DATED 31 JANUARY 2022.
2. ALL EARTHWORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT DRAWINGS, GEOTECHNICAL REPORT AND AS3798.
3. GEOTECHNICAL TESTING SERVICES SHALL BE AS DETERMINED BY LEVEL 1 IN ACCORDANCE WITH AS3798. ALL CERTIFICATION AND TEST RESULTS ARE TO BE COMPILED AND PROVIDED TO THE SUPERINTENDENT PRIOR TO WORKS ACCEPTANCE.
4. ALL BATTERS SHALL BE 1 IN 3 MAX ALONG ROAD FRONTAGE AND 1 ON 2 MAX ALONG SIDE AND REAR BOUNDARIES UNLESS NOTED OTHERWISE.
5. FINISHED SURFACE LEVELS SHOWN ON PROJECT DRAWINGS ARE AFTER ALL EARTHWORKS ARE COMPLETE INCLUDING TOPSOILING. ALL AREAS ARE TO BE GRADED EVENLY BETWEEN FINISHED SURFACE LEVELS UNLESS NOTED OTHERWISE.
6. NO VEGETATION SHALL BE REMOVED WITHOUT PRIOR APPROVAL OF THE SUPERINTENDENT UNLESS NOTED ON THE PROJECT DRAWINGS.
7. ALL VEGETAL MATTER, TOPSOIL AND OTHER UNSUITABLE MATERIAL SHALL BE STRIPPED/REMOVED FROM AREAS TO BE EXCAVATED OR FILLED. ALL VEGETAL MATTER AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF-SITE UNLESS ADVISED OTHERWISE BY THE SUPERINTENDENT. TOPSOIL SHALL BE STOCKPILED ON-SITE FOR REUSE. SURPLUS TOPSOIL SHALL BE DISPOSED OF OFF-SITE.
8. SHOULD ANY SOFT OR UNSUITABLE MATERIAL BE IDENTIFIED, THE CONTRACTOR SHALL INFORM THE SUPERINTENDENT IMMEDIATELY AND SEEK THE ADVICE OF THE SUPERINTENDENT.
9. COMPACT FILL IN ACCORDANCE WITH AS3798 TO 98% DRY DENSITY RATIO WITHIN LOTS AND BENEATH PAVEMENTS IN LAYERS OF THICKNESS APPROPRIATE TO THE COMPACTION PLANT EMPLOYED BY NOT EXCEEDING 200mm. ALL OTHER LANDSCAPED AREAS COMPACT FILL TO 95% DRY DENSITY RATIO.
10. ROAD VERGE SHALL BE FULLY TURFED ON COMPLETION OF TOPSOILING. ELSEWHERE, DISTURBED AREAS 1:4 OR FLATTER SHALL BE GRASS SEEDED AND AREAS STEEPER THAN 1:4 SHALL BE HYDROMULCHED (UNLESS NOTED OTHERWISE).
11. THE CONTRACTOR SHALL PROVIDE TEST RESULTS AND COMPACTION CERTIFICATIONS UPON COMPLETION OF EARTHWORKS.
12. EXISTING TOPSOIL SHALL BE STRIPPED TO A DEPTH OF 100mm WHERE EXCAVATION AND EMBANKMENT WORKS ARE SPECIFIED. TOPSOIL SHALL BE STOCKPILED ON SITE IN ACCORDANCE WITH THE EROSION AND SEDMIENT CONTROL NOTES.

ASPHALT

1. ASPHALT PAVEMENT TO BE CONSTRUCTED IN ACCORDANCE WITH THE TMR SPECIFICATION MRTS 30 - ASPHALT PAVEMENTS (JULY 2020).

PRIME AND SPRAY SEALS

1. NOMINATED BINDER SPRAY & AGGREGATE SPREAD RATES ARE INDICIATIVE ONLY AND THE CONTRACTOR SHALL UNDERTAKE DESIGNS APPROPRIATE FOR THE CONDITIONS AT THE TIME OF PLACEMENT AND SUBMIT DETAILS IN WRITING TO THE PRINCIPAL FOR APPROVAL PRIOR TO UNDERTAKING WORKS.
2. THE CONTRACTOR IS TO UNDERTAKE TESTING OF THE COVER AGGREGATE PARTICLE SIZE DISTRIBUTION, FLAKINESS INDEX AND AVERAGE LEAST DIMENSION. TEXTURE DEPTH AND BALL PENETRATION TESTING SHALL ALSO BE CONDUCTED ON THE PREPARED SURFACE.

ROADWORK

1. ALL ROAD PAVEMENTS AND SURFACING, INCLUDING EARTHWORKS ASSOCIATED WITH ROADS SHALL BE CARRIED OUT IN ACCORDANCE WITH PROJECT DRAWINGS AND MRTS 05 - UNBOUND PAVEMENTS (NOVEMBER 2020).
2. COMPACT PAVEMENT MATERIAL TO 98% DRY DENSITY RATIO IN LAYERS OF THICKNESS APPROPRIATE TO THE COMPACTION PLANT EMPLOYED BY NOT EXCEEDING 200mm.
3. NEW ROADS AND KERBING SHALL JOIN SMOOTHLY TO EXISTING WORKS. WHERE NECESSARY, EXISTING WORKS SHALL BE CUT BACK TO FORM A NEAT JOIN WHERE REQUIRED.
4. ALL KERB PROFILES TO BE AS PER IPWEAQ STANDARD DRAWINGS.
5. ALL STREET SIGNS AND TRAFFIC SIGNS SHALL BE INSTALLED AS PER IPWEAQ STANDARD DRAWINGS.

CONCRETE WORKS

1. ALL CONCRETE WORKS INCLUDING SUPPLY, PLACEMENT, COMPACTION, REINFORCEMENT AND FINISHING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS3600, AS2870, AS3610, AS1379, AS1478, AS3582, AS3972 AND THE PROJECT DRAWINGS AND NOTES.
2. ALL CONCRETE SHALL BE GRADE N32 CONCRETE MINIMUM.
3. CONCRETE COVER TO REINFORCEMENT SHALL BE 40 mm MINIMUM UNLESS OTHERWISE NOTED.
4. ALL CONCRETE SHALL BE CURED IN ACCORDANCE WITH THE FOLLOWING:
    - AS3600
    - ALIPHATIC ALCOHOL MUST BE USED AND APPLIED AFTER SCREEDING AND BULL FLOATING OPERATIONS
    - NO WATER SHALL BE ADDED TO THE CONCRETE
    - AN IMPERMIABLE MEMBRANE SHALL BE APPLIED
    - MINIMUM CURING PERIOD SHALL BE NOT LESS THAN 4 DAYS
5. CONCRETE REINFORCEMENT TO BE AS PER PROJECT DRAWINGS AND IPWEAQ STANDARD DRAWINGS.
6. CONCRETE SHALL BE COMPACTED USING VIBRATORS.
7. PROVIDE ALL EXPOSED EDGES WITH 20mm CHAMFERS OR FILLETS.
8. FORMWORK AND ITS REMOVAL SHALL BE AS PER AS3610.
9. CONSTRUCTION TOLERANCES SHALL BE AS PER AS3610.
10. JOINTING TO BE IN ACCORDANCE WITH IPWEAQ STANDARDS.
11. RETAINING WALL SHALL BE CONSTRUCTED AS PER ULTIMATE CONCRETE CONSTRUCTIONS DETAILED PLAN K-10405-SKE-001 REV A.

DRAINAGE

1. ALL STORMWATER DRAINAGE WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT DRAWINGS.
2. STORMWATER STRUCTURES (PITS AND HEADWALLS) TO BE IN ACCORDANCE WITH IPWEAQ STANDARD DRAWINGS.
3. LADDERS: PROVIDE PITS DEEPER THAN 1.0m WITH HOT-DIP GALVANIZED RUNG TYPE OR INDIVIDUAL RUNG LADDERS TO AS/NZS1567.
4. ALL REINFORCED CONCRETE PIPES SHALL BE CLASS 2 RCP UNLESS NOTED OTHERWISE. ALTERNATIVE MATERIAL TYPES SUCH AS HDPE OR FRC MAYBE USED SUBJECT TO SUPERINTENDENTS/COUNCIL APPROVAL.
5. EXCAVATION, BEDDING AND BACKFILL FOR CONCRETE PIPES SHALL BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT DRAWINGS AND NOTES.
6. SUBSOIL DRAINAGE SHALL BE PROVIDED CONSISTANT WITH IPWEAQ STANDARD DRAWINGS. DRAINS SHALL ACHIEVE A MINIMUM 0.5% GRADE WITH FLUSHING POINTS AND OUTLETS TO BE PROVIDED AS PER IPWEAQ STANDARDS.
7. DRAINAGE SWALES TO BE GRADED WITH CONTINUOUS POSITIVE FALL CONSISTANT WITH THE PROJECT DRAWINGS.
8. CONSTRUCTION OF ROCK LINED DRAINAGE CHANNELS TO BE IN ACCORDANCE WITH CATCHMENTS AND CREEKS STORMWATER MANAGEMENT PRACTICES (ROCK SIZING FOR DRAINAGE CHANNELS). ROCK BEACHING TO BE A SOUND DURABLE ROCK NOT LESS THAN 100mm THICK. ROCK FINISH TO FORM A UNIFORM SURFACE ALONG DRAINAGE CHANNEL TO DESIGN LEVELS.

WATER RETICULATION

1. ALL WATER RETICULATION WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH PROJECT DRAWINGS AND AS PER IPWEAQ STANDARD DRAWINGS.
2. ALL PVC AND PE PIPES SHALL BE CLASS PN16. PVC PIPES SHALL BE RUBBER RING JOINTED AND DUCTILE IRON COMPATIBLE.
3. DICL PIPES SHALL BE CLASS PN35 "TYTON" TYPE RUBBER RING JOINTED.
4. FOR MAIN TRENCHING, BEDDING & ANCHORAGE ENSURE COVER TO WATER MAINS IS 800mm MINIMUM UNDER ROADWAYS AND 600mm MINIMUM ELSEWHERE.
5. ALL WATER MAINS SHALL BE INSTALLED TO AN OFFSET FROM THE PROPERTY BOUNDARY AS SPECIFIED IN THE PROJECT DRAWINGS.
6. COUNCIL MUST BE CONTACTED TO PERFORM ANY DIRECT CONNECTION OR ALTERATION TO LIVE WATER MAINS. THE CONTRACTOR SHALL LODGE WITH COUNCIL THE APPROPRIATE APPLICATION FORMS AND FEES FOR THESE WORKS TO BE COMPLETED. IT MAY BE POSSIBLE FOR SOME WORKS TO BE PERFORMED BY THE CONTRACTOR UNDER SPECIAL CIRCUMSTANCES AND SUBJECT TO APPROPRIATE CONDITIONS AGREED TO WITH COUNCIL.
7. ALL HYDRANTS AND VALVES TO BE LOCATED OPPOSITE PROPERTY BOUNDARY TRUNCATIONS AND CORNERS, UNLESS NOTED OTHERWISE ON PLANS.
8. HYDRANTS OR VALVES CONSTRUCTED IN CONCRETE ARE TO HAVE A COMPRESSIBLE LAYER (ABLEFLEX) INSTALLED ON THE SURROUND.
9. KERB MARKER PLATES SHALL BE PROVIDED TO IDENTIFY THE POSITION OF ALL VALVES AND HYDRANTS. IN ADDITION TO KERB MARKER PLATES, HYDRANTS SHALL ALSO HAVE TEARDROP MARKERS AND BLUE RETRO-REFLECTIVE MARKERS PROVIDED ON THE ROAD PAVEMENT.
10. LAY PIPE IN STRAIGHT LINES BETWEEN CHANGES IN DIRECTION OR GRADE WITH SOCKETS POINTING UP HILL. IF OTHER PIPES ARE ADJACENT, SET EACH PIPE TRUE TO LINE AND COMPLETE EACH JOINT BEFORE LAYING THE NEXT PIPE. IF WORK IS NOT CONTINUOUS, CAP OPEN ENDS TO PREVENT ENTRY OF FOREIGN MATTER.
11. LAY DETECTABLE PLASTIC WARNING TAPE, 300mm ABOVE BURIED PIPING, FOR THE FULL LENGTH OF THE PIPING.
12. THRUST RESTRAINTS TO BE PROVIDED AT ALL TEES, BENDS, VALVES AND HYDRANTS AS PER IPWEAQ STANDARD DRAWING W-0041

SEWER RETICULATION

1. ALL SEWER WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT DRAWINGS AND AS PER IPWEAQ STANDARD DRAWINGS.
2. ALL NEW SEWER MAINS SHALL BE UNPLASTICISED PVC (PVC-U) CLASS SN8 SUITABLE FOR RUBBER RING JOINTS, UNLESS NOTED OTHERWISE.
3. ALL SEWER MANHOLE COVERS SHALL BE CIRCULAR UNLESS NOTED OTHERWISE ON SEWER LONG SECTIONS. COVERS SHALL BE TYPE B INSIDE PROPERTIES AND TYPE C ELSEWHERE AS PER IPWEAQ STANDARD DRAWINGS.
4. ALL SEWER MANHOLE COVER LEVELS TO BE 30mm ABOVE FINISHED SURFACE LEVEL UNLESS NOTED OTHERWISE.
5. THE CONTRACTOR SHALL ENSURE THAT A FLAT AREA OF 1.5m RADIUS FROM THE CENTRE OF THE MANHOLE IS PROVIDED AROUND ALL MANHOLES.
6. LAY IN STRAIGHT LINES BETWEEN CHANGES IN DIRECTION OR GRADE WITH SOCKETS POINTING UP HILL. IF OTHER PIPES ARE ADJACENT, SET EACH PIPE TRUE TO LINE AND COMPLETE EACH JOINT BEFORE LAYING THE NEXT PIPE. IF WORK IS NOT CONTINUOUS, CAP OPEN ENDS TO PREVENT ENTRY OF FOREIGN MATTER.
7. LAY DETECTABLE PLASTIC WARNING TAPE, 300mm ABOVE BURIED PIPING, FOR THE FULL LENGTH OF THE PIPING.
8. LADDERS: PROVIDE PITS DEEPER THAN 1.0m WITH HOT-DIP GALVANIZED RUNG TYPE OR INDIVIDUAL RUNG LADDERS TO AS/NZS1567.
9. COVERS: PROVIDE SEALED GAS-TIGHT COVERS WITH LIFTING HOLES TO AS3996. PROVIDE REMOVABLE PLASTIC PLUGS IN LIFTING HOLES.
10. COUNCIL MUST BE CONTACTED TO PERFORM ANY DIRECT CONNECTION TO LIVE SEWER MAINS. THE CONTRACTOR SHALL LODGE WITH COUNCIL THE APPROPRIATE APPLICATION FORMS AND FEES FOR THESE WORKS TO BE COMPLETED. IT MAY BE POSSIBLE FOR SOME WORKS TO BE PERFORMED BY THE CONTRACTOR UNDER SPECIAL CIRCUMSTANCES AND SUBJECT TO APPROPRIATE CONDITIONS AGREED TO WITH COUNCIL.
11. THE CONTRACTOR SHALL CARRY OUT A CCTV INSPECTION THROUGH ALL SEWERS CONSTRUCTED AS PART OF THIS DEVELOPMENT AND PROVIDE THE FOOTAGE TO THE SUPERINTENDENT FOR ASSESSMENT. ANY SECTIONS OF SEWER CONSIDERED SUB-STANDARD SHALL BE RECTIFIED TO THE SATISFACTION OF COUNCIL.

GROUNDWATER BORE

1. THE CONTRACTOR SHALL CONSTRUCT THE GROUNDWATER BORE AS PER GHD'S GROUNDWATER INVESTIGATION AND PRELIMINARY BORE DESIGN TECHNICAL MEMORANDUM.

Rev	Description	Checked	Approved	Date
0	FOR CONSTRUCTION	JE*	JB*	15.06.22

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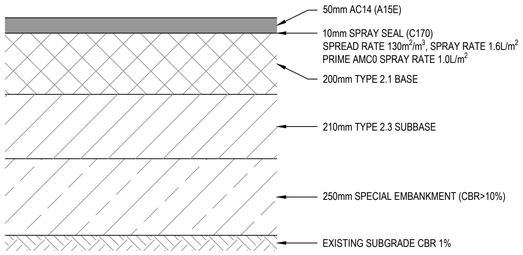
Project No. 12584249

Client GULF CIVIL
Project PERKINS STREET SUBDIVISION
Status FOR CONSTRUCTION
Status Code

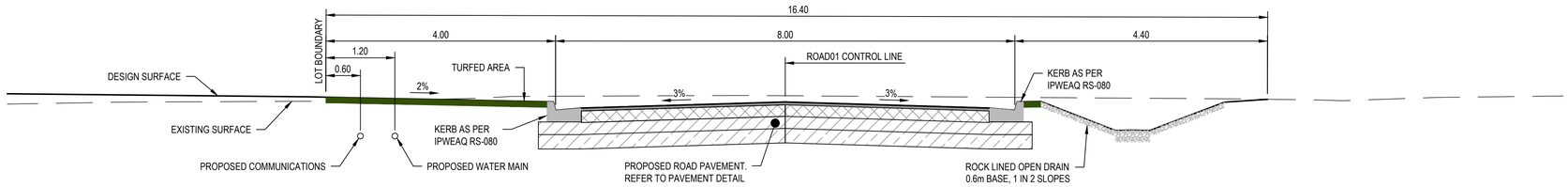
Drawing Title GENERAL NOTES
Size A1
Drawing No. 12584249-C002
Rev 0

Plot Date: 15 June 2022 - 2:59 PM Plotted by: Simon Frewen-Lord File Name: C:\12d\SW\data\P-00-12D-001\42-12584249 - Perkins Street Subdivision - D&C_1955\CADD\Drawings\12584249-C002.dwg



PAVEMENT DETAIL

NTS



ROAD 01 SECTION

SCALE 1:50

NOTES:

1. REFER TO DRG 12584249-C002 FOR GENERAL NOTES.
2. REFER TO DRG 12584249-C020 FOR ROAD CONTROL LINE SETOUT.
3. REFER TO DRG 12584249-C030 FOR STORMWATER PIT SETOUT.

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Rev	Description	Checked	Approved	Date
0	FOR CONSTRUCTION	JE*	JB*	15.06.22

Author S. FREWEN-LORD **Drafting Check** N. CARBIS

Designer S. FREWEN-LORD **Design Check** J. BROWN

0 0.5 1.0 1.5 2.0 2.5m

SCALE 1:50 AT ORIGINAL SIZE

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Project No. 12584249

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Project PERKINS STREET SUBDIVISION

Status FOR CONSTRUCTION

Status Code

Drawing Title TYPICAL SECTIONS & DETAILS

Size A1

Drawing No. 12584249-C003

Rev 0

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File Name: C:\12d\SW\data\P-00-12D-001\42-12584249 - Perkins Street Subdivision - D&C_1955\CADD\Drawings\12584249-C003.dwg

REFER RIGHT FOR CONTINUATION

RAILWAY STREET

LOT 9 (827m²)
LOT 8 (827m²)
LOT 7 (828m²)
LOT 6 (829m²)
LOT 2 (842m²)
LOT 3 (825m²)
LOT 4 (820m²)
LOT 5 (820m²)

3m WIDE CONCRETE ACCESS WITH 375 RCP CULVERT INCLUDING HEADWALLS (TYPICAL FOR LOTS 6, 7, 8 & 9) (GENERALLY AS PER IPWEAQ STD DRG RS-049 AND RS-050)

3.0m SEWER/DRAINAGE EASEMENT

1 in 4 MAX BATTER (2m SOUTH OF EASEMENT LINE)

3.0m SEWER EASEMENT

3m WIDE CONCRETE ACCESS WITH CONCRETE CROSSOVER TO LOTS 1, 2, 3, 4, 5 AND TO ACCESS EASEMENT IN LOT 1 (AS PER IPWEAQ STD DRG RS-049 AND RS-050)

BARRIER KERB AND CHANNEL (TYPE B1) TYPICAL U.N.O.

EXISTING TELECOMMUNICATIONS AND OVERHEARD POWER INFRASTRUCTURE TO BE RELOCATED (REFER TO ELECTRICAL DRAWINGS)

TIE IN NEW DRAINAGE TO EXISTING

NEW GROUNDWATER BORE FOR SUBDIVISION IRRIGATION (REFER TO DRG 12584249-C002 GROUNDWATER BORE NOTE 1)

PERKINS STREET

ROAD 01

87.010
80
CT 78.485

0.6m KERB BREAK TO OPEN DRAIN

OPEN DRAIN TO BE ROCK LINED AS PER GENERAL NOTES

60
TC 58.868

40

ROCK LINED OPEN DRAIN, 0.6m BASE, 1 IN 2 SLOPES

20

LOCALLY SHAPE NATURE STRIP TO ALLOW POSITIVE DRAINAGE FLOW TO NEW OPEN CHANNEL

PROVIDE 300 WIDE CLASS D TRENCH GRATE WITHIN NEW CONCRETE DRIVEWAY

CUT BACK EXISTING PAVEMENT AND DEMOLISH EXISTING KERB. NEATLY TIE IN NEW WORKS AND MAKE GOOD

TIE PROPOSED INLETS NEATLY INTO EXISTING KERB

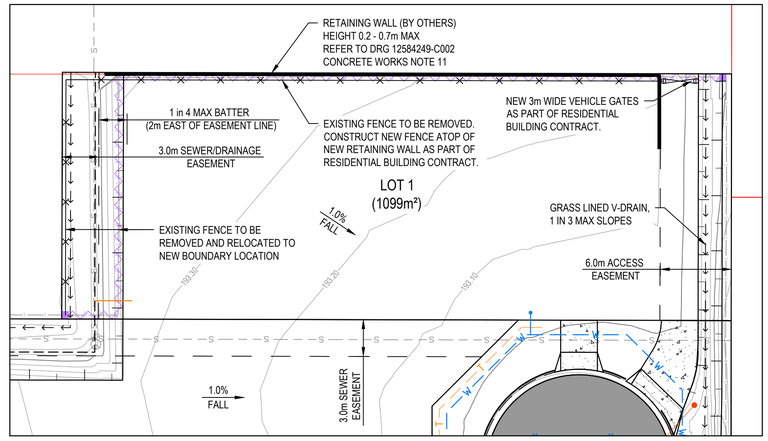
0.000

REFER DRG 12584249-C030 FOR STORMWATER LONGITUDINAL SECTIONS & PIT SCHEDULE

APPROXIMATE LOCATION OF PROPOSED CULVERT AS PART OF FUTURE RAILWAY STREET WORKS (NOT IN CONTRACT)

DRAINAGE SWALE INVERT TO MATCH NEATLY WITH EXISTING RAILWAY STREET SWALE INVERT

NEW ROCK LINED OPEN DRAIN WITHIN COUNCIL OWNED LAND 0.6m BASE, 1 IN 3 SLOPES



REFER LEFT FOR CONTINUATION

LEGEND

- PROPOSED BITUMEN PAVEMENT
- PROPOSED CONCRETE DRIVEWAY
- PROPOSED ROCK PROTECTION TO DRAINS / BATTERS
- 193.00 MAJOR DESIGN CONTOURS (1.0m)
- 193.10 MINOR DESIGN CONTOURS (0.1m)
- BARRIER KERB AND CHANNEL
- TOP OF EARTH BATTER
- BOTTOM OF EARTH BATTER / CHANGE IN GRADE
- PROPOSED OPEN DRAIN
- PROPOSED EASEMENT BOUNDARY
- PROPOSED RETAINING WALL
- PROPOSED FENCE / GATE
- PROPOSED STORMWATER (PIT / PIPE)
- PROPOSED WATER MAIN & PROPERTY CONNECTION
- PROPOSED SEWER MAIN & MANHOLE
- PROPOSED OVERHEAD POWER & POLE
- PROPOSED TELECOMUNICATIONS
- EXISTING STORMWATER
- EXISTING WATER MAIN
- EXISTING SEWER MAIN
- EXISTING ELECTRICAL (OVERHEAD)
- EXISTING TELSTRA (UNDERGROUND)
- EXISTING FENCE
- EXISTING TO BE REMOVED
- EXISTING LOT BOUNDARY
- FH EXISTING FIRE HYDRANT

NOTES:

1. REFER TO DRG 12584249-C002 FOR GENERAL NOTES.
2. REFER TO DRG 12584249-C020 FOR ROAD CONTROL LINE SETOUT.
3. REFER TO DRG 12584249-C030 FOR STORMWATER PIT SETOUT.

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Rev	Description	Checked	Approved	Date
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Author S. FREWEN-LORD **Drafting Check** N. CARBIS
Designer S. FREWEN-LORD **Design Check** J. BROWN

0 2.5 5 7.5 10 12.5m
SCALE 1:250 AT ORIGINAL SIZE

N

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Project No. 12584249

Client GULF CIVIL
Project PERKINS STREET SUBDIVISION
Status FOR CONSTRUCTION
Status Code

Drawing Title SITEWORKS PLAN
Size A1
Drawing No. 12584249-C005
Rev 0

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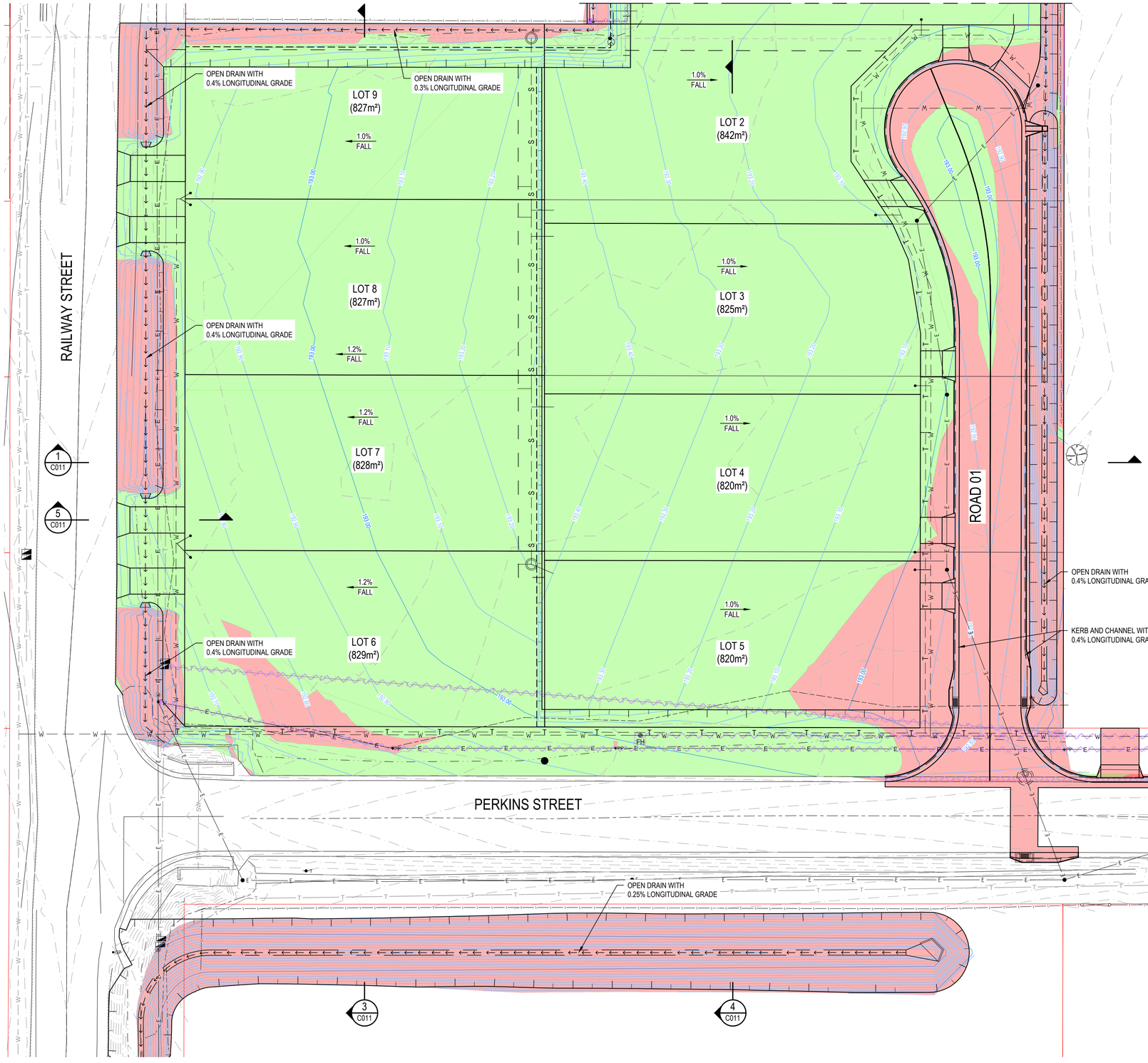

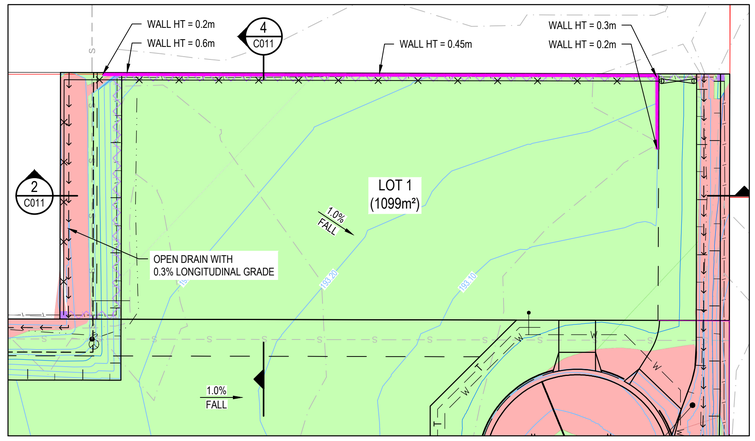

REFER LEFT FOR CONTINUATION

LEGEND

- AREA OF CUT
- AREA OF FILL
- 193.00 — MAJOR DESIGN CONTOURS (1.0m)
- 193.10 — MINOR DESIGN CONTOURS (0.1m)
- BARRIER KERB AND CHANNEL
- TOP OF EARTH BATTER
- BOTTOM OF EARTH BATTER / CHANGE IN GRADE
- PROPOSED OPEN DRAIN
- PROPOSED RETAINING WALL
- PROPOSED WATER MAIN & PROPERTY CONNECTION
- PROPOSED SEWER MAIN & MANHOLE
- PROPOSED OVERHEAD POWER & POLE
- PROPOSED TELECOMUNICATIONS
- EXISTING STORMWATER
- EXISTING WATER MAIN
- EXISTING SEWER MAIN
- EXISTING ELECTRICAL (OVERHEAD)
- EXISTING TELSTRA (UNDERGROUND)
- EXISTING FENCE
- EXISTING LOT BOUNDARY
- EXISTING CONTOUR
- EXISTING TO BE REMOVED

NOTES:

1. REFER TO DRG 12584249-C002 FOR GENERAL NOTES.
2. REFER TO DRG 12584249-C011 FOR SITE SECTIONS.

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Author S. FREWEN-LORD **Drafting Check** N. CARBIS
Designer S. FREWEN-LORD **Design Check** J. BROWN

0 2.5 5 7.5 10 12.5m
SCALE 1:250 AT ORIGINAL SIZE

N

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Project No. 12584249

Client GULF CIVIL
Project PERKINS STREET SUBDIVISION
Status FOR CONSTRUCTION — Status Code

Drawing Title EARTHWORKS AND GRADING
Size A1
Drawing No. 12584249-C010
Rev 0

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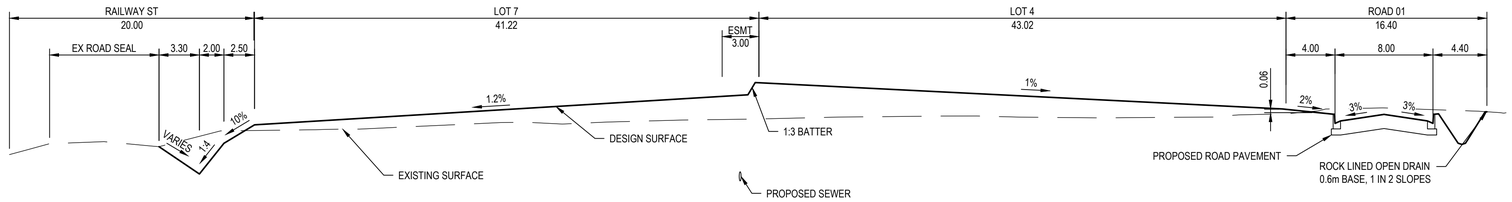

1 SECTION
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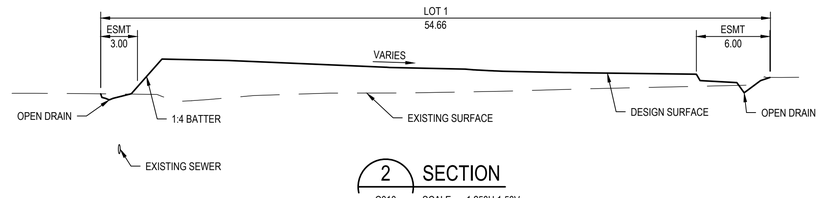
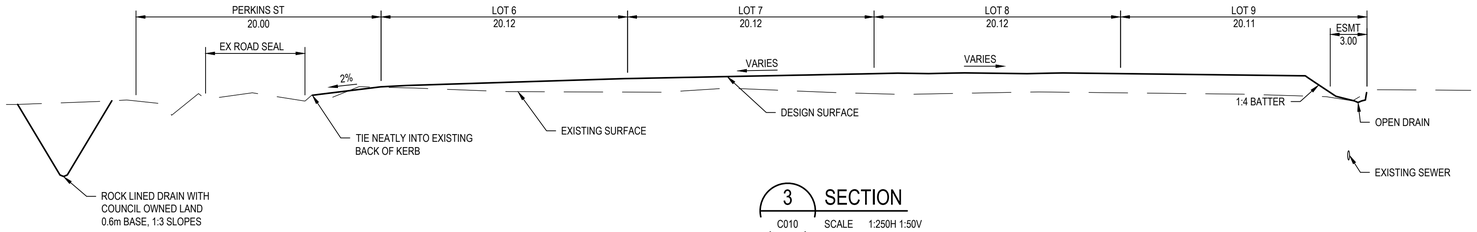
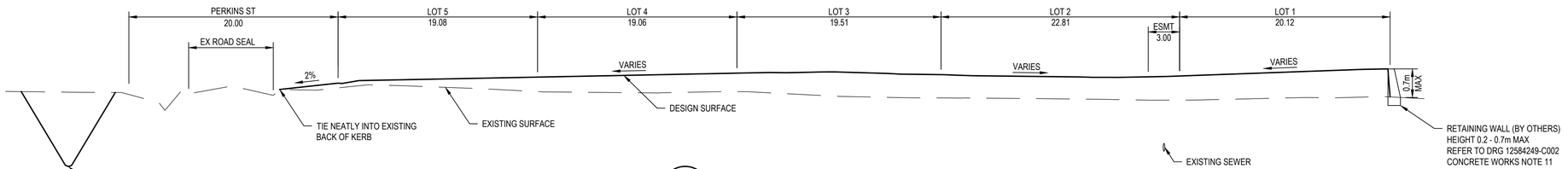


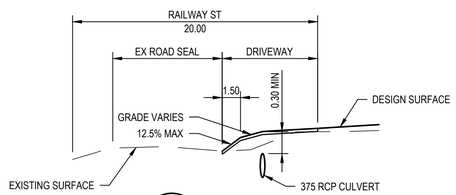
2 SECTION
C010 SCALE 1:250H 1:50V



3 SECTION
C010 SCALE 1:250H 1:50V



4 SECTION
C010 SCALE 1:250H 1:50V



5 SECTION
C010 SCALE 1:250H 1:50V

NOTES:

1. REFER TO DRG 12584249-C002 FOR GENERAL NOTES.
2. REFER TO DRG 12584249-C010 FOR EARTHWORKS AND GRADING.

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Rev	Description	Checked	Approved	Date
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Author S. FREWEN-LORD **Drafting Check** N. CARBIS
Designer S. FREWEN-LORD **Design Check** J. BROWN

VERTICAL 1:50 AT ORIGINAL SIZE 0 0.5 1 1.5 2 2.5m
HORIZONTAL 1:250 AT ORIGINAL SIZE 0 2.5 5 7.5 10 12.5m

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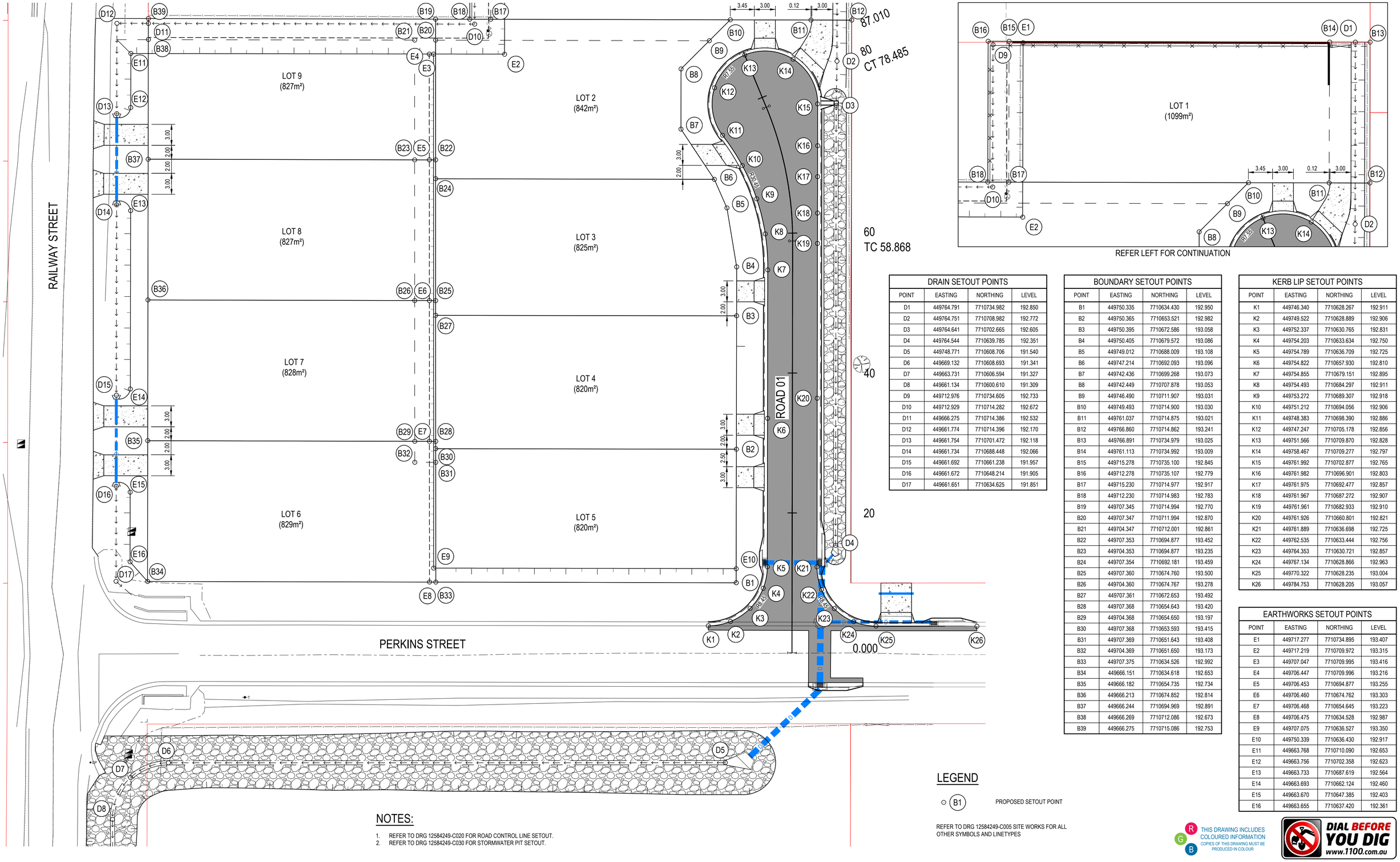
Project No. 12584249

Client GULF CIVIL
Project PERKINS STREET SUBDIVISION
Status FOR CONSTRUCTION Status Code

Drawing Title SITE SECTIONS
Size A1
Drawing No. 12584249-C011
Rev 0

Plot Date: 15 June 2022 - 3:00 PM Plotted by: Simon Frewen-Lord File Name: C:\12d\SW\data\P-00-12D-001\42-12584249 - Perkins Street Subdivision - D&C_1955\CADD\Drawings\12584249-C011.dwg



DRAIN SETOUT POINTS			
POINT	EASTING	NORTHING	LEVEL
D1	449764.791	7710734.982	192.850
D2	449764.751	7710708.982	192.772
D3	449764.641	7710702.665	192.605
D4	449764.544	7710639.785	192.351
D5	449748.771	7710608.706	191.540
D6	449669.132	7710608.693	191.341
D7	449663.731	7710606.594	191.327
D8	449661.134	7710600.610	191.309
D9	449712.976	7710734.605	192.733
D10	449712.929	7710714.282	192.672
D11	449666.275	7710714.386	192.532
D12	449661.774	7710714.396	192.170
D13	449661.754	7710701.472	192.118
D14	449661.734	7710688.448	192.066
D15	449661.692	7710661.238	191.957
D16	449661.672	7710648.214	191.905
D17	449661.651	7710634.625	191.851

BOUNDARY SETOUT POINTS			
POINT	EASTING	NORTHING	LEVEL
B1	449750.335	7710634.430	192.950
B2	449750.365	7710653.521	192.982
B3	449750.395	7710672.586	193.058
B4	449750.405	7710679.572	193.086
B5	449749.012	7710688.009	193.108
B6	449747.214	7710692.093	193.096
B7	449742.436	7710699.268	193.073
B8	449742.449	7710707.878	193.053
B9	449746.490	7710711.907	193.031
B10	449749.493	7710714.900	193.030
B11	449761.037	7710714.875	193.021
B12	449766.860	7710714.862	193.241
B13	449766.891	7710734.979	193.025
B14	449761.113	7710734.992	193.009
B15	449715.278	7710735.100	192.845
B16	449712.278	7710735.107	192.779
B17	449715.230	7710714.977	192.917
B18	449712.230	7710714.983	192.783
B19	449707.345	7710714.994	192.770
B20	449707.347	7710711.994	192.870
B21	449704.347	7710712.001	192.861
B22	449707.353	7710694.877	193.452
B23	449704.353	7710694.877	193.235
B24	449707.354	7710692.181	193.459
B25	449707.360	7710674.760	193.500
B26	449704.360	7710674.767	193.278
B27	449707.361	7710672.653	193.492
B28	449707.368	7710654.643	193.420
B29	449704.368	7710654.650	193.197
B30	449707.368	7710653.593	193.415
B31	449707.369	7710651.643	193.408
B32	449704.369	7710651.650	193.173
B33	449707.375	7710634.526	192.992
B34	449666.151	7710634.618	192.653
B35	449666.182	7710654.735	192.734
B36	449666.213	7710674.852	192.814
B37	449666.244	7710694.969	192.891
B38	449666.269	7710712.086	192.673
B39	449666.275	7710715.086	192.753

KERB LIP SETOUT POINTS			
POINT	EASTING	NORTHING	LEVEL
K1	449746.340	7710628.267	192.911
K2	449749.522	7710628.889	192.906
K3	449752.337	7710630.765	192.831
K4	449754.203	7710633.634	192.750
K5	449754.789	7710636.709	192.725
K6	449754.822	7710657.930	192.810
K7	449754.855	7710679.151	192.895
K8	449754.493	7710684.297	192.911
K9	449753.272	7710689.307	192.918
K10	449751.212	7710694.056	192.906
K11	449748.383	7710698.390	192.886
K12	449747.247	7710705.178	192.856
K13	449751.566	7710709.870	192.828
K14	449758.467	7710709.277	192.797
K15	449761.992	7710702.877	192.765
K16	449761.982	7710696.901	192.803
K17	449761.975	7710692.477	192.857
K18	449761.967	7710687.272	192.907
K19	449761.961	7710682.933	192.910
K20	449761.926	7710660.801	192.821
K21	449761.889	7710636.698	192.725
K22	449762.535	7710633.444	192.756
K23	449764.353	7710630.721	192.857
K24	449767.134	7710628.866	192.963
K25	449770.322	7710628.235	193.004
K26	449784.753	7710628.205	193.057

EARTHWORKS SETOUT POINTS			
POINT	EASTING	NORTHING	LEVEL
E1	449717.277	7710734.895	193.407
E2	449717.219	7710709.972	193.315
E3	449707.047	7710709.995	193.416
E4	449706.447	7710709.996	193.216
E5	449706.453	7710694.877	193.255
E6	449706.460	7710674.762	193.303
E7	449706.468	7710654.645	193.223
E8	449706.475	7710634.528	192.987
E9	449707.075	7710636.527	193.350
E10	449750.339	7710636.430	192.917
E11	449663.768	7710710.090	192.653
E12	449663.756	7710702.358	192.623
E13	449663.733	7710687.619	192.564
E14	449663.693	7710662.124	192.460
E15	449663.670	7710647.385	192.403
E16	449663.655	7710637.420	192.361

LEGEND

B1 — PROPOSED SETOUT POINT

REFER TO DRG 12584249-C005 SITE WORKS FOR ALL OTHER SYMBOLS AND LINETYPES

NOTES:

1. REFER TO DRG 12584249-C020 FOR ROAD CONTROL LINE SETOUT.
2. REFER TO DRG 12584249-C030 FOR STORMWATER PIT SETOUT.

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Rev	Description	Checked	Approved	Date
0	FOR CONSTRUCTION	JE*	JB*	15.06.22

Author S. FREWEN-LORD **Drafting Check** N. CARBIS
Designer S. FREWEN-LORD **Design Check** J. BROWN

0 2.5 5 7.5 10 12.5m
SCALE 1:250 AT ORIGINAL SIZE

N

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Cloncurry Shire Council

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Project No. 12584249

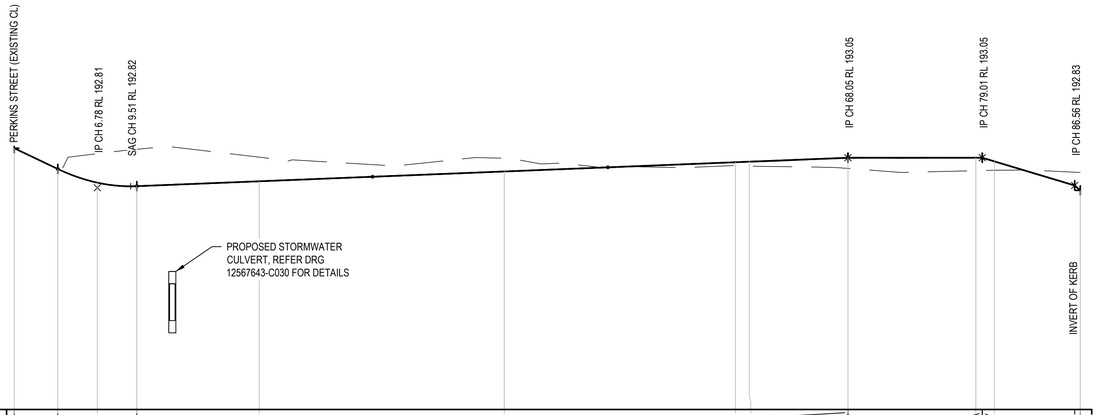
Client GULF CIVIL
Project PERKINS STREET SUBDIVISION
Status FOR CONSTRUCTION
Status Code

Drawing Title SETOUT PLAN
Size A1
Drawing No. 12584249-C015
Rev 0

Plot Date: 15 July 2022 - 9:13 AM Plotted by: Josh Eaton
File Name: C:\12d\SW\data\P-00-12D-001\42-12584249 - Perkins Street Subdivision - D&C_1955\CADD\Drawings\12584249-C015.dwg

CONTROL LINE SETOUT POINTS - ROAD 01

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	449758.320	7710624.412	193.132	0°05'19.90"			
	20.000	449758.351	7710644.412	192.862	0°05'19.90"			
	40.000	449758.382	7710664.412	192.942	0°05'19.90"			
TC	58.868	449758.411	7710683.280	193.018	0°05'19.90"			
	60.000	449758.400	7710684.412	193.022	358°47'28.69"			
IP 2	68.676	449758.427	7710693.217	193.054		R = -50.000	19.617	22°28'47.94"
CT	78.485	449754.642	7710702.404	193.054	337°36'31.97"			
	80.000	449754.064	7710703.805	193.025	337°36'31.97"			
IP 3	87.010	449751.394	7710710.286	192.788	337°36'31.97"			

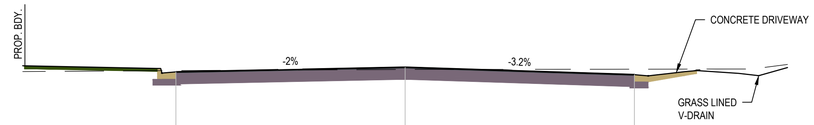


DATUM RL. 191.00

VERTICAL ALIGNMENT	L=3.56m G=-4.76%	K=1.25 L=6.45m	L=58.04m G=0.4%					L=10.96m G=0%	L=7.55m G=-3%	L=0.45m			
HORIZONTAL ALIGNMENT	L=58.87m							L=19.62m R=-50.00m		L=8.52m			
LEVEL DIFFERENCE CUT - / FILL +	0.00	-0.00	-0.24	-0.30	-0.20	-0.11	0.03	0.04	0.09	0.11	0.07	-0.15	
DESIGN SURFACE LEVEL	193.132	192.963	192.851	192.822	192.862	192.942	193.018	193.022	193.054	193.054	193.025	192.788	
EXISTING SURFACE LEVEL	193.13	192.96	193.09	193.12	193.06	193.05	192.99	192.99	192.97	192.95	192.95	192.93	
CHAINAGE	0.00	3.56	6.78	10.01	20.00	40.00	58.87	60.00	68.05	78.49	80.00	87.01	

LONGITUDINAL SECTION - ROAD 01

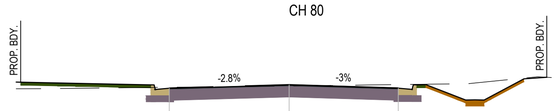
HORZ 1:250 VERT 1:25



DATUM R.L. 191.00

DESIGN SURFACE LEVEL	192.874	193.025	192.773
DEPTH CUT - / FILL +	-0.04	0.07	-0.19
EXISTING SURFACE LEVEL	192.92	192.95	192.96
OFFSET FROM CENTRELINE	-7.48	0	7.48

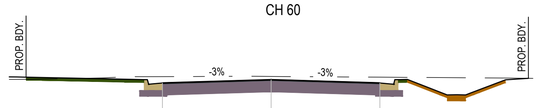
CH 80



DATUM R.L. 191.00

DESIGN SURFACE LEVEL	192.911	193.022	192.914
DEPTH CUT - / FILL +	-0.03	0.04	-0.12
EXISTING SURFACE LEVEL	192.94	192.99	193.03
OFFSET FROM CENTRELINE	-3.91	0	3.56

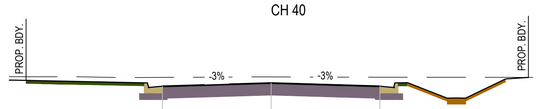
CH 60



DATUM R.L. 191.00

DESIGN SURFACE LEVEL	192.836	192.942	192.836
DEPTH CUT - / FILL +	-0.21	-0.11	-0.19
EXISTING SURFACE LEVEL	193.04	193.05	193.03
OFFSET FROM CENTRELINE	-3.55	0	3.55

CH 40



DATUM R.L. 191.00

DESIGN SURFACE LEVEL	192.756	192.862	192.756
DEPTH CUT - / FILL +	-0.29	-0.2	-0.29
EXISTING SURFACE LEVEL	193.04	193.06	193.05
OFFSET FROM CENTRELINE	-3.55	0	3.55

CROSS SECTIONS - ROAD 01

CH 20

SCALE 1:100

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0	FOR CONSTRUCTION	JE*	JB*	15.06.22

Author S. FREWEN-LORD **Drafting Check** N. CARBIS

Designer S. FREWEN-LORD **Design Check** J. BROWN

VERTICAL 1:25 AT ORIGINAL SIZE 0 0.25 0.5 0.75 1 1.25m

HORIZONTAL 1:250 AT ORIGINAL SIZE 0 2.5 5 7.5 10 12.5m

0 1 2 3 4 5m SCALE 1:100 AT ORIGINAL SIZE

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Project No. 12584249

Client GULF CIVIL

Project PERKINS STREET SUBDIVISION

Status FOR CONSTRUCTION

Status Code

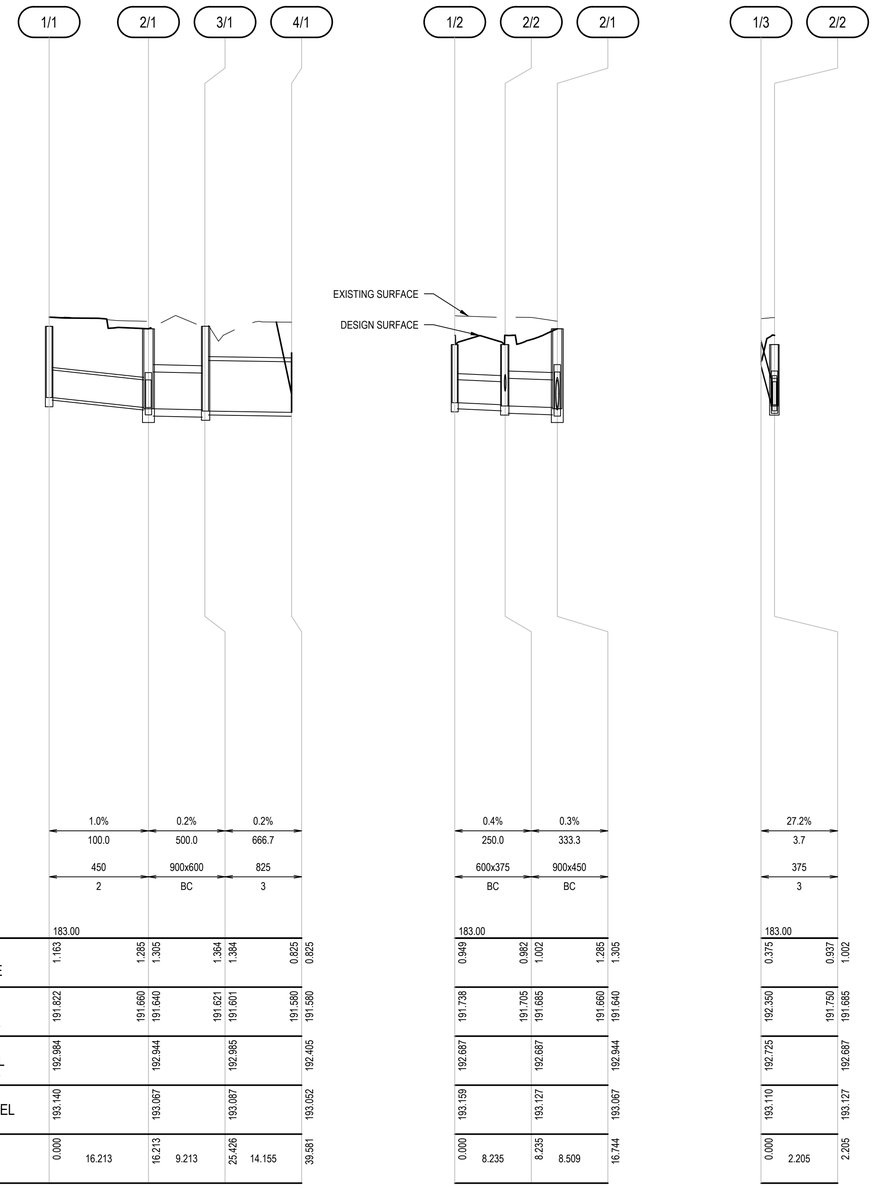
Drawing Title ROAD 01 SETOUT TABLE, LONGITUDINAL SECTION & CROSS SECTIONS

Size A1

Drawing No. 12584249-C020

Rev 0

Plot Date: 15 June 2022 - 3:01 PM Plotted by: Simon Frewen-Lord File Name: C:\12d\SW\data\P-00-12D-001\42-12584249 - Perkins Street Subdivision - D&C_1955\CADD\Drawings\12584249-C020.dwg



LINE 1 DRAINAGE LONGITUDINAL SECTION

LINE 2 DRAINAGE LONGITUDINAL SECTION

LINE 3 DRAINAGE LONGITUDINAL SECTION

PIT SCHEDULE

PIT		SETOUT		INTERNAL DIMS		PIT		REFERENCE
NAME	TYPE	EASTING	NORTHING	WIDTH	LENGTH	SETOUT RL	DEPTH	
1/1	ROAD PIT - 'L' LINTEL	449778.604	7710628.810	0.835	0.930	192.984	1.163	IPWEAQ STD DRG DS-061 & 063
2/1	MANHOLE - LARGE	449762.391	7710628.805	1.500	DIA	192.944	1.305	IPWEAQ STD DRG DS-010 & 019
3/1	ROAD PIT - 'L' LINTEL*	449762.320	7710619.592	0.835	1.800	192.985	1.384	IPWEAQ STD DRG DS-061 & 063, AND TOWNSVILLE CITY COUNCIL SD-200
4/1	HEADWALL	449752.291	7710609.603			192.405	0.825	DTMR STD DRG 1243
1/2	ROAD PIT - SAG - 'S' LINTEL	449754.222	7710637.325	0.835	0.930	192.687	0.949	IPWEAQ STD DRG DS-061 & 063
2/2	ROAD PIT - SAG - 'L' LINTEL*	449762.457	7710637.313	1.200	0.930	192.687	1.002	IPWEAQ STD DRG DS-061 & 063, AND TOWNSVILLE CITY COUNCIL SD-200
1/3	HEADWALL	449764.192	7710638.447	0.000	0.000	192.575	0.225	DTMR STD DRG 1243

NOTE: * HAUNCHED PIT REQUIRED TO SUIT PIPE SIZES, REFER TO HAUNCH DETAILS ON TCC SD-200.

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Rev	Description	Author	Checked	Approved	Date
0	FOR CONSTRUCTION	JE*		JB*	15.06.22

Author S. FREWEN-LORD **Drafting Check** N. CARBIS

Designer S. FREWEN-LORD **Design Check** J. BROWN

VERTICAL 1:50 AT ORIGINAL SIZE 0 0.5 1 1.5 2 2.5m

HORIZONTAL 1:500 AT ORIGINAL SIZE 0 5 10 15 20 25m

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Project No. 12584249

Client GULF CIVIL

Project PERKINS STREET SUBDIVISION

Status FOR CONSTRUCTION Status Code

Drawing Title STORMWATER PIT SCHEDULE & LONGITUDINAL SECTIONS

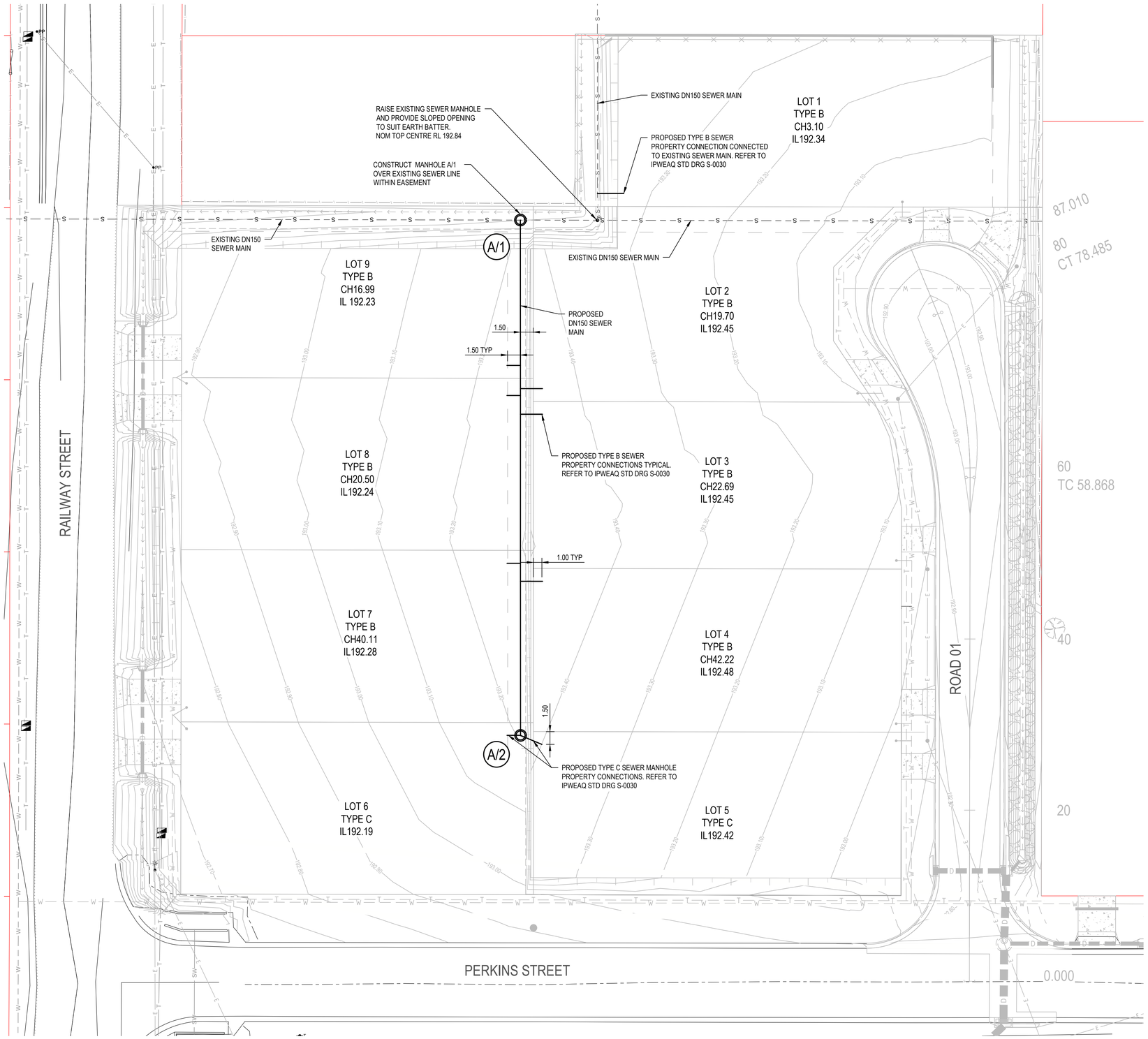
Size A1

Drawing No. 12584249-C030

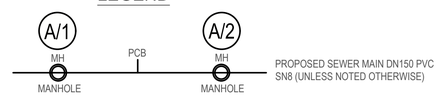
Rev 0

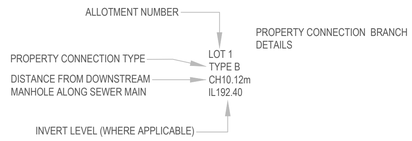
Plot Date: 15 June 2022 - 3:01 PM Plotted by: Simon Frewen-Lord

File Name: C:\12d\SW\data\P-00-12D-001\42-12584249 - Perkins Street Subdivision - D&C_1955\CADD\Drawings\12584249-C030.dwg

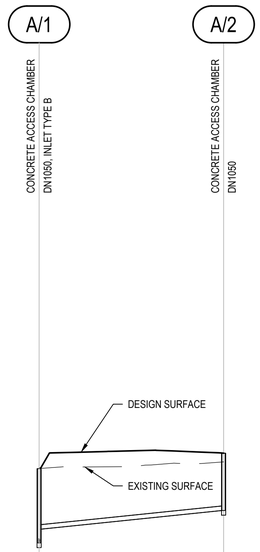


LEGEND





- PROPOSED STORMWATER (PIT / PIPE)
- PROPOSED WATER MAIN & PROPERTY CONNECTION
- PROPOSED OVERHEAD POWER & POLE
- PROPOSED TELECOMUNICATIONS
- EXISTING STORMWATER
- EXISTING WATER MAIN
- EXISTING SEWER MAIN
- EXISTING ELECTRICAL (OVERHEAD)
- EXISTING TELSTRA (UNDERGROUND)
- EXISTING FENCE
- EXISTING LOT BOUNDARY
- MAJOR DESIGN CONTOURS (1.0m)
- MINOR DESIGN CONTOURS (0.1m)



NOTES:

1. REFER TO GENERAL NOTES PAGE FOR SEWER SPECIFICATION NOTES.

PIPE DIAMETER (mm)	150	
PIPE GRADE (1 in ...)	98.7	
PIPE LENGTH (m)	60.225	
DATUM RL.	174.000	
DEPTH TO INVERT	2.425	1.977 / 1.871 / 1.871
INVERT LEVEL	190.272	190.720 / 191.330
DESIGN SURFACE	192.697	193.201
STRUCTURE SETOUT	E 449705.846 N 7710713.372	E 449705.868 N 7710653.146

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Rev	Description		Checked	Approved	Date
0	FOR CONSTRUCTION		JE*	JB*	15.06.22

Author S. FREWEN-LORD Drafting Check N. CARBIS
Designer S. FREWEN-LORD Design Check J. BROWN

SCALE 1:250 AT ORIGINAL SIZE (0 2.5 5 7.5 10 12.5m)
VERTICAL 1:50 AT ORIGINAL SIZE
HORIZONTAL 1:500 AT ORIGINAL SIZE (0 0.5 1 1.5 2 2.5m / 0 5 10 15 20 25m)

N

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Cloncurry Shire Council

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Project No. 12584249

Client GULF CIVIL
Project PERKINS STREET SUBDIVISION
Status FOR CONSTRUCTION (Status Code)

Drawing Title SEWER RETICULATION PLAN
Size A1
Drawing No. 12584249-C035
Rev 0

Plot Date: 15 July 2022 - 9:16 AM Plotted by: Josh Eaton
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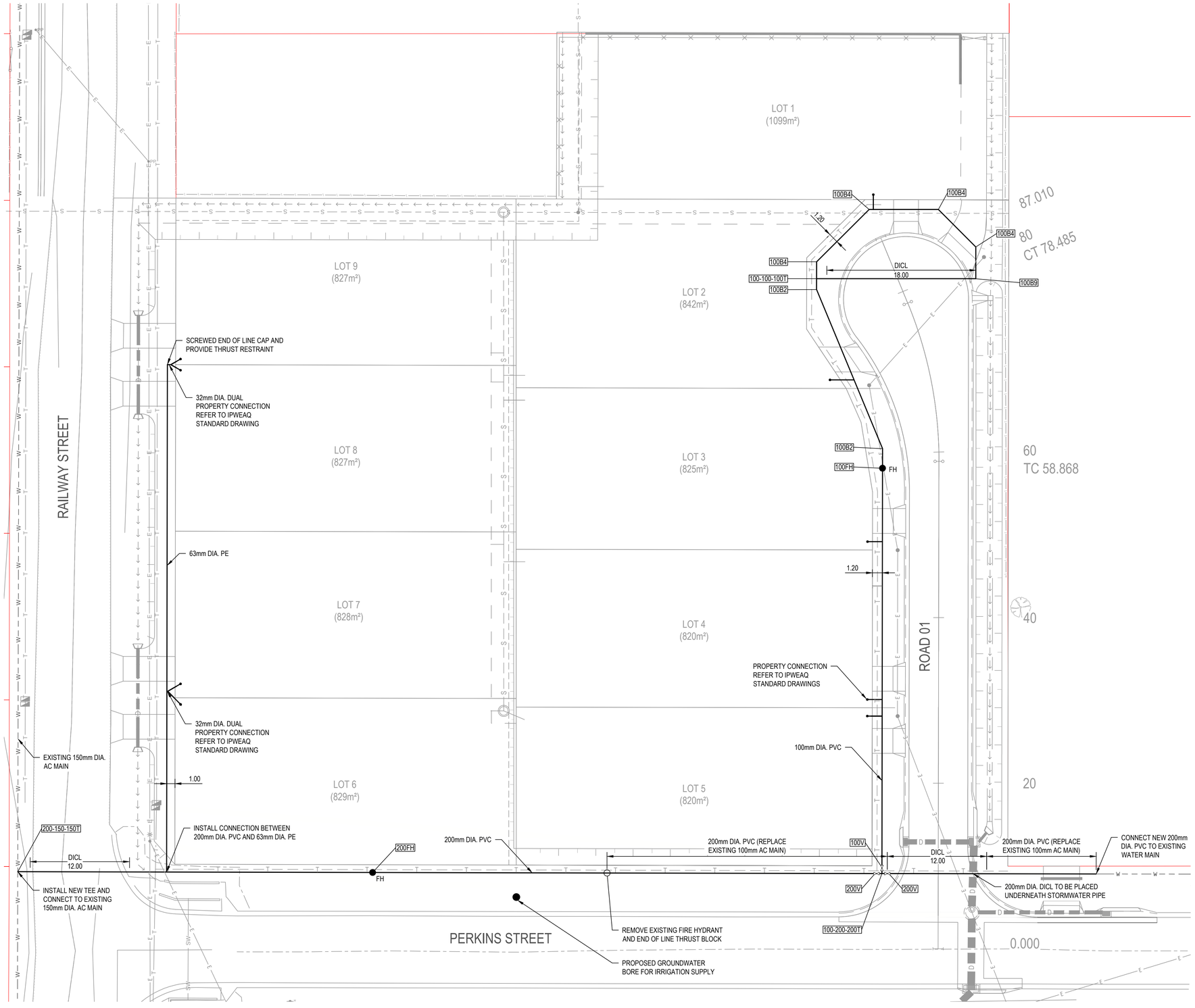

LEGEND

- PROPOSED STORMWATER (PIT / PIPE)
- PROPOSED WATER MAIN & PROPERTY CONNECTION
- PROPOSED SEWER MAIN & MANHOLE
- PROPOSED OVERHEAD POWER & POLE
- PROPOSED TELECOMUNICATIONS
- EXISTING STORMWATER
- EXISTING WATER MAIN
- EXISTING SEWER MAIN
- EXISTING ELECTRICAL (OVERHEAD)
- EXISTING TELSTRA (UNDERGROUND)
- EXISTING FENCE
- EXISTING LOT BOUNDARY
- WATER FITTING CODE (100MC: FITTING SIZE / FITTING TYPE)
  - T - TEE
  - E - ENDCAP
  - B1 - BEND 11 ¼ DEG
  - B2 - BEND 22 ½ DEG
  - B4 - BEND 45 DEG
  - B9 - BEND 90 DEG
  - FH - FIRE HYDRANT
  - V - VALVE

NOTES:

1. REFER TO GENERAL NOTES PAGE FOR WATER SPECIFICATION NOTES.

THIS DRAWING INCLUDES COLOURED INFORMATION
COPIES OF THIS DRAWING MUST BE PRODUCED IN COLOUR

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Rev	Description	Checked	Approved	Date
1	UPDATED WATER MAIN	JE*	JB*	12.07.22
0	FOR CONSTRUCTION	JE*	JB*	15.06.22

Author S. FREWEN-LORD **Drafting Check** N. CARBIS
Designer S. FREWEN-LORD **Design Check** J. BROWN

0 2.5 5 7.5 10 12.5m
SCALE 1:250 AT ORIGINAL SIZE

N

Gulf Civil — Civil Engineering & Construction
Cloncurry Shire Council

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Project No. 12584249

Client GULF CIVIL

Project PERKINS STREET SUBDIVISION

Status FOR CONSTRUCTION — Status Code

Drawing Title WATER RETICULATION PLAN

Size A1

Drawing No. 12584249-C040

Rev 1

Plot Date: 12 July 2022 - 4:01 PM Plotted by: Josh Eaton

File Name: C:\12d\SW\data\P-00-12D-001\42-12584249 - Perkins Street Subdivision - D&C_1955\CADD\Drawings\12584249-C040.dwg

LEGEND OF SYMBOLS

- STATION NUMBER
- NEW POLE - HV & LV
- EXISTING POLE - HV & LV
- NEW POLE - LV
- EXISTING POLE - LV
- RECOVER POLE - LV
- NEW POLE - HV
- EXISTING POLE - HV
- STREETLIGHT (PROPOSED)
- STREETLIGHT (EXISTING)
- STREETLIGHT (RECOVER)
- NEW O/H MAINS
- EXISTING O/H MAINS
- RECOVER O/H MAINS

NOTES:

1. THIS PLAN HAS BEEN PRODUCED FOR THE LIGHTING DESIGN OF THE PERKINS STREET SUBDIVISION ONLY. REFER TO THE ERGON OVERHEAD RELOCATION PLANS FOR ALL ERGON WORKS.
2. ALL CONTRACTORS MUST CARRY OUT A DIAL BEFORE YOU DIG ENQUIRY BEFORE COMMENCING ANY EXCAVATION.
3. ERGON ENERGY APPROVED CONTRACTOR TO BE ENGAGED FOR ALL WORKS.
4. IN ACCORDANCE WITH THE ELECTRICITY SAFETY ACT, A SAFETY OBSERVER MUST BE PRESENT AT ALL TIMES WHEN WORKING IN THE VICINITY OF ENERGISED CABLES. CONTACT ERGON ENERGY ON 131046.
5. ALL OUTREACHES ARE TO BE INSTALLED PERPENDICULAR TO THE CARRIAGEWAY UNLESS NOTED OTHERWISE.
6. THERE ARE 11x17W LED GERARD LIGHTING STREETLED MK III STREETLIGHTS TO BE INSTALLED ON RATE 1. THERE ARE 1x50W CFL STREETLIGHT TO BE RECOVERED ON RATE 1.
7. STREETLIGHTING DESIGN ALONG RAILWAY STREET, PERKINS AND NEW STREET TO PR5 AS PER AS/NZS1158.1.3:2020.
8. CONTRACTOR TO CONFIRM CLEARANCE TO OVERHEAD LINES PRIOR TO EXCAVATION OF FOOTINGS AND ADOPT SAFE WORKING PROCEDURES FOR WORK NEAR OVERHEAD LINES.
9. CONTRACTOR TO CONSULT DESIGN TEAM SHOULD RELOCATION BE REQUIRED TO MAINTAIN CLEARANCES TO OVERHEAD LINES.
10. ALL SERVICE LOCATIONS ARE APPROXIMATE ONLY AND SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF EXCAVATION

LIGHTING DESIGN COMPLIANCE CERTIFICATE

THIS LIGHTING DESIGN COMPLIES WITH THE NOMINATED CATEGORIES OF AS/NZS 1158.3.1

LIGHTING CATEGORY:	PR5
LUMINAIRE DETAILS MANUFACTURER & MODEL:	GERARD LIGHT STREETLED MKIII SLEDGL0167N
TYPE & WATTAGE:	LED 17W
I-TABLE:	STREETLED3 17W 4K 180804PH.cie
INITIAL LUMENS:	2078
COMPUTER DESIGN DETAILS: AS/NZS 1158.2.2005 COMPLIANT SOFTWARE SOURCE FOR PROGRAM	PERFECT LITE TREVOR CASEWELL SOFTWARE
MAINTENANCE FACTOR:	0.75 - BASED ON A 36 MONTH LAMP REPLACEMENT AND CLEANING INTERNAL

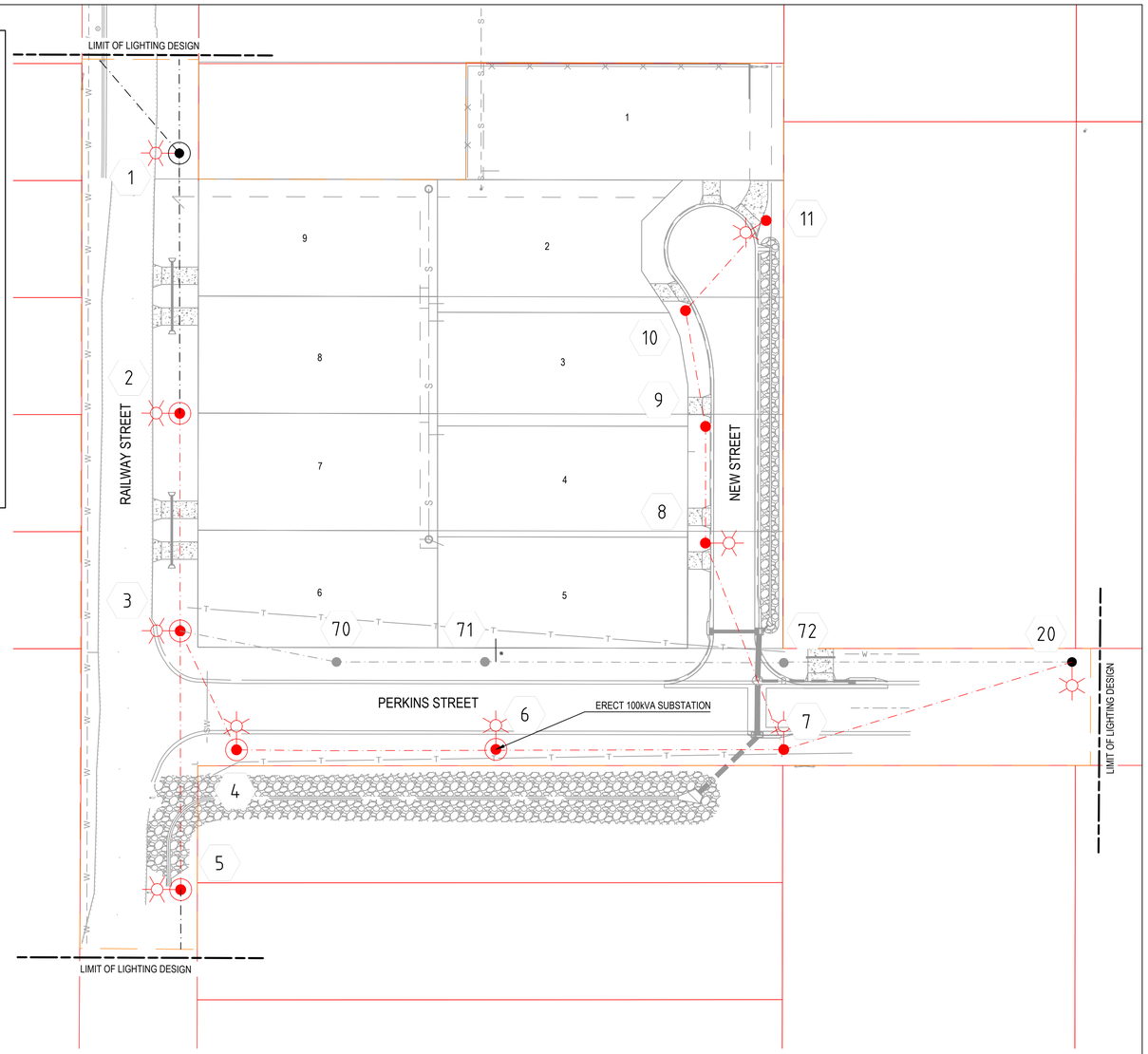
ALL LIGHTING CALCULATIONS ARE AVAILABLE UPON REQUEST. FOR LIGHTING ARRANGEMENT, SPACINGS, MOUNTING HEIGHTS, OUTREACH DETAILS AND SIGNIFICANT ROAD FEATURES, REFER TO DRAWING.

PUBLIC LIGHTING SCHEDULE

STN #	SITE LABEL	ACTION	CON. CODE	RATE	OWNER	HEIGHT (M)	EASTING	NORTHING	REMARKS
1		INSTALL	SLEDGL0167N	RATE 1	ERGON	7.5			LUMINAIRE TO HAVE ZERO DEGREES OF TILT
2		INSTALL	SLEDGL0167N	RATE 1	ERGON	7.5			LUMINAIRE TO HAVE ZERO DEGREES OF TILT
3		INSTALL	SLEDGL0167N	RATE 1	ERGON	7.5			LUMINAIRE TO HAVE ZERO DEGREES OF TILT
3		RECOVER		RATE 1	ERGON	7.5			LUMINAIRE TO HAVE ZERO DEGREES OF TILT
4		INSTALL	SLEDGL0167N	RATE 1	ERGON	7.5			LUMINAIRE TO HAVE ZERO DEGREES OF TILT
5		INSTALL	SLEDGL0167N	RATE 1	ERGON	7.5			LUMINAIRE TO HAVE ZERO DEGREES OF TILT
6		INSTALL	SLEDGL0167N	RATE 1	ERGON	7.5			LUMINAIRE TO HAVE ZERO DEGREES OF TILT
7		INSTALL	SLEDGL0167N	RATE 1	ERGON	7.5			LUMINAIRE TO HAVE ZERO DEGREES OF TILT
8		INSTALL	SLEDGL0167N	RATE 1	ERGON	7.5			LUMINAIRE TO HAVE ZERO DEGREES OF TILT
11		INSTALL	SLEDGL0167N	RATE 1	ERGON	7.5			LUMINAIRE TO HAVE 5 DEGREES OF TILT
20		INSTALL	SLEDGL0167N	RATE 1	ERGON	7.5			LUMINAIRE TO HAVE ZERO DEGREES OF TILT

CONSTRUCTION SCHEDULE

STN #	LABEL	POLE ALIGN (M)	POLE SETTING DEPTH	ACTION	CONSTRUCTION CLASS	CONSTRUCTION CODE	DRAWING #	REMARKS
1				INSTALL	WOOD POLE BRACKET	SL WPB MI1 ABC	1-8-3-1	
1				INSTALL	WOOD POLE			DETAILS TO BE BY ERGON
2				INSTALL	WOOD POLE BRACKET	SL WPB MI1 ABC	1-8-3-1	
2				INSTALL	WOOD POLE			DETAILS TO BE BY ERGON
3				INSTALL	WOOD POLE BRACKET	SL WPB MI1 ABC	1-8-3-1	
3				UPGRADE	WOOD POLE		1-8-3-1	
4				INSTALL	WOOD POLE BRACKET	SL WPB MI1 ABC	1-8-3-1	
4				INSTALL	WOOD POLE			DETAILS TO BE BY ERGON
5				INSTALL	WOOD POLE BRACKET	SL WPB MI1 ABC	1-8-3-1	
5				INSTALL	WOOD POLE			DETAILS TO BE BY ERGON
6				INSTALL	WOOD POLE BRACKET	SL WPB MI1 ABC	1-8-3-1	
6				INSTALL	WOOD POLE			DETAILS TO BE BY ERGON
7				INSTALL	WOOD POLE BRACKET	SL WPB MI1 ABC	1-8-3-1	
7				INSTALL	WOOD POLE			DETAILS TO BE BY ERGON
8				INSTALL	WOOD POLE BRACKET	SL WPB MI1 ABC	1-8-3-1	
8				INSTALL	WOOD POLE			DETAILS TO BE BY ERGON. OFFSET LIGHT POLE AS SHOWN FROM THE PROPERTY BOUNDARY.
9				INSTALL	WOOD POLE			DETAILS TO BE BY ERGON
10				INSTALL	WOOD POLE			DETAILS TO BE BY ERGON
11				INSTALL	WOOD POLE BRACKET	SL WPB MI1 ABC	1-8-3-1	
11				INSTALL	WOOD POLE			DETAILS TO BE BY ERGON
20				INSTALL	WOOD POLE BRACKET	SL WPB MI1 ABC	1-8-3-1	
20				EXISTING	WOOD POLE			
70				RECOVER	WOOD POLE			
71				RECOVER	WOOD POLE			
72				RECOVER	WOOD POLE			



SITE LAYOUT PLAN

SCALE 1:500

ERGON WR:1728726

THIS DRAWING INCLUDES COLOURED INFORMATION
COPIES OF THIS DRAWING MUST BE PRODUCED IN COLOUR

LIGHTING DESIGN

PEDESTRIAN LIGHTING HAS BEEN DESIGNED TO THE FOLLOWING CATEGORIES AS PER COMPLIANCE CERTIFICATE OF AS/NZS 1158.

GHD PTY LTD
LEVEL 8 CAIRNS CORPORATE TOWER, 15 LAKE STREET CAIRNS QLD 4870
PH: 61 7 4044 2222
FX: 61 7 4044 2288
EMAIL: CNSMAIL@GHD.COM

SIGNED:	
DATE:	
NAME:	
RPEQ:	

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Rev	Description	Checked	Approved	Date
0	FOR CONSTRUCTION	JE*	JB*	15.06.22

Author M.PRICE Drafting Check N.CARBIS
Designer M.PRICE Design Check J.COX

0 5 10 15 20 25m
SCALE 1:500 AT ORIGINAL SIZE

N

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Project No. 12584249

Client GULF CIVIL
Project PERKINS STREET SUBDIVISION
Status FOR CONSTRUCTION Status Code

Drawing Title ELECTRICAL LAYOUT
Drawing No. 12584249-E001
Size A1
Rev 0

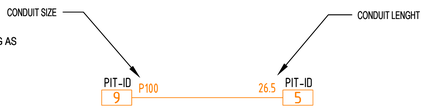
Plot Date: 15 June 2022 - 3:02 PM Plotted by: Simon Frewen-Lord File Name: C:\12d\SW\data\P-00-12D-001\42-12584249 - Perkins Street Subdivision - D&C_1955\CADD\Drawings\12584249-E001.dwg

LEGEND

- PIT-ID 2 — Service Drop Access Pit (650mmX280mmX565mm)
- PIT-ID 5 — Network Boundary/Local Network Pit (Single Lid) (700mmX450mmX650mm)
- PIT-ID 6 — Distribution/Local Network Connection Pit (Dual Lid) (1360mmX555mmX650mm)
- PIT-ID 8 — Distribution/Local Network Connection Pit (1360mmX555mmX860mm)
- PIT-ID 9 — Fibre Distribution Hub (FDH) Pit (2000mmX555mmX900mm)
- Transformer / Kiosk / Pad Mount Sub-station / Pole Mount Transformer

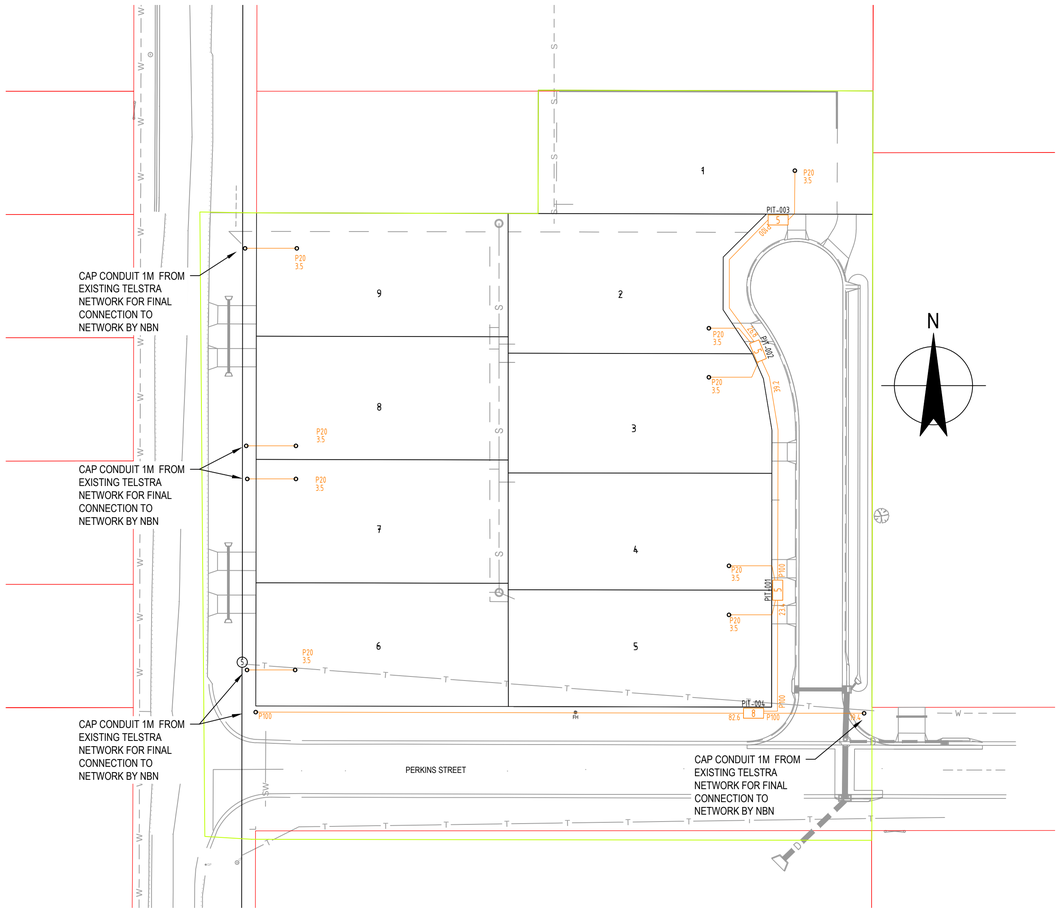
CONDUIT CONFIGURATION

CONDUITS AND DUCTS ARE IN LAYER :
< L460 NBN Support - Underground >
AND TERMINOLOGY CATEGORIZED INTO TWO GROUPS IN THE DRAWING AS PER BELOW:
1- DUCT USED WITH LOCAL NETWORK
2-CONDUIT USED WITH LEAD-IN DROPS
ATTRIBUTES ATTACHED ARE AS SHOWN



STANDARD CONSTRUCTION NOTES:

1. REFER TO NBN Co DOCUMENT NO. NBN-TE-CTO-194 (DEPLOYMENT OF THE NBN Co CONDUIT AND PIT NETWORK - GUIDELINES FOR DEVELOPERS) FOR DETAILED CONSTRUCTION SPECIFICATION.
2. PITS TO INCLUDE LID GASKET TO PREVENT DIRT ENTRY AND SPREADER BARS TO PREVENT PIT BUCKLING DURING BACKFILL / GROUND COMPACTION. PIT LIDS TO BE EMBOSSED WITH "NBN" AND COMPLY AS PER CLAUSE 5.3.2 OF THE ABOVE NBN Co DOCUMENT.
3. ALL CONDUITS TO ENTER AND EXIT AT NARROW ENDS OF PITS ONLY. LOCATE CONDUITS AS CENTRALLY IN PIT END WALLS AS POSSIBLE. CONDUITS SHALL NOT BE INSTALLED WITHIN 50 mm OF ANY CORNER OF THE PIT. MINIMUM SEPARATION BETWEEN CONDUITS TO BE 25 mm. INSTALL CONDUITS AND CONDUIT COLLARS (BUSHES) TO BE SQUARE AND FLUSH WITH THE PIT END WALL. REFER TO THE PIT END WALL DETAILS IN THIS DESIGN FOR ADDITIONAL REQUIREMENTS.
4. MINIMUM COVER TO BE; 300 mm FOR SERVICE DROP CONDUITS, 450 mm IN VERGE (FOOTPATH), 600 mm UNDER LOCAL ROADS, AND 800 mm UNDER MAIN ROADS.
5. CONDUITS ARE TO BE CLEANED AND PROVEN USING A MANDREL. AFTER TESTING INSTALL A SUITABLE DRAW ROPE TO ALL CONDUITS AND CAP CONDUIT ENDS. SEAL CONDUITS AT PITS TO PREVENT ENTRY OF DUST AND MOISTURE. SERVICE CONDUIT DRAW ROPES TO BE ADDITIONALLY FITTED WITH A PLASTIC LABEL AT PIT END, IDENTIFYING LOT NUMBER AND DISTANCE / DIRECTION FROM BOUNDARY.
6. INSTALL NON CONDUCTIVE (METAL FREE) MARKER TAPE ABOVE ALL NBN Co CONDUITS, 300 mm BELOW FINISHED GROUND LEVEL. INSTALL METALLIC KERB MARKERS AT ROAD CROSSINGS.
7. GRADE TOP OF PIT TO MATCH VERGE / FOOTPATH.
8. WHERE CONDUIT BURIAL DEPTH IS LESS THAN THAT SPECIFIED IN THE NBN Co DEPLOYMENT OF CONDUIT AND PIT NETWORK GUIDELINES, SUPPLY AND INSTALL CONCRETE COVER (FOR VERGE AND FOOTPATH) / CONCRETE ENCASEMENT (FOR ROADWAYS) ENSURE THAT MINIMUM SEPARATION TO ALL OTHER SERVICES ARE MAINTAINED.
9. SUPPLY AND INSTALL ADDITIONAL DEVIATING CONDUIT BENDS TO ACHIEVE THE INCREASED / DECREASED BURIAL DEPTH REQUIRED TO AVOID CLASH WITH OTHER SERVICES.
10. CONTRACTOR TO LOCATE PIT AS CLOSE AS PRACTICABLE TO DIVIDING BUILDING BOUNDARY OUTLINES OR BUILDING EDGE.
11. CONDUIT TO BE OFFSET 1200mm FROM THE PROPERTY BOUNDARY



SDU Development Information

Development Name: PERKINS STREET SUBDIVISION CLONCURRY	
Developer Company: CLONCURRY SHIRE COUNCIL	
Development Address: PERKINS STREET CLONCURRY	
Authorised Rep: GHD Pty Ltd Phone: 074044208 E-Mail: matt.price@ghd.com	
nbn Reference Number: STG-W000218160	Stage Number: 1 Design Revision: 0

BILL OF MATERIAL

NO OF LOTS: 9

PITS		DUCTS		
SIZE	QTY	SIZE	QTY	MTRS
2	0	P100	5	191.4
5	3	P50	0	0
6	0	P20	9	31.5
8	1			
9	0			

TOTAL NUMBER OF PITS: 4
TOTAL NUMBER OF MANHOLES: 0
TOTAL NUMBER OF CONDUITS: 14
TOTAL LENGTH OF CONDUITS: 222.9

SAFETY FIRST

SAFETY STARTS WITH YOU

STAFF WORKING ON THIS ESTIMATE PLEASE NOTE: The location of other authorities services which may affect this work have not been obtained by the estimator. Constructor to obtain service information before commencing.

DIAL BEFORE YOU DIG www.1100.com.au

REV	DATE	DRAFTER	DESCRIPTION	APPROVED
-				
-				
-				
-				
-				
-				
-				
0	15.06.2022	M.PRICE	ISSUED FOR CONSTRUCTION	JB*

STRICTLY CONFIDENTIAL

NBNCO APPROVAL RECORD:

	SIGNATURE	DATE
☐ DD		
☐ WD		
☐ AB		

QUALITY RECORD :

NBNCO DISCLAIMER
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Australia's broadband network

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N KEY PLAN

0 5 10 15 20 25m
SCALE 1:500 AT ORIGINAL SIZE

GHD DWG No: 12584249-E001

DRAWING TITLE:
PERKIN STREET SUBDIVISION
NBN Co PIT AND PIPE DESIGN
SITE PLAN AND NOTES

ENABLE#:		
STATE: QLD	REGION: NQ	
FSA:	SAM:	ADA:
PROJECT No: STG-W000218160		
CADREF No: 12547464-T01		
SCALE 1:500	SHEET No. 1 OF 1	REV. 0

Project Document

Cloncurry Shire Council

PERKINS STREET SUBDIVISION - CIVIL WORKS

Contract No: T2022 – 006

Project No: P2020-021

ENVIRONMENTAL MANAGEMENT PLAN

Copy No.	Revision	Registered Holder & Location	Issued as
001	A	Owen Whish	Secure PDF

Revision	Revision Date	Details	Authorisation (Name and Title)	Authorisation (Signature)
A	1/05/2022	For Construction	Owen Whish General Manager	

Table of Contents

1 Introduction

The environment is of prime importance within Gulf Civil, and all managers are expected to give top priority to matters affecting the environment. The 'environment' is taken to include issues affecting the community and natural surroundings.

By providing a safe and environmentally sound workplace Gulf Civil aims to make a positive difference to the industries in which it operates.

Adherence to this Environmental Management Plan (EMP) will ensure that all conditions, activities and tasks, affecting the environment are planned, organised, executed, and controlled in accordance with the requirements of Gulf Civil, statutory legislation and our Customer, Cloncurry Shire Council.

Everybody who works for Gulf Civil, whether as an employee or contractor, has a responsibility to fulfil Gulf Civils health, safety, and environmental policies and objectives, and is expected to work towards achieving these strategic objectives.

2 Project Overview

2.1 Project Scope

This project for the Cloncurry Shire Council will deliver Perkins Street Subdivision Project at the Northern Extent of the Cloncurry Township.
Gulf Civil are required supply all the plant, equipment and labour necessary for the construction of the whole works under each of the following categories:

- Roadworks
- Stormwater Drainage
- Sewer Reticulation
- Water Reticulation
- Electrical and Telecoms Minor Works (Conduits Only), and
- Concreting Works, and
- External Works (Water + Stormwater).

2.2 Location

The project works are located in within the Cloncurry Township – Northwestern QLD.

Figure 1 – Locality Map – Perkins St Subdivision

3 Policy

3.1 Implementation of the Environmental Policy

All relevant activities including activities conducted by contractors or by other companies on Gulf Civils behalf conducted for the project will conform to this Policy.

A copy of our Environmental Policy is attached in **Appendix A.**

3.2 Internal and External Communication

Gulf Civil Environmental Policy will be communicated to all employees, contractors, labour hire personnel, sub-contractors and visitors at their site induction and displayed at the worksite. Gulf Civil Environmental Policy will be made available to any interested party.

4 Environmental Leadership and Commitment

It is Gulf Civils intent that it's project leadership team by means of their actions and behaviour, provide visible and pro-active commitment to environmental issues relevant to the business.

4.1 Project Leadership Team

The following members make up the leadership team on the Perkins Street Subdivision project.

4.1.1 Table 1 – Contact Details

Position	Name	Contact Details
Project Manager	Brendan Smith	0456 012 968
Project Supervisor	Greg Lawton	0411 984 717
Safety Manager	Chris Cooper	0467 645 602
Traffic Manager	A2O Representative	

4.2 Commitment to the Environment

In order to achieve our internal as well as Cloncurry Shire Council's environmental objectives our project leadership team will implement a number of initiatives/activities on the Perkins St Subdivision project, such as:

- Setting clear environmental objectives
- Project Manager conducting site visits and participating in environmental activities
- Putting environmental issues on agenda items at meetings
- Promoting environmental initiatives

- Project Manager participating in environmental audits
- Involving the workforce in addressing environmental issues
- Encouraging open communication on environmental issues
- Continually promoting environmental awareness amongst personnel

5 Environmental Objectives

5.1 General

The environmental objectives and targets for this Project have been established to measure performance and drive improvement to ensure that the requirements of Gulf Civils policies, the Project/Business Unit's environmental legislative requirements and standards are met.

5.2 Project Environmental Objectives and Targets

The following environmental objectives and targets apply to the Project.

Objective	Key Performance Indicator (Target)	Performance Measure
Minimise environmental Impact	Where the Project has influence, adopt a lifecycle perspective during procurement of raw materials, production, transportation, use, maintenance, recycling and disposal	Nil environmental incidents Nil complaints
Minimise air quality impact	Compliance with EA/Development permit conditions	Nil dust complaints
Minimise noise nuisance	Compliance with EA/Development permit conditions	Nil noise complaints
Reduce waste	Minimise volume of material to landfill Appropriate disposal of regulated waste	Waste generated per tonne aggregate produced
Minimise impact to ground and surface water	Capture and store stormwater run-off on site for re-use Implement effective erosion and sediment controls	Nil water quality issues
Minimise use of resources (energy, water)	Reduce electricity consumption Minimise water consumption	Target achieved

	Reduce energy consumption	
Increase environmental awareness	Changed practices and environmental impacts Educate through ongoing awareness (e.g. prestart, toolbox talks, inductions)	Target achieved
Ensure compliance to regulatory requirements	Compliance with EA and Regulatory requirements Action non-conformances	Target achieved
Prevent introduction and spread of weeds and pests	Complete inspections of vehicles, plant and equipment as per EMP Monitor pest fauna where identified Eradicate identified / declared weeds on site	Target achieved
Prevent the release of hazardous substances	Compliance with EA and Regulatory requirements No hazardous waste spillage or leaks Nil contamination of water quality or soil due to hazardous materials	Target achieved

5.3 Monitoring and Review of Objectives

The Project Manager is responsible for the reviewing and reporting on a monthly basis the environmental Objectives for the Project. A record of this review will be reported in the Project meetings, with any incidents or near misses being reported and discussed.

6 Legal and Other Requirements

6.1 General

Gulf Civil adheres to existing statutory regulations concerning the environment as they relate to our operations. Gulf Civils Management Team adhere to relevant legislative requirements.

Gulf Civil Standards are adopted as the minimum requirement for our operations. In circumstances where any conditions set by the contract are below Gulf Civil HSE Standards, Gulf Civil Standards will still apply.

6.2 Environmental Compliance

It is essential that the Project identify relevant regulatory and other requirements which govern the Project's activities to assist in the identification of associated aspects and impacts, which forms the basis for developing controls to ensure proper due diligence occurs.

6.2.1 Environmental Compliance Register

Applicable legislation and standards include:

LEGISLATION	
Queensland	
▪ Environmental Protection Act 1994	▪ Environmental Protection Regulation 2008
▪ Environmental Protection (Waste Management) ▪ Regulation 2000	▪ Environmental Protection (Noise) Policy 2008
▪ Environmental Protection (Water) Policy 2000	▪ Aboriginal Cultural Heritage Act 2003
▪ Biosecurity Act 2014	▪ Land Protection (Pest and Stock Route Management) Act 2002
▪ Nature Conservation Act 1992	▪ Queensland Heritage Act 1992
▪ Vegetation Management Act 1999	▪ Vegetation Management Regulation 1999
▪ Waste Reduction and Recycling Act 2011	▪ Waste Reduction and Recycling Regulation 2011
▪ Heritage Act 2017	▪ Heritage Rivers Act 1992
▪ Pipelines Act 2005	▪ Plant Biosecurity Act 2010
▪ Water Act 1989	
STANDARDS	
▪ ISO 14001:2015 Environmental Management Systems	

6.3 Contractual Environmental Requirements

The following Environmental Contract and Compliance Register identifies and provides brief descriptions of the contractual environmental requirements for the project.

6.3.1 Environmental Contract Compliance Register

Environmental Contract and Compliance Register		
Contract Ref:	**Brief Description of Requirement**	**Environmental Management Plan Ref**

6.4 Client Environmental Requirements

Gulf Civil will comply with all environmental conditions set out in the contract.

6.5 Environmental Infringement, Improvement and Prohibition Notices

The Project Manager will ensure any environmental infringement, improvement, notice or prohibition notices issued by a regulatory authority are addressed immediately, details are recorded, and appropriate actions\ taken. Actions are to be recorded which are specific, measurable, achievable, realistic and timely.

The Project Manager will notify the client or customer when the infringement, improvement, notice or prohibition notice has been closed out.

6.6 Industry Standards

Consideration will be given to incorporating requirements from relevant guidelines, practices and agreements when developing and reviewing project specific procedures.

Relevant HSE industry Guidelines, factsheets and other obligations are referenced in the HSE Legal Compliance Directory.

6.7 Monitoring and Review

The Project Manager will review the project's Compliance Registers every 12 months.

Amendments to existing Acts and Regulations or the listing of new legislation will be monitored by the Project Manager.

7 Accountability and Responsibility

7.1 Overview

The Project Manager is accountable for all environmental issues and is assigned the necessary authority and responsibility by their General Manager to enable them to fulfil the requirements of this Plan.

- The Project Manager is accountable for the environmental performance of the and the implementation of the project's EMP, Licenses, procedures, guidelines, work instructions, plans, reviews and controls.
- All employees have a responsibility to work safely and with due concern for the environment in which we operate. All personnel on the project will accept responsibility for complying with this EMP, Gulf Civil Standards, associated procedures and statutory regulations.

All employees are responsible for:

- Stopping work if they identify anything that could cause harm to person or environment for which controls are not in place
- Reporting pollution incidents
- Assisting in incident investigations
- Identifying, reporting and eliminating (if within their authority and ability) hazards in the workplace and to the environment

- Complying with relevant requirements of the Environmental policies
- Complying with relevant environmental legislation

7.2 Communication and Acceptance of Accountabilities and Responsibilities

Each employee will be given a copy of their position description which will define their environmental responsibilities and accountabilities. Each employee will sign a copy of their position description as an acceptance of those accountabilities and responsibilities.

7.3 Contractor Responsibility

Contractors will comply with relevant requirements of the Gulf Civil and this Environmental Management Plan or the requirements of the Contractors' own Environment, Health and Safety Management Plans where they are equivalent to or more stringent than Gulf Civils standards.

7.4 Functional Responsibilities

7.4.1 Project Manager / Engineer

The Project Manager will be the senior representative who will be responsible for the implementation and maintenance of the project's Environmental Management Plan and monitoring compliance. Environmental licenses for the project will be recorded (Table 4) and maintained as part of this EMP.

7.4.1.1 Table 4 – HSE Legal Compliance Requirements

Environmental Contract and Compliance Register			
Contract Ref:	Brief Description of Requirement	Environmental Plan Ref	Management

8 Training, Competency and Awareness

8.1 Induction

Gulf Civil will ensure that all personnel have the appropriate knowledge and skills to conduct their activities in accordance with Gulf Civils policies, objectives and targets. Minor inductions will be conducted for employees and contractors to inform them of the Environmental Policy, the EMP, conditions of approval, client requirements, project commitments, environmental and social values, management plans and procedural requirements.

Supervisor Barry Allen will conduct the inductions. All personnel will be required to undertake a knowledge questionnaire based on the induction presentation, and records will be retained of all persons being inducted.

8.2 Training and Awareness

Environmental training needs are identified and documented within the Project-specific training matrix, detailing requirements per role. The performance and development process provides an opportunity to identify and plan the delivery of training needs that is not provided within the matrix and is integral to the development of an individual Worker.

Subcontractor training and competency requirements are included in subcontract agreements.

8.3 Training Evaluation and Review

Training evaluation and review is used to assess the effectiveness of training provided. Training evaluation and feedback shall be reviewed and used to improve the quality of training (informal/formal) for the Project.

9 Communication and Consultation

9.1 Internal Consultative Forums

A schedule of communication forums shall be developed which includes:

- Managers' meetings that are to address HSE matters - minimum monthly
- Toolbox talks - minimum monthly
- Pre-start meetings - prior to commencing a shift
- HSE committees – minimum monthly - includes representatives from Project management and elected members from the workplace.

The Project Manager shall establish appropriate environmental interfaces with the Client and regulatory bodies. Records shall be kept of all HSE communication activities (e.g. attendance records). The effectiveness of the meeting outcomes shall be reviewed six-monthly.

9.2 External Communication

Communication will be maintained, both proactively and upon request, on environmental matters with external stakeholders.

Environmental information may be provided to interested parties including:

- Environmental Policies
- HSE Standards
- General brochures and information sheets

Where information is to be released to external stakeholders that is not generally in the public domain then legal review of the information will be sought prior to release.

9.3 Consultation with Regulatory and Non-Regulatory Organisations

Consultation with government agencies, authorities and other organisations will be maintained in order to contribute to the development of public policy, relevant legislation, improved industry performance and educational initiatives.

9.4 Community Consultation

Should the project be likely to have community impacts, management of such impacts will be via implementation of the following:

- Establishing a community enquiries register

10 Fauna Management

Gulf Civil will adopt best management practices for the protection of fauna and ensure that project impacts to the abundance and distribution of fauna of conservation significance are minimised as much as possible.

Gulf Civil will exercise the following objectives in their management of flora:

- To prevent or minimise the impact of construction activities on fauna

11 Flora Management

Gulf Civil will undertake measures to reduce the impact of its operations on flora species and communities where practical.

Perkins Street Subdivision project's footprint is majorly on an existing roadway and it is not envisaged that this will be an issue. However, on all projects Gulf Civil will exercise the following objectives in their management of flora:

- To undertake works in a manner that conforms with contractual and legislative obligations
- To conduct clearance activities in accordance with the relevant permit.
- To undertake the works in a manner that minimises any potential impacts on land use, or capacity for regeneration of native vegetation
- Keep site disturbance to a minimum. Only vegetation identified on the clearing permits may be cleared. This vegetation shall be clearly marked prior to clearing operations commencing.

12 Air Quality, Dust Noise and Vibration Management

Gulf Civil will take reasonable measures to minimise the impact to air quality (particulate matter and odours) and the creation of noise (including vibration) from its operation for the comfort of our employees and protection to the surrounding environment.

12.1 Dust Suppression

Water trucks will be utilised on site to suppress dust. High dust levels can occur during construction activities such as site preparation, materials movement and general equipment movements on unsealed construction areas. Strong winds can also increase local dust levels. Excessive dust levels can have adverse effects on human health, amenities and adjacent vegetation and create an uncomfortable and potentially unsafe working environment.

To reduce dust levels generated from site works, the project works will irrigate unsealed roads to prevent the generation of visible dust. Site vehicles and plant will be restricted to 30km to minimise dust generated from vehicle movement. Adherence and enforcement of this will be the responsibility of all personnel. Where there are stock piles of material or large areas of exposed land, polymer dust suppressants may be used. Polymer suppressants form a thin layer on the surface thereby reducing dust. The project may further undertake dust suppression measures such as hydro mulching, erecting wind rows or dust monitoring where dust is affecting amenities and employees on site.

12.2 Noise and Vibration Management

Noise and vibration control measures will be implemented to ensure that the project presents a safe working environment and minimise impacts to fauna and the community where practical.

Noise and vibration will be generated from the operation of plant and light vehicles (from vehicles fitted with reverse beepers and general construction noise). To minimise impact to the community, working hours and noise levels will be within the assigned values outlined in the Environmental Protection (Noise) Regulations 1997.

Vibrational impacts will be kept to a minimum as to prevent damages to nearby property and amenities. Where damage is suspected from site works, an investigation will be conducted, and an assessment made on remediation.

13 Water Pollution & Managing Site Water

Gulf Civil understands the concerns of sediment runoff during periods of rainfall in which can contaminate the nearby water bodies at Lake Moondarra & Clearwater Lagoon.

There will be various types of controls in place to minimise this risk which may include:

- Excavation of sumps / basins should there be an open trench during times of heightened imminent weather
- The use of silt/sediment fence or silt curtains should there be a risk of runoff along the alignment
- The use of spear pumps to dewater trenches should there be captured water on site.

14 Waste Management

Gulf Civil is committed to minimising the generation of waste on site and recycling where possible. There will be various types of waste generated from construction activities which include:

- General office waste – paper, cardboard, printer cartridges, plastic, cans, glass, packaging materials;
- Building and demolition waste – packaging material, scrap steel, concrete, pipe/PVC cut-offs, wood scraps, plastic;
- Inert waste – Waste, which will not degrade further, either spontaneously or when exposed to microbial degradation. This waste primarily includes material arising out of construction and demolition operations such as plaster, cement and metal; and
- Prescribed waste – Waste that has been listed under State or Federal legislation which has specific storage, handling, transportation and disposal requirements

All waste shall be disposed of by licensed contractor and disposed of at a licensed facility. Incorrect waste disposal can result in groundwater, surface water or soil contamination, impacts to vegetation or fauna, poor visual amenity or health and safety issues.

14.1 Non-recyclable Wastes

Waste receptacles will be placed on site. It is expected the majority of putrescibles waste will be generated from the crib room. This type of waste cannot be recycled and will be periodically removed from site by licensed contractors and disposed of at an approved landfill site.

14.2 Recyclable Wastes

Paper recycling bins will be positioned in offices related to the project and regularly collected for recycling. Local recycling businesses will be approached to facilitate recycling programs. Wastes that can be recycled from this site are scrap steel, PVC off-cuts and concrete. These items will be stockpiled or placed in large recycling bins to be removed from site by licensed contractors and disposed of at an approved landfill site.

15 Management of Hazardous Chemicals and Wastes

Gulf Civil aim prevent the release of hazardous materials to the surrounding environment by implementing the following control measures:

- Dangerous goods that are to be transported by road or rail shall be contained, packaged, labelled, consigned and transported in accordance relevant transport regulations and manufacturer's recommendations.
- Safety Data Sheets for hazardous materials shall be maintained at the site office.
- Permanent and temporary containers that hold hazardous materials must be labelled with the relevant safety and risk phrases.
- The volume and types of hazardous materials stored must be known, current and documented and must not exceed the design capacity of the storage area.
- Quantities of hazardous materials must be kept to a minimum, commensurate with their usage and shelf life.

- Hazardous materials storage areas must be kept clear of combustible material, vegetation and refuse by a minimum of 3 metres.
- Fuel and chemical storage tanks must be located above ground.
- All containers for chemicals must be clearly labelled.
- A spill containment kit is kept in the site container
- No refuelling of plant is to occur within 50m of any watercourses.
- Refuelling shall be carried out in designated areas away from watercourses.
- Diesel and unleaded fuels shall be kept in small quantities in the chemical storage container (Approximately 50 litres of each).
- All chemicals must be stored in bunded areas that meet Australian Standards and minimise water ingress into the bund.

16 Cultural and Heritage Management

Gulf Civil recognises that all Aboriginal heritage sites such as cultural and ceremonial sites, rock engravings, scarred trees, stone arrangements, rock shelters, artefact scatters, water sources, burial sites, shell middens, stone quarries and campsites are protected under the Aboriginal Heritage Act 1972.

Specific locations that have been designated as Aboriginal Heritage Sites or sites of Historical Significance will be demarcated with sign posts, fencing and flagging to prevent unauthorised access. The discovery of potential sites or artefacts will be immediately reported to the site supervisor and Project Manager. The area will be isolated and the relevant regulatory authority will be contacted.

17 Environmental Incidents and Emergencies

17.1 Incident Response

The immediate response to all incidents is to make the area safe and undertake measures to prevent further environmental and human harm. An assessment shall be made to ensure that these measures do not result in further harm; advice shall be sought from the Environmental Representative prior to installation.

17.2 Incident Notification

The Project Manager is notified immediately following any incident.

The Client Representative is notified of all incidents as per agreed contractual arrangements. Incidents shall be reported to regulators in accordance with the requirements of local, state and federal government regulations.

17.3 Investigation

The relevant supervisor will, where required, ensure that the scene of an incident or accident is appropriately secured to protect potential evidence until the investigation commences. Where an incident has had a negative

effect on human health, infrastructure or the environment, an investigation will be conducted to determine the cause, impact, preventative response and remedial action.

Actions arising from an investigation will be documented, monitored and remain open until closed out. Actions will be assigned to person(s) who will be responsible for their timely execution.

17.3.1 Basic Investigation

The Project Manager will identify the resources required to conduct an investigation including the appointment of a team leader and, where required, investigation team members.

A basic investigation report will be completed by recording as a minimum the following information:

- the name/s of the investigation team members;
- a description of what occurred;
- the causal factors;
- the root causes of the causal factors; and
- actions required addressing the root causes.

18 Appendix A – Gulf Civil WHS & Environment Policy

Work Health, Safety & Environment

1. SUMMARY

1.1. This document defines the WHS&E process in detail.

1.2. The relationship between this process and the other processes within the Gulf Civil management system is illustrated in the process flow map included in the ***Business Management System.***

2. PROCESS DEFINITION

2.1. The purpose of the WHS&E Process Detail is to clearly outline the processes in place to deliver a project whilst managing our WHS&E requirements and obligations

3. PROCESS OBJECTIVES AND METRICS

3.1. Process objectives for this process are defined in records of management review; see the documented procedure ***Management Review.***

3.2. In addition, each objective has at least one metric (or KPI) with which management can measure the effectiveness of the process. These are also defined in records of management review.

4. PROCESS OWNERS AND RESPONSIBLE PARTIES

4.1. The owner of this process is the Director / General Manager of the Company

4.2. Responsible Parties include Project Manager, Supervisor and Safety Representative

5. TYPICAL PROCESS INPUTS

5.1. The typical required inputs for this process are:

5.1.1. Technical information needed:

- Legislative requirements for the project location/region
- Any specific client requested requirements

5.1.2. Resources needed:

- Access to legislation
- IT / Computer software

5.1.3. Personnel needed:

- Project Management
- Safety Consultant / Staff

5.1.4. Special training needed:

- WHS&E Training

6. TYPICAL PROCESS STEPS

6.1. Step 1 – Identify any legislative requirements to be input into the Safety Management Plan

6.2. Step 2 – Write Safety Management Plan for the Project for internal approval and client approval

6.3. Step 3 – Create Job Safety Environmental Assessments (JSEA's) relating to the tasks on the project

6.4. Step 4 – Openly Communicate aspects of the JSEA's to the workforce

6.5. Step 5 – Provide Toolbox Talks for the Workers for relevant risks associated with the Project Delivery

6.6. Step 6 – Monitor Fitness for work of all workers and employees on the project

6.7. Step 7 – Monitor and report Incidents, as well as corrective action reports

7. TYPICAL PROCESS OUTPUTS

7.1. The typical results (outputs) of the process are as follows:

7.1.1. Product produced:

- Safely delivered project

7.1.2. Documents or technical information produced:

- JSEA's,

7.1.3. Records produced:

- Toolbox records, incident records, Corrective action records

7.1.4. Services produced:

- Nil

8. RELATED RISKS AND OPPORTUNITIES

8.1. Risks and opportunities related to this process are identified in the ***COTO Log*** and managed per the procedure ***Risk and Opportunity Management.***

WHS & ENVIRONMENT POLICY

Gulf Civil aligns all practices and procedures to meet state or territory legislation and statutory obligations. We are committed to continuous improvement of our Health, Safety and Environmental Management System, which will be monitored and measured against measurable objectives and targets.

HEALTH POLICY

We are committed to:

- ✓ Promoting a healthy lifestyle for employees;
- ✓ Promoting and acting upon the principles of the fatigue management procedures;
- ✓ Following a stringent drug and alcohol policy to eliminate doubt as to employee's fitness for work;
- ✓ Providing PPE and system controls for protection of employees from harmful exposure.

SAFETY POLICY

We are committed to:

- ✓ Ensuring all hazards are identified, assessed for level of risk and managed;
- ✓ Ensuring that all employees are provided an opportunity to participate in the development of JSEA's;
- ✓ Ensuring that all employees are educated and managed to follow JSEA's; Ensuring that all accidents and incidents are recorded, investigated and analysed to develop effective and preventative strategies;
- ✓ Implementing process improvement strategies to achieve zero harm;
- ✓ Monitoring our management system by auditing, analysing and improving practices to achieve zero harm;
- ✓ Promoting a no-blame safety awareness culture to encourage the reporting of hazards, incidents and injuries;
- ✓ Providing a safe work environment free of all forms of bullying, harassment and discrimination.

ENVIRONMENTAL POLICY

We are committed to:

- ✓ Achieving best practice environmental management processes;
- ✓ Reducing waste and energy usage;
- ✓ Complying with all environmental statutes and guidelines;
- ✓ Matching our work practices to this commitment;
- ✓ Documenting our goals and progress;
- ✓ We are committed to using digital solutions to minimize the use of office consumables.

LEADERSHIP

The Managing Director has committed the Company to being proactive in its efforts to provide a safe working environment for staff and to meet its regulatory Health, Safety & Environmental obligations.

Signed,

Gulf Civil Pty Ltd

Owen Whish

DRUG & ALCOHOL POLICY

Gulf Civil is committed to:

- ✓ Ensuring the safety and health of its employees and its subcontractors
- ✓ Maintaining a safe and healthy workforce and workplace through a proactive approach.

Scope

This policy outlines applicable responsibilities and applies to all employees and subcontractors engaged by Gulf Civil while they are working. All personnel are considered "working" whenever they are on any company or client property, including parking areas, or company time even if off company premises – including paid lunch, rest periods, and periods of being on call.

Responsibilities

Gulf Civil is responsible for minimizing the safety and health risks to our employee and subcontractors as a result of impairment from the use of legal and illicit drugs and/or alcohol.

- ✓ It is the responsibility of all employees and subcontractors to present themselves fit for work without impairment from the use of legal and illicit drugs and/or alcohol.
- ✓ As a Duty of Care to all employees and subcontractors, the company will carry out drug and alcohol testing. It is expected all employees and subcontractors will co-operate with the nominated Company Representative in this matter. Testing may occur, at random, upon suspicion, with cause as well as after incidents or accidents have occurred.
- ✓ Gulf Civil prohibits the use, unauthorised possession, manufacture, distribution or sale of illegal drugs, illegal inhalants, drug paraphernalia or controlled substances (i.e. all chemical substances or drugs listed in any Controlled Substances Act or Regulation applicable under any federal, state or local laws) by any worker while on duty, on company premises or work sites or conducting company business, or while operating or occupying any company vehicle or equipment at any time.
- ✓ The use of prescription drugs and/or over-the-counter drugs may also affect a worker's job performance and seriously impair his/her ability to work safely and effectively. It is the responsibility of an individual to disclose to the nominated company representative any use of prescription drugs and over-the-counter drugs prior to entering the workplace.
- ✓ Misusing prescribed or over-the-counter medication on company property or company assignment is strictly prohibited. Designer or "look alike" drugs are prohibited on all Gulf Civil work sites. Non-disclosure will be treated as a breach of this Policy.
- ✓ Alcohol is not to be consumed on the premises except at an official or sanctioned work function where drinks have been supplied.
- ✓ In cases of rehabilitation or self-rehabilitation, confidentiality of personal information will be maintained, although personal information will be released by medical services on a need-to-know basis or as required by law.
- ✓ All personnel engaged by Gulf Civil must understand this Policy and cooperate with the administration of this Policy. A breach of this policy and associated procedures may result in disciplinary action.

Signed,

Gulf Civil Pty Ltd

Owen Whish

Director

Project Document

Cloncurry Shire Council

PERKINS STREET SUBDIVISION - CIVIL WORKS

Contract No: T2022 – 006

Project No: P2020-021

Erosion and Sediment Control Plan

Copy No.	Revision	Registered Holder & Location	Issued as
001	A	Brendan Smith	Secure PDF

Revision	Revision Date	Details	Authorisation (Name and Title)	Authorisation (Signature)
A	18/05/2022	For Construction	Brendan Smith Project Manager	

Table of Contents

1 Introduction

The environment is of prime importance within Gulf Civil, and all managers are expected to give top priority to matters affecting the environment. The 'environment' is taken to include issues affecting the community and natural surroundings.

By providing a safe and environmentally sound workplace Gulf Civil aims to make a positive difference to the industries in which it operates.

Adherence to this Erosion and Sediment Control Plan will ensure that all conditions, activities and tasks, affecting the environment are planned, organised, executed, and controlled in accordance with the requirements of Gulf Civil, statutory legislation and our Customer, Cloncurry Shire Council.

Everybody who works for Gulf Civil, whether as an employee or contractor, has a responsibility to fulfil Gulf Civils health, safety, and environmental policies and objectives, and is expected to work towards achieving these strategic objectives.

2 Project Overview

2.1 Project Scope

This project for the Cloncurry Shire Council will deliver Pavement Reconstruction and General Upgrades to Perkins Street Subdivision at the Northern Extent of the Cloncurry Township.
Gulf Civil are required supply all the plant, equipment and labour necessary for the construction of the whole works under each of the following categories:

- Erosion and Sediment Control
- Earthworks
- Roadworks
- Stormwater Drainage
- Sewer Reticulation
- Water Reticulation
- Electrical and Telecoms Minor Works (Conduits Only), and
- Concreting Works, and
- External Works (Water + Stormwater).

2.2 Location

The project works are located in within the Cloncurry Township – Northwestern QLD.

3 Purpose

The purpose of the Erosion and Sediment Control Plan is to assess the overall risk of the project and prescribe suitable controls in accordance with MRTS 52.

In accordance with DTMR standards, a pre-construction assessment and recommendation for the Erosion and sediment control requirements was undertaken. The assessment identified the project as a low risk project with no increased risk levels identified at different times of the year or at specific locations.

For low environmental projects, MRTS 52 requires that before the natural surface is disturbed on a section of the Works, the Contractor shall submit an Erosion and Sediment Control Plan (ESCP) for that section, the specifications states that for low risk sites the specification can be met by developing standard drawings or diagrams that include the timing of installation and controls.

4 References and Definitions

4.1 External Reference Documents

The following documents are referred to within this Erosion Sediment Control Plan:

- Environmental Protection Act 1994
- Environmental Protection (water) Policy 2009
- MRTS52

4.2 Definitions

Disturbance	Construction activities which could create erosion or sediment, examples: earthworks, removal of vegetation and/or grasses, stripping of soils, stockpiles and excavations
Drainage	Method used to channel stormwater around a construction site
Sediment Control	A practice or device designed to control disturbed soils from leaving a construction site
Silt Fence	A temporary sediment control device using geotextile fabric and posts
Rumble Pad/ Grid	A structure consisting of prefabricated metal or constructed of course aggregate used to remove soil from vehicles entering and departing a construction site

4.3 Procedure overview

Activities that expose large areas of bare earth, causing the potential for erosion, and thereby contamination of receiving bodies, include:

- Cut and fill bulk earthwork activities (including stockpiles);
- Vegetation removal;
- Topsoil stripping;
- Demolition; and
- Service relocation.

The Environmental Protection (Water) Policy 2009 provides the framework for controlling and regulating the discharge of pollutants into all waters.

Soil materials, sediment, and turbidity are categorised as “pollution”, as is any material that will change the physical, biological, or chemical conditions of the water.

The impacts of contaminated water on a receiving stream include the lowering of liveability conditions for the aquatic flora and fauna, and the silting of streams and drainage beds.

The creation of restricted and in extreme cases the blockage of stormwater drainage systems causing localised flooding events.

The primary goal during construction is to minimise the length of time an area is disturbed. This will be achieved by sequencing of site-clearing and rehabilitation works to minimise exposure time. This will be done in conjunction with the development of site-specific control structures.

5 Erosion and Sediment Control Plan

5.1 Stormwater Management

Storm water will be managed to:

- Protect downstream water quality
- Minimise the potential for erosion and subsequent sedimentation
- Provide adequate and appropriate drainage and pollution control measures will be installed to treat run-off from disturbed areas of the site.
- Prevent soil materials and sediment from entering drainage systems

Where practicable, these objectives will be implemented using the following principals

- Storm water will be diverted around the work areas.
- Run-off velocities will be minimised to reduce erosion.
- Isolate uncontaminated water from off-site.
- Treat contaminated water before it reaches waterways.
- Direct all run-off from disturbed site areas through control structures.

It is recognised that there are many factors such as unexpected ground conditions, surface level deviations from design plans, ongoing changes to construction planning, etc, which may result in requirements for run-off controls to vary from original plans.

5.2 Drainage

Storm water is either channelled around the site (i.e. via undisturbed surfaces) or within the site to sediment control devices. The structures should be designed for their designed flow velocity to resist erosion.

Particular attention will be given to diverting clean waters from outside the works into the natural drainage system by the installation of diversion channels and perimeter banks. The structures will be designed and placed on the site to minimise the accumulation and velocity of run-off waters.

Drainage structures may include:

- Grass drains, channels, and swales, which prevent scouring and promote sediment retention.
- Grassed drains, channels, and swales should not be erodible. If erosion is probable, other protective measures such as rock-lining, rock mattresses, reinforced grass channels, and/or geosynthetic lined channels may be utilised.
- Rock mattress will be utilised to reduce erosive velocities in drainage lines.
- Level spreaders may be used at the outlet of drainage lines to prevent erosion of channel/drain outlets.
- Under-road culverts may be provided to prevent vehicles driving through drainage lines and creating turbid water.
- Diversion banks will be, when possible, constructed by pushing soil from the lower side of the slope. This results in flatter, more stable structures, by preventing disturbance of the natural surface at the base of the drain, and creating a bund consisting of natural surface soils, which are more likely to revegetate.
- Where this measure is not practical due to space, erodible granular soil, or other constraints, cut drains may be used.
- Grader or dozer cut V drains will be used only for minor catchments where erosive velocities can be kept low.
- More significant diversion channels will involve a flatter cross section and/or temporary lining.
- Control measures will be removed when on-site erosion is controlled and significant permanent vegetation coverage is obtained over all upstream-disturbed land.

5.3 Sediment Control - Site

Sediment control devices will be designed to retain, on the site, as much of the eroded material as possible. The following devices will comprise most site control measures.

Where possible the entry/exit site point should have a rumble pad at entry / exit point so that sediment is not tracked off the site.

A rumble pad should be constructed at least 2 metres wide and consist of 40mm crushed rock placed 150 to 200mm thick over geotextile filter cloth for a minimum distance of 10 metres. Where necessary 20mm aggregate should be placed to allow pedestrian traffic safe access.

A 200mm high flow diversion bund should be placed on the high side to deflect stormwater run-off into the main sediment control zone or into a separate U-shaped sediment

Sediment fences should be used where sediment run-off occurs as reasonably uniform sheet flow on a slope. The preferable maximum catchment for sediment fences is 0.6ha per 100m of fence.

Sediment fences should be located down slope of disturbances

In areas where it is impractical to bury the lower edge of the sediment fence, the lower 200 mm (min) portion of the fabric should be placed on the ground upslope of the fence and buried under 100mm (min) layer of coarse aggregate(20-40mm) Refer **Fig 1 & 2.**

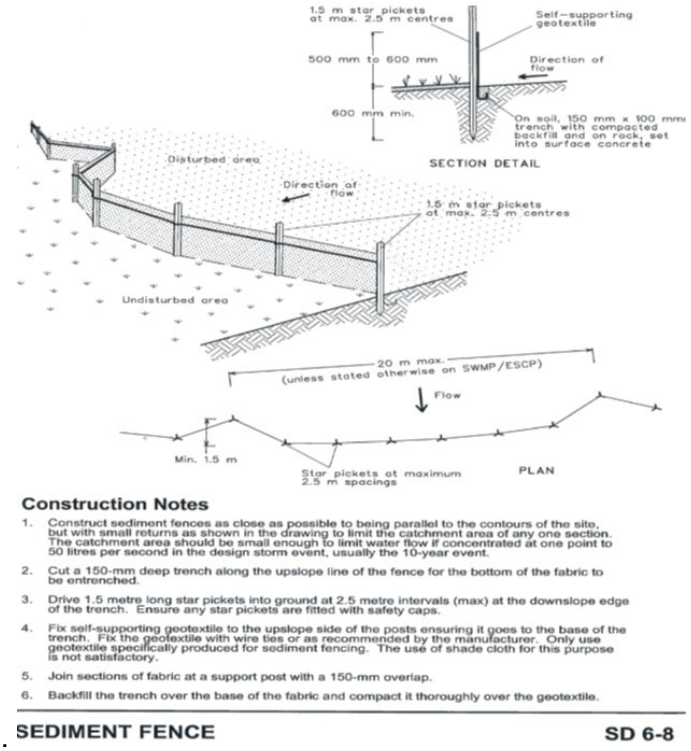


Figure 1: Installation of Silt Fence

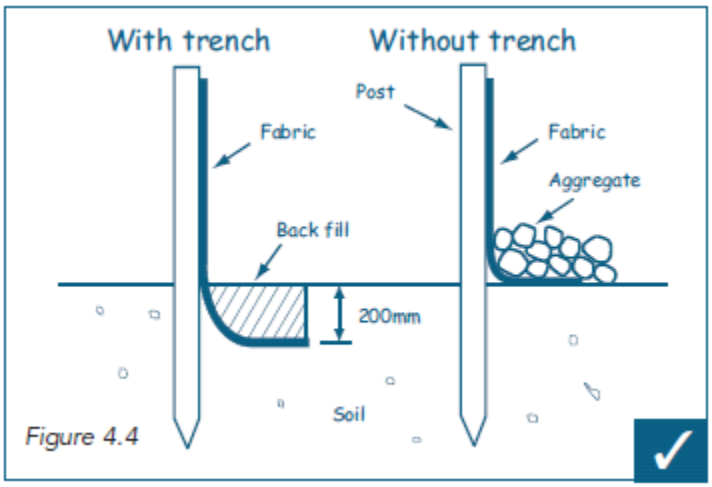


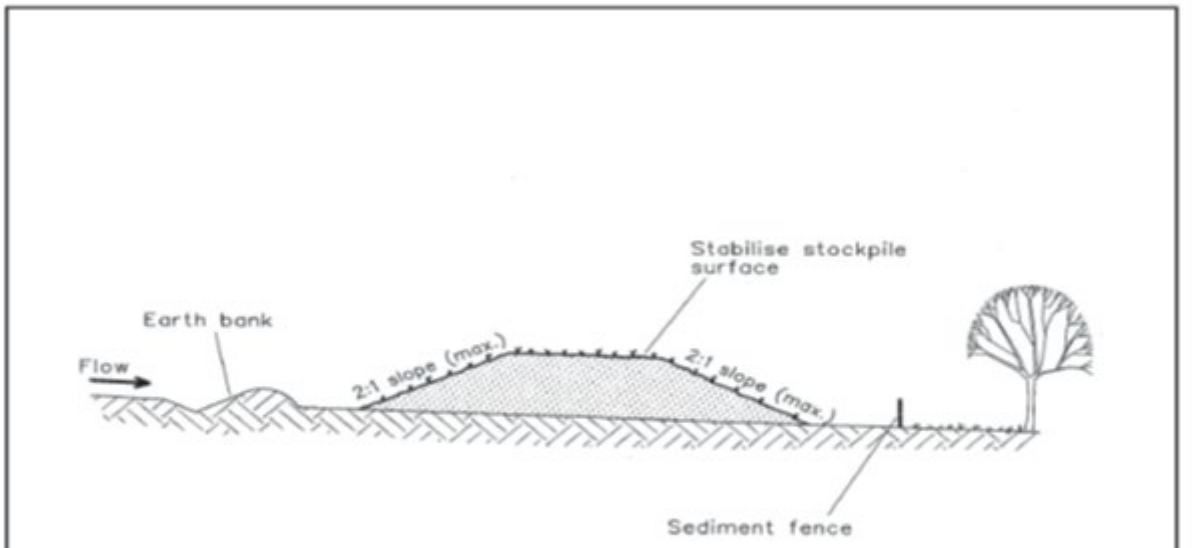
Figure 2: Silt Fence particulars for installation

5.4 Sediment Control – Stockpile Management

Stockpiles placed in runoff areas are to have the following controls put in place:

- Earth Bank placed on the areas where overland flow would approach the stockpile
- Sediment fence is to be placed at areas where sediment will run off the stockpile in a rain event.

If possible, the permanent settlement structures will be constructed early, modified as necessary, and utilised during the construction as a component of the temporary drainage. Figure 3 shows a typical stockpile arrangement:



Construction Notes

1. Place stockpiles more than 2 (preferably 5) metres from existing vegetation, concentrated water flow, roads and hazard areas.
2. Construct on the contour as low, flat, elongated mounds.
3. Where there is sufficient area, topsoil stockpiles shall be less than 2 metres in height.
4. Where they are to be in place for more than 10 days, stabilise following the approved ESCP or SWMP to reduce the C-factor to less than 0.10.
5. Construct earth banks (Standard Drawing 5-5) on the upslope side to divert water around stockpiles and sediment fences (Standard Drawing 6-8) 1 to 2 metres downslope.

STOCKPILES **SD 4-1**

Figure 3: Stockpile ESCP Controls

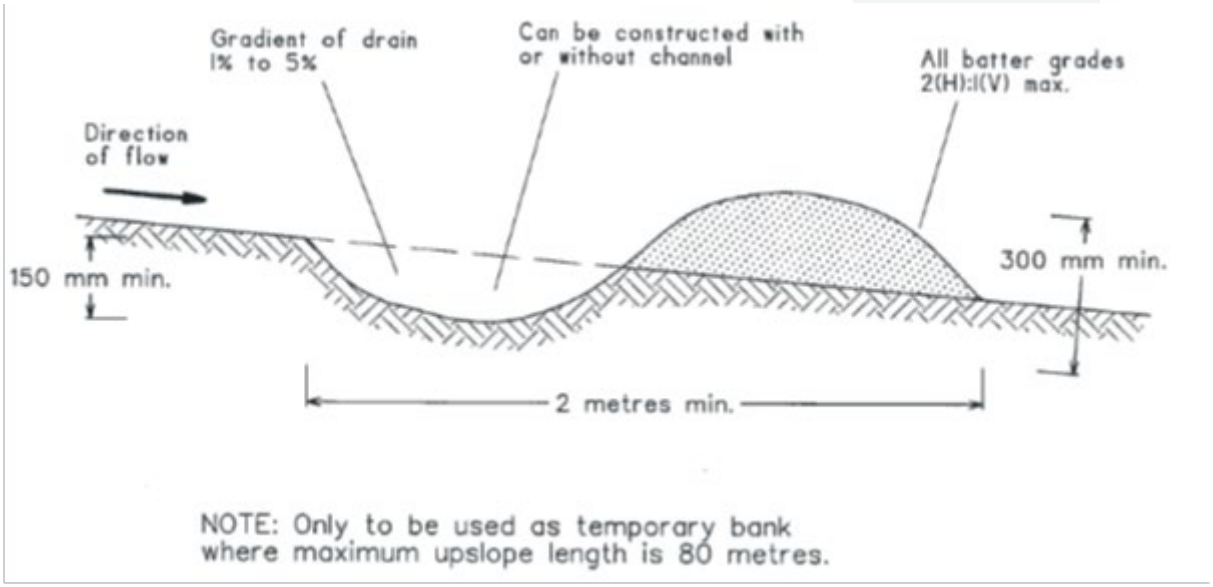


Figure 4: Earth Bank construction

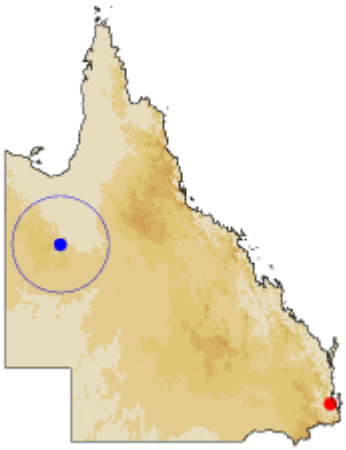
6 Monitoring

The site foreman shall ensure that an inspection all erosion, drainage and sediment control structures for structural integrity and capacity is undertaken and recorded on a weekly basis and following major rainfall events. This inspection shall also include (where identified) regular testing of water from the site.

Where required, sediment control devices shall be regularly cleaned and/or desilting to maintain design capacity.

Water from sediment traps shall also be emptied as soon as possible after rainfall events in preparation for subsequent rainfall events.

7 Appendix A – Local Climate Considerations



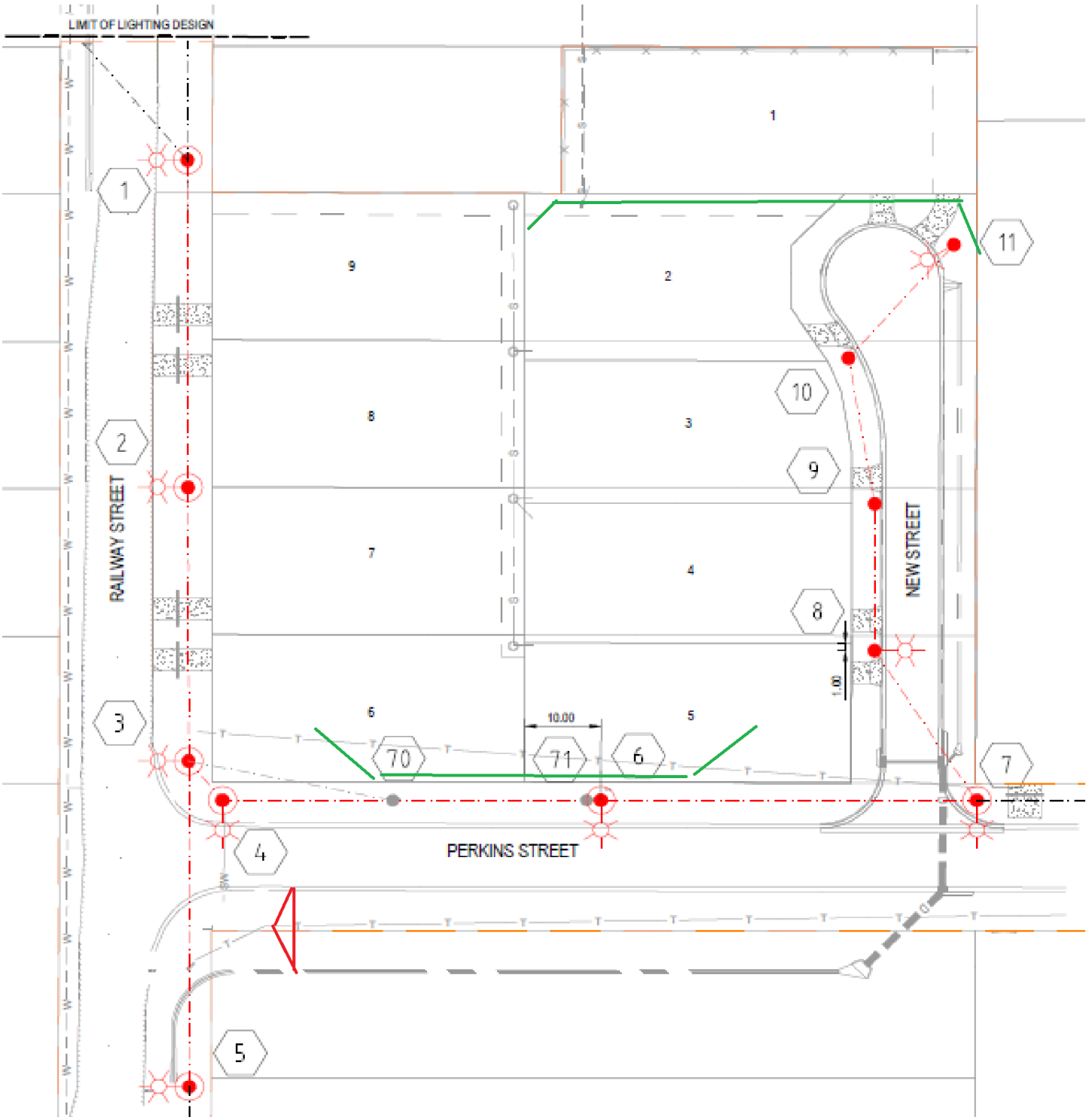
Site information

- **Site name:** CLONCURRY MCILLWRAITH ST
- **Site number:** 029008
- **Latitude:** 20.71 °S **Longitude:** 140.52 °E
- **Elevation:** 196 m
- **Commenced:** 1884 **Status:** Open
- **Latest available data:** 27 Apr 2022

Statistics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Years	
Temperature															
Mean maximum temperature (°C)	37.3	35.6	34.7	32.0	28.3	25.0	24.7	27.5	31.2	35.1	37.1	38.0	32.2	55	1888 1992
Mean minimum temperature (°C)	24.5	23.9	22.7	19.1	15.1	11.7	10.3	12.2	15.6	20.0	22.8	24.2	18.5	55	1888 1992
Rainfall															
Mean rainfall (mm)	123.0	113.5	67.3	17.7	13.3	12.1	7.2	3.7	6.9	15.9	30.8	68.6	481.3	122	1884 2022
Decile 5 (median) rainfall (mm)	92.2	82.2	40.7	2.3	2.3	0.3	0.0	0.0	0.6	5.9	23.6	49.2	439.8	128	1884 2022
Mean number of days of rain ≥ 1 mm	6.1	5.6	3.6	1.2	1.0	0.8	0.7	0.4	0.8	1.6	2.6	4.1	28.5	124	1884 2022

8 Appendix B – Site Specific ESCP

Legend
SILT FENCE –
ROCK CHECK -



Project Document

Cloncurry Shire Council

PERKINS STREET SUBDIVISION - CIVIL WORKS

Contract No: T2022 – 006

Project No: P2020-021

QUALITY & PROJECT MANAGEMENT PLAN

Copy No.	Revision	Registered Holder & Location	Issued as
001	A	Owen Whish	Secure PDF

Revision	Revision Date	Details	Authorisation (Name and Title)	Authorisation (Signature)
A	15/05/2022	For Construction	Owen Whish General Manager	

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1 Introduction

1.1 Purpose and Scope

This Quality & Project Management Plan (Q&PMP) forms one part of the overall Contract Plant that has been developed for the Perkins Street Subdivision Project.

It provides a guide for Gulf Civil personnel involved in the construction of this contract on how the quality requirements of the specifications are addressed. The objective of the Quality & Project Management Plan is to ensure that the completed project complies with quality performance criteria as prescribed by the contract documentation.

Adherence to this Quality & Project Management Plan will ensure that all conditions, activities and tasks, affecting Quality are planned, organised, executed, and controlled in accordance with the requirements of Gulf Civil, statutory legislation and our Principal & its Superintendent for the Contracted Works.

The Project Manager is accountable for the development and implementation of the Quality & Project Management Plan and delegates the responsibility for the development and implementation of this plan to the Site Supervisor. The Quality & Project Management Plan is issued with the authority of the Project Manager. All changes to the Quality & Project Management Plan will be reviewed and authorised by the Project Manager.

Everybody who works for Gulf Civil, whether as an employee or contractor, has a responsibility to fulfil Gulf Civil's quality policy and objectives, and is expected to work towards achieving these strategic objectives.

Where an ambiguity is detected between the requirements in this Project Quality & Project Management Plan and the Contract, then the requirements of the contract will take precedence.

1.2 Management Systems

Gulf Civil's Management System meets the requirements of:

- ISO 45001:2018 "Occupational Health and Safety Management Systems"
- ISO 14001:2015 "Environmental Management Systems"
- ISO 9001:2015 "Quality Management Systems"

1.3 Amendments and Authorisation

This Management Plan will be approved by the Project Manager.

This Management Plan and other related documents will be reviewed annually or as a result of:

- Changes to Company procedures or processes;
- Changes to key personnel or resources;
- Changes in legal and other obligations;
- Findings from an audit or inspection;
- Findings from a significant incident or near miss;
- Significant changes to site conditions and/or work methods
- Instructions from Cloncurry Shire Council or the OSH Committee if established.

Reviews will be undertaken in consultation with key stakeholders to ensure all work locations and impacts are considered. A record of the date and comments relating to any revisions of this document will be included in the revision table. The only Gulf Civil authorisation required to amend this document after initial approval is the Project Manager's.

1.4 Communication of Plan

The Project Manager is accountable for ensuring:

- Location and access to the management plans will be communicated at induction
- Site communication forums will also be used to communicate specific requirements of the plans such as toolbox talks, pre-starts, inductions or site meetings depending on the requirement being communicated and personnel involved with the activity
- Any changes made to the Management Plan are communicated to all affected persons on the site. A revision to the plan is made and the relevant personnel are to re-sign the update version

2 Project Overview

2.1 Project Scope

This project for the Cloncurry Shire Council will deliver the Perkins Street Subdivision and General Upgrades to the Perkins Street.

Gulf Civil are required supply all the plant, equipment and labour necessary for the construction of the whole works under each of the following categories:

- Erosion and Sediment Control
- Earthworks
- Roadworks
- Stormwater Drainage
- Sewer Reticulation
- Water Reticulation
- Electrical and Telecoms Minor Works (Conduits Only), and
- Concreting Works, and
- External Works (Water + Stormwater).

2.2 Project Details

Details	
Project Commencement Date	May 2022
Date for Practical Completion	July 2022
Client	Cloncurry Shire Council
Clients Representative	Simon Humphries

2.3 Location

The project works are located in within the Cloncurry Township – North Western QLD.

Figure 1 – Locality Map – Perkins Street Subdivision

3 Quality Objectives

The Quality objectives and targets for this Project have been established to measure performance and drive improvement ensuring that requirements of the Principal & its Superintendent are met.

The objectives and targets set are consistent with Gulf Civil's Quality Policy and support the Principal & its Superintendent's commitment to measuring and improving quality performance.

3.1 Management Policy and Review of Objectives

Our objectives on this project are to:

- Maintain a reputation for quality of work in a manner that is environmentally responsible while ensuring the safety of general public and to all persons at our workplaces;
- Ensure that our work is carried out competently, safely, to the satisfaction of our customers and economically for the organisation, while minimising environmental impacts.
- Ensure that durability of the project works will be addressed in every aspect of our works, including maintenance works
- Continuously improve the effectiveness of our technical and management systems. To this end we endeavour to document our procedures, set Quality, OHS and Environmental goals, and measure results to indicate areas where we can achieve improvements;
- Develop long term mutually beneficial relationships with our customers by emphasising the importance of meeting their requirements;
- Develop and maintain a working environment that is safe and minimises risks to the health of all employees, contractors and visitors;
- Be aware of and comply with relevant OHS and Environmental legislation; and
- Provide information, training and instruction to all our staff to enable them to carry out their work functions to the best of their ability.

To achieve these objectives, our management system will be effectively communicated to and understood and implemented by all our personnel and subcontractors. Where quality, safety or environmental problems arise, these must be identified and solved without delay. Where the management system is found to be inadequate, it must be reviewed and upgraded.

The application of this management system will provide assurance to our customers that our work complies with their requirements and applicable regulatory requirements.

The Gulf Civil Quality Policy will be made freely available to all interested parties by displaying at all project sites and inclusion in site inductions.

This policy is essential to our continuing success. All staff are expected to adopt these objectives and to actively implement this policy.

4 Accountability and Responsibility

4.1 Overview

The Project Manager is accountable for the Quality of the Perkins Street Subdivision Project and is assigned the necessary authority and responsibility to enable them to fulfil the requirements of this Plan.

4.2 Organisational Structure

The Project Organisation Chart in Attachment 3 shall identify the Project's reporting structure, positions and incumbents' name.

The Project Organisation chart will be reviewed for currency and updated periodically by the Project Manager.

4.3 Communication and Acceptance of Accountabilities and Responsibilities

The Project Manager is accountable for ensuring:

- Personnel with Individual Quality Accountabilities are informed of their requirements
- For wider distribution of QMP information, the Location of and access to the management plans will be communicated at Site Induction
- Site communication forums will also be used to communicate specific requirements of the plans such as toolbox talks, pre-starts, inductions or site meetings depending on the requirement being communicated and personnel involved with the activity
- Any changes made to the Management Plan are communicated to all affected persons on the site. A revision to the plan is made and the relevant personnel are to re-sign the update version

Please refer to Attachment 2 for key personnel Quality Accountabilities & Responsibilities.

4.4 Functional Responsibilities

4.4.1 Gulf Civil's Contractor Representative

Gulf Civil's (as the contractor) nominated representative for this Project is the Project Manager – Brendan Smith. Brendan shall formally advise the Principal & its Superintendent that all correspondence should

also be copied into the appropriate personnel. These Lines of communication should be maintained at all times during the project.

4.4.2 Project Quality Representative

The Project Quality representative will be Project Engineer – Ganesh Pandey.

The PQR will be responsible for ensuring all quality requirements outlined in the QMP and associated quality management system procedures are implemented and maintained on the Project. The PQR has the authority to take steps necessary in fulfillment of this responsibility.

5 Project Specifications

The Perkins Street Subdivision Project shall be constructed in accordance with the Project Specification as provided by the Cloncurry Shire Council at the time of tender. Gulf Civil will deliver the works in accordance with the full Suite of Main Road Technical Specifications and Standard Drawings provided in the Project Documentation.

5.1 Project Measurement

Measurement of the works under contract shall be in accordance with the relevant Main Road Specification in conjunction with the quantities provided in the Sor/BoQ at the time of tender.

See Section 14 in relation to Lot Definition and traceability

6 Resources

The Project Manager and site supervisor are accountable for adequately resourcing the Project, assigning the necessary materials, people and plant to meet the contractual requirements. The Project Manager shall monitor ongoing requirements, performance of work and verification of activities to confirm adequate resourcing.

The Project Manager has been nominated on this project to implement and maintain the projects Quality & Project Management Plan (Q&PMP). The Project delivery team is collectively responsible for continually improving the effectiveness of the Q&PMP, and enhancing Principal & its Superintendent satisfaction by meeting the project requirements.

6.1 Human Resources

6.1.1 Personnel Recruitment and Selection

All employees recruited shall undergo a selection criterion including interviewing, reference checks and consideration of personal competencies and capabilities required to perform the job.

All relevant certificate and qualification originals shall be sighted and verified for currency prior to commencing work by the supervisor and project manager.

6.1.2 Competency Awareness & Training

The competency needs of all personnel performing activities which affect the quality of manufacture/construction shall be identified by the Project Manager. Personnel performing specified assigned tasks shall be appropriately qualified on the basis of appropriate education, training, skills

and/or experience, as required.

The Project Manager shall nominate a project team member to be responsible for ensuring site personnel hold current and relevant qualifications for the work they are required to perform and maintaining training records.

Training needs for project personnel shall be identified giving consideration to:

- Legal requirements
- The knowledge and skills required from the position to fulfil the realisation of the requirements within the Principal & its Superintendent
- Principal & its Superintendent requirements
- Indigenous involvement targets and obligations

6.1.3 Inductions

All personnel, subcontractors and visitors to site will be inducted by either Ganesh Pandey or Supervisor Michael Moore. The basic quality requirements for the project site shall be included in this Induction.

The site management team on site is responsible for ensuring that site inductions are conducted for all personnel, subcontractors and visitors as required and maintaining induction records.

The site induction will highlight the following main areas:

- Project Information
  - Project Overview
  - Working Hours
  - Access to Site
- Quality
  - Overview of Quality Management Process
  - Reporting of non-conformances
  - Reporting requirements
  - Measurement of works
  - Key testing, compaction and finish requirements
- Safety
  - PPE
  - First Aid facilities
  - Emergency Response
  - Reporting of Accidents/Incidents
  - Injury Management Policy and Standard
  - Hazardous Substances
  - Traffic Management
  - Smoke Free Policy
  - Alcohol Free zone

- Environment
  - Overview of Environmental Management plan
  - Dust, Noise & Vibration Management
  - Minimum requirements on site
  - Local content
  - Cultural Heritage requirements
- Consultation and Communication
  - Levels of Communication
  - Prestart Meetings
  - Toolbox Meetings

6.2 Infrastructure and Work Environment

Adequate equipment/facilities and a suitable work environment are provided to Gulf Civil personnel to ensure that employees are able to perform work in a safe and productive manner.

Vehicles, equipment and various items needed for the project execution shall be assessed and identified at the commencement of the Project by the Project Manager and other relevant personnel and included in the mobilisation planning.

7 Control of Work Processes

Construction Methodology/Construction Procedures will be established for processes where the absence of such might adversely affect final product quality and where required by the specifications under which the project is delivered. The Objective of all construction methodologies/procedures is to implement work methods that result in products and outcomes that are compliant with Project Specifications.

The following controlled conditions will be considered when identifying, planning and validating work processes:

- The use of procedures defining the manner of fabrication and installation
- The use of suitable equipment, and a suitable working environment
- Compliance with referenced standards/codes, Quality & Project Management Plans and/or documented procedures
- Monitoring and control of suitable process and product characteristics
- The approval/qualification of personnel, processes, procedures and equipment, as appropriate;
- All acceptance criteria for workmanship shall be stipulated
- Process equipment such as cranes, generators, etc. Shall be subject to planned maintenance
- Defect liability maintenance activities

Work Method Statements, Safe Work Method Statements and other appropriate documentation shall be generated as necessary to specify the practices and requirements to control these processes.

8 Project Planning/Programming

Project Planning occurs at the tender preparation phase and reviewed again at the post award and pre-start phase by the Project Manager.

During the life of the contract the Contract/Project Program will be periodically reviewed on a monthly basis by the Project Manager to ensure that construction is progressing satisfactorily in accordance with the planned approach.

A Contract Program will be developed using Microsoft Project/ Primavera, drawn in a bar chart format. The Program will be set out on a time scale of calendar weeks with individual activity durations, including associated manhours to assist the tracking and review of the program. Unless amended with the approval of Principal & its Superintendent the total time allowed will equal the total time indicated in accordance with the contract practical completion date.

A 6 week look ahead program will also be provided to Council on a monthly basis, which prioritises the focus of upcoming tasks within the next period.

9 Quality & Project Management Planning

Quality & Project Management Planning for this project shall be coordinated by the Project Manager and Project Quality Representative.

9.1 Project Plans

The identified Management Plans required for this project and the responsibility and timing for their development and submission has been outlined in the special conditions of contract as follows:

- Project Quality Management Plan
- Project Safety Management Plan
- Project Traffic Management Plan
- Project Environmental Management Plan.

10 Client Relationship Management

10.1 Principal & its Superintendent Liaison

The following key positions outline the key contacts for this project:

Position	Name	Contact Details
Principal's Rep.	Simon Humphreys	**0450 643 711**
Superintendents Representative	Marc De TERT	**0411 270 259**
Superintendent's Inspector	Bipin Chaudhary	**Bipin.Chaudhary@cloncurry.qld.gov.au**

10.2 Principal & its Superintendent Meetings

Principal & its Superintendent (Cloncurry Shire Council) meetings shall be held as required unless otherwise agreed to discuss as a minimum, the following:

- Progress
- Finance/Variations
- Program
- Safety
- Environment
- Quality
- Objectives
- Design
- Materials
- Feedback

10.3 Complaints

All complaints received on the project will be documented. The Project Manager shall ensure that complaints relating to quality are registered and managed.

10.4 Reporting

10.4.1 Monthly Reporting

Gulf Civil will submit monthly report including the following:

- Updated program
- Summary of Technical queries
- Summary of RFI
- Summary of Safety
- Summary of Environmental Statistics
- Record of any Incidents
- Upcoming activities

10.4.2 Safety Requirements

Gulf Civil is required to submit a Safety Management Plan along with other management documents stated in the Contract and these must be reviewed by the Principal & its Superintendent within the timeframes set out in the Contract. Upon request, Gulf Civil must demonstrate compliance with the safety plan by providing evidences as stated in the Contract.

Any safety incident that occurs within the work must be reported, managed and rectified by Gulf Civil. Incident reports will be submitted to the Principal & its Superintendent as set out in the Health and Safety

Management Plan.

10.4.3 Environmental Requirements

Any incident on the surrounding environment and community must be reported, managed and rectified by Gulf Civil within the timeframes set out in the Contract. A Principal & its Superintendent's representative must be notified verbally followed by a written notification on all incidents.

If required under legislation, Gulf Civil will submit any statutory reporting obligation in accordance with the State and Commonwealth Legislation.

10.4.4 Testing Requirements

A conformance register must be maintained throughout the Works and must be made available upon the request of the Principal & its Superintendent Representative's. All relevant compliance certifications must be submitted to the Principal & its Superintendent Representative when required (including site meetings).

10.5 Principal & its Superintendent Property

Gulf Civil shall exercise care with Principal & its Superintendent property while it is under Gulf Civil's control or use, particularly with client supplied accommodation, materials and facilities. Gulf Civil shall identify, verify, protect and safeguard Principal & its Superintendent property provided for use or incorporation into the product. If any Principal & its Superintendent property is lost, damaged or otherwise found to be unsuitable for use, Gulf Civil shall report this to the Principal & its Superintendent and raise it as an incident or non-conformance as appropriate, a copy of which will be provided to the Principal & its Superintendent.

10.5.1 Infrastructure

Any infrastructure provided by the Principal & its Superintendent to Gulf Civil for use shall be maintained and safeguarded in accordance to contractual requirements.

10.5.2 Intellectual Property

Intellectual property means the businesses proprietary knowledge. Types of Intellectual Property include:

- Patents for new or improved products or processes
- Trade marks
- Designs for the shape or appearance of manufactured goods
- Copyright for original material such as multimedia and computer programs
- Circuit layout rights for the three-dimensional configuration of electronic circuits in integrated circuit products or layout designs
- Confidentiality/trade secrets including know-how and other confidential or proprietary information

Gulf Civil and its employees shall not disclose or deliver to anyone, except as authorised by the Principal & its Superintendent, any information or material which is the property of the Principal & its Superintendent and undertakes that it will hold in trust and in the strictest confidence all such information

or material for the exclusive purpose of performing contractual requirements.

This requirement shall also be applied to Gulf Civil's consultants, contractors and subcontractors, when contractually obligated to do so.

10.5.3 Plant & Equipment

Any plant and equipment provided by the Principal & its Superintendent to Gulf Civil for use shall be maintained and safeguarded in accordance to contractual requirements and Gulf Civil Management processes.

11 Communication

11.1 Internal

Project and Quality related issues shall be managed in accordance to the following table:

Key Stakeholder	Forum	Frequency	Responsible
Gulf Civil Personnel	Toolbox Meeting	Weekly	Site Supervisor
Gulf Civil Personnel	Prestart Meeting	Daily	Site Supervisor
Subcontractors	Toolbox Meeting	Weekly	Site Supervisor
Subcontractors	Prestart Meeting	Daily	Site Supervisor
Subcontractors	Inductions	On Commencement	Site Supervisor

11.2 External

Aconex will be used for all communication between Gulf Civil and the Principal & its Superintendent.

Project and Quality related issues shall be managed in accordance to the following table:

Key Stakeholder	Forum	Frequency	Responsible
Principal & its Superintendent & Authorities	Principal & its Superintendent Meetings	Monthly	Cloncurry Shire Council CSC Reps GULF CIVIL
Principal & its Superintendent	RFI / TQ	As required	All parties
Community	Letters	As required	All parties

12 Design and Development

Design is performed by external Consultants selected and approved by the Principal & its Superintendent; any temporary work design however is the responsibility of the Contractor.

Design control and change activities on this project shall be performed and co-ordinated by the Principal & its Superintendent.

13 Procurement

13.1 Subcontractors/Contractors

Only approved subcontractors shall be used on the Project. Gulf Civil Purchasing Department maintains a list of approved Subcontractors / Contractors.

Sub-contractors engaged during the duration shall be managed by the Project Manager and site supervisor. Any required communication for any of the sub-contracted work is to be with the Project Manager who will liaise with the Principal & its Superintendent where required.

Subcontractors shall comply with the relevant requirements of this Quality & Project Management Plan or the requirements of their own Quality & Project Management Plan where they are equivalent to or more stringent than Gulf Civil's.

Where a subcontractor/supplier does not operate a formal quality management, the Project Manager shall evaluate the required methods of control for the following:

- Documentation, e.g. Specifications, drawings
- Inspection and testing, e.g. ITP's/checklists
- Non-conforming items
- Inspection, measuring and test equipment

If the subcontractor/supplier has no existing documentation to satisfy the above, the Project Manager shall ensure that suitable Gulf Civil documents/records are made available for use.

Where there is no Principal & its Superintendent requirement for a supplier/subcontractor to maintain a quality management, the Project Manager shall determine the appropriate degree of quality management required.

13.2 Purchasing Process and Documentation

Purchasing documents such as purchase orders, subcontracts, request for quotes/tenders, etc. shall contain data such as description of the product and title, number and issue of specification requirements (e.g. drawings, standards, inspection instructions, process specifications, etc).

All purchase documents shall be reviewed prior to approval and release by authorised Gulf Civil personnel.

All POs and sub contracts shall be compiled and issued by authorised personnel in accordance with existing procedures and copies of all contractual documents and POs shall be retained by the Project Manager.

14 Inspection and Testing

14.1 Construction and ITPs

Inspection and Test Plans (ITP) will be prepared for all manufacturing and construction activities. ITP's will outline the sequence of all identified activities in concisely described technical procedures. ITP's will be developed in a manner to ensure appropriate controls are created and implemented, as to meet the requirements of relevant specifications and standards and any additional controls identified by the wider project team.

The project ITP format will detail each step within a designated construction activity in chronological order

and as a minimum each ITP will outline the following:

- Activity Description
- Inspection or Item Description
- Acceptance Criteria
- Test Frequency
- Project Checklist or Work Method Reference
- Inspection Point and Position Responsible for Testing
- Hold Point Identification and verification (by Principal or their Representative)
- Verifying Record (s) Location
- Position Responsible for Approving Test Results

Individual QA activity checklists may also be used to confirm that all quality requirements of the works have been met prior to the application of a hold point release. These checklists will form a part of the inspection and testing process for the project.

Each ITP will be allocated a unique ITP number, consisting of the project number and sequential numbering commencing at 001 (e.g. Project Number-ITP001). Certain work types under the Specification will also require the development of a Construction Procedure (CP). The Construction Procedure informs work crews, the Principal and its Superintendent of the Construction Steps/Method undertaken in achieving the requirements of the ITP for that work type.

Project hold points shall be determined as per the specification of the works unless otherwise requested by the Principal & its Superintendent. Each nominated hold point shall be signed off prior to further progress of the works.

ITPs for the project are found on Attachment 1

14.2 Lot Identification and Traceability

All construction shall be defined in work ‘Lots”. Guidance on the Maximum lot size shall be taken from the relevant TMR Specification for that work activity. Generally, a “Lot” will be defined by work that is:

- Continuous
- Have been produced by the same works process
- Have been brought to completion at the same time
- Appear to be of a constant quality without obvious changes in attribute values
- Have boundaries defined to ensure both transverse and longitudinal homogeneity
- Have pre-determined boundaries prior to sampling or testing

Each individual lot shall have its own unique lot number easily identifiable with the type of work undertaken and commencing at 01 or, using the lots existing design identifier (e.g. 16-BP-01).

The lot register will define and detail each individual lot and act as a cross check that works are signed off as required prior to commencement. The Lot Register will provide a status for each lot as follows:

- **Open**: The Lot is open and currently being worked on.
- **Guaranteed**: Work is finished on the lot but final test results are not available (IE concrete strengths etc). Work will proceed on guaranteed work.

- **Closed:** The lot is conforming, all documentation reviewed and accepted.
- **NCR:** A Non-Conformance Report has been raised for the lot.

The inspection and test status of manufactured/constructed items is identified throughout construction. The status of the constructed works is identified by the progressive completion of inspection and testing documentation (e.g. Inspection & Test Plan) by authorised personnel.

The project Team has identified a number of inspection obligations required by the Contract. The Project Manager shall ensure that the inspections required will be incorporated in the Inspection and Test Plans (ITP's) and checklists. It is the responsibility of the Project Manager or Supervisor to notify the Principal & its Superintendent's Representative on the impending inspections.

14.2.1 Open Lots

Open lots will be raised prior to the commencement of any works activities and provide information on the work process to which they relate, location and lot size. Open lots shall be raised in the lot register and clearly identify the bounds of the works under taken.

14.2.2 Completed Lots and Lot Data

Information relating to a conforming lot (including all required lot attachments) will be collated by the Project Quality Representative (PQR) after the completion of works. Where a lot is subject to delayed testing, these lots shall be submitted to the PQR with preliminary results. The final test results will follow as they become available. If these results are non-conforming, an NCR is to be raised as outlined in Section 16.

Lot data includes information that verifies the works are constructed in accordance with the requirements of the Project, including:

- As Constructed Survey Data e.g. Line and Level Conformance, Layer thickness data
- Test Results e.g. Gravel Density Reports, Concrete Strength Tests
- Lot Maps - Graphic representation of the works, location and boundaries
- ITP – Evidence that relevant Hold Points and Witness Points have been observed

Lot data should be compiled/catalogued for each closed lot progressively as the works progress. A filing system should allow rapid retrieval of relevant lot data at the Site Office – Electronic Method is sufficient.

14.3 Hold & Witness Points

14.3.1 Hold Points

A Hold Point is defined as a position in the progress of the Contractors activities, beyond which further work shall not proceed without mandatory verification by the Superintend or its representatives.

Work shall not proceed past a HOLD POINT until the Principal provides written release of the Hold Point

If the Contractor proceeds beyond this point without the Hold Point's being observed, the Superintendent or its representatives may direct the Contractor to halt the work and to remove any of the works undertaken prior to release.

The PQR or Project Engineer will provide the Principal with at least 24hours advanced notice of Hold Points Inspections. Where there is not physical inspection required, the PQR may request the release of a Hold Point upon the adequate provision of necessary documentation (e.g., Submission of Construction Procedures)

Hold Points will be raised in relation to the unique lot number given to the works. Hold Points and Hold Point release will be recorded in a Register and forms part of the completed lot data.

The Main Roads Technical Specification provides guidance on all applicable Hold Points to any particular work activity. It also indicates the requirements for Hold Point release.

A summary of applicable Hold Points/Witness Points for this Project is detailed in Attachment 5

14.3.2 Witness Points

Witness points are the identified point in a process where prior notice is to be given to the responsible parties delegated to approve Witness Points, with the option to observe a particular activity. The responsible parties to conduct inspections at each Witness Point will be outlined in the ITP's.

The PQR or Project Engineer will provide the Principal with at least 24hours advanced notice of Witness Point approaching, but the works may proceed when the period of notice has expired whether or not the responsible party elects to witness the activity.

A summary of applicable Hold Points/Witness Points for this Project is detailed in Attachment 3

14.4 Sampling and Testing

The PQR will be responsible for arranging tests of materials at source or in stockpile. Testing will be undertaken by National Association of Testing Authorities (NATA) approved laboratories. The NATA Scope of Approval of the testing laboratory shall be provided to the Principal prior to the commencement of work.

Sampling will be undertaken with reference to a lot number to ensure traceability. Material Test Requests may be used to effectively track the status of testing undertaken on site.

All test results will be analysed by the PQR to ensure compliance with relevant specifications and standards, and NCR's will be raised if required. All tests results are to be included in their relevant lots and filed, prior to that lot being verified as complete and closed out.

14.4.1 Testing Frequency

Appropriate frequencies for inspection and testing will be detailed in the ITP. Frequencies will be in accordance with the relevant specifications and standards.

The PQR will review the appropriateness of the frequency of testing nominated in the relevant specifications and standards. Such review will take into account the frequency of non-conformances detected, including non-conformances remedied by simple reworking.

14.5 Plant, Equipment and Vehicles

Ongoing inspections and maintenance of Gulf Civil plant and heavy equipment conducted by the Operator will be conducted.

Subcontractor and Contractor equipment shall be inspected in accordance with the Project Health and Safety Management Plan. Electrical tools and machineries will be checked and tagged on a three monthly basis. The status of inspections of plant and equipment will be verified during safety and quality audits.

14.6 Worksite

Worksite inspections shall be completed in accordance with the Project Health and Safety Management Plan.

15 Material Control & Storage

Incoming materials or items will be handled and stored in designated storage facilities or lay down areas following their receipt and inspection. Designated storage and holding areas shall be provided to prevent loss, damage or deterioration of the items pending use or delivery. The method of storage and handling is dependent on the types of materials received and their sensitivity to the elements.

Where items are dispatched from the project site, suitable arrangements for the protection and packaging of the items shall be made by the store person prior to delivery. Such arrangements shall comply with any contractually specified requirements.

Handling, storage, packaging and delivery activities at offsite subcontractor's premises shall be the responsibility of the subcontractor and be performed in accordance with the subcontractor's documented procedures.

16 Management of Non-Conformances

The management of non-conformances is based on the principle that the Supervisors / Managers involved in the works area are the best people for deciding on and implementing the immediate actions required as well as providing recommendations to prevent recurrence.

Nonconformances, when identified, are reported to the Project Quality Representative. Where the disposition of a Non-Conformance Report (NCR) violates contractual requirements, the Project Manager shall seek approval from the Principal & its Superintendent for the disposition.

Any product that fails to meet the required standards or specifications will be segregated where possible to prevent inadvertent use or installation, until the necessary action has been agreed on. The segregation may be in the form of physical isolation from other product, labelling or identifying boundaries. The product will be nominated as nonconforming until a corrective action has been implemented and approved.

A Non-Conformance Report shall be completed detailing the non-conformance including proposed disposition, corrective actions and close out.

Where required, the NCR will be forwarded to the Principal & its Superintendent for approval as soon as practicable from the date of the non-conformance being reported.

Upon receipt of a subcontractor generated NCR, the Project Manager, in conjunction with relevant

specialist technical staff, will review the content of the document for:

- Accuracy
- Suitability of disposition

All repaired and reworked items shall be re-inspected and verified prior to being put back into service. The Project Manager may generate a Gulf Civil NCR to “cover” the subcontractor report if required.

16.1.1 Corrective and Preventative Action

Corrective and preventive action shall be promptly affected to eliminate the causes of actual or potential non-conformance.

The following are taken into account in relation to corrective and/or preventive actions:

- Principal & its Superintendent complaints and reports of product nonconformance are effectively handled;
- The cause of nonconformance relating to product/process is investigated and recorded;
- The corrective action needed to eliminate the cause of nonconformance is determined;
- Controls used to ensure corrective action is taken are effective.
- Appropriate sources of information such as processes and work operations which affect product quality, audit results, quality records and Principal & its Superintendent complaints, are used to detect, analyse and eliminate potential causes of non-conformance;
- Relevant information on actions taken is submitted for management review

16.1.2 Review of Non-Conformances

All NCRs, corrective actions and preventative actions will be recorded in a register, which will show a summary of the issues and show the status of each NCR.

Each non-conformance and the corrective measure implemented to control the non-conformance will be reviewed at a suitable time by the PQR after the non- conformance has occurred. Only after a suitable review of the non-conformance has been carried out, can the NCR can be considered closed out.

16.1.3 Continuous Improvement

To facilitate continuous improvement, the project will implement several processes to ensure Lessons Learnt are captured, recorded and disseminated. This relies on open and effective reporting and investigation of non-conformances and audit and inspection findings.

Where a major non-conformance is identified or a trend in non-conformances becomes apparent, the Project Manager will table the trend or ongoing failings in a lesson learned “workshop”.

Findings from the “Workshop” may be aloud or discussed at site personnel meetings, toolbox talks etc.

The document will include a page of names and signatures as a record that all relevant personnel/project stakeholders have received/reviewed the document.

17 Document and Record Control

17.1 Document Control

Quality Documentation developed specifically for the project shall be controlled on site by the Project Manager.

17.1.1 Site Drawings and work packages

Site Drawings are controlled through a central point where a drawing register is maintained. All holders of drawings are recorded on this register and new issues of drawings are distributed to those holders. It is procedure that superseded documents are either marked “Superseded” or destroyed.

17.1.2 Technical Queries (Requests for Information)

All technical queries are controlled through the use of the standard Technical Query form and register. Where further information is required, a technical query is completed and forwarded to the Principal & its Superintendent for response. Each query is numbered and the register highlights which queries are still to be closed-out.

17.1.3 Variation Requests

A Variation Request forms will be issued for the purpose of requesting a variation. Each Request is numbered and registered in the Claim for Payment. Variation Requests are recorded as being either ‘Assessed’ (where Principal & its Superintendent has assessed the VR) or ‘Outstanding’ (where the Principal & its Superintendent has yet to assess the VR).

17.1.4 Contract Correspondence

All correspondence between Gulf Civil and the Principal & its Superintendent goes through email, which will allow generation of document references. The labelling of electronic correspondence will be as detailed in the document control procedure. Correspondence not stamped electronically will be stamped with date received. Where information received is to be distributed for action, the relevant piece of correspondence will be accompanying a standard Principal & its Superintendent Memo, facsimile header page or letterhead.

17.1.5 Site Instructions

Site Instructions – will be handled in a similar manner as Contract Correspondence, and site instructions will only be as directed by the Superintendent under contractual correspondence.

17.1.6 Project Management Documentation

A Project Document Register will be used to control documents developed for the Project. Principal & its Superintendent Management Documentation issued to the Project shall also be recorded on the Project Document register.

18 Project Completion and Demobilisation

At practical completion, a project staff member shall be nominated by the Project Manager to coordinate the

finalisation of works prior to the scheduled final completion date.

At the review/inspection visit the nominated staff member shall accompany the Principal & its Superintendent's Representative/Independent Verifier and note any issues highlighted for action. The identified items shall be incorporated into a defect's "punch" prepared by either the Principal & its Superintendent or Gulf Civil. The nominated staff member shall be responsible for coordinating with the relevant parties to rectify the issues prior to final completion.

Upon final completion of the contract, The Project Manager shall nominate a staff member to be responsible for the preparation of the final project reporting, as stipulated by the contract.

19 Project Performance Review

Post project completion, the Project Manager shall organise a meeting with the Principal & its Superintendent Representative to obtain feedback on Gulf Civil's project performance.

The Project Manager shall review any opportunities for improvement identified from the feedback and take action to improve Principal & its Superintendent perception/project performance for future projects. The Project Manager shall respond in writing to the Principal & its Superintendent when appropriate, advising of changes (to be) implemented.

20 Attachments

- Attachment 1- Inspection Test Plans (ITP's)
- Attachment 2- Project Accountabilities and Responsibilities
- Attachment 3: Project Organisation Chart
- Attachment 4: Gulf Civil ISO 9001:2015 "Quality Management Systems"

Attachment 1-

ITP's to be utilised within Civil Pro

Attachment 2- Project Accountabilities and Responsibilities

Project Engineer / Manager

The Project Engineer / Manager is responsible for but not limited to:

- Ensuring procedures in the Quality & Project Management Plan are followed
- Ensuring the requirements for mandatory hold points are satisfied prior to inspection by the Principal & its Superintendent
- Performing verifications and quality inspections as requested
- Technical and logistic support to the Project Manager
- Preparation of Work Method Statements (WMS)/Safe Work Method Statements (SWMS's) and Inspection & Test Plans (ITP's)
- Monitoring the implementation of manufacture/construction activities
- Ensuring and verifying that corrective action is taken when required for non-conforming work
- Identifying and reporting material and/or workmanship non-conformance and notifying the Project Manager of the suspected non-conformance
- Rejecting defective workmanship and materials
- Ensuring and verifying that agreed rectification works and corrective action is taken when required for non-conforming work
- Ensuring construction targets and programs are met
- Assisting with the maintenance of the project programme
- Assisting the Project Manager with letting of subcontracts

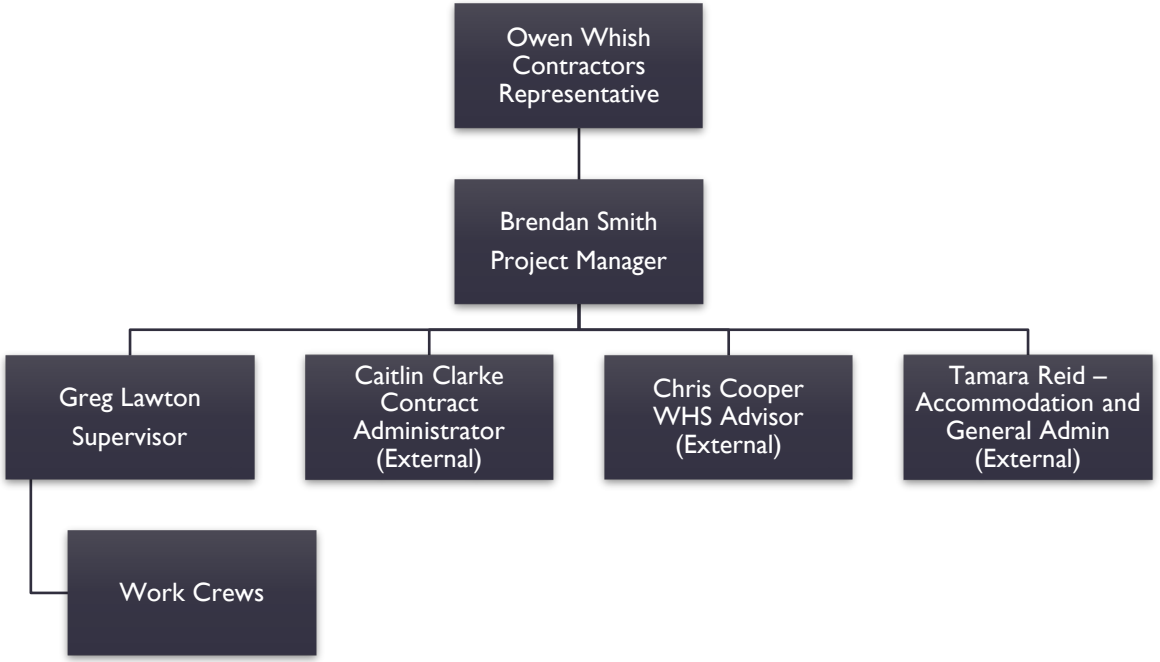
Supervisor/Foreman

The Supervisor/Foreman is responsible for:

- Ensuring procedures in the Quality & Project Management Plan are followed
- Ensuring the requirements for mandatory hold points are satisfied prior to inspection by the Principal & its Superintendent
- Performing verifications and quality inspections as requested by the Project Manager
- Identifying and reporting material and/or workmanship non-conformance and notifying the Project Manager of the suspected non-conformance
- Ensuring and verifying that agreed rectification works and corrective action is taken when required for non-conforming work
- Completing a diary on a project daily report
- Ensuring construction targets and programs are met
- Technical and logistic support to the Project Manager
- Supervision of construction activities
- Assisting with the preparation of Process Procedures (PP's), Safe Work Method Statements (SWMS's) and Inspection & Test Plans (ITP's)
- Assisting with the maintenance of the project programme

Attachment 3 – Project Organisational Chart

PROJECT ORGANISATIONAL CHART
PERKINS STREET SUBDIVISION



Project Document

Cloncurry Shire Council

PERKINS STREET SUBDIVISION - CIVIL WORKS

Contract No: T2022 – 006

Project No: P2020-021

SAFETY MANAGEMENT PLAN

Copy No.	Revision	Registered Holder & Location	Issued as
001	A	Owen Whish	Secure PDF

Revision	Revision Date	Details	Authorisation (Name and Title)	Authorisation (Signature)
A	10/05/2022	For Construction	Owen Whish Project Manager	

Table of Content

1 Introduction

1.1 Purpose and Scope

This document forms the Safety and Health Management Plan (SMP) developed for the Perkins Street Subdivision Project for the Cloncurry Shire Council.

This SMP is established in accordance with the Gulf Civil Sustainability Framework and outlines the applicable Policies and Procedures that must be incorporated into the Gulf Civil system in order that Gulf Civil and Cloncurry Shire Council may realise their Safety and Health Vision of 'No Harm'.

The Gulf Civil Procedures which form the basis of this SMP:

- SMS-23 Work Health, Safety & Environment
- WHS & E Policy
- Drug & Alcohol policy

The abovementioned policies and procedures are attached within **Appendix A** of this document.

1.2 Management System References

Gulf Civil's Management System meets the requirements of:

- ISO 45001:2018 "Occupational Health and Safety Management Systems"
- ISO 14001:2015 "Environmental Management Systems"
- ISO 9001:2015 "Quality Management Systems"

2 Safety Objective

The objective of this plan is to assist in the implementation of a site management system that supports Gulf Civil's vision of 'No Harm' for their contracted works for the project – Perkins Street Subdivision Project

3 Amendments and Authorisation

This Management Plan will be approved by the Project Manager.

This Management Plan and other related documents will be reviewed annually or as a result of:

- Changes to Company procedures or processes;
- Changes to key personnel or resources;
- Changes in legal and other obligations;
- Findings from an audit or inspection;
- Findings from a significant incident or near miss;
- Significant changes to site conditions and/or work methods
- Instructions from Cloncurry Shire Council or the OSH Committee if established.

Reviews will be undertaken in consultation with key stakeholders to ensure all work locations and impacts are considered. A record of the date and comments relating to any revisions of this document will be included in the revision table.

The only Gulf Civil authorisation required to amend this document after initial approval is the Project Manager's.

3.1 Communication of Plan

The Project Manager is accountable for ensuring:

- Location and access to the management plans will be communicated at induction
- Site communication forums will also be used to communicate specific requirements of the plans such as toolbox talks, pre-starts, inductions, or site meetings depending on the requirement being communicated and personnel involved with the activity
- Any changes made to the Management Plan are communicated to all affected persons on the site. A revision to the plan is made and the relevant personnel are to re-sign the update version

4 Scope of Work

This project for the Cloncurry Shire Council will deliver the Perkins Street Subdivision and General Upgrades to the Perkins Street.

Gulf Civil are required supply all the plant, equipment and labour necessary for the construction of the whole works under each of the following categories:

- Erosion and Sediment Control
- Earthworks
- Roadworks
- Stormwater Drainage
- Sewer Reticulation
- Water Reticulation
- Electrical and Telecoms Minor Works (Conduits Only), and
- Concreting Works, and
- External Works (Water + Stormwater).

5 Project Details & Location

5.1 Location

The project works are located in within the Cloncurry Township – North Western, QLD

5.2 Project Details

Details	
Project Commencement Date	April 2022
Date for Practical Completion	August2022
Client	Cloncurry Shire Council

6 Key Contacts

The contractors' key contacts for the project are as follows:

6.1 Contractors Contact List

Position	Name	Contact Number
Project Manager	Brendan Smith	0456 012 968
Project Supervisor	Greg Lawton	0411 984 717
Safety Manager	Chris Cooper	0467 645 602
Traffic Manager	A2O Representative	

6.1 Principal's Safety Contact List

Position	Name	Contact Number
Safety Officer	Jesse McEniery	TBA
Safety Officer	Adam Butters	TBA

7 General Principles

Gulf Civil aims to support our vision for 'No Harm' on all projects. Our vision of 'No Harm' encompasses project and public health and safety expectations.

Gulf Civil will comply with all safety conditions set out in the contract.

8 Leadership and Accountability

Personal leadership is an expectation of all Gulf Civil Staff. Leaders in Gulf Civil understand and accept accountability for 'No Harm' workplaces and demonstrate this through personal safe work behaviours and environmentally responsible actions.

Gulf Civil's commitment to 'No Harm' is visibly exercised by our leaders through participation in site SAFETY processes and most importantly by never walking past an 'at risk' situation.

Goals are established that support Gulf Civil's intent of 'No Harm' and progress against these goals are monitored and reviewed. Employees of Gulf Civil are regularly kept informed of SHE objectives/targets and progress towards them.

9 Pre-Start and Toolbox Talks

Gulf Civil recognizes the opportunities that pre – start and tool box talks provide to send SAFETY messages to the workforce. In Gulf Civil pre-start meetings are conducted toconfirm:

- Planned Works for the Shift and each person's role in its execution;
- The Key Risks associated with the planned works onsite; and
- The Key Control measures to be implemented to mitigate those risks occurring.

Tool box talks are conducted regularly and are focused on broader safety performance and specific hazard groups. Tools box talks are critical for the communication of critical safety messages and form part of the overall safety system

10 Hazard Identification and Risk Management

Hazard Identification and Risk Management Strategies are developed by Gulf Civil prior to the commencement of works on site. This process is undertaken in consultation with stakeholders and experience Gulf Civil Staff and considers Safety, Health, Environment and Community exposures.

Risks/Hazards that are identified are recorded, monitored and controls maintained. Risk assessments are updated as we learn and improve, and as the nature of the risk requires.

Planning processes are applied to understand our changing risk profile. When unplanned or unexpected changes occur, we stop and update our understanding.

We assess and communicate the impact of changes and apply appropriate controls.

If our work is not safe, we stop work in the immediate area and make appropriate changes to unsure a safe workplace going forward.

The monitoring of risk on the project is essential in achieving the Safety, Health and Environmental Vision of 'No Harm'. The key item in monitoring risk on Perkins Street Subdivision project is demonstrating that we are monitoring activities with a higher level of risk, more often than activities that present a lower level of risk. The two major areas of risk monitoring are as follows:

- High Consequence/Low Likelihood events; and
- Low Consequence/High Likelihood events.
- High Consequence/Low Likelihood events are identified and prioritised using the risk register whereas, Low Consequence/High Likelihood events are identified and prioritised on trend data derived from the SHE database.

11 Work Method Statement / Job Step Analysis

A Job Step Analysis (JSA) is a method of conducting a documented risk assessment of a job that involves breaking the job into logical steps. The JSA is the process of assessing the risk potential of each element of a job to ensure hazards/risks are identified and controlled. It is undertaken at a task level and often does not require formal qualification (risk scores). Risk scores can be used to assist in identifying which job steps present the key risks.

WMS/JSAs should be utilised only for the duration of the specific job, however, each version must be on the site WMS/JSA register and can be referred to for similar tasks. If the same task is conducted repeatedly, it shall be formalised into a Procedure.

12 Workplace Inspections

Workplace inspections provide an opportunity for to compare the physical environment against a known standard. The inspection process within Gulf Civil is focused on:

- Preparing and understanding the purpose of the inspection and how it relates to risk on the site
- Conducting the inspection in an effective manner; and
- Reviewing, recording and following up the findings.

13 Fitness for Work

Gulf Civil commences its Fitness for Work testing during recruitment and it consists of:

- Alcohol and Drug testing
- Functional Capacity Evaluations
- Relevant Statutory assessments
- Gulf Civil does not assume that personnel are fit for work merely because they are present
- Once on-site Gulf Civil establishes fitness for work testing and provides an Employee Assistance Program to support employees who require assistance with the management of FFW issues
- Regardless of testing Gulf Civil Supervisors have the obligation to remove a person from risk until a further assessment can be made

14 Personal Protective Equipment

Gulf Civil recognises that suitable Personal Protective Equipment (PPE) is an important aspect of managing risk; however, Gulf Civil believes that PPE should not be the sole control of a workplace hazard and that high levels of controls should be implemented prior to reliance on PPE to protect our people.

Gulf Civil establishes PPE requirements for both general and task specific work, this requires:

- Establishing general PPE requirements for working on site and
- Undertaking a risk assessment for tasks and including specific PPE items to mitigate the risk of a particular task.
- When selecting PPE Gulf Civil considers:
- The anticipated hazards
- The limitations of the item of PPE
- The ease with which that item of PPE can be worn with other items
- The mobility and comfort of the wearer
- Fit
- Cost
- Possible maintenance issues
- Secondary hazards, such as restricted vision or movement
- Relevant signage is posted in conspicuous locations which comply with ASNZS 1319 ‘Safety Signs for the Occupational Environment’.

15 Hazardous Substances

The presence and use of hazardous substances require Gulf Civil to establish procedures and processes to minimise the risk to persons and the environment. Specifically, this means Gulf Civil will:

- Establish a process to have substances approved on site
- Conduct a risk assessment for using specific hazardous substances
- Establish and maintain a hazardous substances register
- Educate personnel of the risks that hazardous substances and dangerous goods
- Have a list of approved substances on site including relevant Material Safety Data Sheets (SDSs) in readily accessible locations
- Audit hazardous substances storage and use

16 Occupational Hygiene

Gulf Civil has established processes to minimise the health effects of occupational hazards, this consists of:

- Ascertaining a base line of occupational health hazards through appropriate monitoring
- Reducing as far as practicable personnel's exposure to occupational health hazards
- Educating the workforce about the occupational health hazards
- Providing and training individuals in the use of appropriate Personal Protective Equipment for occupational hazards
- Periodically monitoring personal exposure to occupational health hazards
- Investigating instances where there is an appreciable increase in occupational health hazards and re - evaluating the monitoring schedule if required

17 Manual Handling

Gulf Civil recognises that inappropriate manual handling can result in injuries to its workforce and requires the following controls to be in place in order to mitigate that risk:

- Manual handling risks that cannot be eliminated are identified at project formation
- Personnel who are not capable of performing roles involving a significant amount of manual handling are identified via relevant pre – employment medical processes; and
- Personnel are trained in manual handling procedures

18 Dangerous Goods

Gulf Civil has established processes to minimise the risk to personnel of storing, using, moving and disposing dangerous goods, specifically, this means Gulf Civil will:

- Establish a process to have dangerous goods approved on site
- Conduct a risk assessment for using specific dangerous goods
- Establish a dangerous goods register
- Educate personnel on the risks that of dangerous goods
- Have a list of approved substances on site including relevant Material Safety Data Sheets (SDSs) in readily accessible locations

- Inform relevant emergency services of the dangerous goods on site and relevant quantities
- Audit dangerous goods

19 Working at Heights

Gulf Civil recognises that personnel working at height without relevant equipment and training poses a significant risk and requires the following processes to minimise the risk that working at height poses:

- No work is to be undertaken where there is a potential to fall 2 metres or greater without specific controls
- Design and constructability methodology must consider the necessity for work at height and construction methods should be considered that reduce the need for work at height by such methods such as ground level pre – assembly
- Physical barriers /scaffold must be compliant to relevant standards
- Fall Arrest and Fall Restraint systems when used must be maintained and inspected regularly with workers being trained and deemed competent in their use
- Equipment and plant used for working at height must comply to relevant standards and be maintained in accordance with Original Equipment Manufacturer recommendations
- 100% hook up required at all times when required to work at heights.

20 Hot Works

Gulf Civil acknowledges that carrying out hot work introduces risk into the workplace which requires specific controls to be established. Specifically, Gulf Civil requires:

- Personnel carrying out gas welding and cutting, arc welding and cutting and grinding to hold specific competencies
- All equipment associated with hot work to be thoroughly checked in accordance with OEM instructions and prior to use
- A thorough check of the work area in order to confirm that the environment is suitable to conduct hot work in
- The use of Hot Work Permits in specific instances

21 Confined Spaces

Entry and work in confined spaces can create significant risk if not controlled. Gulf Civil recognises this risk and requires the following controls to be in place if entry is required into a Confined Space:

- All confined spaces identified with either locks or signage or both
- Personnel who are required to work in a confined space are to be appropriately trained
- All personnel who are required to work in a confined space are to be medically fit
- A permit system is established
- Emergency response teams to have a rescue from confined space capability

22 Fit for Purpose Equipment

Providing and maintaining fit for purpose equipment is critical in minimising the risk to personnel. Gulf Civil has the following processes to verify fit for purpose plant and equipment:

- An assessment is conducted on the type of plant required prior to mobilising

- The maintenance schedule is established in accordance with Original Equipment Manufacturers specifications
- Operators are trained in conducting pre – start inspections and reporting defects in plant and equipment prior to operation

23 Cranes and Lifting Gear

The use of cranes and lifting gear is high risk and Gulf Civil requires:

- An inspection of all cranes mobilised to site by a competent person
- Equipment is to be uniquely numbered, registered and is to clearly exhibit the Safe Working Load (SWL) and Working Load Limit (WLL) rating
- A visual check of all equipment prior to use
- Crane studies to be conducted for critical lifts

24 Contractors and Suppliers

Gulf Civil does not accept lesser standards of SAFETY management from Contracting or suppliers and we will work with them to achieve our collective goals.

Gulf Civil expects Contracting and suppliers to develop and implement processes that manage and monitor their specific SAFETY risks, to a level at least equal with Gulf Civil standards.

Gulf Civil is to ensure all Subcontractors comply with the principal contractors' requirements.

Monitoring of subcontractors will be as per Gulf Civil Standards which will be reported to the superintendent via weekly reports.

25 Managing Contractors and Suppliers

Gulf Civil understands that the effective management of Subcontractors and Suppliers will reduce the risk to the Client, to Gulf Civil and will help achieve the vision of 'No Harm'. This procedure requires:

- The Subcontractor or supplier to demonstrate an appropriate level of SAFETY capability
- The Subcontractor or supplier must be able to demonstrate that they have a comprehensive understanding of the risks of their work
- An assessment of capability pre – award
- Inclusion of Key Performance Indicators for SAFETY
- Regular reviews of SAFETY performance; and
- Termination if SAFETY performance is not satisfactory
- Where applicable, it is highly desirable that Subcontractors to Gulf Civil operate under their own Safety Systems

26 Incident and Emergency Management

Gulf Civil ensures SAFETY incidents are investigated and reported to provide the quality of information necessary for effective organisational learning and as a basis for future prevention programs.

Possible SAFETY emergencies are considered and plans are developed and practiced to prevent and mitigate their impact.

Employees with injuries are managed with genuine care for them and their families.

Gulf Civil recognises early return to work is integral to the wellbeing of our employees and the effectiveness of our rehabilitation programs.

27 Incident Notification, Recording, Investigation and Reporting

Gulf Civil recognises that timely and effective investigation of incidents and the subsequent corrective action process is critical to preventing accidents and improving performance. Gulf Civil requires the following actions to be carried out:

- All incidents, including near misses are reported and recorded in a consistent manner
- Managers are notified and involved in a timely manner
- Investigations are completed using the Incident Cause Analysis Method(ICAM)
- Corrective actions are developed, regularly reviewed and tracked to completion

28 Emergency Preparedness

Identification of and preparation for foreseeable emergencies is required to mitigate risk on Gulf Civil projects. This requires the following:

- Identification of emergency situations
- Understanding the capability requirements needed to deal with emergency situations
- Developing emergency capability
- Testing emergency capability

29 Injury Management

Gulf Civil recognizes that effective and early injury management is crucial to personnel returning to work in a timely manner. Gulf Civil's injury management is focused on:

- Early intervention
- A multidisciplinary approach
- Suitable duties where appropriate
- Timely review and notification to managers

30 Fire

Prior to mobilising to site Gulf Civil will undertake an assessment of the fire risks and undertake the following actions:

- Minimising the quantity of combustible material on site
- Installing fire detection equipment in offices and accommodation
- Providing fire suppression equipment; and
- Training all personnel how to deal with fire risks on site pertinent to their role

31 First Aid

The provision of timely first aid is critical in mitigating consequences of injuries. Gulf Civil requires the following in relation to the provision of first aid:

- An assessment conducted identifying the likely injuries expected on site
- Provision of appropriate first aid resources in prominent location
- A system of checks to verify that first aid equipment is current
- A suitable number of trained first aiders

32 Cyclone / Weather Management

The Emergency Response Team shall be involved and consulted during the design stage of any physical measures to be adopted and implemented on the Project work site, as well as monitoring the progress of this work. This section details the minimum requirements and standards that have been incorporated into the design of each location identified below.

32.1 Office and Temporary Buildings

All temporary buildings & structures are to be adequately secured using approved methods where severe events may be encountered (e.g. duckbill style tie downs).

Adequate numbers/sized buildings or refuge to accommodate all workers onsite in the event of a sudden and unexpected weather event resulting in all workers onsite requiring short term shelter from storm activity

32.2 Storage Containers

All containers storing chemicals to be self bunded or approved external bunding to be installed.

32.3 External Locations/Offices

The Project either has or has the potential to have both external locations and valuable assets located at:

- Places of Accommodation
- Temporary external lay down yard/s & wash down facilities
- Potential for personnel or items in transit
- This could affect the project directly and/or indirectly should an event/incident occur, at the work/asset location.

Procedures and processes should be incorporated into the facilities operating procedures in order to protect and maintain the integrity of the facility, its workforce and the Project assets as appropriate.

An assessment and general overview of each facility shall be conducted by the Project Site Management team to determine the risks and provide a recommendation of mitigating measures.

32.4 Temporary external Lay down yard/s & wash down facilities

Gulf Civil shall implement control measures for any external lay down yards & wash down facilities including:

- Formal risk assessment for the conducted facility identifying all controls required
- All permanent buildings in good repair and constructed in accordance with the relevant building codes
- All loose materials secured against strong winds

32.5 Personnel or Items in Transit

A Journey Management Plan System will be utilised on this project which specifies that prior to any personnel or freight leaving their departure point, a Journey Plan (of which there are several types, all detailed within the Journey Management Plan) must be submitted and approved by the Project Manager or his delegate.

Specific items to consider include:

- Check weather report prior to departure and end route where the journey is prolonged, ideal locations to check weather en route are at each major town, prior to departure
- Consider not only the weather forecast, but current and previous weather experienced in the area, this will give an indication of road conditions
- Where unexpected Severe weather conditions develop whilst on en route, consider obtaining accommodation and 'waiting out the storm' rather than driving through
- Journey Management Representative to increase contact with traveller depending on weather conditions
- DO NOT attempt to drive through flood water.

32.6 Engineering Controls

The project will limit the effects of the Severe Weather Event by a combination of the following controls during the construction phase:

- Early Installation of Permanent and Temporary Erosion and sediment control measures
- Monitor BoM for intensity and directions of Events
- Consider Rainfall forecasts for Scheduling Culvert and Drainage works
- Consider Rainfall forecasts for all excavations and pavement works
- Consider Rainfall forecasts for all concrete, asphalt and line marking works
- Monitor forecast for any high risk activities e.g. Cranage lifts (girders)
- Ensure surfaces are Rolled off (sealed) at the end of each shift
- Ensure surfaces are shaped to fall away from the road, storage, stockpile and worksite where possible including the following
- Cut temporary drains if required and remove temporary rills.
- Fill hollows that allow water to pond
- Temporary Erosion Protection installed where possible
- Form catch banks and diversion drains where possible
- Carry out temporary pavement repairs where possible
- Reduce Speed though site where practicable to reduce the risk of damage
- Sealing completed areas if weather forecasts
- Temporary seals to protect partially completed works
- Cover pavement stockpiles to reduce saturation
- Stockpile and laydown areas to be free draining
- Review of additive content in pavements
- Ability to delay works if weather is impending so to minimise open excavations or unsealed pavements

- Remove plant from areas that are prone to flooding (move to higher ground)
- Have pumps available for dewatering
- Have maintenance and patrol crews available if required

33 Appendix A – Policies and Procedures

Work Health, Safety & Environment

1. SUMMARY

1.1. This document defines the WHS&E process in detail.

1.2. The relationship between this process and the other processes within the Gulf Civil management system is illustrated in the process flow map included in the ***Business Management System.***

2. PROCESS DEFINITION

2.1. The purpose of the WHS&E Process Detail is to clearly outline the processes in place to deliver a project whilst managing our WHS&E requirements and obligations

3. PROCESS OBJECTIVES AND METRICS

3.1. Process objectives for this process are defined in records of management review; see the documented procedure ***Management Review.***

3.2. In addition, each objective has at least one metric (or KPI) with which management can measure the effectiveness of the process. These are also defined in records of management review.

4. PROCESS OWNERS AND RESPONSIBLE PARTIES

4.1. The owner of this process is the Director / General Manager of the Company

4.2. Responsible Parties include Project Manager, Supervisor and Safety Representative

5. TYPICAL PROCESS INPUTS

5.1. The typical required inputs for this process are:

5.1.1. Technical information needed:

- Legislative requirements for the project location/region
- Any specific client requested requirements

5.1.2. Resources needed:

- Access to legislation
- IT / Computer software

5.1.3. Personnel needed:

- Project Management
- Safety Consultant / Staff

5.1.4. Special training needed:

- WHS&E Training

6. TYPICAL PROCESS STEPS

6.1. Step 1 – Identify any legislative requirements to be input into the Safety Management Plan

6.2. Step 2 – Write Safety Management Plan for the Project for internal approval and client approval

6.3. Step 3 – Create Job Safety Environmental Assessments (JSEA's) relating to the tasks on the project

6.4. Step 4 – Openly Communicate aspects of the JSEA's to the workforce

6.5. Step 5 – Provide Toolbox Talks for the Workers for relevant risks associated with the Project Delivery

6.6. Step 6 – Monitor Fitness for work of all workers and employees on the project

6.7. Step 7 – Monitor and report Incidents, as well as corrective action reports

7. TYPICAL PROCESS OUTPUTS

7.1. The typical results (outputs) of the process are as follows:

7.1.1. Product produced:

- Safely delivered project

7.1.2. Documents or technical information produced:

- JSEA's,

7.1.3. Records produced:

- Toolbox records, incident records, Corrective action records

7.1.4. Services produced:

- Nil

8. RELATED RISKS AND OPPORTUNITIES

8.1. Risks and opportunities related to this process are identified in the ***COTO Log*** and managed per the procedure ***Risk and Opportunity Management.***

WHS & ENVIRONMENT POLICY

Gulf Civil aligns all practices and procedures to meet state or territory legislation and statutory obligations. We are committed to continuous improvement of our Health, Safety and Environmental Management System, which will be monitored and measured against measurable objectives and targets.

HEALTH POLICY

We are committed to:

- ✓ Promoting a healthy lifestyle for employees;
- ✓ Promoting and acting upon the principles of the fatigue management procedures;
- ✓ Following a stringent drug and alcohol policy to eliminate doubt as to employee's fitness for work;
- ✓ Providing PPE and system controls for protection of employees from harmful exposure.

SAFETY POLICY

We are committed to:

- ✓ Ensuring all hazards are identified, assessed for level of risk and managed;
- ✓ Ensuring that all employees are provided an opportunity to participate in the development of JSEA's;
- ✓ Ensuring that all employees are educated and managed to follow JSEA's; Ensuring that all accidents and incidents are recorded, investigated and analysed to develop effective and preventative strategies;
- ✓ Implementing process improvement strategies to achieve zero harm;
- ✓ Monitoring our management system by auditing, analysing and improving practices to achieve zero harm;
- ✓ Promoting a no-blame safety awareness culture to encourage the reporting of hazards, incidents and injuries;
- ✓ Providing a safe work environment free of all forms of bullying, harassment and discrimination.

ENVIRONMENTAL POLICY

We are committed to:

- ✓ Achieving best practice environmental management processes;
- ✓ Reducing waste and energy usage;
- ✓ Complying with all environmental statutes and guidelines;
- ✓ Matching our work practices to this commitment;
- ✓ Documenting our goals and progress;
- ✓ We are committed to using digital solutions to minimize the use of office consumables.

LEADERSHIP

The Managing Director has committed the Company to being proactive in its efforts to provide a safe working environment for staff and to meet its regulatory Health, Safety & Environmental obligations.

Signed,

Gulf Civil Pty Ltd

Owen Whish

DRUG & ALCOHOL POLICY

Gulf Civil is committed to:

- ✓ Ensuring the safety and health of its employees and its subcontractors
- ✓ Maintaining a safe and healthy workforce and workplace through a proactive approach.

Scope

This policy outlines applicable responsibilities and applies to all employees and subcontractors engaged by Gulf Civil while they are working. All personnel are considered "working" whenever they are on any company or client property, including parking areas, or company time even if off company premises – including paid lunch, rest periods, and periods of being on call.

Responsibilities

Gulf Civil is responsible for minimizing the safety and health risks to our employee and subcontractors as a result of impairment from the use of legal and illicit drugs and/or alcohol.

- ✓ It is the responsibility of all employees and subcontractors to present themselves fit for work without impairment from the use of legal and illicit drugs and/or alcohol.
- ✓ As a Duty of Care to all employees and subcontractors, the company will carry out drug and alcohol testing. It is expected all employees and subcontractors will co-operate with the nominated Company Representative in this matter. Testing may occur, at random, upon suspicion, with cause as well as after incidents or accidents have occurred.
- ✓ Gulf Civil prohibits the use, unauthorised possession, manufacture, distribution or sale of illegal drugs, illegal inhalants, drug paraphernalia or controlled substances (i.e. all chemical substances or drugs listed in any Controlled Substances Act or Regulation applicable under any federal, state or local laws) by any worker while on duty, on company premises or work sites or conducting company business, or while operating or occupying any company vehicle or equipment at any time.
- ✓ The use of prescription drugs and/or over-the-counter drugs may also affect a worker's job performance and seriously impair his/her ability to work safely and effectively. It is the responsibility of an individual to disclose to the nominated company representative any use of prescription drugs and over-the-counter drugs prior to entering the workplace.
- ✓ Misusing prescribed or over-the-counter medication on company property or company assignment is strictly prohibited. Designer or "look alike" drugs are prohibited on all Gulf Civil work sites. Non-disclosure will be treated as a breach of this Policy.
- ✓ Alcohol is not to be consumed on the premises except at an official or sanctioned work function where drinks have been supplied.
- ✓ In cases of rehabilitation or self-rehabilitation, confidentiality of personal information will be maintained, although personal information will be released by medical services on a need-to-know basis or as required by law.
- ✓ All personnel engaged by Gulf Civil must understand this Policy and cooperate with the administration of this Policy. A breach of this policy and associated procedures may result in disciplinary action.

Signed,

Gulf Civil Pty Ltd

Owen Whish

Director

34 Appendix B – SWMS

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

JOB / TASK DESCRIPTION	**ROAD CONSTRUCTION**	**SWMS #**	SWMS-01	**DATE**	**02/04/2022**
Principal Contractor	GULF CIVIL PTY LTD 12 GREGORY ST, BURKETOWN, QLD **ABN:** 30 636 014 714	**Subcontractor Name**	N/A		
		Subcontractor ABN	N/A		
Project	**PERKINS STREET SUBDIVISION**	**Address**			
Job Number	PERKINS STREET SUBDIVISION				
Location	Cloncurry Shire Council	**Phone**			
List of relevant Legislation or Standards	Workplace Health & Safety Act 2011 Workplace Health & Safety Regulation 2011 Manual of Uniform Traffic Control Devices Part 3 Environmental Protection Act 1994 Environmental Protection Regulation 2008 Manual of Uniform Traffic Control Devices Part 3 Transport Operations (Road Use Management) Act 1995. AS 1742.3-2009 MUTCD- Traffic control for works on roads	**Relevant codes of practice**	Qld COP How to Manage WHS Risks 2011 Qld COP Hazardous Manual Tasks 2011 Qld COP WHS Consultation, Co-operation and Co-ordination 2011 Qld COP Managing Risk of Falls at Workplaces 2011 Qld COP Managing Risks of Plant in the W/Place 2013 Qld COP Hazardous Substances 2003QLD COP Managing Noise and preventing Hearing Loss at Work 2011 Qld COP Traffic Management for Construction & Maintenance 2008 Traffic Controller Accreditation Scheme Approved Procedure (TCASAP) 2007		

Equipment to be used	Applicable Trades	PPE Requirements
Mobile powered Plant, Vehicles & Equipment	COMPETENCY TO OPERATE Traffic Management Level 1 & 2	Mandatory site PPE requirements

NOTE: Work SHALL NOT proceed until the SWMS is signed and dated by the Project Manager or Delegate and this Review Checklist is complete

PLANNED HIGH RISK CONSTRUCTION ACTIVITY (if ticked then refer also to specific Work Method Statement / JSA)

D Excavation Entry	D Explosives Use	DX Live Traffic	DX Mobile Plant Movement	D Flammable / Contaminated Atmosphere
D Roof Work	D Tilt Up / Precast Use	D Energized Electrical Work	D Work In / Over Water	D Confined Space Entry (Rescue plan in place)
DX Road / Rail Work	D Crane Lift	D Hazardous Substances	DX Temperature Extreme	D Work at Heights (Rescue plan in place)
D Demolition Work	Certificate #		D Asbestos Removal	Certificate #

	Name	Signature	Position	Date		Name	Signature	Position	Date
DEVELOPED BY:	Ganesh Pandey		Project Engineer		REVIEWED BY:				

APPROVAL BY: **Brendan Smith** **Position: Project Manager** **Signature:** **Date:**

Name:

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Integrated Risk Matrix

Consequence Descriptions and Index (The consequence selected on the matrix must specifically relate to the consequence defined in the scenario assessed)	Consequence Indices		— Decreasing Consequence →				
			1	2	3	4	5
			Catastrophic	Major	Moderate	Minor	Incidental
	Consequence Description	Safety	Fatality(s)	Permanent Disability	Temporary Disability	Medical Treatment	First Aid
		Environment	Serious Long Term Env. Harm	Serious Medium Env. Term Harm	Serious Short Term Env. Harm	Material Env. Harm	Environmental Nuisance
		Community	Widespread Long Term Reputation Damage	Local Long Term Reputation Damage	Medium Term Reputation Damage	Escalated Community Complaint	Minor Direct Community Complaint
		Economic Loss · Plant / Property Damage · Production Shortfall	>$5 M	$1M - $5M	$250K - $1M	$50K - $250K	<$50K

Likelihood Descriptions	Likelihood Indices			Risk Matrix (The lower the number, the higher the risk)				
Is expected to occur	A	Almost Certain	↓ Decreasing Likelihood	1	3	6	10	15
Will probably occur	B	Likely		2	5	9	14	19
May occur on this site	C	Possible		4	8	13	18	22
Occurrence not expected in life of site	D	Unlikely		7	12	17	21	24
Rarely, if ever has occurred	E	Rare		11	16	20	23	25

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Risk** What could occur? (i.e. slip on loose step)	**Consequence**	**Likelihood**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection/Observation)	**Consequence**	**Likelihood**	**Risk Score**	**Actioned By**
Machine requirements before starting on site	Machine not compliant to Gulf Civil standards WH&S legislation.	3	C	13	Machine must comply with **GULF CIVIL** machinery inspections before starting on site.	5	C	22	Site Supervisor WHS Advisor
Operator competencies.	Competency to operate.	3	C	13	○ Evidence of competency to operate plant. ○ License's being evidence of undertaking training and assessment for a particular plant **or** a civil verification of competency to verify.	5	C	22	Project Manager Site Supervisor WHS Advisor
Prestart machinery inspections	Defective plant	2	C	8	○ All defects must be reported to Gulf Civil Supervisor and equipment owner. ○ Inspection check list must be handed in prior to the end of shift. Any defects that may impact on the safe operation of the equipment or have potential to cause further damage to the equipment must be tagged out of service and reported to the Gulf Civil Site Supervisor immediately for their review.	5	C	22	Plant Operators Site Supervisor WHS Advisor

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Risk** What could occur? (i.e. slip on loose step)	**Consequence**	**Likelihood**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection/Observation)	**Consequence**	**Likelihood**	**Risk Score**	**Actioned By**
Access & Egress to Machine	Uncontrolled fall or movement Sprains & strains Bodily injury	4	C	18	○ Three (3) points of contact must be kept at all times. Extra care must be taken in wet and slippery conditions i.e., clean mud off boots and steps prior to mounting. ○ All machines that have deck areas that are higher than 2.00m off the ground, owners of plant must provide edge protection.	5	C	22	Plant operators
Work zone set-up access/set up	Interaction with Site traffic - Vehicles/Pedestrians	2	C	8	○ Approved Traffic Guidance Scheme (TGS) and approved controls in place. ○ Signage ○ Barriers ○ Delineations ○ Spotters in place if risk identified.	4	C	18	Project Manager Site Supervisor WHS Advisor

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Risk** What could occur? (i.e. slip on loose step)	**Consequence**	**Likelihood**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection/Observation)	**Consequence**	**Likelihood**	**Risk Score**	**Actioned By**
Work zone set-up access/set up (cont.)	Existing services (overhead & underground services)	1	D	7	○ Refer to Dial Before you dig (DBYD) plans, locate services, pothole etc. ○ Potholing of services will be completed if any risk is identified. ○ An Excavation Permit must be in place. ○ Ref: GMSD-14-1553 Trenching, Excavation and Surface Penetration Permit ○ Inspect for above ground services and obstructions – signage to be placed to identify hazards (max height to power lines). ○ Protect services where required / spotter in place. ○ HV permit & controls in place for work within 15m of power line.	4	D	21	Project Manager Site Supervisor Safety Advisor
	Use of spray paint for marking on road - Hazardous Substance Highly flammable Inhalation, skin contact and/or ingestion may produce health damage	3	C	13	○ Keep clear of ignition sources ○ Monitor wind direction and use only up wind and/or in well ventilated areas. ○ Store in dry, cool area. ○ Ensure container is closed after use. ○ Safety Data Sheet available on site. ○ Use PPE specified in SDS.	4	C	18	Site Supervisor Workers WHS Advisor

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Risk** What could occur? (i.e. slip on loose step)	**Consequence**	**Likelihood**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection/Observation)	**Consequence**	**Likelihood**	**Risk Score**	**Actioned By**
Road cut /fill operations	Interaction between ground persons and machinery	1	D	**7**	○ Reverse alarms & revolving lights MUST be operational. ○ High Visibility Clothing MUST be worn at all times ○ Workers on foot are to remain OUTSIDE of the slew/ work area of all machines until a positive effective communication is established with the Operator/ Driver. ○ All personnel SHALL remain clear of ANY working mobile plant – AT LEAST 10 meters. ○ Ground crews working with an Operator – SHALL MAINTAIN AT LEAST a three (3) meter exclusion zone from the slew radius of the plant. ○ ONLY under operator instruction with a positive communication can workers access the three (3) meter exclusion zone. ○ **NEVER APPROACH MOBILE PLANT FROM THE REAR OR KNOWN BLIND SPOT/ AREA.** ○ The Operator/ Driver of the plant or vehicle are to confirm and approve the access. ○ **DO NOT MOVE INTO THE WORK AREA UNLESS THIS IS COMPLETED.**	3	D	**17**	ALL WORKERS, DRIVERS & OPERATORS

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Risk** What could occur? (i.e. slip on loose step)	**Consequence**	**Likelihood**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection/Observation)	**Consequence**	**Likelihood**	**Risk Score**	**Actioned By**
	Interaction between heavy machinery	2	C	8	○ All operators are to travel at the assigned speed limit while on site or within traffic-controlled areas. Effective control to be always maintained. ○ Positive communications to always maintained. ○ Only licensed and authorized operators flashing lights must be on when plant is being operated. ○ Give way to loaded machines. ○ Drivers of all vehicles have a general duty to give way to other plant. Drivers of light and medium vehicles should consider the restricted visibility from, and limited reaction abilities of heavy plant &approach them with extreme caution. ○ Drivers of all plant that have been stationary shall ensure that the road is clear of traffic prior to re-entering traffic flow. Turn signals to be used to indicate intentions.	4	C	18	ALL WORKERS, DRIVERS & OPERATORS
Road cut /fill operations (cont.)	Operating machinery on uneven ground / close to edges	2	D	12	○ Operators to drive to conditions. ○ Level off surfaces as required. ○ Ensure ground conditions are suitable to be operated on. ○ Rollers to work their way out to the edges of fill and to roll edges of fill at a 45-degree angle. ○ Over fill embankments so edges can be properly compacted.	4	D	21	Site Supervisor Workers & Operators

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Risk** What could occur? (i.e. slip on loose step)	**Consequence**	**Likelihood**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection/Observation)	**Consequence**	**Likelihood**	**Risk Score**	**Actioned By**
	Environmental hazards (Erosion, Dust, Noise, Rubbish)	4	C	18	○ Silt traps, check drains or silt fencing is in place & maintained. ○ Dust suppression using water truck. ○ Ensure waste is disposed of correctly. ○ All guards and mufflers in place on machinery & in good order.	5	C	22	Site Supervisor Workers & Operators
	Trips, slips and falls	3	C	13	○ Ground personnel to be aware of ground conditions. ○ Excavations to be barricaded off. ○ Barricades to be erected when no one present in work area.	5	C	22	Workers
Gravel Placement & Compaction	Contact with overhead services when tipping	2	D	12	○ Made aware of overhead hazards when tipping. ○ Spotter in place if tipping near overhead services. ○ Bins/ Trays to be fully lowered before driving away. ○ Assign dumping area away from overhead lines. ○ Operators & workers to act as spotter for deliveries of gravel – a 20m exclusion zone of spotter Vs. Tip-off area. ○ Tip loads on level compacted base	5	D	24	Site Supervisor Workers & Drivers

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Risk** What could occur? (i.e. slip on loose step)	**Consequence**	**Likelihood**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection/Observation)	**Consequence**	**Likelihood**	**Risk Score**	**Actioned By**
	Plant Rollover	2	C	8	○ Seatbelts to be worn. ○ Operators to drive to conditions. ○ Workspace to be sufficient – establish exclusion zone if necessary. ○ Static roll first out to edge of fill at low speed first. ○ Machines to be operated up and down slopes not across them. Graders may operate across slopes to cut batters provided the slope is within the Manufacturers specified range.	4	C	18	Site Supervisor Operators
	Plant Vs. Plant Interactions.	2	C	8	○ Plant Operators/ Ground Workers OR Spotters to direct reversing trucks. ○ Spotter to stand where operators can see them and a safe distance from all moving plant. ○ Positive directions & communications to be issued to delivery vehicles.	4	C	18	Site Supervisor Operators & Drivers

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Risk** What could occur? (i.e. slip on loose step)	**Consequence**	**Likelihood**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection/Observation)	**Consequence**	**Likelihood**	**Risk Score**	**Actioned By**
Working around plant	Worker struck by plant or machinery	1	D	**7**	○ Hi-Vi's clothing **MANDATORY** on site ○ Flashing Amber Beacons reversing/ travel alarms. ○ All personnel SHALL remain clear of ANY working mobile plant – AT LEAST 10 meters. ○ Ground crews working with an Operator – SHALL MAINTAIN AT LEAST a three (3) meter exclusion zone from the slew radius of the plant. ○ ONLY under operator instruction with a positive communication can workers access the three-meter exclusion zone.	3	D	**17**	Site Supervisor WHS Advisor Drivers Operators Workers

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Sign-Off Sheet SWMS#	*SWMS #*	SWMS - 01

I, the undersigned declare that I have read and understand the requirements of this SWMS and will work in accordance with the prescribed controls.
All persons performing any activity covered by this SWMS 'MUST' sign off prior to commencement of this task as recognition of having read and understood the work steps and preventative actions required to reduce the risk of harm and ensure safe work practices are maintained.

Name	Signature	Position	Date	Name	Signature	Position	Date

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Sign-Off Sheet SWMS#	***SWMS #***	SWMS - 01

I, the undersigned declare that I have read and understand the requirements of this SWMS and will work in accordance with the prescribed controls.
All persons performing any activity covered by this SWMS 'MUST' sign off prior to commencement of this task as recognition of having read and understood the work steps and preventative actions required to reduce the risk of harm and ensure safe work practices are maintained.

Name	Signature	Position	Date	Name	Signature	Position	Date

SWMS-01 (V1)
Implementation Date: 02/04/2022

SWMS REVIEW CHECKLIST

Project:	PERKINS STREET SUBDIVISION		
Person or Entity Submitting SWMS for Review:	PERKINS STREET SUBDIVISION		
SWMS Reference # SWMS Title	SWMS - 01 General Works	**Review Date:**	

: PRIOR TO COMMENCING A HIGH-RISK ACTIVITY:

This checklist must be completed, signed, and submitted to the Project Manager with a copy of the relevant SWMS.

MANDATORY CRITERIA

Ref	Mandatory criteria – Does the SWMS:	Y	N
1	Display trading name and ABN of entity conducting the work?	☐	☐
2	Reference relevant legislation, codes of practice and/or Australian standards?	☐	☐
3	Require and indicate consultation with workers and provide for the documented acknowledgement by all relevant workers required to undertake the activity?	☐	☐
4	Detail the risk matrix to be applied to the tasks within the activity?	☐	☐
5	Display a reference number?	☐	☐
6	Clearly display the name of the high-risk activity to be conducted?	☐	☐
7	List the correct PPE for the activity or task?	☐	☐
8	Describe all plant and equipment to be used for the activity?	☐	☐
9	Identify or point the relevant workers to the OEM operating instructions for relevant plant?		
10	Specifically separate each task step required to conduct the activity reflecting the work methodology?	☐	☐
11	Identify safety, health and environmental hazards that may arise through each documented step?	☐	☐
12	For each step and hazard identified clearly document acceptable control measures in accordance with the hierarchy – i.e., the residual risk has been reduced as low as reasonably practicable (ALARP)?	☐	☐
13	Describe how the control measures are to be implemented, monitored, and reviewed?	☐	☐
14	Identify pre-start and in-process certifications/authorisations/permits/meetings/inspections?	☐	☐
15	Consider the SHMP and Risk Register for the development of the SWMS?	☐	☐
16	Describe all control measures considered?	☐	☐

PROJECT SPECIFIC REQUIREMENTS

1		☐	☐
2		☐	☐

RESULT: **NO** Corrective Action Required ☐ **CORRECTIVE ACTION REQUIRED** ☐

COMMENTS

Ref	Corrective Action Required	By When	Who	Date closed out
		/ /		/ /
		/ /		/ /

Reviewed by:		**Signature:**		**Date:**	/ /

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

JOB / TASK DESCRIPTION	**SAFE MOVEMENT & OPERATION OF PLANT**	**SWMS #**	SWMS-02	**DATE**	**02/04/2022**
Principal Contractor	GULF CIVIL PTY LTD 12 GREGORY ST, BURKETOWN, QLD **ABN:** 30 636 014 714	**Subcontractor Name**	N/A		
		Subcontractor ABN	N/A		
Project	PERKINS STREET SUBDIVISION	**Address**			
Job Number	PERKINS STREET SUBDIVISION				
Location	Cloncurry Shire Council	**Phone**			
List of relevant Legislation or Standards	Workplace Health & Safety Act 2011 Workplace Health & Safety Regulation 2011 Manual of Uniform Traffic Control Devices Part 3 Environmental Protection Act 1994 Environmental Protection Regulation 2008 Manual of Uniform Traffic Control Devices Part 3 Transport Operations (Road Use Management) Act 1995. AS 1742.3-2009 MUTCD- Traffic control for works on roads	**Relevant codes of practice**	Qld COP How to Manage WHS Risks 2011 Qld COP Hazardous Manual Tasks 2011 Qld COP WHS Consultation, Co-operation and Co-ordination 2011 Qld COP Managing Risk of Falls at Workplaces 2011 Qld COP Managing Risks of Plant in the W/Place 2013 Qld COP Hazardous Substances 2003QLD COP Managing Noise and preventing Hearing Loss at Work 2011 Qld COP Traffic Management for Construction & Maintenance 2008 Traffic Controller Accreditation Scheme Approved Procedure (TCASAP) 2007		

Equipment to be used	Applicable Trades	PPE Requirements
Mobile powered Plant, Vehicles & Equipment	COMPETENCY TO OPERATE Traffic Management Level 1 & 2	Mandatory site PPE requirements

NOTE: Work SHALL NOT proceed until the SWMS is signed and dated by the Project Manager or Delegate and this Review Checklist is complete

PLANNED HIGH RISK CONSTRUCTION ACTIVITY (if ticked then refer also to specific Work Method Statement / JSA)

□ Excavation Entry	□ Explosives Use	□ Live Traffic	□ Mobile Plant Movement	□ Flammable / Contaminated Atmosphere
□ Roof Work	□ Tilt Up / Precast Use	□ Energized Electrical Work	□ Work In / Over Water	□ Confined Space Entry (Rescue plan in place)
□ Road / Rail Work	□ Crane Lift	□ Hazardous Substances	□ Temperature Extreme	□ Work at Heights (Rescue plan in place)
□ Demolition Work	Certificate #		□ Asbestos Removal	Certificate #

	Name	Signature	Position	Date		Name	Signature	Position	Date
DEVELOPED BY:	Ganesh Pandey		Project Engineer		REVIEWED BY:				

APPROVAL BY: **Brendan Smith** **Position: Project Manager** **Signature:** **Date:**

Name:

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Integrated Risk Matrix

Consequence Descriptions and Index (The consequence selected on the matrix must specifically relate to the consequence defined in the scenario assessed)	Consequence Indices		← Decreasing Consequence →				
			1	2	3	4	5
			Catastrophic	Major	Moderate	Minor	Incidental
	Consequence Description	Safety	Fatality(s)	Permanent Disability	Temporary Disability	Medical Treatment	First Aid
		Environment	Serious Long Term Env. Harm	Serious Medium Env. Term Harm	Serious Short Term Env. Harm	Material Env. Harm	Environmental Nuisance
		Community	Widespread Long Term Reputation Damage	Local Long Term Reputation Damage	Medium Term Reputation Damage	Escalated Community Complaint	Minor Direct Community Complaint
		Economic Loss · Plant / Property Damage · Production Shortfall	>$5 M	$1M - $5M	$250K - $1M	$50K - $250K	<$50K

Likelihood Descriptions	Likelihood Indices			Risk Matrix (The lower the number, the higher the risk)				
Is expected to occur	A	Almost Certain	↓ Decreasing Likelihood	1	3	6	10	15
Will probably occur	B	Likely		2	5	9	14	19
May occur on this site	C	Possible		4	8	13	18	22
Occurrence not expected in life of site	D	Unlikely		7	12	17	21	24
Rarely, if ever has occurred	E	Rare		11	16	20	23	25

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Hazard** What are the hazards of each step?	**C.I.**	**L.I.**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection or ongoing)	**C.R.**	**L.R.**	**Risk Score**	**Actioned By**
Machine requirements before starting on site	Machine not compliant to Gulf Civil standards and WH&S legislation.	4	C	18	○ Plant & machinery MUST comply with GULF CIVIL PTY LTD machinery inspection before starting on each project or site. (Ref: - *New Plant* inspection form)	5	C	22	Principal Contractor
Operator competencies.	Uncontrolled operation of machine Operators not competent with machine operations causing injury.	2	D	12	○ Evidence of competency to operate plant. ○ Licenses being evidence of undertaking training and assessment for a particular plant **or** a civil verification of competency to verify. **AND**	4	D	21	Project Supervisor Project Foreman Safety Advisor

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Hazard** What are the hazards of each step?	**C.I.**	**L.I.**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection or ongoing)	**C.R.**	**L.R.**	**Risk Score**	**Actioned By**
Access & Egress to Machine	Uncontrolled fall or movement(s) Sprains & strains Bodily injury	2	C	8	○ Three (3) points of contact must be always maintained when accessing/ egressing plant. ○ Steps, landings, and handrails must be kept in good repair and inspected as per Mobile Plant Pre-Start Inspection(s). ○ Extra care must be taken in wet/ muddy and slippery conditions i.e., clean mud off boots and steps prior to mounting. ○ All machines that have deck areas that require access by persons when risk of fall is present MUST have edge protection fitted. **SEAT BELTS MUST BE WORN WHEN OPERATING ALL PLANT**.	4	C	18	Operators of plant.

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Hazard** What are the hazards of each step?	**C.I.**	**L.I.**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection or ongoing)	**C.R.**	**L.R.**	**Risk Score**	**Actioned By**
Prestart machinery inspections	Defective plant	2	C	8	○ Mobile Plant pre-start inspection to be carried out daily and/or prior to use by operator and handed in prior to the end of shift. ○ **Apply personal lock & danger tag to isolation point prior to conducting pre-start and test for dead** ○ All defects must be reported to Gulf Civil Supervisor and equipment owner. ○ For any defects that may impact on the safe operation of the equipment or have potential to cause further damage to the equipment the equipment must be tagged out of service and issue must be reported to the Gulf Civil Site Supervisor immediately for review.	4	C	18	ALL OPERATORS
Communications, Radio communications ALL WORKERS, DRIVERS & OPERATORS	Uncontrolled interaction with plant - Struck by plant or machinery	2	C	8	○ Positive, effective Verbal contact to be used whenever possible. *Where communications are not achievable by radio, a combination of direct eye contact, hand signals, use of horn and/ or indicators are to be utilized when plant are approaching/passing other plant*	4	C	18	ALL WORKERS

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Hazard** What are the hazards of each step?	**C.I.**	**L.I.**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection or ongoing)	**C.R.**	**L.R.**	**Risk Score**	**Actioned By**
	Miscommunication leading to significant event	2	C	8	○ Workers Drivers & operators are to call or identify the plant or vehicle by call sign, number, design or type – 'Excavator 008 20T, COPY, Excavator 008 20T' ○ ALL transmissions should be replied by 'copy' ○ If communicating with Traffic Control for permission to enter or cross into a live lane area; NO movement shall take place without a confirmation.	4	C	18	Drivers Operators Workers Traffic Control
Hand Signals ALL WORKERS, DRIVERS & OPERATORS	Miscommunication leading to significant event	2	C	8	○ ALL hand signals should be delivered simply and clearly. DO NOT ASSUME that they have been seen or understood until you receive a confirmation from the operator or driver 	4	C	18	Site Supervisor Drivers Operators Workers Traffic Control

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Hazard** What are the hazards of each step?	**C.I.**	**L.I.**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection or ongoing)	**C.R.**	**L.R.**	**Risk Score**	**Actioned By**
Movement of plant/ machinery	Uncontrolled interaction with plant - Struck by plant or machinery	2	C	8	○ All operators are to travel at the assigned speed limit while on site or within traffic-controlled areas. ○ All operators are to operate machine in line with manufacturer's specifications and Gulf Civil procedures. ○ When visibility or any road conditions are poor, drivers shall reduce the speed of their vehicle to the extent necessary to maintain effective control. ○ A Safety Spotter to be used for all plant moving through high-risk areas. ○ Drivers of all vehicles have a general duty to give way when required. ○ Drivers of light and medium vehicles should consider the restricted visibility from, and limited reaction abilities of heavy vehicles and approach them with extreme caution.	4	C	18	Project Supervisor Project Foreman Drivers Operators
	Uncontrolled interaction with plant - Struck by plant or machinery	3	C	13	○ Drivers of all vehicles that have been stationary shall ensure that the haul area/ road are clear of traffic prior to re-entering traffic flow. ○ Turn signals are to be used to indicate direction or intentions.	4	C	18	Project Supervisor Project Foreman Drivers Operators

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Hazard** What are the hazards of each step?	**C.I.**	**L.I.**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection or ongoing)	**C.R.**	**L.R.**	**Risk Score**	**Actioned By**
Mobile plant working around open excavations.	Vehicle rollover	2	D	12	○ A daily inspection of trenches & excavations by a competent person – Site Supervisor/ Leading Hand prior to the commencement of works. ○ An exclusion zone set around 'zone of influence' by competent person(s) dependent on ground conditions. ○ Windrow or berm placement ○ Where it is necessary to operate closer than one (1) meter to an excavation edge/ operation should be conducted at an angle of 45 degrees; this activity SHALL be always supervised/ monitored by the Supervisor or Leading Hand.	4	D	21	Project Manager Site Supervisor Leading Hand Drivers/ Operators Safety Advisor
Collapse of excavation caused by plant movement. Worker struck/ crushed by plant working in excavation Collapse of excavation caused by plant movement.	Uncontrolled release of energy Collapse of excavation	2	D	12	○ Erect appropriate barriers & barricades around the excavation to separate plant/ people interactions minimum standoff of 1m to be in place. ○ All materials set back from excavation zone of influence, at a minimum of at least one (1) meter.	4	D	21	Project Manager Site Supervisor Leading Hand Safety Advisor

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Hazard** What are the hazards of each step?	**C.I.**	**L.I.**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection or ongoing)	**C.R.**	**L.R.**	**Risk Score**	**Actioned By**
Working around plant	Struck by plant or machinery	1	D	7	○ Reverse alarms & revolving lights MUST be operational. ○ High Visibility Clothing MUST be always worn ○ Workers on foot are to remain OUTSIDE of the slew/ work area of all machines until a positive effective communication is established with the Operator/ Driver. ○ All personnel SHALL remain clear of ANY working mobile plant – AT LEAST 10 meters. ○ Ground crews working with an Operator – SHALL MAINTAIN AT LEAST a three (3) meter exclusion zone from the slew radius of the plant. ○ ONLY under operator instruction with a positive communication can workers access the three (3) meter exclusion zone. ○ **NEVER APPROACH MOBILE PLANT FROM THE REAR OR KNOWN BLIND SPOT/ AREA.** ○ The Operator/ Driver of the plant or vehicle are to confirm and approve the access. **DO NOT MOVE INTO THE WORK AREA UNLESS THIS IS COMPLETED.**	3	D	17	Site Supervisor Drivers Operators Workers

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Hazard** What are the hazards of each step?	**C.I.**	**L.I.**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection or ongoing)	**C.R.**	**L.R.**	**Risk Score**	**Actioned By**
Securing of plant at end of day	Theft of plant or equipment.	3	D	17	○ Remove all fire extinguishers, UHF radios and other valuable items from the cabins. ○ Close & s all windows and doors ○ Fit shutters where applicable. ○ Isolate & lock machine so as key will not turn machine on. ○ Park up machine in designated hard stand.	5	D	24	All plant operators

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Sign-Off Sheet SWMS#	***SWMS #***	SWMS - 02

I, the undersigned declare that I have read and understand the requirements of this SWMS and will work in accordance with the prescribed controls.
All persons performing any activity covered by this SWMS 'MUST' sign off prior to commencement of this task as recognition of having read and understood the work steps and preventative actions required to reduce the risk of harm and ensure safe work practices are maintained.

Name	Signature	Position	Date	Name	Signature	Position	Date

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Sign-Off Sheet SWMS#	***SWMS #***	SWMS - 02

I, the undersigned declare that I have read and understand the requirements of this SWMS and will work in accordance with the prescribed controls.
All persons performing any activity covered by this SWMS 'MUST' sign off prior to commencement of this task as recognition of having read and understood the work steps and preventative actions required to reduce the risk of harm and ensure safe work practices are maintained.

Name	Signature	Position	Date	Name	Signature	Position	Date

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

SWMS REVIEW CHECKLIST			
Project:	**PERKINS STREET SUBDIVISION**		
Person or Entity Submitting SWMS for Review:	PERKINS STREET SUBDIVISION		
SWMS Reference # SWMS Title	SWMS - 02 Safe Movement of Plant	**Review Date:**	

PRIOR TO COMMENCING A HIGH RISK ACTIVITY:

This checklist must be completed, signed and submitted to the Project Manager with a copy of the relevant SWMS.

MANDATORY CRITERIA			
Ref	**Mandatory criteria – Does the SWMS:**	**Y**	**N**
1	Display trading name and ABN of entity conducting the work?	☐	☐
2	Reference relevant legislation, codes of practice and/or Australian standards?	☐	☐
3	Require and indicate consultation with workers and provide for the documented acknowledgement by all relevant workers required to undertake the activity?	☐	☐
4	Detail the risk matrix to be applied to the tasks within the activity?	☐	☐
5	Display a reference number?	☐	☐
6	Clearly display the name of the high-risk activity to be conducted?	☐	☐
7	List the correct PPE for the activity or task?	☐	☐
8	Describe all plant and equipment to be used for the activity?	☐	☐
9	Identify or point the relevant workers to the OEM operating instructions for relevant plant?		
10	Specifically separate each task step required to conduct the activity reflecting the work methodology?	☐	☐
11	Identify safety, health and environmental hazards that may arise through each documented step?	☐	☐
12	For each step and hazard identified clearly document acceptable control measures in accordance with the hierarchy – i.e., the residual risk has been reduced as low as reasonably practicable (ALARP)?	☐	☐
13	Describe how the control measures are to be implemented, monitored, and reviewed?	☐	☐
14	Identify pre-start and in-process certifications/authorizations/permits/meetings/inspections?	☐	☐
15	Consider the SHMP and Risk Register for the development of the SWMS?	☐	☐
16	Describe all control measures considered?	☐	☐
PROJECT SPECIFIC REQUIREMENTS			
1		☐	☐
2		☐	☐

RESULT: **NO** Corrective Action Required ☐ **CORRECTIVE ACTION REQUIRED** ☐

COMMENTS				
Ref	**Corrective Action Required**	**By When**	**Who**	**Date closed out**
		/ /		/ /
		/ /		/ /

Reviewed by:		**Signature:**		**Date:**	
Project Manager Approval:		**Signature:**		**Date:**	

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

JOB / TASK DESCRIPTION	**WORK NEAR LIVE TRAFFIC**	**SWMS #**	SWMS-03	**DATE**	**02/04/2022**
Principal Contractor	GULF CIVIL PTY LTD 12 GREGORY ST, BURKETOWN, QLD **ABN:** 30 636 014 714	**Subcontractor Name**	N/A		
		Subcontractor ABN	N/A		
Project	PERKINS STREET SUBDIVISION	**Address**			
Job Number	PERKINS STREET SUBDIVISION				
Location	Cloncurry Shire Council	**Phone**			
List of relevant Legislation or Standards	Workplace Health & Safety Act 2011 Workplace Health & Safety Regulation 2011 Manual of Uniform Traffic Control Devices Part 3 Environmental Protection Act 1994 Environmental Protection Regulation 2008 Manual of Uniform Traffic Control Devices Part 3 Transport Operations (Road Use Management) Act 1995. AS 1742.3-2009 MUTCD- Traffic control for works on roads	**Relevant codes of practice**	Qld COP How to Manage WHS Risks 2011 Qld COP Hazardous Manual Tasks 2011 Qld COP WHS Consultation, Co-operation and Co-ordination 2011 Qld COP Managing Risk of Falls at Workplaces 2011 Qld COP Managing Risks of Plant in the W/Place 2013 Qld COP Hazardous Substances 2003QLD COP Managing Noise and preventing Hearing Loss at Work 2011 Qld COP Traffic Management for Construction & Maintenance 2008 Traffic Controller Accreditation Scheme Approved Procedure (TCASAP) 2007		

Equipment to be used	Applicable Trades	PPE Requirements
Mobile powered Plant, Vehicles & Equipment	COMPETENCY TO OPERATE Traffic Management Level 1 & 2	Mandatory site PPE requirements

NOTE: Work SHALL NOT proceed until the SWMS is signed and dated by the Project Manager or Delegate and this Review Checklist is complete

PLANNED HIGH RISK CONSTRUCTION ACTIVITY (if ticked then refer also to specific Work Method Statement / JSA)

□ Excavation Entry	□ Explosives Use	□ Live Traffic	□ Mobile Plant Movement	□ Flammable / Contaminated Atmosphere
□ Roof Work	□ Tilt Up / Precast Use	□ Energized Electrical Work	□ Work In / Over Water	□ Confined Space Entry (Rescue plan in place)
□ Road / Rail Work	□ Crane Lift	□ Hazardous Substances	□ Temperature Extreme	□ Work at Heights (Rescue plan in place)
□ Demolition Work	Certificate #		□ Asbestos Removal	Certificate #

	Name	Signature	Position	Date		Name	Signature	Position	Date
DEVELOPED BY:	Ganesh Pandey		Project Engineer		REVIEWED BY:				

APPROVAL BY: **Brendan Smith** **Position: Project Manager** **Signature:** **Date:**

Name:

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Integrated Risk Matrix

Consequence Descriptions and Index (The consequence selected on the matrix must specifically relate to the consequence defined in the scenario assessed)	Consequence Indices		— Decreasing Consequence →				
			1	2	3	4	5
			Catastrophic	Major	Moderate	Minor	Incidental
	Consequence Description	Safety	Fatality(s)	Permanent Disability	Temporary Disability	Medical Treatment	First Aid
		Environment	Serious Long Term Env. Harm	Serious Medium Env. Term Harm	Serious Short Term Env. Harm	Material Env. Harm	Environmental Nuisance
		Community	Widespread Long Term Reputation Damage	Local Long Term Reputation Damage	Medium Term Reputation Damage	Escalated Community Complaint	Minor Direct Community Complaint
		Economic Loss · Plant / Property Damage · Production Shortfall	>$5 M	$1M - $5M	$250K - $1M	$50K - $250K	<$50K

Likelihood Descriptions	Likelihood Indices			Risk Matrix The lower the number, the higher the risk				
Is expected to occur	A	Almost Certain	↓ Decreasing Likelihood	1	3	6	10	15
Will probably occur	B	Likely		2	5	9	14	19
May occur on this site	C	Possible		4	8	13	18	22
Occurrence not expected in life of site	D	Unlikely		7	12	17	21	24
Rarely, if ever has occurred	E	Rare		11	16	20	23	25

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Hazard** What are the hazards of each step?	**Consequence**	**Likelihood**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection or ongoing)	**Consequence**	**Likelihood**	**Risk Score**	**Actioned By**
Plan the Task	Worker or equipment struck by plant or vehicle Worker interaction with plant & machinery	2	D	12	○ A Traffic Permit &Traffic Management Plan (TMP) MUST be in place before any works commence. ○ A Daily Prestart meeting is held to discuss all activities for the day and assess any new risk or hazard which may apply to the work being done.	4	D	21	Project Engineer Site Supervisor SHEC Advisor
Set up Traffic Control	Worker or equipment struck by plant or vehicle	2	C	8	○ Traffic Controller or competent person (Level 1 & 2 TM competency) is to set out all barriers & signage prior to the mobilization of plant & equipment as per the TMP. Traffic Control/ Competent person is to monitor & check the placement of all traffic control equipment.	4	D	21	Traffic Control Competent person
Communications Radio communications ALL WORKERS, DRIVERS & OPERATORS	Uncontrolled interaction with plant Struck by plant or machinery	1	D	7	○ Positive, effective Verbal contact to be ALWAYS used	5	D	24	ALL WORKERS
Communications Radio communications ALL WORKERS, DRIVERS & OPERATORS (Cont'd)	Miscommunication leading to significant event	2	D	12	○ Workers Drivers & operators are to call or identify the plant or vehicle by call sign, number, design, or type – 'Copy 008 20T Excavator' or 'Copy Water truck' ○ All transmissions should be replied by 'copy' ○ If communicating with Traffic Control for permission, no movement should take place without a confirmation.	4	D	21	Drivers Operators Workers Traffic Control

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Hazard** What are the hazards of each step?	**Consequence**	**Likelihood**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection or ongoing)	**Consequence**	**Likelihood**	**Risk Score**	**Actioned By**
Hand Signals ALL WORKERS, DRIVERS & OPERATORS	Miscommunication leading to significant event	2	D	12	○ All hand signals should be delivered simply and clearly. Do not assume that they have been seen or understood until you receive a confirmation from the operator or driver 	4	D	21	Site Supervisor Drivers Operators Workers Traffic Control

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Hazard** What are the hazards of each step?	**C.I.**	**L.I.**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection or ongoing)	**C.R.**	**L.R.**	**Risk Score**	**Actioned By**
Mobilise Equipment and Materials	Worker or equipment struck by plant or vehicle	2	C	8	○ to minimize crossing or moving in live traffic lanes move as much required equipment as possible to the work area in one movement.	5	D	24	Traffic Control Workers
		2	C	8	○ When crossing or moving in live traffic lanes with plant/equipment ensure ALL WORKERS are FULLY AWARE of your intention and cross/ move ONLY on signal. Traffic Control to stop traffic as required.	5	D	24	Traffic Control Workers
	Worker or equipment struck by plant or vehicle	2	C	8	○ Spotter in place for all reversing vehicles. Spotter to maintain positive visual and radio communication if communication is lost – STOP until re-established.	4	D	21	Workers
	Plant Rollover	2	C	8	○ Ensure ground is stable if unsure consult with supervisor. Awareness of proximity of plant to embankment edges.	4	D	21	Workers

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Hazard** What are the hazards of each step?	**C.I.**	**L.I.**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection or ongoing)	**C.R.**	**L.R.**	**Risk Score**	**Actioned By**
Work Beside Traffic	Worker or equipment struck by plant or vehicle Struck underground/ overhead service.	1	D	7	○ Water filled safety barriers (AS/NZ 3845/1999) to be placed as per the Site Traffic Management Plan if applicable. ○ Signage to be in accordance with the TGS ○ All workers are to ALWAYS remain behind the safety barriers. ○ Dial Before You Digs, project drawings and an Excavation Permit must be referenced/ issued before any work commences. ○ Check for overhead services – LOOK UP AND LIVE. ○ Work exclusions zones beside roads are to be set up with appropriate signage placed to ensure that workers andpublic users are separated & protected as per the site Traffic Management Plan.	4	D	21	Project Engineer Site Supervisor Traffic Controller Operators Workers

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Hazard** What are the hazards of each step?	**C.I.**	**L.I.**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection or ongoing)	**C.R.**	**L.R.**	**Risk Score**	**Actioned By**
Work Beside Traffic	Low light at day or night	4	C	18	○ Do not work alone or in poor light. ○ Lighting towers may be required if work is to continue or is planned for night operations. ○ Workers may need to wear fluorescent and reflective clothing that includes leg/ arm gaiters.	4	D	21	Supervisor
	Solar radiation & heat stress	3	C	13	○ Use 30+ sunscreen & broad brims fitted to Safety Helmets. ○ Rotate work were possible to avoid long exposure to sun. ○ Workers to have regular breaks and keep fluid intake up. ○ Try and plan strenuous work in cooler part of day. ○ Workers to monitor each other during the day.	4	D	21	Workers Site Supervisor SHEC Advisor
	Slips, trips and falls	3	C	13	○ All workers are to maintain good housekeeping, clear access & egress of their works area. ○ Barricade or install an exclusion zone for those areas to control hazards. Limit access to high-risk areas.	4	D	21	Workers Site Supervisor

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Hazard** What are the hazards of each step?	**C.I.**	**L.I.**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection or ongoing)	**C.R.**	**L.R.**	**Risk Score**	**Actioned By**
Work Beside Traffic	Noise and vibration	5	C	22	○ Workers to be made aware of noise and vibration issues which may affect pedestrians and localized structures. ○ Between works machines are to be throttled down or shut down ○ Hearing protection to be worn if noise is above normal audible range i.e., if you need to shout or cannot clearly hear someone talk to you, you require protection	5	D	24	SHEC Advisor Site Supervisor Operators Workers
	Using recycled water	4	C	18	○ Biological hazards may be present when using recycled water such as bacteria. Avoid direct skin exposure, spray in non-wind conditions, or set up exclusion zones. DO NOT DRINK ANY RECYCLED WATER.	4	D	21	Water Truck Operator Supervisor
	Manual handling – cuts, abrasions, strains, pinch points	3	C	13	○ Housekeeping progressively & at end of each workday. ○ All materials to be stowed away barricaded or removed fromthe works area. ○ Gloves to be worn for ALL manual tasks.	4	D	21	Workers Site Supervisor

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Hazard** What are the hazards of each step?	**C.I.**	**L.I.**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection or ongoing)	**C.R.**	**L.R.**	**Risk Score**	**Actioned By**
Emergency Procedures	Workers not aware of emergency procedures	3	C	13	○ Workers must be aware of the emergency procedures. ○ In the event of **ANY** emergency: Call 000	4	D	21	Supervisor Safety Advisor
Environmental Protection	Spoil runoff to stormwater drains and roads Loss of containment (Hazardous Substance/ Dangerous Good)	3	D	17	○ Sediment and silt control in place always to protect stormwater and other services ○ Monitor weather conditions prior to work – work to cease with inclement weather. Ensure mobile equipment is available to divert excess spill. Works near drains/waterways to have diversion drains pre-channeled. ○ Report all spills immediately	4	D	21	Site Supervisor Workers

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Job Steps Break down the job into steps (sequentially)	**Hazard** What are the hazards of each step?	**C.I.**	**L.I.**	**Risk Score**	**Control Methods and Monitoring** What control measures will be used? How will the effectiveness be determined? (Inspection or ongoing)	**C.R.**	**L.R.**	**Risk Score**	**Actioned By**
End of Day procedures	Roadside left in a hazardous condition. Pedestrian and vehicular traffic Colliding with safety barriers	2	C	8	○ Site supervisor to complete a Traffic Management Daily Inspection Report (CTR119 REV 00) ○ All barricading around the work area will have sufficient flashing amber lights placed at regular intervals to give adequate warning to pedestrians and vehicular traffic to prevent collision with barricading or excavatedmaterials	4	D	21	Site Supervisor and workers

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Sign-Off Sheet SWMS#	***SWMS #***	SWMS-03

I, the undersigned declare that I have read and understand the requirements of this SWMS and will work in accordance with the prescribed controls.
All persons performing any activity covered by this SWMS 'MUST' sign off prior to commencement of this task as recognition of having read and understood the work steps and preventative actions required to reduce the risk of harm and ensure safe work practices are maintained.

Name	Signature	Position	Date	Name	Signature	Position	Date

SWMS-04 (V1)

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

Sign-Off Sheet SWMS#	***SWMS #***	SWMS-03

I, the undersigned declare that I have read and understand the requirements of this SWMS and will work in accordance with the prescribed controls.
All persons performing any activity covered by this SWMS 'MUST' sign off prior to commencement of this task as recognition of having read and understood the work steps and preventative actions required to reduce the risk of harm and ensure safe work practices are maintained.

Name	Signature	Position	Date	Name	Signature	Position	Date

SAFE WORK METHOD STATEMENT/ JOB STEP ANALYSIS

SWMS REVIEW CHECKLIST			
Project:	PERKINS STREET SUBDIVISION		
Person or Entity Submitting SWMS for Review:	PERKINS STREET SUBDIVISION		
SWMS Reference # SWMS Title	SWMS - 03 Work Near Live Traffic	**Review Date:**	

: PRIOR TO COMMENCING A HIGH RISK ACTIVITY:

This checklist must be completed, signed, and submitted to the Safety Advisor with a copy of the relevant SWMS.

MANDATORY CRITERIA			
Ref	**Mandatory criteria – Does the SWMS:**	**Y**	**N**
1	Display trading name and ABN of entity conducting the work?	☐	☐
2	Reference relevant legislation, codes of practice and/or Australian standards?	☐	☐
3	Require and indicate consultation with workers and provide for the documented acknowledgement by all relevant workers required to undertake the activity?	☐	☐
4	Detail the risk matrix to be applied to the tasks within the activity?	☐	☐
5	Display a reference number?	☐	☐
6	Clearly display the name of the High-risk activity to be conducted?	☐	☐
7	List the correct PPE for the activity or task?	☐	☐
8	Describe all plant and equipment to be used for the activity?	☐	☐
9	Identify or point the relevant workers to the OEM operating instructions for relevant plant?		
10	Specifically separate each task step required to conduct the activity reflecting the work methodology?	☐	☐
11	Identify safety, health and environmental hazards that may arise through each documented step?	☐	☐
12	For each step and hazard identified clearly document acceptable control measures in accordance with the hierarchy – i.e., the residual risk has been reduced as low as reasonably practicable (ALARP)?	☐	☐
13	Describe how the control measures are to be implemented, monitored, and reviewed?	☐	☐
14	Identify pre-start and in-process certifications/authorizations/permits/meetings/inspections?	☐	☐
15	Consider the SHMP and Risk Register for the development of the SWMS? *For construction activities only*	☐	☐
16	Describe all control measures considered? *when working above 2m and only using administrative controls*	☐	☐
PROJECT SPECIFIC REQUIREMENTS			
1		☐	☐

RESULT: **NO** Corrective Action Required ☐ **CORRECTIVE ACTION REQUIRED** ☐

COMMENTS

Ref	Corrective Action Required	By When	Who	Date closed out
		/ /		/ /
		/ /		/ /

Reviewed by:		**Signature:**		**Date:**	/ /
Project Manager Approval:		**Signature:**		**Date:**	/ /

Project Document

Cloncurry Shire Council
PERKINS STREET SUBDIVISION - CIVIL WORKS
Contract No: T2022 – 006
Project No: P2020-021

TRAFFIC MANAGEMENT PLAN

Copy No.	Revision	Registered Holder & Location	Issued as
001	A	Owen Whish	Secure PDF

Revision	Revision Date	Details	Authorisation (Name and Title)	Authorisation (Signature)
A	15/05/2022	For Construction	Owen Whish General Manager	

Table of Contents

1 Introduction

1.1 Purpose and Scope

The purpose of this Traffic Management Plan (TMP) is to detail all aspects of traffic management required to safely facilitate the Construction of the Perkins Street Subdivision Project for the Cloncurry Shire Council. It will investigate all possible arrangements and alternatives to determine the safest, most efficient, cost effective and least disruptive method of managing traffic during the completion of the project.

1.2 Traffic Management Objectives

The key traffic management objectives to successfully complete this project are the safety of all stakeholders and minimizing the impact on the community. These objectives will be achieved by providing clear, easy to understand and interpret direction to vehicle and pedestrian traffic, following best practice traffic management techniques and industry standards and consulting with stakeholders and the client as required.

The Traffic Management plan aims to produce work to a high quality, in an environmentally conscious manner and with the health and safety of all staff and public considered.

1.3 Amendments and Authorisation

This Management Plan will be approved by the Project Manager.
This Management Plan and other related documents will be reviewed annually or as a result of:

- Changes to Company procedures or processes;
- Changes to key personnel or resources;
- Changes in legal and other obligations;
- Findings from an audit or inspection;
- Findings from a significant incident or near miss;
- Significant changes to site conditions and/or work methods
- Instructions from Cloncurry Shire Council or the OSH Committee if established.

Reviews will be undertaken in consultation with key stakeholders to ensure all work locations and impacts are considered. A record of the date and comments relating to any revisions of this document will be included in the revision table.
The only Gulf Civil authorisation required to amend this document after initial approval is the Project Manager's.

1.4 Communication of Plan

The Project Manager is accountable for ensuring:

- Location and access to the management plans will be communicated at induction
- Site communication forums will also be used to communicate specific requirements of the plans such as toolbox talks, pre-starts, inductions or site meetings depending on the requirement being communicated and personnel involved with the activity
- Any changes made to the Management Plan are communicated to all affected persons on the site. A revision to the plan is made and the relevant personnel are to re-sign the update version

2 Scope of Work

This project for the Cloncurry Shire Council will deliver Perkins Street Subdivision Project at the Northern Extent of the Cloncurry Township.

Gulf Civil are required supply all the plant, equipment and labour necessary for the construction of the whole works under each of the following categories:

- Erosion and Sediment Control
- Earthworks
- Roadworks
- Stormwater Drainage
- Sewer Reticulation
- Water Reticulation
- Electrical and Telecoms Minor Works (Conduits Only), and
- Concreting Works, and
- External Works (Water + Stormwater).

3 Location

The project works are located in within the Cloncurry Township – North Western QLD.

Figure 1 – Locality Map – Perkins Street Subdivision

4 Responsibilities

4.1 Management Responsibilities

Below is the contact information of Key Traffic Management personnel:

Position	Name	Number
Project Manager	Brendan Smith	0456 012 968
Project Supervisor	Greg Lawton	0411 984 717
Safety Manager	Chris Cooper	0467 645 602
Traffic Manager	A2O Representative	

4.2 Traffic Control Provider

For this Project, The Nominated TMD will be tasked with development of TGSs for use on the Project. Gulf Civil will engage the following traffic control company for the development of Project TGSs and to Provide Traffic Control Services:

Company	Traffic Control Registration Number
Arid to Oasis Traffic Control	0048

4.3 Site Contacts and Out of Hours Representatives

The following personnel will be available to address traffic management issues outside of normal working hours:

Position	Name	Number
Project Manager	Brendan Smith	0456 012 968
Project Supervisor	Greg Lawton	0411 984 717
Safety Manager	Chris Cooper	0467 645 602
Traffic Manager	A2O Representative	

4.4 Roles and Responsibilities

The Project Manager is accountable to the Director for the performance of the project and the implementation of the project's management plans. The Core Site team will acknowledge their understanding and acceptance of their site responsibilities by signing this plan.

Project Manager / Engineer

- Provide the necessary resources for the development, implementation and monitoring of Worksite Traffic Management Plans and strategies
- Ensure that employees or subcontractors have the required skills and training to conduct worksite traffic management activities
- Ensure any incidents are recorded and closed out and appropriate actions taken with minimal time frames
- Ensure that all identified hazards are controlled
- Ensure this Worksite Traffic Management Plan is complied with
- Comply with the Gulf Civil's Worksite Traffic Management Policy
- Ensure suitable communication and consultation with the affected stakeholders is always maintained

Traffic Manager

- Traffic Manager must hold at least 5 years' experience as a Traffic Manager in developing and implementing Traffic Management Plans and Traffic Guidance Schemes in similar traffic environments;
- Develop, implement and review the Traffic Management Plan, Construction Staging Diagrams and traffic guidance schemes (TGS);
- Full awareness of all traffic management issues and planned control measures;
- Provide technical additional expertise to improve safety and investigate innovative ideas to improve staging and develop complex traffic guidance schemes as required;
- Obtain and manage required permits and approvals. Liaise with all relevant stakeholders;
- Take responsibility for monitoring and quantifying delays, measuring queue lengths and maintaining and adjusting traffic control / devices to assist prevailing traffic flows for the duration of the construction phase;
- Ensure that all TGS are reviewed and approved by an experienced and qualified (holding Traffic

Management Design qualification) person;

- Organise Road Safety Audits (internally or externally) if required by the Project;
- Ensure relevant persons complete the Daily Traffic Management Checkls including details of any non-conformances and corrective actions, details of any changes to traffic control devices, details of traffic controllers on site, etc.; and
- Ensure all changes are documented during inspections, with the relevant control drawings updated as soon as practicable.

Project Supervisor

- Implement the worksite traffic management plan in accordance with the developed documentation.
- Ensure that employees or subcontractors have the required skills and training to conduct worksite traffic management activities
- Document and investigate incidents or near-miss incidents relating to the worksite traffic management processes
- Regularly inspect the workplace, monitoring working and traffic conditions and taking appropriate action where necessary
- To rectify safety matters raised by workers within their area of responsibility
- Ensure this Worksite Traffic Management Plan is complied with
- Comply with the Gulf Civil's Worksite Traffic Management Policy

Workers and Subcontractor

- Correctly wear high visibility vests/shirts, in addition to other protective equipment required (e.g. footwear, eye protection, helmet, sun protection etc), always whilst on the worksite
- Comply with the requirements of the Worksite Traffic Management Plan and ensure no activity is undertaken that will endanger the safety of themselves, other workers or the general public
- Enter and leave the site by approved routes via the VMP (Vehicle Management Plan) and in accordance with safe work practices

Traffic Controllers

- Must hold appropriate Qld issued accreditation to perform traffic control duties;
- Implement and monitor approved traffic guidance schemes;
- Maintain records of implemented traffic control devices including regular check including before, during and after implementation. Regular checks are to be performed throughout the duration of the shift; and
- Ensure that aftercare arrangements are implemented at the end of each shift.

5 Project Overview

5.1 Hours of Work

Monday to Friday- 7am – 6pm

Saturday - 7am – 4pm

Working hours may also include all other days and hours as approved by the Superintendent.
In accordance with the requirements of MRTS02 Specification and Annexure there are a number of non-working periods to be observed, including Public Holidays and Special Event Days.

5.2 Duration of Works

The duration of the works is 12 weeks from possession/access to site. Durations of individual construction activities are nominated within the Contractors Construction Program.

5.3 Legal & Other Obligations

At the planning level, the Project Manager will ensure a review of the Worksite Traffic management needs taking into consideration the legal, statutory and contractual obligations. The legal/statutory obligations are as detailed in the following documents and are available to all personnel and are in the Head Office as controlled manuals:

- AS 1742.3 – 2002 Traffic Control Devices for Works on Roads
- AS 1742.3 Field Guides
- Road Traffic Act
- Road Traffic Code
- Main Roads Act
- Occupational Safety and Health Act
- Disability Services Act
- QLD Guide to Temporary Traffic Management
- MRTS02 Specification and Annexure

Contractual obligations are those stated in the contract documents and are reviewed by the Project Manager at the planning phase. These requirements are written into any Worksite Traffic Management plans or diagrams developed for the project.

6 Assessing the Site

This Traffic Management Plan has been developed following thorough assessment of the Project Extents and the works to be construction with due considering given to the following:

- Existing road layout
- Traffic volumes and speed zones
- Timing and duration of the works
- Staging of the works
- Pedestrian needs (including aged persons)
- Cyclist needs
- Disabled needs
- Emergency vehicle access
- Public transport
- School crossings / traffic
- Local Council needs
- The need for public notification
- Managing local business needs
- Minimising the impact of the works on the stakeholders

6.1 Risk Assessment

To assist in the assessment from the perspective of network performance, this section provides additional risk assessment information specific to the Worksite Traffic Management works.

Risk assessment involves the identification and analysis of all safety risks likely to arise during works on or near the road. The identification of each risk must be followed by defining the appropriate measures to mitigate those risks. When undertaking Risk Assessments for Traffic Management, Gulf Civil look to the following specific hazards/Risks:

6.1.1 Location

Hazards that may arise due to the location of the work activities and constraints that may arise due to restricted safe stopping sight distance etc.

6.1.2 Vehicle

Hazards that may arise due to class speed or volume of traffic, which is impacted by the works.

6.1.3 Vulnerable Road Users

Hazards associated with the use of the road reserve or carriageway by vulnerable road users including pedestrians, cyclists, motorcyclists and people with disabilities

6.1.4 Public Transport

Hazards associated impacts on public transport or public transport facilities

6.1.5 Property Access

Hazards associated with safe access and/or egress from adjacent properties.

6.1.6 Work Activities

Hazards associated with work activities such as excavations, works undertaken at night or other work operations that may impact on traffic.

6.1.7 Other Projects

Hazards that may arise due to other projects being undertaken in conjunction with the proposed project.

6.1.8 Network Performance

Hazards associated with reduced network performance resulting from project activities and existing condition of the road on approach to and throughout the worksite.

6.1.9 Environmental

Hazards associated with the environmental conditions on any given day. Dust or Heavy rain may reduce line of sight or increase risk of end of queue collision.

7 Traffic Management and Staging

7.1 Options Analysis and Method of Control Selection

Gulf Civil has carefully evaluated the project drawings and relevant specification in the review of Options and development of the Traffic Management Strategy for the Project. The Traffic Management strategy has been developed to:

- Mitigate motorist delays
- Provide physical separation of existing carriageway and the road under construction
- Optimise construction efficiency and quality
- Reduction of rework or temporary works
- Maintain compliance with relevant specifications including MRTS02 and the QGTTM

- Ongoing access to public and private areas

Following a thorough site assessment and in accordance with the control measures offered by MRTS02, QGTTM and the MUTCD, Gulf Civil considers the following Methods of Control best mitigate risk and hazards relating to traffic and construction interface:

- **Management of Traffic "Around the Works"**
    - Including provision of Detours and Alternate Travel Routes via Existing Roads
- **Management of Traffic "Past the Works**"
    - Including implementation of Intermittent Contra-Flow arrangements
    - Lateral shift of traffic into temporary travel path arrangements

7.2 Around the Works – All Stages of Construction

7.2.1 Road Closures and Detours

Management of Traffic Around the Worksite via the implementation of full detours, provides the greatest opportunity for the safe and efficient delivery of the works under contract. Removing existing traffic from the road adjacent to the works is the equivalent of Hazard Elimination and mitigates fully construction and traffic interface.

Gulf Civil will require a road closure on Perkins Street during the installation of culvert and accessories, for approximately 2 weeks.

A TGS will provided and discussed for review and acceptance for the nominated timeline prior to works being commenced for the road crossing culvert.

7.2.2 Notification of Road Closures

Upon approval of any road closure or detour Gulf Civil will provide the following notifications:

- Traffic Management Centre Notification identifying the route and affected road users
- Implementation of VMS Messaging (wording to be agreed with the client)
- Installation of Traffic Control Devices and Detour "Markers" in accordance with approved TGS
- Direct engagement with critical stakeholders including businesses and residents along the worksite.
- Notification of Detour Route for Emergency Services

7.2.3 Local Parking and Property Access

Gulf Civil has identified a number of local business and community facilities that will require ongoing access. Per QGTTM/AGTTM Part 3 Cl. 3.4.1 where practical the following measures will be implemented to maintain access:

- Arrange alternative access with the owner via rear or side access
- Provide delineated/separated access along suitable pavement outside of the work area (Local Access Only)
- Access by arrangement

7.2.4 Pedestrian and Cyclist Management at Detours

There is currently no official pedestrian connectivity by way of existing shared user path or designated cycleway. Where pedestrians present to site and wish to gain access the following measures will be implemented:

- Cyclists will be directed via the detour around the works unless gaining access to private residence or business
    - Road Surface conditions outside of the sealed area throughout the jobsite is not adequate for the

operation of on road cyclists.

- Pedestrian access to community facilities will be provided via delineated access clear of work areas

7.2.5 Detour Contingency

In accordance with MRTS02 Cl. 5.9, in the event that excessive delays, excess traffic volumes or unforeseen occurrence results in the continued operation of the detour becoming unsafe or significantly detrimental to the network operation, the following contingency has been considered:

- Reduce detour implementation to more favourable hours that avoids peak traffic durations (to be determined in conjunction with the Administrator)
- Adjust or otherwise modify the Detour route to mitigate delays or disruptions.
- Implementation of Alternative Arrangements (discussed in Section 8)

8 Past the Works

Gulf Civil has considered the delivery of works under contract utilising “Past the Worksite” method of control. This method of control allows for vehicles to move past the works along a safe, delineated travelled path, normally with a reduced speed within 6m of construction works.

8.1 Stage 1 Construction

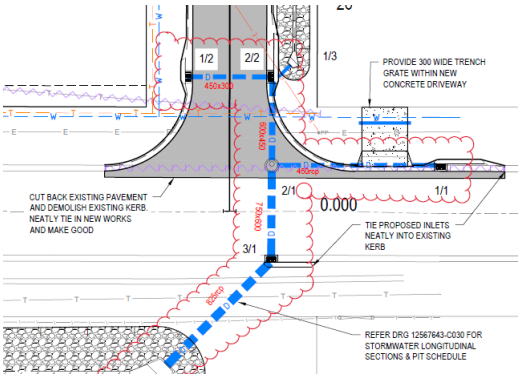
Stage 1 of the Construction Straging plan would deliver the following works:

- Construction within the project confines will have minimal impact or interaction with traffic as this portion of the work is all offline

8.2 Stage 2 Construction – Closure of Perkins Street

Stage 2 of the Construction Straging plan would deliver the following works:

- A road closure will be required to construct the following road crossing culvert:



9 Operations Adjacent to the Travelled Path

9.1 Operation of Cranes Adjacent to Travelled Path

Where any lifting operation is undertaken onsite, a risk assessment will be undertaken in accordance with Gulf Civil Systems. Where appropriate, the following controls will be implemented to avoid risk of lifting operation impacting the travelled path:

- Select Non-Slewing cranes to mitigate risk of accidental slewing across traffic lanes
- Utilise plant with smallest effective footprint and reach
- Consider use of Excavators placement of smaller concrete components
- Consider stopping of all traffic where there is a risk of the crane entering the traffic lanes

9.2 Bituminous Sealing

Where sealing is undertaken adjacent to the travel path, traffic will be held for the maximum allowable time in accordance with MRTS 02.1 Cl. 3.5 – 15min.

Bituminous surfacing shall not be undertaken whilst traffic is travelling beside the sealing operation.

10 Traffic Control Devices

10.1 Signage

Traffic Control Devices (TCD) conditions are listed as follows:

- All temporary signage will be manufactured and installed in accordance with the AGTTM Part 3 – Static Worksites and the MUTCD
- All proposed TGSs Superintendent/Administrator for approval in accordance with MRTS02 Cl. 6.2 Hold Point 2
- Temporary pavement markings will be installed in accordance with the AGTTM Part 3 and MRTS02 and consist of marking paint, tape or temporary raised pavement markers as approved by the Administrator.
- All traffic control devices will be maintained on a regular basis (both day and night), securely fixed in the correct position. Inspections of all devices will be carried out twice daily to monitor their effectiveness.
- Advanced warning VMS's to be used to provide advanced warning of road conditions / detours at key locations
- Full and effective delineation will be maintained
- All irrelevant signs will be removed at the end of each work shift from the public road

10.2 Sequence of Installation

Installation of TCD as part of the Larger TGS will be in accordance with the relevant section of the AGTTM Part 6. The Project will require a number of installations in line with the Construction Staging plan and the associate Method of Traffic Management. Installation for Stage 1 is as per the following sequence:

6.4.2 Two-way road (lateral shift)

Determine points of reference (e.g. beginning and end of work area, location of first cone in taper). The order of installation is then as follows and as depicted in Figure 6.2.

Task	Description	Installation Sequence
a.	Non-works approach - place signs and centre line delineation (advance warning to termination).	1 to 4
	Then use the existing road network to turn where safe to do so	5
b.	Works approach - place signs and edge of works delineation (advanced signs to termination)	6 to 9
c.	Drive through the site to inspect installation is suitable for traffic.	-

Figure 6.2: Lateral shift – typical installation sequence

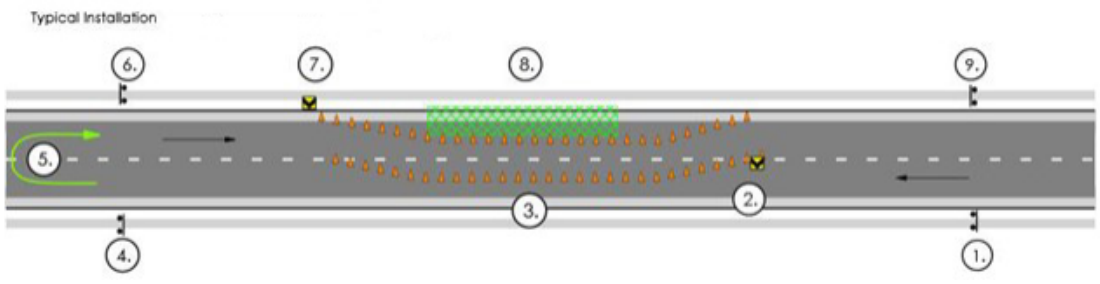


Figure 7. Installation Sequence – Stage 1

The sequence for installation for Stage 2 works is as follows:

6.4.1 Two-way road - lane closure

Determine points of reference (e.g. beginning and end of work area, location of first cone in taper, location of TCs). The order of installation is then as follows and as depicted in Figure 6.1.

Task	Description	Installation Sequence
a.	The 'termination signs/speed reinstatement' on the 'works side' of the road is placed as the first sign when initially leaving work area.	1
	Then use the existing road network to turn where safe to do so	2
b.	Non-works approach - place signs (advance warning to termination) including the four cones on centreline of the road on the approach to the TC position.	3 to 7
	Then use the existing road network to turn where safe to do so	8
c.	Works approach - place signs (advanced signs to taper) including the four cones on centreline of the road on the approach to the TC position.	9 to12
d.	The TCs should briefly stop traffic in both directions (while the taper and delineation is deployed)	-
e.	Taper and 'work area' (lane closure) delineation to be placed in the direction of the traffic flow including any additional signs (e.g. repeater signs or 40km/h at end of taper) if required.	13 to 15
f.	Drive through the site to inspect installation is suitable for traffic.	-

Figure 6.1: Traffic control – typical installation sequence

Figure 8. Installation Sequence – Stage 2

10.3 TGS Operation and Maintenance

The following daily routine will be followed in the operation and maintenance of the various TGS to ensure that:

A. Signs and Surfaces are always adequate for the safety of personnel and road users

B. The surface of the travelled path is maintained in a satisfactory condition

C. Plant operators a not disrupted

D. Loss of productive time is minimised

E. Accessibility for pedestrians and vulnerable road users is maintained

10.3.1 Before Shift

Routine to be undertaken before the commencement of Shift:

A. An inspection of all traffic signs and devices should be made and any deficiencies noted and corrected as soon as practically possible

B. After adjustments have been made to the traffic management provisions for the day they should be checked for safety and effectiveness by an inspection drive through the job, and a record made of the signs erected and their locations

C. Where there are impacts on paths adjacent to the road or of crossings across the road, the route for pedestrians, cyclists and vulnerable road users should be checked for safety, accessibility and effectiveness by an inspection walk through of the job

10.3.2 During Work Hours

The following routine will be followed during work hours:

A. Periodically drive through the work site (recommended at least twice daily) to check that all signs, markings and delineating devices as seen by other road users are satisfactory and in their correct position

B. Attend to minor problems as they occur

C. Escalate problems that cannot be resolved to the Project Engineer/ Project Supervisor

D. During work breaks (eg. Lunch breaks) move personnel clear of the work area; park plant clear of traffic lanes and remove from view or cover signs such as PREPARE TO STOP or Workers Symbolic, if workers leave the site or cannot be seen

E. where there are traffic hazards or where only one lane is open to traffic, instruct traffic controllers to remain on the job and relieve them as necessary

F. Reposition barriers, signs and tapers as necessary (e.g. adjust the length of single lane traffic operations as necessary to keep it to a minimum) and keep records of adjustments or modifications made and the time these occurred

G. Coordinate maintenance of the travelled path with other job operations

10.4 Monitoring Performance and Record Keeping

Following the implementation of traffic control. a site supervisor or the nominated traffic officer will drive (or walk depending on the site setup) through the site to check that all traffic management signage, devices and delineation are in correct position and working order. Any issues identified during these drive throughs are to be rectified as soon as possible. It will also be the responsibility of all traffic controllers on site to report via radio or other means to the site supervisors any issues with traffic management signage or devices they notice at any stage, to allow rectification as quickly as possible.

At the end of a shift where all personnel are leaving site for the night/day, a pre-close-down inspection should be carried out to identify any urgent maintenance required. Worker symbolic signs should then be covered/removed followed by a final drive-through to ensure the site is in a safe and suitable condition.

There are two levels of monitoring performance of the Worksite Traffic Management system:

- Daily Checks
- Independent Audits

Where daily checked are undertaken, the following critical elements will be recorded:

- Length of typical delay to road users
- Queue length in relation to signage (noting any at risk locations)

10.5 Speed Management Plan

Traffic speed through the construction works will be maintained as normal where possible, but due to the methodologies and activities that will need to take place within or adjacent to the existing corridor, traffic speeds reductions will be implemented to manage the safety of the worksite, workers and road uses where appropriate.

Where required, lateral shifts, temporary line marking and / or delineation shall be used to maintain the lane widths and allow the construction adjacent to the road. The traffic speeds implemented for the construction works will be as per AGTTM/QGTTM Part 3 and implemented by qualified traffic controllers as part of the Approved TGS.

Where the existing speed limit has been reduced through site for more than 1 shift (i.e. Long Term Speed Reduction), the traffic will be observed, where necessary enforcement arrangements will be made with traffic police.

10.5.1 Speed Monitoring

Speed Monitoring will only be conducted where existing speed limits have been reduced as part of a long term (longer than 1 shift) TGS.

Visual monitoring will be carried out initially to determine if there a potential problem with speed.

Where excessive speeds through the works become a hazard for both the motorist and workers adjacent to the road, the project may look to implement further control measures which may include:

- Police Enforcement
- Tavel Path width restrictions
- Traffic Calming devices – speed humps, radar speed displays

10.5.2 Risk Assessment

Where the speed monitoring demonstrates that speed compliance is not achieved (the 85% percentile is greater than 10kmlhr above the posted roadwork limit) the project team will be required to either:

- Introduce additional measures to achieve compliance (as per above); or
- Raise the speed limit (where safe to do so)

If a risk assessment indicates an unusually high risk to workers in a particular location, a lower speed limit may be required. Temporary speed zones to be implemented for traffic safety purposes are appropriate where the consequences of excessive speed are not apparent and motorists are therefore unlikely to reduce speed voluntarily.

11 Stakeholder Communication

11.1 Coordination with Stakeholders

Gulf Civil has identified the following parties as key stakeholders:

- QLD Department of Transport and Main Road
- Cloncurry Shire Council
- QLD Emergency Services (QPS, QAS, SES)
- Transport Industry (including oversize transport)
- Private Enterprise Adjacent the Works

Where the project Method of Traffic Management is likely to disrupt the typical operations of the aforementioned stakeholders, the following actions will be taken to communicate onsite changes:

- Project to brief CSC/TMR of any information that maybe necessary for “Notice of Works” distribution
- Project to advise TMR/TMC/CSC of future changes (changes to TGS, Detours, Oversized Dimensions)
- Project to inform TMR/TMC/CSC of any restrictions for over dimension vehicle movements including the duration of the restriction and any alternative arrangements.
- Project to engage directly with Private Enterprise regarding access restrictions or changes
- Project to Notify and keep Emergency Service Organisations abreast of changes that may affect their ability to respond to emergencies throughout the region.

Generally, the Project will inform the client monthly during Progress meetings of upcoming changes, however, where necessary, weekly advice will be distributed to the relevant parties.

11.2 Traffic Management Centre

The Project will provide daily updates of any changes across site through the provisions of the Traffic Control Permit issued by the TMC. At the commencement of each shift, the nominated Traffic Control Officer will contact the TMC and “Log In” for the shift informing the TMC of the following:

- Change to lane closures (including direction of travel, lane and planned duration)
- Expected hours of operations (planned time off site)
- Any detour arrangements in place

Where changes will affect over-sized dimension loads, the Project will inform the TMC and provide an update on the allowable size of vehicles and the duration of any restrictions.

11.3 Cloncurry Shire Council

The Project will provide a weekly brief to CSC’s representative detailing the Traffic Management activities for the week ahead, details will include:

- Any proposed lane closures
- Any restrictions to Over-Sized Dimension Loads
- Any disruption or changes to Public Access to CSCs facilities ie. Cemetery/Gulf Course etc

The Traffic Management brief will be issued via Email.

12 Site Safety

During the project the Project Manager/Engineer will be responsible for site safety. Daily worksite traffic management inspection sheets and audits will be used to monitor all personnel and procedures.

- All personnel will always use high visibility shirts and/or jackets during the works.
- Advance warning of work areas
- Clear signage through work area
- High visibility of machines / vehicles – flashing lights
- Hand held radios for personnel on ground

12.1.1 Onsite Communication

A site-specific radio protocol will be developed and implemented that includes the following minimum requirements:

- Details of radio bands and/or frequencies in use at the site and who is permitted to use them
- The process for transmitting messages during an emergency
- The prioritisation of messages to the following:
    1. Emergency messages
    2. Safe-working messages
    3. General messages
- Protocols to ensure when an emergency message is transmitted all other messaging stops until an all- clear has been announced
- The requirement for positive (confirmed) communication
- The establishment of positive communication protocols between and across mobile plant and road going vehicles.
- Prohibition of general chatter, personal discussions, music or any form of horseplay or abuse including offensive behaviour (e.g. swearing) whilst using the radio.

12.1.2 Onsite Parking

The control of vehicles and equipment park-up areas and go- lines will include:

- Designated parking areas for heavy and light vehicles, this includes site personnel private vehicles
- Reverse parking of light vehicles
- Parking areas will not be used as lay-down or storage areas
- Parking bays will be of an adequate size to ensure the safe parking of the largest vehicle using them.
- Parking bay design must prevent collision with other parked vehicles and equipment
- Residents to be informed of when works is to take place outside properties and if parking maybe an issue due to nature of works

12.1.3 Safe Loading/ Unloading

Loading bays/Areaa should be situated in locations where vehicles can be manoeuvred easily and safely. They should be clearly sign-posted, protected from adverse weather conditions and be on level ground or platform. Requirement for JHA/SWMS

12.1.4 Safe Reversing

Where possible, traffic management should reduce the amount of reversing for mobile plant, including the use of turning circles. Where necessary due to width constraints, Gulf will construct temporary turn around locations within the Road Corridor or by agreement with adjacent land owners.

12.1.5 Safe Access and Egress

All construction traffic will use approved access and egress points, which will be clearly demarcated or incorporated in the various TGSs on site.

This will be communicated to all workers through the Site Induction, regular toolbox talks and all suppliers and drivers will be informed at the time of placing the order via the delivery driver's induction. Entry and exit protocols will also be outlined and communicated to personnel via approved JSEA

There are a number of controls that can be utilised to assist co-ordinate vehicle movements inside the work areas, including:

- Where feasible, utilise existing local road to access construction work areas
- Site speed limits and signage
- Gate keepers/spotter
- The access accommodates the turning movements of the largest vehicles / plant that will be entering site
- UHF communications
- Toolbox and Prestart talks
- Site Inductions
- Vehicle movement as identified for work areas
- Clear routes on blind corners and/or crests

Site access and egress will be closed up during no work period to prevent unauthorised entry or access of road users.

13 Incident Management

Accidents involving vehicles and / or pedestrians within the boundaries of this Project shall be reported and investigated by Gulf Civil Supervision/Management as soon as practicable. Incident / accident reporting and investigation will be conducted in accordance with the Gulf Civil Safety Management Practices.

Following incident investigations, where additional controls are necessary prior to the recommencement of

works, the hierarchy of controls should be considered in all cases:

- Elimination
- Substitution
- Engineering Control
- Administrative Control
- Use of PPE

Changes in procedures resulting from corrective action shall be recorded and a risk assessment undertaken. The Project Manager shall approve any changes in procedures and revise relevant documentation accordingly.

13.1 Incidents Requiring Emergency Response

In the event of an incident requiring emergency services, the following actions will be undertaken:

Incident	Actions to be Taken
Accident or Breakdown where vehicle/vehicles involved can be driven and motorists are uninjured	▪ Attend accident site if available. ▪ If necessary, call 000. ▪ Assist any injured persons if safe to do so, move persons away from any imminent danger (i.e. leaking fuel or fire). ▪ If possible, use traffic controllers to direct traffic around the accident to keep traffic flowing. ▪ Contact the Project Engineer/Manager, who will notify the client's or authority's Administrator ▪ Assist with directions to get emergency services to the location of accident. ▪ Provide assistance as directed by emergency services. ▪ Record details of the incident as per Gulf Civil Safety Management Practices ▪ Gulf Civil Project Manager to commence incident investigation/Report
Accident or Breakdown where vehicles involved are immobile or injury prevents removal of the vehicle – resulting in queued traffic	▪ Attend accident site if available. ▪ Call 000. ▪ Assist any injured persons if safe to do so, move persons away from any imminent danger (i.e. leaking fuel or fire). ▪ Contact the Project Engineer/Manager, who will notify the client's or authority's Administrator ▪ If potential for long delays – Project Manager to contact TMC ▪ Utilise Traffic Control Utes near end of queued traffic to alert motorists of queued traffic ▪ Assist with directions to get emergency services to the location of accident. ▪ Provide assistance as directed by emergency services.