

Stormwater Management Plan Proposed Residential Development

On behalf of McGrath Devco Pty Ltd

Lot 21 & 22 on SP320486

30 McGrath Road, Mareeba QLD

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22 May 2026 (Revision A)

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Revision

Report Title:	Stormwater Management Plan
Street Address	30 McGrath Road, Mareeba QLD
RP Description	Lot 21 & 22 on SP320486
Prepared For:	McGrath Devco Pty Ltd
Date:	22 May 2026/25 May 2026
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1 Introduction:

1.1 Background

Lekker Urban has been commissioned by McGrath Devco Pty Ltd to prepare this Stormwater Management Plan (SWMP) in support of a proposed residential subdivision at Lots 21 and 22 on SP320486, 30 McGrath Road, Mareeba, Queensland. The site has an existing development approval in place with Mareeba Shire Council, referenced as Application No. RAL/25/0017.

This SWMP has been prepared to satisfy the stormwater management requirements of Mareeba Shire Council (MSC) and to demonstrate compliance with applicable engineering standards and State planning policies.

1.2 Property Details

The details of the subject property for the proposed development are shown in Table 1:

Title:	Lots 21 & 22 on SP320486
Street Address:	30 McGrath Road, Mareeba QLD 4880
Local Government Area:	Mareeba Shire Council
Site Area:	4.704 ha (47,040 m ²)
Planning Zone:	Emerging Communities
Existing Use:	Rural residential (two existing dwellings)
Title:	Lots 21 & 22 on SP320486
Street Address:	30 McGrath Road, Mareeba QLD 4880

Table 1 –Property Details

1.3 Scope and Objective

This SWMP addresses the stormwater management requirements for the proposed development in accordance with the following standards and guidelines:

- o FNQROC Development Manual – Design Manual D4: Stormwater Drainage;
- o FNQROC Development Manual – Design Manual D5: Stormwater Quality Management;
- o Queensland Urban Drainage Manual (QUDM), Fourth Edition (2017);
- o Australian Rainfall and Runoff (ARR 2019); and

- o Queensland State Planning Policy 2017 – Part E: Assessment Benchmarks – Water Quality.

The objectives of this SWMP are to:

- Quantify the pre-development and post-development stormwater peak flow rates for the 5-year, 20-year, and 100-year ARI storm events;
- Demonstrate that post-development peak flows will not exceed pre-development levels at the Lawful Point of Discharge, through the provision of On-Site Detention (OSD);
- Identify and confirm the Lawful Point of Discharge in accordance with QUDM Section 3.9.1;
- Address stormwater quality management requirements in accordance with the Queensland State Planning Policy 2017 and FNQROC D5; and
- Provide the technical basis for subsequent detailed design at the Operational Works stage.

The proposed residential development includes:

- Two (2) lots retaining existing dwelling houses (proposed Lots 6 and 12);
- Ten (10) vacant lots ranging in area from approximately 2,500 m² to 4,200 m²;
- New internal road access including kerb and channel, with connectivity to McGrath Road; and
- New services including stormwater, sewer (on-site treatment), water, and utilities.

2 Existing Conditions:

2.1 Property Detail

As can be seen in the aerial photo below, the Site (total site area is 4.704 Ha) is bounded by the following:

- o North boundary – Existing rural residential development;
- o East boundary – Existing rural land and an existing watercourse running parallel to the eastern boundary;
- o South boundary – Existing rural residential development; and
- o West boundary – McGrath Road (Local Government controlled road)

The surrounding land uses are predominantly rural residential in character, consistent with the site's Emerging Communities zoning under the Mareeba Shire Council Planning Scheme.



Figure 1 – Location of Site (Source: Queensland Globe)

2.2 Topography

A detail and contour survey was undertaken by Twine Surveys on 30 July 2025. Broader topographical information from ELVIS and Queensland Globe has also been reviewed to identify site constraints.

The site generally drains in a west-direction at an average grade of approximately 1%, which is relatively flat for the most part, with a steeper batter located along both the northern and eastern boundary. Elevation changes from the high point at the east of the site at RL 395.8m down to the lowest point of the site along the northern boundary at 391.8m. The invert of the channel with McGrath Road to the west of the site is down to approximately RL 391.6m, representing a total fall of approximately 4.2 m across the site.

The site adjoins McGrath Road to the west, with a grass-lined open channel located between the road pavement and the site boundary. There are no notable external topographical features influencing the subject site beyond the local stormwater catchment.

2.3 Existing Site Conditions & Improvements

The site is partially developed, with two existing dwelling houses located within the development footprint. The remainder of the site consists of vegetated open land with scattered rural improvements. There is no formal underground stormwater infrastructure across the site.

2.4 Known Existing Flooding

Mareeba Shire Council (MSC) flood hazard overlay mapping (Overlay Map OM600m in Figure 2) indicates that the subject site is predominantly located within a Low Hazard Flood Zone. A small portion of the northern boundary in proposed Lots 1 to 5 is impacted by a High Hazard Flood Zone, which also coincides with the 20m high voltage power line buffer, preventing any future dwellings being constructed within this area. This area typically decreases significantly in elevation by over 2 metres.

Flood levels relevant to the development have been identified in the Decision Notice for Application No. RAL/25/0017. The adopted Finished Floor Levels (FFLs) are as follows:

- Proposed Lots 1–5 and 8–12: minimum FFL of RL 395.35 m AHD; and
- Proposed Lots 6 and 7: minimum FFL of RL 395.38 m AHD.

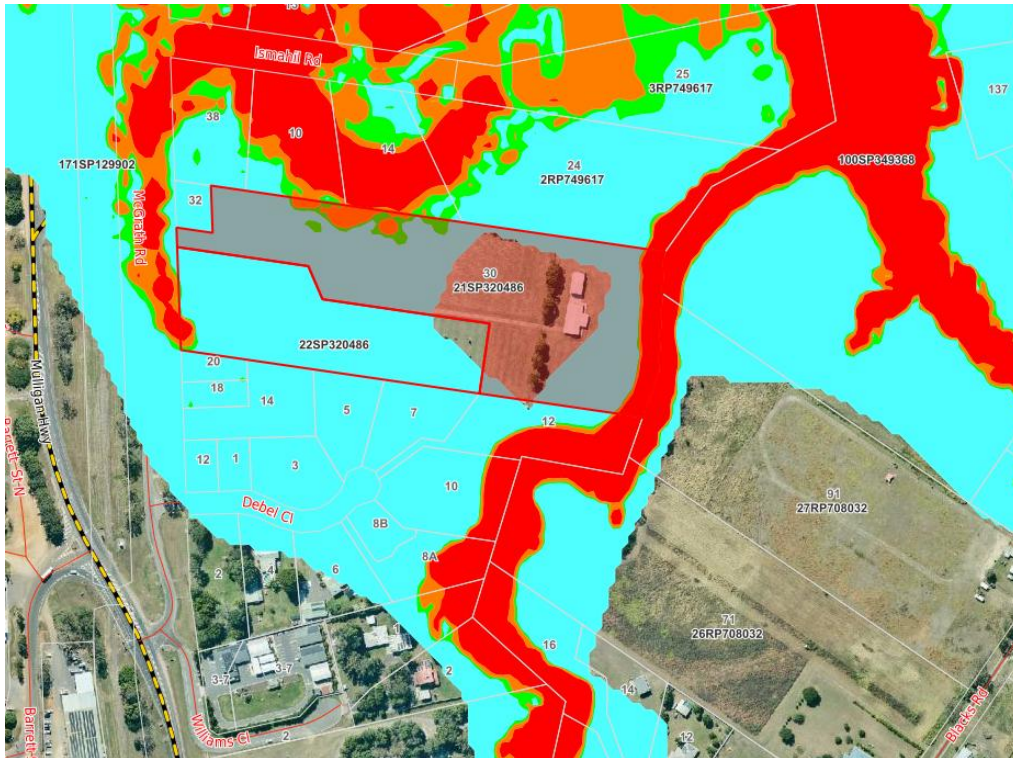


Figure 2– Flood hazard (Source: Mareeba Shire Council Overlay Mapping)

It is recommended that additional flood modelling is required to adequately characterise the flood behaviour affecting the site and to confirm appropriate Finished Floor Levels (FFLs) in accordance with the relevant Decision Notice requirements.

It is recommended that a site-specific Flood Study be undertaken to determine the extent, depth, and velocity of flooding under the applicable design storm events. The outcomes of this study will be used to verify that the proposed FFLs are consistent with the flood hazard provisions and to ensure the development achieves an acceptable level of flood immunity.

The flood study shall be prepared by a suitably qualified flood engineer and submitted to Council for review and approval prior to the commencement of construction.

2.5 Existing Site Stormwater Network

There is no formal stormwater drainage infrastructure (pits, pipes, or kerb and channel) within the subject site. Under existing conditions, stormwater runoff is conveyed as overland sheet flow across the natural surface. The site drains broadly as follows:

- The western portion of the site (Catchment A) drains as overland toward McGrath Road, entering the grassed open channel drain within the road verge;
- The eastern portion of the site (Catchment B) drains toward the existing watercourse running parallel to the eastern boundary; and
- The norther portion of the site (Catchment C) drains as overland flow north to the rear of existing adjoining properties.

Catchment delineation is based on topographic survey data obtained from Twine Surveys and the Queensland Globe LiDAR dataset. Refer to Lekker Urban Civil Engineering Drawing LU23111-CD-600 for the catchment plan and pre-development flow path illustrations.

2.6 Existing External Stormwater Network

McGrath Street has minimal formal stormwater infrastructure in place within the direct vicinity of the site other than an existing open channel (gully) and channel to the western boundary of the site. There is an existing 600mm diameter stormwater pipe located to the current crossover with associated headwall outlet. The pipe discharges directly into the existing open channel (gully) which conveys the road catchment of McGrath Road to the north, towards Ishmail Road and conveys more broadly into the unnamed watercourse to the east.

McGrath Road has minimal formal stormwater infrastructure in the immediate vicinity of the site. The majority of overland flow is conveyed along the road frontage to an existing grassed open channel (gully drain) within the road verge on the western boundary of the site. There is also an existing 600 mm diameter stormwater pipe located at the current site vehicle access, with an associated headwall outlet. This pipe discharges directly into the existing open channel, which conveys road catchment flows north, towards Ishmail Road and conveys more broadly into the unnamed watercourse to the east. The grassed open channel drain along McGrath Road constitutes the identified Lawful Point of Discharge (LPOD) for Catchment A, as discussed further in Section 3.5.

3 Council Planning Requirements

3.1 Major and Minor System Design

The stormwater drainage system for the proposed development has been designed in accordance with the following standards:

- FNQROC Development Manual – Design Manual D4: Stormwater Drainage; and
- Queensland Urban Drainage Manual (QUDM), Fourth Edition (2017).

The stormwater system has been assessed for the following design storm events (As per Table 4.3 – Recommended Design Average Recurrence Intervals (ARI) and annual exceedance probabilities (AEP) – FNQROC D4):

- Minor system: 5-year Average Recurrence Interval (ARI) or (20% Annual Exceedance Probability, AEP).; and
- Major system: 100-year ARI (1% Annual Exceedance Probability, AEP).

3.2 Climate Change Controls

Climate change impacts, such as changes to rainfall intensity, will be incorporated into system design as per relevant policies and/or Australian Rainfall and Runoff (AR&R) guidelines.

3.3 Stormwater Quality and Waterway Protection

Queensland State Planning Policy 2017 – Part E – Assessment Benchmarks – Water Quality have been reviewed in context with the proposed development.

The criteria and associated responses from Lekker Urban outlined in Table 4 below.

SPP Assessment Benchmarks – Water Quality	Lekker Urban Response to Criteria
For receiving waters, a development application for: (1) a material change of use for an urban purpose that involves premises 2500 m ² or greater in size and; (i) (a) will result in six or more dwellings; or (ii) (b) will result in an impervious area greater than 25 per cent of the net developable area; or	Not applicable. The proposed development is a reconfiguration of a lot (ROL), not a material change of use.
(2) reconfiguring a lot for an urban purpose that involves premises 2500 m ² or greater in size and will result in six or more lots; or	This Benchmark applies to the subject site.
(3) operational works for an urban purpose that involves disturbing a land area 2500 metres ² or greater in size.	This Benchmark applies to the subject site.

Table 4 – Response to criteria outlined within the QLD SPP 2017 – Part E – Assessment Benchmarks – Water Quality.

In accordance with FNQROC Development Manual – Design Manual D5 – Stormwater Quality Management does not apply to the proposed development due to small increase in impervious area of the development and due to the site discharging directly to a grass-lined open channel which would provide benefits for Water Quality improvements.

3.4 Legal Point of Discharge

The subject site has been assessed in accordance with the Queensland Urban Drainage Manual, Fourth Edition (2017). In accordance with *Section 3.9.1 – Lawful Point of Discharge Test*, the applicable regulatory and other legal requirements have been reviewed and met to allow stormwater to discharge into the surrounding properties located at the north of the subject site.

The criteria and associated responses from Lekker Urban outlined in Table 5 below.

QUDM Lawful Point of Discharge Test Criteria	Lekker Urban Response to Criteria
<p>(i) Will the proposed development alter the site’s stormwater discharge characteristics in a manner that may substantially damage a third-party property ⁱⁱ (see Section 3.6)</p> <ul style="list-style-type: none"> o If not, then no further steps are required to obtain tenure for a lawful point of discharge (assuming any previous circumstances and changes were lawful). o If there is a reasonable risk of such damage, then consider issue (ii) or (iii). <p><i>ⁱⁱThe issue of whether or not there is an actionable nuisance does not depend on what is demonstrated at the time the works are proposed. The issue is what in fact occurs. This is consistent with it being the developer’s responsibility to not cause nuisance, rather than the regulator’s responsibility to assess and condition works to prevent a nuisance.</i></p>	<p>Consistent with QUDM Section 3.6, the development will not alter stormwater characteristics in a manner that would cause actionable nuisance or substantial damage to any third-party property.</p> <p>The proposed drainage strategy formalises the existing overland flow regimes and splits the discharge to the McGrath Road open channel drain and the rear watercourse, as the Lawful Point of Discharge (LPOD), maintaining the established discharge orientation.</p>
<p>(ii) Is the location of the discharge from the development site under the lawful control of the local government or other statutory authority from whom permission to discharge has been received? This will include a park, watercourse, drainage or road reserve, stormwater registered drainage easement, or land held by local government (including freehold land).</p> <p>Note: The regulatory authority (in its capacity as land holder) is likely to require information about the potential impact of the site’s stormwater discharge characteristics on third party properties</p>	<p>The grassed open channel drain along McGrath Road is under the lawful control of Mareeba Shire Council. Likewise, the unnamed watercourse to the rear of the site is under the lawful control of Mareeba Shire Council. Criterion (ii) is satisfied; no further tenure steps are required. Approval is sought through the provision of this report.</p>

<p>(particularly those downstream of the proposed discharge point) before it will consent to the discharge entering its land.</p> <ul style="list-style-type: none"> o If so, then no further steps are required to obtain tenure for a lawful point of discharge. o If not, then consider issue (iii). A landowner or regulator may require that the developer obtain an authority to discharge as described (ii). 	
<p>(iii) An authority to discharge over affected properties will be necessary. In descending order of certainty, an authority may be in the form of:</p> <ul style="list-style-type: none"> o Dedication of a drainage reserve or park o A registered easement for stormwater discharge/works o Written discharge approval 	<p>Criterion (iii) is not applicable, as Criterion (ii) above has been satisfied.</p>

Table 5 – Response to criteria outlined within the Lawful Point of Discharge Test from Section 3.9.1 of QUDM.

On the basis of the above assessment, the grassed open channel drain along McGrath Road is confirmed as the Lawful Point of Discharge for Catchment A. The rear watercourse along the eastern boundary is confirmed as the Lawful Point of Discharge for Catchment B (Lots 6 and 7). Both discharge points satisfy QUDM requirements, and no additional tenure or authority to discharge is required.

4 Stormwater Strategy

4.1 Stormwater Management Strategy Overview

The stormwater management strategy for the proposed development aims to manage both the quantity and quality of stormwater runoff generated by the development, while maintaining or improving pre-development discharge conditions at the Lawful Point of Discharge.

The primary stormwater management measures are:

- A new internal stormwater drainage network connecting roof and hardstand drainage from each lot to the proposed kerb and channel system (Where possible);
- Kerb and channel along the internal road conveying runoff to the existing open channel drain at McGrath Road (Catchment A);
- Preservation of natural drainage to the rear watercourse for Lots 6 and 7 (Catchment B), consistent with pre-development flow patterns;
- Preservation of natural drainage to the northern boundary for Lots 1 to 5 (Catchment C), consistent with pre-development flow patterns;

The drainage strategy relies on a new underground stormwater pipe network (pits and pipes) to manage existing overland flow and kerb and channel conveyance.

In regard to stormwater quality, no formal treatment infrastructure has been included. As any treated water would be discharged to open channels within the road reserve - resulting in treated stormwater becoming dirty - the development instead relies on passive treatment measures, consistent with Mareeba Shire Council's preference for low-infrastructure drainage solutions for rural residential subdivisions.

4.2 Stormwater Quantity

4.2.1 Introduction

Both pre and post-development hydrologic and hydraulic models were developed to establish peak flow targets (pre-development) and determine the performance of the proposed stormwater system (post-development) for a range of storm events (5, 20 and 100 year ARI). Table 6 and Table 7 provide a breakdown of pre and post-development imperviousness and ultimate discharge points.

Pre-development catchment breakdown (m ²)				
	Catchment A Discharge to McGrath Road to the west of the subject site via new underground piped network	Catchment B Overland flow to the existing watercourse to the east of the subject site	Catchment C Overland flow to adjoining properties to the north of the subject site	Total
Pervious area (m ²)	19175	10725	14680	44580
Impervious area (m ²)	1625	475	390	2490
Total area (m ²)	20800	11200	15070	47070
% of Site area	44%	24%	32%	100%
% Pervious	92%	96%	97%	95%
% Impervious	8%	4%	3%	5%

Table 6 – Pre-development catchment breakdown.

Post-development catchment breakdown (m ²)				
	Catchment A Discharge to McGrath Road to the west of the subject site via new underground piped network	Catchment B Overland flow to the existing watercourse to the east of the subject site	Catchment C Overland flow to adjoining properties to the north of the subject site	Total
Pervious area (m ²)	17218	10275	11750	39243
Impervious area (m ²)	4652	925	2250	7827
Total area (m ²)	21870	11200	14000	47070
% of Site area	46%	24%	30%	100%
% Pervious	79%	92%	84%	83%
% Impervious	21%	8%	16%	17%

Table 7 – Post-development catchment breakdown.

The key observations from these tables are as follows:

- The total site area is 47,070 m², distributed across three catchments: Catchment A (20,800 m², 44%), Catchment B (11,200 m², 24%) and Catchment C (15,070 m², 32%).
- Under pre-development conditions, the site is predominantly pervious, with an overall imperviousness of 5% (2,490 m² impervious across the site).
- Under post-development conditions, impervious area increases to 7,827 m², representing an overall site imperviousness of 17% - an increase of 5,337 m² compared to pre-development.
- The greatest increase in imperviousness occurs within Catchment A, which increases from 8% to 21%, reflecting the concentration of proposed road through the middle of the site.
- Catchment B imperviousness increases from 4% to 8%, while Catchment C increases from 3% to 16%.

4.2.2 Hydrologic and Hydraulic Modelling

Pre-development and post-development stormwater systems have been assessed using DRAINS hydrologic and hydraulic modelling software, applying Australian Rainfall and Runoff (ARR 2019) procedures. This approach is considered more robust than the Rational Method for catchments of this scale, as it accounts for the full temporal pattern of rainfall, antecedent moisture conditions, and the attenuation effects of detention.

Site IFD (Intensity–Frequency–Duration) data was sourced from the Bureau of Meteorology (BoM) website for the site coordinates. Temporal storm patterns, pre-burst data, and loss parameters were sourced from the ARR Data Hub. Both pre-development and post-development scenarios were modelled to assess peak flow targets and confirm the performance of the proposed stormwater system across the full range of design storm events.

4.2.3 Modelling Assumptions and parameters

The following assumptions were made for the modelling:

- Using Site survey data Pre-development Site split up into sub-catchments based on land use and ultimate drainage points (i.e. Existing open space) to establish pre-development peak flows;
- Post-development Site split up into sub-catchments based on land use and ultimate drainage points (i.e. Road reserve, open space etc);

The following parameters were adopted for the DRAINS model:

- Manning's 'n': RCP Pipe – 0.012
- Soil type – Normal (3.0)
- Paved (Impervious) Area Depression Storage – 1mm
- Grassed (Pervious) Area Depression Storage – 1mm
- Antecedent Moisture Condition – 3.0

Tables 8, 9 and 10 present the pre and post-development peak flows for each catchment across the 5, 20 and 100 year ARI storm events.

Catchment A				
Discharge to McGrath Road to the west of the subject site via new underground piped network				
ARI Event	% AEP Event	Pre-Development (m3/s)	Post-Development (m3/s)	Difference (m3/s)
5-year	20%	0.258	0.292	0.034
20-year	5%	0.414	0.449	0.035
100-year	1%	0.667	0.755	0.088

Table 8 – Pre and Post Development Peak Flows.

Catchment B				
Overland flow to the existing watercourse to the east of the subject site				
ARI Event	% AEP Event	Pre-Development (m3/s)	Post-Development (m3/s)	Difference (m3/s)
5-year	20%	0.177	0.177	0.000
20-year	5%	0.266	0.266	0.000
100-year	1%	0.459	0.459	0.000

Table 9 – Pre and Post Development Peak Flows.

Catchment C				
Overland flow to adjoining properties to the north of the subject site				
ARI Event	% AEP Event	Pre-Development (m3/s)	Post-Development (m3/s)	Difference (m3/s)
5-year	20%	0.229	0.214	-0.015
20-year	5%	0.357	0.333	-0.024
100-year	1%	0.608	0.566	-0.042

Table 10 – Pre and Post Development Peak Flows.

The key observations from the hydraulic modelling results are as follows:

- Catchment A — Post-development peak flows increase marginally across all storm events, ranging from 0.034 m³/s (5 year ARI) to 0.088 m³/s (100 year ARI) above pre-development levels. These flows are conveyed via the proposed underground piped network discharging to McGrath Road to the west of the site.
- Catchment B — Post-development peak flows are unchanged from pre-development conditions across all modelled storm events, with zero difference recorded for the 5, 20 and 100 year ARI events. The proposed development does not adversely impact flows to the existing watercourse to the east.
- Catchment C — Post-development peak flows are reduced across all storm events compared to pre-development, with reductions ranging from 0.015 m³/s (5 year ARI) to 0.042 m³/s (100 year ARI). This reduction is attributable to the net decrease in total catchment area contributing to the north under post-development conditions, which benefits adjoining properties.

Overall, the proposed stormwater system performs satisfactorily across the modelled storm events. Flows to the existing watercourse (Catchment B) are maintained at pre-development levels, and flows to adjoining properties to the north (Catchment C) are reduced. The marginal increase in flows within Catchment A is managed via the proposed underground piped network to McGrath Road.

Onsite detention (OSD) was explored as part of the stormwater management strategy. However, OSD was not adopted as the minor increases in peak flows under post-development conditions are considered negligible. Catchment A discharges to McGrath

Road via the proposed underground piped network, which ultimately drains to the same watercourse on the northern side of Ismail Road as Catchment C. When the combined flows from both catchments are considered, the post-development discharge to the watercourse is similar to pre-development levels, with the marginal increase in Catchment A offset by the reduction in flows from Catchment C across all modelled storm events.

4.3 Stormwater Quality Management

4.3.1 Construction Phase

A concept Erosion and Sediment Control Plan (ESCP) will be prepared and submitted as part of the Operational Works application, in accordance with FNQROC D5 and the IECA Best Practice Erosion and Sediment Control Guidelines. The ESCP will detail temporary erosion and sediment control measures appropriate for the construction phase, including:

- Sediment fencing at the site perimeter and within the site as required;
- Stabilised vehicle access point(s) to McGrath Road;
- Diversion bunds and interception drains to manage stormwater during earthworks;
- Staged vegetation clearing to minimise exposed soil areas;
- Stockpile management and temporary sediment basins where required; and
- Regular site inspections and maintenance, particularly during the wet season.

All temporary erosion and sediment control measures will remain in place until permanent surface cover and stabilisation are established across the site.

4.3.2 Post-Development Phase

Permanent stormwater quality management for the development is achieved through passive, low-infrastructure measures consistent with Mareeba Shire Council's preferred approach for rural residential subdivisions. Rather than formal treatment infrastructure, the strategy relies on the natural filtering capacity of grassed areas to manage stormwater quality prior to discharge from the site.

The measures incorporated into the development include:

- Grassed filter strips between property boundaries and kerb and channel, promoting natural infiltration and filtering of runoff from driveways and landscaped areas prior to entering the road drainage system;
- Vegetated open channel (swale) drainage within the McGrath Road road reserve, providing passive treatment of runoff through natural sedimentation, filtration, and surface water polishing; and
- Preservation of natural drainage to the rear watercourse for Lots 6 and 7, with no increase in impervious area, ensuring no degradation of discharge quality to the receiving watercourse.

These measures reflect the Water Sensitive Urban Design (WSUD) principles endorsed by the FNQROC D5 Acceptable Design Solutions and the intent of the Queensland State Planning Policy 2017, managing stormwater quality through practical and effective passive treatment without the introduction of formal infrastructure that would otherwise direct treated water to open channels within the road reserve.

5 Conclusion:

Pre and post-development hydrologic and hydraulic modelling has demonstrated that peak flows generated under post-development conditions are negligible in the context of the broader catchment. As discussed, Catchment A and Catchment C both ultimately discharge to the same watercourse on the northern side of Ismail Road, and when considered in combination, post-development flows to that watercourse are similar to pre-development levels. The marginal increase in flows from Catchment A is offset by the reduction in flows from Catchment C, and no adverse impacts to the downstream network or adjoining properties are anticipated.

The proposed stormwater management measures include:

- A new internal stormwater network to convey runoff from the new proposed Access Road to the existing drainage system via McGrath Road; and
- Landscaped depressions and vegetated areas within the site to promote detention, infiltration and stormwater quality improvement.

The proposed stormwater strategy has been developed in accordance with the following requirements:

- FNQROC Development Manual – Design Manual D4 – Stormwater Drainage;
- FNQROC Development Manual – Design Manual D5 – Stormwater Quality Management;
- Queensland Urban Drainage Manual (QUDM); and
- Australian Rainfall and Runoff (ARR).

Attachment A

Civil Engineering Documentation



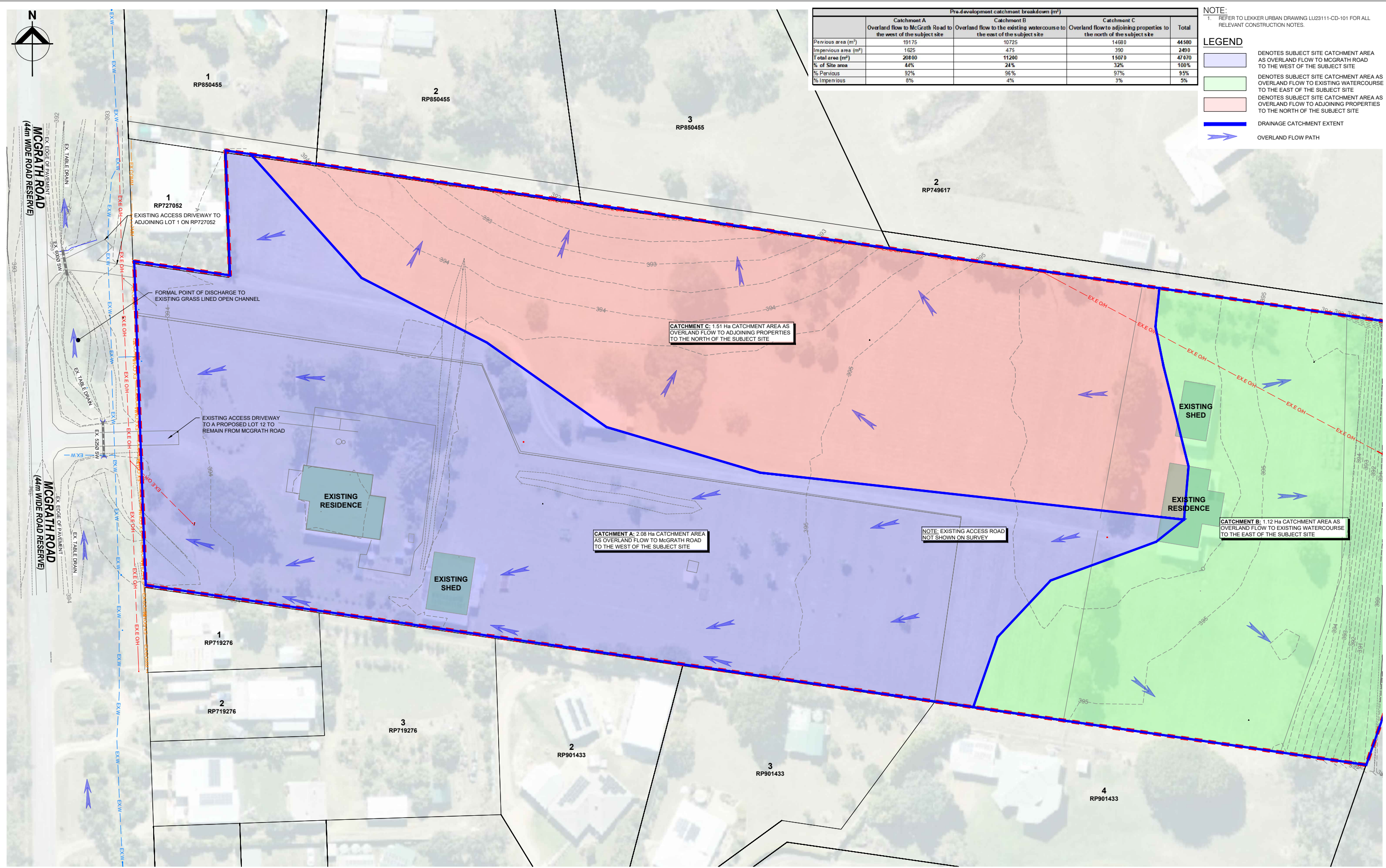
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	Pre-development catchment breakdown (m ²)			Total
	Catchment A Overland flow to McGrath Road to the west of the subject site	Catchment B Overland flow to the existing watercourse to the east of the subject site	Catchment C Overland flow to adjoining properties to the north of the subject site	
Pervious area (m ²)	19175	10725	14680	44580
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Total area (m ²)	20800	11200	15070	47070
% of Site area	44%	24%	32%	100%
% Pervious	92%	96%	97%	95%
% Impervious	8%	4%	3%	5%

NOTE:
1. REFER TO LEKKER URBAN DRAWING LU23111-CD-101 FOR ALL RELEVANT CONSTRUCTION NOTES.

- LEGEND**
- DENOTES SUBJECT SITE CATCHMENT AREA AS OVERLAND FLOW TO MCGRATH ROAD TO THE WEST OF THE SUBJECT SITE
 - DENOTES SUBJECT SITE CATCHMENT AREA AS OVERLAND FLOW TO EXISTING WATERCOURSE TO THE EAST OF THE SUBJECT SITE
 - DENOTES SUBJECT SITE CATCHMENT AREA AS OVERLAND FLOW TO ADJOINING PROPERTIES TO THE NORTH OF THE SUBJECT SITE
 - DRAINAGE CATCHMENT EXTENT
 - OVERLAND FLOW PATH



CATCHMENT C: 1.51 Ha CATCHMENT AREA AS OVERLAND FLOW TO ADJOINING PROPERTIES TO THE NORTH OF THE SUBJECT SITE

CATCHMENT A: 2.08 Ha CATCHMENT AREA AS OVERLAND FLOW TO MCGRATH ROAD TO THE WEST OF THE SUBJECT SITE

NOTE: EXISTING ACCESS ROAD NOT SHOWN ON SURVEY

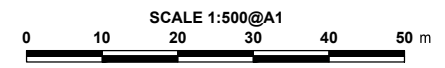
CATCHMENT B: 1.12 Ha CATCHMENT AREA AS OVERLAND FLOW TO EXISTING WATERCOURSE TO THE EAST OF THE SUBJECT SITE

Revision	Amendments	Approved	Date
A	ISSUED FOR APPROVAL - OPERATIONAL WORKS	J.L.A.	22/05/2026

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Authorised:	J.L.A.	Date:	22/05/2026

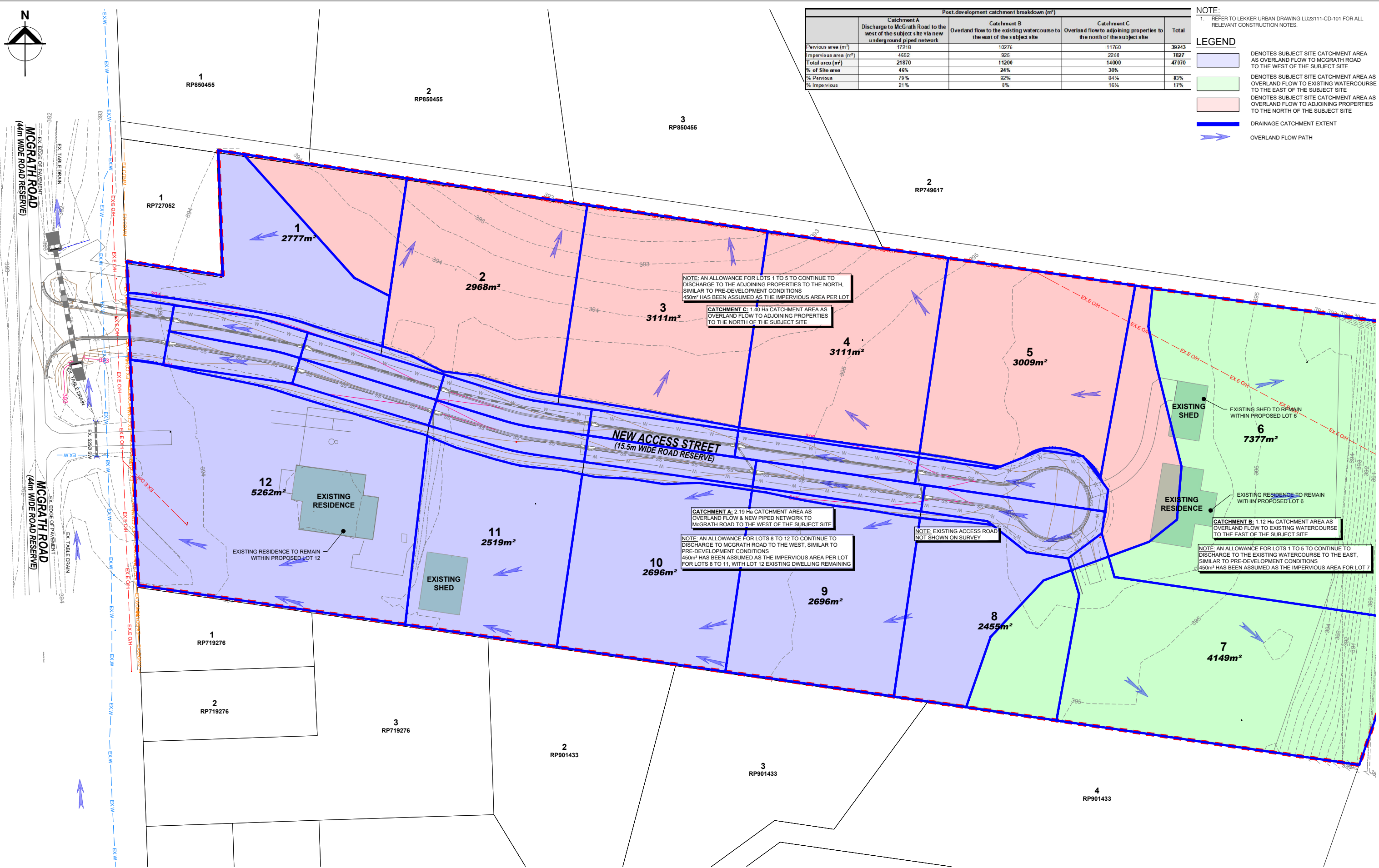
RESIDENTIAL SUBDIVISION - CIVIL WORKS
MCGRATH ROAD, MAREEBA QLD
DRAINAGE CATCHMENT LAYOUT PLAN
PRE-DEVELOPMENT CONDITIONS (MINOR)
LOT 21 & 22 ON SP320495
ON BEHALF OF MCGRATH DEVCO PTY LTD
DRAWING NUMBER: **LU23111-CD-600** REV: **A**
FOR APPROVAL



Post-development catchment breakdown (m ²)				
	Catchment A Discharge to McGrath Road to the west of the subject site via new underground piped network	Catchment B Overland flow to the existing watercourse to the east of the subject site	Catchment C Overland flow to adjoining properties to the north of the subject site	Total
Pervious area (m ²)	17218	10275	11750	39243
Impervious area (m ²)	4552	925	2250	7827
Total area (m ²)	21870	11200	14000	47070
% of Site area	46%	24%	30%	
% Pervious	79%	92%	84%	83%
% Impervious	21%	8%	16%	17%

NOTE:
1. REFER TO LEKKER URBAN DRAWING LU23111-CD-101 FOR ALL RELEVANT CONSTRUCTION NOTES.

- LEGEND**
- DENOTES SUBJECT SITE CATCHMENT AREA AS OVERLAND FLOW TO MCGRATH ROAD TO THE WEST OF THE SUBJECT SITE
 - DENOTES SUBJECT SITE CATCHMENT AREA AS OVERLAND FLOW TO EXISTING WATERCOURSE TO THE EAST OF THE SUBJECT SITE
 - DENOTES SUBJECT SITE CATCHMENT AREA AS OVERLAND FLOW TO ADJOINING PROPERTIES TO THE NORTH OF THE SUBJECT SITE
 - DRAINAGE CATCHMENT EXTENT
 - OVERLAND FLOW PATH



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SCALE 1:500@A1

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Designed: A.P.B. Checked: J.L.A.
Authorised: J.L.A. Date: 22/05/2026

RESIDENTIAL SUBDIVISION - CIVIL WORKS
MCGRATH ROAD, MAREEBA QLD
DRAINAGE CATCHMENT LAYOUT PLAN
POST-DEVELOPMENT CONDITIONS (MINOR)

LOT 21 & 22 ON SP320495
ON BEHALF OF MCGRATH DEVCO PTY LTD

FOR APPROVAL **LU23111-CD-601** A