5.3. DOUGLAS SHIRE COUNCIL LOCAL GOVERNMENT INFRASTRUCTURE PLAN

REPORT AUTHOR(S)	Simon Clarke, Planning Coordinator
GENERAL MANAGER	Nicholas Wellwood, General Manager Operations
DEPARTMENT	Operations

RECOMMENDATION

That Council resolves to:

- 1. endorses the draft Local Government Infrastructure Plan.
- 2. appoint a pre-approved LGIP panel reviewer to review of the Local Government Infrastructure Plan, as required by the Ministerial Guidelines under the *Planning Act 2016*.
- 3. refer the Local Government Infrastructure Plan to the State Government for its First State Interest Check, following completion of the LGIP Panel review.
- 4. commence public notification of the Local Government Infrastructure Plan following completion of the First State Government Interest Check.

EXECUTIVE SUMMARY

Under the *Sustainable Planning Act 2009*, Council is required to prepare a Local Government Infrastructure Plan (LGIP). At the Ordinary Council Meeting held on 19 April 2016, Council resolved to prepare a LGIP for Douglas Shire.

Despite the resolution to commence work on preparing a LGIP occurring under *Sustainable Planning Act 2009*, the *Planning Act 2016*, now requires continuing work on the LGIP to follow the provisions of the Ministerial Guidelines under the *Planning Act 2016*, rather than *Statutory Guideline 04/14 – Making and amending local planning instruments*.

Work on preparing a draft LGIP has been completed. The draft LGIP requires Council's endorsement prior to referral to a pre-approved LGIP panel reviewer, and subsequent referral to the State Government for its First State Interest Check.

BACKGROUND

Council is required to undertake a planning scheme amendment to incorporate a LGIP into the proposed Douglas Shire Council Planning Scheme. The LGIP will replace Council's current Adopted Infrastructure Charges Resolution (AICR) which is the current mechanism for collecting infrastructure charges in Douglas Shire.

A LGIP is a section of the planning scheme which identifies and outlines the type, size, location and cost of infrastructure which is required to service the expected population and non-residential sector envisaged by the planning scheme.

It considers infrastructure demand and requirements across a number in trunk infrastructure networks including:

- Water;
- Sewerage;
- Transport (including roads and trunk pathway infrastructure);
- Public parks and land for community purposes.

Work on the preparation of a draft LGIP is now complete and Council's endorsement is necessary to progress the LGIP through LGIP panel review, and then on to First State Interest Check.

Completion of the draft LGIP represents the culmination of a significant body of work across Council that results in achieving the purpose of the LGIP, which is to:

- integrate infrastructure planning with the land use planning identified in the planning scheme;
- provide transparency regarding a local government's intentions for the provision of trunk infrastructure;
- enable Council to estimate the cost of infrastructure provision to assist its long term financial planning;
- ensure that trunk infrastructure is planned and provided in an efficient and orderly manner; and
- provide a basis for the imposition of conditions about infrastructure on development approvals.

A copy of the Draft LGIP has been provided in Attachment 1 - 8.

A copy of the checklist as required by the State is provided as Attachment 9.

COMMENT

Risk Management, Council Finance and the Local Economy

The LGIP provides transparency for the development industry, and community in general, with respect to Council's intentions for the provision of trunk infrastructure. It also ensures that trunk infrastructure is planned and provided in an efficient and orderly manner that supports the growth of the region.

Statutory

Council resolved to prepare an LGIP under the *Sustainable Planning Act 2009*. However, with the introduction of the *Planning Act 2016* in July 2017, continuing work must now follow the Ministerial Guidelines under the *Planning Act 2016*.

Under the *Planning Act 2016*, the LGIP must be reviewed within 5 years of adoption. However, amendments (including minor amendments) may be made to the LGIP at any time, on an as-needs basis.

It is proposed that regular updates be made to the LGIP, to reflect amendments to trunk infrastructure network planning and annual capital budgetary considerations.

A significant internal review is expected as Council strategic asset management and financial modeling systems are matured and refined and a more detailed financial sustainability assessment completed with the LGIP.

Policy

The LGIP will be Council's primary trunk infrastructure planning document, incorporating trunk infrastructure planning for water supply, wastewater, transport, parks and land for community purposes, based upon current standards of service, population and demand modeling.

Corporate and Operational Plans

The LGIP and proposed resolution advances the goals of Council's Corporate Plan and supports Council's commitment to provide infrastructure in an efficient and coordinated manner while delivering consistent value for money.

FINANCIAL/RESOURCE IMPLICATIONS

Funds were allocated in the budget for the 2017/2018 financial year to complete the necessary work on the LGIP. This funding takes into account:

- the preparation of the draft LGIP package (completed);
- project status meetings;
- third party reviews;
- amendment to the LGIP following reviews and / or public notification; and
- resourcing requirements of staff involved in all stages of the LGIP project.

RISK MANAGEMENT IMPLICATIONS

Council is required to finalise the LGIP by 30 June 2018. The State Government has firmly advised that Local Governments that fail to adopt and complete their LGIPs by this deadline will not be able to charge and collect money for trunk infrastructure.

The timeline to finalise the work on the LGIP is tight and any delay in the process puts Council at significant future financial risk.

SUSTAINABILITY IMPLICATIONS

Economic: Council's existing AICR ceases to have effect from 1 July 2018. Unless the LGIP is completed and in place by 30 June 2018, Council can no longer levy infrastructure charges upon development. This would have significant financial impact on Council with respect to the provision of infrastructure and capital works revenue.

The proposed LGIP identifies the current standards of service for trunk infrastructure elements and ensures Council is collecting the appropriate level of funding for infrastructure and is financially sustainable.

Environmental: The desired standards of service for infrastructure contained in the LGIP consider the impact of infrastructure provision on the natural environment.

Social: The inability to levy and collect infrastructure charges would have a negative impact on the ability for Council to maintain and fulfill community expectations with respect to the provision of suitable and functional infrastructure: being one of Council's core responsibilities.

CORPORATE/OPERATIONAL PLAN, POLICY REFERENCE

This report has been prepared in accordance with the following:

Corporate Plan 2014-2019 Initiatives:

Theme 2 – Building a Sustainable Economic Base

2.1.1 Develop management plans for all Council assets and adequately resource their implementation.

Theme 5 – Governance

- 5.1.1 Establish and develop long term financial, resource and infrastructure planning to ensure on-going capacity to fund operations and capital works programs.
- 5.1.2 Implement a robust enterprise risk management culture to identify and manage potential risks.

Operational Plan 2017-2018 Actions:

On-going activities

Ensuring compliance with relevant State legislation, Council Local Laws and the Shire Planning Scheme.

COUNCIL'S ROLE

Council can play a number of different roles in certain circumstances and it is important to be clear about which role is appropriate for a specific purpose or circumstance. The implementation of actions will be a collective effort and Council's involvement will vary from information only through to full responsibility for delivery.

The following areas outline where Council has a clear responsibility to act:

Asset Owner: Meeting the responsibilities associated with owning or being the custodian of assets such as infrastructure.

Fully Responsible: Funding the full cost of a program or activity.

CONSULTATION

A significant amount of internal consultation was undertaken in the preparation of the LGIP, including, but not limited to:

• Internal asset owners as part of the ongoing preparation of the LGIP, including Water and Wastewater, Infrastructure Services, Development Assessment and Coordination, Finance and Information Technology.

Council has also undertaken consultation with the Department of Transport and Main Roads in relation to the trunk road network and has included their feedback into the planning and documentation where appropriate.

COMMUNITY ENGAGEMENT

Following State Interest Review, Council is required to publicly notify the LGIP for 30 business days.

ATTACHMENTS

- 1. Attachment 1 Planning Localitites [5.3.1]
- 2. Attachment 2 Priority Infrastructure Areas [5.3.2]
- 3. Attachment 3 Water Trunk Infrastructure [5.3.3]
- 4. Attachment 4 Sewerage Trunk Infrastructure [5.3.4]
- 5. Attachment 5 Transport Road Trunk Infrastructure [5.3.5]
- 6. Attachment 6 Paths Trunk Infrastructure [5.3.6]
- 7. Attachment 7 Parks and Reserves Trunk Infrastructure [5.3.7]
- 8. Attachment 8 Stormwater Trunk Infrastructure [5.3.8]
- 9. Attachment 9 LGIP Compliance Checklist [5.3.9]
- 10. Attachment 10 Desired Stadards of Service LGIP [5.3.10]
- 11. Attachment 11 Copy of Charges Summary DSC LGIP [5.3.11]





LOCAL GOVERNMENT INFRASTRUCTURE PLANS (PLANNING LOCALITIES) for DOUGLAS SHIRE COUNCIL

SCHEDULE OF PROJECT DRAWINGS

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1100-141	PLANNING LOCALITIES AREAS
1100-142	PLANNING LOCALITIES KEY MAP
1100-143	PLANNING LOCALITIES – GRID 1
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1100-145	PLANNING LOCALITIES – GRID 3
1100-146	PLANNING LOCALITIES – GRID 4
1100-147	PLANNING LOCALITIES – GRID 5

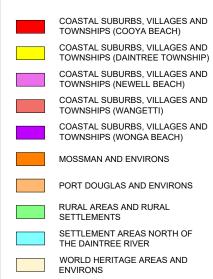
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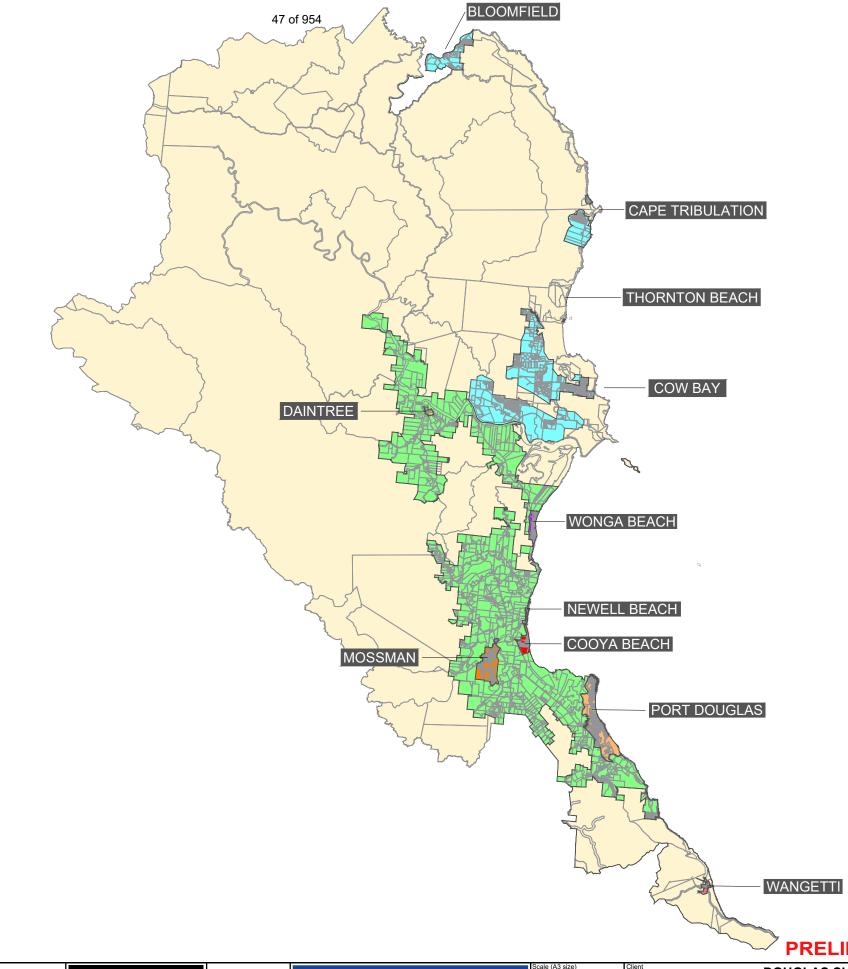




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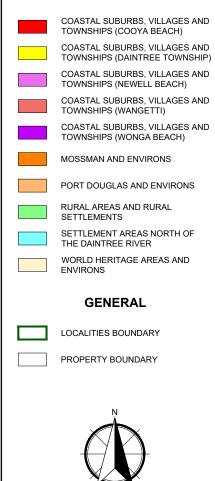
DOUGLAS SHIRE COUNCIL 1100 DOUGLAS SHIRE COUNCIL LGIP

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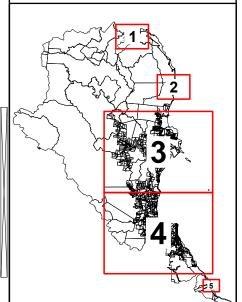
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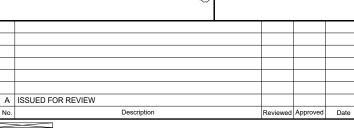
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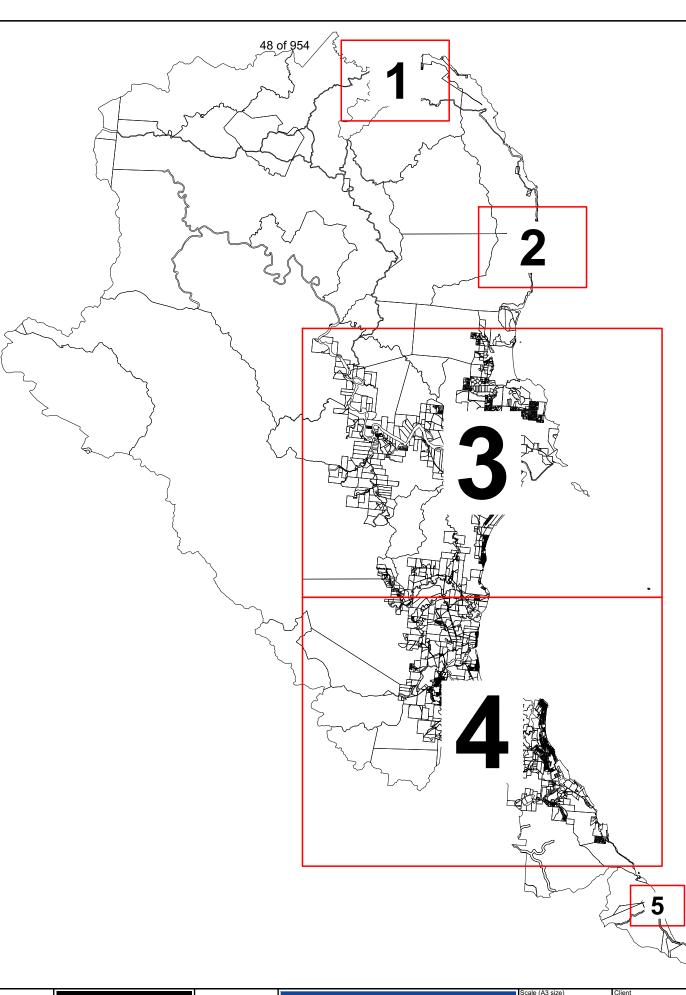






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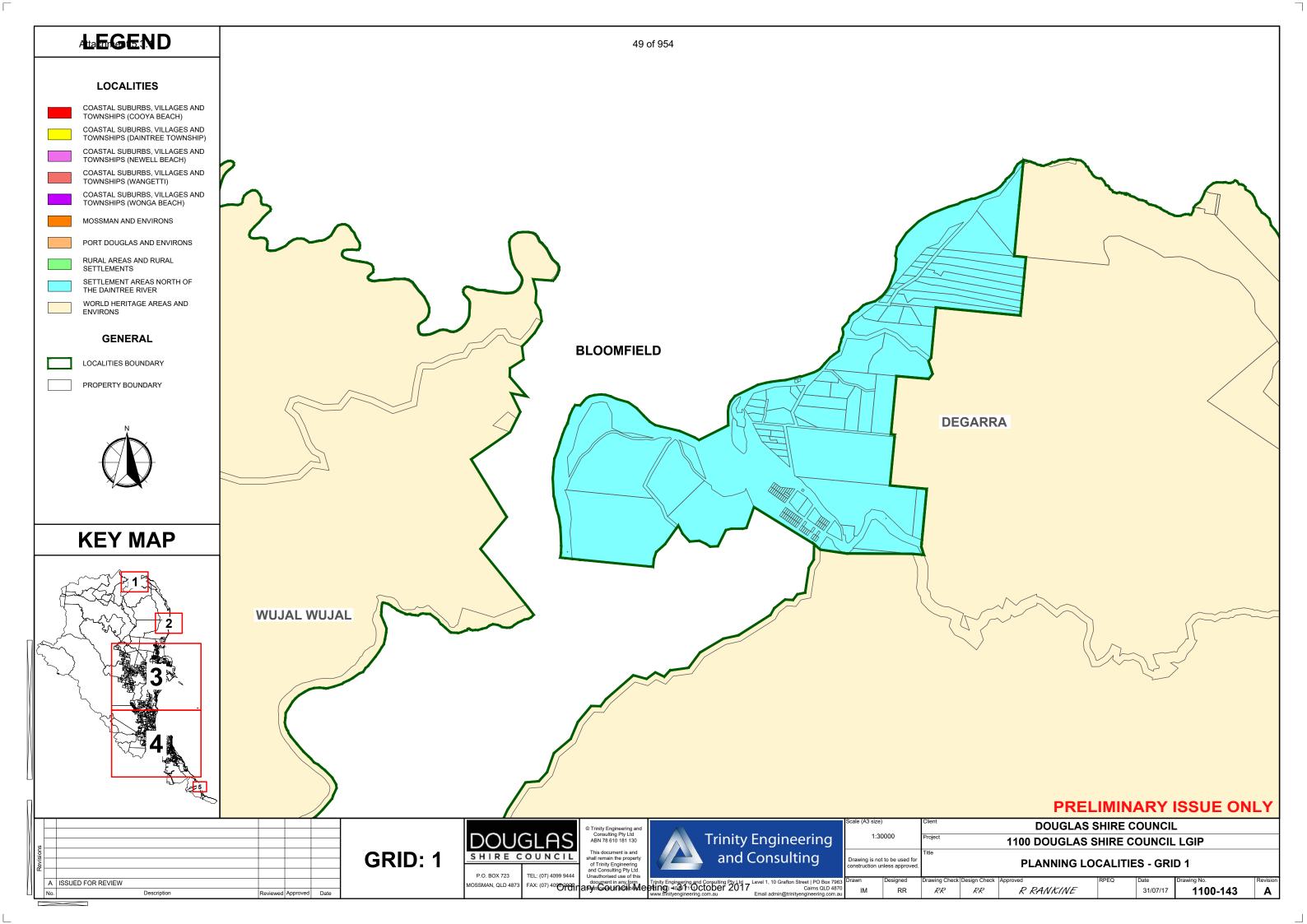
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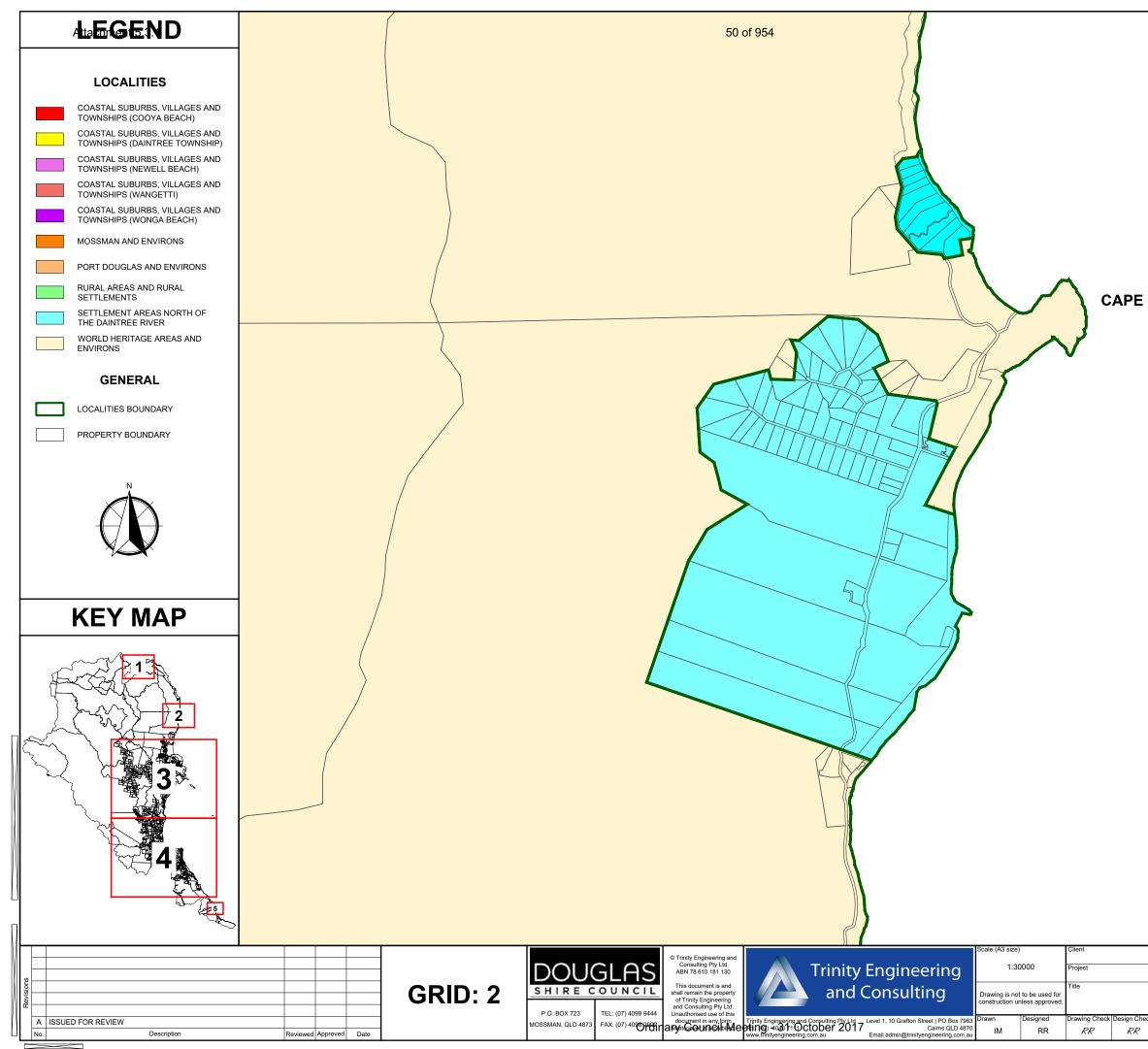
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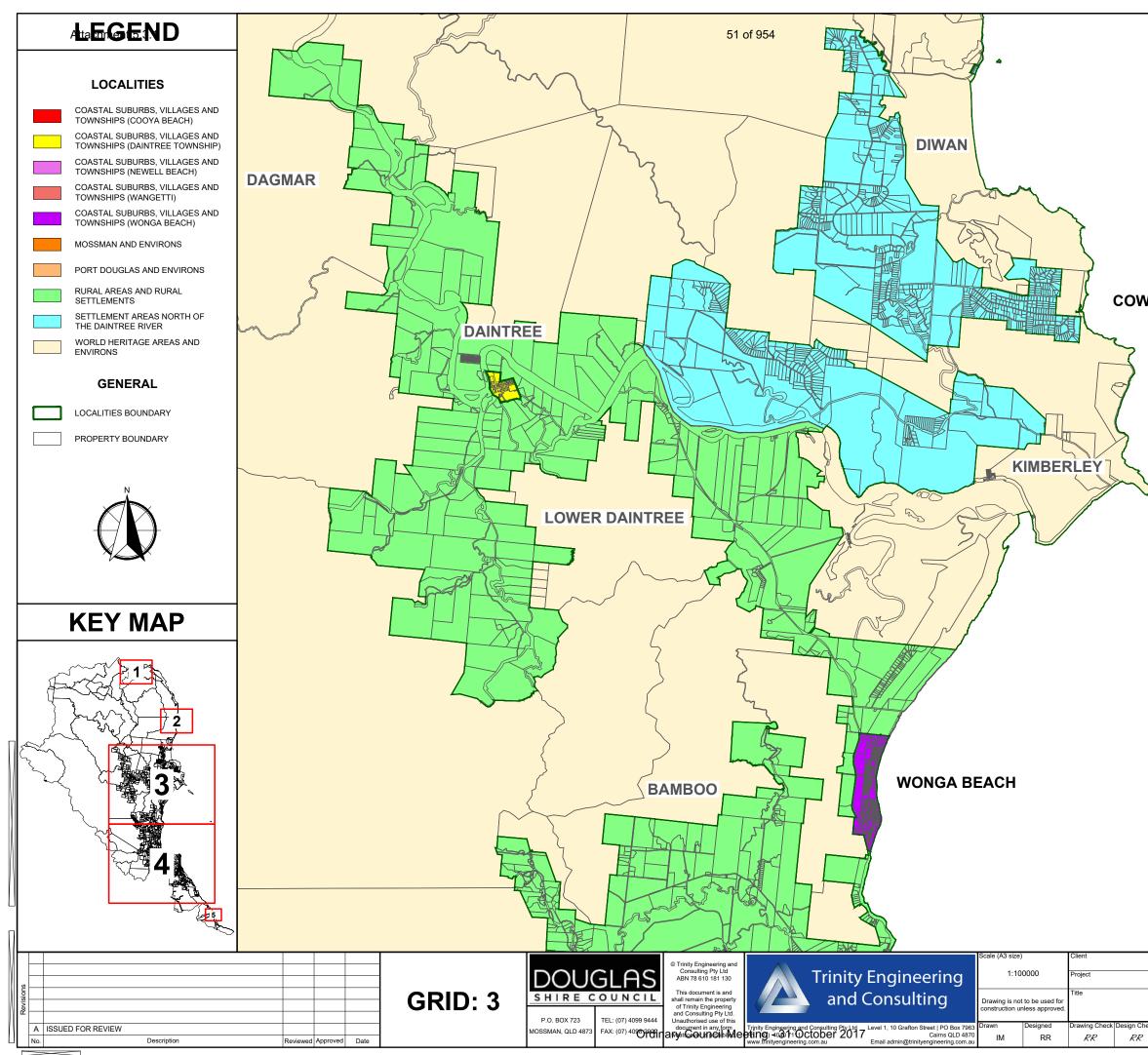
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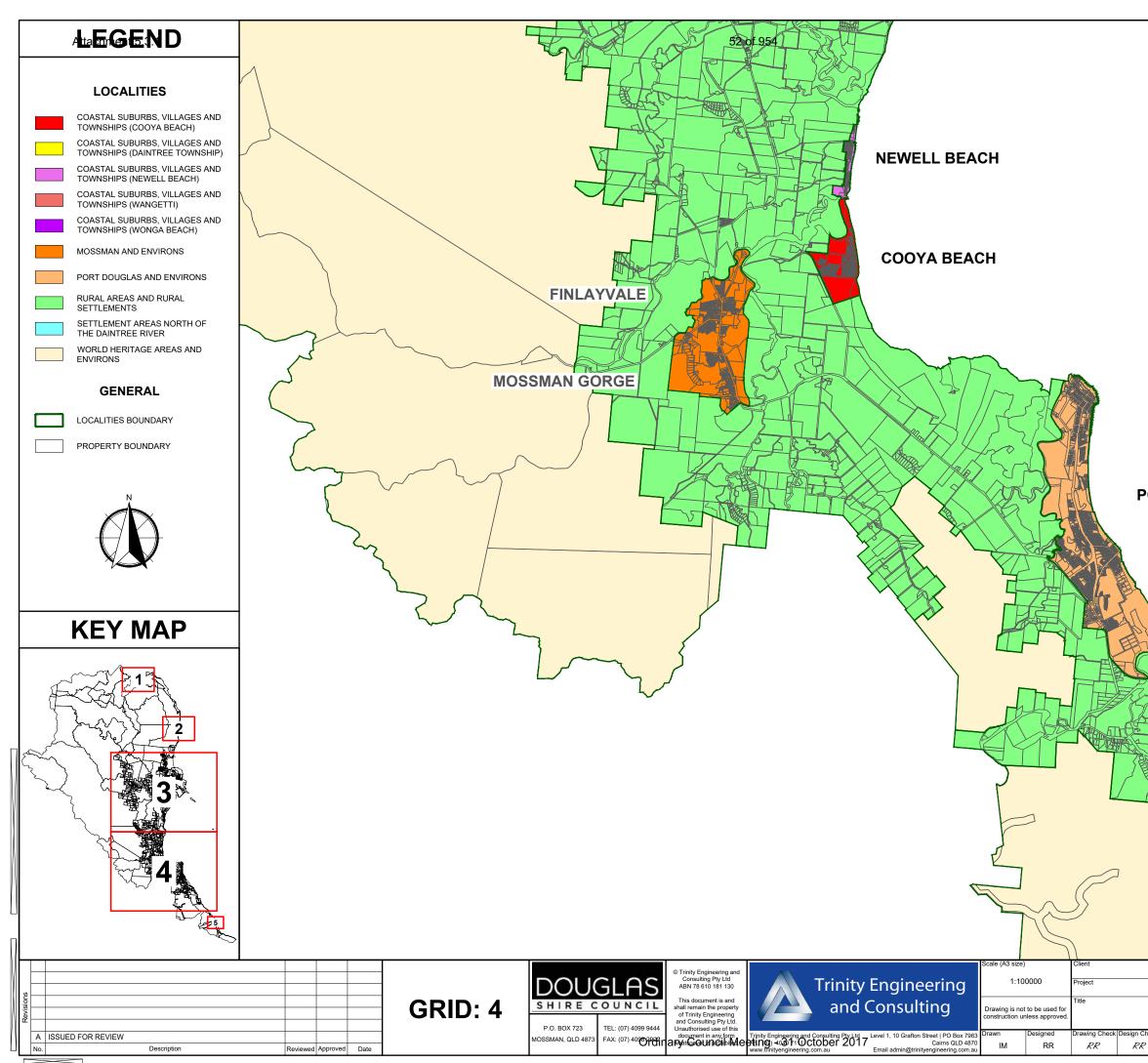
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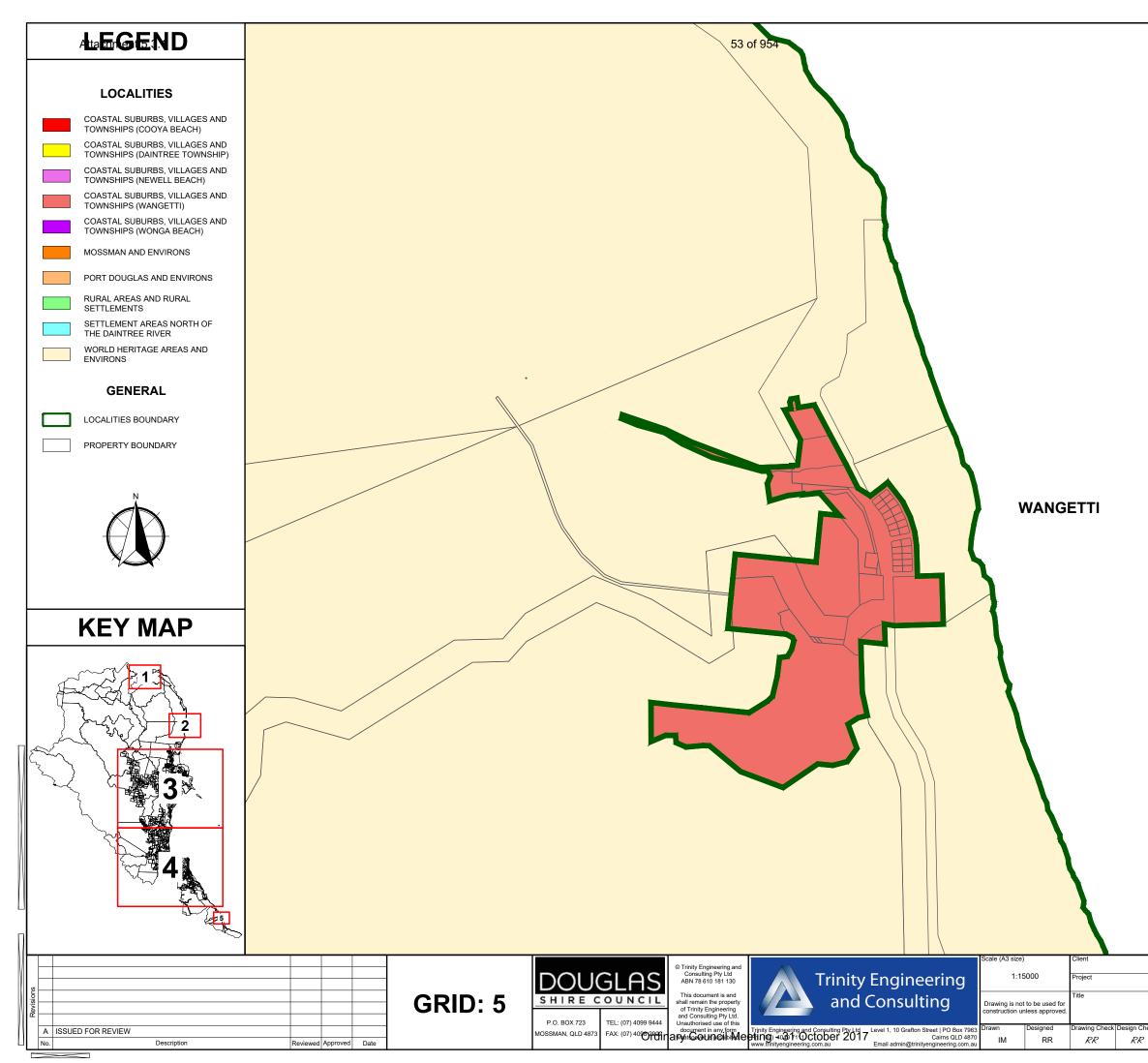
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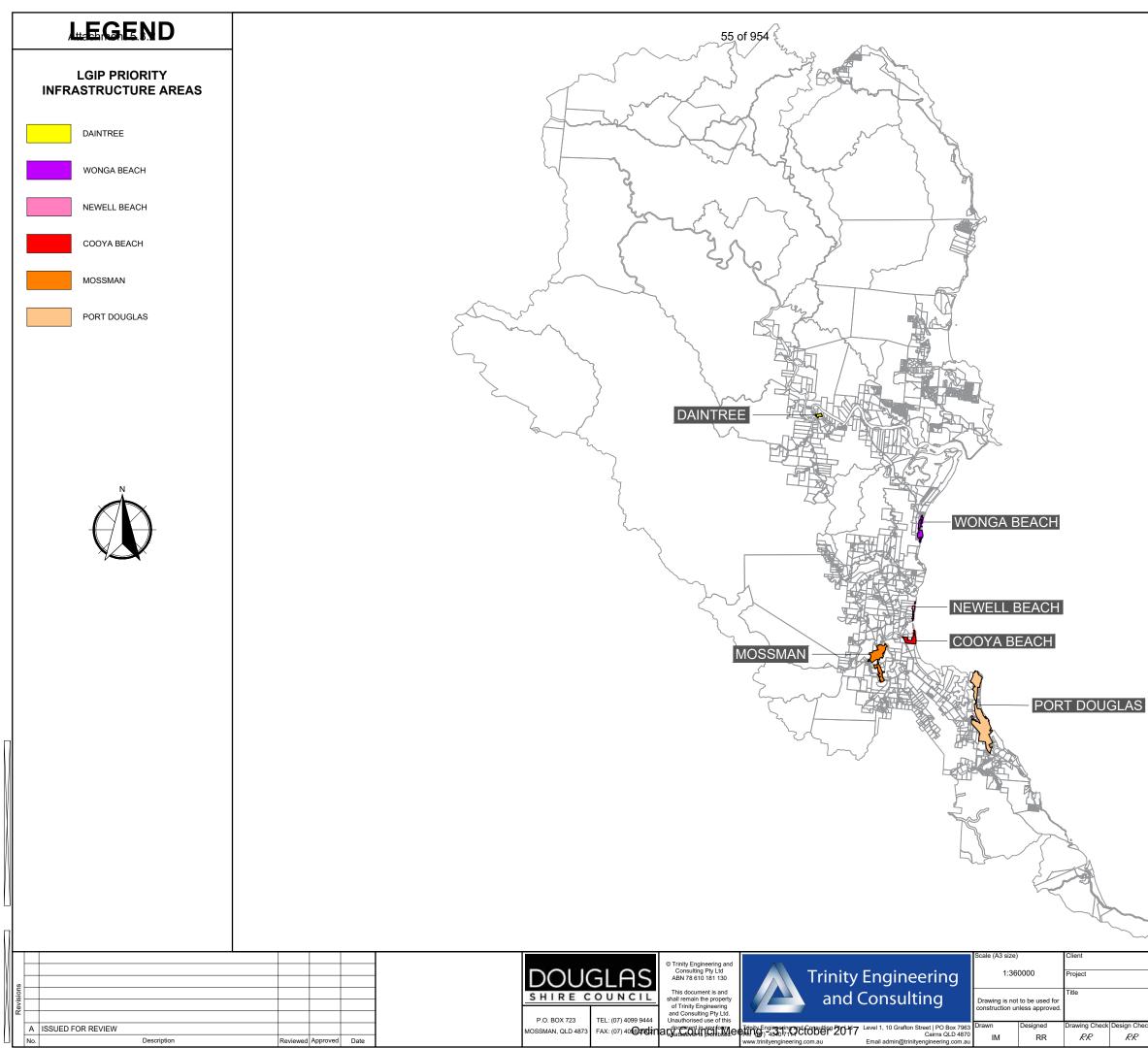
LOCAL GOVERNMENT INFRASTRUCTURE PLANS (PRIORITY INFRASTRUCTURE AREAS) for DOUGLAS SHIRE COUNCIL

SCHEDULE OF PROJECT DRAWINGS

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1100-131	PRIORITY INFRASTRUCTURE AREAS
1100-132	PRIORITY INFRASTRUCTURE AREAS KEY MAP
1100-133	PRIORITY INFRASTRUCTURE AREAS – GRID 1
1100-134	PRIORITY INFRASTRUCTURE AREAS – GRID 2
1100-135	PRIORITY INFRASTRUCTURE AREAS – GRID 3
1100-136	PRIORITY INFRASTRUCTURE AREAS – GRID 4
1100–137	PRIORITY INFRASTRUCTURE AREAS – GRID 5

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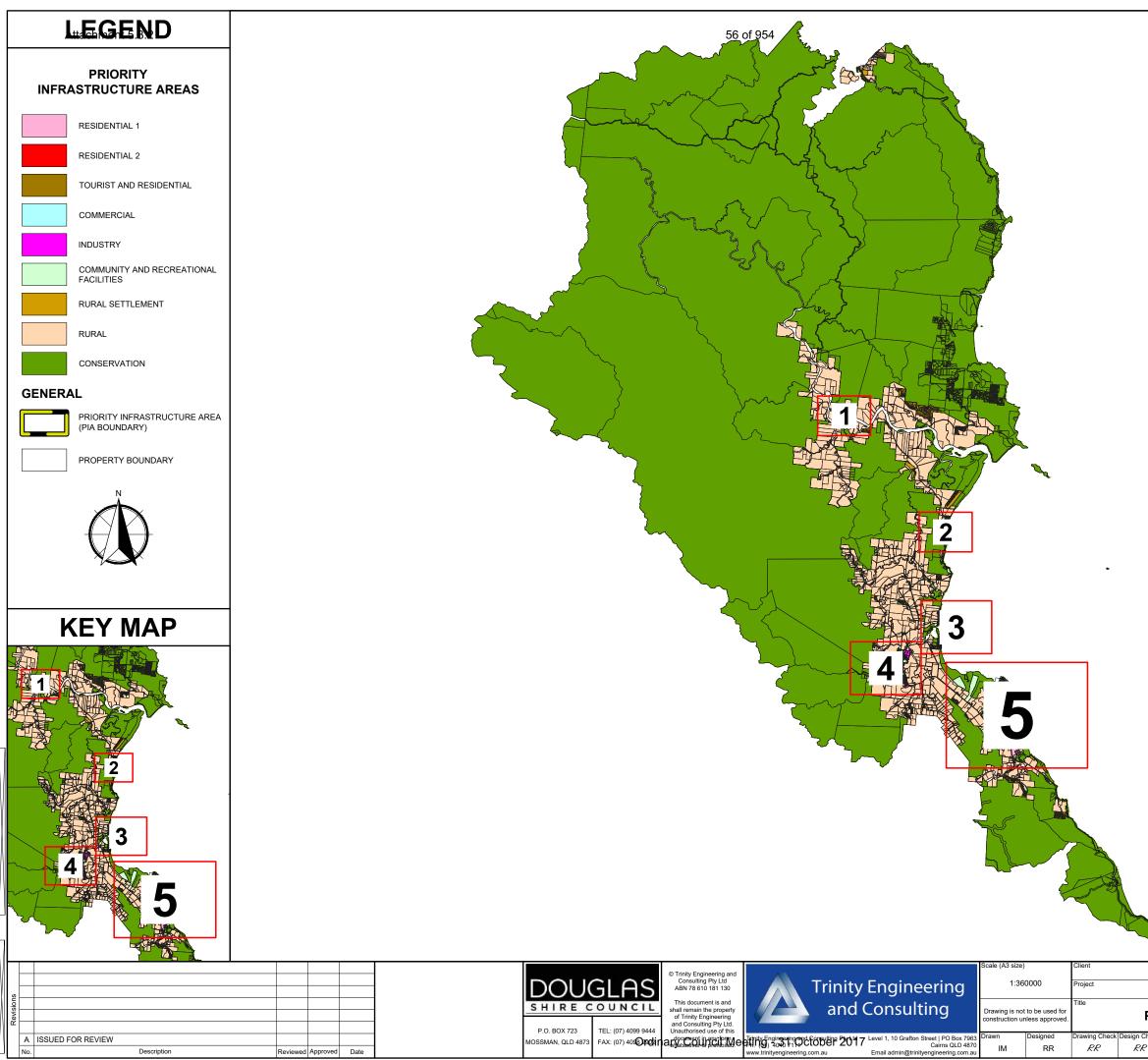
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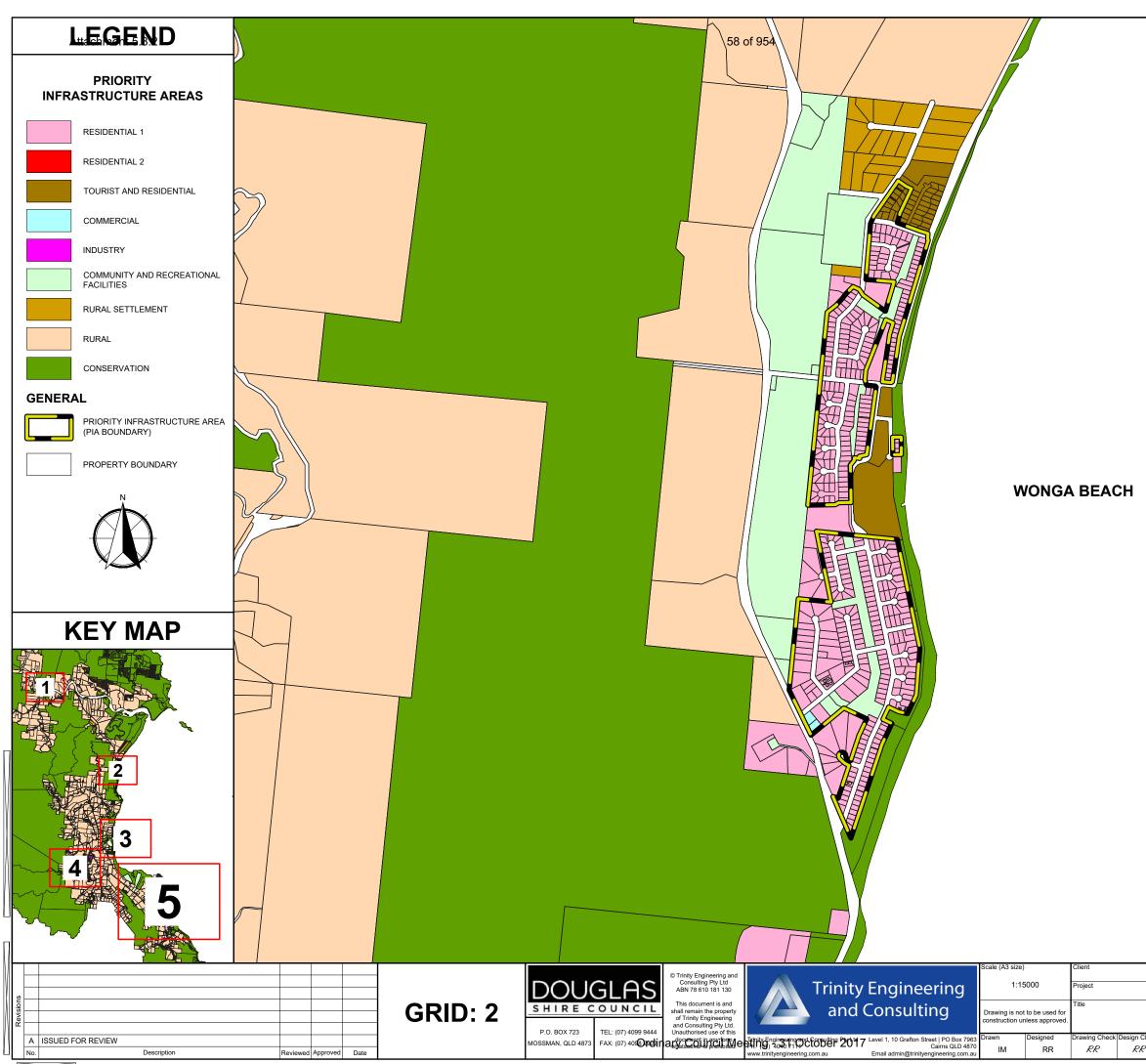
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PRIORITY INFRASTRUCTURE AREAS KEY MAP

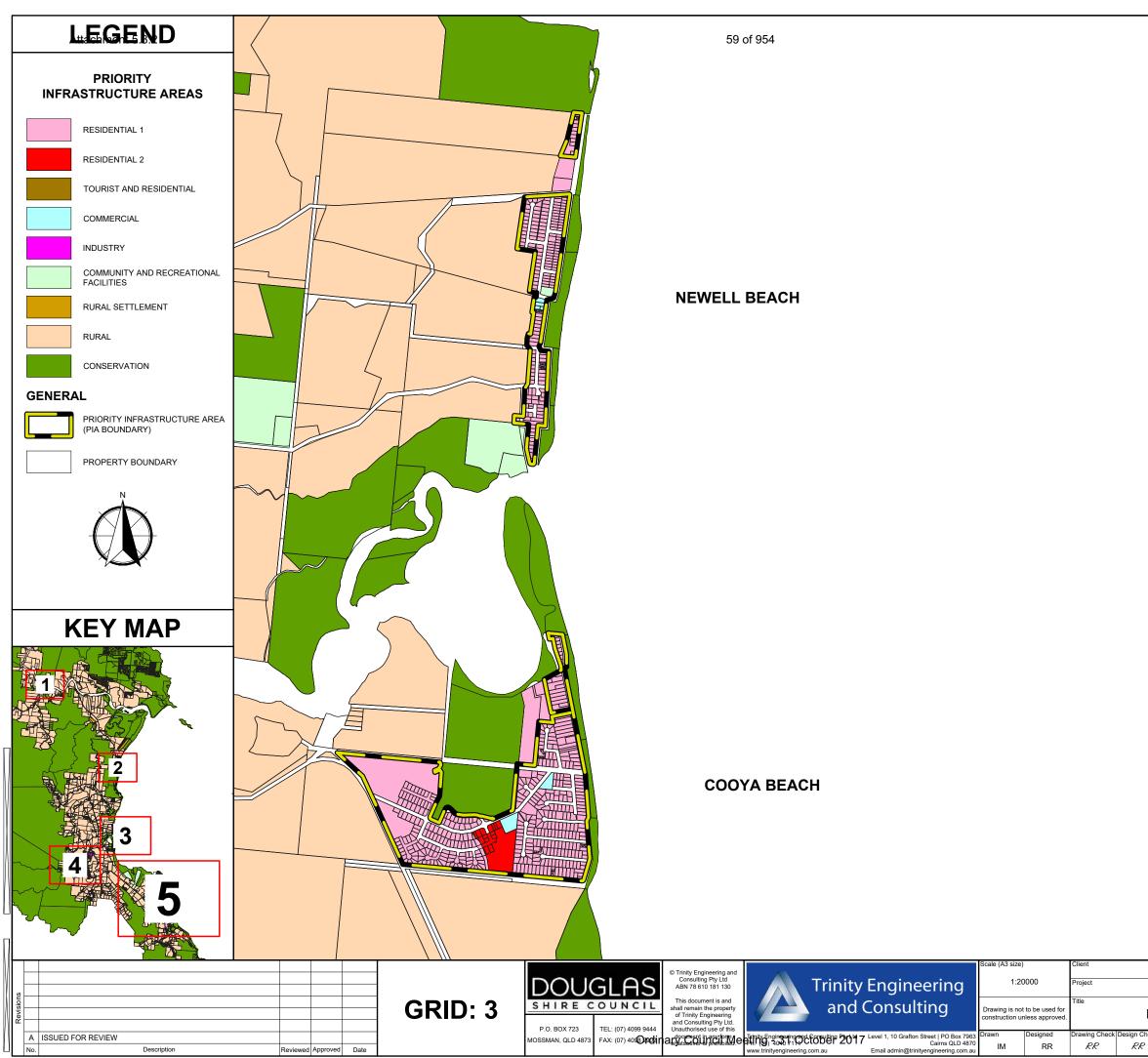
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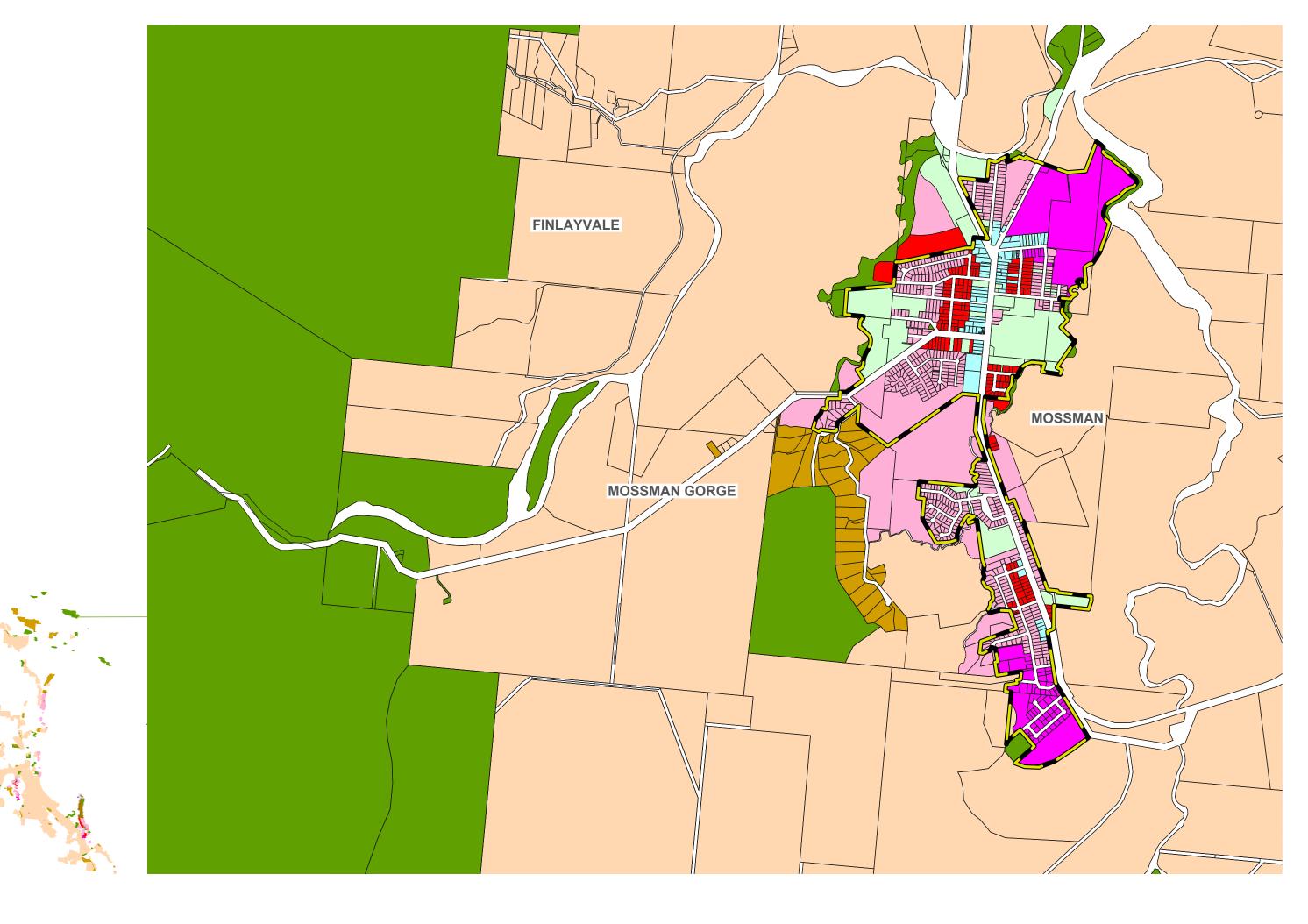
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LOCAL GOVERNMENT INFRASTRUCTURE PLANS (WATER TRUNK INFRASTRUCTURE) for DOUGLAS SHIRE COUNCIL

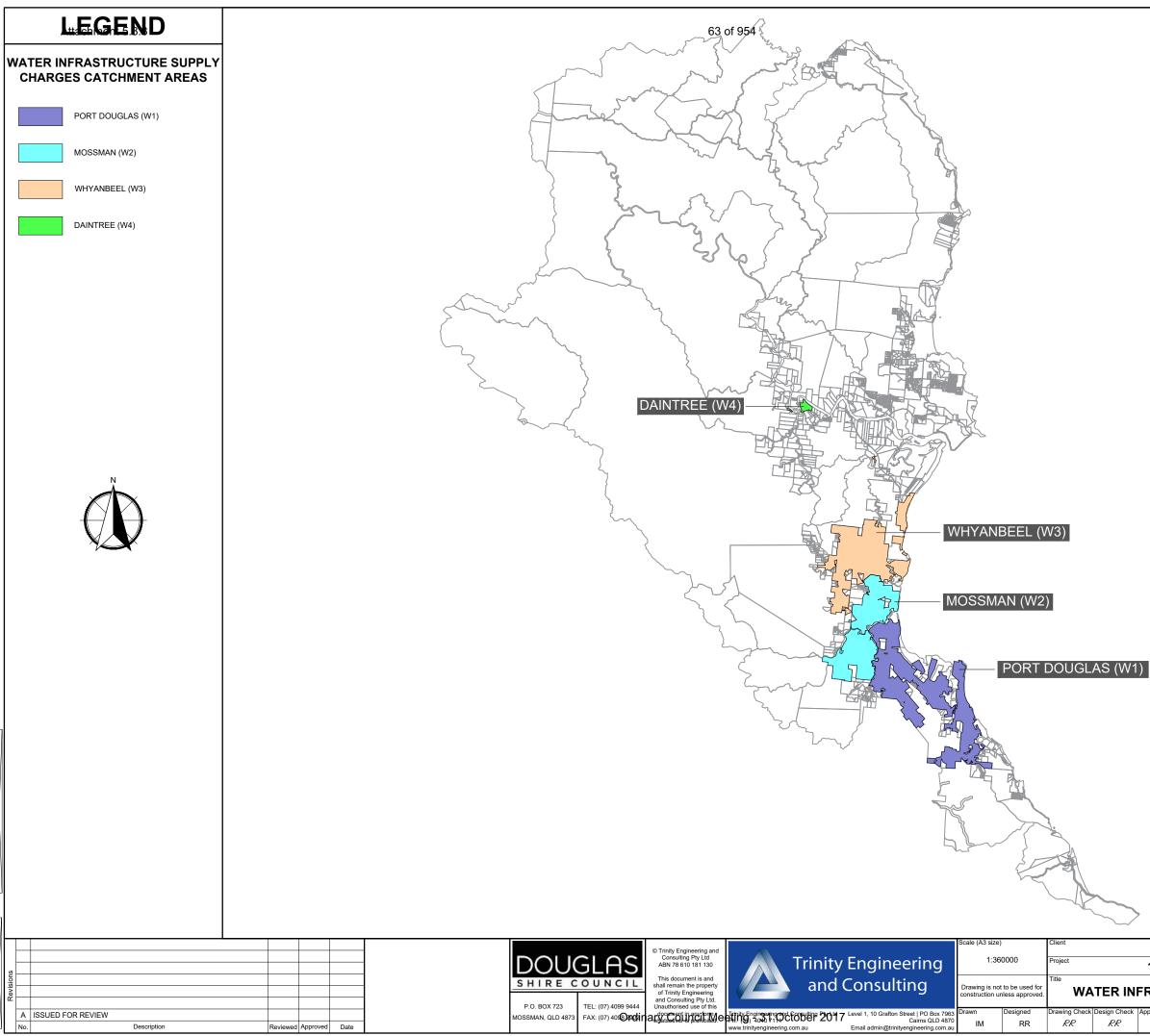
SCHEDULE OF PROJECT DRAWINGS

1100-100	DRAWING INDEX
1100-101	WATER INFRASTRUCTURE SUPPLY CHARGES CATCHMENTS
1100-102	EXISTING WATER TRUNK INFRASTRUCTURE KEY MAP
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EXISTING RECYCLED WATER TRUNK INFRASTRUCTURE KEY MAP
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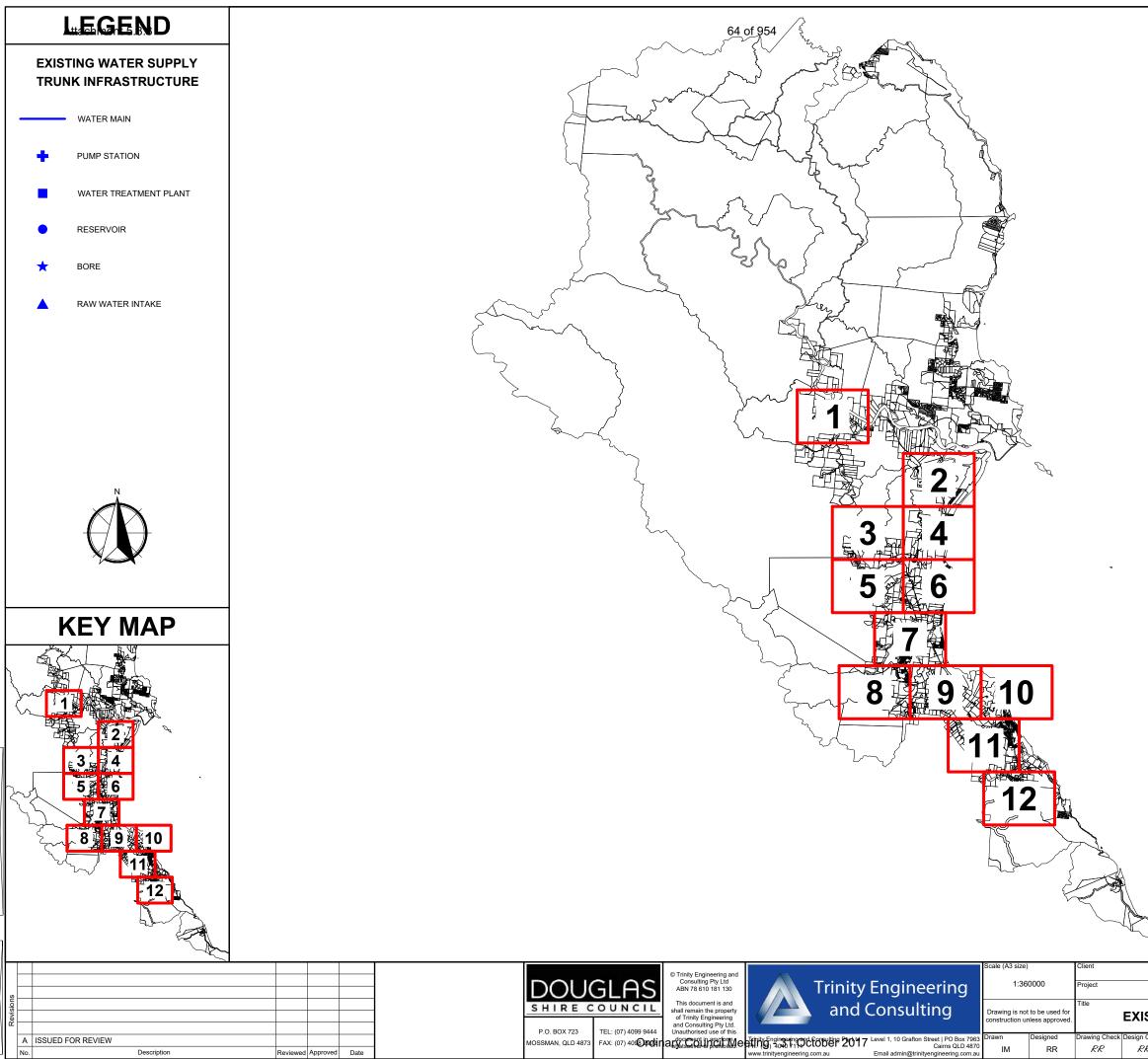
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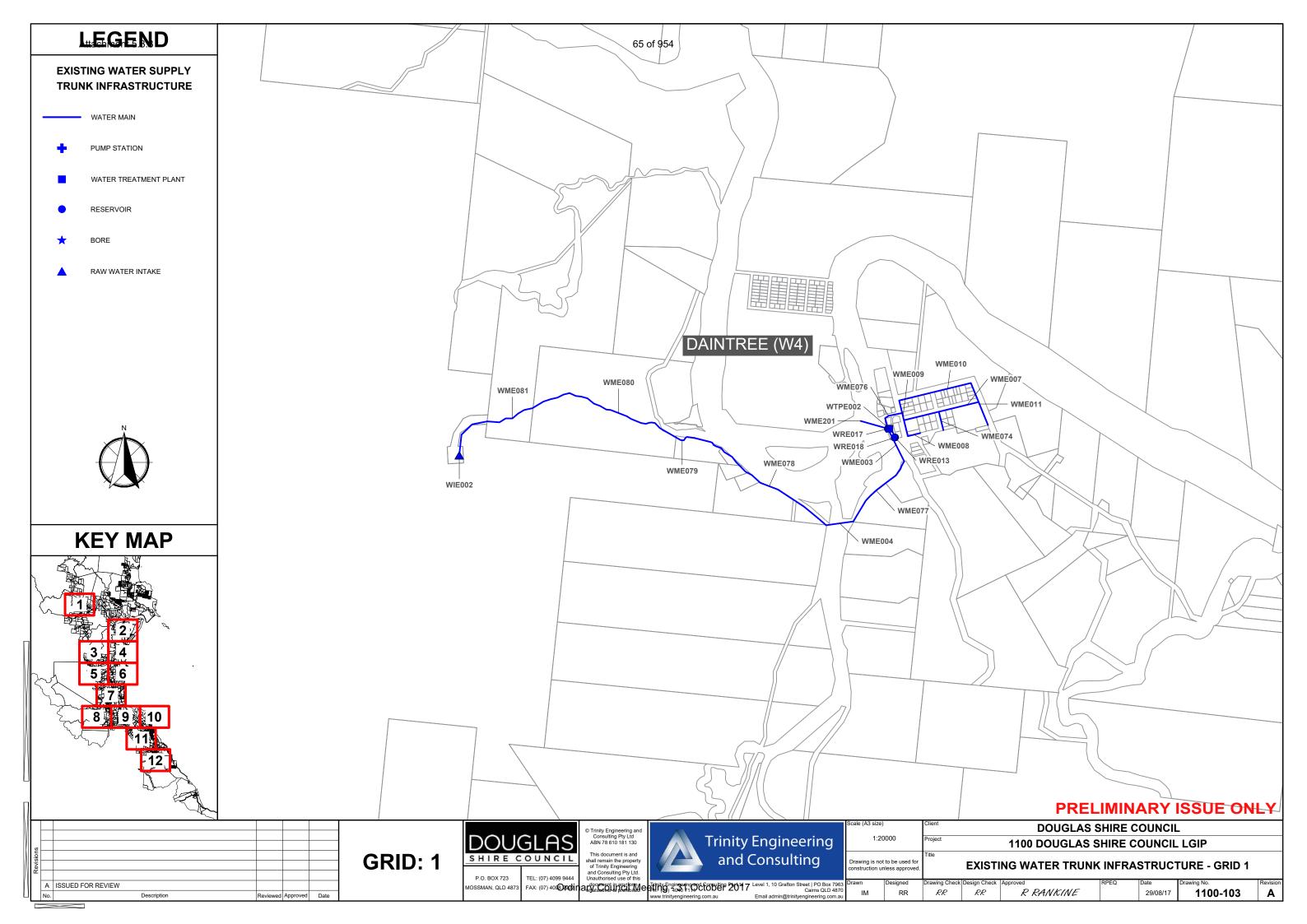
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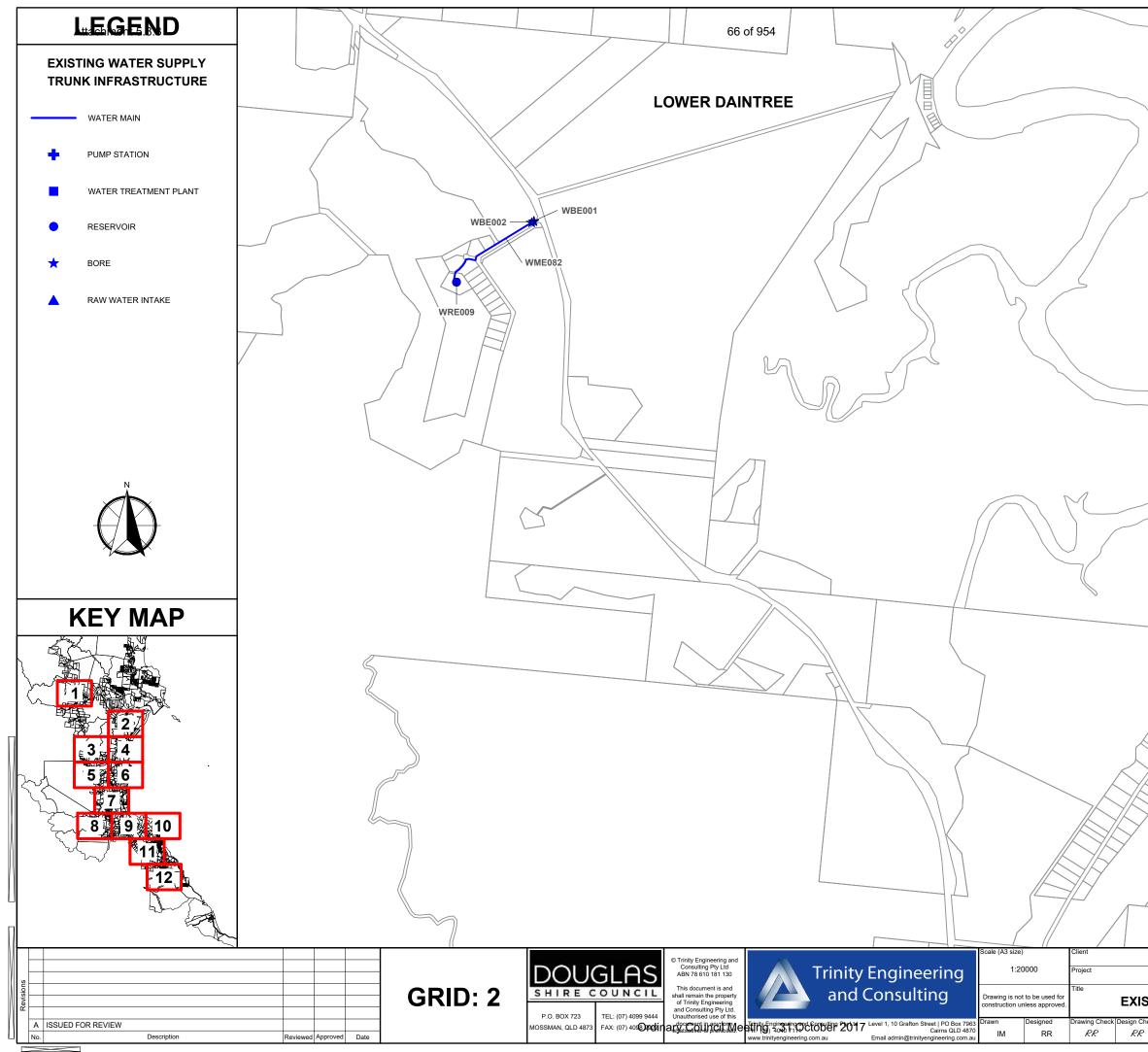
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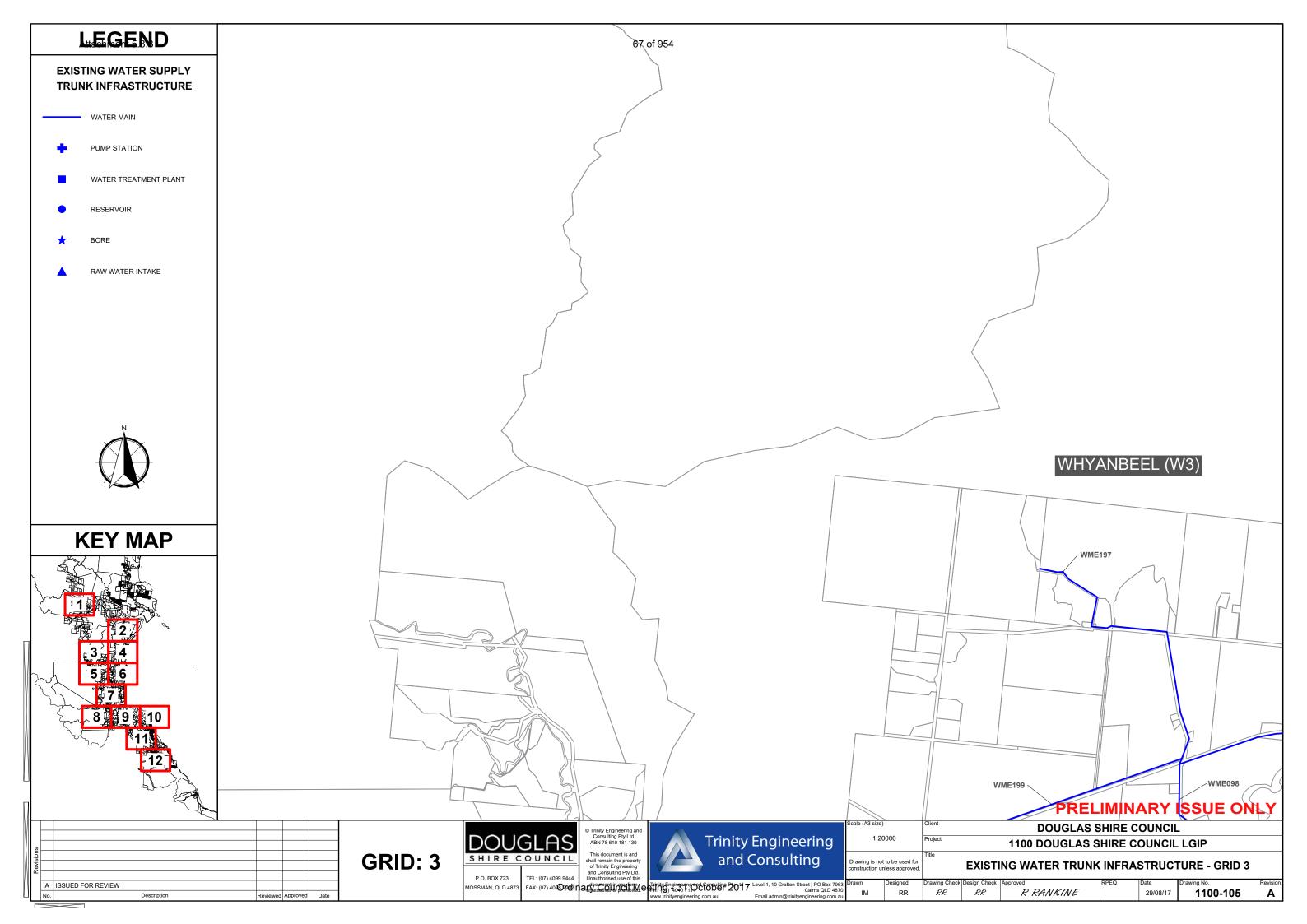
EXISTING WATER TRUNK INFRASTRUCTURE KEY MAP

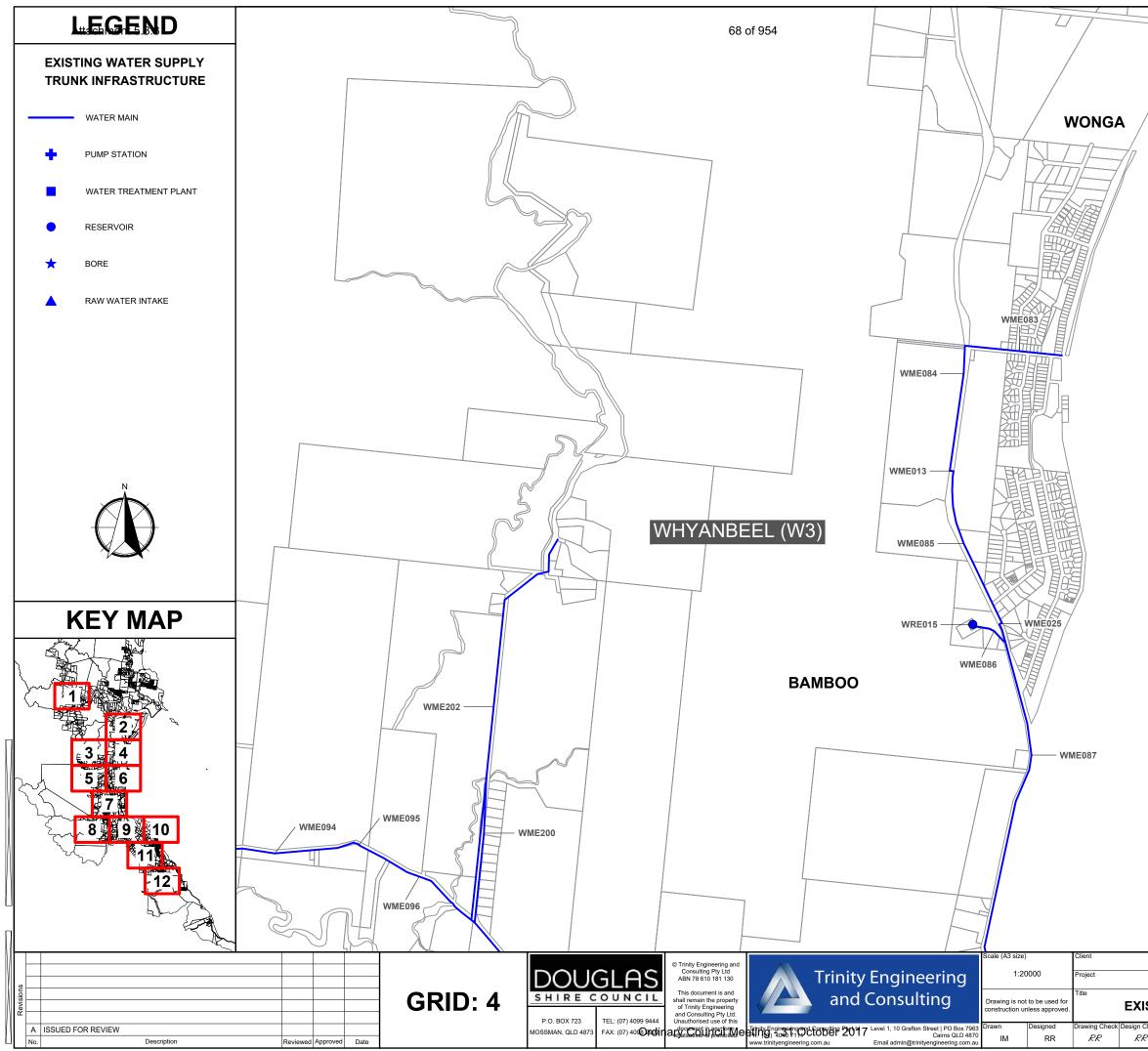
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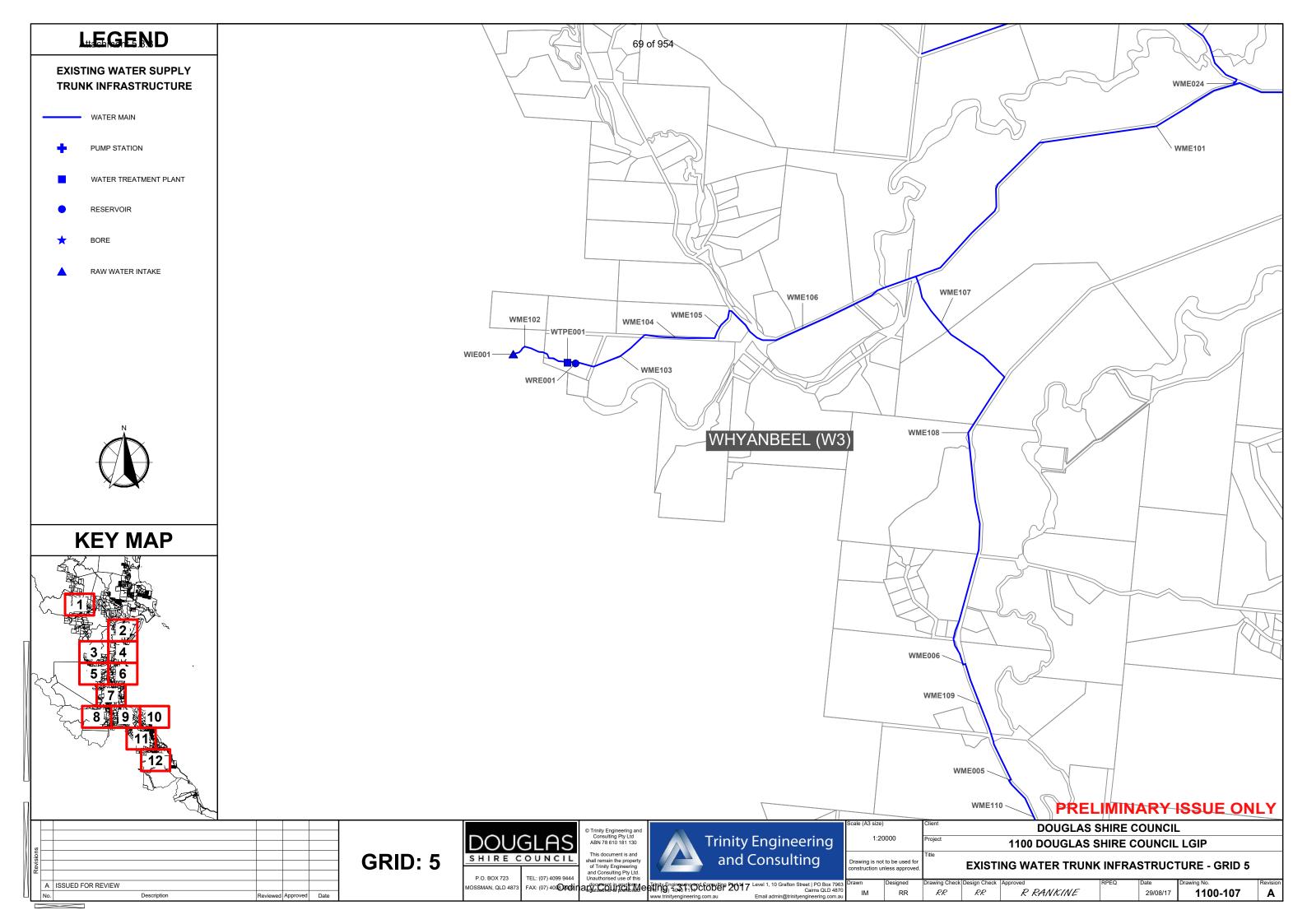


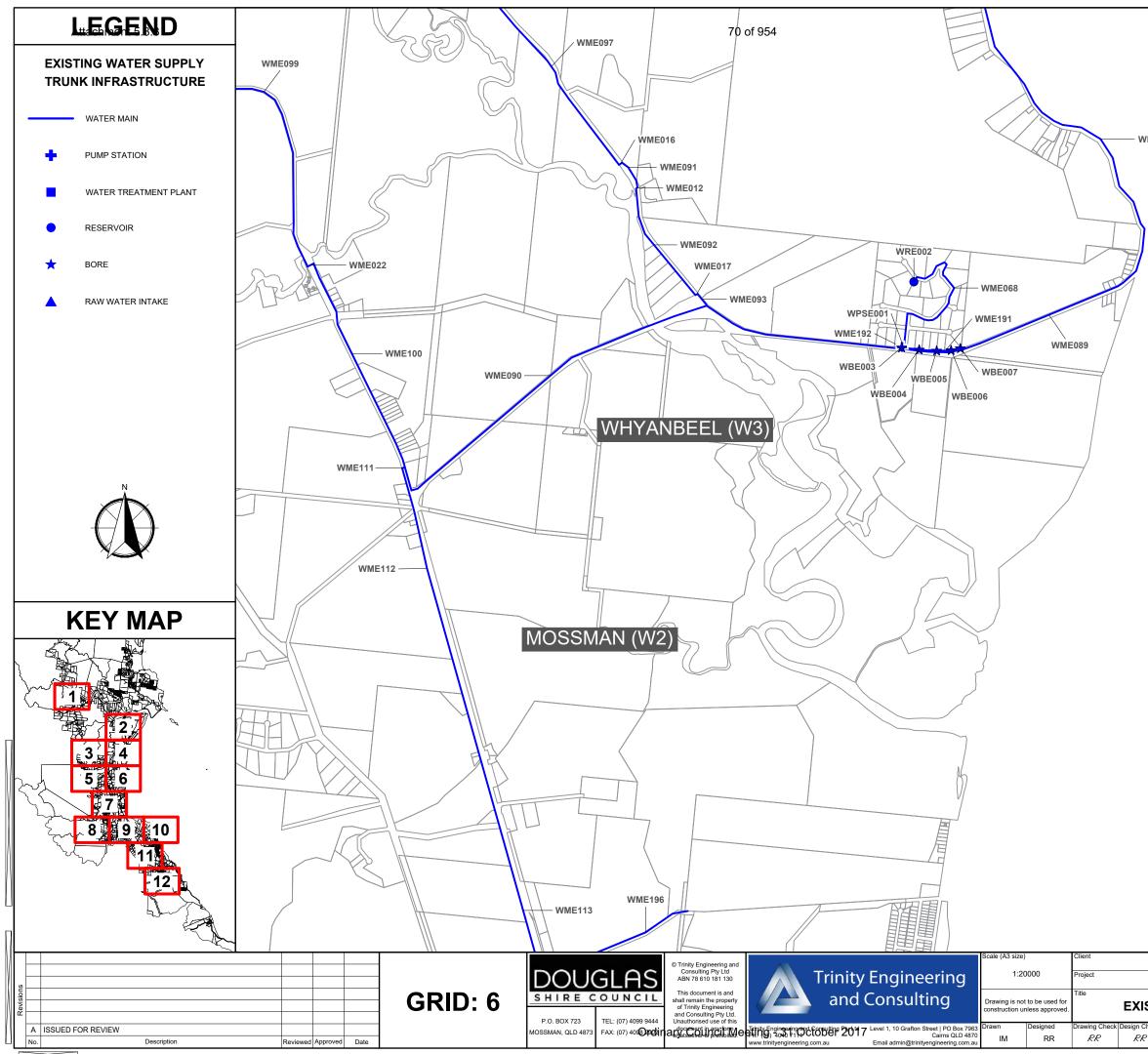


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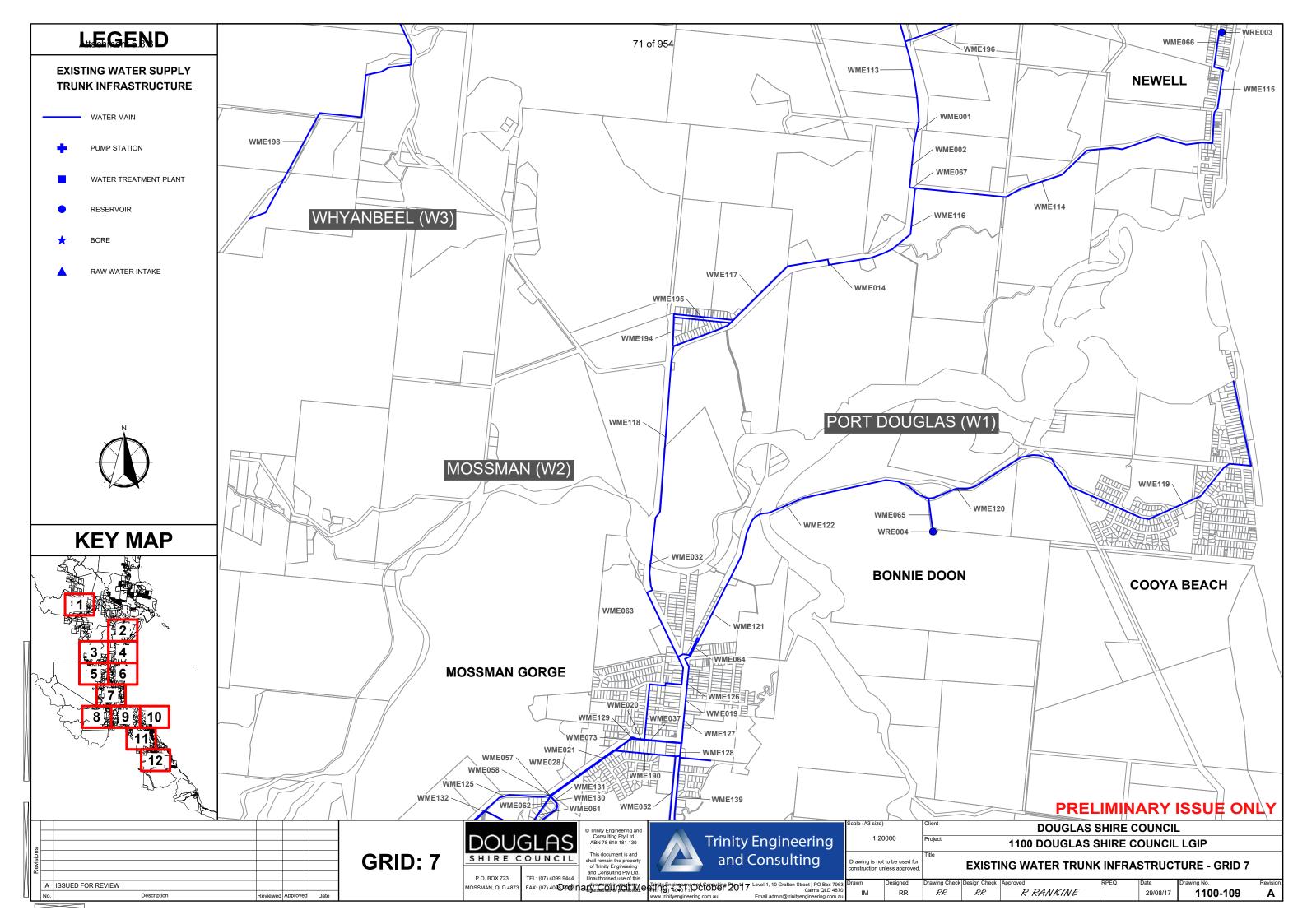
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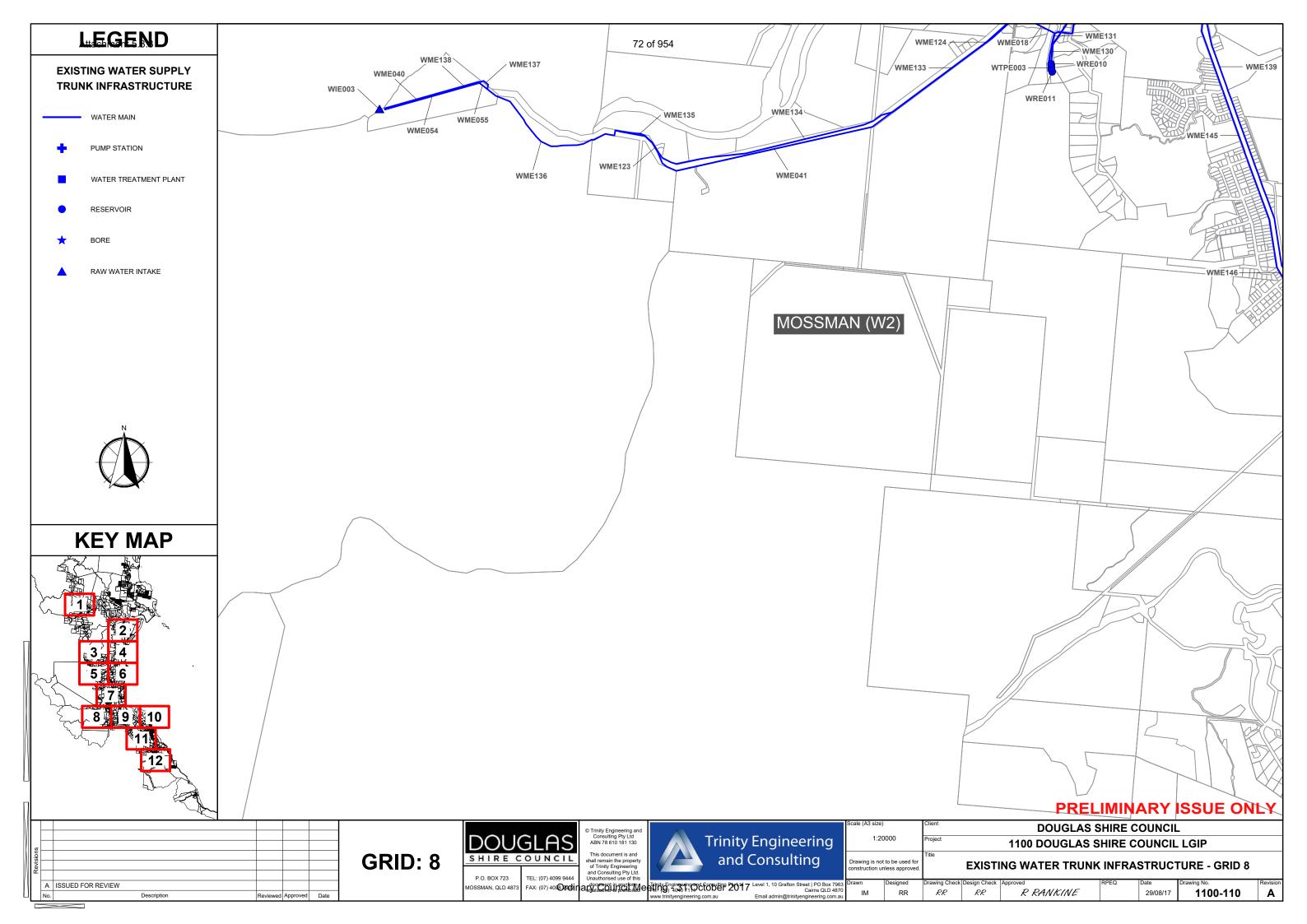
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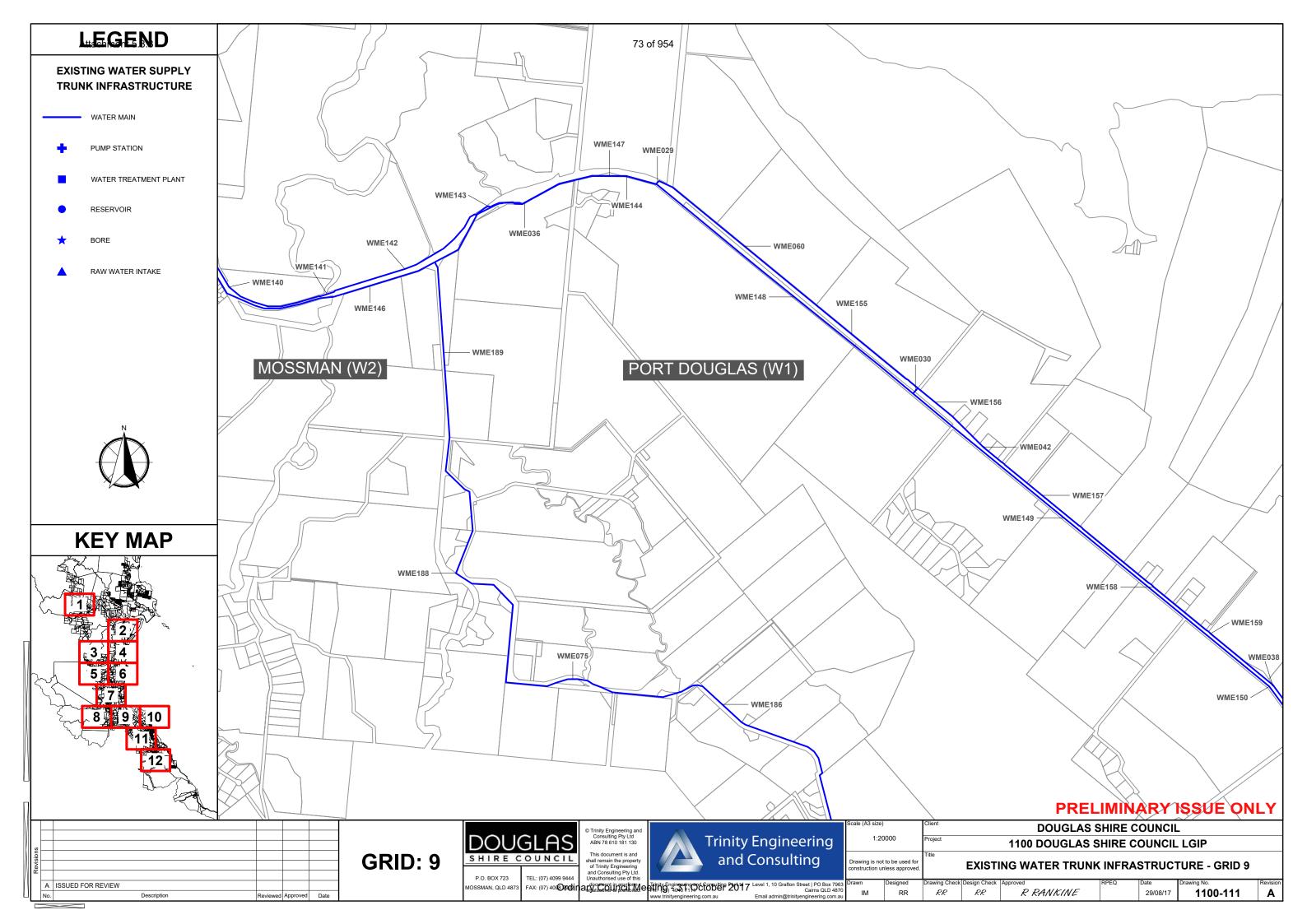
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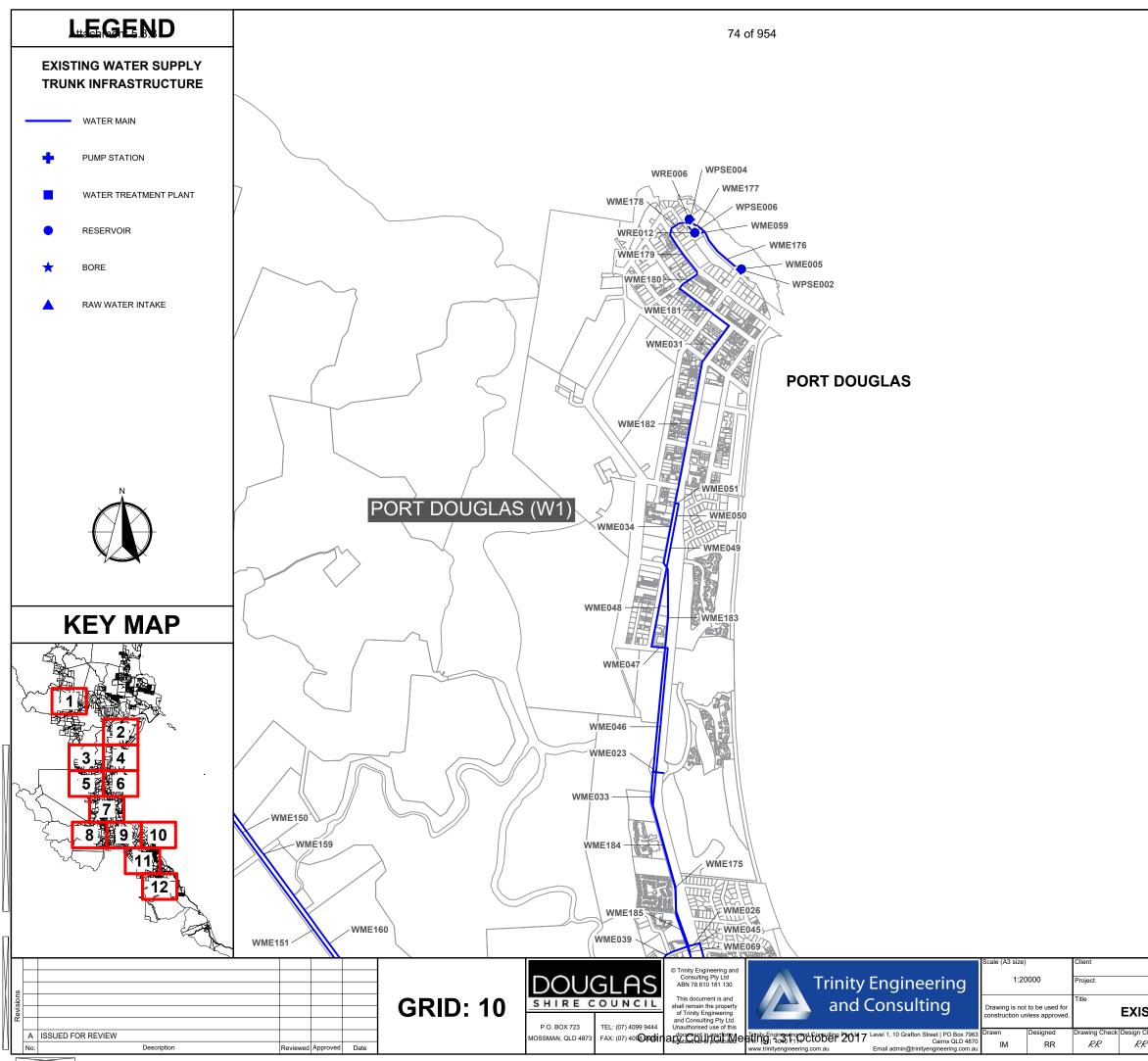
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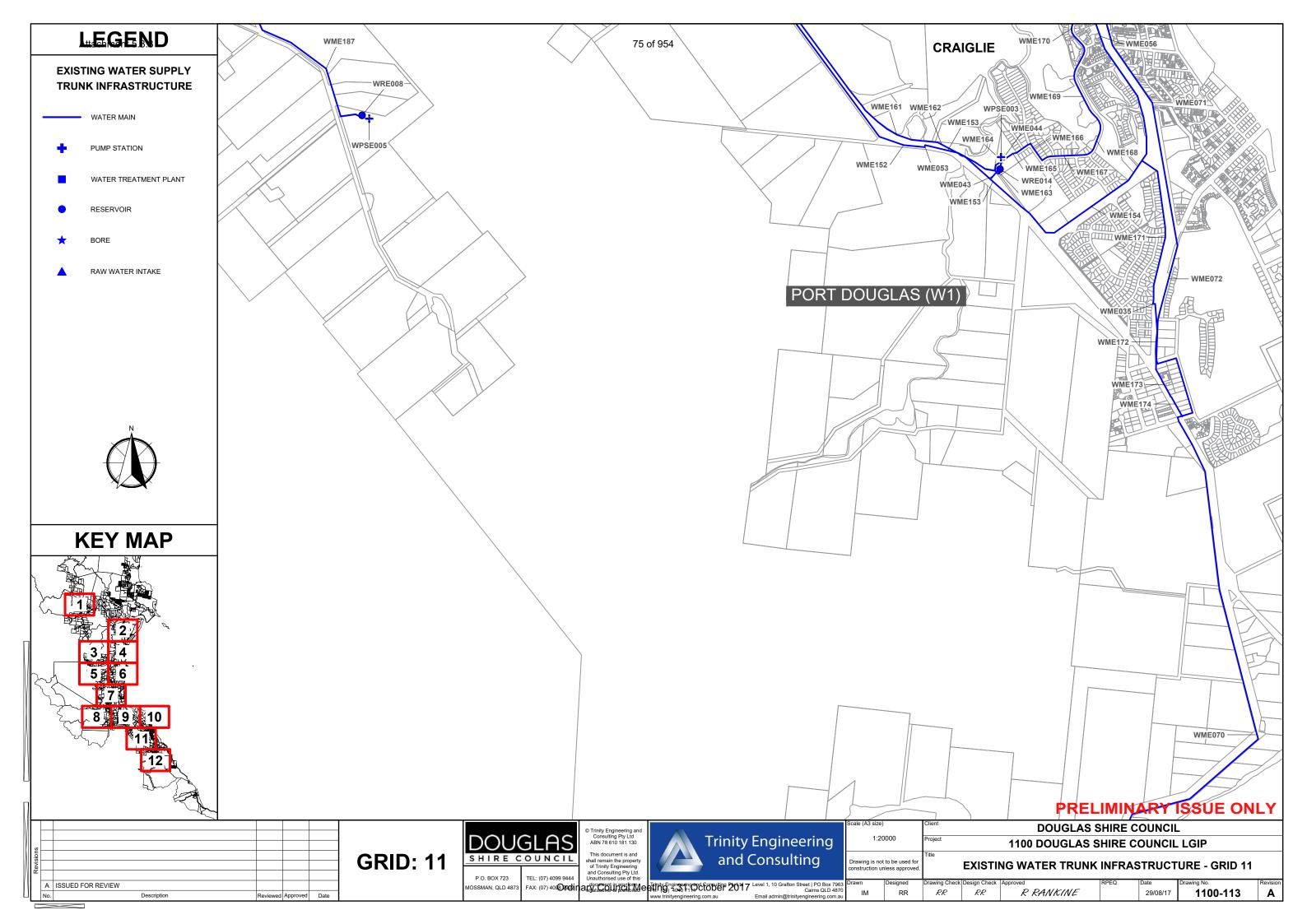


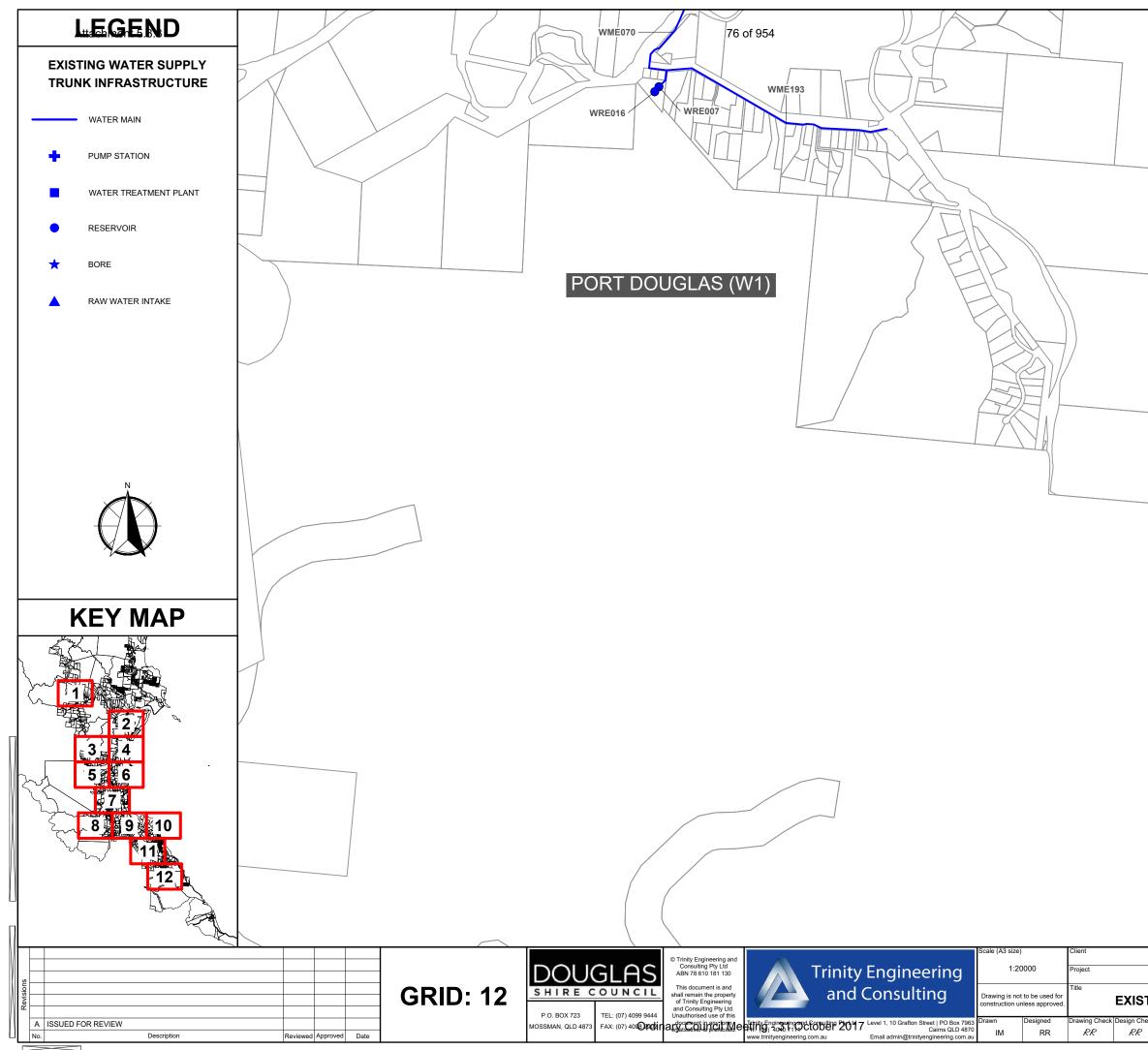


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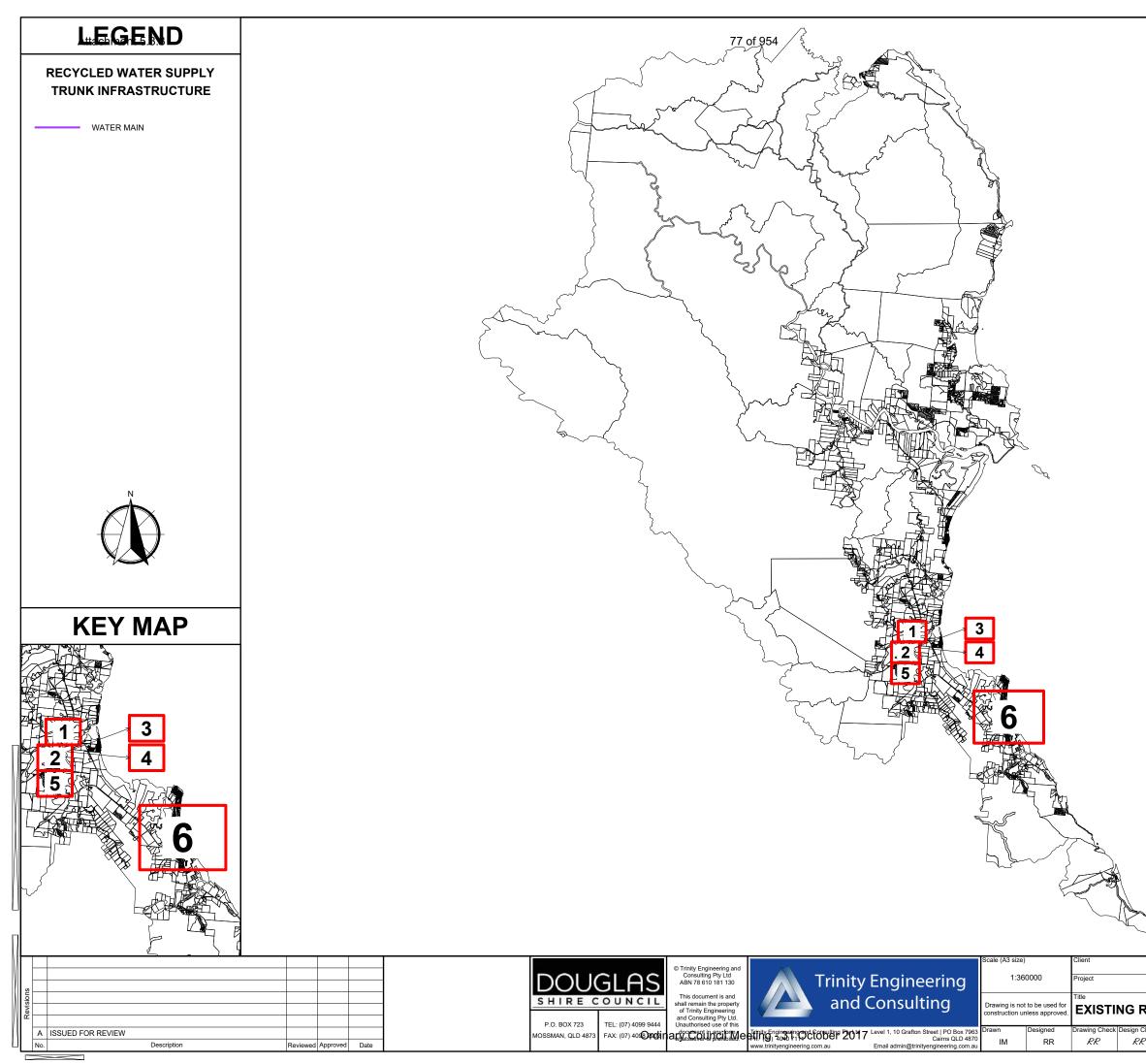
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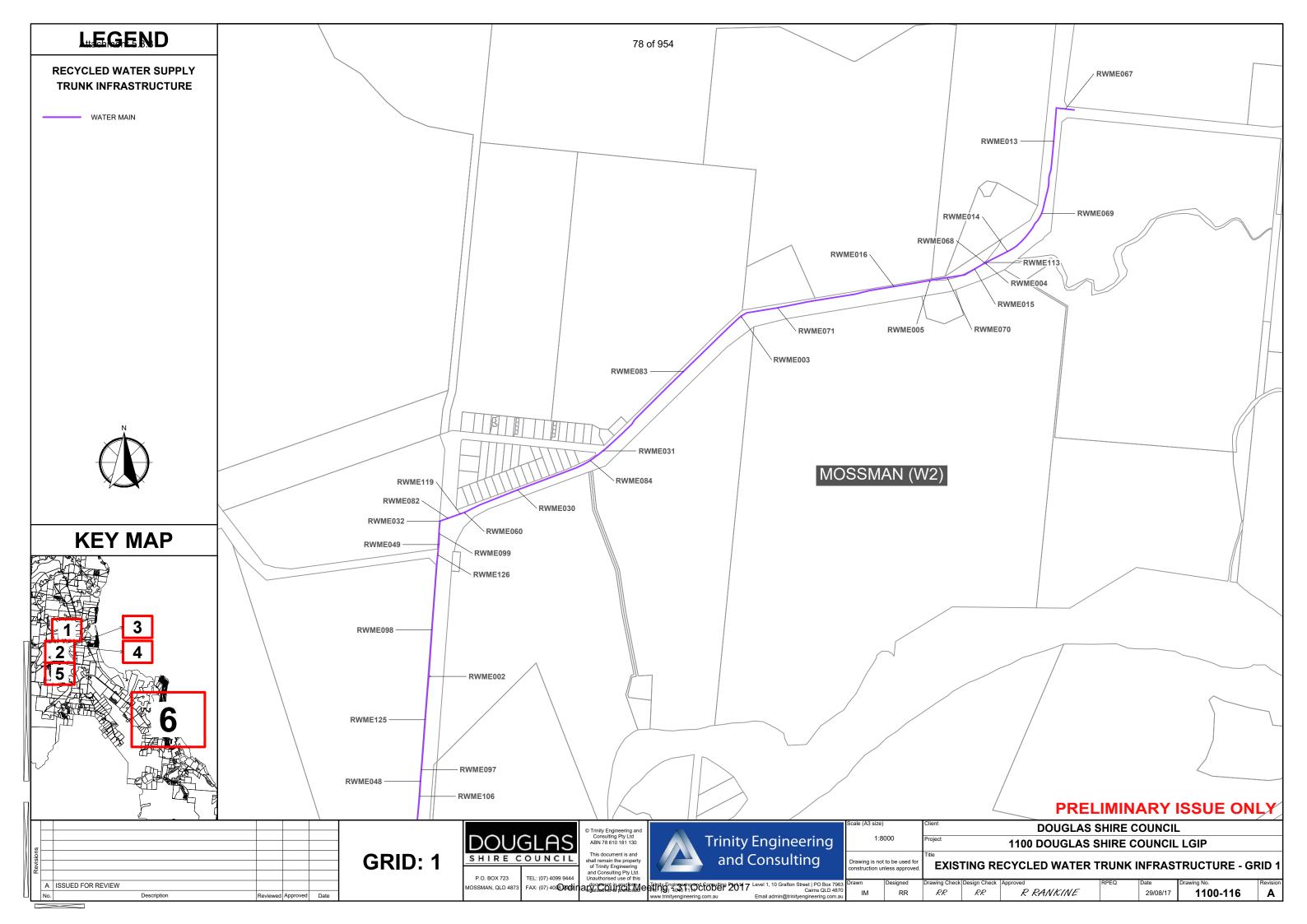
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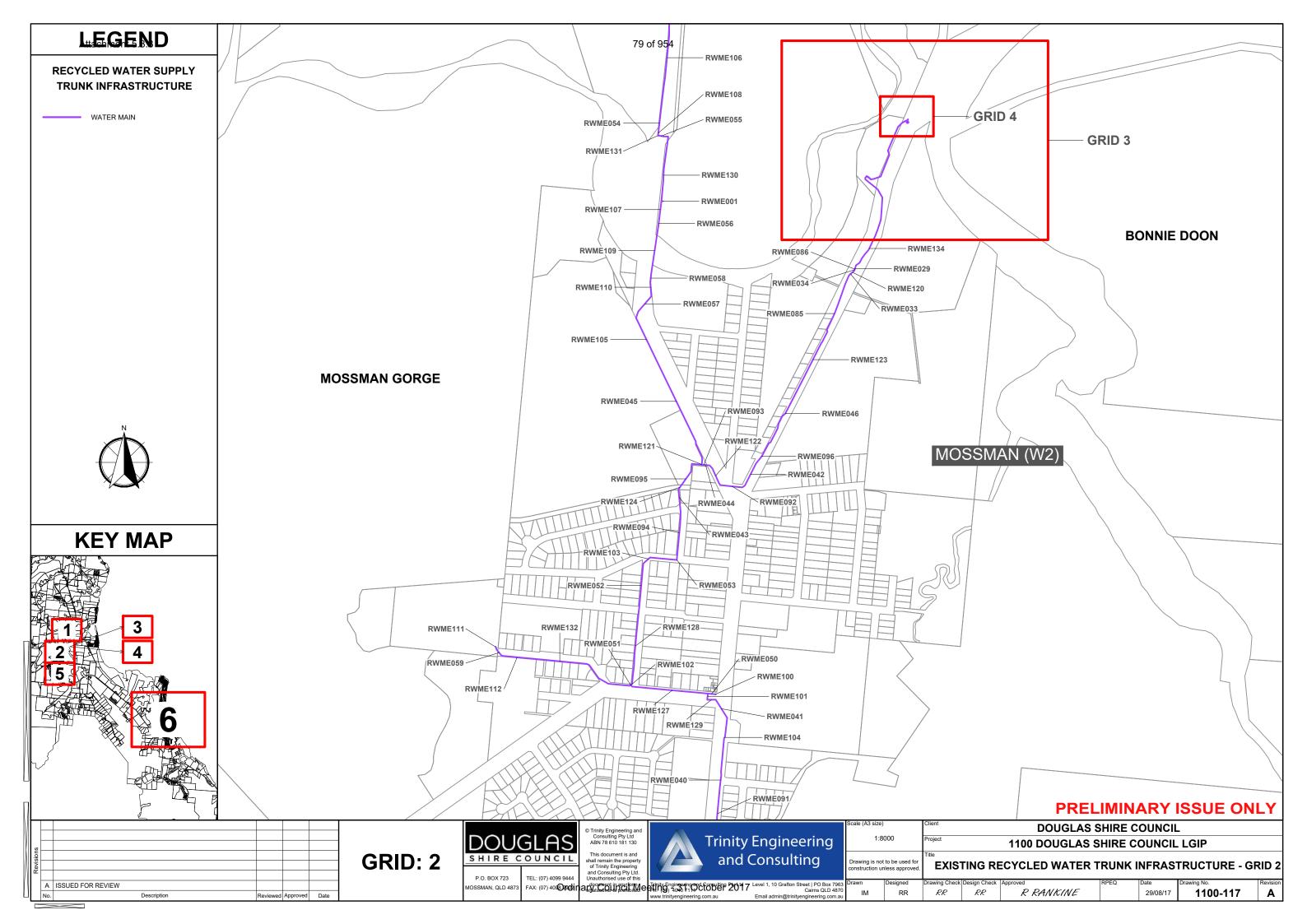


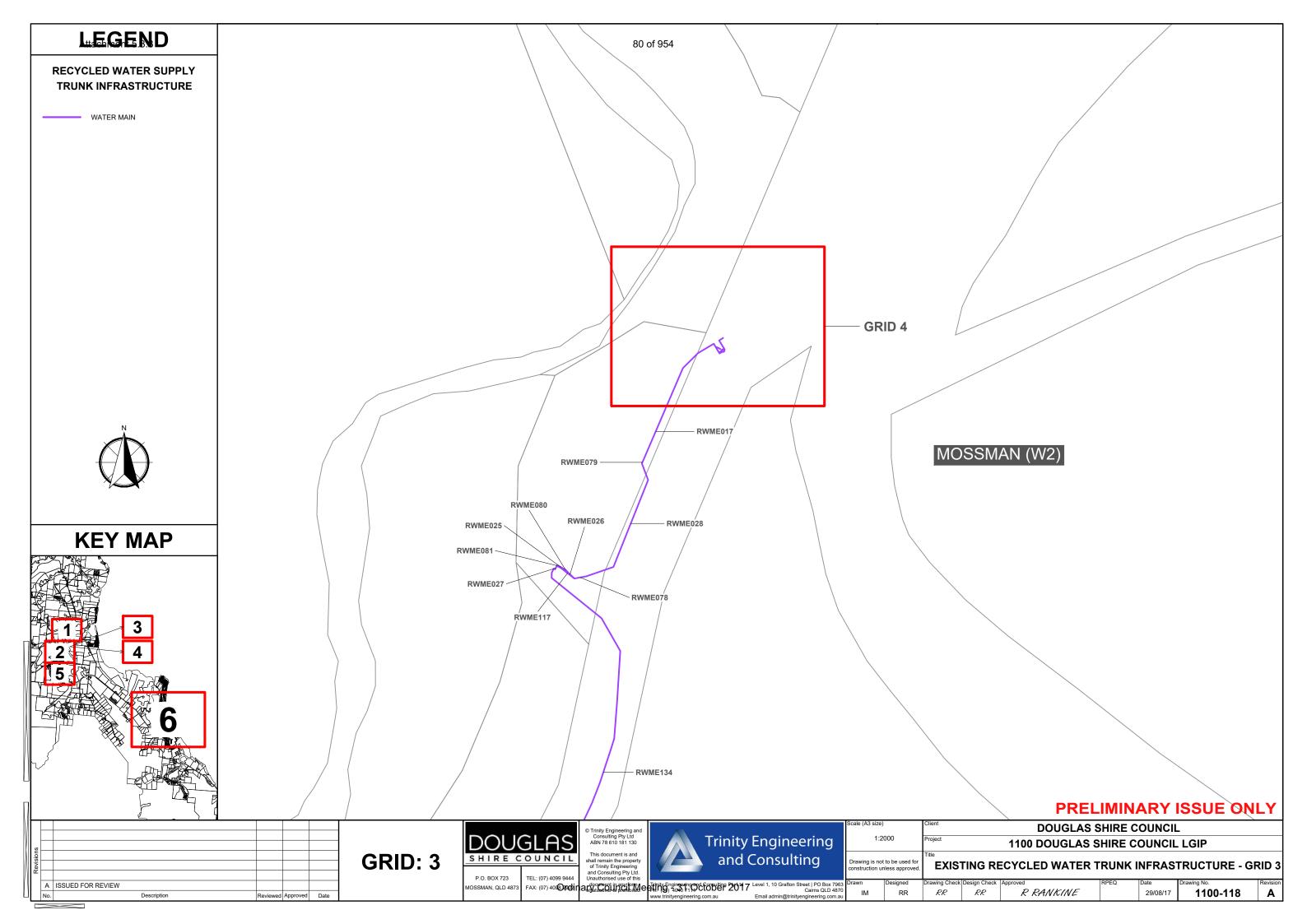
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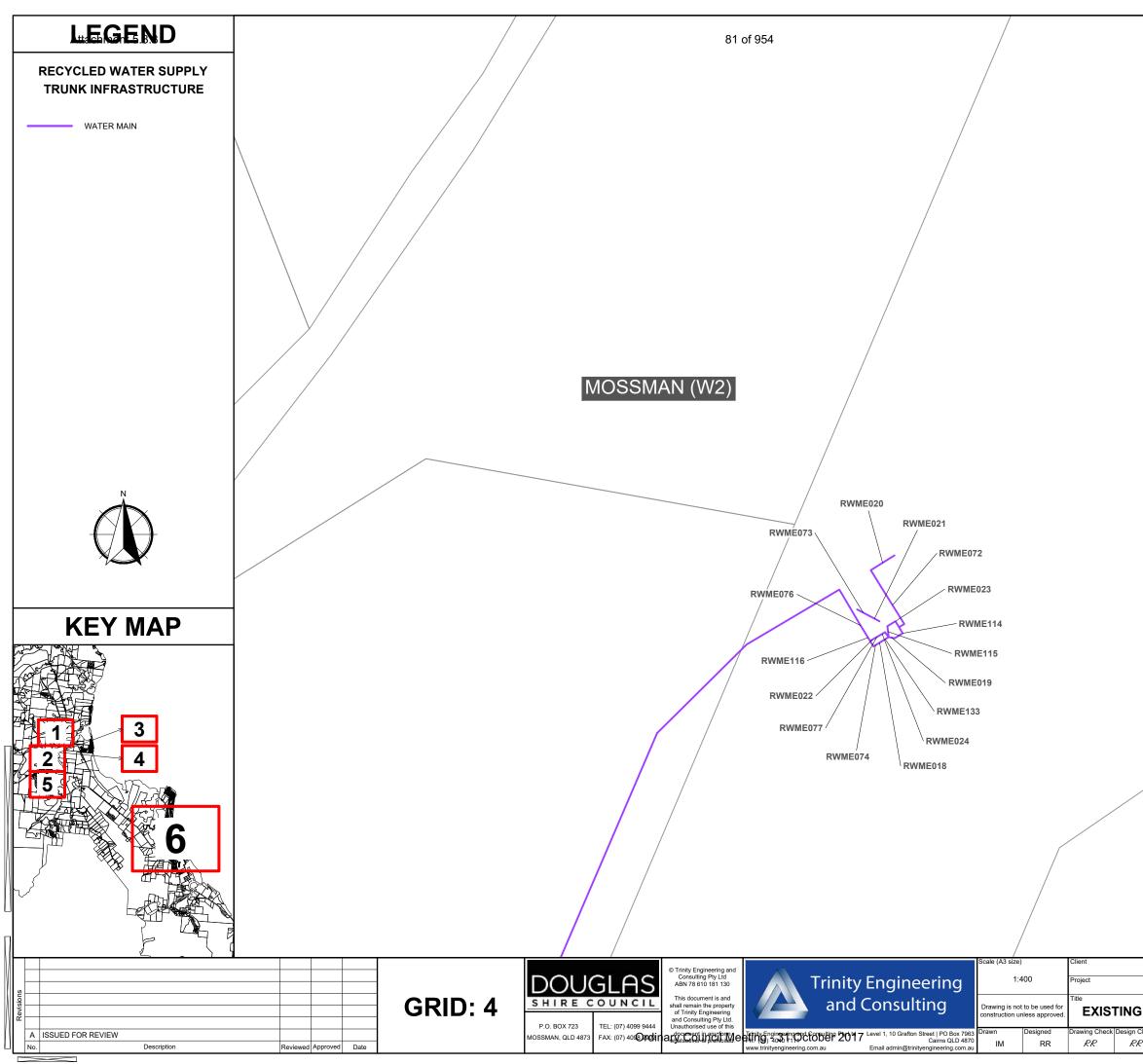
EXISTING RECYCLED WATER TRUNK INFRASTRUCTURE KEY MAP

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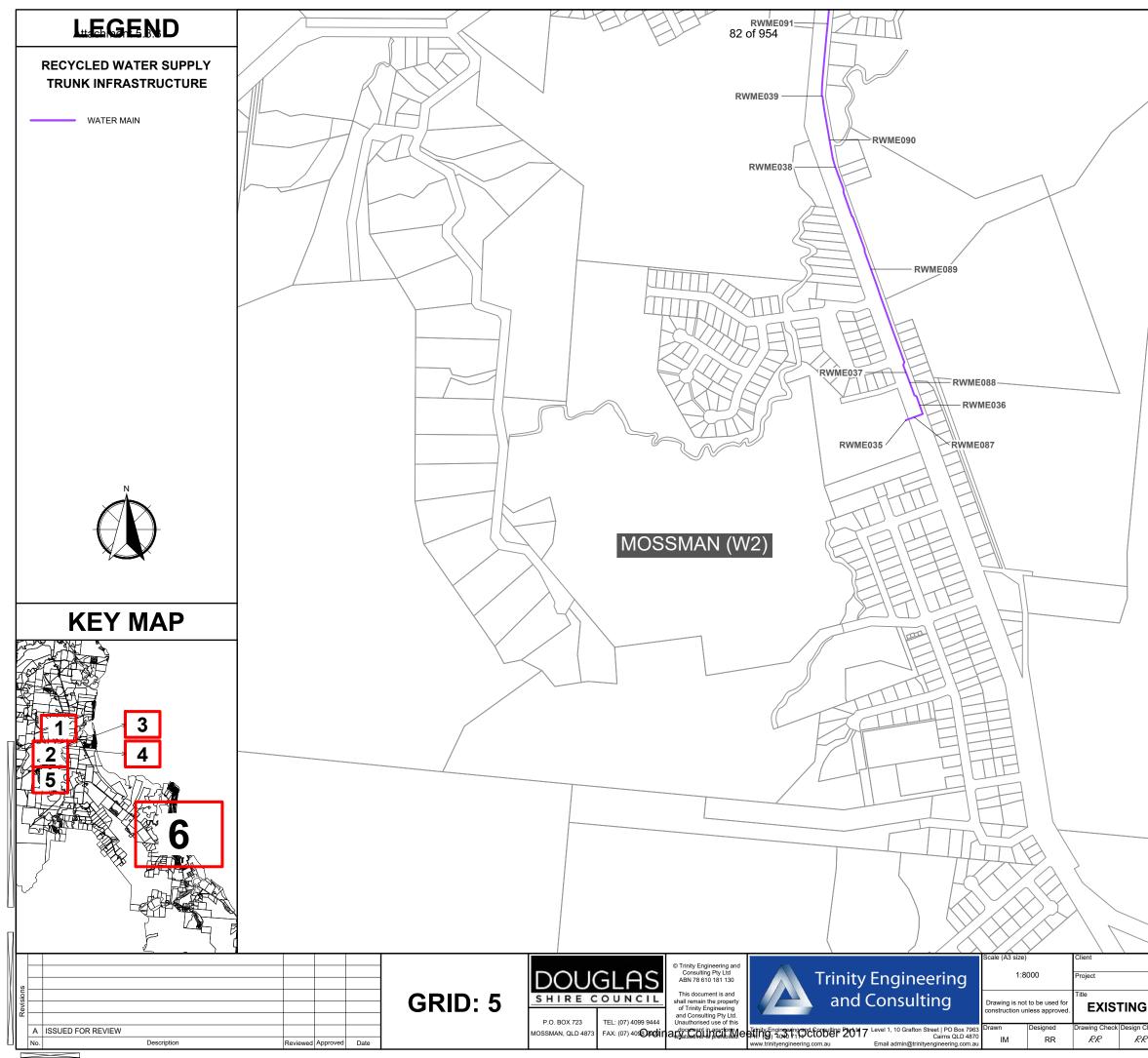


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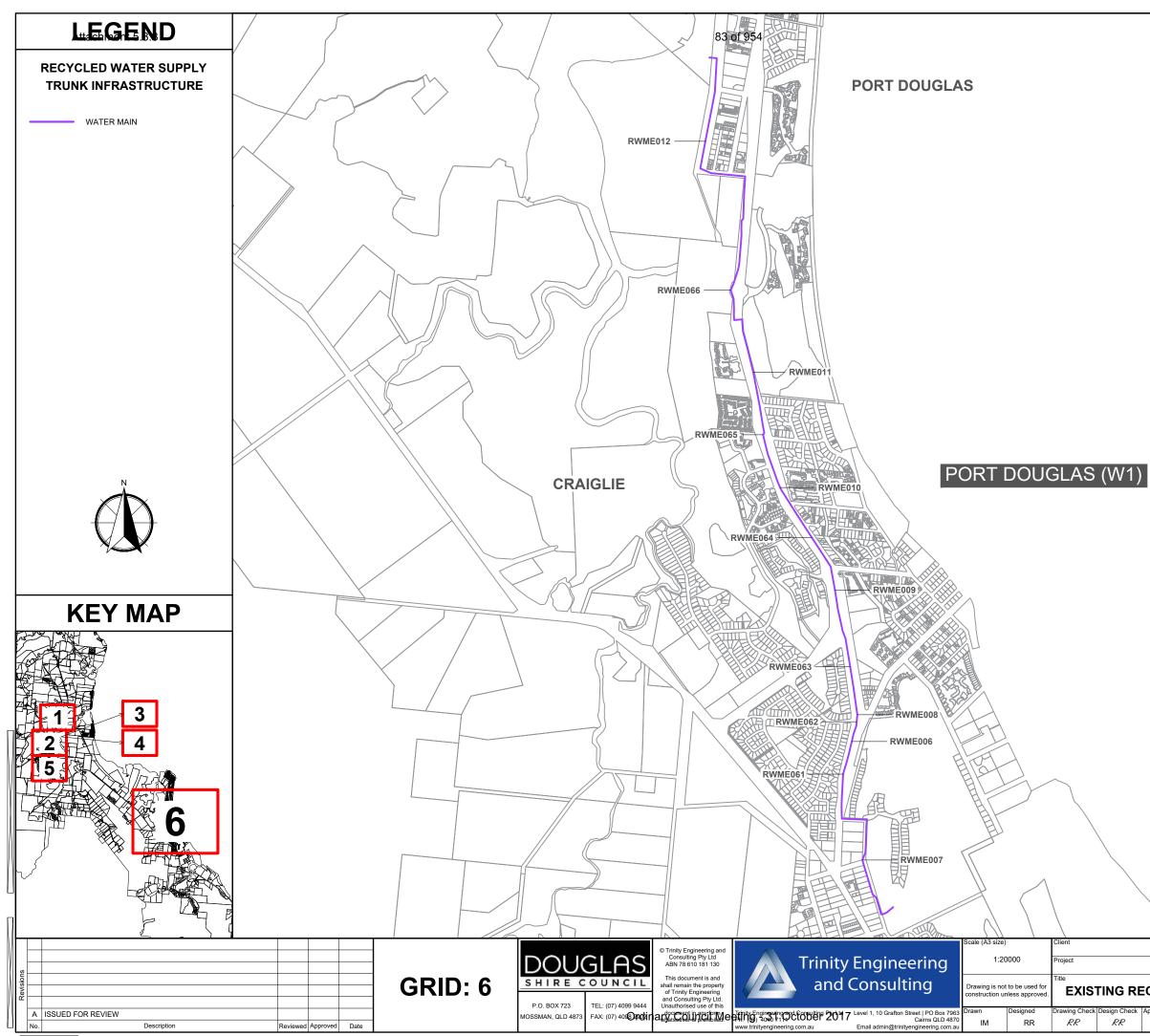
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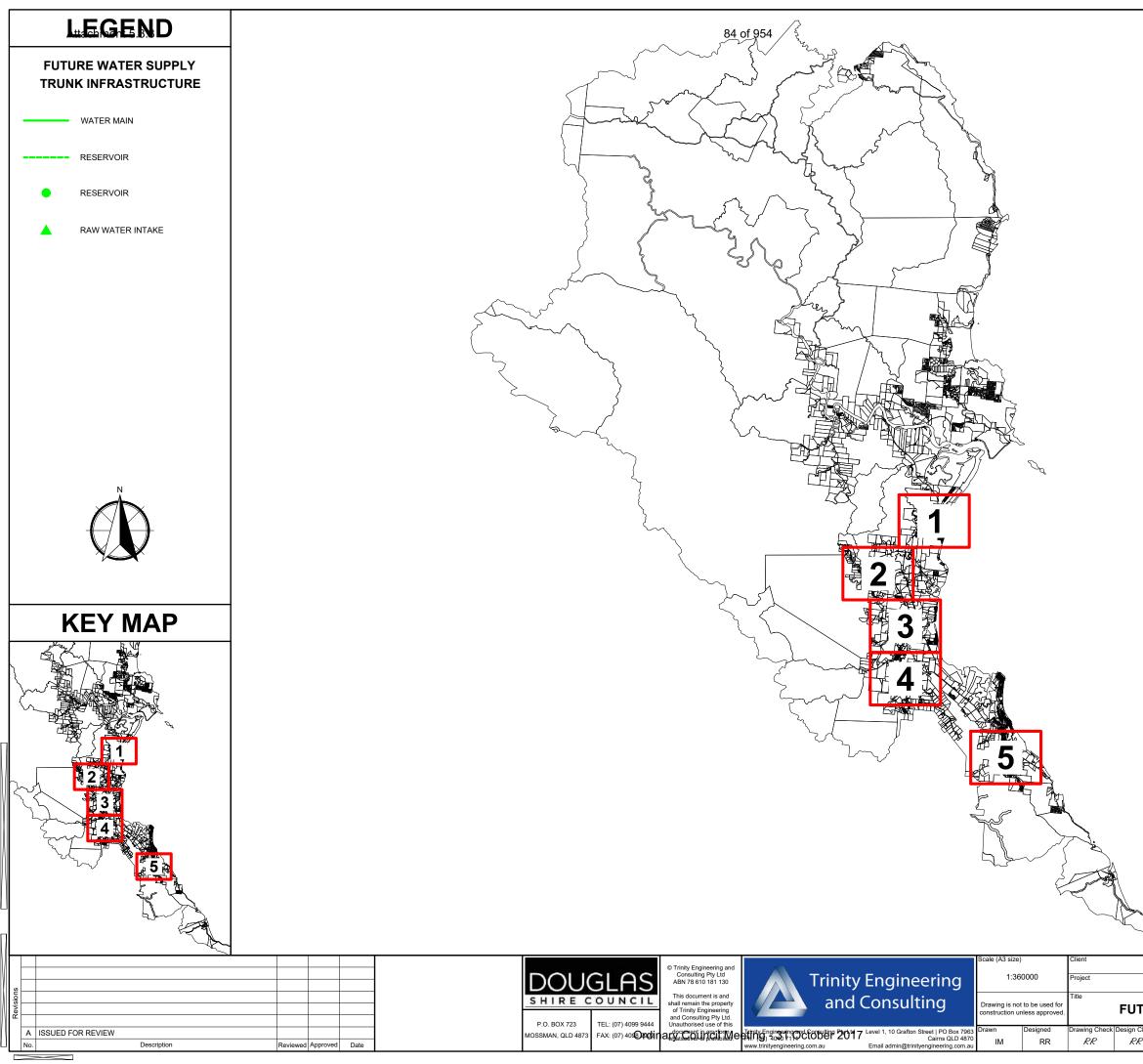
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EXISTING RECYCLED WATER TRUNK INFRASTRUCTURE - GRID 6

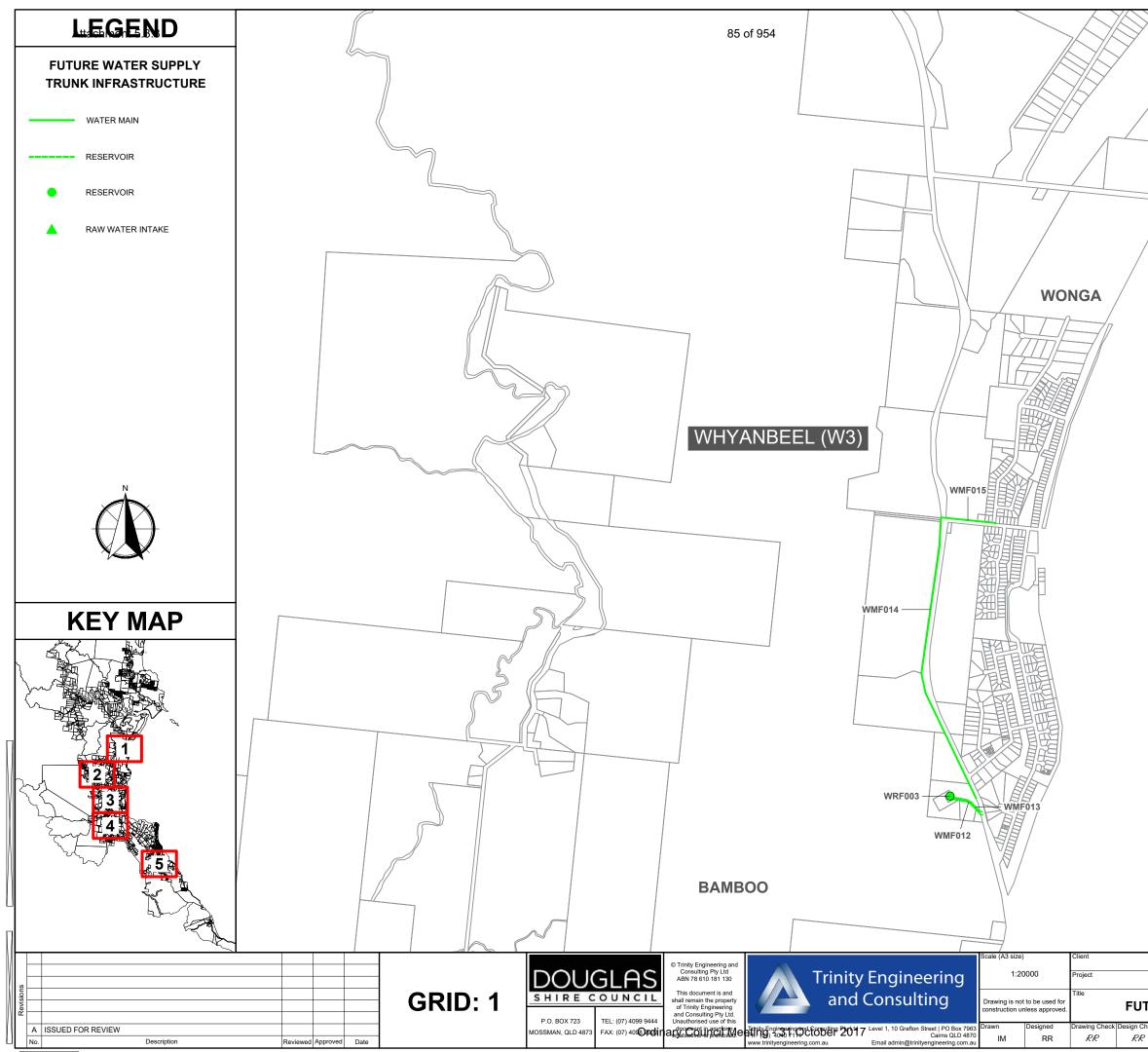
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R R RANKINE 29/08/17 1100-121		R RANKINE		29/08/17	1100-121	Α



DOUGLAS SHIRE COUNCIL 1100 DOUGLAS SHIRE COUNCIL LGIP

FUTURE WATER TRUNK INFRASTRUCTURE KEY MAP

Check	Approved	RPEQ	Date	Drawing No.	Revision
R	R RANKINE		29/08/17	1100-122	Α

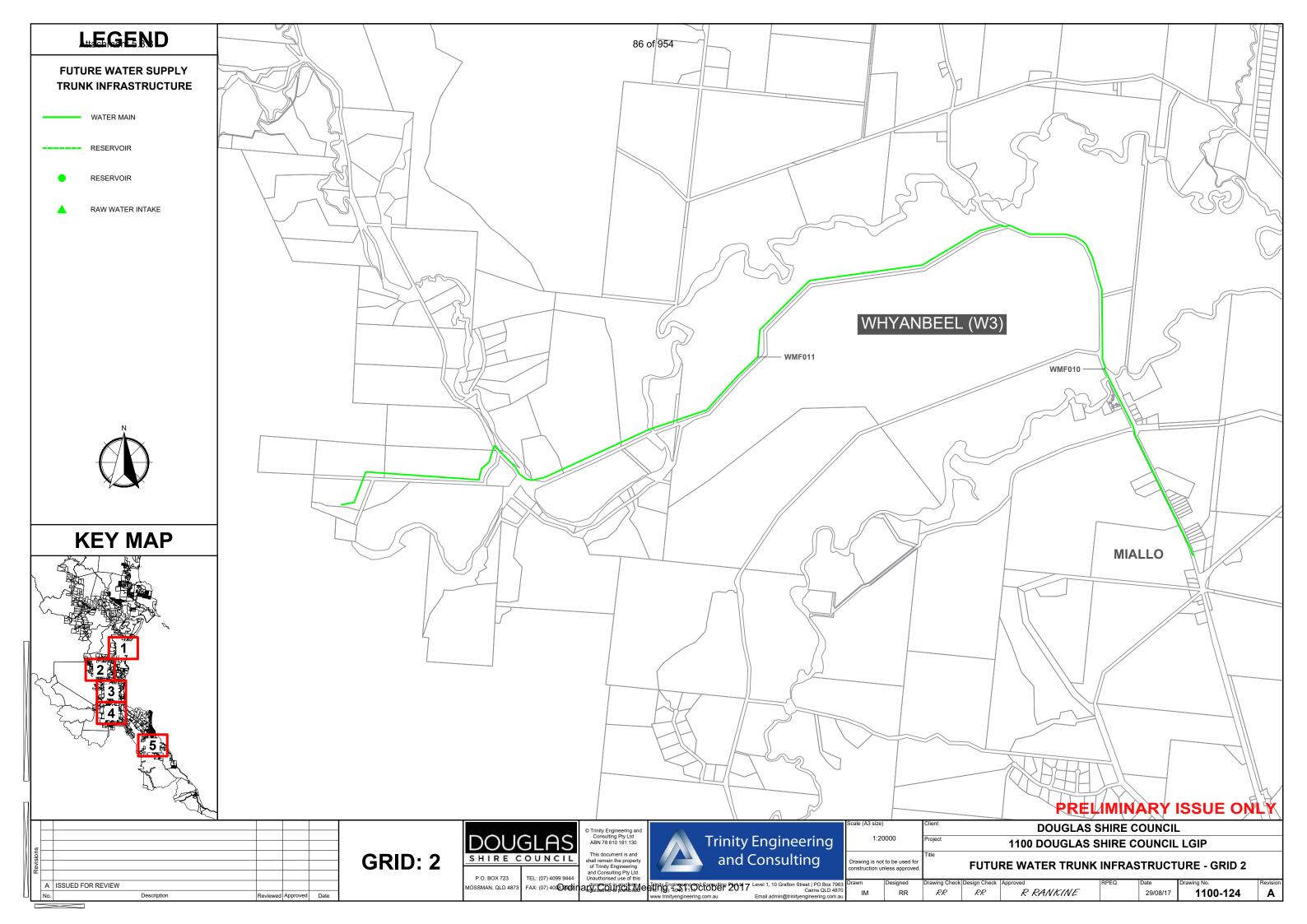


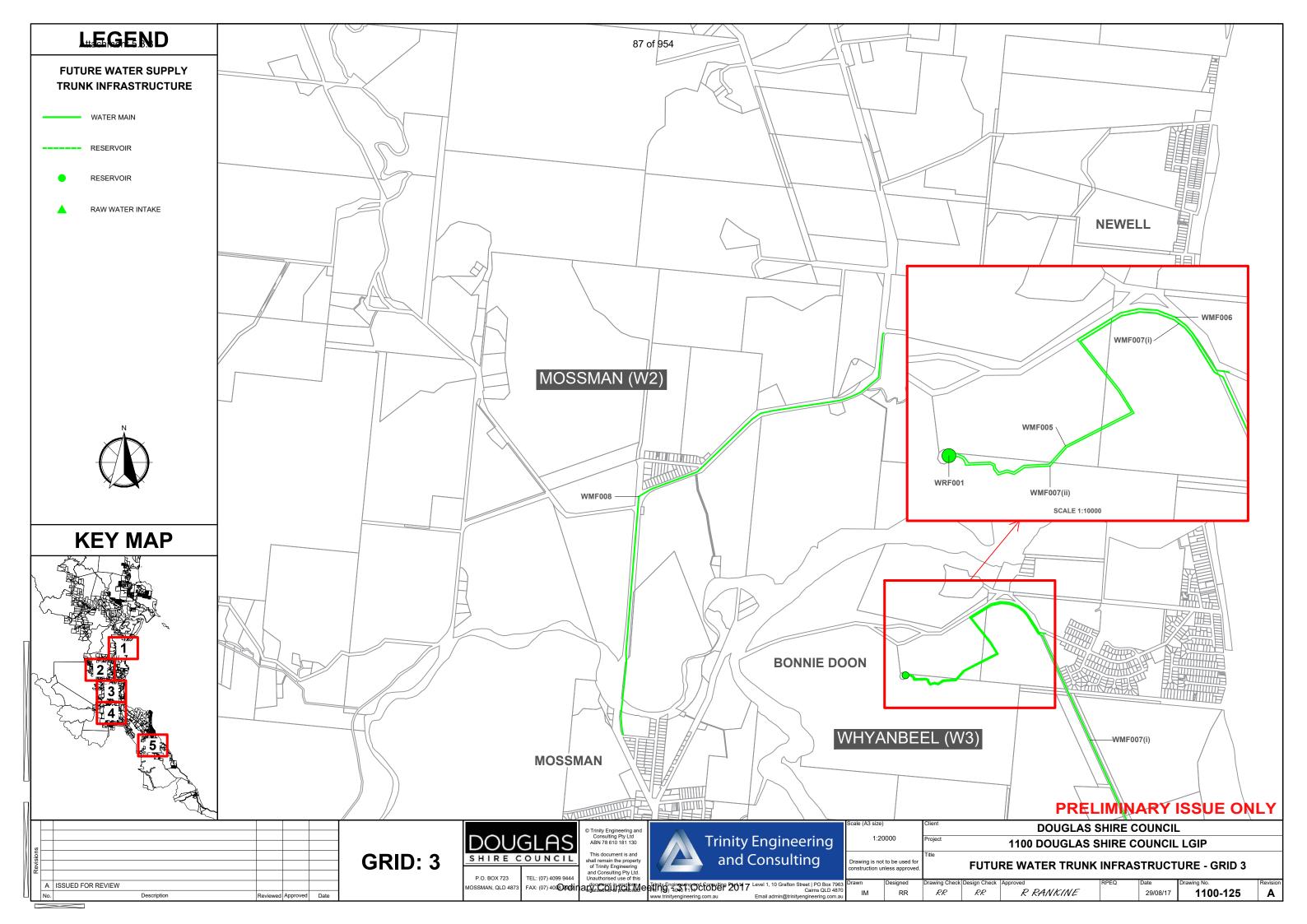
DOUGLAS SHIRE COUNCIL

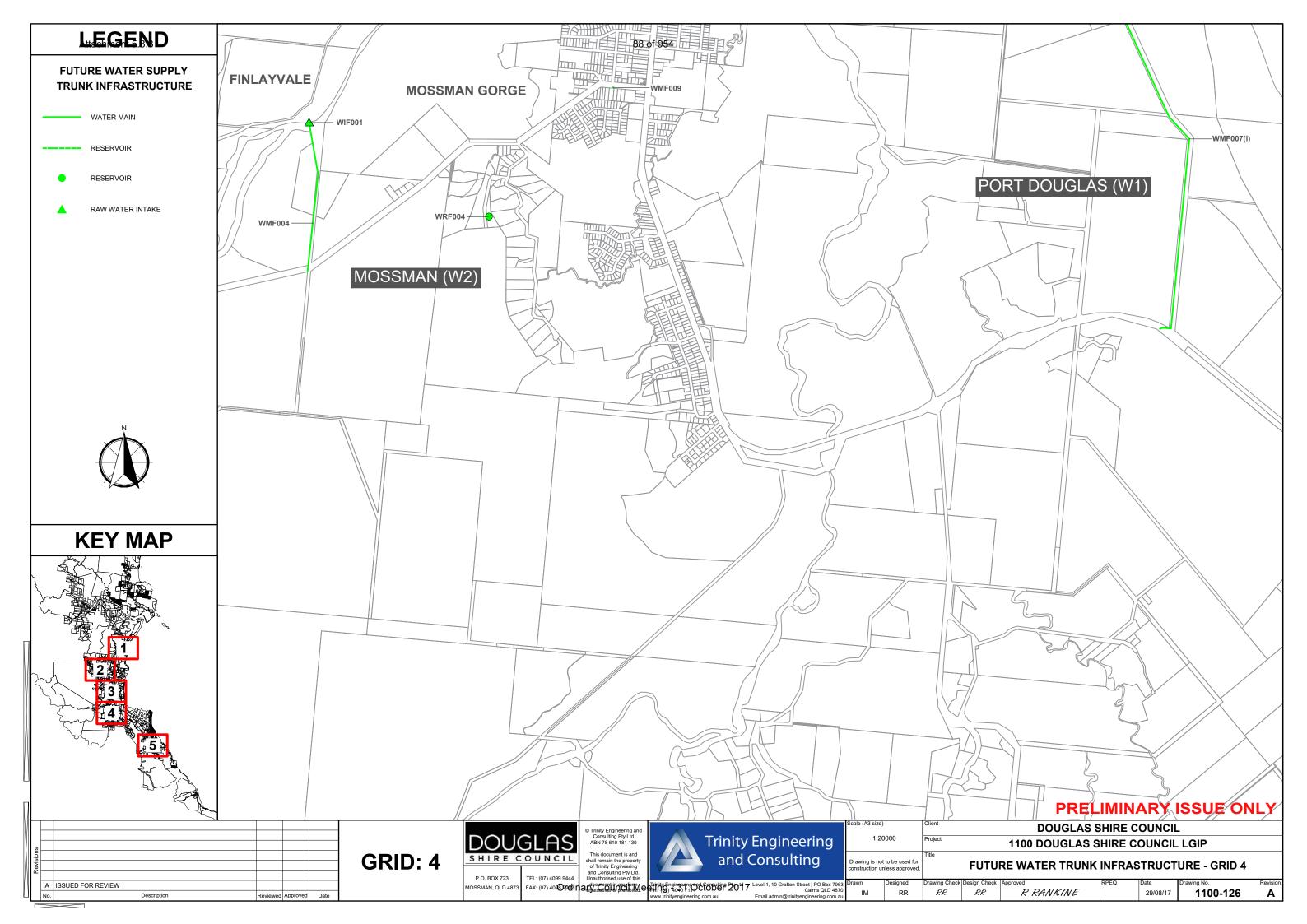
1100 DOUGLAS SHIRE COUNCIL LGIP

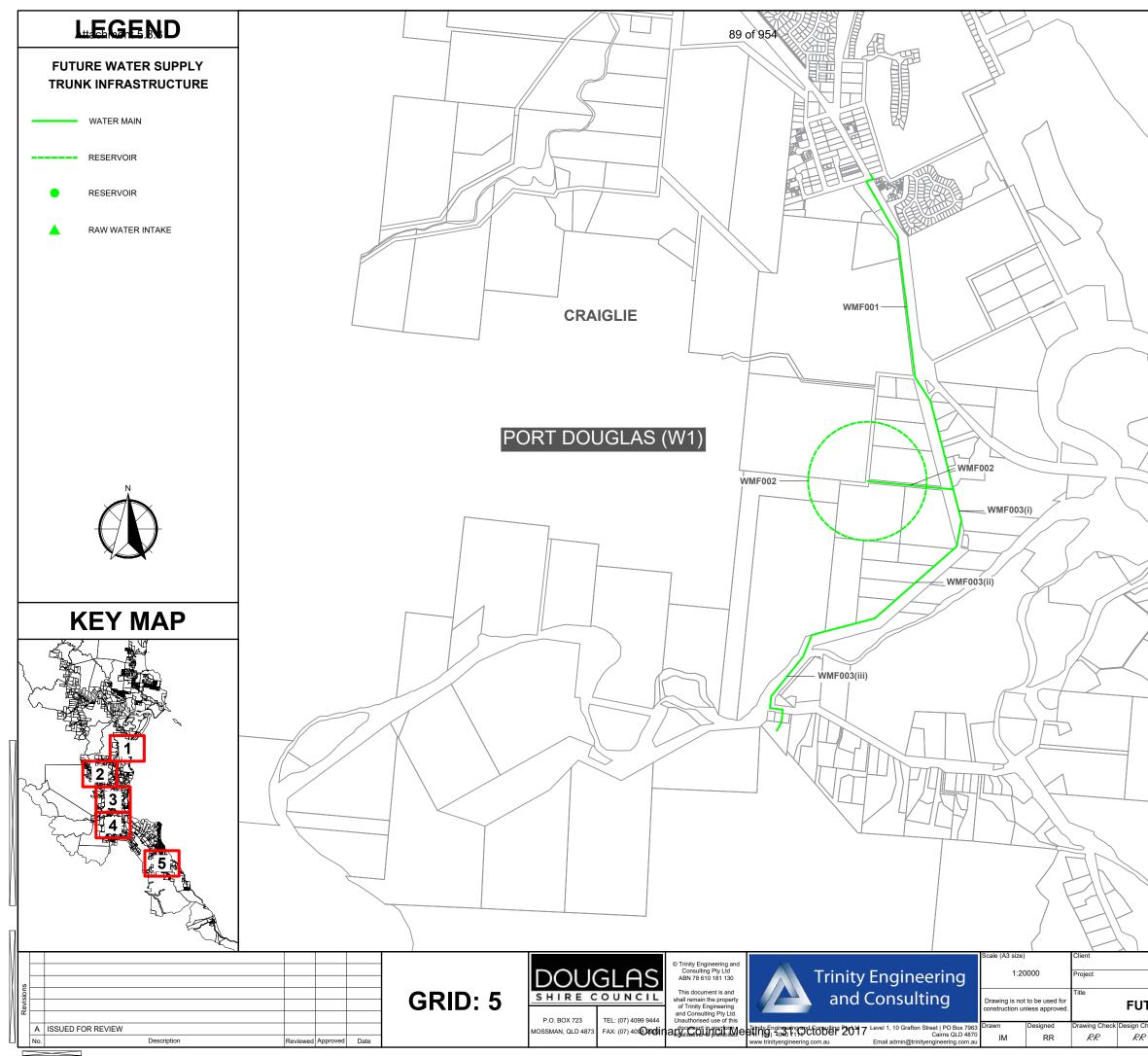
FUTURE WATER TRUNK INFRASTRUCTURE - GRID 1

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R	R RANKINE		29/08/17	1100-123	Α









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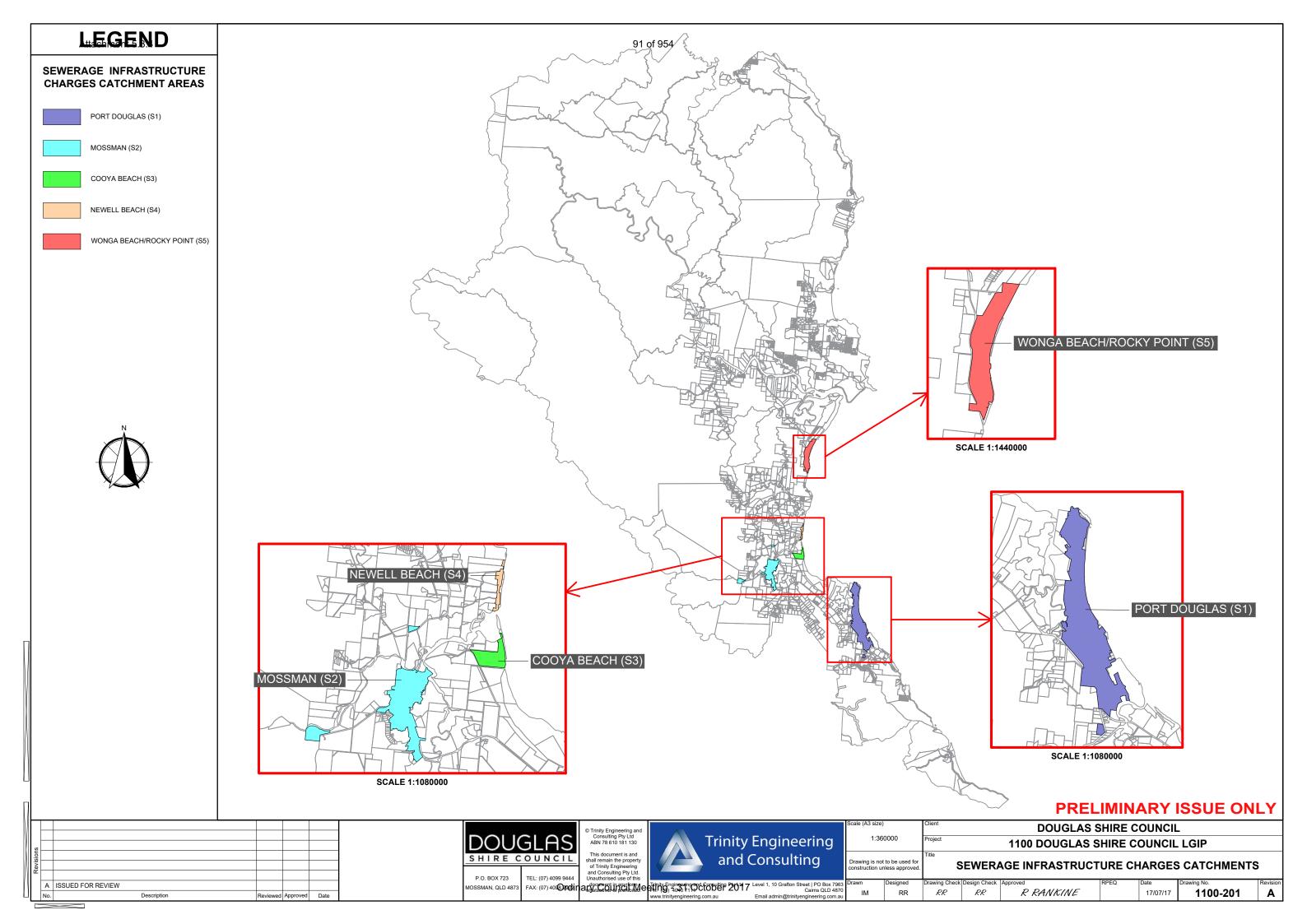


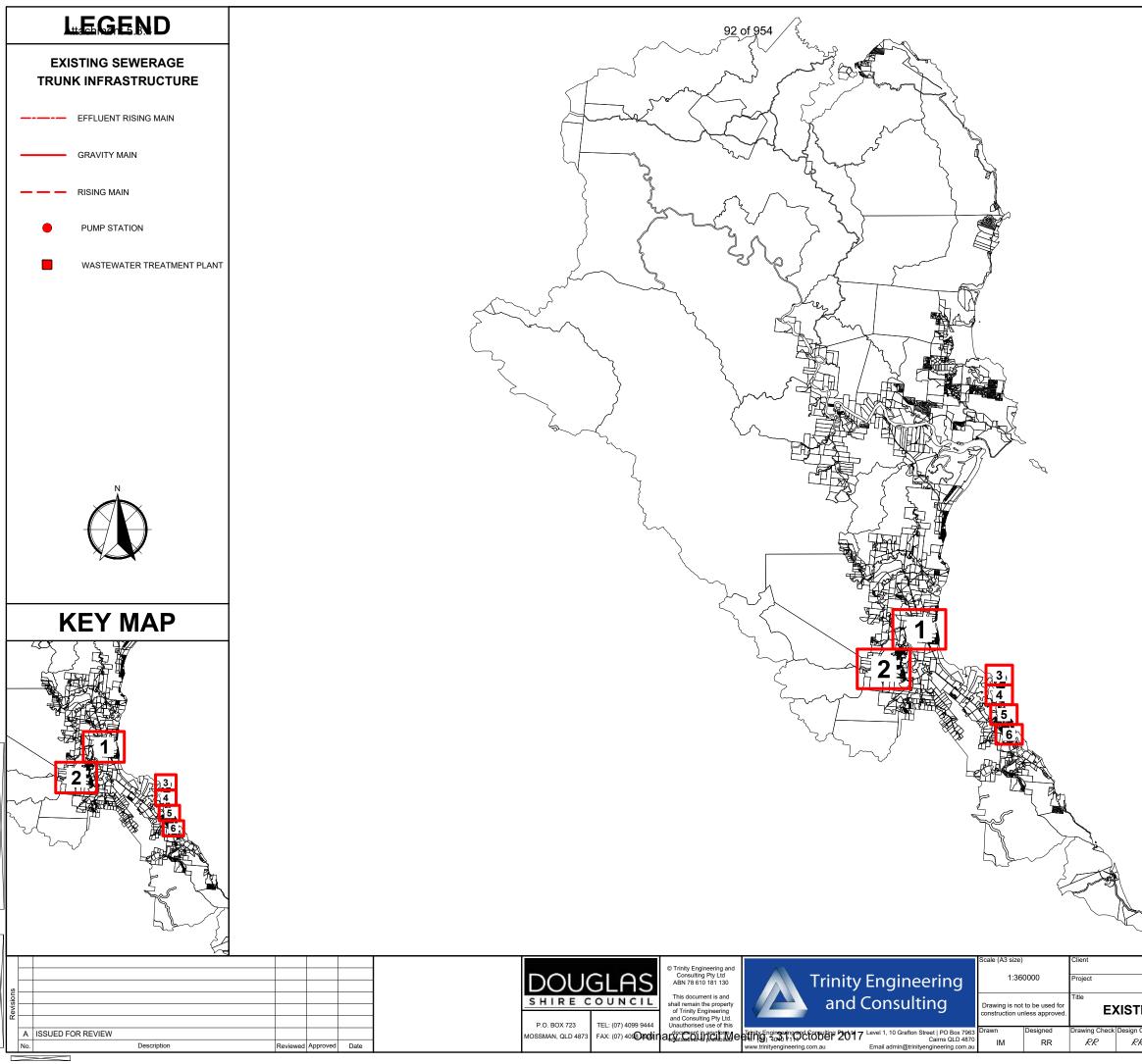
LOCAL GOVERNMENT INFRASTRUCTURE PLANS (SEWERAGE TRUNK INFRASTRUCTURE) for DOUGLAS SHIRE COUNCIL

SCHEDULE OF PROJECT DRAWINGS

1100-200	DRAWING INDEX
1100-201	SEWERAGE INFRASTRUCTURE CHARGES CATCHMENTS
1100-202	EXISTING SEWERAGE TRUNK INFRASTRUCTURE KEY MAP
1100-203	EXISTING SEWERAGE TRUNK INFRASTRUCTURE – GRID 1
1100-204	EXISTING SEWERAGE TRUNK INFRASTRUCTURE – GRID 2
1100-205	EXISTING SEWERAGE TRUNK INFRASTRUCTURE – GRID 3
1100-206	EXISTING SEWERAGE TRUNK INFRASTRUCTURE – GRID 4
1100-207	EXISTING SEWERAGE TRUNK INFRASTRUCTURE – GRID 5
1100-208	EXISTING SEWERAGE TRUNK INFRASTRUCTURE – GRID 6
1100-209	FUTURE SEWERAGE TRUNK INFRASTRUCTURE KEY MAP
1100-210	FUTURE SEWERAGE TRUNK INFRASTRUCTURE – GRID 1
1100-211	FUTURE SEWERAGE TRUNK INFRASTRUCTURE – GRID 2
1100-212	FUTURE SEWERAGE TRUNK INFRASTRUCTURE – GRID 3
1100-213	FUTURE SEWERAGE TRUNK INFRASTRUCTURE – GRID 4

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Description

Reviewed Approved Date

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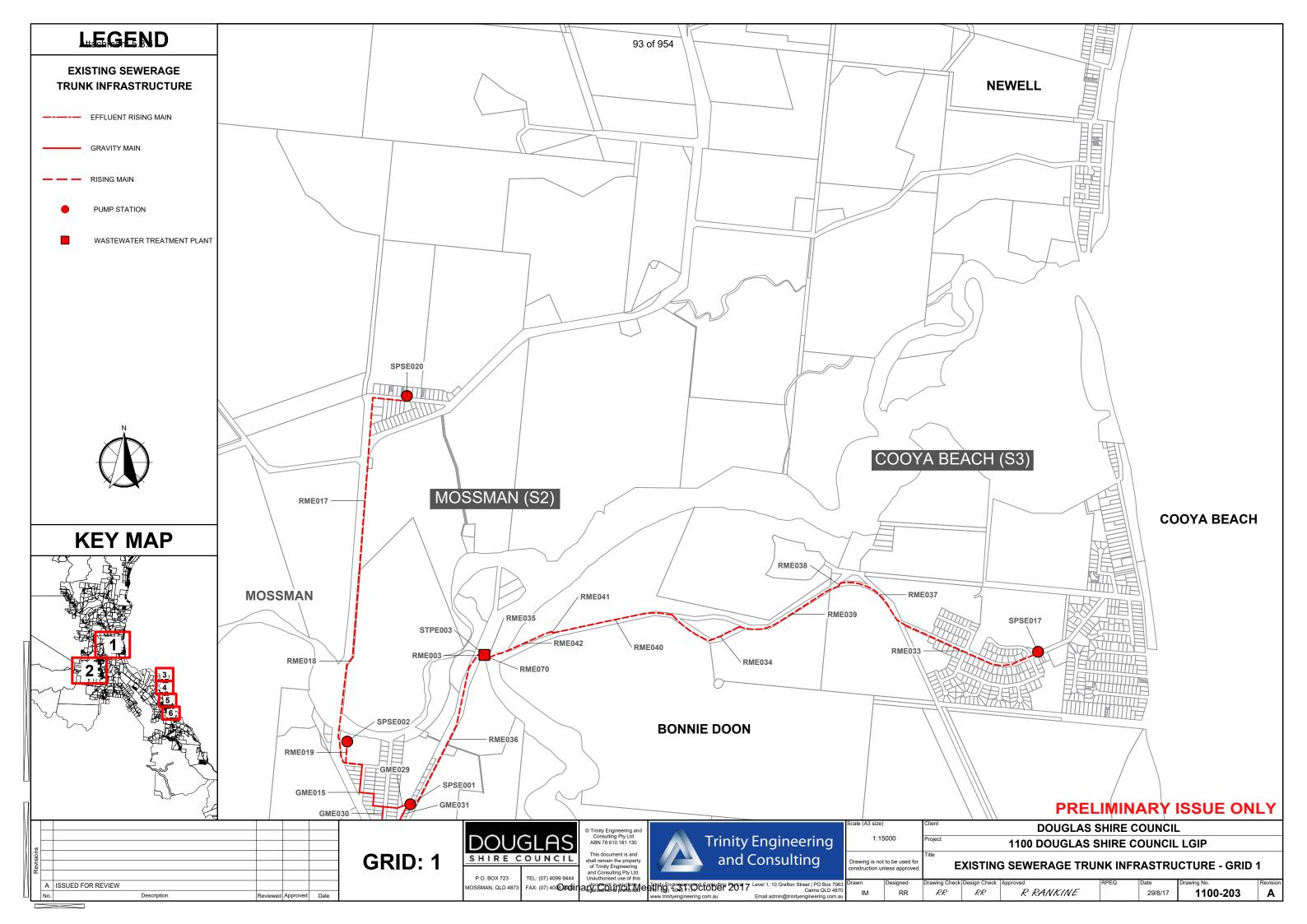
DOUGLAS SHIRE COUNCIL 1100 DOUGLAS SHIRE COUNCIL LGIP

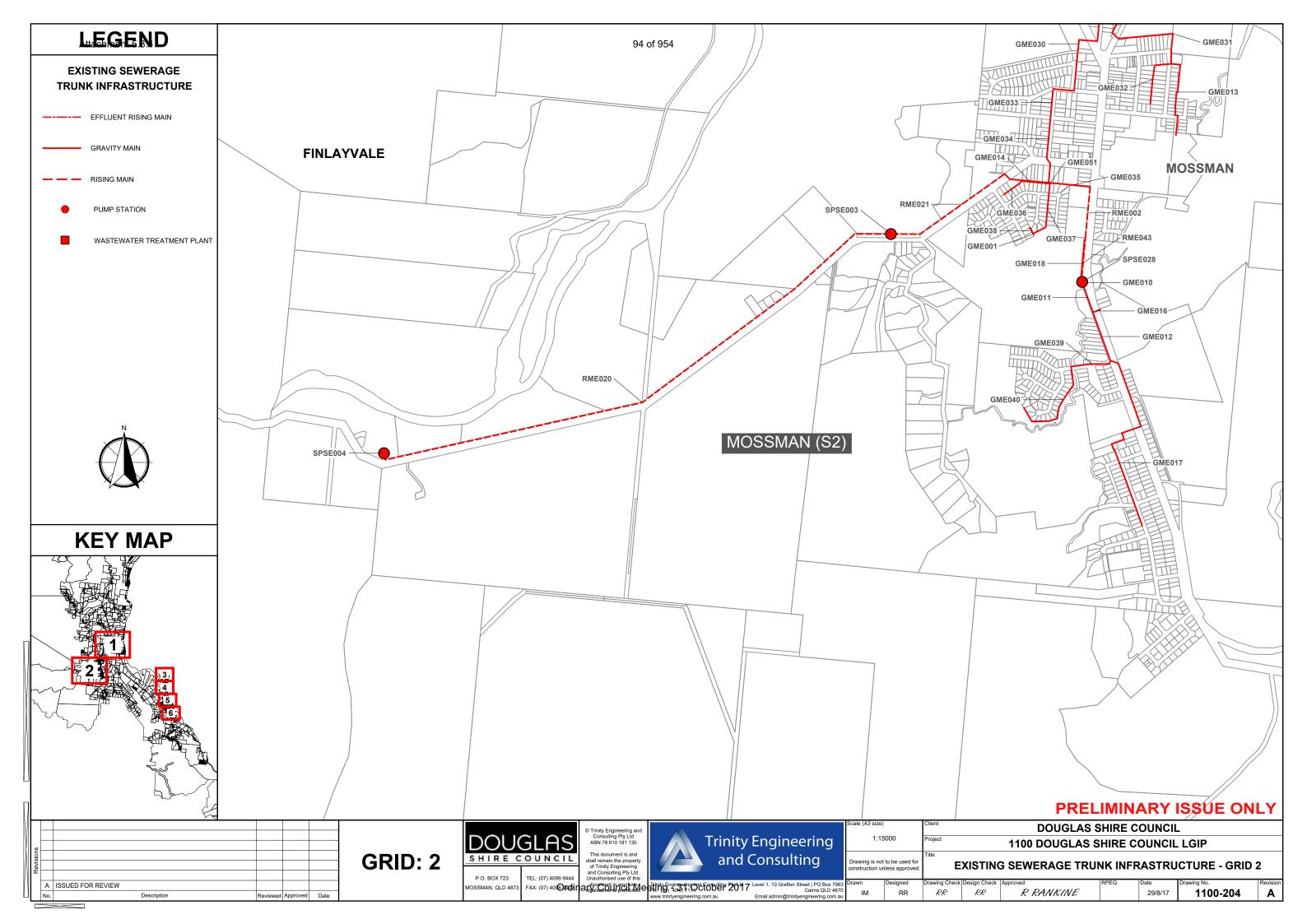
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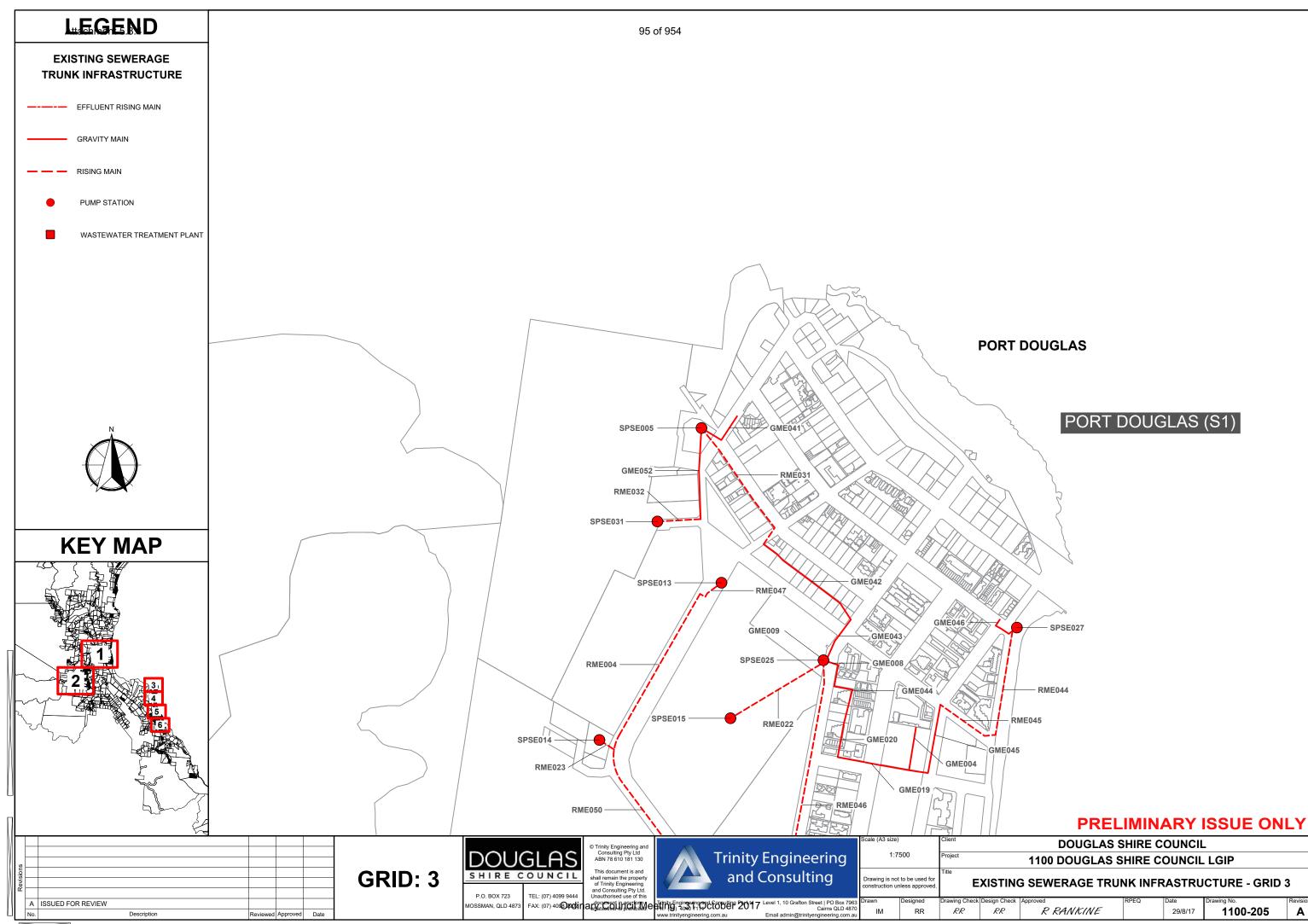
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EXISTING SEWERAGE TRUNK INFRASTRUCTURE KEY MAP

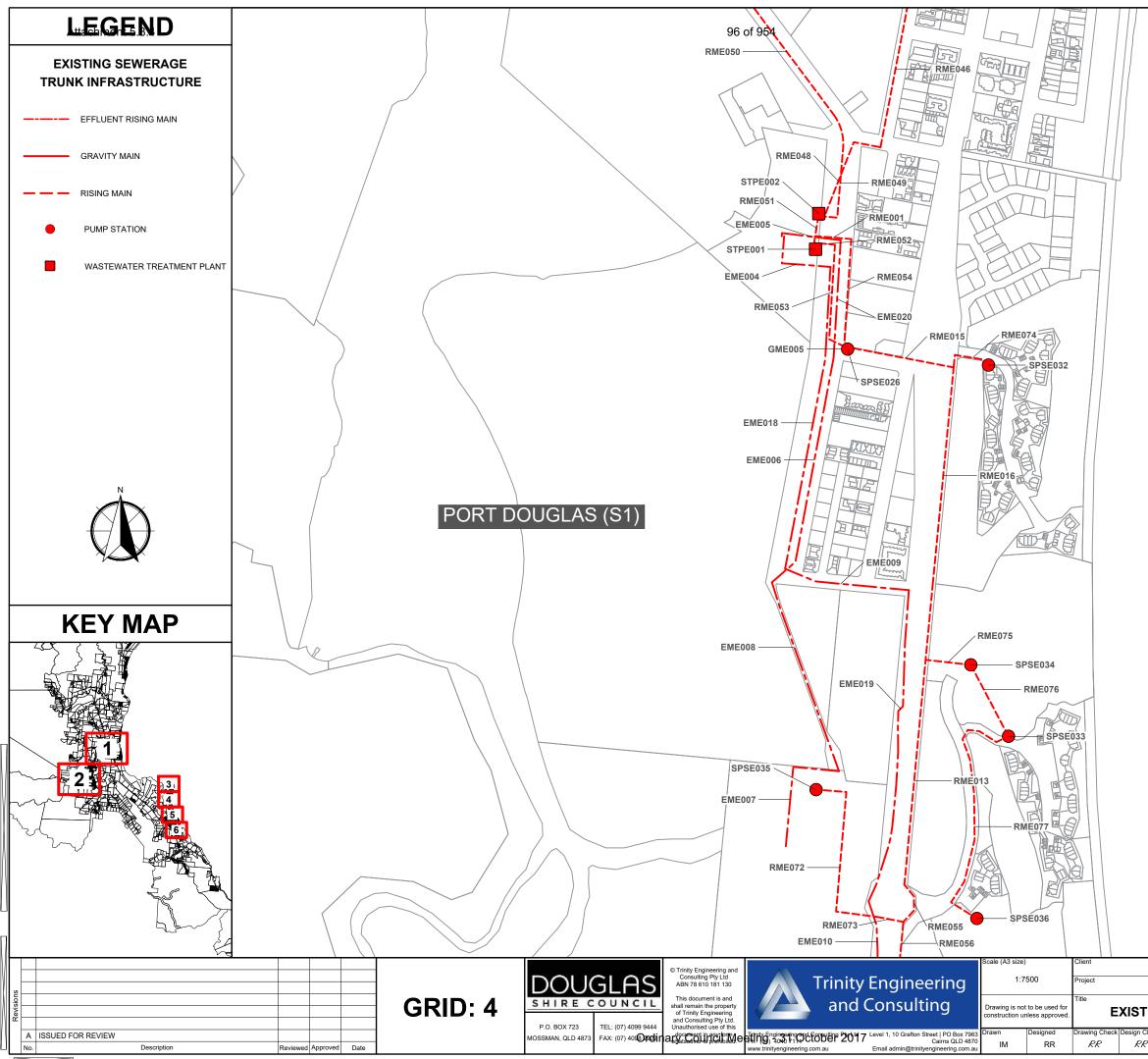
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RR	R RANKINE		29/8/17	1100-202	A







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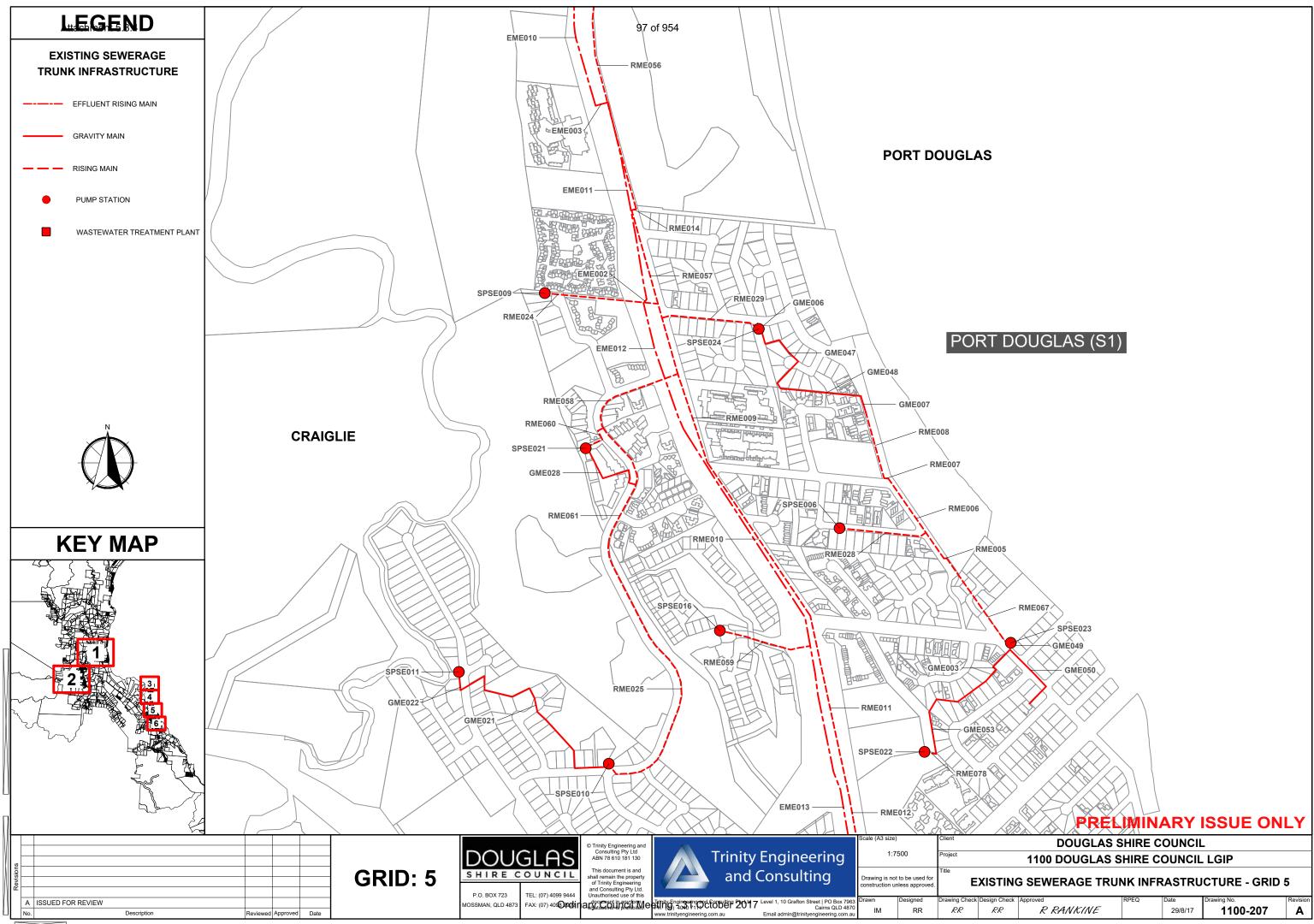
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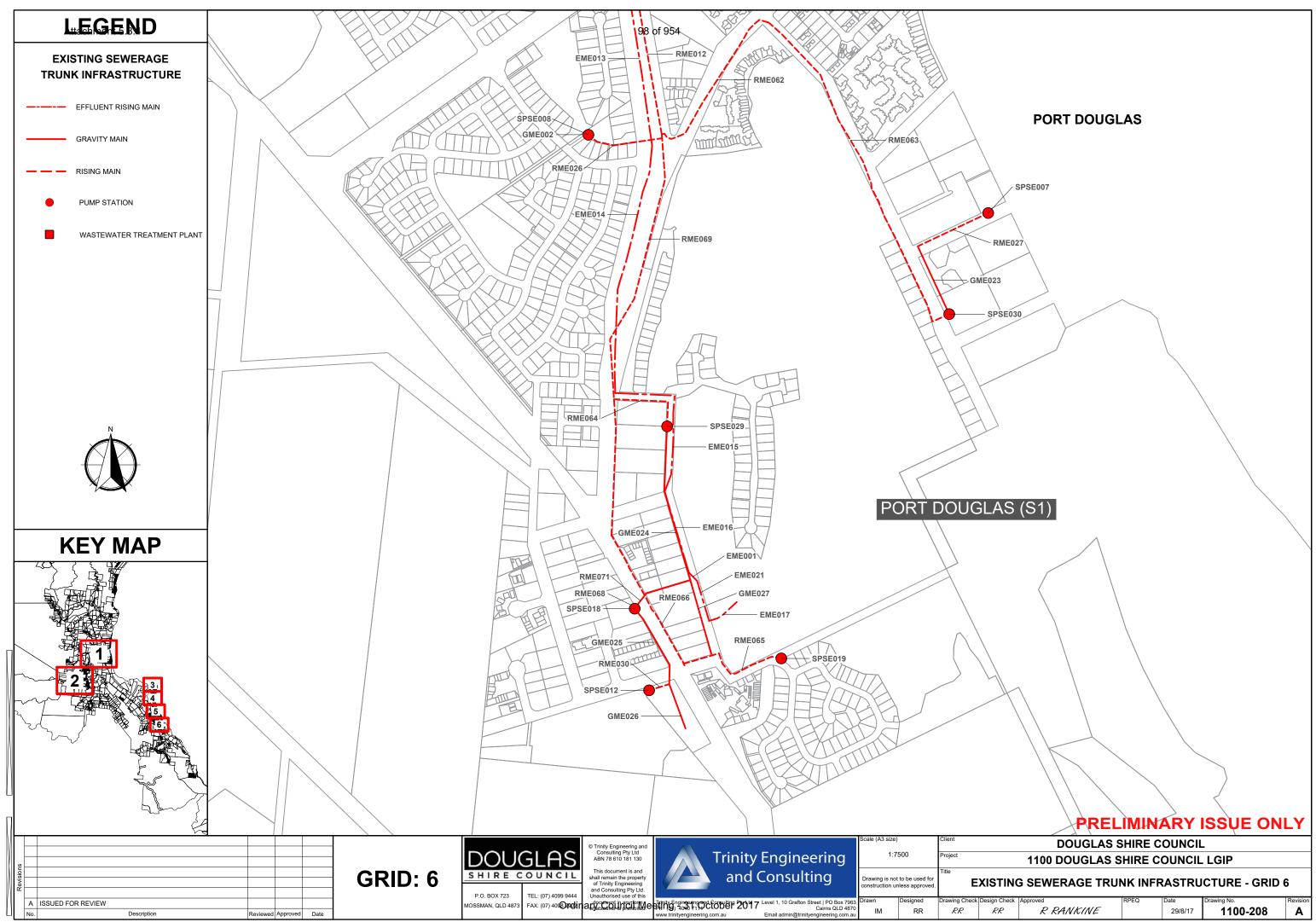
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EXISTING SEWERAGE TRUNK INFRASTRUCTURE - GRID 4

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FUTURE SEWERAGE TRUNK INFRASTRUCTURE

---- RISING MAINS

RISING MAINS (TRUNK)

EFFLUENT RISING MAINS

EFFLUENT RISING MAINS (TRUNK)

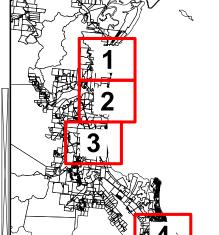
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WASTEWATER TREATMENT PLANT

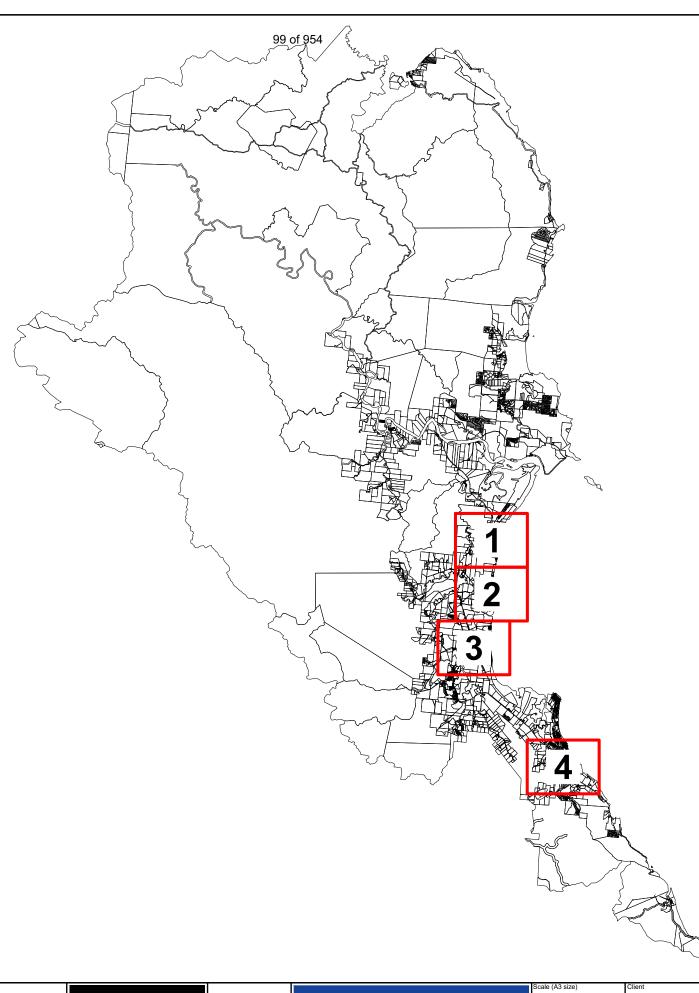
STORAGE FACILITY







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No.	Description	Reviewed	Approved	Date





OSSMAN, QLD 487



	Engineering Consulting
ngingering and Consulting 2017	Level 1, 10 Grafton Street PO Box 7963
) 400 11 OCTODER 2017	Cairns QLD 4870
nityengineering.com.au	Email admin@trinityengineering.com.au

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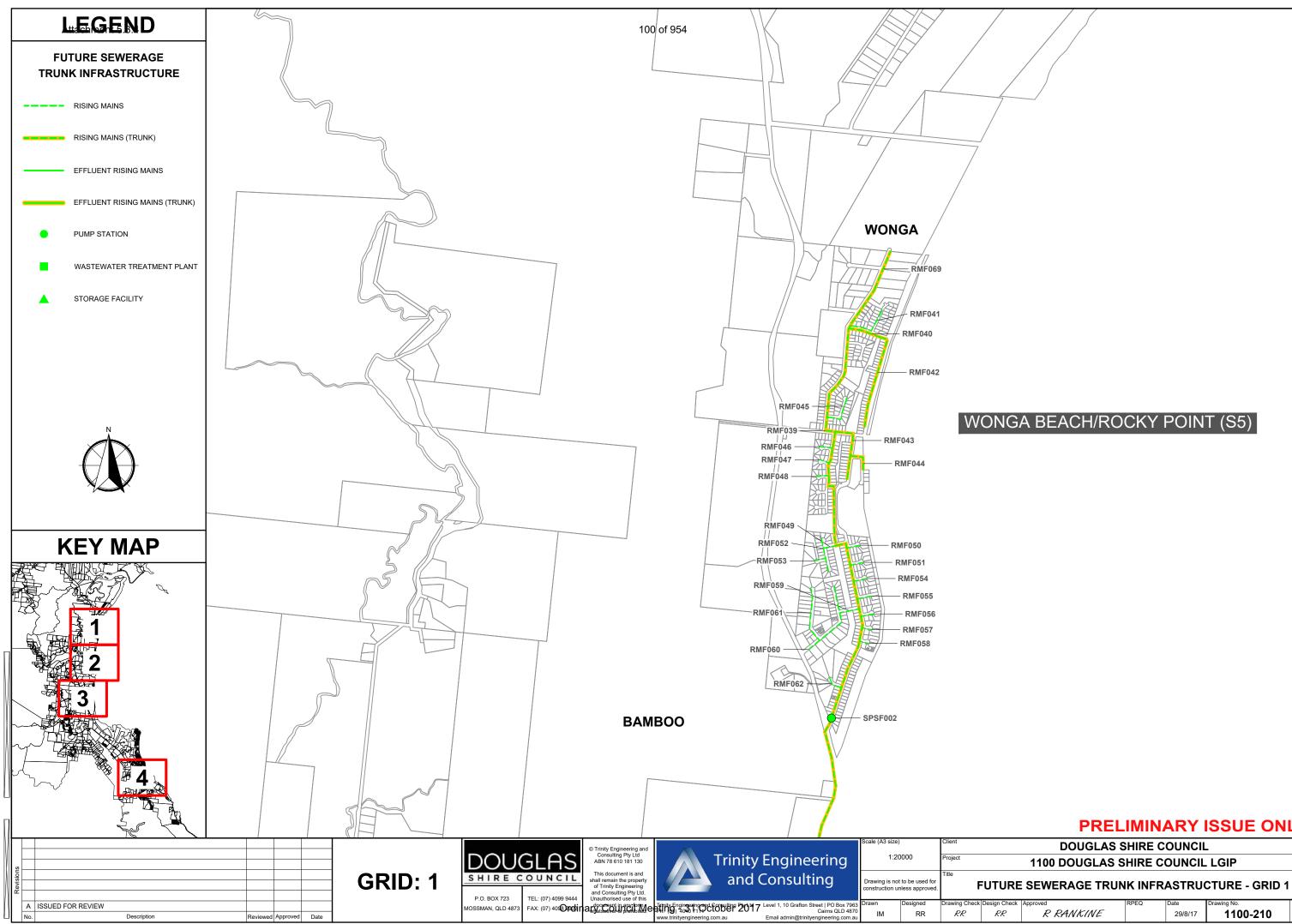
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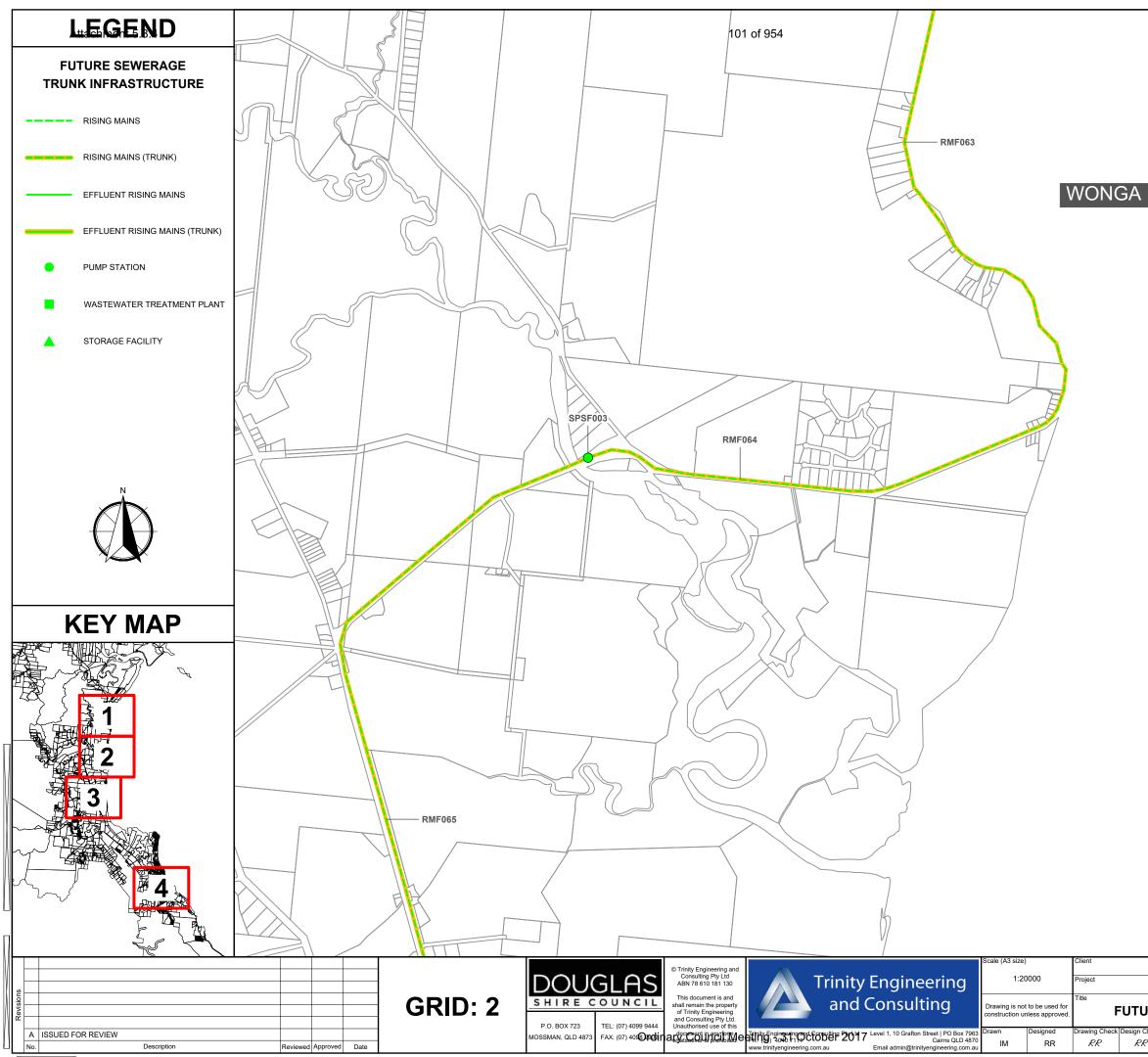
DOUGLAS SHIRE COUNCIL 1100 DOUGLAS SHIRE COUNCIL LGIP

FUTURE SEWERAGE TRUNK INFRASTRUCTURE KEY MAP

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	RR	R RANKINE		29/8/17	1100-209	Α



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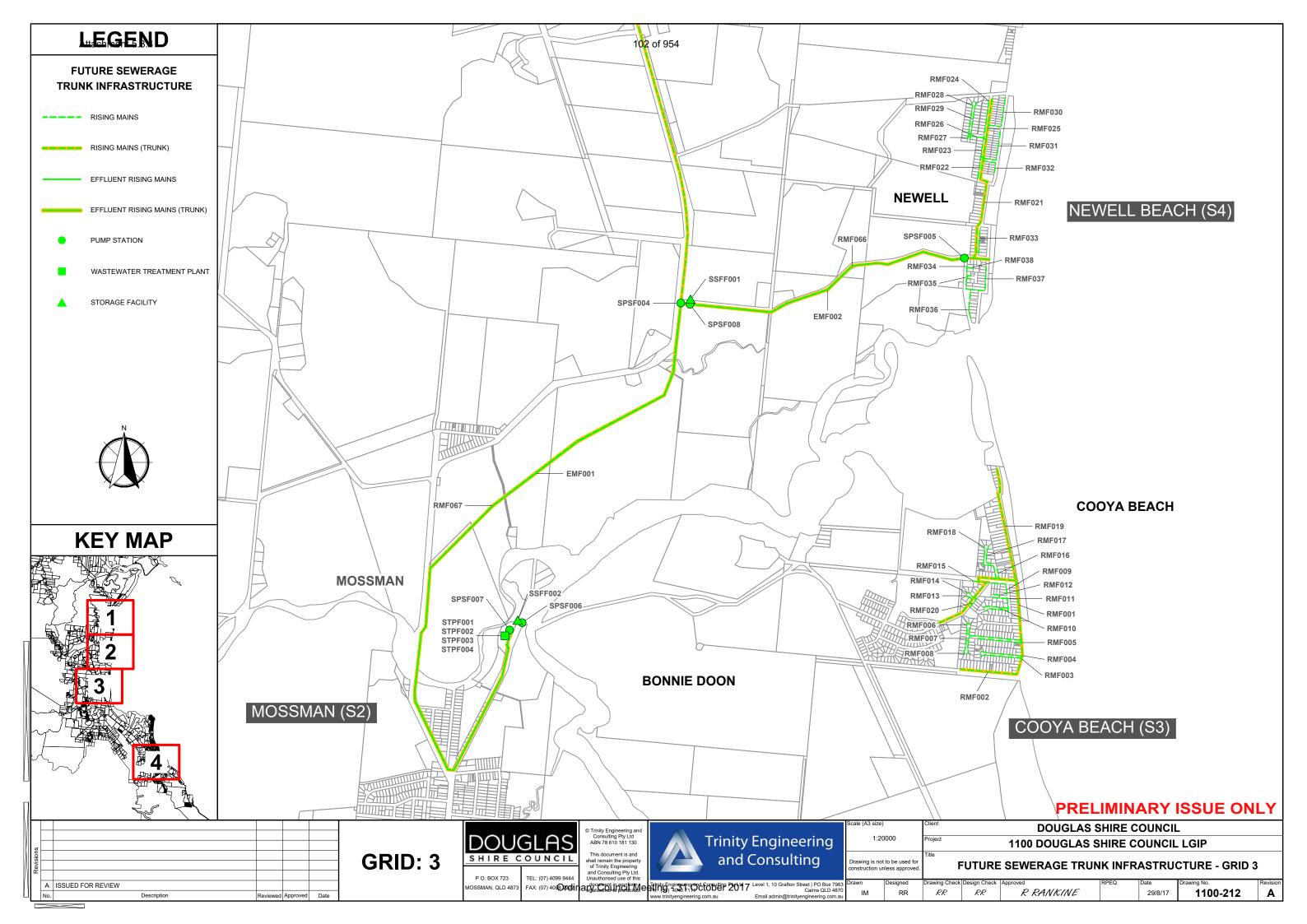
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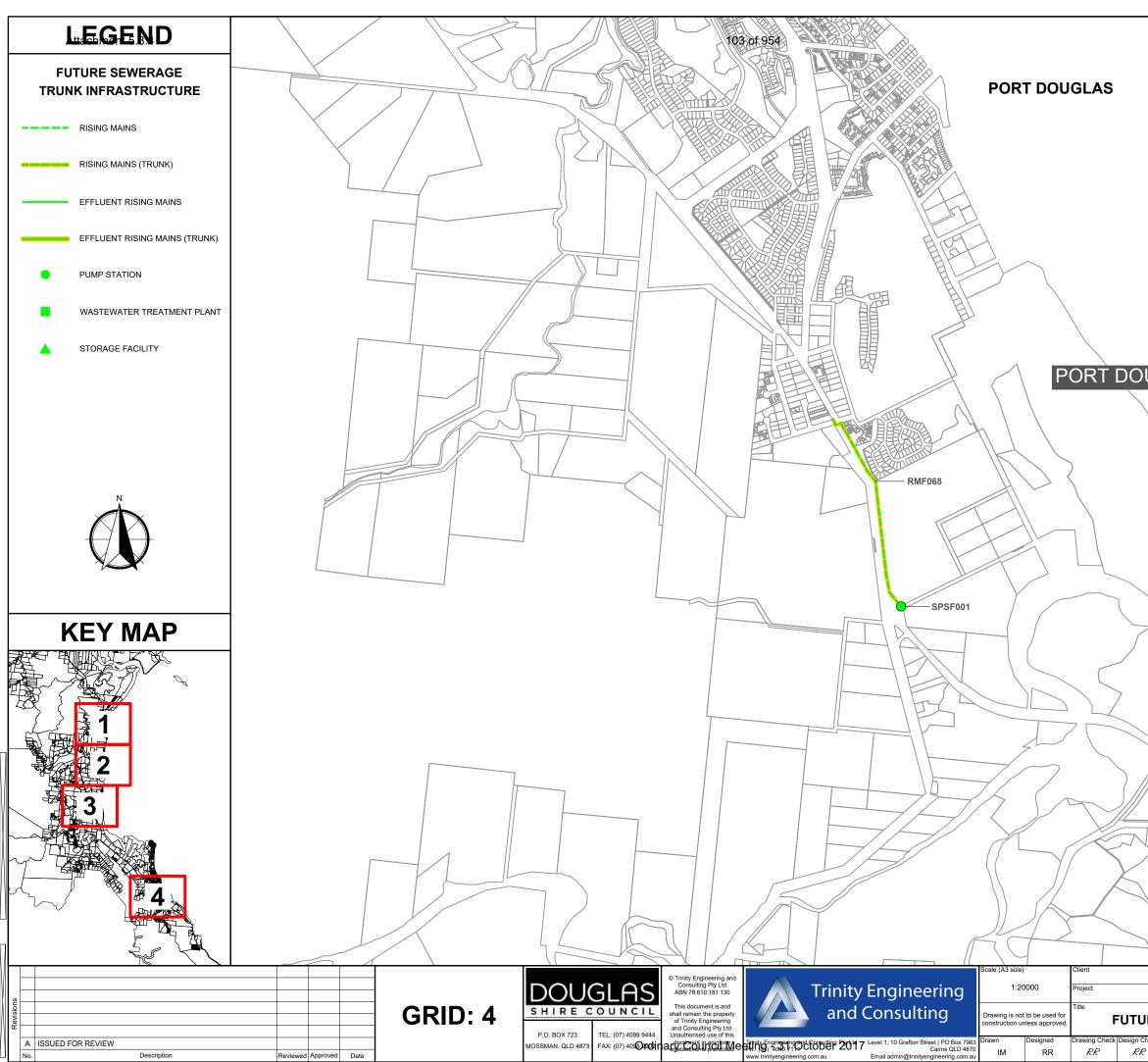
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FUTURE SEWERAGE TRUNK INFRASTRUCTURE - GRID 2

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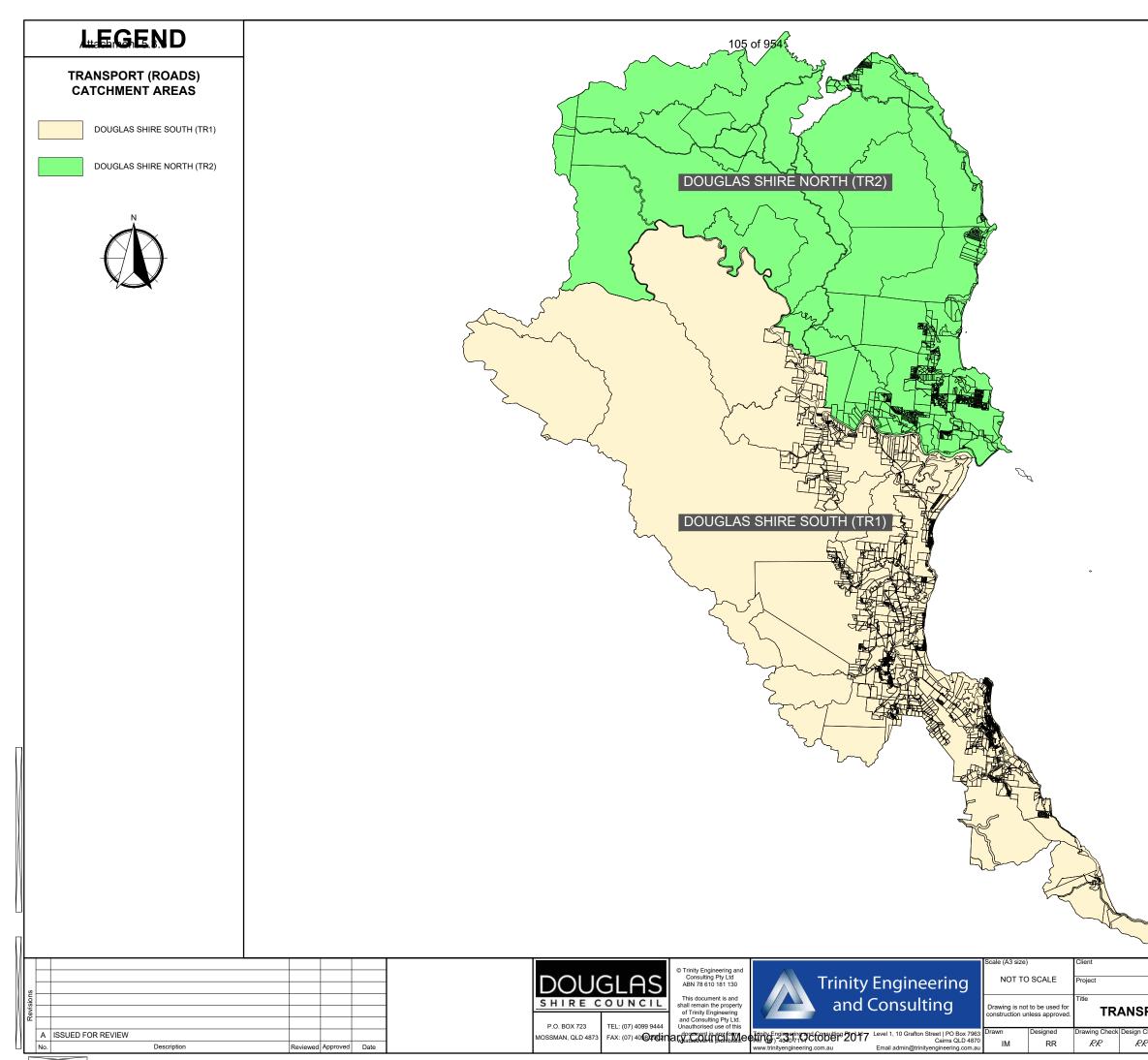


LOCAL GOVERNMENT INFRASTRUCTURE PLANS (TRANSPORT (ROAD) TRUNK INFRASTRUCTURE) for DOUGLAS SHIRE COUNCIL

SCHEDULE OF PROJECT DRAWINGS

1100-300 1100-301	DRAWING INDEX TRANSPORT (ROAD) INFRASTRUCTURE CATCHMENT AREAS
1100 - 302	EXISTING TRANSPORT TRUNK INFRASTRUCTURE KEY MAP
1100-303	EXISTING TRANSPORT TRUNK INFRASTRUCTURE – GRID 1
1100 - 304	EXISTING TRANSPORT TRUNK INFRASTRUCTURE - GRID 2
1100 001	
1100-305	EXISTING TRANSPORT TRUNK INFRASTRUCTURE – GRID 3
1100-306	EXISTING TRANSPORT TRUNK INFRASTRUCTURE – GRID 4
1100-307	EXISTING TRANSPORT TRUNK INFRASTRUCTURE – GRID 5
1100-308	EXISTING TRANSPORT TRUNK INFRASTRUCTURE – GRID 6
1100-309	EXISTING TRANSPORT TRUNK INFRASTRUCTURE – GRID 7
1100-310	EXISTING TRANSPORT TRUNK INFRASTRUCTURE – GRID 8
1100-311	EXISTING TRANSPORT TRUNK INFRASTRUCTURE – GRID 9
1100-312	EXISTING TRANSPORT TRUNK INFRASTRUCTURE – GRID 10
1100-313	FUTURE TRANSPORT TRUNK INFRASTRUCTURE KEY MAP
1100-314	FUTURE TRANSPORT TRUNK INFRASTRUCTURE – GRID 1
1100-315	FUTURE TRANSPORT TRUNK INFRASTRUCTURE – GRID 2
1100-316	FUTURE TRANSPORT TRUNK INFRASTRUCTURE – GRID 3
1100-317	FUTURE TRANSPORT TRUNK INFRASTRUCTURE – GRID 4

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TRANSPORT (ROAD) INFRASTRUCTURE CATCHMENT AREAS

Check	Approved	RPEQ	Date	Drawing No.	Revision
R	R RANKINE		29/06/17	1100-301	Α





	SUB ARTERIAL (SCR)
	URBAN MAJOR COLLECTOR
•••••	RURAL MAJOR COLLECTOR
	URBAN MINOR COLLECTOR
	RURAL MINOR COLLECTOR

EXISTING INTERSECTIONS AND STRUCTURES

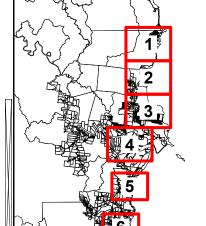
BRIDGE (SCR)

ACCESS STREET

- CULVERT (SCR)
- ROUNDABOUT (SCR)
- CULVERT
- FERRY LANDING
- ROUNDABOUT







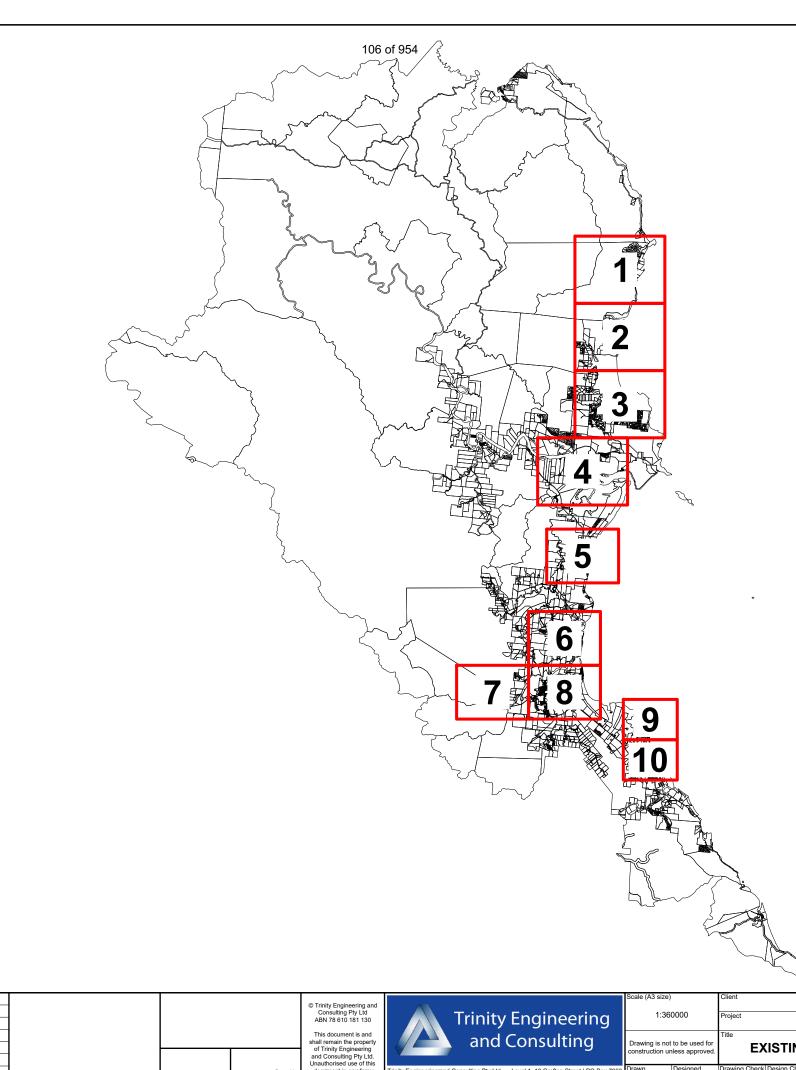
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DOUGLAS SHIRE COUNCIL 1100 DOUGLAS SHIRE COUNCIL LGIP

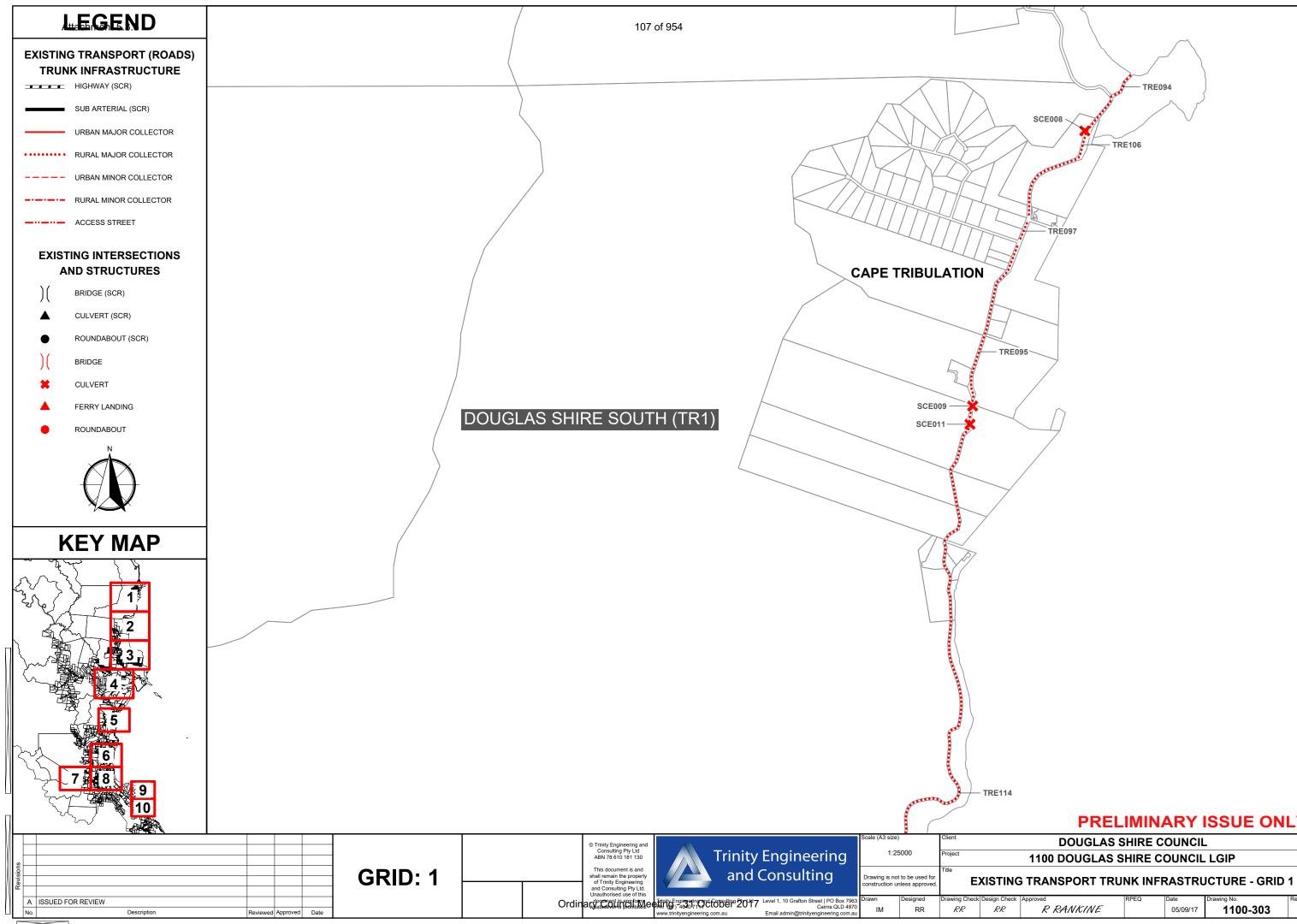
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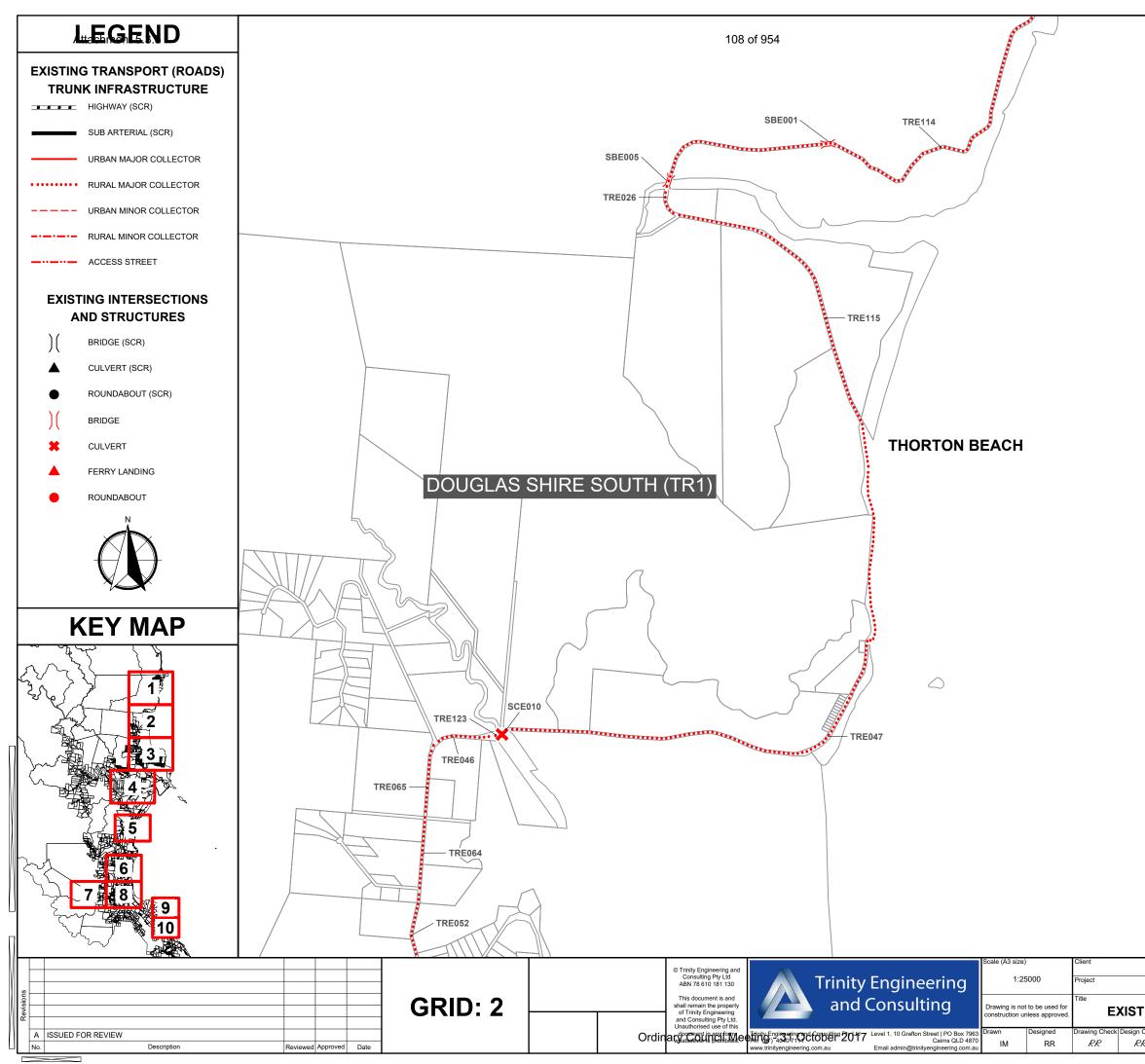
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EXISTING TRANSPORT TRUNK INFRASTRUCTURE KEY MAP

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RR	R RANKINE		05/09/17	1100-302	Α



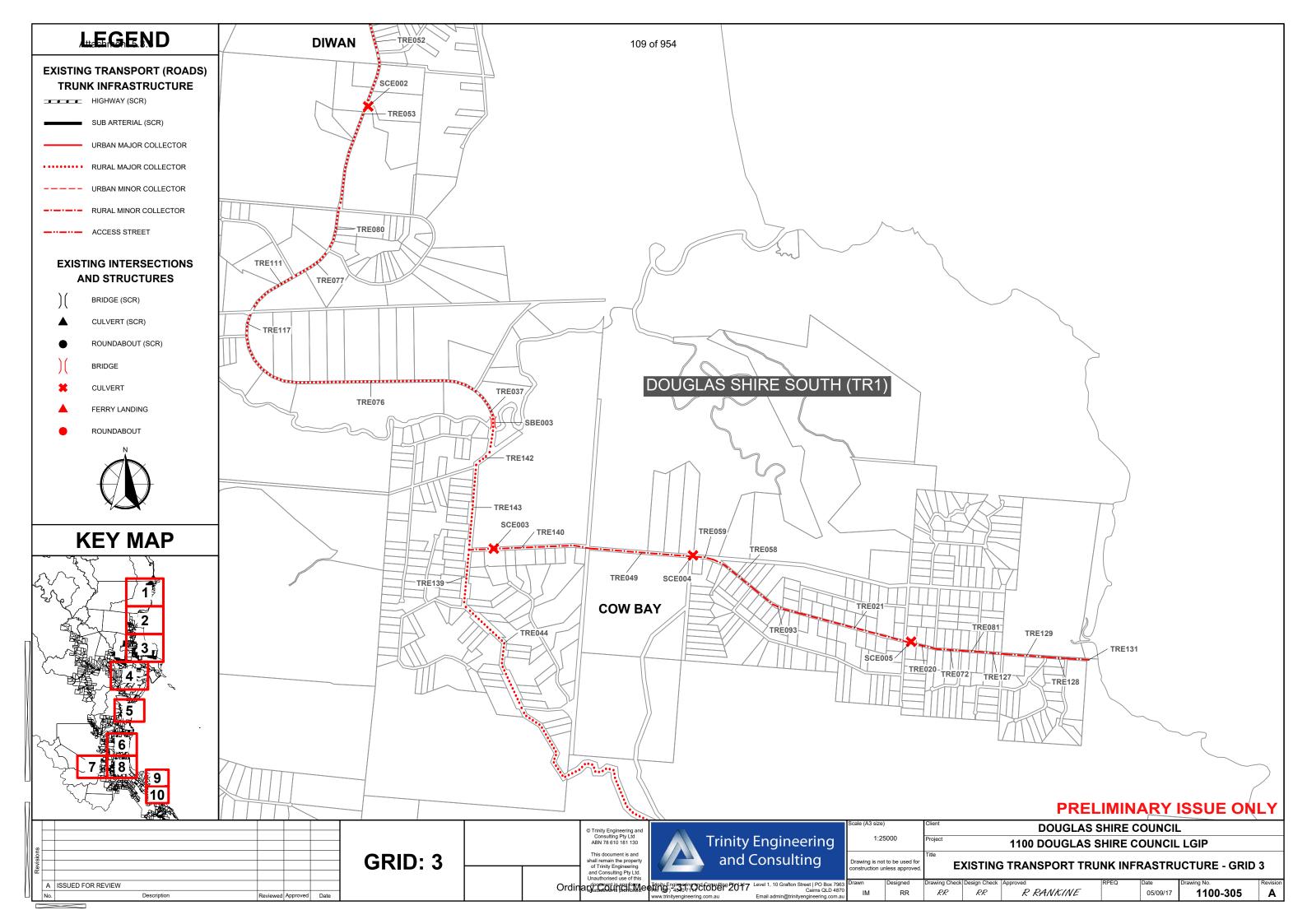
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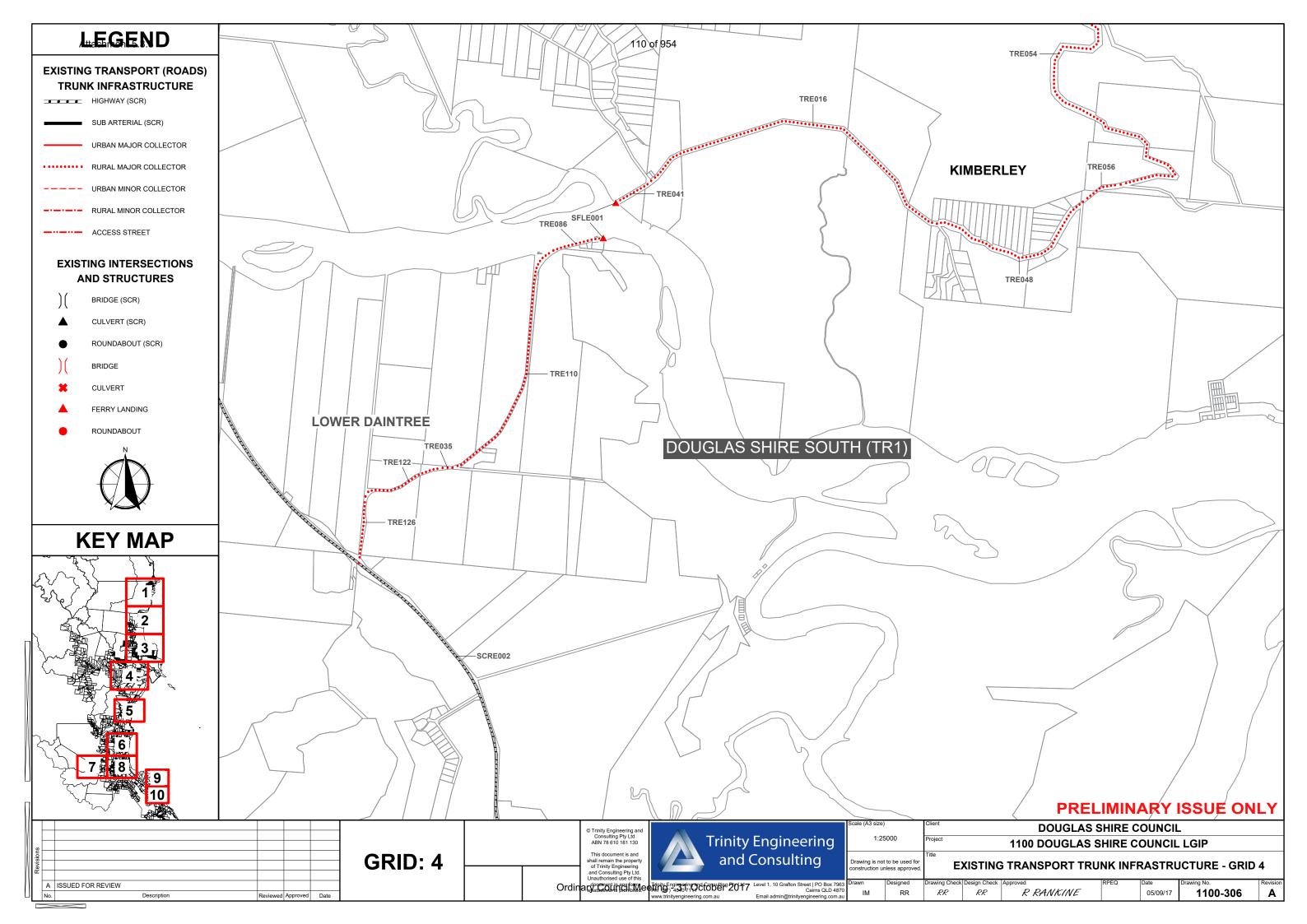


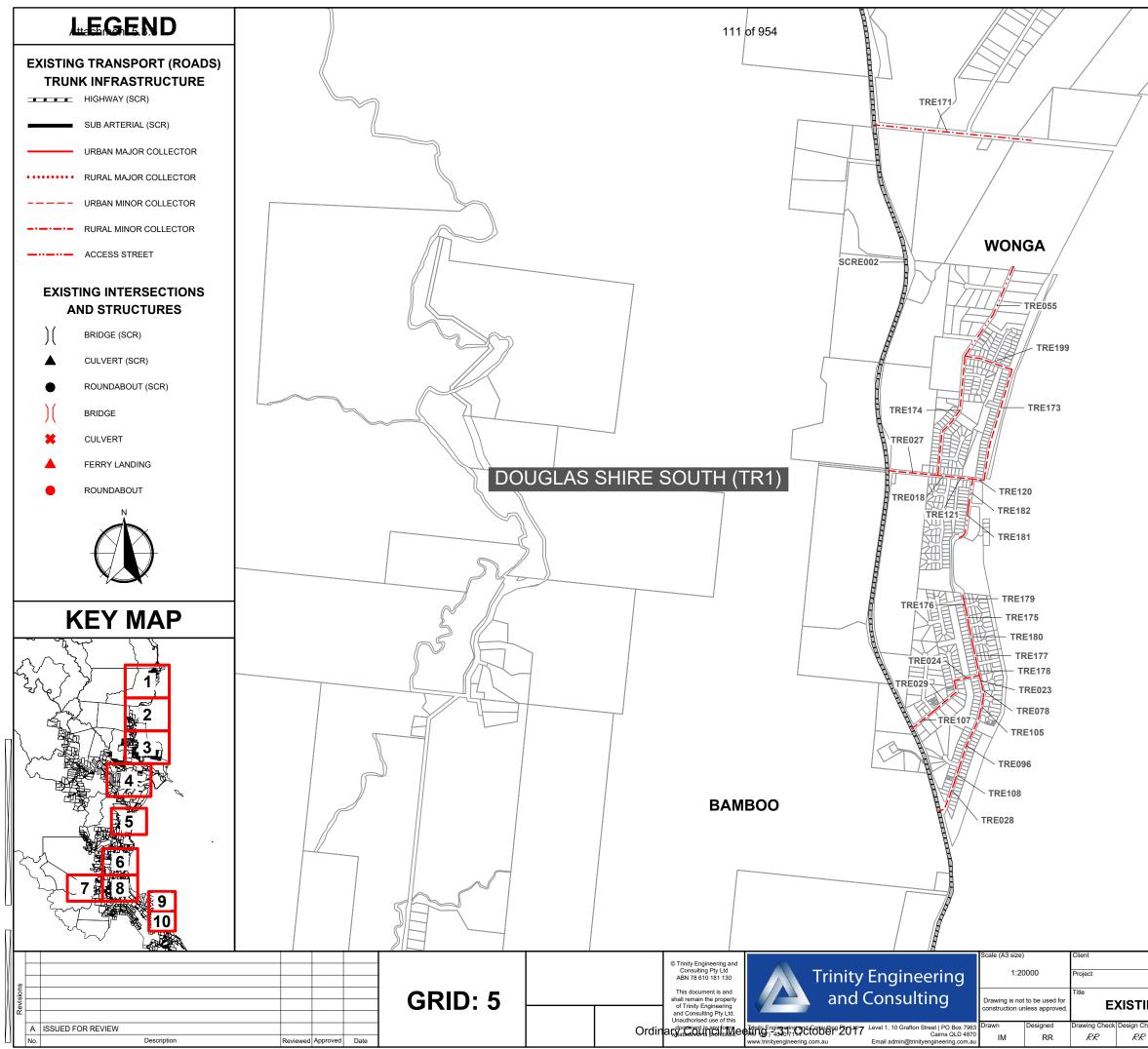
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EXISTING TRANSPORT TRUNK INFRASTRUCTURE - GRID 2

Check	Approved	RPEQ	Date	Drawing No.	Revision
PR	R RANKINE		05/09/17	1100-304	Α



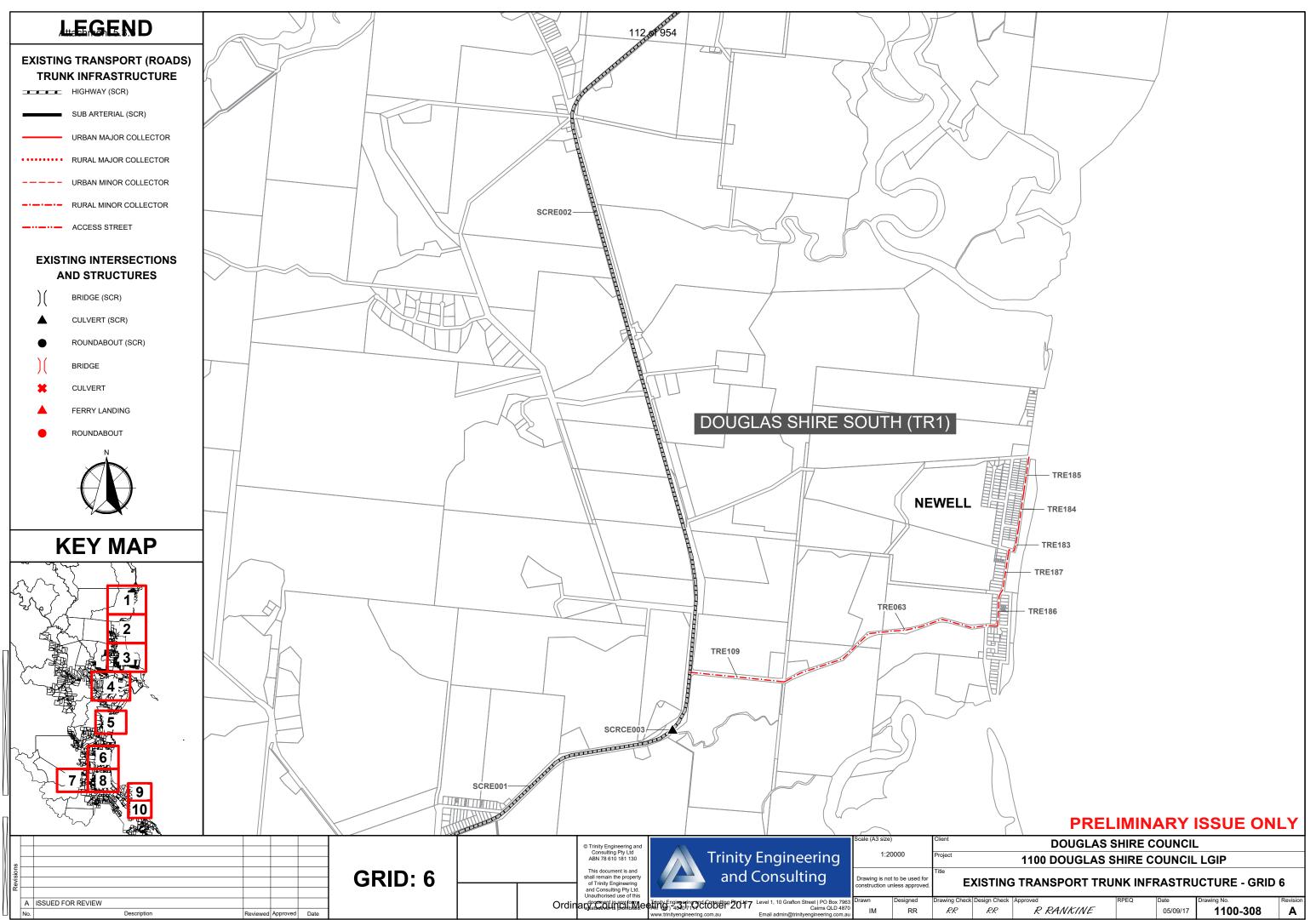




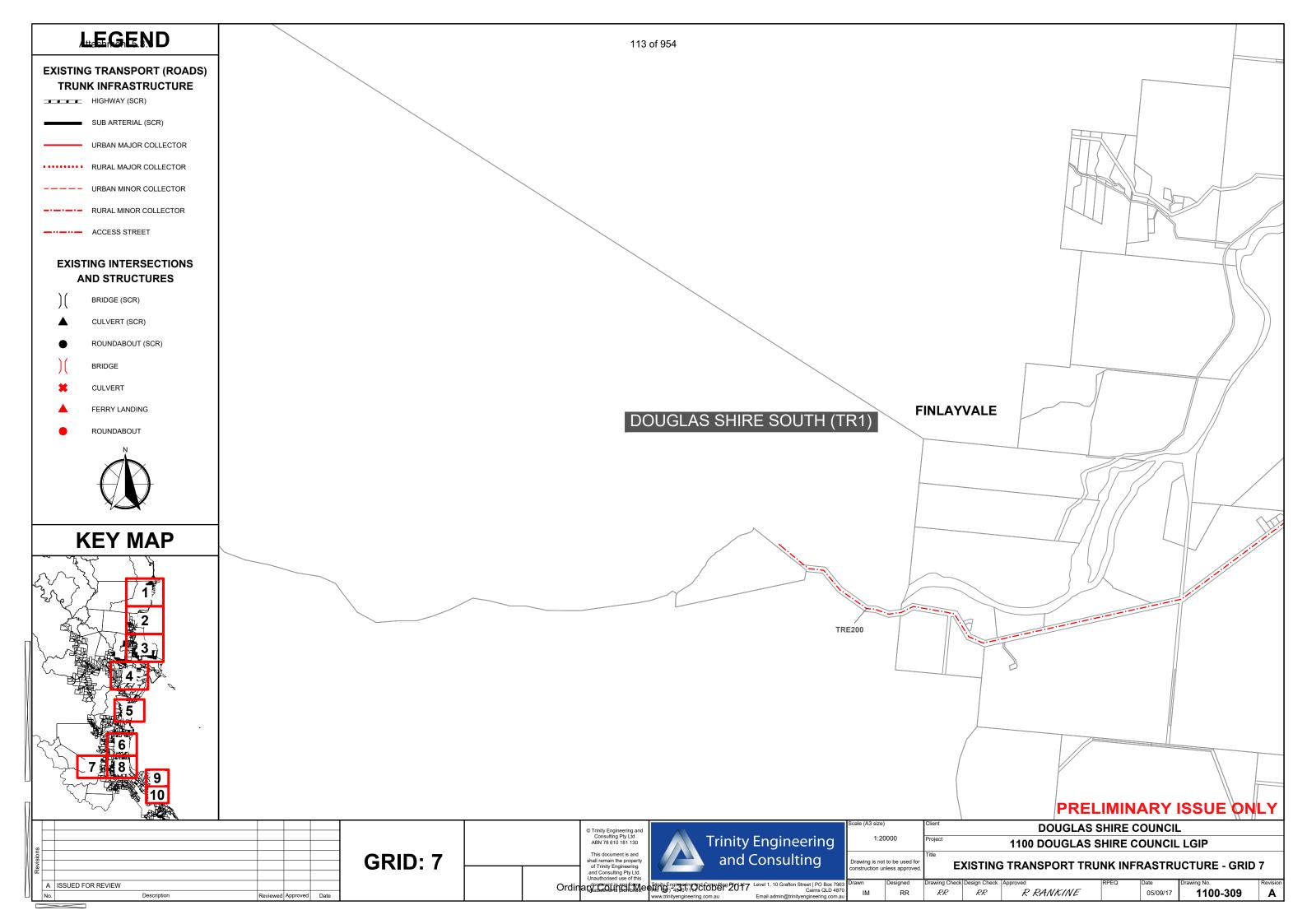
DOUGLAS SHIRE COUNCIL 1100 DOUGLAS SHIRE COUNCIL LGIP

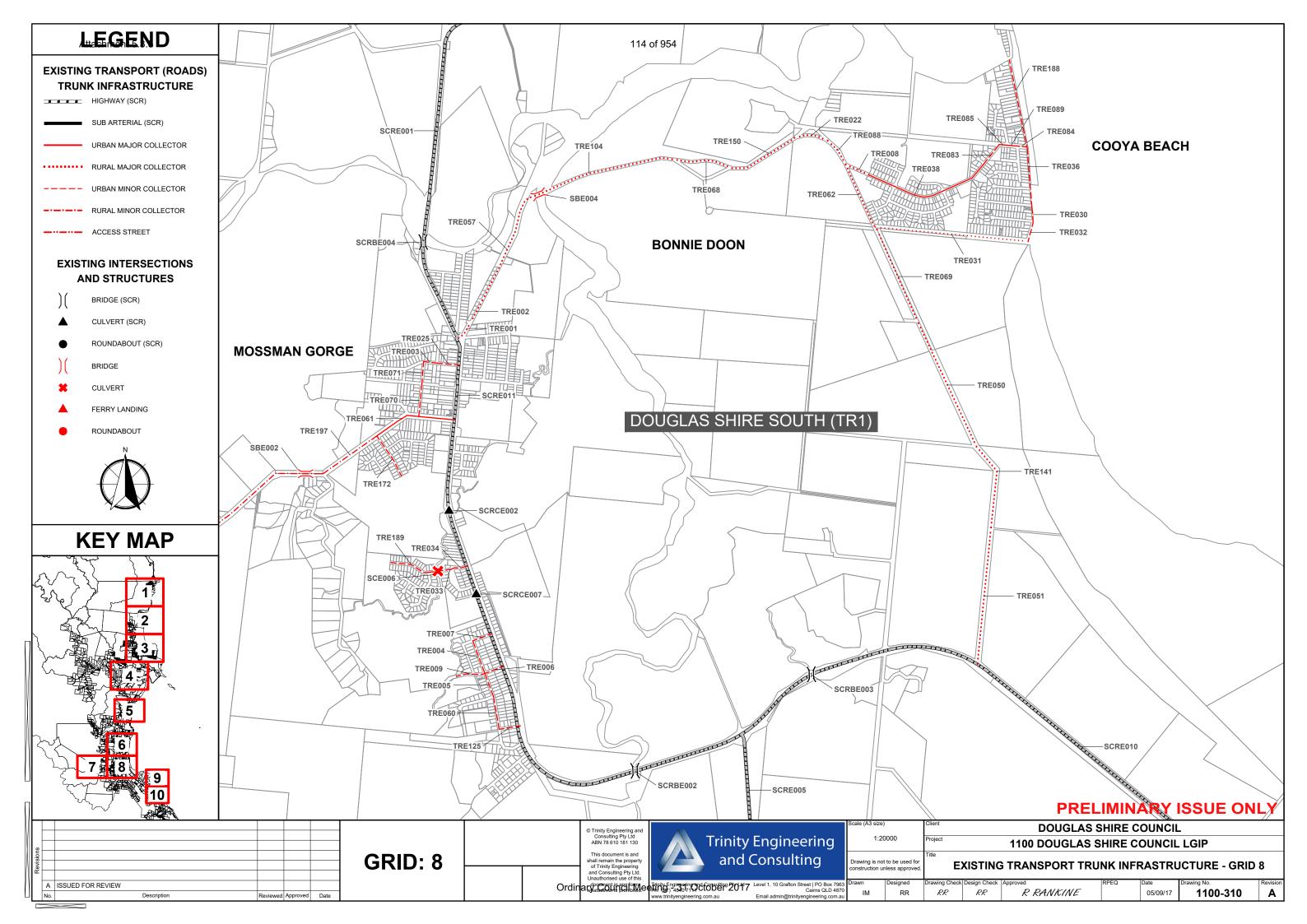
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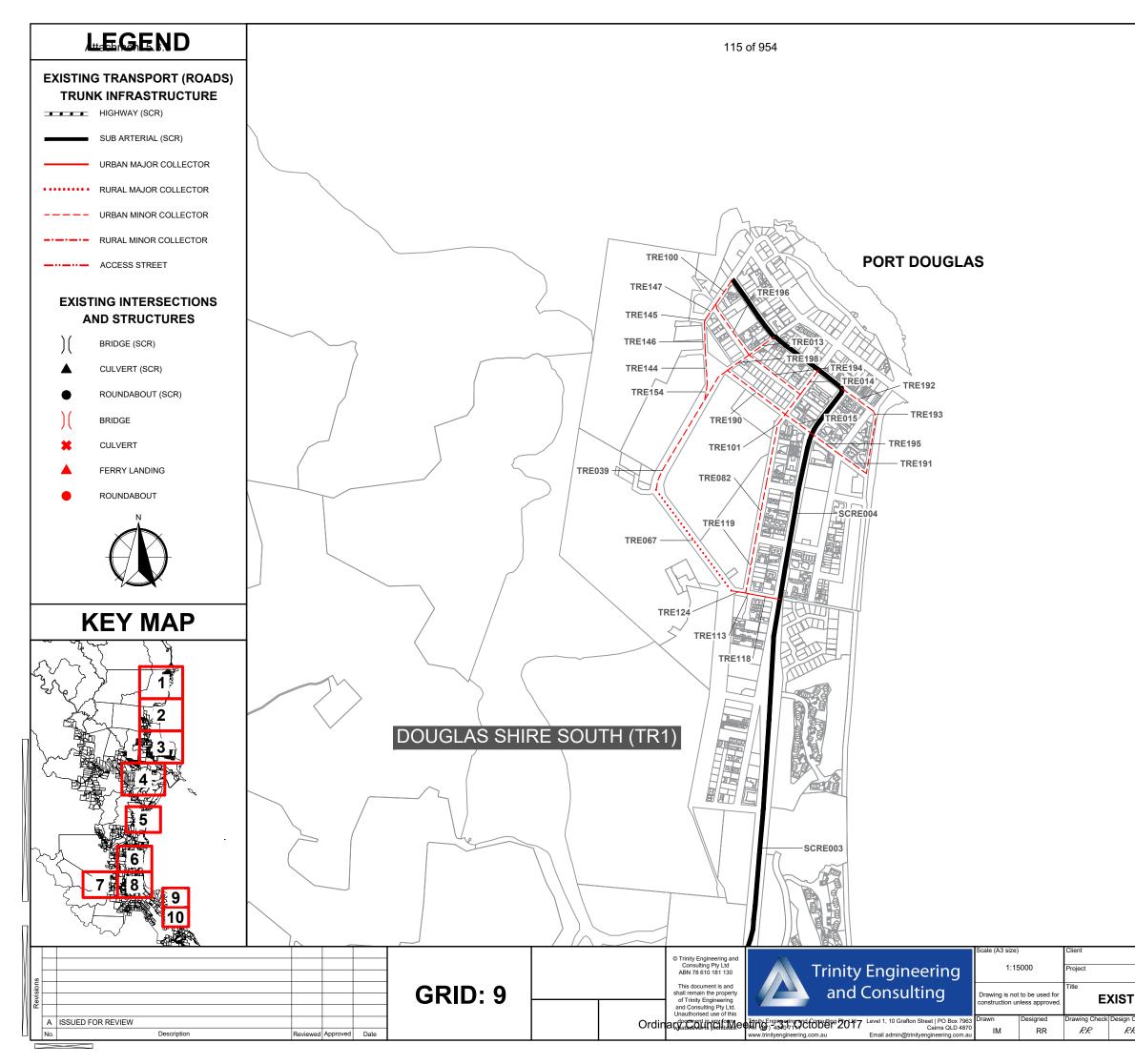
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R	R RANKINE		05/09/17	1100-307	A
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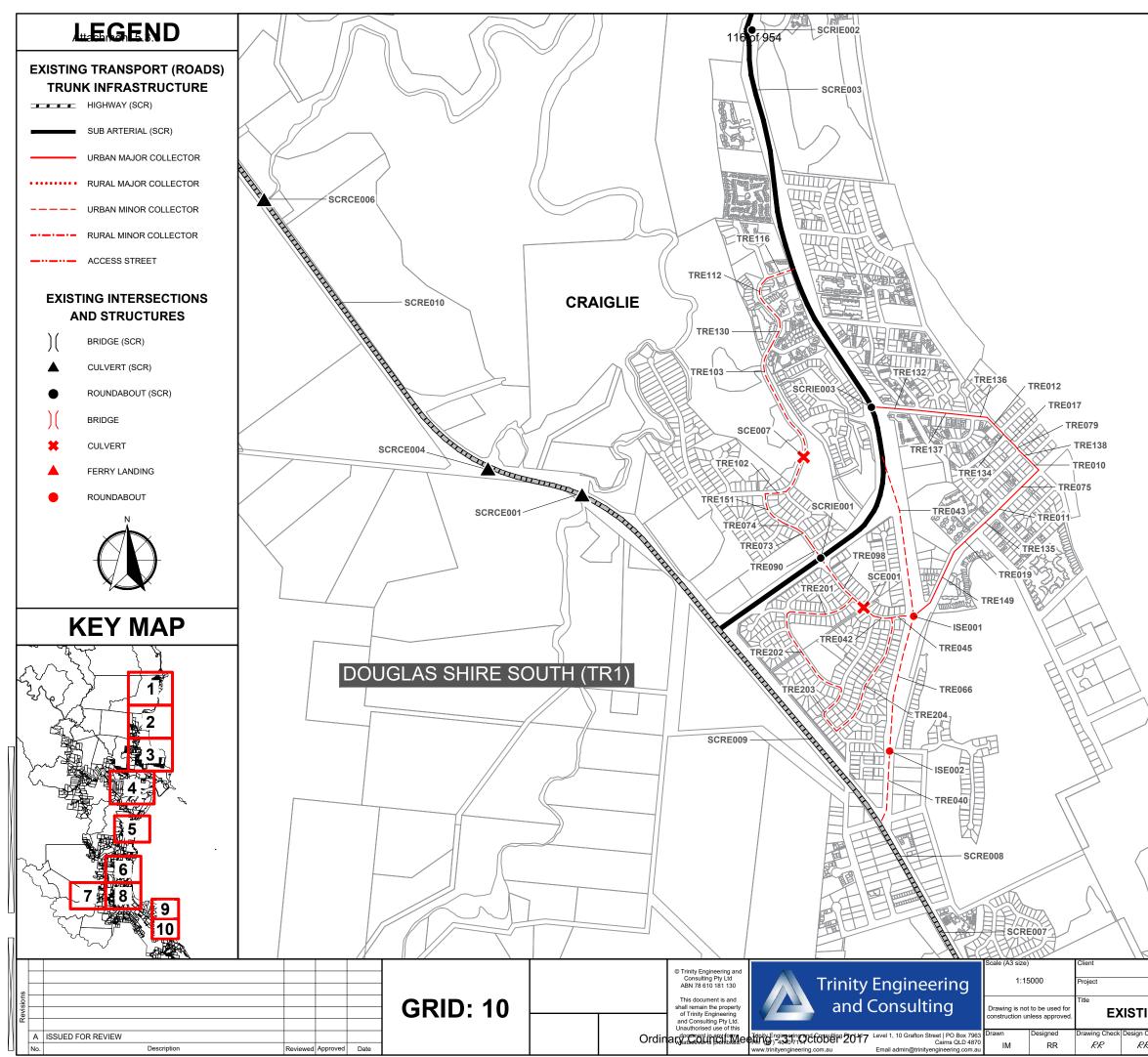




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EXISTING TRANSPORT TRUNK INFRASTRUCTURE - GRID 9

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PR	R RANKINE		05/09/17	1100-311	Α



DOUGLAS SHIRE COUNCIL

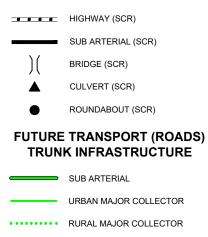
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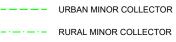
EXISTING TRANSPORT TRUNK INFRASTRUCTURE - GRID 10

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EXISTING TRANSPORT (SCR) TRUNK INFRASTRUCTURE





DRAINAGE LINE

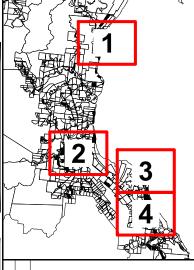
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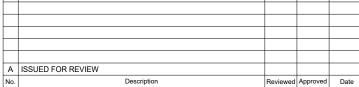
FUTURE INTERSECTIONS AND STRUCTURES

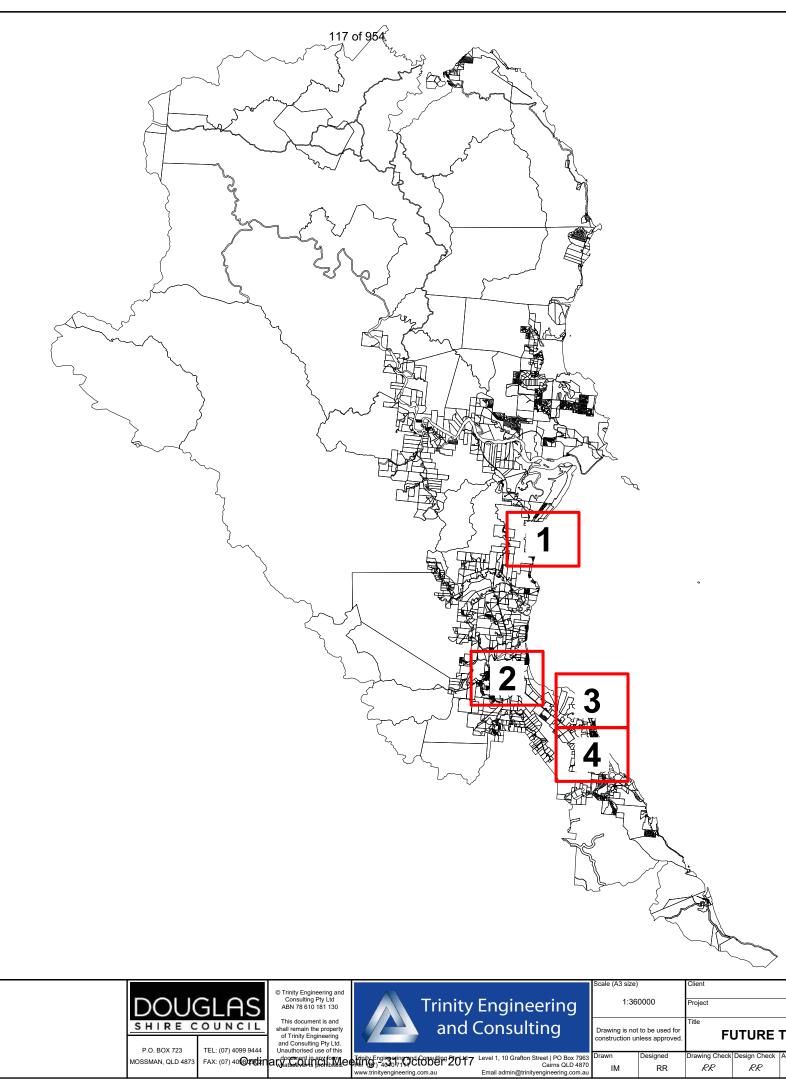
BRIDGE CULVERT × + PRIORITY INTERSECTION



KEY MAP







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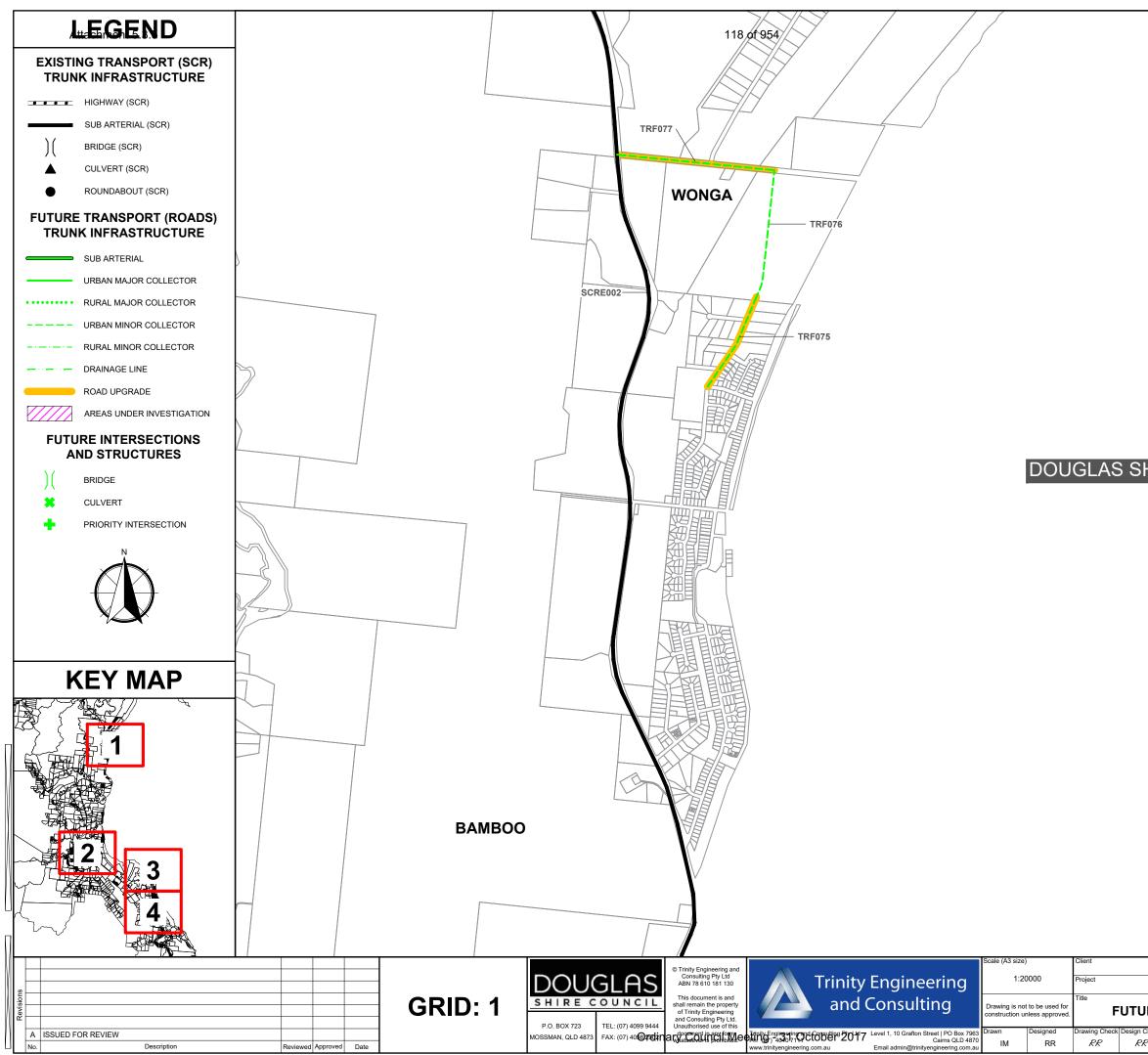
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FUTURE TRANSPORT TRUNK INFRASTRUCTURE KEY MAP

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RR	R RANKINE		05/09/17	1100-313	A



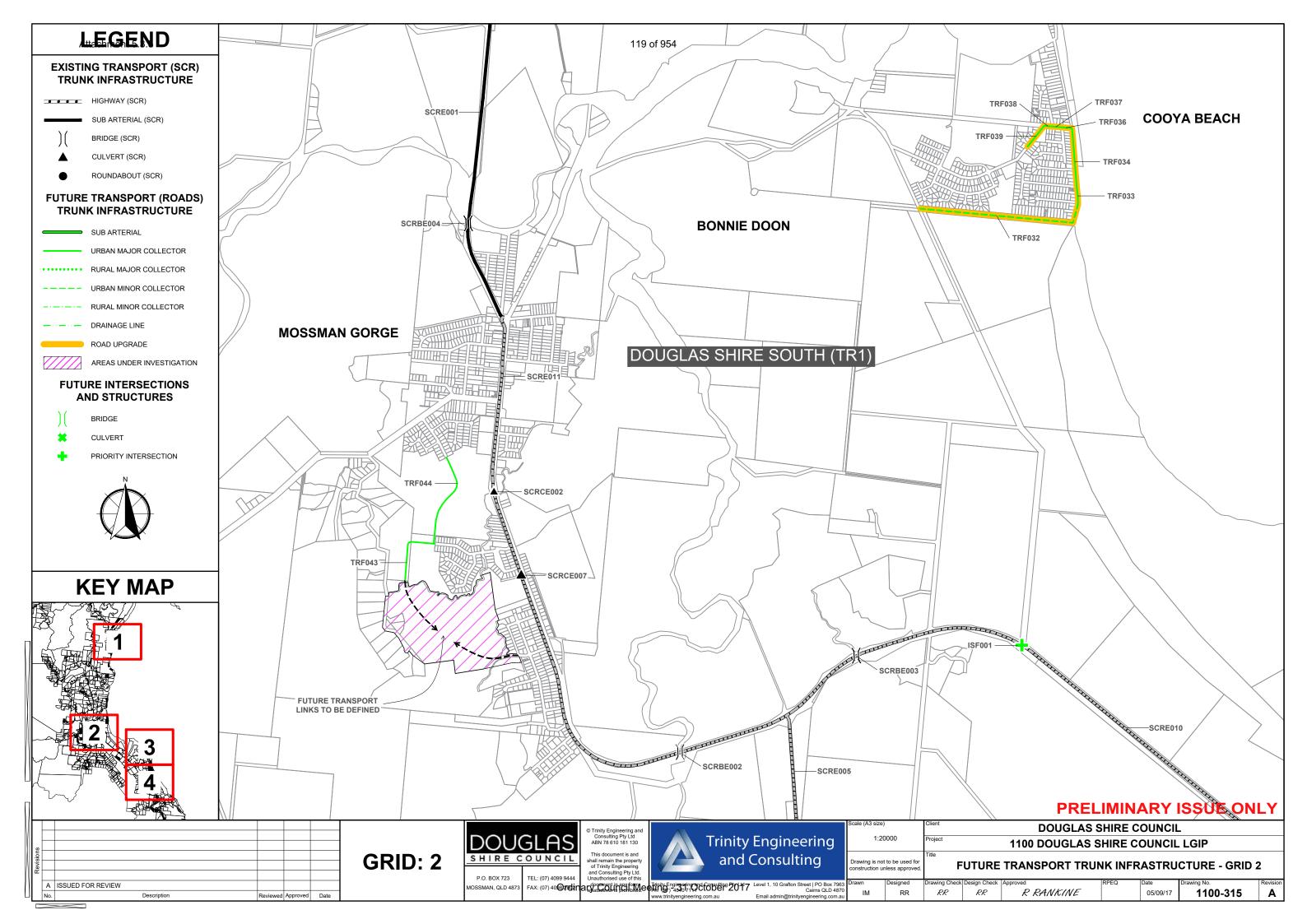
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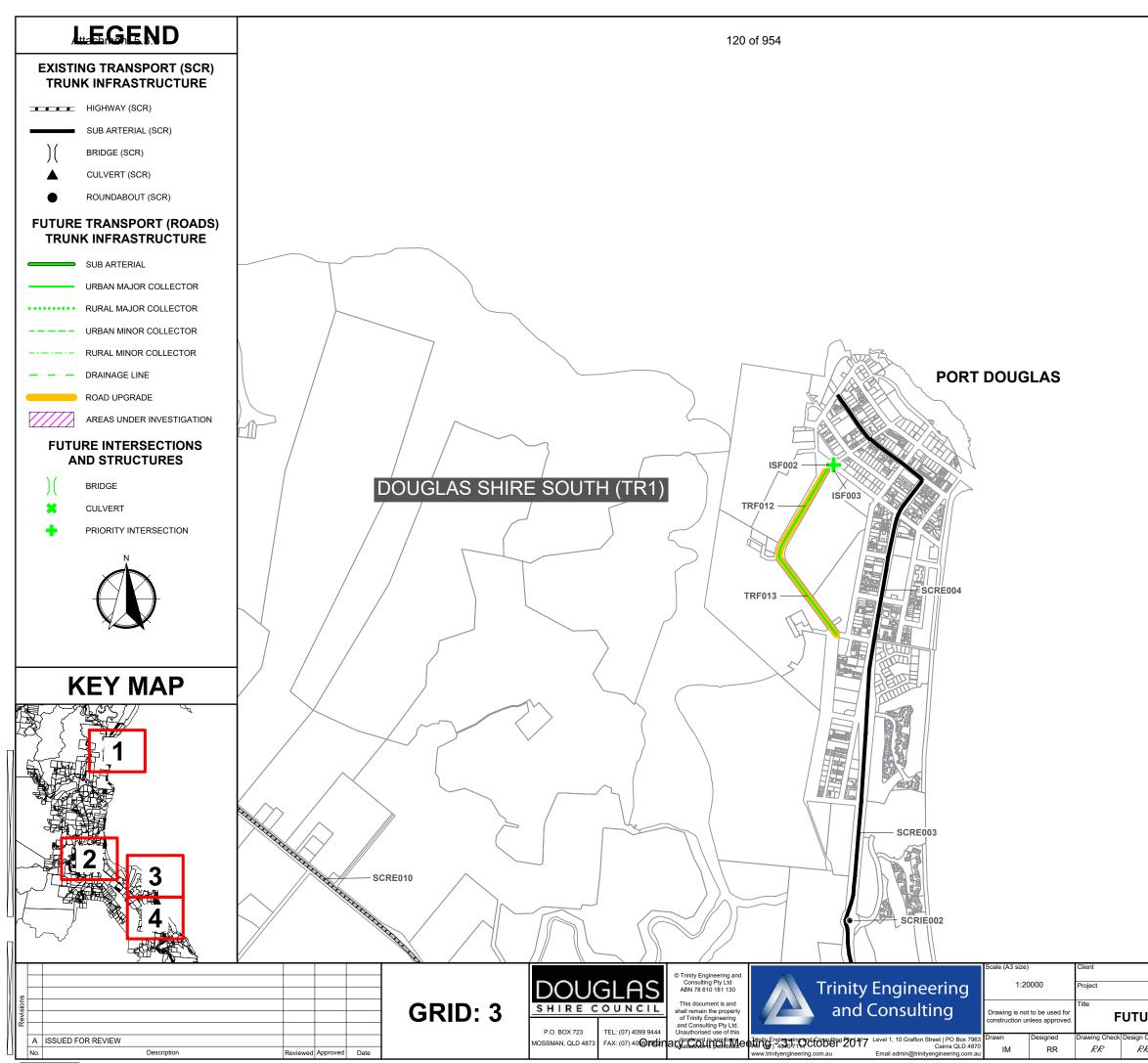
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FUTURE TRANSPORT TRUNK INFRASTRUCTURE - GRID 1

Check	Approved	RPEQ	Date	Drawing No.	Revision
R	R RANKINE		05/09/17	1100-314	Α

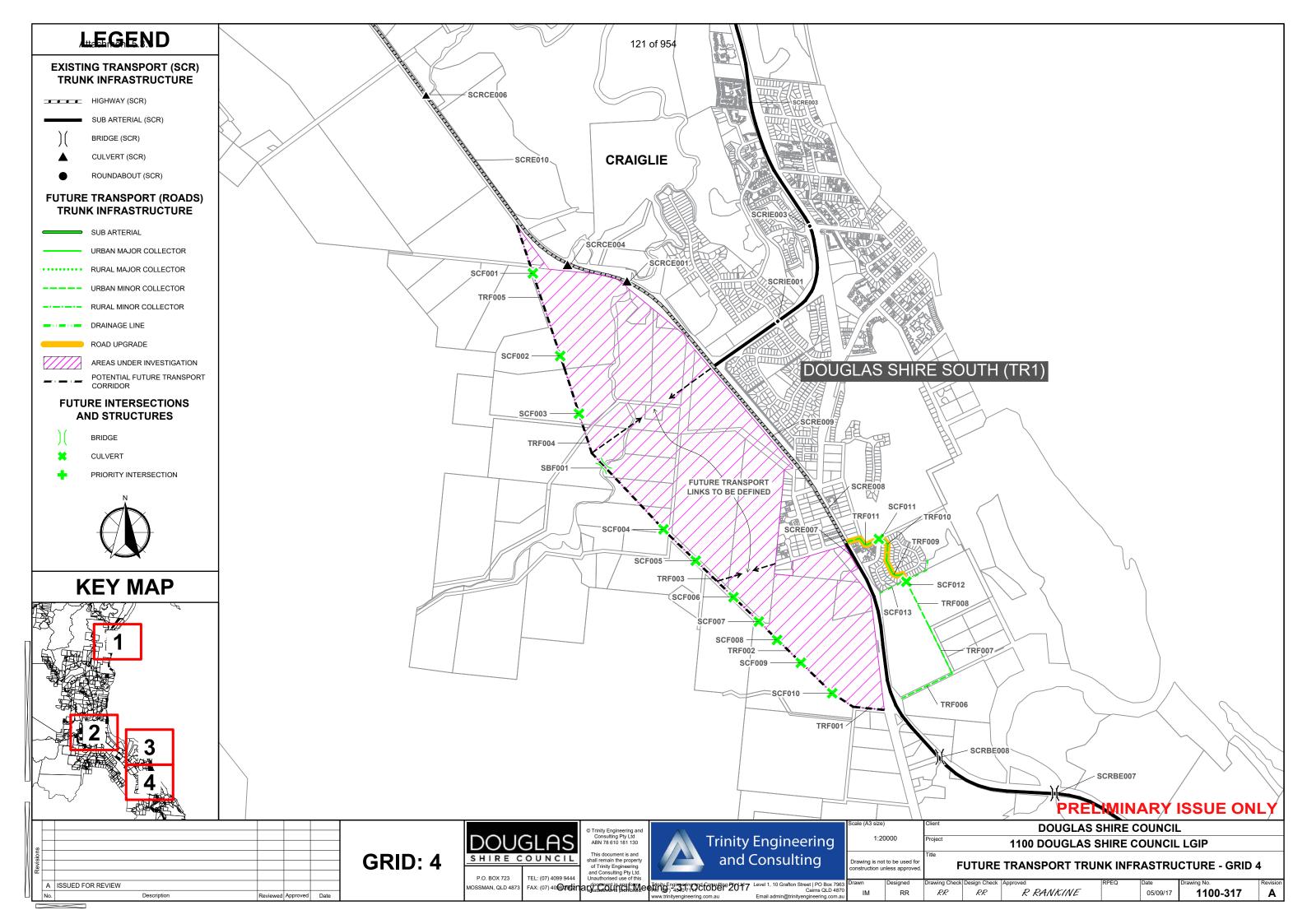


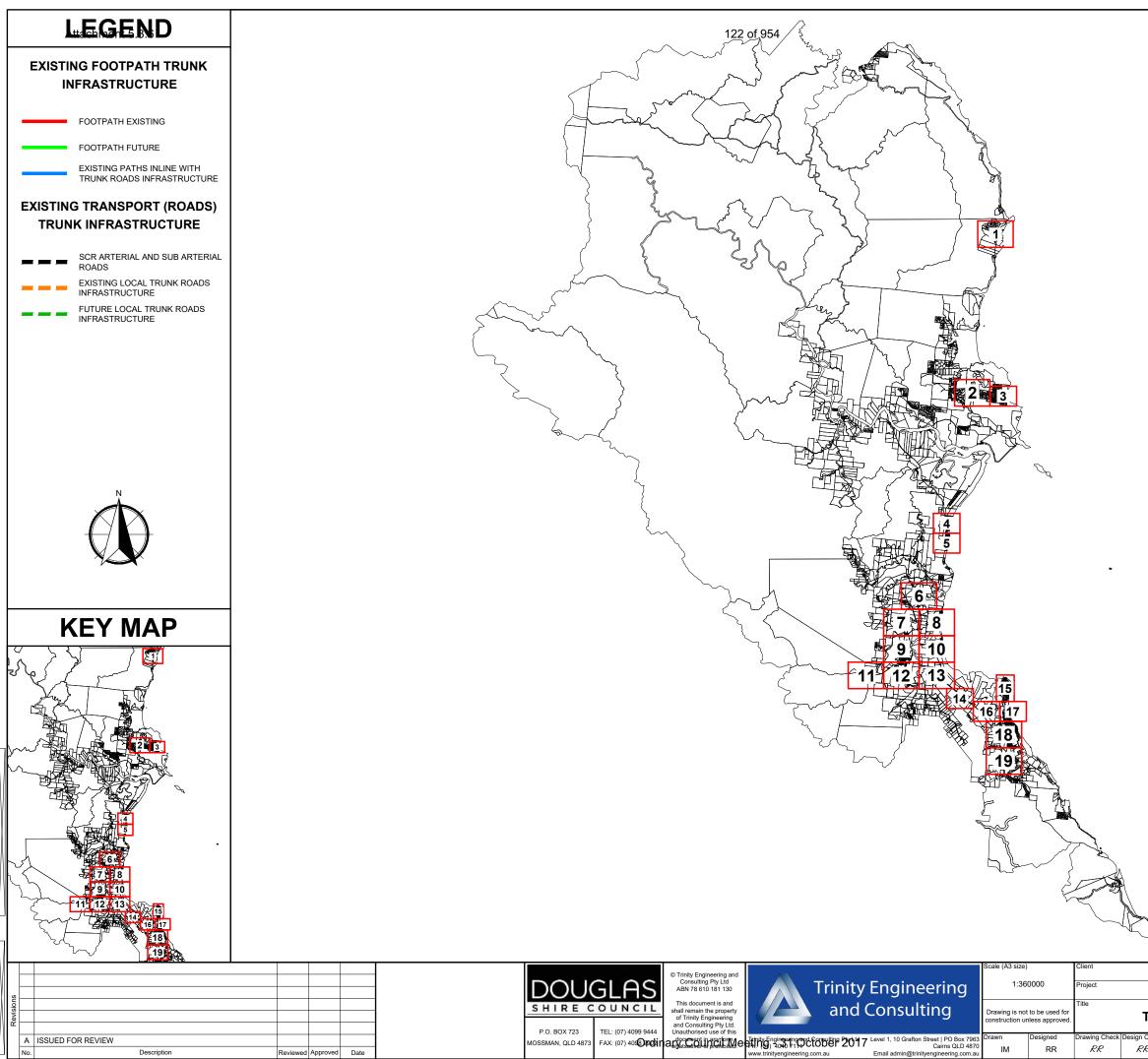


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FUTURE TRANSPORT TRUNK INFRASTRUCTURE - GRID 3

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R	R RANKINE		05/09/17	1100-316	Α





Description

Reviewed Approved Date

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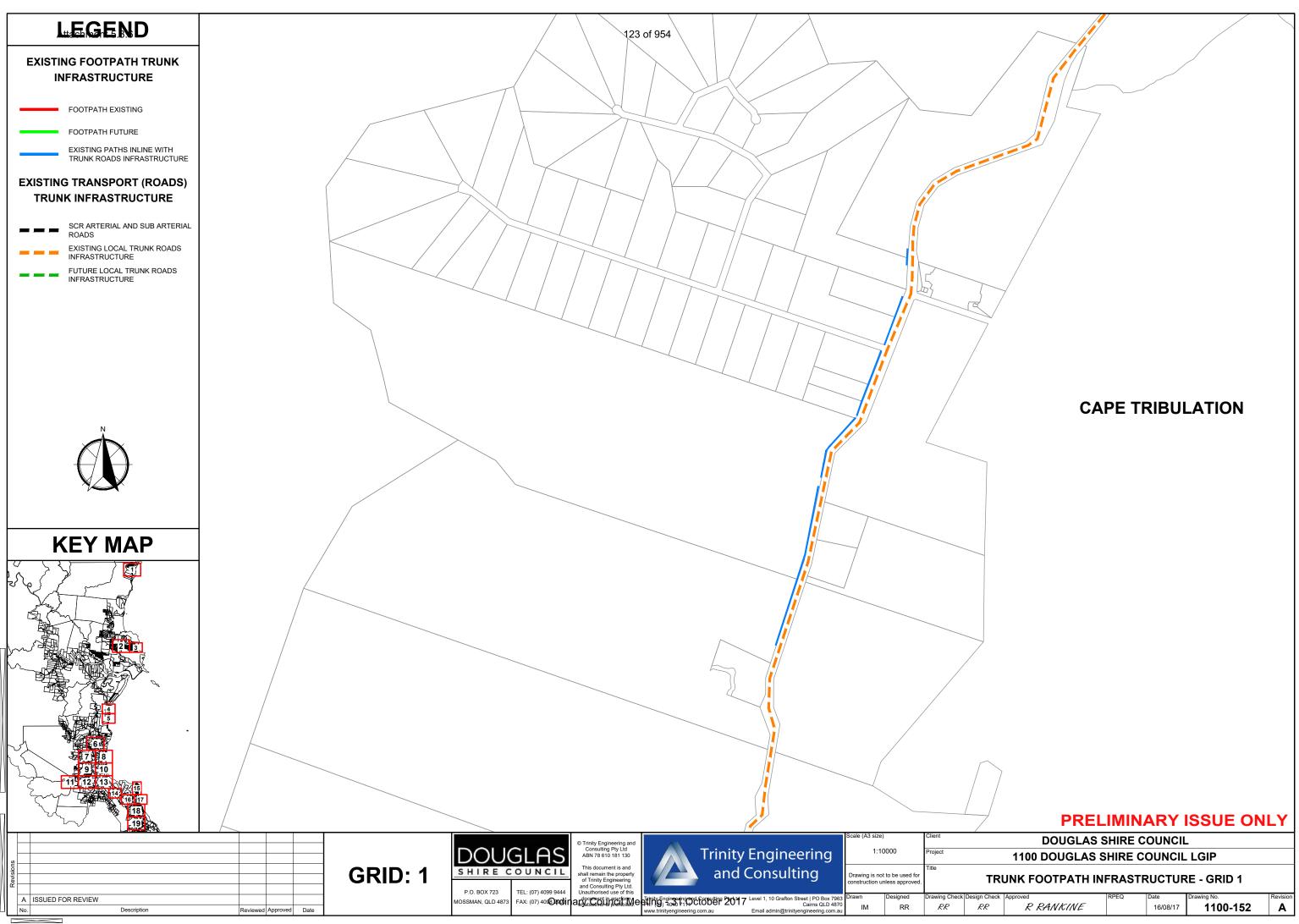
TRUNK FOOTPATH INFRASTRUCTURE KEY MAP

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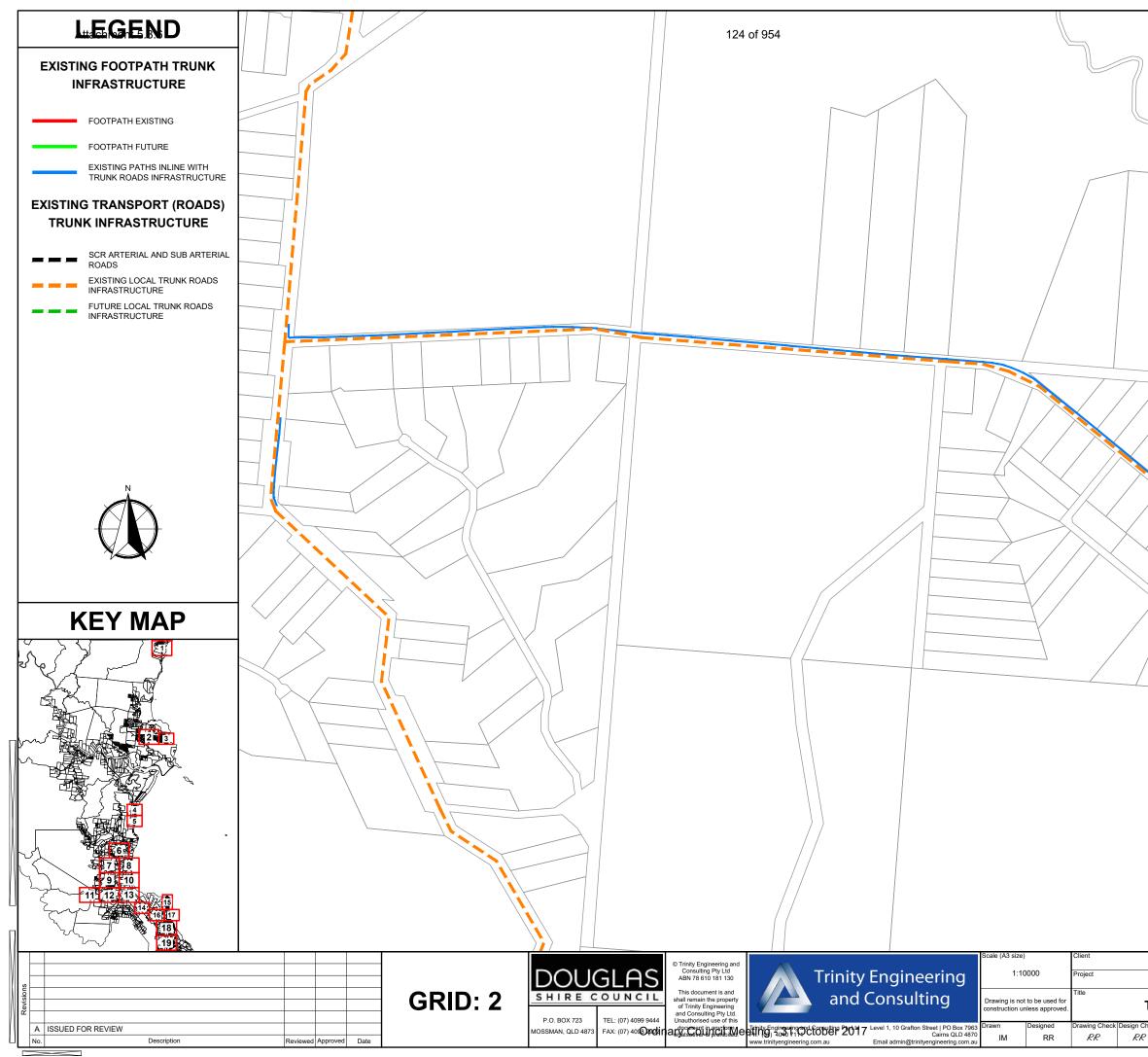
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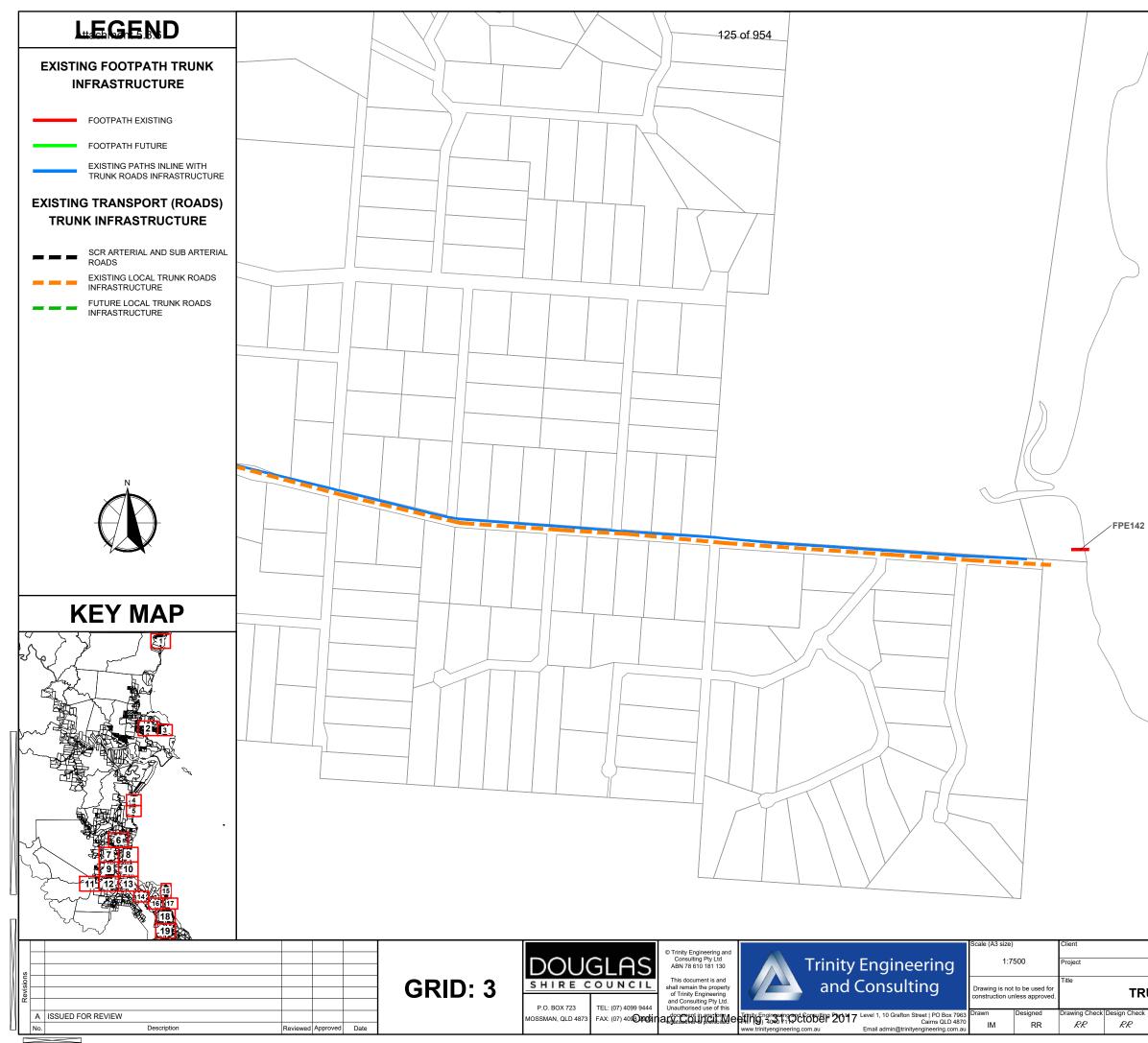
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RR	R RANKINE		08/08/17	1100-151	Α



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R	R RANKINE		16/08/17	1100-152	Α



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TRUNK INFRASTRUC			K - GRID 2	Revision
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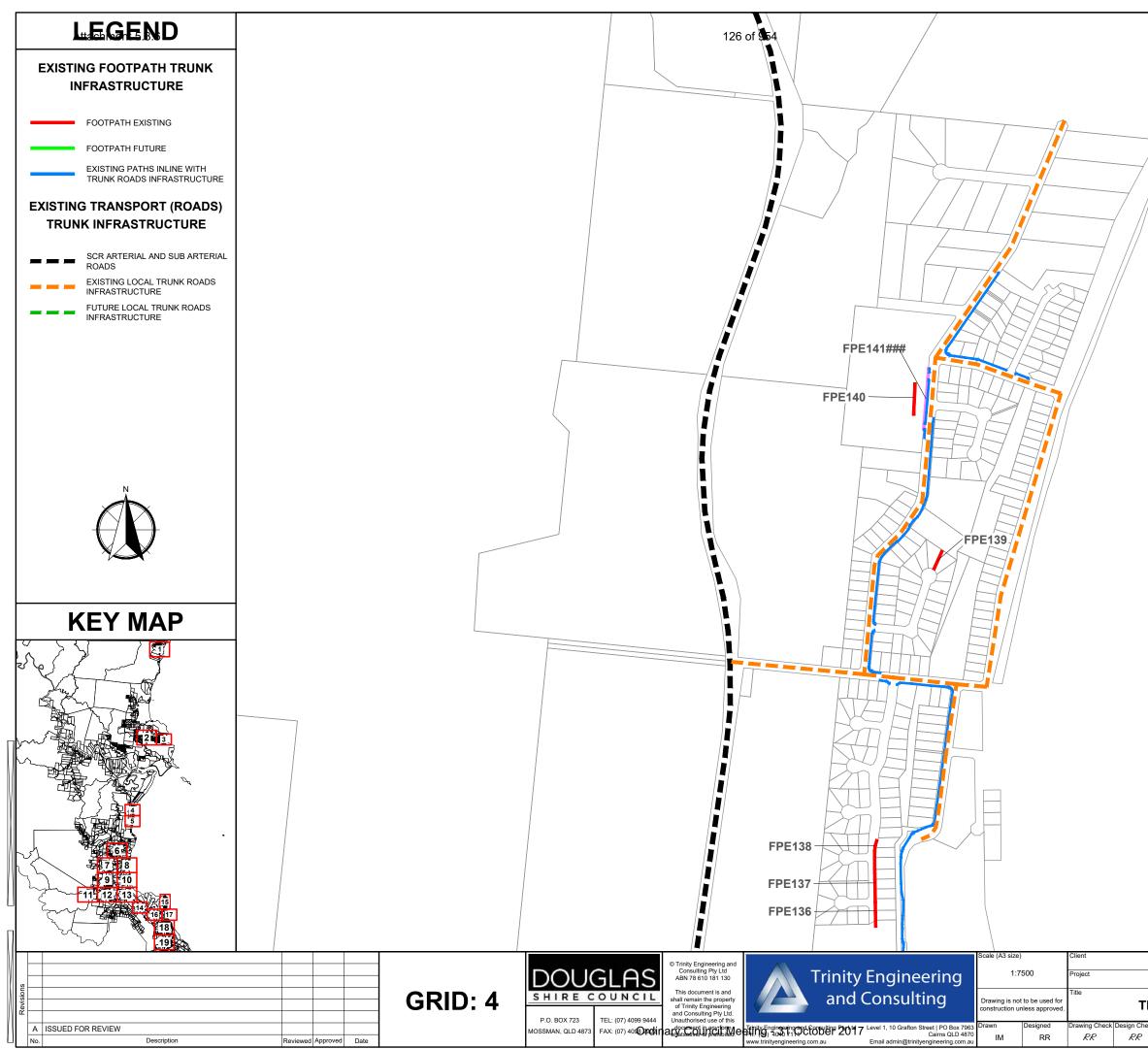


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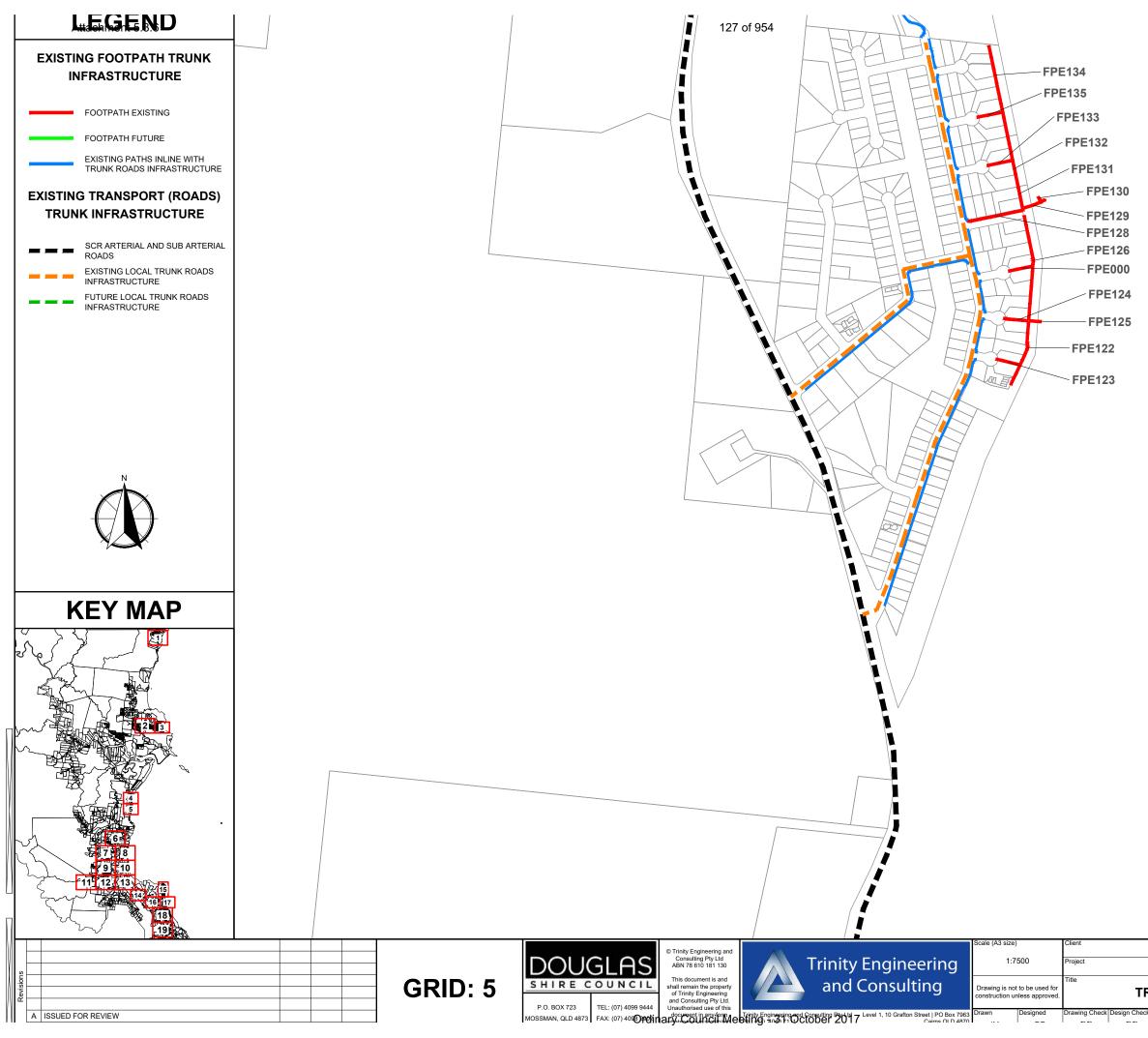
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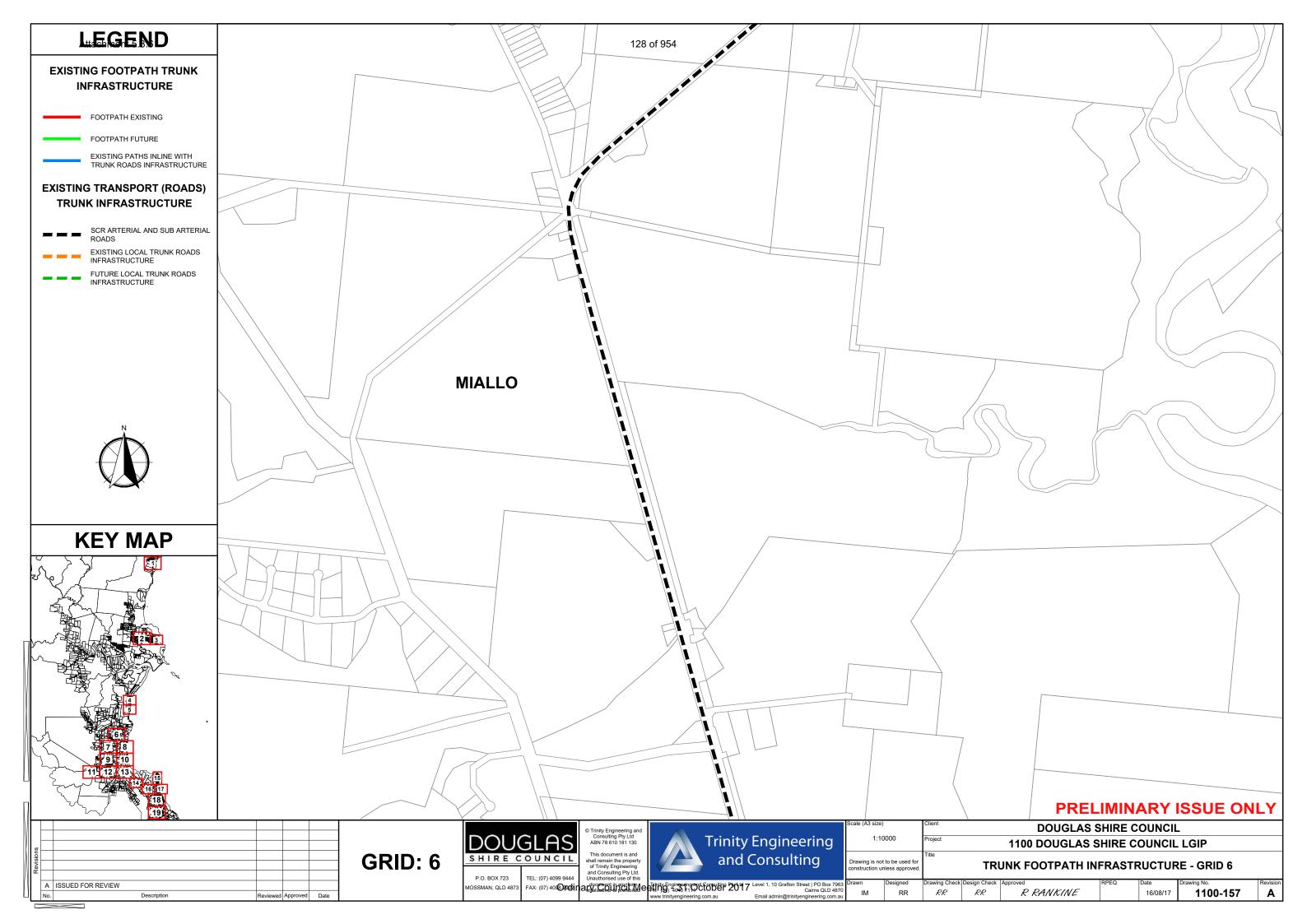
DOUGLAS SHIRE COUNCIL 1100 DOUGLAS SHIRE COUNCIL LGIP

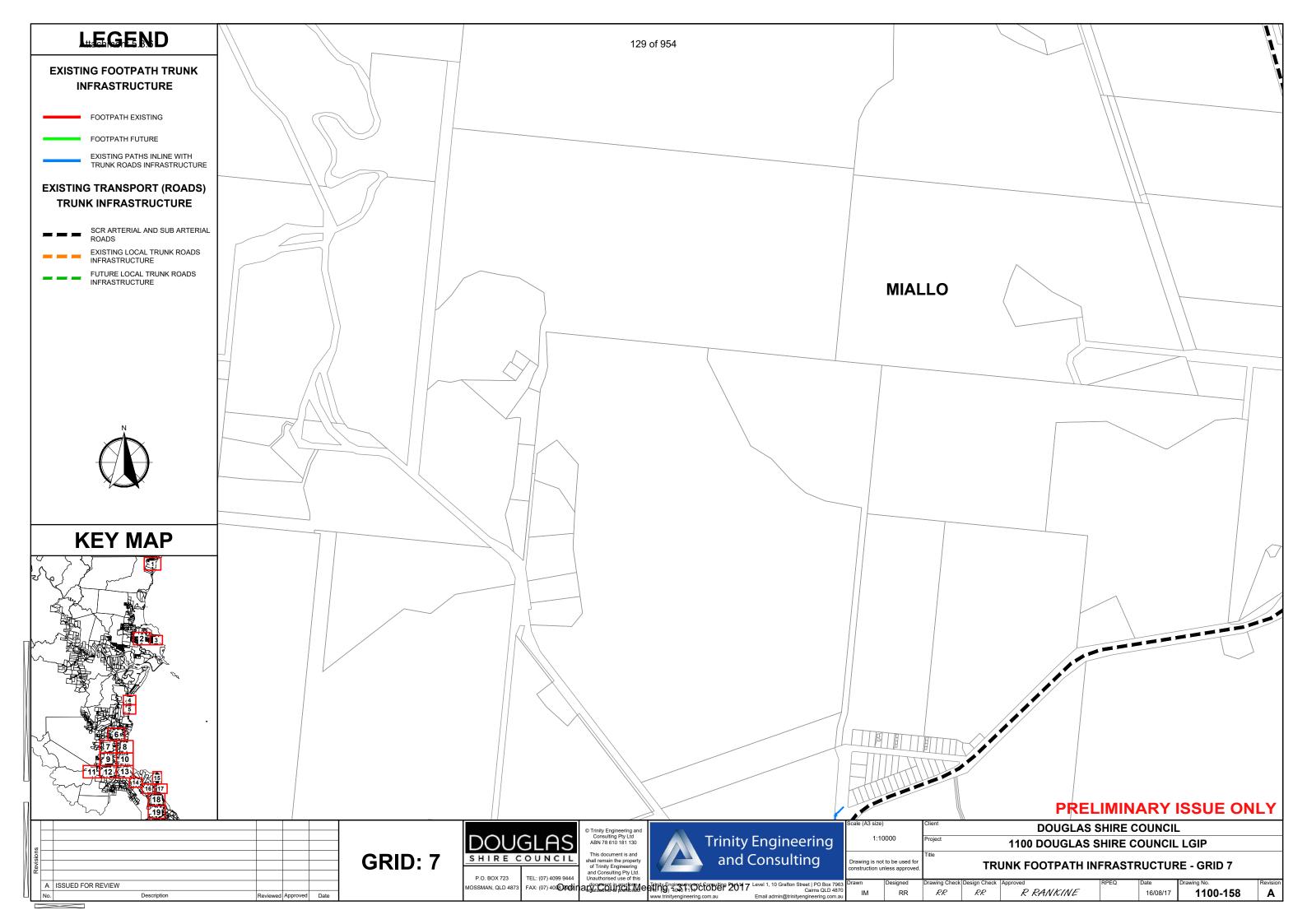
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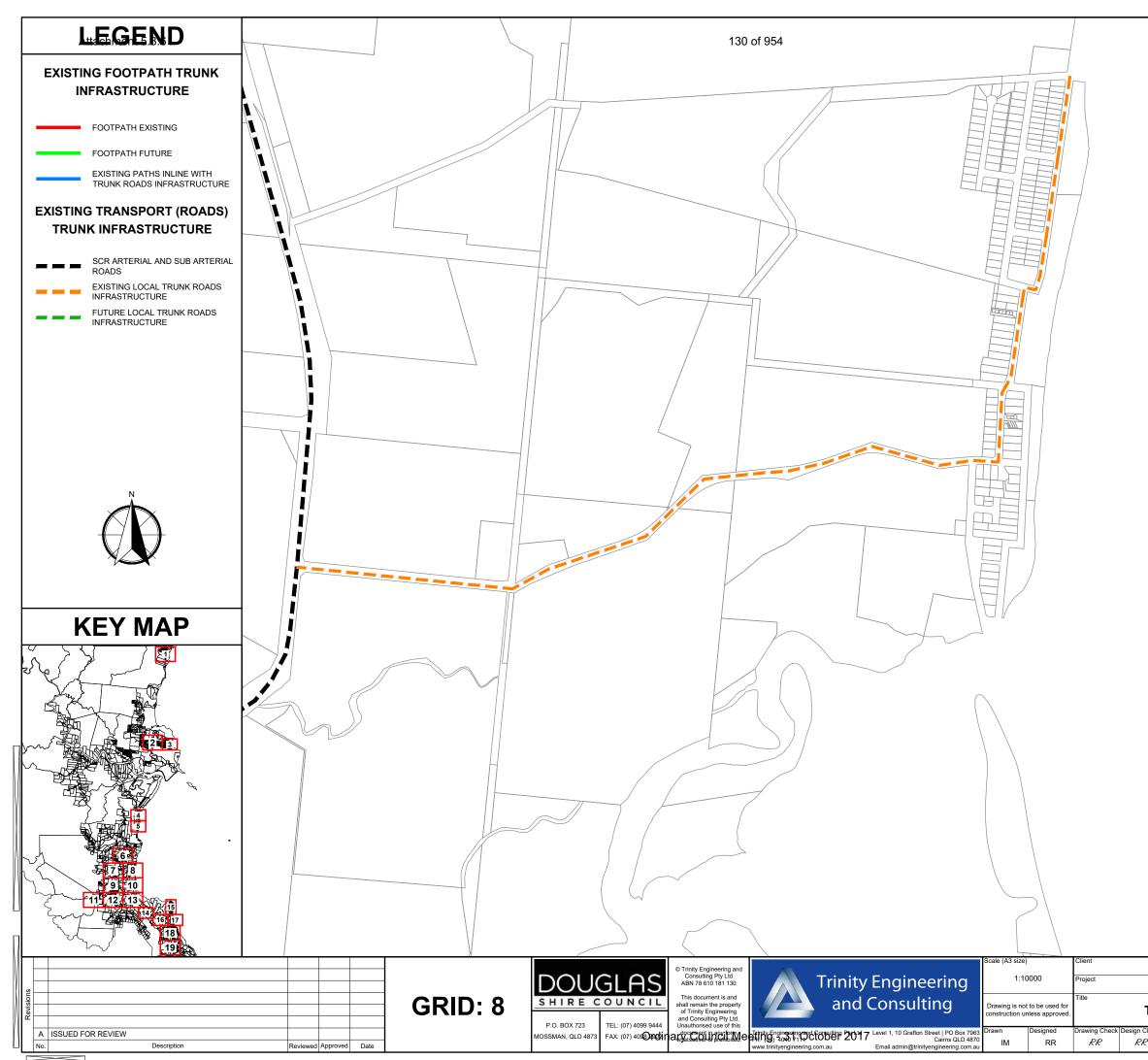


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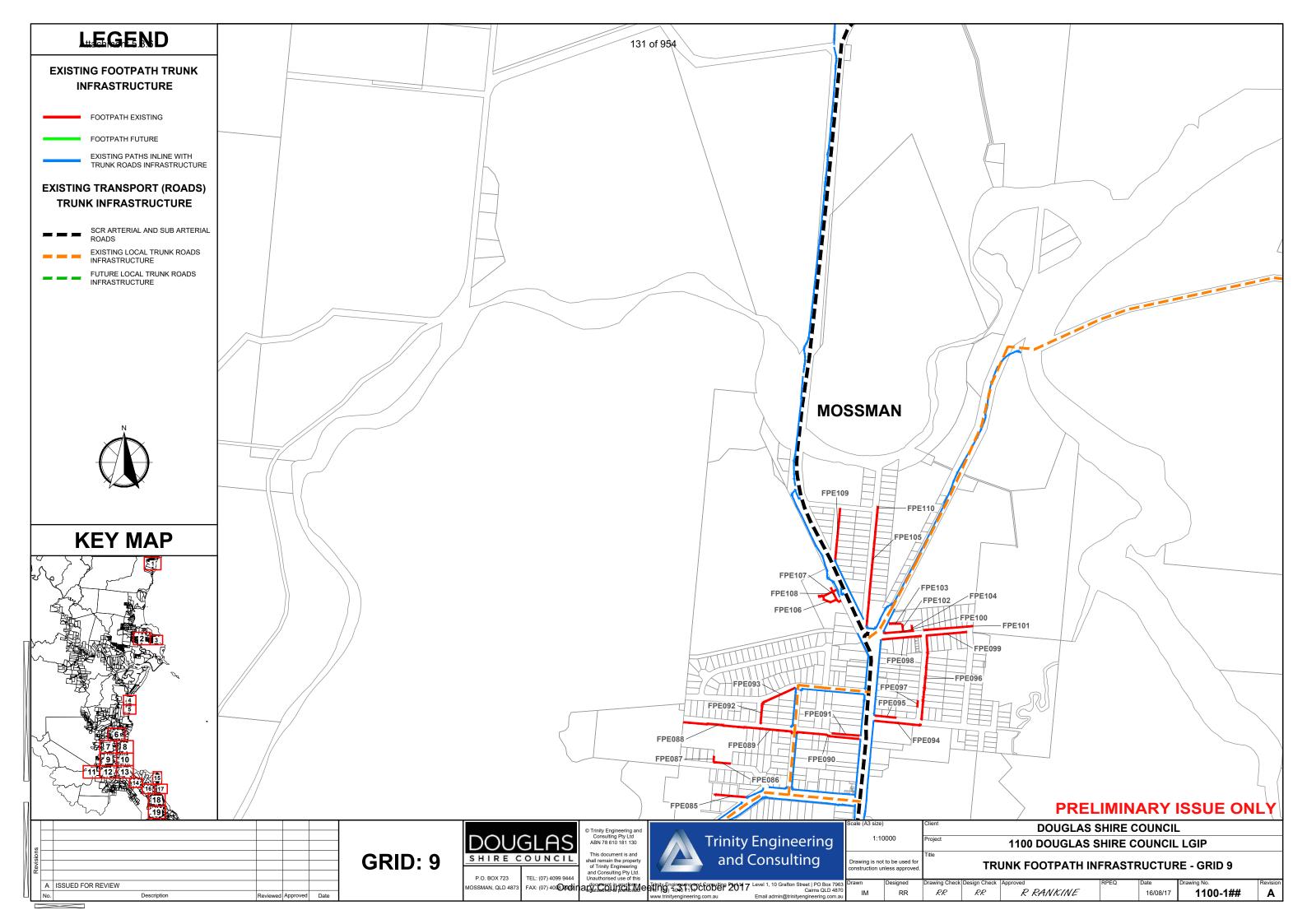


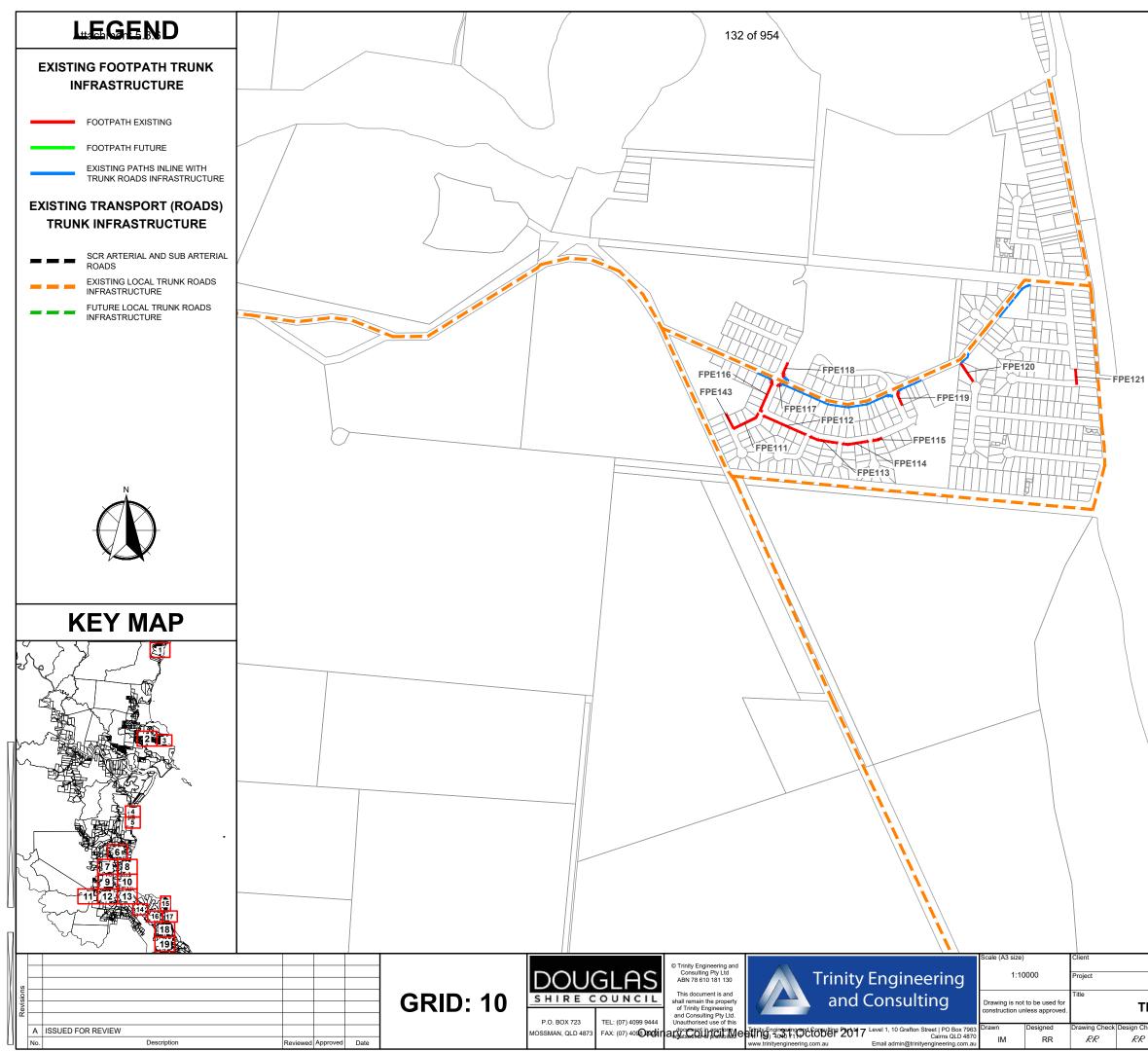
NEWELL BEACH

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DOUGLAS SHIRE COUNCIL 1100 DOUGLAS SHIRE COUNCIL LGIP

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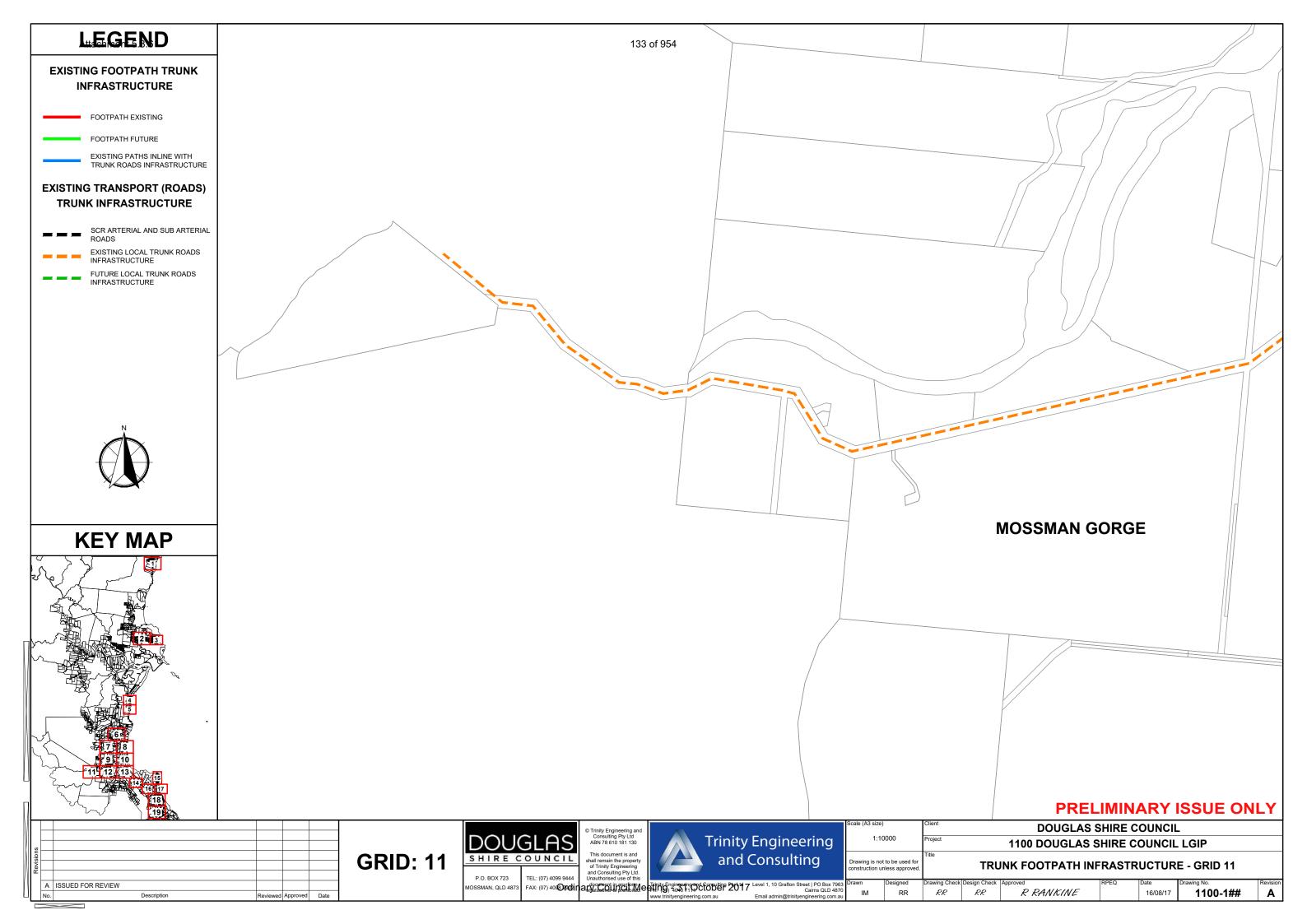


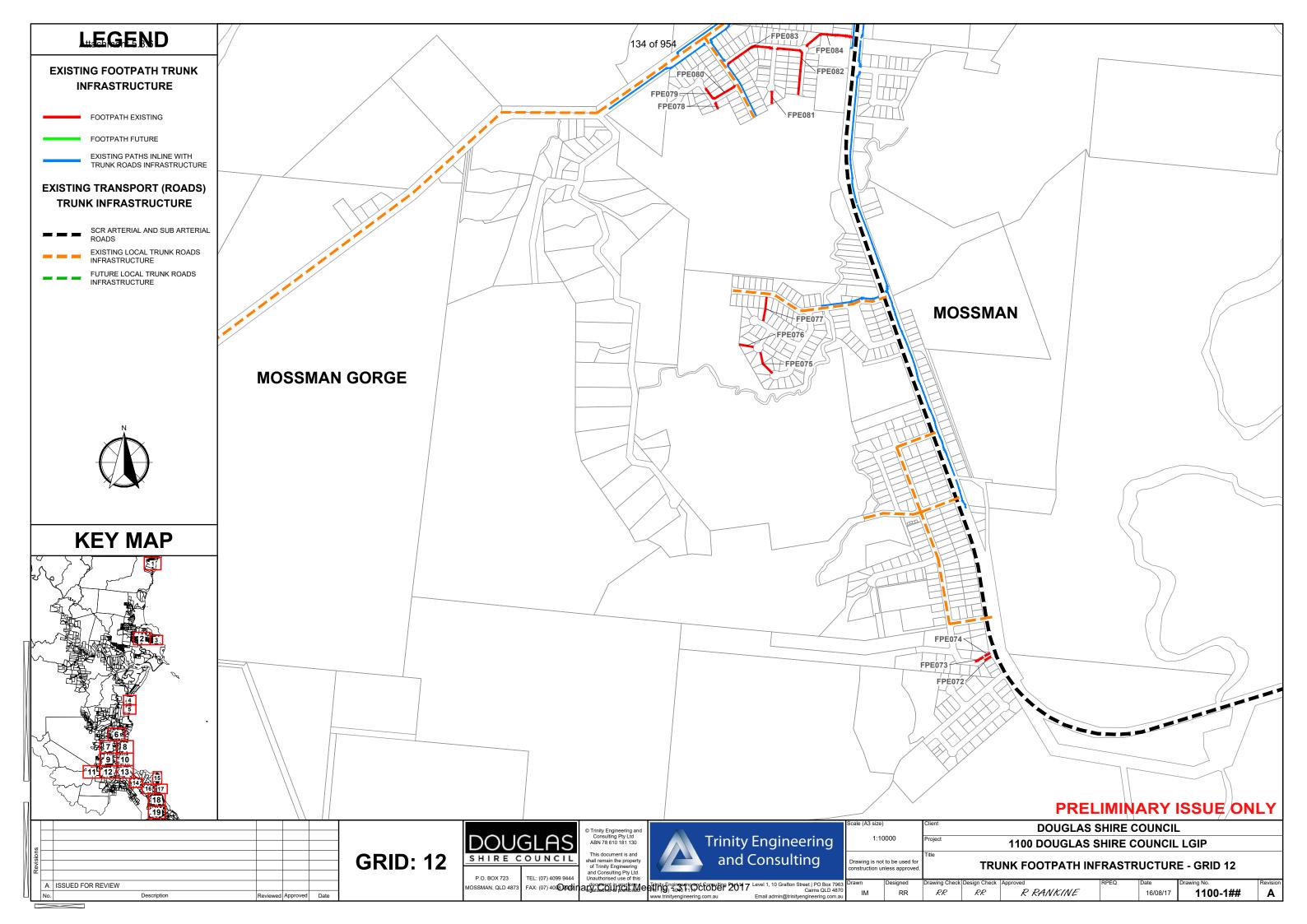
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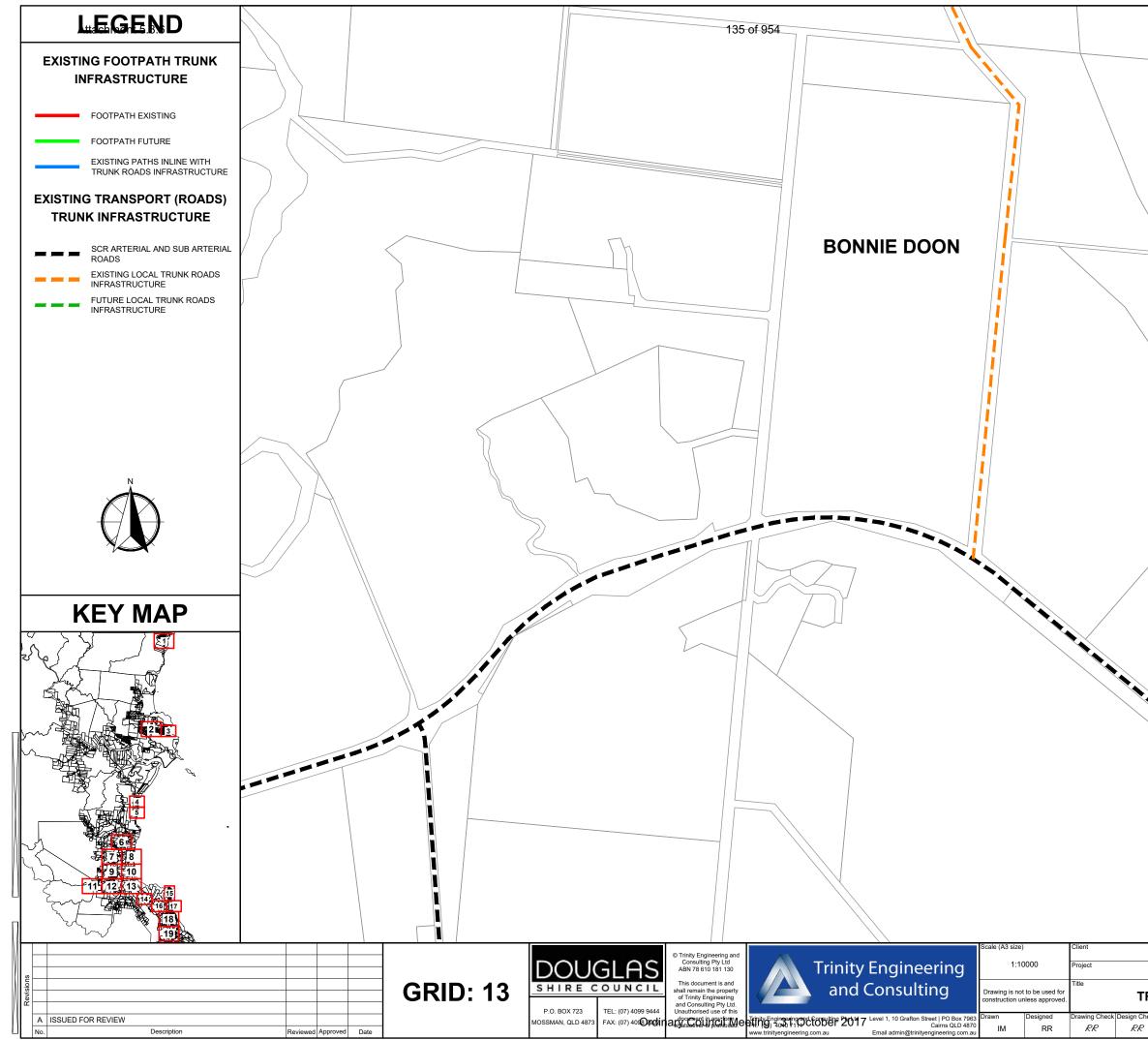
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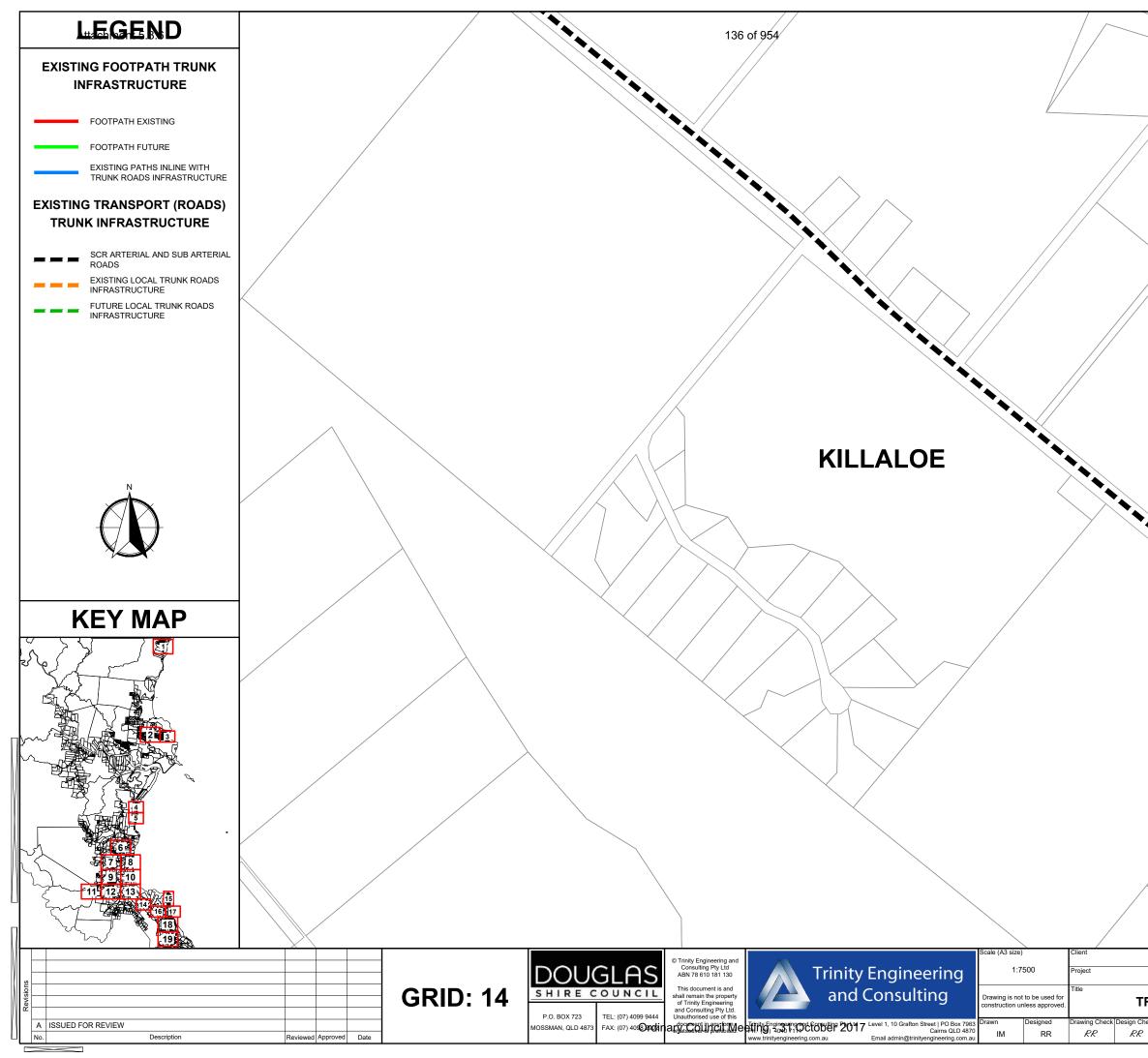
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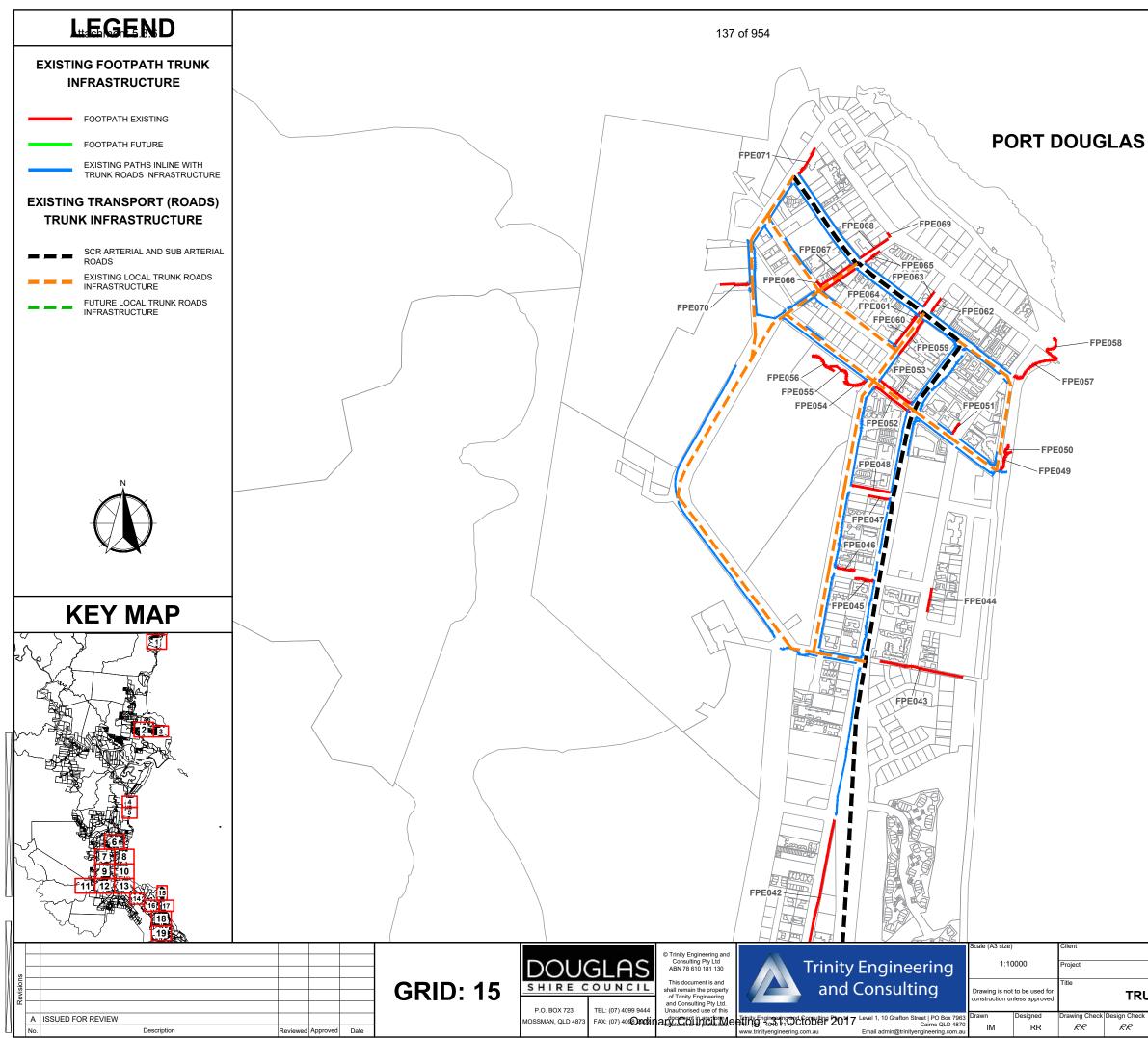




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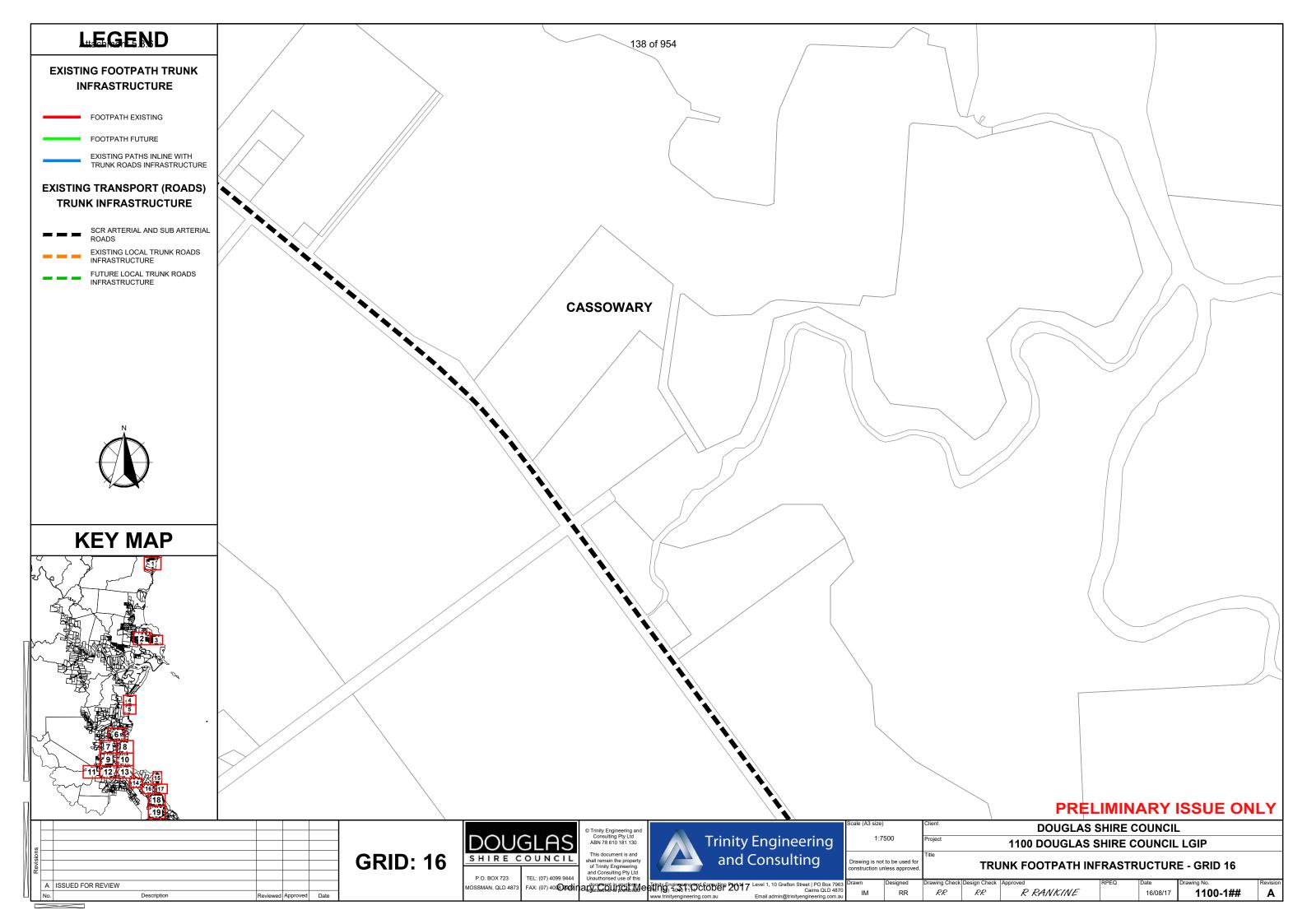


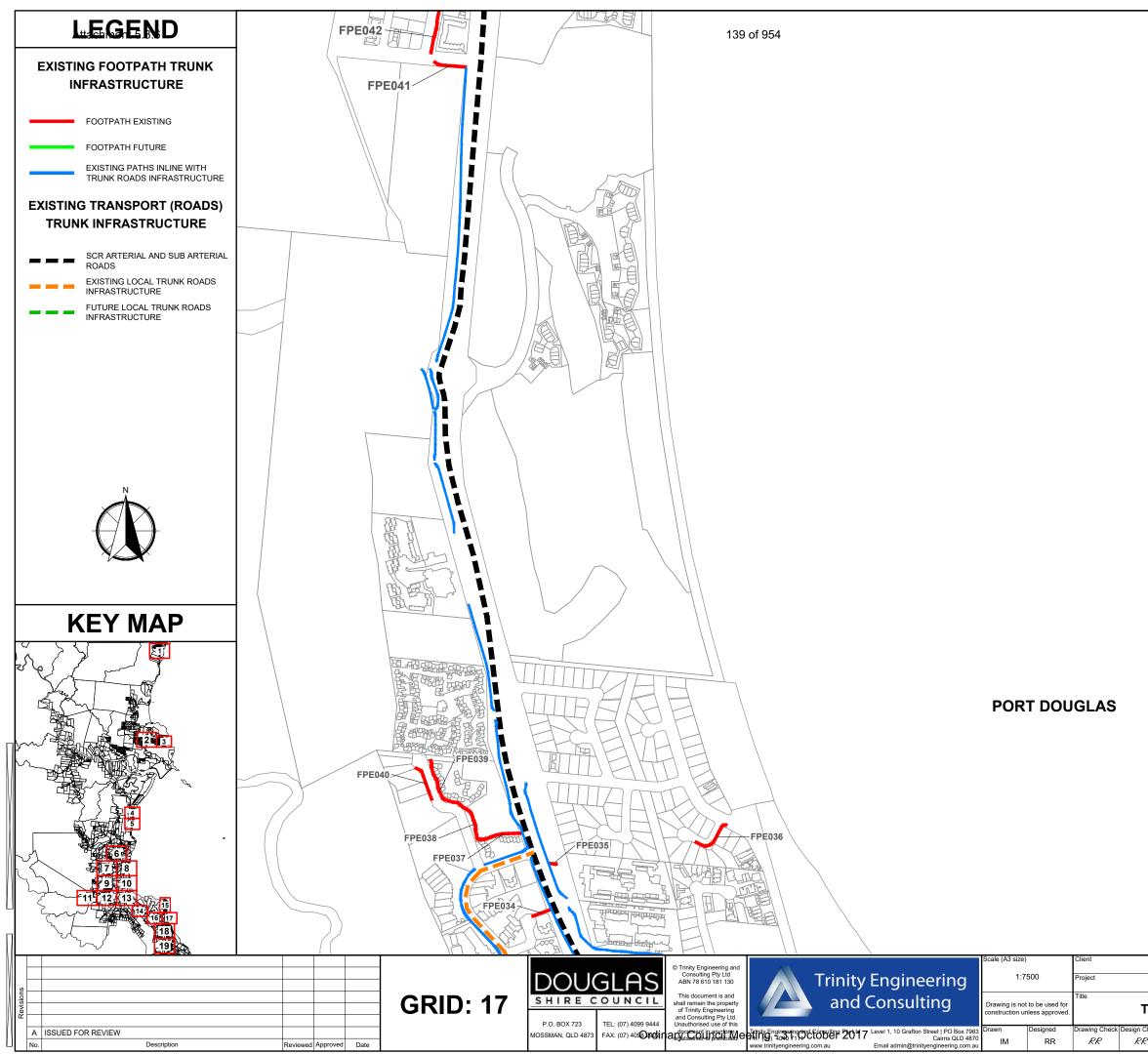
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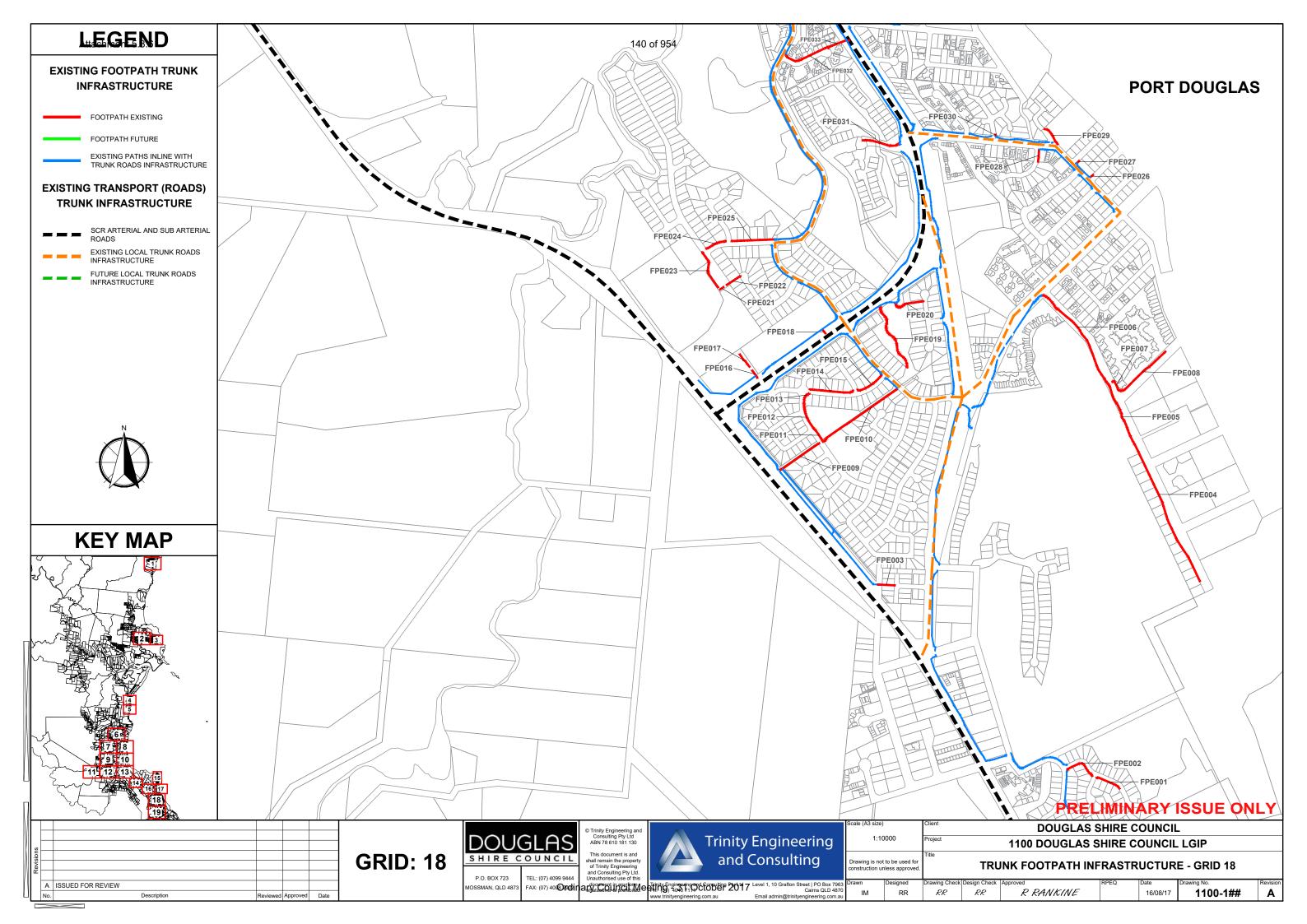
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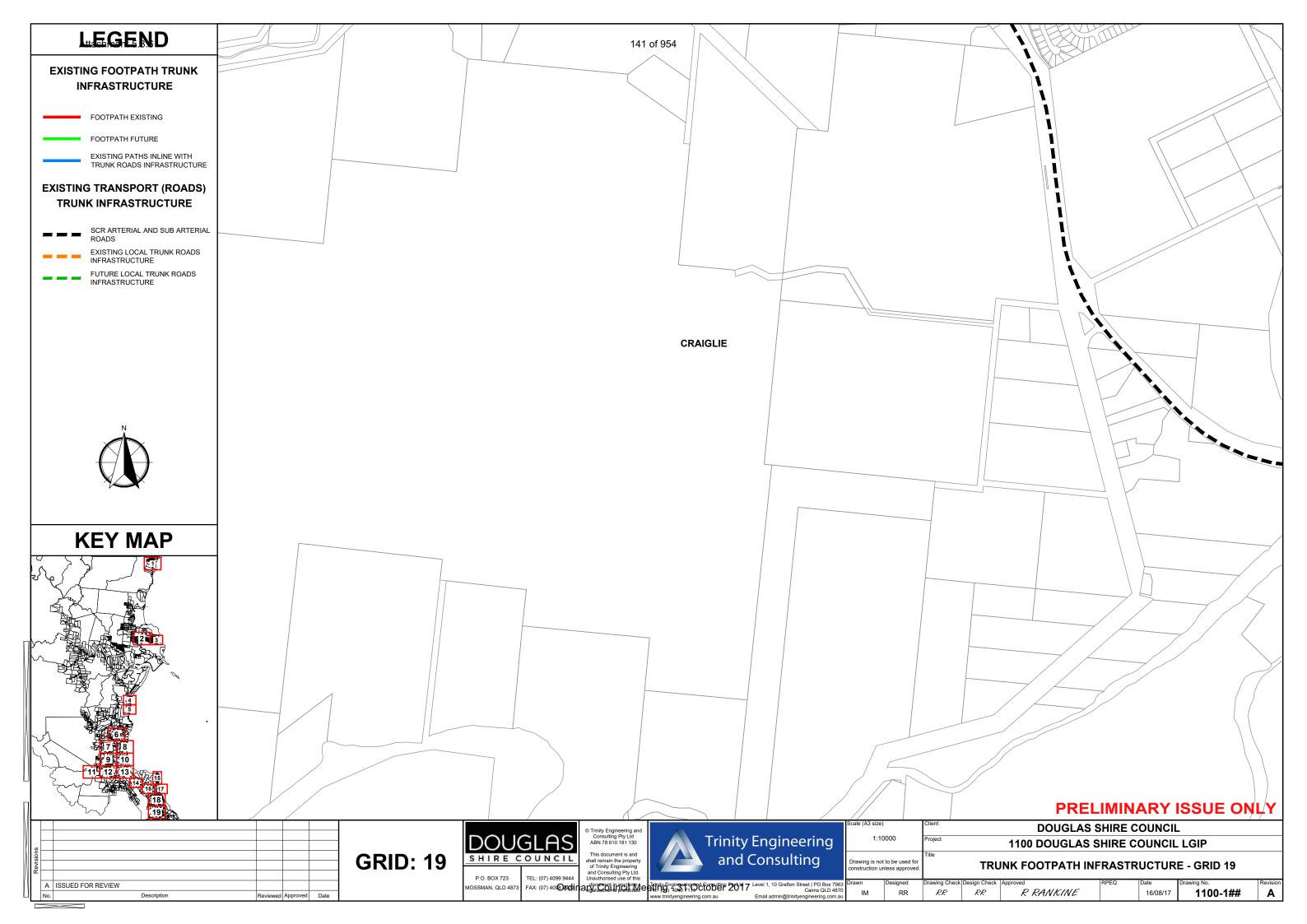


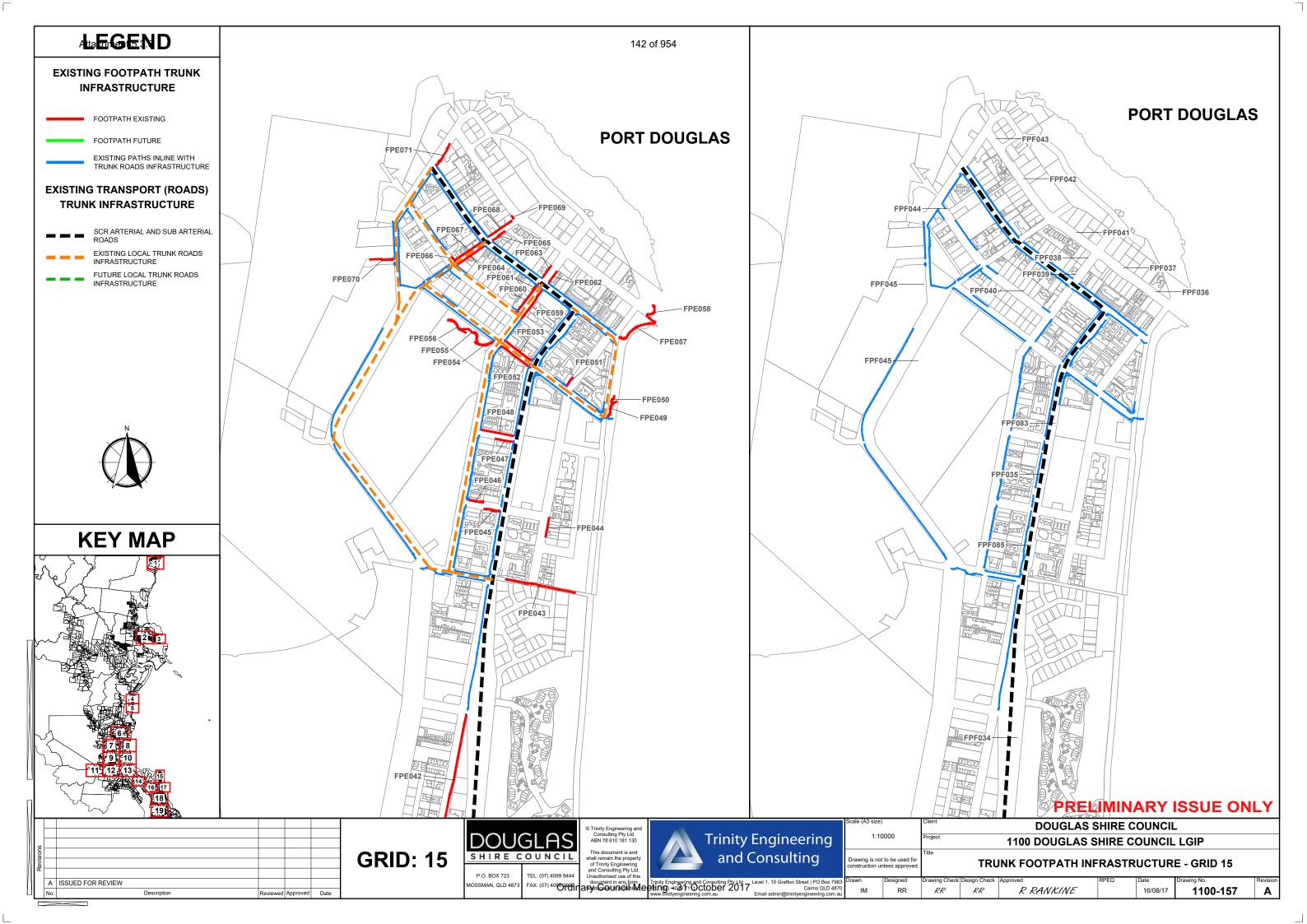


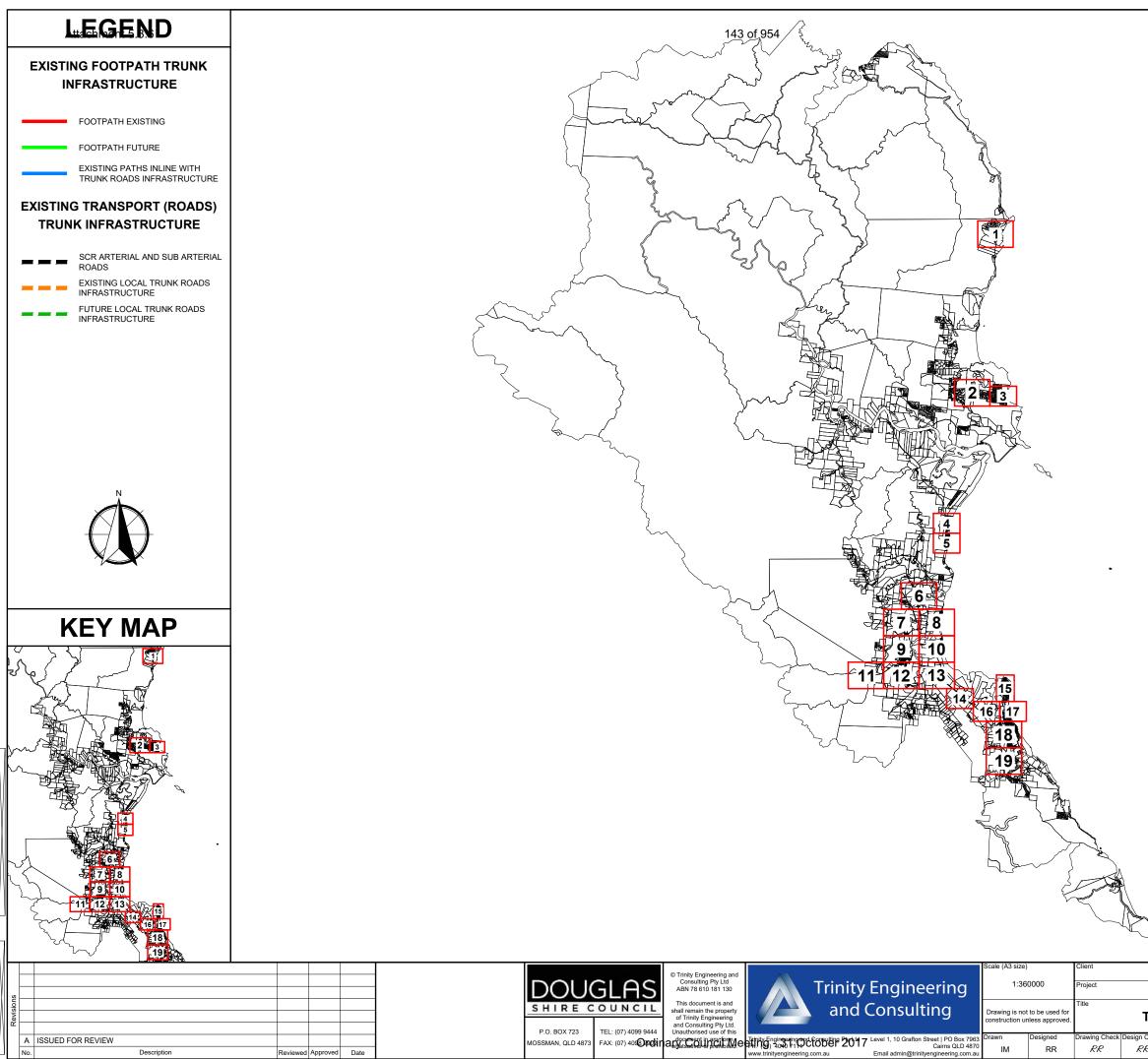
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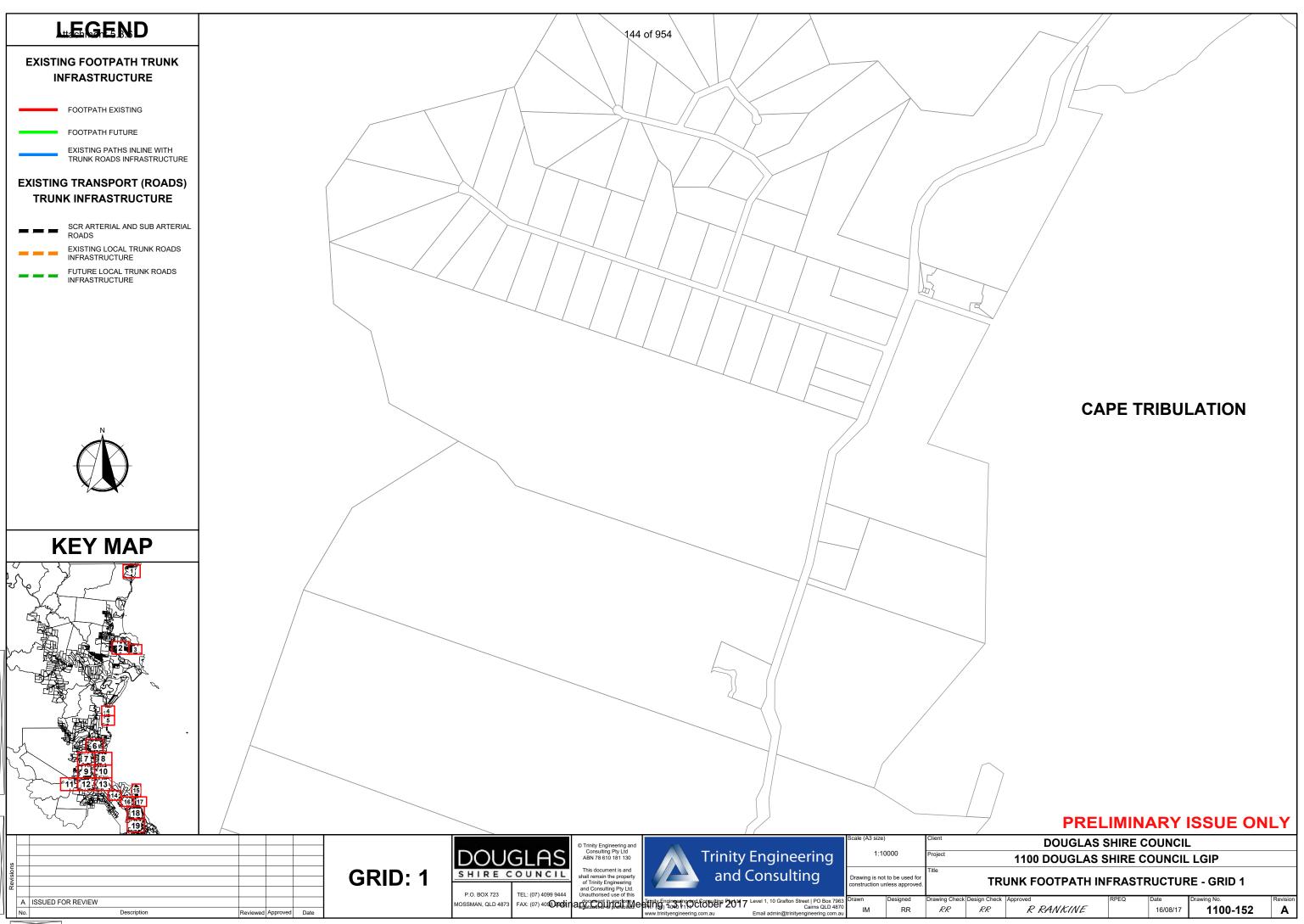
TRUNK FOOTPATH INFRASTRUCTURE KEY MAP

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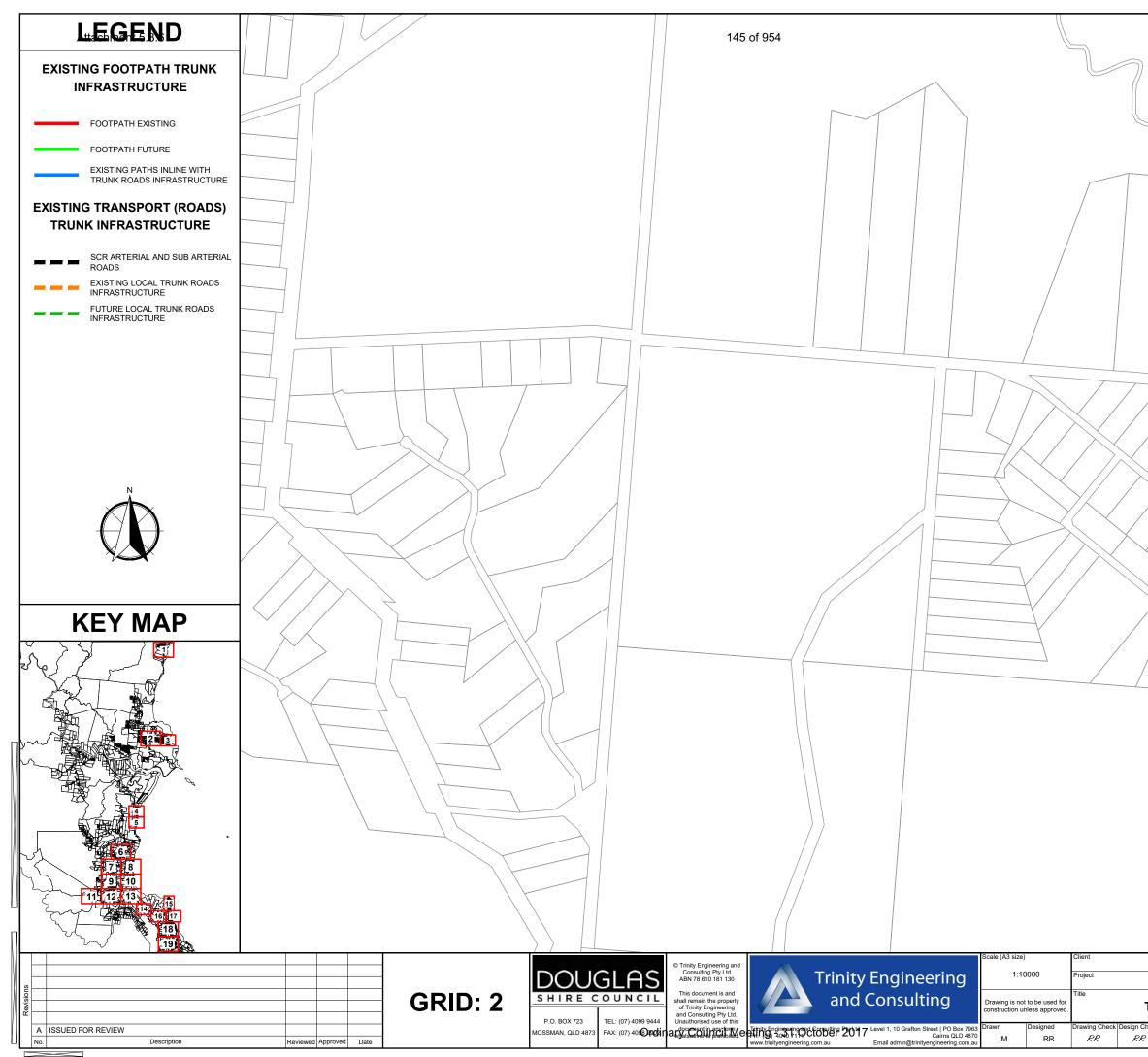
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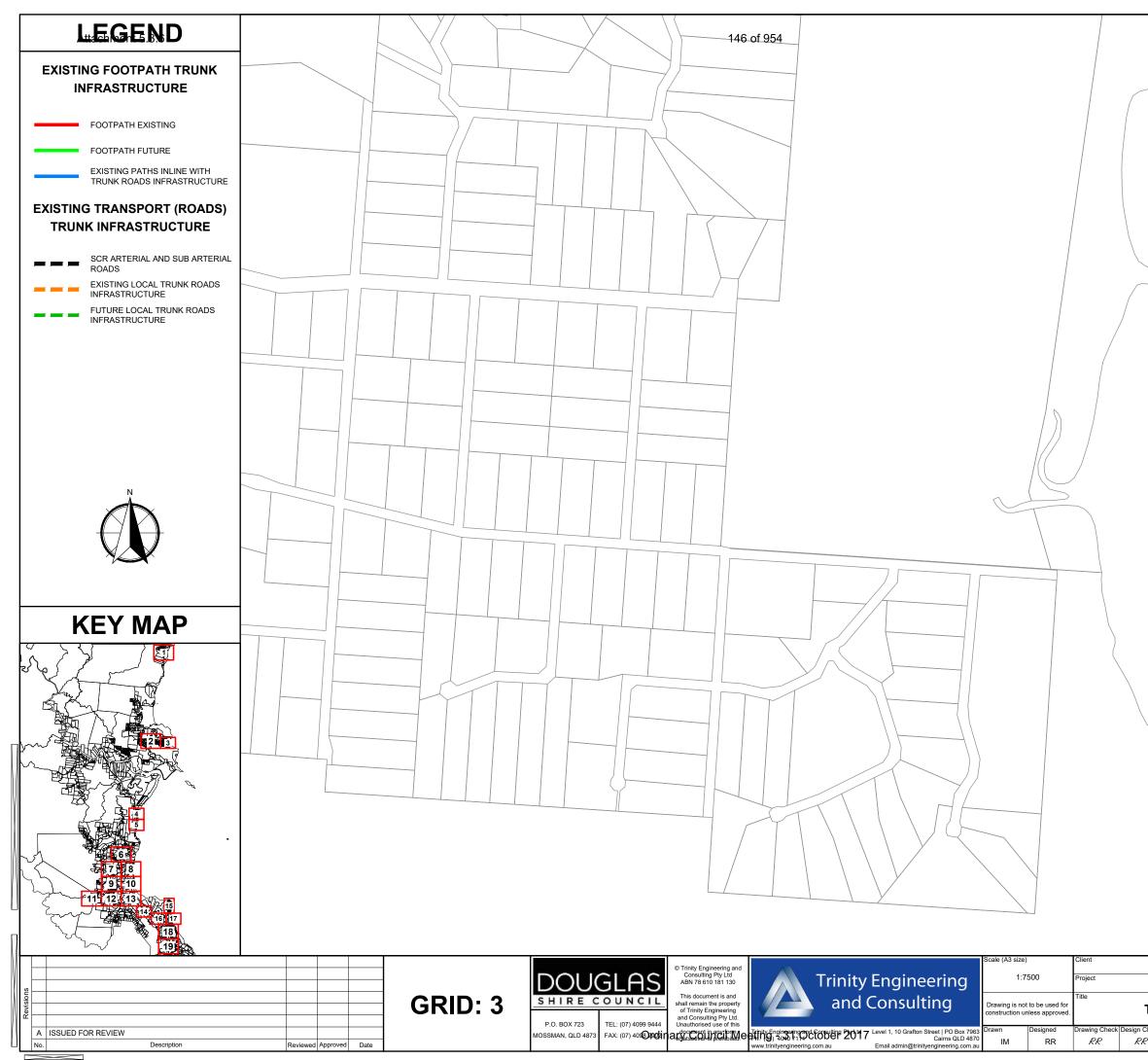
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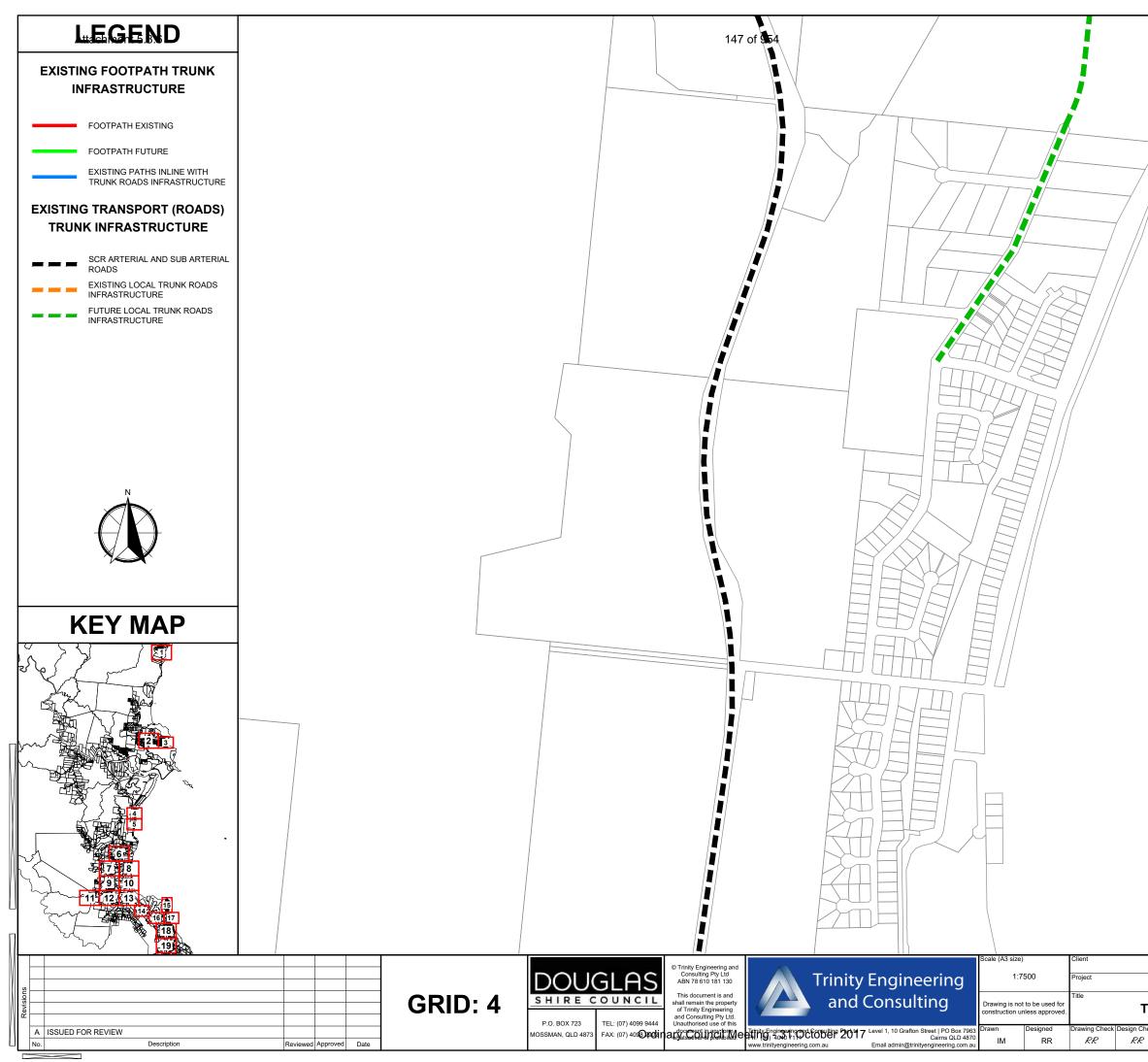


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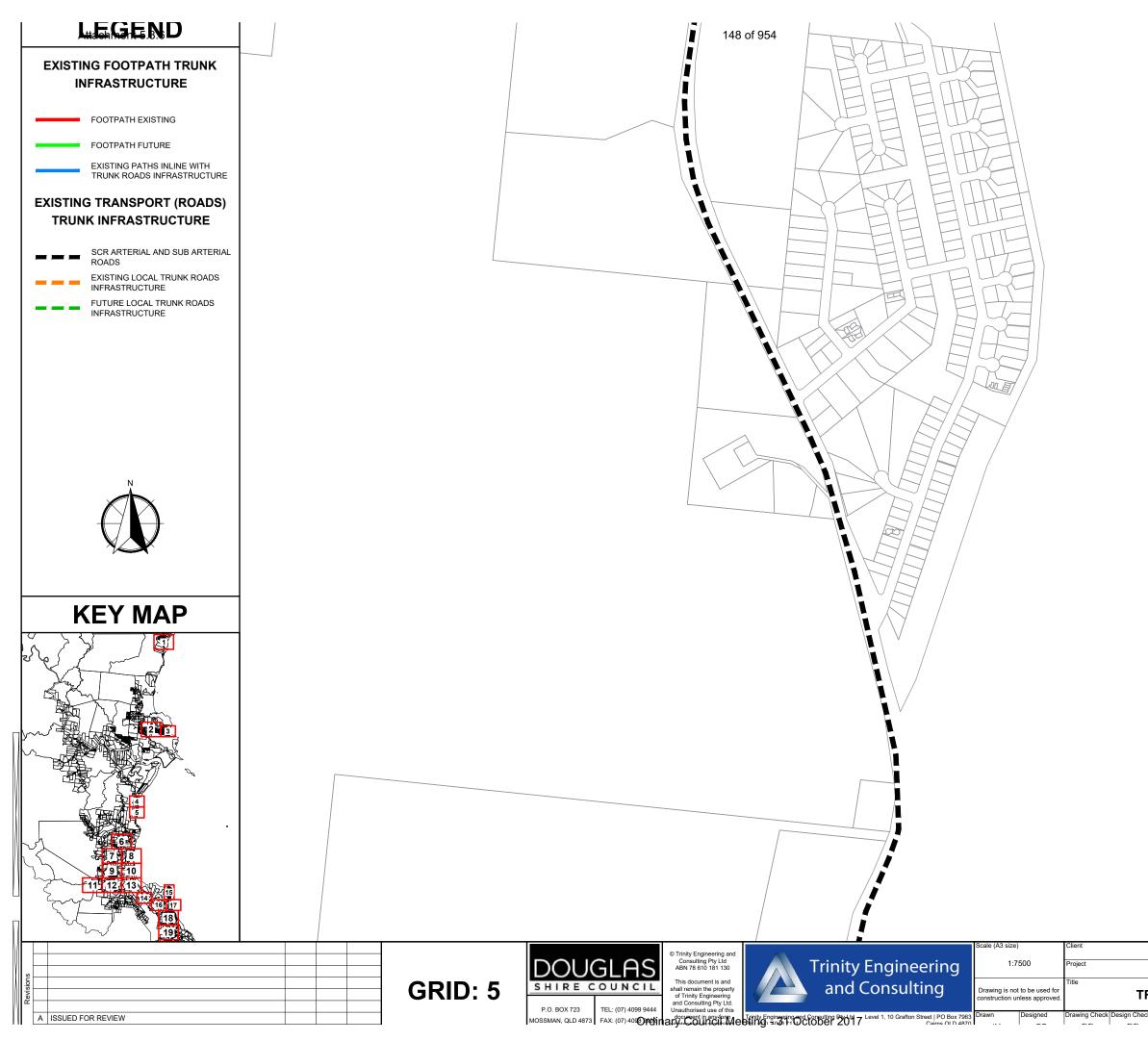
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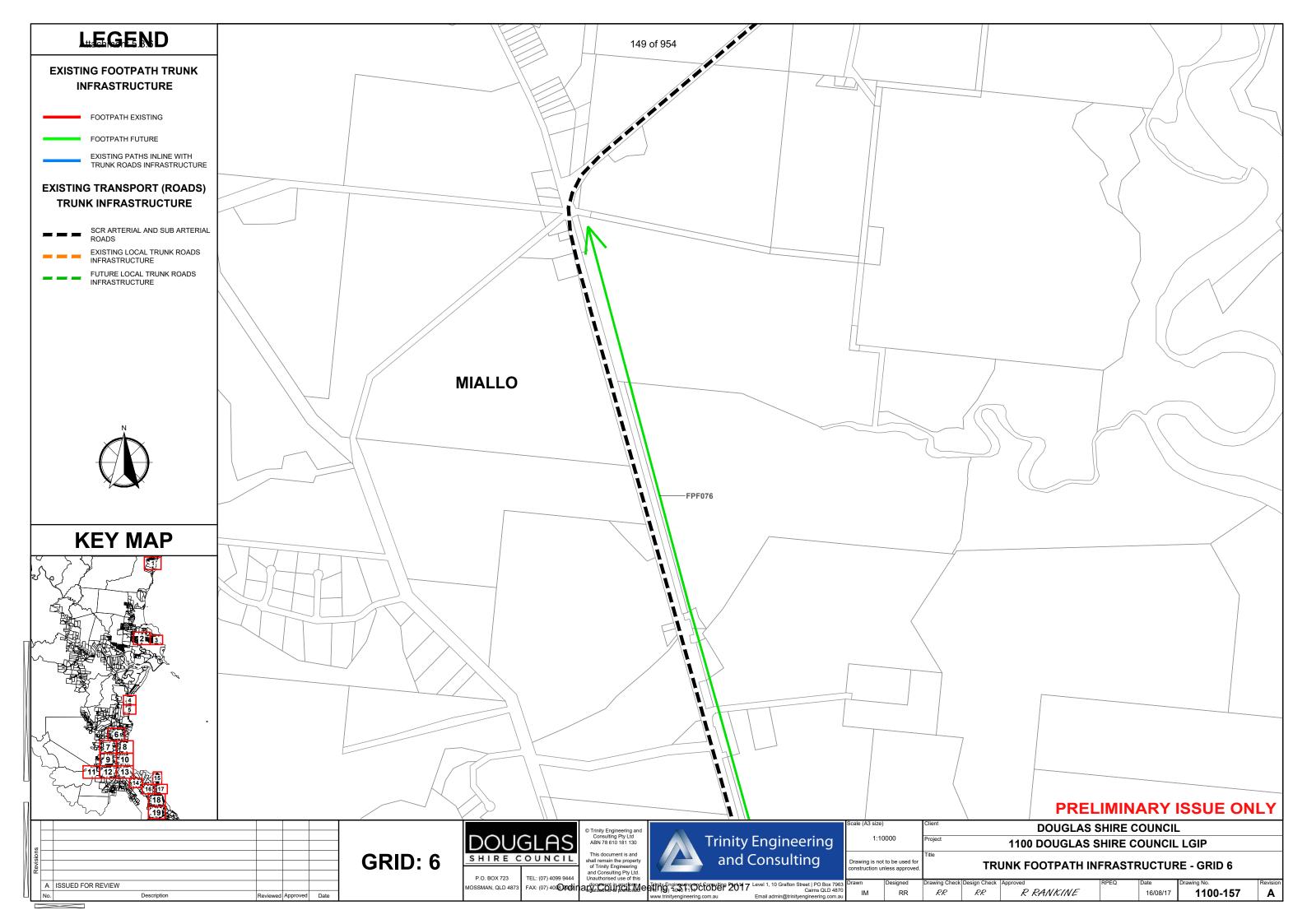
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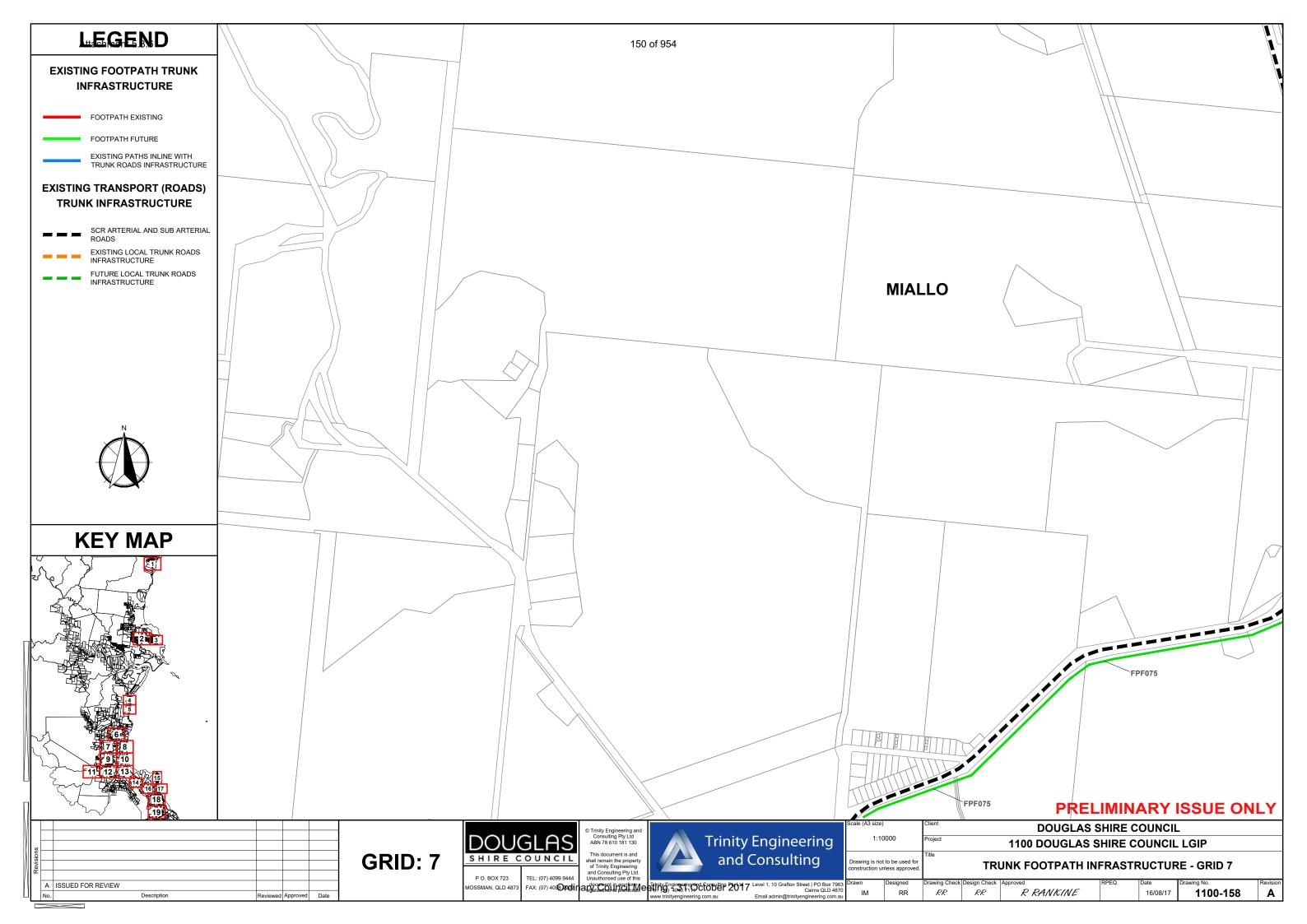
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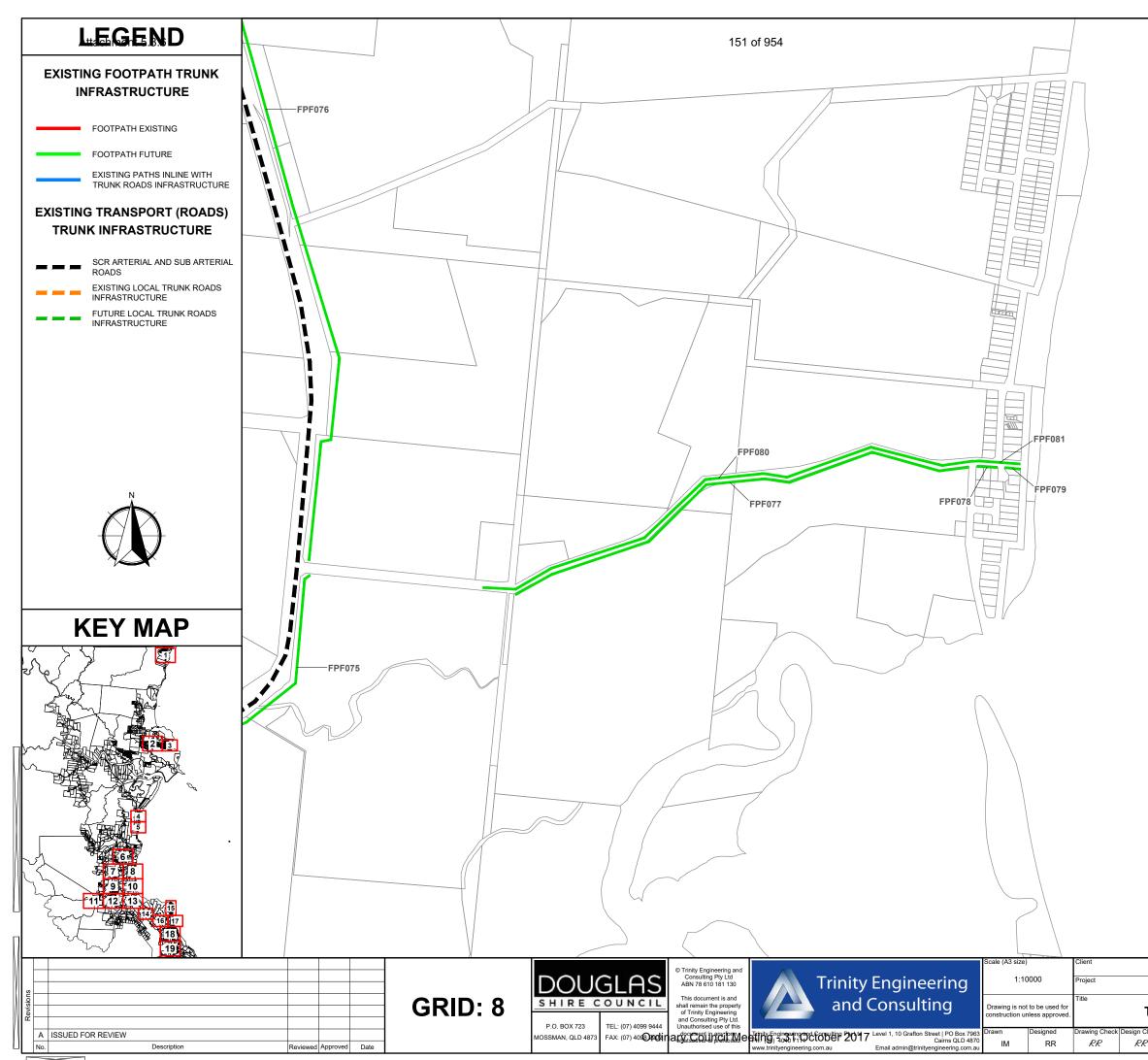


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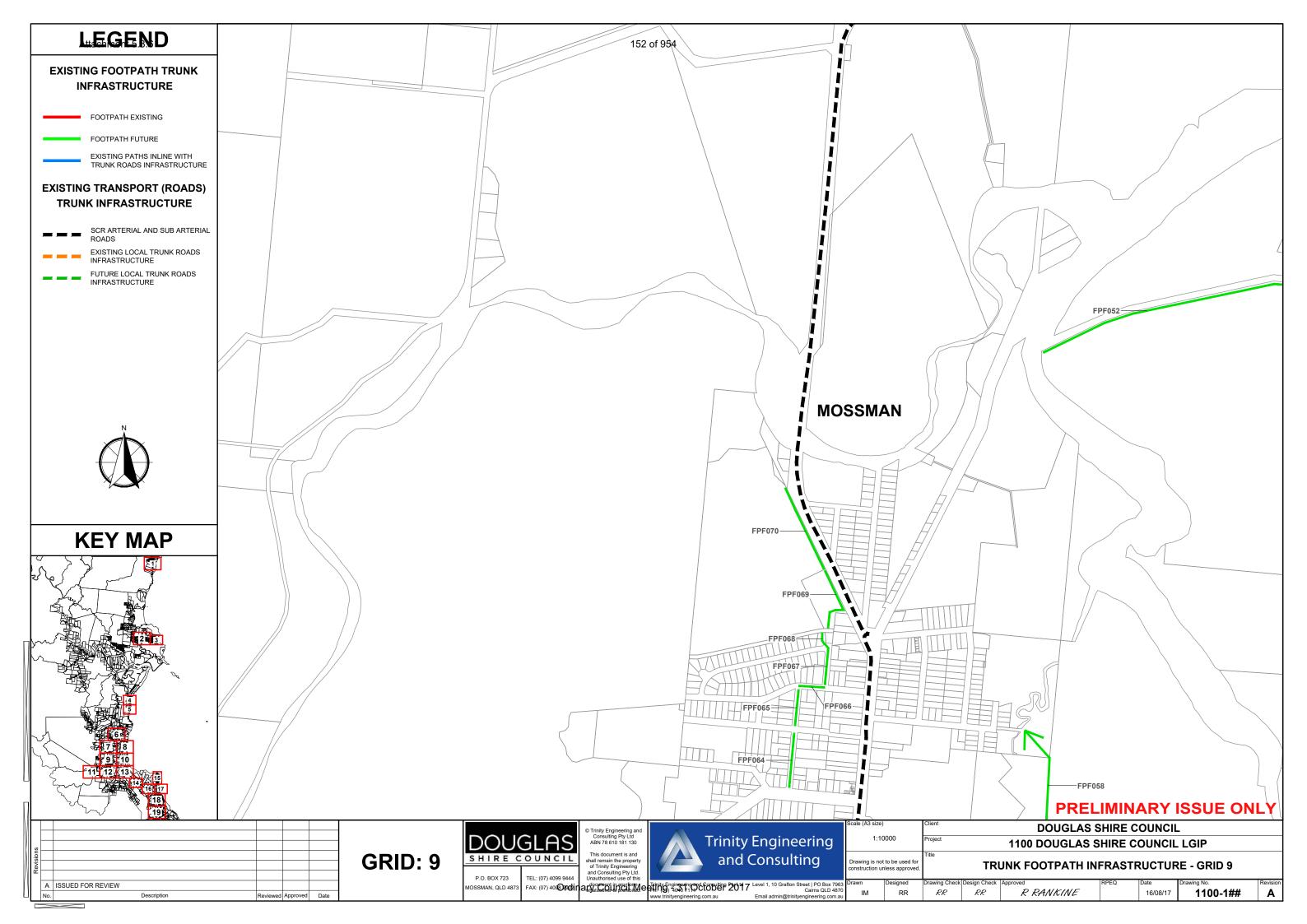


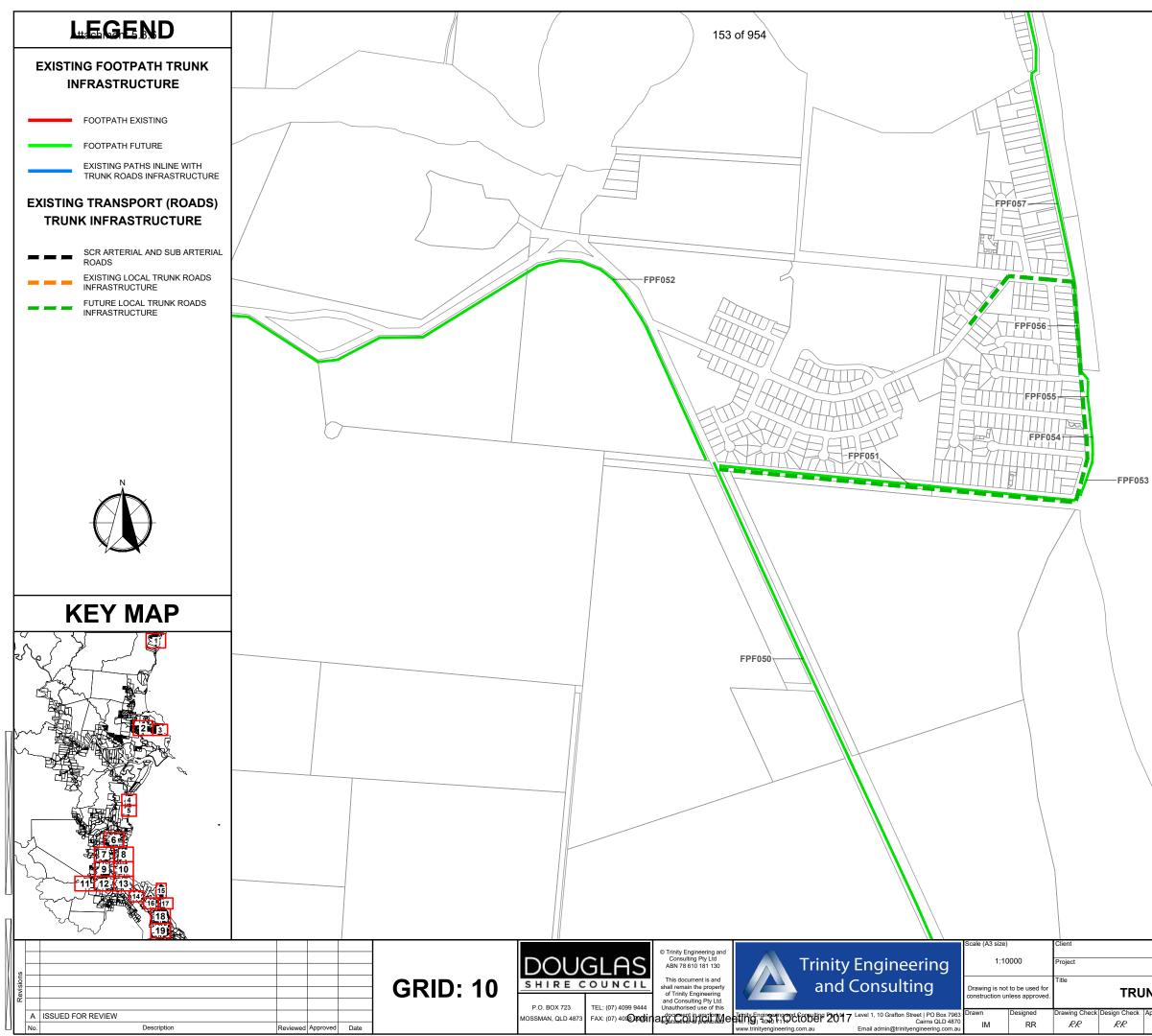
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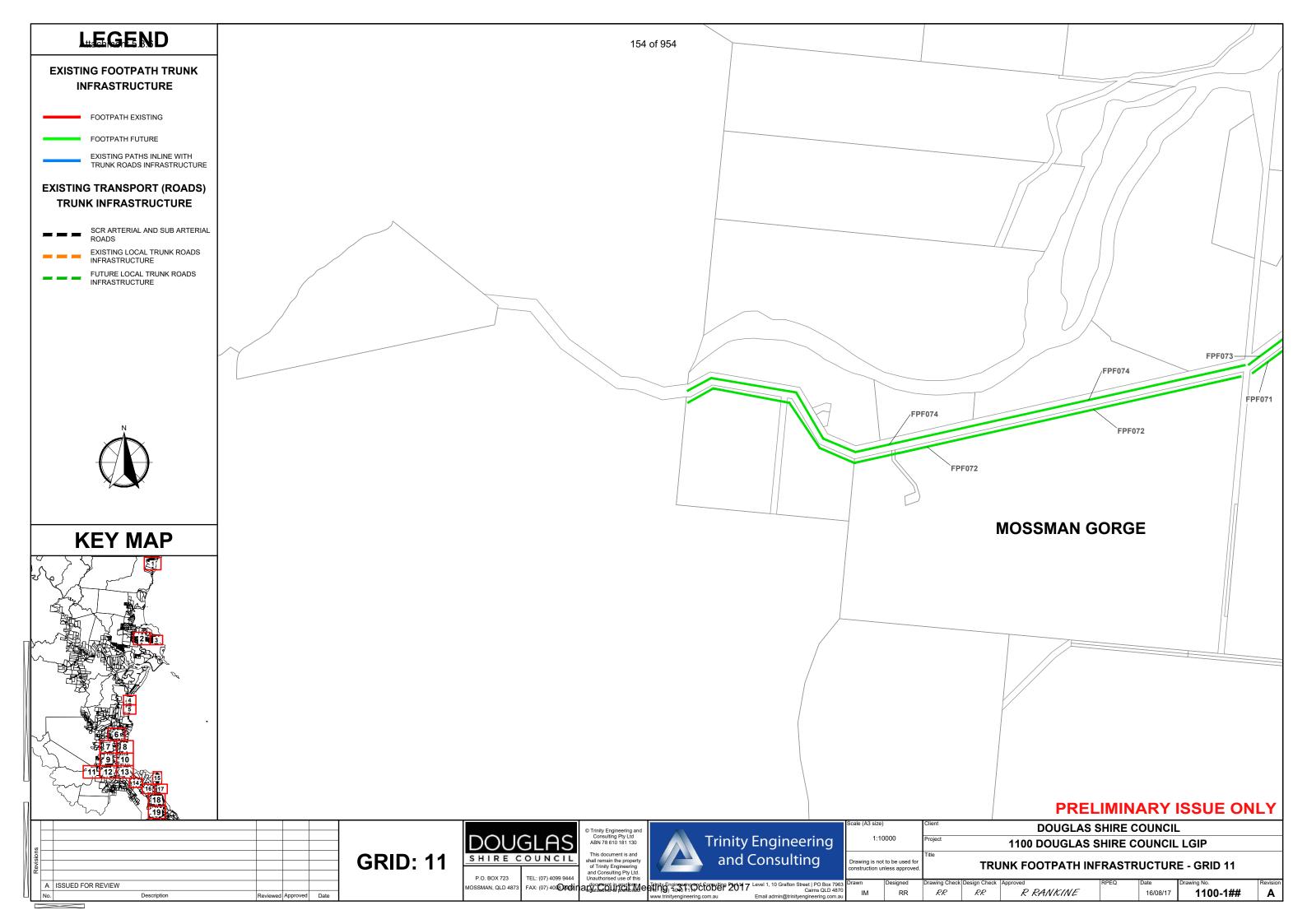


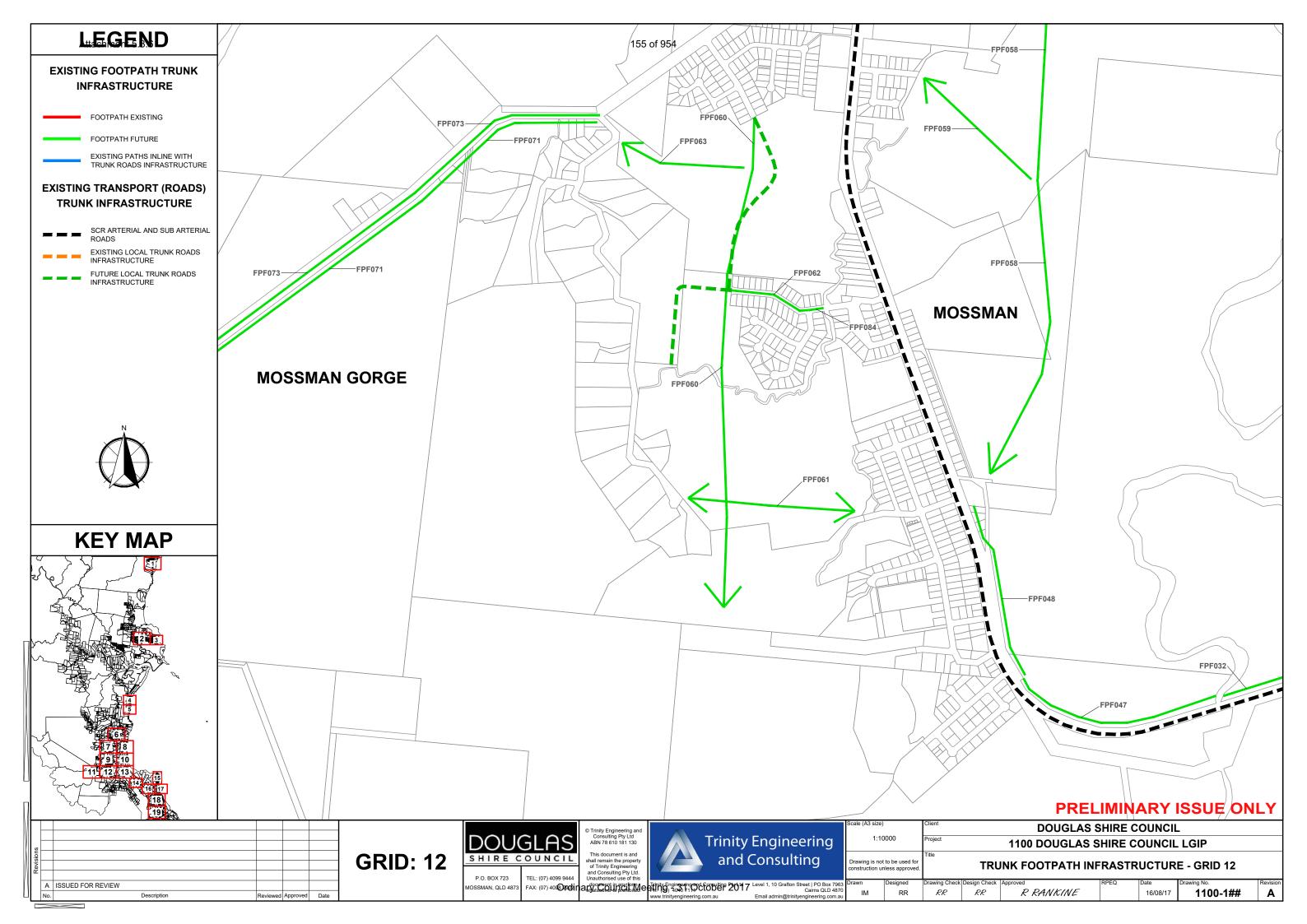
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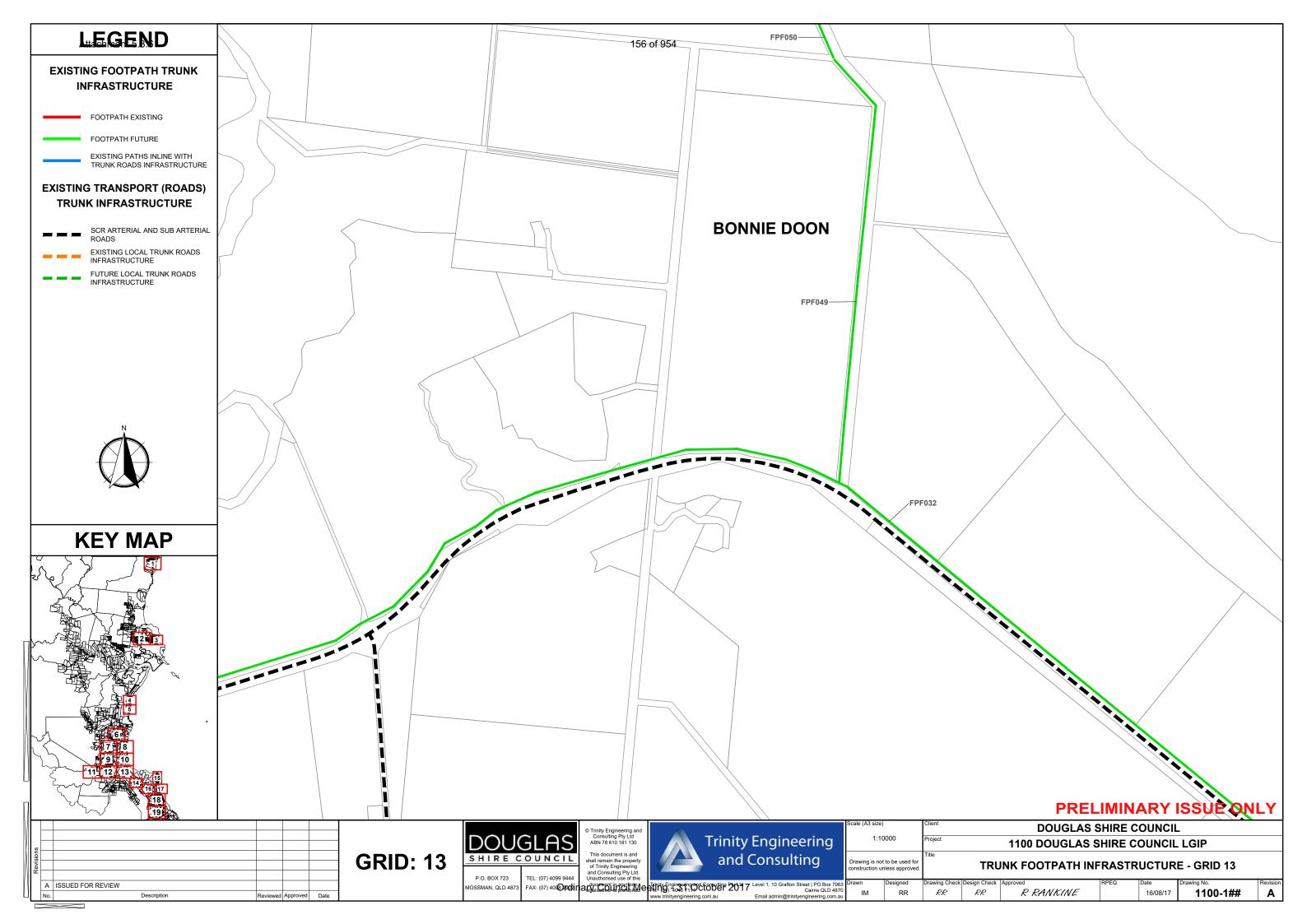
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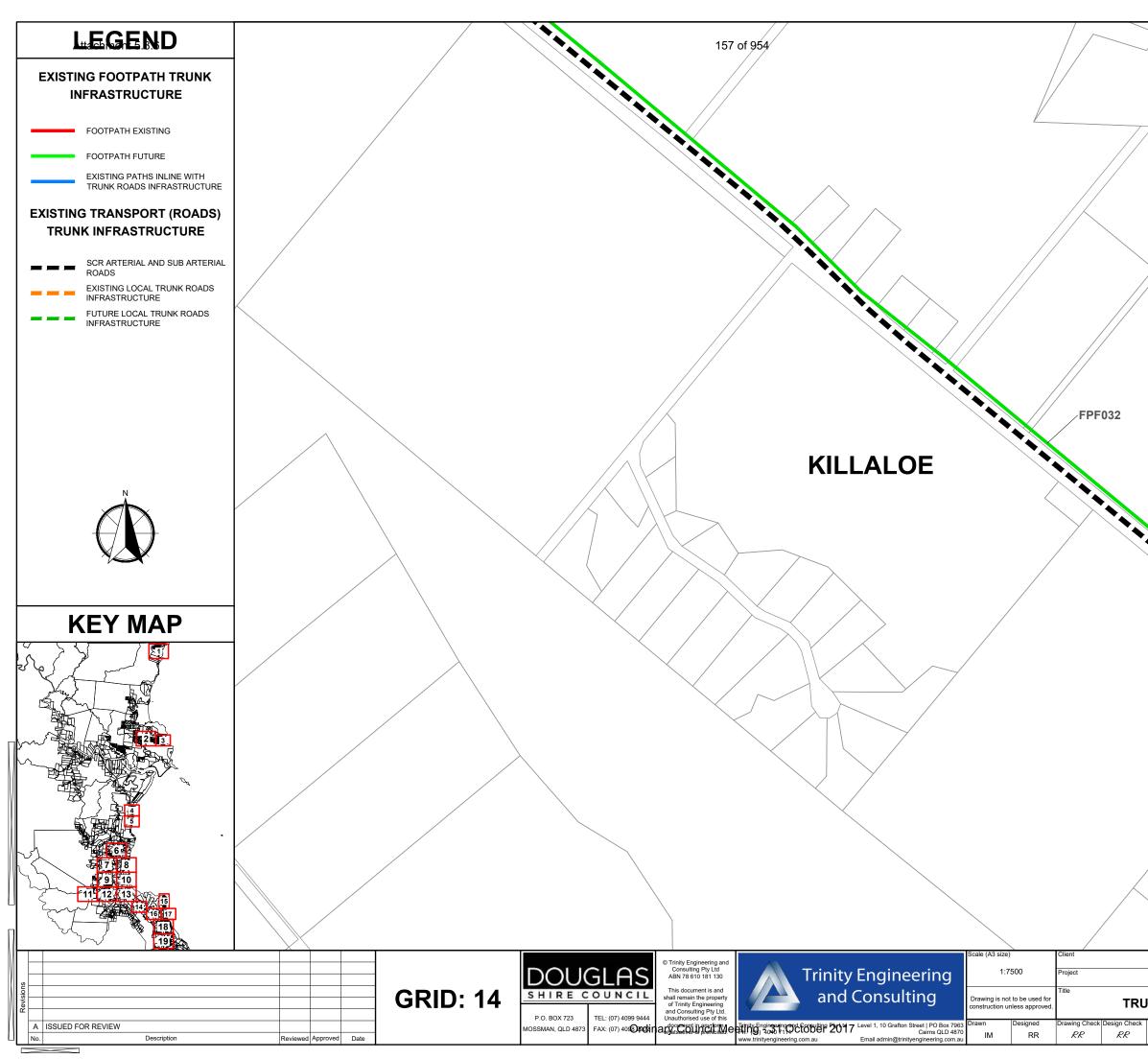
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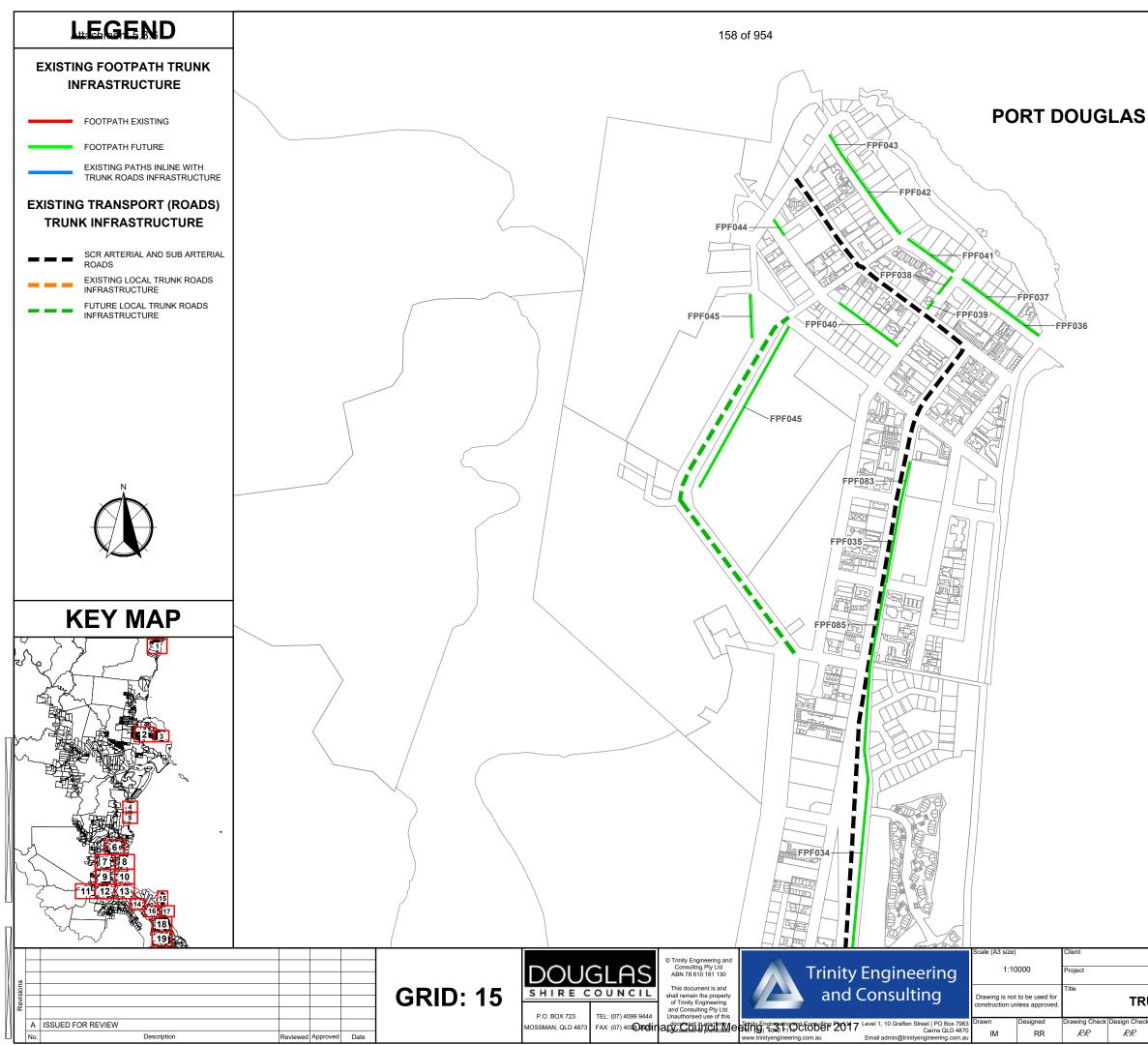








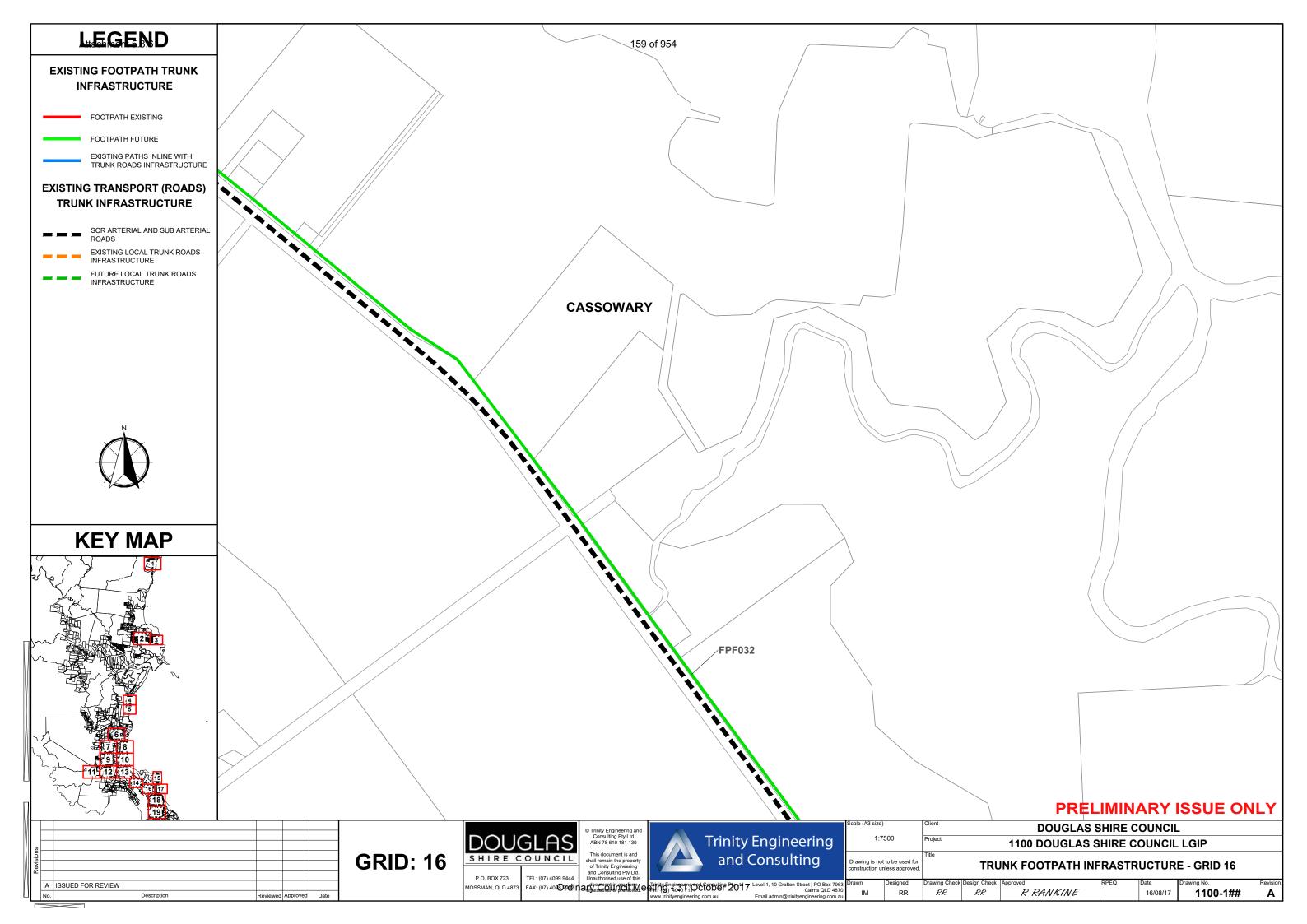
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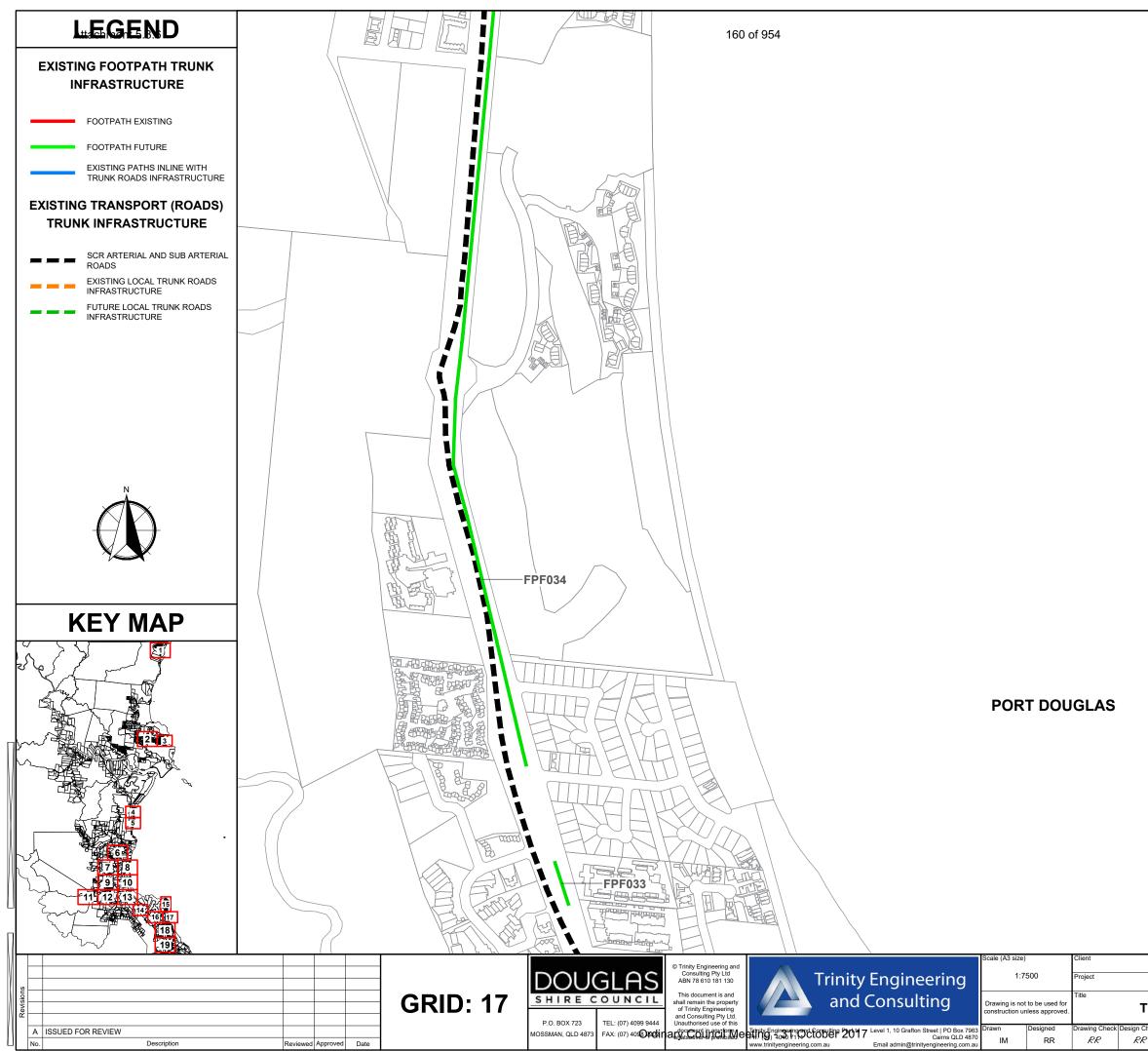


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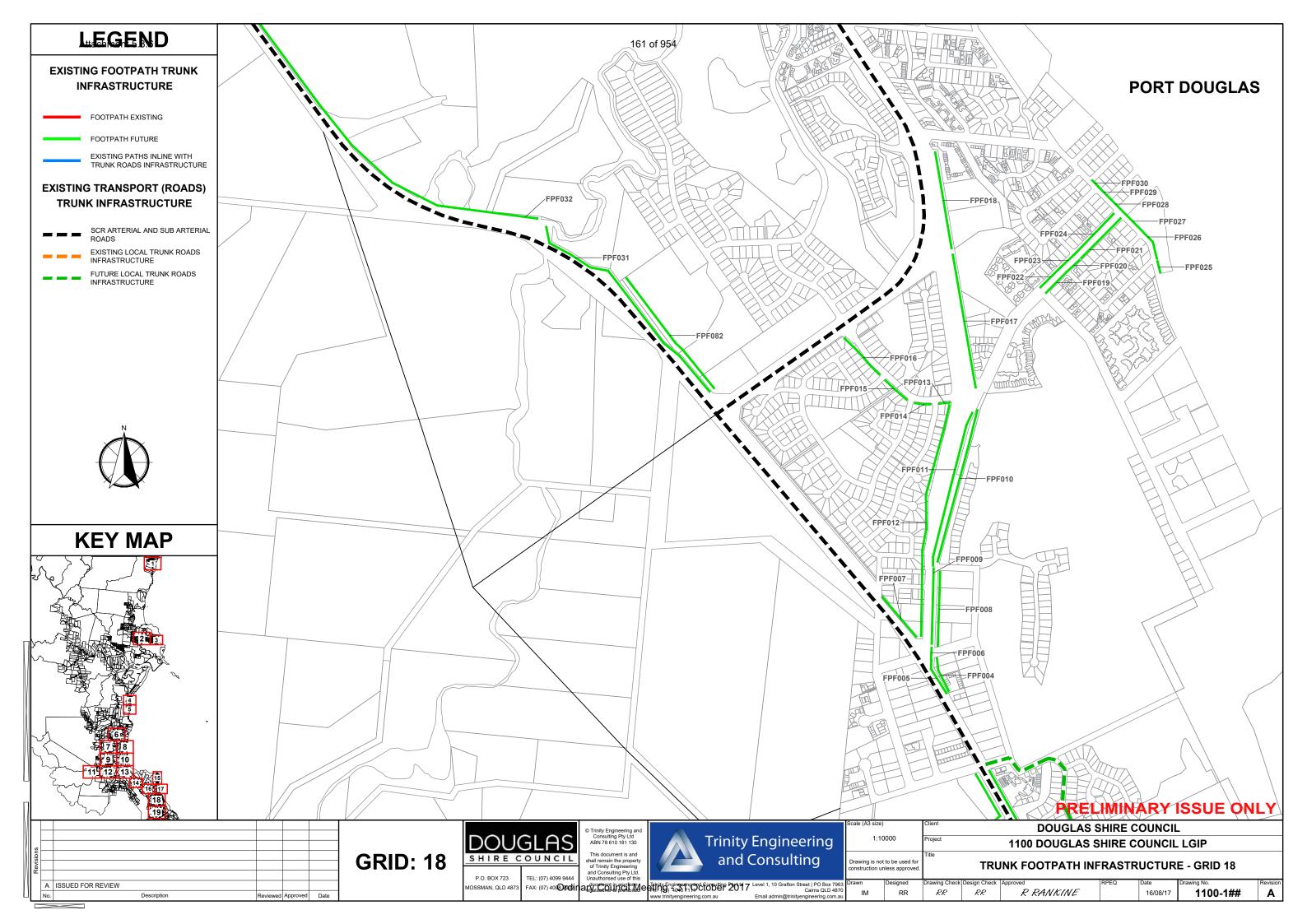
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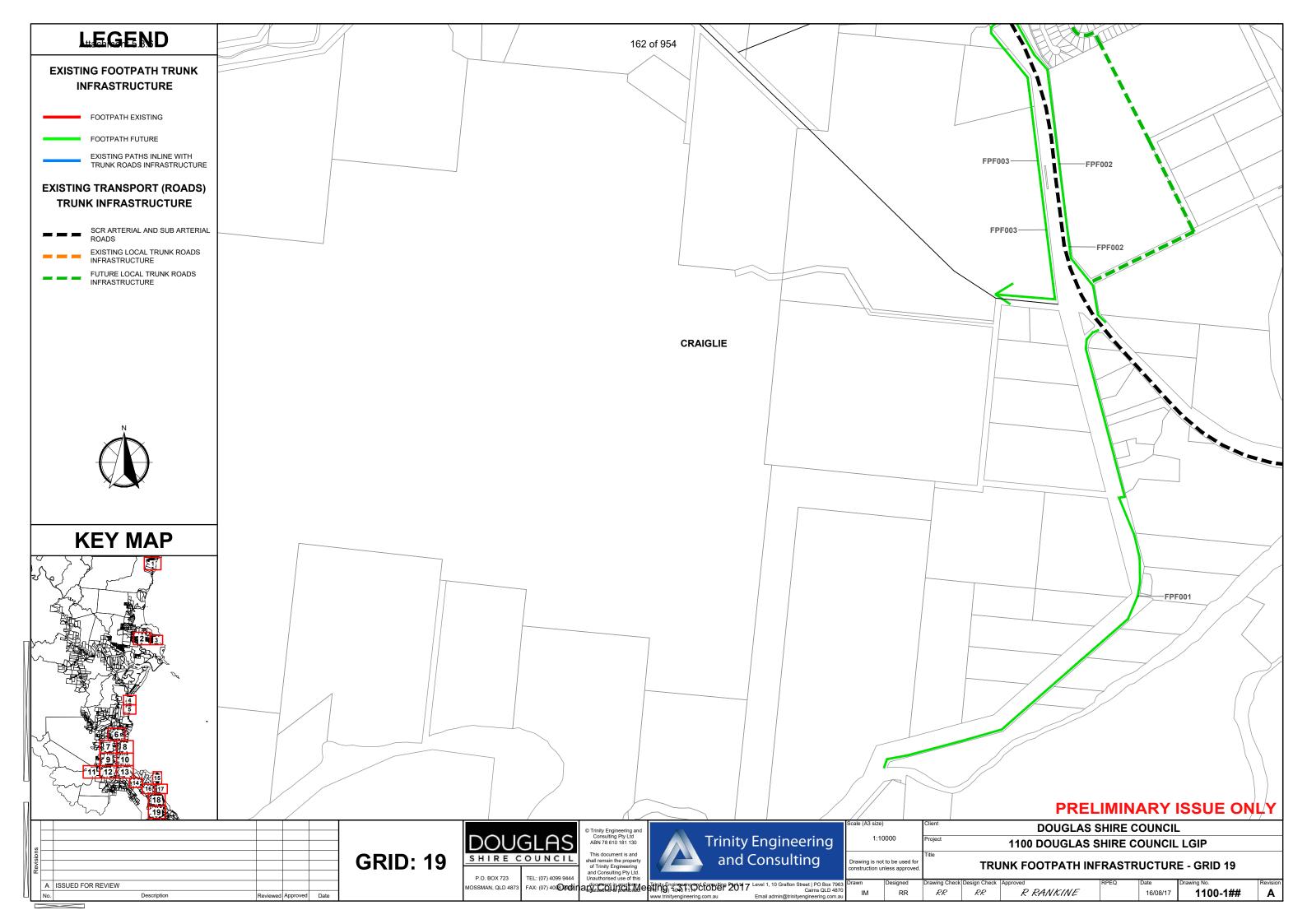




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LOCAL GOVERNMENT INFRASTRUCTURE PLANS (PARKS AND RESERVES TRUNK INFRASTRUCTURE) for DOUGLAS SHIRE COUNCIL

SCHEDULE OF PROJECT DRAWINGS

1100-100	DRAWING IN	DEX			
1100-101	EXISTING PA	ARK TRUNK	INFRASTRUCTURE	KEY MA	Ρ
1100-102	EXISTING PA	ARK TRUNK	INFRASTRUCTURE	- GRID	1
1100-103	EXISTING PA	ARK TRUNK	INFRASTRUCTURE	- GRID	2
1100-104	EXISTING PA	ARK TRUNK	INFRASTRUCTURE	- GRID	3
1100-105	EXISTING PA	ARK TRUNK	INFRASTRUCTURE	- GRID	4
1100-106	EXISTING PA	ARK TRUNK	INFRASTRUCTURE	- GRID	5
1100-107	EXISTING PA	ARK TRUNK	INFRASTRUCTURE	- GRID	6
1100-108	EXISTING PA	ARK TRUNK	INFRASTRUCTURE	- GRID	7
1100-109	EXISTING PA	ARK TRUNK	INFRASTRUCTURE	- GRID	8
1100-110	EXISTING PA	ARK TRUNK	INFRASTRUCTURE	- GRID	9
1100-111	EXISTING PA	ARK TRUNK	INFRASTRUCTURE	- GRID	10
1100-112	EXISTING PA	ARK TRUNK	INFRASTRUCTURE	- GRID	11
1100-113	EXISTING PA	ARK TRUNK	INFRASTRUCTURE	– GRID	12

1100-114	EXISTING PARK TRUNK INFRASTRUCTURE - GRID 13
1100-115	EXISTING PARK TRUNK INFRASTRUCTURE - GRID 14
1100-116	EXISTING PARK TRUNK INFRASTRUCTURE - GRID 15
1100-117	EXISTING PARK TRUNK INFRASTRUCTURE - GRID 16
1100-118	EXISTING PARK TRUNK INFRASTRUCTURE – GRID 17
1100-119	EXISTING PARK TRUNK INFRASTRUCTURE - GRID 18
1100-120	FUTURE PARK TRUNK INFRASTRUCTURE KEY MAP
1100-120 1100-121	FUTURE PARK TRUNK INFRASTRUCTURE KEY MAP FUTURE PARK TRUNK INFRASTRUCTURE – GRID 1
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1100-121	FUTURE PARK TRUNK INFRASTRUCTURE – GRID 1
1100–121 1100–122	FUTURE PARK TRUNK INFRASTRUCTURE – GRID 1 FUTURE PARK TRUNK INFRASTRUCTURE – GRID 2

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EXISTING PARK TRUNK INFRASTRUCTURE LOCAL RECREATION PARK



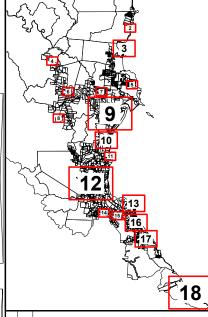
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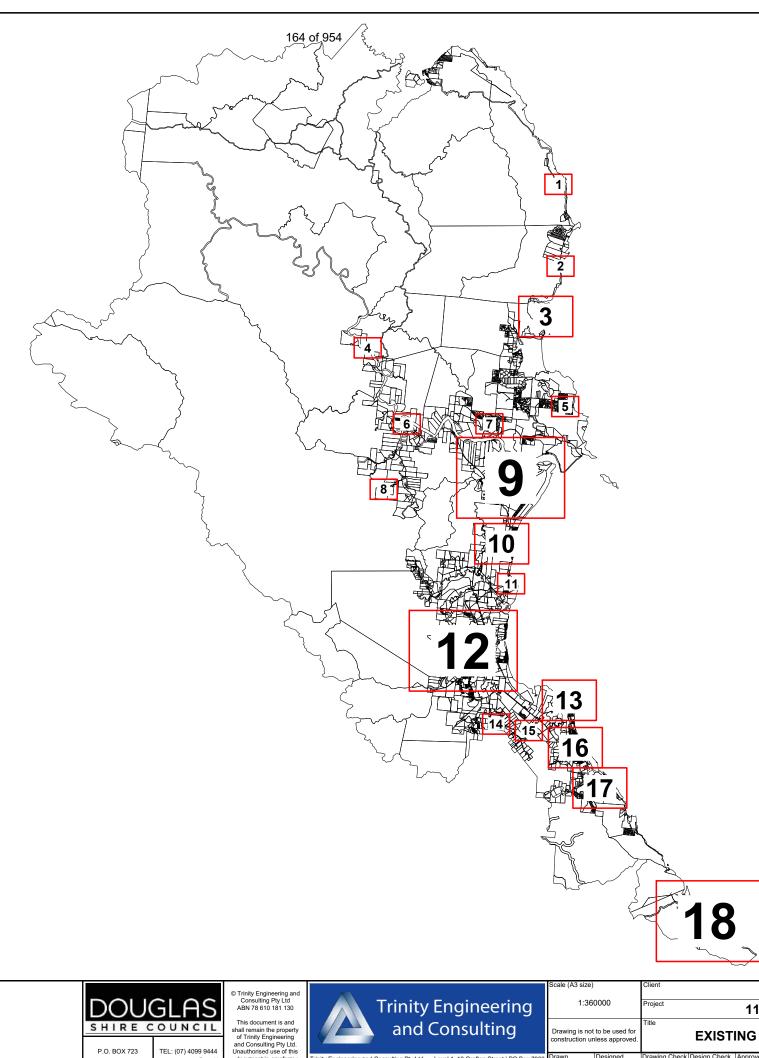
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P.O. BOX 723

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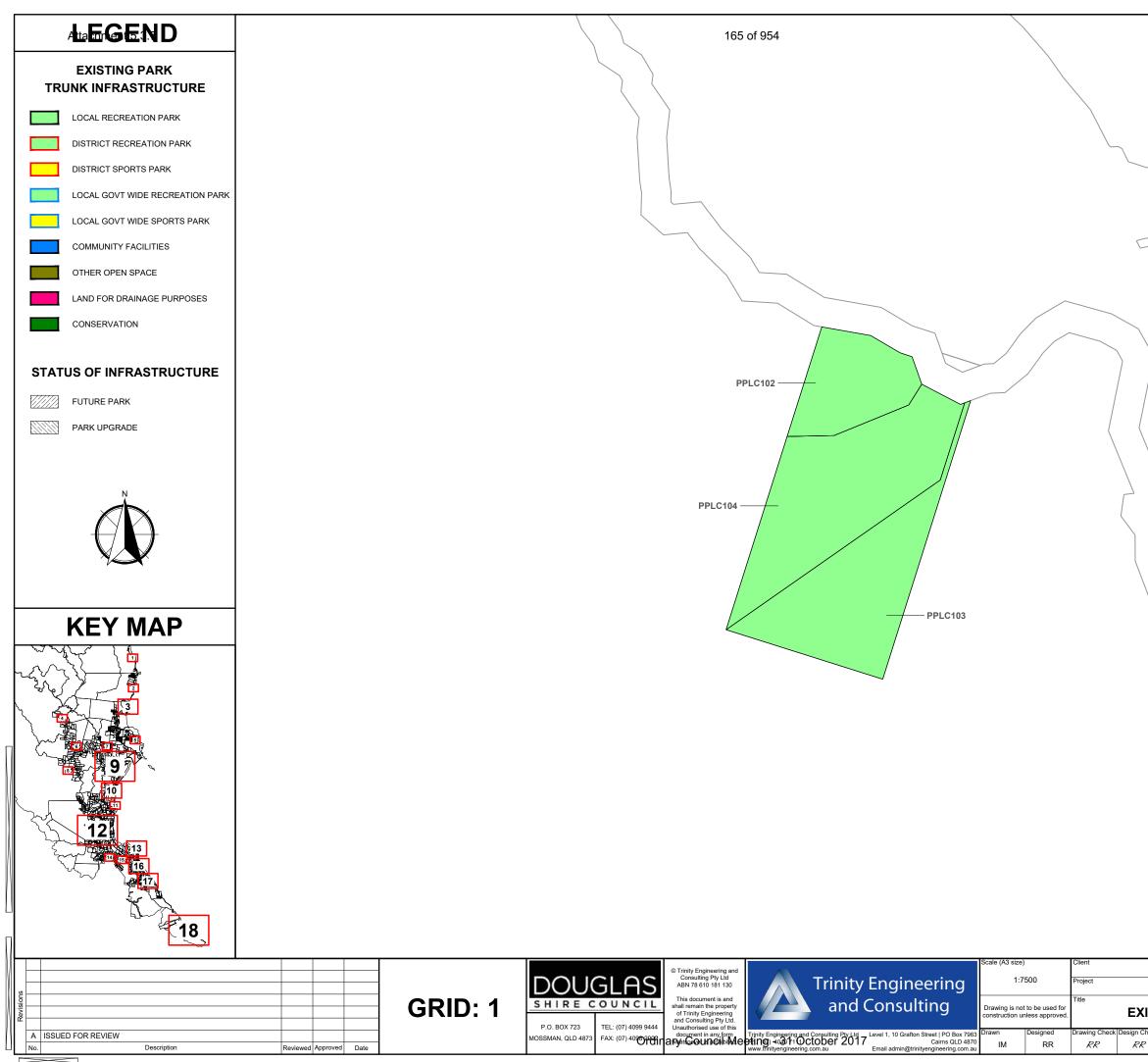
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EXISTING PARK TRUNK INFRASTRUCTURE KEY MAP

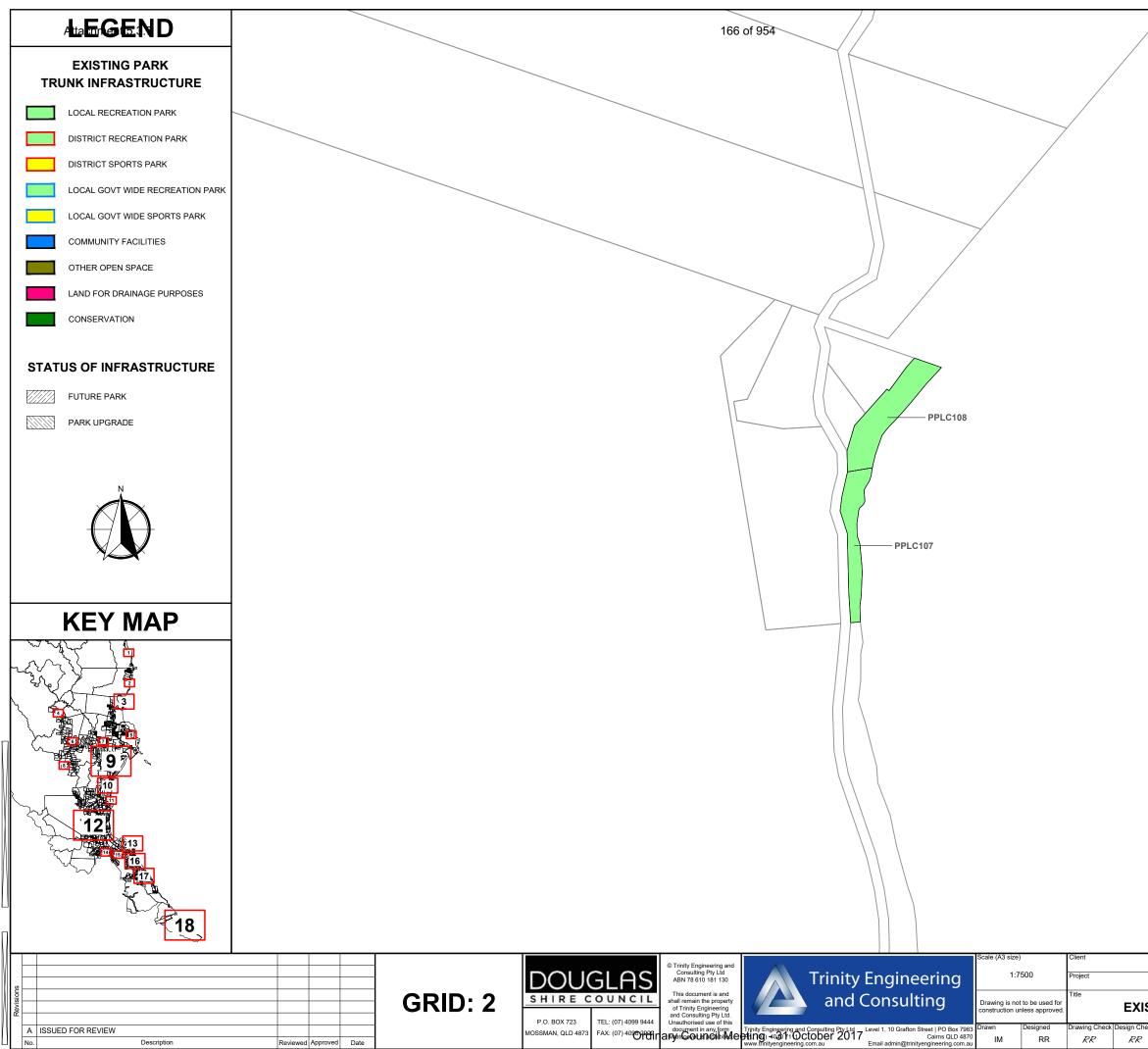
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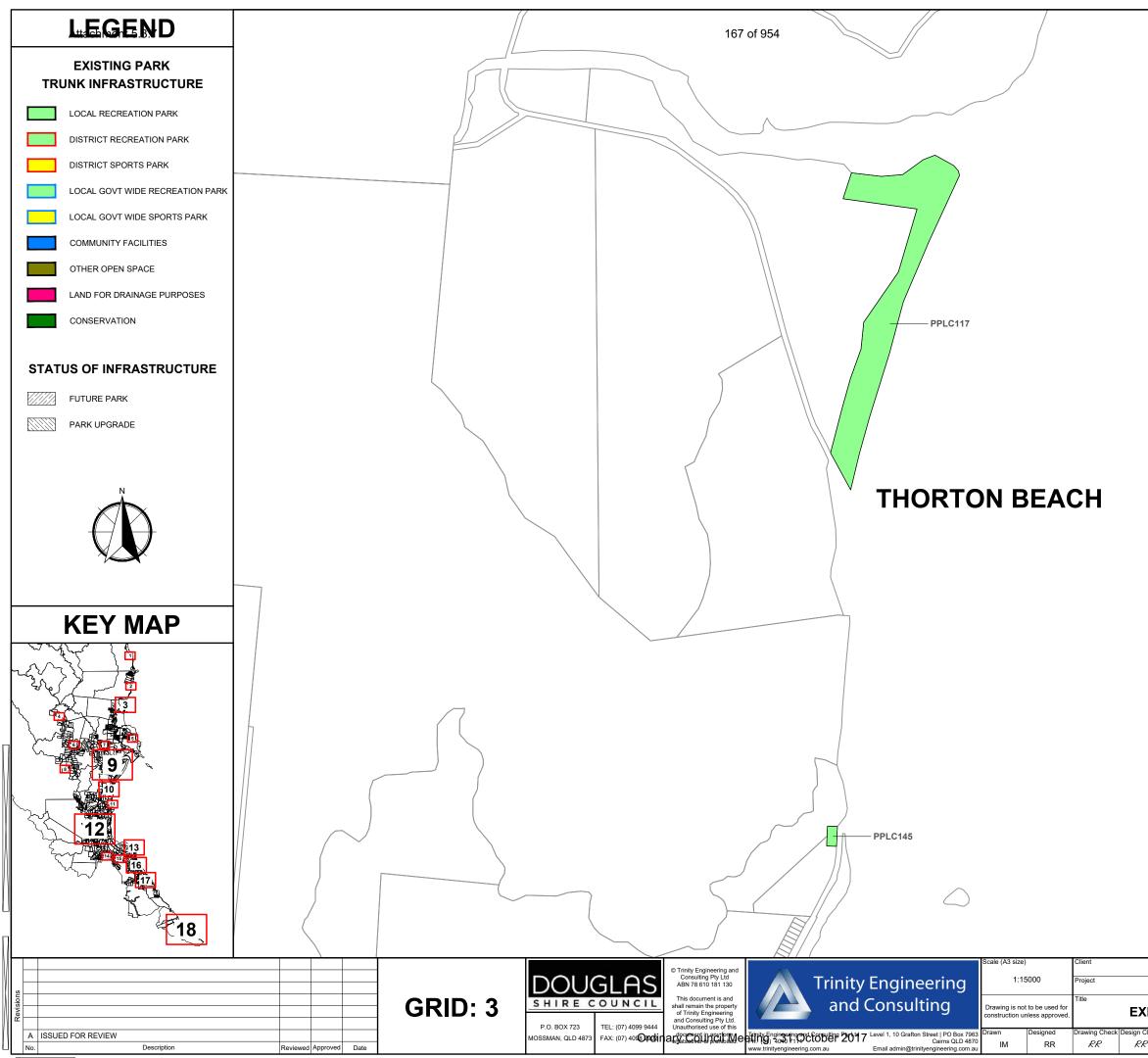


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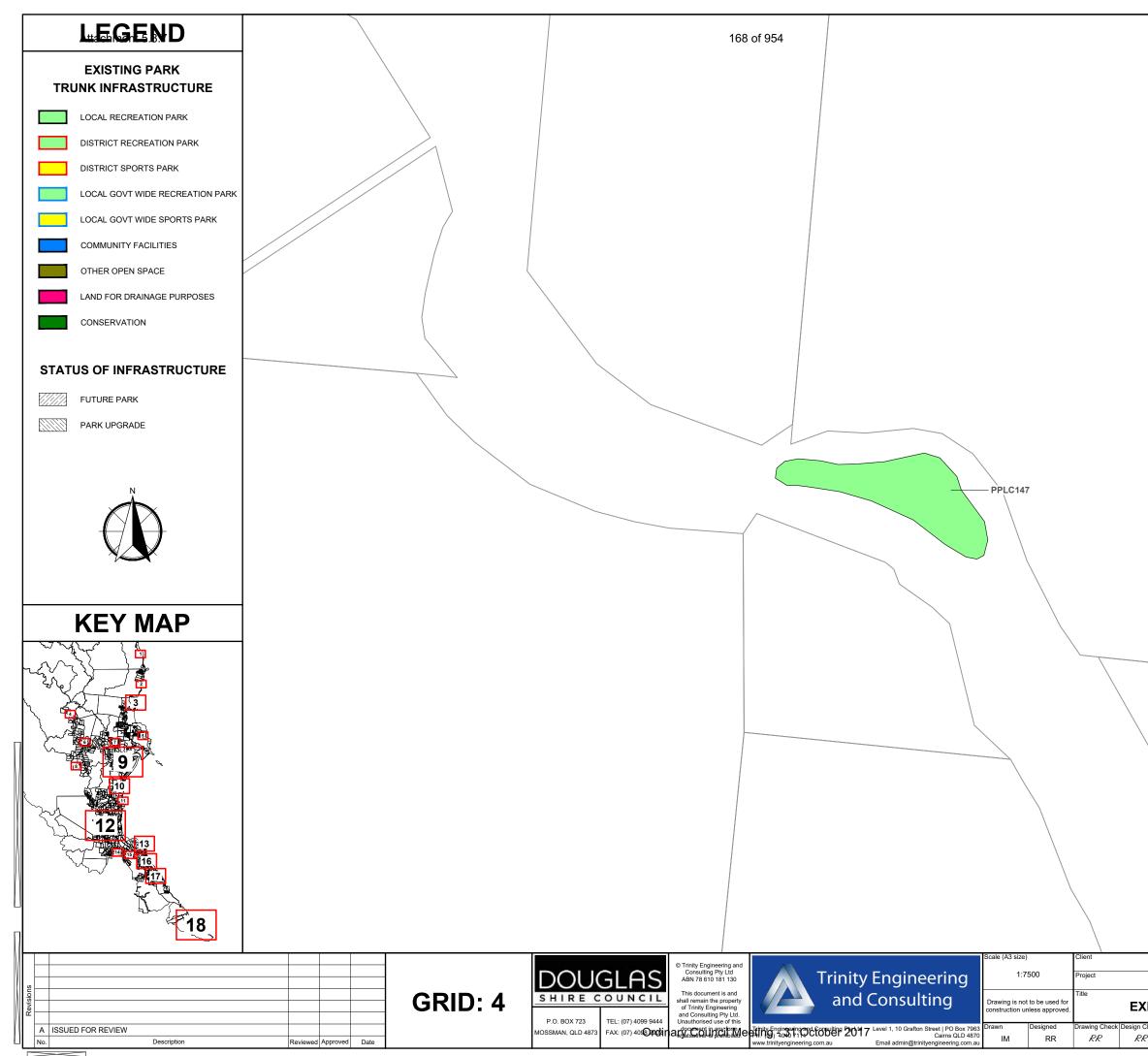
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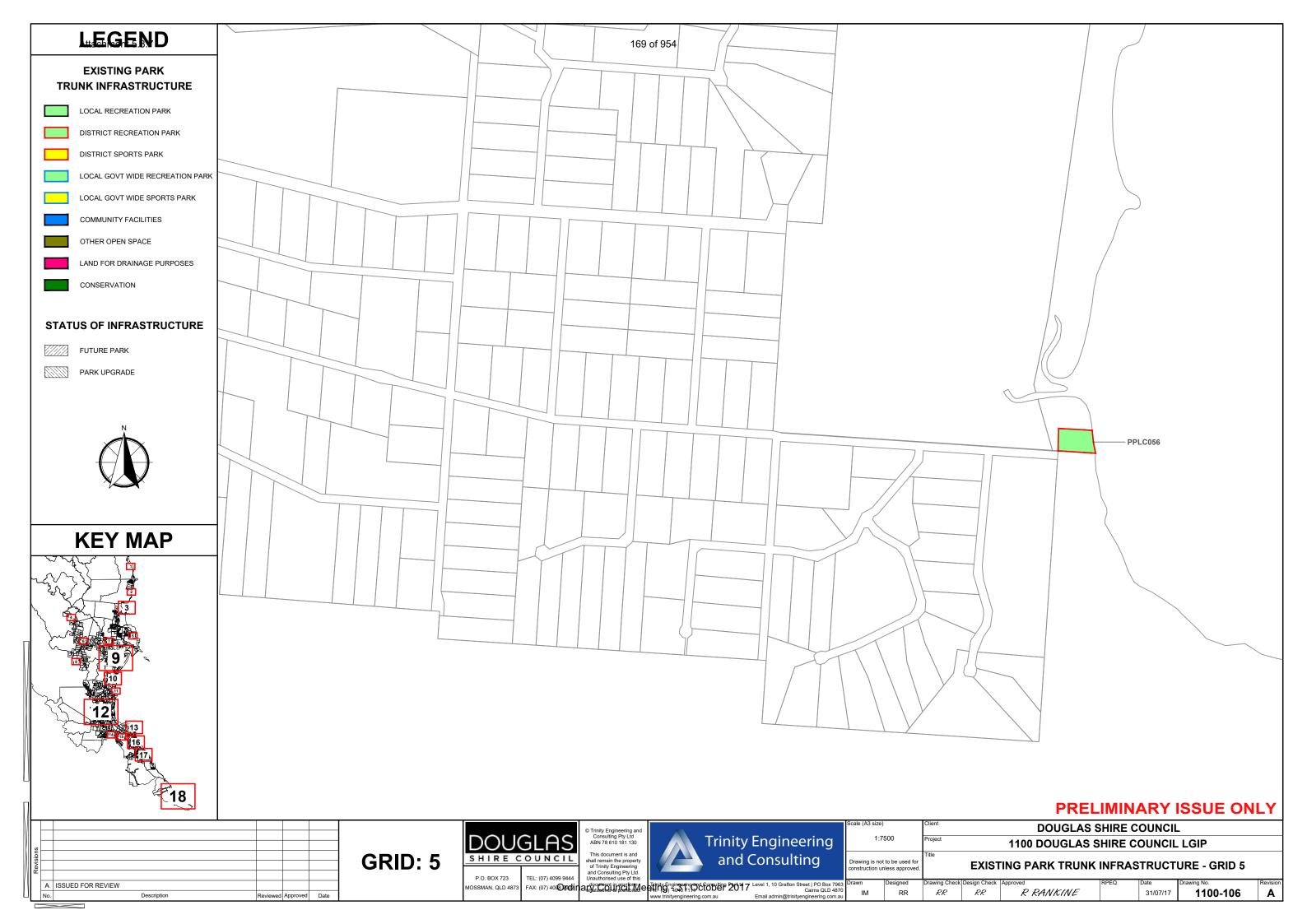
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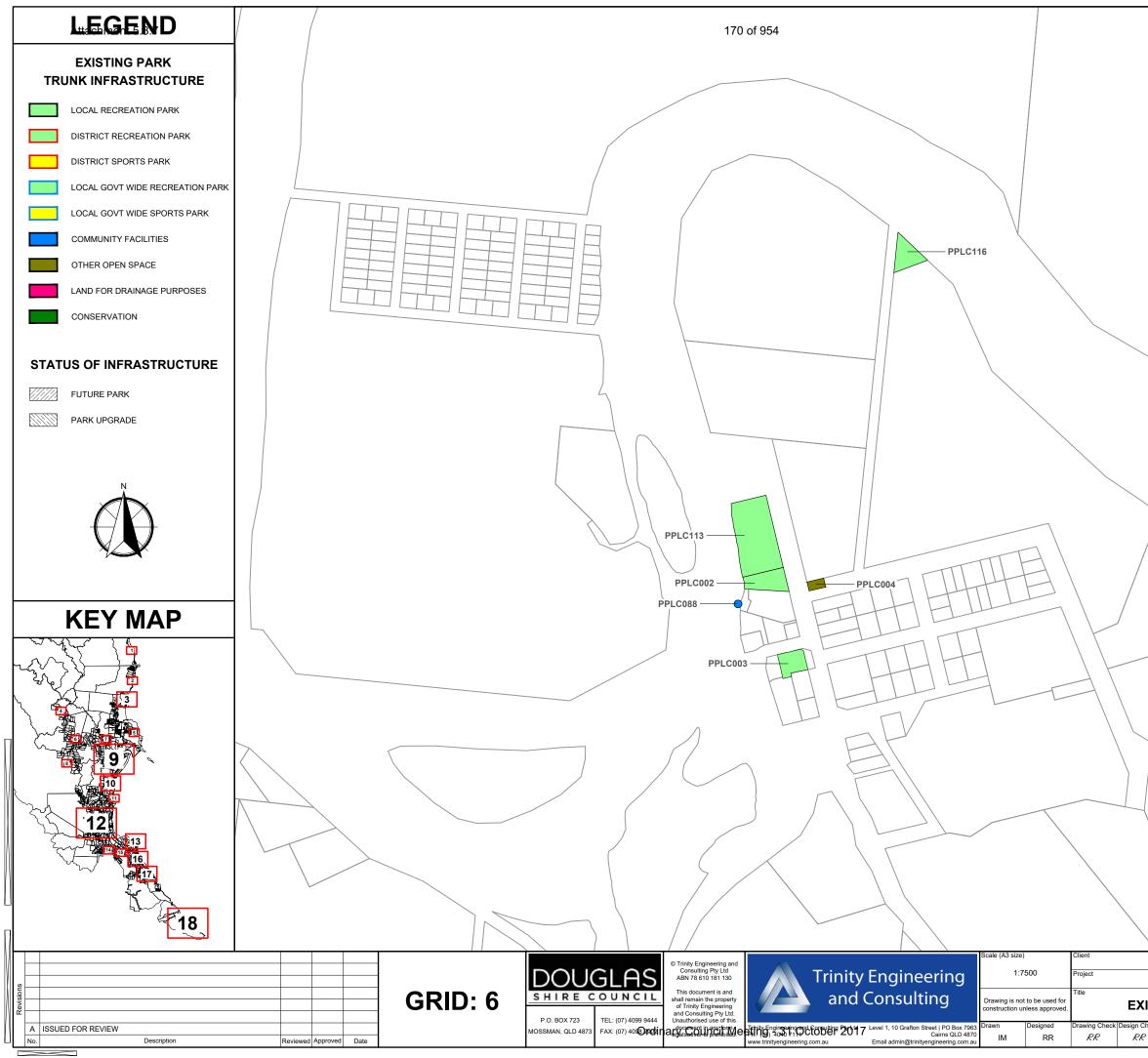
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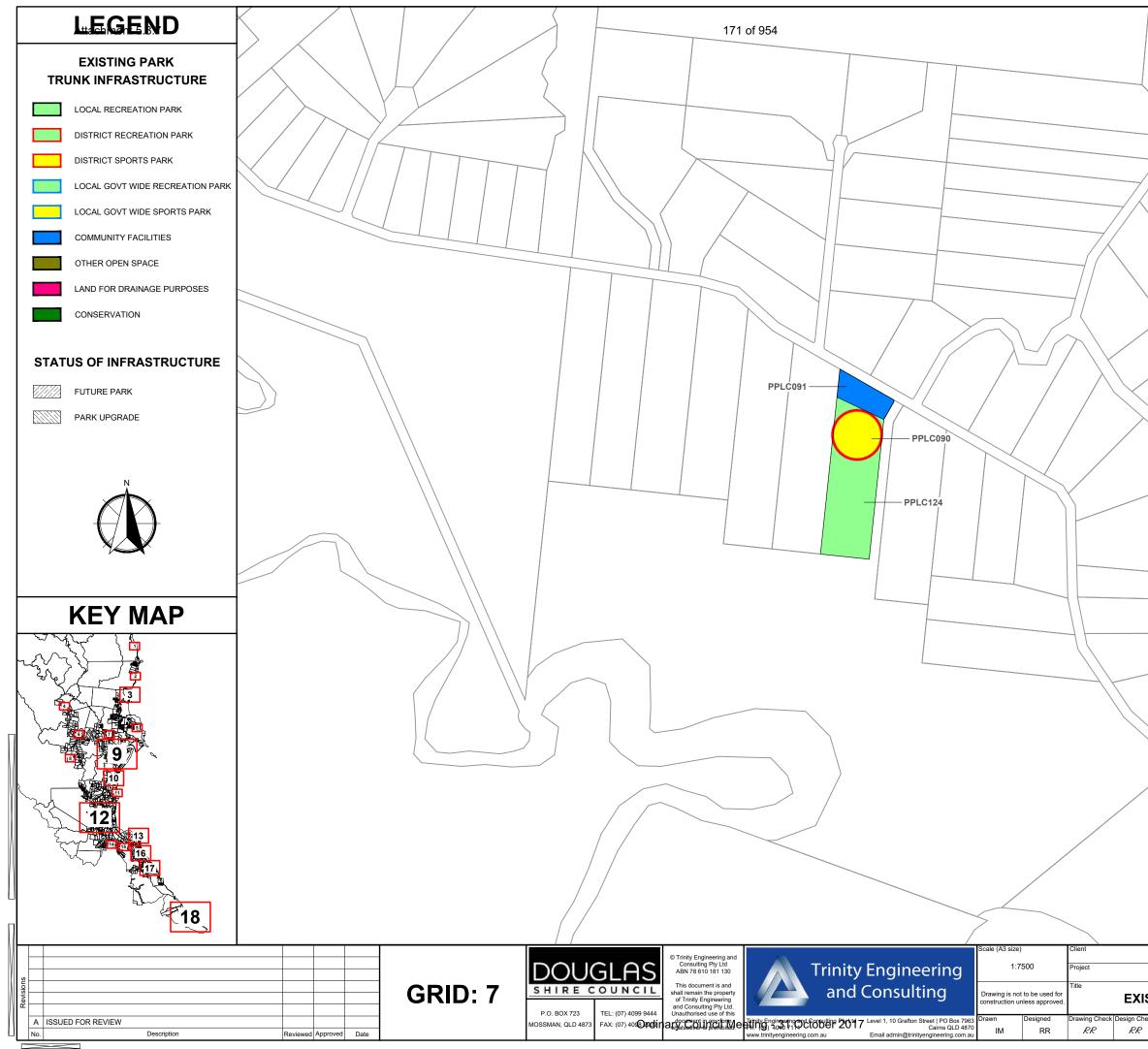
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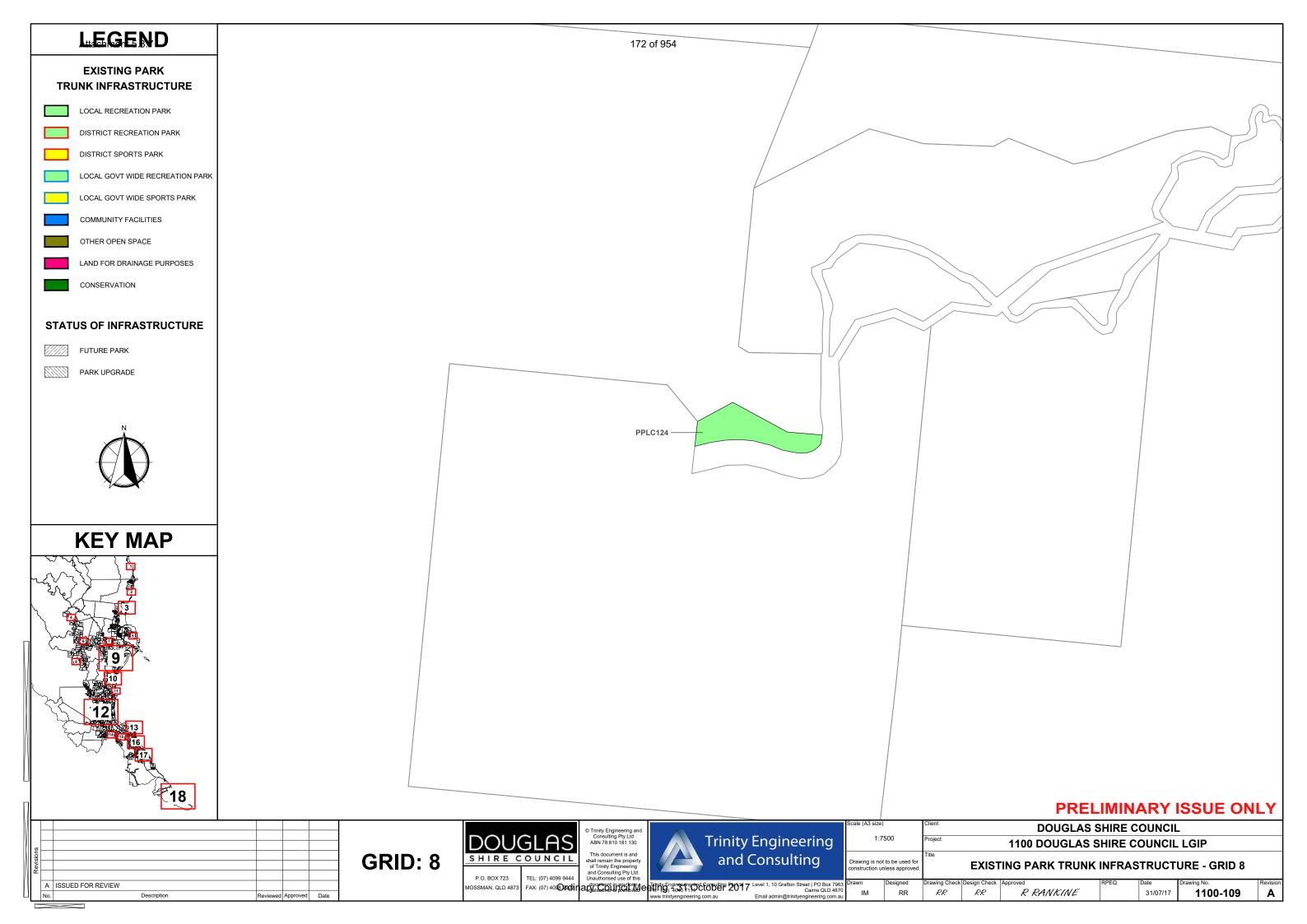


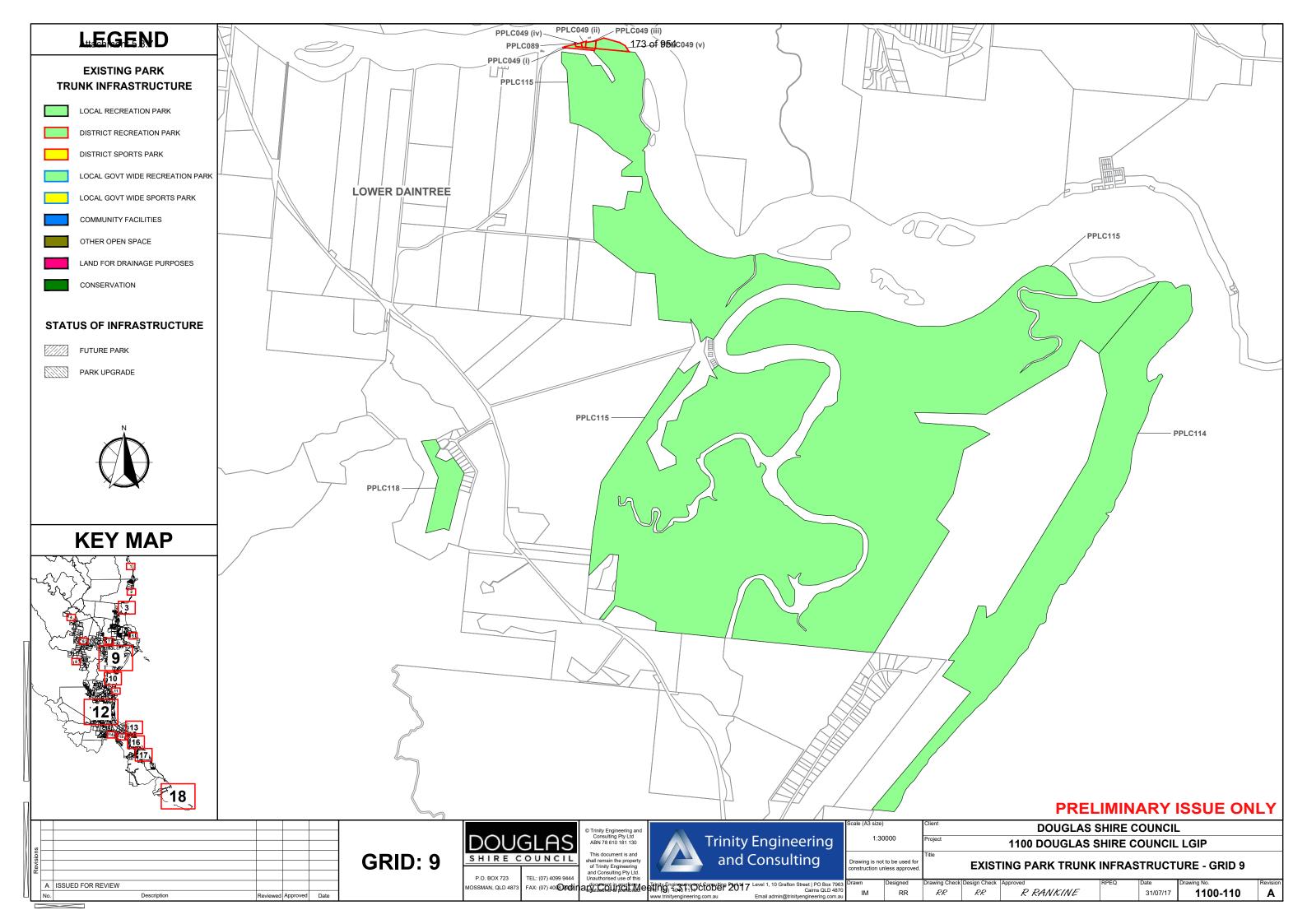


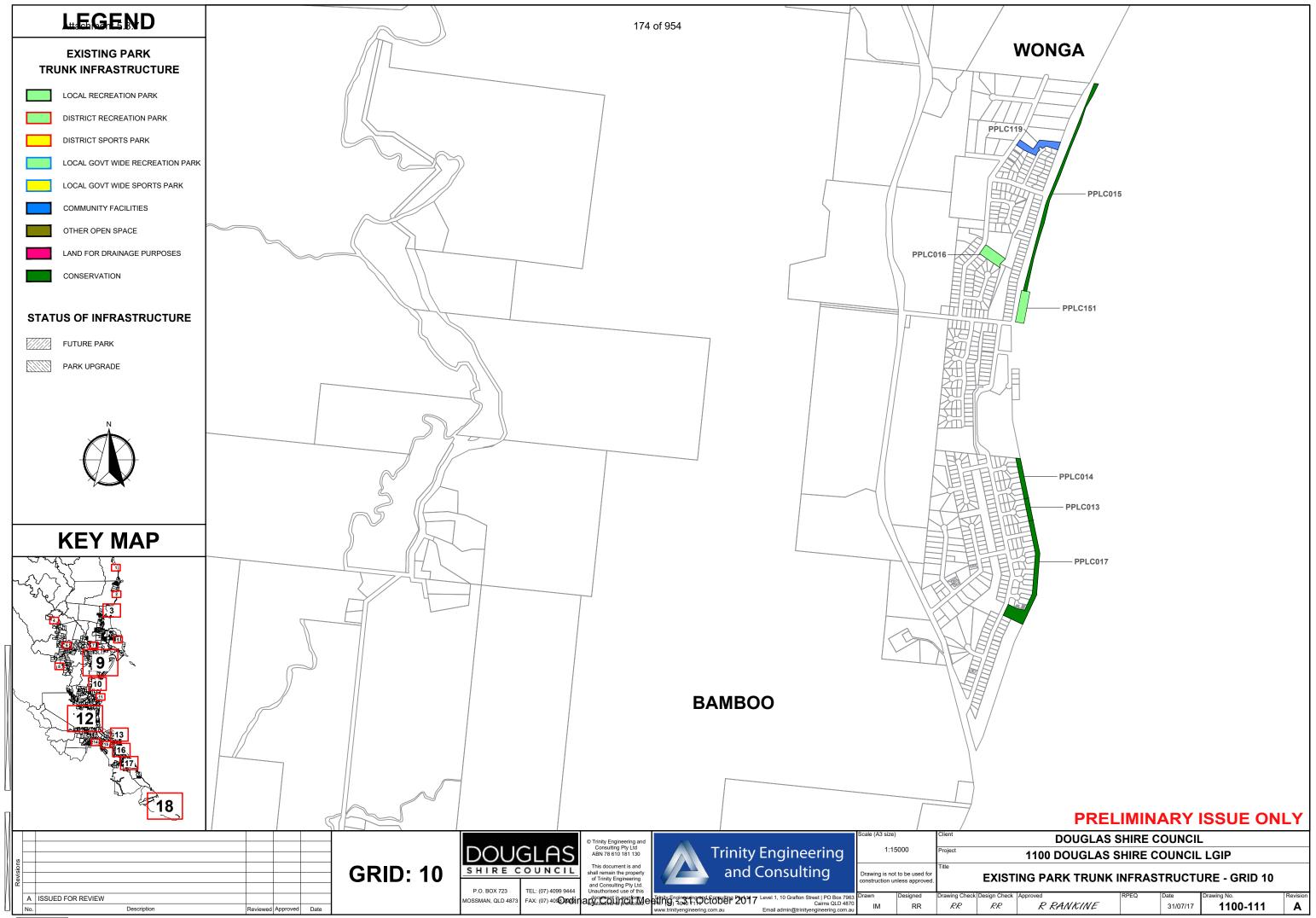
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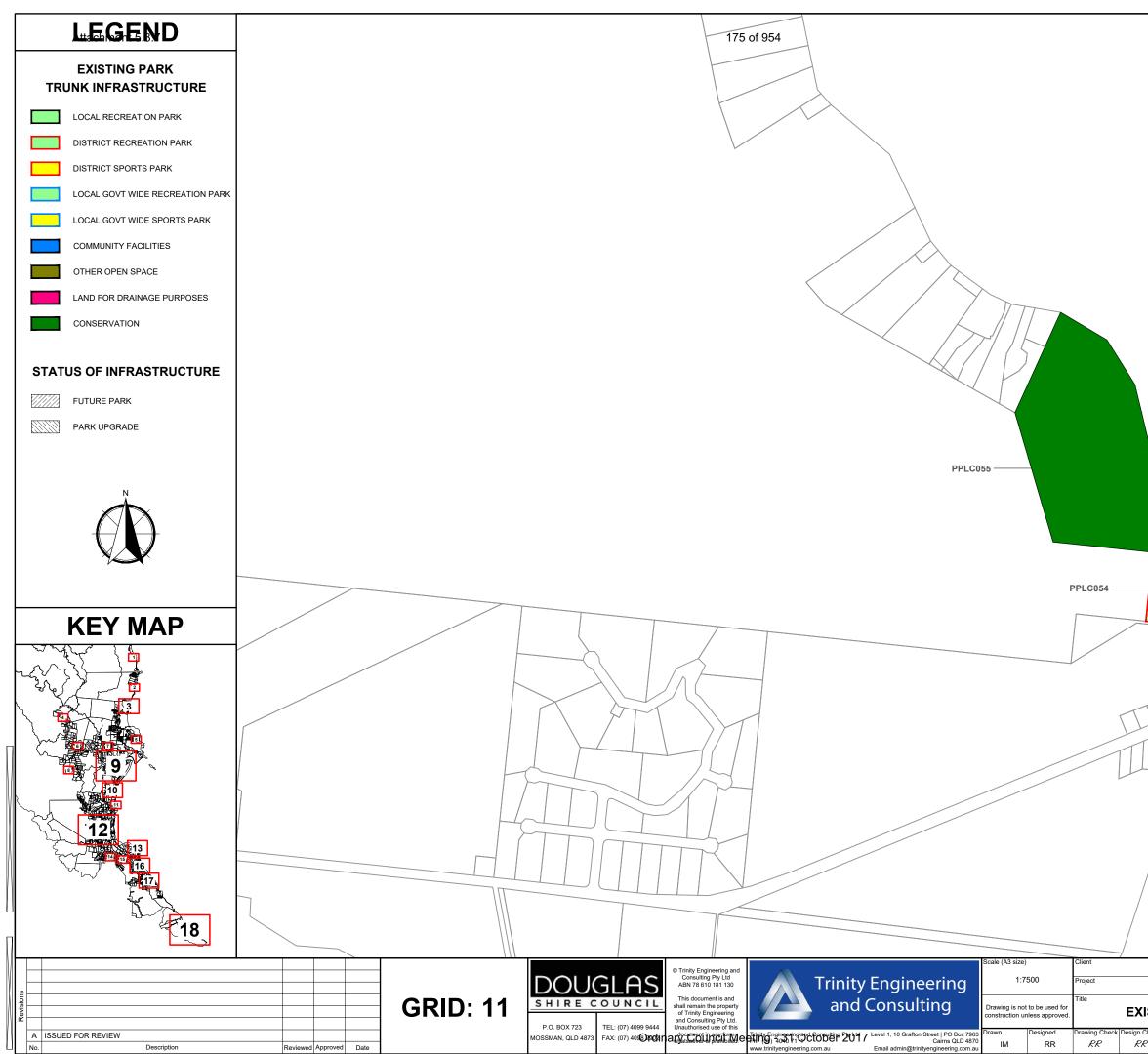
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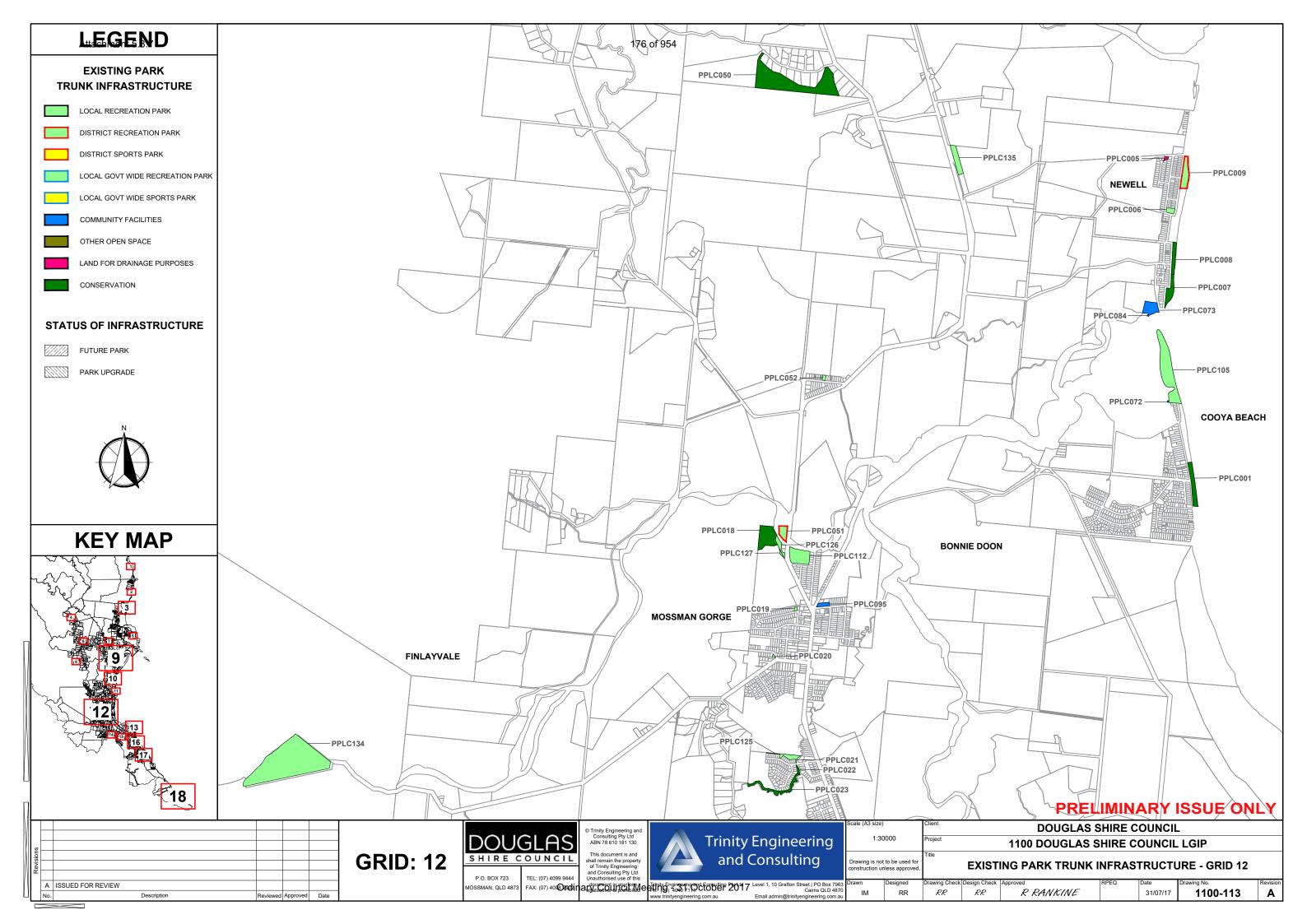


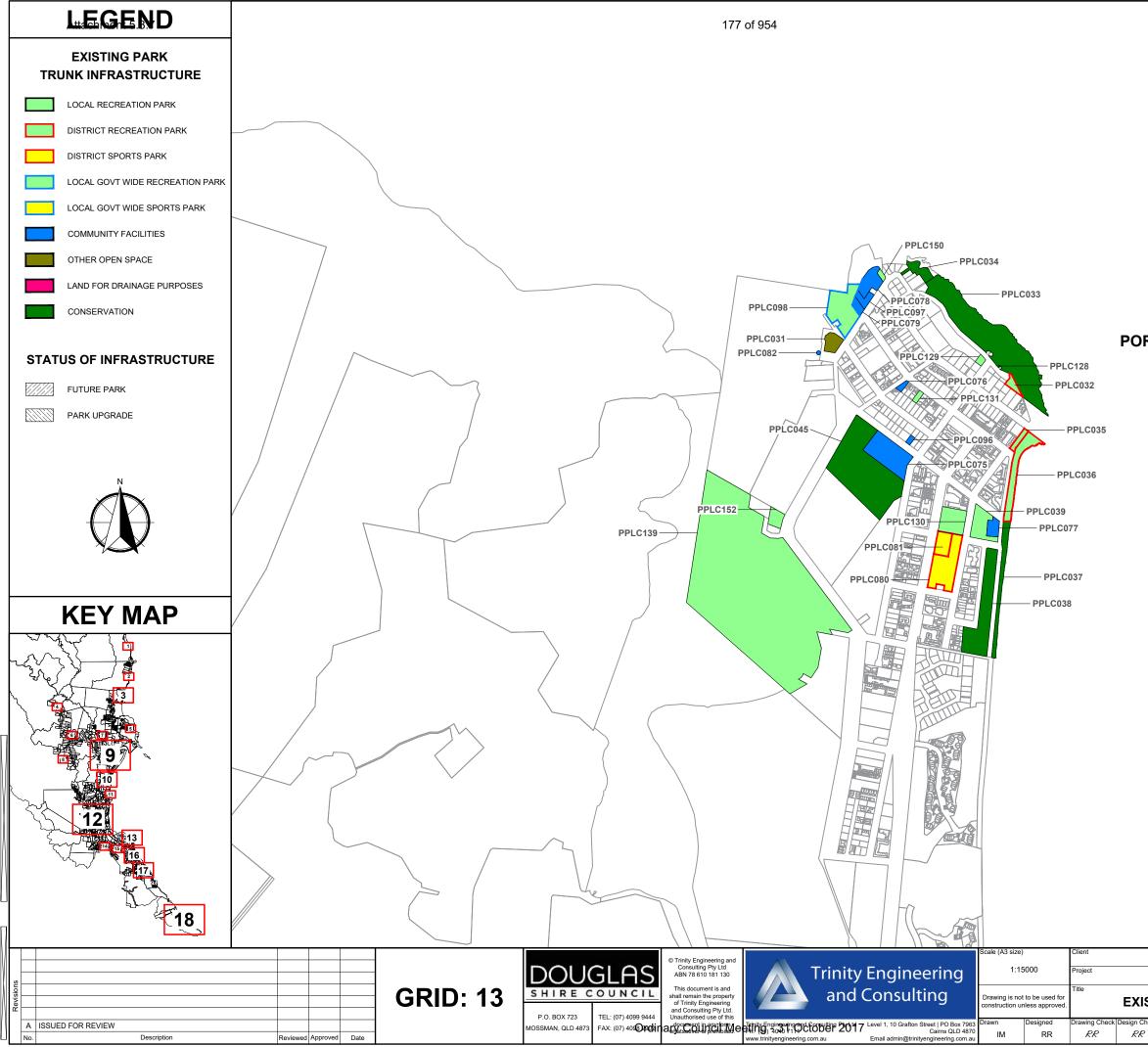
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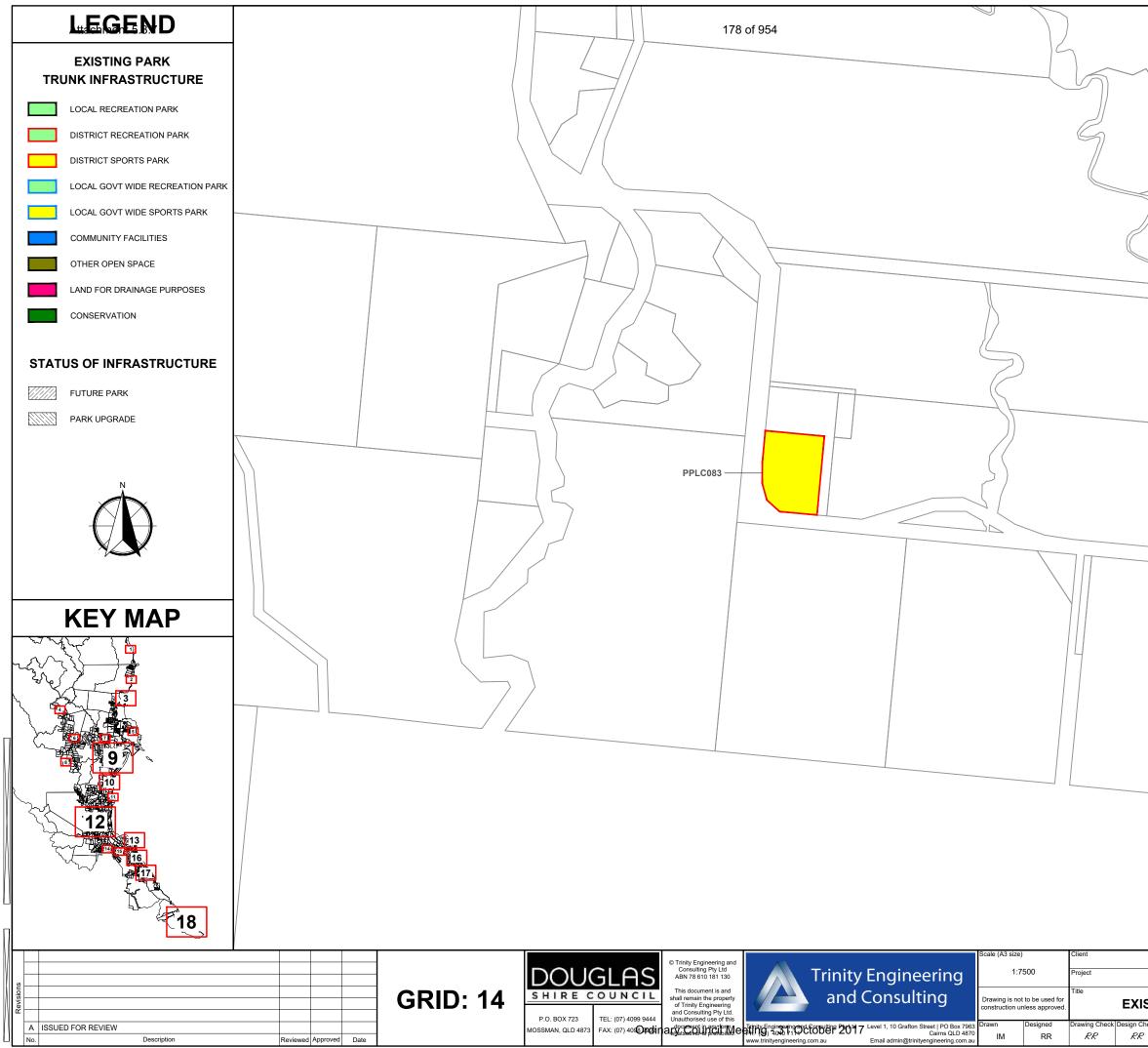


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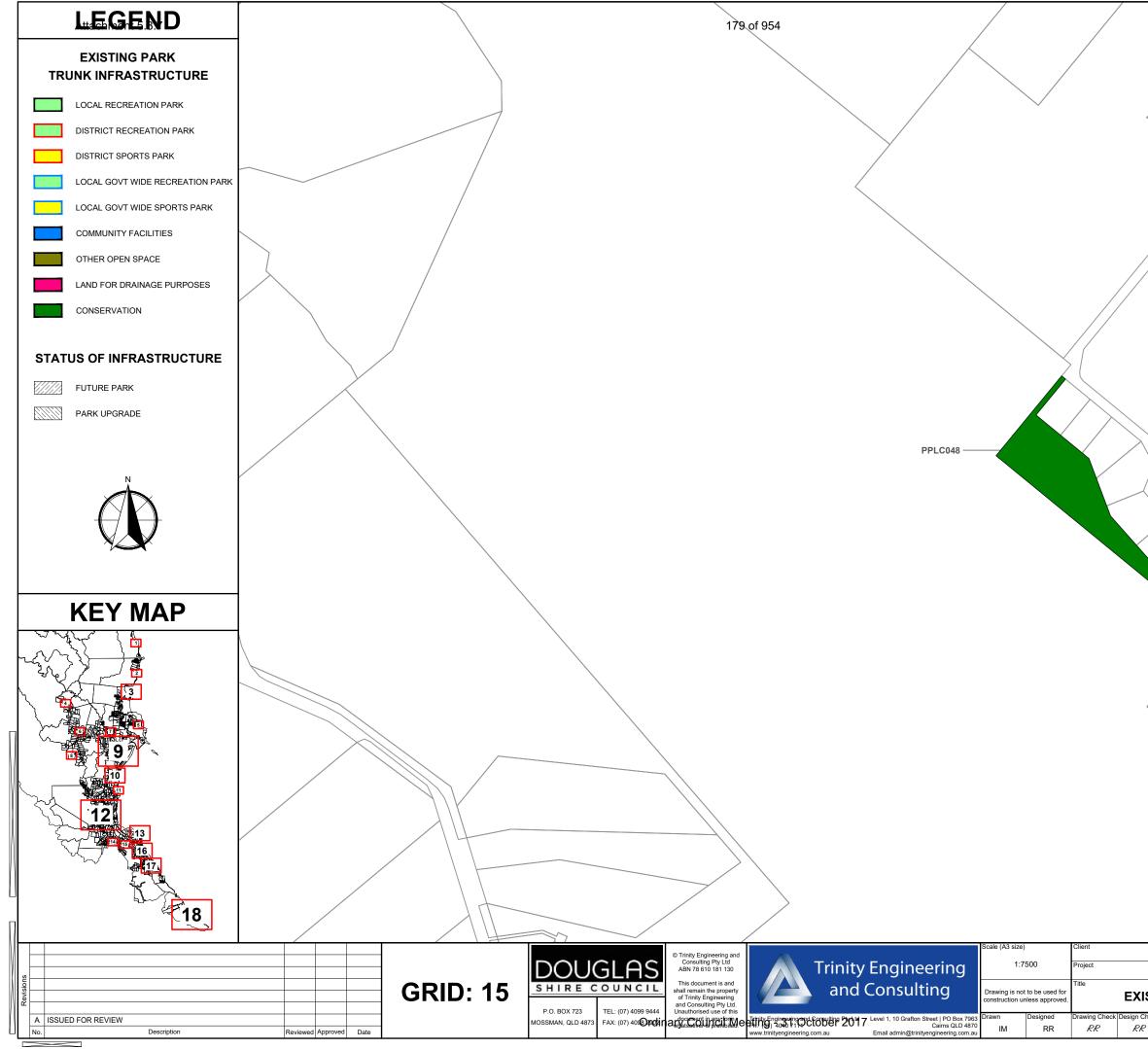
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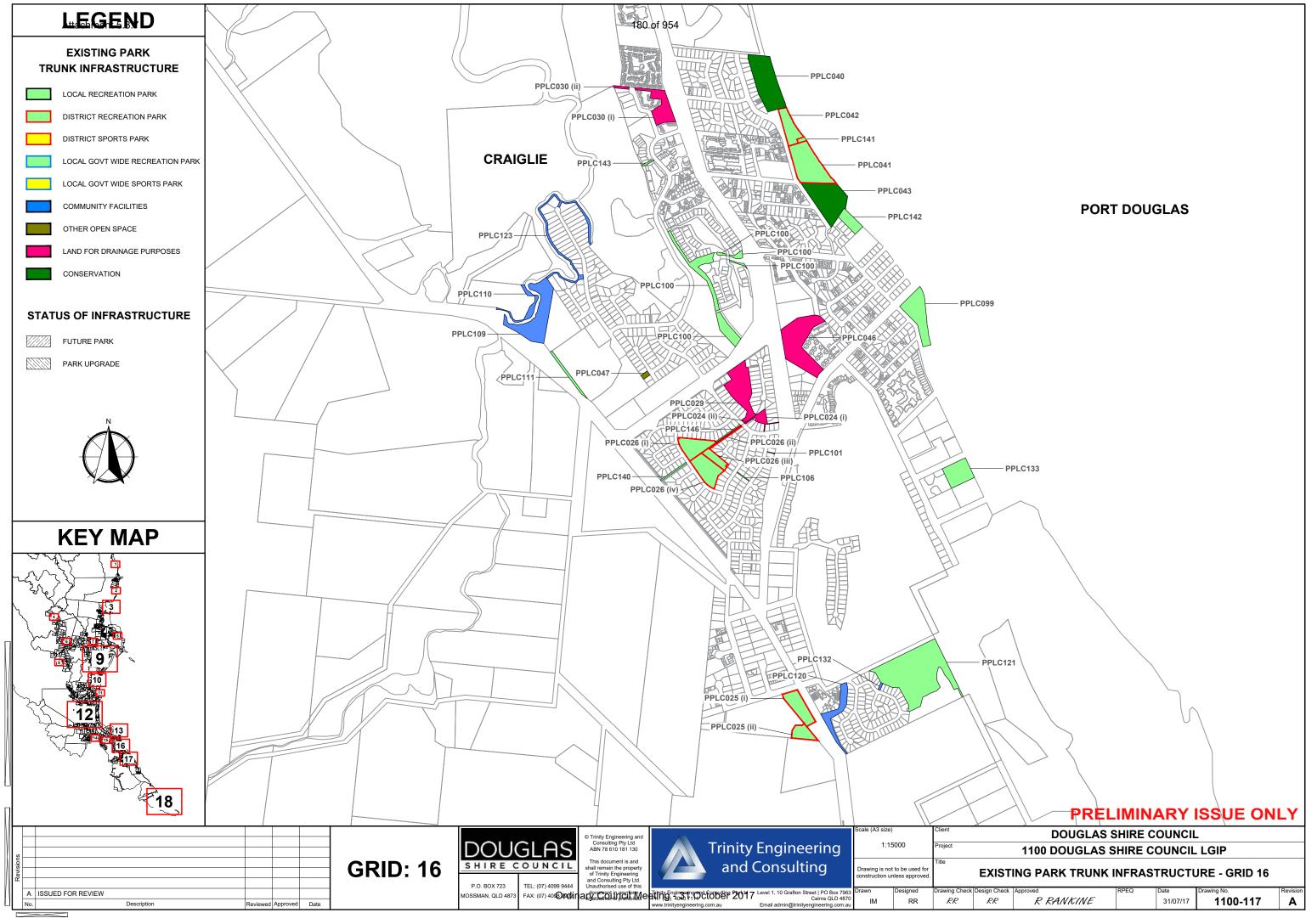
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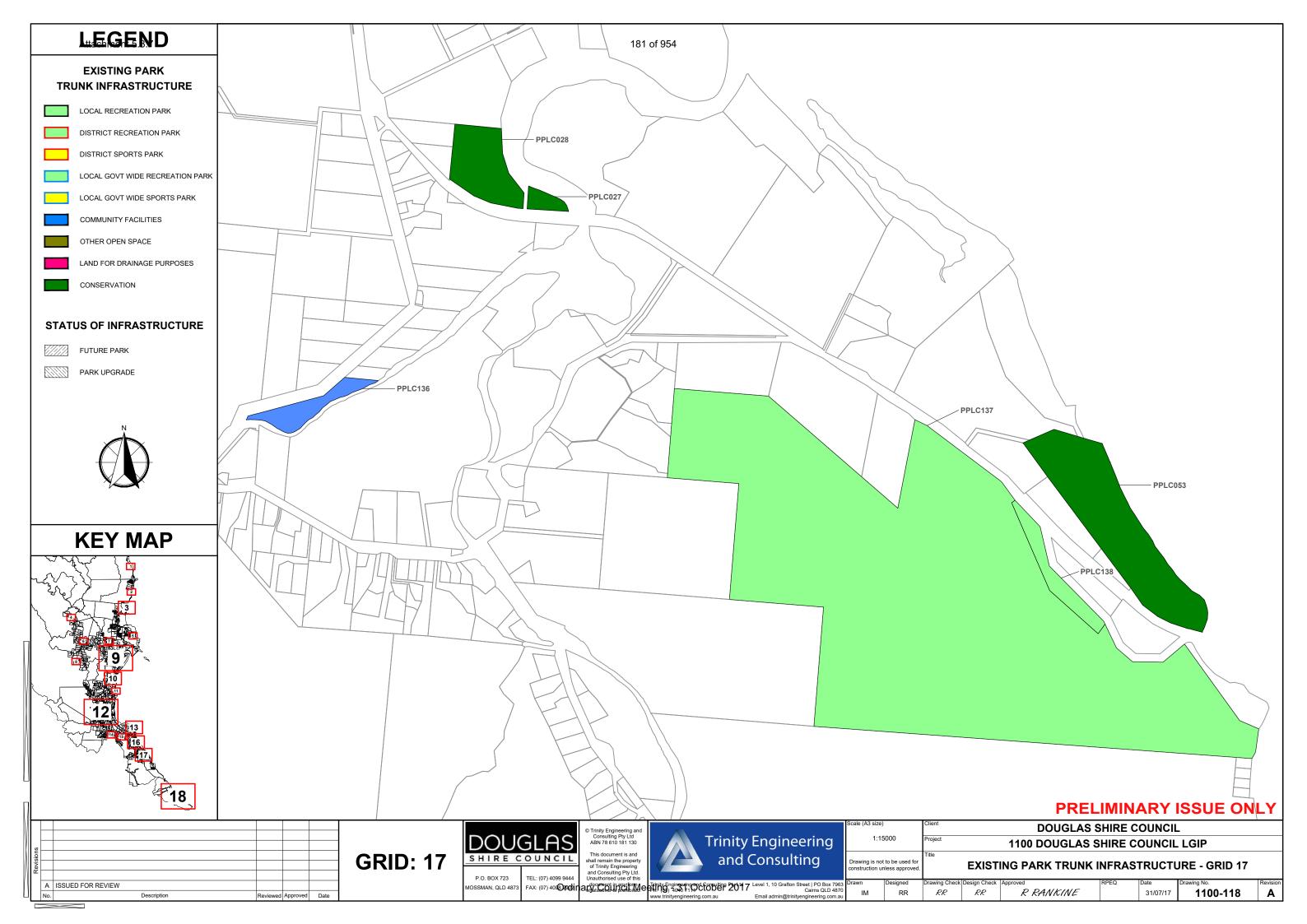
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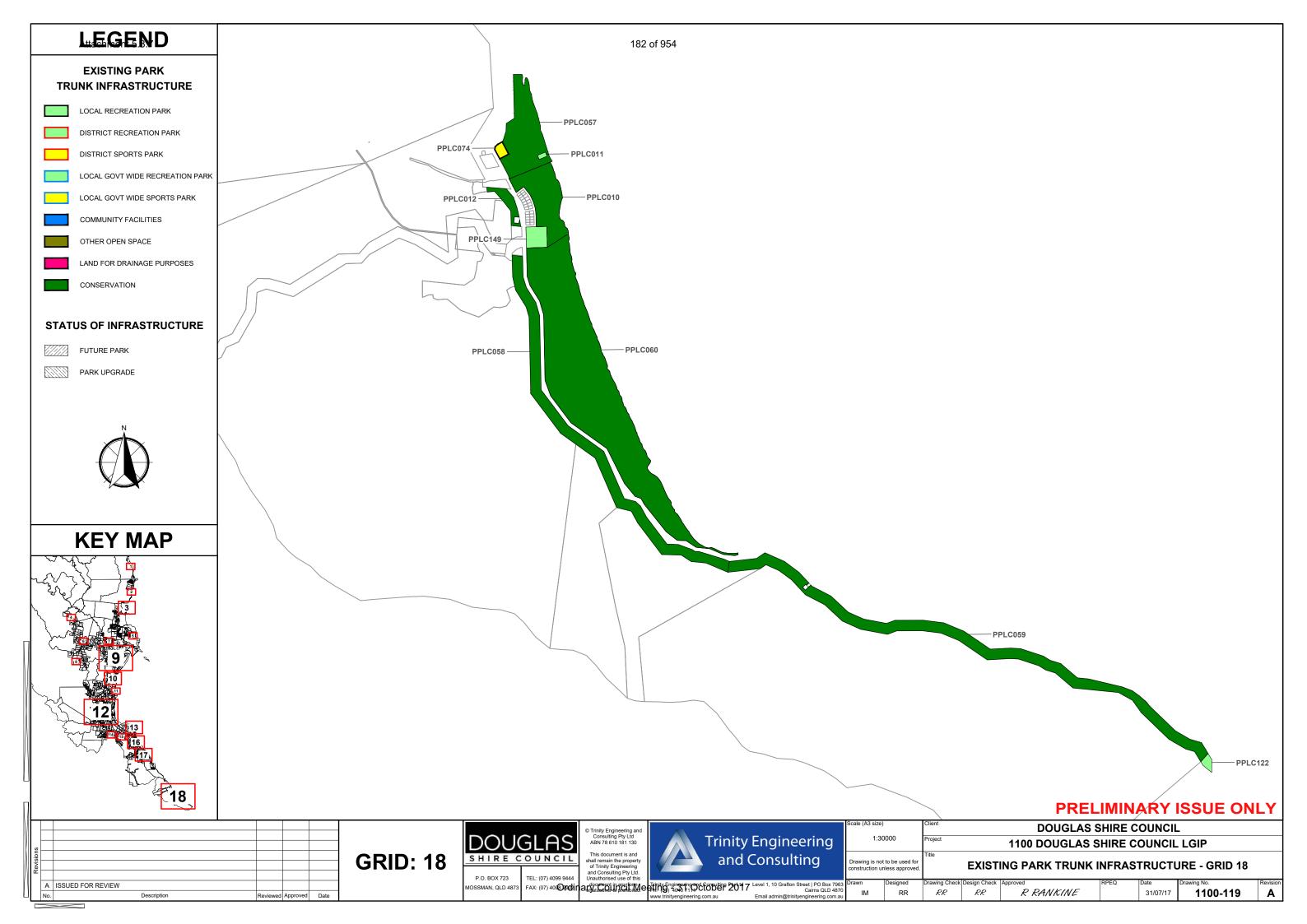


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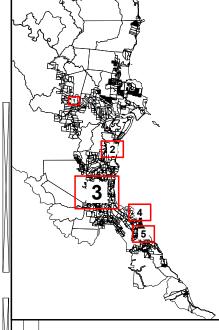
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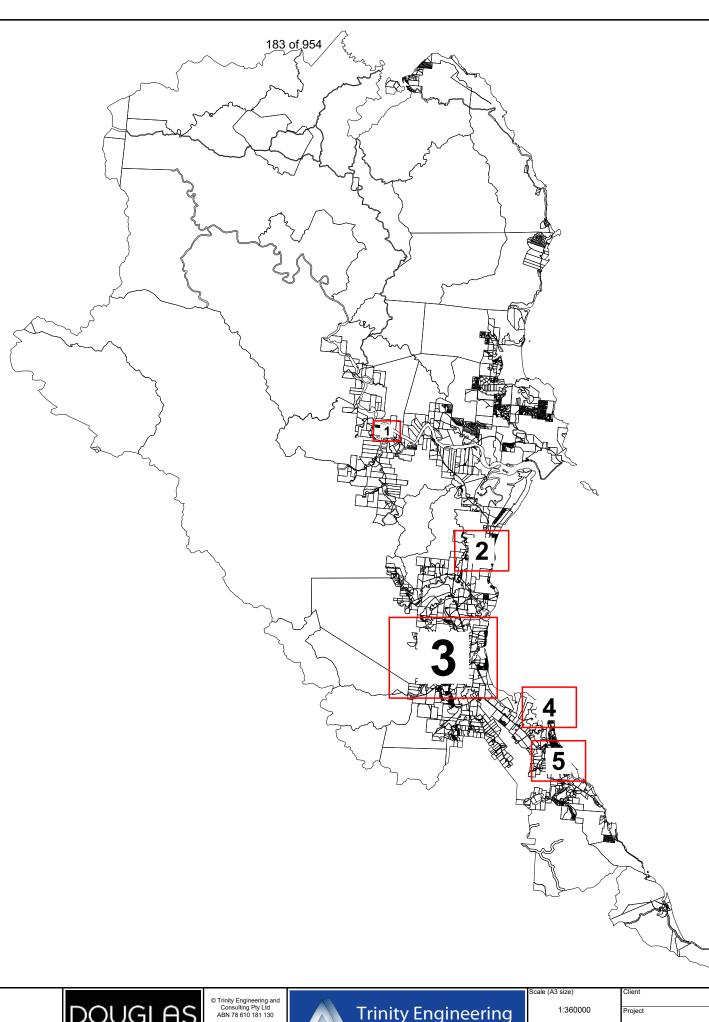








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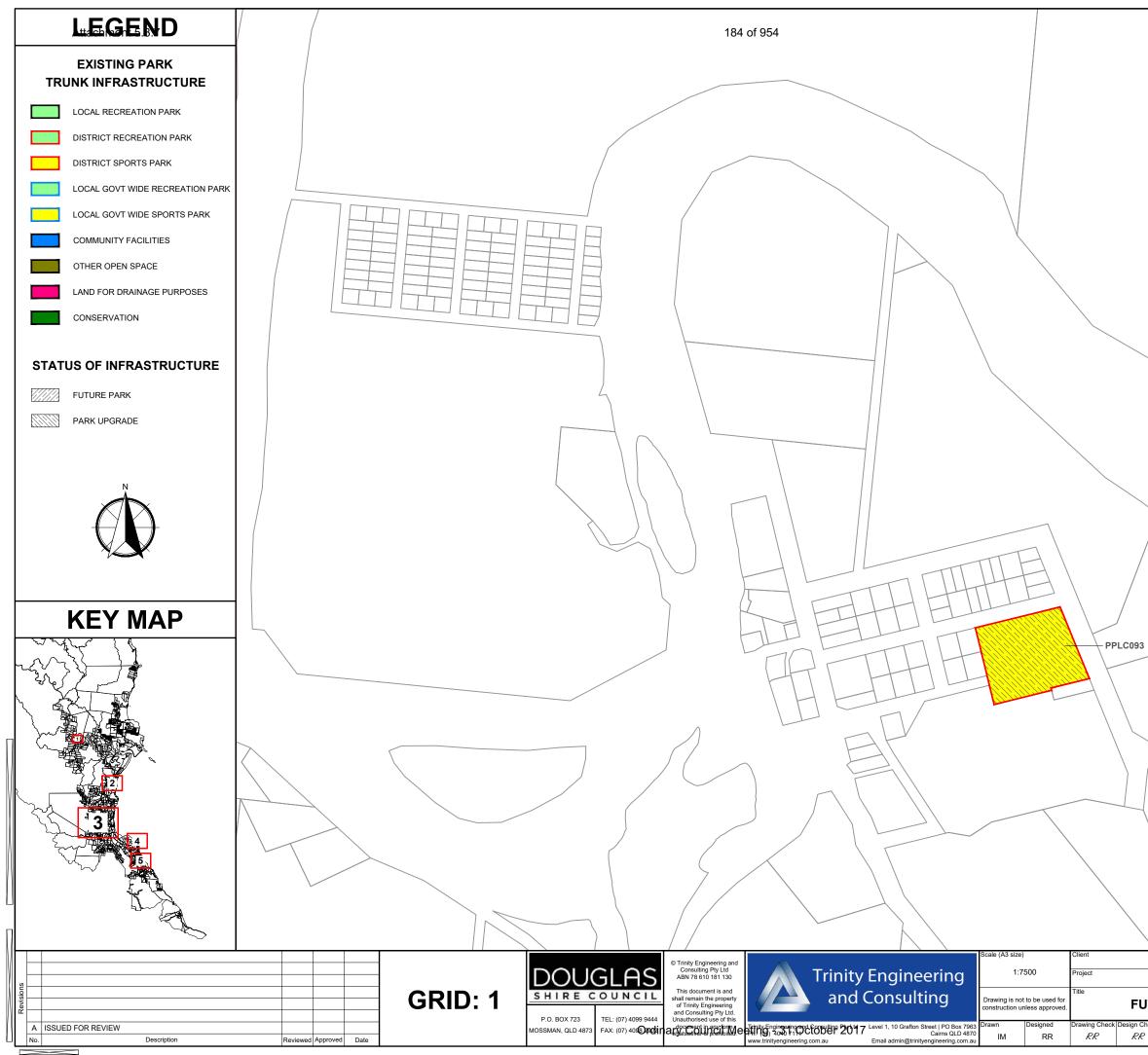
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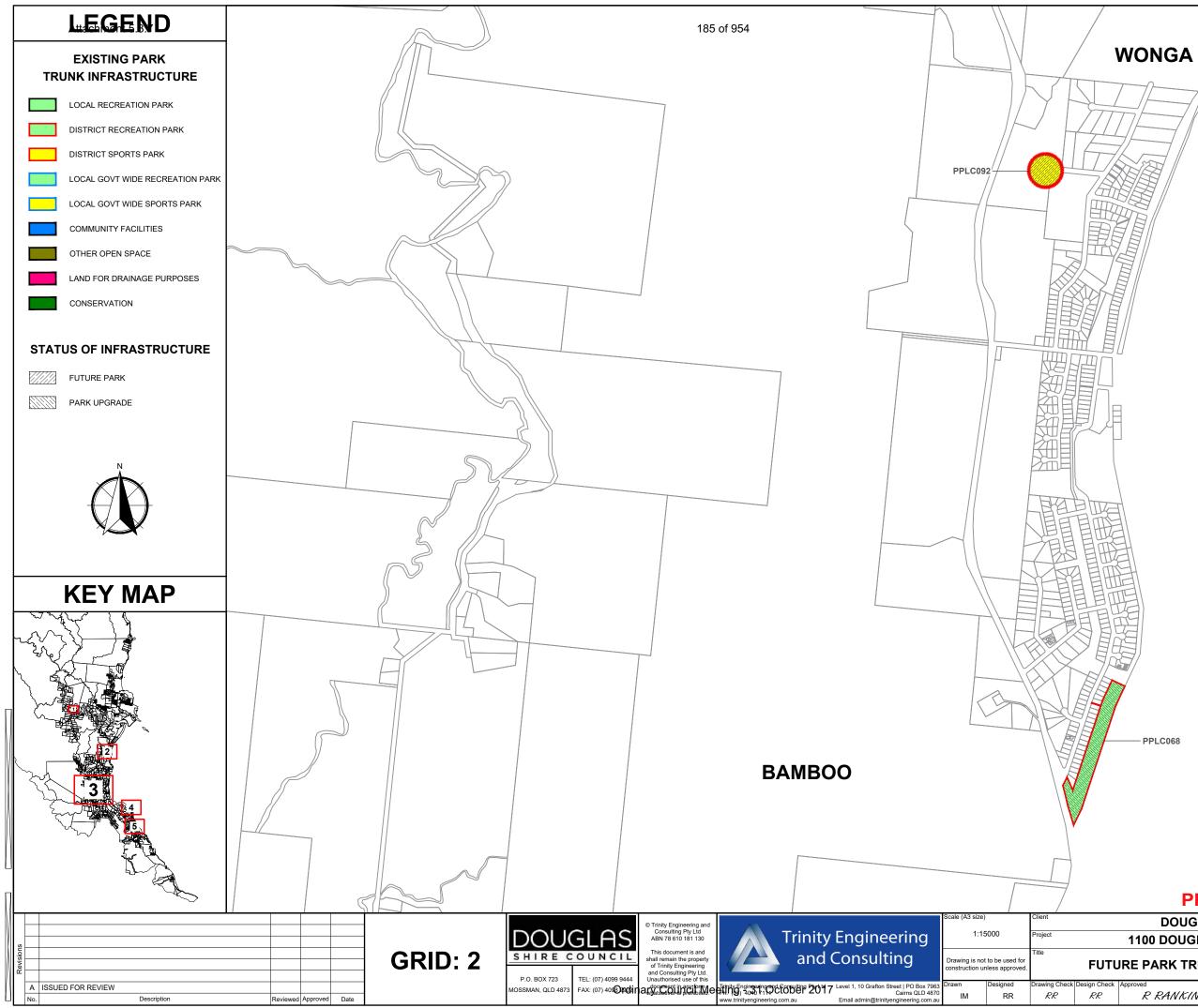
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UTURE PARK TRUNK INFRASTRUCTURE KEY MAP

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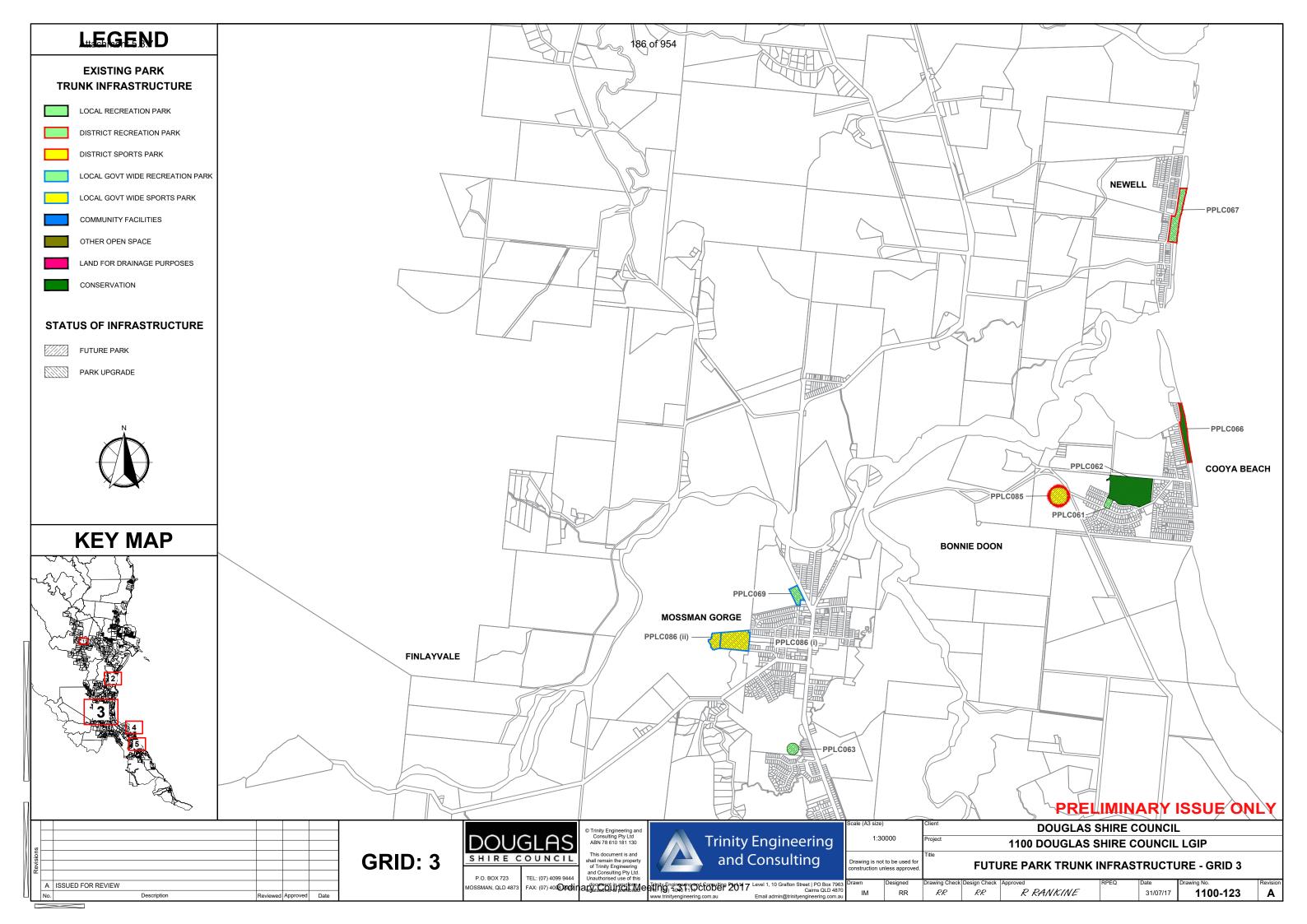


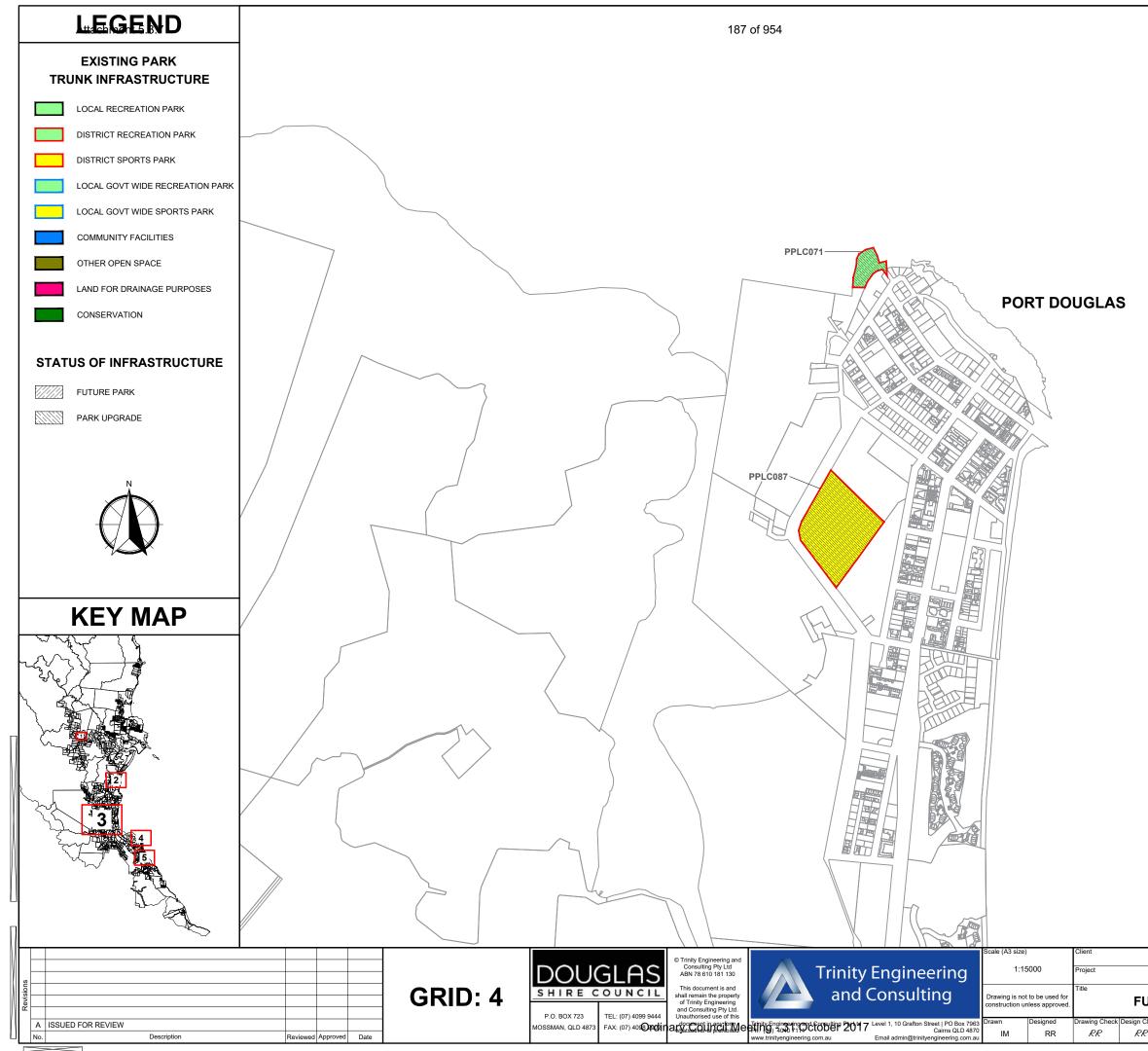
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FUTURE PARK TRUNK INFRASTRUCTURE - GRID 2

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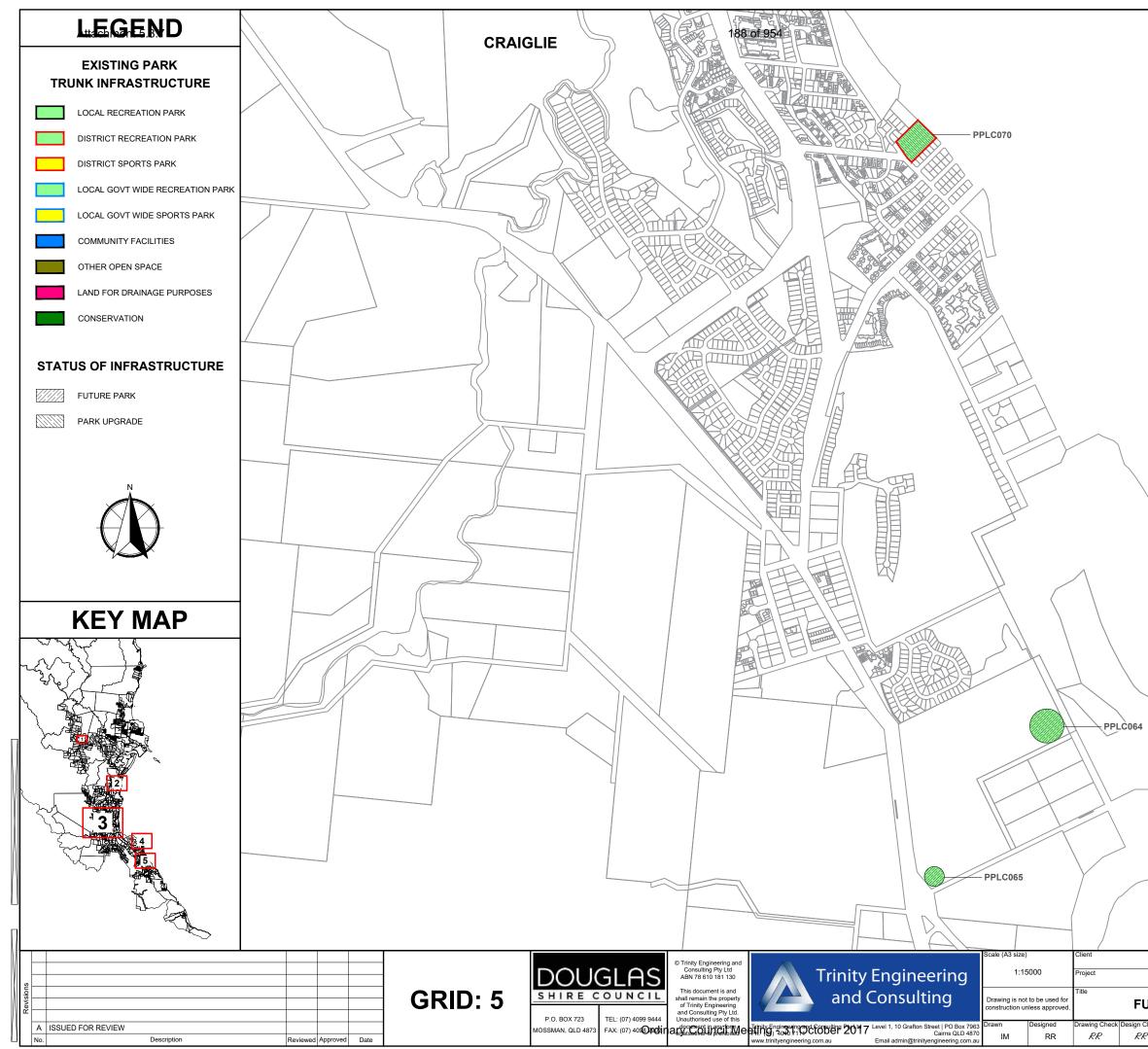


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FUTURE PARK TRUNK INFRASTRUCTURE - GRID 5

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LOCAL GOVERNMENT INFRASTRUCTURE PLANS (STORMWATER TRUNK INFRASTRUCTURE) for DOUGLAS SHIRE COUNCIL

SCHEDULE OF PROJECT DRAWINGS

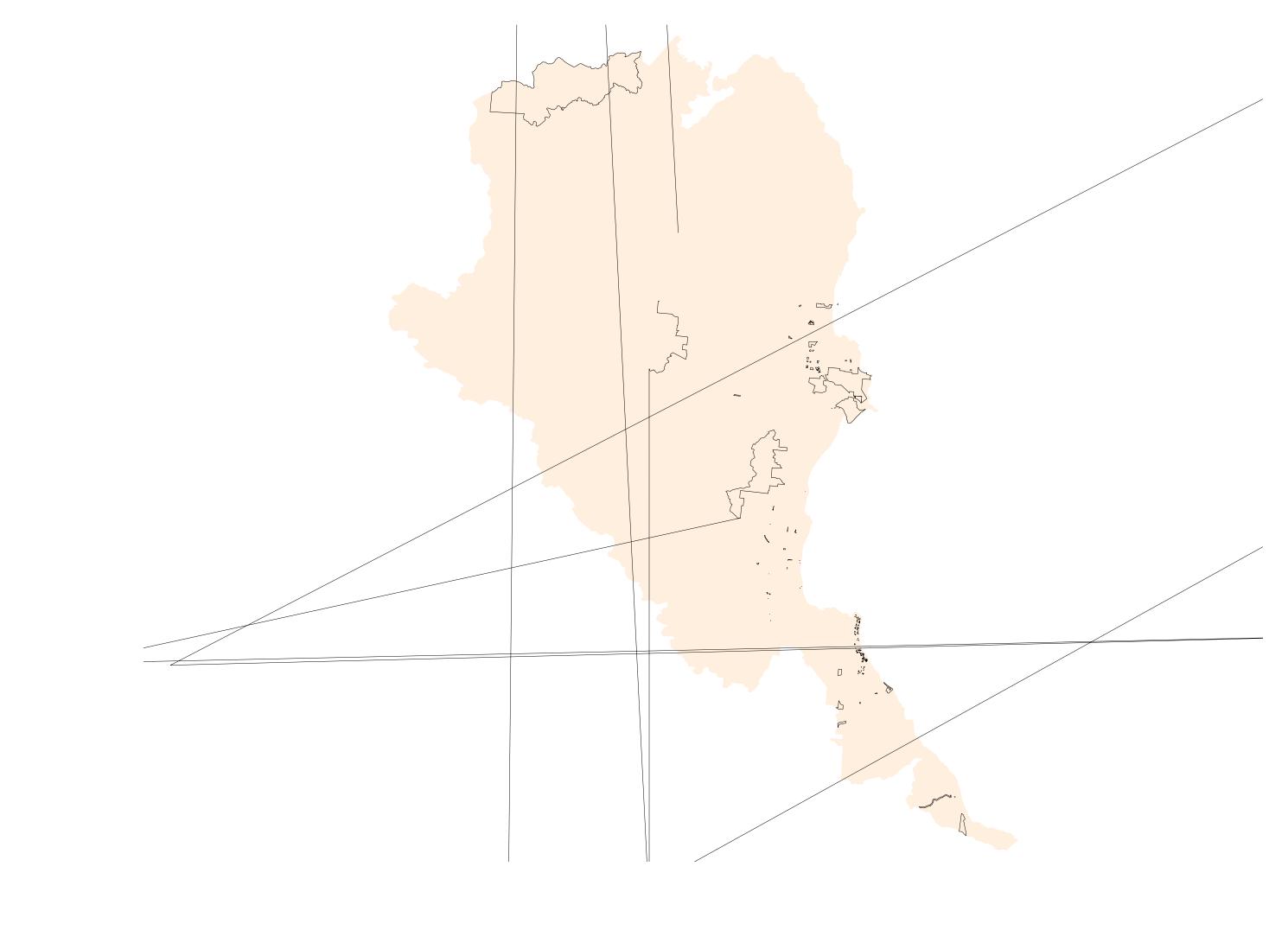
1100–500 DRAWING INDEX

1100-501 STORMWATER INFRASTRUCTURE SUPPLY CHARGES CATCHMENT AREAS

Ordinary Council Meeting - 31 October 2017

Trinity Engineering and Consulting

PRELIMINARY ISSUE ONLY



Appendix D – LGIP Checklist

Appendix D is part of Statutory Guideline 03/14 – Local government infrastructure plans

Review principles:

• A reference in the checklist to the LGIP Template is taken to include a relevant reference to the SPA, statutory guideline for LGIPs, statutory guideline for MALPI or the Queensland Planning Provisions (QPP).

• Compliance requirements are not limited to the requirements listed in the checklist.

	_		ructure plan (LGIP) checklist	To be completed	by local government			o be completed by
LGIP guideline outcome	LGIP component	Number	Requirement	Requirement met (yes/no)	Local government comments	Compliant (yes/no)	Justification	Correcti descript
The LGIP is consistent with the	All	1.	The LGIP sections are ordered in accordance with the LGIP template.	YES	The LGIP sections are structured and ordered in accordance with the LGIP template			
legislation and		2.	The LGIP sections are correctly located in the planning scheme.	YES	The LGIP will be located in section 4 of the Douglas Shire Council Planning Scheme			
statutory guideline for LGIPs		3.	The content and text complies with the mandatory components of the LGIP template.	YES	Complies			
		4.	Text references to numbered paragraphs, tables and maps are correct.	YES	Complies			
	Definitions	5.	Additional definitions (to those in the QPP) do not conflict with statutory requirements.	YES	There are no additional / alternative definitions used.			
	Preliminary section	6.	The drafting of the Preliminary section is consistent with the LGIP template.	YES	The drafting of the preliminary section has been undertaken in accordance with the LGIP template			
		7.	All five trunk networks included in the LGIP. If not, which networks are excluded? Why have these networks been excluded?	YES*	The LGIP contains detailed planning for the water, sewerage, roads, paths, and public parks and community facilities trunk network. However, the stormwater trunk infrastructure network has not been <i>detailed</i> in the LGIP. This is a result of insufficient information being currently available to undertake reliable, (detailed) infrastructure planning for this network. Under the current version of the LGIP, a provision for detailed infrastructure planning in the forms of a drainage management plan (DMP) for the Port Douglas and Environs and Mossman and Environs regions.			
	Planning assumptions - structure	8.	The drafting of the Planning assumptions section is consistent with the LGIP template.	YES	The drafting of the planning assumptions has been prepared using the LGIP template. It is noted that section 4.2.2 of the template requires developable areas to be mapped in Schedule 3. Council requests a relaxation of this requirements as it is not considered reasonable (or indeed possible at this stage) to map the developable areas, given they are affected by a range of locality specific constraints and opportunities, and design matters which may only be determined on a case- by-case basis. The developable areas are generally depicted on the zones. ry Council Meeting - 34 Octob	er 2017		

y appointed rev tive action	Recommendation
	Recommentation

chment 5.3.9		1		(Which artes so to the PIA		
				maps).		
	9.	All the projection areas listed in the tables of	YES	All the projection areas listed in		
		projections are shown on the relevant maps		the tables of projections are shown on the relevant maps		
		and vice versa.		and vice versa.		
	10.	All the service catchments listed in the	YES	Separate service catchment		
		tables of projected infrastructure demand		maps have been provided as part of the PFTI maps.		
		are identified on the relevant PFTI maps and		part of the frittings.		
		vice versa.				
Planning	11.	The population and dwelling projections	YES	The population and dwelling		
assumptions -		reflect those prepared by the Qld		projections are aligned with forecasts prepared the QGSO		
methodology		Government Statistician (as available at the		that were current as at 1/6/17.		
		time of preparation).		The base year of the projections		
				contained in the LGIP is 2011, as		
				it provided the most recent complete set of data from an		
				Australian Census. Australia's		
				2016 census data was not		
				released at the time of the preparation of the LGIP.		
				The resident population as reported by the QGSO at 2011		
				was 11,186 persons.		
				However, to appropriately		
				account for infrastructure		
				demand generated by tourists,		
				the population projections contained in the Douglas LGIP		
				must include tourist		
				projections.		
				At base year the tourist		
				population is estimated to be 5,364 (based on Visitor		
				Population from the ABS),		
				taking the total population		
				(residents and tourists) to 15,546 in 2011. This equates to		
				a visitor to resident population		
				of 45.4%. At the time of writing the LGIP, the Population data		
				from the 2016 Census had just		
				been released. Similarly the figures for		
				Residents = 11,911 persons		
				Visitors = 6,490 persons Visitors / Residents = 54.8%		
				Due to the variability of tourist		
				numbers, and average of the two census years was taken		
				(=49.94 (~50%))		
				Resident population projections		
				for the subsequent time periods		
				are based on the medium series forecasts, with tourist		
				projections increasing in line		
				with population growth.		
				Dwelling forecasts have been		
				determined by converting		
				population to dwellings using average household size		
				information from QGSO and		
				ABS. The breakdown between dwelling types has also been		
				based on 2011 ABS census data		
				(dwelling types and persons per		
				dwelling based on Place of		

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	12.	The employment and non-residential	YES	The employment and non-			
		development projections align with the		residential projections are			
		available economic development studies,		based on ABS employment and labour force data for base year			
				projected in increase in line			
		other reports about employment or		with population growth.			
		historical rates for the area.		Employment and floor space			
				projections have been allocated to projection areas based on an			
				assessment of non-residential			
				land uses and demands by			
				planning district.			
	13.	The developable area excludes all areas	YES	Projected population and employment growth have been			
		affected by absolute constraints such as		estimated considering absolute			
		steep slopes, conservation and flooding.		constraints to development.			
				The extent of urban zones in the draft Planning Scheme			
				(2016) already incorporates			
				overlay constraints such as			
				flooding, hillslopes and natural			
			VEC	areas.			
	14.	The planned densities reflect realistic levels	YES	The assumed densities identified in the LGIP are based			
		and types of development having regard to		on an assessment of Planning			
		the planning scheme provisions and current		Scheme Code provisions,			
		development trends.		average allotment yields			
				determined through review of the DCDB, previous			
				development approvals, and			
				discussions with Council			
				planners. The densities used			
				are considered realistic based on market demand in the Local			
				government area.			
				A review of the Council's			
				Demand and Population model which has was developed prior			
				to 2011 and based on the			
				assumed densities, shows a			
				high degree of correlation (+/-			
				10%), which further supports and validates the density			
				assumptions made.			
	15.	The planned densities account for land	YES	20-30% allowance for road,			
		required for local roads and other		open space and other			
		infrastructure.		infrastructure has been			
				factored into the density calculations.			
	16.	The population and employment projection	YES	The population and			
	±0.	tables identify "ultimate development" in		employment projection tables			
				identify "ultimate			
		accordance with the QPP definition.		development" in accordance with the QPP definition. This is			
				estimated to be at			
				approximately 2061.			
	17.	Based on the information in the projection	YES	LGIP planning assumptions tables have been prepared			
		tables and other available material, it is		using the format required of the			
		possible to verify the remaining capacity to		LGIP template, which shows			
		accommodate growth, for each projection		projections for each projection			
		area.		year and ultimate development. From this information, it is			
				possible to determine			
				remaining capacity after each			
				time period.			
	18.	The planning assumptions reflect an	YES	The planning assumptions			
		efficient, sequential pattern of		reflect the planning scheme provisions and associated land			
		development.		use pattern, the extent of			
		· · · · · · · · · · · · · · · · · · ·		growth areas, propensity to			
			Ordina	ry Council Meeting - 31 Octob	er 2017		

Attach	ment 5.3.9		1		104.of 0546.0cco	Γ	
Allachi	ment 5.5.9				develop, 1 አብ ລ ባ ይ የ ኤፕቲ h QGSO forecasts.		
					The PIA are considered defined to constrain development in		
					area to ensure an efficient and		
					sequential pattern of		
	F	19.	Has the Department of Transport and main	YES	development. TMR was consulted in relation		
		19.	Roads or any relevant distributor-retailer		to the LGIP and its integration		
			been consulted in the preparation of the		of with their planning.		
			LGIP?		Outcomes:		
			What was the outcome of the consultation?		1) TMR initially advised that		
			what was the outcome of the consultation?		they thought the initial designation of road		
					hierarchies was excessive.		
					These have been reviewed		
					in line with htose recommended by TMR and		
					consultation with Council's		
					traffic and transport		
					planners and Engineers.2) Craiglie Bypass: TMR		
					advised a preference for		
					transport planning to be undertaken on the western		
					side of the Highway at		
					Craiglie. Whilst this was		
					outside of the projected planning horizon, it's		
					location, nominal road		
					alignment and associated		
					infrastructure have been identified within the PFTI		
					and the SoW as an "Area of		
					Investigation". No cost has been considered in the		
					context of infrastructure		
					required to service this		
					area in the current LGIP. It is expected that this will be		
					refined over the next		
					reviews of the LGIP as discussions with Council		
					and TMR continue.		
					3) TMR are not planning any		
					upgrade/ capital works along any of the SCR or		
					trunk roads in the next 15		
					years. Although that is		
					subject to change.		
					Council has acknowledged		
					TMR's advice and made		
					changes to the LGIP planning and SoW to reflect these		
					comments.		
	Planning	20.	The infrastructure demand projections are	YES	Infrastructure demand projections have been		
	assumptions -		based on the projections of population and		expressed in the units defined		
	demand		employment growth.		by the LGIP template.		
					The rates of growth in demand		
					is reflective of population and		
					employment growth.		
					The projections have been		
					prepared at the service		
					catchment level and reflect generally understood and		
					recognised demand generation		
					rates for the respective zones		
	F	21	The demand generation rates align with	YES	and land uses. The projections have been		
		21.	The demand generation rates align with accepted rates and/or historical data.		prepared at the service		
					catchment level and reflect generally understood and		
1			•				

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						 -
Attachment 5.3.9				recognised Stern in the second in the second s		
				rates for the respective zones and land uses.		
				and land uses.		
				The DSC demand generation		
				rates have been benchmarked		
				and validated against historic		
				data and compared to CRC Council's demand generation		
				rates.		
				The demand generation rates		
				reflect generally accepted rates defined in relevant standards		
				(FNQROC).		
	22.	The service catchments used for	YES	Service catchments are		
		infrastructure demand projections are		identified in the PFTI maps		
				contained in Schedule 3, for		
		identified on relevant PFTI maps and		each network, and within the demand tables.		
		demand tables.				
	23.	The service catchments for each network	YES	Refer to the network catchment maps, and PIA Plans as		
		cover, at a minimum, the PIA.		contained in Schedule 3		
	24.	The Asset Management Plan and Long Term	YES*	Council has through the LGIP		
		Financial Forecast align with the LGIP		process recognised the		
		-	(in progress)	importance of alignment of		
		projections of growth and demand.		these varying management documents. While some		
		If not, is there a process underway to		alignment had been undertaken		
		achieve this?		in the past there is now an		
				increased awareness of the		
				criticality of such within the organisation.		
				Council has committed		
				resources to the development		
				and refinement of their AMP, LTAMP, LTFF. However, at the		
				time of the preparation of the		
				LGIP, this process was still		
				ongoing.		
				The second secon		
				There remains a need to further develop data management and		
				business practices to ensure a		
				commonly agreed set of base		
				assumptions and data capture		
				between the LGIP, LTAMP and LTFF.		
Prioirty	25.	The drafting of the PIA section is consistent	YES	The drafting of the PIA section		
-	25.	-		is consistent with the LGIP		
infrastructure		with the LGIP template.		template.		
area (PIA)	26.	Text references to PIA map(s) are correct.	YES	Refer to the PIA Plans in		
			VEC	Schedule 3		
	27.	The PIA boundary shown on the PIA map is	YES	Refer to the PIA Plans in Schedule 3		
		legible at a lot level and the planning				
		scheme zoning is also shown on the map.				
	28.	The PIA includes all areas of existing urban	YES	The PIA includes all areas of		
		development serviced by all relevant trunk		existing urban development		
		infrastructure networks at the time the LGIP		with all relevant trunk networks		
		was prepared.				
	20		YES	The PIA accommodates growth		
	29.	The PIA accommodates growth for at least		for approximately 10 years of		
		10 years but no more than 15 years.		urban growth from the date of		
				adoption (expected 2018).		
				The lower bound of provision		
				has been provided for, based on		
				the revised (and reduced)		
				growth projections by the		
				QGSO released in 2016. If the		
				reduced growth projections are used – then there is capacity for		
				approximately 15 yrs of		
				development within the PIA. y Council Meeting - 31 Octobe		

Attachment 5.3.9	20	Are there areas outside the PIA for which	YES	There are1s96n@fo954ons		
	30.		125	outside of the PIA where		
		the planning assumptions identify urban		growth may occur in the next		
		growth within the next 10 to15 years?		10-15 years.		
		If so, why have these areas been excluded		This is primarily due to the		
		from the PIA?		planning scheme having more		
				zone land available than is		
				contained within the PIA, and the exact location of growth		
				within the next 10-15 year is		
				not clear. The definition of a PIA		
				which excludes some areas in		
				which development may occur is to enable Council to focus		
				their energy and resources into		
				the efficient planning and		
				delivery of infrastructure to areas contained within the PIA.		
				areas contained within the PIA.		
				IT should be noted that the		
				extent of growth is very minor		
				and unlikely to influence any		
				new capital works in these locations. As such, it is not		
				expected that it would alter the		
				planning and demand		
				assumptions within the PIA.		
	31.	The PIA achieves an efficient, sequential	YES	While minor growth is projected to occur outside the		
		pattern of development.		PIA, the PIA focusses on		
				fully serviced urban zoned land		
				only.		
				This will help to achieve		
				efficiencies in infrastructure		
				provision by encouraging the		
				logical extension to the current		
			YES	urban form. The LGIP has been prepared		
Desired	32.	The drafting of the DSS section is consistent	YES	using the LGIP template		
standards of		with the LGIP template.		and has a desired standard of		
service (DSS)			service (DSS) clearly articulated		
			YES	for each network. The DSS section states the key		
	33.	The DSS section states the key planning and	TES	planning and design standards		
		design standards for each network.		for each network.		
	34.	The DSS reflects the key, high level industry	YES	The DSS for each network refers		
	54.			to the key standards contained		
		standards, regulatory and statutory		in other relevant documents		
		guidelines and codes, and planning scheme		(eg. FNQROC Development Manual, QUDM etc)		
		policies about infrastructure.				
	35.	There is alignment between the relevant	YES*	It is the intention of Council's DSS and LTAMP to provide and		
		levels of service stated in the local		fund infrastructure in an		
		government's Long Term Asset Management		effective and efficient manner		
		Plan (LTAMP) and the LGIP.		that reduces whole of life cycle		
		If not, is there a process underway to		costs while meeting community expectations and standards.		
		achieve this?		expectations and standards.		
				The LTAMP in and of itself does		
				not identify specific		
				infrastructure Standards. However, Council's defined		
				Desired Standards of Service		
				(DSS) and infrastructure		
				planning that has been		
				undertaken as part of the LGIP		
				seeks to minimise whole of lifecycle costs- which is		
				consistent with a key outcome		
				of a LTAMP.		
				Furthermore the DSS and		
				Furthermore the DSS and infrastructure standards currently adopted (FNQROC		

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hment 5.3.9				standards 27d gf 22 des for the	
				planning, construction and	
				design of infrastructure in a	
				safe and efficient manner.	
				It is a combination of these	
1				processes, which demonstrate	
1				Alignment with the intents of	
1				LTAMP.	
1					
1				Council is also currently	
1				developing their Strategic and	
1				Long-Term Asset Management	
1				Policies.	
1				Once completed, it is a	
1				requirement for Council to	
				review the LGIP and LTAMP's to	
·				ensure congruence.	
Plans for trunk	36.	The drafting of the PFTI section is consistent	YES	The LGIP has been prepared	
infrastructure		with the LGIP template.		using the LGIP template	
	07		YES	DET mans have been reported	
(PFTI) –	37.	PFTI maps are identified for all networks	TES	PFTI maps have been prepared for all infrastructure networks.	
structure and		listed in the Preliminary section.			
text	38.	PFTI schedule of works summary tables for	YES	PFTI schedule of works tables	
	50.			have been provided for all trunk	
		future infrastructure are included for all		networks. As required by the	
		networks listed in the Preliminary section.		template the schedules only	
		,		relate to future works.	
				The SoW template (excel based)	
				contains all existing and future	
				infrastructure for each network.	
PFTI – Maps	39.	The maps clearly identify the existing and	YES	Existing and future networks	
-		future trunk infrastructure networks distinct		have been mapped for all the	
[Add rows to the				LGIP networks and provided in	
checklist to		from each other.		the PFTI.	
address these					
				Separate Plans for Existing and	
items for each				Future infrastructure have been Image: Comparison of the second sec	
of the networks]				provided where is was	
				considered reasonable to	
				improve legibility for the	
ı —				user(s).	
1	40.	The service catchments referenced in the	YES	The service catchments	
		SOW model and infrastructure demand		referred to the SoW model and	
				infrastructure demand	
		summary tables are shown clearly on the		summary tables have been	
		maps.		identified in the set of drawings	
		-		for each of the infrastructure	
				networks.	
· I	41.	Future trunk infrastructure components are	YES	networks. Image: Complies.	
1	41.		YES	networks. Image: Complex. Future infrastructure items are Image: Complex.	
	41.	identified (at summary project level) clearly	YES	networks. Image: Complex. Future infrastructure items are clearly identified on the Image: Complex items are clearly identified on the	
	41.	identified (at summary project level) clearly on the maps including a legible map	YES	networks. Image: Complex. Future infrastructure items are clearly identified on the mappings. The legend provides Image: Complex is an analysis of the complex is an analysis o	
	41.	identified (at summary project level) clearly	YES	networks. Image: Complex. Future infrastructure items are clearly identified on the mappings. The legend provides the user with assistance to Image: Complex and the mapping an	
	41.	identified (at summary project level) clearly on the maps including a legible map	YES	networks. Image: Complex. Future infrastructure items are clearly identified on the mappings. The legend provides the user with assistance to understand the type of Image: Complex is an i	
	41.	identified (at summary project level) clearly on the maps including a legible map	YES	networks. Image: Complex. Future infrastructure items are clearly identified on the mappings. The legend provides the user with assistance to understand the type of infrastructure assets, and works Image: Complex is an and the type of infrastructure assets, and works	
		identified (at summary project level) clearly on the maps including a legible map reference.		networks. Image: Complies. Future infrastructure items are clearly identified on the mappings. The legend provides the user with assistance to understand the type of infrastructure assets, and works to be undertaken. Image: Complies and the type of the type of ty	
	41.	identified (at summary project level) clearly on the maps including a legible map	YES	networks. Image: Complies. Future infrastructure items are clearly identified on the mappings. The legend provides the user with assistance to understand the type of infrastructure assets, and works to be undertaken. Image: Complies. Complies. Image: Complies. Image: Complies. Complies. Image: Complies. Image: Complies. Complies. Image: Complies. Image: Complies.	
		identified (at summary project level) clearly on the maps including a legible map reference. The infrastructure map reference is shown		networks. Image: Complies. Future infrastructure items are clearly identified on the mappings. The legend provides the user with assistance to understand the type of infrastructure assets, and works to be undertaken. Image: Complies. Complies. Image: Complies. Image: Complies. Infrastructure items are clearly Image: Complies. Image: Complies.	
		 identified (at summary project level) clearly on the maps including a legible map reference. The infrastructure map reference is shown in the SOW model and summary schedule of 		networks. Image: Complies. Future infrastructure items are clearly identified on the mappings. The legend provides the user with assistance to understand the type of infrastructure assets, and works to be undertaken. Image: Complies. Complies. Image: Complies. Image: Complies. Infrastructure items are clearly identified on the mapping, and Image: Complies. Image: Complies.	
		identified (at summary project level) clearly on the maps including a legible map reference. The infrastructure map reference is shown		networks. Image: Complies. Future infrastructure items are clearly identified on the mappings. The legend provides the user with assistance to understand the type of infrastructure assets, and works to be undertaken. Image: Complies. Complies. Image: Complies. Image: Complies. Infrastructure items are clearly identified on the mapping, and are labelled with Unique ID Image: Complies.	
		 identified (at summary project level) clearly on the maps including a legible map reference. The infrastructure map reference is shown in the SOW model and summary schedule of 		networks.Image: construction of the structure items are clearly identified on the mappings. The legend provides the user with assistance to understand the type of infrastructure assets, and works to be undertaken.Image: constructure items are clearly identified on the mapping, and are labelled with Unique ID numbers. These numbersImage: constructure items are clearly identified on the mapping, and are labelled with Unique ID numbers. These numbersImage: constructure items are clearly identified on the mapping, and are labelled with Unique ID numbers. These numbersImage: constructure items are clearly identified on the mapping, and are labelled with Unique ID numbers. These numbersImage: constructure items are clearly identified on the mapping, and are labelled with Unique ID numbers. These numbersImage: constructure items are clearly identified on the mapping, and are labelled with Unique ID numbers. These numbersImage: constructure items are clearly identified on the mapping items are clearly items are clear	
		 identified (at summary project level) clearly on the maps including a legible map reference. The infrastructure map reference is shown in the SOW model and summary schedule of 		networks.Image: constraint of the state of th	
		 identified (at summary project level) clearly on the maps including a legible map reference. The infrastructure map reference is shown in the SOW model and summary schedule of 		networks.Image: complex and c	
		 identified (at summary project level) clearly on the maps including a legible map reference. The infrastructure map reference is shown in the SOW model and summary schedule of 		networks.Image: Complies.Future infrastructure items are clearly identified on the mappings. The legend provides the user with assistance to understand the type of infrastructure assets, and works to be undertaken.Image: Complies.Complies. Infrastructure items are clearly identified on the mapping, and are labelled with Unique ID numbers. These numbers correlate to the numbering contained within the Schedule of Works table in the LGIP andImage: Compliant click the user with assistance to the user with assistance to the user with assistance to understand the type of tinfrastructure assets, and works to be undertaken.	
	42.	 identified (at summary project level) clearly on the maps including a legible map reference. The infrastructure map reference is shown in the SOW model and summary schedule of works table in the LGIP. 	YES	networks.Image: Complies.Future infrastructure items are clearly identified on the mappings. The legend provides the user with assistance to understand the type of infrastructure assets, and works to be undertaken.Image: Complies.Complies.Image: Complies.Infrastructure items are clearly identified on the mapping, and are labelled with Unique ID numbers. These numbers correlate to the numbering correlate to the numbering correlate it the Schedule of Works table in the LGIP and SoW model.Image: Complies.	
Schedules of		 identified (at summary project level) clearly on the maps including a legible map reference. The infrastructure map reference is shown in the SOW model and summary schedule of 		networks.Image: complex of the state of the s	
	42.	 identified (at summary project level) clearly on the maps including a legible map reference. The infrastructure map reference is shown in the SOW model and summary schedule of works table in the LGIP. The schedule of works tables in the LGIP 	YES	networks.Image: Complies.Future infrastructure items are clearly identified on the mappings. The legend provides the user with assistance to understand the type of infrastructure assets, and works to be undertaken.Image: Complies.Complies.Infrastructure items are clearly identified on the mapping, and are labelled with Unique ID numbers. These numbers correlate to the numbering contained within the Schedule of Works table in the LGIP and SoW model.Image: Complies.Complies.Image: Complies.Image: Complies.Infrastructure items are clearly identified on the mapping, and are labelled with Unique ID numbers. These numbers correlate to the numbering contained within the Schedule of Works table in the LGIP and SoW model.Image: Complies.Complies.Image: Complies.Image: Complies.The schedule of worksImage: Complies.Image: Complies.The	
works	42.	 identified (at summary project level) clearly on the maps including a legible map reference. The infrastructure map reference is shown in the SOW model and summary schedule of works table in the LGIP. 	YES	networks.Image: complex items are clearly identified on the mappings. The legend provides the user with assistance to understand the type of infrastructure assets, and works to be undertaken.Image: complex items are clearly identified on the mapping, and are labelled with Unique ID numbers. These numbers correlate to the numbering contained within the Schedule of Works table in the LGIP and SoW model.Image: complex items are clearly identified on the tothe numbering contained works templates in the LGIP haveImage: complex items are clearly identified on the mapping. The schedule of works templates in the LGIP haveImage: complex items are clearly identified on the mapping. The schedule of works templates in the LGIP haveImage: complex items are clearly identified on the mapping. The schedule of works templates in the LGIP haveImage: complex items are clearly identified on the mapping. The schedule of works templates in the LGIP haveImage: complex items are clearly identified on the mapping. The schedule of works templates in the LGIP haveImage: complex items are clearly identified on the mapping. The schedule of works templates in the LGIP haveImage: complex items are clearly identified on the mapping. The schedule of works templates in the LGIP haveImage: complex items are clearly identified on the mapping. The schedule of works templates in the LGIP haveImage: complex items are clearly identified on the clip have	
works [Add rows to the	42.	 identified (at summary project level) clearly on the maps including a legible map reference. The infrastructure map reference is shown in the SOW model and summary schedule of works table in the LGIP. The schedule of works tables in the LGIP 	YES	networks.Image: complex set of the set of	
works	42.	 identified (at summary project level) clearly on the maps including a legible map reference. The infrastructure map reference is shown in the SOW model and summary schedule of works table in the LGIP. The schedule of works tables in the LGIP 	YES	networks.Image: complex items are clearly identified on the mappings. The legend provides the user with assistance to understand the type of infrastructure assets, and works to be undertaken.Image: complex items are clearly identified on the mapping, and are labelled with Unique ID numbers. These numbers correlate to the numbering contained within the Schedule of Works table in the LGIP and SoW model.Image: complex items are clearly identified on the tothe numbering contained works templates in the LGIP haveImage: complex items are clearly identified on the mapping. The schedule of works templates in the LGIP haveImage: complex items are clearly identified on the mapping. The schedule of works templates in the LGIP haveImage: complex items are clearly identified on the mapping. The schedule of works templates in the LGIP haveImage: complex items are clearly identified on the mapping. The schedule of works templates in the LGIP haveImage: complex items are clearly identified on the mapping. The schedule of works templates in the LGIP haveImage: complex items are clearly identified on the mapping. The schedule of works templates in the LGIP haveImage: complex items are clearly identified on the mapping. The schedule of works templates in the LGIP haveImage: complex items are clearly identified on the mapping. The schedule of works templates in the LGIP haveImage: complex items are clearly identified on the clip have	
works [Add rows to the checklist to	42.	 identified (at summary project level) clearly on the maps including a legible map reference. The infrastructure map reference is shown in the SOW model and summary schedule of works table in the LGIP. The schedule of works tables in the LGIP complies with the LGIP template. 	YES	networks.Image: Complex set of the set of	
works [Add rows to the checklist to address these	42.	 identified (at summary project level) clearly on the maps including a legible map reference. The infrastructure map reference is shown in the SOW model and summary schedule of works table in the LGIP. The schedule of works tables in the LGIP 	YES	networks. Image: Complex Sector S	
works [Add rows to the checklist to	42.	 identified (at summary project level) clearly on the maps including a legible map reference. The infrastructure map reference is shown in the SOW model and summary schedule of works table in the LGIP. The schedule of works tables in the LGIP complies with the LGIP template. 	YES	networks.Image: Complex set of the set of	

A ++							
Attach	nment 5.3.9				those eleitestob		
					which perform a shared function. Non-trunk		
					infrastructure or 'internal'		
					infrastructure has been		
					excluded.		
		45.	The existing and future trunk infrastructure		The infrastructure network		
		_	identified in the LGIP is adequate to service		planning has been undertaken,		
			at least the area of the PIA.		taking into consideration		
			at least the drea of the PIA.		demand across the entire service catchment(s). These		
					extend beyond the PIA.		
		46.	Is there alignment of the scope, estimated	NO	Council are in the process of		
		10.	cost and planned timing of proposed trunk		developing their LTFF and		
					LTAMP. In this regard,		
			capital works contained within the Schedule		alignment has not been		
			of Works and the relevant inputs of the		explicitly completed to date.		
			LTAMP and LTFF?		However, the importance and		
			If not, is there a process underway to		value of this requirement to		
			achieve this?		ensure the cohesion between		
					Council business units and		
					financial sustainability is noted. As Council continues to develop		
					their SAMP/ LTAMP/ LTFF, we		
					will continue to actively work to		
					align all planning, engineering		
					and financial reporting around		
					the varying expenditures and		
					revenues to ensure clarity and certainty of alignment.		
					certainty of angliment.		
					It is noted and expected that		
					full alignment between all these		
					documents may be difficult, and		
					will require iterations to achieve even "sufficient		
					alignment".		
					angent i		
					Some areas which are expected		
					to require more detailed		
					consideration would be:-		
					LGIP/LTFF The LGIP contains		
					infrastructure works (or land)		
					which is delivered by the		
					development industry,		
					concurrent with land		
					development. In this scenario the works would not typically		
					form part of Council's LTFF or		
					Capital Works Program.		
					It is also expected that		
					• LGIP/ LTAMP The timing of infrastructure		
					delivery in the LGIP is the		
					current "best estimate" of		
					when it will be required to		
					service the required demand.		
					The necessarily requires the reliance on assumptions		
					reliance on assumptions (population growth,		
					development patterns,		
					economic conditions etc). The		
					due to the Trunk nature of the		
					items identified within the LGIP		
					(i.e. high value/ critical nature), movements in the timing of		
					delivery is expected to create		
					the need to revisit the LGIP/		
					LTAMP regularly to ensure		
					congruence.		
					LGIP/LTAMP/LTFF/ Capital		
					Works Program.		
					Consistency of data capture will		
					v Council Meeting - 31 Octobe		

Attachment 5.3.9				100 of 054 up at		
Attaonment 5.5.9				be critical (29. of 3) of 4 that data for and from each of these items are able to be sufficiently detailed and captured to ensure useability between each.		
	47.	The cost of trunk infrastructure identified in the SOW model and schedule of works tables is consistent with legislative requirements.	Yes	The Key Input assumptions are documented within the SoW model and are consistent with industry standards and legislative requirements.		
				Costs have been determined using the best information available (unit rates and project cost estimates). Allowances for the Project		
				Owners Cost has been set as 20% across all asset classes. This is within accepted industry standards and is recognised by the State as reflected by the SoW User manual.		
				Time based contingencies have been applied of 10%,15%,20% and 30% for works being undertaken within horizon of 5,10,15 and 20 years		
				respectively. The exception of which is transport in which a 40% contingency is provided, for works planned outside of the 20-year horizon. This is in accordance with TMR's road		
				planning and design manual and Evan's and Pecks (2009) report on Contingencies and on-costs – as reference in the Statutory guideline 03/14.		
SOW model	48.	The submitted SOW model is consistent with the model included with the statutory guideline for LGIPs.	Yes	Complies The LGIP – SoW model has been prepared using the template provided as part of the Statutory guideline for LGIPs and its associated User Manual		
	49.	The SOW model has been prepared and populated consistent with the statutory guideline for LGIPs and its User manual for the SOW model.	Yes	Complies The LGIP – SoW model has been prepared using the template provided as part of the Statutory guideline for LGIPs and its User Manual for the SoW model		
Extrinsic material	50.	All relevant background studies and reports in relation to the preparation of the LGIP are available and identified in the list of extrinsic material in the LGIP guideline.	Yes	All key background studies and reports in relation to the preparation of the LGIP are available and identified in the list of extrinsic material in the LGIP.		

4.1 Desired standards of service

- (1) This section states the key standards of performance for a trunk infrastructure network.
- (2) Details of the standard of service for a trunk infrastructure networks are identified in the extrinsic material.

4.1.1 Water supply network

The Desired Standards for water supply trunk infrastructure are shown in Table

22.4 - Desired Standards of Service - Water Supply and should be read in

conjunction with Local Government's own adopted technical standards.

Table 22.1— Desired Standards of Service – Water Supply

Planning Standard	Community Outcomes
Ensure drinking water complies with the NHMRC Australian Drinking Water Guidelines for colour,	Provides uniform quality of water monitored in relation to recognised standards.
turbidity and microbiology.	Provide a safe and reliable water supply.
	Safeguards community health.
Water infrastructure provides for system operation	Ensures environmental controls are maintained.
and monitoring in accordance with recognised standards.	Ensures potable water is provided in a manner consistent with environmental standards.
Reduce non-revenue water.	Extend asset life.
	Improve environmental flows.
	Reduced greenhouse gas emissions.
	Reduce extraction of water from source.
Provide infrastructure which minimises power usage.	Reduced cost of energy.
	Cost effective service for community.
	Reduced greenhouse gas emission.
Develop and maintain excellence in appropriate new	Reduced cost of energy and chemicals.
technologies.	Cost effective service for community.
	Reduced greenhouse gas emissions.
	Reduced environmental effects from chemical production.
Provide infrastructure which minimises whole of life	Cost effective service for community.
costs.	Reduced energy cost.
	Reduced maintenance costs.
	Reduced overall operation costs.
	Reduced replacement costs.
	Reduction in disposal of waste.
	Reduced environmental effects from chemical production.

Design Standards	Community Outcome	
 Design water supply infrastructure to comply with: FNQROC Development Manual; EBA Requirements; 	 Provides uniform quality of water monitored in relation to recognised standards. Provide a safe and reliable water supply. 	
EPA Requirements;DNR Requirements;	Safeguards community health.	
SAMP Customer Service Standards;Water Act 2000;		
Plans for Trunk Infrastructure – Water Supply.		

4.1.2 Sewerage network

The Desired Standards for water supply trunk infrastructure are shown in <u>Table 22.5</u> – *Desired Standards of Service* – *Sewerage and* should be read in conjunction with Local Government's own adopted technical standards.

Table 22.2— Desired Standards of Service – Sewerage

Planning Standard	Community Outcomes		
Ensure wastewater collection, transportation and treatment system remains effective.	Reduced impact from blockages, overflows and spills.		
	Reduced impact on residents.		
	 Reduced lease of Nitrogen and phosphorous to aquatic ecosystems. 		
	Improved community health.		
	Reduced greenhouse gas emissions.		
Provide infrastructure which minimises energy	Reduced cost of energy.		
usage.	Cost effective service for community.		
	Greenhouse gas reduction.		
Provide infrastructure which minimises whole of life	Cost effective service for community.		
costs.	Reduced energy cost.		
	Reduced maintenance costs.		
	Reduced overall operation costs.		
	Reduced replacement costs.		
	Reduction in disposal of waste.		
	Reduced greenhouse gas emissions.		
	Reduced environmental effects from chemical production.		
Achieve excellence in appropriate new technologies.	Reduced cost of energy and chemicals.		
	Cost effective service for community.		
	Reduced greenhouse gases.		
	Reduced environmental effects from chemical production.		

Maximise opportunities for re-use of effluent.	Beneficial use of reclaimed water and biosolids.			
	Opportunity for cost recovery for reclaimed water treatment.			
	Reduction in use of potable water supply and treatment.			
	 Reduced release of nitrogen and phosphorous to aquatic ecosystems. 			
	• Reduction of raw water extraction from source.			
Design Standards	Community Outcome			
Design wastewater infrastructure to comply with:	Noise control.			
FNQROC Development Manual;	No adverse visual effect.			
EPA Requirements;	Control of overflows from system.			
DNR Requirements;	Improves community health.			
SAMP Customer Service Standards;	Reduction in contaminated discharges.			
Water Act 2000	Reduced odour emissions.			
Plans for Trunk Infrastructure - Wastewater				
Ensure infiltration and inflow in new wastewater	 Reduced cost of energy for effluent transport, treatment and disposal. Minimise customer overflow issues. 			
collection and transportation systems remain within				
industry acceptable limits (compliance with				
Environmental licences, IEMS and associated	Maximise life of system.			
EMPs)	Reduced overflows to local waterways.			
and is minimised to a practical extent in existing				
systems.				

4.1.3 Stormwater network

The Desired Standards for water supply trunk infrastructure are shown in <u>Table 22.6</u> – *Desired Standards of Service* – *Stormwater and* should be read in conjunction with Local Government's own adopted technical standards.

Table 22.3— Desired Standards of Service – Stormwater

Planning Standard	Community Outcomes
Provide system of shared stormwater infrastructure	Minimises inundation of habitable areas
allowing free and safe drainage of urban land while maintaining or improving the quality of run-off.	 Minimises the damage and risk associated with flooding
	 Minimises the impact of development on the ecological health and water quality within waterway corridor
Ensure the use of Water Sensitive Urban Design and other types of on-site infrastructure to minimise	Provides waterways infrastructure at least life cycle cost
impact on trunk infrastructure	 Reduces the scale of shared infrastructure by optimising on site solutions
	Improves water quality at the point of discharge to benefit the waterway corridor's health

Planning Standard	Community Outcomes
Ensure sufficient buffers from urban development along waterway corridors for ecological links	Maintain or improves environment amenity such as scenic values and natural construction
(including rehabilitation of degraded waterway corridor banks, where required).	Erosion and sedimentation is minimised
	Negative impacts on adjoining and downstream properties are minimised
	Protects environmentally sensitive areas from development
Ensure natural stream processes are maintained within waterway corridors.	Reduces the need for costly structural treatments of waterway corridor banks
	 Provides for natural processes of accretion, erosion and sedimentation and reduces environmental effects from pollution
	Increases regional water quality
Design Standards	Community Outcome
Design stormwater infrastructure to comply with:	Free and safe drainage of urban land
• FNQROC Design Manual;	• Maintain or improve water quality and ecological
Queensland Urban Drainage Manual (QDUM); and	health
• EPA requirements and guidelines.	
Where appropriate, implement Water Sensitive	Maximise the water quality on site
Urban Design principles to achieve maximum on site quantity and quality treatment and minimise offsite discharge.	Negative impacts on adjoining and downstream properties are minimised
Implement regional and on-site detention facilities to minimise the impact of peak run-off for the full range	Reduces the cumulative impact from existing and future developments on peak flow levels
of events (Q1 to Q100) from developments, taking into account safety and risk.	Reduces the need to increase the size of waterway corridors and underground drainage
Design detention basins to maintain pre- development peak flow levels from the development site for all flood events (Q1 to Q100).	 Increases active and passive recreation opportunities
Design Detention Basins in the same catchment to ensure that the coincident peak discharge at downstream control points is not increased.	 Minimises the impact on the environmental values of downstream waterway corridors by maintaining pre-development flows and velocities
	Reduces downstream sedimentation by slowing flow velocities
Design bridges and culverts with appropriate flood immunity and capacity to convey floodwater, taking into account the Council's road hierarchy.	 Ensures road crossings operate safely in times of inundation Reduces the risk of flooding for upstream
Construction of bridges and culverts must not	Reduces the risk of flooding for upstream properties
adversely impact on the natural environment, such as through the loss of vegetation and undesirable impacts on bio-diversity.	 Provides opportunities for extended pedestrian and bicycle links
Design bridges and culverts to maintain fauna and recreational links.	Enhances ecological links

4.1.4 Transport network

The Desired Standards for water supply trunk infrastructure are shown in <u>Table 22.7</u> – *Desired Standards of Service* – *Transport and* should be read in conjunction with Local Government's own adopted technical standards.

Table 22.4— Desired Standards of Service – Transport

Planning Standard Community Outcomes				
	Community Outcomes			
Road Network				
Define the road network as a functional road hierarchy of State Controlled Roads, Sub-arterial	Protects the amenity of residential communities by removing non-local traffic.			
Roads, and Major and Minor Urban and Rural Collectors which support the Local government's urban and rural settlement patterns as well as	 Improves local safety by removing "through" traffic. 			
commercial and economic activities.	Reduces fuel consumption and emission levels by sustaining efficient operating speeds.			
	Maintains travel speeds in off-peak periods.			
	Reduces vehicle operating costs.			
	Improves public transport operation by improving travel speeds.			
	Supports economic growth by developing efficient and integrated transport networks.			
	 Minimises through traffic and heavy vehicles in residential areas. 			
	Limits community severance.			
Path Network				
Define the trunk path network which provide improved access and alternative options for the travel mode.	 Protects the amenity of residential communities by providing an alternative mode of transport between locations 			
	Provides a network of paths for recreational and commuter use			
	 Provides facilities and access within the LGA which are not accessible by alternative transport options. 			
	Provides a basis for a healthy and active community.			
Design Standards	Community Outcome			
Road Network				
 Road network system is designed and provided in accordance with: Queensland Streets, Queensland Residential Design Guidelines, FNQROC Development Manual, TMR and Australian Standards; and 	 Reduce delays during peak periods. Improve safety by reducing vehicle speed differentials. Supports efficient and integrated freight 			
Plans for Trunk Infrastructure – Road Network.	movement network.			

Path Network			
Path network system is designed and provided in	Provide a choice in mode of transport		
accordance with:	Improve safety by providing dedicated Path		
Queensland Streets, Queensland Residential	networks.		
Design Guidelines, FNQROC Development Manual, TMR and Australian Standards; and	Supports efficient, integrated and diverse modes of movement across the Path network.		
Plans for Trunk Infrastructure –Path Network.			

4.1.5 Public parks and land for community facilities network

The Desired Standards for water supply trunk infrastructure are shown in <u>Table 22.8</u> – *Desired Standards of Service* – *Transport and* should be read in conjunction with Local Government's own adopted technical standards.

Planning Standard	Community Outcomes
Provide a connected and accessible network of parks, open space, and	Provides opportunities for access and increased usage of open space, recreational and community facilities.
community facilities that meet the needs of the Local government's residents and	 Provides for an appropriate balance of land uses and ensures high levels of amenity in the urban form.
visitors.	Provides a basis for a healthy and active community.
Ensure strong linkages and, where possible, co-location of existing and future parks, open space and community facilities.	Ensures utilisation of existing and future assets while maintaining maximum access.
Provide embellishments to public parks, commensurate with the range of activities envisaged.	Provides open space embellishments that meet the needs of the community by providing a range of facilities for social activities and/or fitness/recreational pursuits.
	 Ensures activities are met and contained within designated areas - reducing potential off-site impacts to other more sensitive areas in the Local government.
Ensure that existing and future parks, open space and community facilities with significant environmental, waterway or	Protects and enhances items of cultural interest in the Local government for the benefit of current and future communities in the Local government.
cultural heritage value are managed appropriately.	Provides a basis for tourism opportunities.
	 Protection of the natural landscape ensures maintenance of quality of air, water and land resources reducing negative impacts requiring amelioration.
	Recreational and sporting parks promote the health and wellbeing of the Local government's residents.
Design Standards	Community Outcome
Public parks and land for community facilities areas are provided in accordance with the preferred quantity, distribution	 Provides a standard of service reflecting the communities' needs as identified by the local government's adopted strategies.
(Shire wide, district, local, sporting, community), quality and level of development specified in Council's 'Public Parks and Land for Community Purposes Trunk Infrastructure Planning Study' and	 Provides recreation and sporting parks with a diverse range of activity opportunities and landscape settings to encourage healthy lifestyles and maximise opportunities for activity.
Plans for Trunk Infrastructure – Public Parks and Land for Community Facilities.	Recreation and open space facilities are managed in the most efficient and cost-effective way.
	Recreation and open space facilities can be safely and conveniently accessed by all existing and potential users.

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Land provided for parks, recreation, and sport is not constrained by physical, environmental or other hazards.	•	Ensure adequate provision of safe, accessible and usable facilities.
Ensure land is accessible, of suitable quality and integrated with the urban and open space networks. Provide an accessible network of parks, open space, and community facilities that meets the needs of residents and visitors in accordance with the rate of provision identified in Table 22.9 and accessibility standards outlined in Table 22.10. Ensure land for public parks and community facilities has minimum land size as identified in Table 22.11.	•	Provides community access to a range of park, open space and community facilities.
Public park embellishments are provided in accordance with Council's 'Public Parks and Land for Community Purposes Trunk Infrastructure Planning Study' and the Plans for Trunk Infrastructure – Public Parks and Land for Community Facilities. Embellish public parks to complement the type and purpose of the public park as identified in Table 22.12.	•	Provides a range of park types that are suitability embellished to meeting their purpose within the park hierarchy.

 Table 22.6— Rate of Land Provision for Public Parks and Land for Community Facilities

Infrastructure Item	Rate of Provision (Ha / 1000 people)					
	Local	District	Local Government Wide			
Recreation park (2.5 ha/1000)	1 ha/1000	1.3 ha/1000	0.2 ha/1000			
Sport park (2 ha/1000)	0	1.6 ha/1000	0.4 ha/1000			
Land for community facilities (0.3 ha/1000)	0	0.15 ha/1000	0.15 ha/1000			

Table 22.7— Accessibility standards for Public Parks and Land for Community Facilities

Infrastructure Item	Accessibility Standard (km)					
	Local	District	Local Government Wide			
Recreation park	500m	2-3km	10-15km			
Sport park	N/A	2-5km	15km			
Land for community facilities	N/A	5km	20km			

Table 22.8— Size of public parks and land for community facilities

Infrastructure Item	Minimum size (Ha)					
	Local	District	Local Government Wide			
Recreation park	1 ha pref – 0.5 ha min	2-5 ha	2-5 ha			
Sport park	N/A	10 ha Minimum 7 ha (allows for 3 fields and ancillary)	20 ha			
Land for community facilities	N/A	Cultural Activity Space (CAS) 1500m ²	CAS 1 ha			
		Community Meeting & Activity Space (CMS) 2000m ²	CMS 1 ha			
		Community Service Facility (CSF) 1000m2	CSF 1 ha			
		Formal Memorial Space (FMS) 1000m ²	FMS 10 ha			

Table 22.9— Standard facilities/embellishments for public parks

Embellishment Type	R	ecreation Pa	Sports Park		
	Local	District	LGA - wide	District	LGA -wide
Water connection/tap	✓	✓	✓	✓	✓
Drinking Fountain	✓	✓	✓		
Lighting	✓	✓	✓	\checkmark	✓
Fencing (bollard/post and top rail)	✓	✓	✓	✓	✓
Playground equipment (incl. Soft fall)	~	~	✓		
Seating	✓	✓	✓	✓	
Picnic Shelter	✓	✓	✓		
BBQ	✓	✓	\checkmark		
Earthworks – Field preparation/Kickabout	✓	✓	✓	✓	×
Spectator facilities	✓	✓	✓	\checkmark	✓
Landscaping	✓	✓	✓	✓	✓
Power	✓	✓	✓	✓	✓
Irrigation (new parks)	✓	✓		✓	✓
Public Toilet	✓	✓	✓	✓	✓
Path/bikeways	✓	√	\checkmark	\checkmark	✓
Car parking and access works	✓	✓	✓	✓	✓

Douglas Shire Council

Summary Cost Schedule

Catchment			Demand		Cost of Trunk Infi			true	
No	Name	Existing (A)	NPV Future (B)	TOTAL (A)+ (B)	Existing (2)	NPV Future (D)	TOTAL (C)+ (D)	Cost per Unit Demand
			Water Supply	,					
	1 PORT DOUGLAS (W1)	16,328	8,185	24,513	\$ 36,906	i,931	\$ 3,738,718	\$ 40,645,649	\$ 1,658
	2 MOSSMAN (W2)	6,278	1,315	7,592	\$ 19,669	,038	\$ 1,530,176	\$ 21,199,214	\$ 2,792
	3 WHYANBEEL (W3)	1,702	1,016	2,718	\$ 16,442	,958	\$ 7,951,522	\$ 24,394,480	\$ 8,975
	4 DAINTREE (W4)	192	154	346	\$ 4,144	,119	\$-	\$ 4,144,119	\$ 11,98
	5 SHARED TREATMENT (W1&W2)	22,605	9,658	32,263	\$ 8,770),371	\$ 401,111	\$ 9,171,482	\$ 284
	Totals	47,105	20,327	67,432	\$ 85,933	8,417	\$ 13,621,527	\$ 99,554,943	
			Sewerage						
	1 PORT DOUGLAS (S1)	15,073	5,347	20,419	\$ 8,044	,945	\$ 865,600	\$ 8,910,545	\$ 43
	2 MOSSMAN (S2)	5,544	1,296	6,840	\$ 3,121	,009	\$ 10,054,072	\$ 13,175,081	\$ 1,92
	3 COOYA BEACH (S3)	267	978	1,245	\$ 842	,259	\$ 2,992,106	\$ 3,834,365	\$ 3,08
	4 NEWELL BEACH (S4)	-	505	505	\$	-	\$ 2,679,463	\$ 2,679,463	\$ 5,30
	5 WONGA BEACH / ROCKY POINT (S5)	-	2.023	2.023	Ś	-	\$ 11,823,432		\$ 5,84
	6 SHARED TREATMENT (S2-S5)	5,811	4,801	10,612	\$	-	\$ 16,020,283		\$ 1,51
	Totals	26,695	14,948	41,643	\$ 12,008	3,213	\$ 44,434,955	\$ 56,443,168	
			Stormwater	· · ·			· · · ·		
	1 Douglas Shire Council (SW_1)	1	-	1	\$	-	\$ 562,943	\$ 562,943	\$ 562,943
	Totals	1	-	1	\$	-	\$ 562,943	\$ 562,943	
			Transport		-			-	-
	1 Douglas Shire South (TR1)	93,412	35,607	129,019	\$ 80,915	,408	\$ 27,594,304	\$ 108,509,712	\$ 84
	2 Douglas Shire North (TR2)	3,970	- 133	3,838	\$ 39,540),777	\$ -	\$ 39,540,777	\$ 10,30
	Totals	97,382	35,474	132,856	\$ 120,456	6,184	\$ 27,594,304	\$ 148,050,488	
		Park	s and Commu	inity				-	
	1 Port Douglas (PPLC1)	9,757	- 1,016	8,740	\$ 6,775	,813	\$ 5,056,740	\$ 11,832,553	\$ 1,35
	2 Mossman (PPLC2)	1,531	- 157	1,374	\$ 1,405	,834	\$ 1,968,316	\$ 3,374,150	\$ 2,45
	3 Cooya Beach (PPLC3)	667	- 57	610	\$ 472	,802	\$ 942,820	\$ 1,415,622	\$ 2,32
4 Newell Beach (PPLC4)		329	- 37	292	\$ 447	,241	\$ 445,457	\$ 892,698	\$ 3,05
5 Wonga Beach (PPLC5)		751	- 74	677	\$ 670),062	\$ 677,058	\$ 1,347,120	\$ 1,99
	6 Rural Area - South of Mowbray River (PPLC6)	382	- 61	321	\$ 138	3,333	\$ 62,320	\$ 200,653	\$ 62
7 Rural Area - Mowbray River to Mossman River (PPL		418	- 51	368		,910			\$ 48
	8 Rural Area - Mossman River to Daintree River (PPLC	968	- 117	851		,178		÷	\$ 95
	9 Rural Area - North of Daintree River (PPLC9)	743	- 115	628),314			\$ 63
	0 District Shared Catchments (1,2,3,4,6&7)	5,784	1,825	7,609			\$ 2,263,065	÷	\$ 73
	0 District Shared Catchments (5,8&9)	1,223	174	1,397		,970	+ =/====/===		\$ 78
	0 Regional Shared Catchments (1-9)	7,007	1,999	9,006	- -`	,891		\$ 345,891	\$ 3
	Totals	29,560	2,313	31.873	\$ 14,566		\$ 12,950,666	\$ 27,517,421	