

BCC DS  
RECEIVED  
19/06/2026  
APPLICATION REF  
A007053194



**Legend Consultants**  
Efficiency · Innovation · Quality

# HYDRAULIC IMPACT ASSESSMENT

**Proposed Industrial Development  
437 Stafford Road, Stafford**

**Lots 1 on RP126855**

For Sarris International Pty Ltd  
15 June 2026  
File No: LC26013-0004-HIA



## EXECUTIVE SUMMARY

This Hydraulic Impact Assessment (HIA) report details the impacts of flooding likely to arise from the proposed master planning level and conceptual drainage for the proposed Industrial Development located at 437 Stafford Road, Stafford. The report demonstrates how the development meets the acceptable performance outcomes in accordance with the Brisbane City Council Planning Scheme.

This HIA aims to show that the proposed Development meets the requirements set out by the Brisbane City Council Plan (Version 8). This has been achieved through hydraulic modelling of the pre and post-development scenario.

The subject site is located in the flood investigation area and is merely impacted by regional floods. This HIA has made the following conclusions relating to the coverage of the flood investigation area and overland flooding at the subject site in accordance with Brisbane City Council Plan (Version 8)

- The proposed development does not result in a loss of flood plain storage up to and including for the defined flood event (DFL).
- The proposed development has no adverse impacts on existing local hydraulic conditions.




## DOCUMENT CONTROL RECORD

This document is copyrighted. Other than for the purposes and subject to the conditions prescribed under the Copyright Act 1968 (Commonwealth). No part of it may in any form or by any means (electronic, mechanical, micro-copying, photocopying, recording or otherwise) be reproduced, stored in a retrieval system, or transmitted without prior written permission.

The information contained in this report has been prepared based on the information made available to Legend Consultants Pty Ltd at the time of preparation. This document, design parameters, and conclusions rely on external data sources, and the accuracy of this document is correct to the extent of the information provided to us.

This report has been prepared solely for the benefit of our client. We do not accept any liability for damage or loss resulting from reliance on this report, or any part of it, by any party other than the client (named on the front page of this report).

Revision	Revision Date	Author	Reviewer	Report Details	Authorised By
					Signature
A	11 April 2025	MN	JW – RPEQ 31580	Original	

## Transmission Register

Controlled copies of this document are issued to the persons/companies listed below. Any copy of this report held by persons not listed in this register is deemed uncontrolled. Updated versions of this report if issued will be released to all parties listed below via the email address listed.

Distribution	Email Address
Sarris International Pty Ltd - Mr Allister Sarris	allister@sarrisint.com



## CONTENTS

<b>1.0</b>	<b>INTRODUCTION</b> .....	<b>1</b>
1.1	INTRODUCTION .....	1
1.2	SCOPE OF REPORT .....	1
<b>2.0</b>	<b>STUDY AREA</b> .....	<b>2</b>
2.1	SITE LOCATION .....	2
2.2	SITE CHARACTERISTICS .....	3
2.3	EXISTING VEGETATION AND USE .....	3
2.4	PROPOSED DEVELOPMENT .....	4
2.5	RAINFALL DATA .....	4
<b>3.0</b>	<b>STANDARDS AND DATA REFERENCES</b> .....	<b>5</b>
<b>4.0</b>	<b>STUDY OBJECTIVES</b> .....	<b>6</b>
4.1	STUDY METHODOLOGY .....	6
<b>5.0</b>	<b>HYDRAULIC MODELLING</b> .....	<b>7</b>
5.1	HYDRAULIC MODELLING PARAMETERS .....	7
5.2	ESTABLISHMENT OF HYDRAULIC MODEL .....	8
5.3	2D MODEL SETUP .....	8
5.4	BOUNDARIES CONDITIONS .....	8
5.5	2D HYDRAULIC ROUGHNESS .....	8
<b>8.0</b>	<b>QUALIFICATIONS</b> .....	<b>18</b>
<b>9.0</b>	<b>RPEQ CERTIFICATION</b> .....	<b>19</b>
<b>10.0</b>	<b>REFERENCES</b> .....	<b>19</b>

## FIGURES

FIGURE 1:	LOCALITY PLAN (SOURCE – GOOGLE MAP) .....	2
FIGURE 2:	AERIAL IMAGE OF THE SITE (SOURCE: METROMAP) .....	3
FIGURE 3:	PLAN OF DEVELOPMENT .....	4
FIGURE 4:	PRE – DEVELOPMENT TUFLOW 2D MANNING VALUE(N) .....	10
FIGURE 5:	POST – DEVELOPMENT TUFLOW 2D MANNING VALUE(N) .....	11
FIGURE 6:	1% AEP FLOOD EXTENT – PRE-DEVELOPMENT SCENARIO .....	13
FIGURE 7:	POST-DEVELOPMENT 1% FLOOD EXTENT .....	15

## TABLES

Table 1 – Site Description .....	2
Table 2 – Adopted Mannings 'n' for 2D Hydraulic Model .....	9

## APPENDICES

Appendix A:	J Surveyors Detail Plan of Survey (Ref: JS 383-DET01-REV.A)
Appendix B:	Sarris, Ground Floor Plan (Ref: AS88)
Appendix C:	TUFLOW Model Configuration Plans
Appendix D:	Pre-Development Flood Mapping Results
Appendix E:	Post-Development Flood Mapping Results
Appendix F:	Afflux Mapping Analysis
Appendix G:	Flood Overlay Code Response



## 1.0 INTRODUCTION

---

### 1.1 Introduction

Legend Consultants has been commissioned by Sarris International Pty Ltd to carry out a Hydraulic Impact Assessment (HIA) to support a Development Application (DA) to the Brisbane City for the proposed Industrial Development situated at 437 Stafford Road, Stafford.

As prescribed by Brisbane City Council City Plan. The subject site is currently zoned as Low-Density Residential zone.

The Land Parcels to which the development site and subject area pertain is:

- Lots 1 on RP126855 (here within known as 'the site').

The proposed development for the site consists of thirty residential lots, and a balance lot with a combined total site area of 0.1765 ha.

### 1.2 Scope of Report

This Hydraulic Impact Assessment report has been undertaken using the following scope:

- Assessment of Existing Flooding Conditions
  - Review and interrogation of Council's Brisbane TuFLOW Model
- Regional Model Development
  - Utilise Council's regional model, with refined Manning's roughness values to represent the proposed development for regional flooding impacts; and
  - Construct a refined TUFLOW model subdivided from Council's TUFLOW model to ensure impact is assessed at a more detailed level
  - This model utilises a five metre model cell size to represent the proposed earthworks.
- Review of Model Results
  - Review of modelling results, including water level impacts, velocity impacts, hazards and modelling inefficiencies.
- Report and Mapping
  - Presentation of pre-development and post-development flood extents, depths, and velocities (where applicable);
  - Impact assessment including afflux contours and risk assessment; and
  - Review of any impacts resulting from the proposal in the context of whether such afflux may give rise to potential actionable damage to surrounding properties.



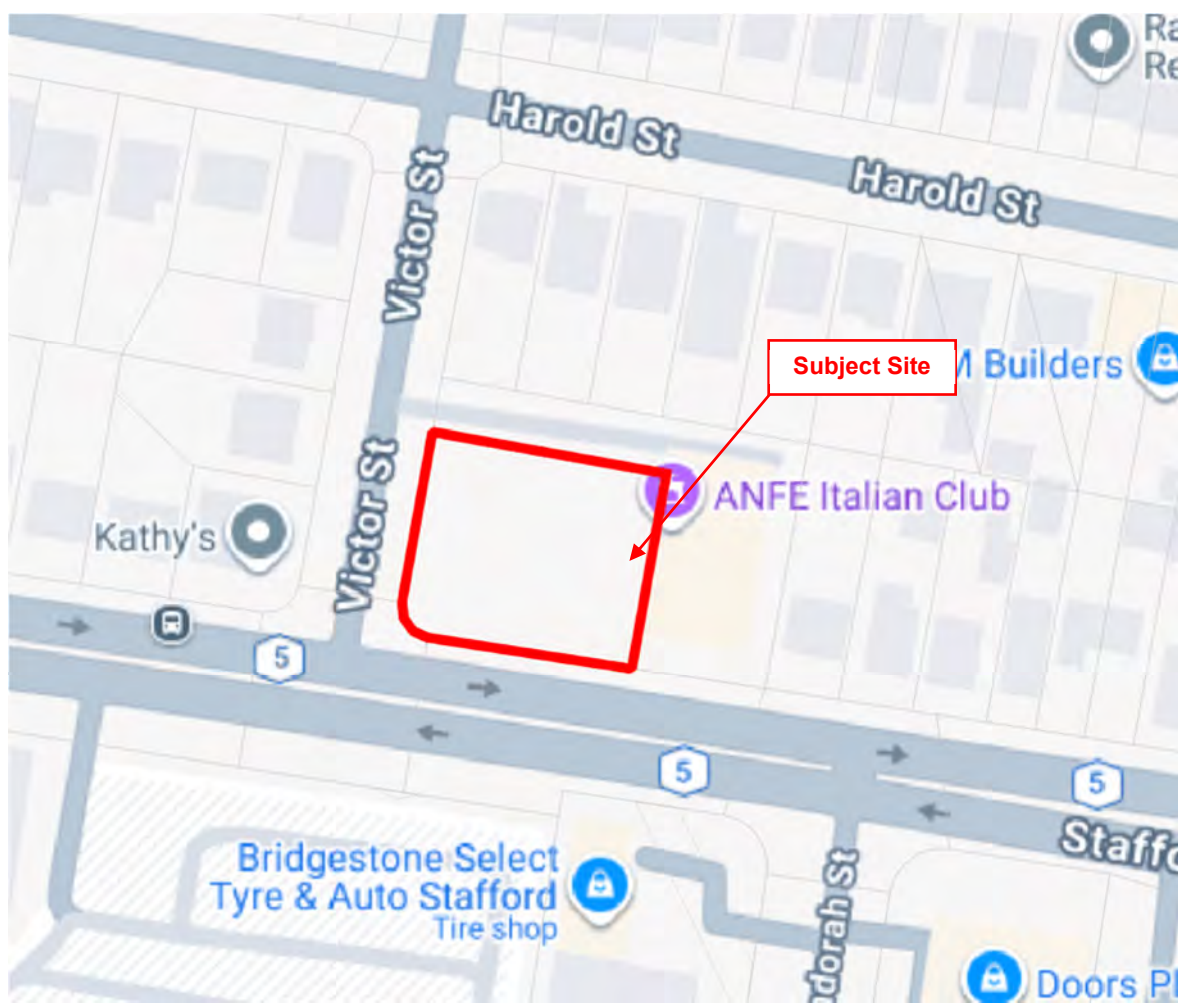
## 2.0 STUDY AREA

### 2.1 Site Location

The development site is situated at 437 Stafford Road, Stafford. It is proposed that the current site, a block of approximately 1765m<sup>2</sup> that is currently vacant, will be developed with into a Bob Jane T-Mart Tyre and Car Servicing centre. The site formerly contained a fuel service station. The site is located at the intersection of Stafford Road and Victor Street, in the suburb of Stafford, as provided in Table 1 and Figure 1.

**Table 1 – Site Description**

Client	Lot and Property Description	Street Address
Sarris International Pty Ltd	Lots 1 on RP126855	437 Stafford Road, Stafford



**Figure 1: Locality Plan (Source – Google Map)**

## 2.2 Site Characteristics

A review of contour data indicates that the majority of runoff from a local catchment to the west and north-west of the site will flow through or around the site. The existing catchment stormwater drainage network includes two 1800mm diameter stormwater pipes running diagonally from north-west to south-east across the site. There is also a 1950 mm diameter stormwater pipe running south down the western side of Victor Street. There is a low point in Victor Street adjacent to the site where there are eight stormwater drainage gully pits on western side and nine on the eastern side.

These pits connect into the 1950 mm diameter stormwater pipe. The pits appear to be recently installed as a retrofit to the stormwater drainage network which indicates historical flooding problems at this location in Victor Street. Similarly, there appears to have been additional gully pits retrofitted in the streets to the west (further up the catchment).

Further information of the site survey has been provided by J Surveyors Detail Plan of Survey (Ref: JS 383-DET01-REV.A) included as Appendix A.

## 2.3 Existing Vegetation and Use

The project site is a vacant lot with grassed areas. An aerial photograph from 8 September 2024 of the development site is in Figure 2.



Figure 2: Aerial Image of the Site (Source: MetroMap)



## 2.4 Proposed Development

The proposed development will require the entire building and carpark areas to be on suspended slab to provide the required flood immunity to the buildings and car parks as well as to negate interference with overland flood flows through the site.

Access to the site is gained via the proposed vehicle crossover directly off Stafford Road to the south. This proposed internal driveway will connect the entrance and parking areas to the kerb line in Stafford Road. The three existing vehicle crossovers will be removed and the kerb lines and verges reinstated to council standards.

Refer to Appendix B for further Plan of Development details prepared by Sarris, Ground Floor Plan (Ref: AS88) , a Figure of which is provided in Figure 3.

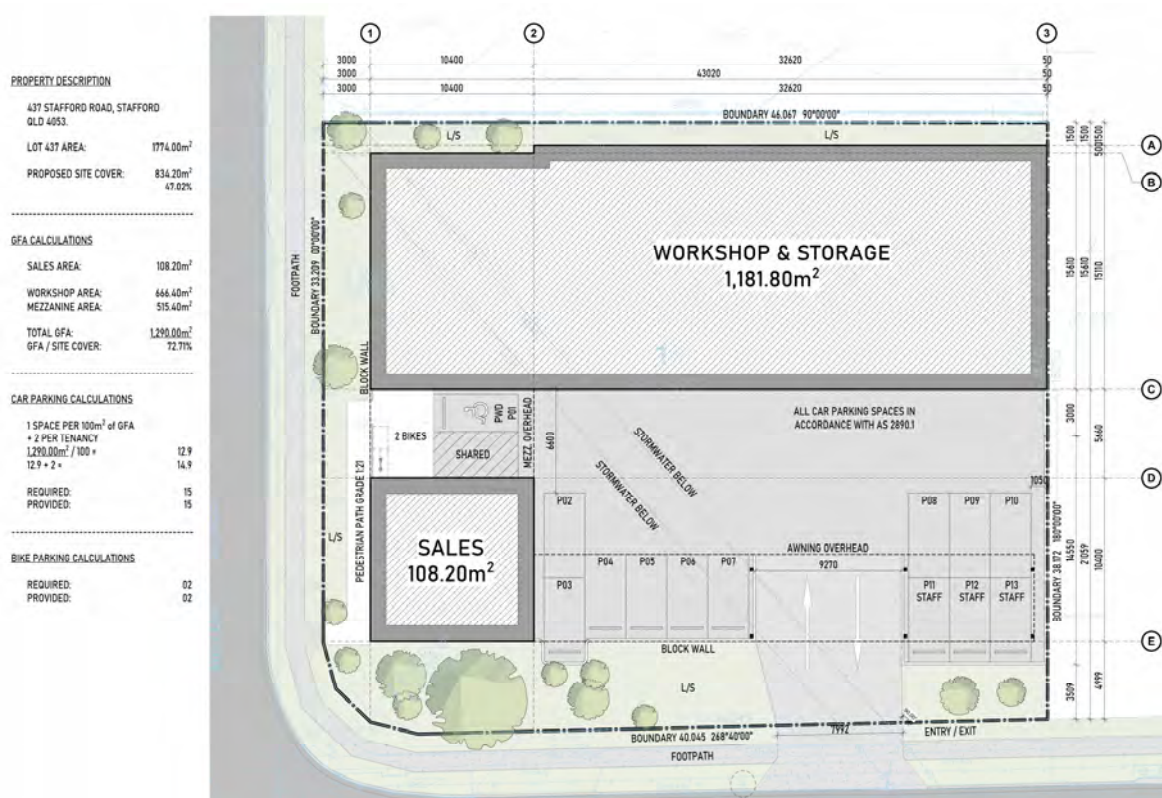


Figure 3: Plan of Development

## 2.5 Rainfall Data

Rainfall intensity data has been acquired from the Australian Bureau of Meteorology's 2016 Design IFD Rainfall System. The data has been obtained for the nearest grid cell at Latitude 27.409 (S) and Longitude 153.011 (E). The IFD data and average rainfall intensities utilized in this report are in accordance with the techniques outlined in Geosciences Australia, Australian Rainfall and Runoff 2019.



### 3.0 STANDARDS AND DATA REFERENCES

---

The following provides the data references which have been utilised in order to prepare this report for the site:

- Detailed site survey provided by J Surveyors Detail Plan of Survey (Ref: JS 383-DET01-REV.A) included as Appendix A.
- Proposed site plan provided by Sarris, Ground Floor Plan (Ref: AS88) .
- LIDAR data for the development site obtained from Australian Government Elevation and Depth Foundation Spatial Data (ELVIS)
- Rainfall and Meteorological 2016 IFD Data by the Australian Bureau of Meteorology.
- Information Extracted from Council Brisbane Infrastructure Assets Mapping.
- Aerial photography from Queensland Global (Accessed on 16 October 2024),
- Flood model from Council Brisbane



## 4.0 STUDY OBJECTIVES

---

The objective of the report is to assess the impact of the proposed development at 437 Stafford Road, Stafford via detail design completed surfaces manipulation and stormwater infrastructure at strategically placed locations.

The impact results will be compared against the results of the base case model.

### 4.1 Study Methodology

This HIA has been undertaken using the following scope:

- Review Nundah TuFlow Flood model for 1% AEP critical duration event
- Rebuild TUFLOW flood model for the site and surrounding area with inflow boundaries, source boundaries and Downstream boundaries extracted from TuFLOW Flood model.
- Hydraulic Model Development
  - Assessment of Existing Flooding Conditions.
  - Develop a TUFLOW model for the post development scenario by including the proposed earthworks design, refined Manning's roughness that represent the proposed development within the site.
  - This model will utilise a five-metre model cell size to precisely represent the proposed earthworks, it has been refined from 20m grid cell size in TuFLOW flood model; and
  - Run events as required by the Flood Overlay Code, including:
    - 1% to 20% Annual Exceedance Probability (AEP) for flood events.
- Review of Model Results
  - Review of modelling results, including water level impacts, velocity impacts, hazards, and modelling efficiencies.
- Report and Mapping
  - Presentation of pre-development and post-development flood extents, depths, velocities and hazards (where applicable).
  - Impact assessment, including afflux contours and risk assessment, and
  - Review of any impacts resulting from the proposal in the context of whether such afflux may give rise to potential actionable damage to surrounding properties.



## 5.0 HYDRAULIC MODELLING

---

The software package TUFLOW has been used to undertake the hydraulic modelling presented in this report. For further information about the TUFLOW model, please refer to Appendix C.

### 5.1 Hydraulic Modelling Parameters

The details of the parameters used for the TUFLOW model are presented below. The pre-development and post-development model feature maps along with roughness maps are presented in Appendix C.

#### Scenarios:

- Pre-development, and
- Post-development.

#### Events and Critical Durations Modelled

- 1% to 20% AEP with a critical duration of 60min for 1% to 20%AEP.
- The Critical duration of 60min were determined based on the base case's Nundah model results.

This duration was utilised for the subsequent hydraulic assessment.

#### Topography

##### Pre-Development

- Dem\_2014\_brisbane\_1m  
Vertical data: Spatial Accuracy: 0.3m @ 95% (68% confidence level or 1 sigma)  
Horizontal Data: Spatial Accuracy: 0.8m @ 95% (68% confidence level or 1 sigma)
- survey digital elevation model

##### Post-development

- Digital Elevation Model (DEM) of the Mixed-Use Development – Refer to Legend Consultants' civil drawings provided with this development application.

#### 2D Resolution

- 2m grid from Council's regional flood model

#### Timestep

- Adaptive timestep. (HPC)

#### Inflows & Downstream Boundary Conditions

One (01) Rainfall Area and One (01) Downstream boundary have been utilised from the Council's Flood regional flood model for critical durations of 60min.

A normal depth condition with a slope of 0.0 was adopted for the TUFLOW's downstream boundary.



## 5.2 Establishment of Hydraulic Model

The modelling was completed using TUFLOW Model 2020-10-AA (TUFLOW\_iSP\_w64). In the unsteady state, 1D/2D TUFLOW was used to analyse the flood behaviour of the study area. Brisbane\_2014\_LGA 1m cell size data and site survey data were used to create a TIN for the study area from which grid points (2D cells) were generated. Flood levels, discharge and velocity can be extracted from the model as functions of time at required locations.

## 5.3 2D Model Setup

The major component of a two-dimensional model setup is the model grid or topographic grid. The existing scenario is based on the provided LiDAR for topographical data. The underlying surface data for the post-development scenario was manipulated within QGIS, before the flood modelling computation via TUFLOW.

One of the key considerations in establishing a 2D hydraulic model is the selection of appropriate grid size. Grid size, or model resolution, must be balanced in consideration of the goals of the study and computational efficiency. Accordingly, the grid resolution must be selected to provide a suitable compromise between the following:

- The grid resolution must be fine enough to provide sufficient representation of the modelling domain to accurately simulate the physical characteristics of the study area, and
- The grid resolution must result in a model with several elements that will not result in unrealistically long run times.

Given the local context for overland flood assessment and the importance of the catchment to the Brisbane River flood systems, a cell size of 2m x 2m which is currently used in the Council's local flood model is considered acceptable to represent local overland flow paths within the site and adjacent to the site.

The pre-developed scenario was updated to include the survey areas for the site by Legend Consultants.

In the Post development scenario, the model was updated to include the site's proposed development earthworks, compensatory earthworks, and proposed low flow culverts.

## 5.4 Boundaries Conditions

The council's local downstream rating curves were utilised for the boundary conditions shown in Appendix C.

## 5.5 2D Hydraulic Roughness

The 2D model component requires a 2D roughness grid to be generated which assigns a Manning's 'n' value to each grid cell. The roughness values were based on engineering judgment after a review of aerial photography and the site visit.



The land use classification and Manning's 'n' value (roughness co-efficient) adopted to represent each respective area within the modelled grid have been shown in Table 2 and Figure 4

**Table 2 – Adopted Mannings 'n' for 2D Hydraulic Model**

<b>Land Use</b>	<b>Mannings 'n'</b>
<b>Bare Earth</b>	0.035
<b>Open Ground</b>	0.029
<b>Vegetation</b>	0.1
<b>Buildings</b>	0.1
<b>Road</b>	0.017
<b>Back-yard</b>	0.15
<b>Proposed Building On Pier</b>	0.1
<b>Proposed Road</b>	0.022

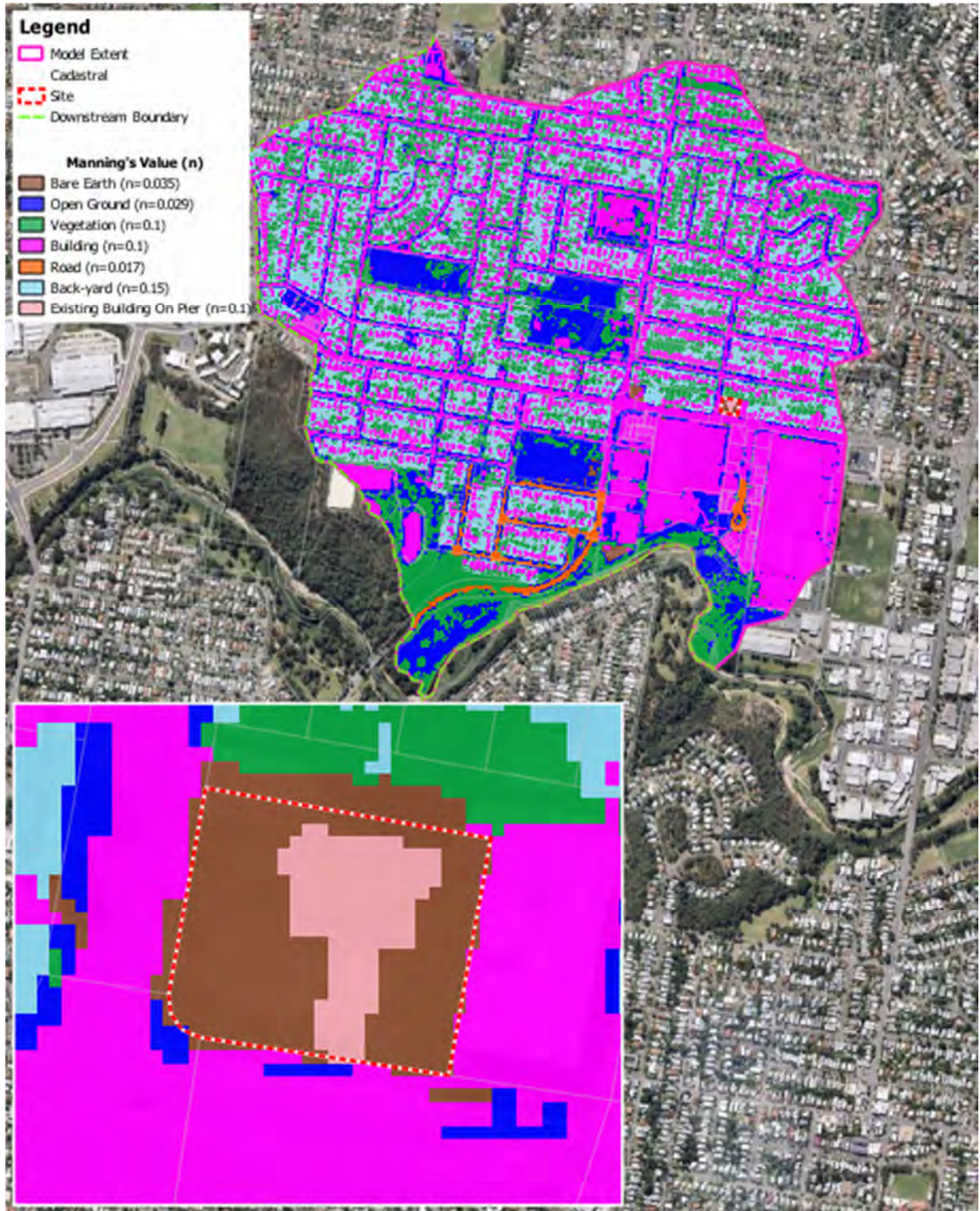


Figure 4: Pre – Development TUFLOW 2D Manning Value(n)

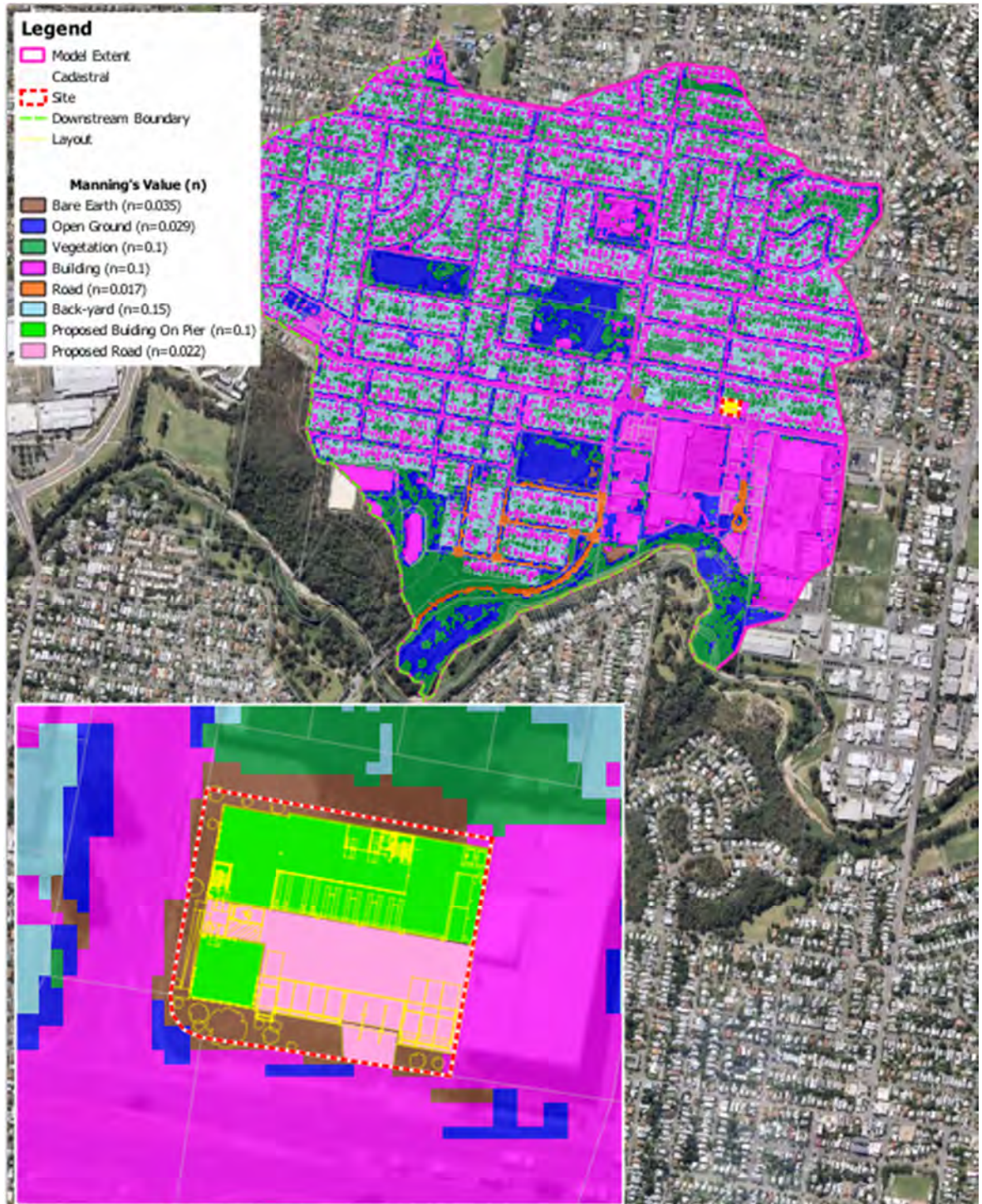


Figure 5: Post – Development TUFLOW 2D Manning Value(n)



## 6.0 DESIGN FLOOD RESULTS

---

### 6.1 Flood Behaviour Pre-Development

During the 1%AEP event, the *Lots 1 on RP126855* is flooded. The surrounding roads are also not trafficable including Victor Street and Stafford Rd.

Within the site lot *Lots 1 on RP126855* experiences a medium flood depth (max 1.0m approximately) and velocity (max 0.82 m/s approximately), and high flood hazard and flood risk, with the highest is H4.

Flooding at the subject site in the existing condition for the 1% AEP event has been presented in Figure 6. Flood characteristics at the subject site are presented in Appendix D.

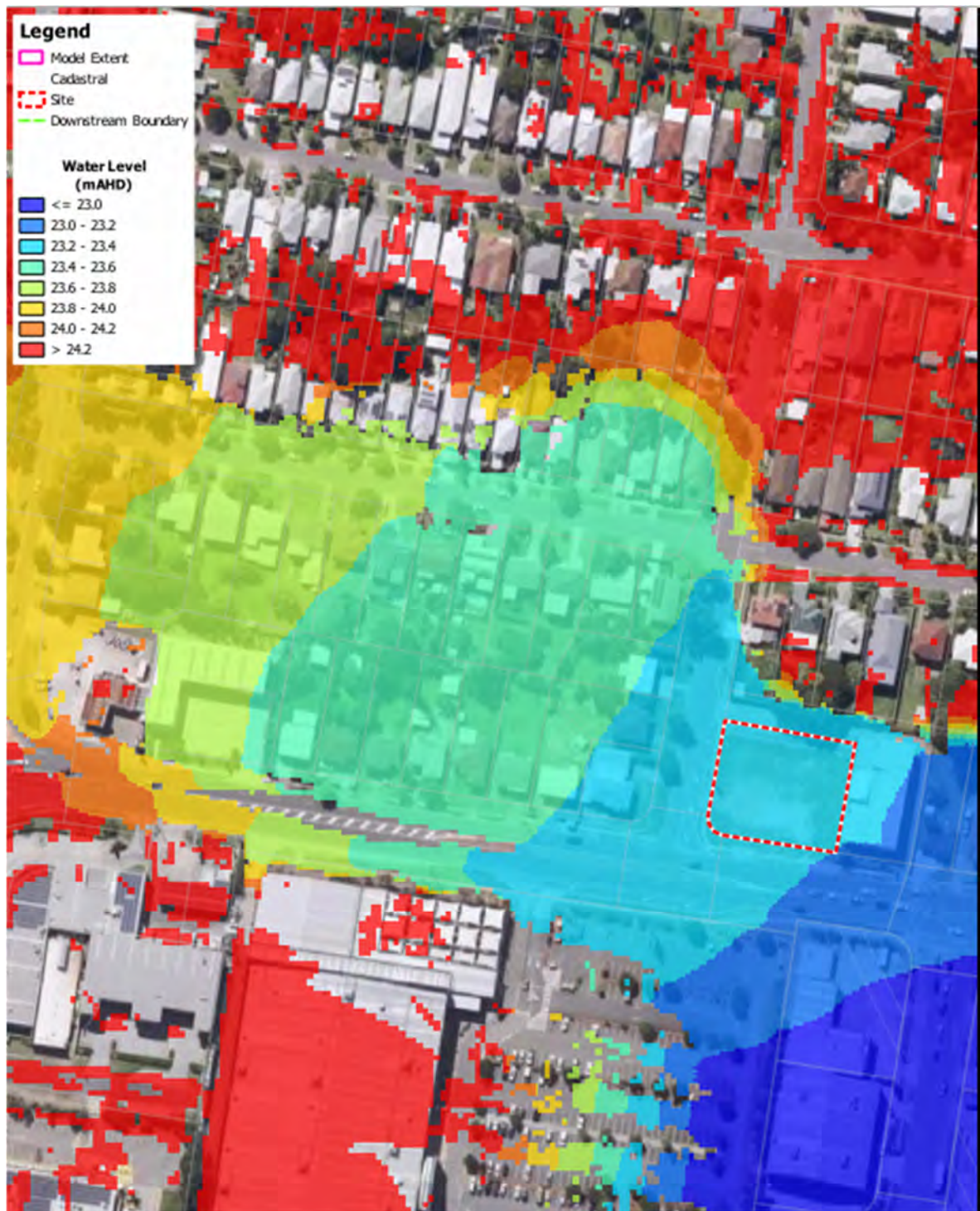


Figure 6: 1% AEP Flood Extent – Pre-Development Scenario



## 6.2 Flood Behaviour Post-Development

The proposed development scenario involves the redevelopment of the site into an automotive and tyre service centre operating under the Bob Jane T-Marts franchise. The proposed development is required to ensure that construction on the site does not increase flood levels or flood impacts on buildings and car parking areas located on surrounding properties.

Please also refer to the civil engineering design plans for more details of the proposed development works.

The maximum flood depth and velocity in the proposed site are 1.01m and 1.04m.s respectively. The maximum hazard within the compensatory earthworks area is H4 during the 1%AEP event.

No change in flood hazard and flood risk is caused by the site's proposed development on Victor Street or Stafford Road, and the site's external properties as observed from the post-development scenario's results. Some nominal afflux of 5-10mm is indicted in northwest and southwest corners of the site and adjacent hard surfaced areas this does not alter duration or hazard of flood water.

Flood conveyance at the subject site in the post-developed scenario is demonstrated in Figure 7.

The Post Development flood maps are presented in Appendix E.

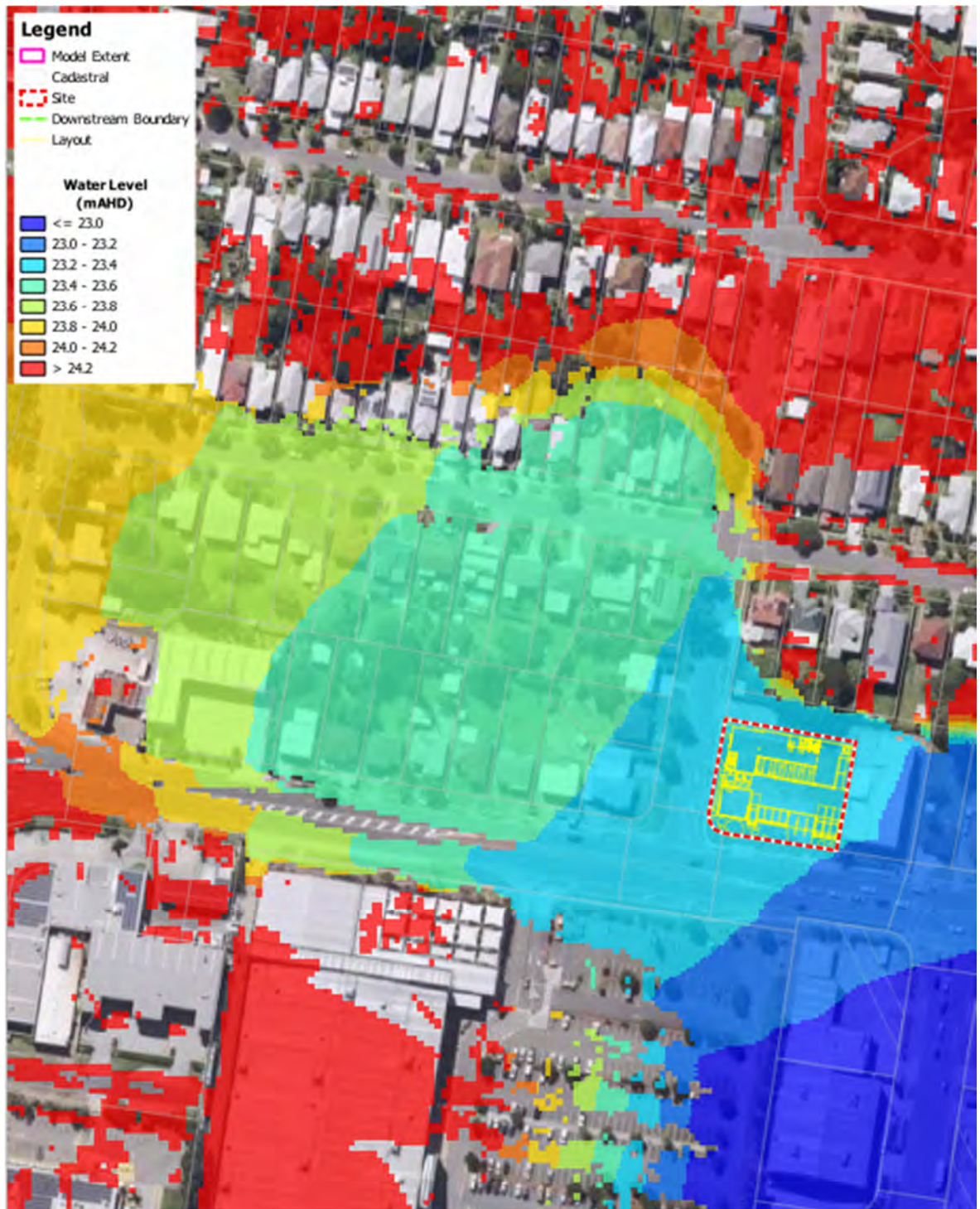


Figure 7: Post-Development 1% Flood Extent



### 6.3 Hydraulic Impact Assessment

The proposed development is expected to have minimal external impact on the local flooding regime, with flood levels increasing by no more than 5-10 mm for the council's flood modelling extent during 1% AEP event for a nominal area within Victor Street. There are a few small areas at the northwest and southwest corners of the site and adjacent hard surfaced areas that experience an increase of 5-10 mm, this does not alter duration or hazard of flood water and is not indicated over habitable floor areas:

- Localised flood level increases exceeding 10 mm are predicted within very small areas located in the north-western portions of the site.
- Similarly, in the south-eastern, the outflow from the site meeting the road reserve of Stafford Road will have a comparable effect.

However, these areas do not contain vulnerable infrastructure or habitable buildings, and the change is considered nominal as no alterations were found in those areas.

Additionally, a stormwater management plan prepared as part of the Development Application (DA) ensures that there will be no increase in flow for various flood events caused by the site's proposed development to the downstream drainage systems and waterways. The stormwater management device will also enhance the flood condition external to the site by treating stormwater before it is discharged. For more details, refer to LC24013-0003-SMP.

The impact of the proposed development on the existing flood condition is presented in Appendix F of this report, in the form of water level afflux maps.



## 7.0 CONCLUSION

---

Based on the hydraulic modelling results presented in this report, the following conclusions have been made:

- The site and its surrounding areas are affected by existing regional flooding.
- The finished floor levels of the proposed buildings were set to be above 1% AEP by more than the freeboard required.
- Flood level afflux (or increase) due to the proposed development within the site is generally contained within the subject site.
- Tolerant flood level afflux external to the site resulted in isolated small areas that do not cover vulnerable infrastructure or habitable building footprints to the north-western and south-eastern of the site. The proposed development areas were designed above 1%AEP flood level.
- Any external afflux on private property does not give rise to actionable damage and does not cause real tangible damage to any premises, with generally reductions demonstrated by the modelling results.

This report has analysed the site's local flooding and shows that the proposed development has no adverse impacts on flood conditions for the simulated 1% AEP event.



## 8.0 QUALIFICATIONS

---

Our analysis and overall approach have been specifically catered for the requirements of Sarris International Pty Ltd for the proposed development and are not applicable beyond the scope of the proposed development. For this reason, any third parties are not authorised to utilise this report without further input and advice from Legend Consultants.

Legend Consultants has relied on the data as outlined within **Section 3** of this report.

While Legend Consultants' report accurately assesses peak flows from design storms, consequently, future observed flows may vary from those predicted based on the data available at the time of compiling this report and modelling. For this reason, appropriate freeboards should be adopted.



## 9.0 RPEQ CERTIFICATION

---

As Registered Professional Engineer of Queensland (RPEQ) for this project, on behalf of Legend Consultants, I certify that the modelling undertaken as part of this assessment has been undertaken by current engineering best practices as recommended in the QUDM, ARR87 and CRC Guidelines.

Name: Jason Webster

RPEQ No: 31580

Date: 15 June 2026

Signature: \_\_\_\_\_

A handwritten signature in blue ink, appearing to be 'J. Webster', written over a horizontal line.

## 10.0 REFERENCES

---

1. Institute of Public Works Engineering Australasia (QLD Division), et al, 2016. Queensland Urban Drainage Manual (QUDM), Fourth Edition. Brisbane.
2. BMT WBM, 2018 TufLOW User Manual, GIS Based 2D/1D Hydrodynamic Modelling Brisbane BMT WBM.
3. Ball, J (Ed), 2016. Australian Rainfall and Runoff. Institution of Engineers Australia, Canberra.
4. Pilgrim, D (Ed), 1987. Australian Rainfall and Runoff. Institution of Engineers Australia, Canberra.
5. State of Queensland: Department of Natural Resources and Mines, 2017. LiDAR Supply Agreement SSL\_2017\_2681.



APPENDIX

**A**

J Surveyors Detail Plan of  
Survey (Ref: JS 383-DET01-REV.A)



Unit 5/121 Newmarket Road, Windsor, 4030  
 admin@surveyors.com.au  
 Ph (07) 3117 0730

- NOTES**
1. Drawn to scale on A1 at 1:150 (A1) or 1:300 (A3)
  2. Property boundaries have not been defined by this survey. An Identification survey must be completed to confirm the exact location of the property boundaries prior to any operational works.
  3. This plan has been prepared for the exclusive use and purposes of the client as stated on this plan and should not be used by any other person or corporation and for any other purpose.
  4. Underground features have been plotted from records. Only those services as shown on this plan have been located by this survey. Prior to any construction, demolition or excavation on the site, the relevant authority should be contacted for the location of any further underground services and detailed location of all services.
  5. For flood level information impacting the subject lot, please refer to Floodwise Property Report attached to this documentation.
  6. For underground service information impacting the subject lot, please refer to Service Location Report attached to this documentation.
  7. This plan may not be photocopied unless these notes are included.
  8. JSURVEYORS accepts no responsibility for any loss or damages caused in contravention of the above.
  9. All levels are in metres on Australian Height Datum and have been derived from OPM43289 RL24.396 (AHD) via GNSS.
  10. Natural surface contours have been plotted by BCC eBmap records 2002.
  11. Contour Interval . . . 0.5m

- LEGEND**
- D Underground Stormwater Line
  - W Underground Water Line
  - S Underground Sewer Line
  - G Underground Gas Line
  - T Underground Telstra Line
  - U Underground Comms Line
  - E Underground Power Line
  - O Overhead Power Line
  - Retaining Wall
  - Fence Line
  - Top of Bank
  - Bottom of Bank
  - Major Contour (Existing)
  - Minor Contour (Existing)
  - Major Contour (Natural)
  - Minor Contour (Natural)
  - ⊙ Stormwater Manhole
  - ⊙ Fire Hydrant
  - ⊙ Water Valve
  - ⊙ Water Meter
  - ⊙ Roof Water Outlet
  - ⊙ Sewer Manhole
  - ⊙ Sewer Inspection Opening
  - ⊙ Gas Valve
  - ⊙ Gas Meter
  - ⊙ Telstra Pit
  - ⊙ Comms Pit
  - ⊙ Electrical Pillar
  - ⊙ Electrical Pit
  - ⊙ Electrical Light/Power Pole

RL25.69 (E) Eave Line  
 RL30.05 (R) Roof Line  
 RL27.81 (RL) Ridge Line

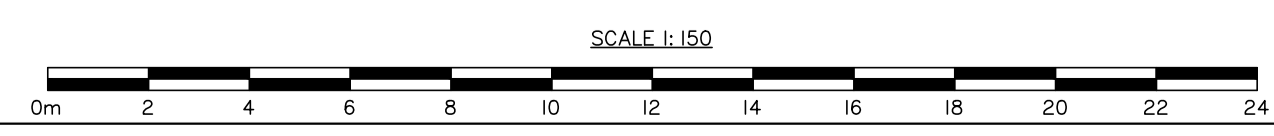
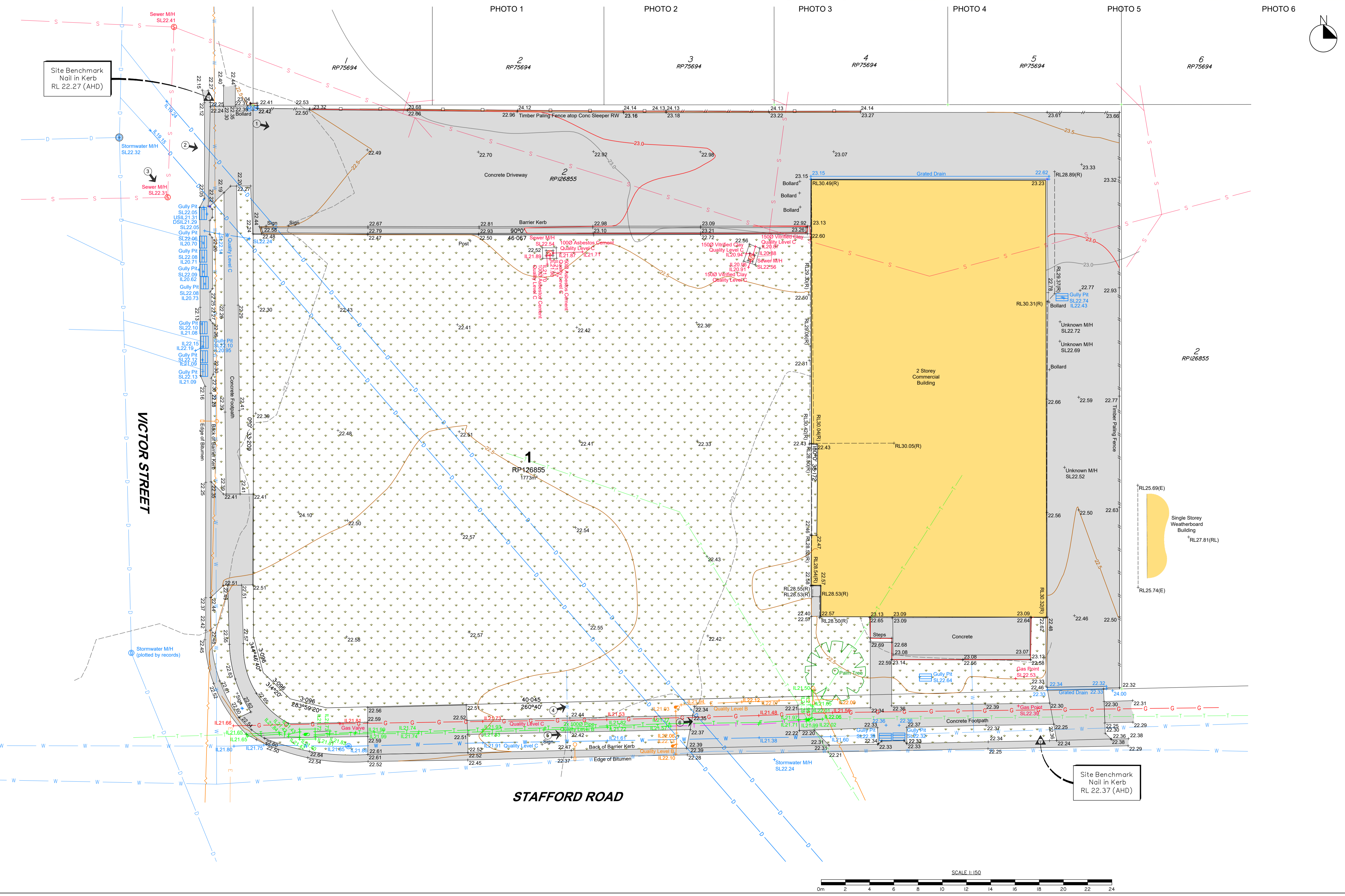
All rights reserved. No part of this document may be reproduced or transmitted in any form or by any means electronic, mechanical, photocopying, recording, or otherwise, without the written permission of J Surveyors

A	ORIGINAL ISSUE	13.04.26	QT	BC
Issue	Description	Date	Drawn	Check
Client:	SARRIS INTERNATIONAL			
Title:	Plan of Detail Survey of Lot 1 on RP126855			

437 Stafford Road, Stafford, QLD  
 Drawing No: JS 383 - DET01 - REV.A  
 Sheet No: 1 of 1



PHOTO 1 RP75694  
 PHOTO 2 RP75694  
 PHOTO 3 RP75694  
 PHOTO 4 RP75694  
 PHOTO 5 RP75694  
 PHOTO 6 RP75694





APPENDIX

**B**

Sarris, Ground Floor Plan (Ref: AS88)

**PROPERTY DESCRIPTION**

437 STAFFORD ROAD, STAFFORD  
QLD 4053.

LOT 437 AREA: 1774.00m<sup>2</sup>  
PROPOSED SITE COVER: 834.20m<sup>2</sup>  
47.02%

**GFA CALCULATIONS**

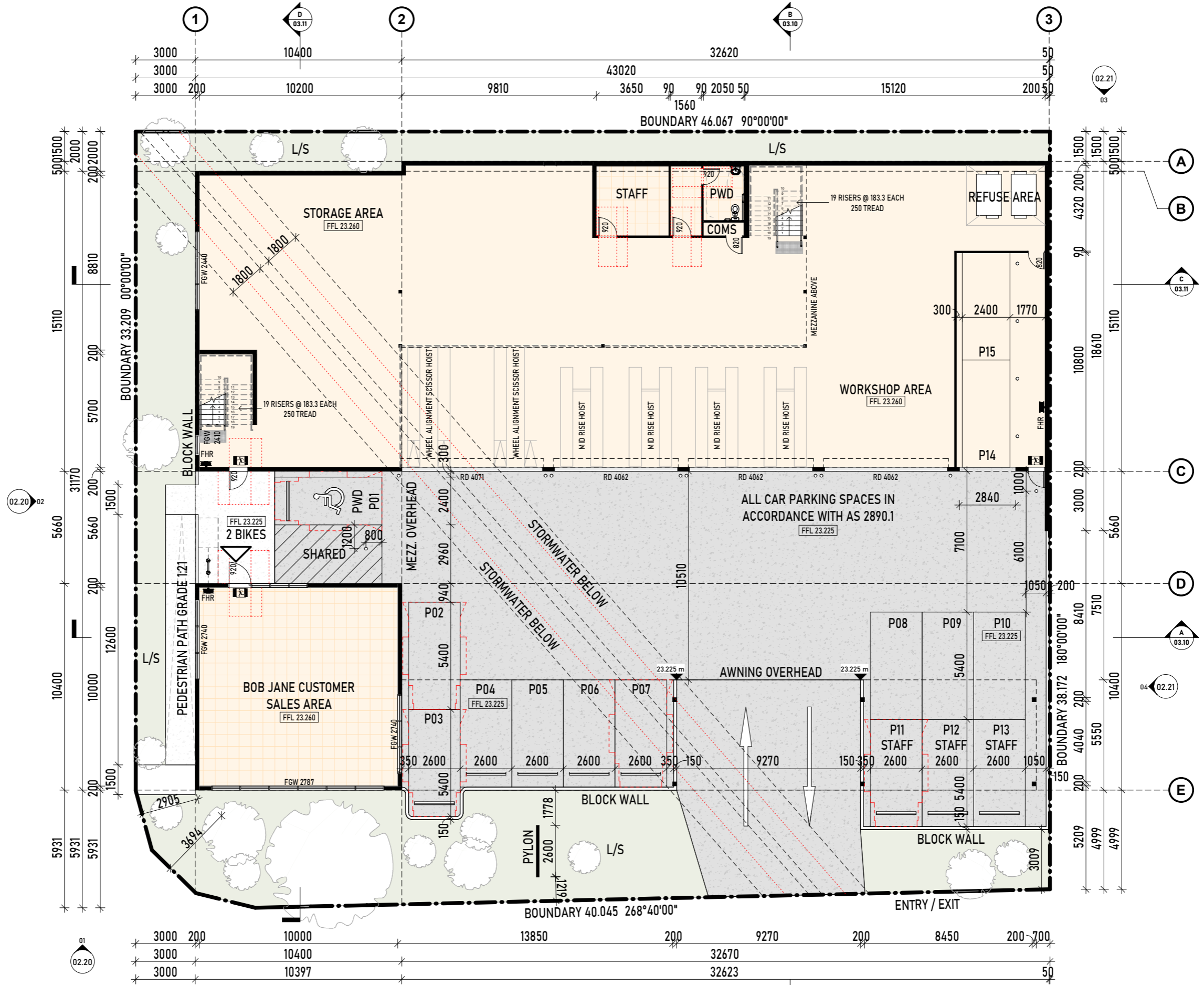
SALES AREA: 108.20m<sup>2</sup>  
WORKSHOP AREA: 666.40m<sup>2</sup>  
MEZZANINE AREA: 515.40m<sup>2</sup>  
TOTAL GFA: 1,290.00m<sup>2</sup>  
GFA / SITE COVER: 72.71%

**CAR PARKING CALCULATIONS**

1 SPACE PER 100m<sup>2</sup> of GFA  
+ 2 PER TENANCY  
1,290.00m<sup>2</sup> / 100 = 12.9  
12.9 + 2 = 14.9  
REQUIRED: 15  
PROVIDED: 15

**BIKE PARKING CALCULATIONS**

REQUIRED: 02  
PROVIDED: 02



**GENERAL NOTES**  
Architectural documents to be read in conjunction with relevant Structural, Fire Service, Mechanical, Hydraulic, Electrical, Civil and Landscaping documents. Technical drawings to be read in conjunction with appropriate sections of technical specification.  
Contractor to verify all dimensions / condition on site prior to commencement of works. Contractor to seek clarification of all inconsistencies and resolve all discrepancies on plans and site conditions prior to commencement of any works on site. Commencement of works on site by the contractor is deemed to be acceptance of all conditions and plans and any variations will be the responsibility of the contractor expense.  
Figured dimensions shall take precedence to scaled dimensions.  
Copyright of designs shown herein is retained by Allister Sarris. Written authority is required for any reproduction.  
Notify SARRIS ARCHITECTURE of any changes. No changes to occur without SARRIS approval.

No.	AMENDMENT	DATE
C	REVISED ISSUE	23.03.2026
D	CAR PARKING AMENDMENTS	23.04.2026
E	REVISED ISSUE	21.05.2026
F	PYLON REVISION	28.05.2026
G	PODIUM HEIGHT REVISION	18.06.2026

# SARRIS

DP AD 2298

**AUSTRALIA**  
A Level 27, 101 Collins Street  
Melbourne, Vic 3000 Australia  
TOTAL PROPERTY DEVELOPMENT SOLUTIONS  
E info@sarrisint.com T +61 3 9528 8999  
W www.sarrisint.com M +61 433 263 928

**SINGAPORE**  
A Level 26, PSA Building  
460 Alexandra Road, Singapore 119963  
T +65 3138 6528  
E allister@allistersarris.com  
W www.linkedin.com/profile/view

<b>BOB JANE T MART</b>	project :
437 STAFFORD ROAD, STAFFORD, QLD	address :
	description :
	Ground Floor drawing title :

# SARRIS

CORPORATE COMMERCIAL INTERIOR DESIGN

ISSUE PRELIMINARY			
Project No.	Drawing No.		
<b>AS88</b>		🕒	
Total Area	First Drawn	Option	Revision
April 2025	Date Issued	Option	Revision
		Paper Size	
		<b>A3</b>	



APPENDIX

**C**

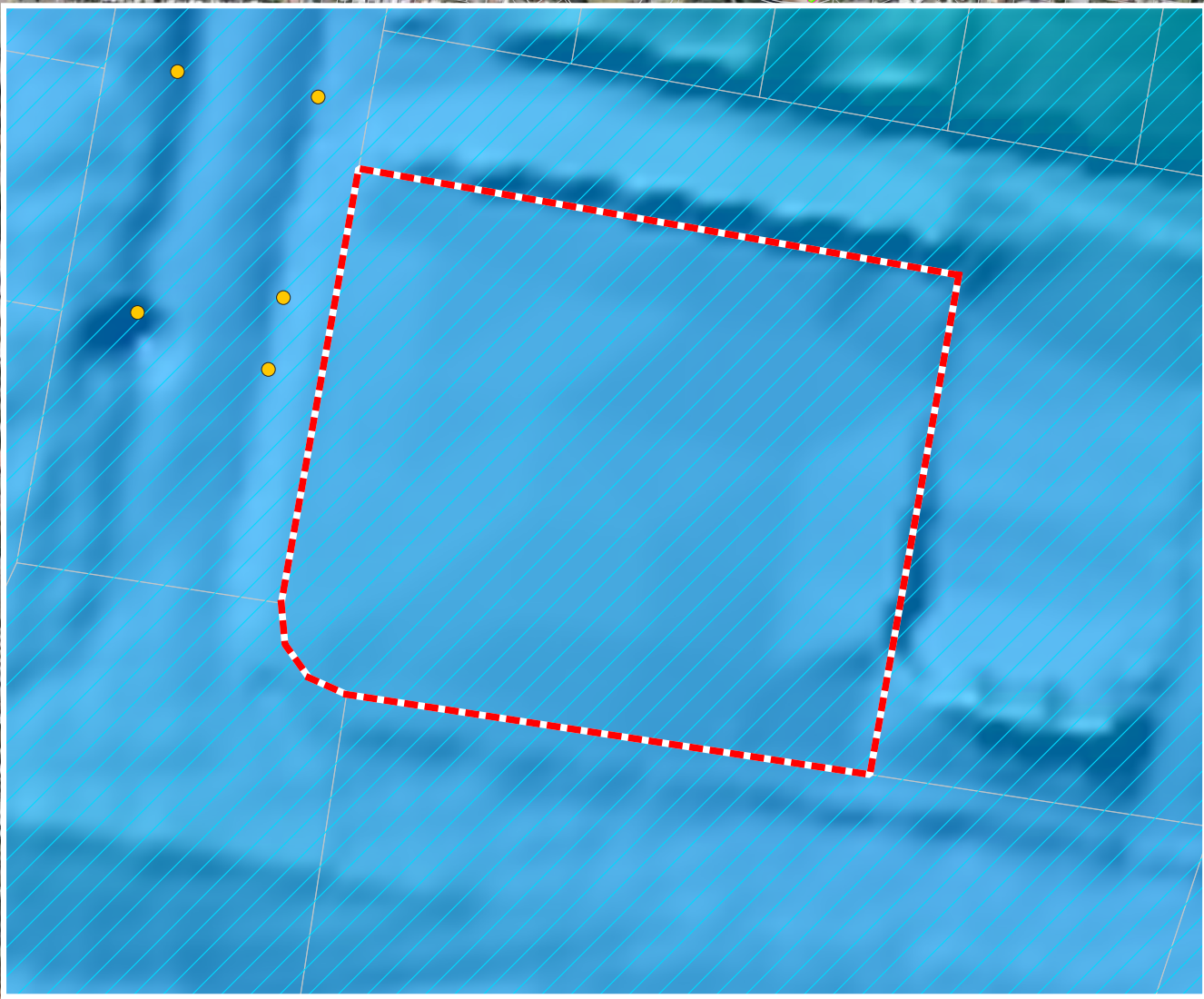
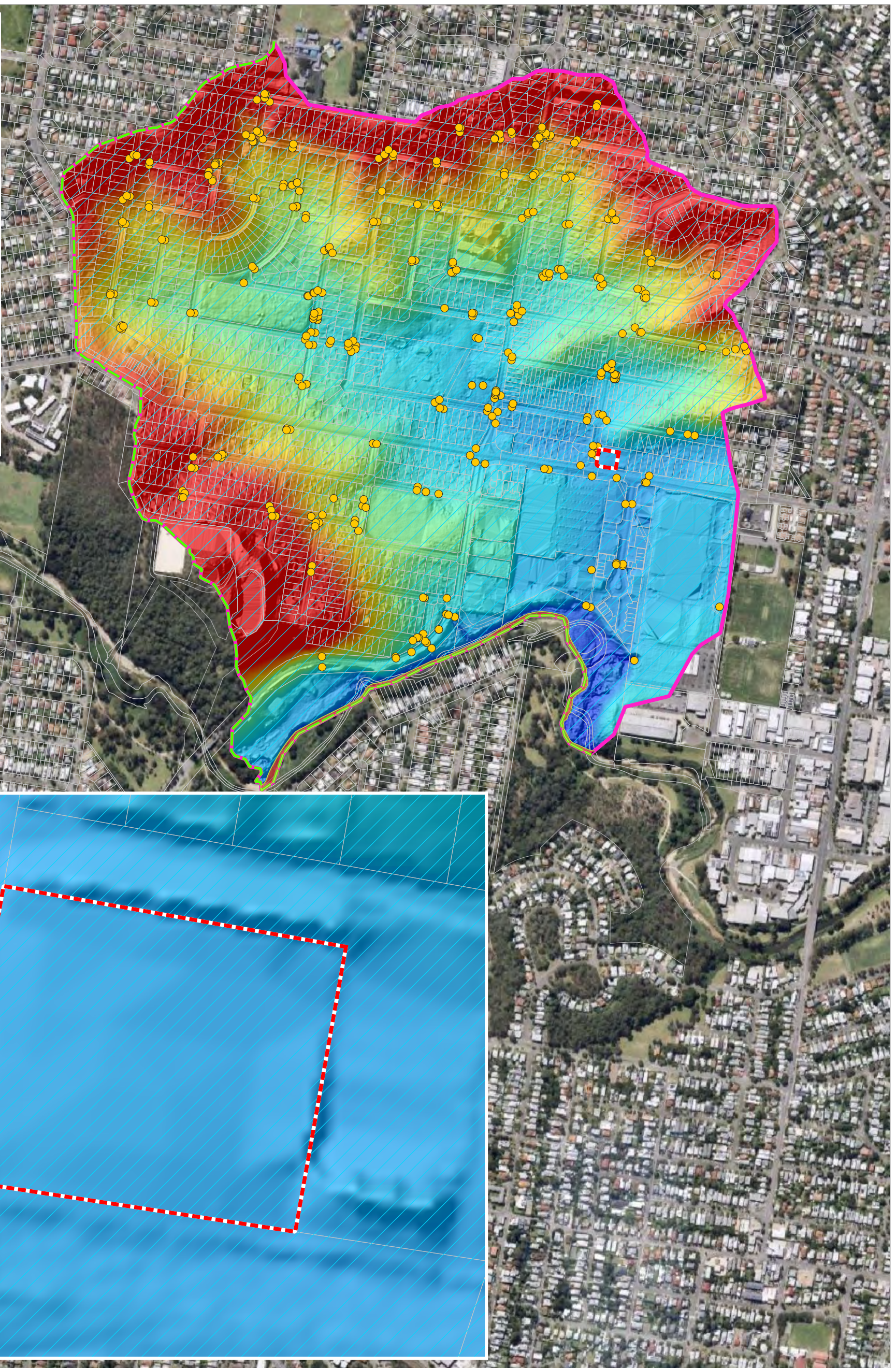
# TUFLOW Model Configuration Plans

# Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- 1d\_Virtual Pits
- Rainfall Area

## Surface Elevation (mAHD)

- 15.0
- 20.0
- 25.0
- 30.0
- 35.0
- 40.0
- 45.0
- 50.0



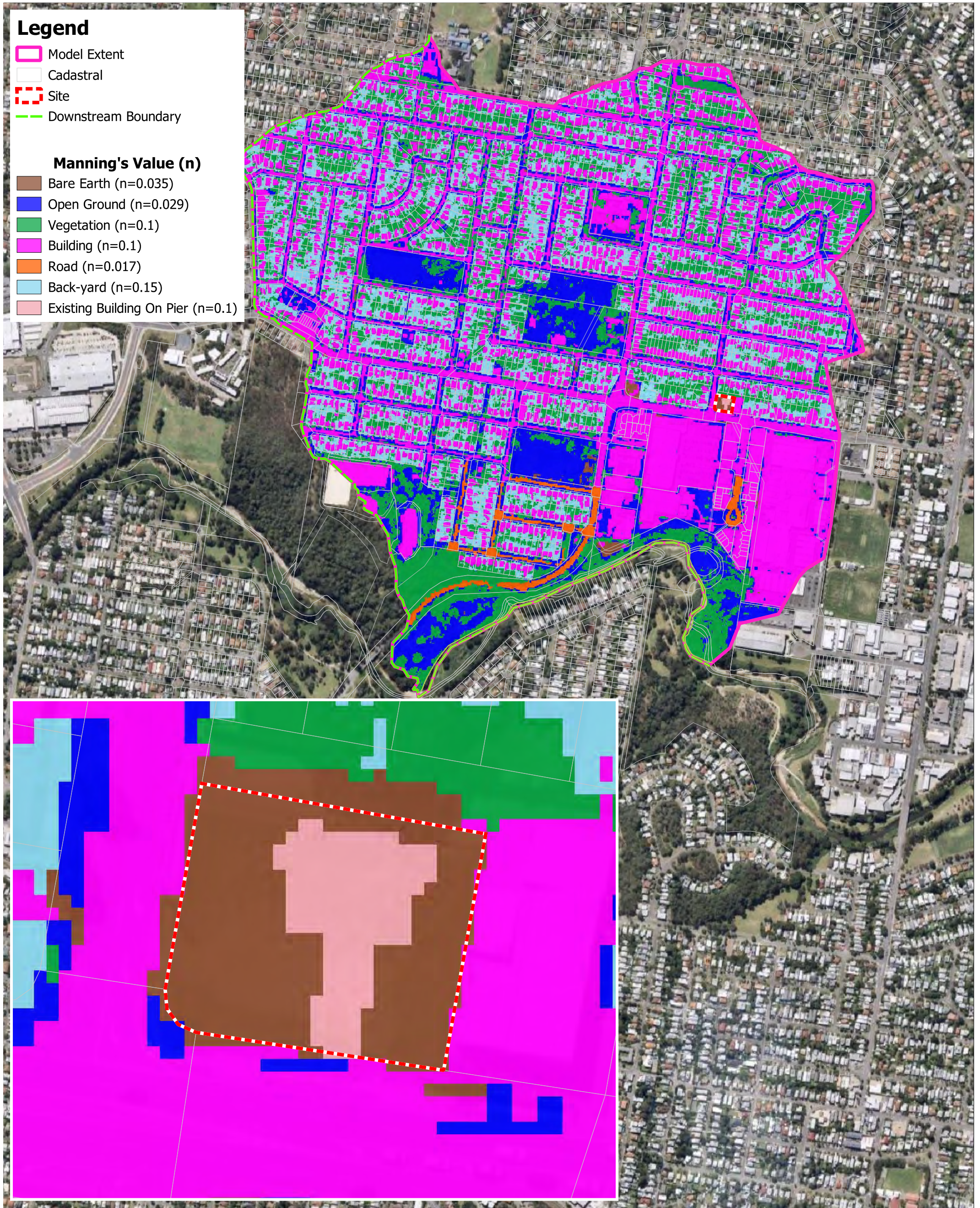
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> </tr> <tr> <td style="text-align: center;">A</td> <td style="text-align: center;">12.06.26</td> <td style="text-align: center;">FOR DISCUSSION</td> </tr> <tr> <td style="text-align: center;">ISSUE No.</td> <td style="text-align: center;">DATE</td> <td style="text-align: center;">AMENDMENT</td> </tr> </table>						A	12.06.26	FOR DISCUSSION	ISSUE No.	DATE	AMENDMENT	Client  <b>SARRIS INTERNATIONAL PTY LTD</b>	PROJECT  <b>437 Stafford Road Staffor</b>	PROJECT NO.  <b>LC26013</b>
A	12.06.26	FOR DISCUSSION												
ISSUE No.	DATE	AMENDMENT												
			Consultant   <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	TITLE  <b>Pre - Development TuFLOW Model Features</b>	DWG NO.  <b>01</b>									
DESIGN DP	DRAWN AWE	APPROVED RM	SCALE: 1:7.000 <div style="display: flex; align-items: center; justify-content: center; margin-top: 5px;"> <span style="margin-right: 10px;">0</span> <span style="margin-right: 10px;">0.1</span> <span style="margin-right: 10px;">0.2</span> <span style="margin-right: 10px;">0.3</span> <span style="margin-right: 10px;">0.4</span> <span>0.5 km</span> </div>											
					ISSUE  <b>A</b>									


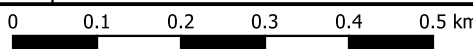
# Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary










## Manning's Value (n)

- Bare Earth (n=0.035)
- Open Ground (n=0.029)
- Vegetation (n=0.1)
- Building (n=0.1)
- Road (n=0.017)
- Back-yard (n=0.15)
- Existing Building On Pier (n=0.1)






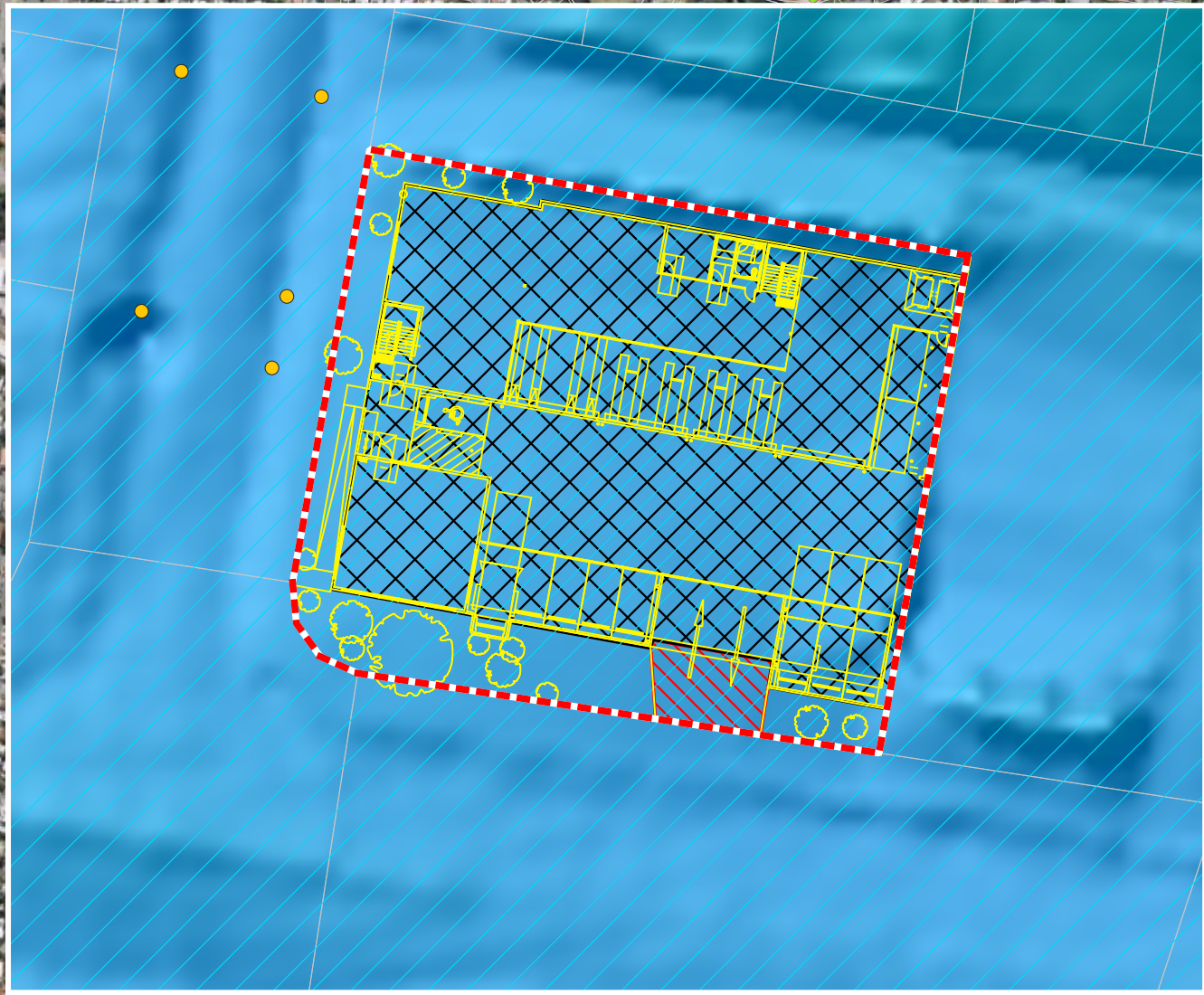
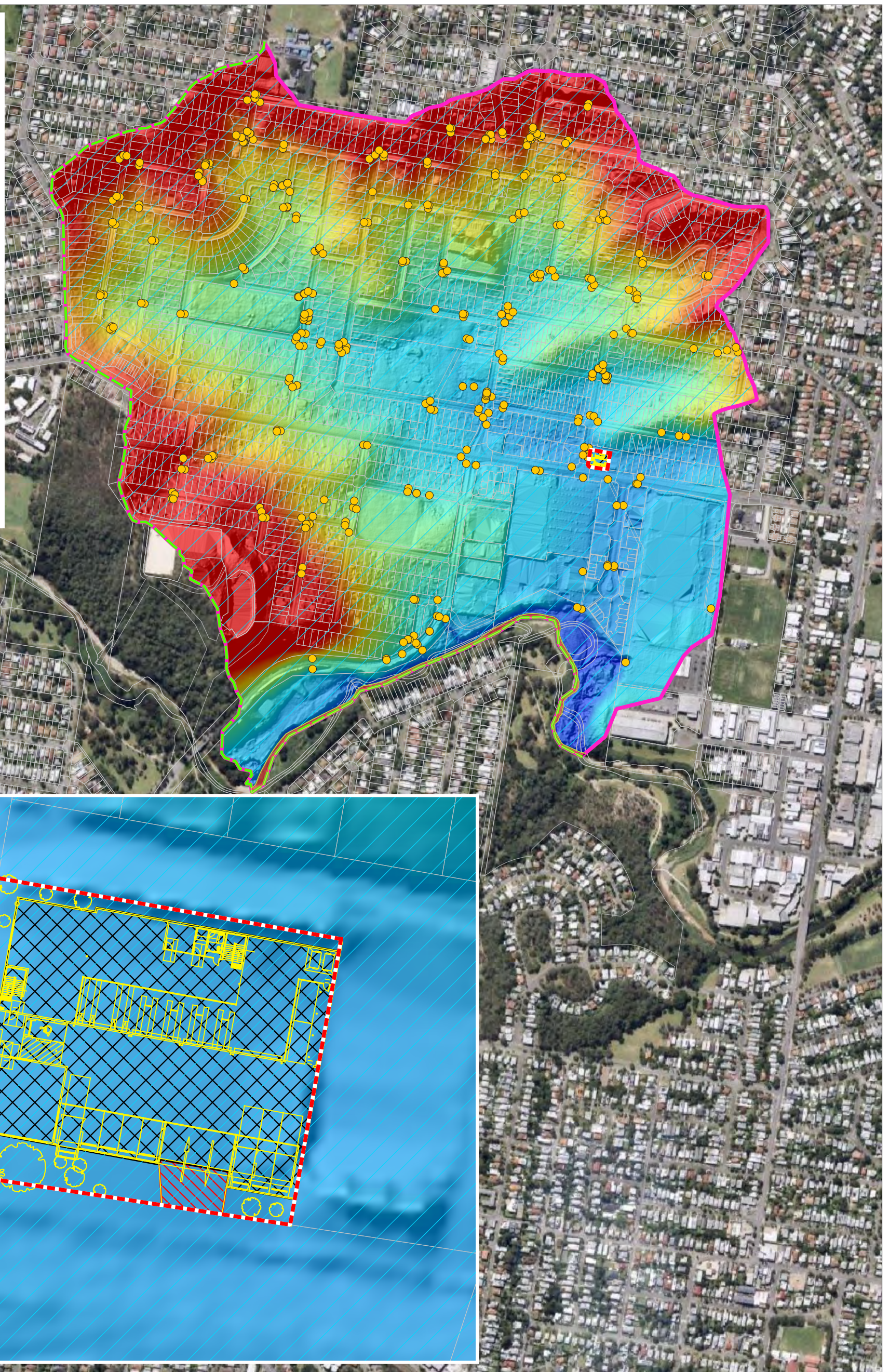
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 Legend Consultants Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	Pre - Development TuFLOW Manning Map	02
DESIGN	DRAWN	APPROVED			
DP	AWE	RM			A
			SCALE: 1:7.000		
					


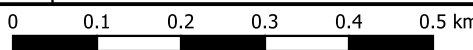
### Legend

-  Model Extent
-  Cadastral
-  Site
-  Downstream Boundary
-  1d\_Virtual Pits
-  Rainfall Area
-  Proposed Building on Pier
-  Proposed Ramp
-  Layout

### Surface Elevation (mAHD)

-  15.0
-  20.0
-  25.0
-  30.0
-  35.0
-  40.0
-  45.0
-  50.0



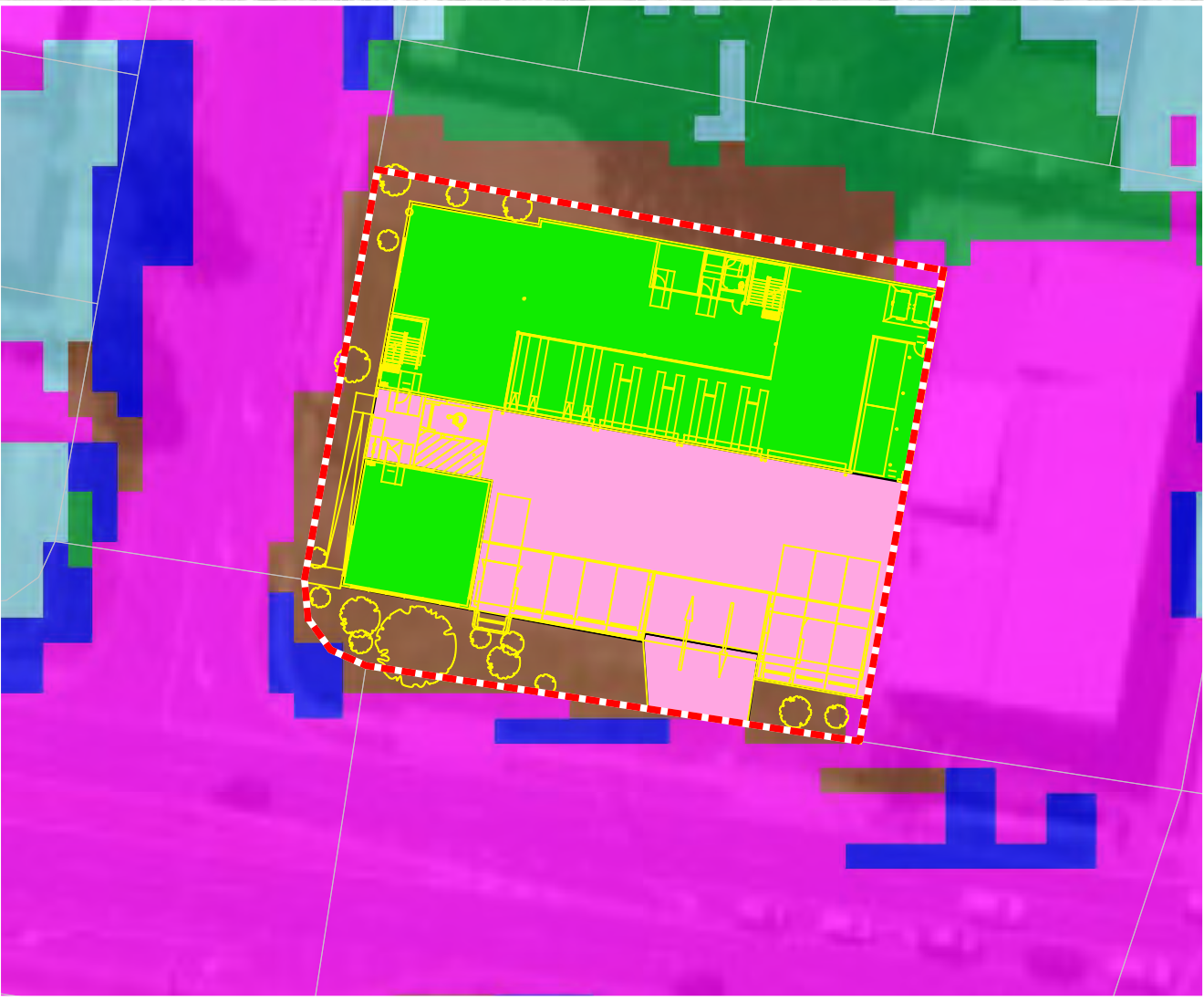
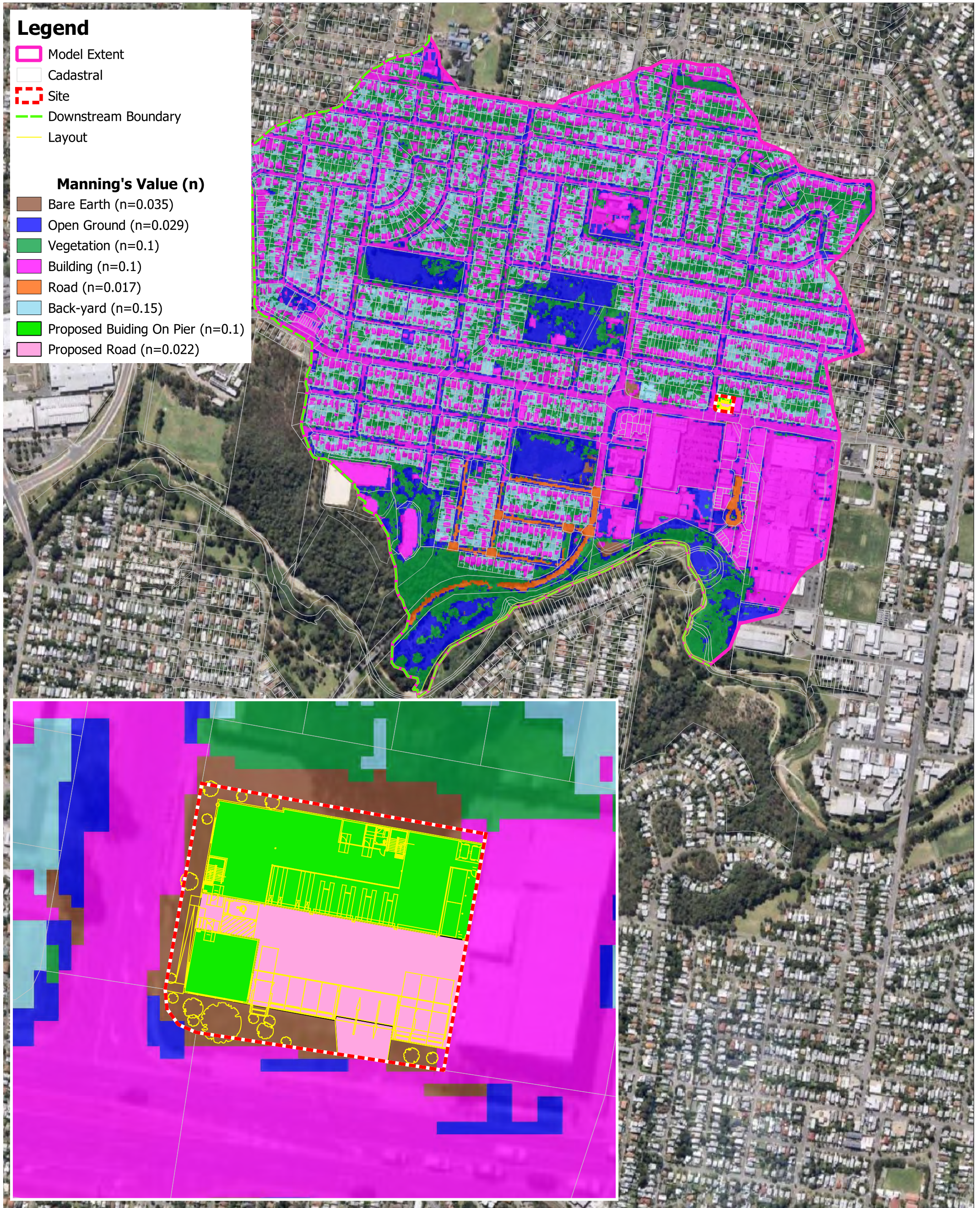
			Client	PROJECT	PROJECT NO.
			<b>SARRIS INTERNATIONAL PTY LTD</b>	<b>437 Stafford Road Staffor</b>	<b>LC26013</b>
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	<b>Post - Development TuFLOW Model Features</b>	<b>03</b>
DESIGN	DRAWN	APPROVED			ISSUE
DP	AWE	RM			<b>A</b>
			SCALE: 1:7,000 		


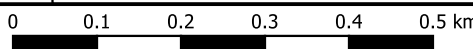
### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout

### Manning's Value (n)

- Bare Earth (n=0.035)
- Open Ground (n=0.029)
- Vegetation (n=0.1)
- Building (n=0.1)
- Road (n=0.017)
- Back-yard (n=0.15)
- Proposed Building On Pier (n=0.1)
- Proposed Road (n=0.022)



			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 Legend Consultants Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	Post - Development TuFLOW Manning Map	04
DESIGN	DRAWN	APPROVED			ISSUE
DP	AWE	RM			A
			SCALE: 1:7.000 		



APPENDIX

**D**

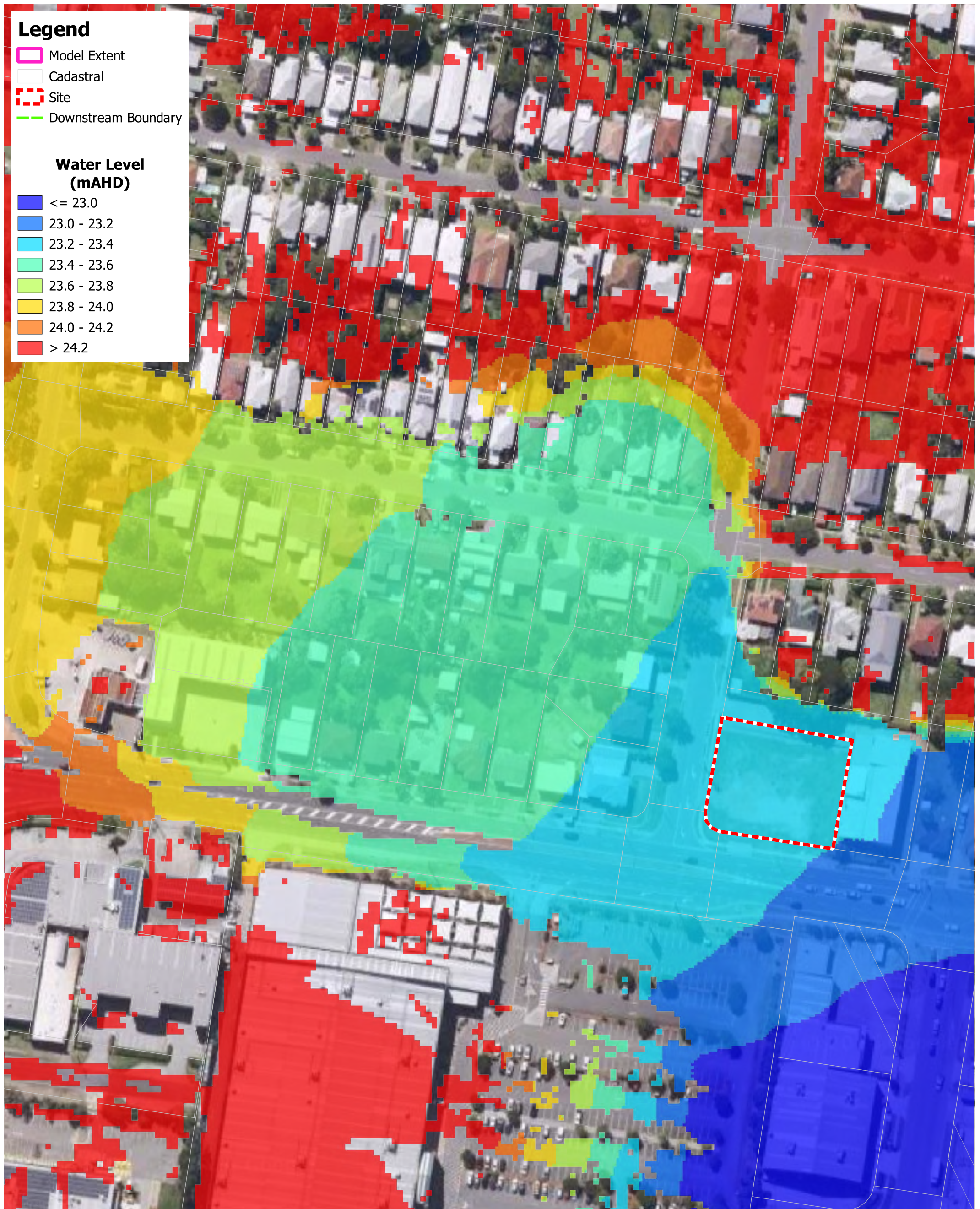
# Pre-Development Flood Mapping Results

### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary

### Water Level (mAHd)

- <= 23.0
- 23.0 - 23.2
- 23.2 - 23.4
- 23.4 - 23.6
- 23.6 - 23.8
- 23.8 - 24.0
- 24.0 - 24.2
- > 24.2



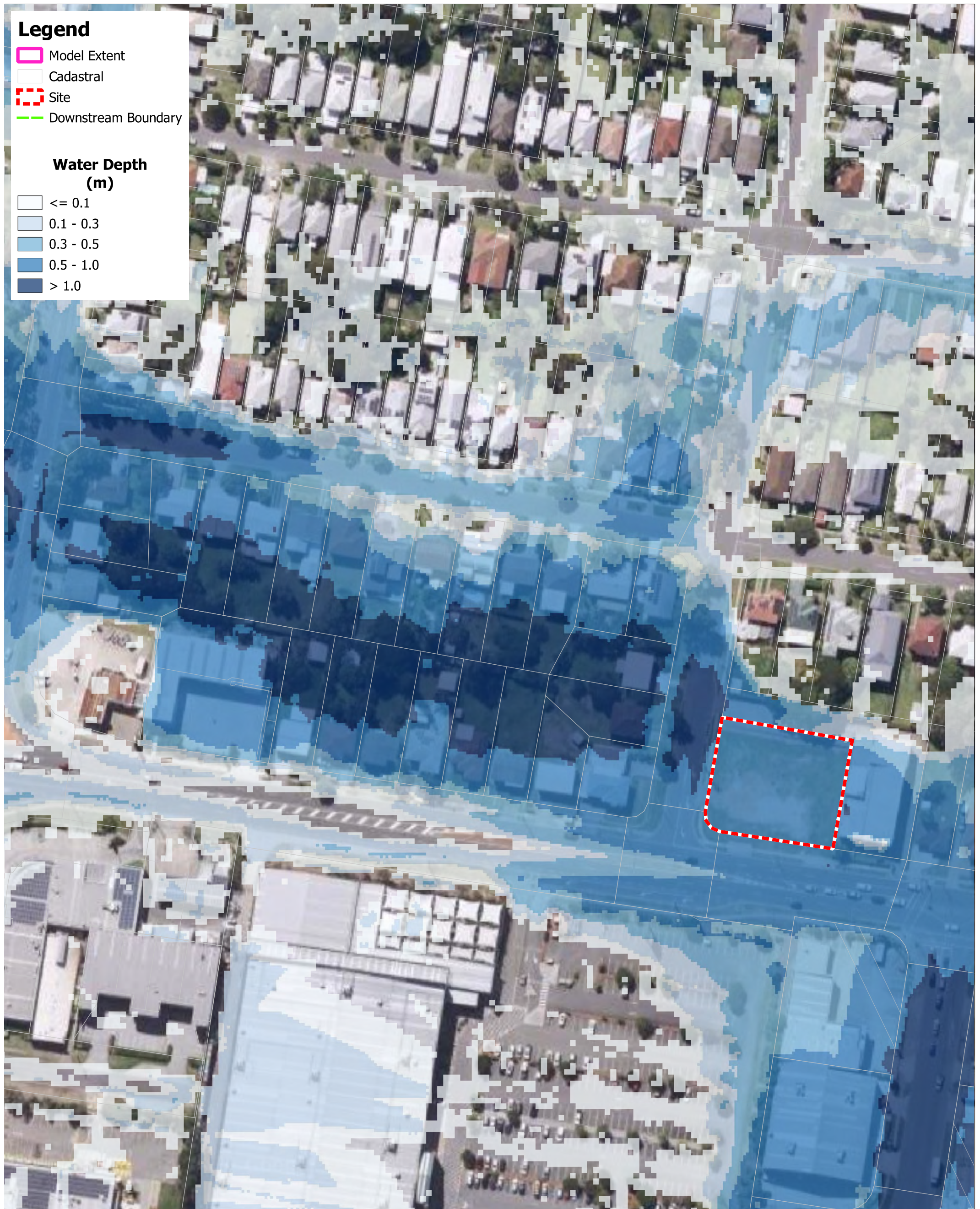
			<b>Client</b>	<b>PROJECT</b>	<b>PROJECT NO.</b>
			<b>SARRIS INTERNATIONAL PTY LTD</b>	<b>437 Stafford Road Staffor</b>	<b>LC26013</b>
<b>A</b>	<b>12.06.26</b>	<b>FOR DISCUSSION</b>			
<b>ISSUE No.</b>	<b>DATE</b>	<b>AMENDMENT</b>	<b>Consultant</b>	<b>TITLE</b>	<b>DWG NO.</b>
			<b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	<b>PRE-DEVELOPMENT 1%AEP FLOOD WATER LEVEL</b>	<b>A01</b>
<b>DESIGN</b>	<b>DRAWN</b>	<b>APPROVED</b>			<b>ISSUE</b>
<b>DP</b>	<b>AWE</b>	<b>RM</b>			<b>A</b>
			<b>SCALE: 1:1,200</b>		


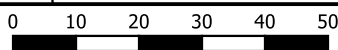
### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary

### Water Depth (m)

- <= 0.1
- 0.1 - 0.3
- 0.3 - 0.5
- 0.5 - 1.0
- > 1.0



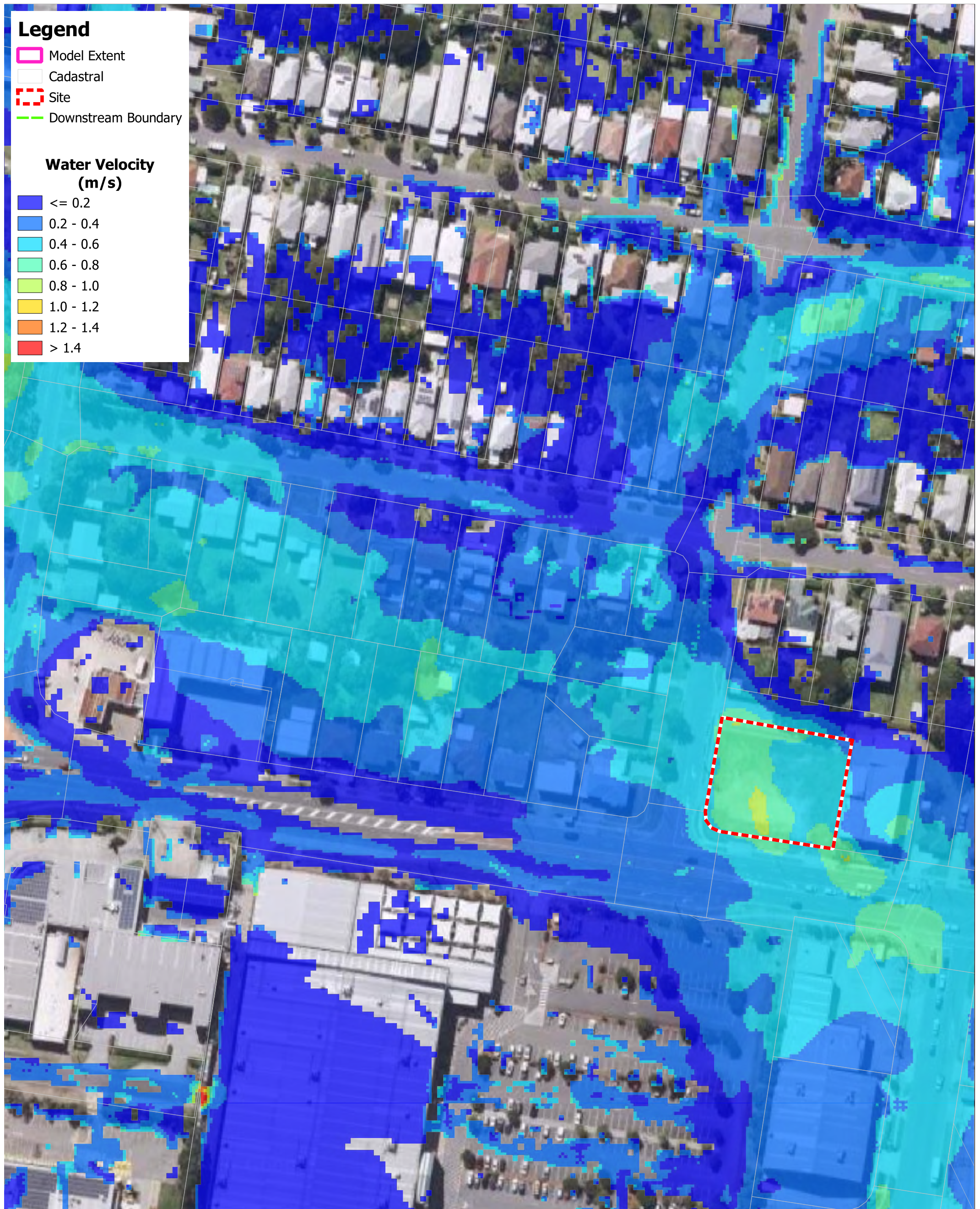
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 Legend Consultants Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	PRE-DEVELOPMENT 1%AEP FLOOD WATER DEPTH	A02
DESIGN	DRAWN	APPROVED			
DP	AWE	RM	SCALE: 1:1.200		
			0    10    20    30    40    50 m 		
			ISSUE <b>A</b>		


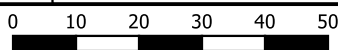
### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary





### Water Velocity (m/s)

- <= 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1.0
- 1.0 - 1.2
- 1.2 - 1.4
- > 1.4









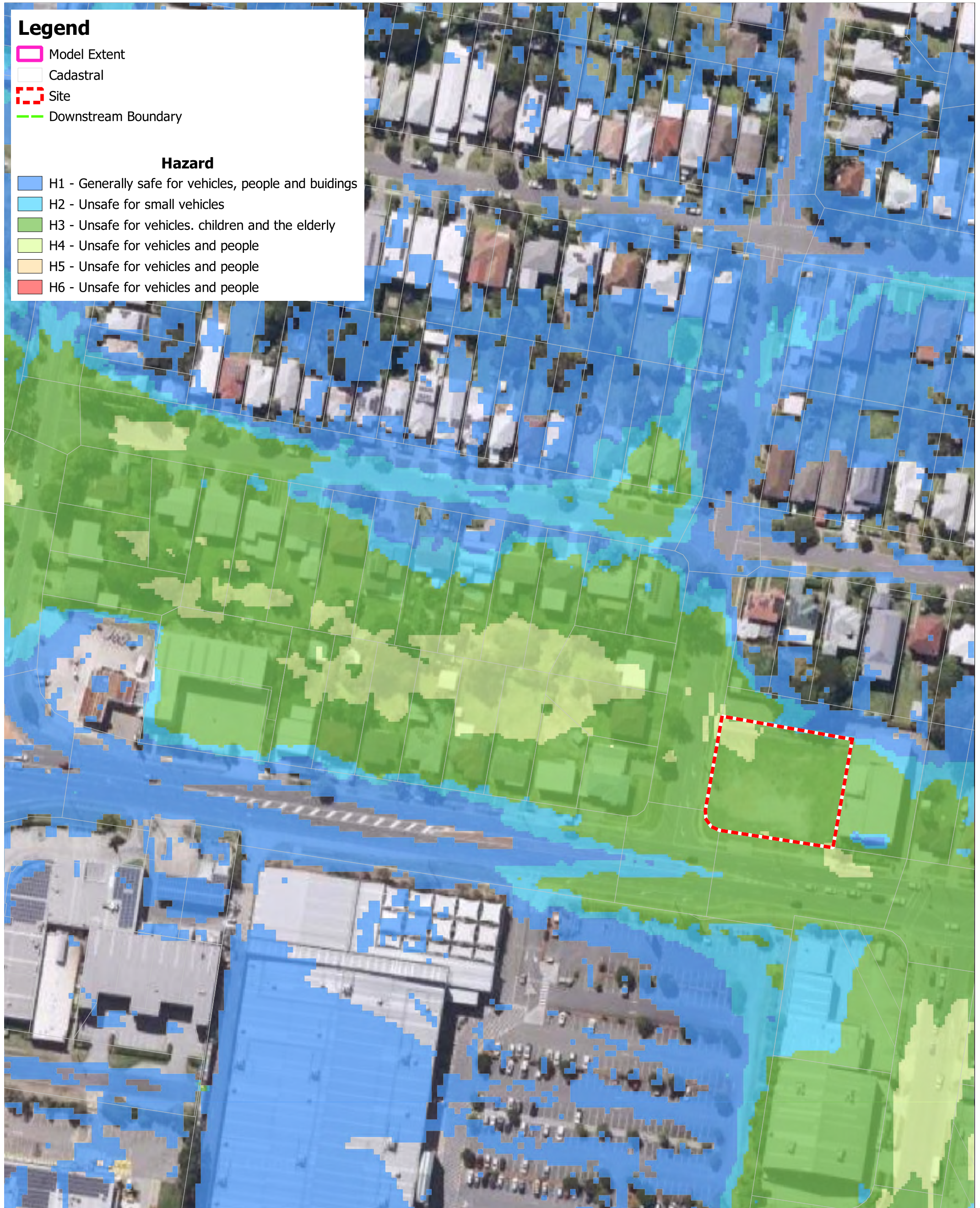
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	PRE-DEVELOPMENT 1%AEP FLOOD WATER VELOCITY	A03
DESIGN	DRAWN	APPROVED			ISSUE
DP	AWE	RM			A
			SCALE: 1:1.200		
			0    10    20    30    40    50 m 		


# Legend

-  Model Extent
-  Cadastral
-  Site
-  Downstream Boundary

## Hazard

-  H1 - Generally safe for vehicles, people and buidings
-  H2 - Unsafe for small vehicles
-  H3 - Unsafe for vehicles. children and the elderly
-  H4 - Unsafe for vehicles and people
-  H5 - Unsafe for vehicles and people
-  H6 - Unsafe for vehicles and people



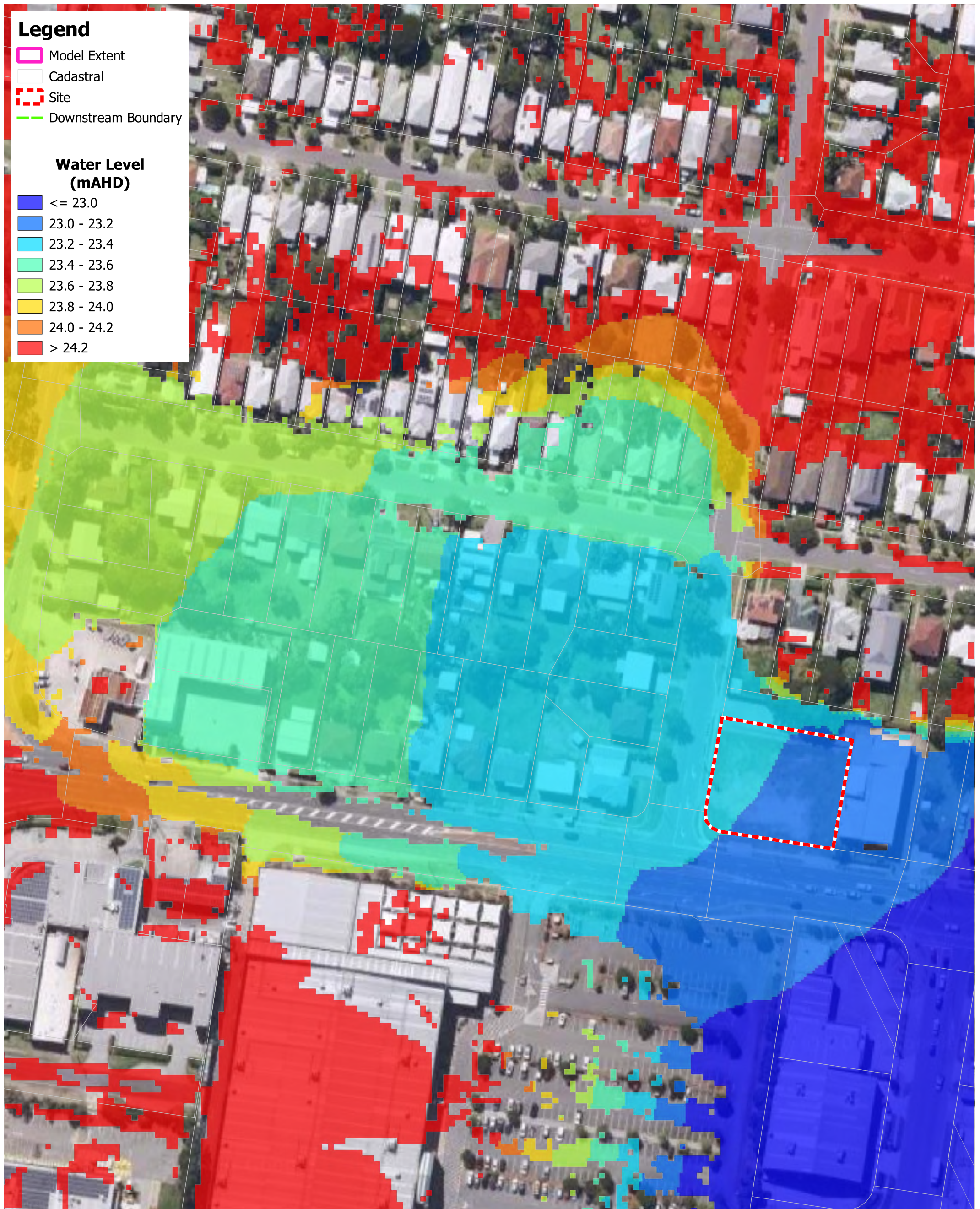
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	PRE-DEVELOPMENT 1%AEP FLOOD HAZARD	A04
DESIGN	DRAWN	APPROVED			ISSUE
DP	AWE	RM			A
			SCALE: 1:1.200      0   10   20   30   40   50 m		


### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary

### Water Level (mAHD)

- <= 23.0
- 23.0 - 23.2
- 23.2 - 23.4
- 23.4 - 23.6
- 23.6 - 23.8
- 23.8 - 24.0
- 24.0 - 24.2
- > 24.2



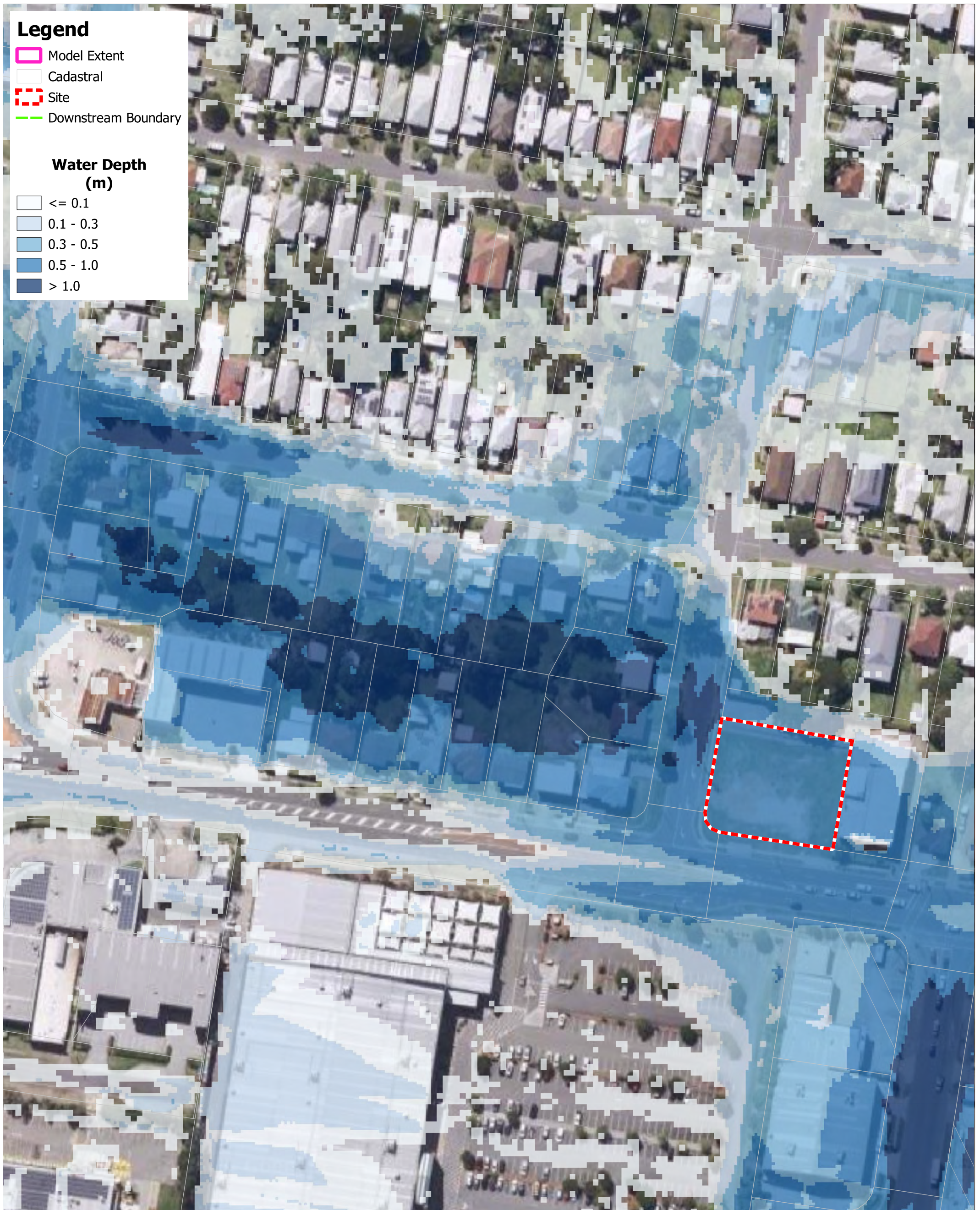
			Client <b>SARRIS INTERNATIONAL PTY LTD</b>	PROJECT <b>437 Stafford Road Staffor</b>	PROJECT NO. <b>LC26013</b>
A	12.06.26	FOR DISCUSSION		Consultant  75 Barden Ridge Road, Reedy Creek, QLD 4227	TITLE <b>PRE-DEVELOPMENT 2%AEP FLOOD WATER LEVEL</b>
ISSUE No.	DATE	AMENDMENT			
DESIGN DP	DRAWN AWE	APPROVED RM	SCALE: 1:1.200 <span style="display: inline-block; width: 100px; border-bottom: 1px solid black; position: relative; top: -5px;">0 10 20 30 40 50 m</span>		
			ISSUE <b>A</b>		


### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary

### Water Depth (m)

- <= 0.1
- 0.1 - 0.3
- 0.3 - 0.5
- 0.5 - 1.0
- > 1.0



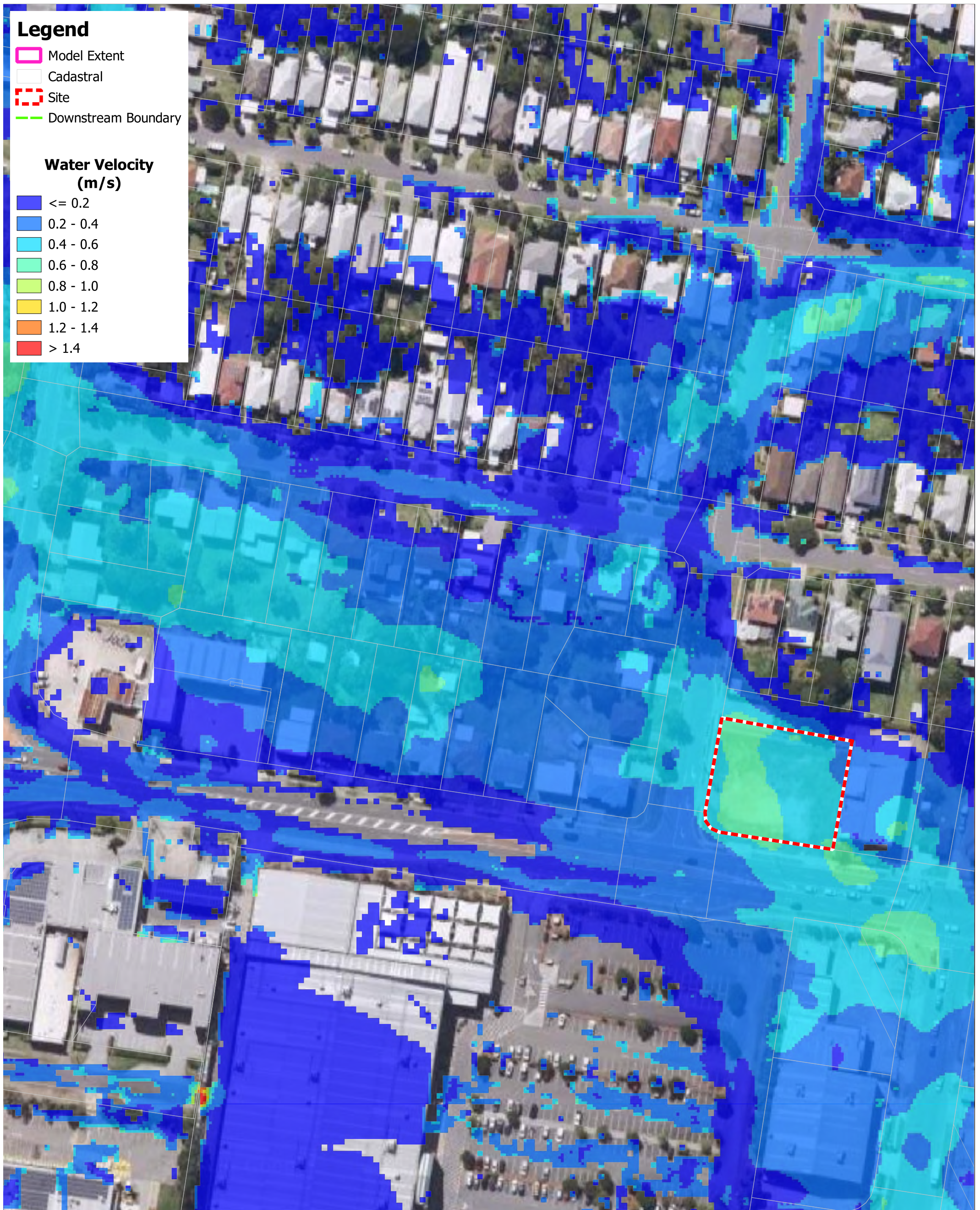
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	PRE-DEVELOPMENT 2%AEP FLOOD WATER DEPTH	A06
DESIGN	DRAWN	APPROVED	SCALE: 1:1.200      0   10   20   30   40   50 m		
DP	AWE	RM			



### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary





### Water Velocity (m/s)

- <= 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1.0
- 1.0 - 1.2
- 1.2 - 1.4
- > 1.4









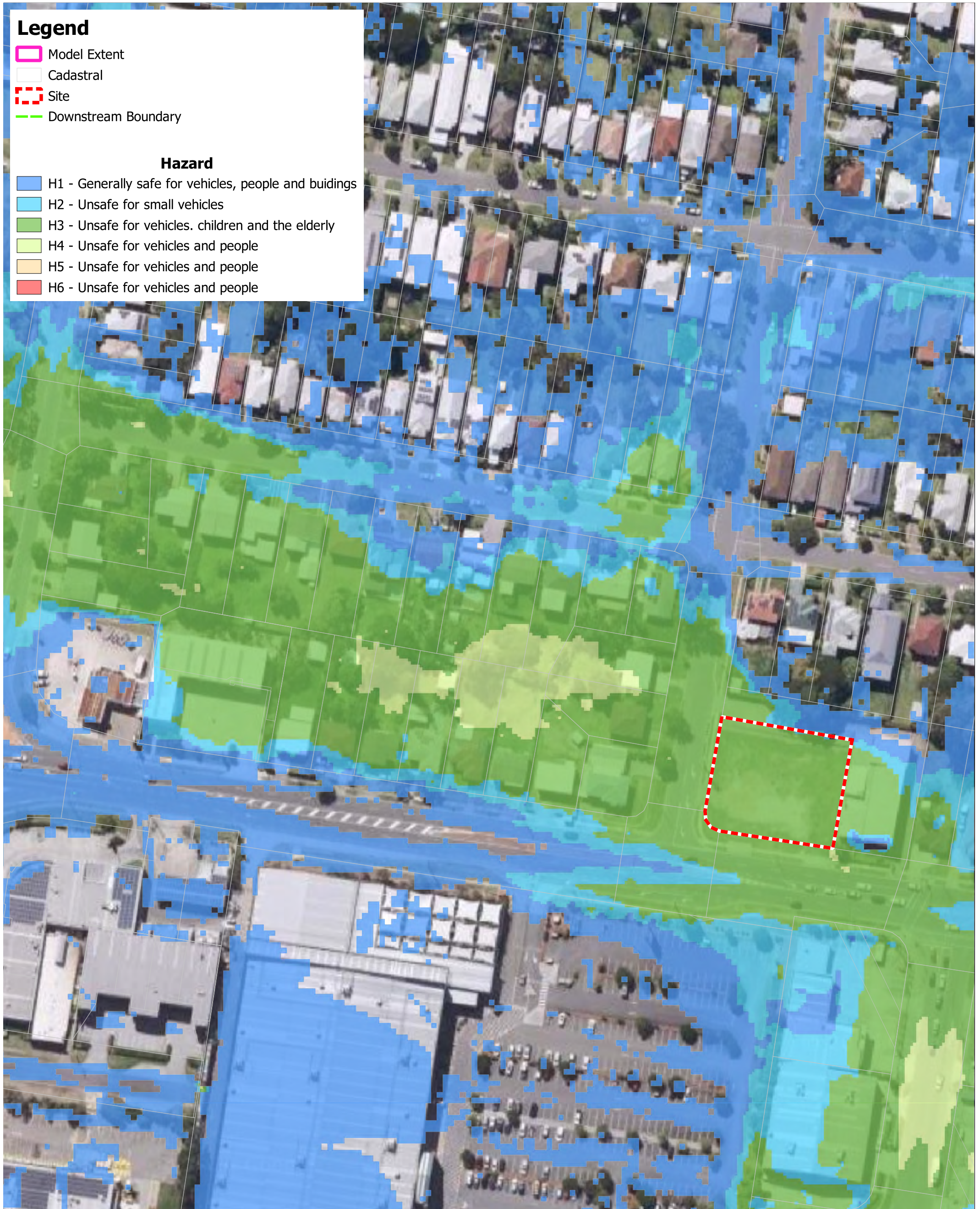
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	PRE-DEVELOPMENT 2%AEP FLOOD WATER VELOCITY	A07
DESIGN	DRAWN	APPROVED			ISSUE
DP	AWE	RM			A
			SCALE: 1:1,200		
			0    10    20    30    40    50 m 		


# Legend

-  Model Extent
-  Cadastral
-  Site
-  Downstream Boundary

## Hazard

-  H1 - Generally safe for vehicles, people and buidings
-  H2 - Unsafe for small vehicles
-  H3 - Unsafe for vehicles. children and the elderly
-  H4 - Unsafe for vehicles and people
-  H5 - Unsafe for vehicles and people
-  H6 - Unsafe for vehicles and people



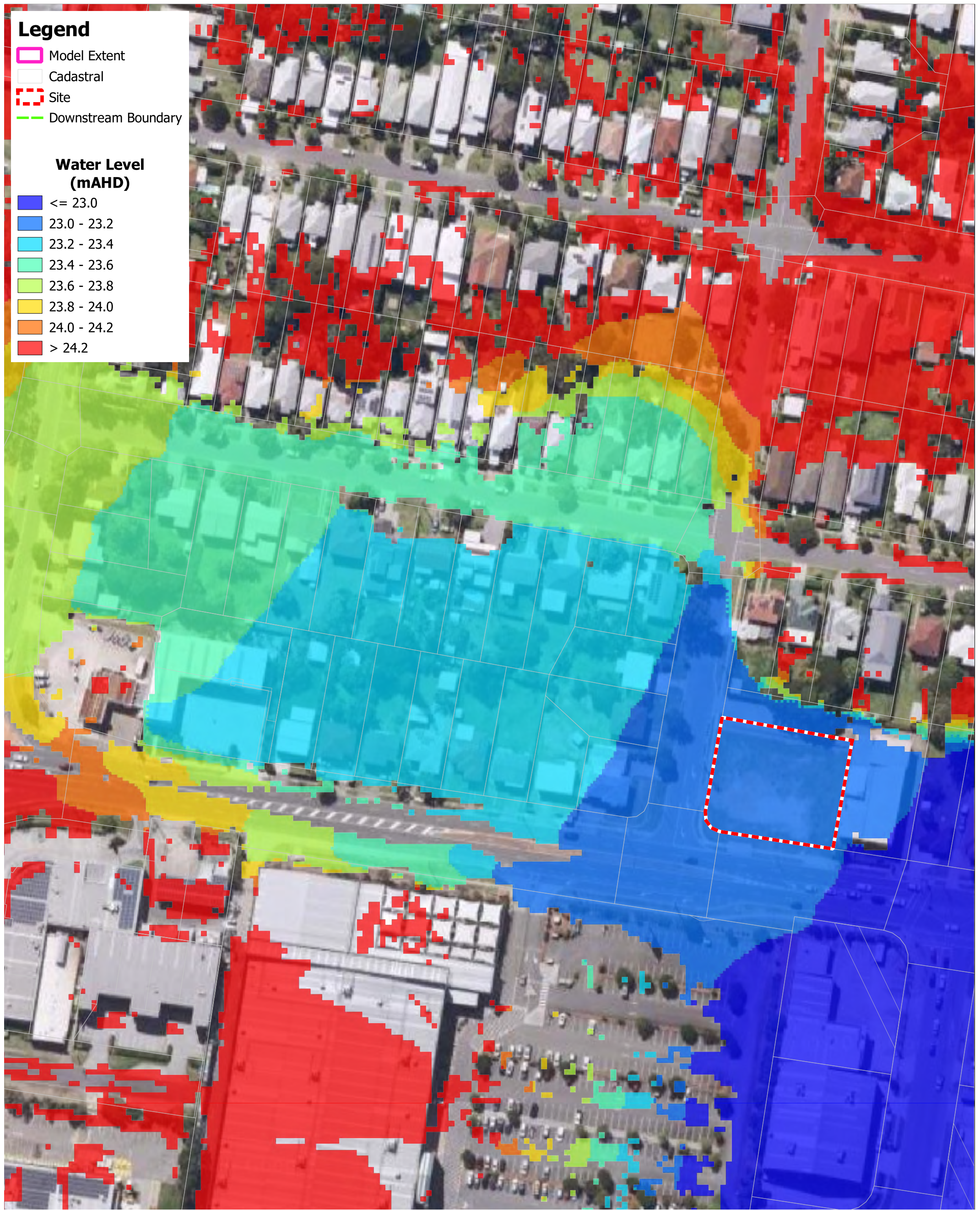
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	<b>PRE-DEVELOPMENT                  2%AEP                  FLOOD HAZARD</b>	A08
DESIGN	DRAWN	APPROVED			
DP	AWE	RM			A
			SCALE: 1:1.200      0   10   20   30   40   50 m		


### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary

### Water Level (mAHd)

- <= 23.0
- 23.0 - 23.2
- 23.2 - 23.4
- 23.4 - 23.6
- 23.6 - 23.8
- 23.8 - 24.0
- 24.0 - 24.2
- > 24.2



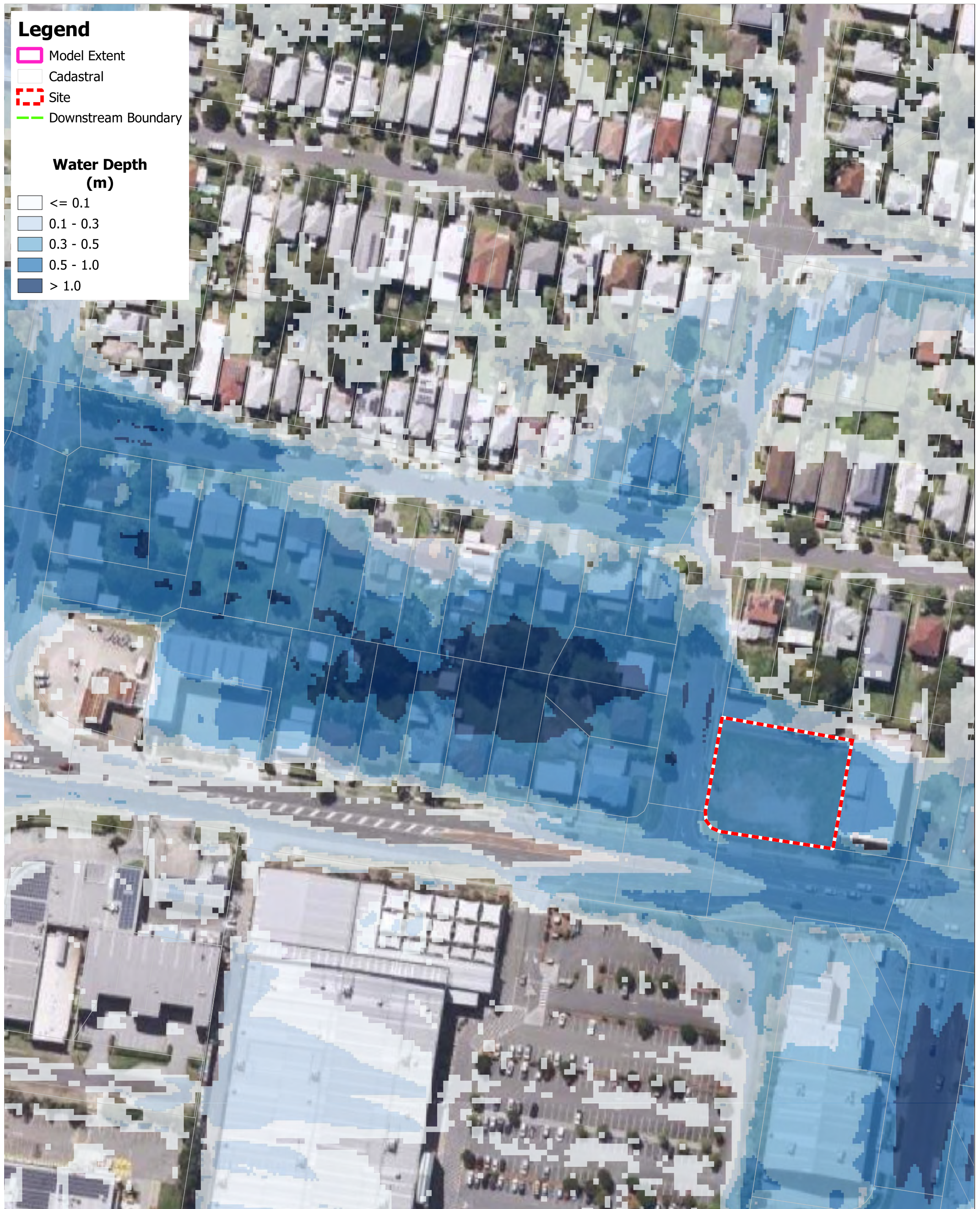
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	PRE-DEVELOPMENT 5%AEP FLOOD WATER LEVEL	A09
DESIGN	DRAWN	APPROVED			ISSUE
DP	AWE	RM			A
			SCALE: 1:1.200 <div style="display: flex; align-items: center; justify-content: center; margin-top: 5px;"> <span style="margin-right: 5px;">0</span> <span style="margin-right: 5px;">10</span> <span style="margin-right: 5px;">20</span> <span style="margin-right: 5px;">30</span> <span style="margin-right: 5px;">40</span> <span style="margin-right: 5px;">50 m</span> </div>		


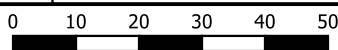
# Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary

## Water Depth (m)

- <= 0.1
- 0.1 - 0.3
- 0.3 - 0.5
- 0.5 - 1.0
- > 1.0



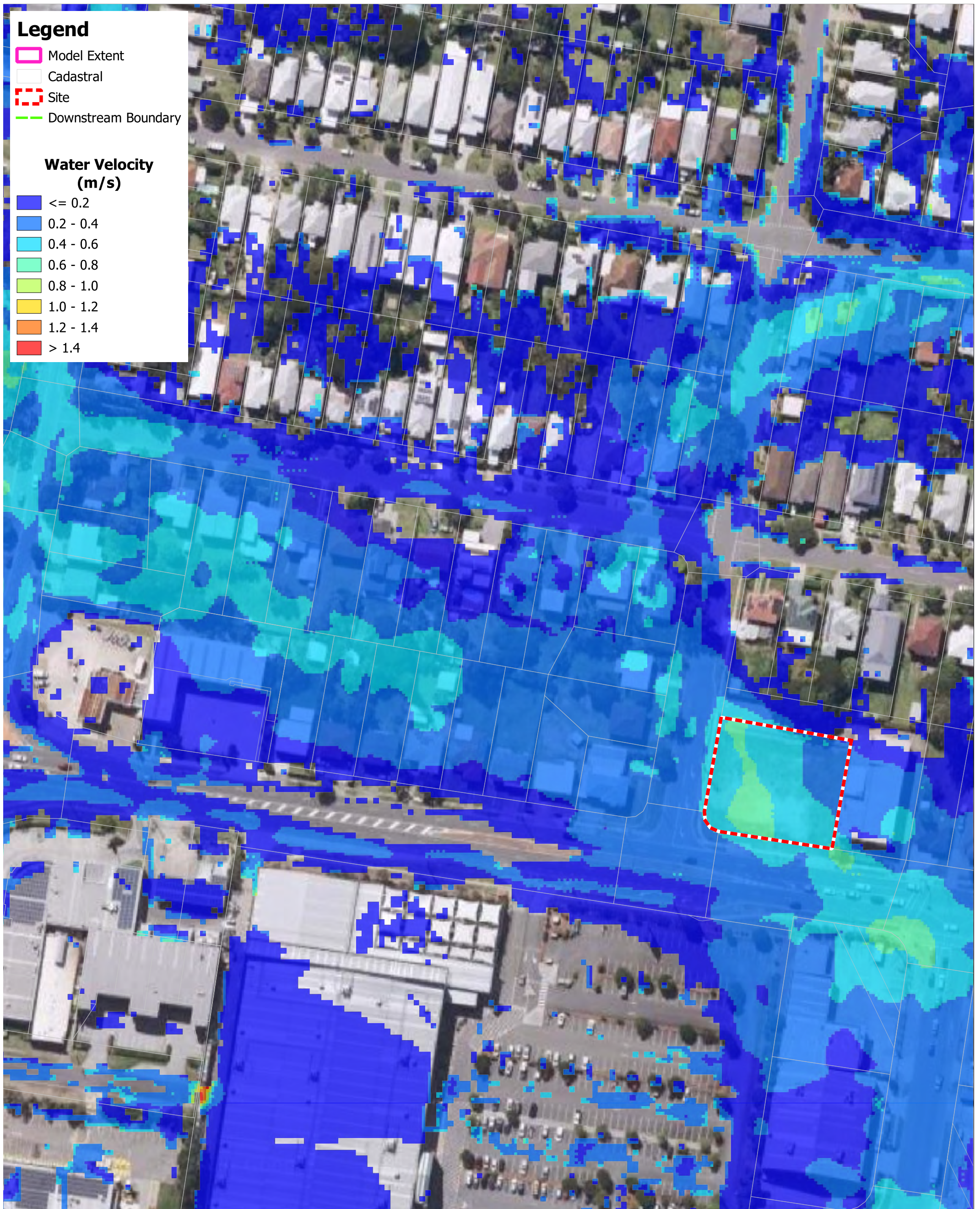
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 Legend Consultants Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	PRE-DEVELOPMENT 5%AEP FLOOD WATER DEPTH	A10
DESIGN	DRAWN	APPROVED			
DP	AWE	RM	0 10 20 30 40 50 m 		A


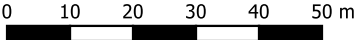
### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary





### Water Velocity (m/s)

- <= 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1.0
- 1.0 - 1.2
- 1.2 - 1.4
- > 1.4









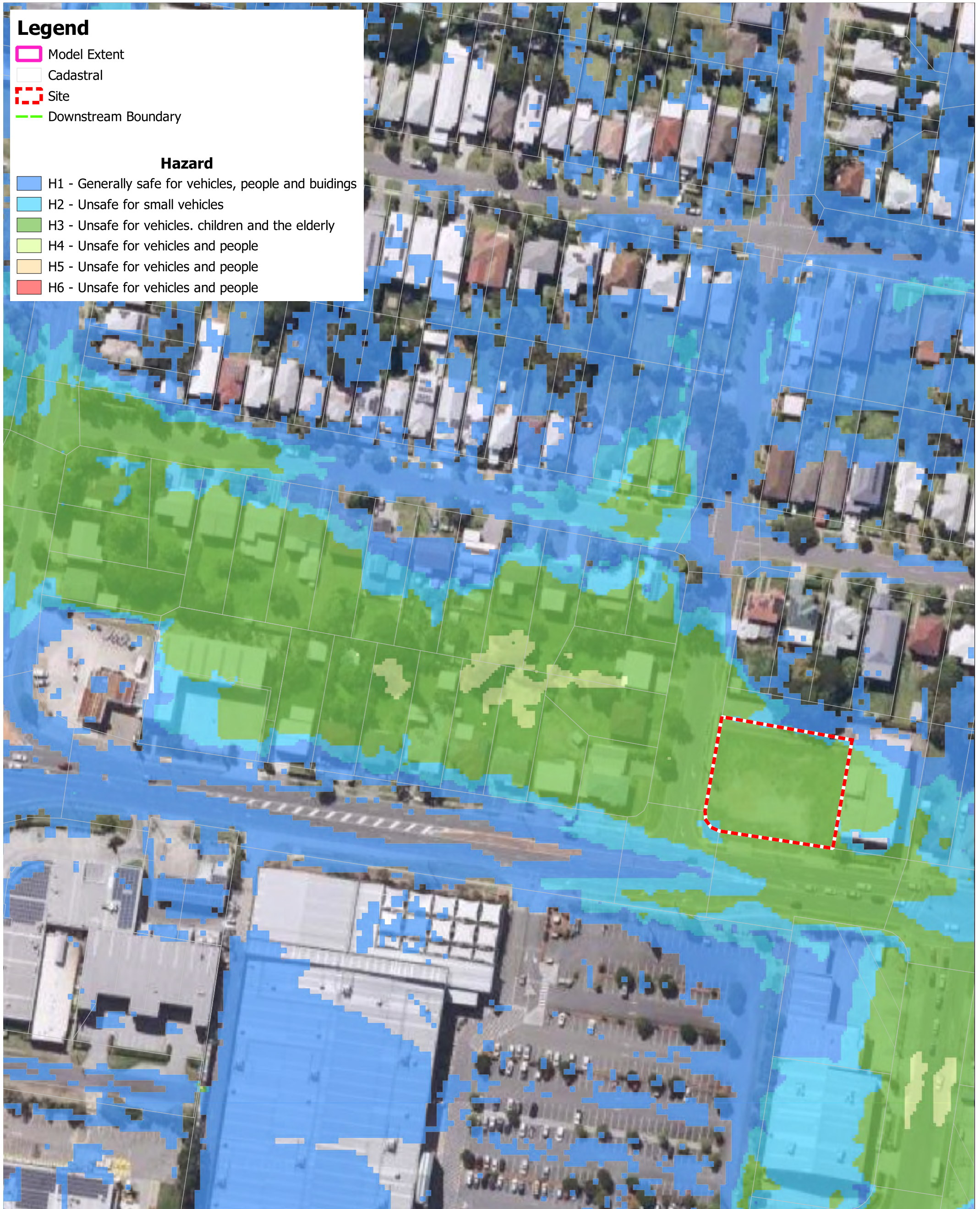
			Client <b>SARRIS INTERNATIONAL PTY LTD</b>	PROJECT <b>437 Stafford Road Staffor</b>	PROJECT NO. <b>LC26013</b>
A	12.06.26	FOR DISCUSSION	Consultant  75 Barden Ridge Road, Reedy Creek, QLD 4227	TITLE <b>PRE-DEVELOPMENT 5% AEP FLOOD WATER VELOCITY</b>	DWG NO. <b>A11</b>
ISSUE No.	DATE	AMENDMENT			ISSUE <b>A</b>
DESIGN DP	DRAWN AWE	APPROVED RM	SCALE: 1:1,200 		


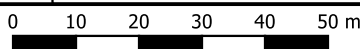
# Legend

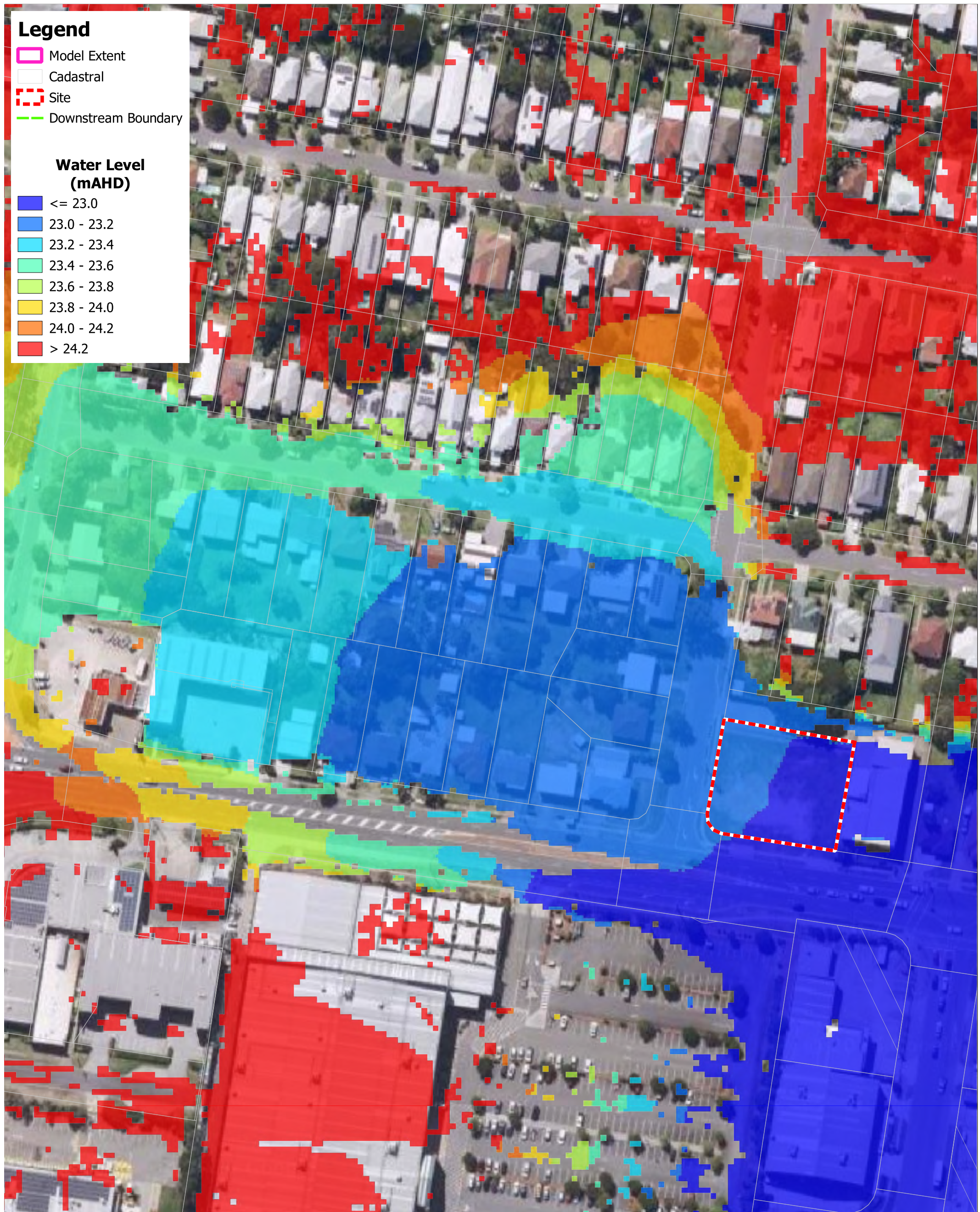
-  Model Extent
-  Cadastral
-  Site
-  Downstream Boundary


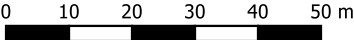
## Hazard

-  H1 - Generally safe for vehicles, people and buidings
-  H2 - Unsafe for small vehicles
-  H3 - Unsafe for vehicles. children and the elderly
-  H4 - Unsafe for vehicles and people
-  H5 - Unsafe for vehicles and people
-  H6 - Unsafe for vehicles and people



			Client <b>SARRIS INTERNATIONAL PTY LTD</b>	PROJECT <b>437 Stafford Road Staffor</b>	PROJECT NO. <b>LC26013</b>
A	12.06.26	FOR DISCUSSION	Consultant  75 Barden Ridge Road, Reedy Creek, QLD 4227	TITLE <b>PRE-DEVELOPMENT 5%AEP FLOOD HAZARD</b>	DWG NO. <b>A12</b>
ISSUE No.	DATE	AMENDMENT			ISSUE <b>A</b>
DESIGN DP	DRAWN AWE	APPROVED RM	SCALE: 1:1.200 		



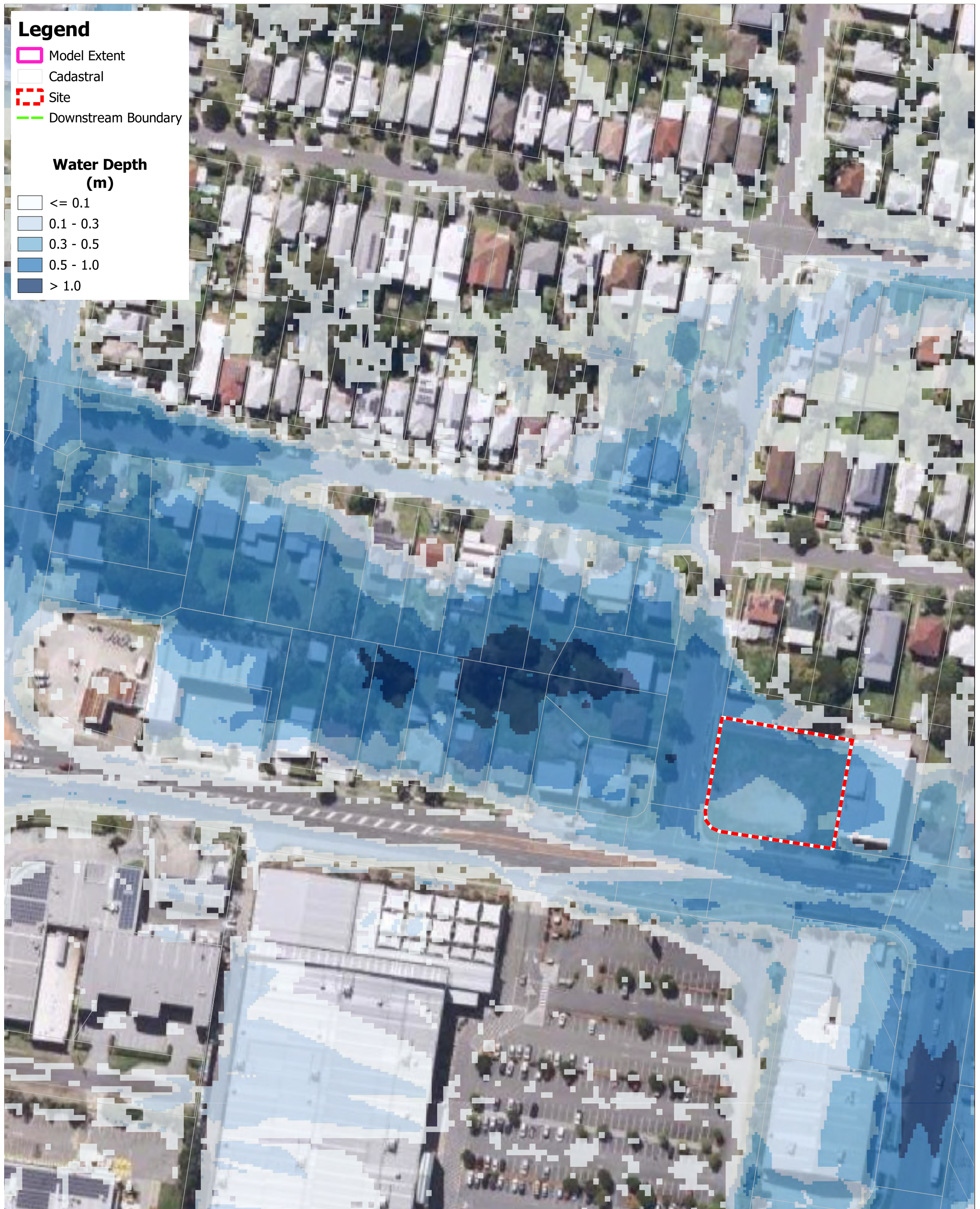
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 Legend Consultants Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	PRE-DEVELOPMENT 10%AEP FLOOD WATER LEVEL	A13
DESIGN DP	DRAWN AWE	APPROVED RM	SCALE: 1:1.200		
					
			ISSUE A		


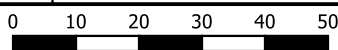
### Legend

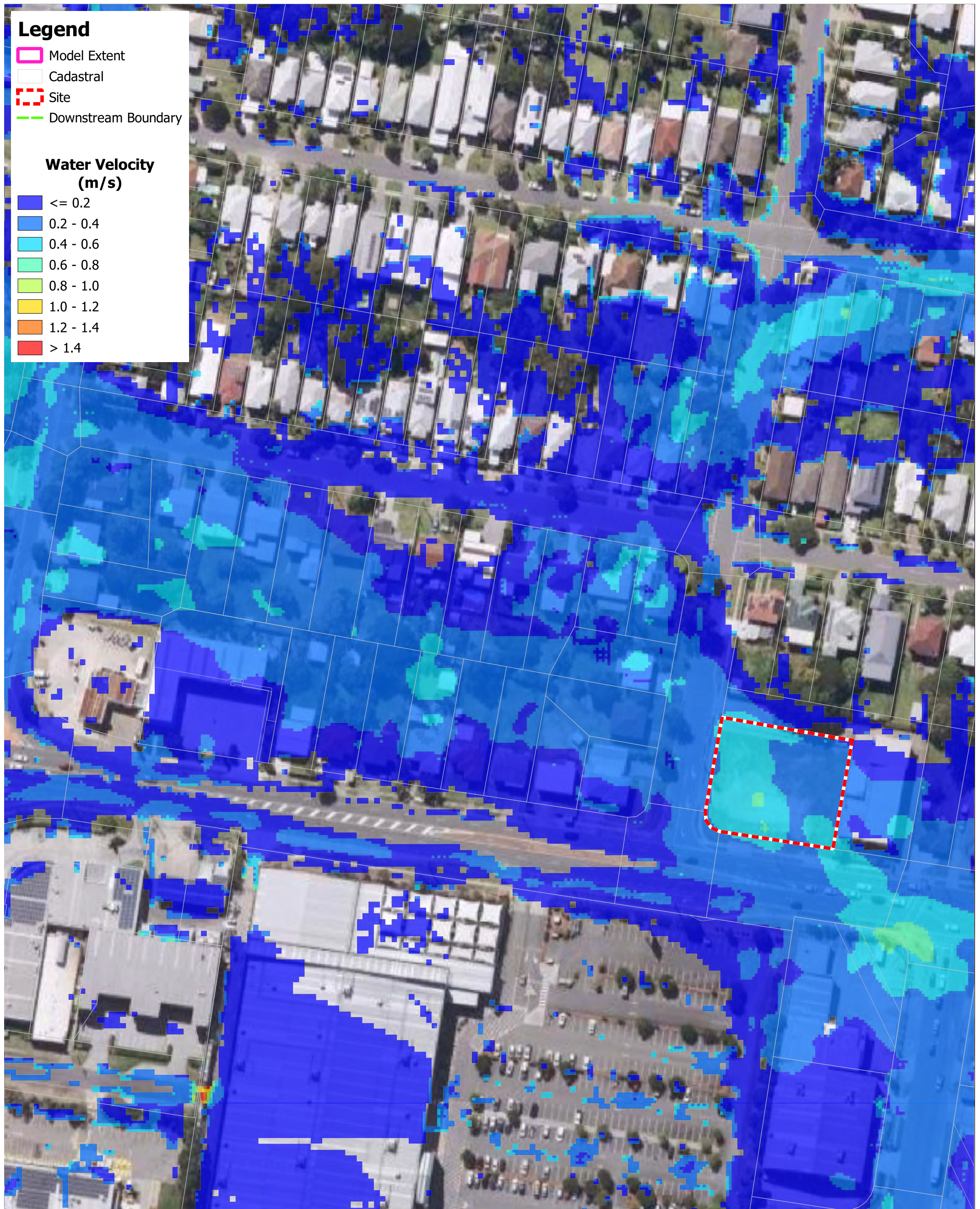
- Model Extent
- Cadastral
- Site
- Downstream Boundary

### Water Depth (m)

- <= 0.1
- 0.1 - 0.3
- 0.3 - 0.5
- 0.5 - 1.0
- > 1.0



			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 Legend Consultants Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	PRE-DEVELOPMENT 10%AEP FLOOD WATER DEPTH	A14
DESIGN	DRAWN	APPROVED			
DP	AWE	RM	SCALE: 1:1.200		
			0    10    20    30    40    50 m 		
			ISSUE <b>A</b>		


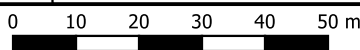


**Legend**





- Model Extent
- Cadastral
- Site
- Downstream Boundary

**Water Velocity (m/s)**







- <= 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1.0
- 1.0 - 1.2
- 1.2 - 1.4
- > 1.4

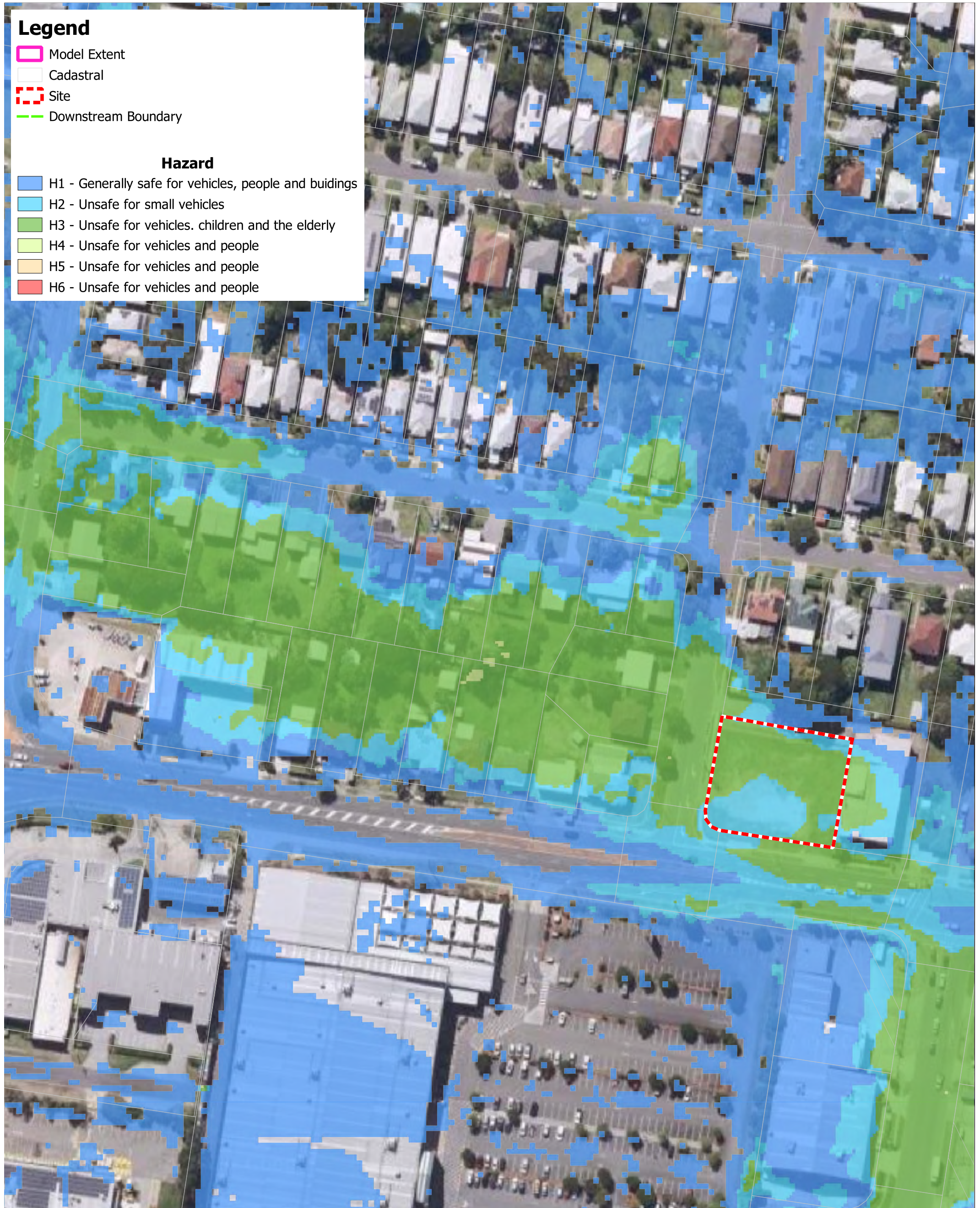
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> <small>Efficiency · Innovation · Quality</small> 75 Barden Ridge Road, Reedy Creek, QLD 4227	PRE-DEVELOPMENT 10%AEP FLOOD WATER VELOCITY	A15
DESIGN DP	DRAWN AWE	APPROVED RM	SCALE: 1:1.200		ISSUE A
					


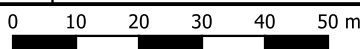
# Legend

-  Model Extent
-  Cadastral
-  Site
-  Downstream Boundary

## Hazard

-  H1 - Generally safe for vehicles, people and buidings
-  H2 - Unsafe for small vehicles
-  H3 - Unsafe for vehicles. children and the elderly
-  H4 - Unsafe for vehicles and people
-  H5 - Unsafe for vehicles and people
-  H6 - Unsafe for vehicles and people



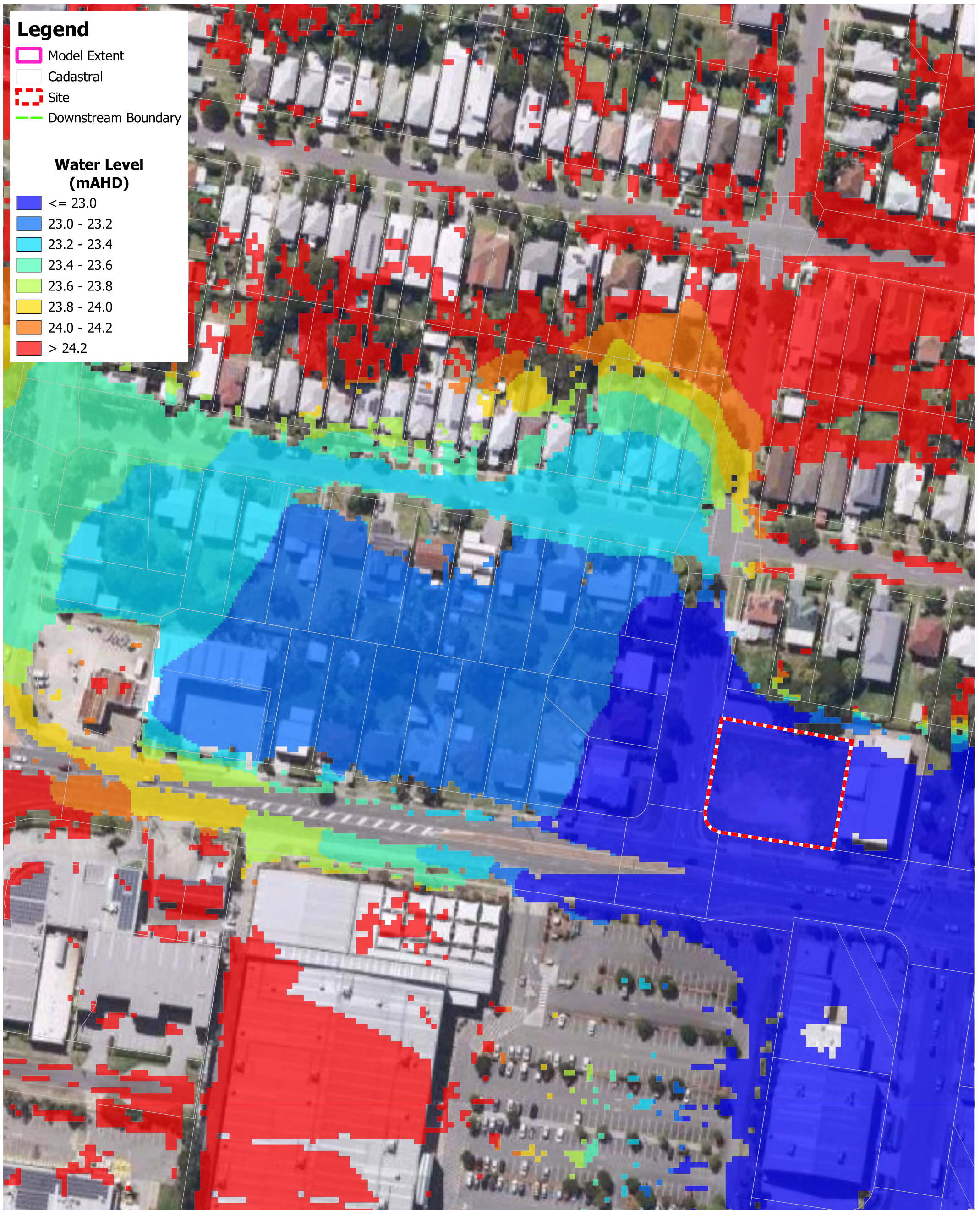
			Client <b>SARRIS INTERNATIONAL PTY LTD</b>	PROJECT <b>437 Stafford Road Staffor</b>	PROJECT NO. <b>LC26013</b>
A	12.06.26	FOR DISCUSSION	Consultant  75 Barden Ridge Road, Reedy Creek, QLD 4227	TITLE <b>PRE-DEVELOPMENT 10%AEP FLOOD HAZARD</b>	DWG NO. <b>A16</b>
ISSUE No.	DATE	AMENDMENT			ISSUE <b>A</b>
DESIGN DP	DRAWN AWE	APPROVED RM	SCALE: 1:1.200 		


### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary

### Water Level (mAHD)

- <= 23.0
- 23.0 - 23.2
- 23.2 - 23.4
- 23.4 - 23.6
- 23.6 - 23.8
- 23.8 - 24.0
- 24.0 - 24.2
- > 24.2



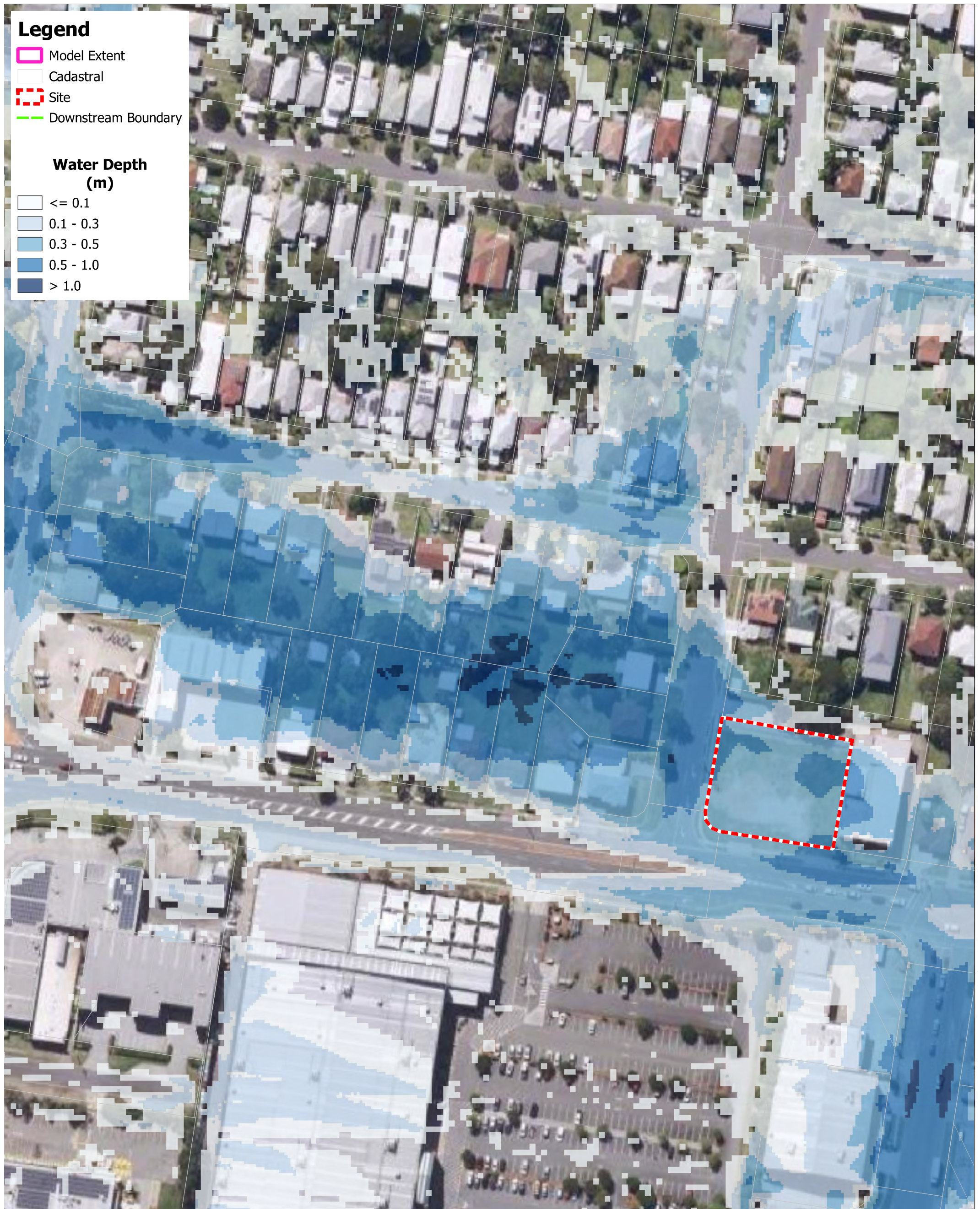
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	PRE-DEVELOPMENT 20%AEP FLOOD WATER LEVEL	A17
DESIGN	DRAWN	APPROVED			ISSUE
DP	AWE	RM			A
			SCALE: 1:1.200 <div style="display: flex; justify-content: center; align-items: center; margin-top: 5px;"> <span style="margin-right: 10px;">0</span> <span style="margin-right: 10px;">0.1</span> <span style="margin-right: 10px;">0.2</span> <span style="margin-right: 10px;">0.3</span> <span style="margin-right: 10px;">0.4</span> <span>0.5 m</span> </div>		


### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary

### Water Depth (m)

- <= 0.1
- 0.1 - 0.3
- 0.3 - 0.5
- 0.5 - 1.0
- > 1.0



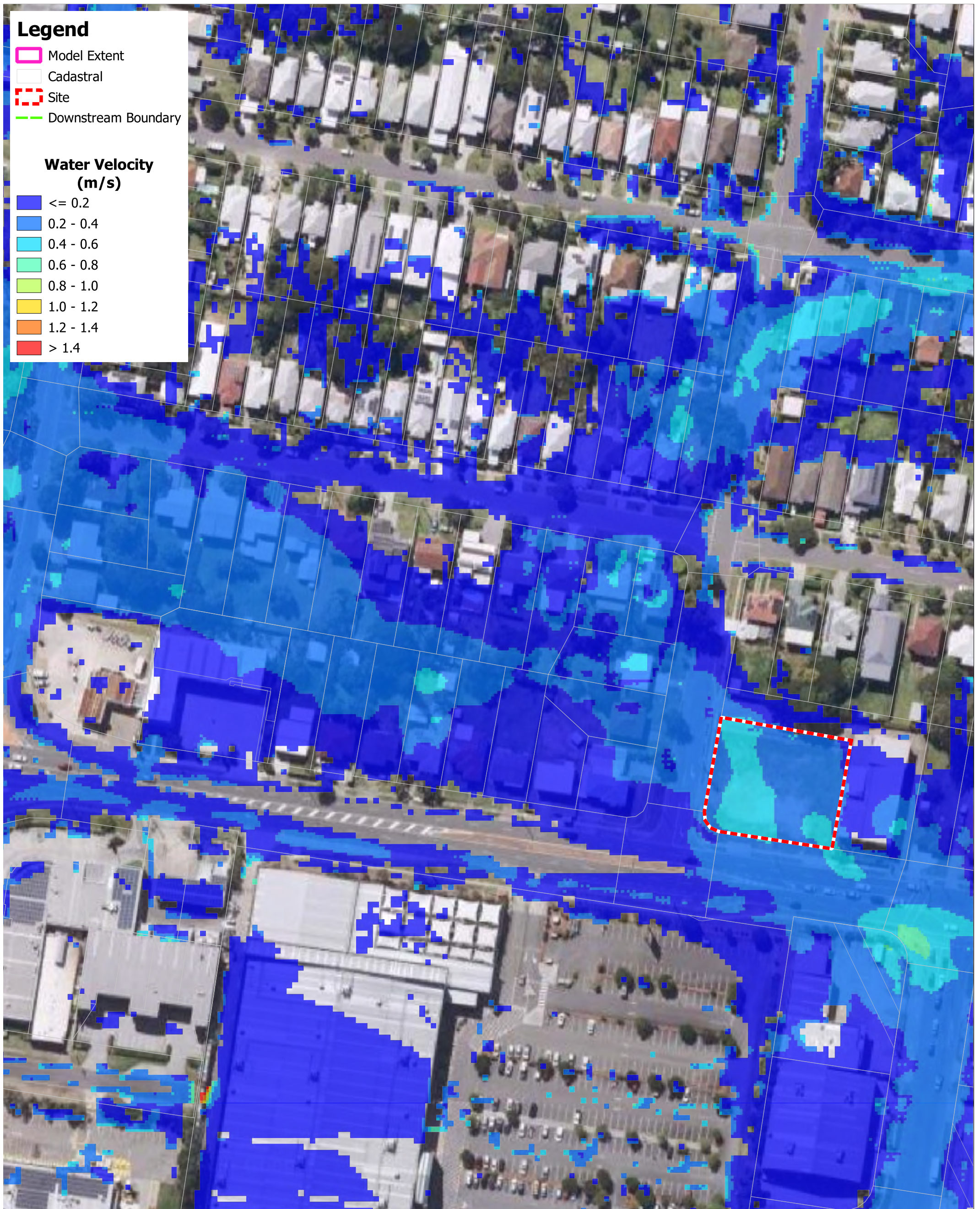
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	PRE-DEVELOPMENT 20%AEP FLOOD WATER DEPTH	A18
DESIGN	DRAWN	APPROVED	SCALE: 1:1.200      0   10   20   30   40   50 m		
DP	AWE	RM			
			A		


### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary

### Water Velocity (m/s)

- <= 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1.0
- 1.0 - 1.2
- 1.2 - 1.4
- > 1.4



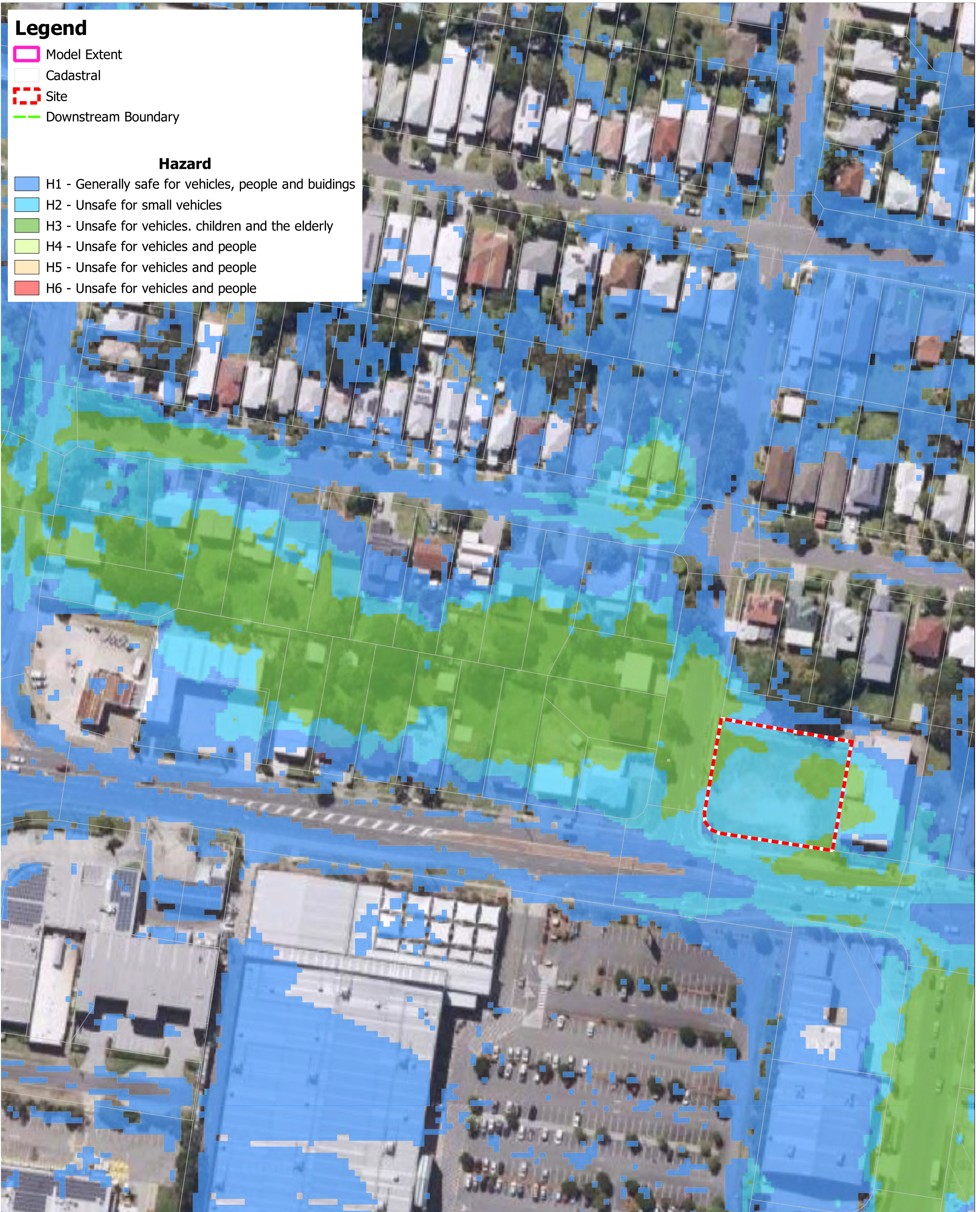
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	PRE-DEVELOPMENT 20%AEP FLOOD WATER VELOCITY	A19
DESIGN	DRAWN	APPROVED			ISSUE
DP	AWE	RM			A
			SCALE: 1:1,200 <div style="display: flex; align-items: center; justify-content: center; margin-top: 5px;"> <span style="margin-right: 5px;">0</span> <span style="margin-right: 5px;">10</span> <span style="margin-right: 5px;">20</span> <span style="margin-right: 5px;">30</span> <span style="margin-right: 5px;">40</span> <span style="margin-right: 5px;">50 m</span> </div>		


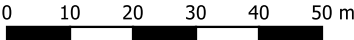
# Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary

## Hazard

- H1 - Generally safe for vehicles, people and buidings
- H2 - Unsafe for small vehicles
- H3 - Unsafe for vehicles. children and the elderly
- H4 - Unsafe for vehicles and people
- H5 - Unsafe for vehicles and people
- H6 - Unsafe for vehicles and people



			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 Legend Consultants Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	PRE-DEVELOPMENT 20%AEP FLOOD HAZARD	A20
DESIGN	DRAWN	APPROVED			
DP	AWE	RM			A
			SCALE: 1:1.200		
					



APPENDIX

**E**

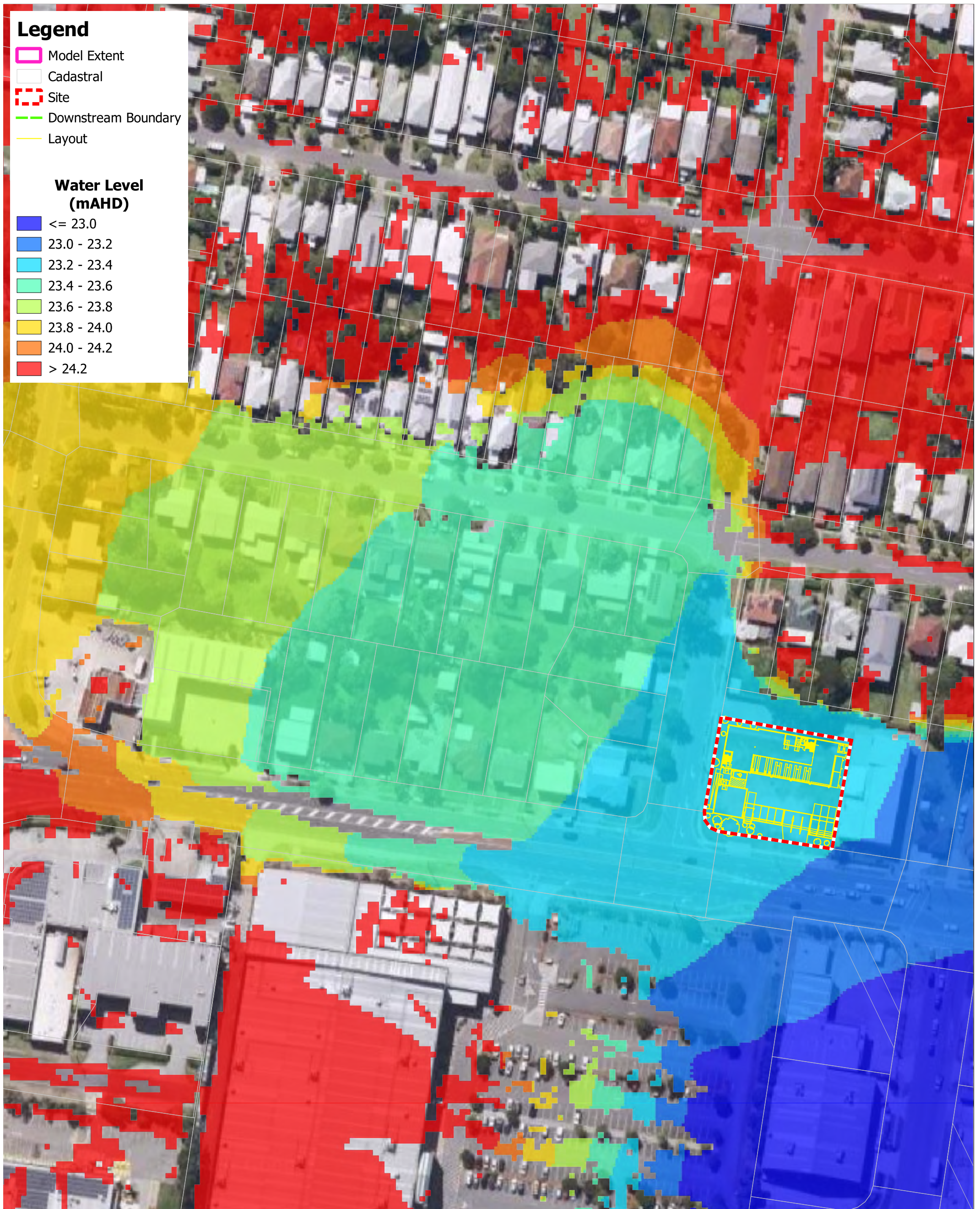
## Post-Development Flood Mapping Results


### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout






### Water Level (mAHD)

- <= 23.0
- 23.0 - 23.2
- 23.2 - 23.4
- 23.4 - 23.6
- 23.6 - 23.8
- 23.8 - 24.0
- 24.0 - 24.2
- > 24.2








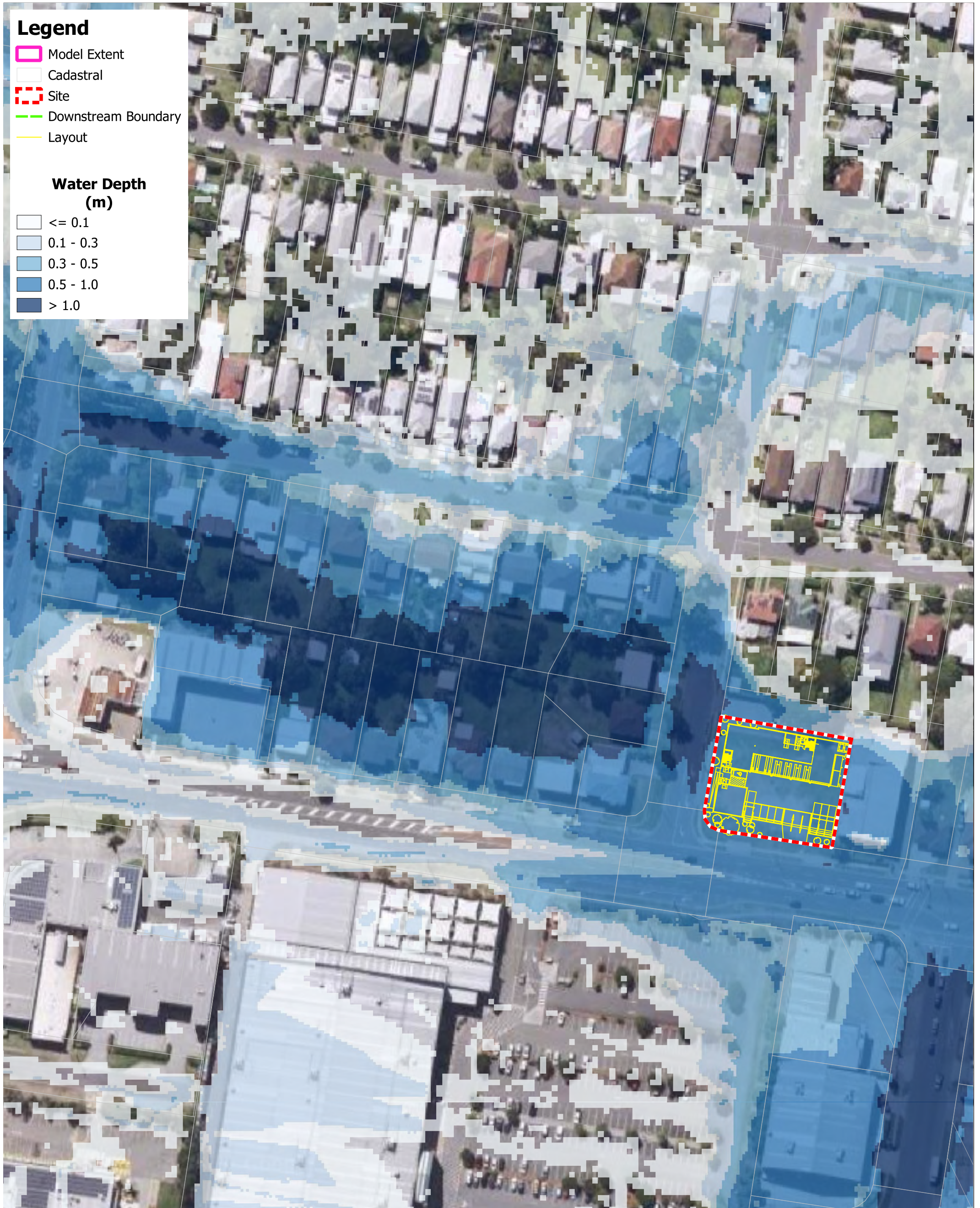
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	POST-DEVELOPMENT 1%AEP FLOOD WATER LEVEL	B01
DESIGN	DRAWN	APPROVED			ISSUE
DP	AWE	RM			A
			SCALE: 1:1.200		
			0      0.1      0.2      0.3      0.4      0.5 m		


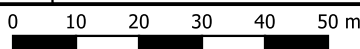
### Legend

-  Model Extent
-  Cadastral
-  Site
-  Downstream Boundary
-  Layout

### Water Depth (m)

-  <= 0.1
-  0.1 - 0.3
-  0.3 - 0.5
-  0.5 - 1.0
-  > 1.0



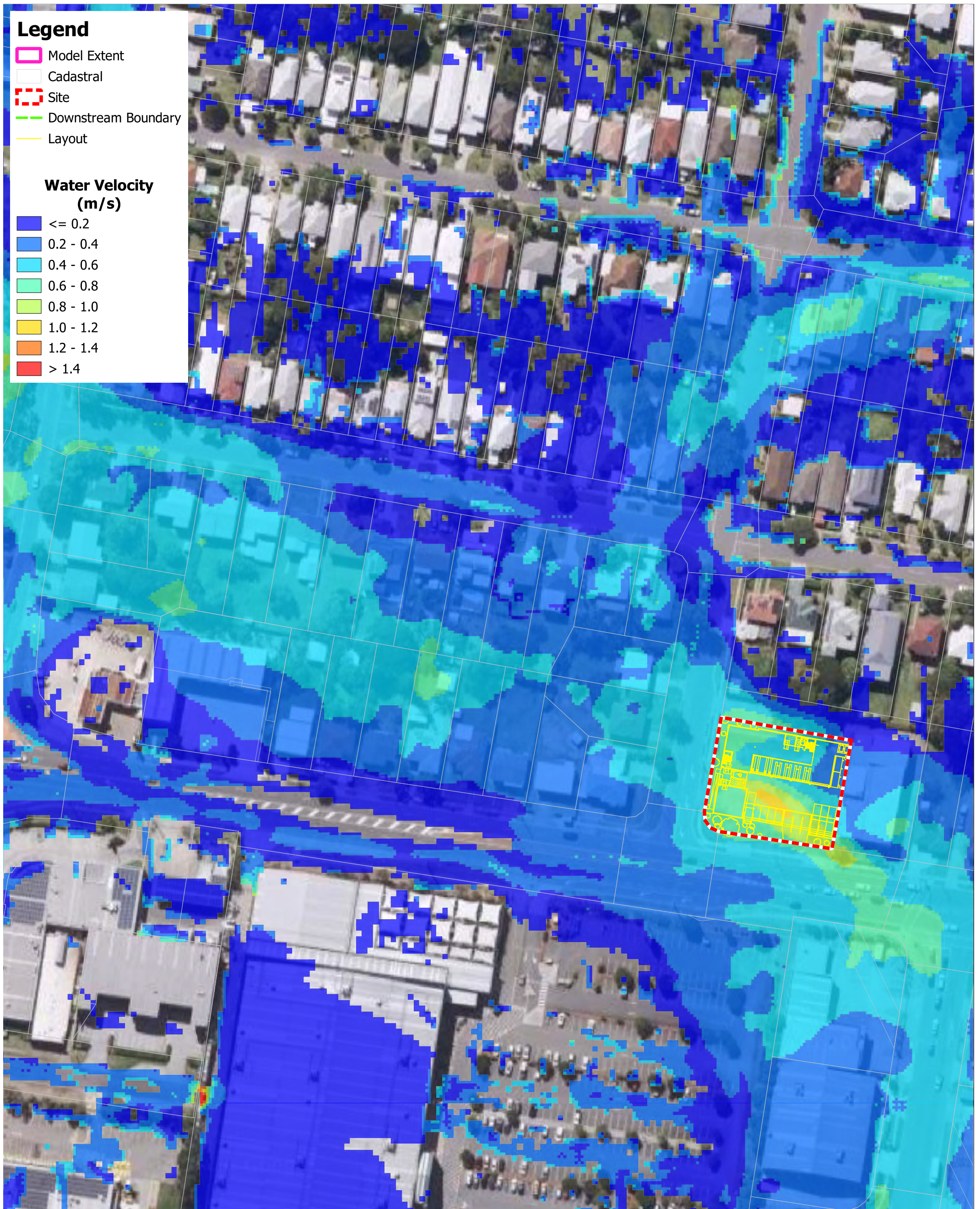
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT			
			Consultant	TITLE	DWG NO.
			 Legend Consultants Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	POST-DEVELOPMENT 1%AEP FLOOD WATER DEPTH	B02
DESIGN DP	DRAWN AWE	APPROVED RM			
			SCALE: 1:1.200		
					
			ISSUE <b>A</b>		



### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout






### Water Velocity (m/s)

- <= 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1.0
- 1.0 - 1.2
- 1.2 - 1.4
- > 1.4









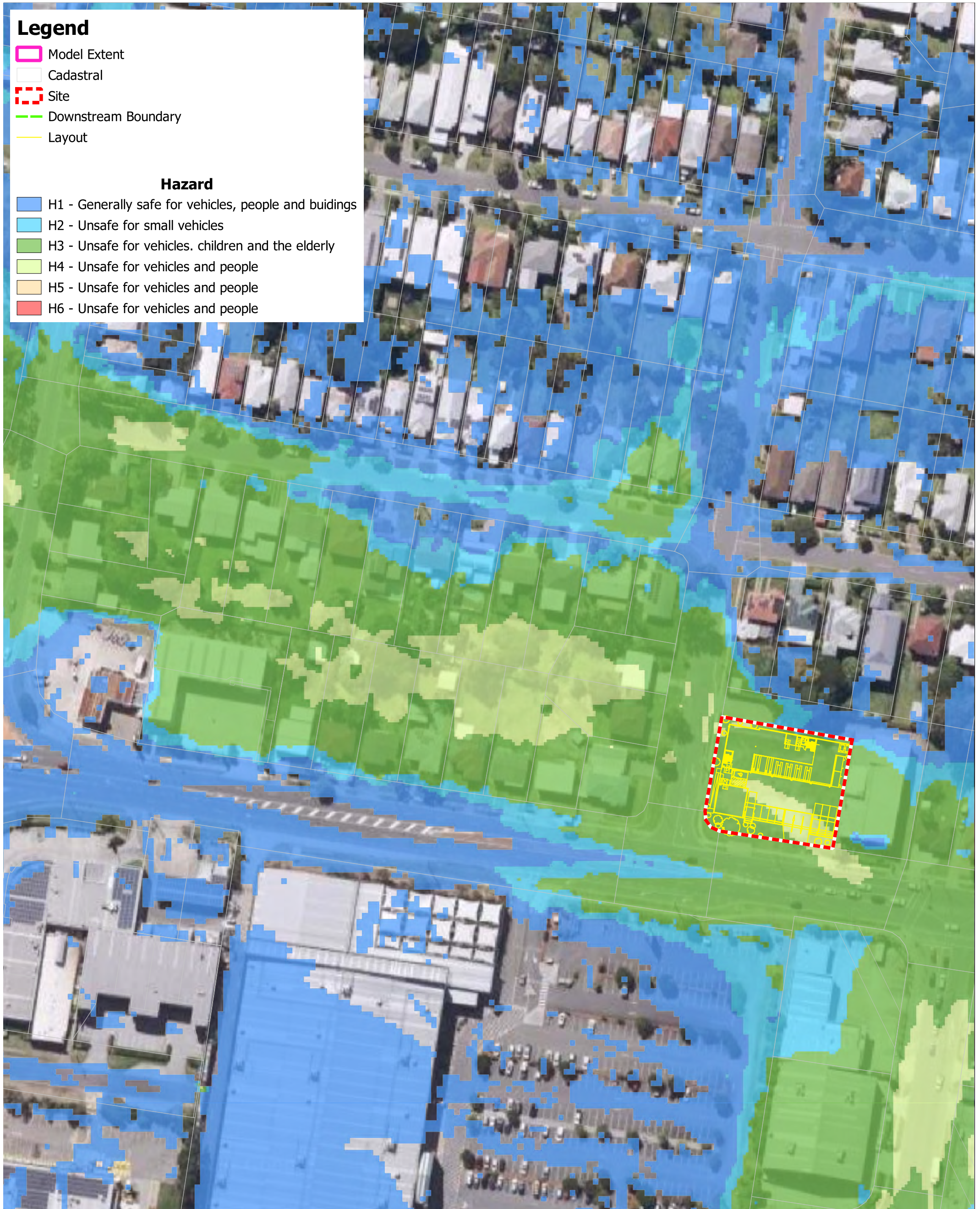
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	POST-DEVELOPMENT 1%AEP FLOOD WATER VELOCITY	B03
DESIGN	DRAWN	APPROVED			ISSUE
DP	AWE	RM			A
			SCALE: 1:1.200		
			0    10    20    30    40    50 m 		


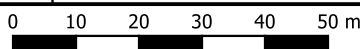
# Legend

-  Model Extent
-  Cadastral
-  Site
-  Downstream Boundary
-  Layout






## Hazard

-  H1 - Generally safe for vehicles, people and buidings
-  H2 - Unsafe for small vehicles
-  H3 - Unsafe for vehicles. children and the elderly
-  H4 - Unsafe for vehicles and people
-  H5 - Unsafe for vehicles and people
-  H6 - Unsafe for vehicles and people











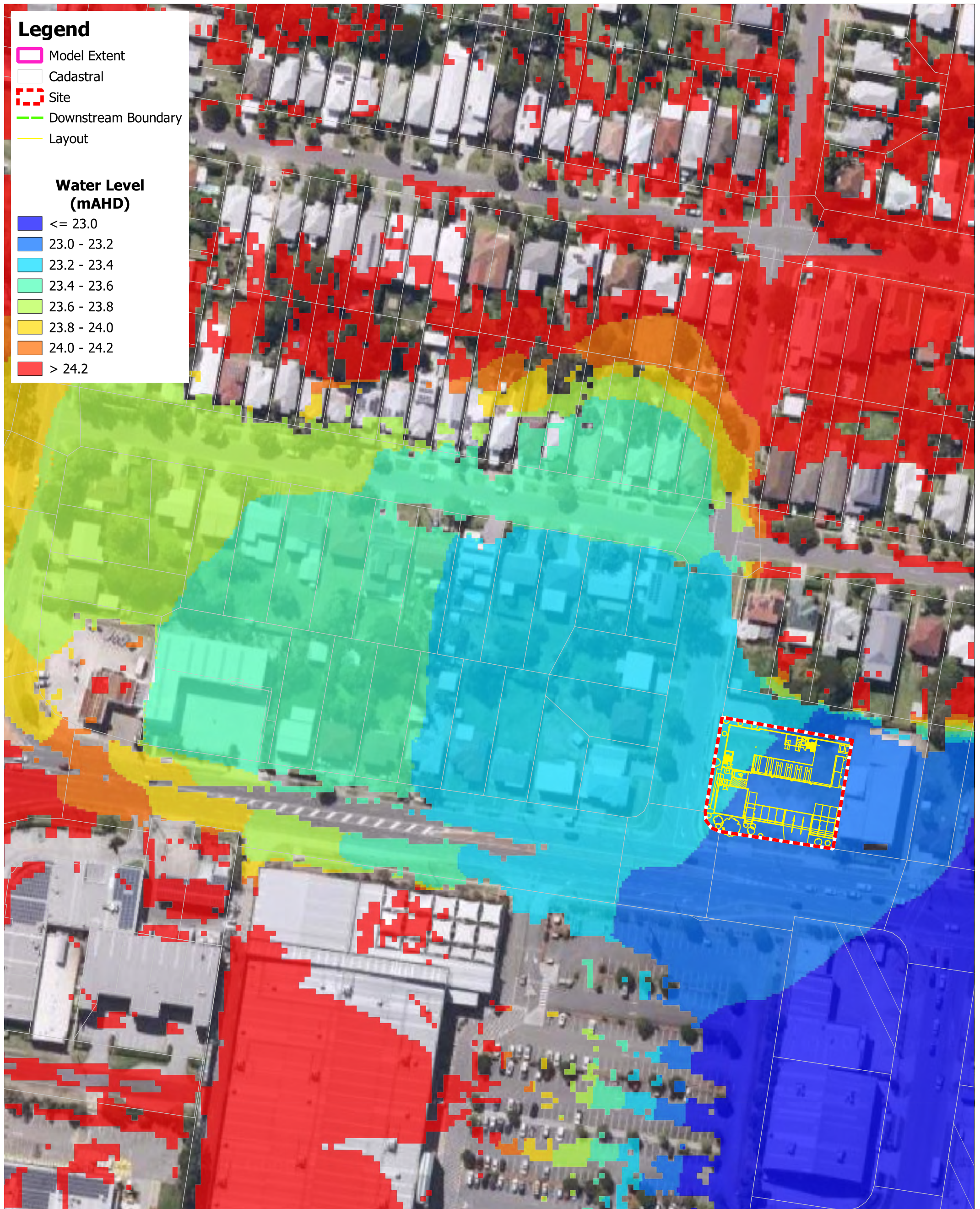
			Client <b>SARRIS INTERNATIONAL PTY LTD</b>	PROJECT <b>437 Stafford Road Staffor</b>	PROJECT NO. <b>LC26013</b>
A	12.06.26	FOR DISCUSSION	Consultant  75 Barden Ridge Road, Reedy Creek, QLD 4227	TITLE <b>POST-DEVELOPMENT 1%AEP FLOOD HAZARD</b>	DWG NO. <b>B04</b>
ISSUE No.	DATE	AMENDMENT			ISSUE <b>A</b>
DESIGN DP	DRAWN AWE	APPROVED RM	SCALE: 1:1.200 		



### Legend

-  Model Extent
-  Cadastral
-  Site
-  Downstream Boundary
-  Layout

### Water Level (mAHD)

-  <= 23.0
-  23.0 - 23.2
-  23.2 - 23.4
-  23.4 - 23.6
-  23.6 - 23.8
-  23.8 - 24.0
-  24.0 - 24.2
-  > 24.2



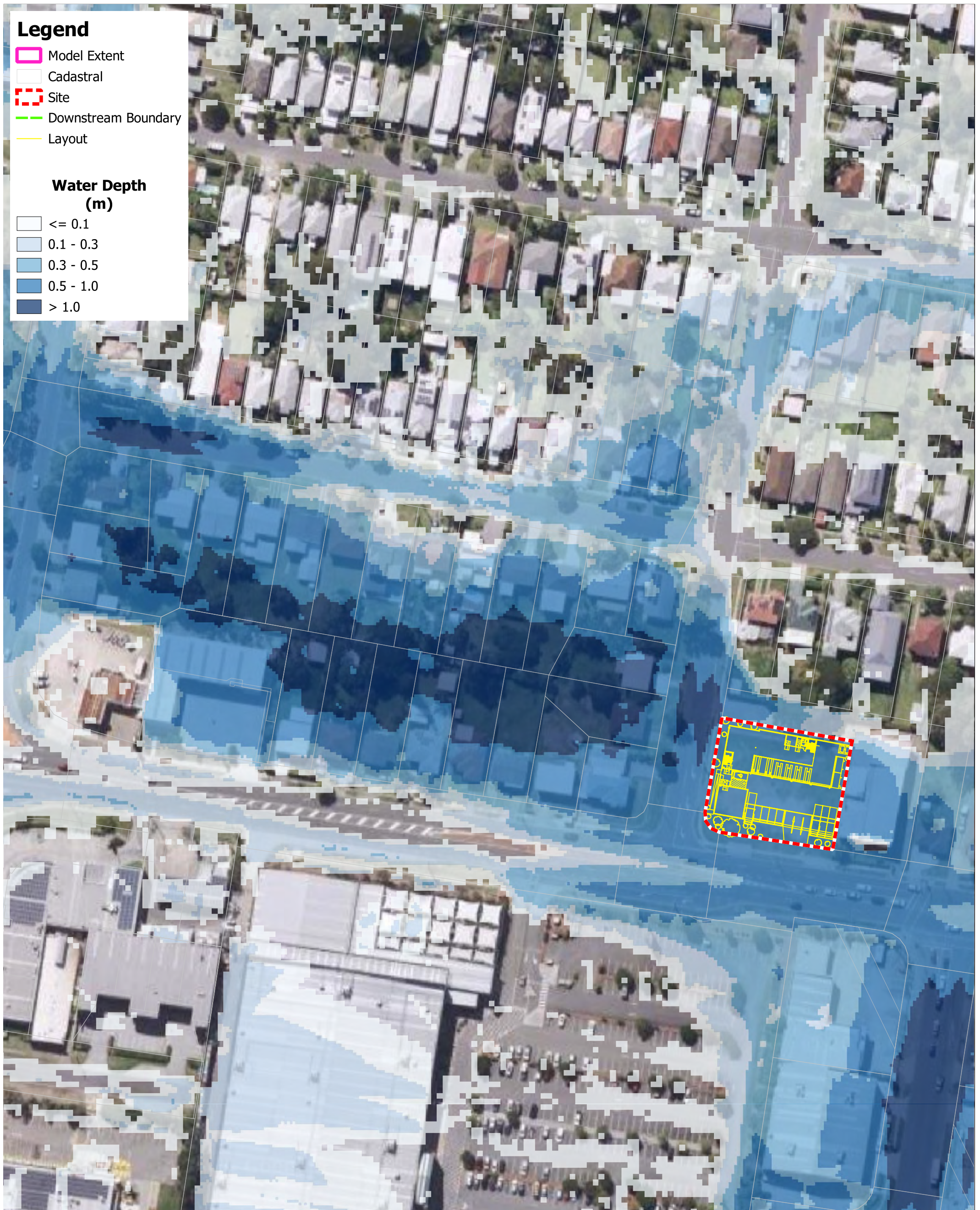
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 Legend Consultants Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	POST-DEVELOPMENT 2% AEP FLOOD WATER LEVEL	B05
DESIGN	DRAWN	APPROVED			ISSUE
DP	AWE	RM			A
			SCALE: 1:1,200		
					



### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout

### Water Depth (m)

- <= 0.1
- 0.1 - 0.3
- 0.3 - 0.5
- 0.5 - 1.0
- > 1.0



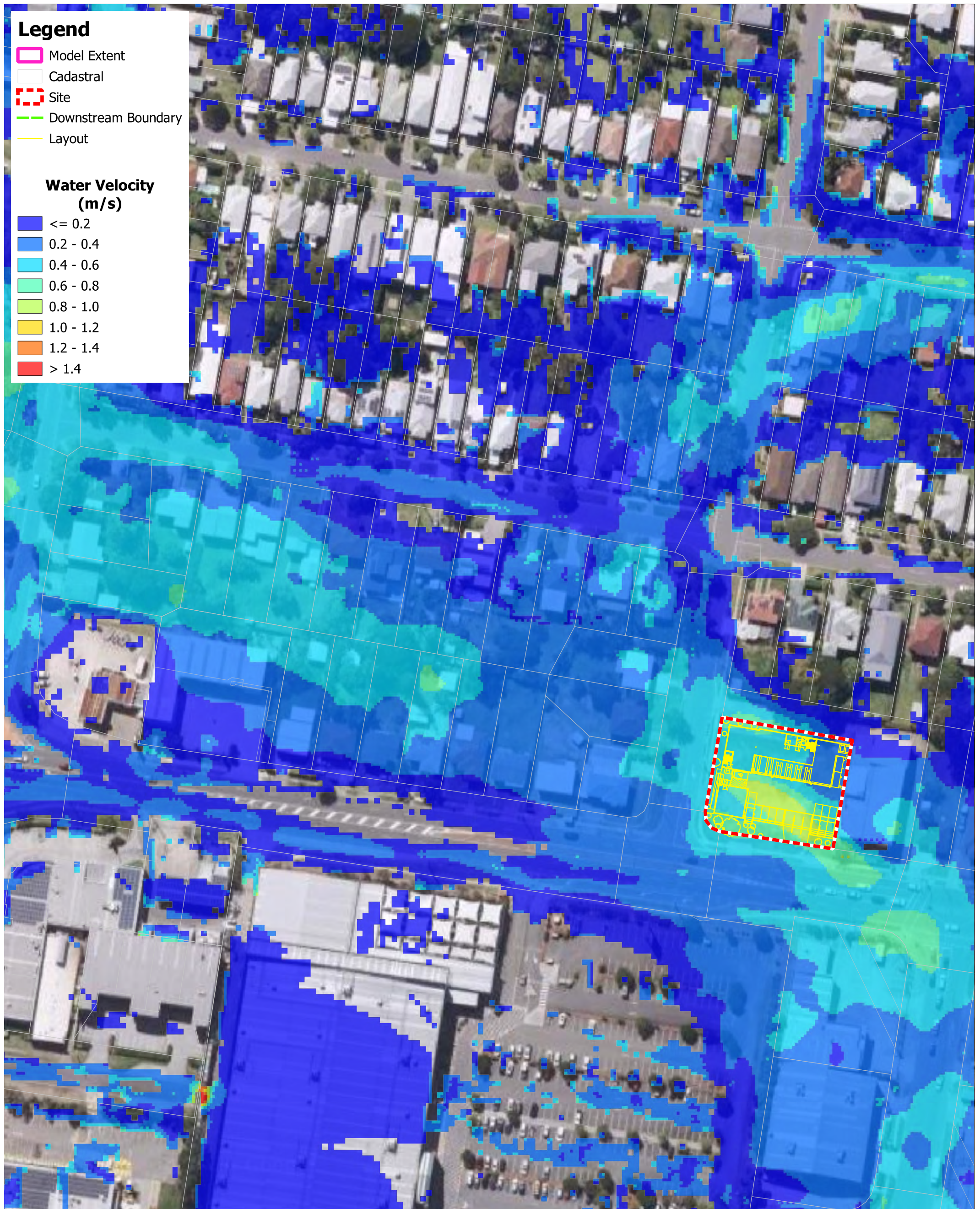
			<b>Client</b>	<b>PROJECT</b>	<b>PROJECT NO.</b>
			<b>SARRIS INTERNATIONAL PTY LTD</b>	<b>437 Stafford Road Staffor</b>	<b>LC26013</b>
<b>A</b>	<b>12.06.26</b>	<b>FOR DISCUSSION</b>			
<b>ISSUE No.</b>	<b>DATE</b>	<b>AMENDMENT</b>	<b>Consultant</b>	<b>TITLE</b>	<b>DWG NO.</b>
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	<b>POST-DEVELOPMENT 2%AEP FLOOD WATER DEPTH</b>	<b>B06</b>
<b>DESIGN</b>	<b>DRAWN</b>	<b>APPROVED</b>			<b>ISSUE</b>
<b>DP</b>	<b>AWE</b>	<b>RM</b>			<b>A</b>
			<b>SCALE: 1:1.200</b> 		


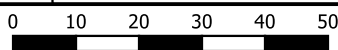
### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout

### Water Velocity (m/s)

- <= 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1.0
- 1.0 - 1.2
- 1.2 - 1.4
- > 1.4



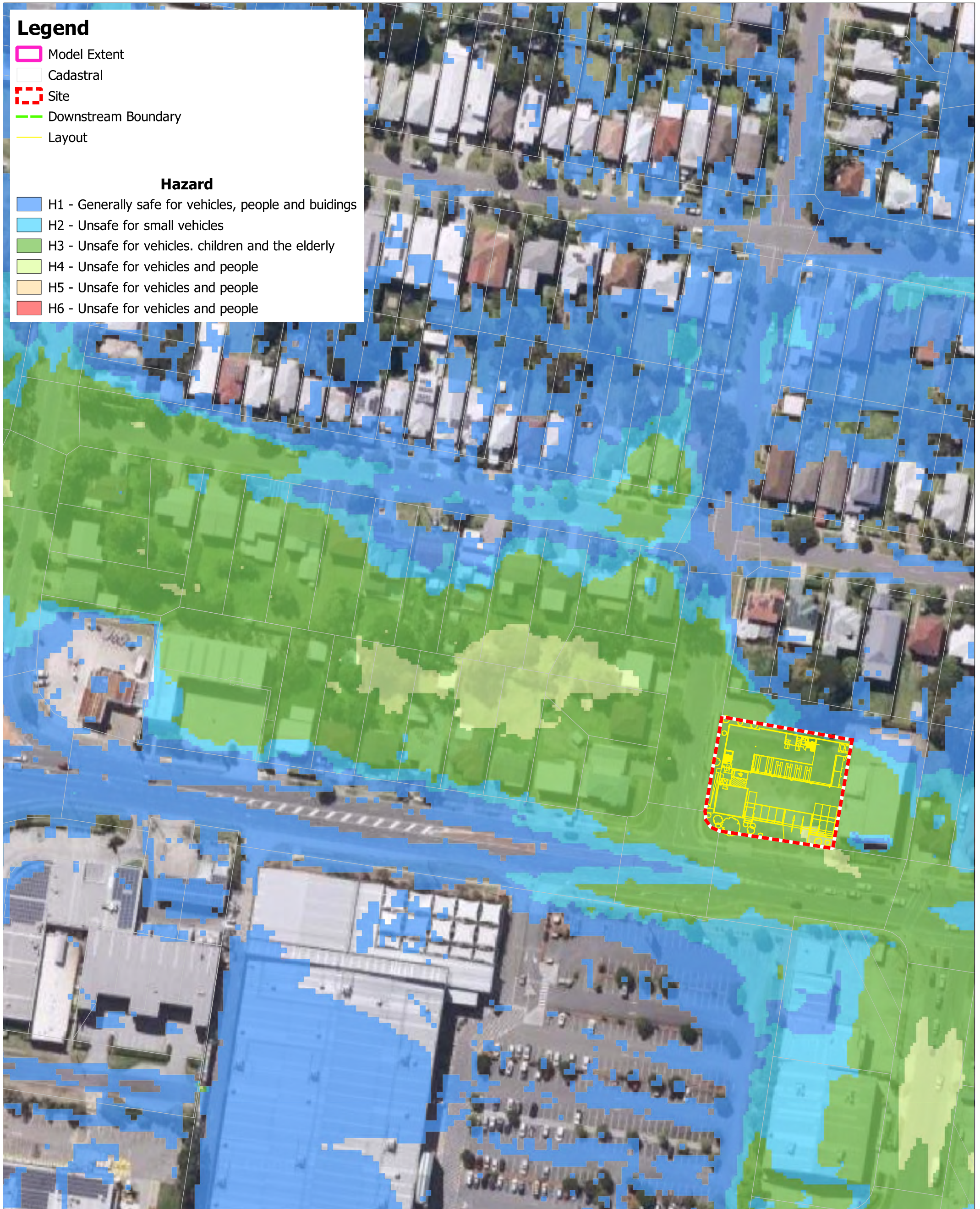
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	POST-DEVELOPMENT 2%AEP FLOOD WATER VELOCITY	B07
DESIGN	DRAWN	APPROVED			ISSUE
DP	AWE	RM			A
			SCALE: 1:1,200		
			0    10    20    30    40    50 m 		


# Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout

## Hazard

- H1 - Generally safe for vehicles, people and buidings
- H2 - Unsafe for small vehicles
- H3 - Unsafe for vehicles. children and the elderly
- H4 - Unsafe for vehicles and people
- H5 - Unsafe for vehicles and people
- H6 - Unsafe for vehicles and people



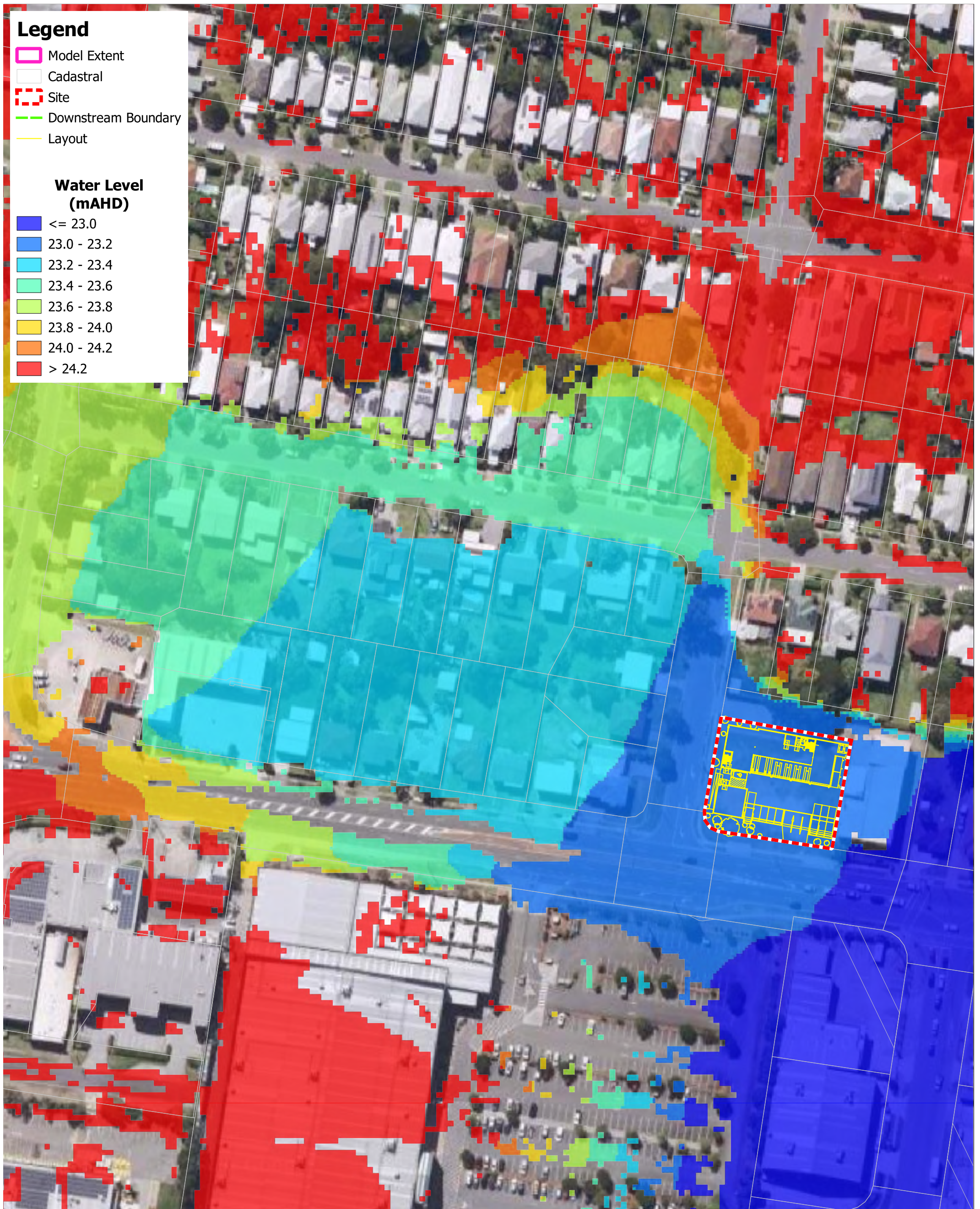
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 Legend Consultants Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	POST-DEVELOPMENT 2%AEP FLOOD HAZARD	B08
DESIGN	DRAWN	APPROVED			
DP	AWE	RM			A
			SCALE: 1:1.200      0   10   20   30   40   50 m		


### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout

### Water Level (mAHD)

- <= 23.0
- 23.0 - 23.2
- 23.2 - 23.4
- 23.4 - 23.6
- 23.6 - 23.8
- 23.8 - 24.0
- 24.0 - 24.2
- > 24.2



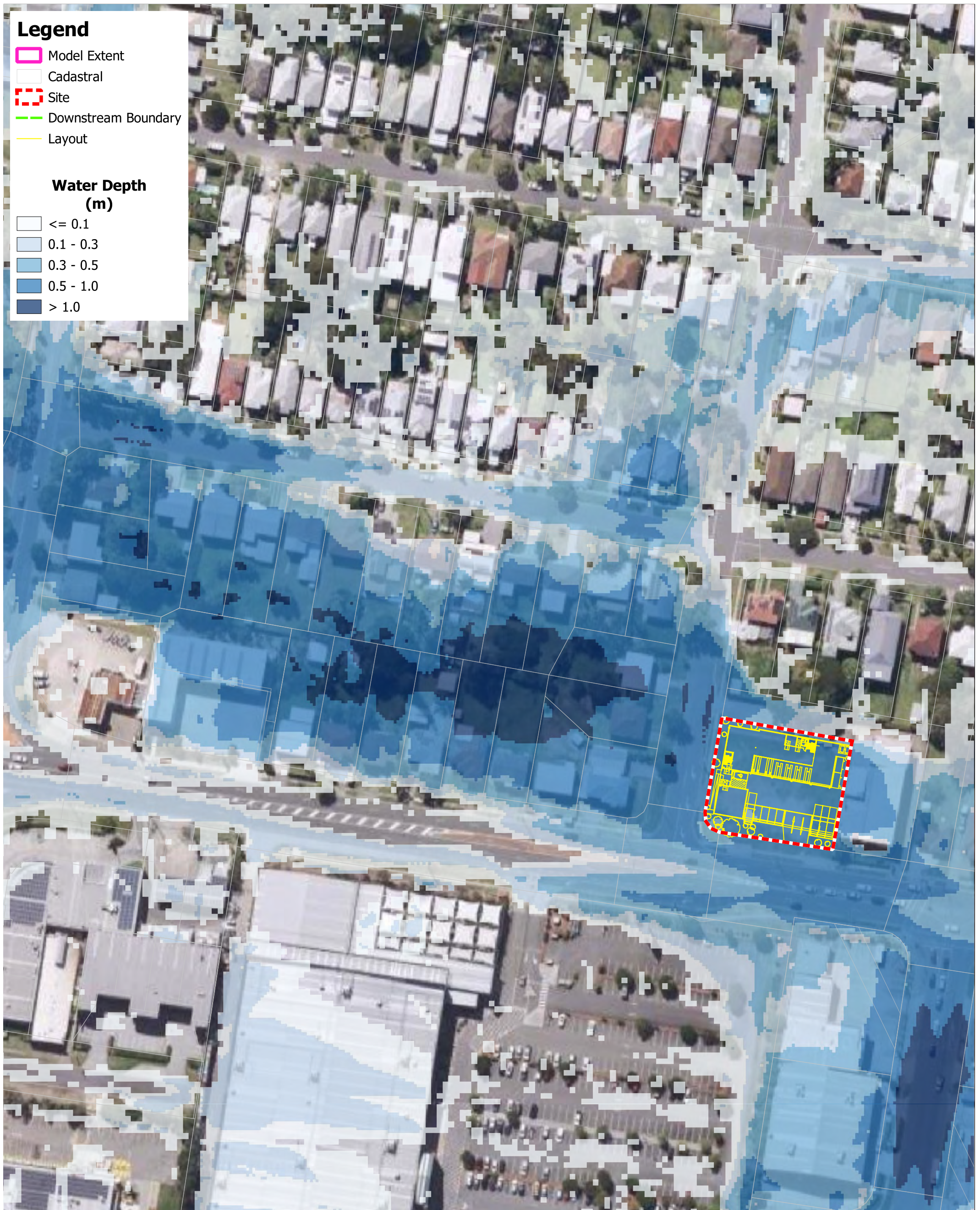
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	POST-DEVELOPMENT 5% AEP FLOOD WATER LEVEL	B09
DESIGN	DRAWN	APPROVED			ISSUE
DP	AWE	RM			A
			SCALE: 1:1,200		
			0      0.1      0.2      0.3      0.4      0.5 m		

### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout

### Water Depth (m)

- <= 0.1
- 0.1 - 0.3
- 0.3 - 0.5
- 0.5 - 1.0
- > 1.0



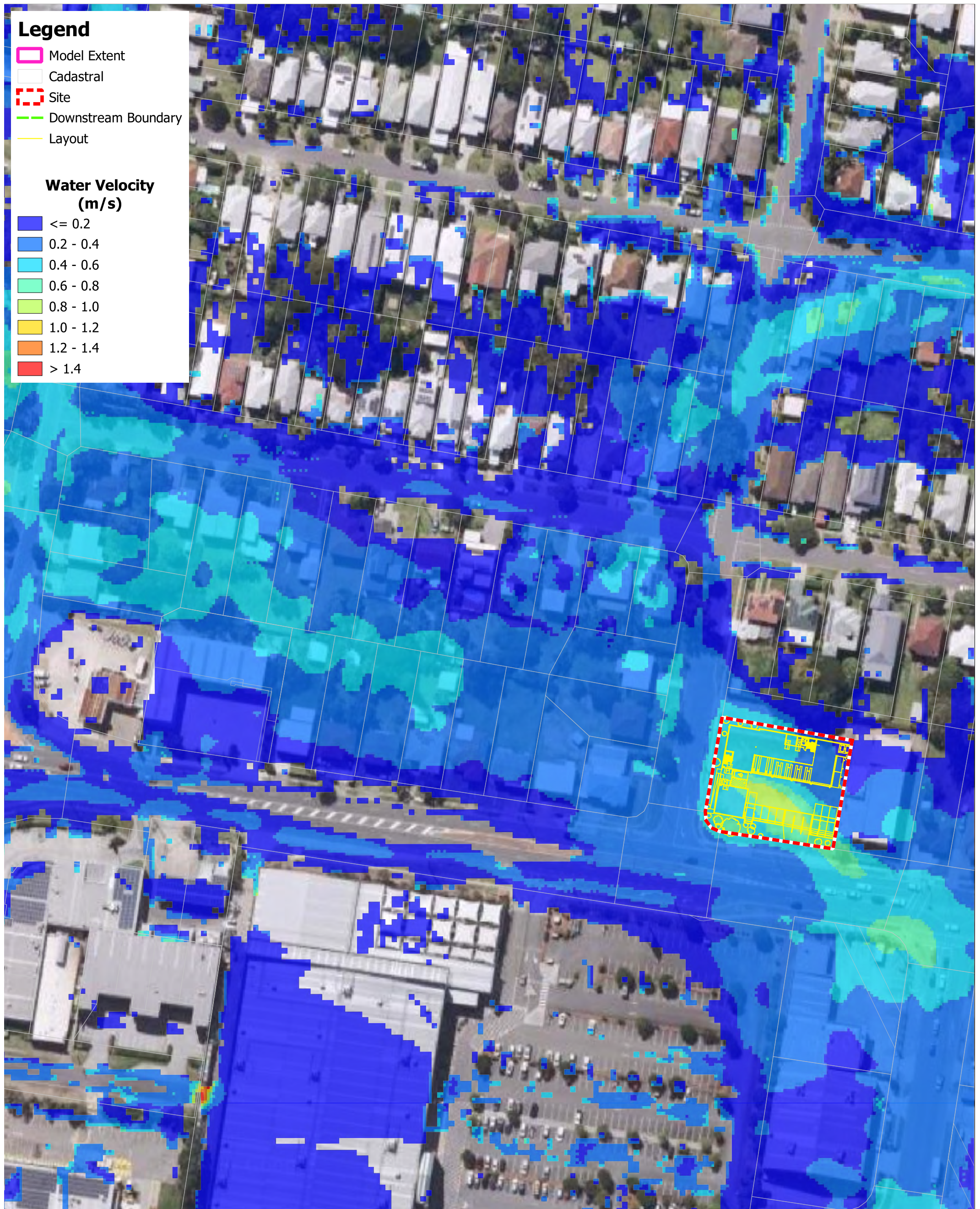
			Client  <b>SARRIS INTERNATIONAL PTY LTD</b>	PROJECT  <b>437 Stafford Road Staffor</b>	PROJECT NO.  <b>LC26013</b>
A ISSUE No.	12.06.26 DATE	FOR DISCUSSION AMENDMENT	Consultant   <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	TITLE  <b>POST-DEVELOPMENT 5%AEP FLOOD WATER DEPTH</b>	DWG NO.  <b>B10</b>
DESIGN DP	DRAWN AWE	APPROVED RM	SCALE: 1:1.200 0 10 20 30 40 50 m		
			ISSUE  <b>A</b>		


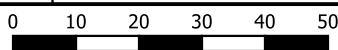
### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout






### Water Velocity (m/s)

- <= 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1.0
- 1.0 - 1.2
- 1.2 - 1.4
- > 1.4









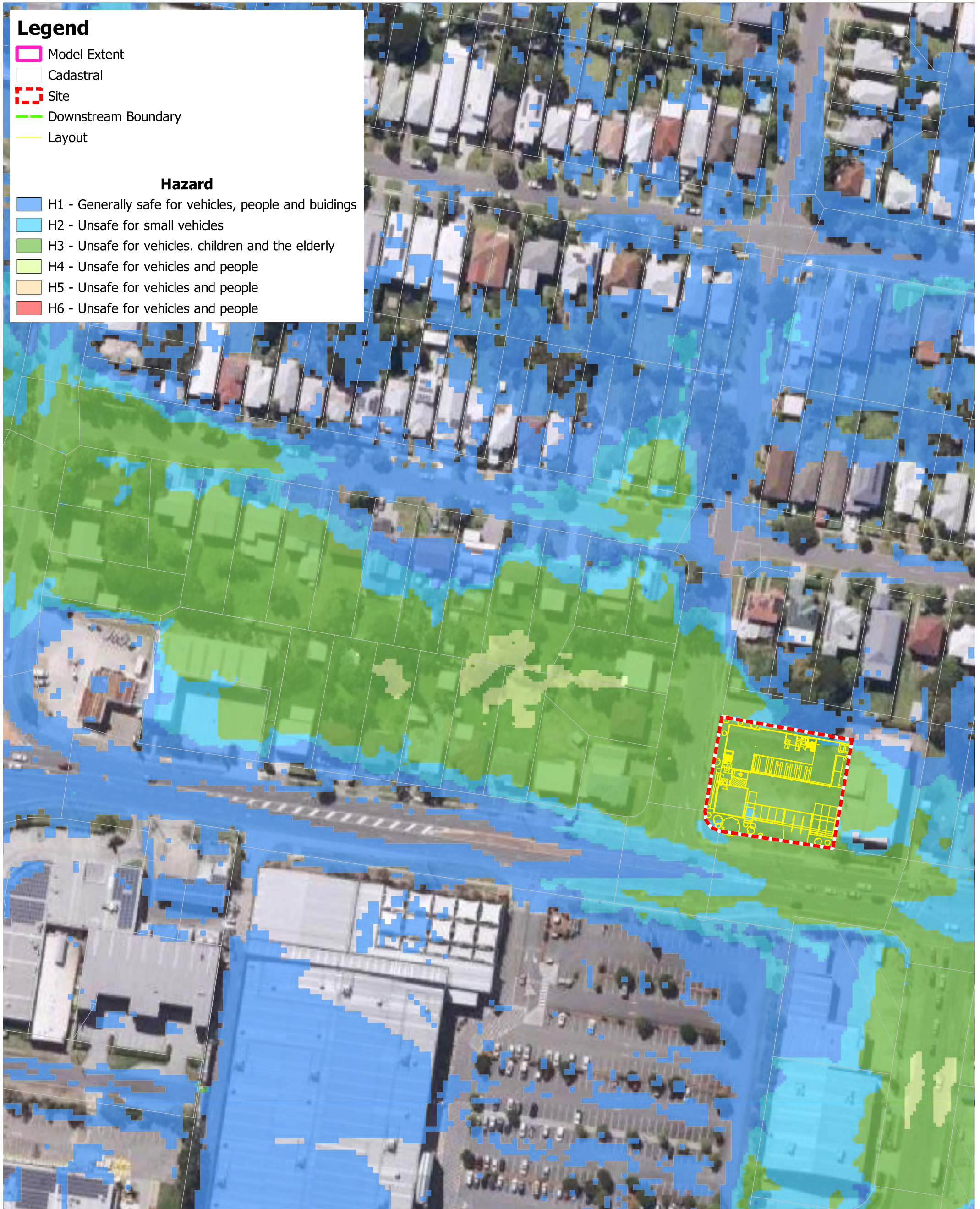
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	POST-DEVELOPMENT 5%AEP FLOOD WATER VELOCITY	B11
DESIGN	DRAWN	APPROVED			ISSUE
DP	AWE	RM			A
			SCALE: 1:1.200		
			0    10    20    30    40    50 m 		


# Legend

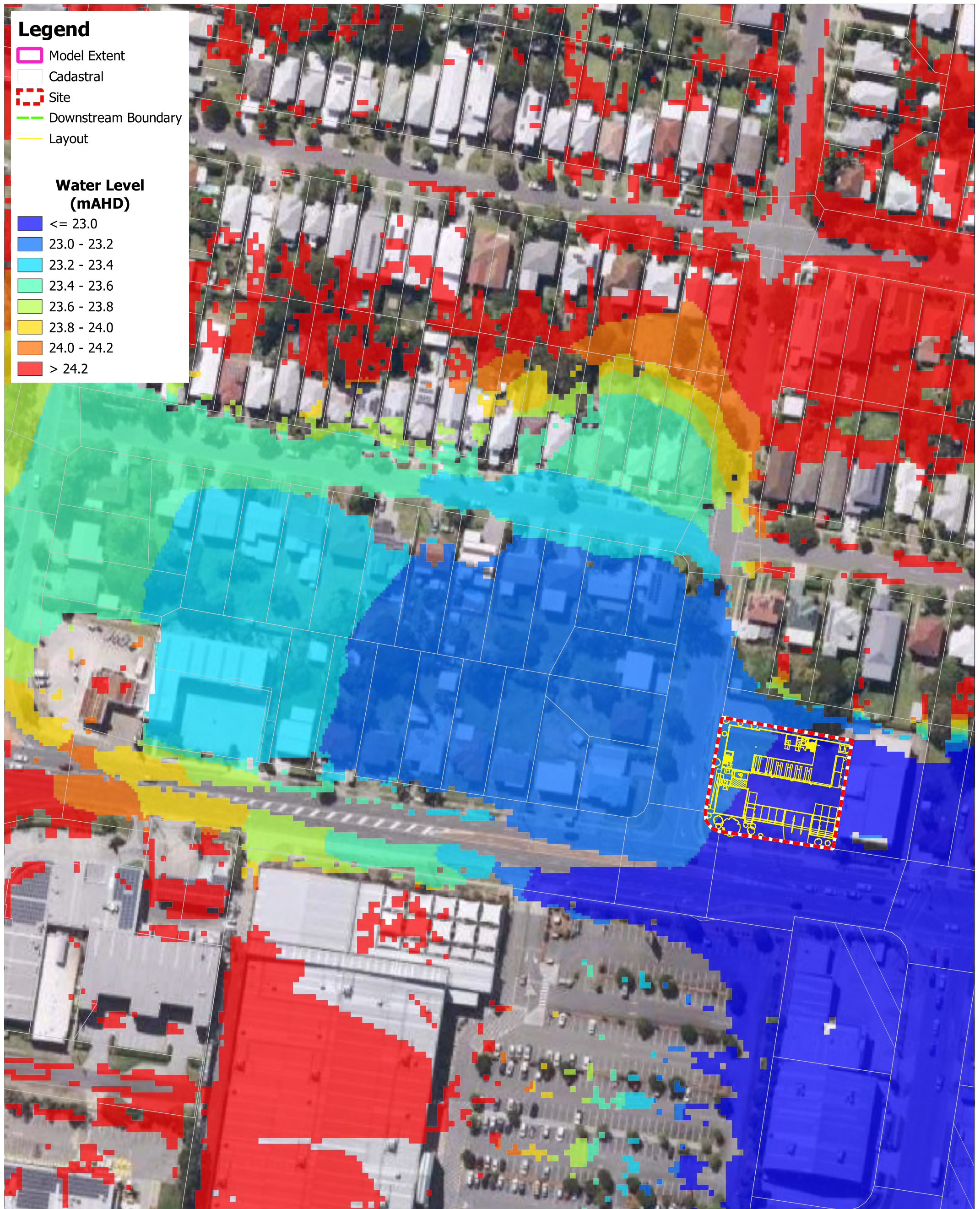
-  Model Extent
-  Cadastral
-  Site
-  Downstream Boundary
-  Layout

## Hazard

-  H1 - Generally safe for vehicles, people and buidings
-  H2 - Unsafe for small vehicles
-  H3 - Unsafe for vehicles. children and the elderly
-  H4 - Unsafe for vehicles and people
-  H5 - Unsafe for vehicles and people
-  H6 - Unsafe for vehicles and people



			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 Legend Consultants Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	POST-DEVELOPMENT 5%AEP FLOOD HAZARD	B12
DESIGN	DRAWN	APPROVED			
DP	AWE	RM			A
			SCALE: 1:1.200      0   10   20   30   40   50 m		





**Legend**

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout

**Water Level (mAHD)**

- <= 23.0
- 23.0 - 23.2
- 23.2 - 23.4
- 23.4 - 23.6
- 23.6 - 23.8
- 23.8 - 24.0
- 24.0 - 24.2
- > 24.2

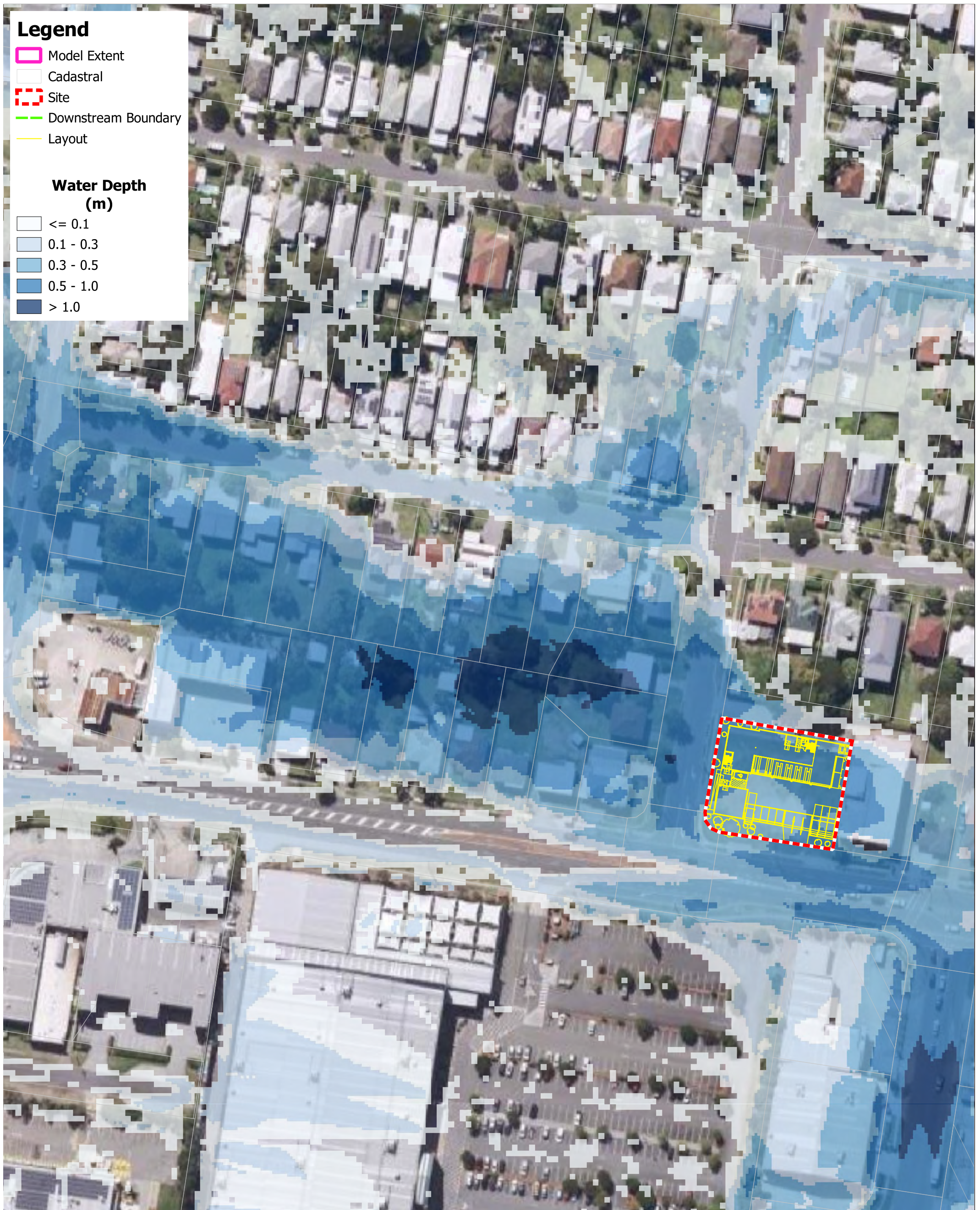
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 Legend Consultants Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	POST-DEVELOPMENT 10%AEP FLOOD WATER LEVEL	B13
DESIGN	DRAWN	APPROVED			ISSUE
DP	AWE	RM			A
			SCALE: 1:1.200		
					

# Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout

## Water Depth (m)

- <= 0.1
- 0.1 - 0.3
- 0.3 - 0.5
- 0.5 - 1.0
- > 1.0



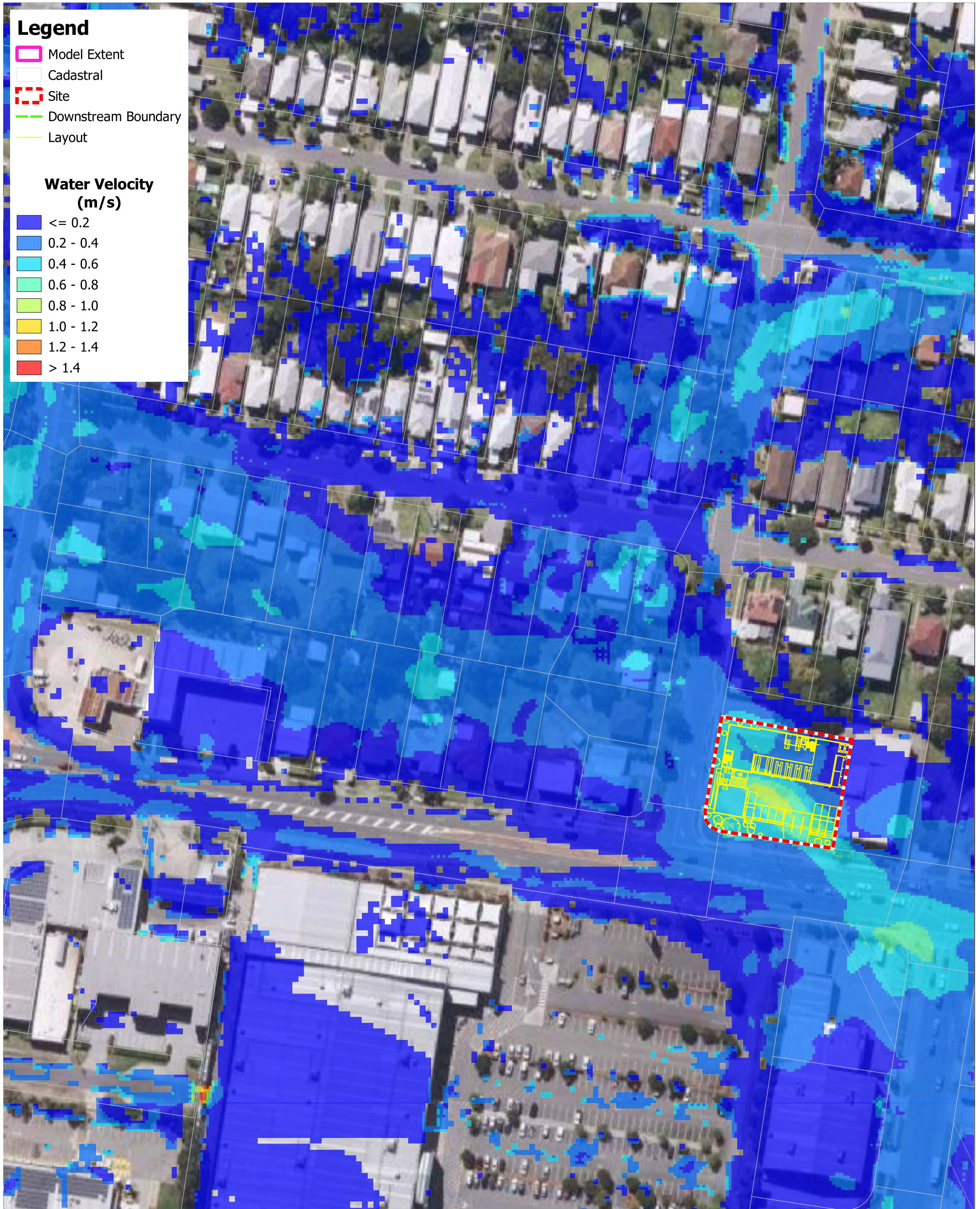
			Client <b>SARRIS INTERNATIONAL PTY LTD</b>	PROJECT <b>437 Stafford Road Staffor</b>	PROJECT NO. <b>LC26013</b>
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT			
			Consultant <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	TITLE <b>POST-DEVELOPMENT 10%AEP FLOOD WATER DEPTH</b>	DWG NO. <b>B14</b>
DESIGN DP	DRAWN AWE	APPROVED RM			ISSUE <b>A</b>
			SCALE: 1:1.200 <div style="display: flex; align-items: center; justify-content: center; margin-top: 5px;"> <span style="margin-right: 5px;">0</span> <span style="margin-right: 5px;">10</span> <span style="margin-right: 5px;">20</span> <span style="margin-right: 5px;">30</span> <span style="margin-right: 5px;">40</span> <span style="margin-right: 5px;">50 m</span> </div>		


### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout






### Water Velocity (m/s)

- <= 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1.0
- 1.0 - 1.2
- 1.2 - 1.4
- > 1.4









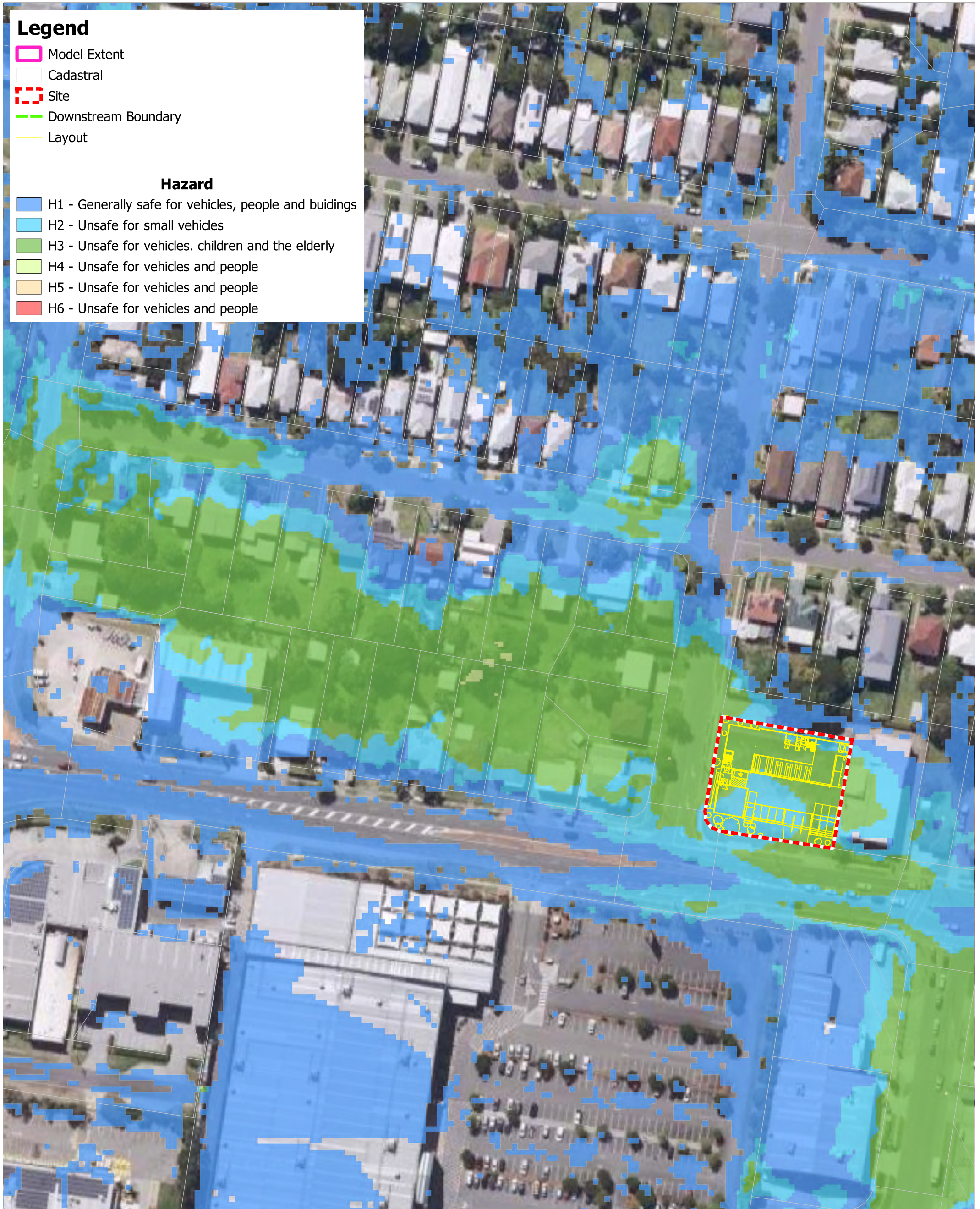
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	POST-DEVELOPMENT 10%AEP FLOOD WATER VELOCITY	B15
DESIGN	DRAWN	APPROVED			
DP	AWE	RM			A
			SCALE: 1:1.200 <div style="display: flex; align-items: center; justify-content: center; margin-top: 5px;"> <span style="margin-right: 5px;">0</span> <span style="margin-right: 5px;">10</span> <span style="margin-right: 5px;">20</span> <span style="margin-right: 5px;">30</span> <span style="margin-right: 5px;">40</span> <span style="margin-right: 5px;">50 m</span> </div>		


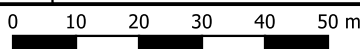
# Legend

-  Model Extent
-  Cadastral
-  Site
-  Downstream Boundary
-  Layout

## Hazard

-  H1 - Generally safe for vehicles, people and buidings
-  H2 - Unsafe for small vehicles
-  H3 - Unsafe for vehicles. children and the elderly
-  H4 - Unsafe for vehicles and people
-  H5 - Unsafe for vehicles and people
-  H6 - Unsafe for vehicles and people



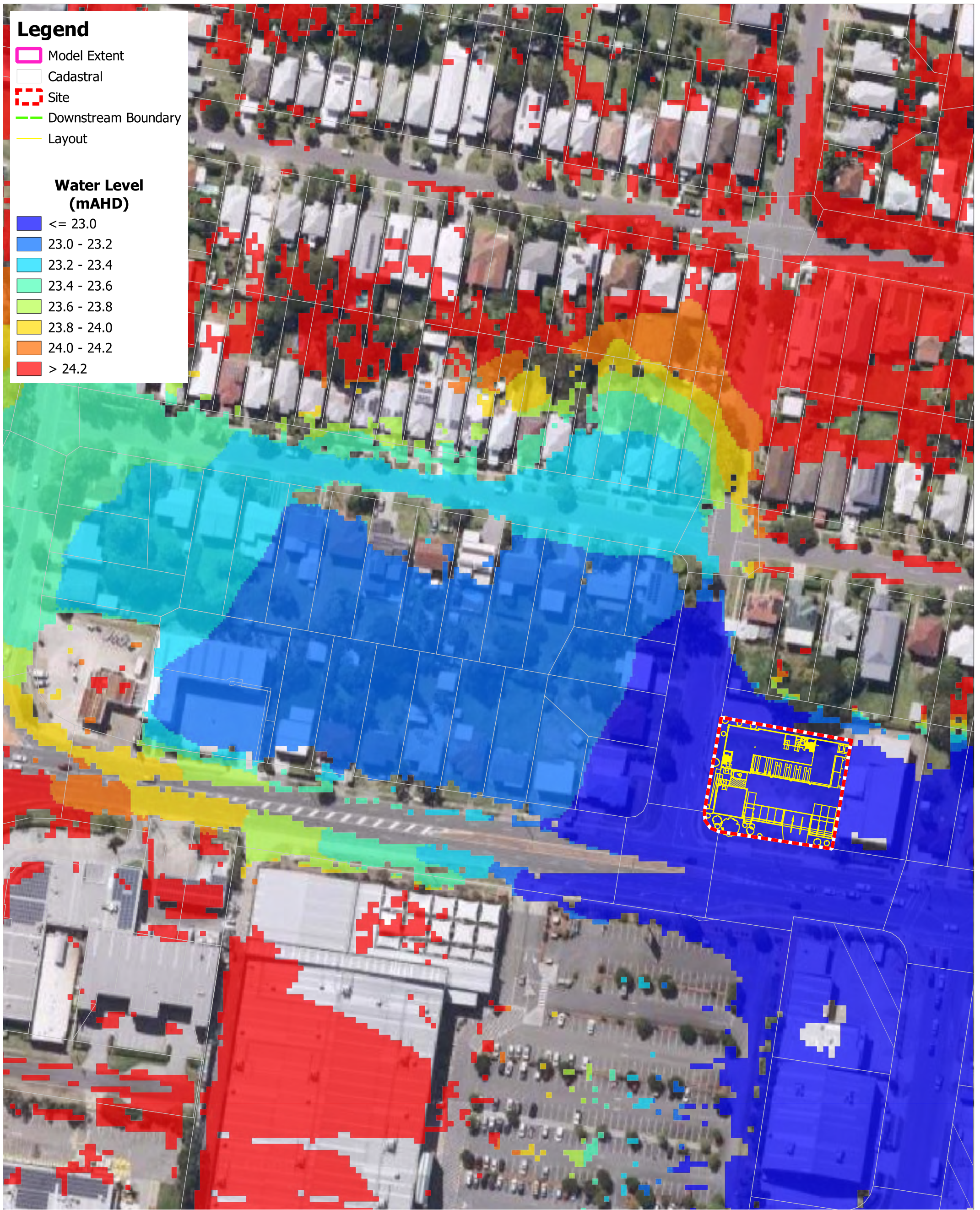
			Client <b>SARRIS INTERNATIONAL PTY LTD</b>	PROJECT <b>437 Stafford Road Staffor</b>	PROJECT NO. <b>LC26013</b>
A	12.06.26	FOR DISCUSSION	Consultant  75 Barden Ridge Road, Reedy Creek, QLD 4227	TITLE <b>POST-DEVELOPMENT 10%AEP FLOOD HAZARD</b>	DWG NO. <b>B16</b>
ISSUE No.	DATE	AMENDMENT			ISSUE <b>A</b>
DESIGN DP	DRAWN AWE	APPROVED RM	SCALE: 1:1.200 		


### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout






### Water Level (mAHD)

- <= 23.0
- 23.0 - 23.2
- 23.2 - 23.4
- 23.4 - 23.6
- 23.6 - 23.8
- 23.8 - 24.0
- 24.0 - 24.2
- > 24.2








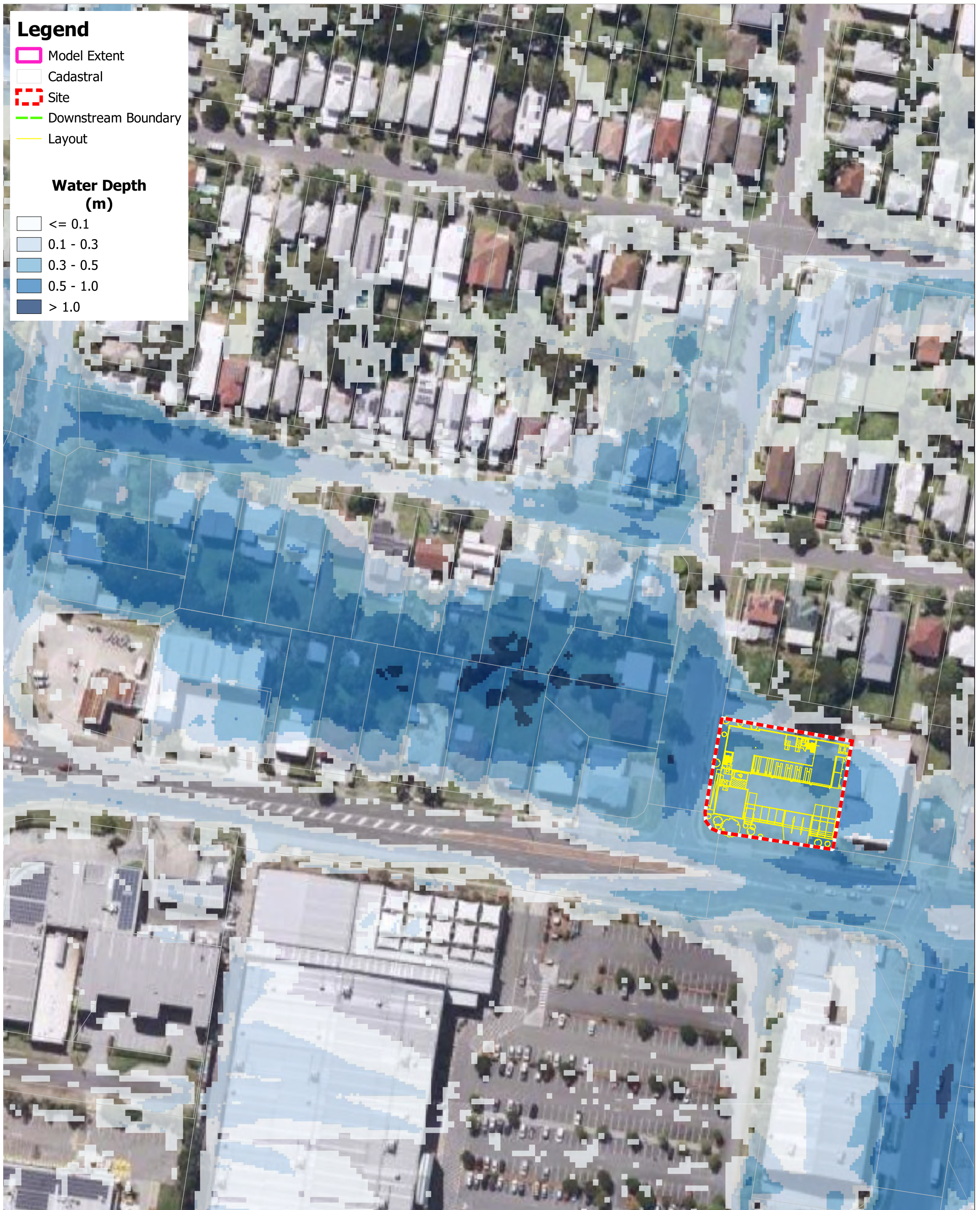
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	POST-DEVELOPMENT 20%AEP FLOOD WATER LEVEL	B17
DESIGN	DRAWN	APPROVED			ISSUE
DP	AWE	RM			A
			SCALE: 1:1,200 <div style="display: flex; align-items: center; justify-content: center; margin-top: 5px;"> <span style="margin-right: 5px;">0</span> <span style="margin-right: 5px;">10</span> <span style="margin-right: 5px;">20</span> <span style="margin-right: 5px;">30</span> <span style="margin-right: 5px;">40</span> <span style="margin-right: 5px;">50 m</span> </div>		


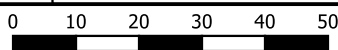
### Legend

-  Model Extent
-  Cadastral
-  Site
-  Downstream Boundary
-  Layout

### Water Depth (m)

-  <= 0.1
-  0.1 - 0.3
-  0.3 - 0.5
-  0.5 - 1.0
-  > 1.0



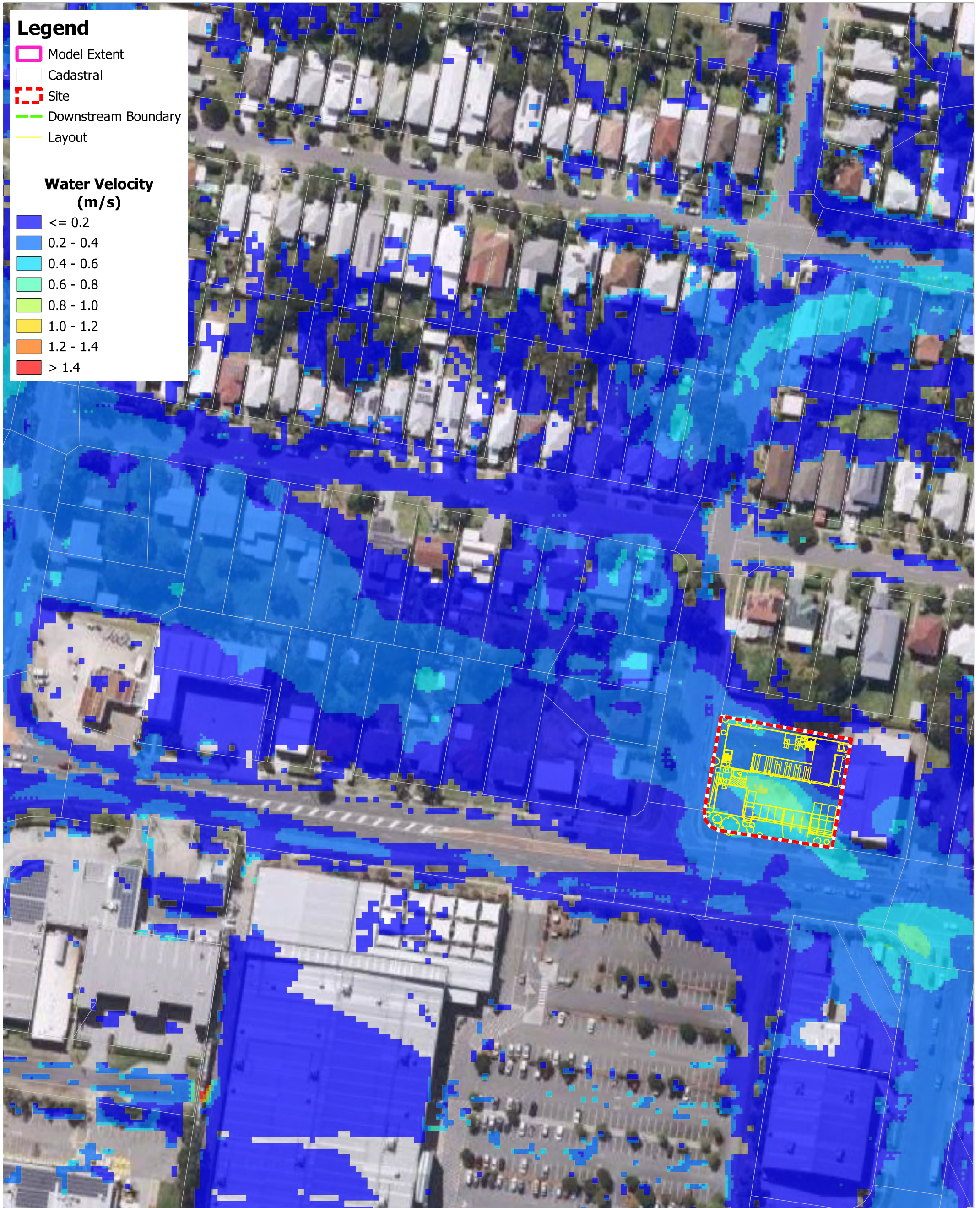
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 Legend Consultants Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	POST-DEVELOPMENT 20%AEP FLOOD WATER DEPTH	B18
DESIGN	DRAWN	APPROVED			
DP	AWE	RM	0   10   20   30   40   50 m 		A


### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout

### Water Velocity (m/s)

- <= 0.2
- 0.2 - 0.4
- 0.4 - 0.6
- 0.6 - 0.8
- 0.8 - 1.0
- 1.0 - 1.2
- 1.2 - 1.4
- > 1.4



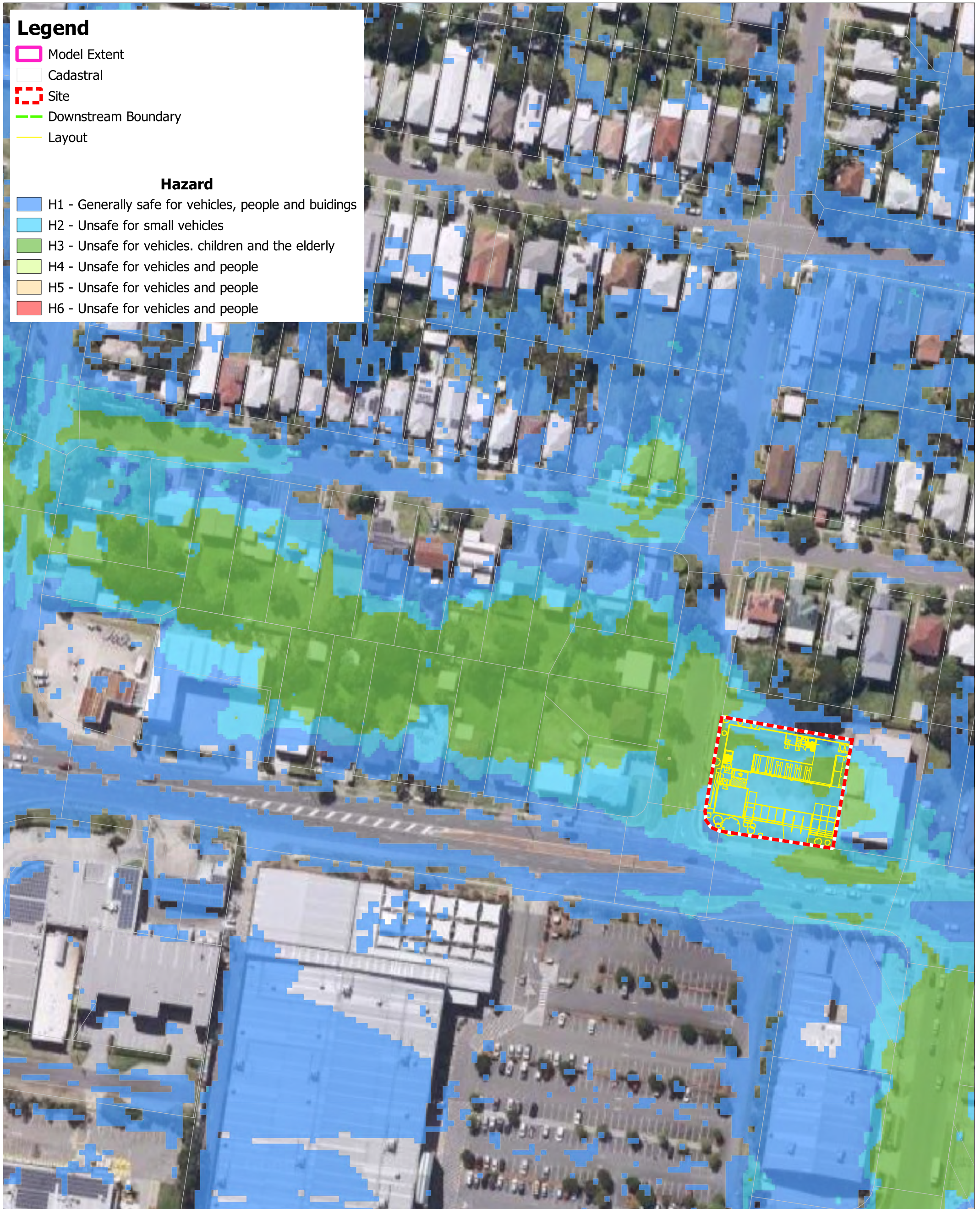
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	POST-DEVELOPMENT 20%AEP FLOOD WATER VELOCITY	B19
DESIGN	DRAWN	APPROVED			
DP	AWE	RM			A
			SCALE: 1:1,200 <div style="display: flex; justify-content: center; align-items: center; margin-top: 5px;"> <span style="margin-right: 5px;">0</span> <span style="margin-right: 5px;">10</span> <span style="margin-right: 5px;">20</span> <span style="margin-right: 5px;">30</span> <span style="margin-right: 5px;">40</span> <span style="margin-right: 5px;">50 m</span> </div>		


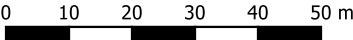
# Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout

## Hazard

- H1 - Generally safe for vehicles, people and buidings
- H2 - Unsafe for small vehicles
- H3 - Unsafe for vehicles. children and the elderly
- H4 - Unsafe for vehicles and people
- H5 - Unsafe for vehicles and people
- H6 - Unsafe for vehicles and people



			Client <b>SARRIS INTERNATIONAL PTY LTD</b>	PROJECT <b>437 Stafford Road Staffor</b>	PROJECT NO. <b>LC26013</b>
A	12.06.26	FOR DISCUSSION	Consultant  75 Barden Ridge Road, Reedy Creek, QLD 4227	TITLE <b>POST-DEVELOPMENT 20%AEP FLOOD HAZARD</b>	DWG NO. <b>B20</b>
ISSUE No.	DATE	AMENDMENT			ISSUE <b>A</b>
DESIGN DP	DRAWN AWE	APPROVED RM	SCALE: 1:1.200 		



APPENDIX

**F**

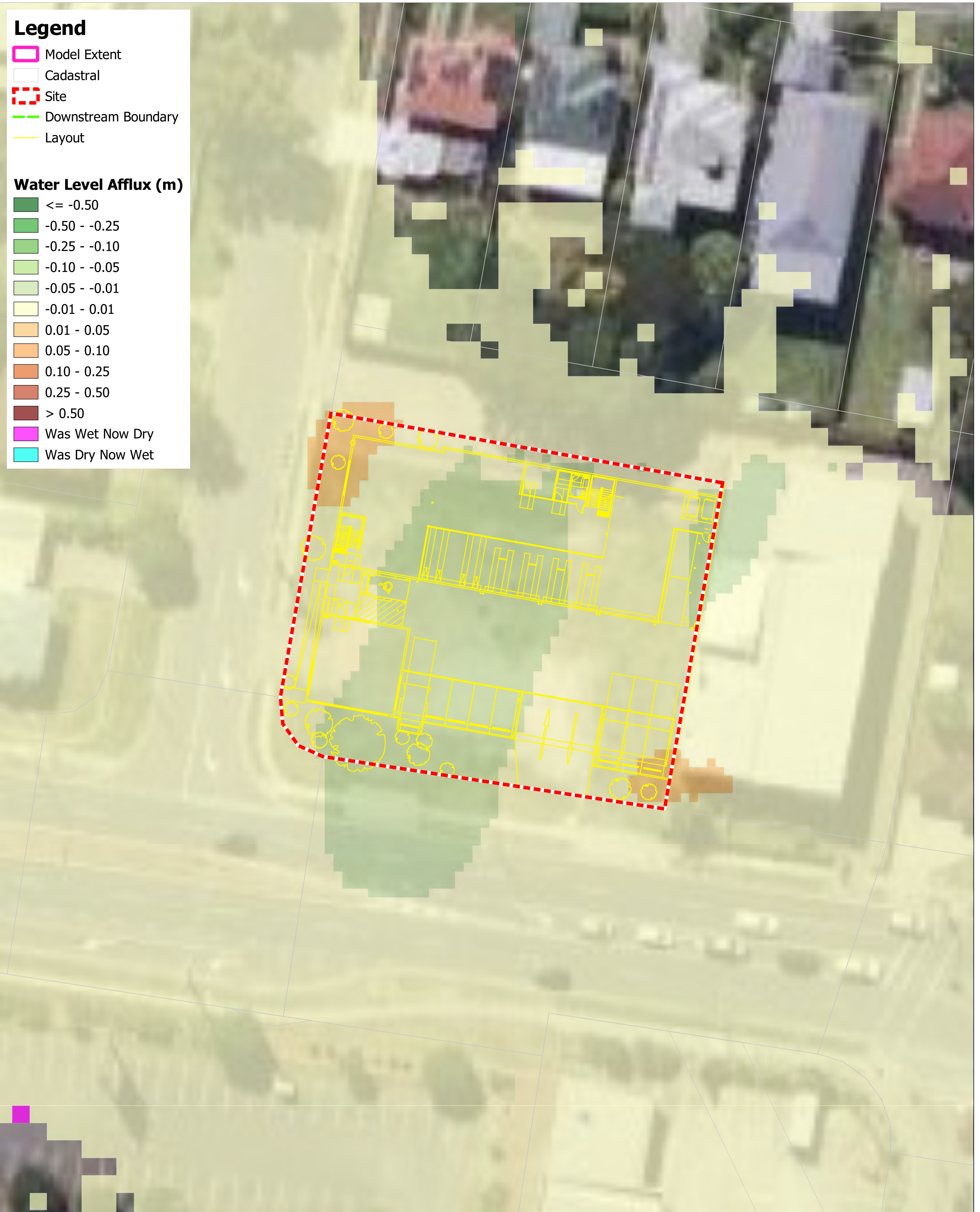
## Afflux Mapping Analysis



### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout






### Water Level Afflux (m)

- <= -0.50
- 0.50 - -0.25
- 0.25 - -0.10
- 0.10 - -0.05
- 0.05 - -0.01
- 0.01 - 0.01
- 0.01 - 0.05
- 0.05 - 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- > 0.50
- Was Wet Now Dry
- Was Dry Now Wet












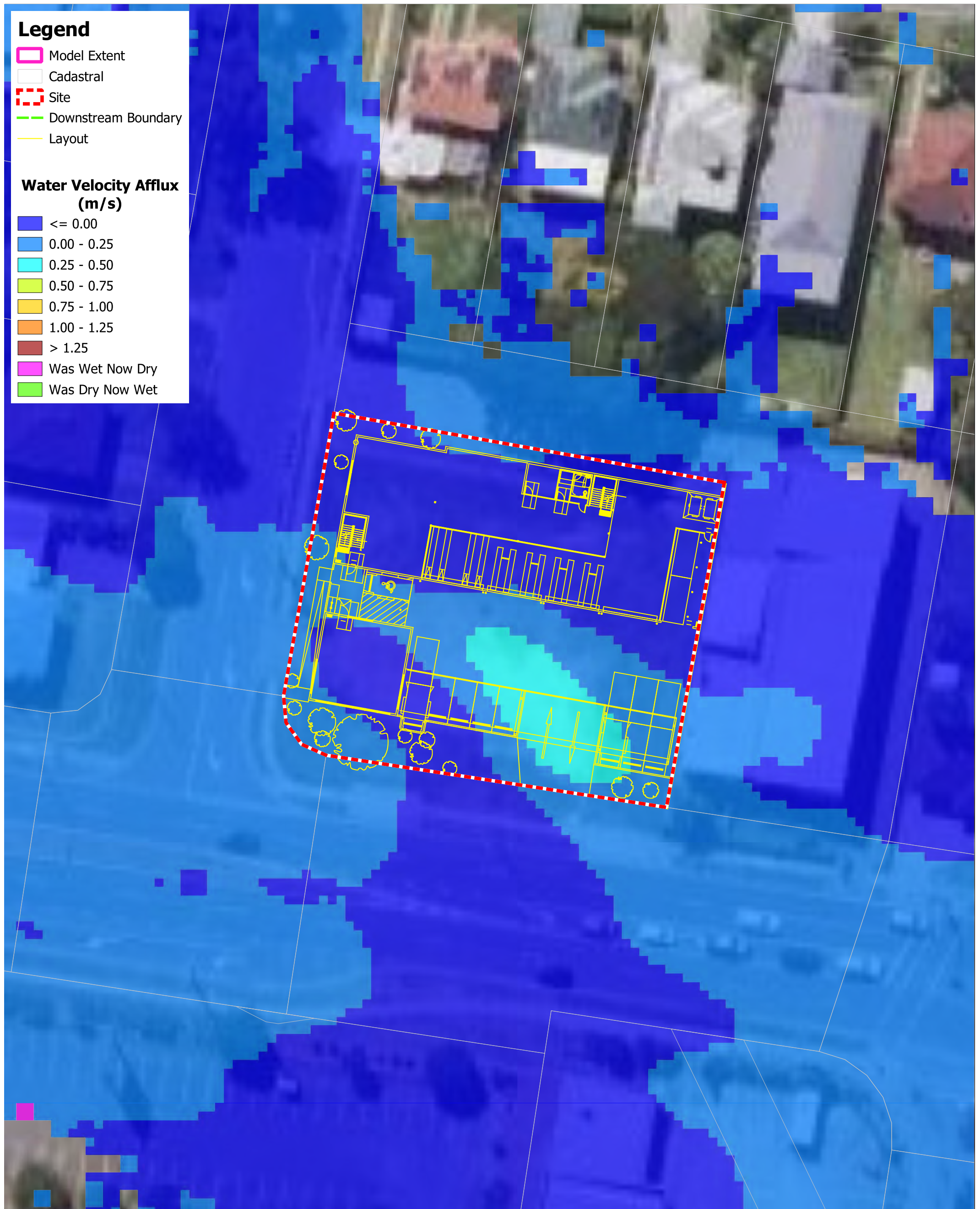
			Client <b>SARRIS INTERNATIONAL PTY LTD</b>	PROJECT <b>437 Stafford Road Staffor</b>	PROJECT NO. <b>LC26013</b>
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT			
			Consultant  75 Barden Ridge Road, Reedy Creek, QLD 4227	TITLE <b>POST-DEVELOPMENT 1%AEP FLOOD WATER LEVEL AFFLUX</b>	DWG NO. <b>C01</b>
DESIGN DP	DRAWN AWE	APPROVED RM	SCALE: 1:1200		
					
			ISSUE <b>A</b>		


### Legend

-  Model Extent
-  Cadastral
-  Site
-  Downstream Boundary
-  Layout






### Water Velocity Afflux (m/s)

-  <= 0.00
-  0.00 - 0.25
-  0.25 - 0.50
-  0.50 - 0.75
-  0.75 - 1.00
-  1.00 - 1.25
-  > 1.25
-  Was Wet Now Dry
-  Was Dry Now Wet
















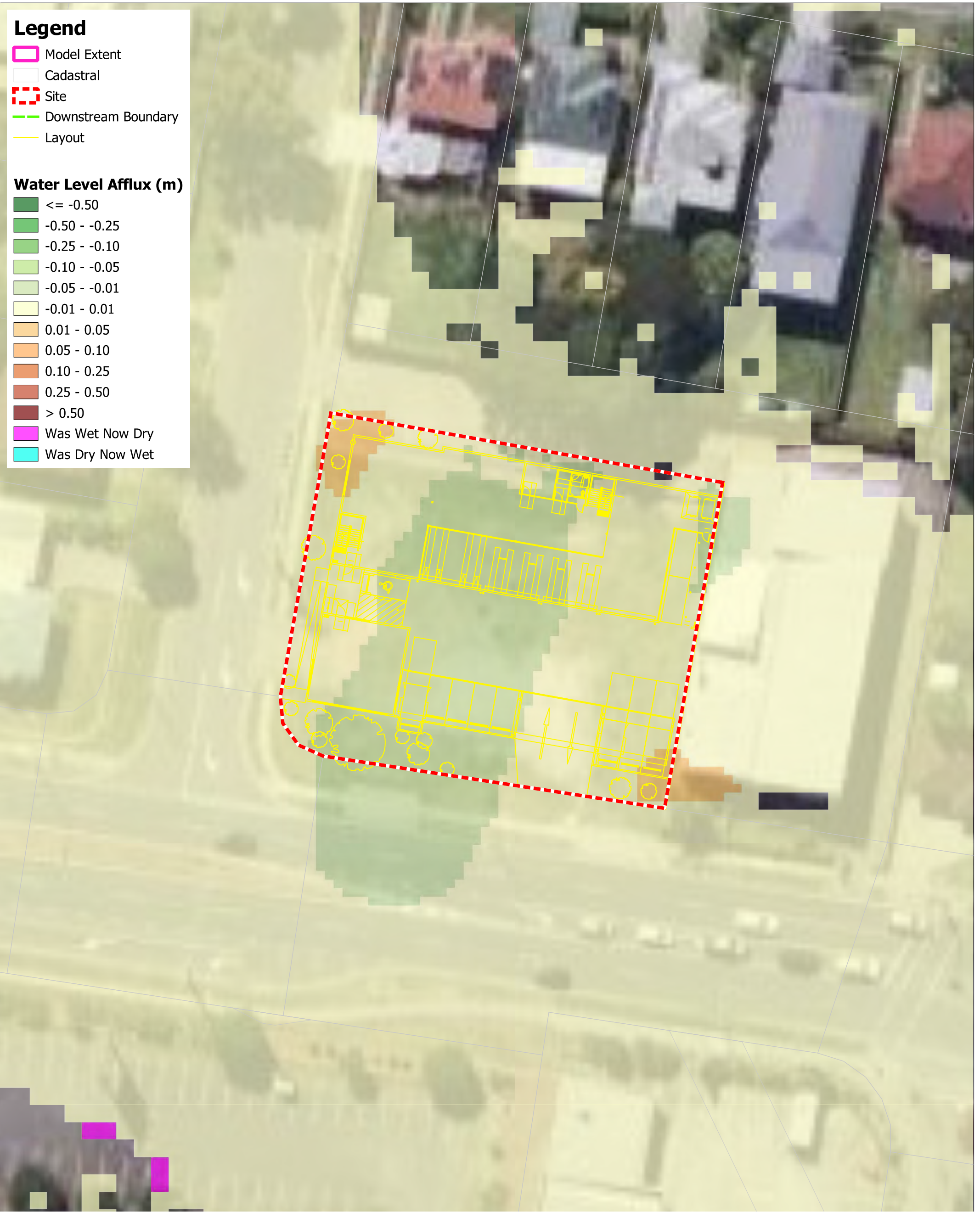
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT			
			Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	POST-DEVELOPMENT 1%AEP FLOOD WATER VELOCITY AFFLUX	C02
DESIGN	DRAWN	APPROVED			
DP	AWE	RM			
			SCALE: 1:1200      0      5      10      15      20      25 m		
			ISSUE		
			A		



### Legend

-  Model Extent
-  Cadastral
-  Site
-  Downstream Boundary
-  Layout






### Water Level Afflux (m)

-  <= -0.50
-  -0.50 - -0.25
-  -0.25 - -0.10
-  -0.10 - -0.05
-  -0.05 - -0.01
-  -0.01 - 0.01
-  0.01 - 0.05
-  0.05 - 0.10
-  0.10 - 0.25
-  0.25 - 0.50
-  > 0.50
-  Was Wet Now Dry
-  Was Dry Now Wet












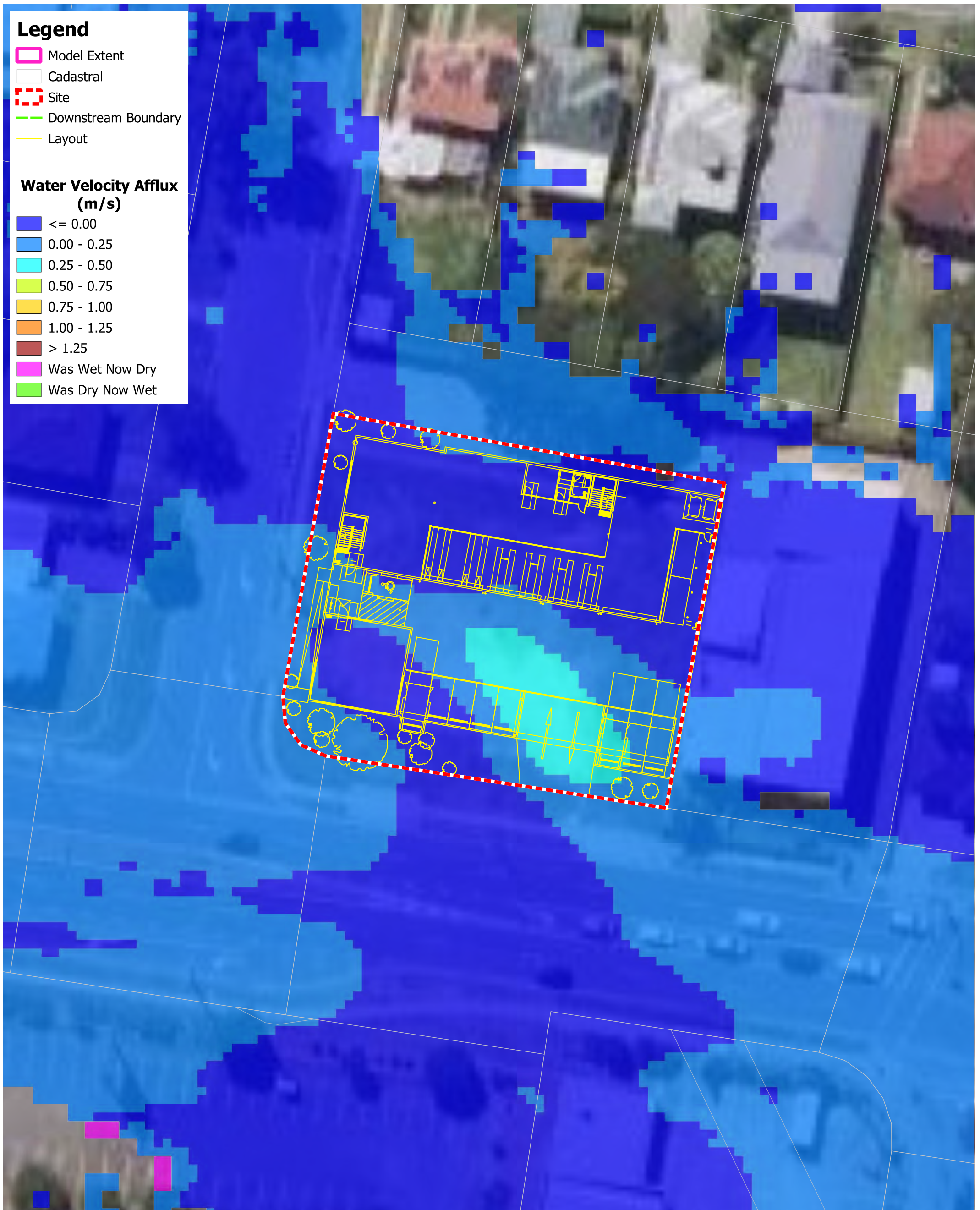
			Client <b>SARRIS INTERNATIONAL PTY LTD</b>	PROJECT <b>437 Stafford Road Staffor</b>	PROJECT NO. <b>LC26013</b>
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT			
			Consultant  75 Barden Ridge Road, Reedy Creek, QLD 4227	TITLE <b>POST-DEVELOPMENT 2%AEP FLOOD WATER LEVEL AFFLUX</b>	DWG NO. <b>C03</b>
DESIGN DP	DRAWN AWE	APPROVED RM	SCALE: 1:1200		
					
			ISSUE <b>A</b>		



### Legend

-  Model Extent
-  Cadastral
-  Site
-  Downstream Boundary
-  Layout

### Water Velocity Afflux (m/s)

-  <= 0.00
-  0.00 - 0.25
-  0.25 - 0.50
-  0.50 - 0.75
-  0.75 - 1.00
-  1.00 - 1.25
-  > 1.25
-  Was Wet Now Dry
-  Was Dry Now Wet



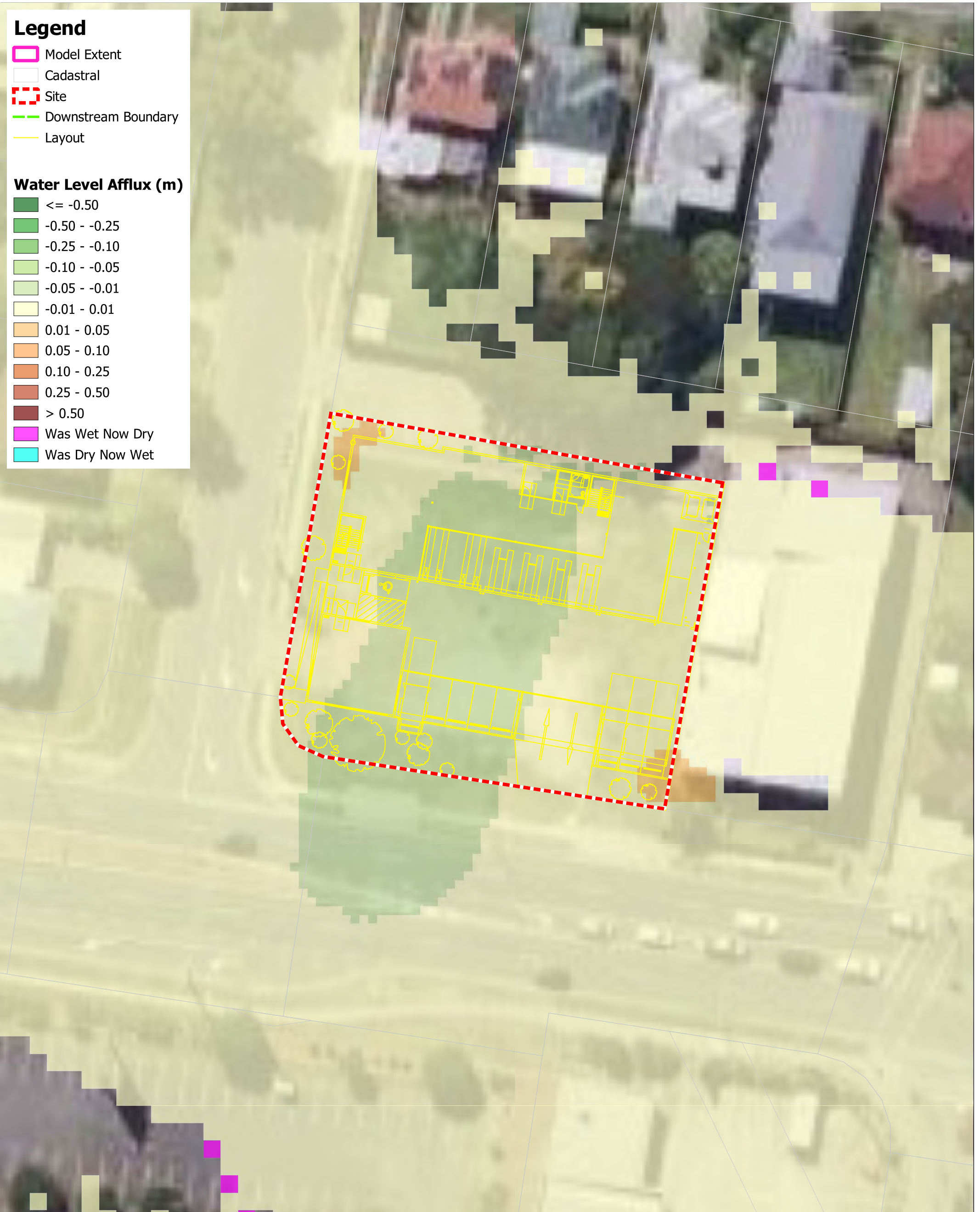
			Client <b>SARRIS INTERNATIONAL PTY LTD</b>	PROJECT <b>437 Stafford Road Staffor</b>	PROJECT NO. <b>LC26013</b>
A	12.06.26	FOR DISCUSSION	Consultant  75 Barden Ridge Road, Reedy Creek, QLD 4227	TITLE <b>POST-DEVELOPMENT 2%AEP FLOOD WATER VELOCITY AFFLUX</b>	DWG NO. <b>C04</b>
ISSUE No.	DATE	AMENDMENT			
DESIGN DP	DRAWN AWE	APPROVED RM	SCALE: 1:1200		
					
			ISSUE <b>A</b>		


### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout

### Water Level Afflux (m)

- <= -0.50
- 0.50 - -0.25
- 0.25 - -0.10
- 0.10 - -0.05
- 0.05 - -0.01
- 0.01 - 0.01
- 0.01 - 0.05
- 0.05 - 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- > 0.50
- Was Wet Now Dry
- Was Dry Now Wet



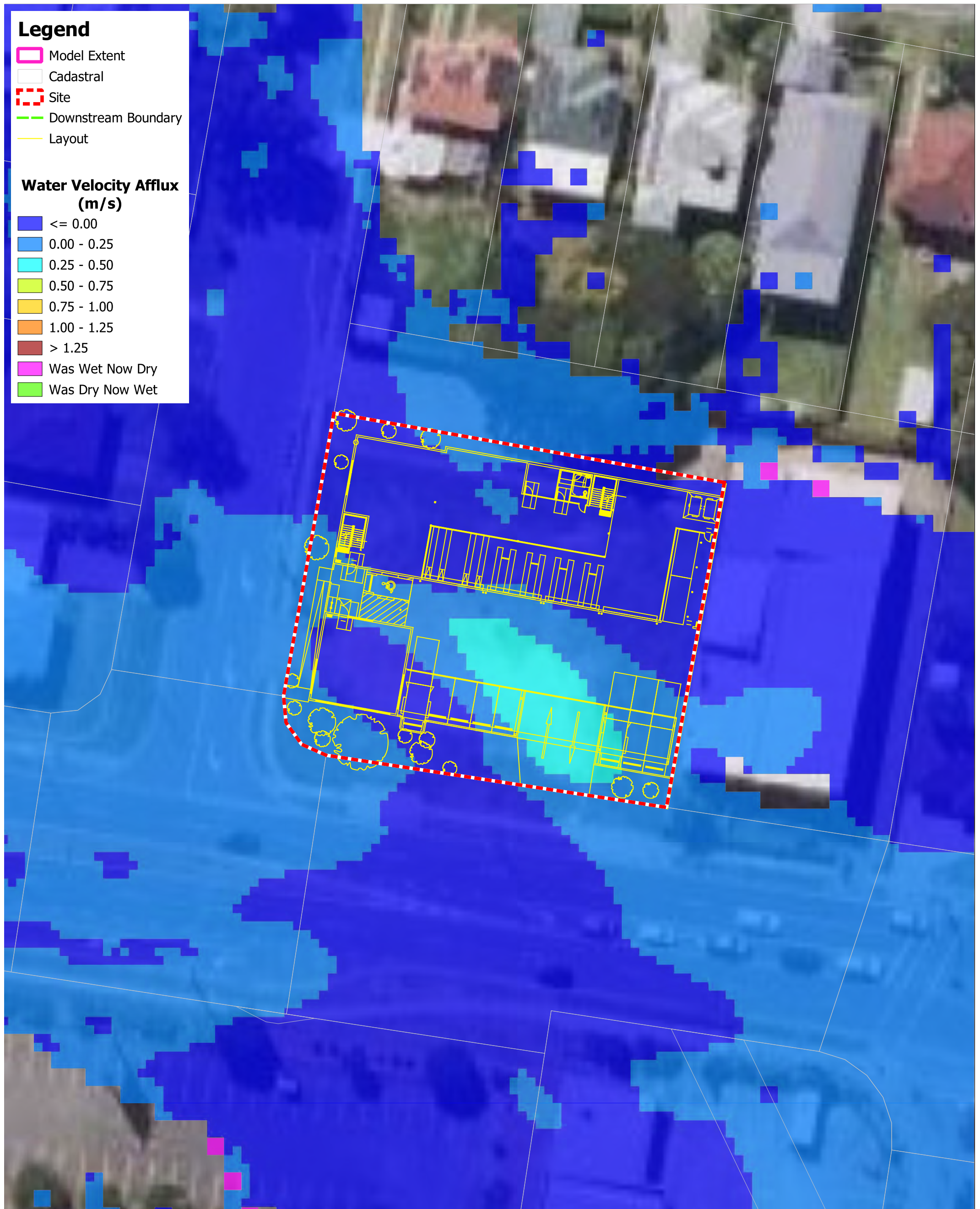
			Client <b>SARRIS INTERNATIONAL PTY LTD</b>	PROJECT <b>437 Stafford Road Staffor</b>	PROJECT NO. <b>LC26013</b>
A	12.06.26	FOR DISCUSSION	Consultant  75 Barden Ridge Road, Reedy Creek, QLD 4227	TITLE <b>POST-DEVELOPMENT 5%AEP FLOOD WATER LEVEL AFFLUX</b>	DWG NO. <b>C05</b>
ISSUE No.	DATE	AMENDMENT			ISSUE <b>A</b>
DESIGN DP	DRAWN AWE	APPROVED RM	SCALE: 1:1200 0    5    10    15    20    25 m		


### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout

### Water Velocity Afflux (m/s)

- <= 0.00
- 0.00 - 0.25
- 0.25 - 0.50
- 0.50 - 0.75
- 0.75 - 1.00
- 1.00 - 1.25
- > 1.25
- Was Wet Now Dry
- Was Dry Now Wet



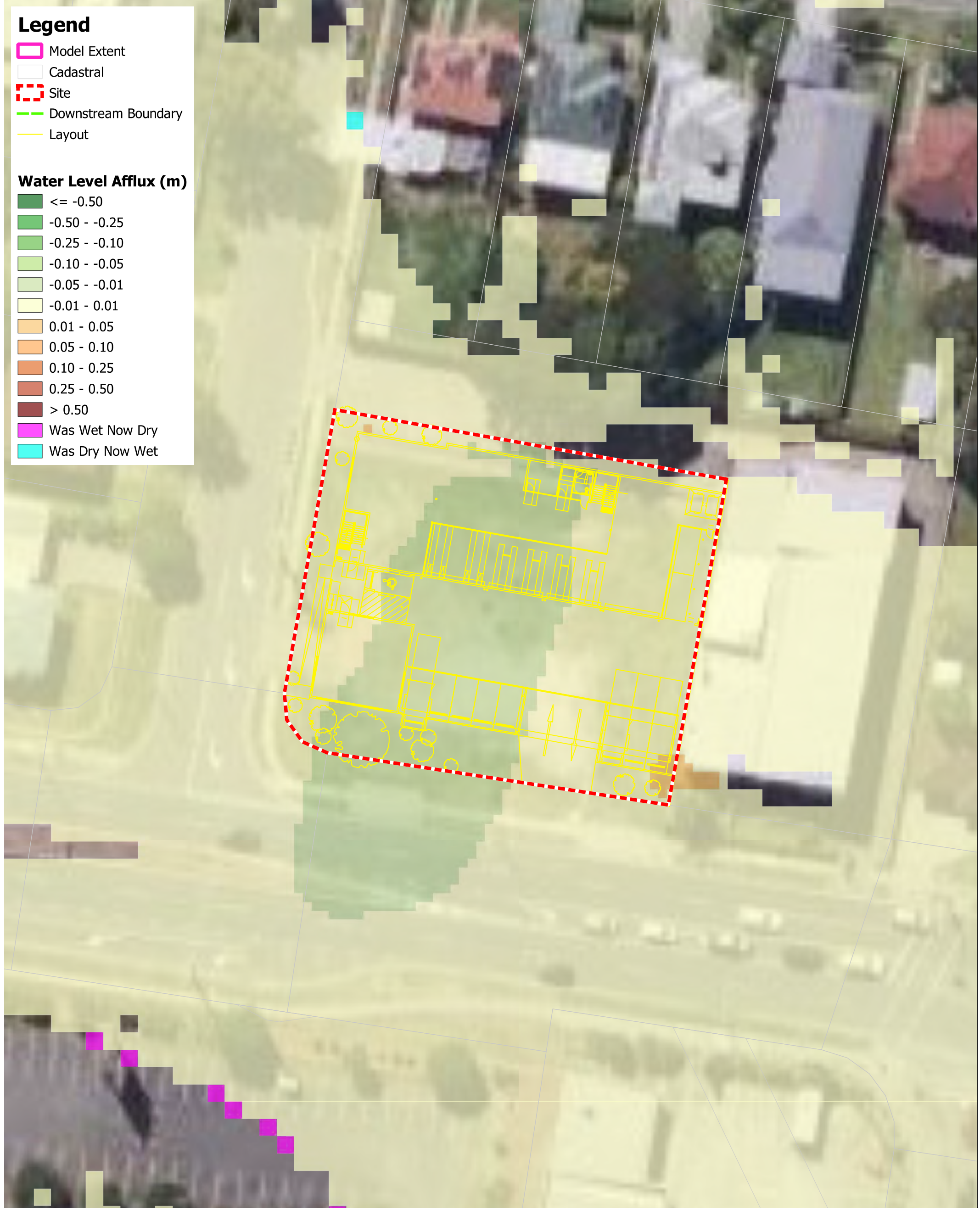
			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	POST-DEVELOPMENT 5% AEP FLOOD WATER VELOCITY AFFLUX	C06
DESIGN	DRAWN	APPROVED			ISSUE
DP	AWE	RM			A
			SCALE: 1:1200 <div style="display: flex; justify-content: center; align-items: center; margin-top: 5px;"> <span style="margin-right: 5px;">0</span> <span style="margin-right: 5px;">5</span> <span style="margin-right: 5px;">10</span> <span style="margin-right: 5px;">15</span> <span style="margin-right: 5px;">20</span> <span style="margin-right: 5px;">25 m</span> </div>		

### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout

### Water Level Afflux (m)

- <= -0.50
- 0.50 - -0.25
- 0.25 - -0.10
- 0.10 - -0.05
- 0.05 - -0.01
- 0.01 - 0.01
- 0.01 - 0.05
- 0.05 - 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- > 0.50
- Was Wet Now Dry
- Was Dry Now Wet



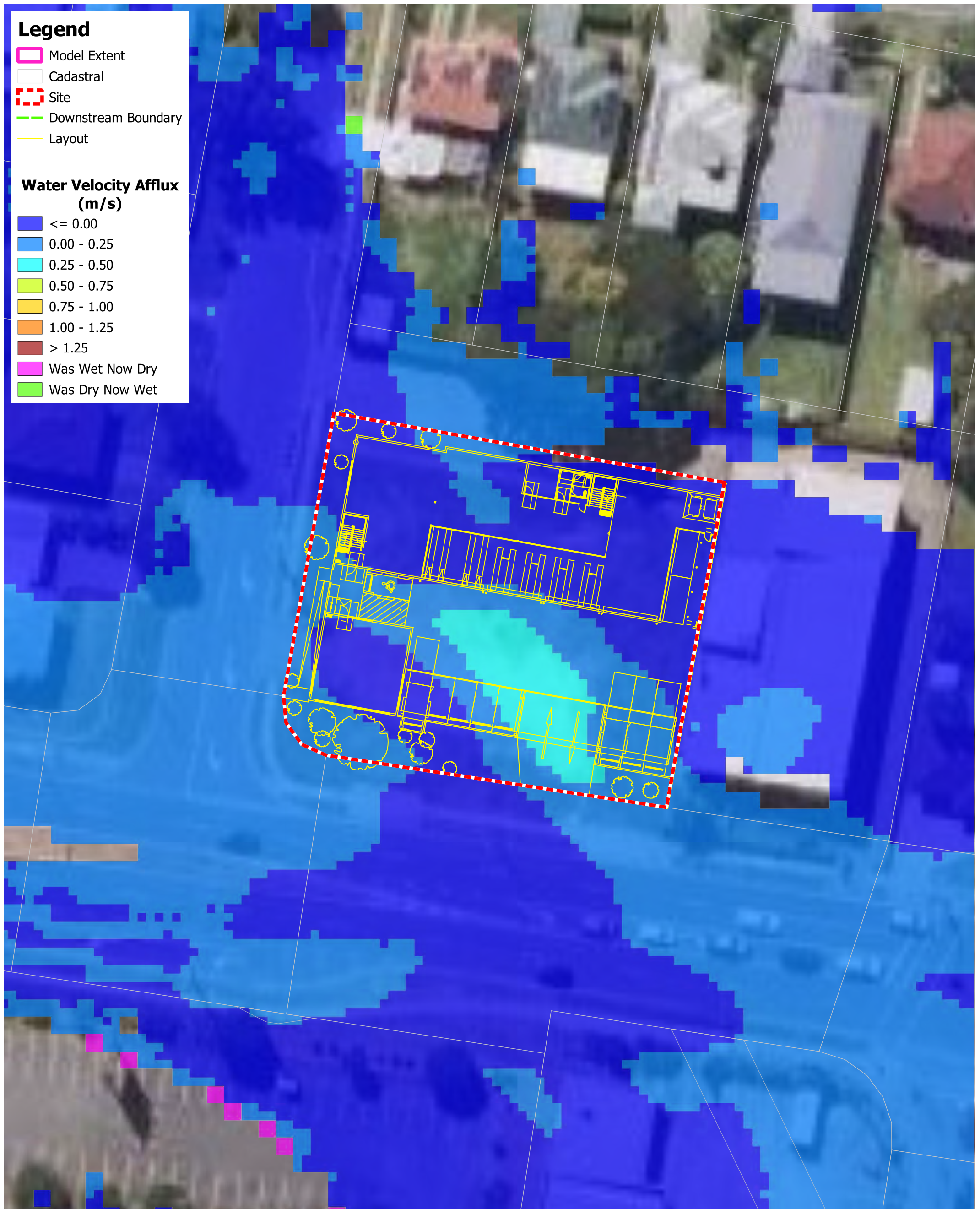
			Client <b>SARRIS INTERNATIONAL PTY LTD</b>	PROJECT <b>437 Stafford Road Staffor</b>	PROJECT NO. <b>LC26013</b>
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT			
			Consultant  <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	TITLE <b>POST-DEVELOPMENT 10%AEP FLOOD WATER LEVEL AFFLUX</b>	DWG NO. <b>C07</b>
DESIGN DP	DRAWN AWE	APPROVED RM			
			SCALE: 1:1200		ISSUE <b>A</b>

### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout

### Water Velocity Afflux (m/s)

- <= 0.00
- 0.00 - 0.25
- 0.25 - 0.50
- 0.50 - 0.75
- 0.75 - 1.00
- 1.00 - 1.25
- > 1.25
- Was Wet Now Dry
- Was Dry Now Wet



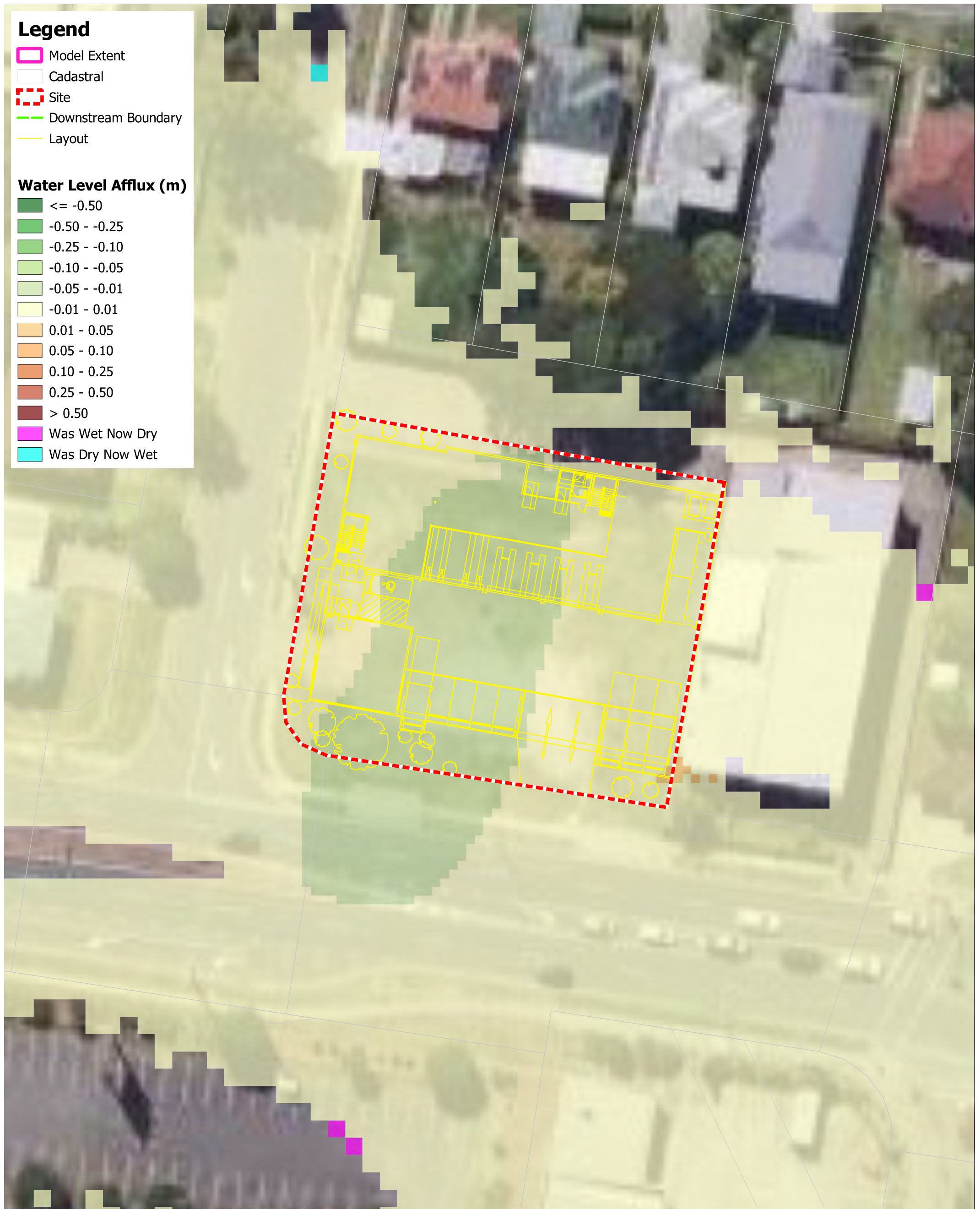
			Client <b>SARRIS INTERNATIONAL PTY LTD</b>	PROJECT <b>437 Stafford Road Staffor</b>	PROJECT NO. <b>LC26013</b>
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT			
			Consultant  <b>Legend Consultants</b> Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	TITLE <b>POST-DEVELOPMENT 10%AEP FLOOD WATER VELOCITY AFFLUX</b>	DWG NO. <b>C08</b>
DESIGN DP	DRAWN AWE	APPROVED RM	SCALE: 1:1200 0    5    10    15    20    25 m		ISSUE <b>A</b>


### Legend

- Model Extent
- Cadastral
- Site
- Downstream Boundary
- Layout






### Water Level Afflux (m)

- <= -0.50
- 0.50 - -0.25
- 0.25 - -0.10
- 0.10 - -0.05
- 0.05 - -0.01
- 0.01 - 0.01
- 0.01 - 0.05
- 0.05 - 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- > 0.50
- Was Wet Now Dry
- Was Dry Now Wet












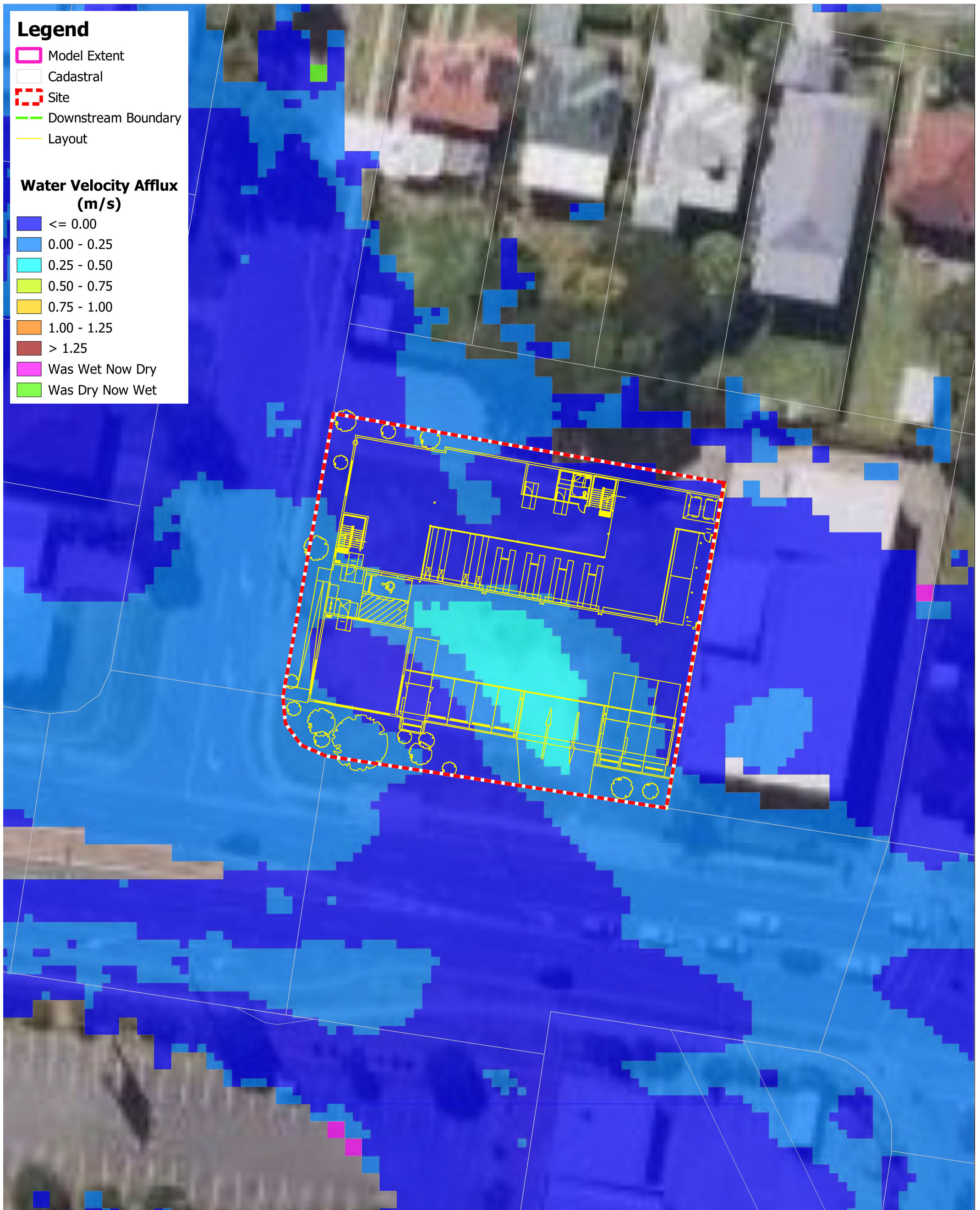
			Client <b>SARRIS INTERNATIONAL PTY LTD</b>	PROJECT <b>437 Stafford Road Staffor</b>	PROJECT NO. <b>LC26013</b>
A	12.06.26	FOR DISCUSSION	Consultant  75 Barden Ridge Road, Reedy Creek, QLD 4227	TITLE <b>POST-DEVELOPMENT 20%AEP FLOOD WATER LEVEL AFFLUX</b>	DWG NO. <b>C09</b>
ISSUE No.	DATE	AMENDMENT			ISSUE <b>A</b>
DESIGN DP	DRAWN AWE	APPROVED RM	SCALE: 1:1200		
			<div style="display: flex; align-items: center; justify-content: center;"> <div style="width: 20px; height: 20px; background: linear-gradient(to right, black, white); margin-right: 5px;"></div> <div style="display: flex; gap: 5px;"> <span>0</span><span>5</span><span>10</span><span>15</span><span>20</span><span>25 m</span> </div> </div>		



### Legend

-  Model Extent
-  Cadastral
-  Site
-  Downstream Boundary
-  Layout

### Water Velocity Afflux (m/s)

-  ≤ 0.00
-  0.00 - 0.25
-  0.25 - 0.50
-  0.50 - 0.75
-  0.75 - 1.00
-  1.00 - 1.25
-  > 1.25
-  Was Wet Now Dry
-  Was Dry Now Wet



			Client	PROJECT	PROJECT NO.
			SARRIS INTERNATIONAL PTY LTD	437 Stafford Road Staffor	LC26013
A	12.06.26	FOR DISCUSSION			
ISSUE No.	DATE	AMENDMENT	Consultant	TITLE	DWG NO.
			 Legend Consultants Efficiency · Innovation · Quality 75 Barden Ridge Road, Reedy Creek, QLD 4227	POST-DEVELOPMENT 20%AEP FLOOD WATER VELOCITY AFFLUX	C10
DESIGN DP	DRAWN AWE	APPROVED RM	SCALE: 1:1200		
			0      5      10      15      20      25 m 		
			ISSUE <b>A</b>		



APPENDIX

**G**

Flood Overlay Code Response

## **8.2.11 Flood Overlay Code Response – 437 Stafford Road, Stafford**

### **8.2.11.1 Application**

1. This code applies to assessing development in the Flood overlay, if:
  - a. accepted development subject to compliance with identified requirements, where acceptable outcomes of this code are identified requirements in a table of assessment for an overlay (section 5.10); or
  - b. assessable development where this code is an applicable code identified in the assessment benchmarks column of a table of assessment for an overlay (section 5.10); or
  - c. impact assessable development.
2. Land in the Flood overlay is identified on the Flood overlay map and is included in the following sub-categories:
  - a. Brisbane River flood planning area 1 sub-category;
  - b. Brisbane River flood planning area 2a sub-category;
  - c. Brisbane River flood planning area 2b sub-category;
  - d. Brisbane River flood planning area 3 sub-category;
  - e. Brisbane River flood planning area 4 sub-category;
  - f. Brisbane River flood planning area 5 sub-category;
  - g. Creek/waterway flood planning area 1 sub-category;
  - h. Creek/waterway flood planning area 2 sub-category;
  - i. Creek/waterway flood planning area 3 sub-category;
  - j. Creek/waterway flood planning area 4 sub-category;
  - k. Creek/waterway flood planning area 5 sub-category;
  - l. Overland flow flood planning area sub-category.

Editor's note—For the purposes of the overlay, the Pine and South Pine rivers are treated as Creek/waterway flood planning area sub-categories.

Note—The Flood overlay is a 'natural hazard area' for the purpose of the State Planning Policy. Within this area, susceptibility to flooding has been identified. The natural hazard area identified on the Flood overlay map may not reflect the full extent of the flood affected area.

3. When using this code, reference should be made to section 1.5 and section 5.3.3.

Note—The following purpose, overall outcomes, performance outcomes and acceptable outcomes comprise the assessment benchmarks of this code.

Note—Where this code includes performance outcomes or acceptable outcomes that relate to:

- management of flood hazard or hydraulic hazard, guidance is provided in the Flood planning scheme policy;
- filling or excavation within the Creek/waterway flood planning area sub-categories, guidance is provided in the Compensatory earthworks planning scheme policy;
- handling or storage of hazardous materials, guidance is provided in the Management of hazardous chemicals in flood affected areas planning scheme policy;
- standards and specifications for public assets in a park, guidance is provided in the Infrastructure design planning scheme policy;
- standards and specifications for stormwater drainage assets, guidance is provided in the Infrastructure design planning scheme policy.

Editor's note—For a proposal to be accepted development subject to compliance with identified requirements, it must meet all the identified acceptable outcomes of this code that relate to the applicable sub-category

---

and any other applicable code. Where it does not meet all identified acceptable outcomes, the proposal becomes assessable development and a development application is required. Where a development application is required, only the specific acceptable outcomes that the proposal fails to meet need to be assessed against the corresponding assessable acceptable outcomes or performance outcomes and relevant overall outcomes. Other identified acceptable outcomes that are met are not assessed as part of the development application.

**8.2.11.2 Purpose**

1. The purpose of the Flood overlay code is to:
  - a. Implement the policy direction in the Strategic framework, in particular:
    - i. Theme 2: Brisbane’s outstanding lifestyle, and Element 2.3 — Brisbane’s healthy and safe communities;
    - ii. Theme 4: Brisbane’s highly effective transport and infrastructure networks, and Element 4.3 — Brisbane’s coordinated infrastructure planning and delivery.
  - b. Provide for the assessment of the suitability of development in the Flood overlay.
2. The purpose of the Flood overlay code will be achieved through the following overall outcomes:
  - a. Development minimises exposure of people and property to unacceptable risk from flood hazard in all flood events.
  - b. Development and infrastructure mitigates the flood risk through its location, siting, design, construction and operation whilst maintaining amenity.
  - c. Development does not unduly burden the city’s counter-disaster response capacity, including emergency services access during a flood emergency.
  - d. Development provides for efficient evacuation and access for evacuation resources including emergency services during flood events, or otherwise plans for the prospect and impact of isolation or hindered evacuation during flooding.
  - e. Development involving essential community infrastructure remains functional during and immediately after flood events.
  - f. Development ensures that emergency management plans respond to the number and capacity of future users of the development to safely participate in emergency measures such as evacuation.
  - g. Development ensures that essential building services or services essential for the development are designed, located and operated to minimise the flood risk to people, minimise damage to property, disruption to building function, and re-establishment time after a flood event.
  - h. Development involving hazardous materials manufactured, handled or stored in bulk does not adversely impact on public safety and the environment as a result of the impacts of floodwater.
    - i. Development does not, directly or cumulatively, cause or increase adverse impacts on other properties or land within the floodplain from flooding.
    - j. Development and infrastructure mitigates the impacts of hydraulic hazard due to predictable future increases in rainfall intensity on flooding.
  - k. Development prioritises, in order, the safety of people, protection of public infrastructure and protection of private property, in the management of the economic, social and environmental impacts of flooding.

**8.2.11.3 Performance outcomes and acceptable outcomes**

**Table 8.2.11.3.A—Performance outcomes and acceptable outcomes**

Performance outcomes	Acceptable outcomes	Comments
<b>Section A—If for accepted development subject to compliance with identified requirements (acceptable</b>		

<p><b>outcomes only) or assessable development for a dwelling house including any secondary dwelling</b>                  Note—Development for a dwelling house does not require assessment against any other sections of this code.</p>		
<p><b>PO1</b>                  Development involving any habitable or non-habitable part of a dwelling house, including any secondary dwelling, is located and designed to:</p> <ul style="list-style-type: none"> <li>a. minimise the risk to people from flood hazard;</li> <li>b. achieve acceptable flood immunity;</li> <li>c. minimise property impacts from a flood event up to and including the defined flood event;</li> <li>d. minimise disruption to residents, recovery time and rebuilding or restoration costs after a flood event up to and including the defined flood event.</li> </ul>	<p><b>AO1.1</b>                  Development for a dwelling house including any secondary dwelling:</p> <ul style="list-style-type: none"> <li>a. is not located in the Brisbane River flood planning area 1, 2a or 2b sub-categories or the Creek/waterway flood planning area 1 or 2 sub-categories; or</li> <li>b. is only located in these sub-categories, if a Registered Professional Engineer Queensland certifies that the dwelling house and any secondary dwelling are structurally designed to be able to resist hydrostatic and hydrodynamic loads associated with flooding up to and including the defined flood event.</li> </ul>	<p>N/A</p>
	<p><b>AO1.2</b>                  Development for a dwelling house and any secondary dwelling complies with the minimum flood planning levels in Table 8.2.11.3.B.                  Note—If located in an area that has no flood level information available from the Council such as an overland flow path, a Registered Professional Engineer of Queensland with expertise in undertaking flood studies is to certify that the flood level and development levels for the dwelling house and any secondary dwelling achieve the required flood planning levels in Table 8.2.11.3.B.</p>	
	<p><b>AO1.3</b>                  Development involving a building undercroft complies with the minimum clearance requirements in Table 8.2.11.3.E.                  Editor's note—For creek/waterway, storm-tide and river flooding, applicable flood planning information is available from Council's FloodWise Property Report.                  Note—The Flood planning scheme policy provides guidance on undercroft design.</p>	

<p><b>PO2</b>                  Development within the Creek/waterway flood planning area sub-categories or Overland flow flood planning area sub-category:</p> <ol style="list-style-type: none"> <li>a. maintains the conveyance of flood waters to allow flow and debris to pass predominantly unimpeded through the site;</li> <li>b. does not concentrate, intensify or divert floodwater onto upstream, downstream or adjacent properties;</li> <li>c. will not result in a material increase in flood levels or flood hazard on upstream, downstream or adjacent properties.</li> </ol>	<p><b>AO2</b>                  Development:</p> <ol style="list-style-type: none"> <li>a. is not located within the Creek/waterway flood planning area 1, 2 or 3 sub-categories or the Overland flow flood planning area sub-category; or</li> <li>b. provides an open undercroft area from natural ground level to habitable floor level for any area inundated by the defined flood event; or</li> </ol> <p>Note—This undercroft area is not suitable for providing non-habitable rooms, secure storage of valuables, or future enclosing for storage or car parking. The clear area may include structural elements such as columns and floor substructure. The Flood planning scheme policy provides guidance on undercroft design.                  Editor's note—An open undercroft design may be achieved through a 'valance' treatment around the perimeter of an otherwise internally clear undercroft.                  Editor's note—For Creek/waterway, storm-tide and river flooding, applicable flood planning information is available from Council's FloodWise Property Report.</p> <ol style="list-style-type: none"> <li>c. a report from a Registered Professional Engineer Queensland certifies that the development in the Creek/waterway flood planning area or Overland flow flood planning area sub-categories will not result in a material increase in flood level or flood hazard on upstream, downstream or adjacent properties.</li> </ol> <p>Note—Flood studies demonstrate that the development and engineering design methods conform to the principles within the Flood planning scheme policy and the Infrastructure design planning scheme policy.</p>	<p>Complies – Please refer to Legend Consultants hydraulic impact assessment LC26013-0004-HIA</p>
<p><b>Section B—If accepted development subject to compliance with identified requirements (acceptable outcomes only) or assessable development other than for a dwelling house or reconfiguring a lot</b></p> <p>Note—If development that is accepted development subject to compliance with identified requirements complies with the acceptable outcomes of this part, no further assessment against this code is required.</p>		
<p><b>PO3</b>                  Development:</p> <ol style="list-style-type: none"> <li>a. is compatible with flood hazard in a defined flood event;</li> </ol>	<p><b>AO3</b>                  Development for a material change of use is identified in Table 8.2.11.3.C as compatible with the flood hazard in the relevant flood planning area.</p>	<p>Complies – Please refer to Legend Consultants hydraulic impact assessment LC26013-0004-HIA</p>

<p>b. minimises the risk to people from flood hazard;  c. does not reduce the ability of evacuation resources including emergency services to access and evacuate the site in a flood emergency, with consideration to the scale of the development;  d. minimises impacts on property from flooding;  e. minimises disruption to residents, business or site operations and recovery time due to flooding;  f. minimises the need to rebuild structures after a flood event greater than the defined flood event.</p> <p>Note—Where Table 8.2.11.3.C identifies that a flood risk assessment is required, compliance with this performance outcome can be achieved by submitting a flood risk assessment, which may be included within a flood study, addressing the criteria within this performance solution. Preparing flood risk assessments and flood studies is required to be in accordance with the Flood planning scheme policy.</p> <p>Note—An emergency management plan prepared in accordance with the Flood planning scheme policy, which sets out procedures for evacuation due to flooding may be used to demonstrate compliance with this performance outcome.</p>		
<p><b>PO4</b>  Development for a park ensures that the design of a park and location of structures and facilities responds to the flood hazard and balances the safety of intended users with:</p> <ul style="list-style-type: none"> <li>a. maintaining continuity of operations;</li> <li>b. impacts of flooding on asset life and ongoing maintenance costs;</li> <li>c. efficient recovery after flood events;</li> <li>d. recreational benefits to the city;</li> <li>e. availability of suitable land within the park.</li> </ul>	<p><b>AO4.1</b>  Development involving a building or structure in a park complies with the flood planning levels specified in Table 8.2.11.3.D.</p> <p><b>AO4.2</b>  Development involving a building or structure in a park where Table 8.2.11.3.D does not apply:</p> <ul style="list-style-type: none"> <li>a. is not located within the 20% AEP flood extent of any creek/waterway or overland flow path; or</li> <li>b. is located above the 20% AEP flood level of any creek/waterway or overland flow path.</li> </ul>	<p>N/A</p>
<p><b>Section C—If for assessable development other than for a dwelling house</b></p>		
<p><b>PO5</b>  Development is located and designed to:</p> <ul style="list-style-type: none"> <li>a. minimise the risk to people from flood hazard on the</li> </ul>	<p><b>AO5.1</b>  Development complies with the flood planning levels specified in Table 8.2.11.3.D.</p>	<p>Complies – Please refer to Legend Consultants hydraulic impact assessment LC26013-0004-HIA</p>

<p>site;</p> <p>b. minimise flood damage to the development and contents of buildings up to the defined flood event;</p> <p>c. provide suitable amenity;</p> <p>d. minimise disruption to residents, recovery time and the need to rebuild structures after a flood event up to and including the defined flood event.</p>	<p>Note—If located in an area with no Council-derived flood levels such as an overland flow path, a Registered Professional Engineer Queensland with expertise in undertaking flood studies is to derive the applicable flood level and certify that the development meets the required flood planning levels in Table 8.2.11.3.D. The study is to demonstrate that the development and engineering design methods conform to the principles within the Flood planning scheme policy and the Infrastructure design planning scheme policy.</p> <p><b>AO5.2</b>                  Development is:</p> <p>a. not located in the:</p> <ul style="list-style-type: none"> <li>i. Brisbane River flood planning area 1, 2a, or 2b sub-categories;</li> <li>ii. Creek/waterway flood planning area 1 or 2 sub-categories;</li> <li>iii. Overland flow flood planning area sub-category; or</li> </ul> <p>b. only located in these sub-categories if a Registered Professional Engineer Queensland with expertise in undertaking flood studies certifies that:</p> <ul style="list-style-type: none"> <li>i. the development design, siting and any mitigation measures will ensure the development is structurally adequate to resist hydrostatic, hydrodynamic and debris impact loads associated with flooding up to the defined flood event; and</li> <li>ii. the risk to people is managed to an acceptable level.</li> </ul>	<p>Complies – Please refer to Legend Consultants hydraulic impact assessment LC26013-0004-HIA</p>
<p><b>PO6</b>                  Development involving essential electrical services or a basement storage area is suitably located and designed to ensure public safety and minimise flood recovery and economic consequences of damage during a flood.</p>	<p><b>AO6.1</b>                  Development ensures that:</p> <p>a. all areas containing essential electrical services comply with the flood planning levels in Table 8.2.11.3.D; or</p> <p>b. if a basement contains essential electrical services or a private basement storage area, the basement is a waterproof structure with walls and floors</p>	<p>To Be Complied with in services detail design and connections</p>

	<p>impermeable to the passage of water with all entry points and services located at or above the relevant flood planning level in Table 8.2.11.3.D.</p> <p>Note—A basement storage area does not include a bike storage room, change room, building maintenance storage and non-critical electrical services.</p> <p><b>AO6.2</b>                  Development involving a basement that relies on a pumping solution to manage floodwater ingress or for dewatering after a flood provides a secondary pump system with a backup power source for the pump.</p>	
<p><b>PO7</b>                  Development does not directly or indirectly create a material adverse impact on flood behaviour or drainage on properties that are upstream, downstream or adjacent to the development.</p>	<p><b>AO7.1</b>                  Development:                  a. does not block, or divert floodwaters for any area affected by creek/waterway or overland flow flooding, excluding storm-tide flooding and Brisbane River flooding sources; or                  b. does not result in a material increase in flood level or hydraulic hazard on upstream, downstream or adjacent properties.</p> <p>Note—Compliance with this acceptable solution can be demonstrated by the submission of a flood study by a Registered Professional Engineer of Queensland with expertise in undertaking flood studies demonstrating that the development and engineering design methods conform to the principles within the Flood planning scheme policy and the Infrastructure design planning scheme policy.</p> <p><b>AO7.2</b>                  Development retains existing overland flow paths and does not rely wholly on piped solutions to manage major flows.</p> <p><b>AO7.3</b>                  Development which creates a new overland flow path or significantly modifies an existing overland flow path via earthworks does not materially worsen hydraulic hazard on the site from existing conditions.</p>	<p>Complies – Please refer to Legend Consultants hydraulic impact assessment LC26013-0004-HIA</p>

	<p>Note—Compliance with this acceptable solution can be demonstrated by the submission of a flood study by a Registered Professional Engineer of Queensland with expertise in undertaking flood studies demonstrating that the development and engineering design methods conform to the principles within the Flood planning scheme policy and the Infrastructure design planning scheme policy.</p>	
<p><b>PO8</b>          Development for filling or excavation in an area affected by creek/waterway flooding does not directly, indirectly or cumulatively cause any material increase in flooding or hydraulic hazard or involve significant redistribution of flood storage from high to lower areas in the floodplain.          Note—This can be demonstrated by undertaking earthworks in compliance with the Compensatory earthworks planning scheme policy.          Note—This part of the code applies to all development other than a dwelling house and any secondary dwelling which involves filling or excavation, whether or not the development application comprises a separate development application for operational work involving filling or excavation.</p>	<p><b>A08</b>          Development ensures that no filling or excavation greater than 100mm is located in the Creek/waterway flood planning area 1, 2 or 3 sub-categories if contained in the 5% AEP flood extent of any Creek/waterway flood planning area sub-category for which no waterway corridor has been mapped in the Waterway corridors overlay.</p>	<p>N/A – no earthworks proposed.</p>
<p><b>PO9</b>          Development ensures that the building and site design:</p> <ol style="list-style-type: none"> <li>a. maintains the conveyance capacity of existing overland flow paths and creek/waterways;</li> <li>b. ensures floodwaters and flood debris can pass predominantly unimpeded under a structure or building to minimise property or building damage, including for a flood larger than the defined flood event;</li> <li>c. mitigates flood impacts by ensuring that filling, excavation and location of services are designed to allow for the conveyance of floodwater across the site.</li> </ol> <p>Note—The Flood planning scheme policy provides guidance on relevant considerations in determining minimum undercroft clearances and treatment of ground level in undercroft areas where floodwater conveyance is required underneath development.</p>	<p><b>AO9.1</b>          Development involving a building undercroft in the Creek/waterway flood planning area sub-categories or the Overland flow flood planning area sub-category:</p> <ol style="list-style-type: none"> <li>a. complies with the minimum building undercroft clearance requirements in Table 8.2.11.3.E;</li> <li>b. not located directly above any part of a waterway corridor as mapped in the Waterway corridors overlay.</li> </ol> <p><b>AO9.2</b>          Development involving a building undercroft in the Creek/waterway flood planning area sub-categories or the Overland flow flood planning area sub category:</p> <ol style="list-style-type: none"> <li>a. has a ground level within the undercroft area that is free draining;</li> <li>b. does not involve excavation below ground level of more than 300mm within the undercroft area.</li> </ol>	<p>Complies – Please refer to Legend Consultants hydraulic impact assessment LC26013-0004-HIA</p>

<p><b>PO10</b>                  Development for vulnerable uses, difficult to evacuate uses or assembly uses optimises vehicular access and efficient evacuation from the development to parts of the road network unaffected by flood hazard, in order to:</p> <ol style="list-style-type: none"> <li>protect safety of users and emergency services personnel;</li> <li>support efficient emergency services access and site evacuation with consideration to the scale of development.</li> </ol> <p>Note—A flood risk assessment may be required to address the performance outcomes or acceptable solutions which deal with evacuation and isolation arrangements, and the ability to take refuge. The Flood planning scheme policy provides information for undertaking flood risk assessments.</p>	<p><b>AO10</b>                  Development for vulnerable uses, difficult to evacuate uses or assembly uses:</p> <ol style="list-style-type: none"> <li>is not isolated in any event up to the relevant flood planning level specified in Table 8.2.11.3.L; or</li> <li>has direct vehicle access to a critical route or interim critical route in the Critical infrastructure and movement network overlay for evacuation in a flood; or</li> <li>can achieve vehicular evacuation to a suitable flood-free location.</li> </ol> <p>Note—A suitable flood-free location is of a size and nature sufficient to provide for the size and characteristics of the population likely to need evacuation to that area.</p>	<p>N/A</p>
<p><b>PO11</b>                  Development has access which, having regard to hydraulic hazard, provides for safe vehicular and pedestrian movement and emergency services access to adjoining roads.</p>	<p><b>AO11.1</b>                  Development provides an access or driveway into the site which is:</p> <ol style="list-style-type: none"> <li>trafficable during the defined flood event;</li> <li>not located in the Creek/waterway flood planning area 1 sub-category;</li> <li>not located in the Overland flow flood planning area sub-category if the hydraulic hazard is unsafe in the defined flood event;</li> <li>the access or driveway is not inundated by a 10% AEP flood.</li> </ol> <p><b>AO11.2</b>                  Development located in the Creek/waterway flood planning area 1, 2, 3 or 4 sub-categories locates any disabled access in the highest part of the site.</p> <p>Note—explanation of hydraulic hazard provided in the Flood planning scheme policy.</p>	<p>Complies – Please refer to Legend Consultants hydraulic impact assessment LC26013-0004-HIA</p>
<p><b>PO12</b>                  Development involving a new road, a bridge or culvert is designed to minimise impacts to flood behaviour,</p>	<p><b>AO12</b>                  Development involving a new road complies with the flood planning levels in Table 8.2.11.3.F.</p>	<p>N/A</p>

<p>minimise disruption to traffic during a flood and allow for emergency access.</p>		
<p><b>PO13</b>                  Development for pedestrian and cyclist paths:</p> <ul style="list-style-type: none"> <li>a. provides a suitable level of trafficability;</li> <li>b. manages the impacts of flooding on asset life and ongoing maintenance costs;</li> <li>c. balances route availability with recreational and transport connectivity benefits to the city.</li> </ul>	<p><b>AO13.1</b>                  Development for cyclist and pedestrian facilities other than on public roads, including those traversing through a park and adjacent to a watercourse and overland flow path, are located above the 39% AEP (2 year ARI) flood immunity from all flooding sources.                  Note—If the site is subject to more than one type of flooding, the requirement that affords the greatest level of protection will apply.</p> <p><b>AO13.2</b>                  All new on-road cyclist and pedestrian facilities comply with the flood planning levels and trafficability standards for the applicable category of road in Table 8.2.11.3.F or Table 8.2.11.3.K.</p>	<p>N/A</p>
<p><b>PO14</b>                  Development which increases the residential population within the Brisbane River flood planning area sub-categories minimises the risk to people in all flood events with consideration to flood hazard, including warning time.</p>	<p><b>AO14</b>                  Development in the Brisbane River flood planning area sub-categories in areas where the residential flood level is greater than 12.8m AHD involving:</p> <ul style="list-style-type: none"> <li>a. an increase in the number of residential dwellings;</li> <li>or</li> <li>b. additional residential lots</li> </ul> <p>is not subject to an unsafe hydraulic hazard in the 0.2% AEP flood event.                  Note—Explanation of a hydraulic hazard is provided in the Flood planning scheme policy.</p>	<p>N/A</p>
<p><b>Additional performance outcomes and acceptable outcomes for essential community infrastructure</b></p>		
<p><b>PO15</b>                  Development involving essential community infrastructure:</p> <ul style="list-style-type: none"> <li>a. remains functional to serve community need during and immediately after a flood event, or is part of a network that is able to maintain the function of the</li> </ul>	<p><b>AO15</b>                  Development involving essential community infrastructure:</p> <ul style="list-style-type: none"> <li>a. is ancillary to and not relied upon for the provision of the essential service during a flood; or</li> <li>b. is located above the flood planning levels in Table</li> </ul>	<p>N/A</p>

<p>essential community infrastructure when parts of the development are unable to function during or after a flood;</p> <p>b. is designed, sited and operated to avoid adverse impacts on the community or the environment due to the impacts of flooding on infrastructure, facilities or access and egress routes;</p> <p>c. is able to remain functional or is part of a network which is able to remain functional even when other infrastructure or services (such as electricity supply) may be compromised in a flood event;</p> <p>d. contains mitigation measures which are not entirely dependent on human activation to respond to a flood event.</p> <p>Note—Protection of function is required up to and including the flood event in Table 8.2.11.3.G.</p>	<p>8.2.11.3.G;</p> <p>c. has access to or provides the necessary back-up emergency electricity and communications supply in times of flood;</p> <p>d. is designed and constructed to resist hydrostatic and hydrodynamic forces as a result of inundation by the flood event listed for the development type in Table 8.2.11.3.G;</p> <p>e. that services a local area:</p> <p>i. is able to be accessed in times of flood to service local community needs up to the event listed for that development type in Table 8.2.11.3.G; or</p> <p>ii. has a service continuity plan that demonstrates the continued provision of service during the relevant flood event.</p>	
<p><b>Additional performance outcomes and acceptable outcomes if development involves the processes in Table 8.2.11.3.H</b></p>		
<p><b>PO16</b>                  Development involving the storage and handling of hazardous materials avoids or minimises risks to public health and safety and the environment, by:</p> <p>a. protecting underground tanks for hazardous materials against the forces of buoyancy, velocity flow and debris impacts;</p> <p>b. securing above-ground tanks for hazardous materials against flotation and lateral movement;</p> <p>c. preventing damage to hazardous materials pipework or entry of floodwater into hazardous materials pipework;</p> <p>d. preventing damage to or off-site release of packages, drums or containers storing hazardous materials.</p> <p>Note—A chemical hazards flood risk report prepared in accordance with the Management of hazardous chemicals in flood affected areas</p>	<p><b>AO16</b></p> <p>a. Development does not include the storage or handling of hazardous chemicals that exceed the hazardous chemicals flood hazard threshold quantities in Table 8.2.11.3.M.</p> <p>b. Development involving the processes listed in Table 8.2.11.3.H:</p> <p>i. where located in the Flood overlay area, occurs only in the Creek/waterway flood planning area 5 sub-category or the Brisbane River flood planning area 5 sub-category; or</p> <p>ii. is consistent with the standards contained in the Management of hazardous chemicals in flood affected areas planning scheme policy and can operate without risk of environmental harm during a flood event.</p>	<p>N/A</p>

<p>planning scheme policy can assist in demonstrating achievement of this performance outcome.                  Note—A pump drainage system is not an acceptable measure to meet the performance outcome.</p>	<p>Note—The Management of hazardous chemicals in flood affected areas planning scheme policy sets out further information and processes including risk assessment for the management of hazardous chemicals in flood planning areas.</p>	
<p><b>Additional performance outcomes and acceptable outcomes for reconfiguring a lot</b></p>		
<p><b>PO17</b>                  Development locates and designs all lots resulting from reconfiguring a lot to:</p> <ol style="list-style-type: none"> <li>a. minimise the risk to people from flood hazard;</li> <li>b. minimise damage to property from flood hazard;</li> <li>c. facilitate safe and efficient evacuation.</li> </ol> <p>Note—</p> <ul style="list-style-type: none"> <li>• Consideration of all floods up to the probable maximum flood is relevant to minimising the risk to people.</li> <li>• Flood warning time is not considered sufficient in the Creek/waterway planning area sub-categories or the Overland flow flood planning area sub-category.</li> <li>• Filling above the flood planning level for a flood event greater than the defined flood event cannot be assumed to mitigate the flood hazard.</li> </ul>	<p><b>AO17.1</b>                  Development creating new lots is identified in Table 8.2.11.3.I as suitable within the relevant flood planning area.</p> <p><b>AO17.2</b>                  Development provides for reconfiguring a lot design that achieves a road and lot layout which:</p> <ol style="list-style-type: none"> <li>a. provides trafficable vehicular egress for evacuation during a defined flood event;</li> <li>b. optimises hazard-free movement away from sources of flood hazard within the development.</li> </ol> <p>Note—Further advice on road and lot layout is contained in the Flood planning scheme policy.</p>	<p>N/A</p>
<p><b>AO17.3</b>                  Development which creates a new residential lot in an area subject to Brisbane River flooding, if the residential flood level is greater than 12.8m AHD is not subject to a hydraulic hazard greater than 0.6m<sup>2</sup>/s DV or 0.6m deep in a 0.2% AEP flood.                  Note—Refer to the Flood planning scheme policy for further explanation on the 0.2% AEP flood.</p>		
<p><b>PO18</b>                  Development involving reconfiguring a lot:</p> <ol style="list-style-type: none"> <li>a. minimises the risk to people from flood hazard;</li> <li>b. creates safe evacuation routes or avoids isolation of the development during a flood greater than the defined flood event;</li> <li>c. minimises damage to property and services;</li> </ol>	<p><b>AO18.1</b>                  Development involving reconfiguring a lot ensures:</p> <ol style="list-style-type: none"> <li>a. all lots comply with the flood planning levels in Table 8.2.11.3.J;</li> <li>b. a new road complies with the flood planning levels in Table 8.2.11.3.F.</li> </ol> <p><b>AO18.2</b></p>	<p>N/A</p>

<p>d. provides lots and roads that are not frequently flooded or subject to nuisance ponding or seepage;                  e. ensures lots created for park or private open space minimise the risk to people from flood hazard and are fit for purpose;                  f. provides a lot that is not substantially burdened by flood mitigation infrastructure.</p>	<p>Development involving reconfiguring a lot creating more than 6 residential lots or a lot for industry ensures the flood planning levels of a dedicated road fronting the development or providing primary access within 200m of the development:</p> <p>a. complies with Table 8.2.11.3.K; or                  b. has acceptable trafficability in accordance with the requirements in the Flood planning scheme policy and the Queensland Urban Drainage Manual.</p> <p>Note—The Flood planning scheme policy contains supporting information about trafficability on existing roads and serviceability during floods.</p>	
	<p><b>AO18.3</b>                  Development protects the conveyance of flood hazard area by providing an easement over the:</p> <p>a. 2% AEP flood extent for overland flow flooding;                  b. 1% AEP flood extent for creek/waterway flooding.</p>	

**Table 8.2.11.3.B—Flood planning levels for a dwelling house (BCA building classification 1a)**

Flooding source	Minimum habitable floor level	Minimum non-habitable floor level (i.e. utility areas, garage, laundry, storage room and basement entries)
Brisbane River	RFL + 500mm	2% AEP flood level + 300mm
Creek/ waterway	1% AEP flood level + 500mm	1% AEP flood level + 300mm
Overland flow	2% AEP flood level + 500mm	2% AEP level + 300mm
	Note—Where no detailed flood level information is available from the Council such as an overland flow path, a Registered Professional Engineer Queensland with expertise in flood studies is to derive the relevant flood level and certify that the development level for the dwelling house, including any secondary dwelling, meets the required flood immunity standards.	

- Note—
- Where the site is subject to more than one flooding source, the minimum flood planning level is the highest level determined from these flooding sources.
  - Flood planning levels for a dwelling house from storm-tide inundation are located in the Coastal hazard overlay code.
  - A flood event with an AEP of 1% is the equivalent of a 100 year ARI flood event.

- A flood event with an AEP of 2% is the equivalent of a 50 year ARI flood event.

**Table 8.2.11.3.C—Land use compatibility with flood hazard**

C — Land use is compatible with the flood hazard subject to meeting all other relevant requirements.

# — Flood risk assessment in accordance with requirements of the Flood planning scheme policy is required to demonstrate the use is compatible with the flood hazard.

Accommodation activities	Brisbane River flood planning area sub-category						Creek/waterway flood planning area sub-category					Overland flow flood planning area sub-category
	5	4	3	2B	2A	1	5	4	3	2	1	
Community residence	C	#	#	#	#	#	C	#	#	#	#	#
Dual occupancy	C	C	#	#	#	#	C	#	#	#	#	C
Dwelling unit	C	C	#	#	#	#	C	#	#	#	#	C
Multiple dwelling (1—3 storeys)	C	C	#	#	#	#	C	#	#	#	#	C
Multiple dwelling (4+ storeys)	C	C	C	#	#	#	C	#	#	#	#	C
Nature-based tourism	C	C	C	#	#	#	C	#	#	#	#	C
Relocatable home park	C	#	#	#	#	#	C	#	#	#	#	C
Residential care facility	#	#	#	#	#	#	#	#	#	#	#	#
Resort complex	C	C	C	#	#	#	C	#	#	#	#	C
Retirement facility	C	#	#	#	#	#	#	#	#	#	#	C
Rooming	C	C	#	#	#	#	C	#	#	#	#	C

accommodation, short-term accommodation or hotel where including accommodation (1—3 storeys)												
Rooming accommodation, short-term accommodation or hotel where including accommodation (4+ storeys)	C	C	C	#	#	#	C	#	#	#	#	C
Tourist park	C	C	#	#	#	#	C	C	#	#	#	C
<b>Commercial land uses</b>	<b>Brisbane River flood planning area sub-category</b>						<b>Creek/waterway flood planning area sub-category</b>					<b>Overland flow flood planning area sub-category</b>
	5	4	3	2B	2A	1	5	4	3	2	1	
Agricultural supplies store	C	C	#	#	#	#	C	#	#	#	#	C
Animal husbandry	C	C	#	#	#	#	C	#	#	#	#	C
Animal keeping	C	C	#	#	#	#	C	#	#	#	#	C
Aquaculture	C	C	#	#	#	#	C	#	#	#	#	C
Bulk landscape supplies	C	C	C	C	C	C	C	C	C	#	#	C

Car park ancillary to another use	C	C	C	C	C	#	C	C	#	#	#	C
Car wash	C	C	C	C	C	#	C	C	#	#	#	C
Food and drink outlet	C	C	#	#	#	#	C	C	#	#	#	C
Function facility	C	C	#	#	#	#	C	#	#	#	#	C
Garden centre	C	C	C	#	#	#	C	C	#	#	#	C
Hardware and trade supplies	C	C	#	#	#	#	C	C	#	#	#	C
Home-based business	C	C	#	#	#	#	C	#	#	#	#	C
Hotel (where not including accommodation)	C	C	#	#	#	#	C	#	#	#	#	C
Market	C	C	C	#	#	#	C	C	#	#	#	C
Nightclub entertainment facility	C	C	#	#	#	#	C	#	#	#	#	C
Office	C	C	#	#	#	#	C	#	#	#	#	C
Outdoor sales	C	C	#	#	#	#	C	C	#	#	#	C
Parking station	C	C	C	C	C	#	C	C	#	#	#	C
Roadside stalls	C	C	C	#	#	#	C	C	#	#	#	C
Sales office	C	C	#	#	#	#	C	C	#	#	#	C
Shop, Adult store	C	C	#	#	#	#	C	#	#	#	#	C
Shopping centre	C	#	#	#	#	#	C	#	#	#	#	C
Showroom	C	C	#	#	#	#	C	C	#	#	#	C

Theatre	C	C	#	#	#	#	C	#	#	#	#	C
Tourist attraction	C	C	C	#	#	#	C	C	#	#	#	C
Veterinary service	C	C	#	#	#	#	C	#	#	#	#	C
Wholesale nursery	C	C	C	C	C	C	C	C	C	#	#	C
<b>Community land uses</b>	<b>Brisbane River flood planning area sub-category</b>						<b>Creek/waterway flood planning area sub-category</b>					<b>Overland flow flood planning area sub-category</b>
	5	4	3	2B	2A	1	5	4	3	2	1	
Childcare centre	C	#	#	#	#	#	C	#	#	#	#	#
Club	C	C	#	#	#	#	C	C	#	#	#	C
Community care centre	C	#	#	#	#	#	C	#	#	#	#	C
Community use	C	#	#	#	#	#	C	C	#	#	#	C
Educational establishment (and outdoor education centre)	C	#	#	#	#	#	C	#	#	#	#	C
Environment facility	C	C	C	C	C	C	C	C	C	C	C	C
Health care service	C	#	#	#	#	#	C	#	#	#	#	C
Hospital	#	#	#	#	#	#	#	#	#	#	#	#
Indoor sport and recreation	C	C	#	#	#	#	C	C	#	#	#	C

Major sport, recreation and entertainment facility	C	#	#	#	#	#	C	C	#	#	#	C
Motor sport facility	C	C	C	#	#	#	C	C	C	#	#	C
Outdoor sport and recreation	C	C	C	#	#	#	C	C	#	#	#	C
Park	C	C	C	C	C	C	C	C	C	C	C	C
Place of worship	C	#	#	#	#	#	C	C	#	#	#	C
<b>Special purpose land uses</b>	<b>Brisbane River flood planning area sub-category</b>						<b>Creek/waterway flood planning area sub-category</b>					<b>Overland flow flood planning area sub-category</b>
	5	4	3	2B	2A	1	5	4	3	2	1	
Air service	C	#	#	#	#	#	C	#	#	#	#	C
Cemetery	C	C	C	#	#	#	C	C	#	#	#	C
Crematorium	C	#	#	#	#	#	C	#	#	#	#	C
Detention facility	#	#	#	#	#	#	#	#	#	#	#	C
Emergency services	#	#	#	#	#	#	#	#	#	#	#	#
Funeral parlour	C	#	#	#	#	#	C	#	#	#	#	C
Landing	C	C	C	C	C	C	C	C	C	C	#	C
Major electricity infrastructure	#	#	#	#	#	#	#	#	#	#	#	#

Port service	C	C	C	#	#	#	C	C	C	C	#	C
Substation	C	#	#	#	#	#	C	#	#	#	#	#
Telecommunications facility	C	#	#	#	#	#	C	#	#	#	#	#
Utility installation	C	#	#	#	#	#	#	#	#	#	#	#
<b>Industry land uses</b>	<b>Brisbane River flood planning area sub-category</b>						<b>Creek/waterway flood planning area sub-category</b>				<b>Overland flow flood planning area sub-category</b>	
	5	4	3	2B	2A	1	5	4	3	2	1	
Extractive industry	C	C	C	#	#	#	C	C	C	#	#	C
High impact industry	C	C	#	#	#	#	C	C	#	#	#	C
Intensive animal industry	C	C	#	#	#	#	C	#	#	#	#	C
Intensive horticulture	C	C	C	#	#	#	C	C	#	#	#	C
Low impact industry	C	C	#	#	#	#	C	C	#	#	#	C
Marine industry	C	C	C	#	#	#	C	C	#	#	#	C
Medium impact industry	C	C	#	#	#	#	C	C	#	#	#	C
Research and technology industry	C	#	#	#	#	#	C	#	#	#	#	C
Rural industry	C	C	C	C	C	C	C	C	C	#	#	C

Service industry	C	C	#	#	#	#	C	C	#	#	#	C
Service station	C	#	#	#	#	#	C	#	#	#	#	C
Special industries	C	#	#	#	#	#	#	#	#	#	#	C
Transport depot	C	#	#	#	#	#	C	#	#	#	#	C
Warehouse	C	C	#	#	#	#	C	#	#	#	#	C

Note—Caretaker's accommodation and home-based business are considered ancillary to the dominant land use.

**Table 8.2.11.3.D—Flood planning categories for development types**

BCA building classification <sup>(1)</sup>	Development types and design levels, assigned design floor or pavement levels	Category — refer to Table 8.2.11.3.L for flood planning levels
Class 1—4	Habitable room <sup>(2)</sup>	Category A
	Non-habitable room including patio and courtyard	Category B
	Non-habitable part of a Class 2 or Class 3 building excluding the essential services <sup>(2)</sup> control room	Category B Risk management approach to Brisbane River flooding is permitted (refer to Flood planning scheme policy)
	Parking located in the building undercroft of a multiple dwelling	Category C
	Carport <sup>(4)</sup> , unroofed car park; vehicular manoeuvring area	Category D
	Essential electrical services <sup>(2)</sup> of a Class 2 or Class 3 building only	Category A <sup>(6)</sup>
	Basement parking entry <sup>(3)</sup>	Category C + 300mm
Class 5, Class 6, or Class 8	Building floor level	Category C Risk management approach to Brisbane River flooding is permitted (refer to Flood planning scheme policy)
	Garage or car park located in the building undercroft <sup>(3)</sup>	Category C

	Carport <sup>(4)</sup> or unroofed car park	Category D
	Vehicular access and manoeuvring areas	Category D
	Basement parking entry <sup>(3)</sup>	Category C
	Essential electrical services <sup>(2)</sup>	Class 8 — Category C <sup>(6)</sup> Class 5 & 6 — Category A <sup>(6)</sup>
Class 7a	Refer to the relevant building class specified in this table	
Class 7b	Building floor level	Category C Risk management approach to Brisbane River flooding is permitted (refer to Flood planning scheme policy)
	Vehicular access and manoeuvring area	Category D
	Essential electrical services <sup>(2)</sup>	Category C
Class 9	Building floor level	Category A
	Building floor level for habitable rooms in Class 9a or 9c where for a residential care facility	0.2% AEP flood
	Building floor level for habitable rooms in Class 9b where involving children, such as a childcare centre	0.2% AEP flood
	Garage or car park located in the building undercroft <sup>(3)</sup>	Category C
	Carport <sup>(5)</sup> or unroofed car park	Category D
	Vehicular access and manoeuvring areas	Category D
	Essential electrical services <sup>(2)</sup>	Category A
Class 10a	Car parking facility	Refer to the relevant building class specified in this table
	Shed <sup>(5)</sup> or the like	Category D

Class 10b	Swimming pool	Category E
	Associated mechanical and electrical pool equipment	Category C
	Other structures	Flood planning levels do not apply

Notes—

(1) Refer to the Building Code of Australia for definitions of building classifications.

(2) Essential electrical services include any area or room used for fire control panel, telephone PABX, sensitive substation equipment including transformers, low voltage switch gear, high voltage switch gear, battery chargers, protection control and communication equipment, low voltage cables, high voltage cables, and lift or pump controls.

(3) Basement car parks must be suitably waterproofed and all air vents, air-conditioning ducts, pedestrian access and entry and exit ramps into the basement must comply with the applicable flood planning levels in this table.

(4) A shelter for a motor vehicle, which has a roof and one or more open sides, and which can be built against the side of a building.

(5) A slight or rough structure built for shelter and storage; or a large strongly built structure, often open at the sides or end.

(6) Where essential electrical services are proposed in a basement below the specified flood planning level, the flood immunity of all air vents, air-conditioning ducts, pedestrian access, lift shafts and entry/exit ramps at the basement entrance and any other openings into that basement must conform with the flood planning levels for Category A for Residential development, and the relevant basement entry level of all other uses. To ensure flood immunity, basements require a waterproof basement design to prevent flood waters entering the basement.

- A flood event with an AEP of 2% is the equivalent of a 50 year ARI flood event.
- A flood event with an AEP of 0.2% is the equivalent of a 500 year ARI flood event.
- Where a building has a combination of uses that includes a component of classes 2, 3 or 9, the essential services for that building shall comply with the requirements of the building class with the greatest flood planning level requirement.
- Use classes for residential development also include basement storage.

**Table 8.2.11.3.E— Building undercroft clearances**

<b>Flooding source</b>	<b>Minimum clearance requirement<sup>(1)(3)</sup></b>
Overland flow— Hydraulic Hazard (DV <0.6 m <sup>2</sup> /s and depth <600mm in 2% AEP flood event)	Lowest floor level is to be 1.5m <sup>(2)</sup> above the highest ground elevation in undercroft area
Overland flow— Hydraulic Hazard (DV >0.6 m <sup>2</sup> /s or depth >600mm in 2% AEP flood event)	Lowest floor level is to be 2.5m <sup>(2)</sup> above the highest ground elevation in undercroft area
Creek/waterway (Flood planning area 1, 2 or 3 sub-categories)	Lowest floor level is to be 2.5m <sup>(2)</sup> above the highest ground elevation in undercroft area
Creek/waterway (Flood planning area 4 sub-category)	Lowest floor level is to be 1.5m <sup>(2)</sup> above the highest ground elevation in undercroft area

Notes—

(1) The minimum undercroft only relates to the minimum clearance requirements from ground level to the finished floor level and not minimum flood planning levels. Where the flood planning level requirement with freeboard results in a higher finished floor level that higher level needs to be adopted.

(2) Refer to the Flood planning scheme policy for explanatory material regarding clearances and considerations.

(3) The minimum undercroft clearance only applies to the area of undercroft above the relevant flood extent or flood planning area sub-category.

**Table 8.2.11.3.F—Flood planning levels for a new road**

Flooding source <sup>(1)</sup>	Minimum design levels at the crown of the road (m AHD) <sup>(2)</sup>	
	Residential development	Industrial or commercial development
Brisbane River <sup>(3)</sup>	Defined flood level	5% AEP flood level
Creek/waterway	1% AEP flood level	2% AEP flood level
Overland flow	2% AEP flood level	2% AEP flood level

Notes—

(1) Where the road is subject to more than one flooding source, the minimum flood planning level is the highest level determined from these sources.

(2) Where flood levels are not available from Council's FloodWise Property Report, such as for overland flow flooding, a suitably qualified Registered Professional Engineer Queensland with expertise in undertaking flood studies is required to estimate the relevant flood level.

(3) A risk management approach determining flood planning levels of roads for Brisbane River flooding can be applied as an alternative to Table 8.2.11.3.F. Typically such roads would have a flood immunity no worse than the surrounding roads that support a similar land use, otherwise a Flood Risk Assessment which complies with the relevant requirements of the Flood planning scheme policy is provided.

**Table 8.2.11.3.G—Flood planning levels for essential community infrastructure**

Type of essential community infrastructure	Minimum design levels
Emergency services	0.2% AEP flood
Emergency services, where for an emergency shelter	0.5% AEP flood
Emergency services, where for police facilities	0.5% AEP flood
Hospital and health care service where associated with a hospital	0.2% AEP flood
Community facility where involving storage of valuable records or items of historic or cultural significance (e.g. galleries and libraries)	0.5% AEP flood

State-controlled roads Major or minor electricity infrastructure not otherwise listed in this table Utility installation where for rail transport services Air service Telecommunications facility	No specific recommended level but development proponents should ensure that the infrastructure is optimally located and designed to achieve suitable levels of service, having regard to the processes and policies of the administering government agency.
Power stations (as defined in the <i>Electricity Act 1994</i> ) or renewable energy facility.	0.2% AEP flood
Major electricity infrastructure where a major switch yard	0.2% AEP flood
Substations	0.5% AEP flood
Utility installation where for a sewage treatment plant	Defined flood event
Utility installation where for a water treatment plant	0.5% AEP flood

Note—A flood event with an AEP of 0.2% is the equivalent of a 500 year ARI flood event.

Note—A flood event with an AEP of 0.5% is the equivalent of a 200 year ARI flood event.

**Table 8.2.11.3.H—Table of processes requiring additional assessment in a flood planning area**

<b>Process</b>
(1) Oil refining or processing
(2) Producing, refining or processing gas or fuel gas
(3) Power station, including the activity of generating electricity by using fuel
(4) Producing, quenching, cutting, crushing or grading coke
(5) Waste incinerator, including thermal treatment of waste
(6) Pulp or paper manufacturing
(7) Tannery or works for curing animal skins, hides or finishing leather
(8) Textile manufacturing, including carpet manufacturing, wool scouring or carbonising, cotton milling, or textile bleaching, dyeing or finishing
(9) Rendering plant, including meat processing

(10) Manufacturing chemicals, poisons and explosives
(11) Manufacturing fertilisers involving ammonia
(12) Manufacturing polyvinyl chloride plastic
(13) Major hazard facilities for the storage and handling of dangerous goods
(14) Storage of hazardous chemicals in quantities that would exceed the hazardous chemicals flood hazard threshold set out in Table 8.2.11.3.M
(15) Manufacturing medium-density fibreboard, chipboard, particle board, plywood, laminated board or wood veneer products
(16) Manufacturing or processing plaster
(17) Enamelling workshop
(18) Galvanising works
(19) Anodising or electroplating workshop
(20) Powder coating workshop
(21) Treating timber for preservation using chemicals including copper, chromium, arsenic, borax and creosote
(22) Manufacturing soil conditioners by receiving, blending, storing, processing, drying or composting organic material or organic waste, including animal manures, sewage, septic sludges and domestic waste
(23) Manufacturing tyres, asbestos products, asphalt, cement, glass or glass fibre, mineral wool or ceramic fibre
(24) Abattoir, including meat processing
(25) Recycling chemicals, oils or solvents
(26) Waste disposal activity (other than waste incinerator), including waste transfer station operation
(27) Recycling, storing or reprocessing regulated waste, including regulated waste treatment
(28) Manufacturing batteries and battery recycling
(29) Drum and container reconditioning

(30) Water treatment
(31) Sewage treatment

**Table 8.2.11.3.I—Suitability of reconfiguring a lot within a flood planning area**

C — Reconfiguring a lot is suitable within a flood planning area

# — Flood risk assessment in accordance with the requirements of the Flood planning scheme policy is required to demonstrate the mitigation of risk from flood hazard

Flood planning area	Creek/waterway flood planning area sub-categories			Brisbane River flood planning area sub-categories		
	Residential	Industrial	Other	Residential	Industrial	Other
1	#	#	#	#	#	#
2/2a;2b	#	#	#	#	C	#
3	#	#	#	#	C	C
4	C	C	C	C	C	C
5	C	C	C	C	C	C

- Notes—
- A flood risk assessment is required for residential reconfiguring a lot development where creating more than two new lots in the overland flow flood planning area sub-category.
  - Additional requirements apply for the Brisbane River flood planning area sub-category if the residential flood level is greater than 12.8m AHD.
  - Minimum site levels, requirements for no adverse off site impacts and other provisions in the planning scheme still apply.

**Table 8.2.11.3.J—Flood planning levels for reconfiguring a lot**

Flooding source <sup>(1)</sup>	Minimum lot levels (m AHD) <sup>(2)</sup>		
	Residential (creating 6 or less lots with no new road)	Residential (creating more than 6 lots), or a new road	Other than residential
Brisbane River	2% AEP flood level + 300mm	RFL + 0.3m	1% AEP flood level

Creek/waterway	Minimum 300m <sup>2</sup> area at the 1% AEP flood level + 300mm <sup>(3)</sup>	1% AEP flood level + 300mm	2% AEP flood level
Overland flow	Minimum 300m <sup>2</sup> area at the 2% AEP flood level + 300mm <sup>(3)</sup>	2% AEP flood level + 300mm	2% AEP flood level

Notes—

<sup>(1)</sup> Where the site is subject to more than one flooding source, the minimum flood planning level is the highest level determined from these sources.

<sup>(2)</sup> Where flood levels are not available from Council's FloodWise Property Report such as for overland flow flooding, a suitably qualified Registered Professional Engineer Queensland with expertise in undertaking flood studies is required to estimate the relevant flood level.

<sup>(3)</sup> The 300m<sup>2</sup> area is considered suitable for siting a dwelling house with open space area at or above the nominated flood planning level.

**Table 8.2.11.3.K—Flood planning levels for existing road providing access to or fronting a development**

Flooding source <sup>(1)</sup>	Minimum design levels at the crown of the road (m AHD) <sup>(2)(3)</sup>		
	Local road	Neighbourhood road	District road, suburban road, arterial road
Brisbane River	5% AEP flood level	2% AEP flood level	2% AEP flood level
Creek/waterway	5% AEP flood level	2% AEP flood level	2% AEP flood level
Overland flow	5% AEP flood level	5% AEP flood level	5% AEP flood level

Notes—

<sup>(1)</sup> Where the site is subject to more than one flooding source, the minimum flood planning level is the highest level determined from these sources.

<sup>(2)</sup> Where flood levels are not available from Council's FloodWise Property Report such as overland flow flooding a suitably qualified Registered Professional Engineer in Queensland with expertise in undertaking flood studies is required to estimate the relevant flood level. The Flood planning scheme policy sets out the requirements for a flood risk assessment process.

<sup>(3)</sup> The design standard for industry access is the 5% AEP flood level for all flooding sources.

**Table 8.2.11.3.L—Categories of flood planning levels**

Flooding source <sup>(1)</sup>	Minimum design floor or pavement levels (m AHD) <sup>(2)</sup> (refer to Table 8.2.11.3.D for assignment of these categories)				
	Category A	Category B	Category C	Category D	Category E

Brisbane River	RFL + 500mm	RFL + 300mm	DFL	5% AEP flood level	5% AEP flood level
Creek/ waterway	1% AEP flood level + 500mm	1% AEP flood level + 300mm	1% AEP flood level	1% AEP flood level	5% AEP flood level
Overland flow	2% AEP flood level + 500mm	2% AEP flood level + 300mm	2% AEP flood level	2% AEP flood level	5% AEP flood level

Notes—

(1) Where the site is subject to more than one type of flooding that is overland flow flooding, creek or waterway flooding or river flooding, the minimum flood immunity level is the highest level determined from these sources.

(2) Where flood levels are not available from Council's FloodWise Property Report such as overland flow flooding, the applicant will need to engage a suitably qualified Registered Professional Engineer Queensland with expertise in undertaking flood studies required to estimate the relevant flood level. The Flood planning scheme policy sets out the requirements for a flood risk assessment process.

- A flood event with an AEP of 1% is the equivalent of a 100 year ARI flood event.
- A flood event with an AEP of 2% is the equivalent of a 50 year ARI flood event.
- A flood event with an AEP of 5% is the equivalent of a 20 year ARI flood event.

**Table 8.2.11.3.M—Hazardous chemicals flood hazard threshold**

Hazardous chemicals flood hazard threshold means any of the following:
A hazardous chemical listed in schedule 11 of the Work Health and Safety Regulation 2011 in a quantity that exceeds a threshold quantity stated in column 5 of schedule 11
A chemical classified as hazardous to the aquatic environment under the Australian Dangerous Goods Code in the Acute I or Chronic I category that exceeds 2500 litres or kilograms
A chemical classified as hazardous to the aquatic environment under the Australian Dangerous Goods Code in the Chronic II category that exceeds 10,000 litres or kilograms
A chemical classified as hazardous to the aquatic environment under the Australian Dangerous Goods Code and assigned to Packing Group III that exceeds 10,000 litres or kilograms
A chemical classified as hazardous to the aquatic environment under the Globally Harmonised System of Classification and Labelling of Chemicals that exceeds 10,000 litres or kilograms