



FLOOD IMPACT & RISK ASSESSMENT

Warra Warra Road, South Nowra

Site: Lot 224 DP 755952 & Lot 2 DP 1126288

Project: Planning Proposal – Commercial, mixed use
and residential

DA: TBA

LGA: Shoalhaven City Council

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- Engineering Design Specifications
 - o Shoalhaven AUS-SPEC
- Development Design Specifications
 - o Shoalhaven Engineering Design Specifications (D1 – D8)
- Shoalhaven’s DCP2014 and supporting technical guidelines (Chapter G9).
- Engineering Standards / Specifications and Planning Guidelines
 - o Australian Standards (various)
 - o Austroads Guidelines (various)
- Australian Rainfall & Runoff – A Guide to Flood Estimation – 2019
- Flood Risk Management Manual: The policy and manual for the management of flood liable land (2023) – Department of Planning and Environment – NSW Government
- Landcom Managing Urban Stormwater Soil and Construction Volume 1 (4th Edition 2004) known as the “blue book”.
- The Estimation of Probable Maximum Precipitation in Australia: Generalised Short-Duration Method – Commonwealth Bureau of Meteorology
- Nowra and Browns Creek Flood Study, March 2005, Patterson Britton and Partners
- Water Cycle Management Plan 20260408_24047_001_1, April 2026, CivPlan LTD
- Design drawings - 20260409_24047_P1-CIVILS, CivPlan LTD



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Table of Contents

1	Introduction	8
1.1	Purpose and Scope.....	8
1.1.1	Previous Studies	8
1.1.2	Other project specific requirements.....	9
1.2	Assumptions/Justifications	9
2	Project Overview	9
2.1	The Site	9
2.2	Proposed Development	13
3	Hydraulic Modelling	14
3.1	Pre-development modelling	15
3.1.1	Digital Elevation Model (DEM).....	15
3.1.2	Model Cell Mesh	16
3.1.3	Direct Rainfall.....	16
3.1.4	Hydraulic Roughness.....	19
3.1.5	Hydraulic Structures and Controls	21
3.2	2D Hydraulic Model Validation	22
3.2.1	10% AEP Event	24
3.2.2	1% AEP Event	25
3.2.3	PMF Event	28
4	Pre-Development Results	30
4.1	Existing flood impacts	30
5	Post-Development Flood Modelling and Analysis	33
5.1	Post-development surface modifications	33
5.1.1	Hydraulic Roughness Modifications.....	33
6	Results	35
6.1	10%AEP	35
6.2	1% AEP	37
6.2.1	Water Surface Elevation (WSE).....	37
6.2.2	Flood Hazard	38
6.3	PMF	39
6.3.1	Water Surface Elevation (WSE).....	39
6.3.2	Flood Hazard and Evacuation.....	41
6.4	Climate Change	42
7	Assessment against S9.1 Ministerial Directions 4.1 Flooding.....	44

8	Compliance with Chapter G9: Development on flood prone land	47
9	Conclusions	51

TABLES:

Table 1: Critical Storms.....	18
Table 2: Manning's 'n' Roughness Co-efficient (see ARR19 Book 6 Section 6.2.1 & 6.2.2).....	19
Table 3: 2D Hydraulic Model – Manning's Roughness with depth	20
Table 4: Hydraulic Structure Parameters	22
Table 5: Assessment of consistency against S9.1 Ministerial Directions 4.1 Flooding.....	47
Table 6: Compliance with Chapter G9 development controls	50

FIGURES:

Figure 1: Site and surrounding context (NSW Base Map)	10
Figure 2: Site Location - NSW Imagery (SIX Maps)	11
Figure 3: Surrounding Waterways - NSW Spatial Mapping (Hydrolines)	12
Figure 4: Masterplan by Jervis Bay Town Planning Pty Ltd	13
Figure 5: General Arrangement Plan (Civils)	14
Figure 6: 2D Active Model Domain.....	15
Figure 7: TUFLOW 2D model cell mesh	16
Figure 8: Catchment for rainfall data extraction	17
Figure 9: 10%AEP Critical storm	18
Figure 10: 1%AEP Critical storm	18
Figure 11: PMF Critical storm	19
Figure 12: Roughness parameter adopted for Nowra and Browns Creek Flood Study	20
Figure 13: 2D Hydraulic Model – Manning's Roughness.....	21
Figure 14: Culvert location (Pre-Development)	22
Figure 15: Extent of Nowra and Browns Creek Flood study.....	23
Figure 16: Flood Levels (Nowra and Browns Creek Flood Study VS FIRA model) – 10% AEP	24
Figure 17: Browns Creek Flood Study - 10% AEP water Surface Elevation	25
Figure 18: Flood Levels (Nowra and Browns Creek Flood Study VS FIRA model) – 1% AEP.....	26
Figure 19: Nowra and Browns Creek Flood Study channel cross sections	26
Figure 20: Cross Section - Water Level Comparison.....	27
Figure 21: Long Section – Water Level Comparison.....	28
Figure 22: PMF WSE comparison	29
Figure 23: Long section - PMF water surface elevation comparison	29
Figure 24: 10% AEP – WSE.....	30
Figure 25: 1% AEP – WSE.....	30
Figure 26: Hazard category mapping 10% AEP event	31
Figure 27: Hazard category mapping 1% event.....	31
Figure 28: Hazard category mapping PMF event	31
Figure 29: ARR19 Book 6 Section 6.7.3 & 6.7.4.....	32
Figure 30: Design Surface (Post-Development)	33
Figure 31: 2D Hydraulic Model – Manning's Roughness (Post-Development)	34
Figure 32: 10% AEP Water Surface Elevation - Pre and Post-development.....	35
Figure 33: 10% AEP - WSE Comparison – Pre & Post-Development	36
Figure 34: 1% AEP Water Surface Elevation - Pre and Post-development.....	37
Figure 35: 1% AEP - WSE Comparison – Pre & Post-Development	38

Figure 36: 1% AEP Hazard Category - Pre and Post-development	39
Figure 37: PMF - Water Surface Elevation - Pre and Post-development	39
Figure 38: PMF - WSE Comparison – Pre & Post-Development	40
Figure 39: PMF - flood depth.....	41
Figure 40: PMF Hazard Classification – Post-development.....	42
Figure 41: 10% AEP Climate Change Comparison	43
Figure 42: 1% AEP Climate Change Comparison	43
Figure 43: CC SSP3-7.0 1% AEP- Hazard mapping	44
Figure 44: Hazard and Hydraulic Categories: 1% AEP (Nowra and Browns Creek Flood Study 2005)	47
Figure 45: Hazard mapping (Nowra and Browns Creek flood Study 2005).....	48
Figure 46: Chapter G9, Schedule 2 - Flood related development controls	49

APPENDIX:

- Appendix A: Flood Impact & Risk Assessment Mapping
- Appendix B: Rainfall Data
- Appendix C: Climate Change rainfall data
- Appendix D: Critical Storm Hydrographs
- Appendix E: PMF calculations

1 Introduction

1.1 Purpose and Scope

This Flood Impact and Risk Assessment (FIRA) has been prepared for Lysand Pty Ltd & Lyrock Pty Ltd. It is to provide support for Planning Proposal to rezone and develop Lot 224 DP 755952 & Lot 2 DP 1126288 which is situated between the Princes Highway on the West of the site, the unformed Old Southern Road easement along the North-Western fringe and the unsealed Warra Warra Road to the south of the site.

Browns Creek flows through the centre of the subject site in a south to the north direction. Flood mapping from Browns Creek Flood Study (Councils adopted flood study) indicates that the Old Southern Road and the edges of the proposed development immediately to the east of Old Southern Road are flood affected for the 10% AEP event and greater, additionally the access road to the proposed development, to the west of Browns Creek is subject to flooding from the 1%AEP event.

The objectives of this FIRA are to:

- Assess the overland flood risk to the subject site and surrounding areas resulting from the proposed development.
- Identify potential isolation of future sites (if any) and assess the level of hazard based on duration of flood inundation and hazard categorisation for up to and including the PMF, and determine safe flood evacuation routes.
- Assess the developments impact on flooding and flood risk in the surround area.
- Assess consistency of the Planning proposal against S9.1 Ministerial Directions 4.1 Flooding.
- Define a revised Flood Planning Area (FPA) based on the planning proposal

The FIRA required the development of a 1D-2D flood model in TUFLOW to understand the pre and post-development site conditions, and flood behaviour and characteristics for the; 10%, 1%, 0.2% and 0.05% AEP design events and the Probable Maximum Flood (PMF).

Climate change scenario for SSP 3-7.0, target year 2100 has been modelled for the; 10%, 1%, 0.2% and 0.05% AEP design events and the Probable Maximum Flood (PMF) as part of this FIRA to understand any potential future flood impacts to the proposal from climate change.

Outputs from the model include design flood information such as peak flood depth, water surface elevations, velocities, flood hazard and hydraulic categorisation. Additionally, comparison has been made of the water surface elevation between pre- and post-development scenarios to identify the flood impact from the proposed development up and downstream on adjoining properties and existing infrastructure, when compared to the pre-development flow regimes.

1.1.1 Previous Studies

The Council adopted flood study, Nowra and Browns Creek Flood Study, March 2009 and flood mapping from this study was used to:

- Compare the appropriateness of manning coefficient adopted for modelling work conducted as part of this FIRA and carry out sensitivity testing on roughness coefficients.

- Calibrate and validate the TUFLOW model developed for this FIRA against the Council adopted flood mapped results.

1.1.2 Other project specific requirements

Earthworks are proposed as part of the development to raise the subject site above the 1% AEP flood level. This will allow a larger area of the site to be developed and meet flood risk compliance requirements.

This FIRA will analyse the impacts on flood regime and determine the effects of flood hazard, flood damage and whether there are any adverse effects to surrounding properties as the results of the proposed development.

1.2 Assumptions/Justifications

Rainfall data has been taken from the Data Hub and the BOM, via the ARR2019 extraction tool for TUFLOW within QGIS.

A climate change target/design year of 2100, based on the perceived design life of the proposal. The Shared Socio-economic Pathway (SSP)3–7.0 was adopted, as advised by Shoalhaven City council and in line with the most recent flood studies completed in the LGA.

Mannings values have been adopted based on ARR2019 guidance and Roughness coefficients used in the Council adopted flood study.

Hydraulic structures have not been surveyed. The dimension used for modelling have been taken from measurements conducted during a site visit.

The Council adopted flood study was conducted in 2005 and uses ARR1987 hydrology whereas this FIRA uses ARR2019 version 4.2. The difference in hydrology between the two guidelines see 20019 ARR hydrology adopting temporal patterns, pre-burst rainfall, and initial loss and continuing loss values. As such hydrological modelling results from this FIRA are expected to vary when compared to Councils adopted flood study. Additionally, the hydraulic model used for the Council adopted flood study is based on surveyed cross-sections along the length of Browns Creek. The model for this FIRA uses a DEM surface, sub grid sampling and reduced grid sizes around critical areas requiring higher model definition. It is anticipated that the variance in modelling techniques used will result in variations in model outputs between these two studies.

The FPA is based on the 1% AEP flood level, plus a freeboard of 0.5m. this is based on guidance within the Floodplain Development Manual 2005 and the Flood Risk management Manual 2023.

2 Project Overview

2.1 The Site

The site is located on Lot 224 DP 755952 & Lot 2 DP 1126288 between The Princes Highway, Warra Warra Road (unsealed), and Old Southern Road (unformed) within the Shoalhaven City Council LGA and the Shoalhaven Water catchment area. Access to the site is via Warra Warra Road which

is aligned East – West along the site’s Southern Boundary. Additionally, the Princes Highway runs North-South along the sites’ Western boundary and an unformed road reserve for Old Southern Road runs along the North-western side of the site.

The surround area is a blend between general industrial land use (E3/E4, residential land (R1/R2/RU2) and vegetated areas (C2). There are currently no dwellings or structures on the site however, the site is burdened by high voltage electrical transmission lines running North-South on the western portion of the site. There is an approved development (SF10743) to the North of the site. Lot 224 DP 755952 & Lot 2 DP 1126288 is approximately 32.4ha in area with no existing dwellings or structures.

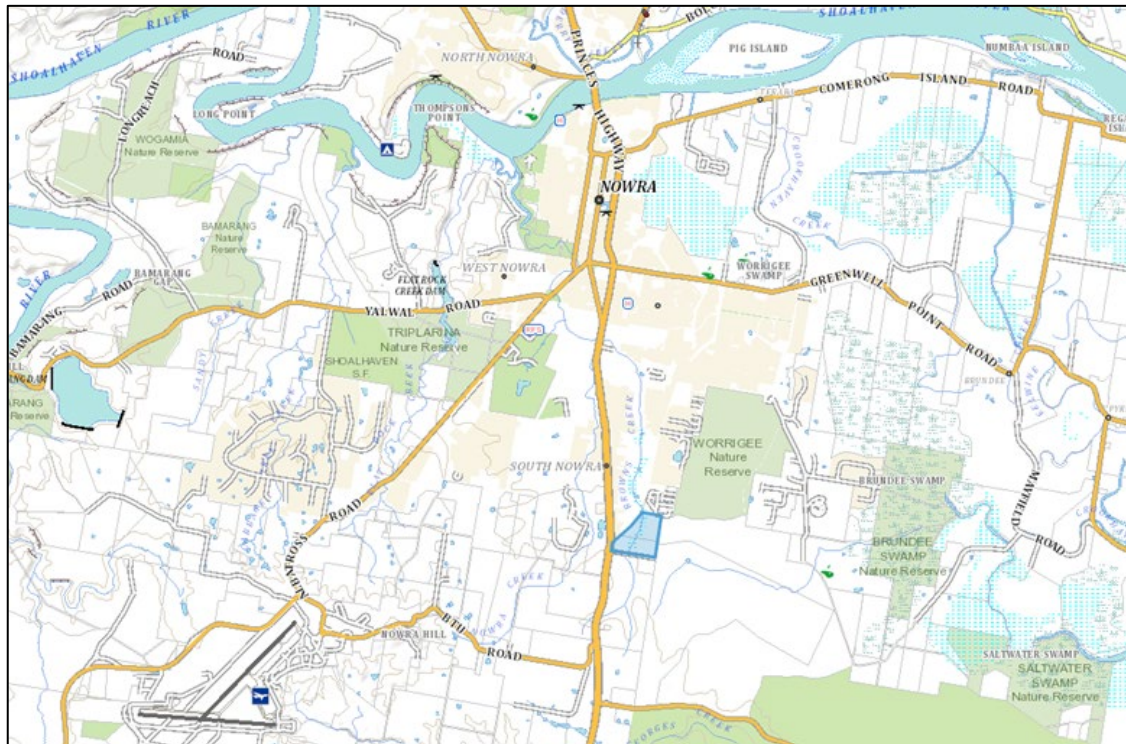


Figure 1: Site and surrounding context (NSW Base Map)

Browns Creek runs through the site flowing from the South to the North into Nowra Creek. Browns Creek is a named waterway with fluctuating flows, and the typical condition is a marshy swamp area.

Figure 3 shows the extent and location of Browns Creek within the site. The portion of Browns Creek within the site sits within the upper to middle catchment area of the creek and at the starts of the 1% flood mapping.

There are portions of the site that are below the 1% AEP flood planning levels, this is primarily in the Browns Creek corridor.

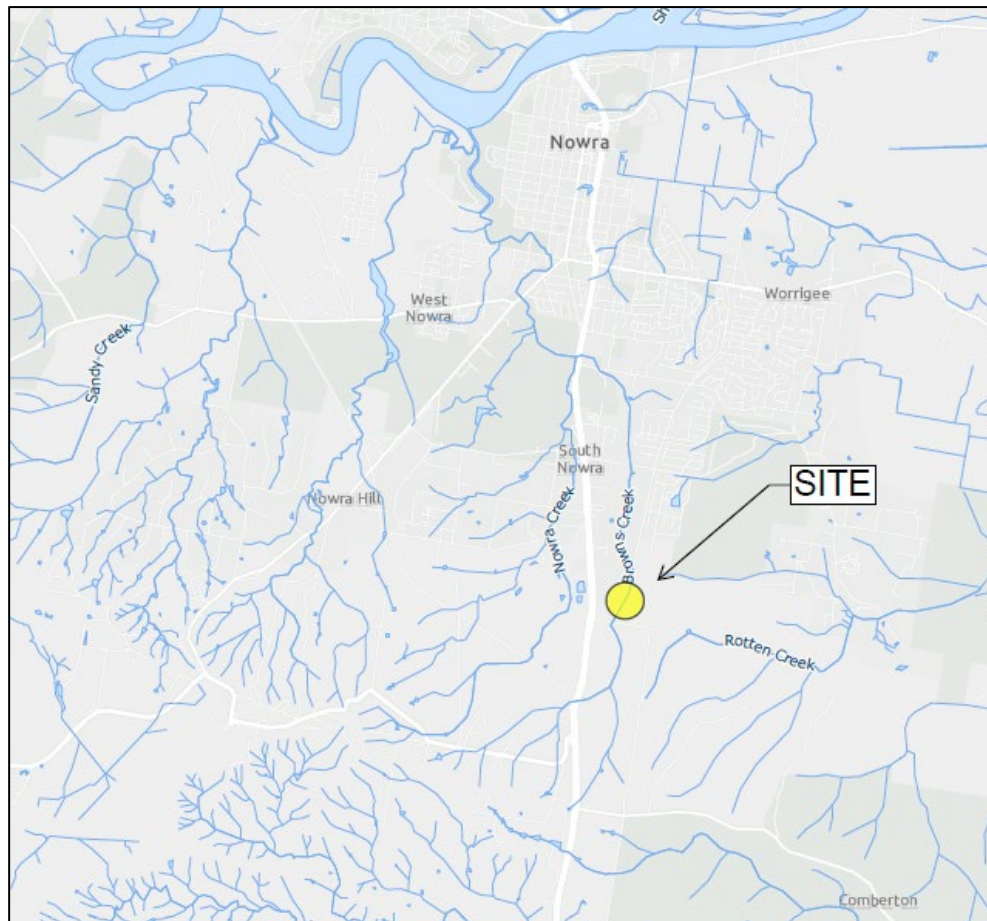


Figure 3: Surrounding Waterways - NSW Spatial Mapping (Hydrolines)

2.2 Proposed Development

The Planning Proposal aims to rezone part of the site from being entirely 'E3' zoning to the following categories:

- R1 General Residential – 16.21 ha
- C2 Environmental Conservation – 9.3 ha

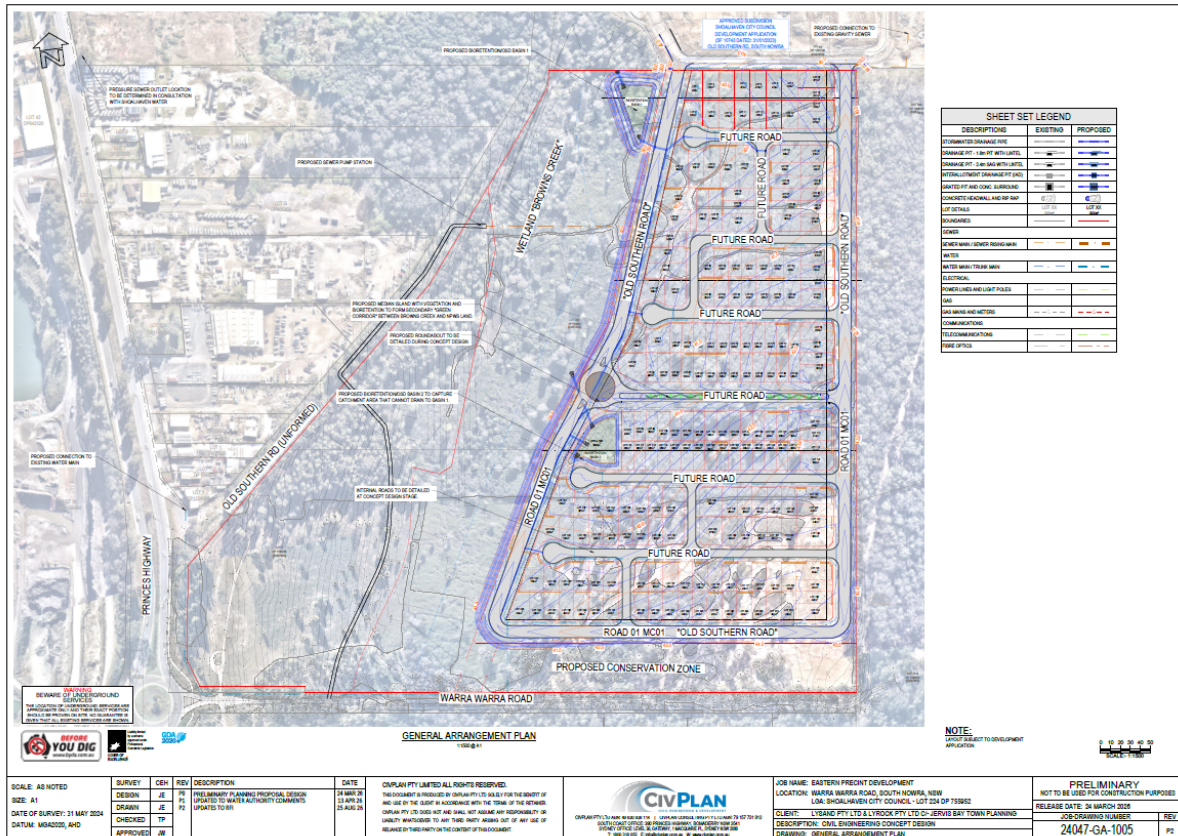
Figure 4: Masterplan by Jervis Bay Town Planning Pty Ltd is a masterplan showing the location of the above changes to the zoning as part of the Planning Proposal.



Figure 4: Masterplan by Jervis Bay Town Planning Pty Ltd

The planning proposal aims to formalise and protect the Browns Creek catchment and biodiversity areas on the southern portion of the site though 'C2' zoning and to change the existing 'E3' zoning to 'R1' General Residential. Given that this is a high-level planning proposal the discrete lots as part of the development are subject to a development application.

Figure 5 shows the general arrangement of the civil concept.



3.1 Pre-development modelling

3.1.1 Digital Elevation Model (DEM)

The 1m DEM used in the hydrological modelling was utilised for the surface topography in the TUFLOW model.

A 2D active model area of 592ha (refer Figure 6) was established up and downstream of the subject site, defining the area across which water can flow.

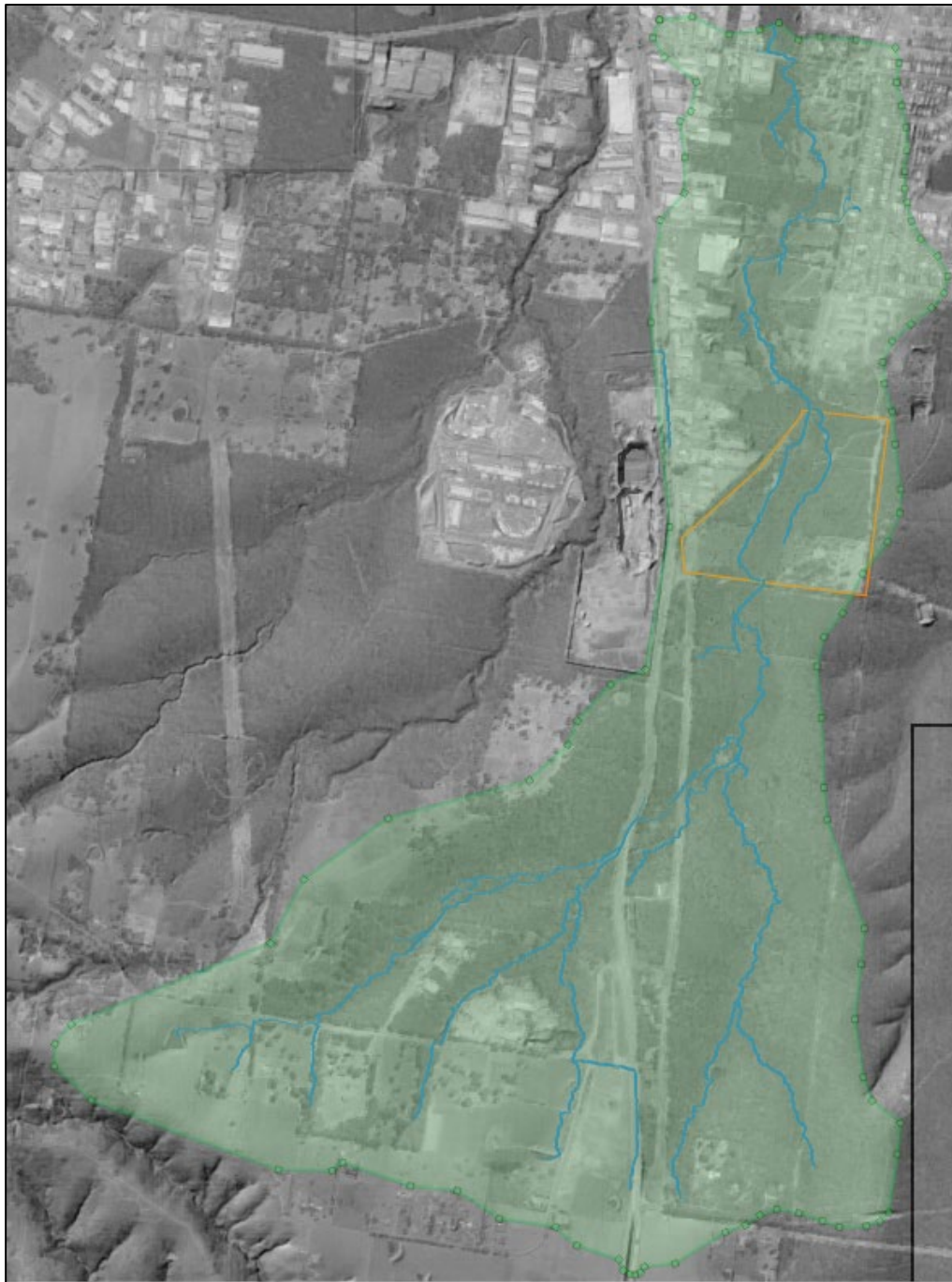


Figure 6: 2D Active Model Domain

3.1.2 Model Cell Mesh

A TUFLOW 2D base domain model resolution of 8m was adopted for the study area. This was reduced to 4m and 2m resolution around the subject site and along Browns Creek, to allow a higher accuracy of modelling around the subject site. The different cell mesh sizes used are presented in Figure 7.



Figure 7: TUFLOW 2D model cell mesh

3.1.3 Direct Rainfall

Direct rain was used apply rainfall to active cells within the TUFLOW model. TUFLOW simulates the runoff of the applied rainfall over the 2d active model domain using the terrain of the DEM, with rainfall losses being applied within the materials layer.

3.1.3.1 Rainfall

Rainfall data was extracted from the BOM and ARR data hub within QGIS using a TUFLOW extraction tool.

Figure 8 presents the catchment used to define the location that rainfall data was extracted from and was defined in HEC-HMS using the DEM terrain.

Rainfall data downloaded in QGIS is provided in Appendix B.

Climate change rainfall data was extracted for the same catchment area presented in Figure 8. A climate change target/design year of 2100 was chosen based on the perceived design life of the proposal. A Shared Socio-economic Pathway (SSP) of 2-4.5 was adopted. This is a moderate emissions/warming “middle of the road” scenario and was considered appropriate for a commercial/industrial development containing no “critical infrastructure”. Climate change rainfall data is provided in Appendix C.



Figure 8: Catchment for rainfall data extraction

3.1.3.2 Losses

Rainfall excess was used as the loss method, utilising the initial loss/continuing loss methodology in line with ARR 2019 guidance. In the rainfall excess loss approach, the IL and CL values are subtracted from the rainfall inputs before they are applied to the 2D cells.

3.1.3.3 Critical Duration

The critical duration is the specific length of a rainfall event that produces the most severe flooding (highest peak flow) for a particular watershed.

For each design event the Critical duration is presented in Table 1. Figure 9 to Figure 11 presents the hydrographs used to identify the critical duration for the 10%, 1% and PMF design events.

Design event	Critical Duration	Median Temporal pattern
10%	120 Minute	TP04
1%	120 Minute	TP03
0.2%	60 Minute	TP02
0.05%	90 Minute	TP01
PMF	120 Minute	N/A

Table 1: Critical Storms

For each duration the median temporal pattern was selected, these were compared to identify the duration with the highest peak flow (critical duration). Appendix C presents the comparison and identification of the median temporal patterns for each duration for each design event and identification of the critical duration for each design event.

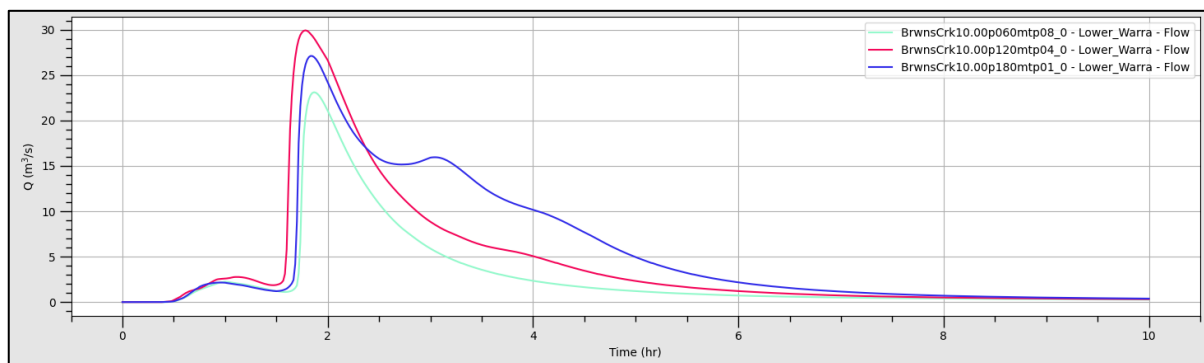


Figure 9: 10%AEP Critical storm

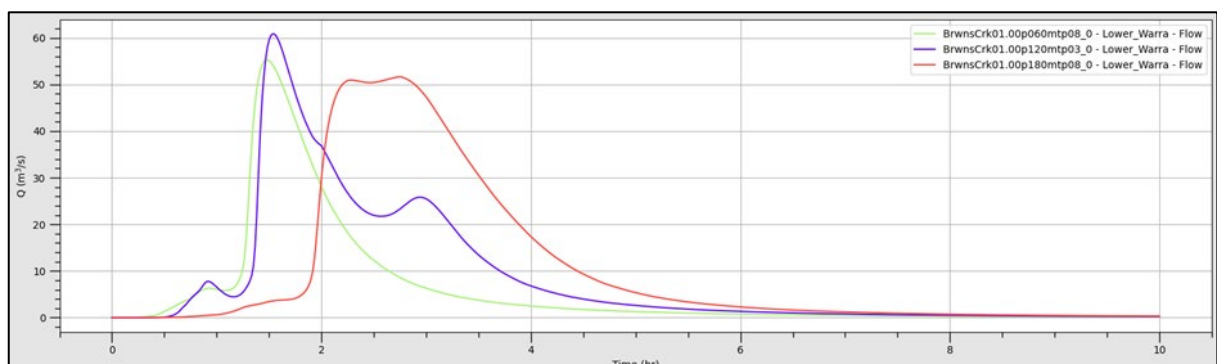


Figure 10: 1%AEP Critical storm

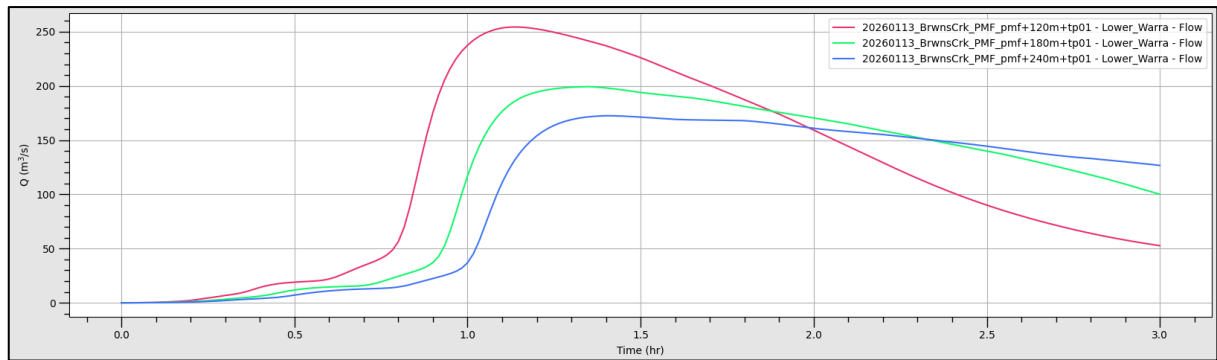


Figure 11: PMF Critical storm

The Nowra and Browns Creek Flood study identified the 120-minute (2 hour) storm as the critical duration for the 10% and 1% AEP event, and the 180-minute (3 hour) storm as the critical duration for the PMF event.

Analysis conducted of modelling result for this FIRA agree with the critical duration identified in the Council adopted flood study for the 10% and 1% AEP event, however modelling results for this FIRA identified the 120m (2 hour) storm as the critical duration for the PMF event and has been used as the design storm for PMF modelling for this FIRA.

3.1.4 Hydraulic Roughness

The hydraulic roughness is an important calibration parameter within the hydraulic model, influencing flow routing across the model's surface.

Different hydraulic roughness values (Mannings 'n') have been assignment to different areas of the hydraulic model based on land types.

Table 10 of the Nowra and Browns Creek Flood Study (refer Figure 12), presents the manning coefficients used for Councils adopted flood study. Table 2, presents AR&R Book 6 section 6.2.1 and 6.2.2 recommended manning's values for defined land use types.

Comparison of roughness parameters adopted by the Council adopted flood study against the values recommended by AR&R demonstrate the roughness parameters adopted for land use type 1, 2,3 and 4 within the Browns Creek Flood Study are reasonable based on current guidance.

Land Use Type	Manning 'n'
Residential areas – high density	0.2 – 0.5
Residential areas – low density	0.1 – 0.2
Industrial/commercial	0.2 – 0.5
Open pervious areas, minimal vegetation (grassed)	0.03 – 0.05
Open pervious areas, moderate vegetation (shrubs)	0.05 – 0.07
Open pervious areas, thick vegetation (trees)	0.07 – 0.12
Land Use Type	Manning 'n'
Waterways/channels – minimal vegetation	0.02 - 0.04
Waterways/channels – vegetated	0.04 – 0.1
Concrete lined channels	0.015 – 0.02
Paved roads/car park/driveways	0.02 – 0.03
Lakes (no emergent vegetation)	0.015 – 0.35
Wetlands (emergent vegetation)	0.05 – 0.08
Estuaries/Oceans	0.02 – 0.04

Table 2: Manning's 'n' Roughness Co-efficient (see ARR19 Book 6 Section 6.2.1 & 6.2.2)

RMA-2 ELEMENT TYPE	DESCRIPTION	ROUGHNESS PARAMETER
1	Creek channel with Heavy Bank Vegetation	0.045
2	Densely vegetated floodplain areas (e.g., u/s of Albatross Road)	0.080
3	Creek Channel with Low / Medium Density Bank Vegetation	0.035
4	Typical semi-urban floodplain areas	0.055

Figure 12: Roughness parameter adopted for Nowra and Browns Creek Flood Study

Council adopted flood study conducted flood modelling using a rafts hydrology. Direct rainfall was utilised for the flood modelling for this FIRA.

Modelling with direct rainfall applies depth varying roughness values to reflect the bed roughness at varying depths for more realistic flow behaviour characteristics. These are presented in Table 3.

For urban residential area is it assumed that shallow flows have reduced roughness and a low roughness value is assigned. For deeper flows a greater roughness value is assigned to account for flow impedance caused by structures such as fences and buildings.

For vegetated areas a higher roughness value is assigned for shallower flows where vegetation caused a greater impedance to flow at shallower depths. Comparison of Mannings values presented in with AR&R guidance (Table 2) demonstrates the values adopted for this FIRA are within recommended range.

A default value 'pasture' is assigned to the whole model within TUFLOW. Figure 13 illustrates the locations where different values Mannings roughness's have been assigned based on land use. Numbers displayed within Figure 13 are those listed under 'land use' of Table 3.

Land Use	Mannings 'n'	Water Depth (m)
Pasture (default)	0.1	0.03
	0.05	0.1
Roads (2)	0.02	N/A
Urban undeveloped (3)	0.03	N/A
Ponds and other waterways (4)	0.03	N/A
Heavily vegetated (5)	0.08	N/A
Vegetated creek (10)	0.08	0.075
	0.045	0.150
Urban developed (12)	0.02	0.03
	0.1	0.1

Table 3: 2D Hydraulic Model – Manning's Roughness with depth

3.1.5 Hydraulic Structures and Controls

These hydraulic structures are represented as a 1D layer in TUFLOW and are dynamically linked to the 2D domain at either end. The parameters used in modelling the culverts are provided in Table 4. The structures were not surveyed and dimension used in the TUFLOW model were taken from measurements conducted during a site visit.



Figure 14: Culvert location (Pre-Development)

Name	Culvert Type	Manning 'n'	US_Invert m AHD	DS_Invert m AHD	Width / Dia(m)	Height (m)	No
Warra Warra Rd	Circular	0.015	40.789	40.767	0.6	-	1
Quinns Lane	Box	0.015	31.957	31.694	10	1.2	1

Table 4: Hydraulic Structure Parameters

3.2 2D Hydraulic Model Validation

The pre-development water surface elevation (flood levels) mapping produced as part of this FIRA has been compared to the flood mapping for the Nowra and Browns Creek Flood Study. Modelling results from Council adopted flood study have been provided to enable direct comparison against the flood model develop for this FIRA. Figure 15 displays the extent of the Nowra and Browns

Creek Flood Study, with the extend of the TUFLOW model developed for this FIRA outlined in Orange.

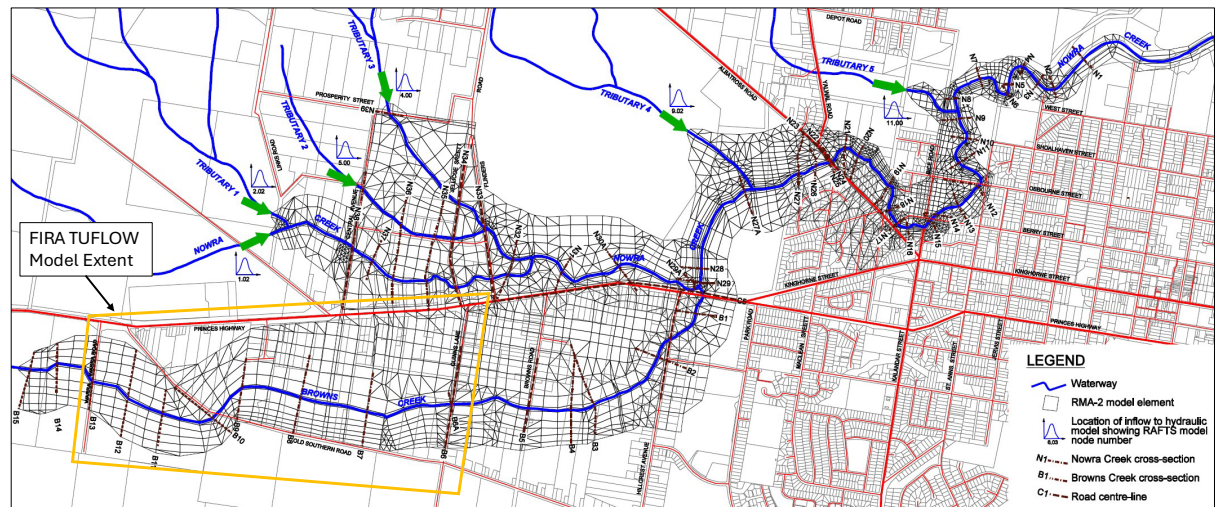


Figure 15: Extent of Nowra and Browns Creek Flood study

It should be noted that the Council adopted flood study was conducted in 2005 and uses ARR1987 hydrology whereas this FIRA uses ARR2019. The council adopted flood study would not have taken account of temporal patterns or pre-burst rainfall.

Additionally, the hydraulic model used for the Council adopted flood study is based on surveyed cross-sections along the length of Browns Creek. With reference to Figure 15, Browns Creek is represented by eight (8) cross sections along its length, with tin interpolation between the cross sections. The model for this FIRA uses a DEM surface, sub grid sampling and reduced grid sizes around critical areas requiring higher model definition. The model surface used for this FIRA is therefore deemed to be of higher accuracy than the surface developed for Councils adopted flood study.

It is anticipated that the variation in modelling techniques used will result in variations in model outputs.

3.2.1 10% AEP Event

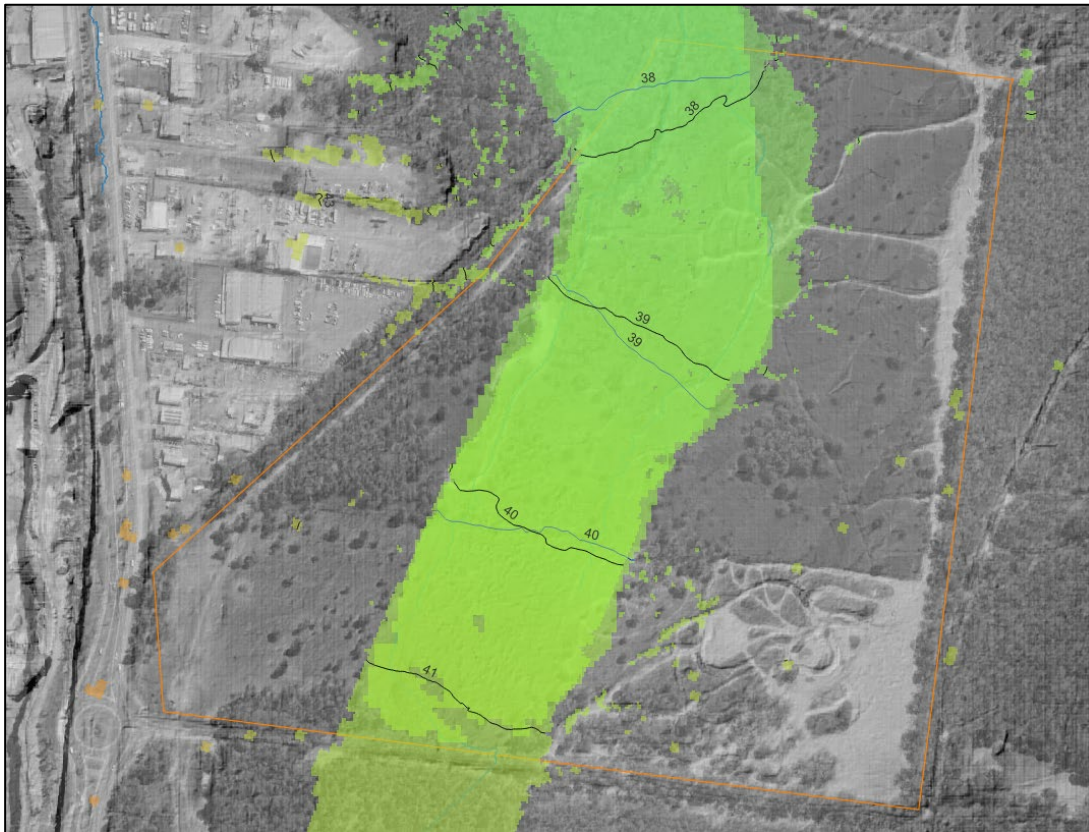


Figure 16: Flood Levels (Nowra and Browns Creek Flood Study VS FIRA model) – 10% AEP

Figure 16 presents the water surface elevation model results from Council adopted Flood study and the TUFLOW model developed for this FIRA. Mapped results and contours have been overlaid for comparison. The Council adopted Flood Study is the less transparent surface with blue contours. The contours for the TUFLOW model results for this FIRA are black.

The Council Flood study starts at the upstream extent of the subject site and therefore upstream level comparison is not possible. Both models follow the same route with very similar flood extents. It is noted that the Browns Creek Flood Study does not extend as far to the east at the downstream end of the site, and in this location the flood level for the Browns Creek Flood Study is higher than the TUFLOW model. Figure 17 presents the water surface elevation for the 10% AEP from the Browns Creek Flood Study. Figure 17 shows the Browns Creek Flood Study does not cover the full extent of the flood plain in this location, causing a glass walling effect which potentially increases an unrealistic flood level. This could explain the slight variation in flood levels shown between the two models in Figure 16 around 38m contour for flood level. Throughout the rest of the site the flood models display excellent correlation in flood extent and level.

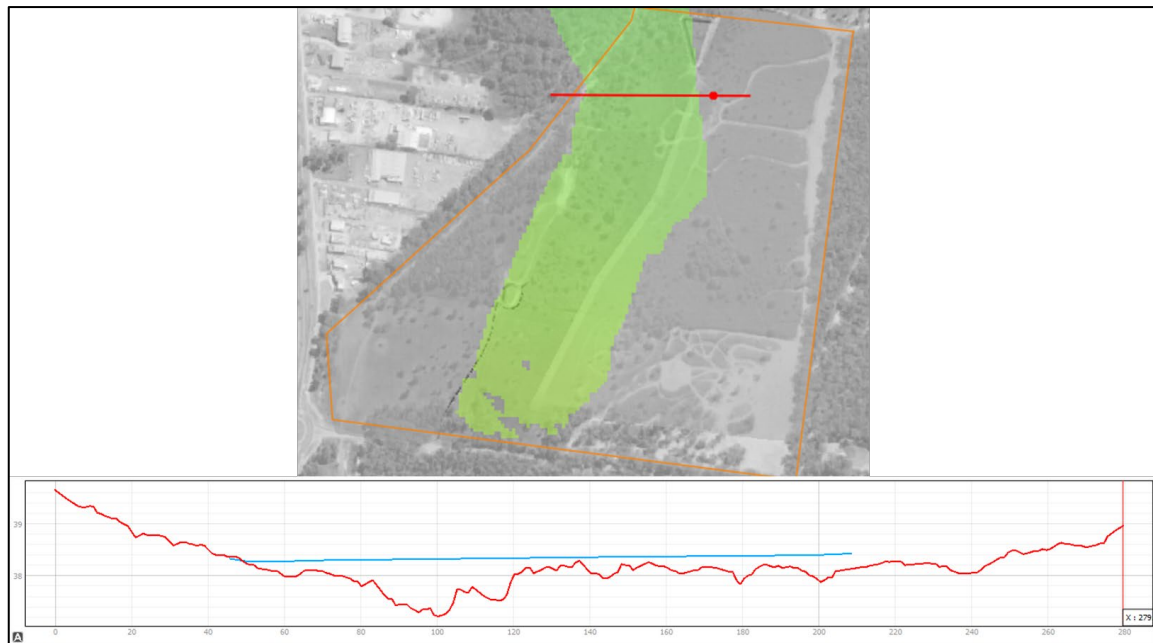


Figure 17: Browns Creek Flood Study - 10% AEP water Surface Elevation

3.2.2 1% AEP Event

The comparison of flood levels for the 1% AEP (refer Figure 18) demonstrate excellent correlation between the two flood models over the centre of the subject site, with the water surface elevation at contours 40m and 39m overlapping. Downstream of the subject site at water surface elevation 36m and 35m there is also excellent correlation between the two models. The flood extent, as previously discussed, also demonstrated good correlation. In some locations the flood extents in the TUFLOW model extend past the extents for the Browns Creek Flood Study, due to the Browns Creek Flood model not extending the full width of the floodplain.

However, immediately downstream of the subject site The Browns Creek Flood Study presents a higher water surface elevation than the water level in the TUFLOW model created for this FIRA (refer Figure 18, contours 37 and 38).

Figure 19 presents the cross sections and model surface structure used for Council adopted flood study and Figure 20 presents the flood depth mapping for the 1% AEP from Council adopted flood study with a cross section taken through it.

Just above cross section B9 in the Browns Creek Flood study there is a sudden drop in water depth (refer Figure 19). Figure 20 presents a cross section across the flood mapping which corresponds to the location of B9 cross section. The dark blue line is the water level from the Browns Creek Flood Study, and the light blue line is the water level from the TUFLOW model. The sudden drop in flood depth appears to be an anomaly in the Browns Creek Flood Study and not representative of the flow behaviour expected. There does not appear to be any changes in model surface that would cause the sudden change in water level. It is believed that the interaction between cross section B10 and B9 in the Browns Creek Flood Study may have cause this erroneous result.

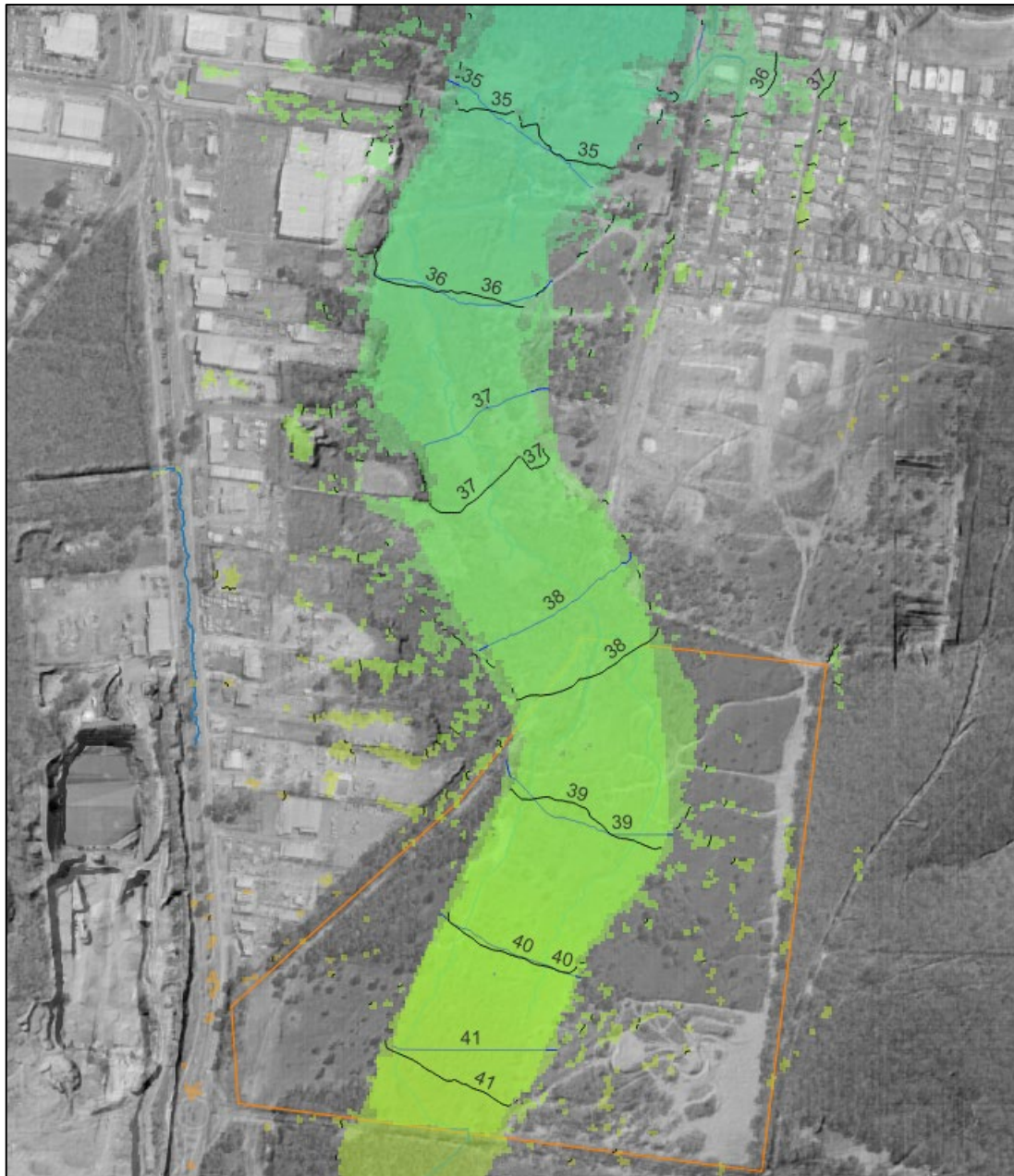


Figure 18: Flood Levels (Nowra and Browns Creek Flood Study VS FIRA model) – 1% AEP

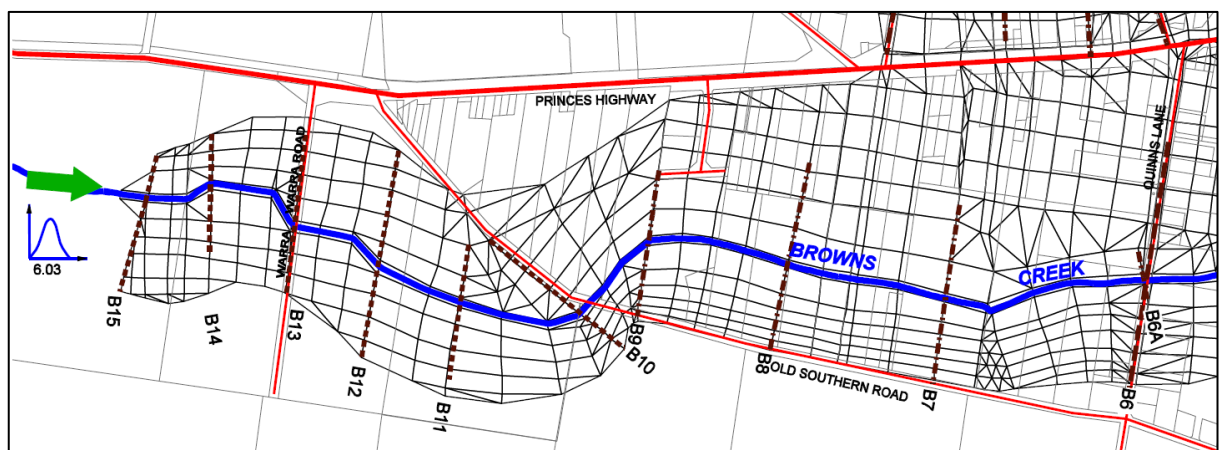


Figure 19: Nowra and Browns Creek Flood Study channel cross sections

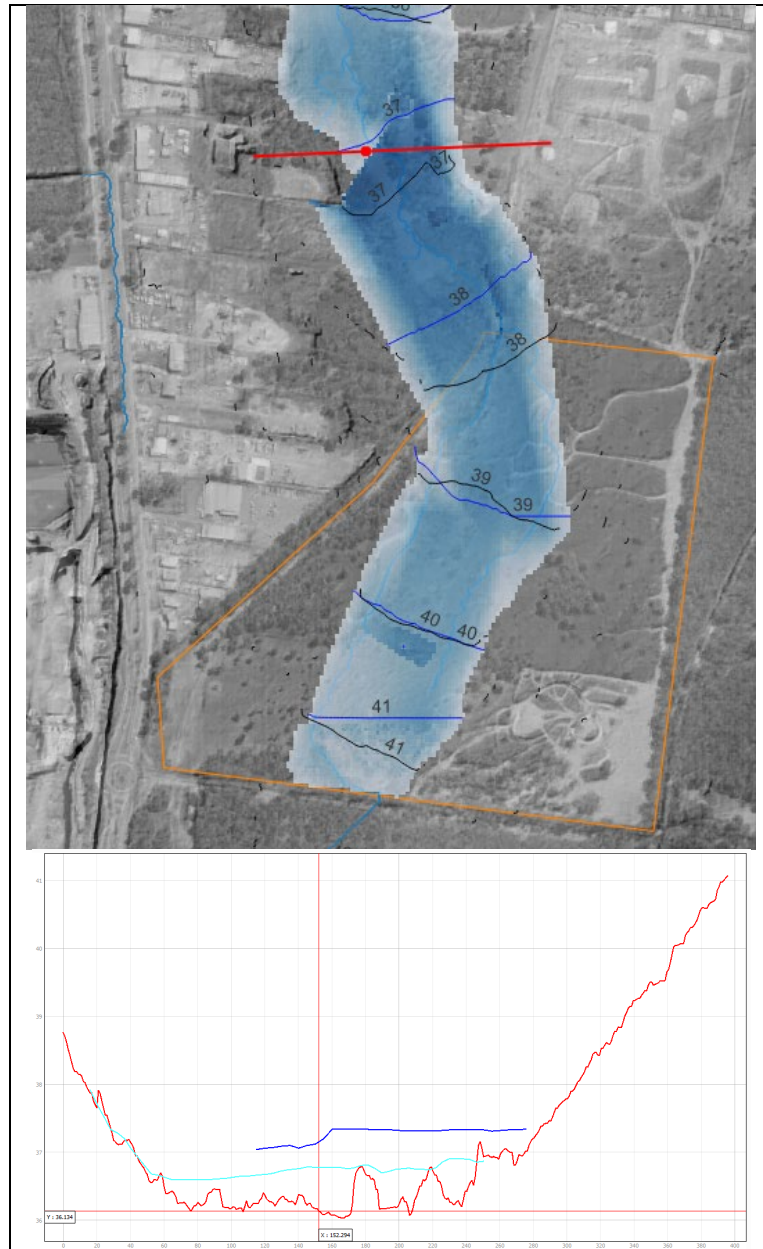


Figure 20: Cross Section - Water Level Comparison

Figure 21 presents a long section comparison between the two flood model results. The red dot along the long section line corresponds to the crosshairs in the long section displaying the water levels. The glass walling effect in the Browns Creek flood model appears to be causing an artificially raised water level upstream of the sudden change in water level. There is no obvious cause to the increase in water level arising from the model surface. The sudden change in water level is believed to be caused by an issue with the Browns Creek model surface and is an erroneous result.

Based on the analysis of the water levels in the Browns Creek Flood Study, it is concluded that the water surface elevation at 37m and 38m are artificially high. These have therefore been discounted for calibration purposes.

By comparison of non-erroneous water levels, the flood model developed for this FIRA has excellent correlation to the Council adopted flood study and is considered suitable for understanding the impacts of the proposed development on the subject site.

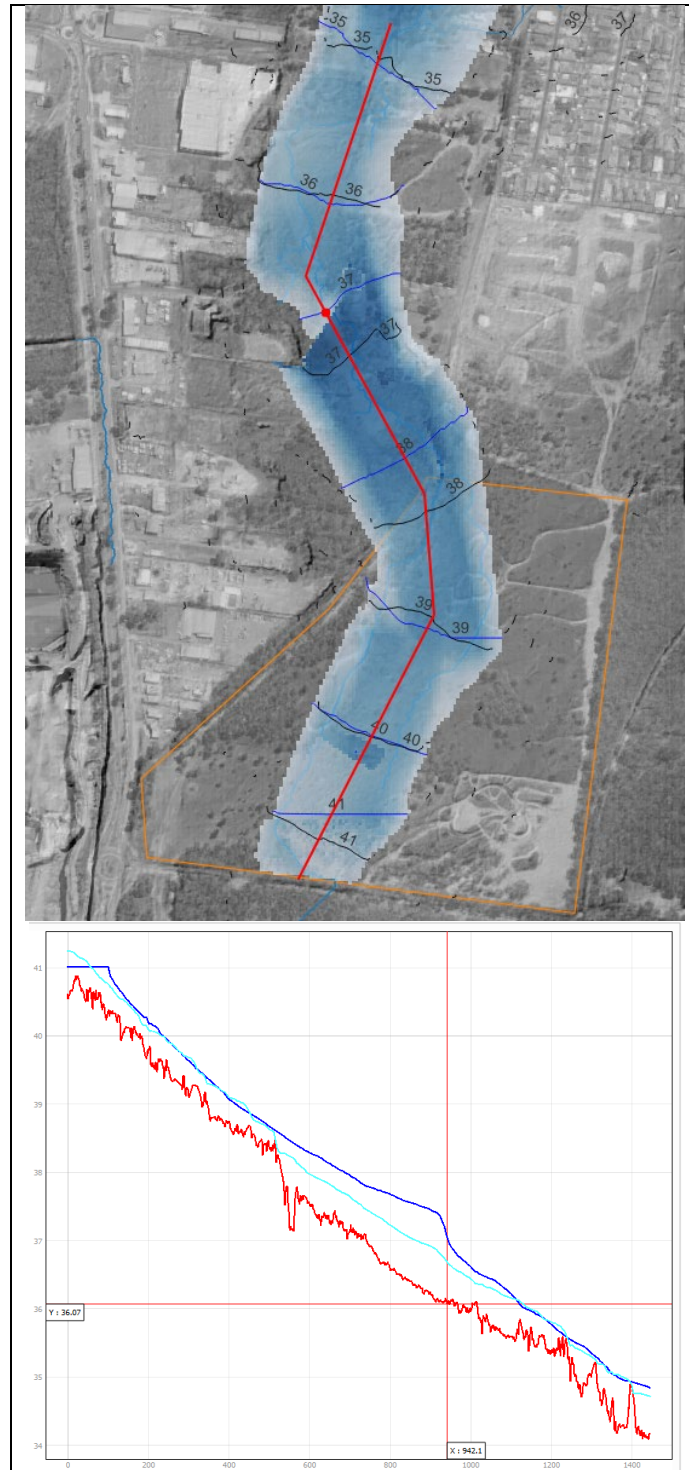


Figure 21: Long Section – Water Level Comparison

3.2.3 PMF Event

Comparison of the water surface elevation for the PMF events supports the conclusions for the 1% AEP comparison. There is excellent correlation between the Browns Creek flood model and the model developed for this FIRA. With reference to Figure 22 and Figure 23 the water levels between the two models correlate across the subject site and downstream at water level 36m and 37m. Due to the anomaly with the Brown Creek flood model, as discussed in section 3.2.2, water levels are artificially elevated immediately downstream of the subject site in the Browns Creek Flood

model. Figure 22 and Figure 23 clearly presents the erroneous result. These levels have been disregarded for flood level comparisons and model validation.

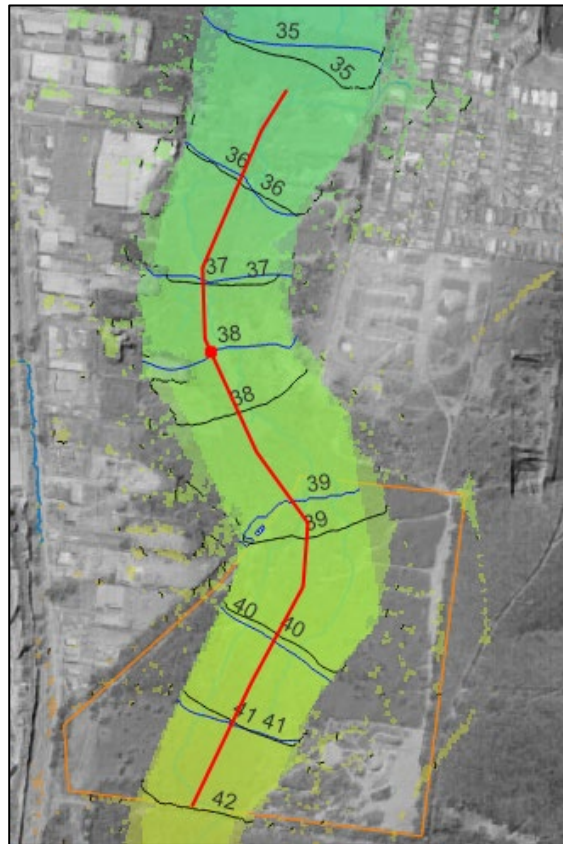


Figure 22: PMF WSE comparison

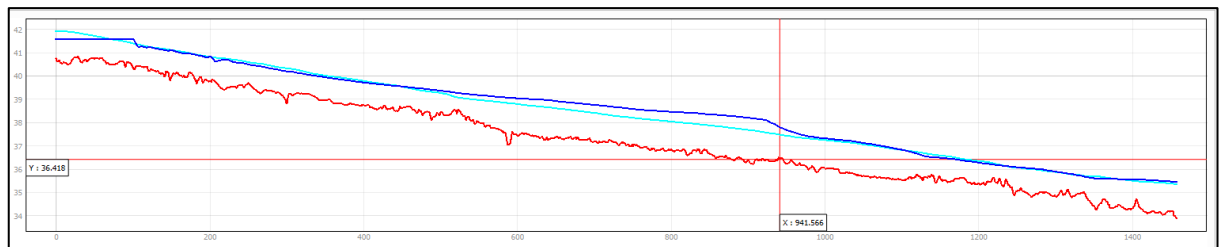


Figure 23: Long section - PMF water surface elevation comparison

The excellent correlation between the Browns Creek Flood model and the TUFLOW model developed for this FIRA places a high level of confidence in the flood modelling results produced.

4 Pre-Development Results

Design events for the 10%, 1%, 0.2% 0.05% AEP and PMF have been assessed for the pre-development scenario. Flood mapping for all these events covering flood depth, velocity, water surface elevation, flood product (dxv) and flood hazard categorisation are provided in Appendix A.

Section 4.1 provides discussion of key results observed for the pre-development scenario.

4.1 Existing flood impacts

With reference to Figure 24 and Figure 25, Browns Creek flows through the centre of the subject site from south to north, as such the central portion of the subject site therefore experiences flooding from the 10% AEP events and greater. For all design events up to and including the PMF the flood flows are contained within the creek channel.

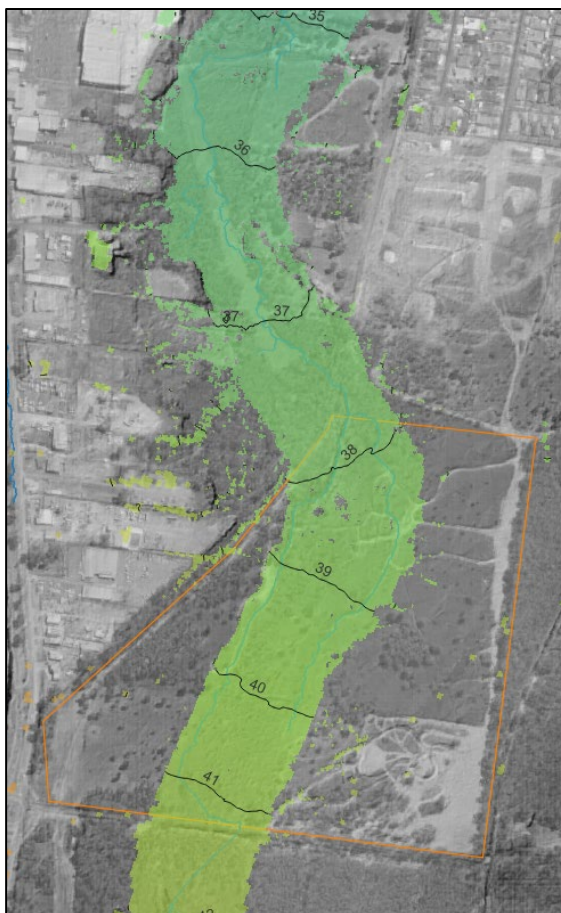


Figure 24: 10% AEP – WSE

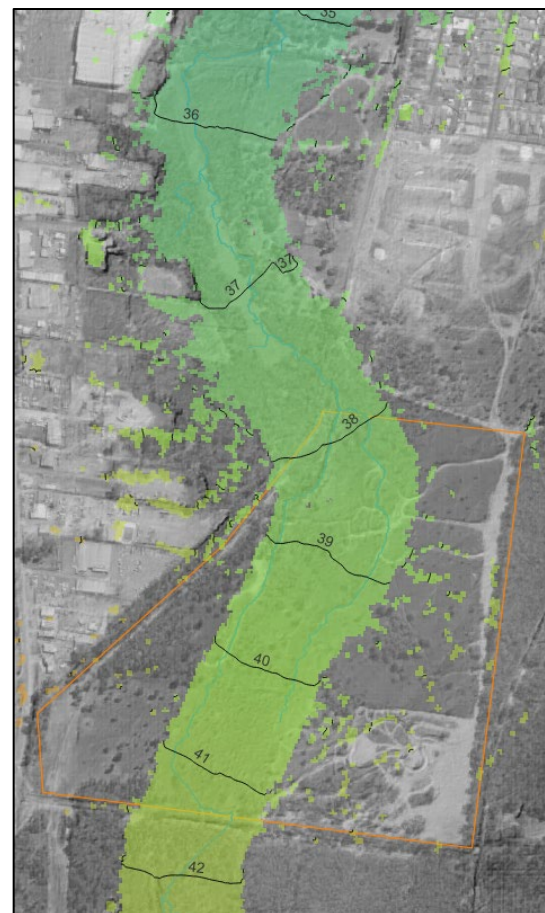


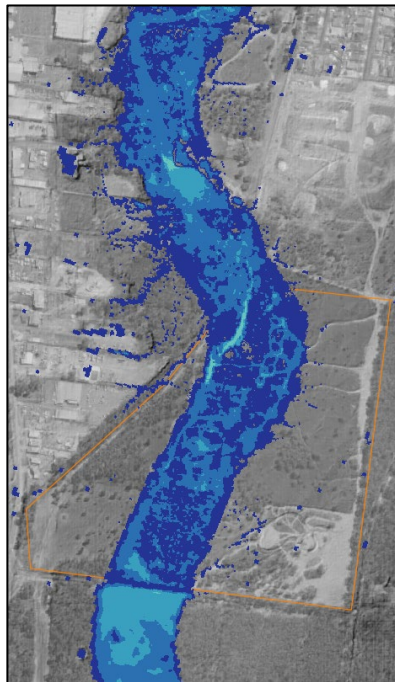
Figure 25: 1% AEP – WSE

Hazard mapping for the 10% AEP, 1% AEP and PMF events are presented in Figure 27 and Figure 28 respectively.

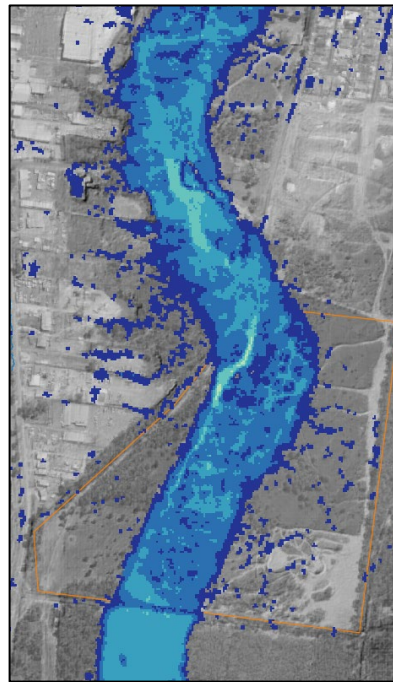
With reference to Figure 29 the flood hazard for the 10% AEP, is a combination of H1 (Generally safe for people, vehicles and buildings) and H2 (unsafe for small vehicles). The sag of Warra Warra Road is overtopped in the 10% AEP and all subsequent events. The hazard category across the road for the 10% AEP is H1

For the 1% AEP most of the area that is flood impacted is category H2, dispersed with H1 and H3. At the downstream, northern, end of the site the hazard category is H4 and H5, however this is

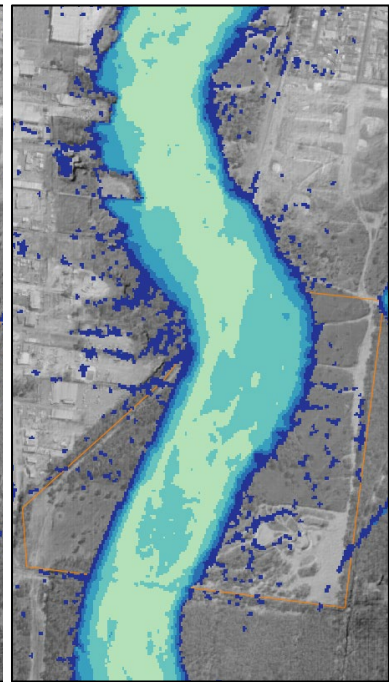
contained within a deeper more formalised creek channel. The sag of Warra Warra Road is H2 for the 1% AEP. Access along Warra Warra Road is unsafe for the 1% AEP flood event and greater.



**Figure 26: Hazard category mapping
10% AEP event**



**Figure 27: Hazard category mapping
1% event**



**Figure 28: Hazard category mapping
PMF event**

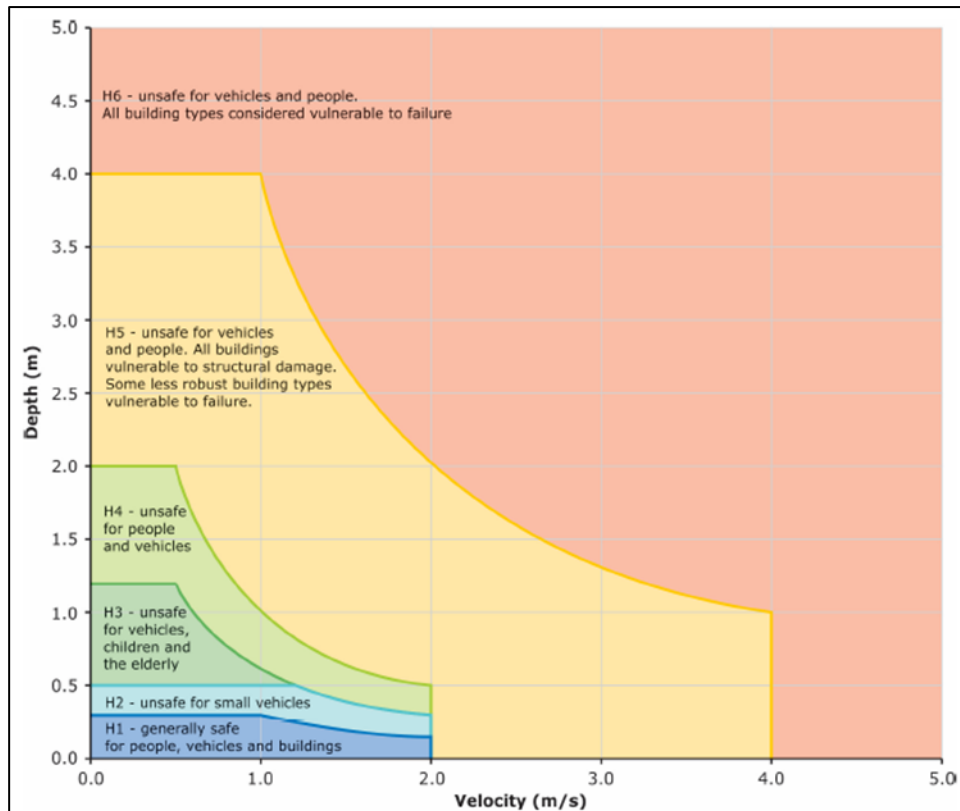


Table 6.7.3. Combined Hazard Curves - Vulnerability Thresholds (Smith et al., 2014)

Hazard Vulnerability Classification	Description
H1	Generally safe for vehicles, people and buildings.
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. All buildings vulnerable to structural damage. Some less robust buildings subject to failure.
H6	Unsafe for vehicles and people. All building types considered vulnerable to failure.

Table 6.7.4. Combined Hazard Curves - Vulnerability Thresholds Classification Limits (Smith et al., 2014)

Hazard Vulnerability Classification	Classification Limit (D and V in combination)	Limiting Still Water Depth (D)	Limiting Velocity (V)
H1	$D \cdot V \leq 0.3$	0.3	2.0
H2	$D \cdot V \leq 0.6$	0.5	2.0
H3	$D \cdot V \leq 0.6$	1.2	2.0
H4	$D \cdot V \leq 1.0$	2.0	2.0
H5	$D \cdot V \leq 4.0$	4.0	4.0
H6	$D \cdot V > 4.0$	-	-

Figure 29: ARR19 Book 6 Section 6.7.3 & 6.7.4

5 Post-Development Flood Modelling and Analysis

5.1 Post-development surface modifications

The proposed development will raise the subject site out of the 1% AEP flood extent to the east and west of Browns Creek. The design surface additionally includes basins on the East and West development areas to manage water quality and stormwater detention, balancing pre and post-development flows for the proposed development. Design and analysis of the basins do not form part of this report. Further information on the basins is available in the Water Cycle Management Plan 20260408_24047_001_1 by CivPlan LTD.

A design surface for the proposed site surface has been created in Civil Site Design (CSD) and combined with the existing natural surface DEM (utilised for the pre-development modelling) to form the development surface used for the post-development hydraulic model. This is present in Figure 30.



Figure 30: Design Surface (Post-Development)

5.1.1 Hydraulic Roughness Modifications

The Manning's Roughness coefficient was altered for the post-development scenario. 'Urban Developed' (12) has been assigned to the whole of the proposed subject site development with a preliminary road network assigned to 'road' (2). The Browns Creek corridor

retains the Mannings coefficient value that was adopted for the pre-development model. Refer to Table 3 in Section 3.1.4 for the Mannings coefficient value used.



Figure 31: 2D Hydraulic Model – Manning's Roughness (Post-Development)

6 Results

Mapping of the flood extents for the 10% AEP, 1% AEP and PMF events for the pre and post-development scenarios have been compared and analysed and impacts to key areas critical to the site discussed.

Full mapping of flood results are provided in Appendix A.

6.1 10%AEP

Water Surface Elevations (WSE) with contours for the 10% AEP event for the pre-and post-development is presented in Figure 32, a comparison of WSE elevations for the pre and post-development is presented in Figure 33.

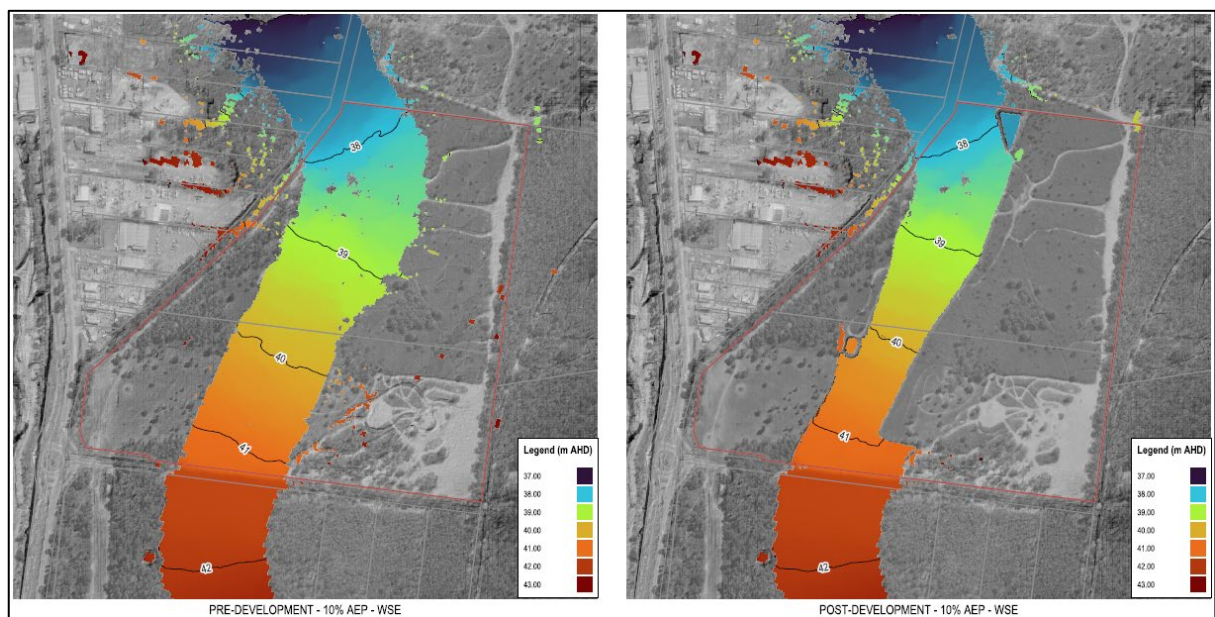


Figure 32: 10% AEP Water Surface Elevation - Pre and Post-development

Figure 33 presents the flood level changes resulting from the topography updates between the pre- and post-development scenarios for the 10% AEP.

The difference in maximum flood level is post-development maximum flood level subtracted from pre-development maximum flood levels ranges. Negative values (purple/pink colours) represent areas where flood waters are shallower due to the proposed development. Positive values (yellow to green) represent areas where flood waters are deeper due to the proposed development.

Changes in flood extent identifies cells that were once wet, now dry (Pink) and once dry, now wet (Blue).

Figure 32 and Figure 33 demonstrate there is very little if any detrimental impact to the flood extent or depth during the 10% AEP as a result proposed development and associated earthworks. Figure 33 shows a very slight increase, almost negligible, in flood extend along the edge of Browns Creek, the extent of this is contained with the subject site and a maximum of 50m downstream. There is no impact on any existing developments within the vicinity of the subject site.

There is a slight increase in water level within Browns Creek resulting from the proposed earthworks. The increase in water level contained wholly within Browns Creek and within the

subject site. There is a maximum increase in flood depth of 250mm on the upstream eastern side of Browns Creek and upstream of the western basin. The maximum increase in water depth within the central portion of the Browns Creek is 130mm.

The proposed earth works affords a significant reduction in flood extent within the subject site with very little detrimental flood impacts elsewhere.

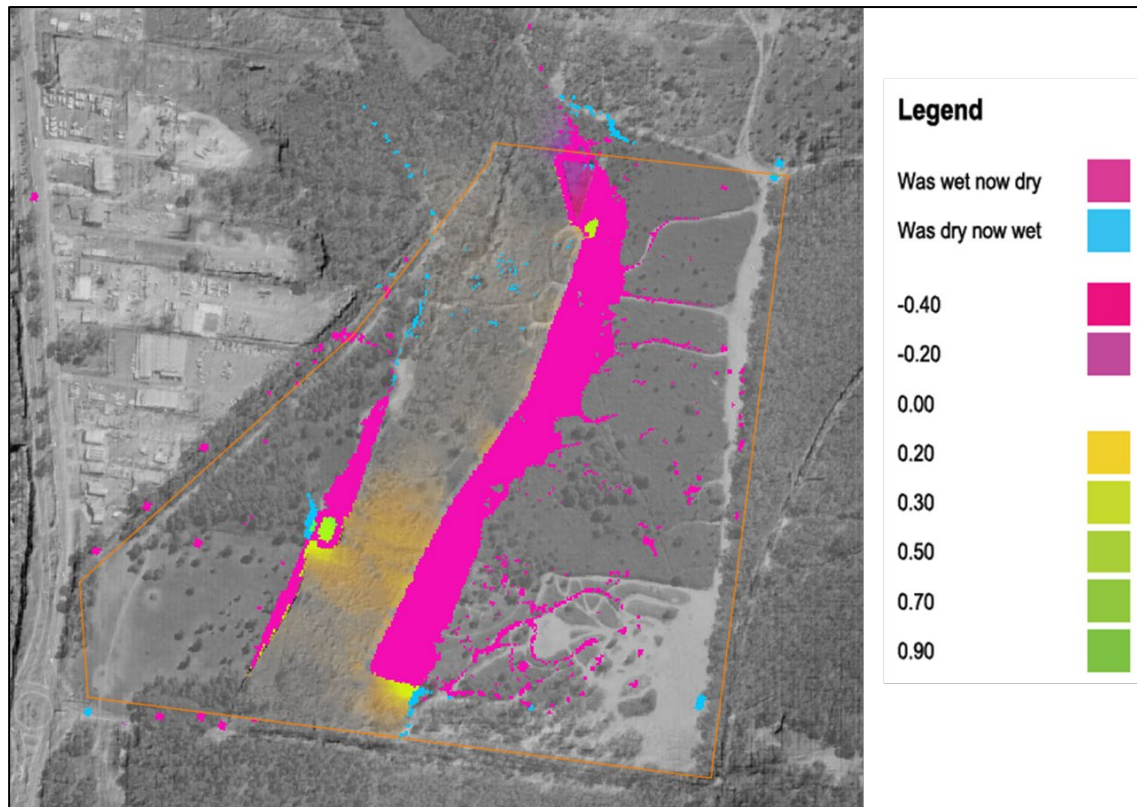


Figure 33: 10% AEP - WSE Comparison – Pre & Post-Development

6.2 1% AEP

6.2.1 Water Surface Elevation (WSE)

Water Surface Elevations with contours for the 1% AEP event for the pre and post-development is presented in Figure 34, a comparison of WSE elevations for the pre and post-development is presented in Figure 35. Figure 35 presents the flood level changes resulting from the topography updates between the pre and post-development scenarios for the 1% AEP.

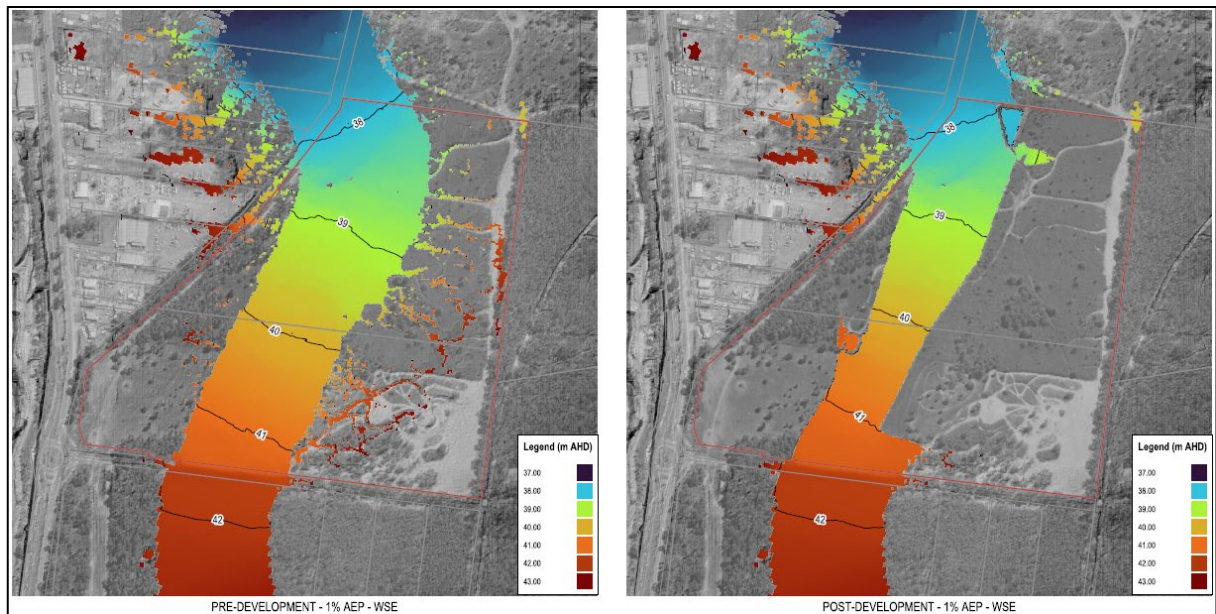


Figure 34: 1% AEP Water Surface Elevation - Pre and Post-development

Figure 34 and Figure 35 demonstrate there is very little if any detrimental impact to the flood extent and minor impact to flood depth during the 1% AEP as a result proposed development and associated earthworks. Figure 35 shows a very slight increase in flood extent along the edge of Browns Creek, the extent of this is contained within the subject site and a maximum of 50m downstream and has no impact on existing development within the vicinity of the subject site. There is also a slight increase to flood extent along Warra Warra Road.

There is a slight increase in water level within Browns Creek resulting from the proposed earthworks. The increase in water level is contained within Browns Creek and within the subject site. There is a maximum increase in flood depth of 300mm on the upstream eastern side of Browns Creek and upstream of the western basin. The maximum increase in water depth within the central portion of the Browns Creek is 180mm.

The proposed earth works affords a significant reduction in flood extent within the subject site for the 1% AEP, with very little detrimental flood impacts elsewhere.

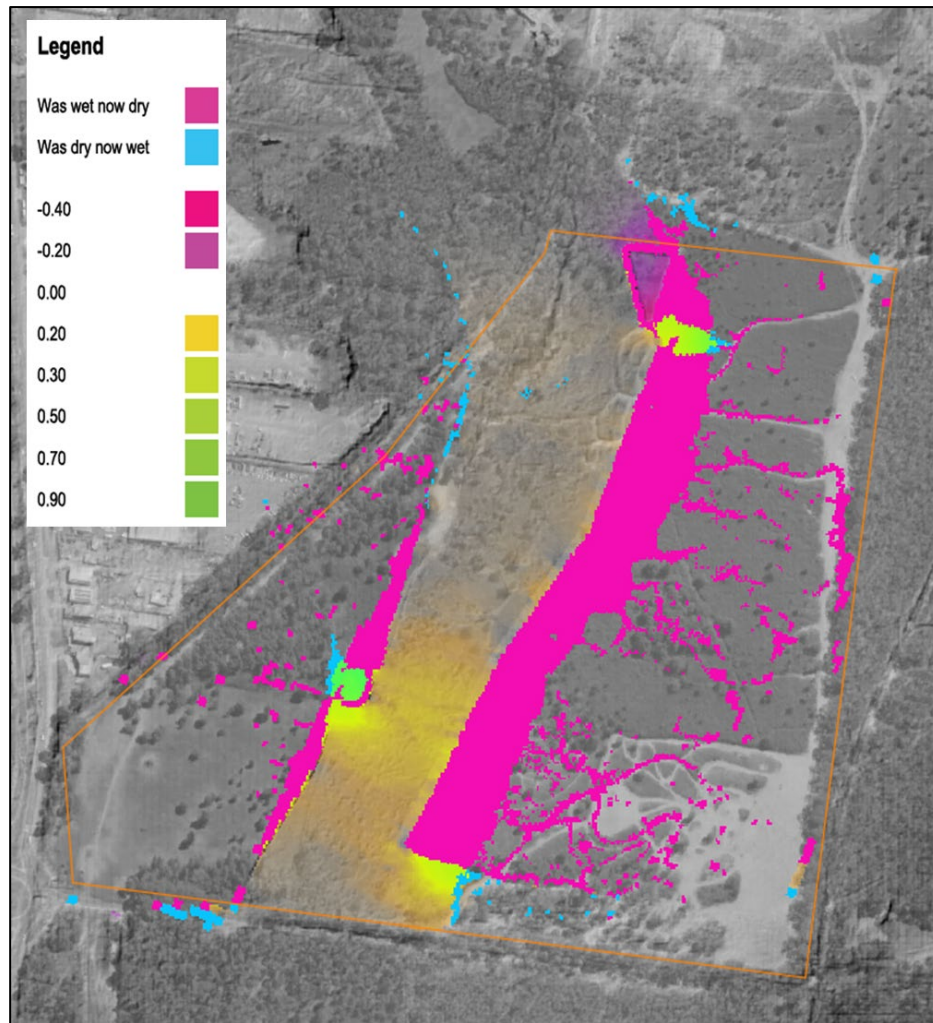


Figure 35: 1% AEP - WSE Comparison – Pre & Post-Development

6.2.2 Flood Hazard

Figure 36 presents the hazard classification for the 1% AEP event. Refer to section 4.1 for discussion on the Hazard categories across the subject site for pre-development.

An increase in hazard category within Browns Creek can be seen in Figure 36 for the post-development scenario when compared to the pre-development scenario. The increase in hazard category is only experienced within the upstream two thirds of the subject site. The majority of the upper two thirds of Browns Creek increases in hazard category to H2 and H3 (refer Figure 29), with a central portion increasing to H4 and a section along the edge of the eastern development increasing to H5.

These increases in hazard category is contained within the Browns Creek channel and result from surface modifications for the proposed development creating an increase in water depth and velocity being experienced within the channel.

For the lower third of the subject site and up and down stream of the subject site the hazard category remains unchanged Compared to the pre-development scenario.

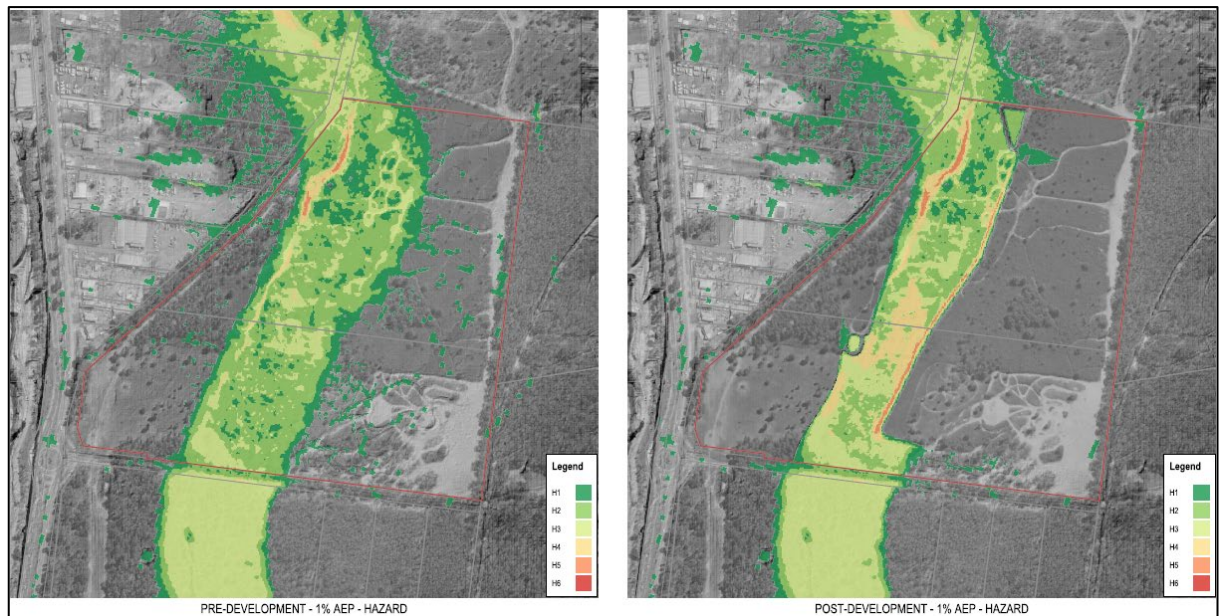


Figure 36: 1% AEP Hazard Category - Pre and Post-development

6.3 PMF

6.3.1 Water Surface Elevation (WSE)

Water Surface Elevations with contours for the PMF event for the pre-and post-development is presented in Figure 37. A comparison of WSE elevations for the pre and post-development is presented in Figure 38 resulting from the topography updates between the pre and post-development scenarios for the PMF.

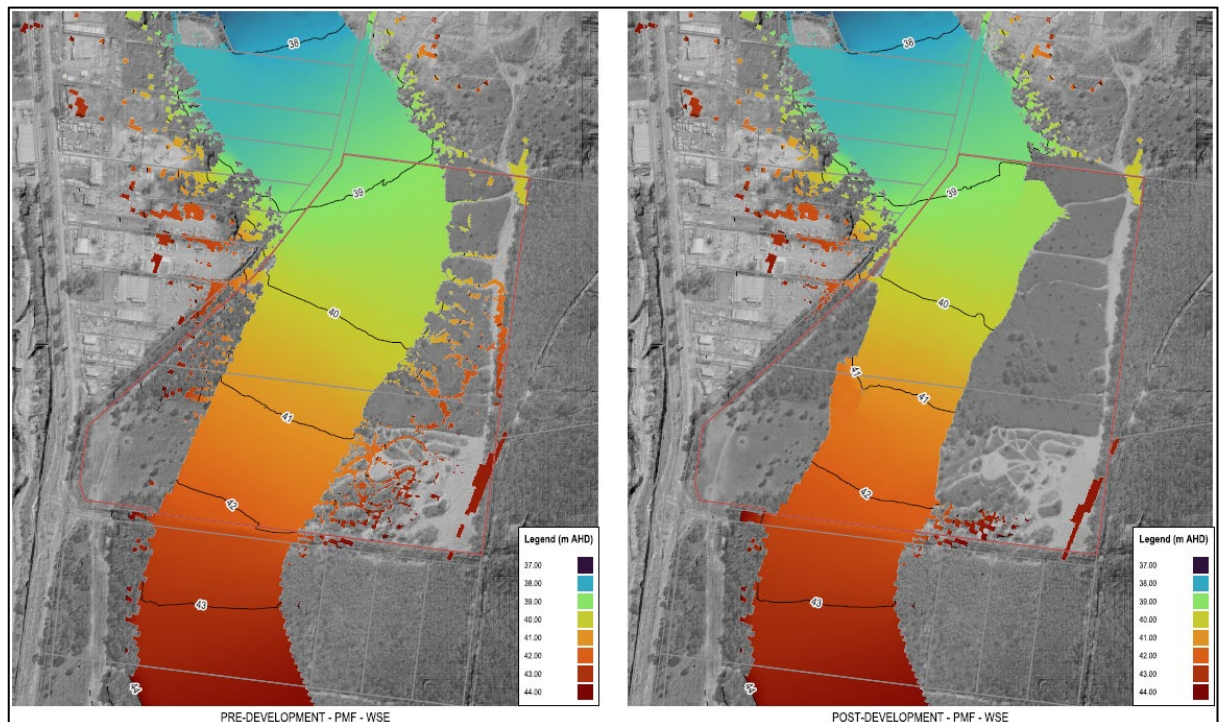


Figure 37: PMF - Water Surface Elevation - Pre and Post-development

Figure 37 and Figure 38 demonstrate there is very little detrimental impact to the flood extent and minor impact to flood depth during the PMF as a result proposed development and associated earthworks. Figure 38 shows a very slight increase, in flood extent along the edge of Browns Creek and in very small sporadic location to the west of Browns Creek. This slight increase in flood extent is considered to have no impact on existing development within the vicinity of the subject site.

The proposed earth works affords a significant reduction in flood extent within the subject site and to the east, and downstream to the east of the subject site. There is negligible detrimental flood impacts elsewhere.

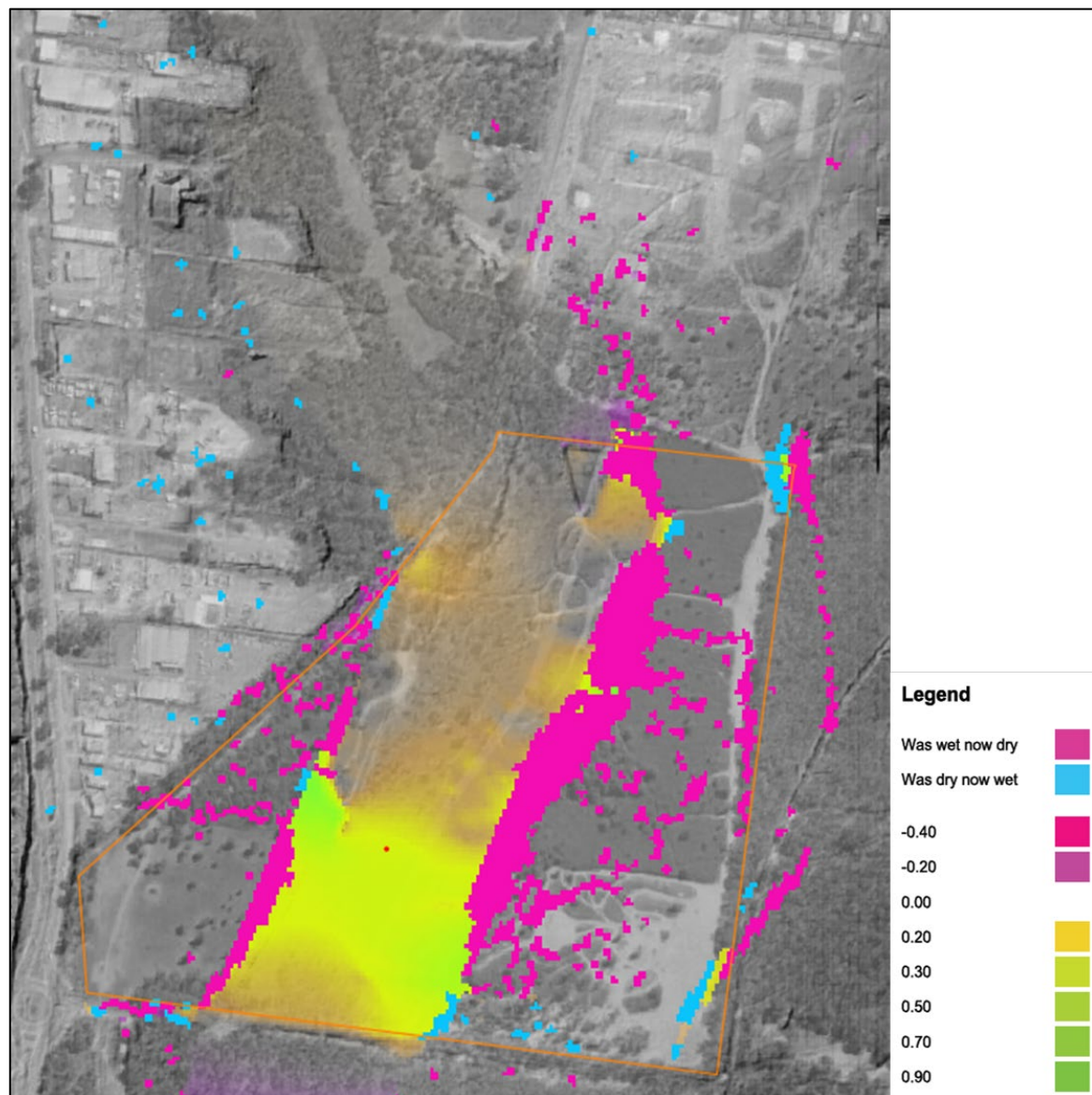


Figure 38: PMF - WSE Comparison – Pre & Post-Development

There is an increase in water level within Browns Creek resulting from the proposed earthworks. The increase in water level is contained within the subject site with a very minor increase immediately downstream of the site to the west. There is a maximum increase in flood depth of approximately 400mm on the upstream eastern side of Browns Creek and upstream of the western basin. The maximum increase in water depth within the central portion of the Browns Creek is approximately 300mm.

The increase in water level is mostly contained within Browns Creek Channel. However, there is some encroachment of flood water for the PMF event on to proposed developable land to the east and west of the Browns Creek channel (Refer Figure 39). The extent of flooding from the PMF over proposed developable land to the east of Browns Creek is approximately 50m at the downstream end of the site and approximately 90m at the upstream end. To the west of Browns Creek the extent of PMF flooding is approximately 30m at the downstream end of the site, and approximately 10m at the upstream end. The depth of flooding is over the proposed developable areas is approximately 700mm at the deepest locations along the east and west banks of Browns Creek.

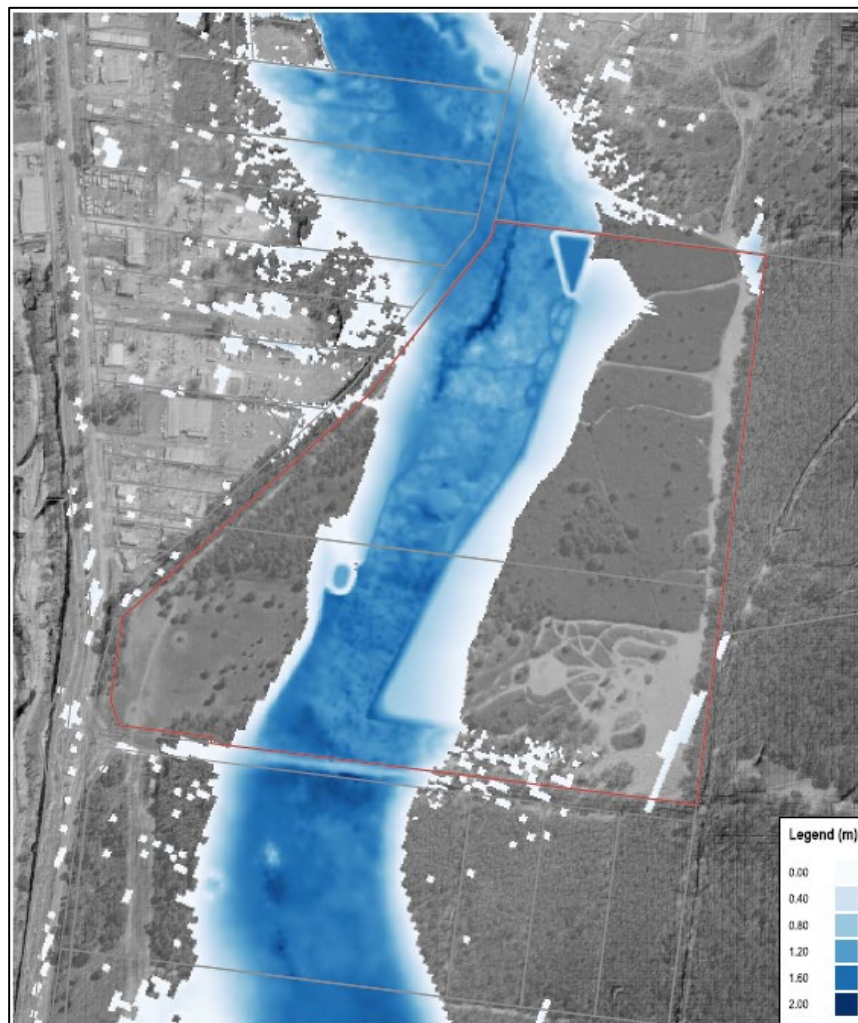


Figure 39: PMF - flood depth

6.3.2 Flood Hazard and Evacuation.

Figure 40 presents the hazard classification for the PMF event. There is no notable increase in the Hazard classification for the subject site or up or downstream of the subject site. Although, it is noted that a larger portion of the flood extent along the east and west perimeters is classified as H1 and H2 in post-development compared to H3 and H4 in the pre-development scenario. This shows a beneficial reduction in hazard classification within the proposed developable area for the subject site for the PMF event.

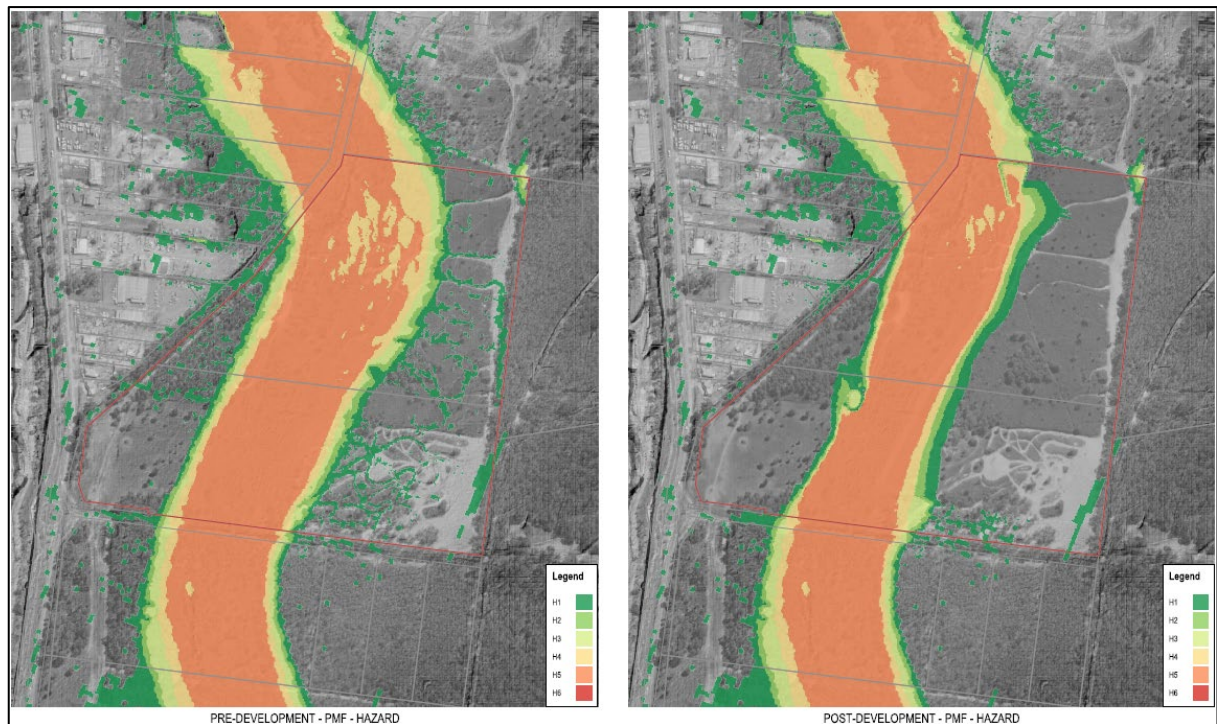


Figure 40: PMF Hazard Classification – Post-development

With reference to Figure 40, safe evacuation can be made from the western side of the subject site in a westerly direction onto the Princes Highway. From the eastern side of the subject site safe evacuation can be made via the north of the site on to Firetail Street and onto Old Southern Road.

6.4 Climate Change

Climate change rainfall data was extracted from the BOM and ARR data hub within QGIS using a TUFLOW extraction tool. Rainfall data for climate change downloaded in QGIS is provided in Appendix C.

A climate change target/design year of 2100 was chosen based on the perceived design life of the proposal. A Shared Socio-economic Pathway (SSP) of SSP 3-7.0 was adopted based on advice provided by Shoalhaven City Council.

The post-development scenario was rerun using the rainfall data for the climate change scenario for the 10%, 1%, 0.2%, 0.05% AEP design events and the PMF accordance with Australian Rainfall and Runoff Version 4.2, 2019. Flood mapping for the climate change scenario described, for the full suite of design storms are provided in Appendix A.

Figure 41 and Figure 42 present the comparison between current day flood extent and climate change flood extents for the 10% and 1% AEP, for the post-development scenario.

Figure 41 and Figure 42 demonstrate that there is very little impact to flood level and extent due to climate change for the post-development scenario. The increase in flood extent is almost entirely contained within the Browns Creek channel for the 10% and 1%AEP event, except for the southwestern corner of the proposed R1 rezoning for the 1% AEP design event +CC.

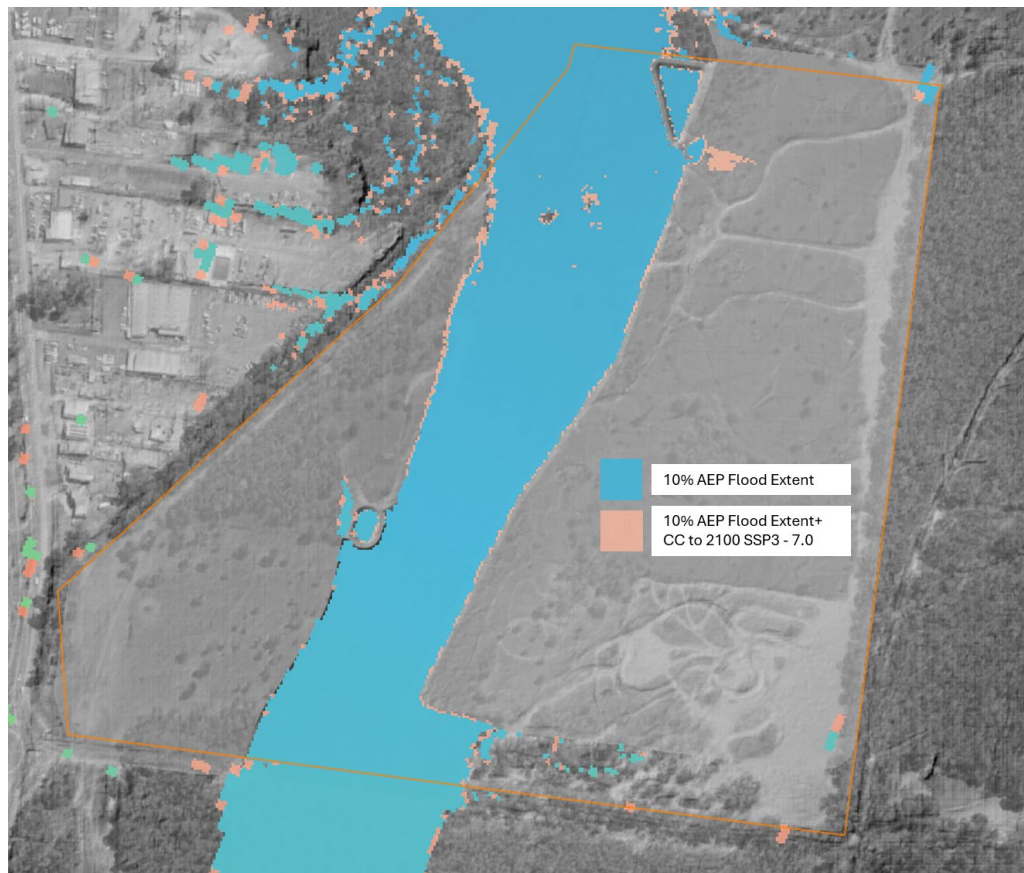


Figure 41: 10% AEP Climate Change Comparison



Figure 42: 1% AEP Climate Change Comparison

Figure 43 presents the hazard mapping for the 1% AEP +CC. two and a half proposed lots are impacted by the increase in flooding due to climate Change under the SSP3-7.0 scenario. However the hazard classification is H1 (generally safe for vehicles, people and buildings).

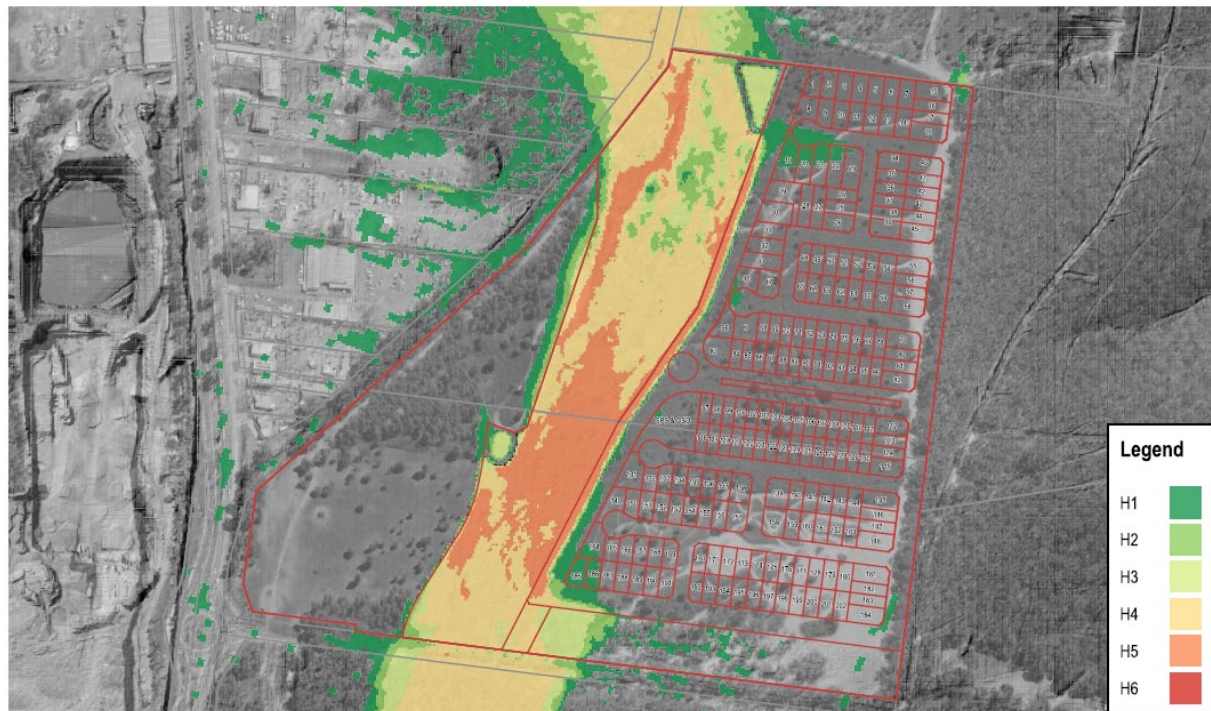


Figure 43: CC SSP3-7.0 1% AEP- Hazard mapping

7 Assessment against S9.1 Ministerial Directions 4.1 Flooding

Table 5 documents how the planning proposal is compliant with the direction of focus area ‘4.1- Flooding’ of the Ministerial planning directions.

Requirements	Response
(1) A planning proposal must include provisions that give effect to and are consistent with: (a) The NSW Flood Prone Land Policy. The principles of the Floodplain Development Manual 2005. (b) The considering flooding in land use planning guideline 2021, and (c) Any adopted flood study and/or floodplain risk management plan prepared in accordance with the principles of the Floodplain Development Manual 2005 and adopted by the relevant council.	Where applicable this FIRA is consistent with the principles of the Flood Risk Management Manual 2023, which supersedes the Floodplain Development Manual 2005. Nowra and Browns Creek Flood Study, March 2009 has been reviewed and items and finding, where relevant, have been aligned to the flood modelling and FIRA associated with the planning proposal.
(2) A planning proposal must not rezone land within the flood planning area from Recreation, Rural, Special Purpose or Conservation Zones to Residential,	(2) N/A. The planning proposal is rezoning from E3 Productivity Support to R1 General Residential.

Employment, Mixed Use, W4 Working Waterfront or Special Purpose Zones.	
(3) A planning proposal must not contain provisions that apply to the flood planning area which: (a) Permit development in floodway areas. (b) Permit development that will result in significant flood impacts to other properties. (c) Permit development for the purposes of residential accommodation in high hazard areas. (d) Permit a significant increase in the development and/or dwelling density of that land. (e) Permit development for the purpose of center-based childcare facilities, hostels, boarding houses, group homes, hospitals, residential care facilities, respite day care centers and seniors housing in areas where the occupants of the development cannot effectively evacuate. (f) Permit development to be carried out without development consent except for the purposes of exempt development or agriculture. Dams, drainage canals, levees, still require development consent, (g) Are likely to result in a significantly increased requirement for government spending on emergency management	(a) Mapping for post-development scenario shows no development is proposed in the floodway. Refer Appendix A. (b) Comparison of pre and post-development flood mapping shows no significant flood impacts to other properties. Refer Appendix A. (c) Mapping for post-development scenario shows no development is proposed in high hazard areas. (d) The proposal is for the rezoning from E3 to R1. The proposed location for residential development is outside of the revised FPA based on proposed earthworks for the site. The FPA for the proposed development is provided in Appendix A. (e) The facilities listed do not form part of the planning proposal rezoning. (f) The proposal is for the rezoning from E3 to R1. The proposed location for residential development is outside of the revised FPA based on proposed earthworks for the site. The FPA for the proposed development is provided in Appendix A (g) Section 6.3.2 of the FIRA demonstrates safe evacuation during a PMF design event is achievable. Evacuation can be achieved without

services, flood mitigation and emergency response measures, which can include but are not limited to the provision of road infrastructure, flood mitigation infrastructure and utilities, or (h) Permit hazardous industries or hazardous storage establishments where hazardous materials cannot be effectively contained during the occurrence of a flood event.	additional spending by government on services described. (h) The proposal is for the rezoning from E3 to R1. This rezoning does not allow for hazardous industries or hazardous storage establishments
(4) A planning proposal must not contain provisions that apply to areas between the flood planning area and probable maximum flood to which Special Flood Considerations apply which: (a) Permit development in floodway areas. (b) Permit development that will result in significant flood impacts to other properties. (c) Permit a significant increase in the dwelling density of that land (d) Permit the development of center-based childcare facilities, hostels, boarding houses, group homes, hospitals, residential care facilities, respite day care centers and seniors housing in areas where the occupants of the development cannot effectively evacuate. (e) Are likely to affect the safe occupation of and efficient evacuation of the lot, or	(4) <i>The special flood considerations clause applies to:</i> <i>sensitive and hazardous development, such as caravan parks, hospitals and seniors housing, between the flood planning area and the probable maximum flood level</i> <i>development that is not sensitive or hazardous on land that the consent authority considers that, in a flood, may pose a particular risk to life and where people may need to evacuate or there are other safety concerns.</i> The proposal does contain infrastructure to which special flood considerations apply With reference to Section 6.3.2 of the FIRA the proposal allows for safe evacuation during a PMF design event. (a) Mapping for post-development scenario shows no development is proposed in the floodway. Refer to Appendix A. (b) Comparison of pre and post-development flood mapping shows no significant flood impacts to other properties. Refer to Appendix A. (c) The proposal is for the rezoning from E3 to R1. This is not considered a significant increase in dwelling density. (d) The facilities listed do not form part of the planning proposal rezoning.

(f) Are likely to result in a significantly increased requirement for government spending on emergency management services, and flood mitigation and emergency response measures, which can include but not limited to road infrastructure, flood mitigation infrastructure and utilities.	(e) Section 6.3.2 of the FIRA demonstrates safe evacuation during a PMF design event is achievable. (f) Evacuation can be achieved without additional spending by government on services described. Refer to Section 6.3.2 of the FIRA
(5) For the purposes of preparing a planning proposal, the flood planning area must be consistent with the principles of the Floodplain Development Manual 2005 or as otherwise determined by a Floodplain Risk Management Study or Plan adopted by the relevant council.	Refer to Appendix A for mapping of the revised flood planning area based on the 1% AEP plus 0.5m freeboard. For the proposed development for which the planning application is being sought. The 1% AEP plus 0.5m is based on guidance within the Floodplain Development Manual 2005 and the Flood Risk management Manual 2023.

Table 5: Assessment of consistency against S9.1 Ministerial Directions 4.1 Flooding

8 Compliance with Chapter G9: Development on flood prone land

With reference to Figure 44, taken from the Nowra and Browns Creek flood Study, the subject site is partially within the high hazard flood way and the low hazard flood fringe for the 1% AEP.

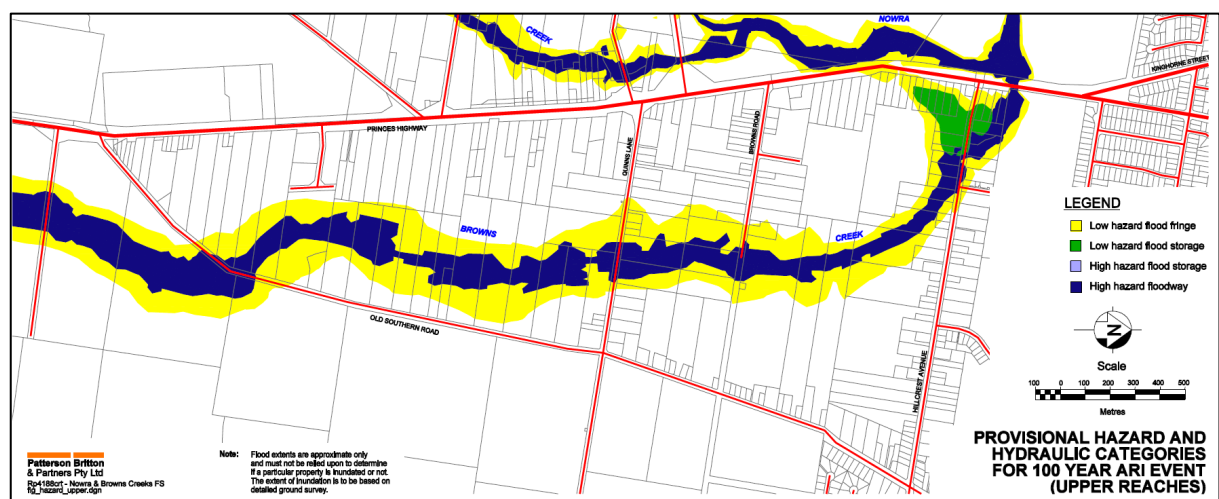


Figure 44: Hazard and Hydraulic Categories: 1% AEP (Nowra and Browns Creek Flood Study 2005)

The hazard category result from Council's adopted Flood Study were overlayed onto the proposed design surface for the for the subject site (refer Figure 45).

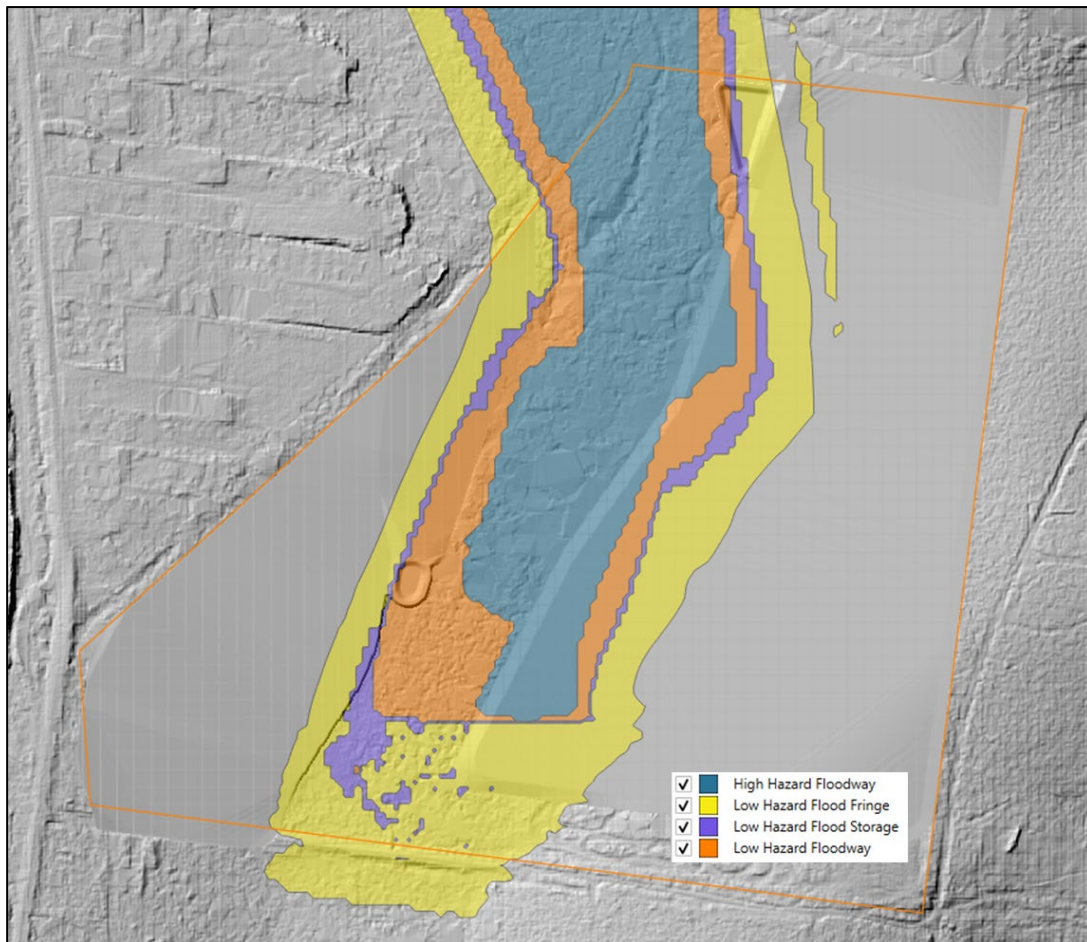


Figure 45: Hazard mapping (Nowra and Browns Creek flood Study 2005)

Most of the proposed development within the subject site is outside the flood planning area. Of the proposed developable area within the flood planning area, it mostly falls within the low hazard category, and small areas are within the high hazard category.

Earthworks will raise the proposed developable area above the 1% AEP flood level, and in doing so will contain the High Hazard Floodway within the Browns Creek channel and the area of the subject site proposed for development will be either outside the flood planning area and a small area along the edge of the Browns Creek formalised channel will fall within the Low Hazard category.

As such this FIRA will assess the proposed development against Chapter G9 development control matrix for Earthworks(E) within the high hazard category, and will assess Residential/Habitable buildings (A), Commercial/Industrial Buildings(C) and Subdivision(D) within the low hazard category.

Flood Evacuation Planning from the high hazard category has additionally been address for completeness.

Refer to Figure 46, which presents the planning controls that will apply to the development. These have been addressed in Table 6.

Shoalhaven Development Control Plan 2014
Chapter G9: Development on Flood Prone Land

Hazard/Hydraulic Category	High Hazard Flood Storage or High Hazard Flood Fringe										
Land Use Category (As per schedule 1)	Single Residential / Habitable Buildings	Other Residential / Habitable Buildings	Carparks	Commercial / Industrial / Agricultural Buildings / Retail	Subdivision	Earthworks	Resources Management / Agriculture / Recreational Activities	Critical Infrastructure Assets / Potentially Polluting Activities	Buildings and activities requiring special evacuation consideration	Minor Development	Ancillary Structures
	A(I)	A(II)	B	C	D	E	F	G	H	I	J
FLOOR LEVEL*	1	1	5	1				3		1 or 4**	
BUILDING COMPONENTS	1, 2	1, 2	1, 2	1, 2			1, 2	1, 2		1, 2	1, 2
STRUCTURAL SOUNDNESS	2, 4	2, 4	2, 4	2, 4			3	2, 3, 4		2	3
HYDRAULIC IMPACT	1	1	2	1		2	1, 2	1, 2			1
ACCESS	1, 2	1, 2	1, 2	1, 2				1		3	
FLOOD EVACUATION PLAN	1	1	1	1						1	2
MANAGEMENT & DESIGN	1, 3	1, 3		1, 3			1, 2, 3	1, 2, 3			1

Not suitable for development
Not required

**
Note: for definitions of Land Use Categories refer to Schedule 1
Control no. 1 is desirable however if this cannot be achieved control no. 4 is acceptable
Numbers in columns are described in the Development Controls Matrix Legend.

Shoalhaven Development Control Plan 2014
Chapter G9: Development on Flood Prone Land

Hazard/Hydraulic Category	Low Hazard Floodway, Low Hazard Flood Storage, Low Hazard Flood Fringe										
Land Use Category (As per schedule 1)	Single Residential / Habitable Buildings	Other Residential / Habitable Buildings	Carparks	Commercial / Industrial / Agricultural Buildings / Retail	Subdivision	Earthworks	Resources Management / Agriculture / Recreational Activities	Critical Infrastructure Assets / Potentially Polluting Activities	Buildings and activities requiring special evacuation consideration	Minor Development	Ancillary Structures
	A(I)	A(II)	B	C	D	E	F	G	H	I	J
FLOOR LEVEL	1	1	5	1				3		4	
BUILDING COMPONENTS	1, 2	1, 2	1, 2	1, 2			1, 2	1, 2		1, 2	
STRUCTURAL SOUNDNESS	4	4	3	4				4			
HYDRAULIC IMPACT			2								
ACCESS	1, 2	1, 2	1, 2	1, 2	1, 2					3	
FLOOD EVACUATION PLAN			1								2
MANAGEMENT & DESIGN							1, 2, 3	1, 2, 3			

Not suitable for development
Not required

Note: for definitions of Land Use Categories refer to Schedule 1
Numbers in columns are described in the Development Controls Matrix Legend.

Figure 46: Chapter G9, Schedule 2 - Flood related development controls

Planning Consideration	Items	Requirement (*Note: for new building applications flood levels for the year 2050 are to be used)	Response
Floor Level	1	1% AEP flood level + 0.50M freeboard;	Proposed earthworks will raise the development out of the 1% AEP flood extent. All buildings will be assigned a FFL above the 1% AEP + freeboard.
Building Components	1	Any portion of the building or structure below the FPL to be built from flood compatible materials (being those materials used in building that are resistant to damage when inundated).	All buildings are proposed to be constructed outside of the 1% AEP flood extent and have a FFL above the 1% AEP +freeboard.
	2	All electrical installations to be above the FPL.	All buildings are proposed to be constructed outside of the 1% AEP flood extent and have a FFL above the 1% AEP +freeboard.
Structural Soundness	4	Appropriate consulting engineer's report – the structure will not become floating debris during a 1%AEP flooding scenario.	All buildings are proposed to be constructed outside of the 1% AEP flood extent.
Hydraulic Impact (High Hazard)	2	Appropriate consulting engineers report for earthworks of volumes exceeding 250 cubic metres or with a length of more than 20 metres. The report is to prove that the earthworks will not increase flood hazard, flood damage or adversely affect other properties for a 5% AEP up to the PMF scenario.	Refer to Section 6 and flood mapping in Appendix A of this FIRA. It is demonstrated that there is no increase in flood hazard outside of the Browns Creek channel resulting from the proposed development. Results and mapping provided as part of this FIRA demonstrate the proposed development will not increase flood damage or adversely affect other properties for the 10% AEP up to and including the PMF scenario.
Access	1	Reliable emergency vehicle access is required for ambulance, SES, fire brigade, police and other emergency services during a 1% AEP flood event	The West and Eastern developable portion of the subject site are outside of the 1% AEP flood level. There is reliable emergency vehicle access to the western side of the proposed development from the roundabout at Princes Highway and Warra Warra Road. There is reliable emergency vehicle access to the eastern side of the proposed development from Old Southern Road and Firetail Road to the northeast of the subject site.
	2	Reliable access for pedestrians is required during a 1% AEP flood event	The West and Eastern developable portion of the subject site are outside of the 1% AEP flood level.
Flood Evacuation Plan (High Hazard)	1	Appropriate engineers report demonstrating that permanent, fail-safe, maintenance-free measures are incorporated in the development to ensure that the timely, orderly and safe evacuation of people is possible from the area and that it will not add significant cost and disruption to the community or the SES.	Safe evacuation can be made from the western side of the proposed development via the roundabout at Princes Highway and Warra Warra Road. Safe evacuation can be made from the eastern side of the proposed development via Firetail Road and Old Southern Road.

Table 6: Compliance with Chapter G9 development controls

9 Conclusions

This report discusses the outcomes of the Flood Risk Impact Assessment completed to support the viability of the planning proposal at Lot 224 DP 755952 & Lot 2 DP 1126288. This report analyses the flood behaviour for the pre and post-development scenarios and the impacts on the flood characteristics upstream and downstream of the subject site.

Pre and post-development conditions have been modelled using TUFLOW. Please refer to Appendix A for all the flood mappings and analysis performed for this assessment, including depths, velocities, WSE, hazard and WSE comparison map for both pre and post-development scenarios and Climate Change for the 10%, 1%, 0.2%, 0.05% AEP and PMF events.

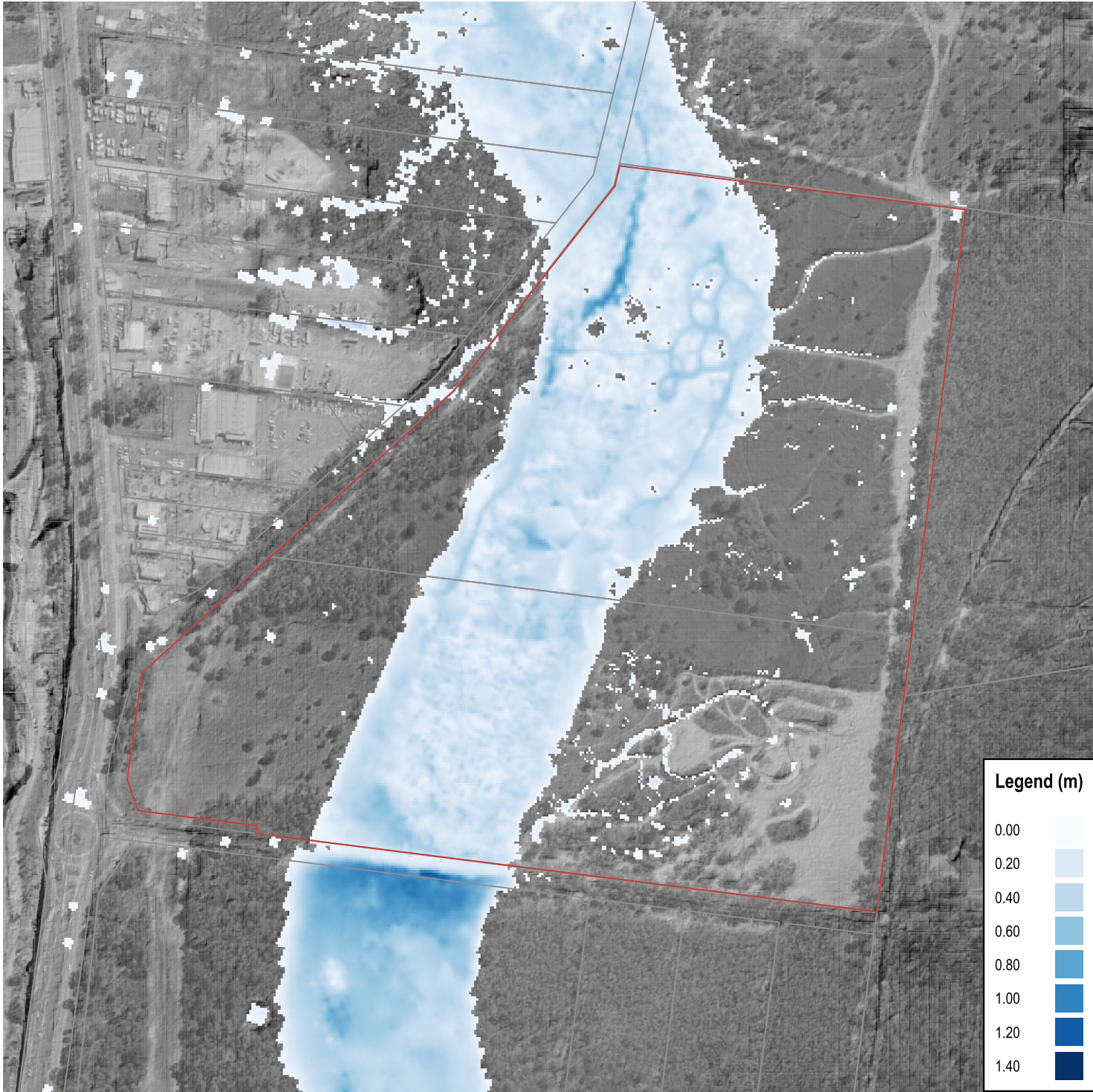
This assessment demonstrates that the proposed planning application is viable from a flood perspective.

- Results of flood modelling demonstrate the proposed development can be raised out of the 10% and 1% AEP flood extent with is no detrimental impact or increase in flood hazard or flood extent for all design events modelled.
- There is safe and reliable access to and from the east and west of the proposed developable site for the 1% AEP. Additionally, most of the site is outside the PMF flood extent with safe and orderly evacuation of people possible from the east and west of the proposed developable site for the PMF design event.
- The planning proposal is compliant with the direction of focus area '4.1-Flooding' of the Ministerial planning directions
- The area of the subject site that sits within the high and low hazard areas can achieve compliance with development controls within Schedule 2 of Chapter G9
- Additionally, the proposed earth works afford a significant reduction in flood extent within the subject site with very little detrimental flood impacts elsewhere.
- There is no significant increase in flood extent within the subject site for the 2100 SSP3-7.0 scenario when compared to the current day 1% AEP flood extent. Where there is an increase the hazard category is H1.
- Flood planning levels can be assigned to lots 131, 149, 164, 185 and 186 sit just inside the post-development FPA.

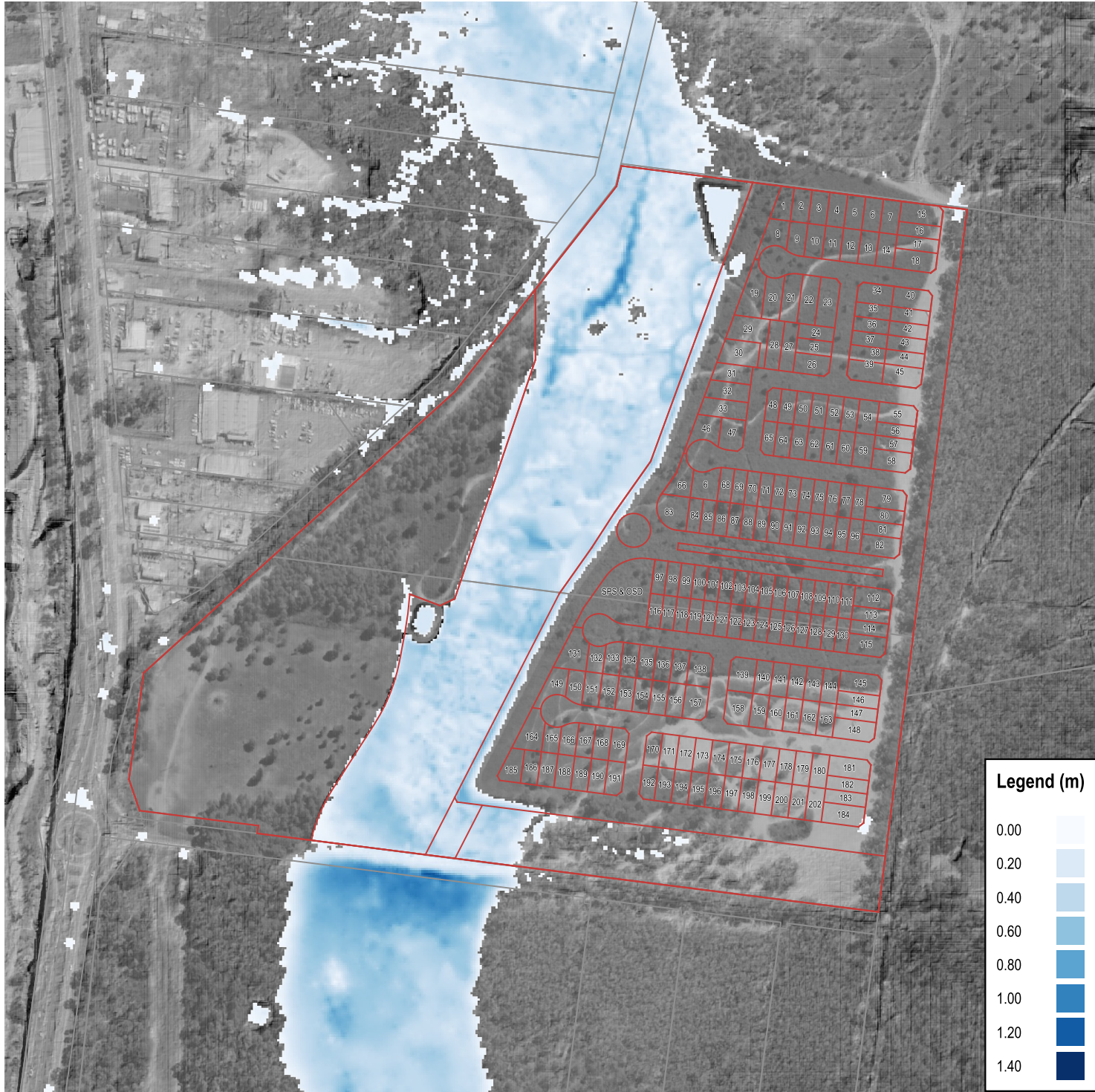


APPENDIX A:

Flood Mapping



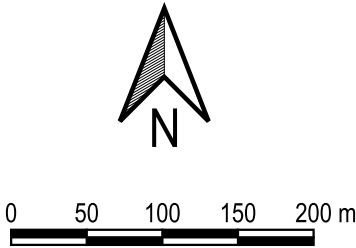
PRE-DEVELOPMENT - 10% AEP - DEPTH



POST-DEVELOPMENT - 10% AEP - DEPTH

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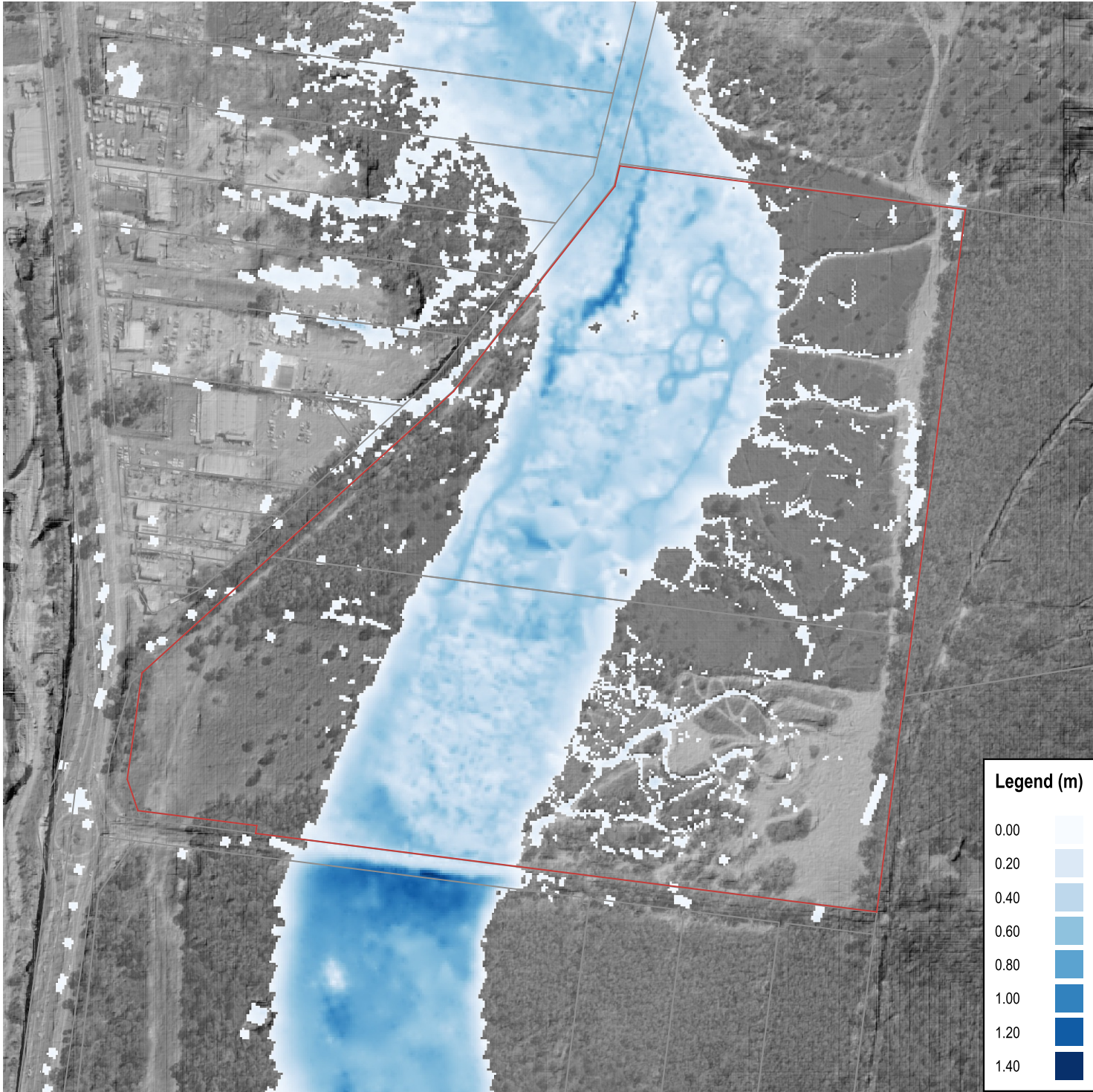
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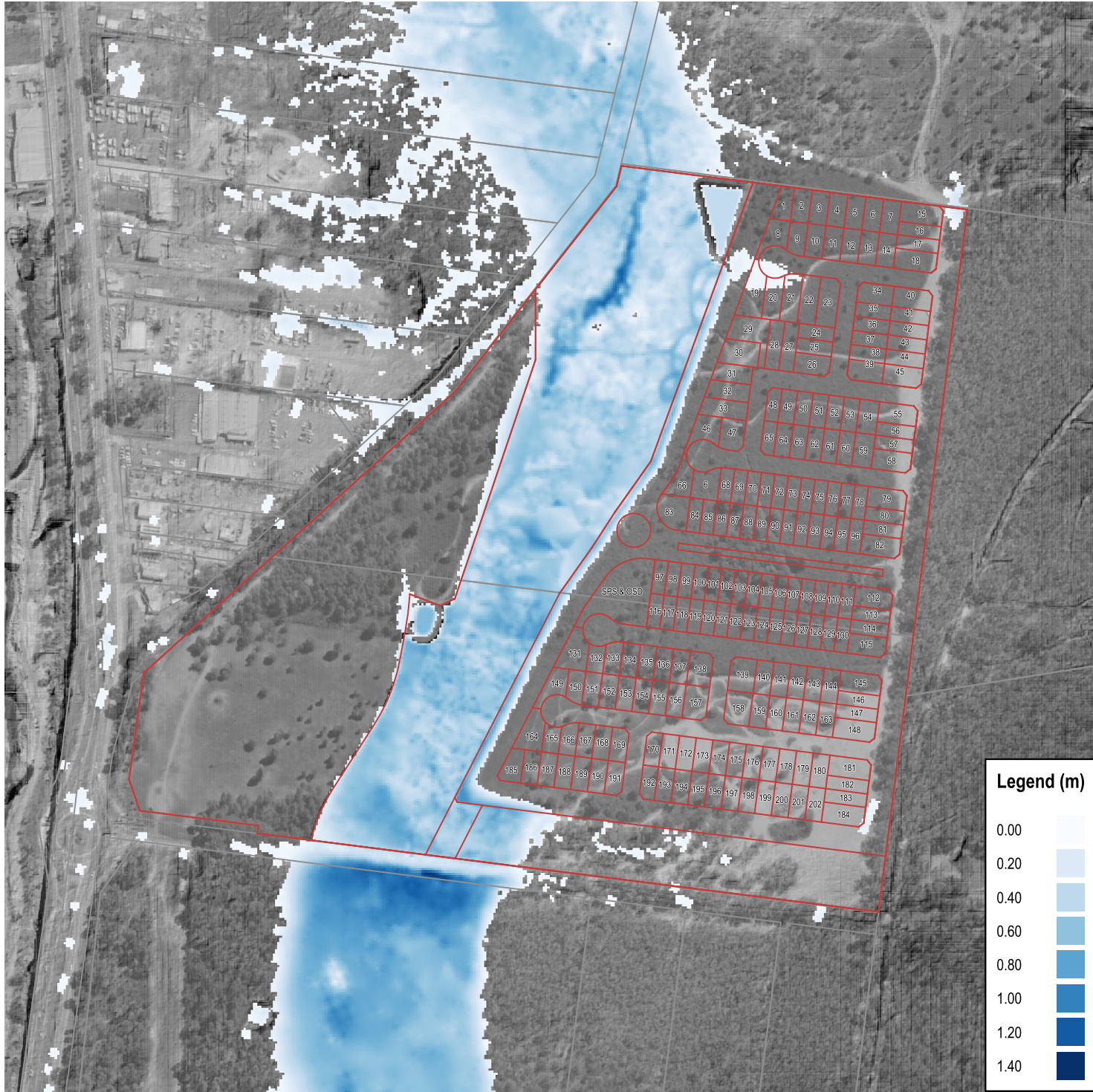
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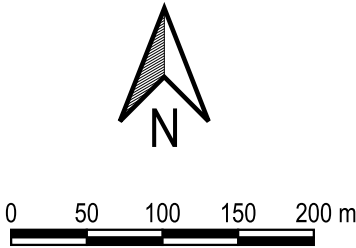
PRE-DEVELOPMENT - 1% AEP - DEPTH



POST-DEVELOPMENT - 1% AEP - DEPTH

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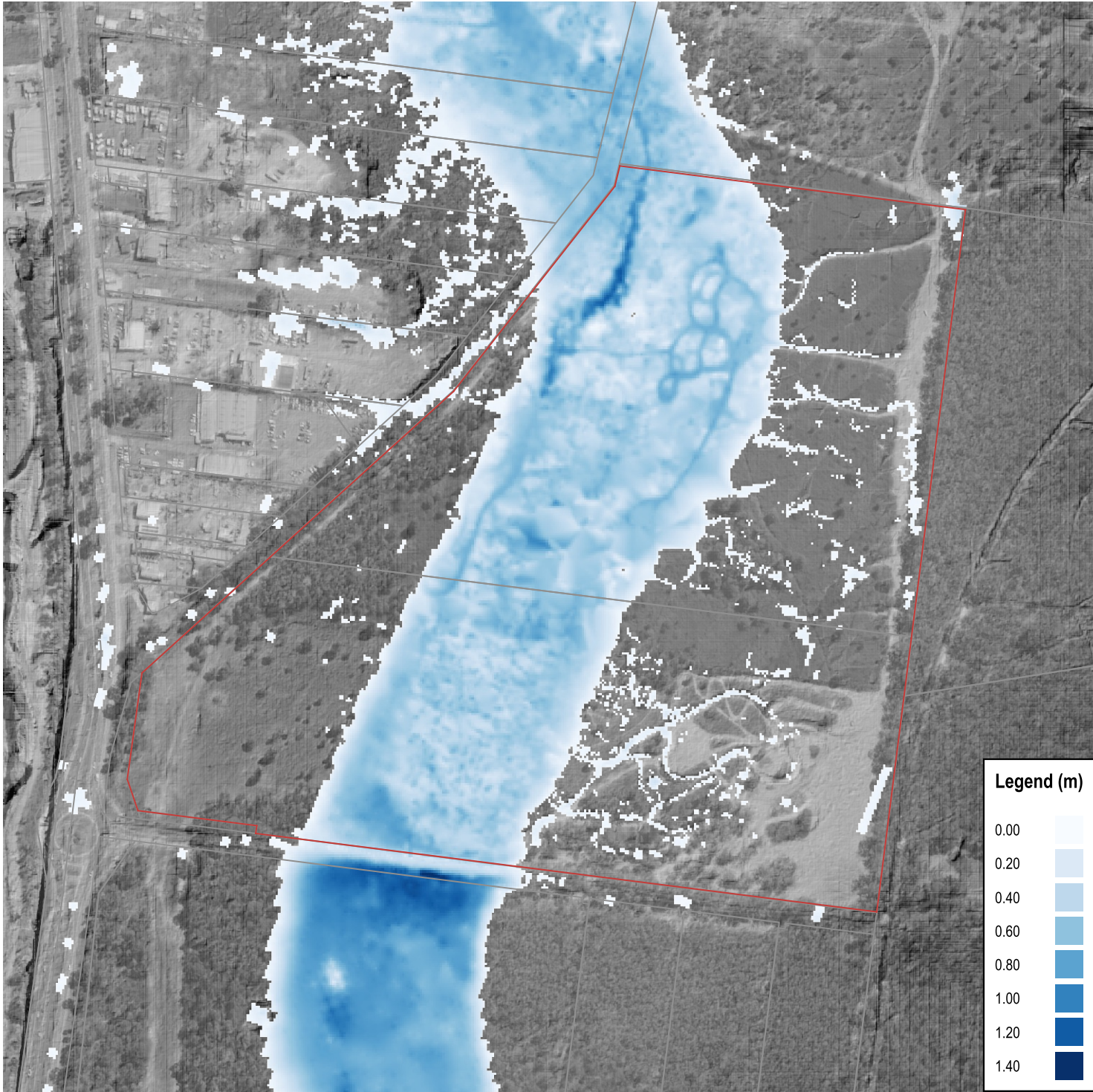
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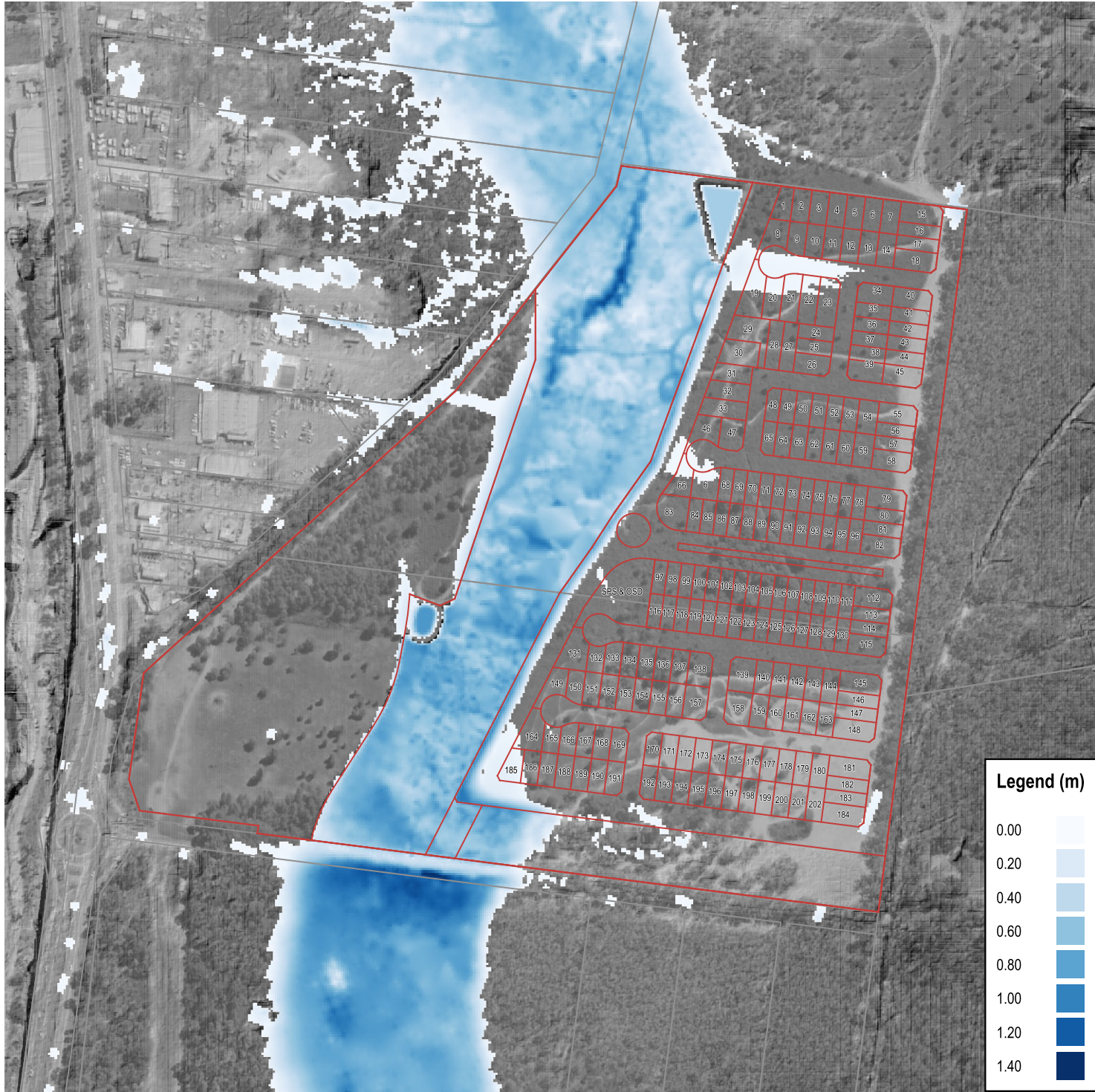
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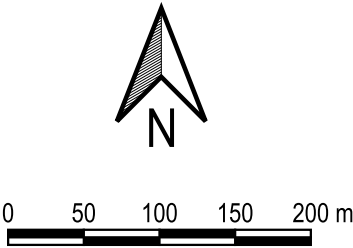
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POST-DEVELOPMENT - 0.2% AEP - DEPTH

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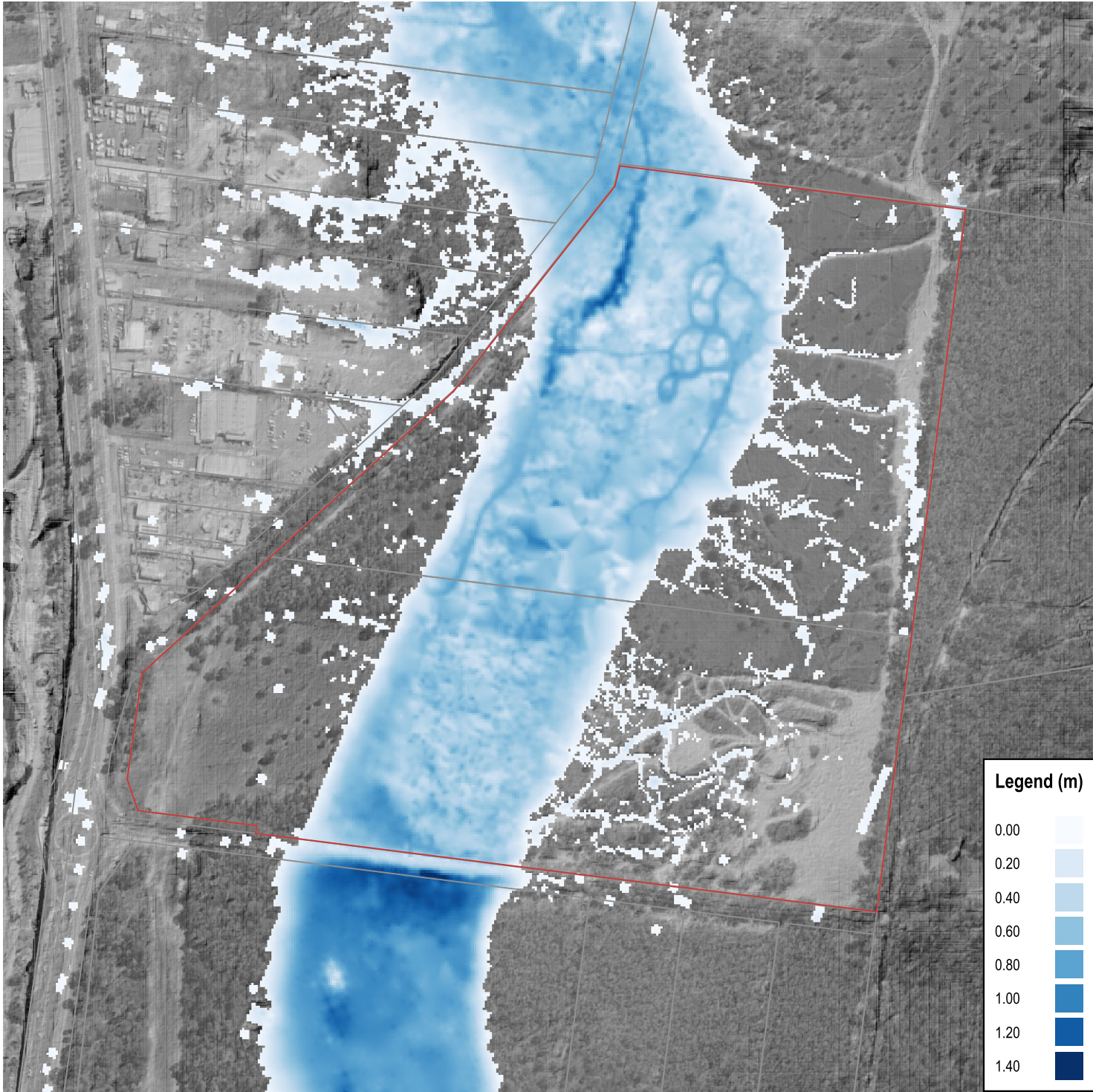
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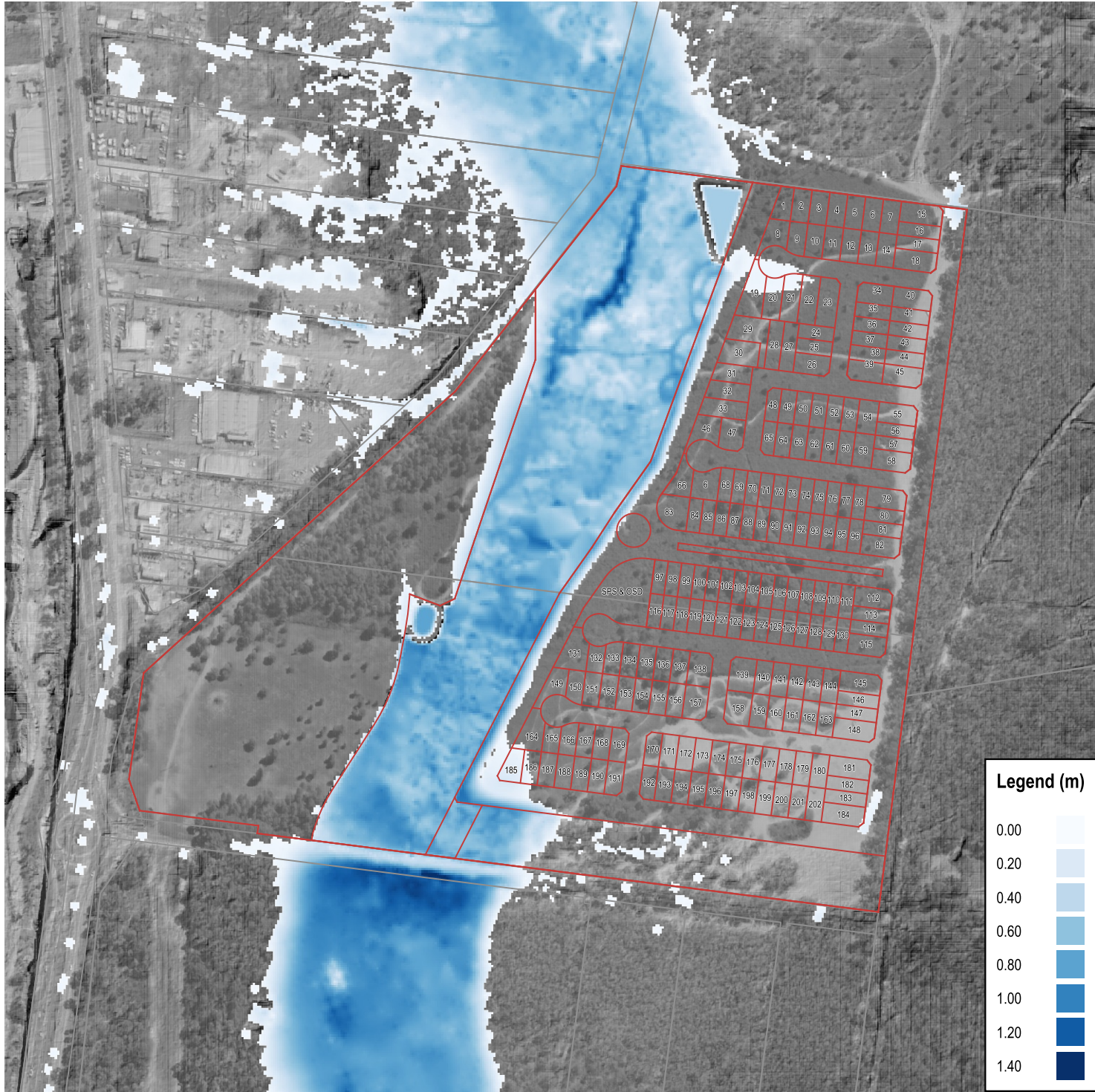
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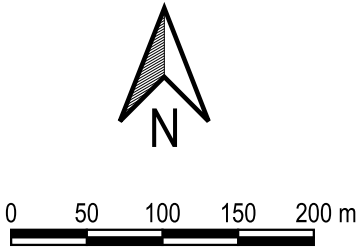
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POST-DEVELOPMENT - 0.05% AEP - DEPTH

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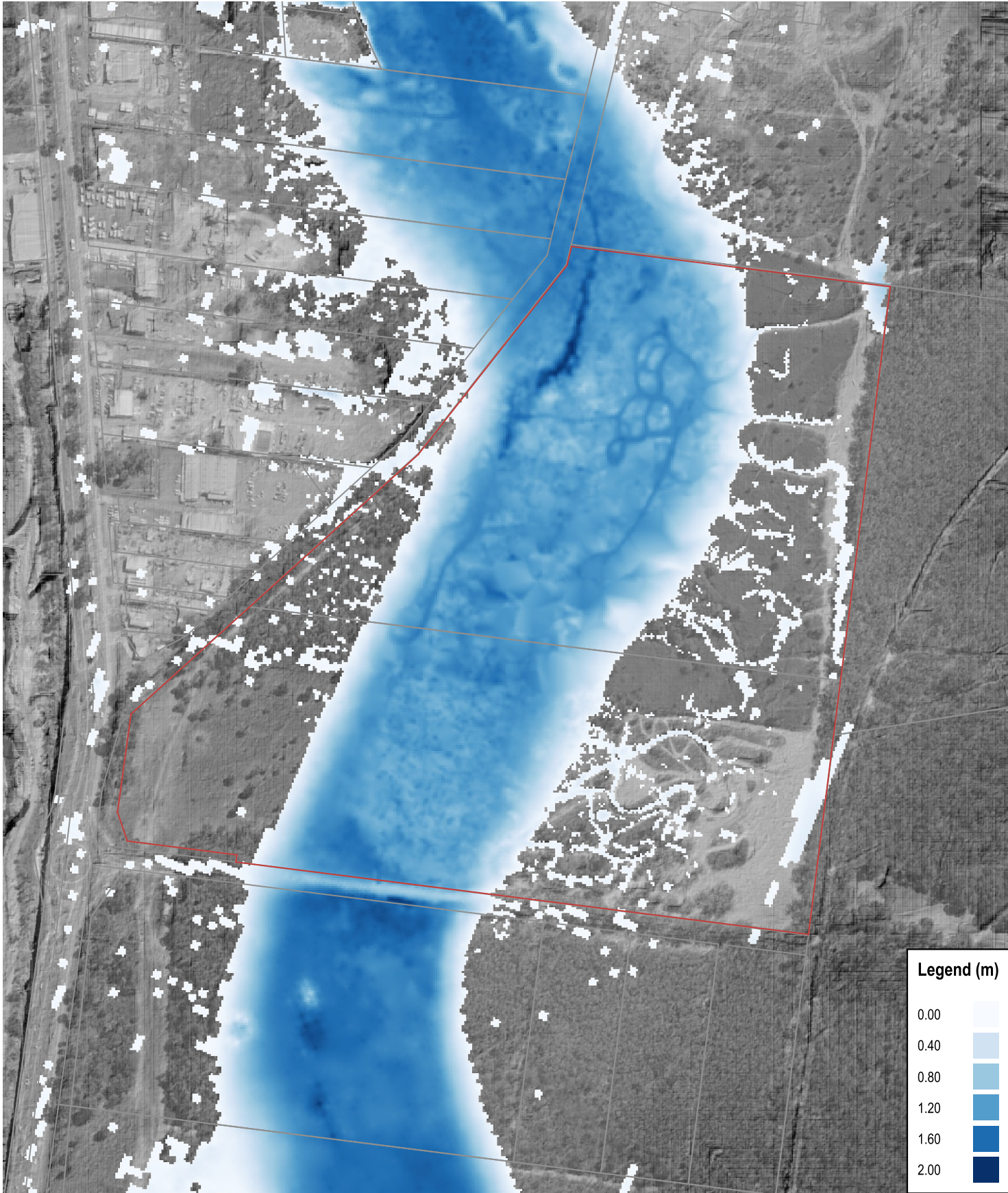
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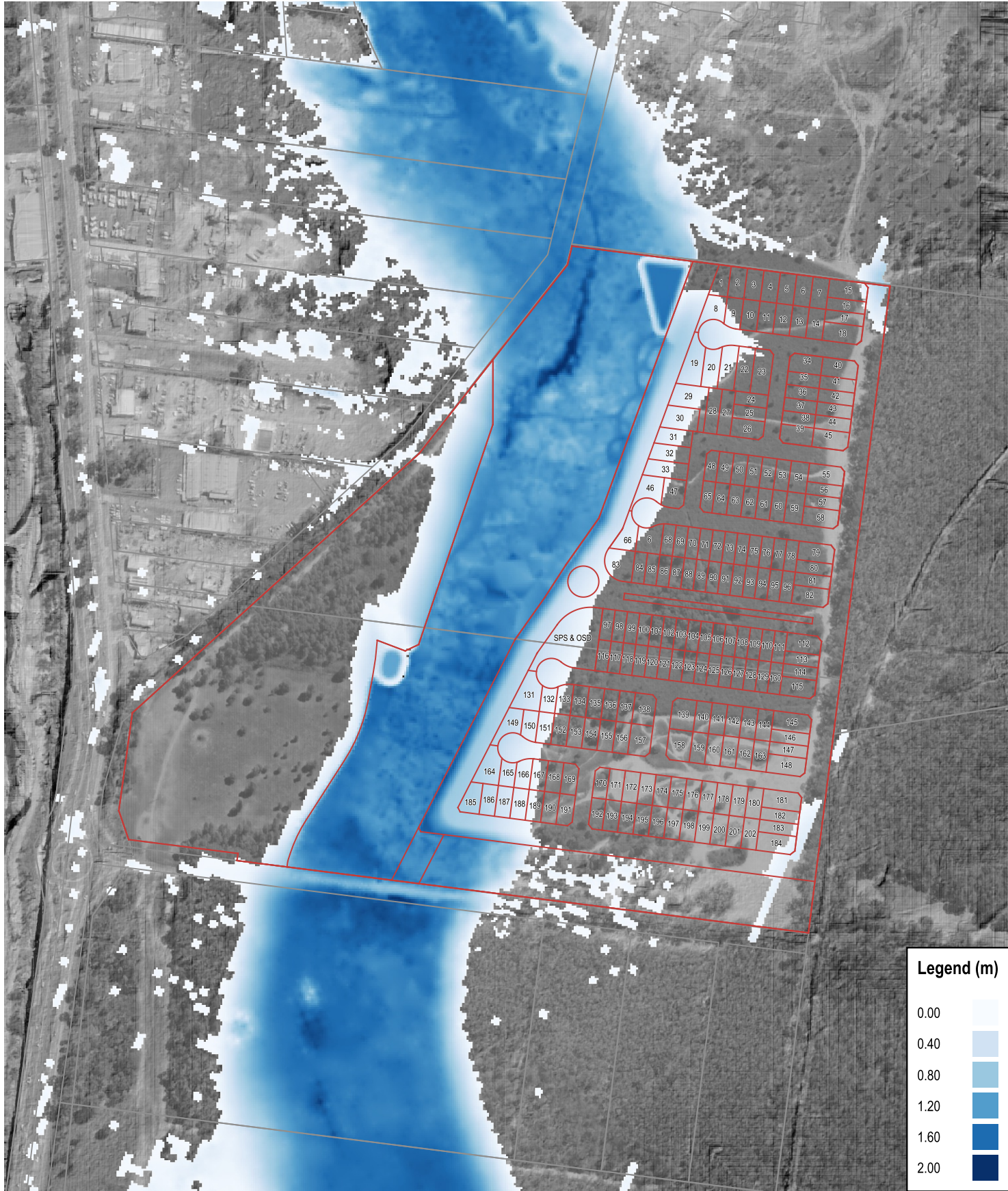
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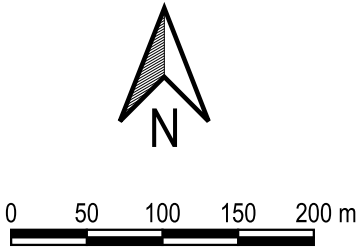
PRE-DEVELOPMENT - PMF - DEPTH



POST-DEVELOPMENT - PMF - DEPTH

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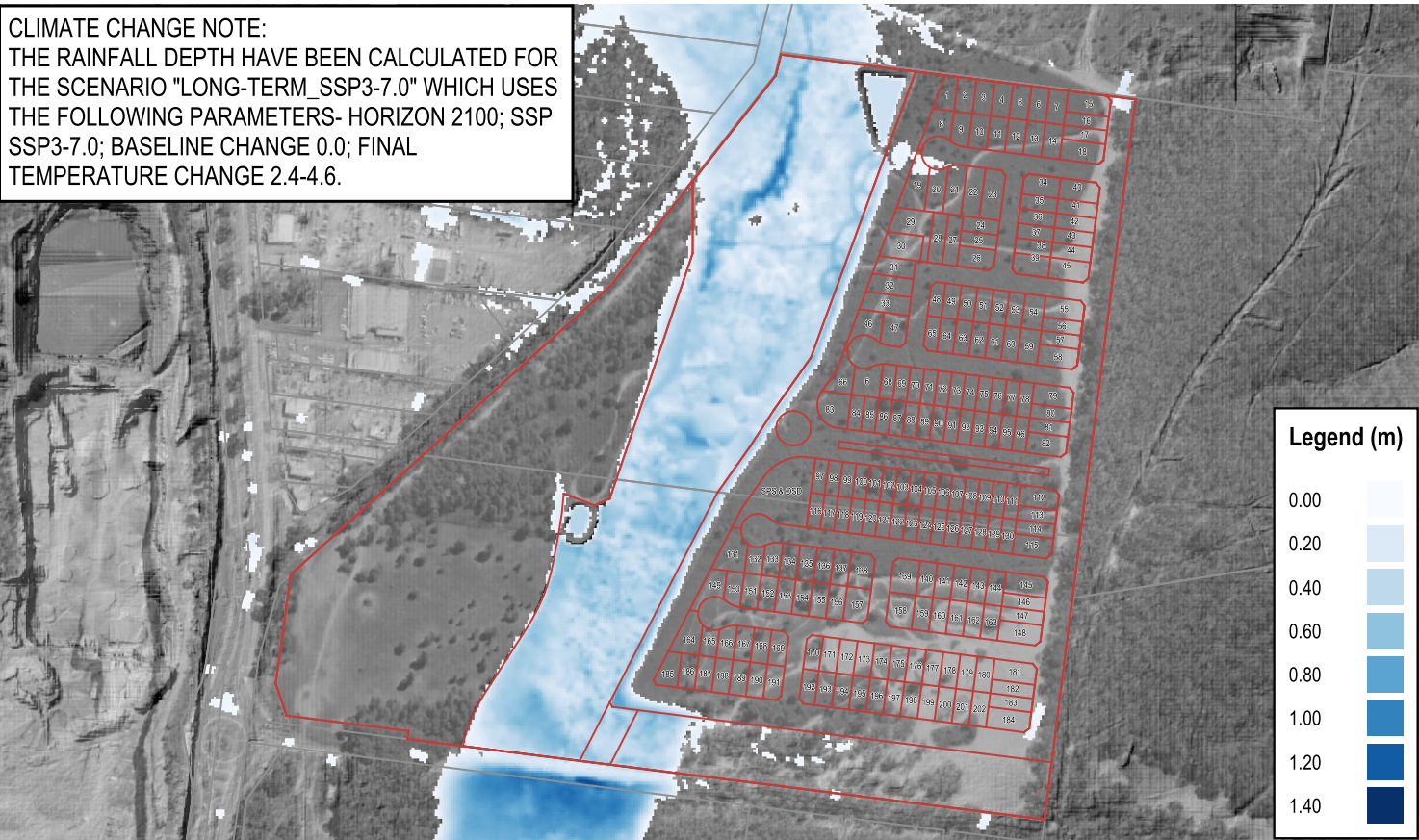
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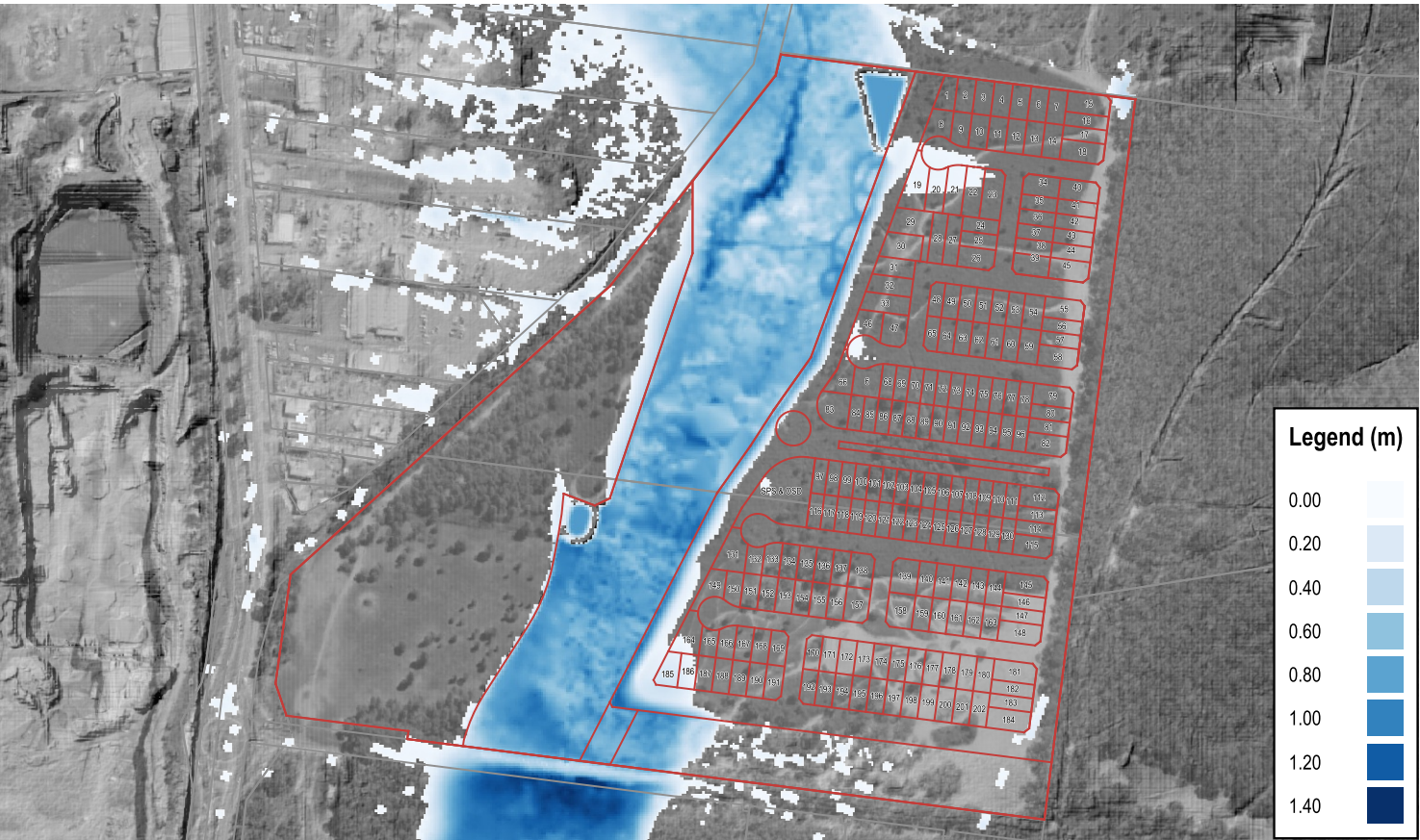
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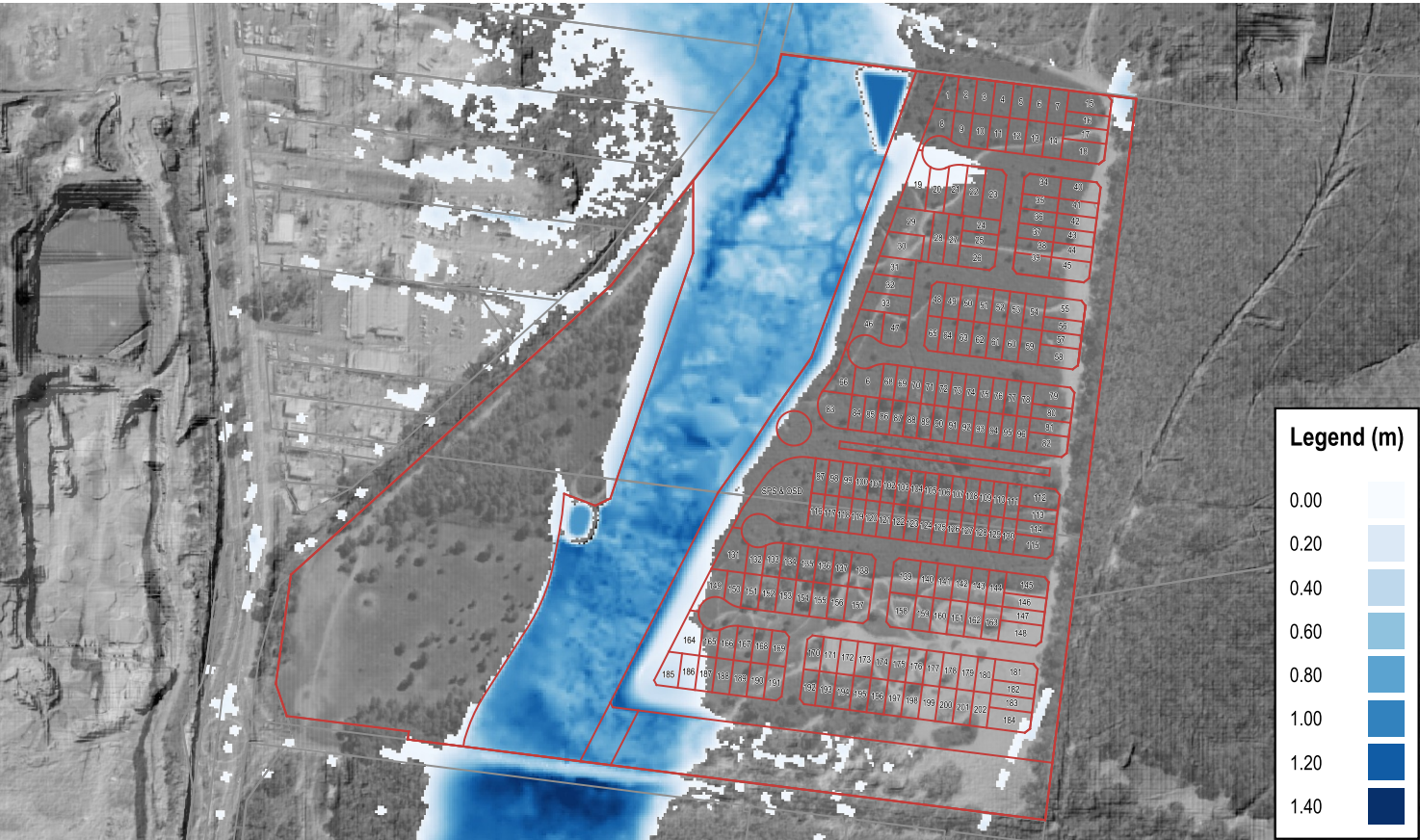
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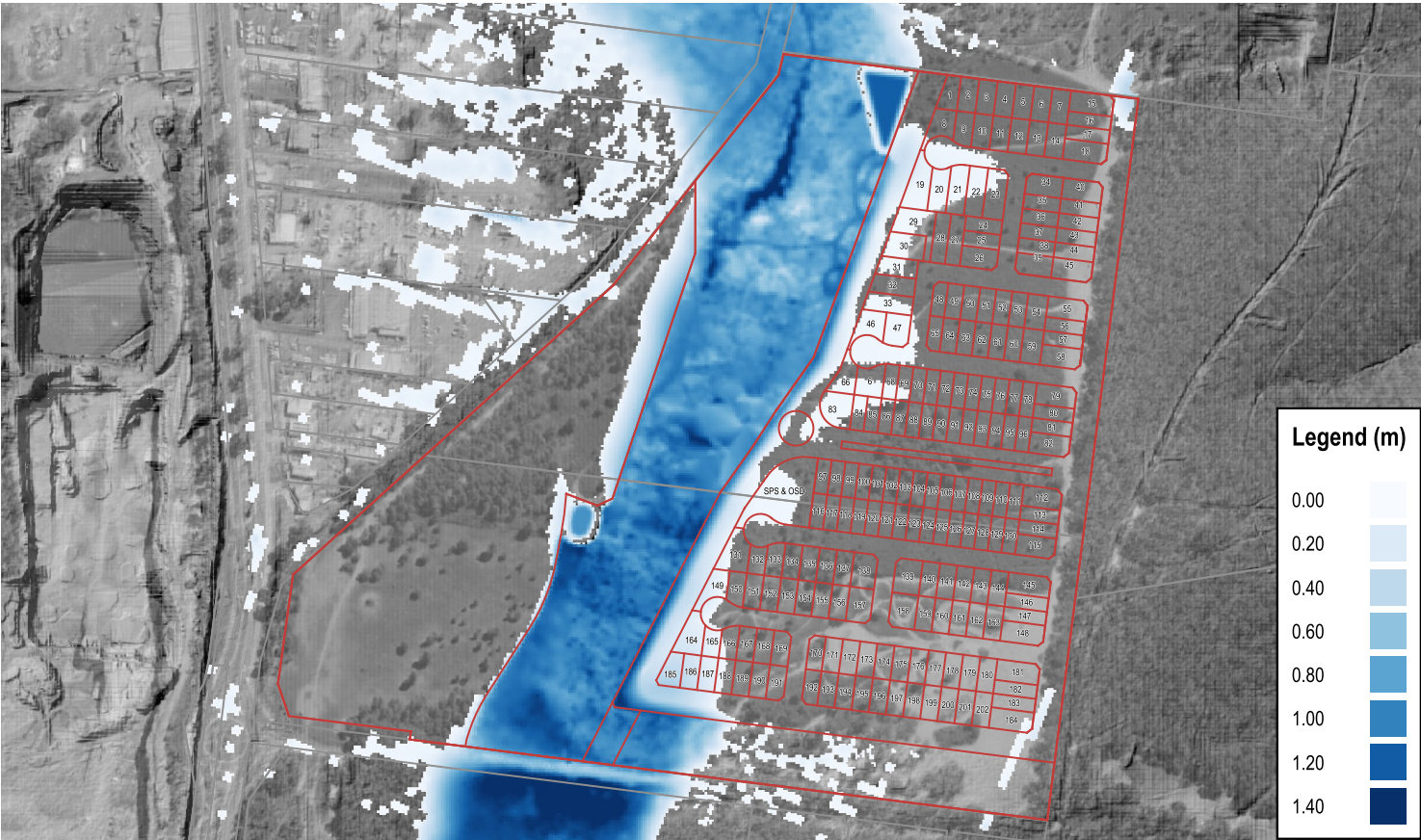
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POST DEVELOPMENT CLIMATE CHANGE - 1% AEP - DEPTH



POST DEVELOPMENT CLIMATE CHANGE - 0.2% AEP - DEPTH



POST DEVELOPMENT CLIMATE CHANGE - 0.05% AEP - DEPTH

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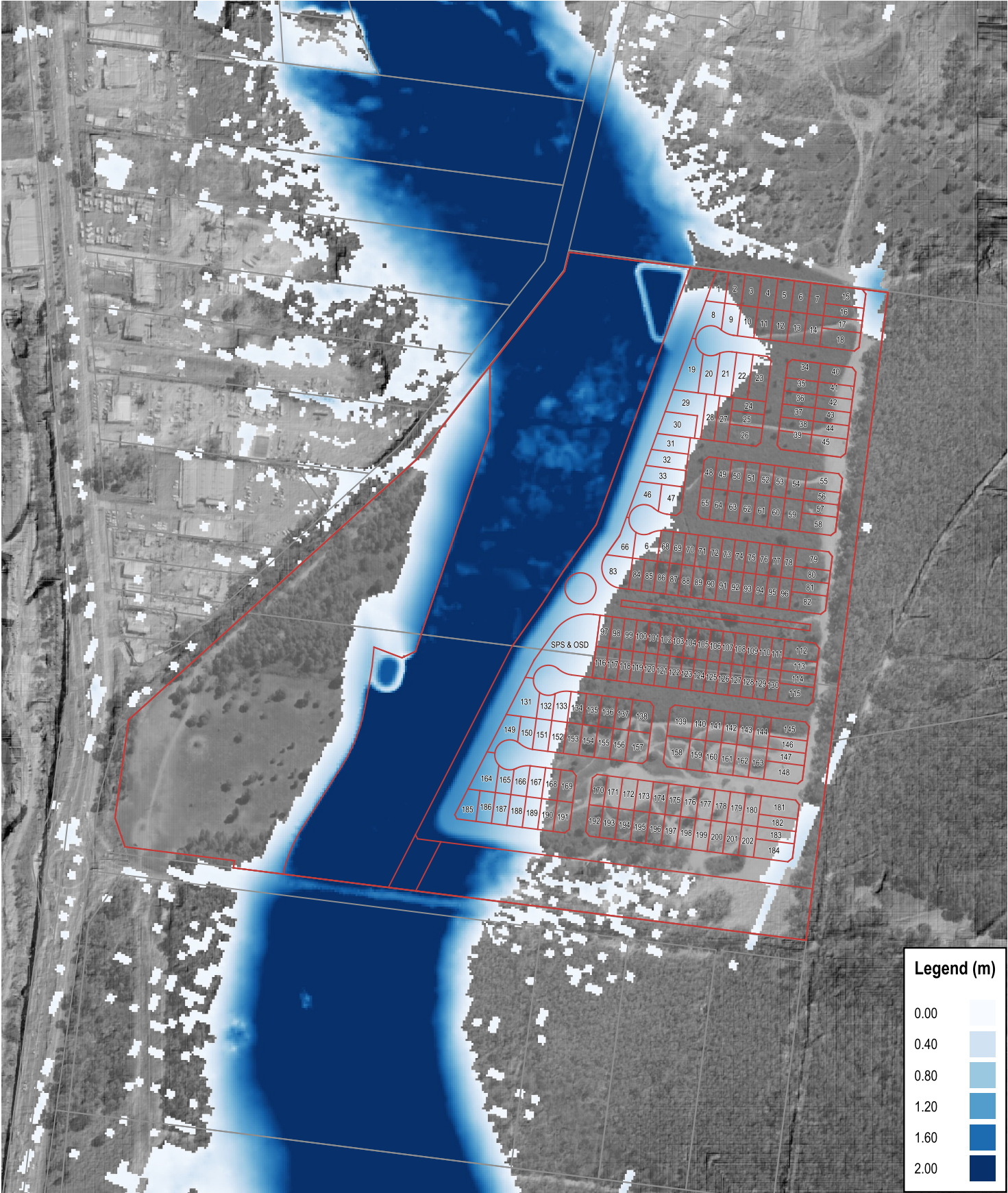
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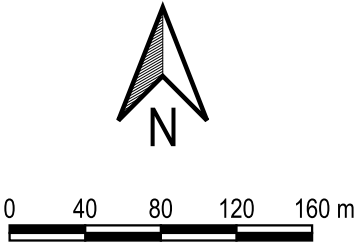
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POST DEVELOPMENT CLIMATE CHANGE - PMF - DEPTH

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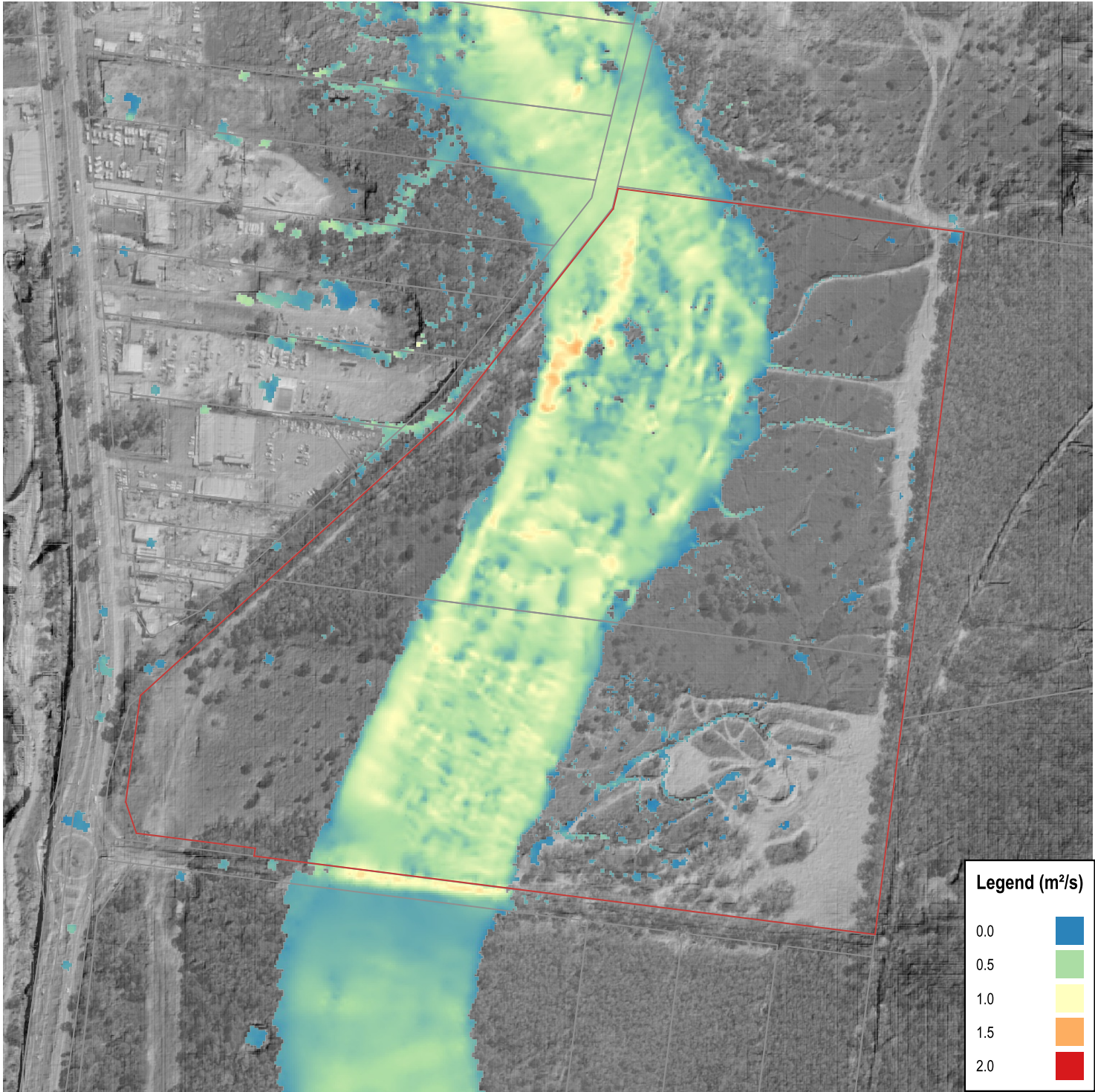
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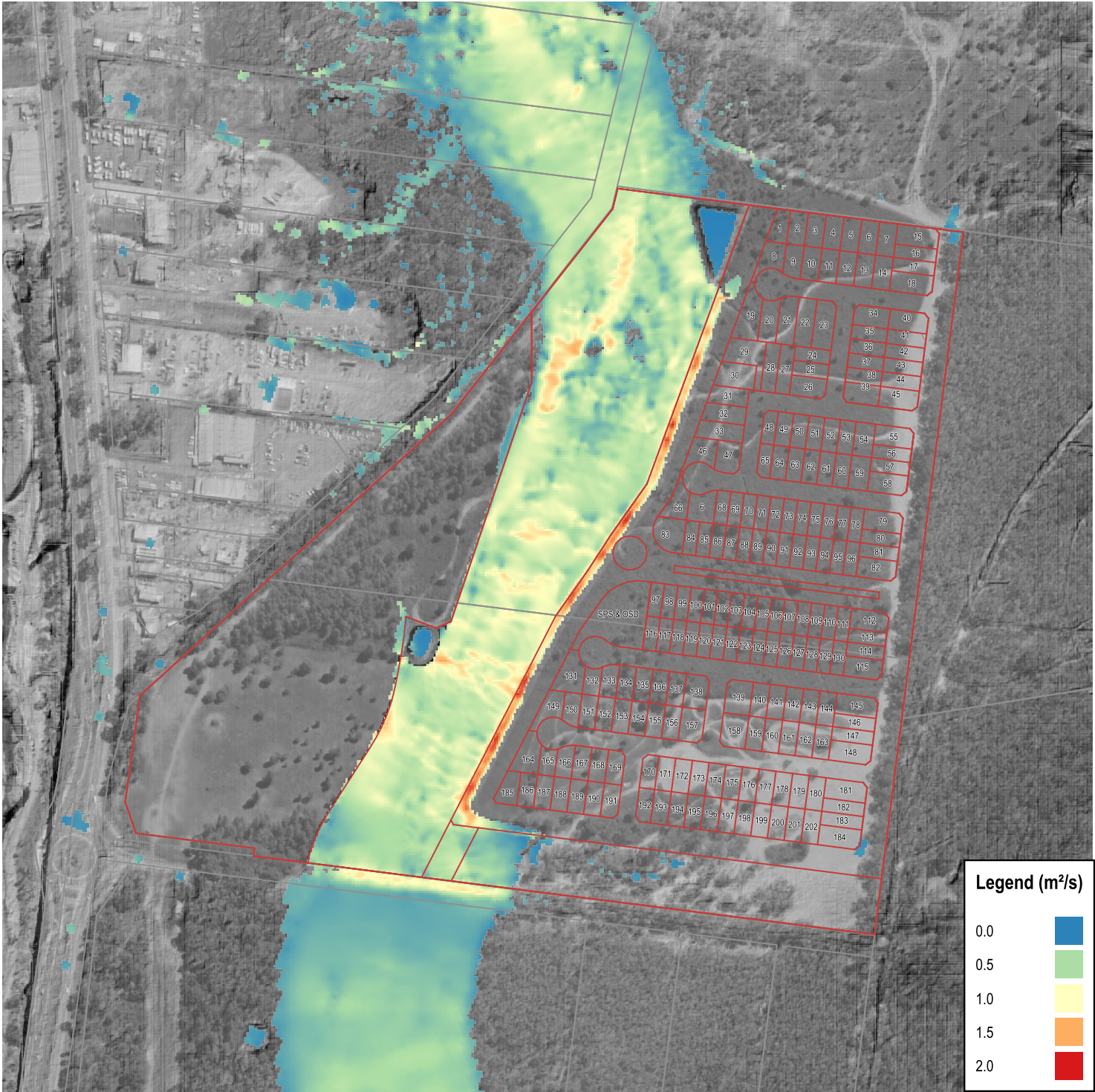
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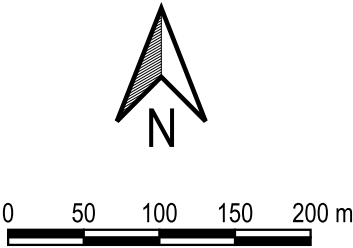
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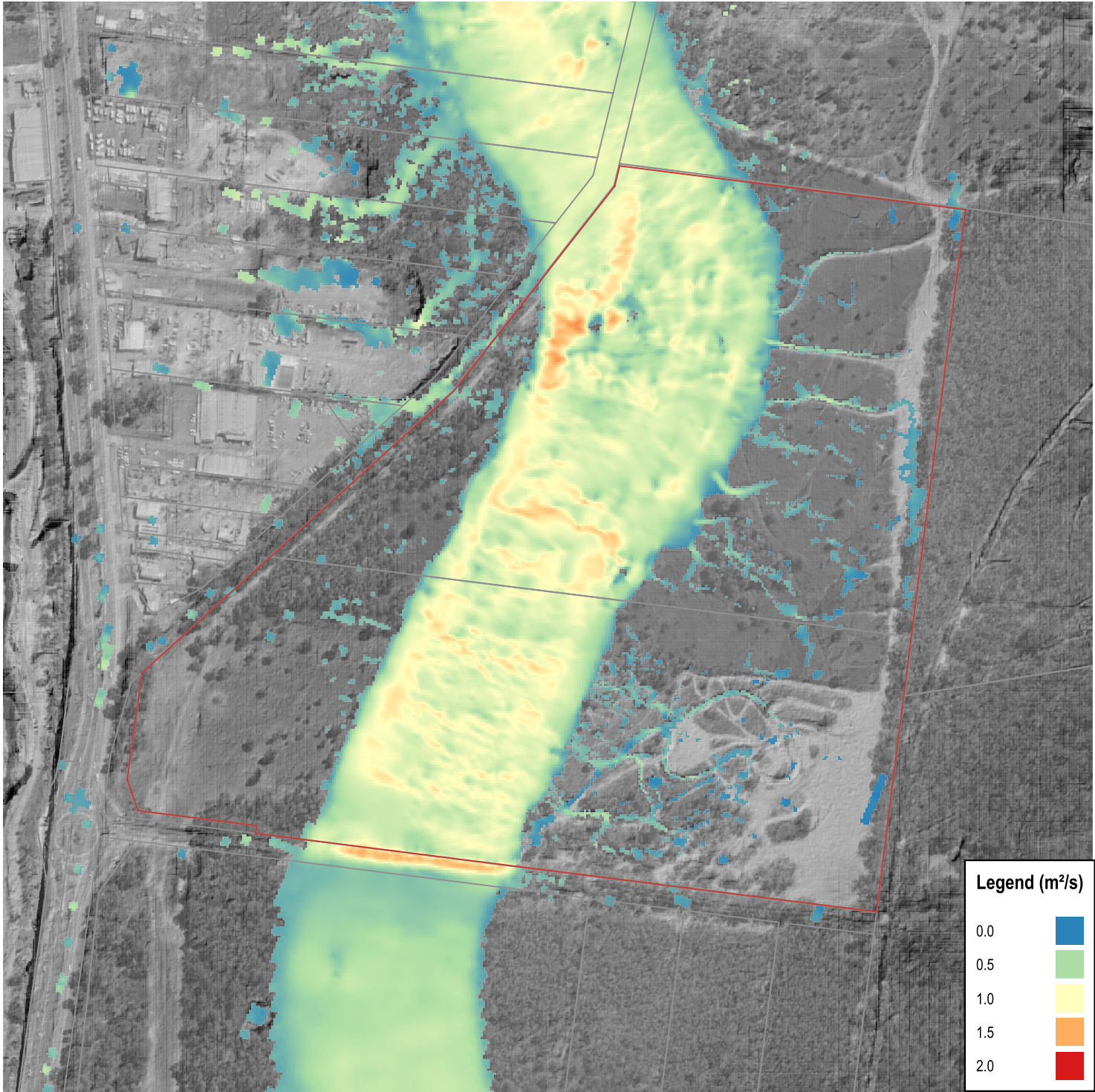
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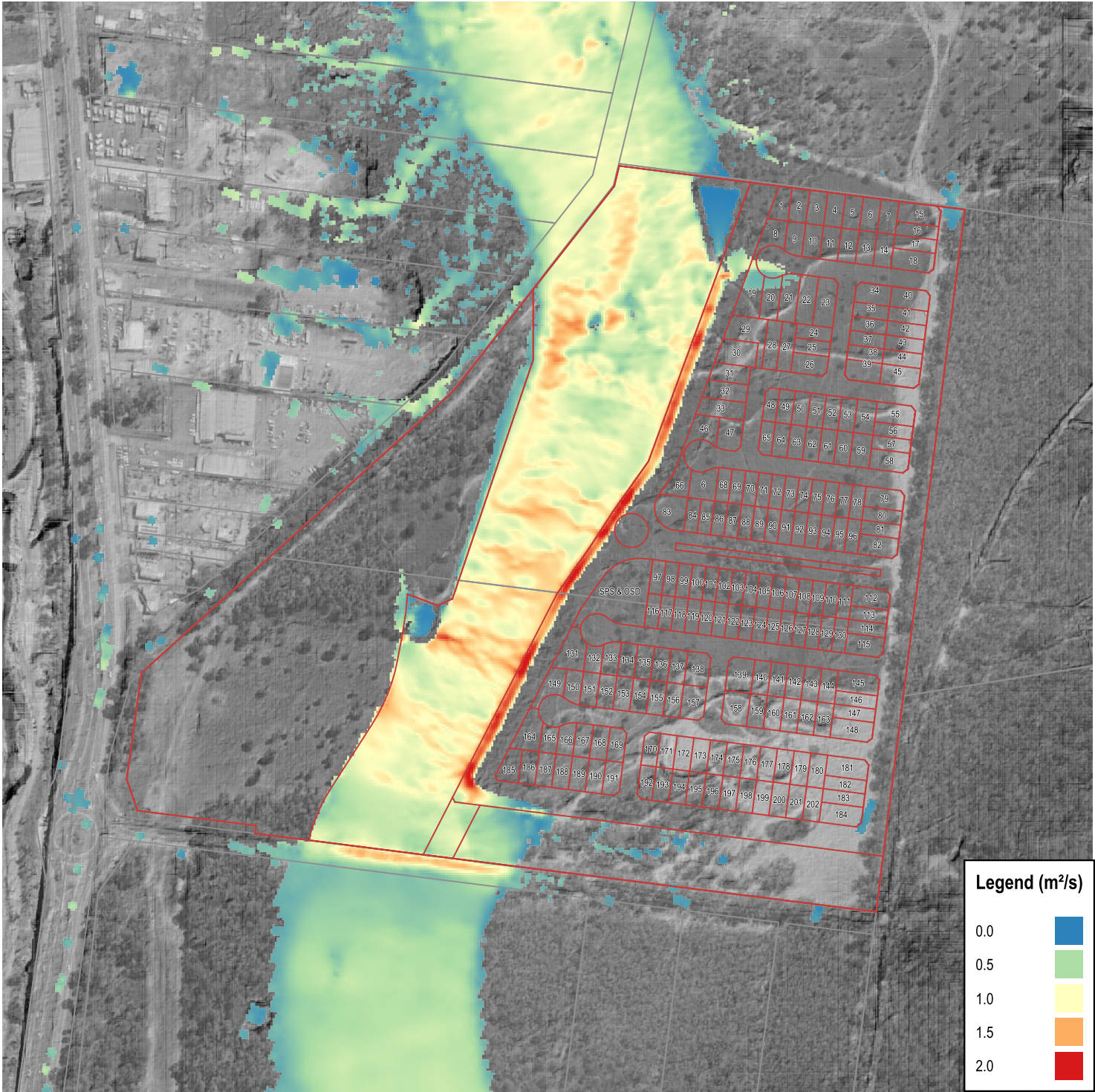
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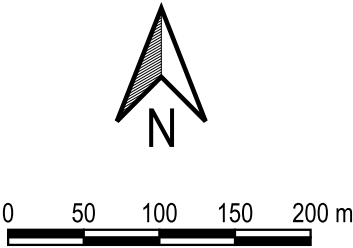
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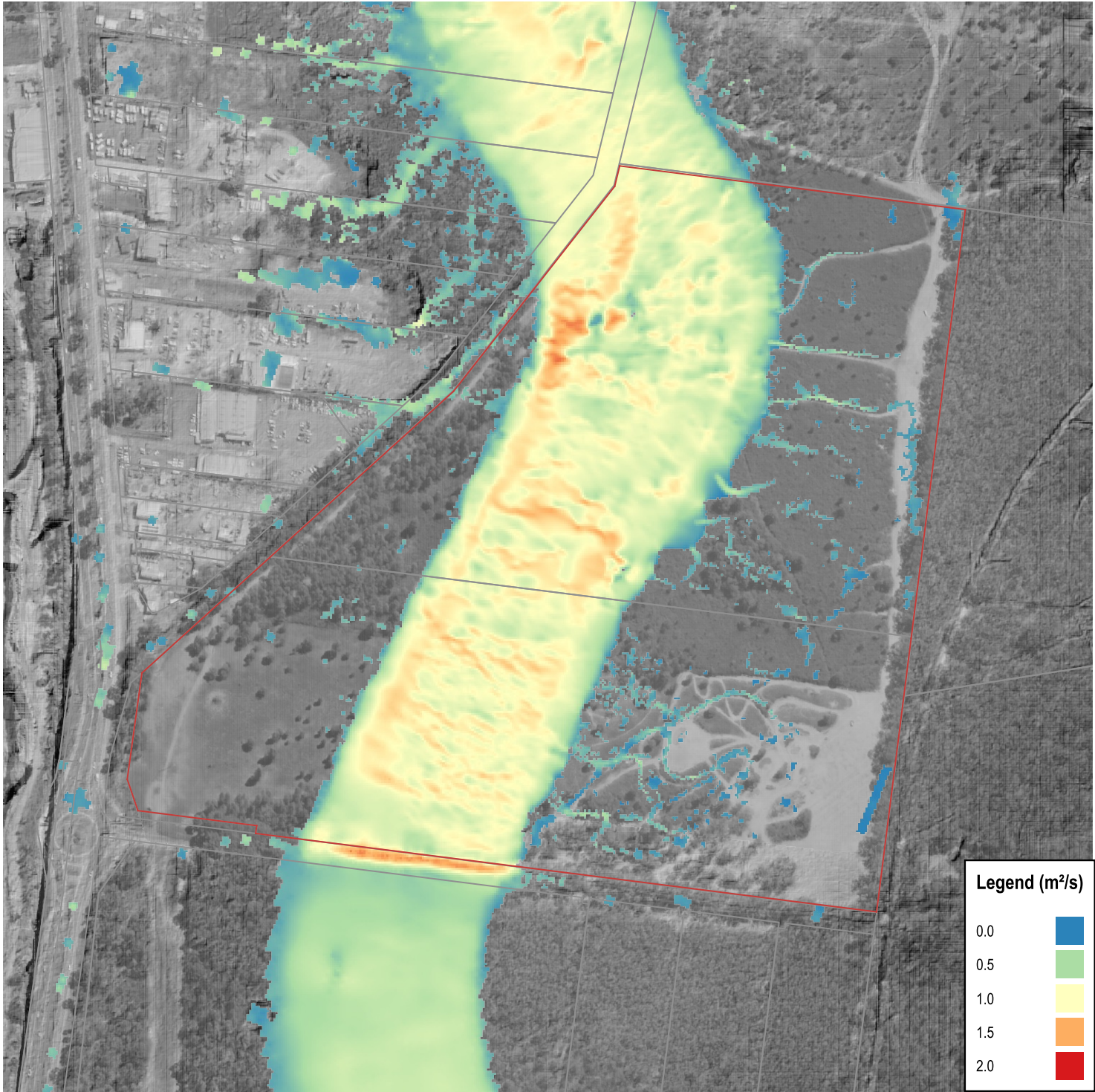
RELEASE DATE: 10 AUGUST 2026

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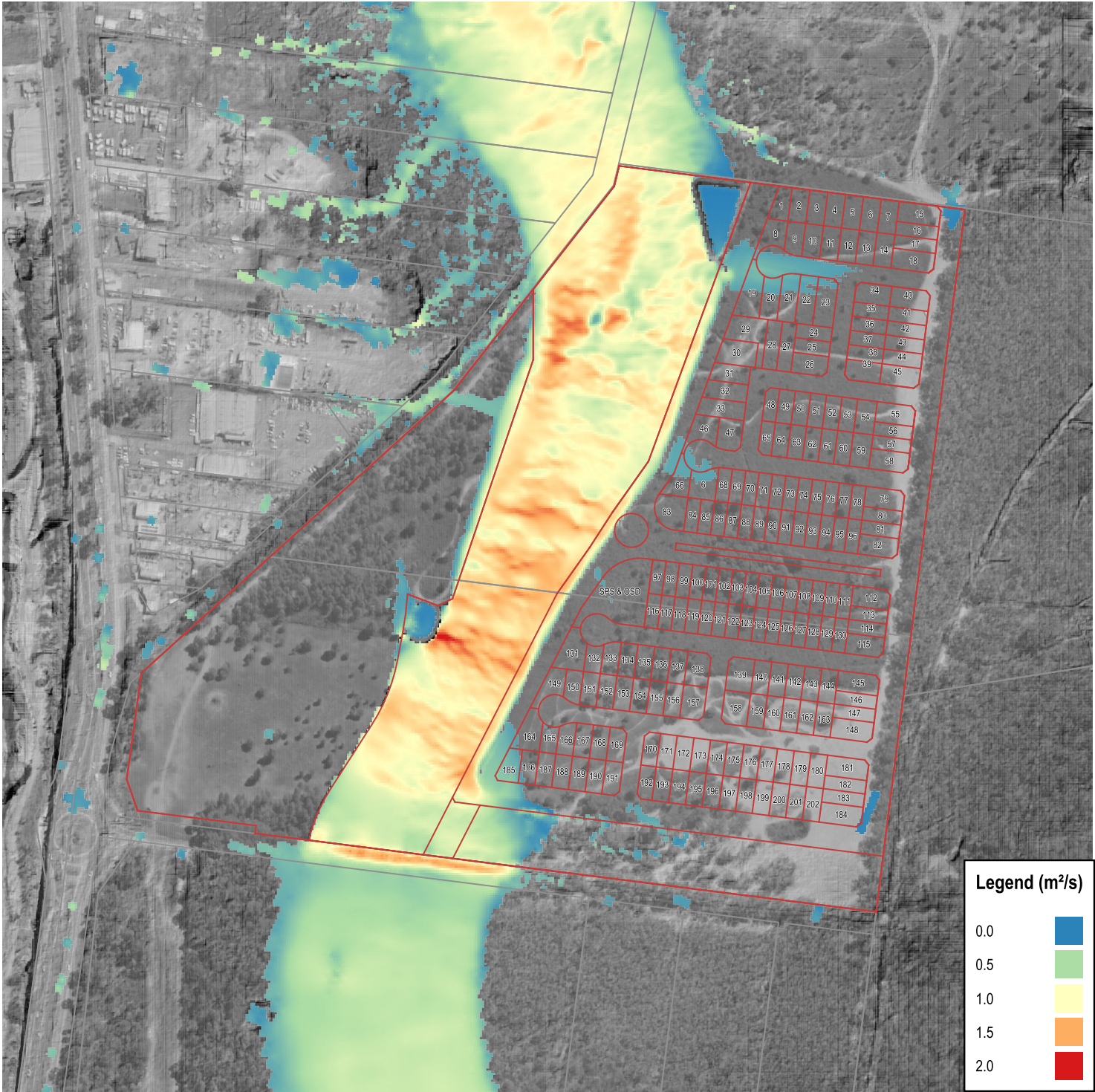
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REV:

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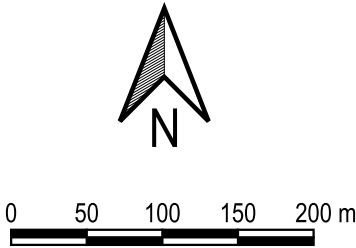
PRE-DEVELOPMENT - 0.2% AEP - VELOCITY



POST-DEVELOPMENT - 0.2% AEP - VELOCITY

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JOB NAME: EASTERN AND WESTERN PRECINCT DEVELOPMENT

LOCATION: WARRA WARRA ROAD, SOUTH NOWRA, NSW

CLIENT: LYSAND PTY LTD & LYROCK PTY LTD C/- JERVIS BAY TOWN PLANNING

DESCRIPTION: CIVIL ENGINEERING CONCEPT DESIGN

DRAWING: PRE x POST-DEVELOPMENT - 0.2% AEP - VELOCITY

PRELIMINARY

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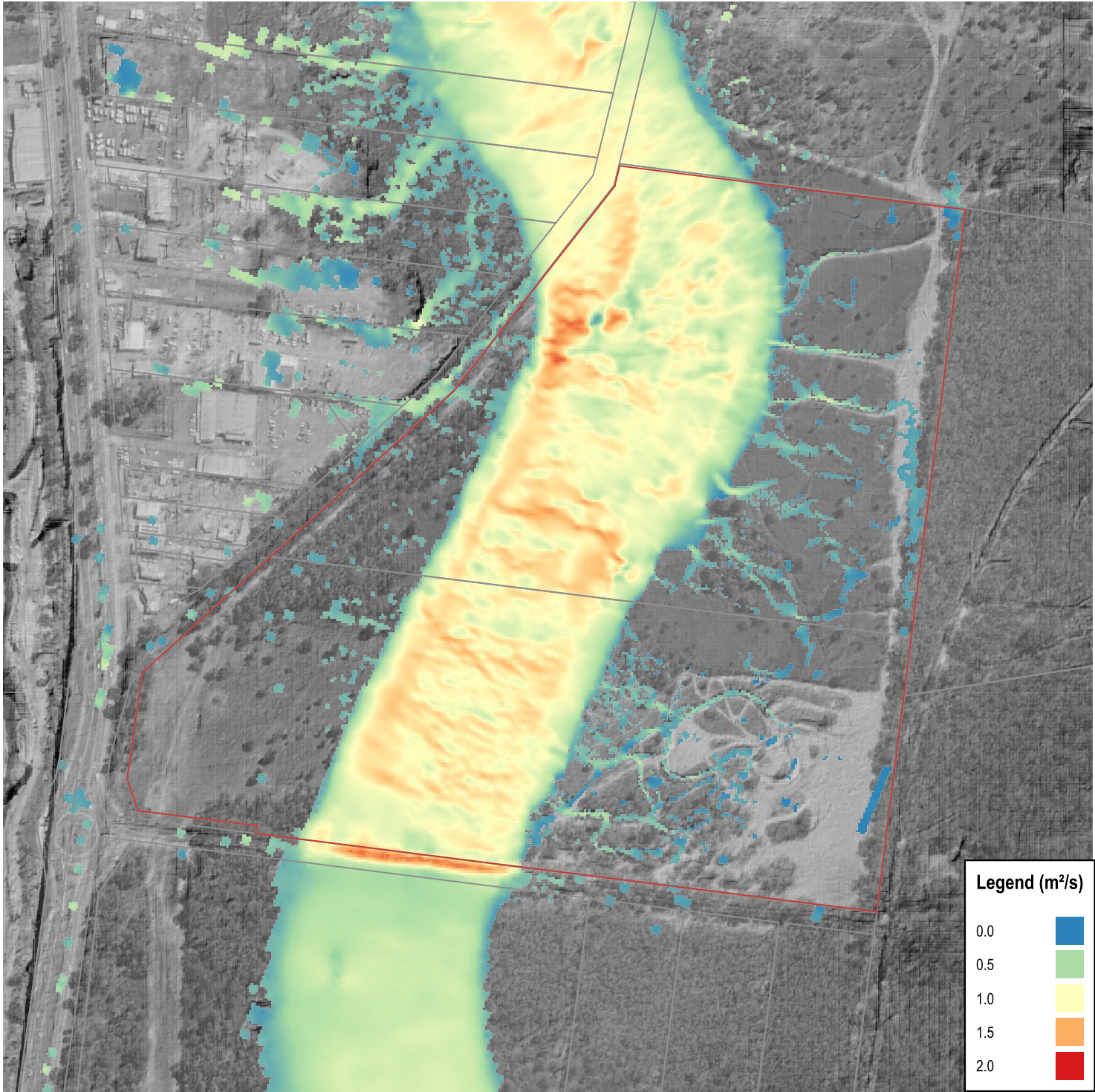
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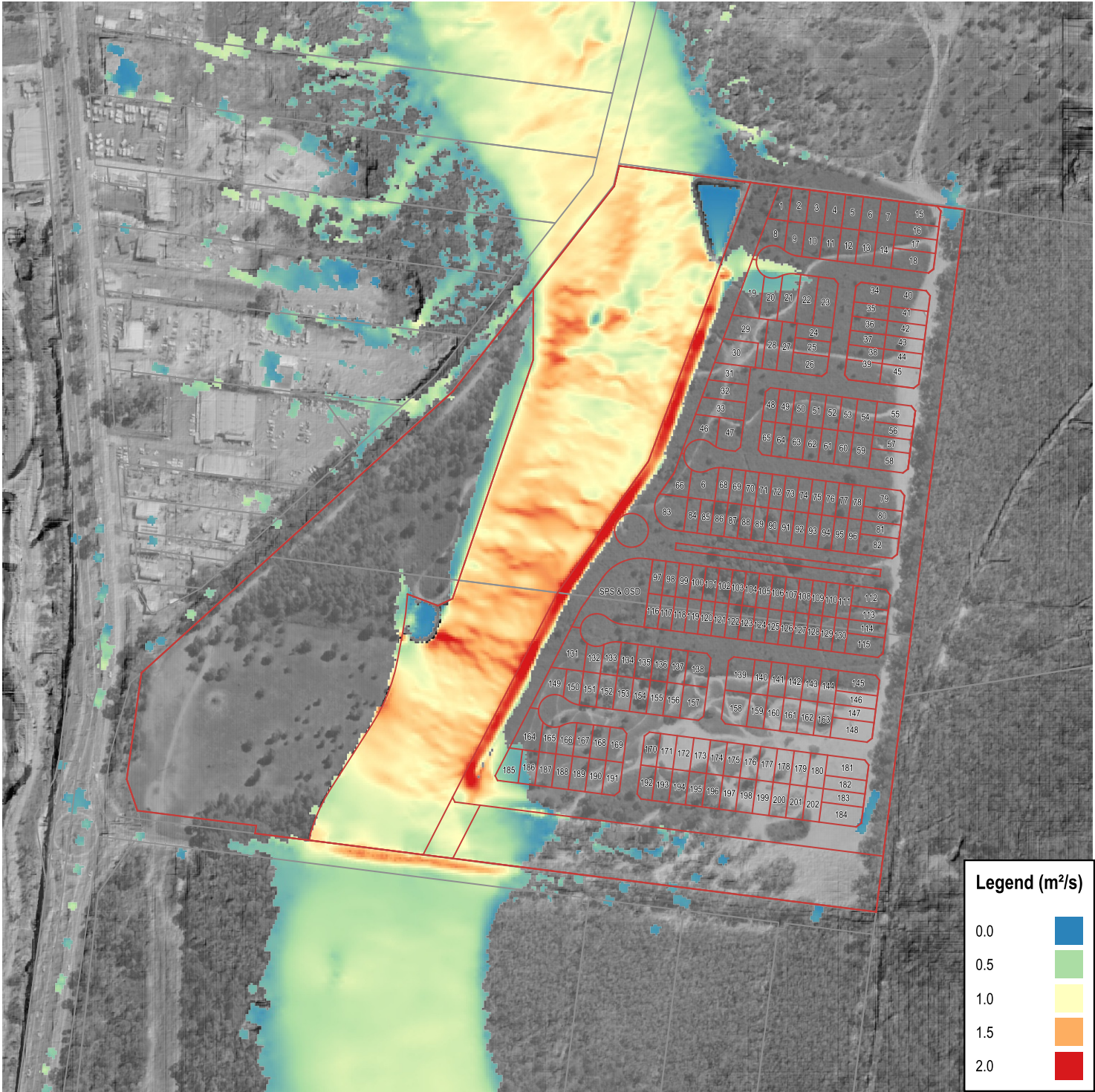
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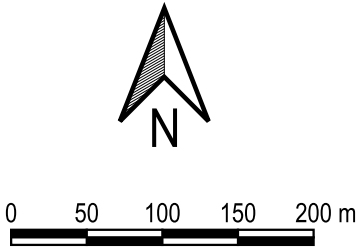
PRE-DEVELOPMENT - 0.05% AEP - VELOCITY



POST-DEVELOPMENT - 0.05% AEP - VELOCITY

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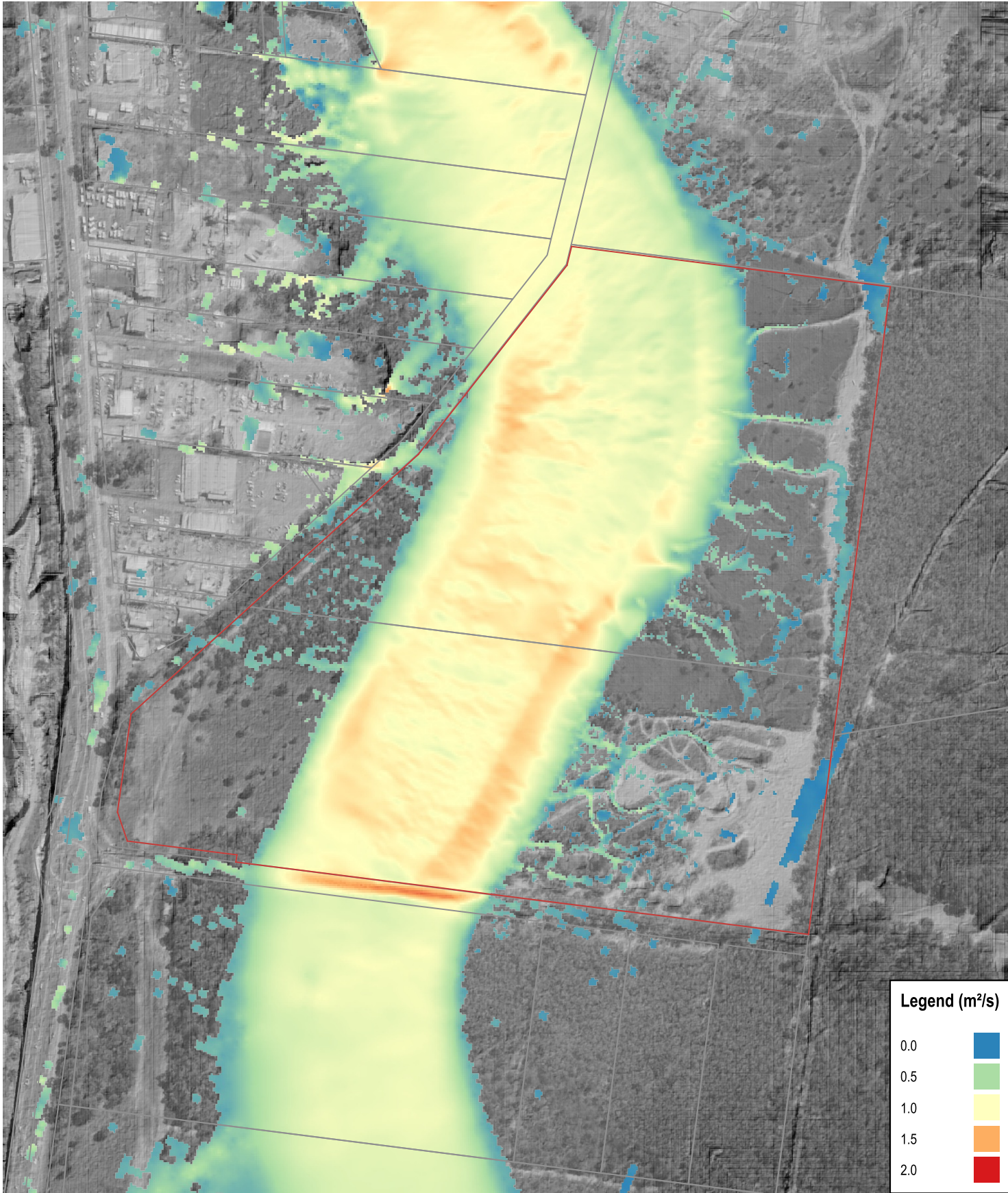
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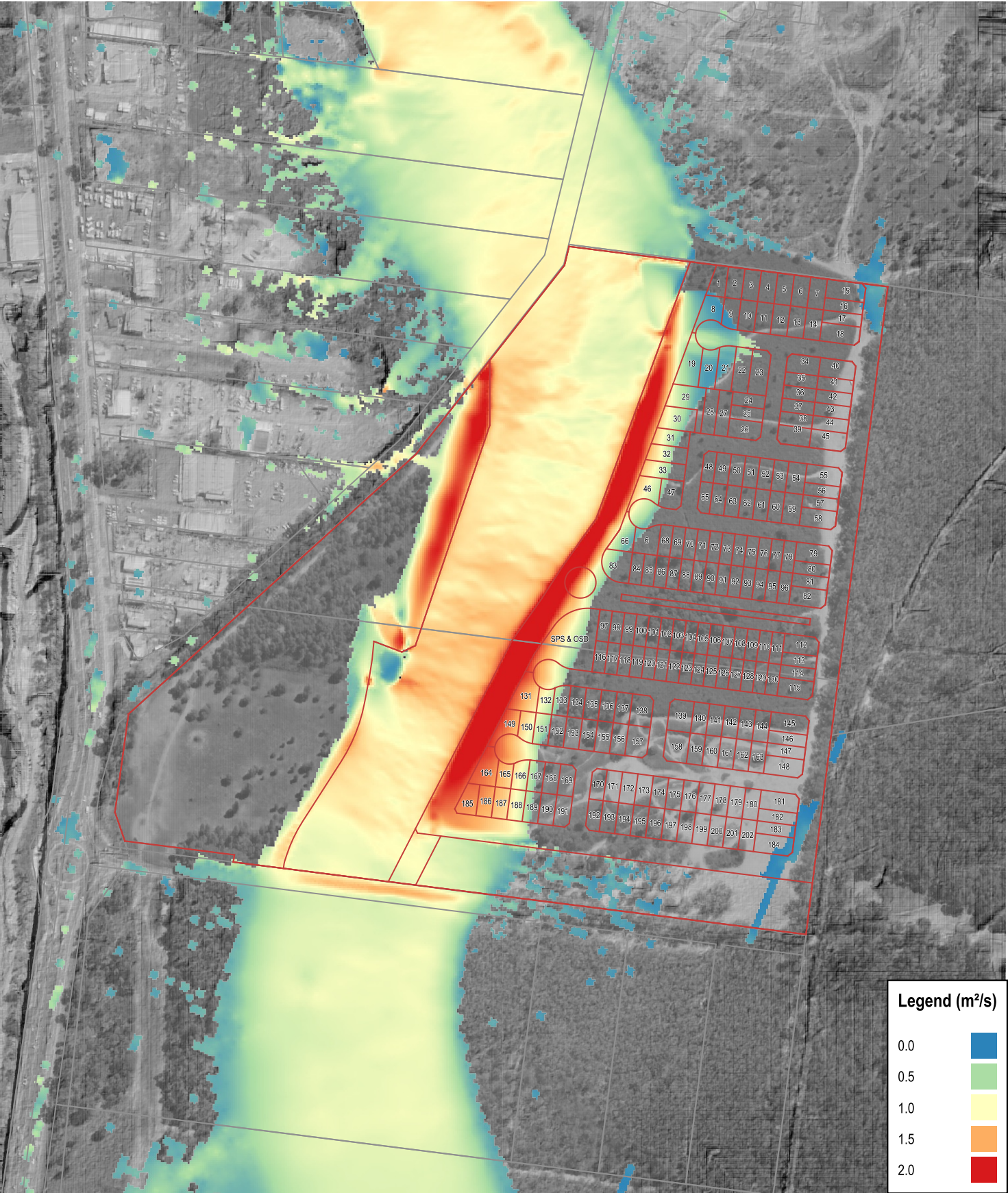
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24047-FM-4010

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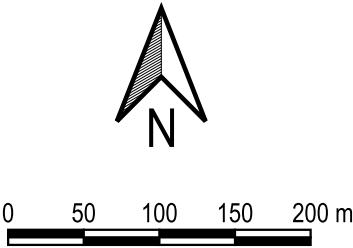
PRE-DEVELOPMENT - PMF - VELOCITY



POST-DEVELOPMENT - PMF - VELOCITY

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RELEASE DATE: 10 AUGUST 2026

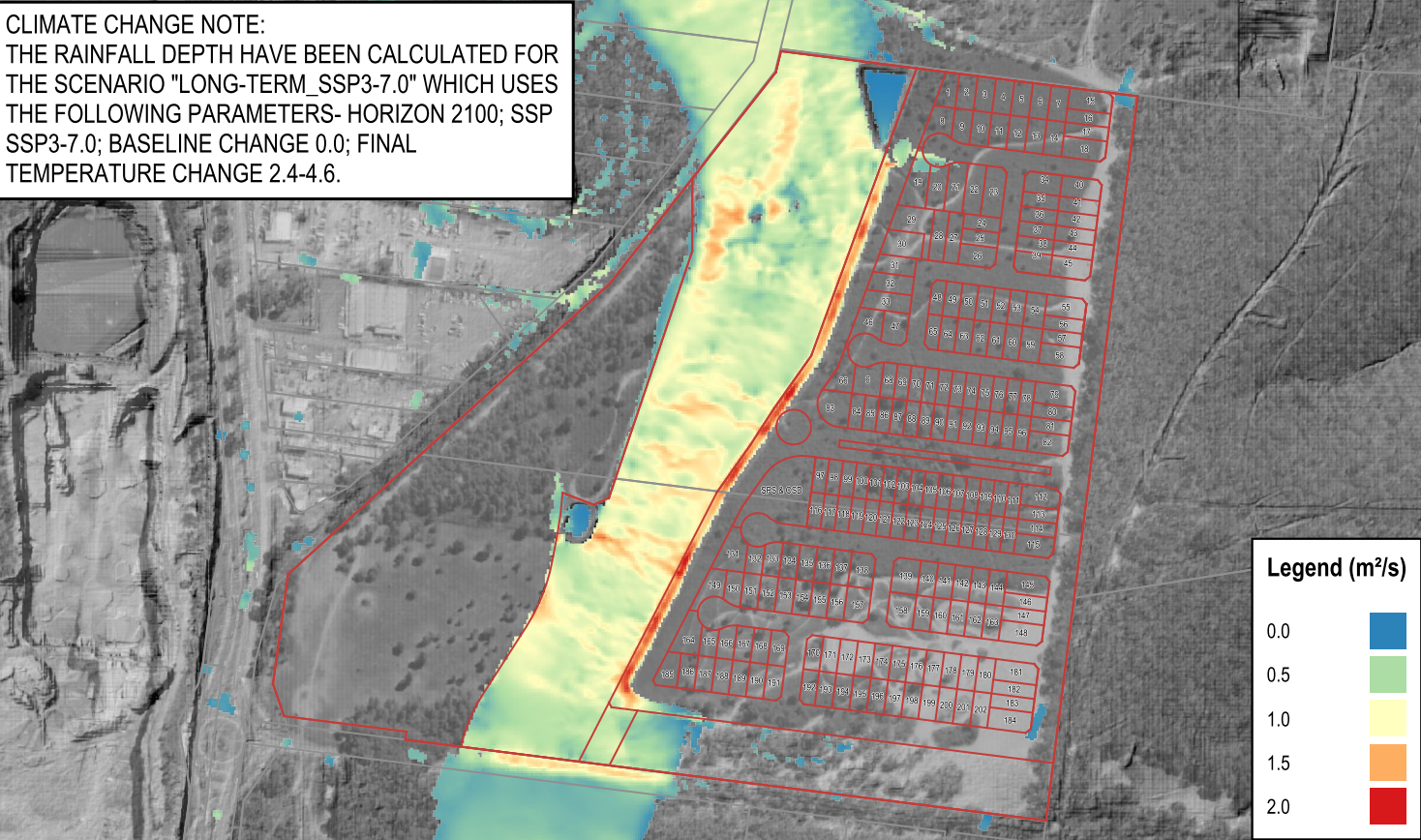
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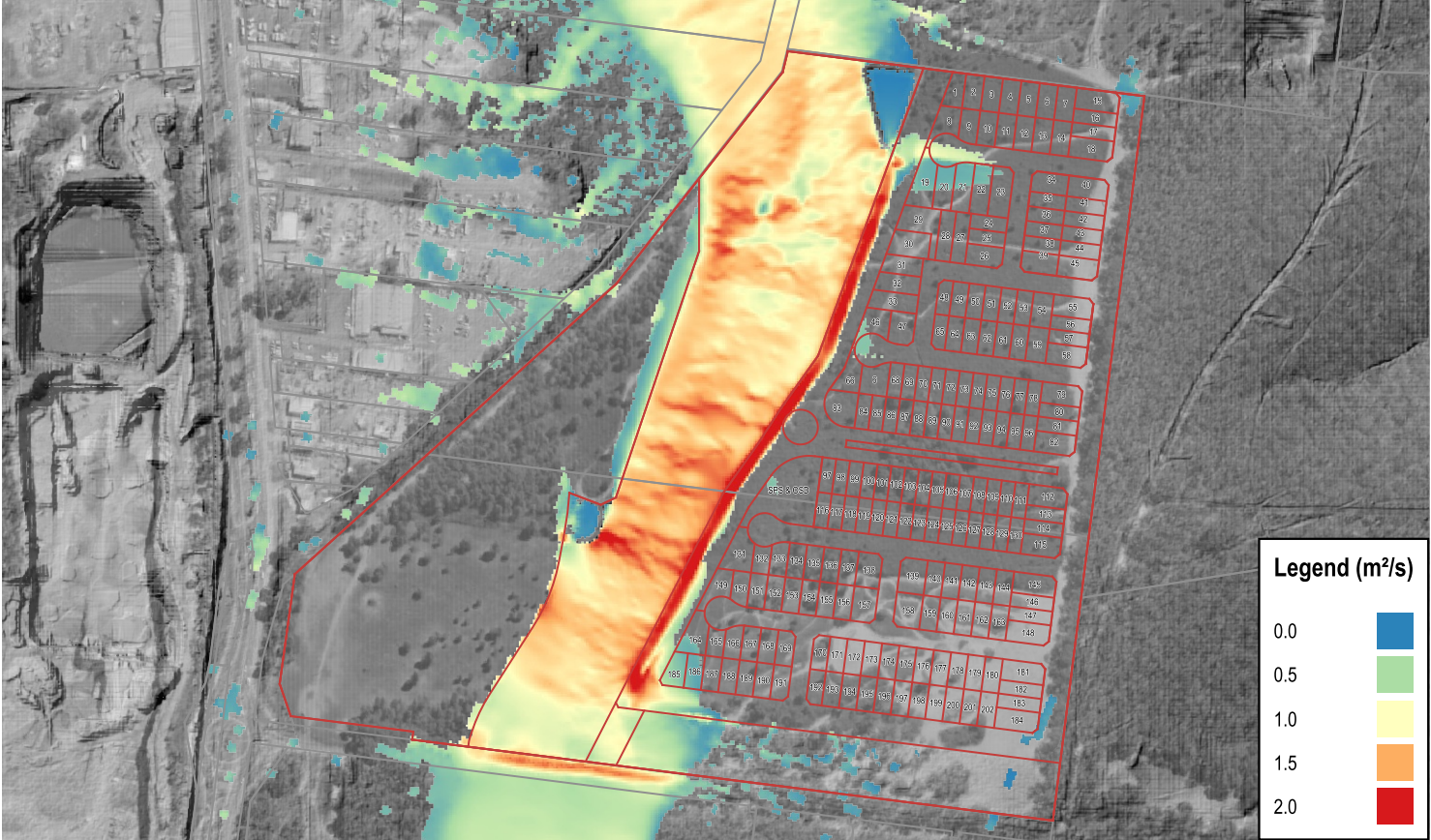
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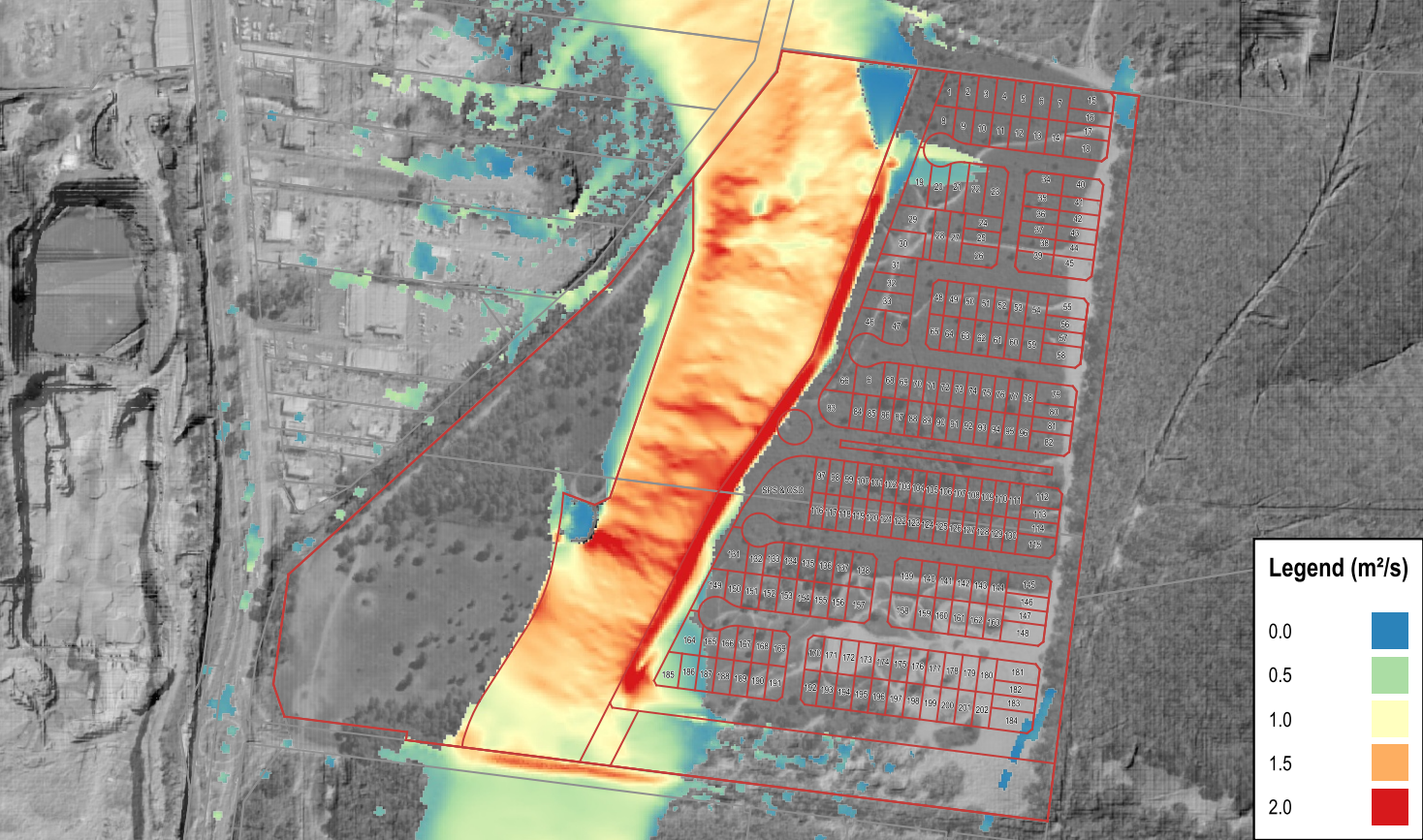
CLIMATE CHANGE NOTE:
THE RAINFALL DEPTH HAVE BEEN CALCULATED FOR THE SCENARIO "LONG-TERM_SSP3-7.0" WHICH USES THE FOLLOWING PARAMETERS- HORIZON 2100; SSP SSP3-7.0; BASELINE CHANGE 0.0; FINAL TEMPERATURE CHANGE 2.4-4.6.



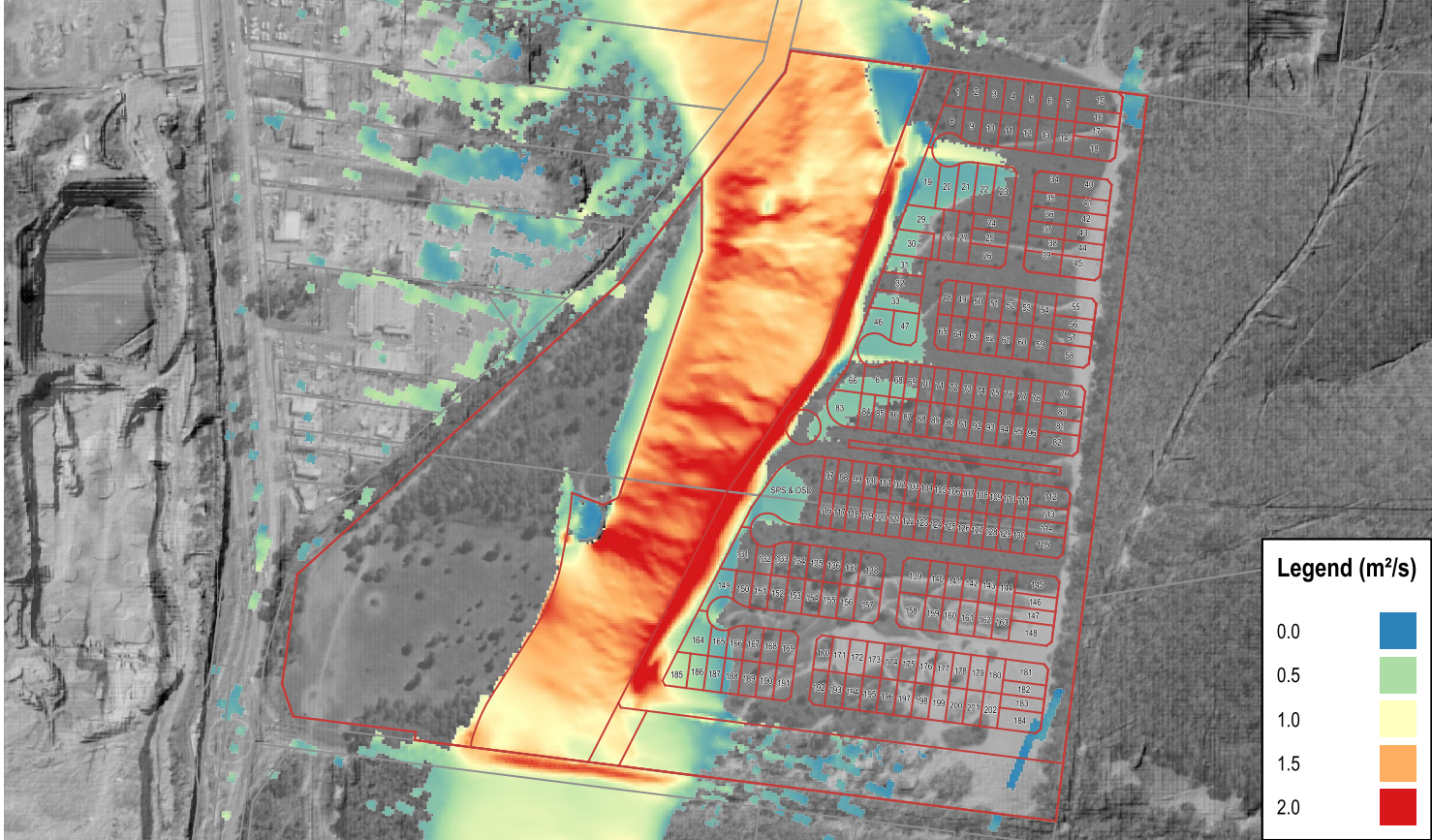
POST DEVELOPMENT CLIMATE CHANGE - 10% AEP - VELOCITY



POST DEVELOPMENT CLIMATE CHANGE - 1% AEP - VELOCITY



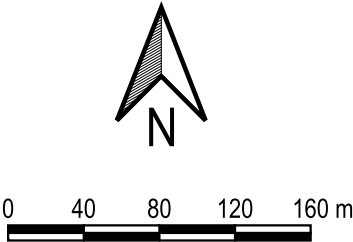
POST DEVELOPMENT CLIMATE CHANGE - 0.2% AEP - VELOCITY



POST DEVELOPMENT CLIMATE CHANGE - 0.05% AEP - VELOCITY

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DESCRIPTION: CIVIL ENGINEERING CONCEPT DESIGN

DRAWING: POST-DEVELOPMENT - CLIMATE CHANGE - VELOCITY

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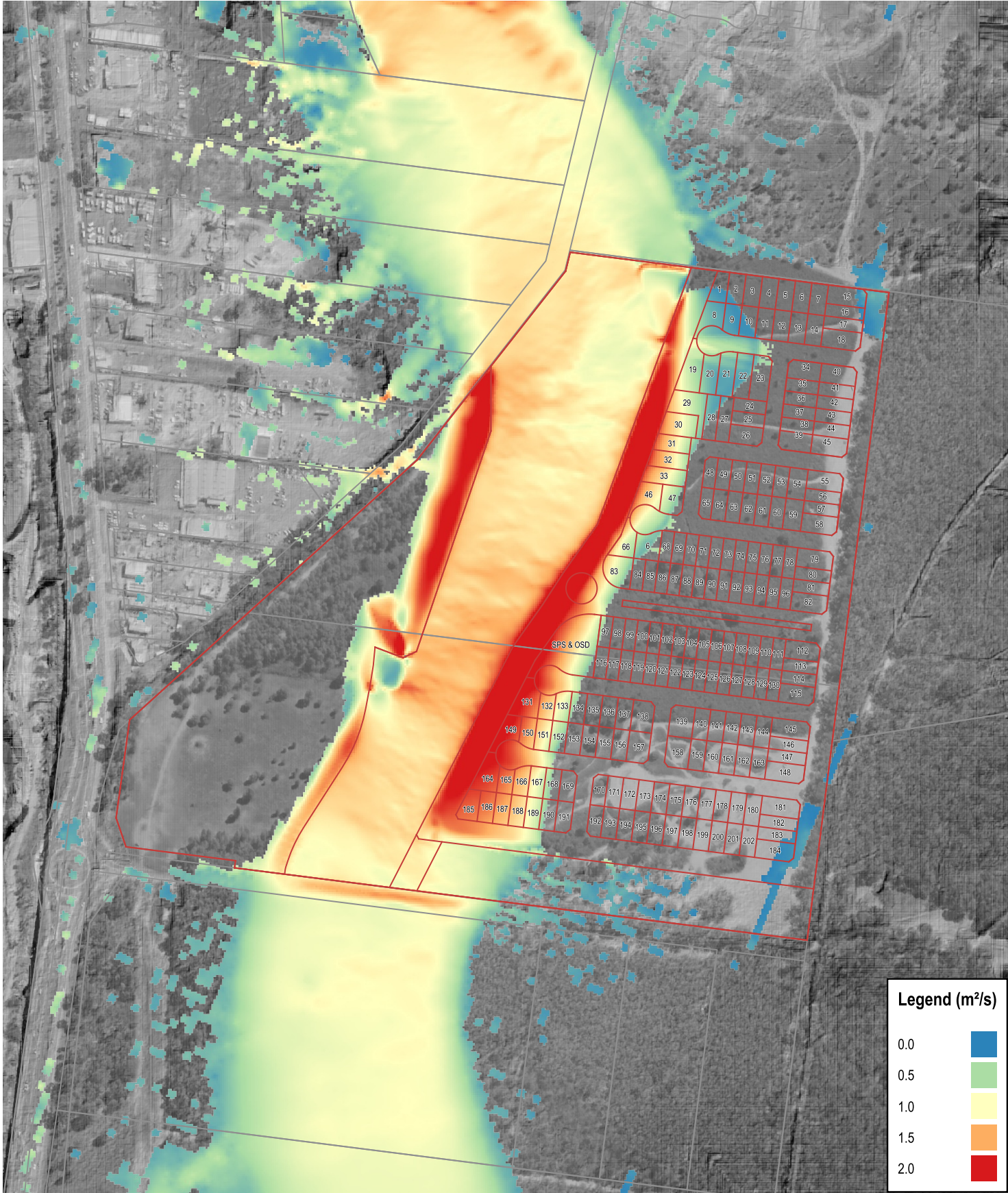
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24047-FM-4012

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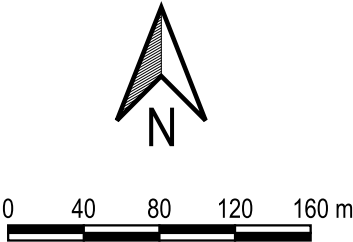
CLIMATE CHANGE NOTE:
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BASELINE CHANGE 0.0; FINAL TEMPERATURE CHANGE 2.4-4.6.



POST DEVELOPMENT CLIMATE CHANGE - PMF - VELOCITY

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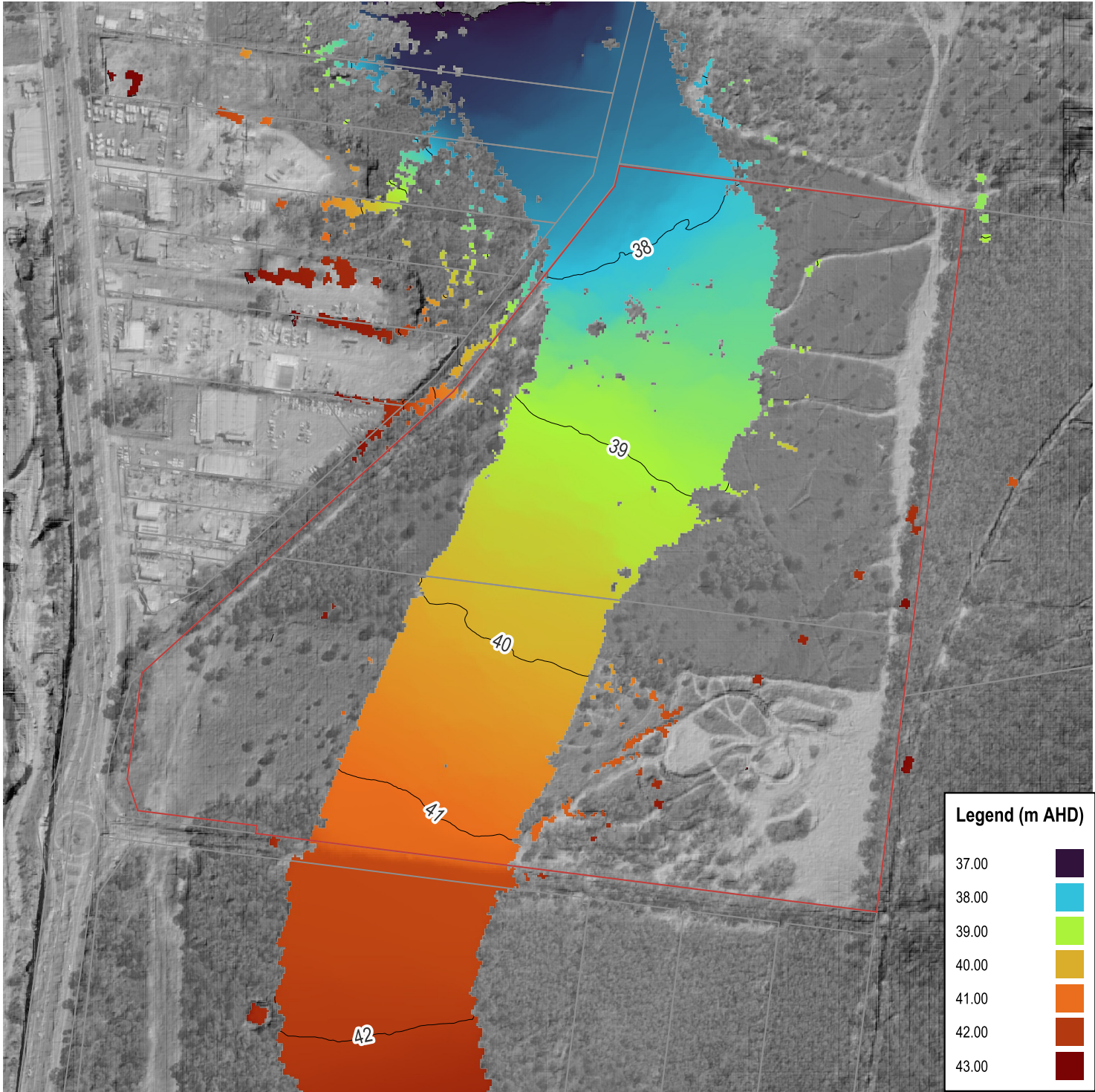
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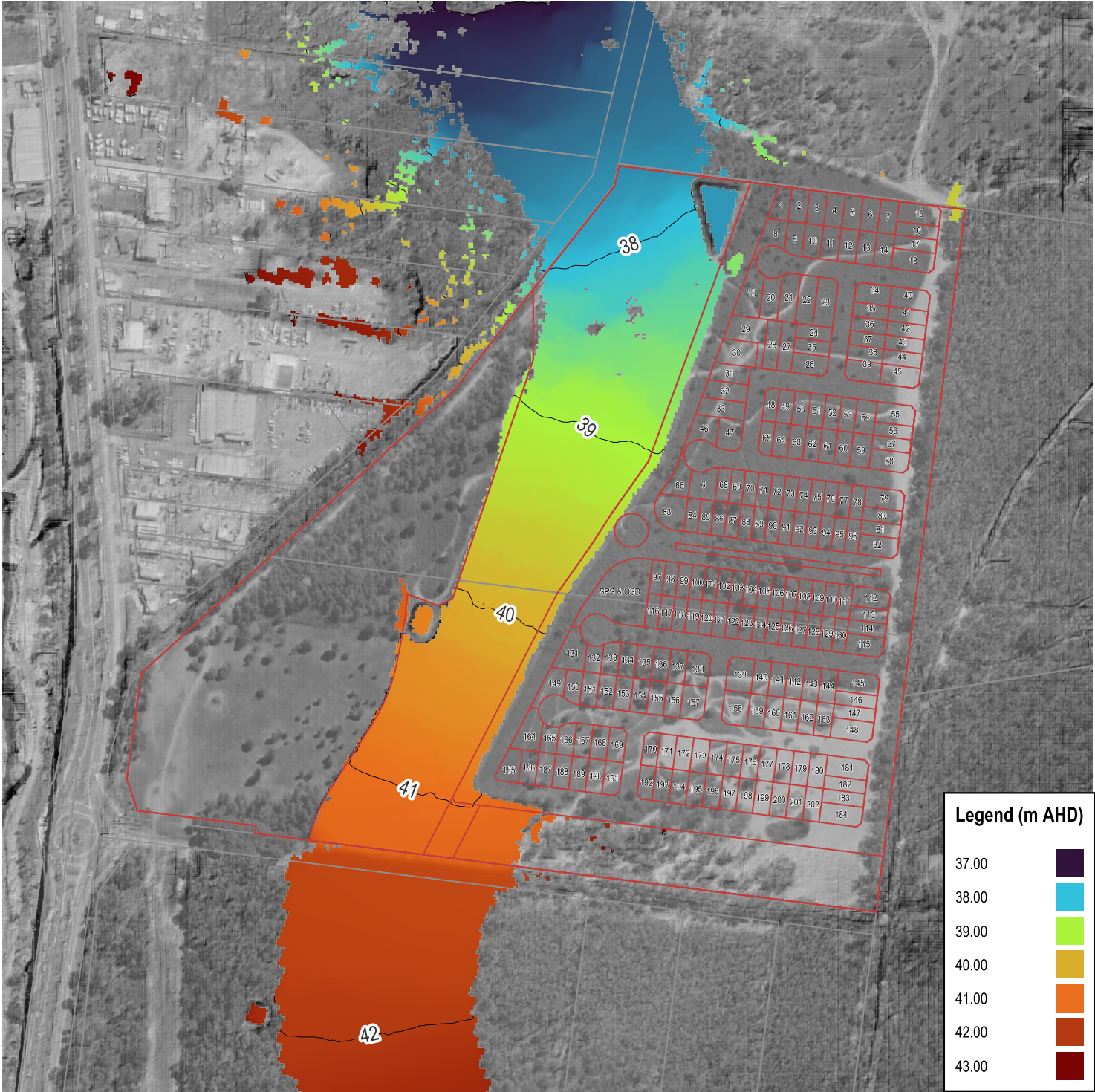
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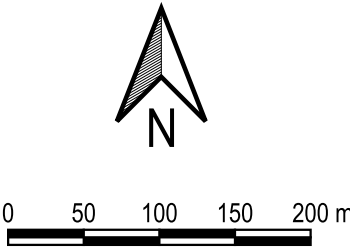
PRE-DEVELOPMENT - 10% AEP - WSE



POST-DEVELOPMENT - 10% AEP - WSE

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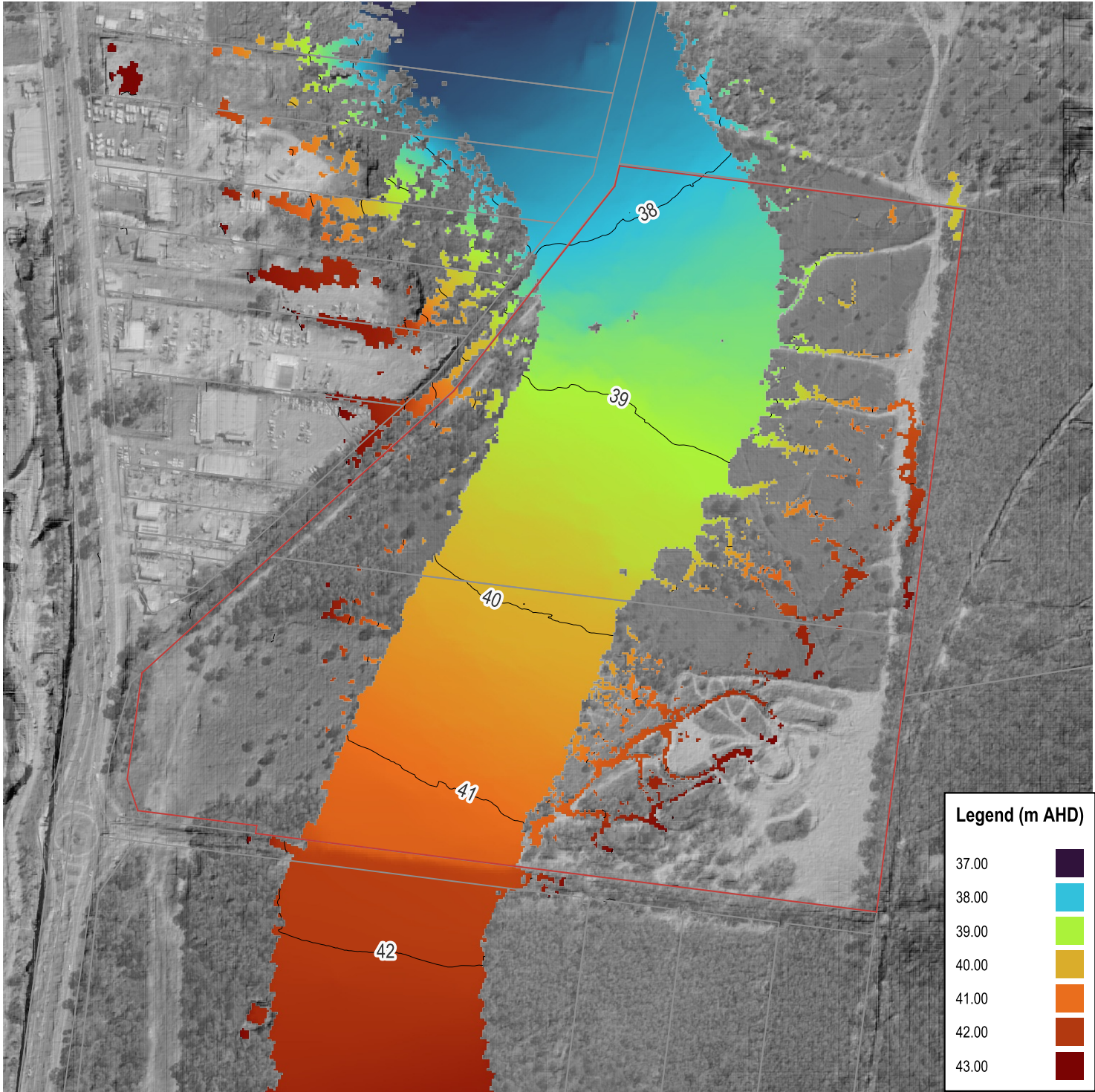
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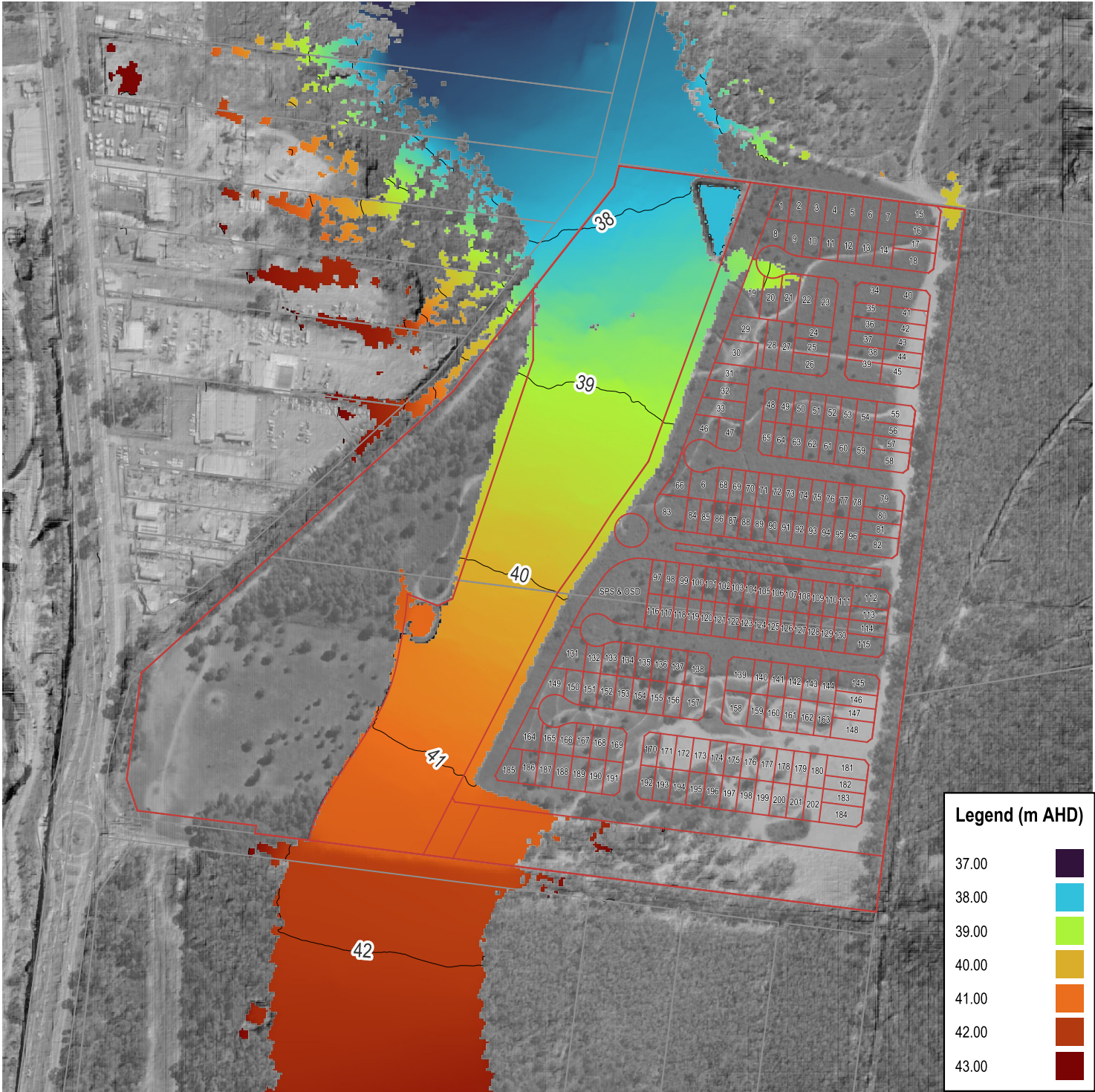
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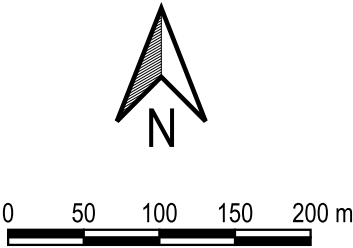
PRE-DEVELOPMENT - 1% AEP - WSE



POST-DEVELOPMENT - 1% AEP - WSE

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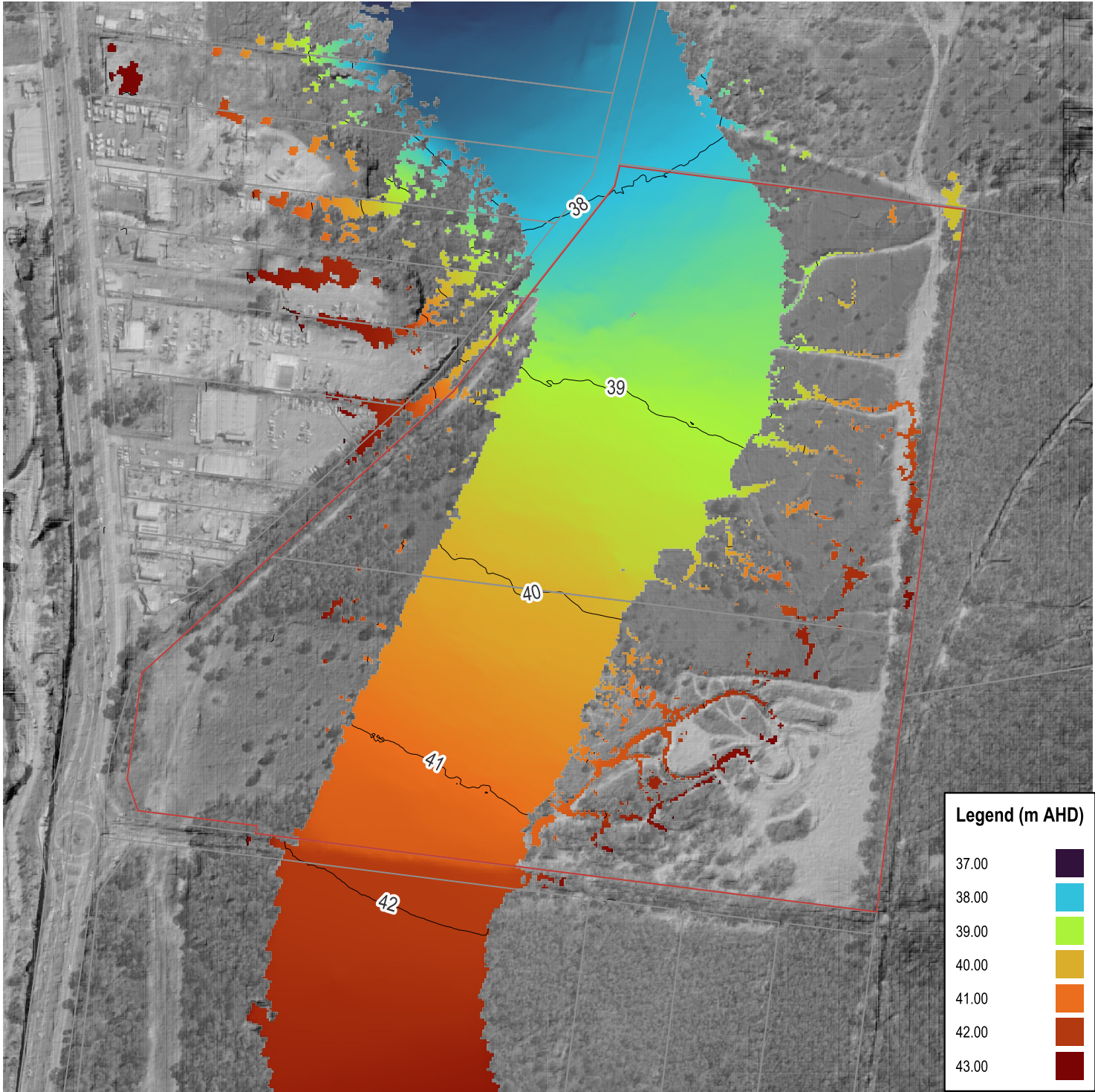
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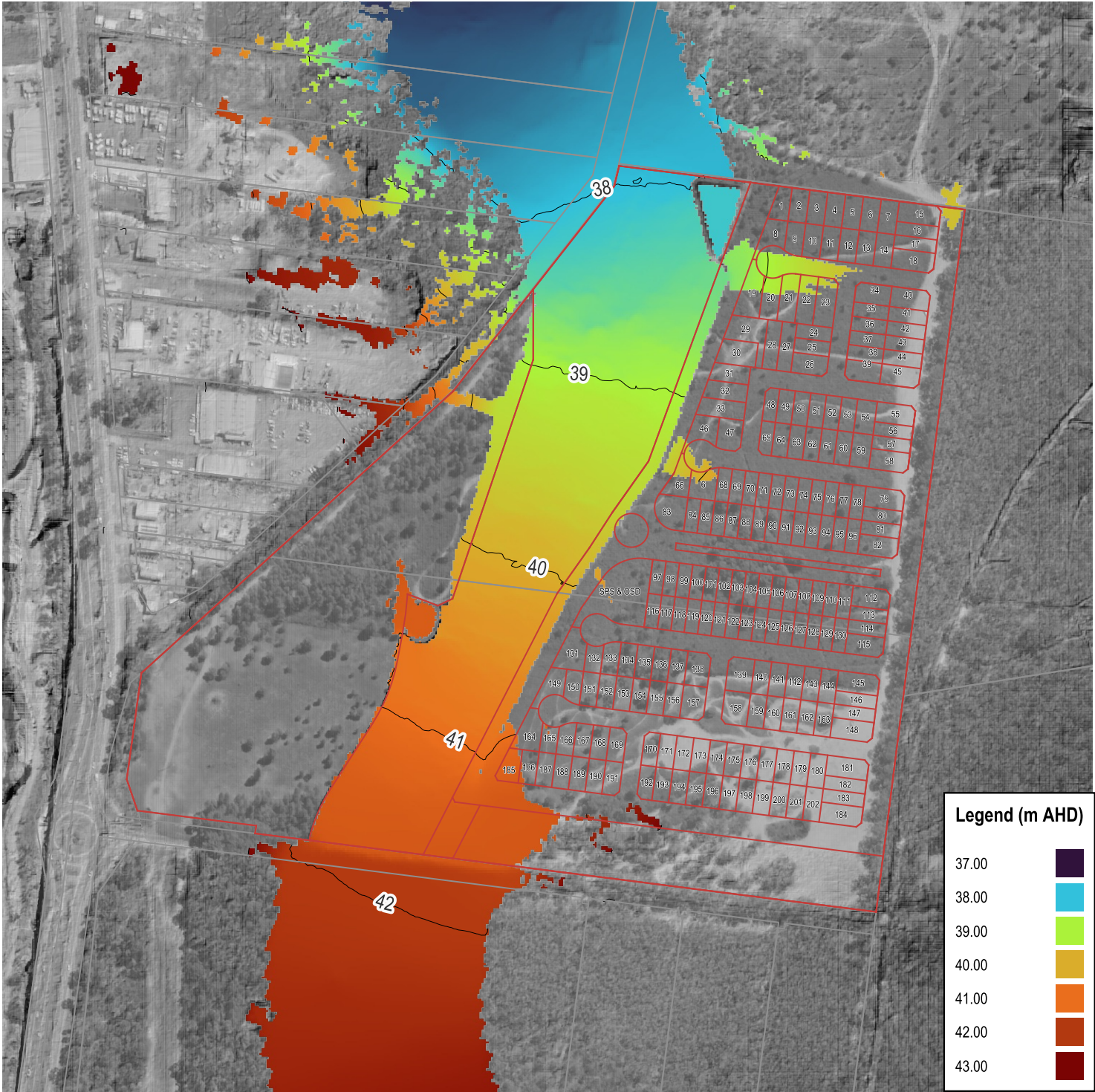
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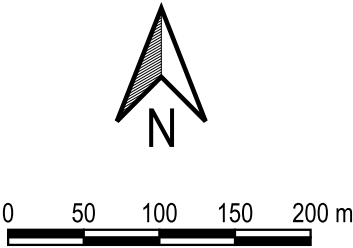
PRE-DEVELOPMENT - 0.2% AEP - WSE



POST-DEVELOPMENT - 0.2% AEP - WSE

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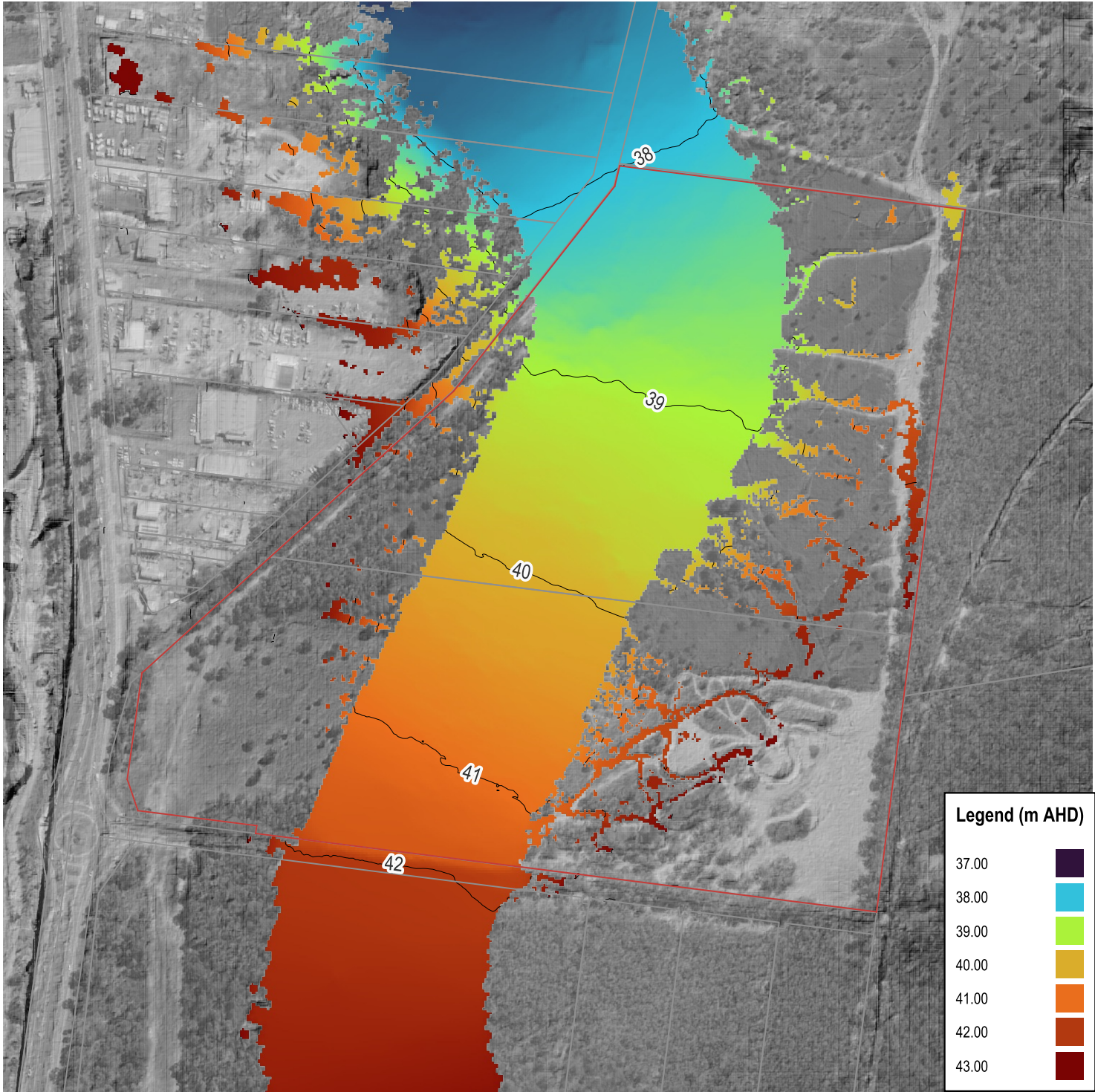
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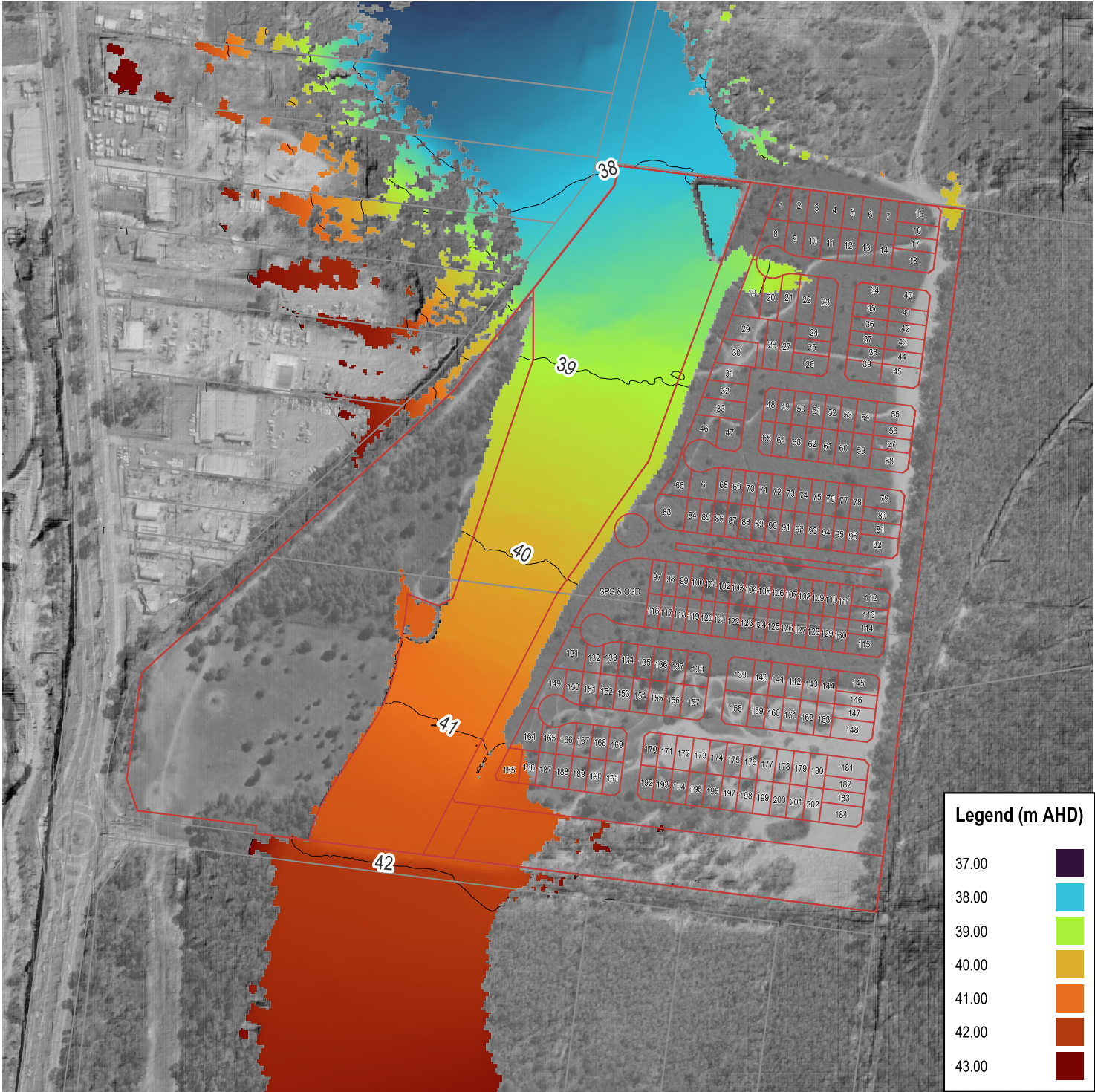
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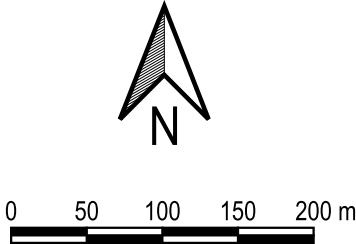
PRE-DEVELOPMENT - 0.05% AEP - WSE



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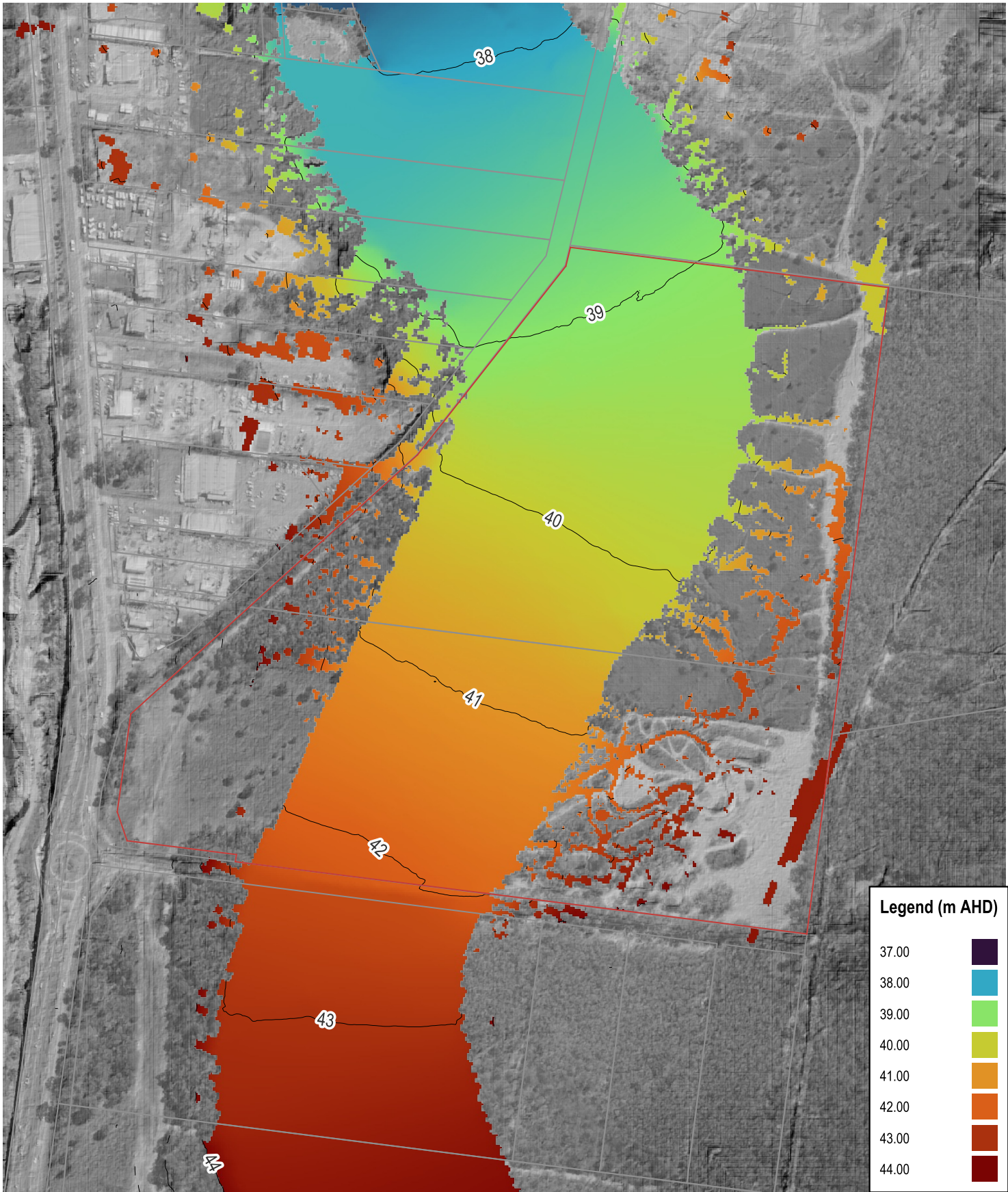
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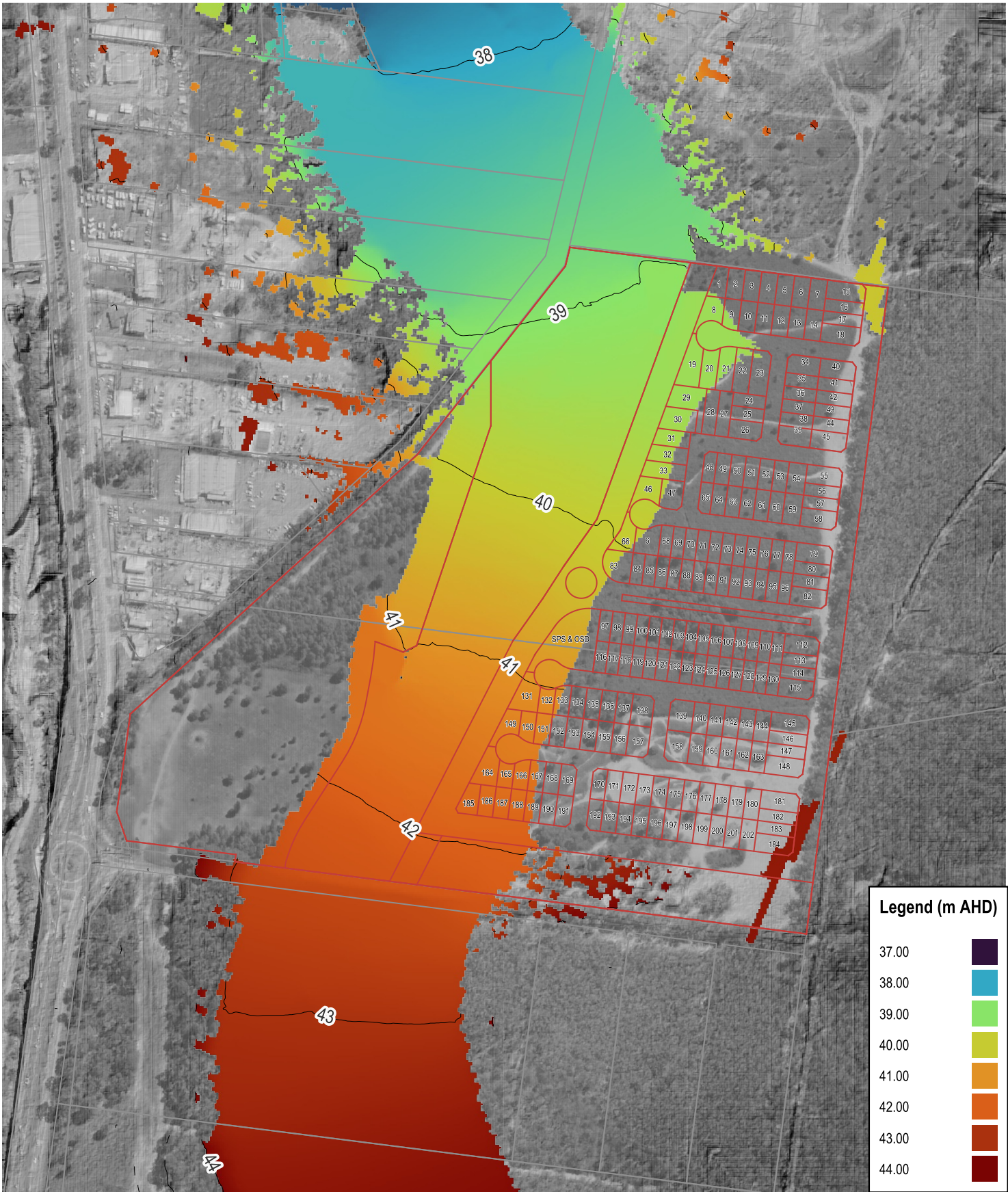
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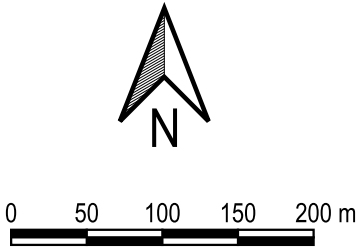
PRE-DEVELOPMENT - PMF - WSE



POST-DEVELOPMENT - PMF - WSE

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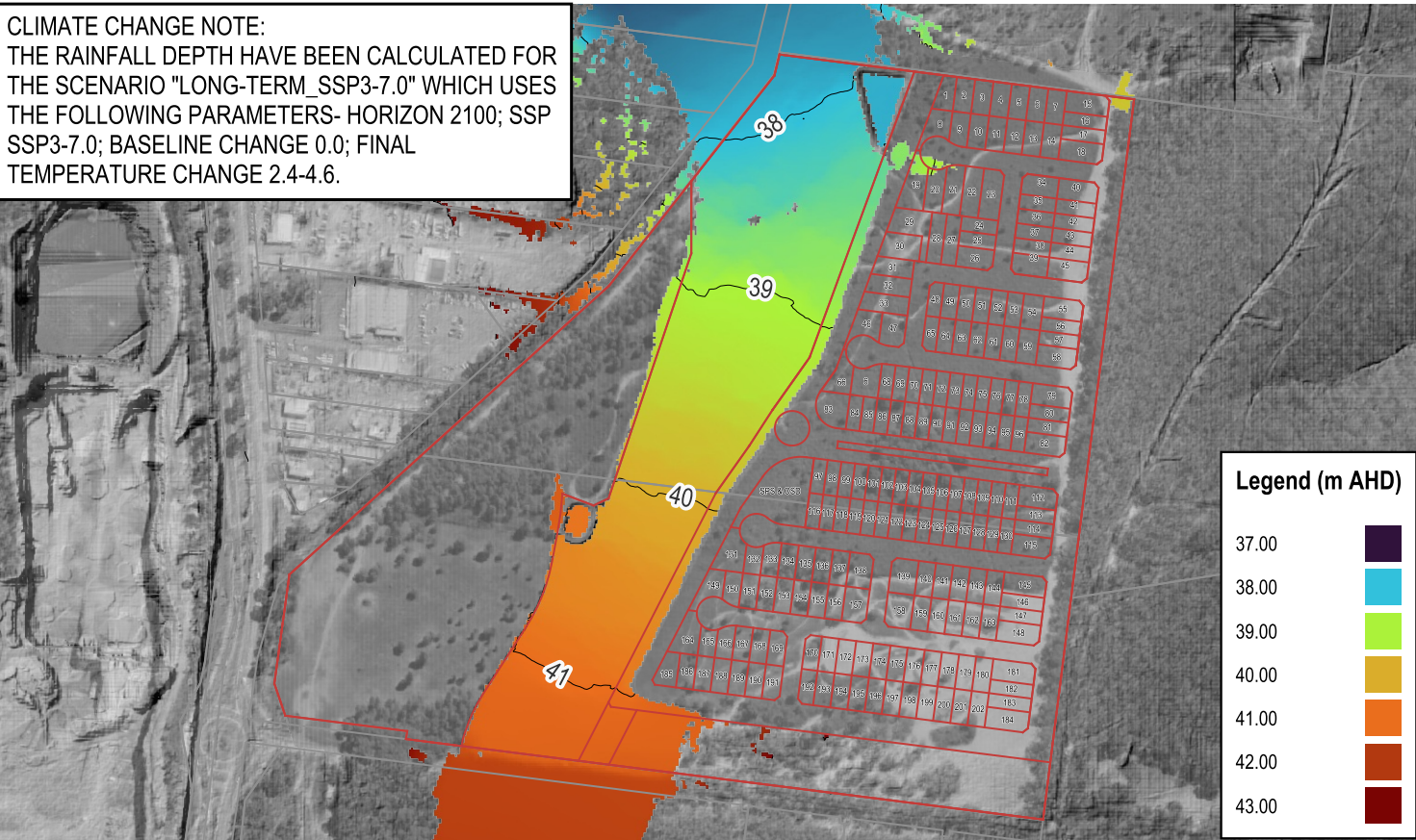
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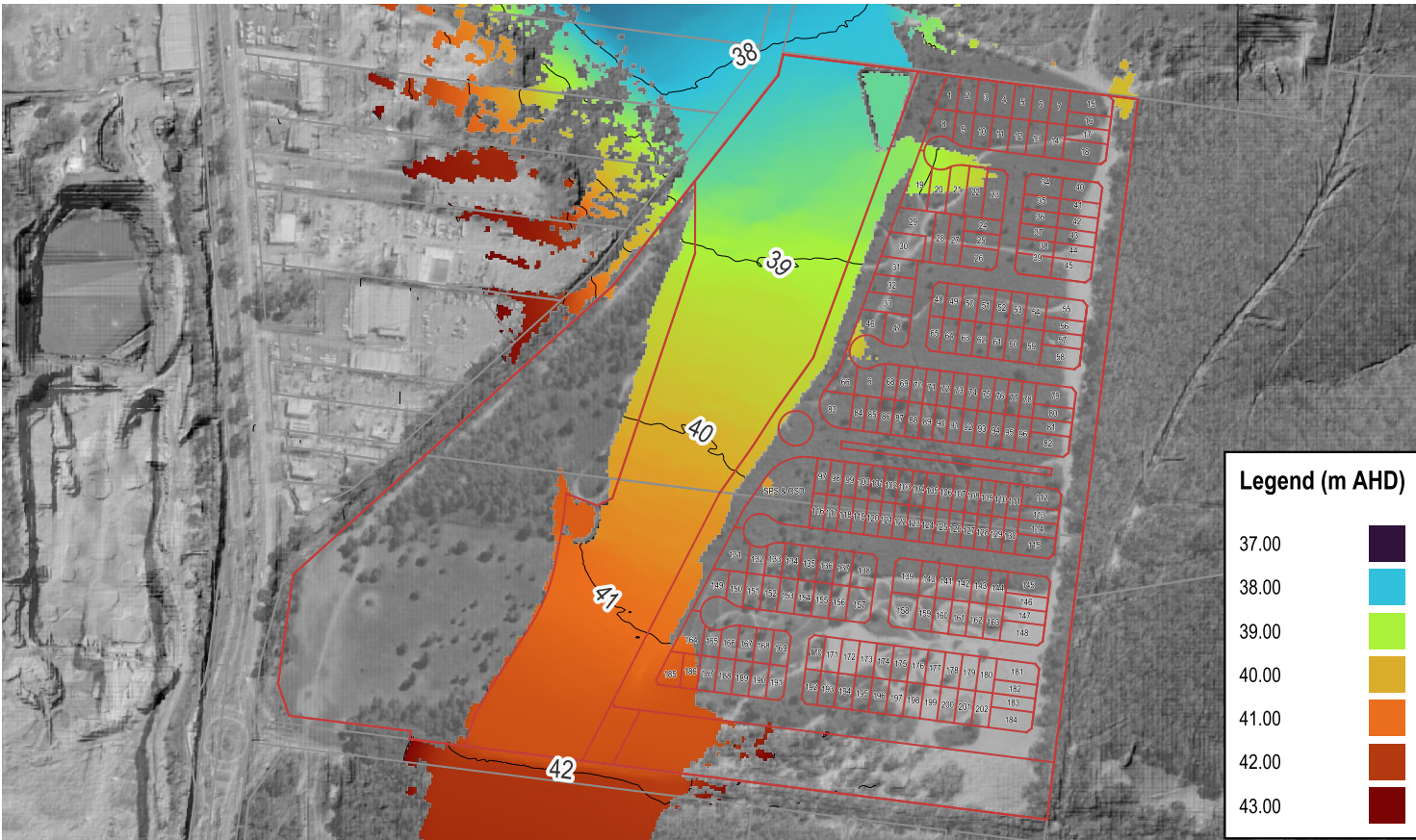
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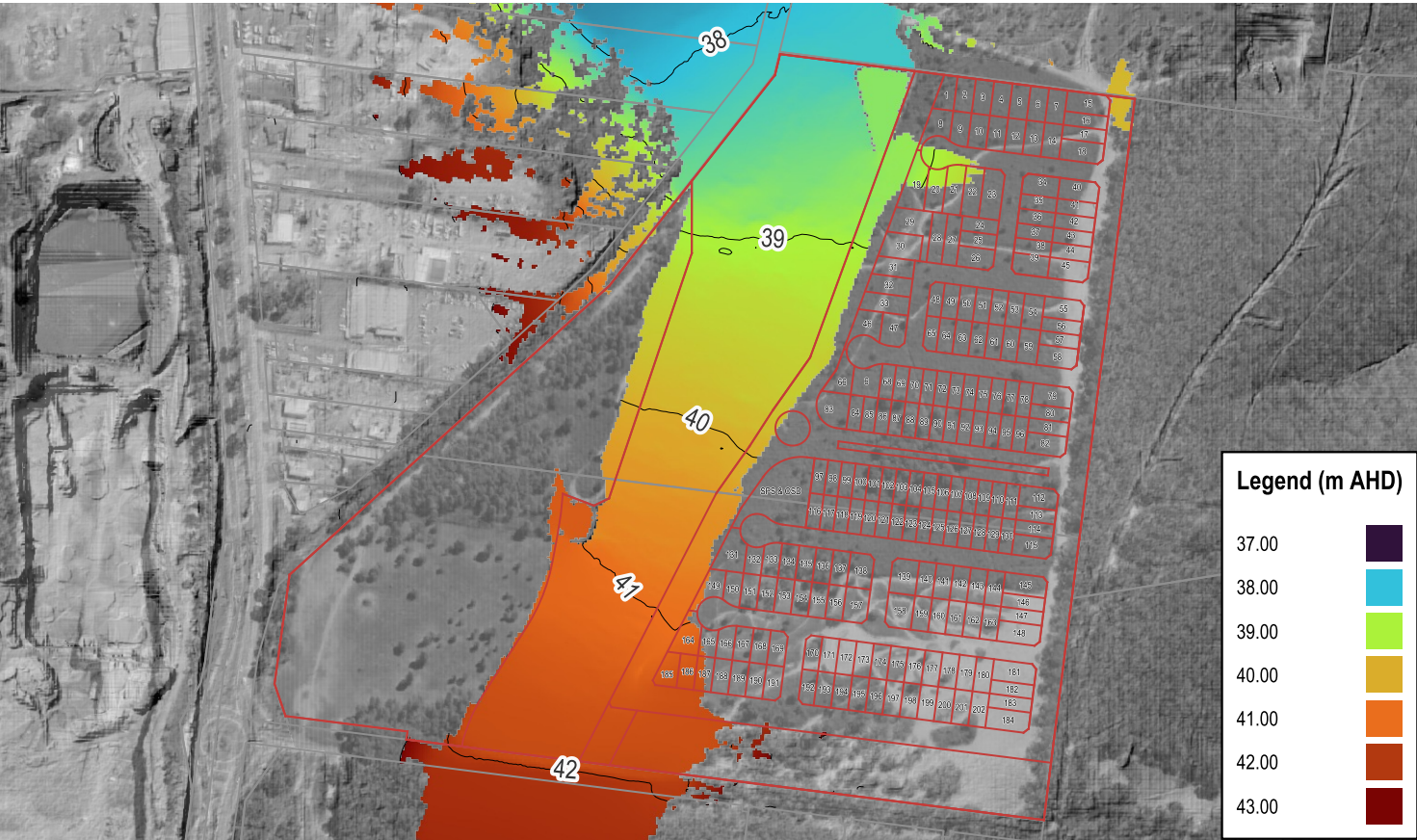
CLIMATE CHANGE NOTE:
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SSP3-7.0; BASELINE CHANGE 0.0; FINAL
TEMPERATURE CHANGE 2.4-4.6.



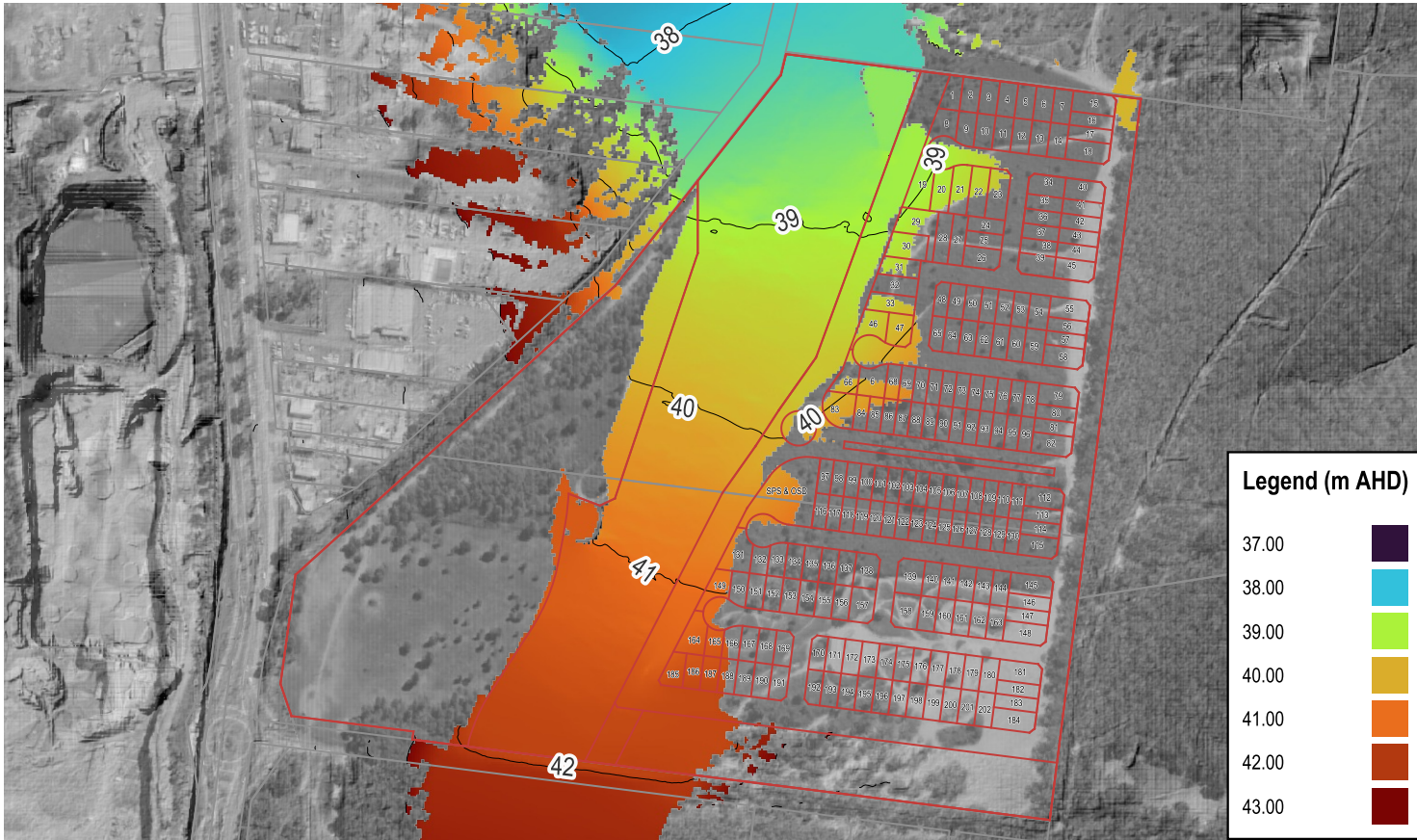
POST DEVELOPMENT CLIMATE CHANGE - 10% AEP - WSE



POST DEVELOPMENT CLIMATE CHANGE - 1% AEP - WSE



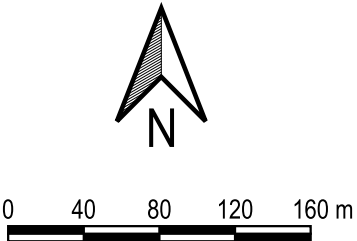
POST DEVELOPMENT CLIMATE CHANGE - 0.2% AEP - WSE



POST DEVELOPMENT CLIMATE CHANGE - 0.05% AEP - WSE

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RELEASE DATE: 10 AUGUST 2026

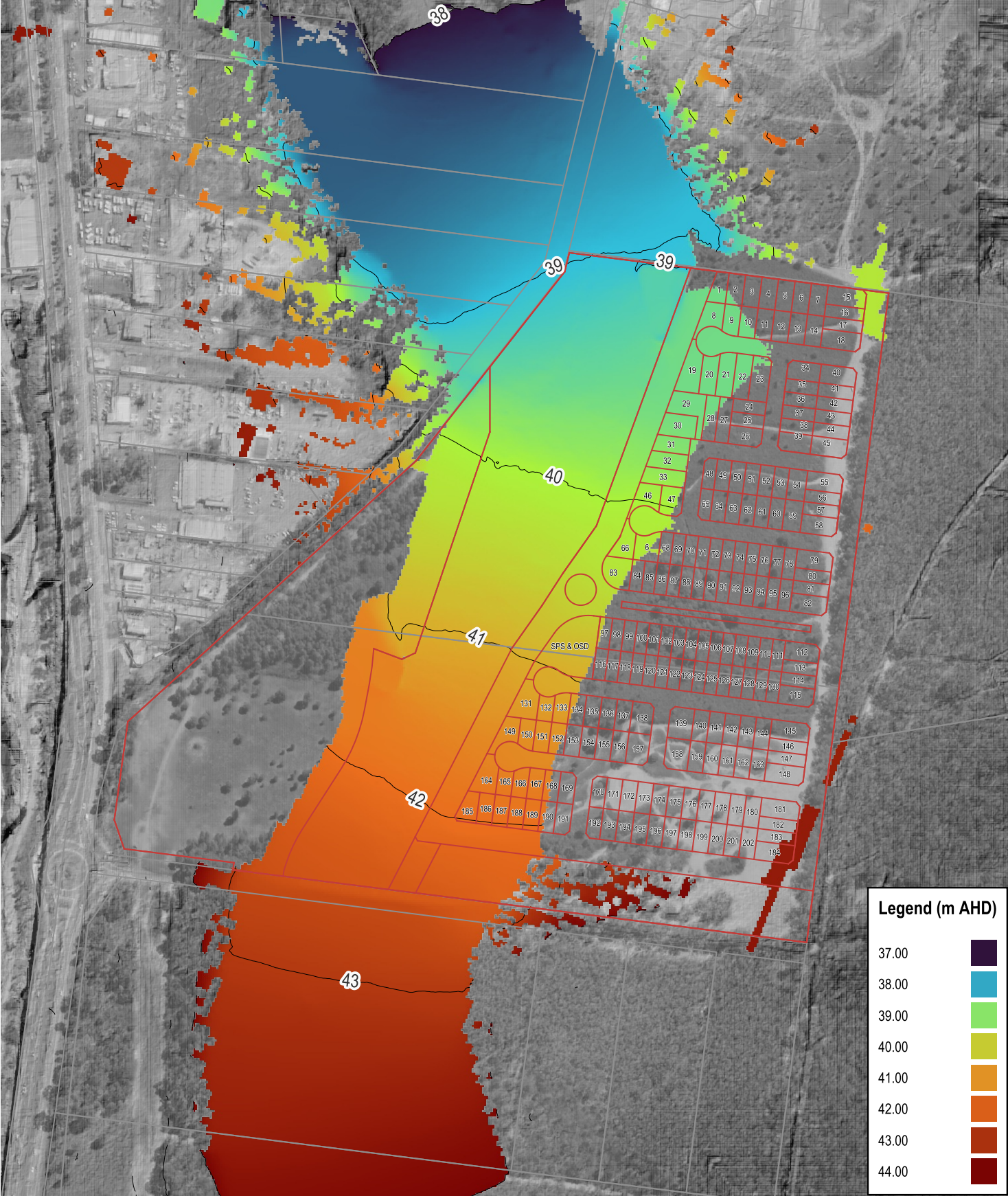
JOB DRAWING NUMBER:

24047-FM-4019

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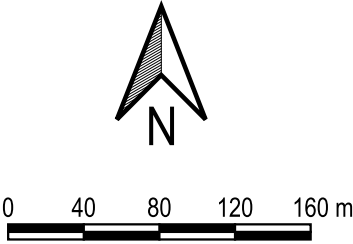
CLIMATE CHANGE NOTE:
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SCENARIO "LONG-TERM_SSP3-7.0" WHICH USES THE
FOLLOWING PARAMETERS- HORIZON 2100; SSP SSP3-7.0;
BASELINE CHANGE 0.0; FINAL TEMPERATURE CHANGE 2.4-4.6.



POST DEVELOPMENT CLIMATE CHANGE - PMF - WSE

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T: 1800 318 052 E: info@civplan.com.au W: www.civplan.com.au

JOB NAME: EASTERN AND WESTERN PRECINCT DEVELOPMENT

LOCATION: WARRA WARRA ROAD, SOUTH NOWRA, NSW

CLIENT: LYSAND PTY LTD & LYROCK PTY LTD C/- JERVIS BAY TOWN PLANNING

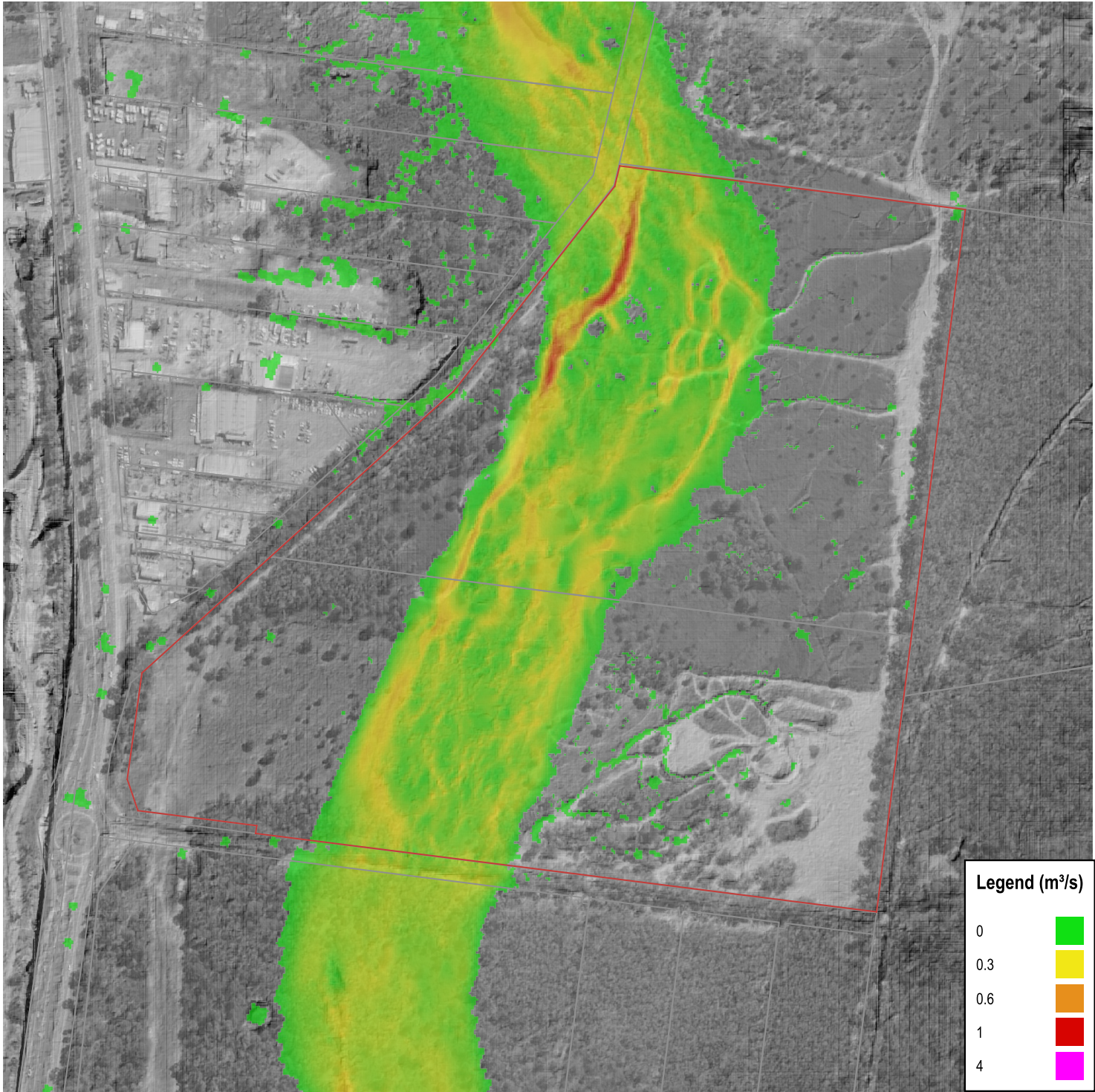
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DRAWING: POST-DEVELOPMENT - CLIMATE CHANGE - PMF - WSE

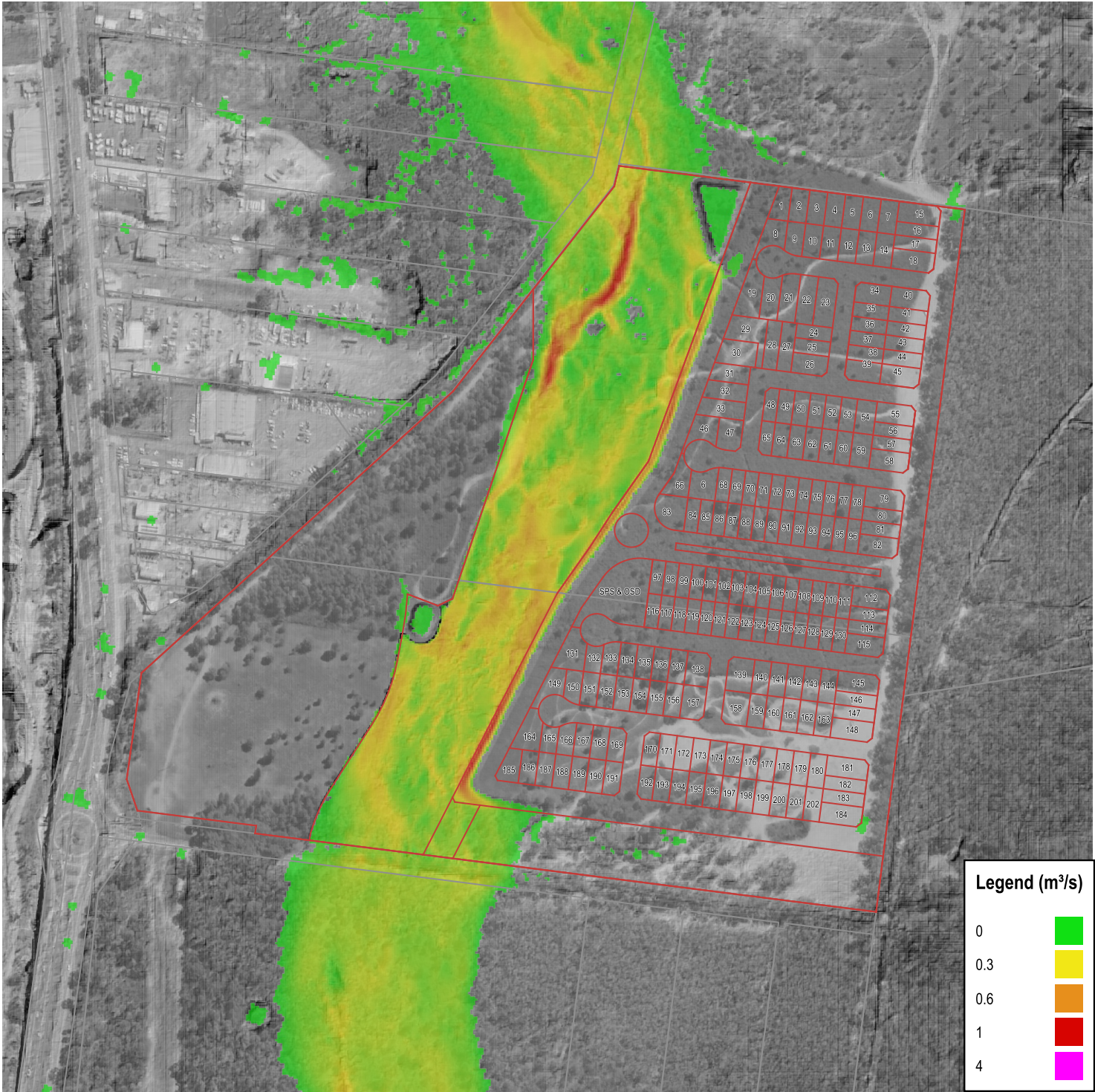
PRELIMINARY
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RELEASE DATE: 10 AUGUST 2026

JOB DRAWING NUMBER:	REV:
24047-FM-4020	1



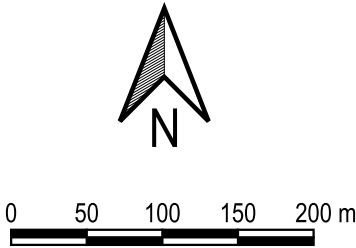
PRE-DEVELOPMENT - 10% AEP - D x V



POST-DEVELOPMENT - 10% AEP - D x V

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DRAWING: PRE x POST-DEVELOPMENT - 10% AEP - D x V

PRELIMINARY

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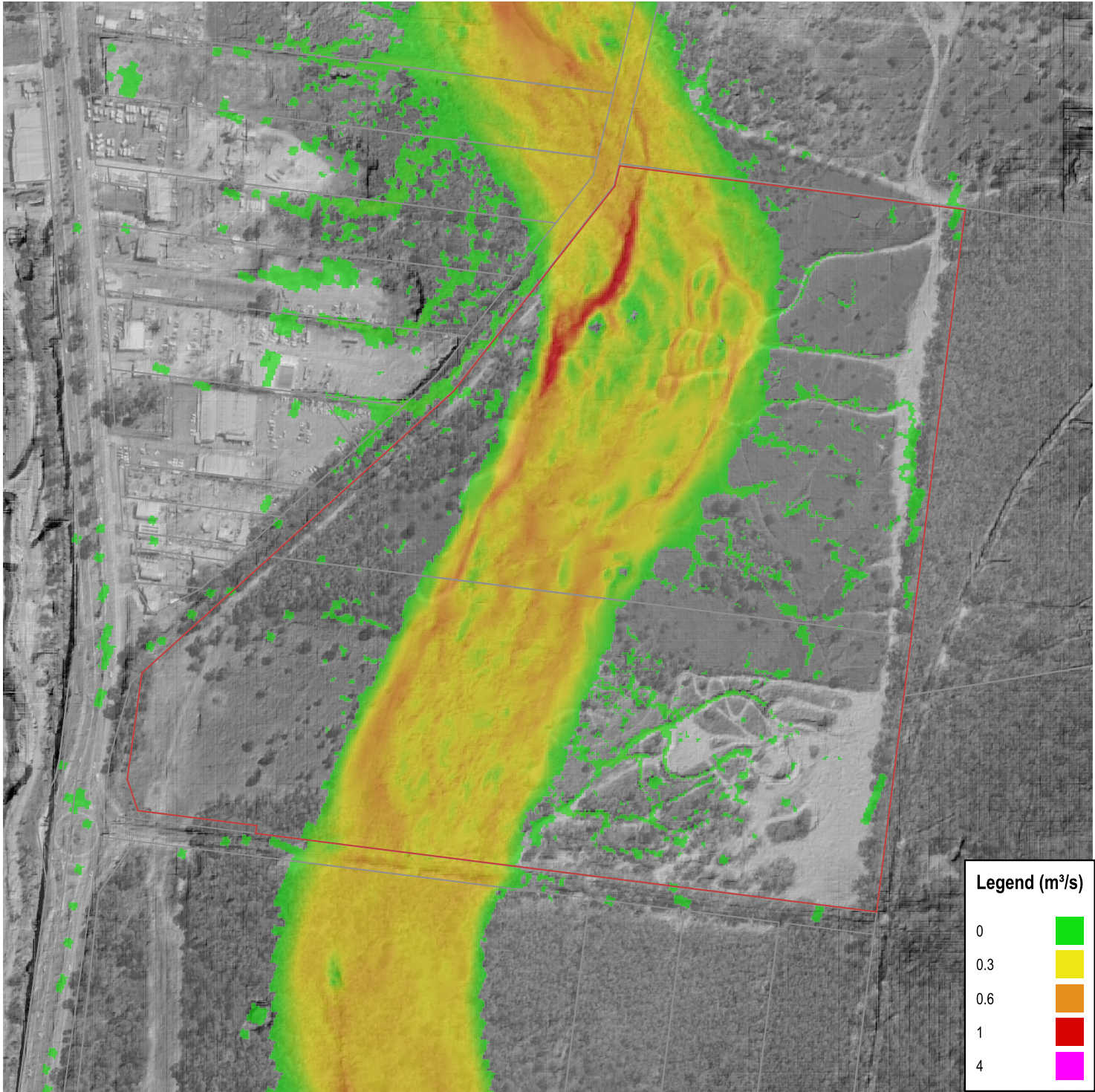
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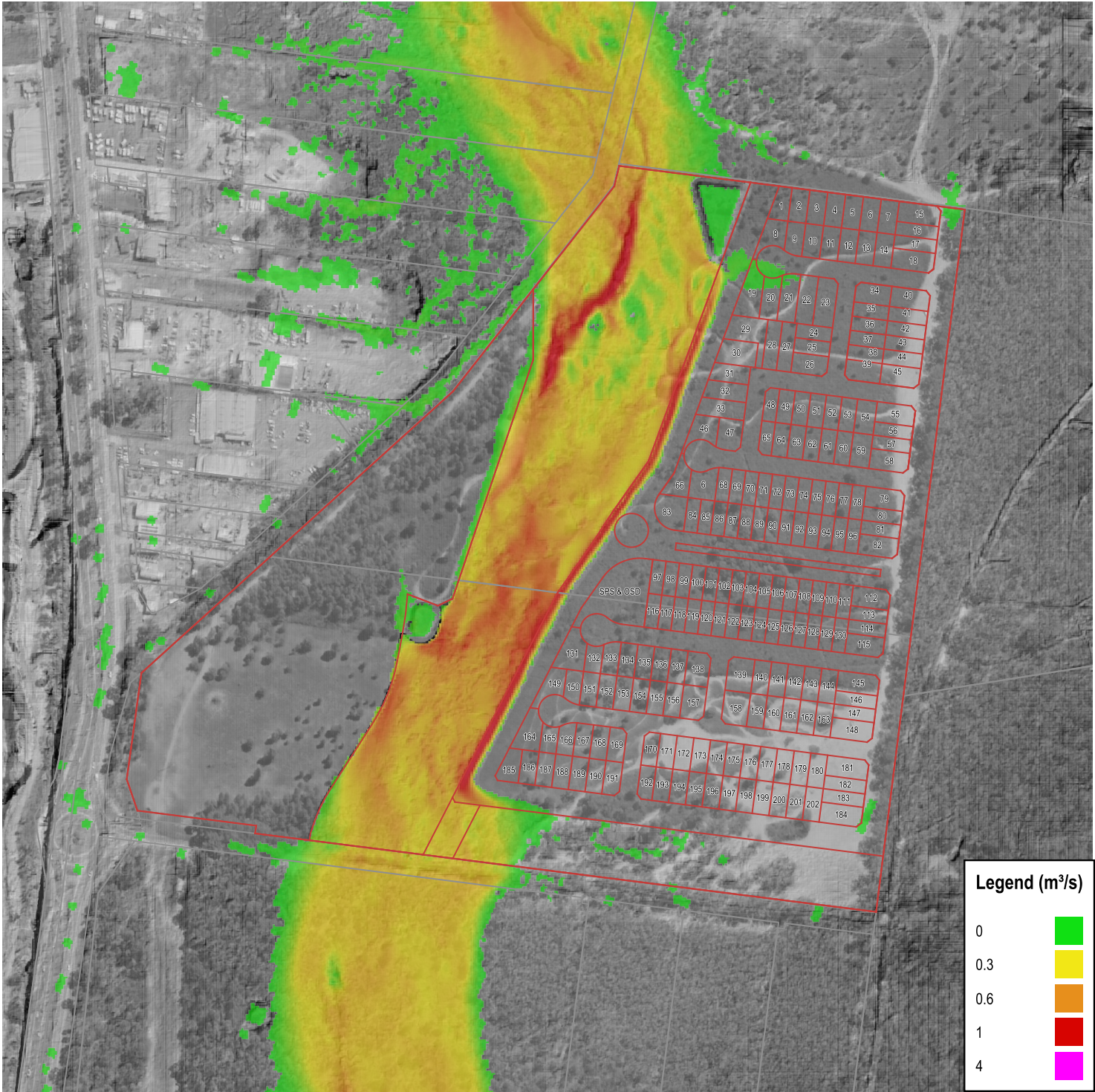
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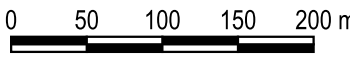
PRE-DEVELOPMENT - 1% AEP - D x V



POST-DEVELOPMENT - 1% AEP - D x V

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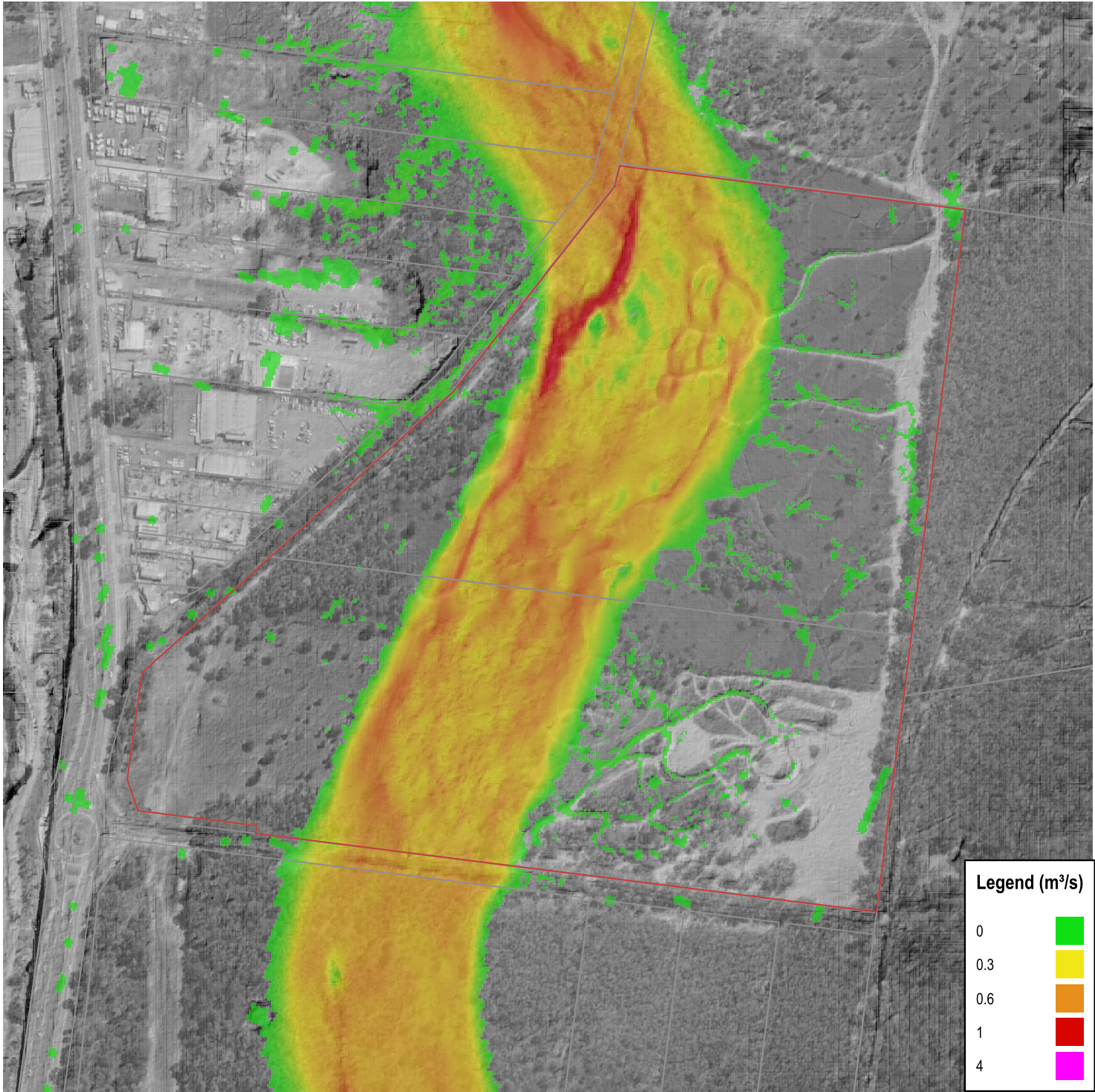
RELEASE DATE: 10 AUGUST 2026

JOB DRAWING NUMBER:

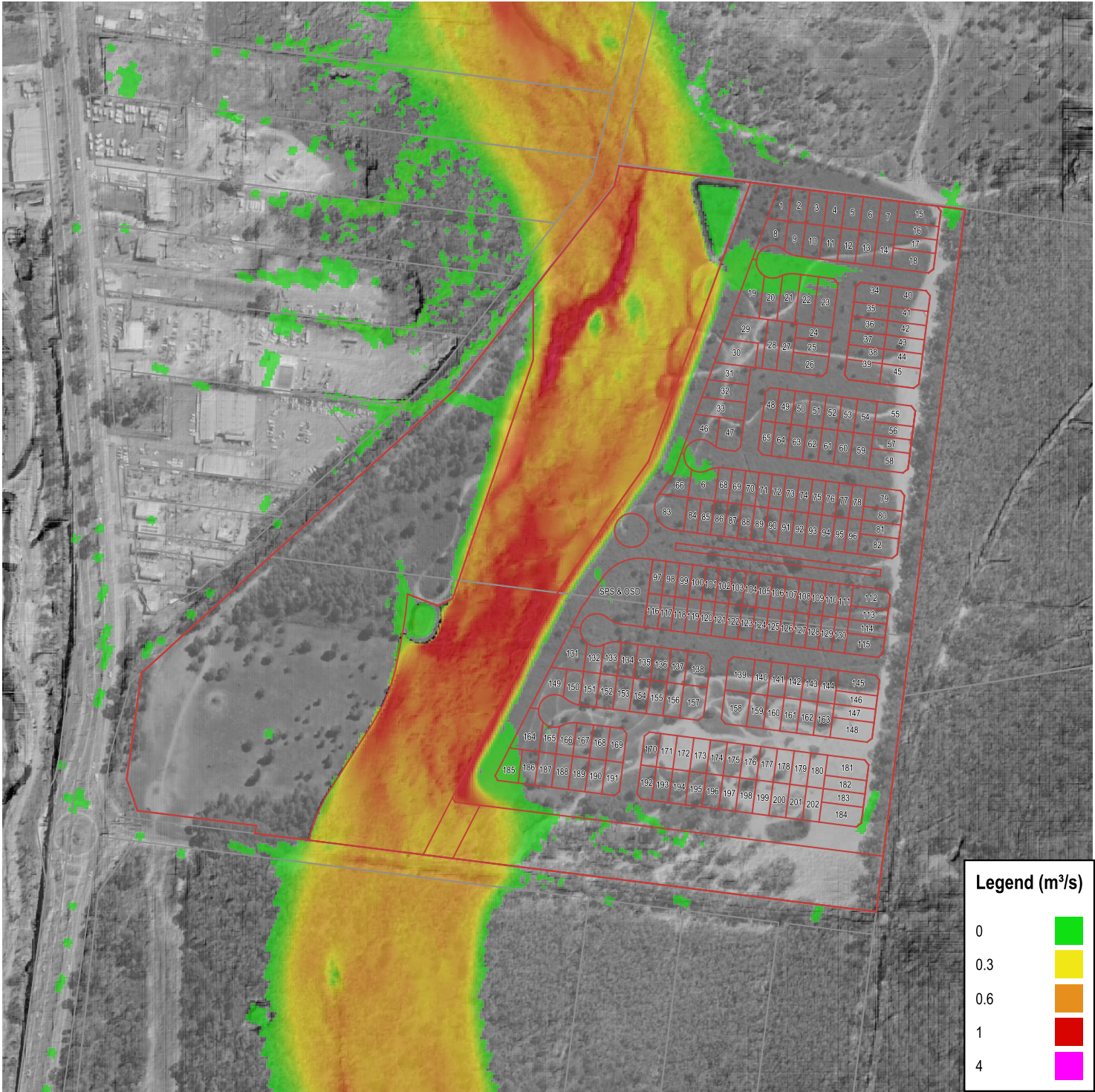
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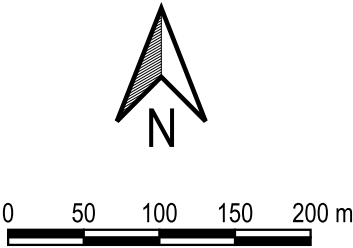
PRE-DEVELOPMENT - 0.2% AEP - D x V



POST-DEVELOPMENT - 0.2% AEP - D x V

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DRAWING: PRE x POST-DEVELOPMENT - 0.2% AEP - D x V

PRELIMINARY

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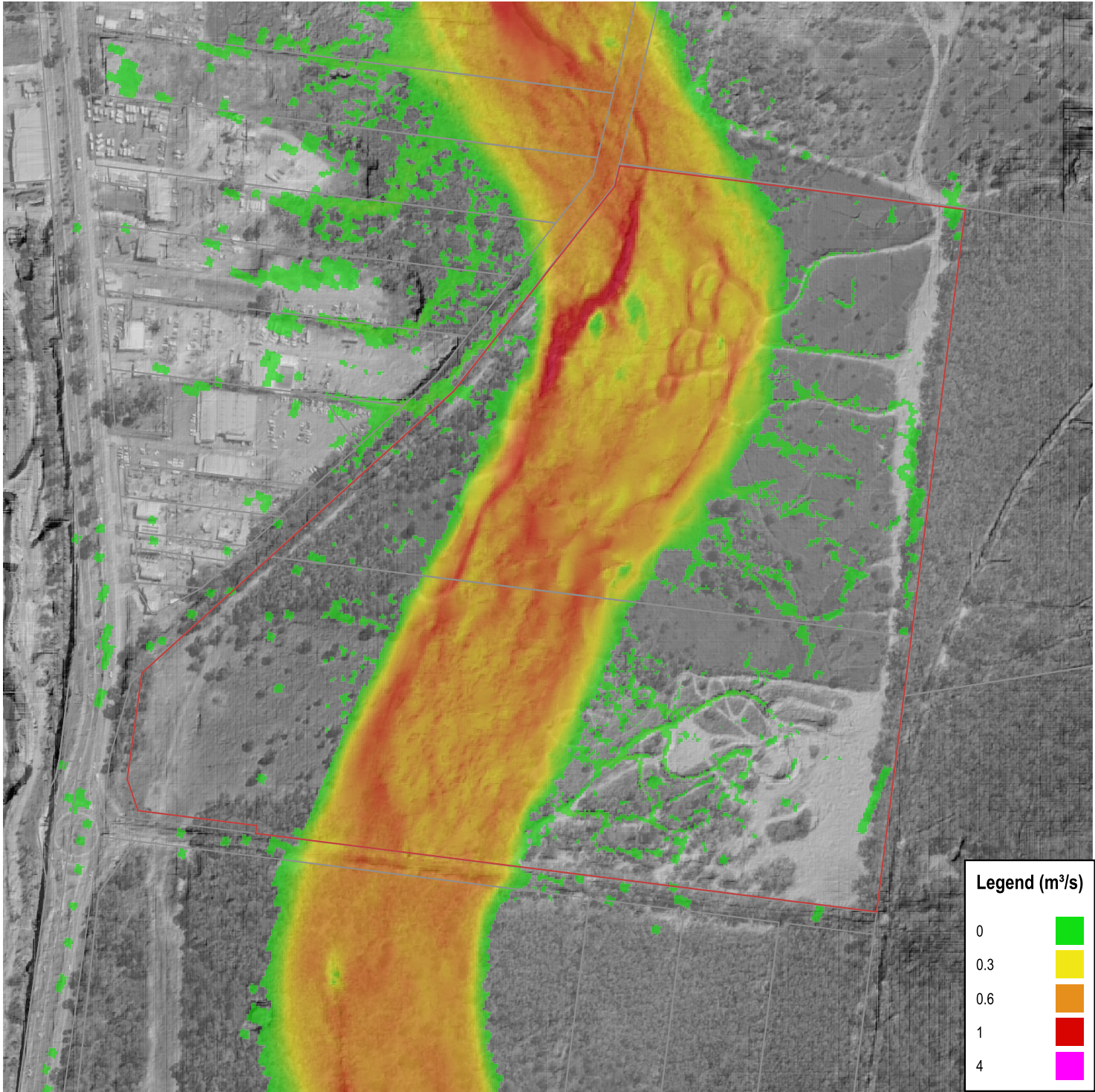
RELEASE DATE: 10 AUGUST 2026

JOB DRAWING NUMBER:

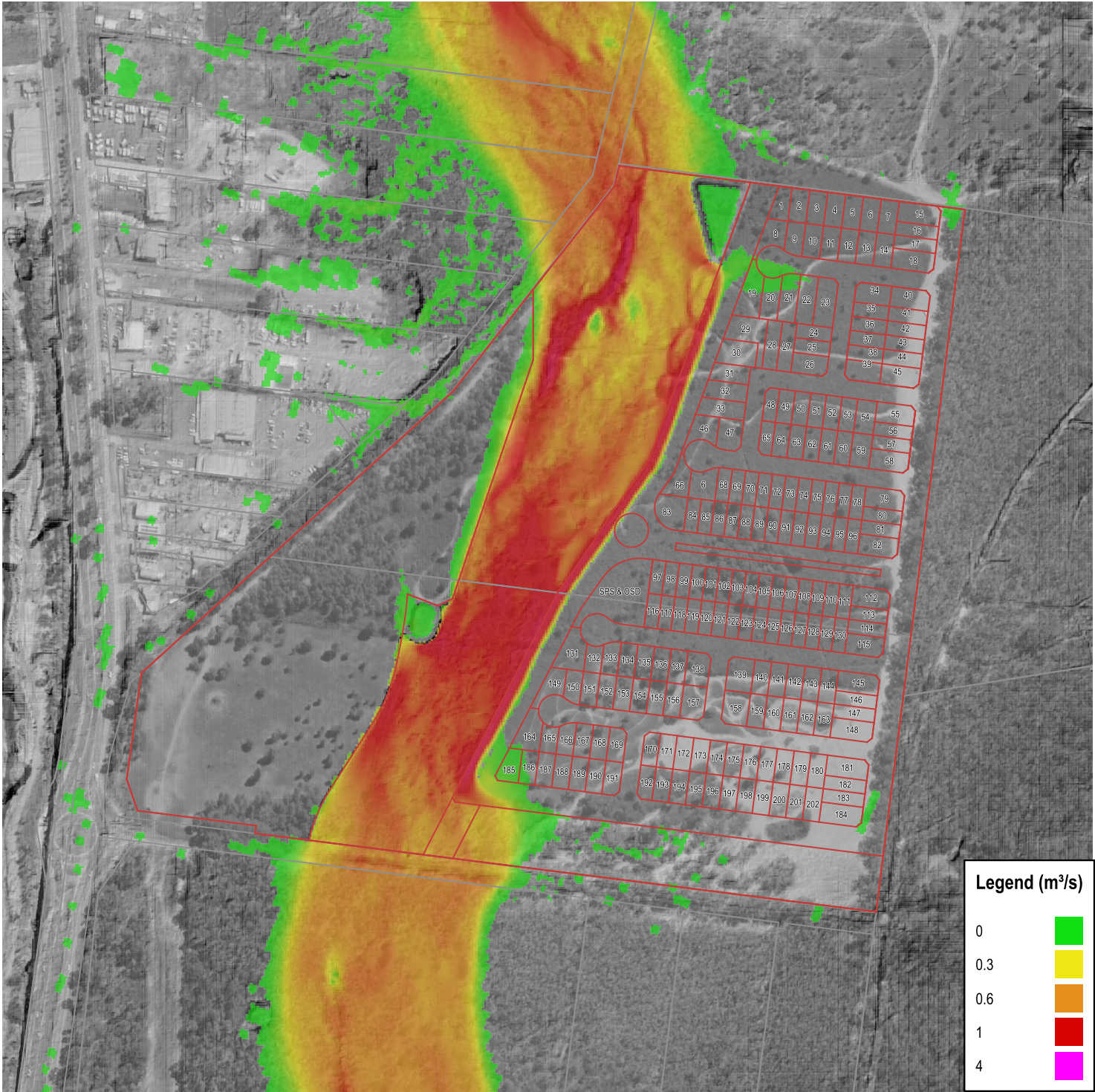
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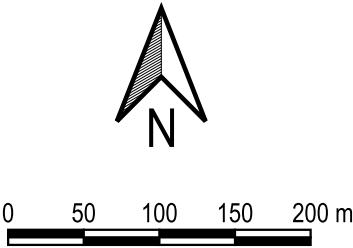
PRE-DEVELOPMENT - 0.05% AEP - D x V



POST-DEVELOPMENT - 0.05% AEP - D x V

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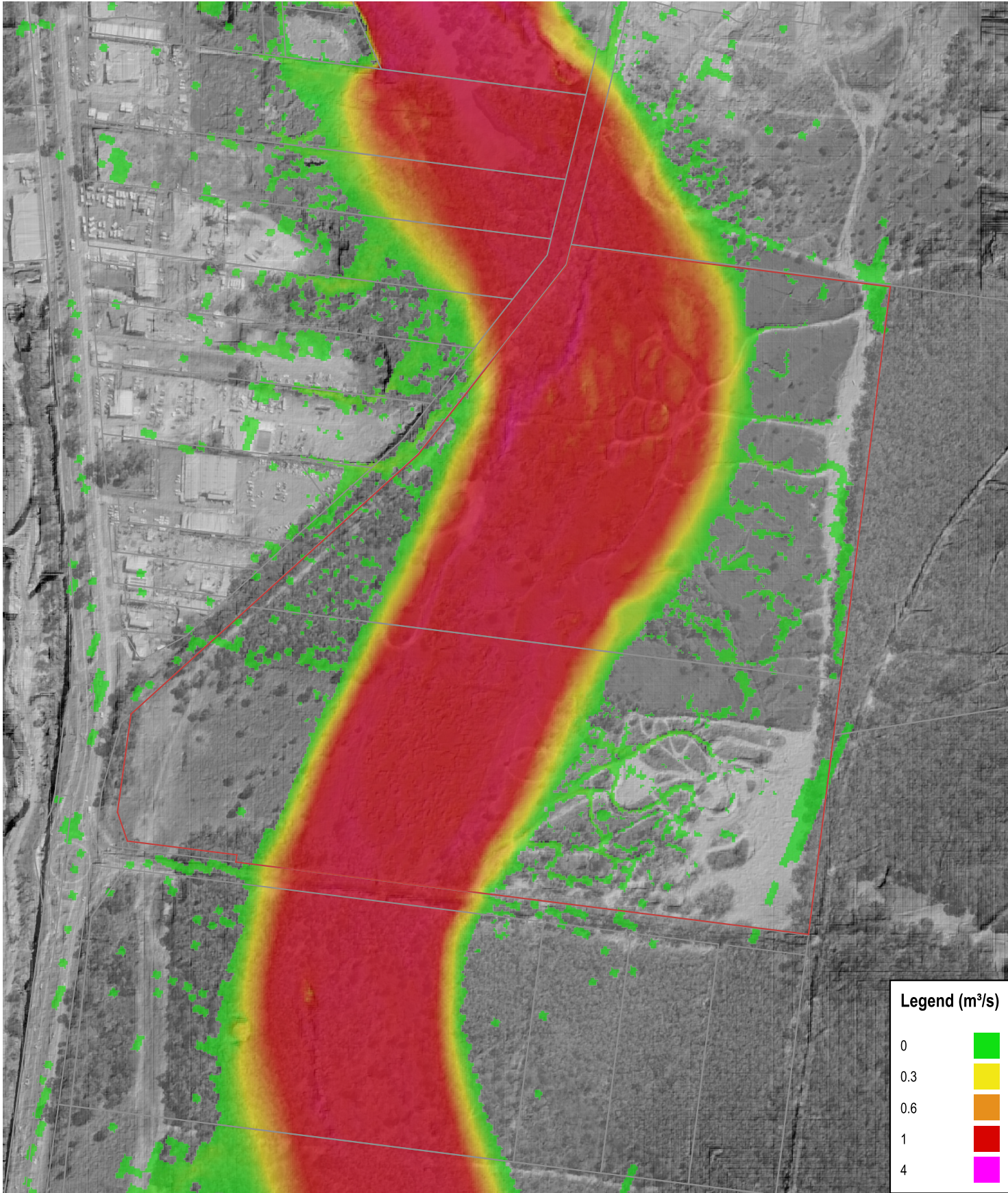
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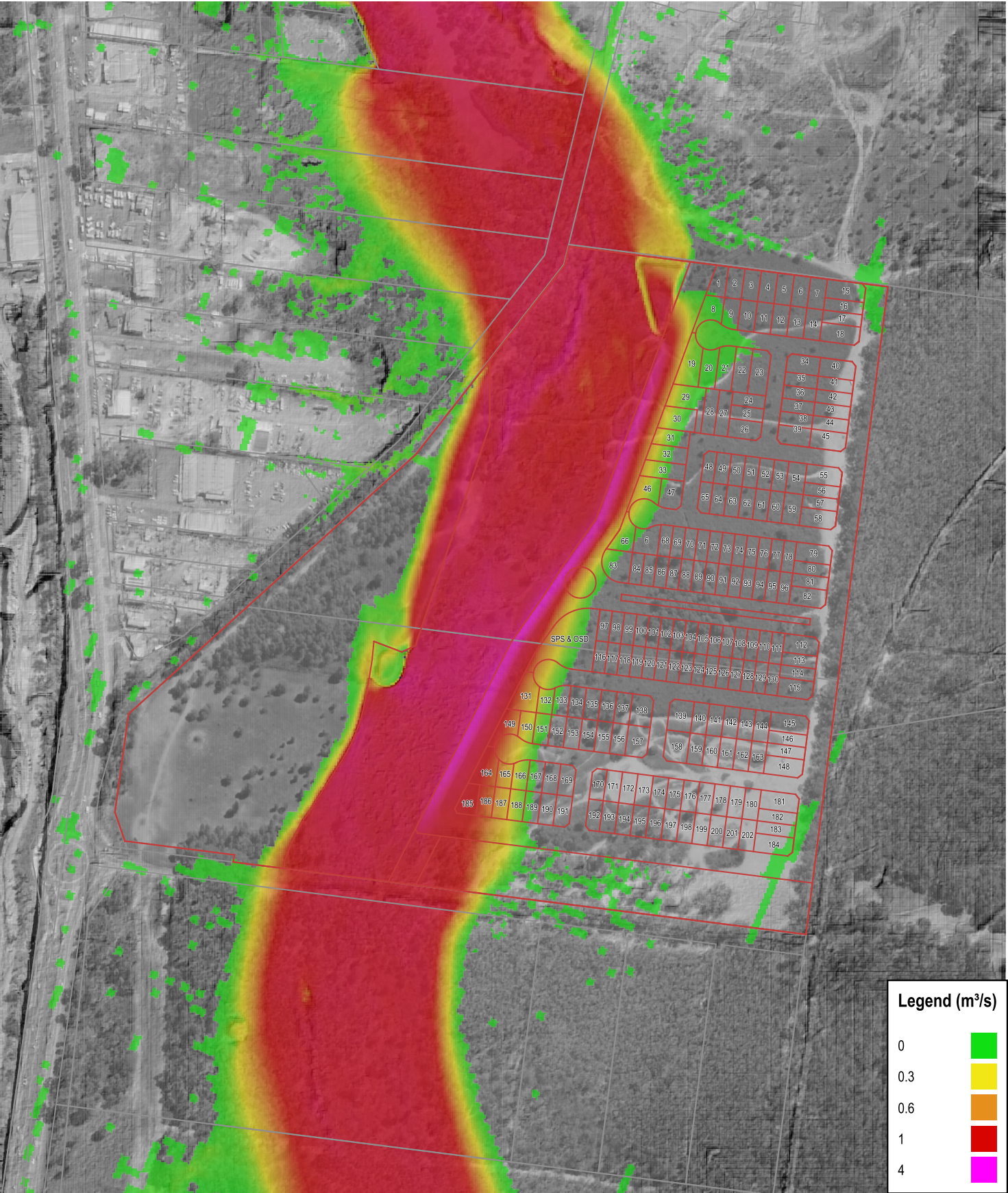
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REV:

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PRE-DEVELOPMENT - PMF - D x V



POST-DEVELOPMENT - PMF - D x V

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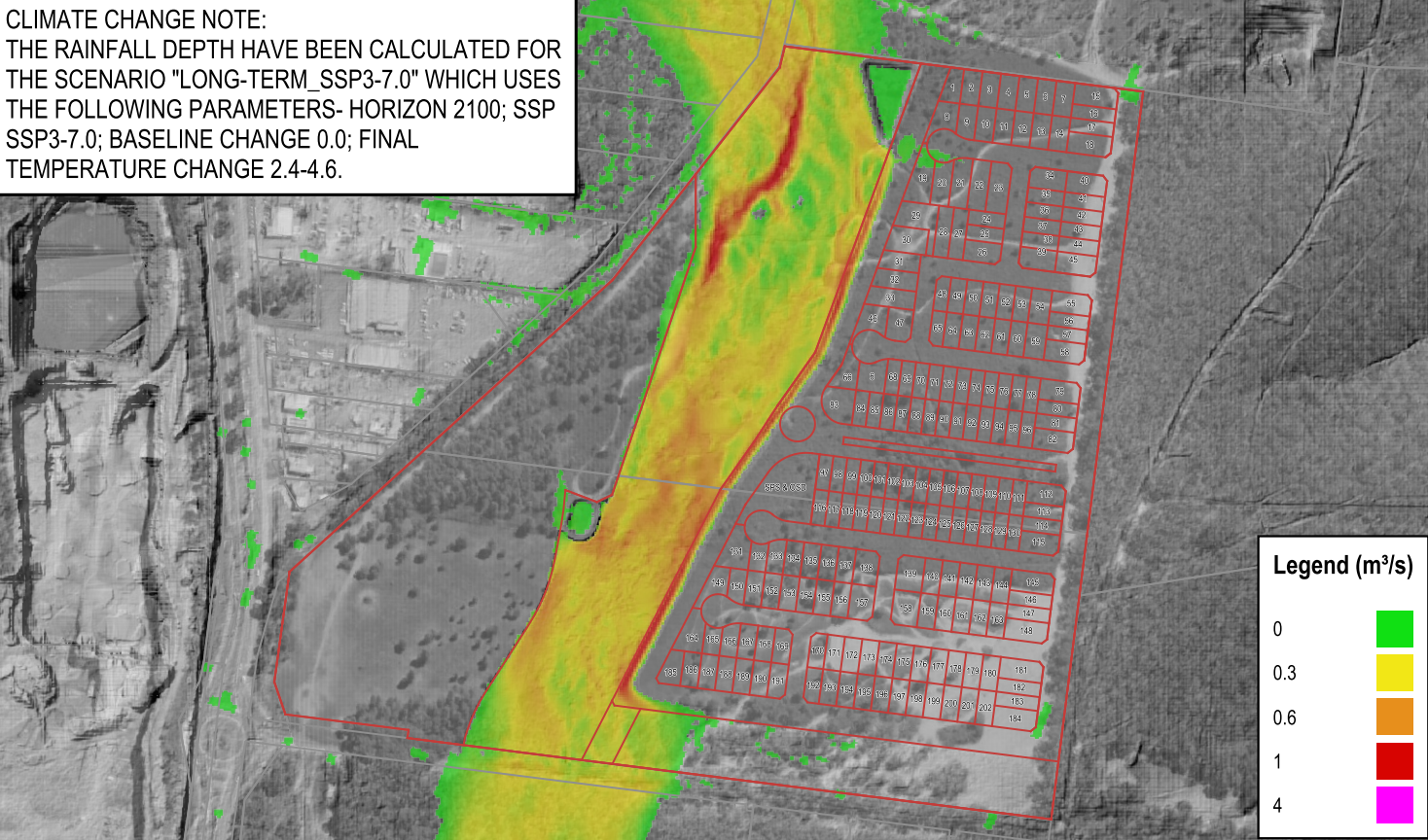
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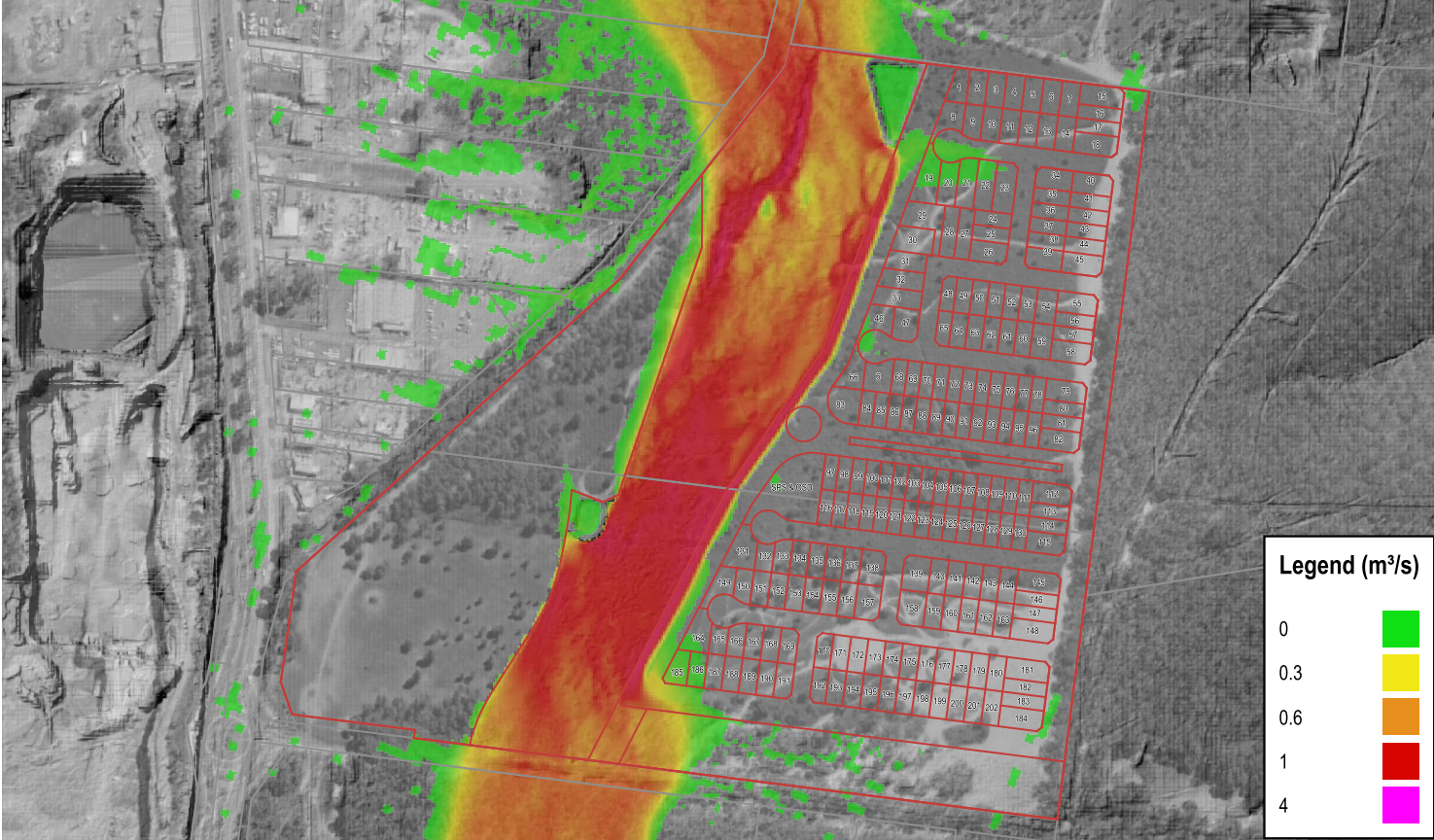
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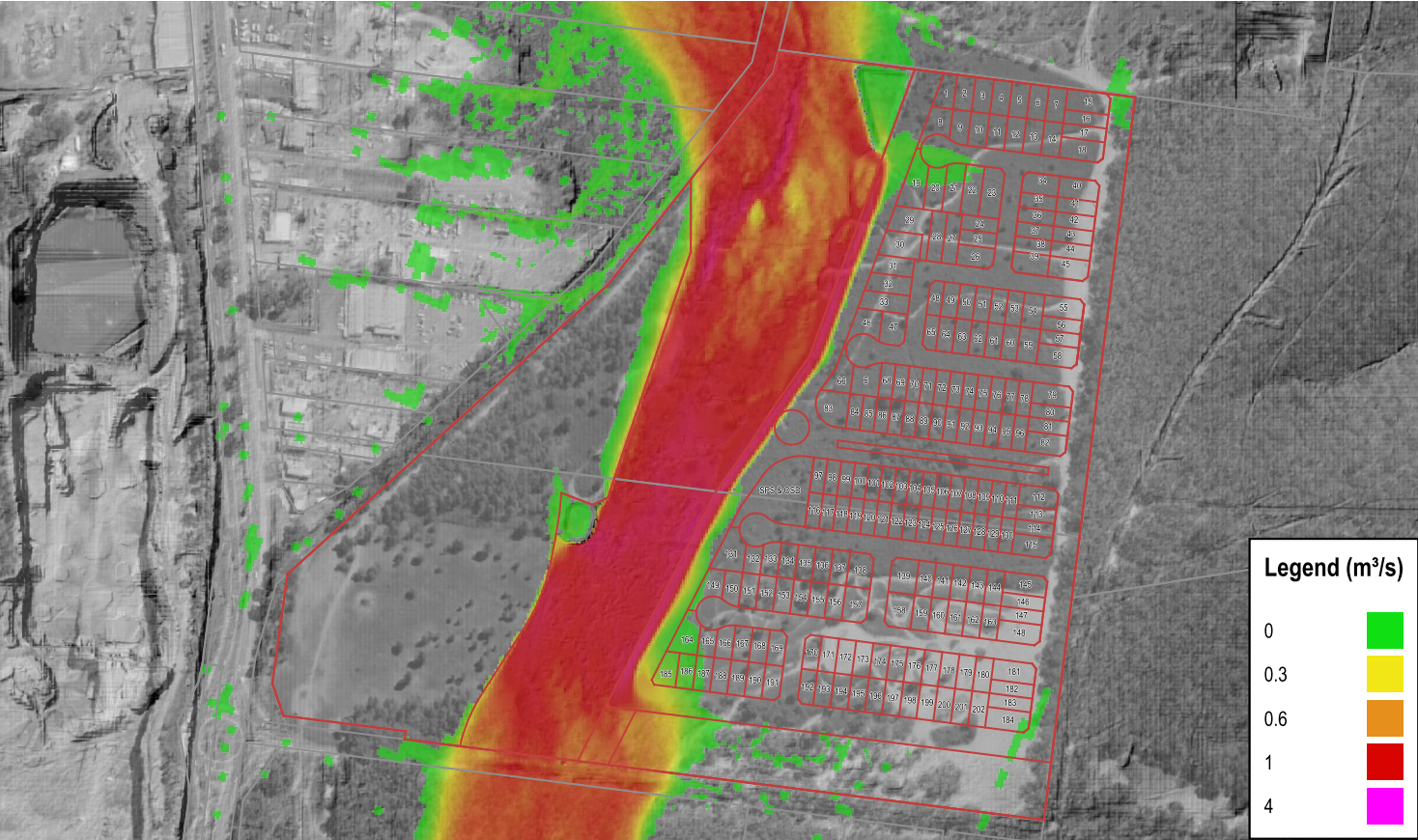
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SSP3-7.0; BASELINE CHANGE 0.0; FINAL
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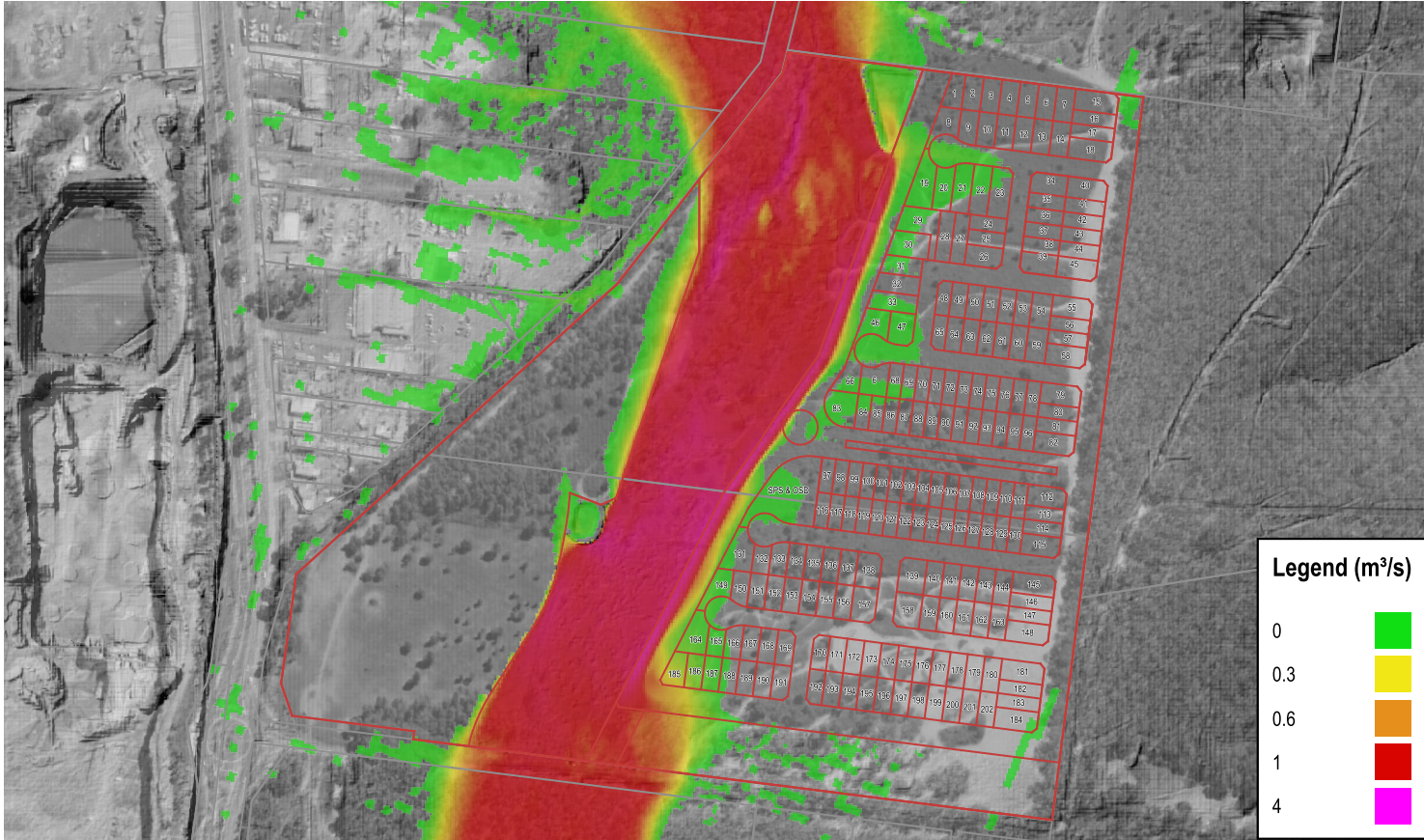
POST DEVELOPMENT CLIMATE CHANGE - 10% AEP - DXV



POST DEVELOPMENT CLIMATE CHANGE - 1% AEP - DXV



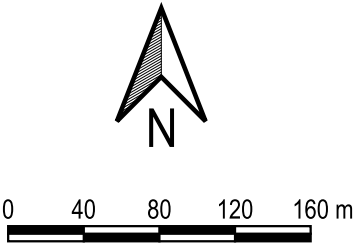
POST DEVELOPMENT CLIMATE CHANGE - 0.2% AEP - DXV



POST DEVELOPMENT CLIMATE CHANGE - 0.05% AEP - DXV

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LOCATION: WARRA WARRA ROAD, SOUTH NOWRA, NSW

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DESCRIPTION: CIVIL ENGINEERING CONCEPT DESIGN

DRAWING: POST-DEVELOPMENT - CLIMATE CHANGE - DxV

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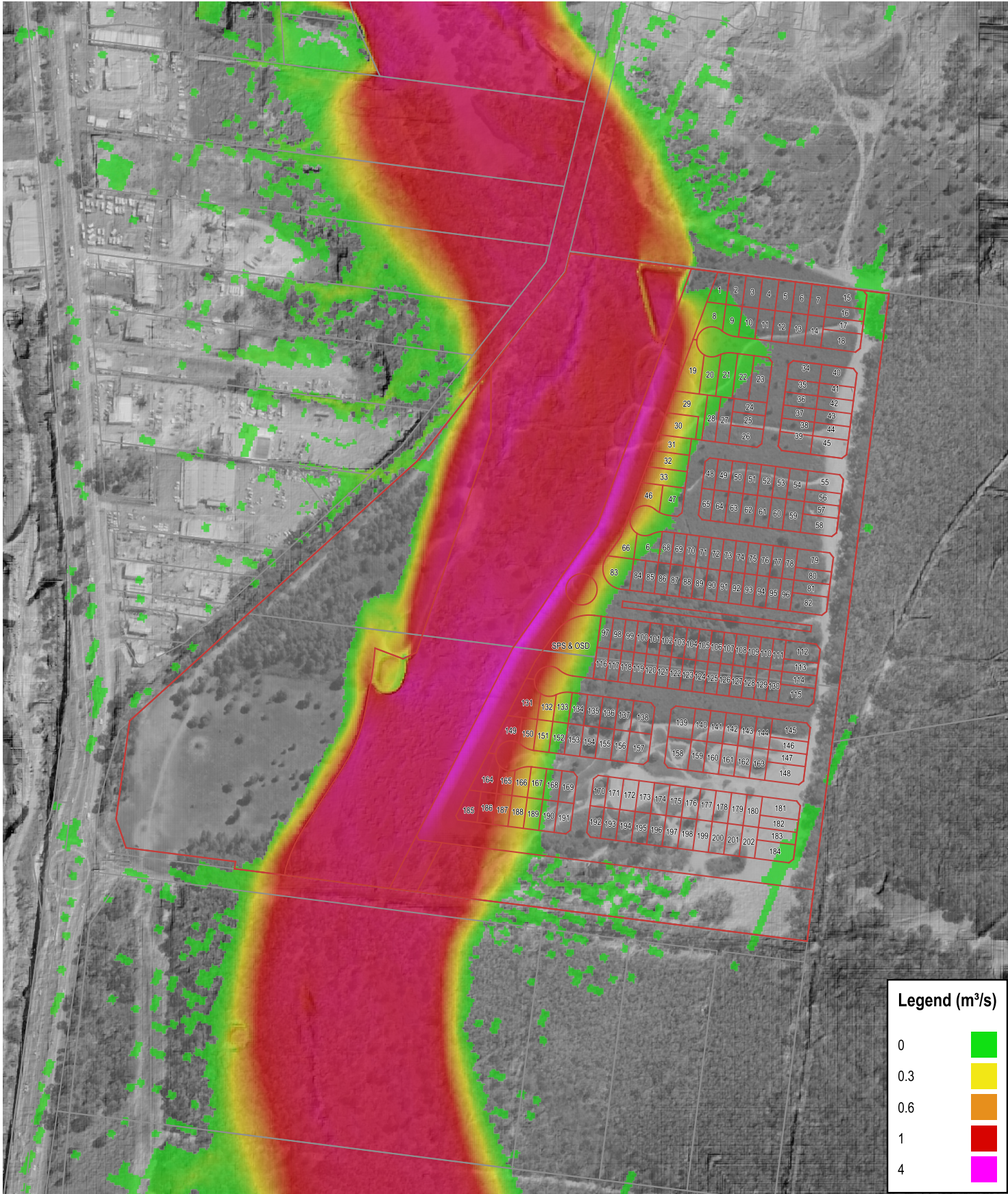
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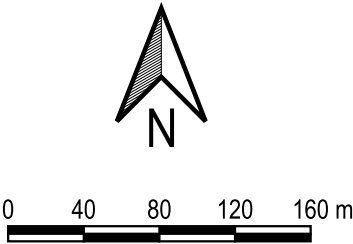
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POST DEVELOPMENT CLIMATE CHANGE - PMF - DXV

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DRAWING: POST-DEVELOPMENT - CLIMATE CHANGE - PMF - D x V

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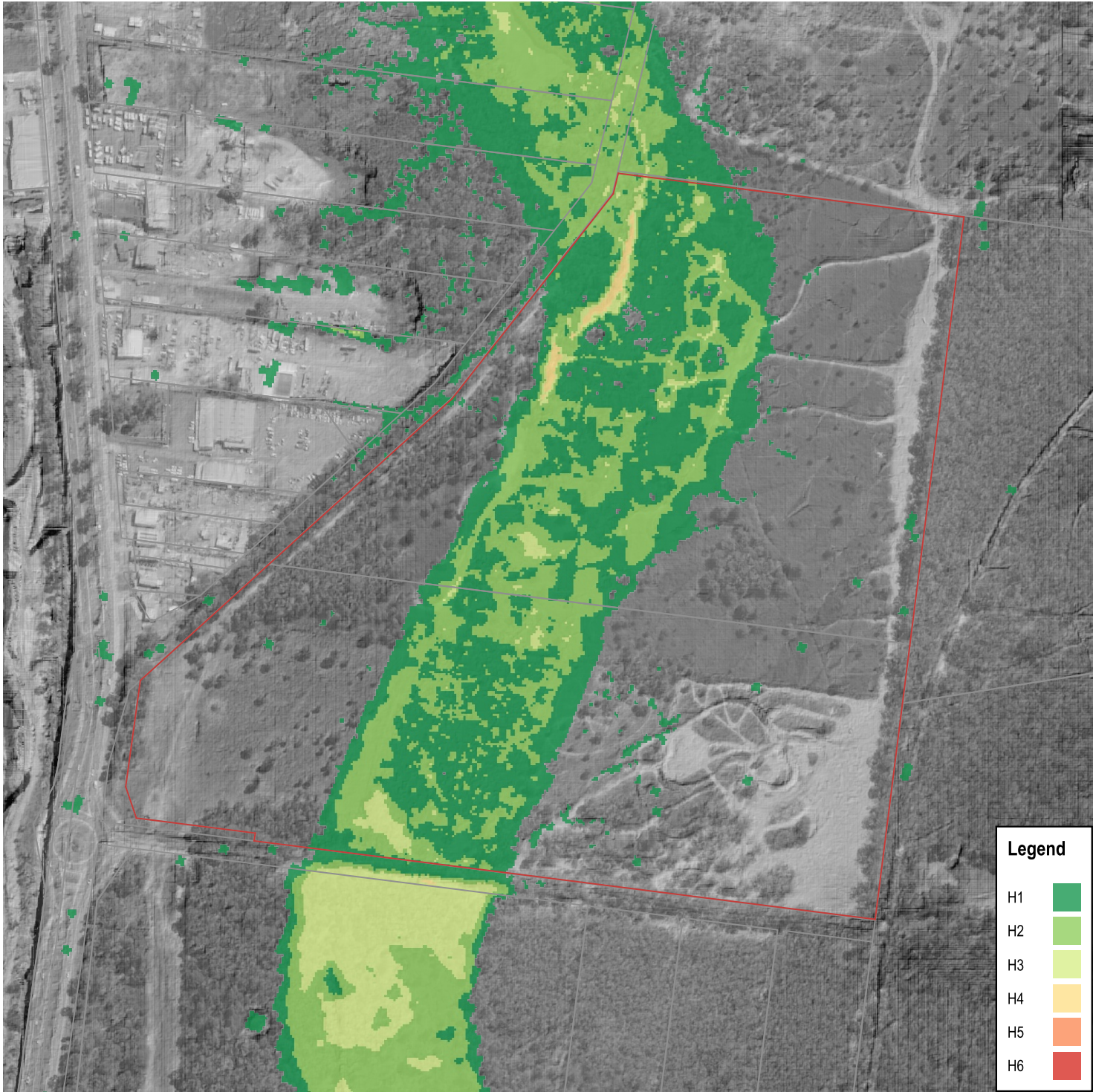
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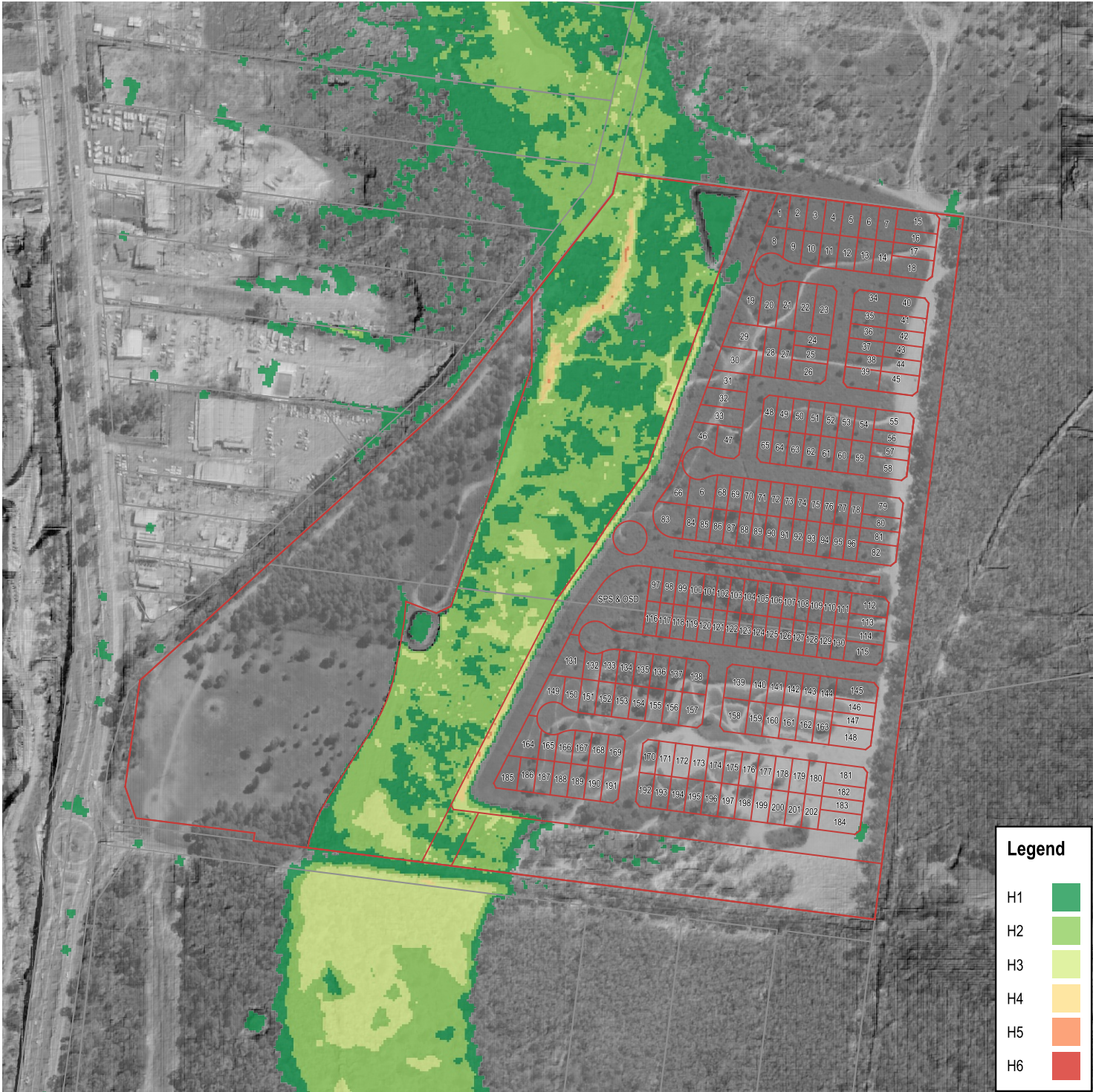
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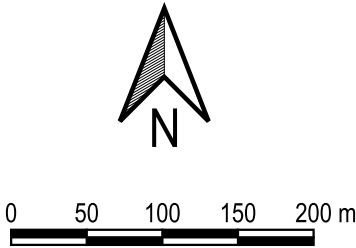
PRE-DEVELOPMENT - 10% AEP - HAZARD



POST-DEVELOPMENT - 10% AEP - HAZARD

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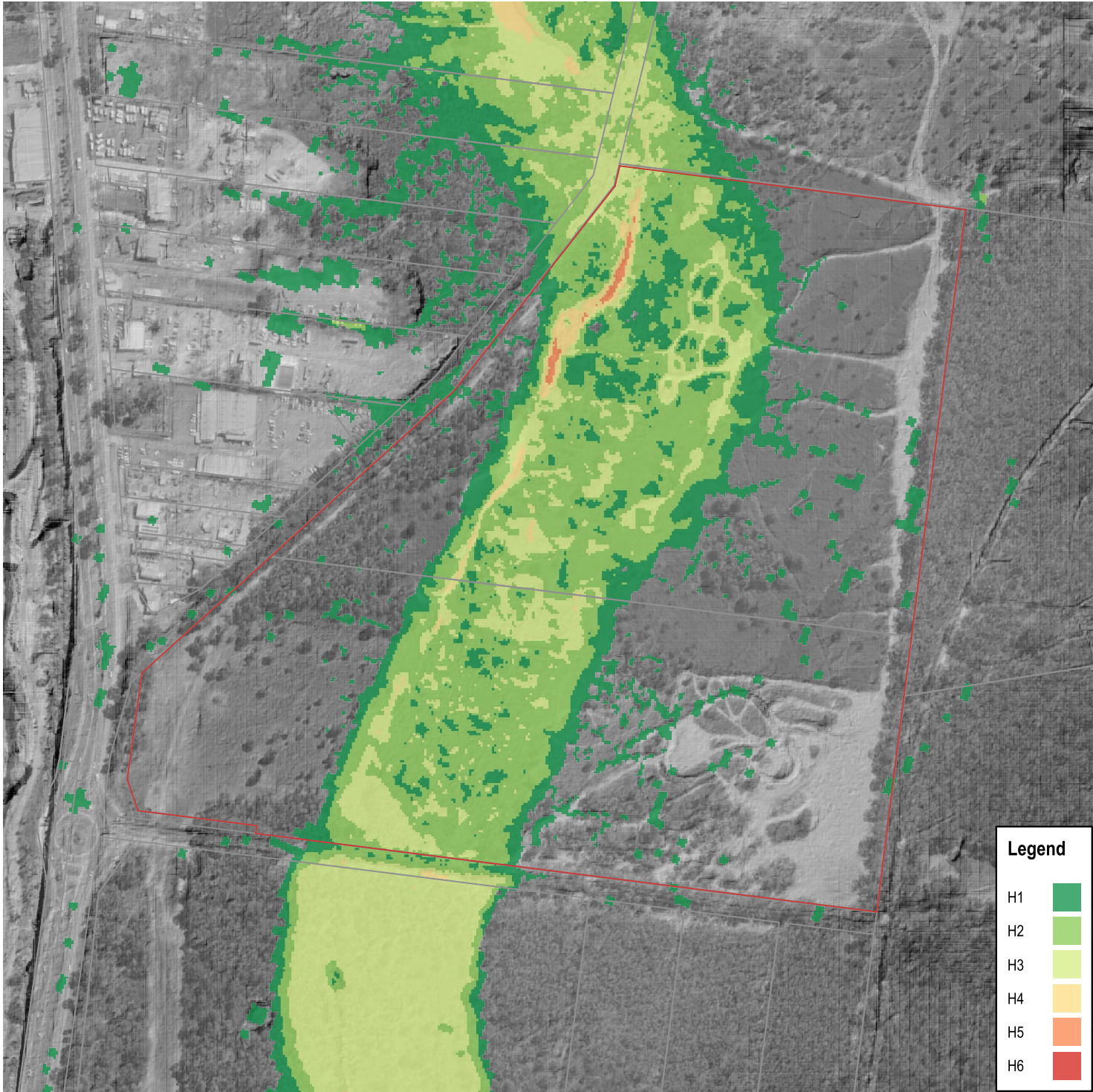
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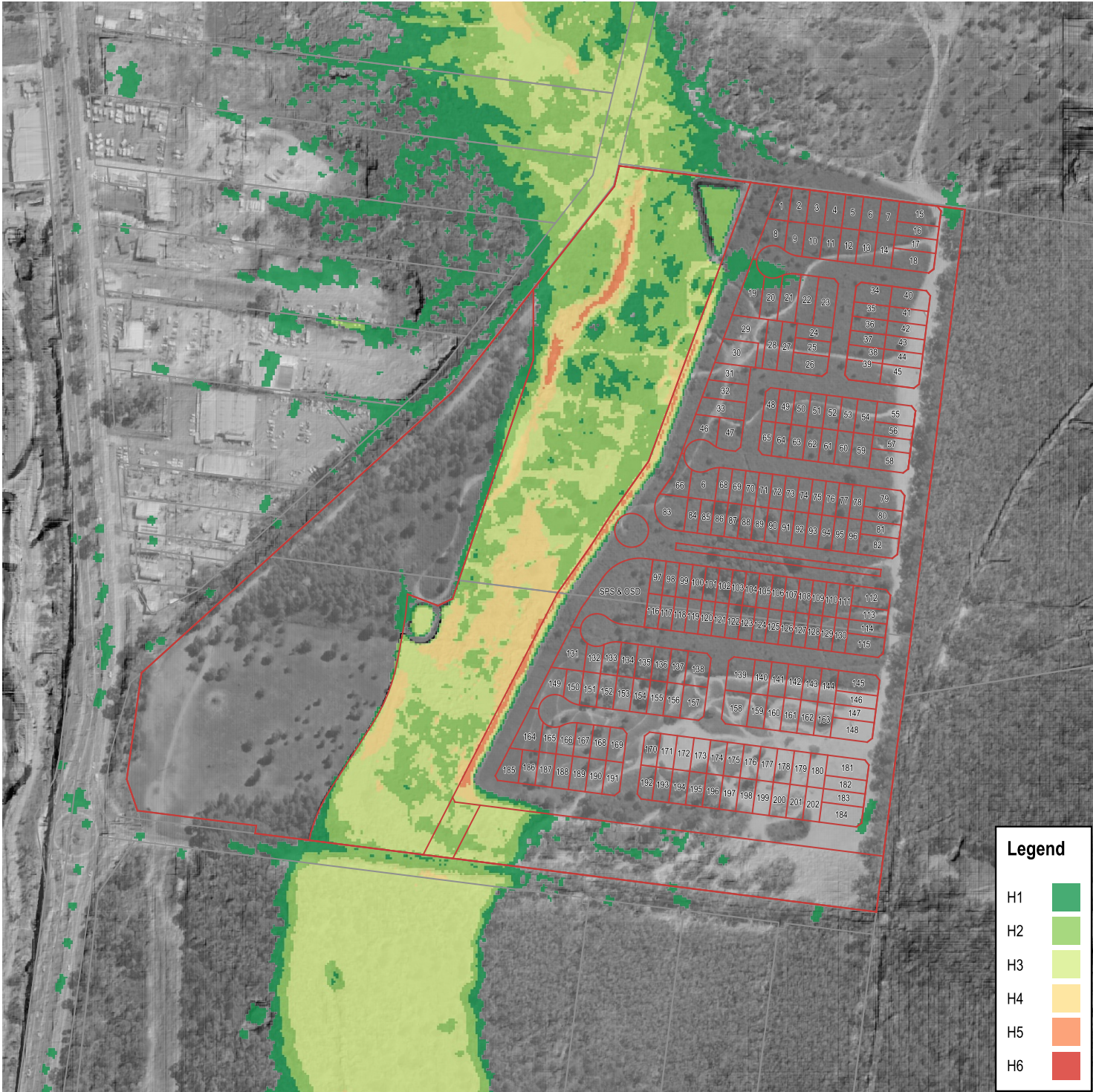
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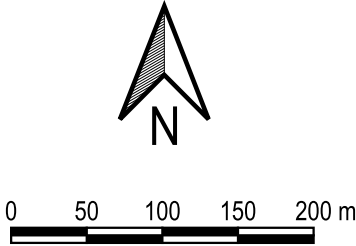
PRE-DEVELOPMENT - 1% AEP - HAZARD



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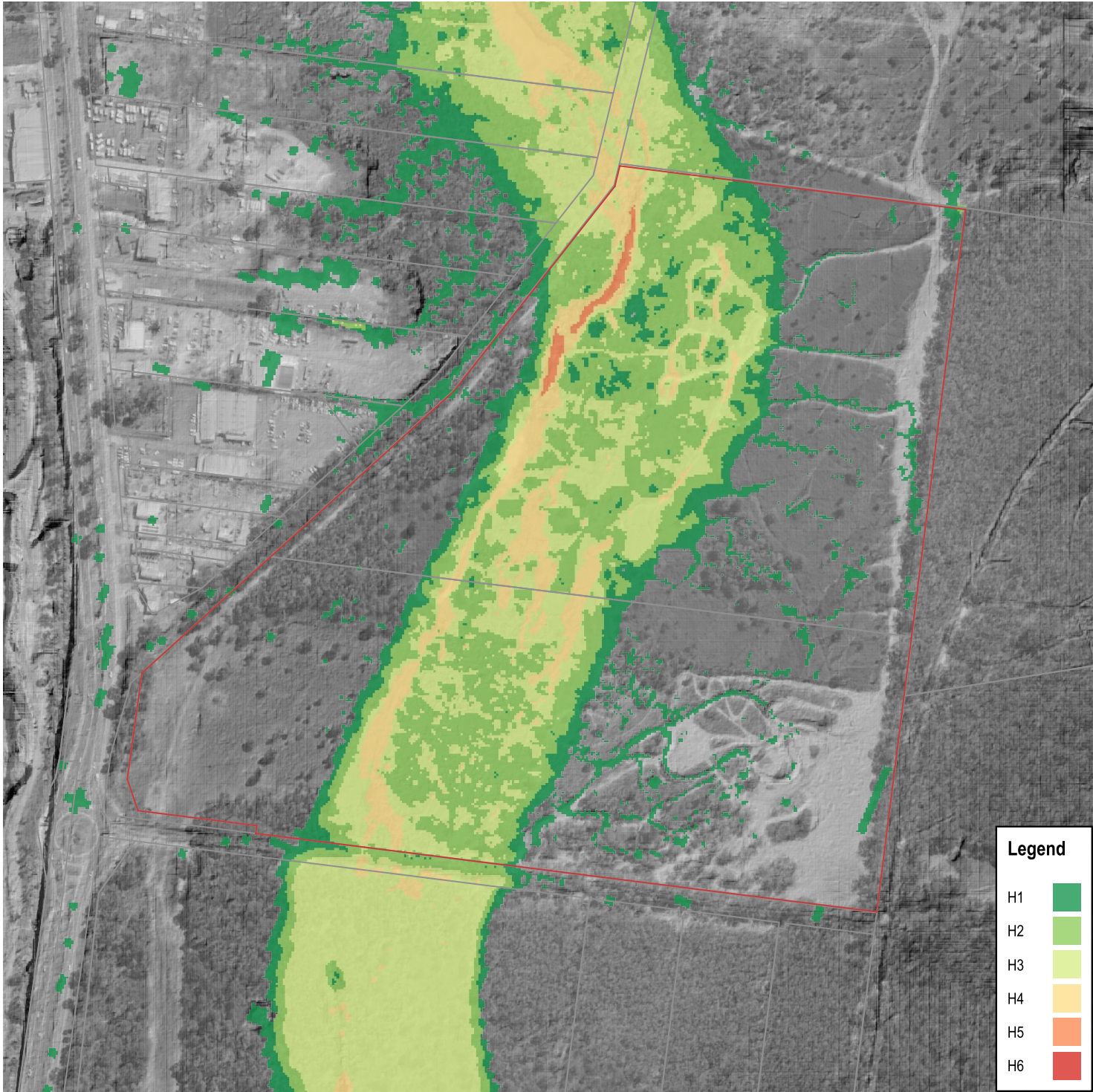
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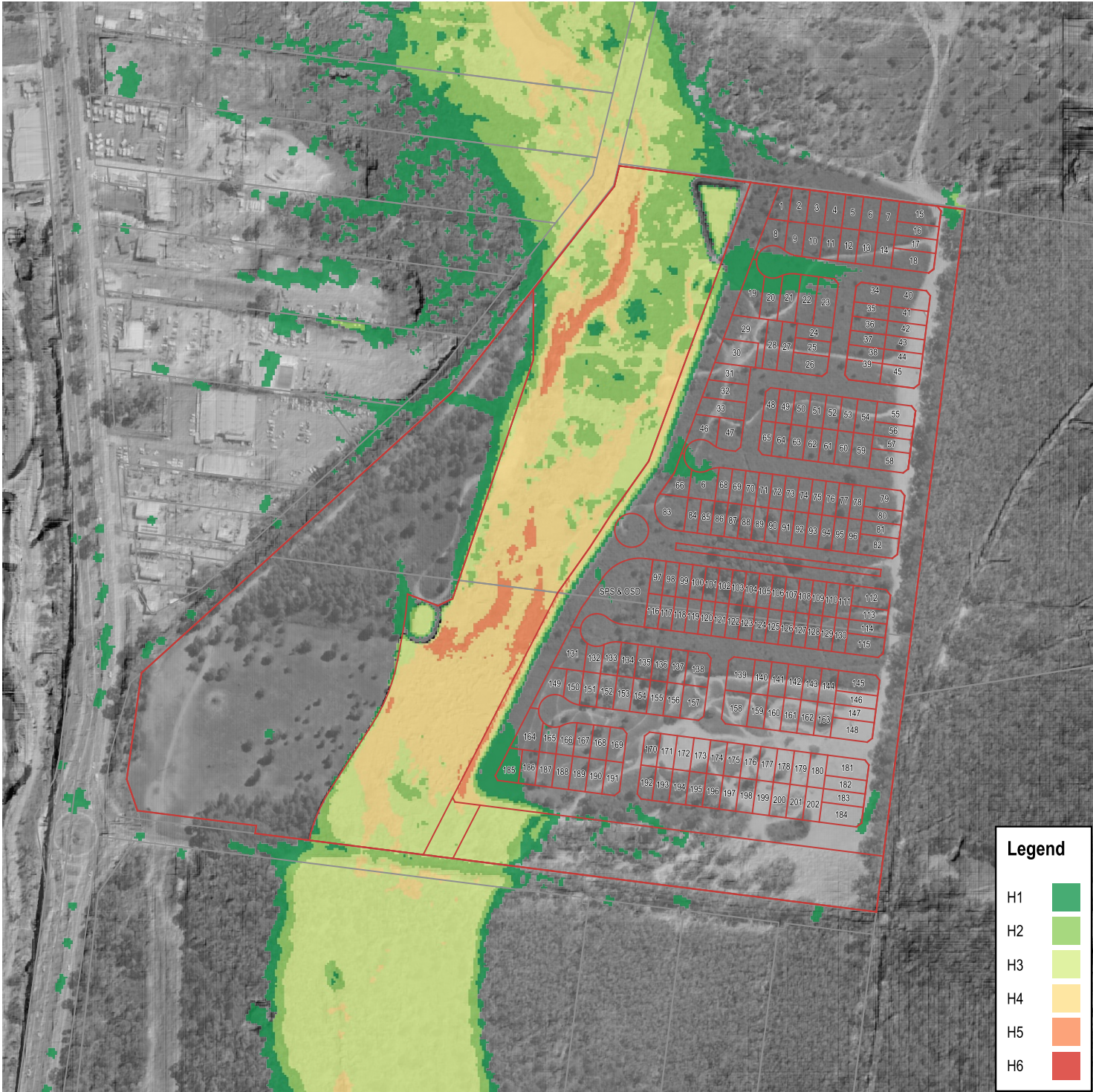
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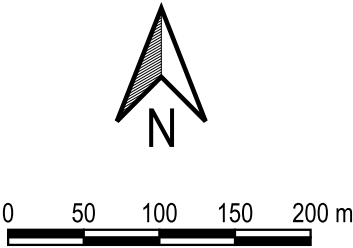
PRE-DEVELOPMENT - 0.2% AEP - HAZARD



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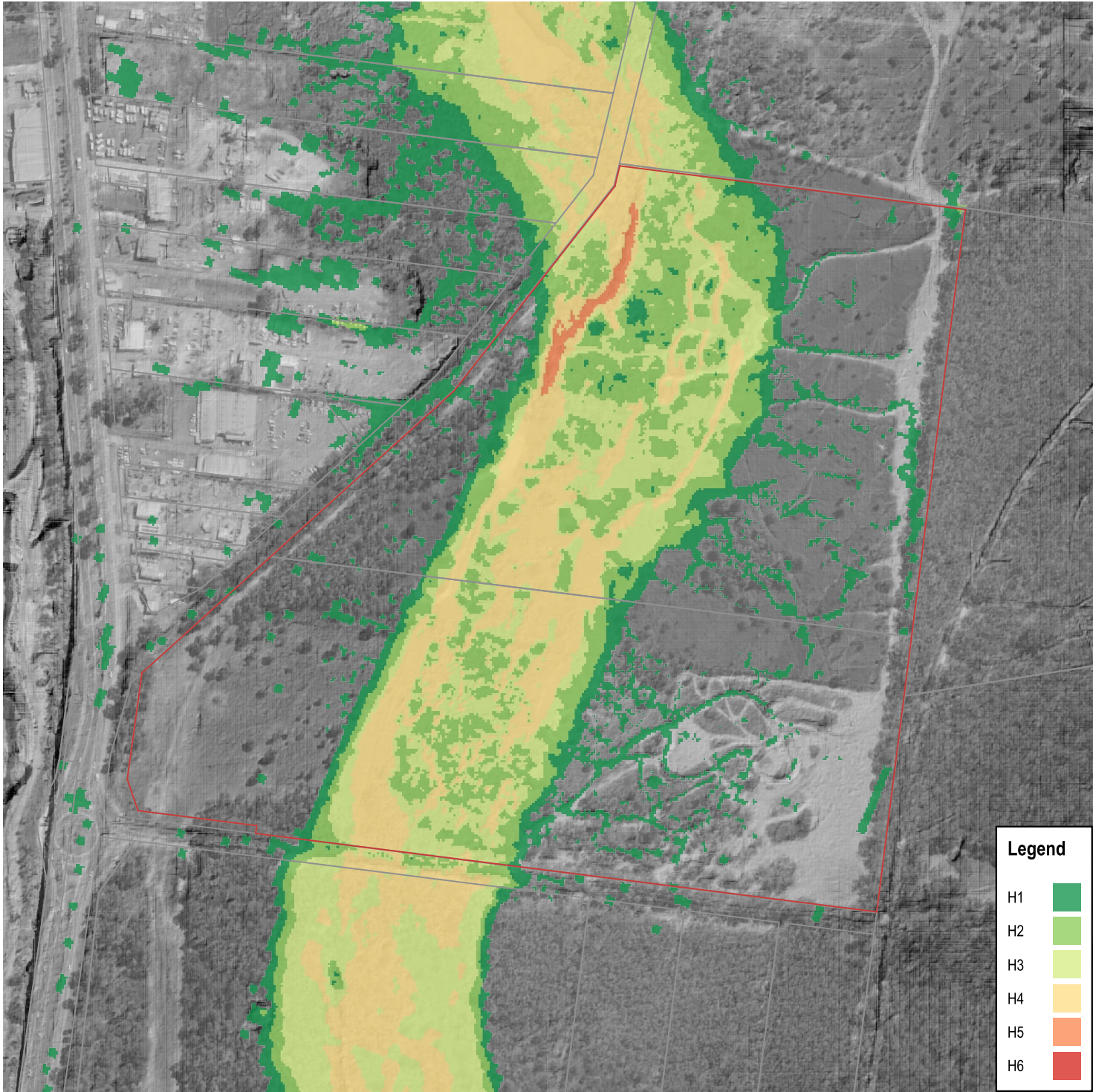
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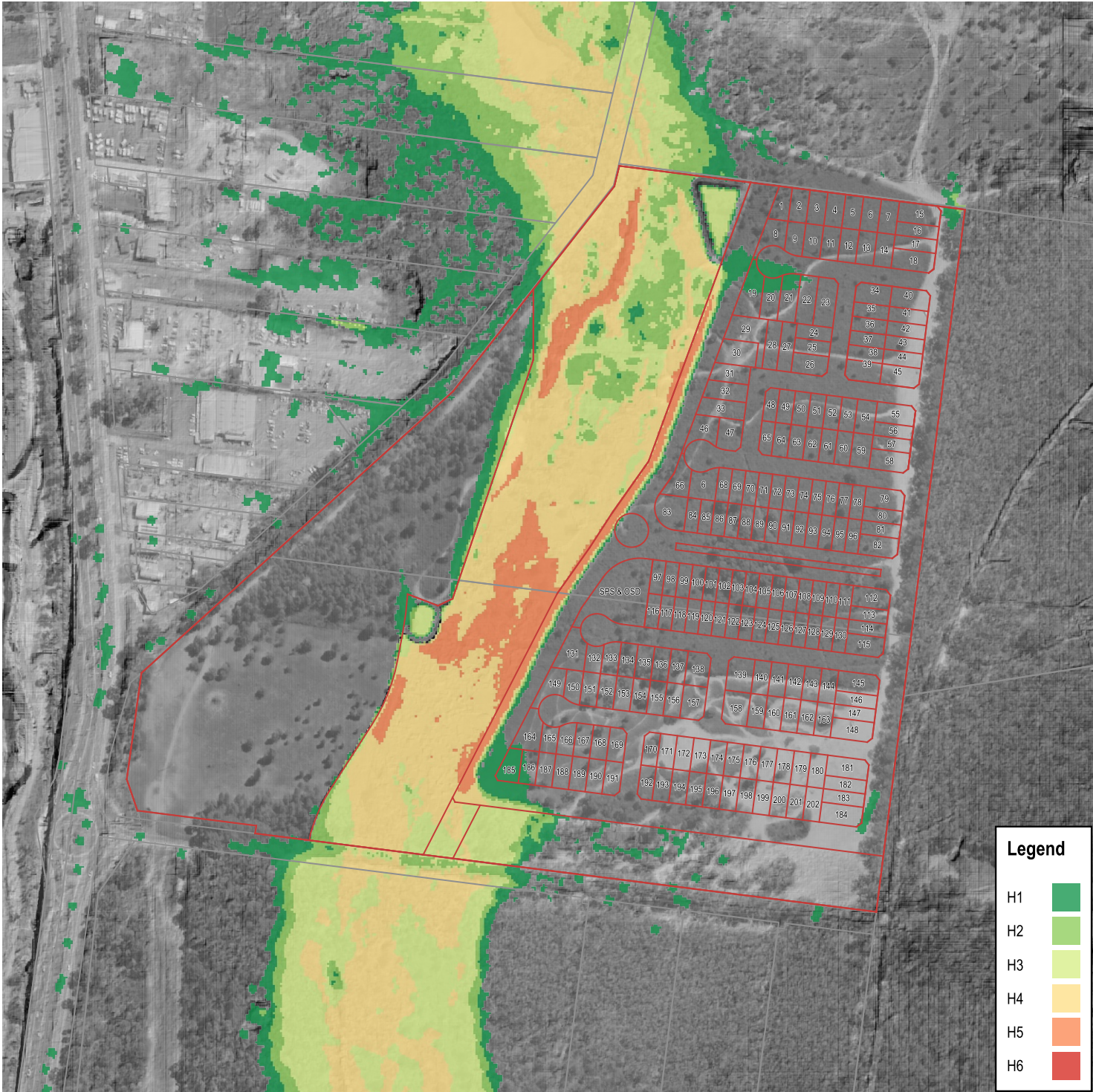
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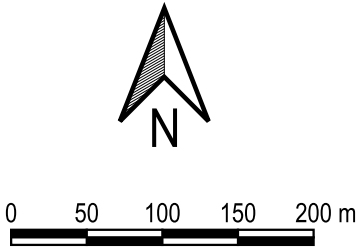
PRE-DEVELOPMENT - 0.05% AEP - HAZARD



POST-DEVELOPMENT - 0.05% AEP - HAZARD

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JOB NAME: EASTERN AND WESTERN PRECINCT DEVELOPMENT

LOCATION: WARRA WARRA ROAD, SOUTH NOWRA, NSW

CLIENT: LYSAND PTY LTD & LYROCK PTY LTD C/- JERVIS BAY TOWN PLANNING

DESCRIPTION: CIVIL ENGINEERING CONCEPT DESIGN

DRAWING: PRE x POST-DEVELOPMENT - 0.05% AEP - HAZARD

PRELIMINARY

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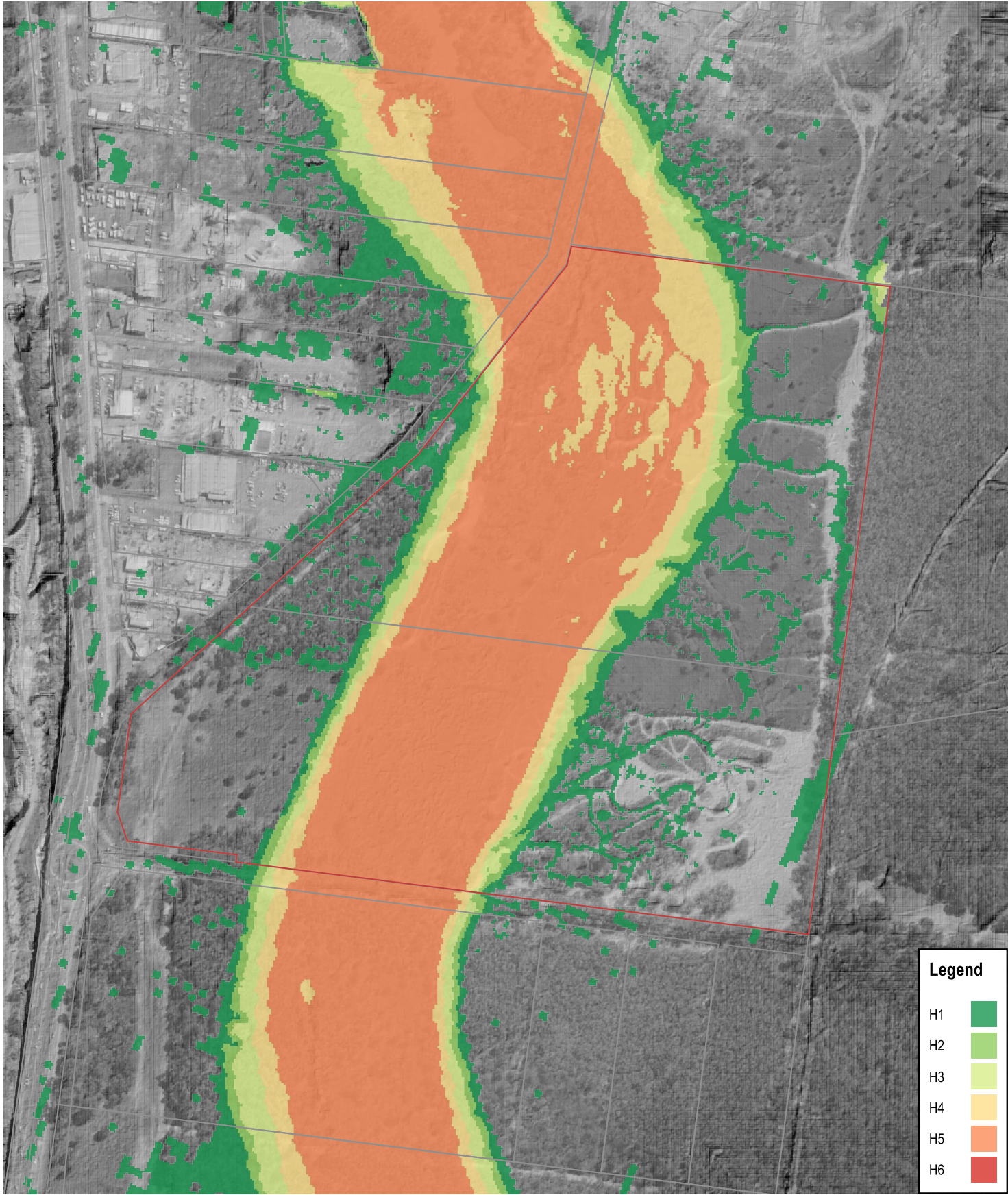
RELEASE DATE: 10 AUGUST 2026

JOB DRAWING NUMBER:

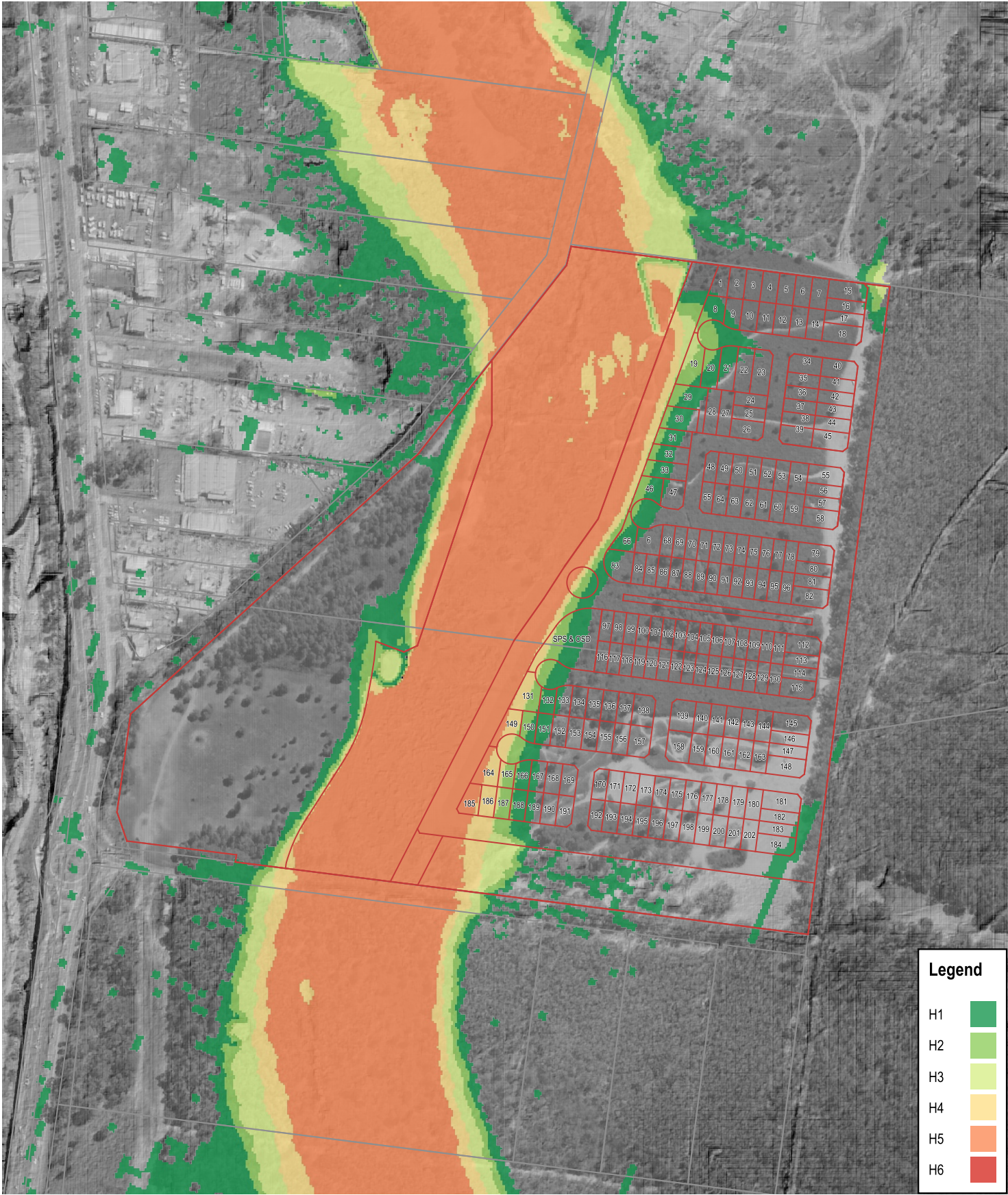
REV:

24047-FM-4031

1



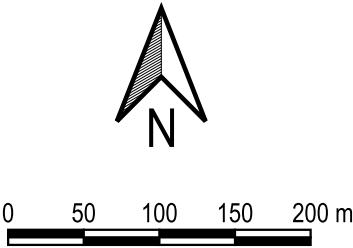
PRE-DEVELOPMENT - PMF - HAZARD



POST-DEVELOPMENT - PMF - HAZARD

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RELEASE DATE: 10 AUGUST 2026

JOB DRAWING NUMBER:

24047-FM-4032

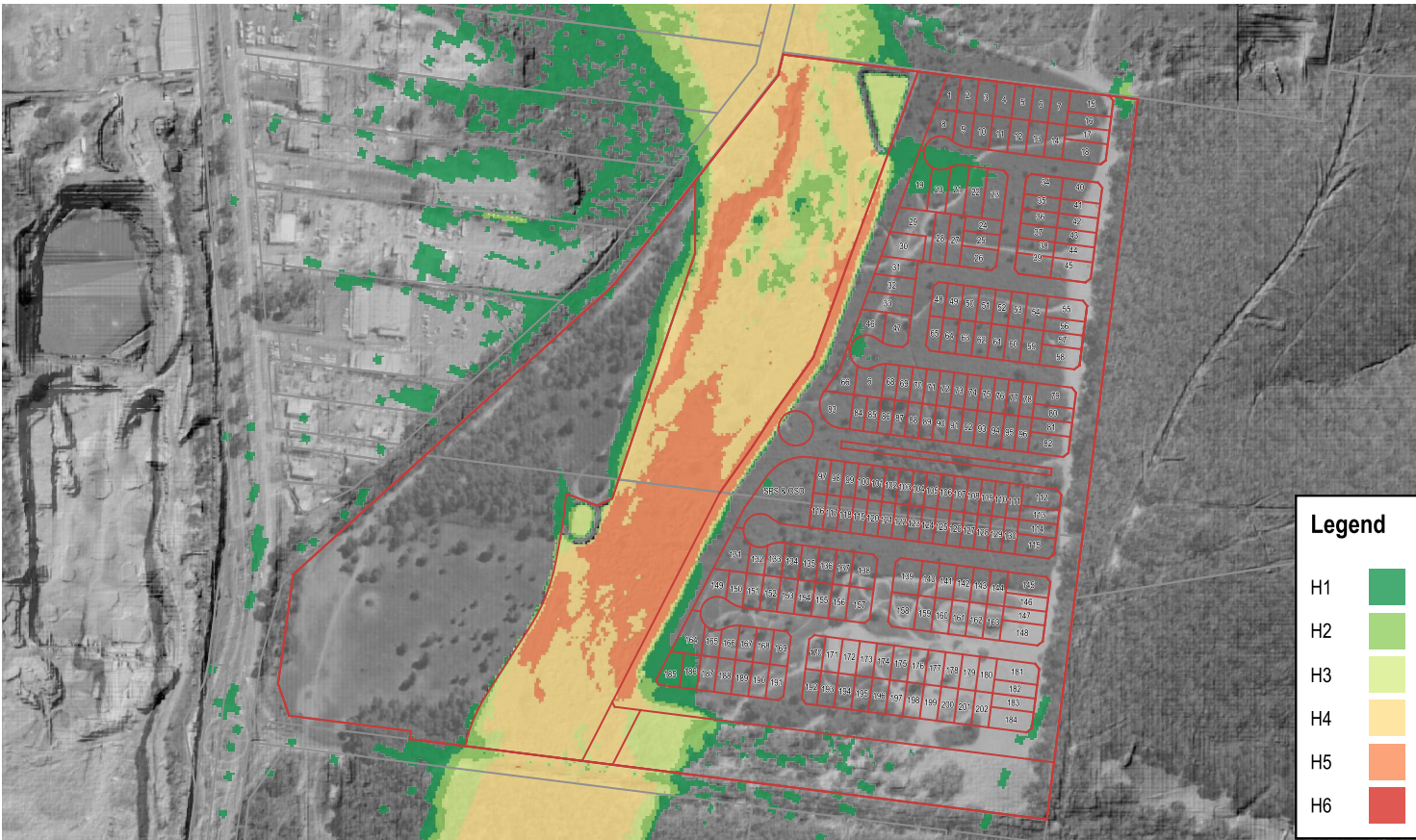
REV:

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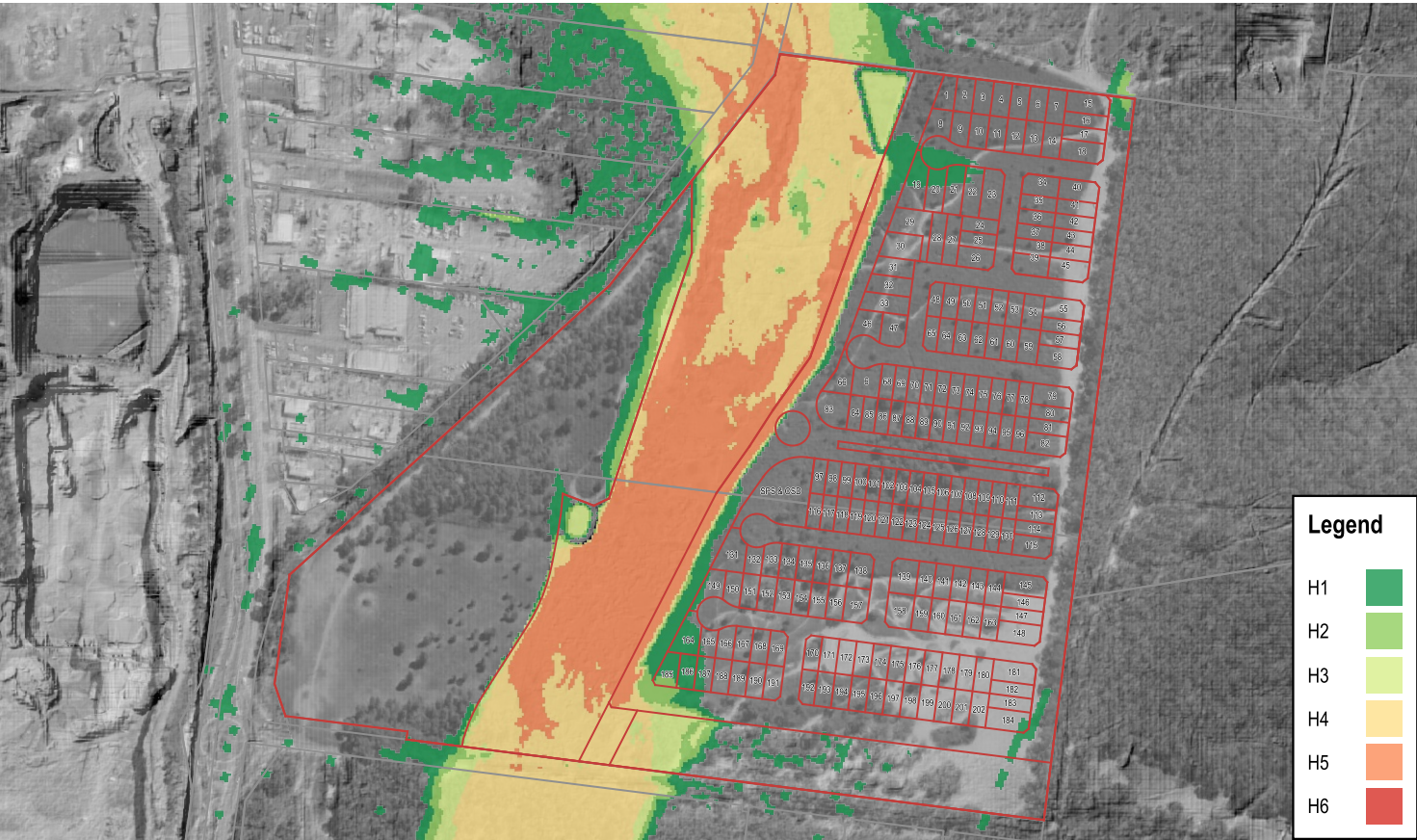
CLIMATE CHANGE NOTE:
THE RAINFALL DEPTH HAVE BEEN CALCULATED FOR
THE SCENARIO "LONG-TERM_SSP3-7.0" WHICH USES
THE FOLLOWING PARAMETERS- HORIZON 2100; SSP
SSP3-7.0; BASELINE CHANGE 0.0; FINAL
TEMPERATURE CHANGE 2.4-4.6.



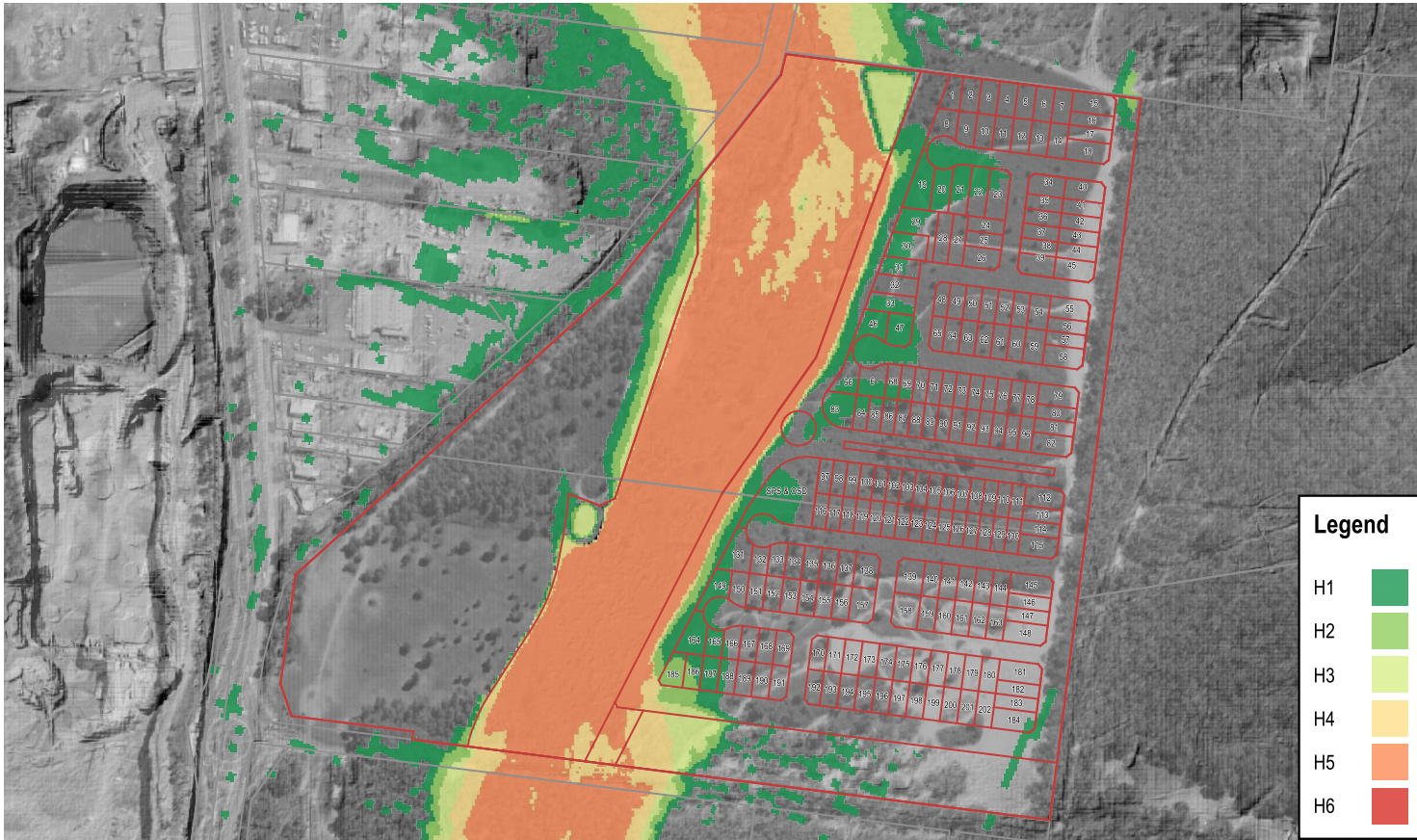
POST DEVELOPMENT CLIMATE CHANGE - 10% AEP - HAZARD



POST DEVELOPMENT CLIMATE CHANGE - 1% AEP - HAZARD



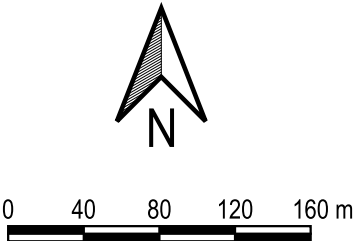
POST DEVELOPMENT CLIMATE CHANGE - 0.2% AEP - HAZARD



POST DEVELOPMENT CLIMATE CHANGE - 0.05% AEP - HAZARD

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DRAWING: POST-DEVELOPMENT - CLIMATE CHANGE - HAZARD

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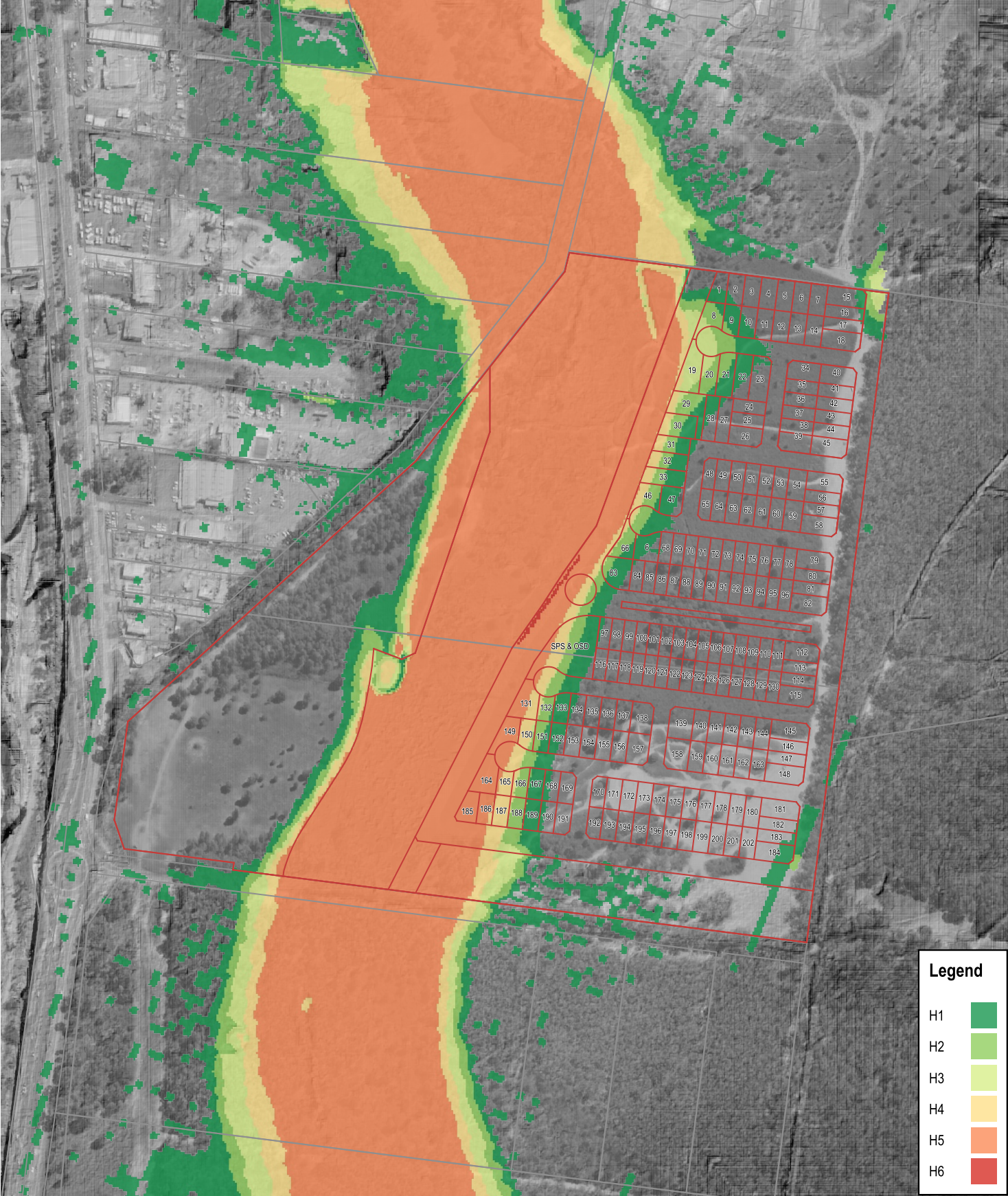
JOB DRAWING NUMBER:

24047-FM-4033

REV:

1

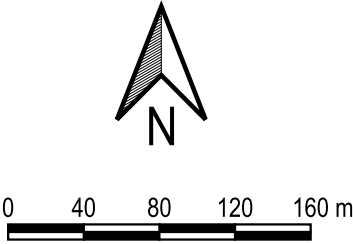
CLIMATE CHANGE NOTE:
THE RAINFALL DEPTH HAVE BEEN CALCULATED FOR THE
SCENARIO "LONG-TERM_SSP3-7.0" WHICH USES THE
FOLLOWING PARAMETERS- HORIZON 2100; SSP SSP3-7.0;
BASELINE CHANGE 0.0; FINAL TEMPERATURE CHANGE 2.4-4.6.



POST DEVELOPMENT CLIMATE CHANGE - PMF - HAZARD

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DESCRIPTION: CIVIL ENGINEERING CONCEPT DESIGN

DRAWING: POST-DEVELOPMENT - CLIMATE CHANGE - PMF - HAZARD

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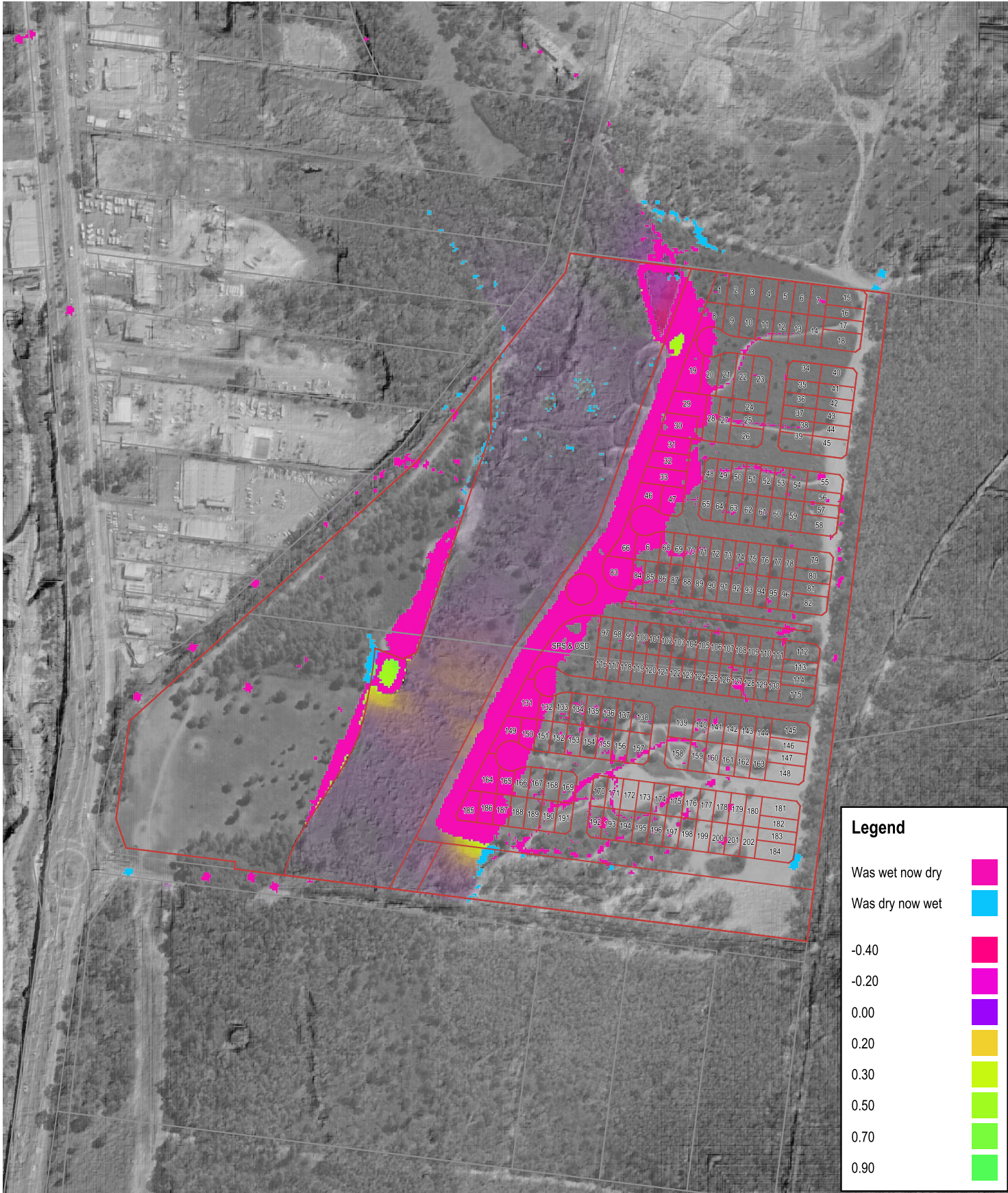
RELEASE DATE: 10 AUGUST 2026

JOB DRAWING NUMBER:

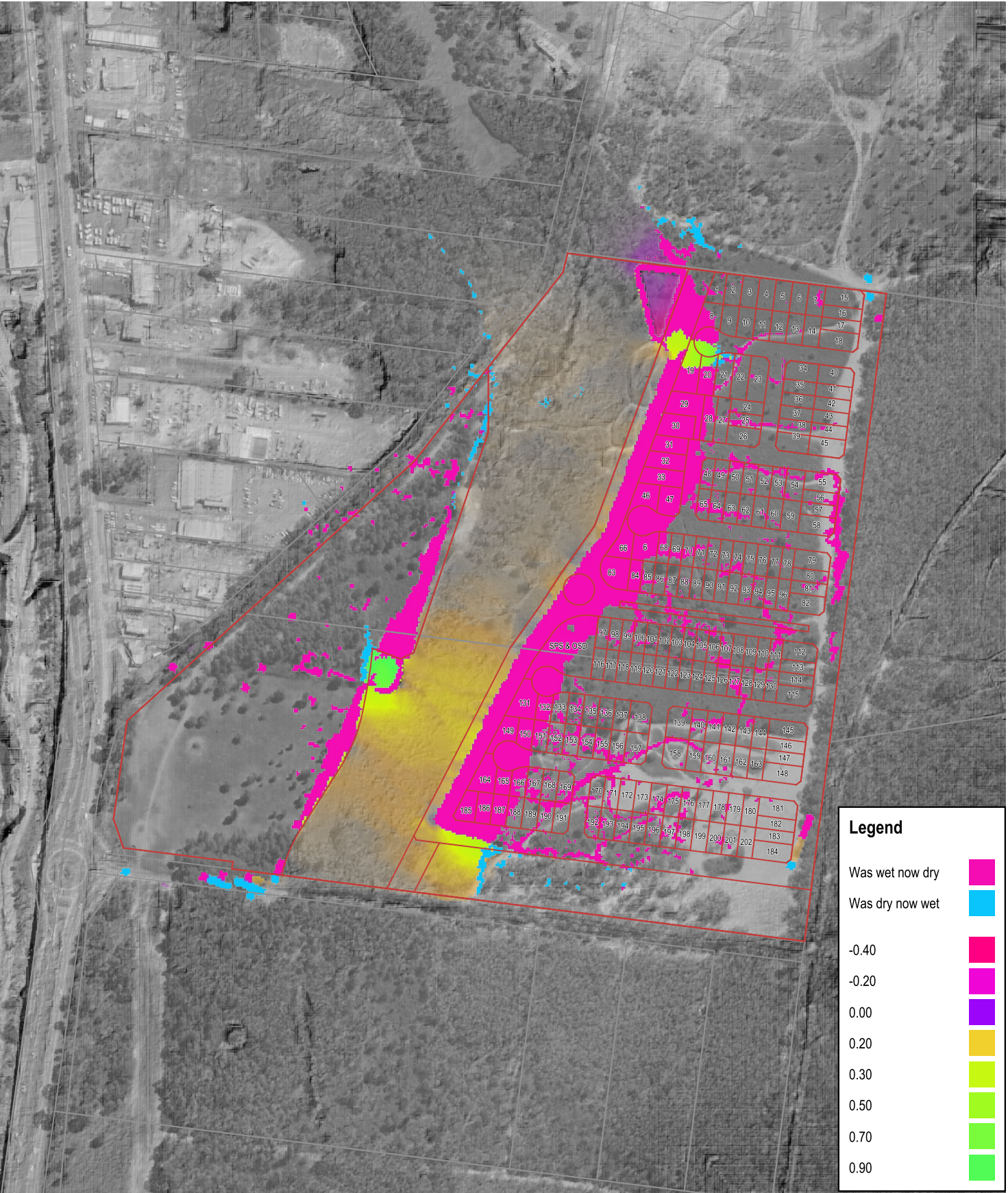
24047-FM-4034

REV:

1



PRE x POST-DEV WSE COMPARISON - 10% AEP



PRE x POST-DEV WSE COMPARISON - 1% AEP

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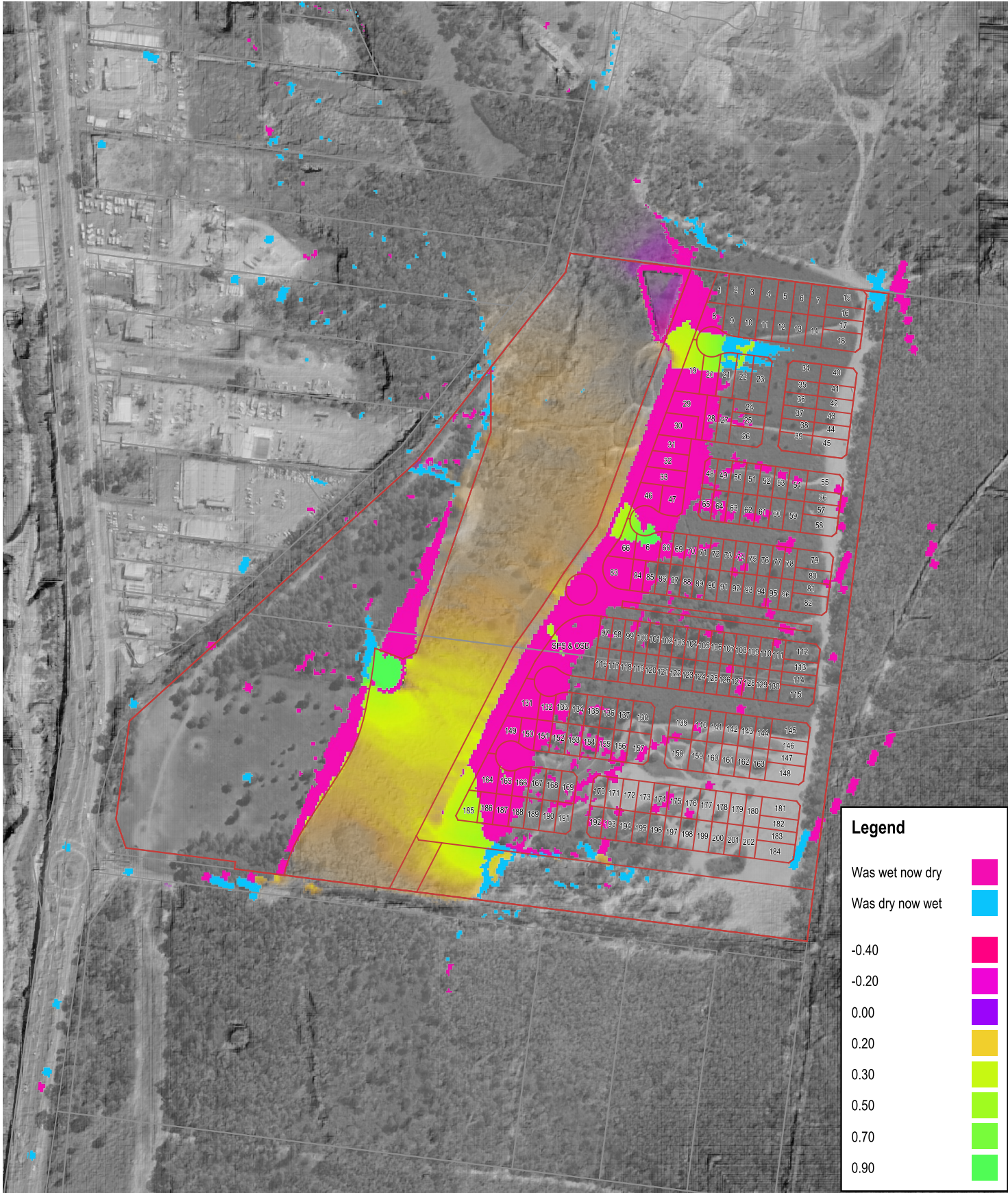
RELEASE DATE: 10 AUGUST 2026

JOB DRAWING NUMBER:

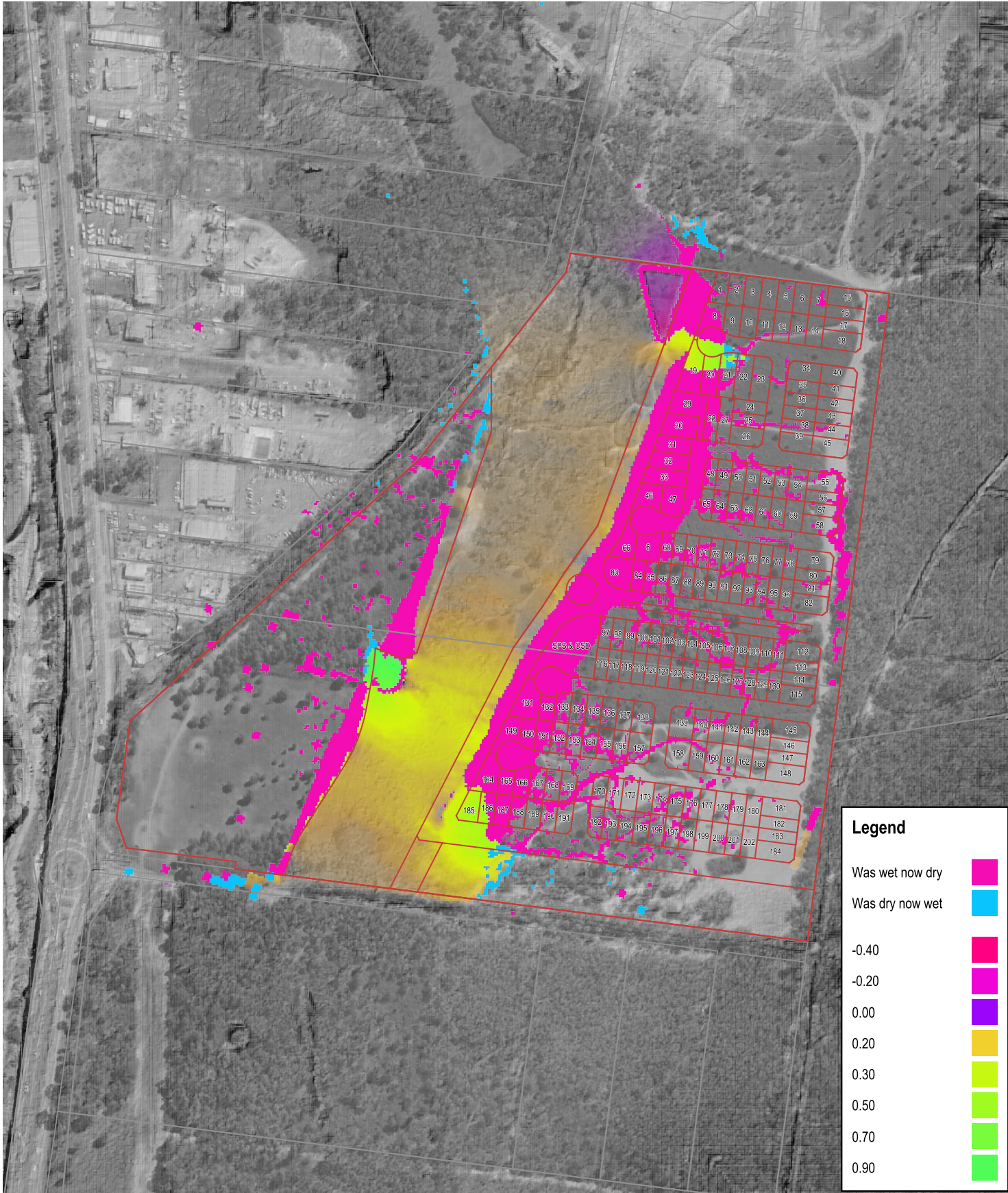
24047-FM-4035

REV:

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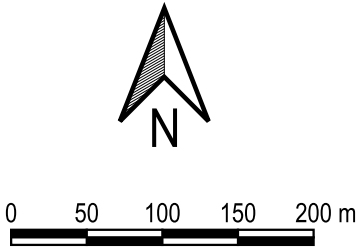
PRE x POST-DEV WSE COMPARISON - 0.2% AEP



PRE x POST-DEV WSE COMPARISON - 0.05% AEP

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DESCRIPTION: CIVIL ENGINEERING CONCEPT DESIGN

DRAWING: PRE x POST-DEV WSE COMPARISON - 0.2% & 0.05% AEP

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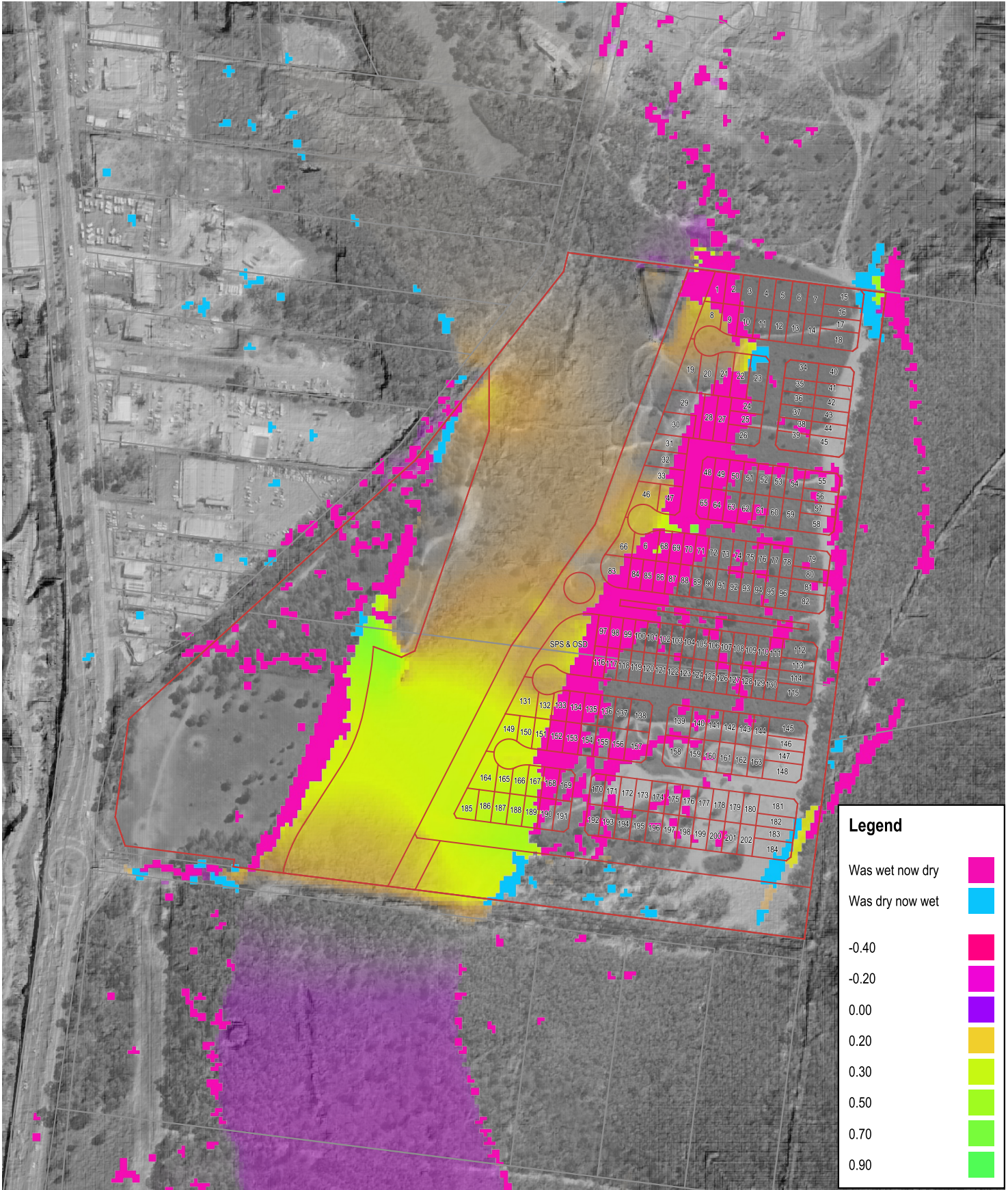
RELEASE DATE: 10 AUGUST 2026

JOB DRAWING NUMBER:

24047-FM-4036

REV:

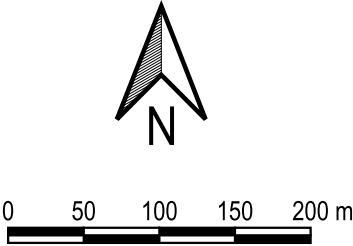
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PRE & POST-DEV WSE COMPARISON - PMF AEP

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DESCRIPTION: CIVIL ENGINEERING CONCEPT DESIGN

DRAWING: WSE COMPARISON PRE & POST DEV - PMF

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

RELEASE DATE: 10 AUGUST 2026

JOB DRAWING NUMBER: REV:

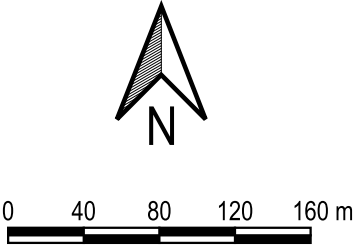
24047-FM-4037 1



POST DEVELOPMENT FLOOD PLANNING AREA (FPA)
(1% AEP + 0.5m FREEBOARD)

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CLIENT: LYSAND PTY LTD & LYROCK PTY LTD C/- JERVIS BAY TOWN PLANNING

DESCRIPTION: CIVIL ENGINEERING CONCEPT DESIGN

DRAWING: POST DEVELOPMENT FLOOD PLANNING AREA

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

RELEASE DATE: 10 AUGUST 2026

JOB DRAWING NUMBER: REV:

24047-FM-4040 1



APPENDIX B:

Rainfall Data

Results - ARR Data Hub
[STARTTXT]

Input Data Information
[INPUTDATA]
Latitude,-34.933000
Longitude,150.602150
[END_INPUTDATA]

River Region
[RIVREG]
Division,South East Coast (NSW)
River Number,15
River Name,Shoalhaven River
[RIVREG_META]
Time Accessed,15 January 2026 10:20AM
Version,2016_v1
[END_RIVREG]

ARF Parameters
[LONGARF]
Zone,SE Coast
a,0.06
b,0.361
c,0.0
d,0.317
e,8.11e-05
f,0.651
g,0.0
h,0.0
i,0.0
[LONGARF_META]
Time Accessed,15 January 2026 10:20AM
Version,2016_v1
[END_LONGARF]

Storm Losses
[LOSSES]
ID,1470.0
Storm Initial Losses (mm),37.0
Storm Continuing Losses (mm/h),4.0
[LOSSES_META]
Time Accessed,15 January 2026 10:20AM
Version,2016_v1
[END_LOSSES]

Temporal Patterns
[TP]
code,SSmainland
Label,Southern Slopes (Vic/NSW)
[TP_META]
Time Accessed,15 January 2026 10:20AM
Version,2016_v2

[END_TP]

Areal Temporal Patterns

[ATP]
code,SSmainland
arealabel,Southern Slopes (Vic/NSW)
[ATP_META]
Time Accessed,15 January 2026 10:20AM
Version,2016_v2
[END_ATP]

Median Preburst Depths and Ratios

[PREBURST]
min (h)\AEP(%),50,20,10,5,2,1
60 (1.0),2.0 (0.074),1.4 (0.038),1.1 (0.023),0.7 (0.013),0.9 (0.014),1.0 (0.014)
90 (1.5),1.0 (0.031),2.4 (0.054),3.3 (0.062),4.2 (0.067),3.7 (0.049),3.3 (0.038)
120 (2.0),4.7 (0.128),4.8 (0.096),4.9 (0.082),5.0 (0.071),3.4 (0.040),2.2 (0.023)
180 (3.0),16.0 (0.360),11.8 (0.193),9.0 (0.123),6.3 (0.074),6.4 (0.062),6.4 (0.055)
360 (6.0),10.8 (0.170),18.2 (0.207),23.1 (0.220),27.7 (0.228),22.9 (0.159),19.3 (0.119)
720 (12.0),6.2 (0.068),13.4 (0.105),18.2 (0.119),22.7 (0.128),31.1 (0.148),37.3 (0.159)
1080 (18.0),3.6 (0.032),9.8 (0.062),13.8 (0.073),17.7 (0.081),28.2 (0.108),36.1 (0.124)
1440 (24.0),1.9 (0.015),6.8 (0.038),10.0 (0.046),13.2 (0.052),19.3 (0.064),23.9 (0.071)
2160 (36.0),0.0 (0.000),2.2 (0.011),3.7 (0.014),5.1 (0.017),7.8 (0.022),9.7 (0.024)
2880 (48.0),0.0 (0.000),0.3 (0.001),0.5 (0.002),0.7 (0.002),1.9 (0.005),2.9 (0.006)
4320 (72.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
[PREBURST_META]
Time Accessed,15 January 2026 10:20AM
Version,2018_v1
Note,Preburst interpolation methods for catchment wide preburst has been slightly altered. Point values remain unchanged.
[END_PREBURST]From preburst class

10% Preburst Depths

[PREBURST10]
min (h)\AEP(%),50,20,10,5,2,1
60 (1.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
90 (1.5),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
120 (2.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
180 (3.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
360 (6.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
720 (12.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
1080 (18.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
1440 (24.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
2160 (36.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
2880 (48.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
4320 (72.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
[PREBURST10_META]
Time Accessed,15 January 2026 10:20AM
Version,2018_v1
Note,Preburst interpolation methods for catchment wide preburst has been slightly altered. Point values remain unchanged.
[END_PREBURST10]From preburst class

25% Preburst Depths

[PREBURST25]

min (h)\AEP(%),50,20,10,5,2,1

60 (1.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
90 (1.5),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
120 (2.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
180 (3.0),0.5 (0.011),0.3 (0.005),0.1 (0.002),0.0 (0.000),0.0 (0.000),0.0 (0.000)
360 (6.0),0.0 (0.000),0.5 (0.006),0.9 (0.008),1.2 (0.010),0.5 (0.004),0.0 (0.000)
720 (12.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
1080 (18.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),5.0 (0.019),8.8 (0.030)
1440 (24.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
2160 (36.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
2880 (48.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)
4320 (72.0),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000),0.0 (0.000)

[PREBURST25_META]

Time Accessed,15 January 2026 10:20AM

Version,2018_v1

Note,Preburst interpolation methods for catchment wide preburst has been slightly altered. Point values remain unchanged.

[END_PREBURST25]From preburst class

75% Preburst Depths

[PREBURST75]

min (h)\AEP(%),50,20,10,5,2,1

60 (1.0),18.5 (0.683),18.5 (0.493),18.5 (0.408),18.5 (0.347),18.5 (0.286),18.5 (0.249)
90 (1.5),17.1 (0.529),33.5 (0.753),44.3 (0.832),54.8 (0.876),42.4 (0.561),33.2 (0.385)
120 (2.0),43.9 (1.195),41.9 (0.830),40.6 (0.672),39.3 (0.556),38.4 (0.451),37.7 (0.390)
180 (3.0),47.5 (1.064),53.7 (0.877),57.8 (0.791),61.7 (0.725),64.3 (0.630),66.2 (0.573)
360 (6.0),45.2 (0.710),66.2 (0.754),80.2 (0.766),93.5 (0.769),95.4 (0.661),96.9 (0.598)
720 (12.0),26.5 (0.291),44.8 (0.351),56.9 (0.372),68.5 (0.385),84.0 (0.400),95.6 (0.407)
1080 (18.0),25.5 (0.230),43.6 (0.278),55.5 (0.294),67.0 (0.305),79.8 (0.306),89.4 (0.307)
1440 (24.0),15.6 (0.124),27.7 (0.155),35.8 (0.165),43.5 (0.172),52.5 (0.175),59.2 (0.176)
2160 (36.0),7.3 (0.050),20.7 (0.098),29.6 (0.116),38.2 (0.127),46.9 (0.130),53.5 (0.132)
2880 (48.0),3.7 (0.023),9.0 (0.039),12.6 (0.044),16.0 (0.048),19.9 (0.050),22.9 (0.051)
4320 (72.0),0.0 (0.000),1.2 (0.005),1.9 (0.006),2.7 (0.007),22.0 (0.048),36.4 (0.071)

[PREBURST75_META]

Time Accessed,15 January 2026 10:20AM

Version,2018_v1

Note,Preburst interpolation methods for catchment wide preburst has been slightly altered. Point values remain unchanged.

[END_PREBURST75]From preburst class

90% Preburst Depths

[PREBURST90]

min (h)\AEP(%),50,20,10,5,2,1

60 (1.0),62.4 (2.300),68.4 (1.820),72.3 (1.598),76.1 (1.429),81.8 (1.264),86.0 (1.160)
90 (1.5),106.0 (3.282),127.4 (2.866),141.6 (2.655),155.2 (2.482),136.1 (1.800),121.7 (1.410)
120 (2.0),111.2 (3.026),126.0 (2.496),135.8 (2.248),145.2 (2.055),135.6 (1.594),128.4 (1.326)
180 (3.0),107.1 (2.401),109.1 (1.782),110.3 (1.511),111.6 (1.311),125.7 (1.233),136.3 (1.181)
360 (6.0),85.5 (1.343),116.6 (1.328),137.3 (1.311),157.0 (1.292),170.9 (1.184),181.3 (1.119)
720 (12.0),70.1 (0.769),96.2 (0.754),113.5 (0.743),130.1 (0.732),161.5 (0.769),185.0 (0.788)
1080 (18.0),71.0 (0.641),92.3 (0.588),106.4 (0.564),119.9 (0.545),148.5 (0.570),170.0 (0.584)
1440 (24.0),62.5 (0.498),74.2 (0.414),81.9 (0.378),89.3 (0.352),100.8 (0.335),109.5 (0.326)
2160 (36.0),47.8 (0.328),61.2 (0.290),70.0 (0.273),78.5 (0.260),93.9 (0.261),105.4 (0.261)
2880 (48.0),19.2 (0.120),36.5 (0.157),47.9 (0.169),58.9 (0.176),73.4 (0.183),84.3 (0.186)

4320 (72.0),9.7 (0.055),18.8 (0.073),24.8 (0.078),30.5 (0.081),78.4 (0.172),114.3 (0.221)

[PREBURST90_META]

Time Accessed,15 January 2026 10:20AM

Version,2018_v1

Note,Preburst interpolation methods for catchment wide preburst has been slightly altered. Point values remain unchanged.

[END_PREBURST90]From preburst class

Climate Change Factors

[CCF]

[SSP1-2.6]

,<1 hour,1.5 Hours,2 Hours,3 Hours,4.5 Hours,6 Hours,9 Hours,12 Hours,18 Hours,>24 Hours

2030,1.18,1.17,1.16,1.14,1.13,1.12,1.12,1.11,1.1,1.1

2040,1.21,1.19,1.17,1.16,1.15,1.14,1.13,1.12,1.11,1.11

2050,1.22,1.2,1.18,1.17,1.15,1.15,1.14,1.13,1.12,1.11

2060,1.23,1.21,1.2,1.18,1.17,1.16,1.15,1.14,1.13,1.12

2070,1.24,1.22,1.2,1.18,1.17,1.16,1.15,1.14,1.13,1.12

2080,1.23,1.21,1.2,1.18,1.17,1.16,1.15,1.14,1.13,1.12

2090,1.23,1.21,1.2,1.18,1.17,1.16,1.15,1.14,1.13,1.12

2100,1.22,1.2,1.19,1.17,1.16,1.15,1.14,1.13,1.12,1.12

[END_SSP1-2.6]

[SSP2-4.5]

,<1 hour,1.5 Hours,2 Hours,3 Hours,4.5 Hours,6 Hours,9 Hours,12 Hours,18 Hours,>24 Hours

2030,1.18,1.17,1.16,1.14,1.13,1.12,1.12,1.11,1.1,1.1

2040,1.22,1.2,1.19,1.17,1.16,1.15,1.14,1.13,1.12,1.12

2050,1.27,1.24,1.23,1.21,1.19,1.18,1.17,1.16,1.15,1.14

2060,1.3,1.27,1.25,1.23,1.21,1.2,1.19,1.18,1.16,1.16

2070,1.33,1.3,1.28,1.26,1.24,1.22,1.21,1.19,1.18,1.17

2080,1.37,1.33,1.31,1.28,1.26,1.24,1.22,1.21,1.2,1.19

2090,1.4,1.36,1.34,1.31,1.28,1.26,1.24,1.23,1.21,1.2

2100,1.41,1.37,1.35,1.32,1.29,1.27,1.25,1.24,1.22,1.21

[END_SSP2-4.5]

[SSP3-7.0]

,<1 hour,1.5 Hours,2 Hours,3 Hours,4.5 Hours,6 Hours,9 Hours,12 Hours,18 Hours,>24 Hours

2030,1.18,1.17,1.16,1.14,1.13,1.12,1.12,1.11,1.1,1.1

2040,1.23,1.21,1.2,1.18,1.17,1.16,1.15,1.14,1.13,1.12

2050,1.29,1.26,1.24,1.22,1.2,1.19,1.18,1.17,1.16,1.15

2060,1.35,1.32,1.3,1.27,1.25,1.23,1.22,1.2,1.19,1.18

2070,1.42,1.38,1.35,1.32,1.29,1.28,1.26,1.24,1.22,1.21

2080,1.5,1.45,1.42,1.38,1.35,1.33,1.3,1.28,1.26,1.25

2090,1.59,1.53,1.49,1.44,1.4,1.38,1.35,1.33,1.3,1.29

2100,1.66,1.59,1.55,1.5,1.45,1.42,1.39,1.37,1.34,1.32

[END_SSP3-7.0]

[SSP5-8.5]

,<1 hour,1.5 Hours,2 Hours,3 Hours,4.5 Hours,6 Hours,9 Hours,12 Hours,18 Hours,>24 Hours

2030,1.2,1.18,1.17,1.16,1.14,1.13,1.13,1.12,1.11,1.11

2040,1.26,1.24,1.22,1.2,1.18,1.17,1.16,1.15,1.14,1.14

2050,1.34,1.31,1.29,1.26,1.24,1.23,1.21,1.2,1.18,1.18

2060,1.42,1.38,1.35,1.32,1.29,1.28,1.26,1.24,1.22,1.21

2070,1.52,1.47,1.43,1.4,1.36,1.34,1.31,1.29,1.27,1.26

2080,1.63,1.57,1.52,1.48,1.43,1.4,1.37,1.35,1.33,1.31

2090,1.77,1.69,1.64,1.58,1.52,1.49,1.45,1.42,1.39,1.37

2100,1.86,1.77,1.71,1.64,1.58,1.54,1.5,1.47,1.43,1.41

[END_SSP5-8.5]

[Climate_Change_INITIAL_LOSS]
,Losses SSP1-2.6,Losses SSP2-4.5,Losses SSP3-7.0,Losses SSP5-8.5
2030,1.05,1.05,1.05,1.05
2040,1.05,1.06,1.06,1.07
2050,1.06,1.07,1.07,1.08
2060,1.06,1.07,1.09,1.1
2070,1.06,1.08,1.1,1.12
2080,1.06,1.09,1.12,1.14
2090,1.06,1.09,1.13,1.17
2100,1.06,1.1,1.15,1.19

[END_Climate_Change_INITIAL_LOSS]
[Climate_Change_CONTINUING_LOSS]
,Losses SSP1-2.6,Losses SSP2-4.5,Losses SSP3-7.0,Losses SSP5-8.5
2030,1.1,1.1,1.1,1.11
2040,1.12,1.12,1.13,1.14
2050,1.12,1.15,1.16,1.18
2060,1.13,1.17,1.19,1.23
2070,1.13,1.18,1.23,1.28
2080,1.13,1.2,1.27,1.33
2090,1.13,1.21,1.31,1.39
2100,1.12,1.22,1.34,1.44

[END_Climate_Change_CONTINUING_LOSS]
[TEMPERATURE_CHANGES]
,SSP1-2.6,SSP2-4.5,SSP3-7.0,SSP5-8.5
2030,1.2,1.2,1.2,1.3
2040,1.3,1.4,1.5,1.6
2050,1.4,1.7,1.8,2.1
2060,1.5,1.9,2.2,2.5
2070,1.5,2.1,2.5,3.0
2080,1.5,2.2,2.9,3.5
2090,1.5,2.4,3.3,4.1
2100,1.4,2.5,3.6,4.5
[END_TEMPERATURE_CHANGES]

[CCF_META]
Time Accessed,15 January 2026 10:20AM
Version,2024_v1
Note,Updated climate change factors for IFD Initial loss and continuing loss based on IPCC AR6 temperature increases from the updated Climate Change Considerations (Book 1: Chapter 6) in ARR (Version 4.2). ARR recommends the use of Current and near-term (2030 midpoint). Medium-term (2050 midpoint) and Long-term (2090 midpoint)
[END_CCF]

Probability Neutral Burst Initial Loss
[BURSTIL]
min (h)\AEP(%),50.0,20.0,10.0,5.0,2.0,1.0
60 (1.0),25.2,13.0,12.6,13.1,12.3,11.6
90 (1.5),23.4,12.0,10.8,10.1,10.1,8.8
120 (2.0),18.8,11.4,11.7,11.9,11.1,8.8
180 (3.0),16.7,11.0,12.0,11.5,10.2,7.2
360 (6.0),18.9,12.2,11.9,10.8,10.3,4.7
720 (12.0),23.9,17.3,15.6,14.1,12.5,3.0
1080 (18.0),25.4,19.4,18.2,14.5,14.9,3.8
1440 (24.0),28.7,23.2,21.3,19.7,20.8,8.0
2160 (36.0),32.1,26.2,25.2,23.4,21.8,10.4

2880 (48.0),36.2,30.5,29.3,32.7,25.0,17.4
4320 (72.0),39.1,35.0,34.1,36.4,29.1,12.3
[BURSTIL_META]
Time Accessed,15 January 2026 10:20AM
Version,2018_v1

Note,As this point is in NSW the advice provided on losses and pre-burst on the NSW Specific Tab of the ARR Data Hub is to be considered. In NSW losses are derived considering a hierarchy of approaches depending on the available loss information. Probability neutral burst initial loss values for NSW are to be used in place of the standard initial loss and pre-burst as per the losses hierarchy.

[END_BURSTIL]
Transformational Pre-burst Rainfall
[PREBURST_TRANS]
min (h)\AEP(%),50.0,20.0,10.0,5.0,2.0,1.0
60 (1.0),11.7,23.9,24.3,23.8,24.6,25.3
90 (1.5),13.5,24.9,26.1,26.8,26.8,28.1
120 (2.0),18.1,25.5,25.2,25.0,25.8,28.1
180 (3.0),20.2,25.9,24.9,25.4,26.7,29.7
360 (6.0),18.0,24.7,25.0,26.1,26.6,32.2
720 (12.0),13.0,19.6,21.3,22.8,24.4,33.9
1080 (18.0),11.5,17.5,18.7,22.4,22.0,33.1
1440 (24.0),8.2,13.7,15.6,17.2,16.1,28.9
2160 (36.0),4.8,10.7,11.7,13.5,15.1,26.5
2880 (48.0),0.7,6.4,7.6,4.2,11.9,19.5
4320 (72.0),0.0,1.9,2.8,0.5,7.8,24.6

[PREBURST_TRANS_META]
The tranformational pre-burst is intended for software suppliers in the NSW area and is simply the Initial Loss - Burst Initial Loss. It is not appropriate to use these values if considering a calibrated initial loss.
[END_PREBURST_TRANS]

[ENDTXT]
Temporal Pattern Raw Data
[STARTPATTERNS]

EventID	Duration	TimeStep	Region	AEP	Increments	
5792	10,5	Southern Slopes (mainland)	frequent	51.27,48.73		
5793	10,5	Southern Slopes (mainland)	frequent	57.5,42.5		
5794	10,5	Southern Slopes (mainland)	frequent	58.02,41.98		
5796	10,5	Southern Slopes (mainland)	frequent	66.67,33.33		
5797	10,5	Southern Slopes (mainland)	frequent	55.66,44.34		
5798	10,5	Southern Slopes (mainland)	frequent	66.7,33.3		
5799	10,5	Southern Slopes (mainland)	frequent	33.37,66.63		
5800	10,5	Southern Slopes (mainland)	frequent	66.63,33.37		
5801	10,5	Southern Slopes (mainland)	frequent	46.53,53.47		
5802	10,5	Southern Slopes (mainland)	frequent	43.89,56.11		

5779,10,5,Southern Slopes (mainland),intermediate,61.19,38.81,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5780,10,5,Southern Slopes (mainland),intermediate,58.49,41.51,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5782,10,5,Southern Slopes (mainland),intermediate,56.8,43.2,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5784,10,5,Southern Slopes (mainland),intermediate,55.7,44.3,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5785,10,5,Southern Slopes (mainland),intermediate,66.64,33.36,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5786,10,5,Southern Slopes (mainland),intermediate,48.94,51.06,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5787,10,5,Southern Slopes (mainland),intermediate,49.23,50.77,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5788,10,5,Southern Slopes (mainland),intermediate,57.52,42.48,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5789,10,5,Southern Slopes (mainland),intermediate,29.21,70.79,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5790,10,5,Southern Slopes (mainland),intermediate,46.67,53.33,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5769,10,5,Southern Slopes (mainland),rare,56.71,43.29,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5770,10,5,Southern Slopes (mainland),rare,61.43,38.57,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5771,10,5,Southern Slopes (mainland),rare,53.25,46.75,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5772,10,5,Southern Slopes (mainland),rare,40,60,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5773,10,5,Southern Slopes (mainland),rare,58.1,41.9,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5774,10,5,Southern Slopes (mainland),rare,46.15,53.85,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5775,10,5,Southern Slopes (mainland),rare,59.62,40.38,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5776,10,5,Southern Slopes (mainland),rare,41.35,58.65,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5777,10,5,Southern Slopes (mainland),rare,31.56,68.44,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5778,10,5,Southern Slopes (mainland),rare,38.89,61.11,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5825,15,5,Southern Slopes (mainland),frequent,46.53,30.95,22.52,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5827,15,5,Southern Slopes (mainland),frequent,54.67,24,21.33,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5828,15,5,Southern Slopes (mainland),frequent,57.45,17.37,25.18,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5829,15,5,Southern Slopes (mainland),frequent,23.2,41.15,35.65,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5830,15,5,Southern Slopes (mainland),frequent,35.7,41.53,22.77,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5831,15,5,Southern Slopes (mainland),frequent,30.9,40.54,28.56,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
5832,15,5,Southern Slopes (mainland),frequent,20.28,40.23,39.49,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

5909,60,5,Southern Slopes
(mainland),rare,11.95,15.65,15.1,11.99,8.38,6.83,7.79,6.04,4.43,4.43,4.97,2.44,,,,,,,,,,,,,,,,,,,,,

6026,90,5,Southern Slopes
(mainland),frequent,1.04,1.16,3.27,6.57,7.02,9.94,5.72,5.02,4.32,2.81,2.35,2.35,3.27,8.08,13.45,14.85,6.43,2.35,,,,,,,,,,,,,
6027,90,5,Southern Slopes
(mainland),frequent,0.32,0.32,15.14,13.78,7.57,1.12,1.08,0.79,0.79,0.79,3.19,4.76,1.45,0,0,12.16,29,7.74,,,,,,,,,,,,,
6005,90,5,Southern Slopes
(mainland),intermediate,2.67,12.77,20.74,12.23,7.45,1.6,0.53,0,0.53,1.06,4.26,6.91,6.91,3.72,2.66,2.13,7.45,6.38,,,,,,,,,,,,,
6006,90,5,Southern Slopes
(mainland),intermediate,11.82,14.63,8.02,4.9,7.83,7.68,5.99,4.1,4.61,6.2,6.34,3.48,2.68,2.53,2.45,2.41,1.84,2.49,,,,,,,,,,,,,
6007,90,5,Southern Slopes
(mainland),intermediate,2.31,3.26,13.25,15.08,9.61,6.49,5.68,6.42,0.91,1.79,0,0.91,0,0.91,2.42,8.17,16.9,5.89,,,,,,,,,,,,,
6008,90,5,Southern Slopes
(mainland),intermediate,2.27,12.41,3.57,0.94,0,0.28,1.31,4.07,15.7,12.87,17.07,7.79,0.81,0.53,1.34,3.31,6.75,8.98,,,,,,,,,,,,,
6009,90,5,Southern Slopes
(mainland),intermediate,6.54,7.72,6.31,7.58,5.35,3.75,4.21,5.12,1.91,0.8,1.97,2.23,7.44,10.22,9.76,9.1,3.86,6.13,,,,,,,,,,,,,
6011,90,5,Southern Slopes
(mainland),intermediate,1.73,2.85,4.45,4.93,3.47,4.67,5.75,8.88,9.88,7.47,6.01,7.81,9.48,8.09,5.29,4.13,3.55,1.56,,,,,,,,,,,,,
6012,90,5,Southern Slopes
(mainland),intermediate,6.76,4.29,3.07,3.07,12.27,5.52,7.36,9.2,6.13,6.13,8.59,3.07,1.84,1.84,1.84,2.45,8.59,7.98,,,,,,,,,,,,,
6013,90,5,Southern Slopes
(mainland),intermediate,4.55,1.88,12.44,7.55,8.09,6.42,3.35,8.44,2.33,1.02,2.81,1.05,0.17,0.17,0.09,1.45,17.32,20.87,,,,,
6014,90,5,Southern Slopes
(mainland),intermediate,2.34,2.43,2.49,1,1.58,2.77,5.78,7.29,1,3.28,8.42,14.29,15.23,9.64,12.64,4.83,2.8,2.19,,,,,,,,,,,,,
6015,90,5,Southern Slopes
(mainland),intermediate,2.52,3.55,3.94,3.73,4.16,4.85,4.04,6.07,6.07,2.43,0,0,0,31.34,11.53,7.19,5.76,2.82,,,,,,,,,,,,,
5863,90,5,Southern Slopes
(mainland),rare,2.3,2.51,5.4,10.54,5.72,3.79,8.64,9.22,8.92,11.27,5.62,4.56,2.91,2.87,3.24,4.33,4.56,3.6,,,,,,,,,,,,,

5925,90,5,Southern Slopes
(mainland),rare,4.14,4.27,3.75,3.59,4.1,3.99,4.67,4.22,4.03,4.06,6.38,8.75,6.45,6.75,7.39,8.11,8.32,7.03,,,,,,,,,,,,,,,,,,,,,
,,,,,,,,,,,,,
5994,90,5,Southern Slopes
(mainland),rare,1.78,5.32,8.85,11.5,6.19,9.73,6.19,7.96,5.75,5.31,3.54,5.75,7.08,5.75,3.1,1.77,1.33,3.1,,,,,,,,,,,,,,,,,,,,,
,,,,,,,,,,,,,
5995,90,5,Southern Slopes
(mainland),rare,5.28,9.22,10.4,7.32,3.65,8.44,6.69,2.74,0.91,0.49,0.91,1.75,3.52,6.33,7.03,8.71,10.28,6.33,,,,,,,,,,,,,,,,,,,,,
,,,,,,,,,,,,,
5996,90,5,Southern Slopes
(mainland),rare,9.09,10.36,13.98,12.39,7.82,12.25,5.92,2.13,2.13,2.91,3.01,2.37,1.59,2.2,3.55,3.72,2.61,1.97,,,,,,,,,,,,,,,,,,,,,
,,,,,,,,,,,,,
5997,90,5,Southern Slopes
(mainland),rare,1.73,2.85,4.45,4.93,3.47,4.67,5.75,8.88,9.88,7.47,6.01,7.81,9.48,8.09,5.29,4.13,3.55,1.56,,,,,,,,,,,,,,,,,,,,,
,,,,,,,,,,,,,
5999,90,5,Southern Slopes
(mainland),rare,3.9,4.18,3.34,4.46,5.01,5.57,5.57,5.01,5.29,6.41,6.41,5.29,6.41,6.13,9.19,7.52,5.57,4.74,,,,,,,,,,,,,,,,,,,,,
,,,,,,,,,,,,,
6002,90,5,Southern Slopes
(mainland),rare,2.36,1.68,3.3,6.94,10.05,9.91,3.7,4.71,3.38,5.87,8.44,7.89,1.68,4.05,12.14,8.5,3.64,1.76,,,,,,,,,,,,,,,,,,,,,
,,,,,,,,,,,,,
6003,90,5,Southern Slopes
(mainland),rare,5.01,4.24,3.86,4.25,6.95,1.74,0.39,0.58,5.02,16.22,10.42,12.36,11.2,2.32,5.79,1.02,2.45,6.18,,,,,,,,,,,,,,,,,,,,,
,,,,,,,,,,,,,
6004,90,5,Southern Slopes
(mainland),rare,9.63,5.02,5.24,5.19,4.4,2.62,1.55,1.55,1.05,0.37,0.9,0.71,3.28,11.13,16.46,14.03,9.14,7.73,,,,,,,,,,,,,,,,,,,,,
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6048,120,5,Southern Slopes
(mainland),frequent,3.99,5.86,7.46,10.41,1.41,6.02,8.63,8.67,7.53,2.41,2.71,1.77,0.94,0.84,2.07,3.31,2.78,2.71,2.74,1.3
7,4.12,3.11,4.22,4.92,,,,,,,,,,,,,,,,,,,,,
6049,120,5,Southern Slopes
(mainland),frequent,4.73,5.86,4.56,7.5,14.53,10.23,7.44,5.86,2.88,1.33,1.55,2.47,3.51,2.66,3.01,1.36,2.18,1.93,2.44,3.0
4,2.63,2.41,2.53,3.36,,,,,,,,,,,,,,,,,,,,,
6050,120,5,Southern Slopes
(mainland),frequent,1.3,1.65,1.67,2.75,5.47,21.84,12.4,4.66,4.1,2.8,2.91,3.1,2.8,3.72,4.29,3.72,3.99,3.42,3.32,2.7,2.53,2
.13,1.54,1.19,,,,,,,,,,,,,,,,,,,,,
6051,120,5,Southern Slopes
(mainland),frequent,2.39,4.67,2.92,2.24,1.68,3.5,1.55,2.96,9.92,12.5,5.99,3.16,5.3,2.54,1.64,2.22,1.86,7.61,5.47,5.38,4.
29,3.99,3.59,2.63,,,,,,,,,,,,,,,,,,,,,
6052,120,5,Southern Slopes
(mainland),frequent,2.98,2.38,2.39,3.43,6.15,5.39,3.35,2.04,5.83,3.03,1.08,1.52,5.15,4.79,4.35,4.79,1.88,2.35,5.75,2.63,

3.07,5.75,13.77,6.15,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6055,120,5,Southern Slopes
(mainland),frequent,4.06,2.43,6.49,4.07,8.94,6.5,8.94,2.44,3.25,1.63,4.07,4.07,4.07,2.44,4.07,1.63,3.25,0.81,1.63,0.81,4.88,4.88,9.76,4.88,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6056,120,5,Southern Slopes
(mainland),frequent,6.34,12.71,0,0,0,10.99,10.99,0,0,0,8.32,8.17,5.24,3.19,3.66,2.45,0.48,6.96,7.69,2.45,4.87,0.62,2.56,2.31,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6057,120,5,Southern Slopes
(mainland),frequent,3.91,14.97,13.91,6.5,4.3,1.27,0.42,0.79,0.82,1.02,2.86,2.6,3.36,3.65,1.61,3.56,8.2,4.86,3.87,7.49,5.74,2.74,1.07,0.48,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6058,120,5,Southern Slopes
(mainland),frequent,2.73,2.48,2.33,1.25,0.97,1.34,1.82,2.42,3.42,3.7,4.41,5.41,5.55,3.84,8.06,9.54,7.14,6.06,8.2,6.52,2.79,2.56,3.42,4.04,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6059,120,5,Southern Slopes
(mainland),frequent,3.73,2.6,6.32,1.86,0.37,5.2,5.2,1.86,0.74,0,0,0.37,0,0.37,8.18,12.64,10.04,6.32,10.04,4.09,3.35,2.97,7.06,6.69,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

5989,120,5,Southern Slopes
(mainland),intermediate,1.22,2.13,3.51,2.61,1.4,2.58,2.27,5.5,2.27,4.83,2.3,2.55,3.85,4.88,4.77,2.5,3.99,10.69,10.58,8.2,6.82,4.07,4.32,2.16,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6039,120,5,Southern Slopes
(mainland),intermediate,3.49,16.21,19.81,6.16,3.15,2.42,2.83,2.51,2.39,2.95,2.95,2.59,2.98,1.53,2.21,1.5,2.09,2.21,2.59,2.98,4.45,4.54,2.95,2.51,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6040,120,5,Southern Slopes
(mainland),intermediate,1.94,3.25,0.65,6.49,13.64,10.39,7.14,1.95,3.9,5.84,6.49,1.95,0,1.95,2.6,2.6,1.95,5.19,3.25,3.9,1.95,1.3,5.19,6.49,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6041,120,5,Southern Slopes
(mainland),intermediate,5.01,6.67,5.35,1.09,8.93,12.93,10.66,1.66,5.35,11.44,6.85,3.01,4.93,1.07,0.83,0.64,0.43,0.26,0.26,0.02,0.38,2.23,4.43,5.57,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6042,120,5,Southern Slopes
(mainland),intermediate,1.97,6.19,5.6,3.15,3.15,1.5,0.38,0.38,3.46,4.27,4.27,4.27,9.66,8.57,5.46,5.46,4.86,6.65,6.65,3.2,2,3.22,2.9,2.38,2.38,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6043,120,5,Southern Slopes
(mainland),intermediate,1.12,1.09,1.9,2.8,2.37,2.72,3.01,2.9,3.35,4.79,5.46,4.21,5.95,7.17,6.95,5.46,3.21,2.31,1.9,2.8,5.82,13.82,6.55,2.34,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6044,120,5,Southern Slopes
(mainland),intermediate,2.69,2.69,3.77,2.69,3.78,5.4,5.4,4.32,7.55,9.17,5.94,7.01,5.94,6.48,5.4,4.86,3.78,1.62,2.16,1.34,1.9,2.16,2.16,1.79,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6045,120,5,Southern Slopes
(mainland),intermediate,4.98,9.41,3.63,5.19,8.91,6.43,3.73,2.89,2.08,4.13,4.13,4.13,4.75,5.28,3.63,5.68,4.88,4.04,3.2,2.48,2.08,1.55,1.55,1.24,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6046,120,5,Southern Slopes
(mainland),intermediate,2.88,3.28,3.3,5.12,5.24,4.3,5.62,3.58,4.03,4.06,3.64,4.28,6.88,3.62,4.46,4.35,2.71,4.46,5.22,4.15,5.1,3.07,3.65,3,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6047,120,5,Southern Slopes
(mainland),intermediate,0.21,15.3,0.94,0.15,0.15,0.15,0.12,0.12,0.12,3.61,17.59,3.74,0.17,0.17,1.31,1.26,2.5,7.97,18.19,20.51,5.3,0.2,0.2,0.02,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

5864,120,5,Southern Slopes
(mainland),rare,1.78,2.05,2.25,4.85,9.47,5.14,3.41,7.76,8.28,8.01,10.12,5.04,4.1,2.62,2.58,2.91,3.89,4.1,3.23,1.89,1.19,1.35,2.25,1.73,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6028,120,5,Southern Slopes
(mainland),rare,1.19,1.45,3.56,4.6,5.53,10.2,7.37,11.18,9.85,6.24,6.24,5.34,5.02,4.57,3.54,3.1,1.72,2.85,0.9,1.5,1.39,0.83,0.79,1.04,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6029,120,5,Southern Slopes
(mainland),rare,0.68,0.14,2.31,4.56,5.46,4.89,8.4,14.28,13.65,9.3,4.14,1.05,0.36,0.9,0.84,0.99,1.2,0.36,1.41,1.41,3.3,4.68,5.88,9.81,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6030,120,5,Southern Slopes
(mainland),rare,3.82,0.06,0.33,9.44,11.87,8.61,13.77,0.54,5.88,4.01,3.61,1.84,1.34,3.22,1.45,14.16,5.41,2.11,0.31,4.32,0.06,0.1,1.49,2.25,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6033,120,5,Southern Slopes
(mainland),rare,1.61,5.97,7.65,6.05,4.75,5.46,7.91,0.48,0.23,1.22,3.35,5.39,5.63,5.77,8.47,8.85,5.91,3.06,4.03,1.32,0.35,0.35,0.52,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6034,120,5,Southern Slopes
(mainland),rare,6.4,2.75,1.72,9.46,5.95,5.49,4.92,2.11,1.76,6.568,7.38,1.84,0.49,4.89,2.19,5.3,6.49,2.05,4.32,5.46,1.51,1.3,4.54,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6035,120,5,Southern Slopes
(mainland),rare,3.68,4.83,3.13,3.13,3.13,3.69,3.98,2.84,2.56,3.69,5.11,3.41,2.27,3.41,3.41,3.98,3.98,3.41,7.95,6.82,6.82,3.98,5.68,5.11,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6036,120,5,Southern Slopes
(mainland),rare,5.34,5.34,3.59,3.59,5.45,5.45,3.7,3.7,0,0,0,16.34,16.34,1.96,1.96,4.58,4.58,3.16,3.16,3.16,3.16,2.72,2.72,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6037,120,5,Southern Slopes
(mainland),rare,2.07,3.42,3.33,2.66,3.37,4.04,3.71,3.13,2.31,1.35,1.58,1.95,4.26,6.17,6.75,6.75,6.75,6.46,7.06,7.59,5.39,3.46,3.71,2.73,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6038,120,5,Southern Slopes
(mainland),rare,5.62,5.61,5.61,4.92,2.15,2.15,1.06,0.33,0.33,0.33,0.33,0.65,1.21,2.58,2.06,7.65,7.65,7.65,7.65,6.21,8.13,8.13,8.13,3.86,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6084,180,15,Southern Slopes
(mainland),frequent,12.48,12.07,19.04,13.74,4.12,2.66,2.28,3.76,2.14,2.25,13.65,11.81,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6085,180,15,Southern Slopes
(mainland),frequent,19.52,15.49,9.07,10.94,10.43,6.96,5.89,5.62,6.69,3.21,1.63,4.55,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6126,270,15,Southern Slopes
(mainland),frequent,4.32,4.78,2.39,4.78,2.87,5.74,6.7,5.26,6.22,8.61,4.31,4.31,7.18,4.31,5.26,5.26,5.74,11.96,,,,,,,,,,,,,
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6127,270,15,Southern Slopes
(mainland),frequent,6.02,4.46,6.01,5.53,6.66,6.68,5.43,4.73,5.87,5.76,5.36,4.99,5.51,5.59,5.07,5.8,4.94,5.59,,,,,,,,,,,,,
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6128,270,15,Southern Slopes
(mainland),frequent,3.74,2.47,3.38,3.56,4.46,3.84,3.67,5.82,6.02,4.4,9.91,7.91,4.49,6.82,8.38,8,9.27,3.86,,,,,,,,,,,,,
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6129,270,15,Southern Slopes
(mainland),frequent,5.69,4.52,4.78,6.64,5.62,4.69,4.93,5.02,1.67,0.75,0.78,2.06,6.88,8.46,7.12,5.83,14.06,10.5,,,,,,,,,,,,,
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5973,270,15,Southern Slopes
(mainland),intermediate,9.55,4.66,0.19,1.68,1.68,3.2,18.36,9.73,9.19,9.19,2.81,5.43,7.11,7.5,1.31,3.56,2.23,2.62,,,,,,,,,,,,,
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6105,270,15,Southern Slopes
(mainland),intermediate,6.27,8.12,3.2,4.88,7.04,14.31,11.14,3.11,8.14,2.02,3.13,4.34,2.94,2.6,5.76,2.39,4.33,6.28,,,,,,,,,,,,,
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6109,270,15,Southern Slopes
(mainland),intermediate,12.78,5.76,7.77,4.26,6.52,5.01,8.27,8.77,4.01,2.26,1.25,0.25,1,2.01,3.26,2.76,13.78,10.28,,,,,,,,,,,,,
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6110,270,15,Southern Slopes
(mainland),intermediate,7.04,27.33,18.17,6.87,1.82,0.86,0.97,0.73,2.5,5.89,1.28,2.24,0.62,0.6,7.34,10.75,2.13,2.86,,,,,,,,,,,,,
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6111,270,15,Southern Slopes
(mainland),intermediate,2.98,4.21,3.86,4.2,8.78,7.37,7.15,8.46,6.46,6.39,6.34,5.27,4.2,5.11,5.06,4.6,3.49,6.07,,,,,,,,,,,,,
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6113,270,15,Southern Slopes
(mainland),intermediate,6.87,6.71,3.15,4.87,2.36,8.49,11.37,7.81,3.43,1.29,5.43,7.14,11.88,3.88,10.32,1.57,1.93,1.5,,,,,,,,,,,,,
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6114,270,15,Southern Slopes
(mainland),intermediate,5.29,6.23,5.61,4.71,5.14,6.47,5.82,4.6,5.75,5.03,5.61,6.61,5.28,4.78,6,5.39,4.89,6.79,,,,,,,,,,,,,
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6115,270,15,Southern Slopes
(mainland),intermediate,3.92,3.7,6.7,2.54,5.54,5.54,6.58,4.04,9.24,10.85,6.47,4.85,4.39,4.85,6.47,6,3.93,4.39,,,,,,,,,,,,,
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6116,270,15,Southern Slopes
(mainland),intermediate,2.56,4.39,8.41,1.68,2.28,2.47,1.25,0.42,1.07,3.72,4.95,21.27,3.48,4.45,13.36,14.35,6.43,3.46,,,,,
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6117,270,15,Southern Slopes
(mainland),intermediate,3.9,3.72,1.5,2.43,1.74,1.55,9.9,2.64,4.93,11.72,6.4,7.2,5.29,5.53,6.32,3.86,17.89,3.48,,,,,,,,,,,,,
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6000,270,15,Southern Slopes
(mainland),rare,6.73,7.09,8.08,9.7,7.96,4.85,6.34,4.1,4.48,4.23,4.85,4.1,3.73,2.74,3.36,5.97,5.47,6.22,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

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6063,270,15,Southern Slopes
(mainland),rare,3.1,7.22,0.63,7.79,5.39,5.49,18.48,0.13,1.13,16.41,0.93,0.14,15.96,5.56,3.42,3.64,1.7,2.88,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

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6096,270,15,Southern Slopes
(mainland),rare,3.45,4.03,6.34,6.34,10.94,13.1,6.19,3.6,5.33,5.76,2.88,4.61,4.9,1.87,3.31,4.75,5.33,7.27,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

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6097,270,15,Southern Slopes
(mainland),rare,7.99,16.28,9.34,6.3,17.49,4.4,3.1,1.76,1.85,2.9,3.8,5.38,2.46,4.51,2.56,2.95,3.57,3.36,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

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6098,270,15,Southern Slopes
(mainland),rare,5.02,5.03,5.08,6.88,8.75,5.74,5.26,6.98,6.79,4.77,5.83,5.77,4.41,4.84,6.82,3.73,3.83,4.47,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

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6099,270,15,Southern Slopes
(mainland),rare,2.59,2.91,4.21,3.88,3.56,4.53,6.8,5.83,8.41,13.27,8.09,5.18,6.47,5.83,5.18,7.44,2.91,2.91,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

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6101,270,15,Southern Slopes
(mainland),rare,3.5,3.25,2.33,2.81,5.6,6.13,8.27,12.3,2.73,1.96,2.7,2.61,2.11,2.75,5.07,16.92,6.78,12.18,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

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6102,270,15,Southern Slopes
(mainland),rare,2.8,3.71,3.63,4.73,6.21,11,6.03,1.45,2.59,4.68,14.19,7.58,5.77,4.4,5.34,3.9,7.79,4.2,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

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6103,270,15,Southern Slopes
(mainland),rare,0.81,2.13,3.18,3.45,4.77,4.24,3.71,5.04,3.98,3.71,4.24,5.84,10.34,9.55,12.2,15.38,5.31,2.12,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

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6104,270,15,Southern Slopes
(mainland),rare,2.94,2.58,3.69,1.48,2.95,2.21,2.58,0,7.01,1.48,5.17,5.9,19.56,5.54,8.86,4.43,11.81,11.81,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

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6122,360,15,Southern Slopes
(mainland),frequent,9.49,6.09,1.18,0.77,4.28,13.12,11.84,2.91,0.69,2.73,3.77,5.13,8.34,3.93,4.28,5.8,2.83,3.18,2,2.06,1.58,0.72,2.08,1.2,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6147,360,15,Southern Slopes
(mainland),frequent,8.33,7.57,7.08,9.66,10.55,4.56,6.37,1,1.22,1.17,2.55,0.84,0.92,2.41,1.95,1.76,1.6,2.87,1.44,1.79,3.69,8.11,5.13,7.43,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6148,360,15,Southern Slopes
(mainland),frequent,5.78,7.49,5.16,5.11,4.51,4.39,5.71,4.85,4.77,4.87,3.78,2.76,2.67,2.65,2.71,3.24,3.48,3.89,3.26,3.31,3.92,3.48,3.89,4.32,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6149,360,15,Southern Slopes
(mainland),frequent,3.7,7.2,6.77,1.75,1.75,4.8,5.24,1.96,2.4,10.04,6.55,5.67,3.08,4.58,7.64,1.11,1.53,2.18,3.06,2.4,6.77,
3.06,4.8,1.96,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6150,360,15,Southern Slopes
(mainland),frequent,2.61,4.57,2.77,3.22,3.99,2.77,3.28,7.87,6.89,4.8,4.05,5.6,3.13,5.73,4.38,2.25,4.48,3.95,4.87,4.68,3.
3,1.27,5.49,4.05,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6151,360,15,Southern Slopes
(mainland),frequent,2.78,3.53,3.16,3.53,4.28,2.79,2.79,3.9,2.42,3.9,6.32,8.18,3.9,4.65,4.83,6.69,3.9,5.76,4.28,4.65,3.53,
3.16,3.72,3.35,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6152,360,15,Southern Slopes
(mainland),frequent,3.16,2.71,2.71,4.06,4.51,4.96,5.42,4.05,4.05,4.05,3.15,3.6,4.05,4.95,5.86,6.31,4.05,2.7,4.05,4.95,4.
95,3.6,3.15,4.95,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6153,360,15,Southern Slopes
(mainland),frequent,1.51,2.03,2.54,2.54,4.06,8.12,3.05,2.54,2.03,2.03,3.55,6.09,8.63,1.52,3.55,12.69,10.15,5.08,0.51,1.
02,2.03,7.11,4.57,3.05,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6154,360,15,Southern Slopes
(mainland),frequent,1.46,1.88,2.63,2.54,3.44,3.58,3.73,3.36,4.54,5.33,4.04,2.35,2.19,1.45,3.23,5.13,5.55,2.7,4.61,7.33,6
.3,7.09,13.54,2,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6155,360,15,Southern Slopes
(mainland),frequent,2.59,2.57,2.5,2.95,3.97,2.65,3.32,3.58,5.02,3.17,2.5,4.68,2.8,3.51,2.16,0,0.43,6.04,7.98,6.25,3.73,2.
74,16.39,8.47,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6136,360,15,Southern Slopes
(mainland),intermediate,2.31,12.88,7.94,6.25,12.55,2.23,0.96,2.31,3.01,2.19,1.56,2.1,0.51,0.36,1.37,3.73,4.3,5.24,1.64,
6.02,11.92,5.41,1.79,1.42,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6137,360,15,Southern Slopes
(mainland),intermediate,33.3,10.91,5.35,1.8,1.14,0.56,0.33,0,0,0,0.44,0.75,0.88,1.41,2.83,13.91,2.88,1.05,2.22,0.72,2.2
4,4.19,2.89,10.2,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6138,360,15,Southern Slopes
(mainland),intermediate,0.97,0.32,6.81,11.03,8.13,4.54,12.67,4.87,1.61,0.97,10.38,13.97,3.41,0.16,0.16,2.11,2.11,1.78,
0.83,1.8,2.77,1.46,5.68,1.46,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6139,360,15,Southern Slopes
(mainland),intermediate,4.95,3.84,4.24,3.67,3.74,4.13,5.86,6.58,5.86,6.97,5.1,5.59,4.08,4.02,3.95,4.72,0.25,1.83,5.29,4.
3,3.68,2.4,2.07,2.88,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6140,360,15,Southern Slopes
(mainland),intermediate,5.25,1.15,1.46,1.8,2.11,2.62,2.62,2.45,4.09,5.07,4.75,3.76,5.73,6.07,8.04,5.74,6.37,5.55,5.56,6.
22,5.91,3.76,2.45,1.47,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6141,360,15,Southern Slopes
(mainland),intermediate,2.59,2.95,2.78,4.17,5.38,1.89,1.89,1.91,6.08,0.87,12.84,3.82,6.08,4.69,4.69,4.34,2.26,4.36,3.99
,6.77,4.7,3.3,3.99,3.66,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6142,360,15,Southern Slopes
(mainland),intermediate,2.46,2.94,2.88,2.91,2.78,3.6,3.58,4,3.55,4.82,5.43,8.68,7.01,5.57,6.23,7.4,3.38,1.87,2.3,4.11,4.

43,4.23,2.98,2.86,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6143,360,15,Southern Slopes
(mainland),intermediate,3.34,3.9,5.31,4.69,5.42,5.39,5.06,5.81,5.24,5.65,3.98,3.78,3.57,4.35,4.02,3.62,3.7,3.87,2.71,3.08,2.89,2.95,3.57,4.1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6145,360,15,Southern Slopes
(mainland),intermediate,2.61,0.97,1.95,1.3,0.65,4.55,8.12,13.96,7.14,0.32,0,0,0.65,4.22,1.95,4.87,5.52,11.36,10.71,9.42,1.62,1.62,3.57,2.92,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6146,360,15,Southern Slopes
(mainland),intermediate,3.7,5.08,2.15,1.95,2.54,2.15,2.34,2.15,5.86,4.49,6.64,4.3,2.15,2.34,3.71,8.01,6.84,4.49,6.45,6.25,7.23,2.34,4.3,2.54,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

5826,360,15,Southern Slopes
(mainland),rare,7.42,6.07,2.01,3.45,2.87,2.49,1.72,0.96,3.35,0.49,0.19,2.11,4.4,0.1,0,1.54,2.49,15.99,12.99,16.15,5.79,6.08,1.01,0.33,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6010,360,15,Southern Slopes
(mainland),rare,4.33,3.77,1.55,4.01,1.26,4.54,9.07,7.35,4.95,2.2,12.07,8.4,4.26,2.66,2.03,1.21,2.06,7.06,1.51,1,5.42,2.18,1.43,5.68,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6016,360,15,Southern Slopes
(mainland),rare,4.48,5.35,3.06,2.62,3.83,3.17,6.47,5.36,2.74,2.95,2.85,5.46,3.94,3.5,2.74,2.08,1.42,2.08,4.05,4.71,5.25,0,18.06,3.83,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6032,360,15,Southern Slopes
(mainland),rare,2.36,16.82,11.35,5.32,3.38,12.19,2.64,2.16,0.45,3.15,2.44,1.23,3.82,6.28,0.8,1.58,3.5,8.49,4.77,3.3,1.7,0.49,0.77,1.01,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6130,360,15,Southern Slopes
(mainland),rare,5.58,5.02,13.54,6.58,2.09,9.92,4.47,9.22,4.61,1.83,0.56,1.96,1.26,0.7,0.84,5.59,0.84,0,0,0.56,12.7,2.37,2.37,7.39,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6131,360,15,Southern Slopes
(mainland),rare,23.69,0.59,0,24.86,3.22,0,0.88,0.88,0.29,2.63,2.63,1.46,2.92,1.75,0,0.58,0,0,0,0,0.58,16.08,13.45,3.51,,
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6132,360,15,Southern Slopes
(mainland),rare,2.87,3.39,7.57,8.62,3.13,3.92,3.13,3.66,3.66,3.13,4.18,4.18,3.39,4.7,5.74,5.48,4.18,3.92,4.96,3.92,4.18,3.13,2.87,2.09,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6133,360,15,Southern Slopes
(mainland),rare,4.19,4.38,4.29,3.41,2.91,4.39,5.19,6.04,5.81,8.72,4.44,7.07,6.36,2.31,3.21,5.74,2.18,1.24,1.46,1.56,2.46,4.35,4.43,3.86,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6134,360,15,Southern Slopes
(mainland),rare,4.3,3.63,4.76,1.68,5.3,6.5,3.22,5.76,6.04,5.76,4.62,5.43,4.7,3.08,3.48,2.41,5.96,3.82,2.07,2.21,1.94,5.56,4.69,3.08,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6135,360,15,Southern Slopes
(mainland),rare,2.01,1.89,1.3,2.39,2.24,2.86,2.56,3.23,2.65,2.87,3.5,3.79,3.43,4.23,8.86,7.93,8.2,8.45,4.88,7,3.93,5.01,4.64,2.15,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6183,540,30,Southern Slopes
(mainland),frequent,5.29,13.4,8.42,3.5,2.9,4.7,11.4,10.19,2.71,2.74,0.49,2.66,9.4,5.83,1.88,0.96,6.22,7.31,,,,,,,,,,,,,,,,,,,,,
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6184,540,30,Southern Slopes
(mainland),frequent,5.18,4.64,9.57,9.98,3.6,15.16,5.07,5.05,5.39,4.98,1.32,0.49,1.02,0.29,6,5.21,6.15,10.9,,,,,,,,,,,,,,,,,,,,,
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6185,540,30,Southern Slopes
(mainland),frequent,20.68,14.24,4.64,2.91,3.97,2.67,1.46,0.86,2.45,6.95,12.3,4.13,5.63,7.15,9.65,0.31,0,0,,,,,,,,,,,,,,,,,,,,,
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6186,540,30,Southern Slopes
(mainland),frequent,3.34,2.62,3.72,6.71,5.56,5.19,4.46,9.3,4.09,3.72,2.62,4.09,7.05,7.44,15.23,4.09,4.82,5.95,,,,,,,,,,,,,,,,,,,,,
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6187,540,30,Southern Slopes
(mainland),frequent,3.14,3.95,6.15,5.36,5.3,6.98,6.11,6.89,4.72,6.34,3.5,2.33,4.07,4.47,5.83,7.57,9.12,8.17,,,,,,,,,,,,,,,,,,,,,
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6188,540,30,Southern Slopes
(mainland),frequent,2.49,7.12,7.43,4.09,6.27,5.1,4.36,8.23,6.92,6.44,7.88,9.69,9.17,6.77,1.59,1.22,2.81,2.42,,,,,,,,,,,,,,,,,,,,,
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6189,540,30,Southern Slopes
(mainland),frequent,17.62,10.95,7.62,1.9,10.48,0,0.95,0,6.19,6.19,0.48,0.95,2.38,3.81,4.29,4.76,10.48,10.95,,,,,,,,,,,,,,,,,,,,,
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6190,540,30,Southern Slopes
(mainland),frequent,4.49,5.82,1.82,2.55,3.17,1.96,2.44,1.11,3.89,3.62,5.46,9.33,5.95,11.64,12.12,12.01,8.62,4,,,,,,,,,,,,,,,,,,,,,
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6192,540,30,Southern Slopes
(mainland),frequent,0,11.23,0.39,0.2,13.37,0.79,4.94,1.38,0,0,0,16.33,9.67,4.73,4.9,9.26,13.57,9.24,,,,,,,,,,,,,,,,,,,,,
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6193,540,30,Southern Slopes
(mainland),frequent,5.35,5.21,1.46,2.82,5.06,5.18,4.38,4.12,2.56,5.2,4.26,2.94,2.12,4.12,7.34,15.21,13.35,9.32,,,,,,,,,,,,,,,,,,,,,
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6088,540,30,Southern Slopes
(mainland),intermediate,3.16,1.81,1.44,2.11,5.24,8.3,5.24,2.8,2.18,1.74,3.48,1.67,7.6,12.86,19.92,7.02,7.99,5.44,,,,,,,,,,,,,,,,,,,,,
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6172,540,30,Southern Slopes
(mainland),intermediate,4.73,5.82,3.31,3.03,2.76,16.63,13.02,3.89,0.83,0,0,1.66,5.83,16.33,7.76,6.08,4.16,4.16,,,,,,,,,,,,,,,,,,,,,
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6173,540,30,Southern Slopes
(mainland),intermediate,4.09,8.2,11.45,3.82,9.83,6.57,6.57,5.47,3.29,4.35,3.28,4.38,1.09,3.28,5.47,6.28,8.2,4.38,,,,,,,,,,,,,,,,,,,,,
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6174,540,30,Southern Slopes
(mainland),intermediate,1.48,9.24,12.24,15.62,15.79,7.36,5.34,2.19,0.67,1.78,3.95,3.43,2.45,2.49,7.36,2.47,4.38,1.76,,,,,

6175,540,30,Southern Slopes
 (mainland),intermediate,2.44,5.07,4.55,4.31,5.87,6.01,6.9,4.44,4.56,6.09,6.77,8.28,7.52,5.52,5.47,6.07,3.48,6.65,,,,,,,,,,,,,
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6177,540,30,Southern Slopes
(mainland),intermediate,1.4,6.61,6.9,6.43,8.19,6.67,2.38,5.85,2.77,2.59,6.71,5.36,2.41,5.37,2.87,8.3,9.23,9.96,,,,,,,,,,,,,
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6178,540,30,Southern Slopes
 (mainland),intermediate,2.56,2.15,5.44,3.39,1.88,1.02,7.67,5.1,7.99,8.36,5.83,13.06,6.03,3.56,3.06,4.6,14.52,3.78,,,,,,,,,
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6179,540,30,Southern Slopes
 (mainland),intermediate,4.49,3.34,6.14,4.93,8.03,5.51,6.23,6.25,5.96,6.33,6.83,7.14,4.67,2.39,4.53,3.29,5.18,8.76,,,,,,,,,
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6181,540,30,Southern Slopes
 (mainland),intermediate,2.52,2.73,3.96,2.61,4.79,3.01,2.69,4.54,6.74,3.3,8.67,6.87,9.29,7.71,7.89,7.57,7.03,8.08,,,,,,,,,,,,,
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6182,540,30,Southern Slopes
 (mainland),intermediate,3.89,5.66,6.01,3.12,3.22,4.55,5.46,3.67,3.87,2.07,3.12,4.37,5.8,10.11,7.18,15.03,9.75,3.12,,,,,,,,,
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5887,540,30,Southern Slopes
(mainland),rare,2.54,1.99,3.04,4.96,8.34,8.04,6.76,4.69,5.98,6.65,6.06,4.66,7.08,4.78,6.23,7.62,2.42,8.16,,,,,,,,,,,,,,,,,,,,,
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5926,540,30,Southern Slopes
(mainland),rare,5.95,6.35,6.6,5.86,6.13,9.91,8.52,3.54,5.2,5.58,5.15,5.47,4.94,3.35,1.9,3.78,5.45,6.32,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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5998,540,30,Southern Slopes
(mainland),rare,4,3.85,0.72,2.47,7.93,19.69,20.03,3.95,3.15,4.1,3.32,4.31,5.59,5.29,3.98,3.14,1.83,2.65,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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6156,540,30,Southern Slopes
(mainland),rare,3.39,5.61,7.38,10.09,7.27,12.29,7.12,5.93,9,5.2,3.31,2.65,3.7,3,4.05,4.89,2.61,2.51,,,,,,,,,,,,,,,,,,,,,
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6163,540,30,Southern Slopes
(mainland),rare,10.24,1.05,2.62,28.35,11.55,2.1,1.84,6.43,1.44,2.1,0,0,0,0,0.26,0,4.72,27.3,,,,,,,,,,,,,,,,,,,,,

6166,540,30,Southern Slopes
(mainland),rare,8.05,8.92,4.24,7.02,7.31,6.43,5.26,2.05,3.07,3.07,2.78,1.9,6.43,3.8,9.06,7.6,5.85,7.16,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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6167,540,30,Southern Slopes
(mainland),rare,3.4,5.96,8.13,4.84,4.02,4.46,5.03,2.79,6.14,4.37,3.17,5.25,3.08,1.09,7.01,8.35,13.16,9.75,,,,,,,,,,,,,,,,,,,,,
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6168,540,30,Southern Slopes

(mainland),rare,4.73,4.99,8.23,4.11,4.36,2.06,3.87,4.86,4.61,5.74,6.48,9.23,5.49,7.73,11.97,7.86,3.12,,,,,,,,,,,,,,,,,,,,,
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6169,540,30,Southern Slopes
(mainland),rare,2.06,3.97,4.09,5.88,3.71,3.07,2.3,1.02,3.2,2.81,5.24,3.84,4.73,8.18,13.17,13.55,7.03,12.15,,,,,,,,,,,,,,,,,,,,,
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6170,540,30,Southern Slopes
(mainland),rare,3.33,3.79,6.68,2.45,0.45,1.34,2.67,6.46,4.23,0.89,2.9,2.45,7.57,9.58,0.89,3.34,20.94,20.04,,,,,,,,,,,,,,,,,,,,,
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6208,720,30,Southern Slopes
(mainland),frequent,5.88,13.78,4.48,2.77,2.43,7.59,5.15,2.43,4.13,9.28,5.51,3.81,4.82,1.39,1.38,1.03,1.72,1.74,2.41,5.1
5,3.1,2.43,2.77,4.82,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6209,720,30,Southern Slopes
(mainland),frequent,1.69,4.39,4.26,4.27,3.09,3.88,5.41,5.33,14.27,8.73,5.49,3.96,3.15,2.79,4.48,4.45,4.51,1.88,2.05,1.6
9,3.01,0.65,2.22,4.35,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6210,720,30,Southern Slopes
(mainland),frequent,4.77,8.47,9.23,7.6,4.06,3.57,4.83,7.14,1.66,1.71,2.71,3.39,2.63,3.34,3.77,3.82,2.95,1.63,1.86,2.48,2
.58,3.52,5.82,6.46,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6211,720,30,Southern Slopes
(mainland),frequent,2.07,3.57,3.4,3.65,3.96,5.13,5.4,0.2,3.33,3.83,3.26,2.9,3.56,5.44,6.87,6.85,7.5,3.6,2.32,4.28,3.16,5.2
2,3.56,3.52,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6212,720,30,Southern Slopes
(mainland),frequent,5.43,5.94,2.52,2.73,1.85,1.32,3.43,1.34,6.01,9.52,6.12,4.43,9.38,7.08,5.74,6.77,3.41,2.55,3.19,2,1.1
1,3.23,2.55,2.35,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6213,720,30,Southern Slopes
(mainland),frequent,5.61,5.67,4.01,3.09,2.83,3.02,4.48,4.13,6.11,4.07,5.12,4.23,3.69,3.96,4.89,4.02,4.48,4.08,4.34,2.86,
4.33,4.31,3.26,3.41,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6214,720,30,Southern Slopes
(mainland),frequent,2.44,2.45,4.2,3.39,5.26,2.24,7.11,5.02,6.64,5.02,4.42,7.32,9.79,4.67,6.07,5.82,5.12,3.02,0.93,2.45,3
.37,2.2,0,1.05,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6215,720,30,Southern Slopes
(mainland),frequent,3.81,3.46,0.35,1.73,1.04,4.84,2.08,3.11,2.77,3.46,3.46,3.81,3.81,4.84,1.38,3.11,3.46,3.81,6.92,6.57,
12.46,5.88,6.57,7.27,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6216,720,30,Southern Slopes
(mainland),frequent,5.94,22.42,4.29,0.12,0.12,0.12,0.12,5.46,4.47,0.76,0.58,0.1,0,0,0,0,0,4.53,7.38,7.64,10.65,9.02,16
.28,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6217,720,30,Southern Slopes
(mainland),frequent,2.28,3.27,2.95,0,3.61,1.97,1.66,1.31,7.21,4.92,4.59,4.59,2.95,2.29,4.59,5.24,1.97,6.23,4.26,1.97,3.2
8,6.23,4.28,18.35,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6176,720,30,Southern Slopes
(mainland),intermediate,2.02,3.78,4.13,2.84,5.94,4.86,5.9,4.21,3.84,5.19,5.53,7.29,6.47,5.05,4.44,5.26,2.91,5.99,2.03,1.
84,2.26,2.25,3.69,2.28,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6191,720,30,Southern Slopes
(mainland),intermediate,3.79,2.05,1.59,1.89,1.89,4.41,4.09,1.57,2.99,2.22,1.9,2.06,0.96,3.15,3.92,4.56,8.19,5.19,10.86,
10.39,10.23,6.61,2.99,2.5,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6198,720,30,Southern Slopes
(mainland),intermediate,1.21,0.59,2.26,13.26,20.66,9.22,1.84,0.62,0,0.67,0,0,0,2.07,5.44,6.36,4.11,0.83,2.53,4.68,5.39,
7.17,1.22,9.87,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6199,720,30,Southern Slopes
(mainland),intermediate,3.89,8.06,2.55,2.39,0.51,1.82,3.1,9,14.08,7.61,3.8,4.55,3.53,2.12,3.25,5.41,4.92,3.06,1.04,4.14,
4.74,2.63,1.88,1.92,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6200,720,30,Southern Slopes
(mainland),intermediate,2.63,4.87,4.73,4.21,10.04,8.86,8.22,5.38,3.08,2.05,1.15,2.15,3.62,3.31,4.75,4.58,4.57,4.85,2.74
,3.38,3.45,2.32,2.35,2.71,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6201,720,30,Southern Slopes
(mainland),intermediate,4.66,1.36,5.04,1.06,3.64,9.51,5.62,5.96,6.24,3.85,3.98,4.95,2.72,3.53,4.44,3.29,4.22,3.57,4.72,
5.16,4.45,4.93,1.27,1.83,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6202,720,30,Southern Slopes
(mainland),intermediate,3.51,6.06,3.89,3.01,5.86,3.42,3.38,2.23,0.4,0.15,4.13,3.74,3.99,6.11,4.82,5.31,4.72,4.31,3.97,2.
97,6.64,6.21,4.87,6.3,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6203,720,30,Southern Slopes
(mainland),intermediate,5.82,4.91,4.55,4.82,3.96,3.51,3.27,2.75,3.84,3.44,4,3.63,3.69,1.61,1.32,2.4,2.19,4.65,5.87,11.1
2,5.56,2.9,5.24,4.95,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6204,720,30,Southern Slopes
(mainland),intermediate,6.48,4.36,3.5,4.11,4.33,4.8,4.28,3.65,3.3,1.19,2.28,1.19,0.21,0.38,1.09,1.03,3.14,9.77,9.75,8.07
,5.17,4.3,7.4,6.22,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6205,720,30,Southern Slopes
(mainland),intermediate,1.04,6.16,9.76,5.48,0.68,1.71,1.37,3.08,2.91,5.99,3.42,0.86,1.54,0.34,6.34,4.62,3.94,3.77,8.9,2.
57,3.77,6.85,9.08,5.82,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

5991,720,30,Southern Slopes
(mainland),rare,4.91,1.54,1.78,7.94,6.16,4.87,8.09,1.69,0.18,0.67,1.48,1,0.85,0.76,0.67,1.07,1.64,3.45,5.43,8.54,10.1,13
.05,8.39,5.74,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6017,720,30,Southern Slopes
(mainland),rare,5.25,5.2,4.89,7.59,5.11,4.37,6.79,4.16,2.37,5.11,6.11,14.54,3.48,3.53,2.78,3,2.37,1.64,0.91,0.58,1.37,2.
21,3.95,2.69,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6081,720,30,Southern Slopes
(mainland),rare,3.48,9.18,8.17,7.67,6.43,5.69,4.95,4.43,3.97,3.45,4.45,5.19,4.95,3.46,2.23,3.79,0.76,0.24,0.49,4.16,2.98
,3.58,3.83,2.47,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6157,720,30,Southern Slopes
(mainland),rare,3.2,5.17,6.47,8.3,7.03,9.9,5.65,5.44,7.41,4.12,2.87,2.09,3.12,2.6,3.61,3.95,1.99,2.03,1.15,2.04,1.45,3.13
,4.21,3.07,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6171,720,30,Southern Slopes

(mainland),rare,1.98,3.15,1.97,1.57,1.38,1.57,2.76,4.53,5.91,0.79,0.59,1.18,2.36,6.3,2.95,0.98,2.56,2.56,7.09,7.48,0.98,4.13,19.88,15.35,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6180,720,30,Southern Slopes
(mainland),rare,0.98,1.33,2.13,3.41,3.55,2.88,3.98,3.05,6.01,4.21,6.39,4.81,5.61,6.16,3.7,6.61,5.96,5.24,3.24,2.18,4.26,3.18,5.23,5.9,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6194,720,30,Southern Slopes
(mainland),rare,3.82,4.76,4.99,5.49,5.93,6.48,8.1,8.21,7.8,4.03,1.14,3.09,1.69,0.71,0.17,0.09,0.08,1.41,3.95,6.74,7.16,4.61,4.74,4.81,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6195,720,30,Southern Slopes
(mainland),rare,0.33,0.33,1.17,3.66,2.96,2.71,5.66,2.82,2.05,1.87,1.61,2.96,15.99,12.08,11.37,6.62,5.11,3.37,3.08,4.24,1.54,0.19,4.56,3.72,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6196,720,30,Southern Slopes
(mainland),rare,2.59,1.98,2.6,3.42,3.81,4.58,4.37,4.38,5.608,5.49,7.37,6.45,5.28,4.74,6.08,5.79,2.66,3.45,4.27,2.49,2.83,2.68,1.61,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6197,720,30,Southern Slopes
(mainland),rare,1.8,2.07,1.45,1.3,1.87,1.43,1.76,1.69,6.35,7.7,13.57,5.87,1.89,0.31,2.24,4.52,2.61,10.63,1.86,2.25,5.23,6.32,11.59,3.69,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6230,1080,60,Southern Slopes
(mainland),frequent,7.52,7.11,7.02,7.66,9.49,8.39,7.77,7.23,4.11,3.29,2.55,3.96,5.28,1.76,2.56,3.35,6.3,4.65,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6231,1080,60,Southern Slopes
(mainland),frequent,5.16,0.86,15.99,19.68,12.7,4.94,0,0,0,0,0.65,2.39,6.8,8.96,8.21,7.95,5.71,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6232,1080,60,Southern Slopes
(mainland),frequent,7.79,11.72,12.8,11.1,5.31,3.66,2.63,3.65,3.63,3.02,3.96,3.96,4.89,7.32,7.53,3.15,2.35,1.53,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6233,1080,60,Southern Slopes
(mainland),frequent,1.85,3.79,4.42,4.93,4.27,6.83,7.13,8.2,7.22,9.46,6.08,7.96,3.95,3.63,8.46,8.73,0.35,2.74,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6234,1080,60,Southern Slopes
(mainland),frequent,3.57,3.36,3.79,8.66,2.26,16.95,6.73,6.35,1.6,3.07,1.3,6.76,3.37,3.3,5.39,4.51,6.13,12.9,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6235,1080,60,Southern Slopes
(mainland),frequent,10.3,4.29,2.42,3.67,7.75,5.88,8.35,8.57,5.38,4.85,5.17,4.85,4.61,7.14,4.46,4.54,4.15,3.62,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6236,1080,60,Southern Slopes
(mainland),frequent,3.69,9.07,9.19,5.96,5.3,7.02,6.97,6.18,7.14,7.43,5.01,5.13,4.77,4.73,3.04,3.98,2.32,3.07,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6237,1080,60,Southern Slopes
(mainland),frequent,5.15,2.28,5.41,3.13,2.28,4.86,3.13,4.57,5.68,2.28,2.85,10.85,5.97,5.38,7.7,8.83,13.1,6.55,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6238,1080,60,Southern Slopes
(mainland),frequent,2.26,1.98,3.06,3.69,5.67,4.47,6.84,4.11,6.05,6.61,7.24,7.95,6.99,7.29,7.72,7.82,8.57,1.68,,,,,,,,,,,,,
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6242,1080,60,Southern Slopes
(mainland),frequent,0.95,3.8,7.59,7.91,0.95,1.9,0.95,0.63,2.53,4.75,4.43,1.9,4.11,20.57,18.04,9.18,6.33,3.48,,,,,,,,,,,,,
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6092,1080,60,Southern Slopes
(mainland),intermediate,5.06,7.3,6.75,5.79,2.16,1.21,0.33,0.37,1.81,6.58,12.2,13.49,9.36,7.03,5.49,8.89,4.44,1.74,,,,,,,,,,,,,
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6206,1080,60,Southern Slopes
(mainland),intermediate,5.1,2.11,7.44,8.81,1.61,3.35,6.7,2.85,1.36,7.94,6.33,8.44,6.95,10.55,6.7,6.2,4.71,2.85,,,,,,,,,,,,,
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6220,1080,60,Southern Slopes
(mainland),intermediate,3.67,5.95,5.95,8.01,11.03,9.8,6.73,6.93,4.46,4.49,5.44,5.9,5.83,4.67,3.31,2.83,3.58,1.42,,,,,,,,,,,,,
,,,,,,,,,,,,,
6221,1080,60,Southern Slopes
(mainland),intermediate,7.07,5.03,4.4,5.92,8.7,9.36,7.72,8.45,4.34,1.64,0.75,6.11,3.69,4.01,2.96,4.67,9.76,5.42,,,,,,,,,,,,,
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6222,1080,60,Southern Slopes
(mainland),intermediate,3.54,5.79,7.12,6.46,6.56,9.35,10.84,9.34,4.45,3.53,1.19,3.6,4.68,6.76,4.21,5.02,2.61,4.95,,,,,,,,,,,,,
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6224,1080,60,Southern Slopes
(mainland),intermediate,4.55,5.09,5.7,4.97,4.43,5.86,6.8,6.15,7.53,8.66,7.45,5.63,4.57,6.01,4.91,3.93,4.69,3.07,,,,,,,,,,,,,
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6226,1080,60,Southern Slopes
(mainland),intermediate,4.05,2.79,4.75,4.62,1.22,4.36,4.08,6.44,7.56,7.67,8.64,4.69,1.2,9.61,7.67,9.02,6.67,4.96,,,,,,,,,,,,,
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6227,1080,60,Southern Slopes
(mainland),intermediate,4.95,3.68,3.31,5.06,8.65,4.96,7.21,6.55,7.8,5.31,4.86,4.58,4.96,2.3,2.95,3.89,11.46,7.52,,,,,,,,,,,,,
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6228,1080,60,Southern Slopes
(mainland),intermediate,2.11,2.35,9.13,2.87,6.02,4.7,7.03,3.16,2.35,2.88,8.61,15.66,7.05,7.03,3.39,6.54,5.47,3.65,,,,,,,,,,,,,
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6229,1080,60,Southern Slopes
(mainland),intermediate,1.91,2.86,0.63,1.27,4.76,16.19,3.49,0.5,4.0,0.95,0.95,3.49,10.48,17.14,10.16,8.89,7.3,4.13,,,,,,,,,,,,,
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4215,1080,60,Southern Slopes
(mainland),rare,4.01,5.54,8.45,8.29,6.47,6.26,4.46,4.33,4.06,3.42,4.99,5.65,7.63,6.16,5.6,4.85,4.59,5.24,,,,,,,,,,,,,
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5927,1080,60,Southern Slopes
(mainland),rare,5.94,7.6,8.15,9.33,8.99,6.94,6.13,6.38,3.42,7.06,6.29,1.15,1.62,4.01,5.55,4.52,3.6,3.32,,,,,,,,,,,,,
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6075,1080,60,Southern Slopes
(mainland),rare,5.66,6.02,5.54,5.87,2.01,4.17,4.94,3.37,3.13,3.14,5.06,4.94,6.87,8.92,10.12,6.14,7.11,6.99,,,,,,,,,,,,,,,,,,,,,
6112,1080,60,Southern Slopes
(mainland),rare,5.06,7.3,6.75,5.79,2.16,1.21,0.33,0.37,1.81,6.58,12.2,13.49,9.36,7.03,5.49,8.89,4.44,1.74,,,,,,,,,,,,,,,,,,,,,
6118,1080,60,Southern Slopes
(mainland),rare,2.87,4.81,5.37,4.06,5.27,4.32,4.72,7.04,14.33,12.78,5.92,2.79,0.27,1.34,4.39,10.08,6.74,2.9,,,,,,,,,,,,,,,,,,,,,
6144,1080,60,Southern Slopes
(mainland),rare,5.61,8.92,10.06,7.12,6.9,5.41,6.18,6.54,6.62,6.43,5.14,4.89,5.08,3.95,4.56,2.8,1.48,2.31,,,,,,,,,,,,,,,,,,,,,
6158,1080,60,Southern Slopes
(mainland),rare,1.66,2.86,3.71,3.13,4.82,11.27,11.98,12.19,10.56,5.09,4.51,5.66,4.7,2.39,3.05,6.13,4.7,1.59,,,,,,,,,,,,,,,,,,,,,
6164,1080,60,Southern Slopes
(mainland),rare,7.38,20.24,8.92,5.4,2.32,0,0,0.17,20.93,2.23,1.89,1.03,3.6,4.8,7.2,13.72,0.17,0,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6218,1080,60,Southern Slopes
(mainland),rare,7.74,3.37,2.09,0.7,5.77,12.13,8.55,0.6,2.2,2.48,3.58,5.78,8.37,6.78,8.46,7.77,8.55,5.08,,,,,,,,,,,,,,,,,,,,,
6219,1080,60,Southern Slopes
(mainland),rare,6.2,6.17,4.56,4.03,3.8,3.68,5.8,6.18,8.5,8.73,9.01,6.46,5.06,4.52,2.08,4.36,7.13,3.73,,,,,,,,,,,,,,,,,,,,,
6273,1440,60,Southern Slopes
(mainland),frequent,6.15,6.24,9.69,3.79,5.74,9.71,4.62,0.67,6.26,9.18,3.54,4.37,3.39,8.35,3.85,0,0.76,0,1.62,1.57,2.01,1.85,4.24,2.4,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6274,1440,60,Southern Slopes
(mainland),frequent,22.21,9.86,6.48,6.75,5.36,7.32,3.37,1.69,7.87,5.61,0,0,0,0,1.97,0.84,1.69,3.66,6.34,1.41,1.12,2.81,3.64,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6276,1440,60,Southern Slopes
(mainland),frequent,9.96,4.91,13.22,3.35,12.29,6.08,0.15,4.79,0.78,0.09,0.1,0.04,15.18,2.16,1.52,2.4,4,2.71,5.95,2.36,2.53,0.82,2.18,2.43,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6277,1440,60,Southern Slopes
(mainland),frequent,1.24,0.42,3.77,9.91,6.47,6.06,4.24,4.26,4.25,4.89,5.13,5.12,2.98,7.5,6.56,4.56,2.67,3.58,2.09,3.86,2.73,0.91,1.55,5.25,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6278,1440,60,Southern Slopes
(mainland),frequent,2.81,3.83,3.53,4.37,5.68,6.67,4.09,5.8,4.02,3.64,4.12,3.69,4.33,3.09,3.57,4.53,4.84,5.7,5.65,4.41,3.89,3.56,2.56,1.62,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6279,1440,60,Southern Slopes

(mainland),frequent,4.07,5.01,3.58,4.25,5.49,6.26,4.45,4.32,3.37,3.4,3.31,3.51,3.44,3.01,2.76,3.39,3.03,4.31,5,5.08,5.03,5.51,4.53,3.89,,,,,,,,,,,,,,,,,,,,,

6281,1440,60,Southern Slopes
(mainland),frequent,3.65,9.28,8.34,5.51,0.44,0.43,2,1.73,7.77,1.92,8.41,2.95,2.25,0.76,4.97,3.76,2.8,1.52,5.59,13,9.09,2.01,1.27,0.55,,,,,,,,,,,,,,,,,,,,,

6282,1440,60,Southern Slopes
(mainland),frequent,0.31,0.95,0.66,6.52,1.75,0.6,0.9,2.3,7.3,7.64,3.81,6.28,6.03,3.86,1.45,1.5,0.7,9.96,10.08,8.62,3.86,5.68,5.34,3.9,,,,,,,,,,,,,,,,,,,,,

6283,1440,60,Southern Slopes
(mainland),frequent,7.58,3.65,7.58,2.26,1.12,1.12,2.81,0.84,0,1.12,2.25,1.12,1.12,0.28,1.12,5.33,11.54,2.53,4.5,3.1,8.14,10.4,8.13,12.36,,,,,,,,,,,,,,,,,,,,,

6284,1440,60,Southern Slopes
(mainland),frequent,4.29,4.4,4.34,2.32,1.52,2.89,1.25,1.94,3.01,4.38,4.22,3.83,4.69,3.15,1.26,1.78,5.3,6.54,5.62,6.78,8.29,5.68,5.13,7.39,,,,,,,,,,,,,,,,,,,,,

6207,1440,60,Southern Slopes
(mainland),intermediate,1.25,2.41,3.05,2.84,3.99,9.66,1.58,2.73,4.73,3.36,1.26,6.62,3.99,7.67,6.3,9.35,2.63,7.98,4.31,2.1,1.89,2.1,1.58,6.62,,,,,,,,,,,,,,,,,,,,,

6261,1440,60,Southern Slopes
(mainland),intermediate,3.93,6.89,7.35,6.51,9.41,7.27,4.97,4.9,3.29,2.07,1.71,2.01,2.87,2.53,2.25,2.01,2.01,2.12,3.12,4.26,4.42,4.23,4.97,4.9,,,,,,,,,,,,,,,,,,,,,

6263,1440,60,Southern Slopes
(mainland),intermediate,5.79,9.22,4.19,3.94,6.06,5.27,5.49,3.44,2.4,4.99,1.07,1.33,5.77,5.52,4.2,0,0.26,0.26,1.32,3.13,7.65,11.58,0,7.12,,,,,,,,,,,,,,,,,,,,,

6264,1440,60,Southern Slopes
(mainland),intermediate,3.06,3.88,9.89,2.46,4.13,3.21,9.65,8.78,5.45,0.33,0.22,7.19,4.52,0.59,2.39,5.06,5.08,2.46,4.08,3.3,2.42,3.99,4.58,3.28,,,,,,,,,,,,,,,,,,,,,

6265,1440,60,Southern Slopes
(mainland),intermediate,5.6,4.76,1.5,3.52,3.81,5.04,4.85,4.12,4.91,8.73,1.66,1.15,5.06,3.37,3.77,7.46,2.8,6.23,3.11,2.13,2.28,3.64,5.19,5.31,,,,,,,,,,,,,,,,,,,,,

6266,1440,60,Southern Slopes
(mainland),intermediate,3.27,3.61,4.16,4.7,4.72,3.78,2.95,3.6,3.69,4.49,5.25,6.57,5.86,5.92,1.09,0.77,1.44,0.39,10.65,6.49,3.83,4.01,4.71,4.05,,,,,,,,,,,,,,,,,,,,,

6267,1440,60,Southern Slopes
(mainland),intermediate,2.77,3.4,5.16,3.98,1.82,4.07,3.81,5.4,5.75,4.41,4.78,4.8,4.55,4.51,3.76,2.6,3.68,4.72,5.59,3.69,4.02,3.85,6.22,2.66,,,,,,,,,,,,,,,,,,,,,

6268,1440,60,Southern Slopes
(mainland),intermediate,4.56,3.32,3.33,3.33,1.66,2.7,2.08,1.46,3.12,1.66,2.08,1.46,0.83,2.7,3.12,4.37,9.77,7.69,9.15,8.32,9.36,6.03,4.16,3.74,,,,,,,,,,,,,,,,,,,,,

6271,1440,60,Southern Slopes
(mainland),intermediate,2.18,0.78,2.34,1.71,1.71,2.49,3.43,4.05,5.76,5.61,5.45,4.67,2.96,3.74,3.58,3.27,3.74,3.58,5.61,9.35,7.32,7.79,6.23,2.65,,,,,,,,,,,,,,,,,,,,,

6272,1440,60,Southern Slopes
(mainland),intermediate,3.14,3.68,3.2,4.23,2.6,2.44,2.93,2.32,3.75,3.33,3.15,4.05,5.08,3.96,3.06,1.96,3.89,4.79,9.74,10.76,3.88,1.25,4.11,8.7,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

4230,1440,60,Southern Slopes
(mainland),rare,3.08,3.44,3.16,2.28,1.83,2.36,2.96,2.31,2.29,2.42,3.06,4.68,3.85,2.63,2.53,3.25,5.58,5.99,8.72,8.13,8.35,6.12,5.95,5.03,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6053,1440,60,Southern Slopes
(mainland),rare,4.16,9.32,7.33,4.5,4.25,2.79,6.14,5.75,6.99,5.13,4.28,4.07,3.26,5.27,7.94,3.85,1.7,0.12,0.12,3.33,6.6,2.86,0.12,0.12,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6106,1440,60,Southern Slopes
(mainland),rare,4.64,3.43,2.28,2.33,3.93,8.23,13.15,5.75,4.76,4.45,4.71,2.13,3.27,4.07,4.54,2.75,1.23,1.1,2.26,4.01,5,4.31,5.57,2.1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6247,1440,60,Southern Slopes
(mainland),rare,1.72,9.67,7.38,8.97,1.81,3.01,6.24,1.99,13.34,1.57,4.15,2.76,0,0,0,0,3.57,1.98,1.51,0.98,4.19,9.23,11.05,4.88,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6250,1440,60,Southern Slopes
(mainland),rare,0.96,1.01,3.05,4.19,4.87,5.32,4.69,5.86,4.59,7.06,0,0,2,2.31,8.93,5.5,3.71,2.52,0.62,0.76,3.42,5.28,16.65,4.47,4.03,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6251,1440,60,Southern Slopes
(mainland),rare,2.92,3.37,4.62,3.34,2.68,3.86,2.97,7.03,3.21,1.99,3.11,1.86,5.03,6.09,12.37,6.27,6.64,5.51,3.94,3.48,3.14,3.25,1.72,1.6,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6254,1440,60,Southern Slopes
(mainland),rare,3.79,7,2.49,3.85,2.8,0.08,1.94,2.77,9.17,13.55,4.09,8.76,4.81,4.13,4.42,3.68,4.31,3.91,3.69,3.47,3.38,2.47,1.03,0.41,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6255,1440,60,Southern Slopes
(mainland),rare,0.82,1.65,1.45,3.63,6.35,9.05,3.7,2.53,6.64,5.12,5.8,4.41,4.38,4.78,4.97,3.39,3.83,4.9,5.34,5.8,3.84,0.52,0.42,6.68,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6256,1440,60,Southern Slopes
(mainland),rare,2.8,3.05,1.89,2.04,2.63,2.27,1.65,1.49,2.88,3.52,3.28,2.64,2.17,2.01,2.96,8.16,7.56,6.6,5.2,4.92,6,3.77,6.51,14,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6258,1440,60,Southern Slopes
(mainland),rare,15.02,0,10.51,11.66,0.5,0,0,0,0.2,0,0,0,2.3,2.56,1.7,1.1,1,11.44,3.03,6.61,12.45,4.91,5.11,9.9,,,,,,,,,,,,,,,,,,,,,
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6323,1800,120,Southern Slopes
(mainland),frequent,5.69,8.67,8.05,19.16,5.18,13.25,6.07,3.73,1.99,0,0.37,3.37,5.32,17.18,1.97,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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6324,1800,120,Southern Slopes
(mainland),frequent,3.64,6.81,12.85,13.99,12.34,10.91,4.5,7.47,4.56,5.96,6.06,3.07,1.27,3.58,2.99,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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6325,1800,120,Southern Slopes

(mainland),frequent,7.76,5.73,10.36,7.13,12.12,16.43,9.3,9.42,3.39,0.86,0.63,2.49,2.36,2.02,10,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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6326,1800,120,Southern Slopes
(mainland),frequent,4.94,6.67,9.79,8.07,6.96,8.16,9.47,8.43,8.18,7.84,4.82,7.4,1.44,4.45,3.38,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6327,1800,120,Southern Slopes
(mainland),frequent,7.29,6.26,8.82,11.09,9.95,0.95,3.41,8.63,6.07,4.74,1.61,0,0.19,8.72,22.27,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6328,1800,120,Southern Slopes
(mainland),frequent,3.12,8.1,3.35,4.31,3.82,8.58,6.44,7.16,8.59,9.54,10.73,5.97,5.28,7.86,7.15,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6329,1800,120,Southern Slopes
(mainland),frequent,6.83,8.96,2.87,8.76,7.49,6.17,0.33,3.32,19.55,4.04,0.26,0.41,6.9,8.79,15.32,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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6330,1800,120,Southern Slopes
(mainland),frequent,3.61,3.15,5.42,6.52,2.96,3.26,5.49,8.83,10.76,12.59,11.08,10.71,6.4,5.79,3.43,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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6332,1800,120,Southern Slopes
(mainland),frequent,18.8,4.11,1,0.32,2.82,5.6,0,4.24,7.71,12.76,8.44,11.48,6.81,3.42,12.49,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6333,1800,120,Southern Slopes
(mainland),frequent,5.12,2.48,6.77,7.93,3.65,3.8,3.59,1.69,6.74,6.42,15.65,12.96,8.89,6.93,7.38,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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6239,1800,120,Southern Slopes
(mainland),intermediate,6.86,10.36,4.35,1.91,0.69,1.62,1.5,3.5,6.71,8.71,6.32,10.72,11.95,10.38,14.42,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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6262,1800,120,Southern Slopes
(mainland),intermediate,6.21,11.7,13.22,11.15,7.33,3.55,4.02,4.3,3.53,4.34,7.27,7.66,7.69,4.01,4.02,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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6303,1800,120,Southern Slopes
(mainland),intermediate,14.29,9.77,8.88,13.18,19.28,8.43,2.61,1.38,2.12,0.31,0,1.45,2.98,6.36,8.96,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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6305,1800,120,Southern Slopes
(mainland),intermediate,15.88,14.56,10.48,7.67,4.94,1.66,0,0.24,10.34,5.98,1.84,7.98,14.21,1.18,3.04,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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6306,1800,120,Southern Slopes
(mainland),intermediate,3.14,4.03,5.15,6.72,7.28,6.05,5.71,7.95,9.18,11.09,6.49,8.62,4.26,9.07,5.26,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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6307,1800,120,Southern Slopes
(mainland),intermediate,5.73,5,5.28,5.19,9.98,12.55,4.58,3.59,3.89,5.66,8.37,9.98,10.63,6.06,3.51,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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6312,1800,120,Southern Slopes
(mainland),intermediate,9.07,8.8,4.88,1.84,1.98,3.93,4.85,8,7.11,9.31,3.35,4.25,7.47,13.74,11.42,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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6316,1800,120,Southern Slopes
(mainland),intermediate,5.71,9.61,6.35,9.12,7.98,5.37,10.26,8.14,0.98,0.65,0.16,0.33,7.65,14.82,12.87,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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6321,1800,120,Southern Slopes
(mainland),intermediate,3.95,4.45,7.23,5.89,6.49,3.85,6.58,3.34,4.48,8.22,9.99,9.5,8.43,11.99,5.61,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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6322,1800,120,Southern Slopes
(mainland),intermediate,9.42,8.11,3.22,4.22,0.8,5.95,0.84,3.75,13.16,9.63,19.25,8.19,3.78,0.69,8.99,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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6076,1800,120,Southern Slopes
(mainland),rare,5.88,5.26,4.24,5.9,6.75,7.94,5.41,6.25,4.47,5.63,8.11,13.07,9.1,7.01,4.98,,,

6159,1800,120,Southern Slopes
(mainland),rare,1.82,6.46,2.62,1.26,4.22,5.45,14.73,19.08,12.16,8.95,5.35,7.96,4.37,2.48,3.09,,,

6248,1800,120,Southern Slopes
(mainland),rare,6.28,19.01,4.53,7.46,12.81,7.26,0.09,0,3.98,2.48,8.87,17.3,1.93,2.55,5.45,,,

6252,1800,120,Southern Slopes
(mainland),rare,7.23,8,5.76,3.7,2.54,5.23,6.18,4.81,8.19,4.21,4.51,10.12,14.82,9.02,5.68,,,

6285,1800,120,Southern Slopes
(mainland),rare,5.38,21.67,21.9,2.03,0.65,0.37,0,4.47,6.97,2.62,3.86,9.72,5.76,9.7,4.9,,,

6289,1800,120,Southern Slopes
(mainland),rare,6.79,10.68,13.1,7.35,9.93,5.47,6.77,1.45,5.95,9.32,6.8,5.08,4.15,3.06,4.1,,,

6296,1800,120,Southern Slopes
(mainland),rare,14.64,2.96,1.58,3.33,4.95,5.27,12.26,5.89,6.79,6.37,10.28,8.49,5.17,6.8,5.22,,,

6297,1800,120,Southern Slopes
(mainland),rare,5.49,5.92,7.34,6.53,6.62,6.69,5.23,6.02,9.9,9.26,8.25,8.37,6.41,4.41,3.56,,,

6298,1800,120,Southern Slopes
(mainland),rare,5.59,5.05,3.5,4.65,3.99,6.06,6.27,4.44,9.18,14.21,12.58,9.87,5.36,5.2,4.05,,,

6302,1800,120,Southern Slopes
(mainland),rare,5.01,5.77,6.48,5.78,3.75,3.01,5.49,5.75,7.41,8.55,6.77,9.61,10.06,7.77,8.79,,,

6331,2160,120,Southern Slopes
(mainland),frequent,3.38,2.95,5.07,6.1,2.77,3.05,5.14,8.26,10.07,11.78,10.37,10.02,5.99,5.42,3.21,2.1,2.74,1.58,,,,,,,,,,,,,,,,,,,,,
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6351,2160,120,Southern Slopes
(mainland),frequent,21.58,7.1,5.43,11.56,13.23,2.51,1.81,8.5,1.81,1.11,2.51,0,0,0,0.28,4.46,8.64,9.47,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
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6352,2160,120,Southern Slopes
(mainland),frequent,2.84,11.41,11.28,7.72,10.84,2.81,6.58,4.46,5.04,2.15,11.14,6.68,5.89,1.09,1.64,1.91,3.51,3.01,,,,,,,,,,,,,,,,,,,,,
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6353,2160,120,Southern Slopes
(mainland),frequent,12.47,10.43,7.31,1.03,4.74,12.17,5.46,4,12.16,1.55,0.99,1.21,0.38,1.22,6.02,8.92,4.9,5.04,,,,,,,,,,,,,
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6355,2160,120,Southern Slopes
(mainland),frequent,3.97,6.46,4.16,3.54,2.04,5.85,6.5,6.9,4.67,3.05,4.14,5.38,9.53,10.38,7.6,2.57,6.32,6.94,,,,,,,,,,,,,
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6356,2160,120,Southern Slopes
(mainland),frequent,7.05,7.01,3.72,0.97,5.35,10.3,12.53,6.13,11.48,6.51,1.44,2.75,4.52,8.22,4.02,4.92,0.48,2.6,,,,,,,,,,,,,
,,,,,,,,,,,,,,,,,,,,,
6357,2160,120,Southern Slopes
(mainland),frequent,4.13,6.08,3.86,4.14,1.24,4.57,6.82,9.03,9.34,8.47,10.59,3.25,0.22,3.7,10.37,7.47,4.33,2.39,,,,,,,,,,,,,
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6358,2160,120,Southern Slopes
(mainland),frequent,11.19,22.22,0.23,0.49,4.53,1.32,0.99,2.95,0.68,0.44,2.42,0.88,8.49,13.16,7.72,6.65,7.58,8.06,,,,,,,,,,,,,
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6359,2160,120,Southern Slopes
(mainland),frequent,22.33,12,0.98,0,0,0.23,0,0,0.45,0.68,3.39,3.09,2.82,10.5,20.37,5.66,5.8,11.7,,,,,,,,,,,,,
6360,2160,120,Southern Slopes
(mainland),frequent,8.08,2.39,10.47,7.64,3.02,9.78,0.23,0,0,0,1.83,28.73,15.36,0.62,0.81,3.37,2.13,5.54,,,,,,,,,,,,,
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6225,2160,120,Southern Slopes
(mainland),intermediate,7.02,7.78,7.5,9.44,11.81,9.54,7.72,6.45,5.66,2.85,0.97,0.1,2.16,0.42,0.59,8.18,10.24,1.57,,,,,,,,,,,,,
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6334,2160,120,Southern Slopes
(mainland),intermediate,2.03,3.74,4.42,3.06,5.78,7.12,3.11,3.59,2.67,3.04,6.1,7.06,14.42,11.74,8.11,4.9,6.66,2.45,,,,,,,,,,,,,
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6340,2160,120,Southern Slopes
(mainland),intermediate,12.86,9.31,11.79,3.09,9.32,12.63,0.83,0.41,6.2,8.9,4.33,2.08,6.21,2.29,3.73,3.11,2.91,0,,,,,,,,,,,,,
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6341,2160,120,Southern Slopes
(mainland),intermediate,6.82,9.07,9.05,3.62,5.46,7.91,6.66,7.5,2.94,9.82,5.87,4.5,1.58,5.94,5.23,1.26,1.34,5.43,,,,,,,,,,,,,
,,,,,,,,,,,,,,,,,,,,,
6343,2160,120,Southern Slopes
(mainland),intermediate,3.9,3.05,5.11,16.51,2.72,1.21,8.72,10.3,0.75,8.48,1.55,1.17,1.37,1.82,8.06,21.57,2.17,1.54,,,,,,,,,,,,,
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6344,2160,120,Southern Slopes
(mainland),intermediate,3.16,2.78,6.38,5.61,6.13,8.73,10.88,4.15,2.81,5.21,12.87,8.64,2.62,3.17,4.7,5.07,4.32,2.77,,,,,,,,,,,,,
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6346,2160,120,Southern Slopes
(mainland),intermediate,13.53,5.23,10.05,2.68,0,0.17,2.68,0,0.71,2.78,4.3,2.97,13.24,24.34,11.15,6.17,0,0,,,,,,,,,,,,,

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6347,2160,120,Southern Slopes
(mainland),intermediate,6.21,8.63,5.99,4.95,5.91,8.65,7.07,5.06,4.09,2.69,2.82,4.11,4.65,8.2,4.44,6.69,5.99,3.85,,,,,,,,,,,,,

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6348,2160,120,Southern Slopes
(mainland),intermediate,7.67,2.4,5.91,7.87,6.06,3.1,1.02,0.65,0.84,4.85,4.49,12.02,6.33,11.99,7.4,6.73,4.66,6.01,,,,,,,,,,,,,

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6350,2160,120,Southern Slopes
(mainland),intermediate,0.65,3.97,5.3,4.64,6.4,8.17,10.82,1.55,0,2.87,3.09,10.6,13.47,3.75,2.21,3.75,5.96,12.8,,,,,,,,,,,,,

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4216,2160,120,Southern Slopes
(mainland),rare,6.53,11.64,9.11,6.99,5.31,7.14,9.96,7.57,6.79,3.81,2.6,3.26,2.26,2.02,2.27,4.47,3.1,5.17,,,,,,,,,,,,,

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6077,2160,120,Southern Slopes
(mainland),rare,2.24,3.1,4.92,5.45,3.48,5.75,5.6,7.27,5.55,5.39,4.35,4.97,6.92,11.81,8.33,7.27,4.32,3.28,,,,,,,,,,,,,

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6107,2160,120,Southern Slopes
(mainland),rare,6.78,3.64,3.61,4.82,4.47,16.5,8.9,6.68,4.53,6.83,3.47,2.43,7.22,6.35,3.54,4.21,1.59,4.43,,,,,,,,,,,,,

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6160,2160,120,Southern Slopes
(mainland),rare,1.96,5.6,2.49,2.35,1.45,5.31,7.43,20.13,14.81,6.89,7.65,4.82,7.78,1.44,3.15,1.33,2.28,3.13,,,,,,,,,,,,,

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6253,2160,120,Southern Slopes
(mainland),rare,5.04,8.07,5.13,4.77,1.26,4.27,5.96,5.05,7.11,4.07,3.56,7.72,13.76,9.15,6,4.62,2.38,2.08,,,,,,,,,,,,,

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6290,2160,120,Southern Slopes
(mainland),rare,2.66,3.86,7.57,11.67,10.55,5.9,9.67,2.79,5.58,2.25,8.02,7.53,5.1,4.91,3.05,2.57,3.8,2.52,,,,,,,,,,,,,

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6335,2160,120,Southern Slopes
(mainland),rare,1.63,4.46,3.23,4.06,10.1,6.58,1.48,6.25,9.68,6.65,6.6,8.62,6.02,2.65,5.07,7.9,4.91,4.11,,,,,,,,,,,,,

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6336,2160,120,Southern Slopes
(mainland),rare,8.65,5.18,3.69,4.26,6.09,3.05,3.77,3.67,3.83,3.28,6.84,4.72,6.95,9.76,4.57,6.88,10.09,4.72,,,,,,,,,,,,,

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6338,2160,120,Southern Slopes
(mainland),rare,8.06,2.35,0.48,1.23,4.39,7.02,0.17,0,0,0.32,4.01,1.63,7.02,5.35,18.59,24.51,10.81,4.06,,,,,,,,,,,,,

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6339,2160,120,Southern Slopes
(mainland),rare,3.98,3.9,3.26,7.25,3.63,2.72,3.63,2.18,3.26,4.53,7.62,3.45,1.99,8.16,10.88,13.6,9.25,6.71,,,,,,,,,,,,,

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6354,2880,120,Southern Slopes
(mainland),frequent,5.18,5.48,1.93,6.71,3.05,0.59,2.36,3.28,3.71,0.32,2.06,1.53,0,7.55,8.15,10.33,1.23,1.66,11.25,2.8,7.11,3.46,9.06,1.2,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6372,2880,120,Southern Slopes
(mainland),frequent,2.09,0.24,6.08,2.06,16.77,8.48,11.9,6.62,5.48,4.28,0,0.08,0.43,2.6,1.66,4.75,3.56,2.27,3.62,4.75,2.71,3.1,3.76,2.71,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6373,2880,120,Southern Slopes
(mainland),frequent,6.84,13.92,11.94,16.02,7.68,5.09,1.39,0.23,0,0,0,0,1.16,2.09,5.34,10.79,7.06,2.55,2.1,1.16,1.16,1.16,2.32,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6374,2880,120,Southern Slopes
(mainland),frequent,3.21,5.73,2.75,2.75,28.56,6.18,9.8,1.37,3.67,0.47,0,0,0.46,0.23,1.83,5.02,2.98,3.2,3.89,5.53,3.91,1.83,2.98,3.65,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6375,2880,120,Southern Slopes
(mainland),frequent,0,0,0,8.83,6.02,8.36,5.67,5.53,6.4,5.06,3.57,9.01,11.82,1.9,2.14,0.56,0.89,2.07,1.9,4.28,1.93,3.33,4.54,6.19,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6376,2880,120,Southern Slopes
(mainland),frequent,5.6,0,6,0,0.43,19,14.55,0.25,0,0.21,0,8.72,1.53,0,0,0,13.03,16.99,5.43,0.21,0,0,2.9,5.15,,,,,,,,,,,,,,,,,,,,,
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6377,2880,120,Southern Slopes
(mainland),frequent,7,0,7,6.57,1.98,1.1,0.66,6.14,6.17,1.33,0.44,3.96,10.73,12.28,6.13,8.12,3.71,0.66,6.36,5.05,0.66,2.85,0.66,0.44,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6378,2880,120,Southern Slopes
(mainland),frequent,0,1.16,3.89,2.82,1.72,5.73,4.46,10.5,7.45,5.93,1.91,2.66,3.75,2.37,7.58,1.26,2.59,4.6,6.06,7.13,3.62,4.04,5.11,3.66,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6379,2880,120,Southern Slopes
(mainland),frequent,4.69,3.24,6.89,1.3,1.22,2.5,11.19,1.85,1.64,0.41,4.68,1.47,0.41,2.21,2.25,1.26,2.01,7.13,9.32,8.89,2.08,6.3,1.5,0.41,1.02,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6380,2880,120,Southern Slopes
(mainland),frequent,4.92,1.03,0.2,3.89,4.09,3.27,9.84,4.09,4.29,0,0,4.91,1.02,1.64,3.3,9.45,9.82,6.35,7.4,12.1,0,0,4.71,3.68,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6223,2880,120,Southern Slopes
(mainland),intermediate,6.52,1.59,2.26,5.81,5.44,6.94,1.9,2.46,1.94,3.15,1.12,0.99,1.46,2.18,2.9,6.57,7.21,10.48,8.17,2.98,4.08,6.15,4.06,3.64,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6240,2880,120,Southern Slopes
(mainland),intermediate,4.33,2.91,5.01,3.02,2.13,0.64,0.92,0.98,2.91,5.14,7.93,2.8,1.48,0.23,1.3,1.69,2.97,5.51,6.66,5.98,8.16,8.8,8.84,9.66,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6304,2880,120,Southern Slopes
(mainland),intermediate,9,6.45,7.02,6.75,15.4,5.73,2.48,0.98,1.42,0.47,0,0.54,2.1,3.56,6.52,4.92,3.17,5.55,3.93,2.86,1.72,5.7,4.29,2.59,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6317,2880,120,Southern Slopes
(mainland),intermediate,9.61,7.36,3.99,1.75,0.62,0.12,0.12,0.12,0.12,0.2,6.61,5.24,3.87,8.1,4.86,4.49,11.97,0.37,1,0.25,0,

2.62,3.49,20.82,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6342,2880,120,Southern Slopes
(mainland),intermediate,1.71,4.96,7.49,8.01,3.66,4.25,6.79,5.06,7.21,2.69,7.8,5.64,3.96,1.13,4.93,4.89,1.13,0.85,4.35,3.48,2.68,3.07,3.15,1.11,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6361,2880,120,Southern Slopes
(mainland),intermediate,5.56,0.97,4.42,0.83,2.88,0.07,6.88,2.03,8.93,6.52,2.58,8.34,0.2,0,0,0,1.56,24.5,13.09,0.53,0.69,2.88,1.82,4.72,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6367,2880,120,Southern Slopes
(mainland),intermediate,6.02,3.38,4.13,5.56,3.73,5.69,10.47,5.05,4.97,2.46,0.22,0.14,0,0,3.8,0,0,5.86,5.9,4.97,6.59,6.4,5.4,8.4,5.54,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6368,2880,120,Southern Slopes
(mainland),intermediate,3.29,12.73,10.63,6.59,4.43,2.66,1.84,2.05,0.98,0.17,1.53,1.43,1.65,2.58,2.59,2.55,3.47,5.03,3.72,4.47,10.12,8.67,4.9,1.92,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6369,2880,120,Southern Slopes
(mainland),intermediate,1.72,2.29,5.15,5.87,1.88,5.03,3.55,4.88,3.91,3.56,5.71,10.53,11.74,8.88,3.19,4.73,3.3,3.09,2.19,2.77,1.42,0.62,1.58,2.41,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6371,2880,120,Southern Slopes
(mainland),intermediate,6.75,0.6,0,0,2.51,12.35,5.43,0.2,0,0,0,4.21,0,0,0.2,3.92,8.44,6.92,4.13,15.35,2.42,19.86,3.41,3.3,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

4217,2880,120,Southern Slopes
(mainland),rare,3.37,6.05,9.85,7.8,5.71,4.68,6.21,8.62,6.59,5.8,3.08,2.34,2.73,1.91,1.75,2.13,3.77,2.76,4.42,3.4,2.97,0.38,0.58,3.1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6054,2880,120,Southern Slopes
(mainland),rare,8.74,7.67,4.55,7.69,7.84,5.4,5.52,7.63,1.18,2.24,6.12,0.16,0.15,0,0,0,0,0,5.98,11.8,12.07,4.49,0.77,,,,,
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6100,2880,120,Southern Slopes
(mainland),rare,3.18,1.93,1.59,1.02,3.4,3.74,6.8,8.05,10.32,4.2,4.65,4.88,1.13,0.34,0.91,0.79,0,0.11,0,1.81,4.31,6.69,20.29,9.86,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6108,2880,120,Southern Slopes
(mainland),rare,5.6,3,2.97,3.96,3.68,13.58,7.32,5.5,3.73,5.62,2.86,2,5.95,5.23,2.91,3.46,1.31,3.65,3.63,2.52,2.88,3.93,1.64,3.07,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6286,2880,120,Southern Slopes
(mainland),rare,0,4.47,2.49,1.55,2.58,2.47,0.16,0,0.33,4.62,18.63,18.82,1.75,0.56,0.32,0,3.84,5.99,2.26,3.32,8.35,4.95,8.33,4.21,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6291,2880,120,Southern Slopes
(mainland),rare,0.52,0.9,2.4,3.48,6.81,10.5,9.5,5.31,8.7,2.51,5.02,2.02,7.22,6.77,4.59,4.42,2.74,2.31,3.42,2.27,1.2,2.81,2.77,1.81,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6308,2880,120,Southern Slopes
(mainland),rare,1.91,2.58,1.07,1.4,2.97,2.4,5.06,4.16,3.5,5.59,8.95,8.56,3.3,2.54,2.91,5.73,8.24,7.53,7.73,4.04,2.64,2.05,1.13,4.01,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6349,2880,120,Southern Slopes
(mainland),rare,7.79,0.52,0.15,1.99,4.57,5.97,2.49,3.88,6.72,4.54,3.78,1.14,0.56,0.41,2.98,3.64,7.99,6.54,9.07,7.47,4.8,4.9,4.44,3.66,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6362,2880,120,Southern Slopes
(mainland),rare,1.61,3.11,2.38,3.62,4.91,6.13,5.67,2.64,1.1,1.62,0.29,1.02,0.7,7.39,3.4,2.24,2.66,9.33,7.97,5.91,8.22,6.69,6.74,4.65,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6365,2880,120,Southern Slopes
(mainland),rare,3.37,4.74,3.35,3.36,1.8,1.68,1.62,1.91,2.29,2.83,3.71,4.41,4.59,5.35,5.64,4.68,3.11,3.27,5.29,3.91,4.88,3.19,3.75,17.27,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6402,4320,180,Southern Slopes
(mainland),frequent,7.76,6.05,2.27,6.99,8.13,7.37,9.83,8.13,3.4,2.27,0.57,4.16,0,0,4.73,7.56,3.97,3.78,3.4,1.32,3.4,1.51,0,3.4,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6403,4320,180,Southern Slopes
(mainland),frequent,20.52,2.16,0.45,2.94,11.64,11.69,2.02,0,0,0.86,0,0,0,0.06,1.44,0,4.67,1.67,13.69,14.9,9.47,0,0,1.82,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6405,4320,180,Southern Slopes
(mainland),frequent,0.52,0.85,5.11,10.61,4.93,0.75,6.43,8.4,10.55,6.11,5.69,5.9,3.93,3.94,3.84,3.63,2.56,3.25,1,1.59,3.07,1.93,2.34,3.07,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6406,4320,180,Southern Slopes
(mainland),frequent,11.32,8.67,5.16,0.15,0,0.1,1.22,10.81,12.11,1.58,9.88,3.99,0,0.34,2.43,9.57,0.35,0,0,0,14.8,6.22,1.3,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6407,4320,180,Southern Slopes
(mainland),frequent,7.91,4.33,0.33,1.47,0.13,10.86,8.18,12.83,3.06,1.01,1.59,3,1.01,6.99,1.27,5.38,2.4,14.34,2.32,0.8,2.2,7.59,0.8,0.2,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6411,4320,180,Southern Slopes
(mainland),frequent,8.92,5.68,4.71,1.12,0.89,0,0,0.11,2.41,2.2,5.98,8.53,6.53,6.8,4.92,6.99,1.46,3.57,5.26,3.5,3.5,4.39,4.89,7.64,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6412,4320,180,Southern Slopes
(mainland),frequent,4.07,2.57,11.92,5.23,6.95,1.97,8.3,3.97,4.23,0.95,4.38,0.02,0.56,2.82,1.25,3.29,5.13,3.12,2.73,2.95,3.87,6.14,6.87,6.71,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6413,4320,180,Southern Slopes
(mainland),frequent,5.51,0,0.39,2.87,8.88,1.76,1.18,3.01,5.63,7.64,0.98,0,1.37,3.91,6.99,7.8,5.41,1.37,1.57,5.29,15.54,3.65,3.21,6.04,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6414,4320,180,Southern Slopes
(mainland),frequent,1.05,3.55,0.21,0,2.5,1.45,16,0,0,0,0,0,0,5.13,7.56,17.12,8.45,6.44,0.97,2.7,2.98,10.82,12.24,0.83,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6415,4320,180,Southern Slopes
(mainland),frequent,7.6,2.87,5.54,2.05,5.54,0.82,12.32,1.03,0.62,0.82,3.7,2.26,0,0,0,7.39,6.37,5.75,16.02,0,0,0,1.64,17.66,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6241,4320,180,Southern Slopes
(mainland),intermediate,3.21,3.34,9.84,6.52,4.47,3.92,1.74,1.05,1.34,5.37,7.38,2.11,0.76,1.72,3.79,7.6,7.38,10.08,10.08

,5.55,1.48,0.43,0.26,0.58,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6275,4320,180,Southern Slopes
(mainland),intermediate,21.71,11.36,6.29,6.59,0,2.17,6.77,3.34,3.67,0.83,3.49,1.38,2.34,0.83,17.03,2.5,0.68,0,1.85,0.33
,0,3.33,3.15,0.36,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6313,4320,180,Southern Slopes
(mainland),intermediate,2.19,1.18,2.25,1.58,2.21,1.76,4.01,8.74,5.98,1.44,3.57,5.89,7.02,7.31,3.63,8.49,12.63,5.52,0.33
,0.72,1.56,4.03,4.74,3.22,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6370,4320,180,Southern Slopes
(mainland),intermediate,4.67,7.16,4.62,5.13,6.27,4.94,9.25,16.33,9.13,5.16,4.58,3.19,3.21,1,2.8,1.79,1.04,0.61,0.2,0.49,
1.83,1.97,2.1,2.53,,,
6393,4320,180,Southern Slopes
(mainland),intermediate,5.59,19.33,4.89,2.25,3.62,1.65,2.88,6.29,2.99,3.07,4.63,5.56,5.22,0.58,0.42,2.85,5.46,3.47,3.79
,3.22,3.36,1.74,4.59,2.55,,,
6394,4320,180,Southern Slopes
(mainland),intermediate,2.69,2.72,5.17,4.65,3.54,6.47,0.53,0.08,2.16,3.34,6,3.96,4.32,7.07,1.13,4.89,5.8,0.86,1.3,3.8,0.
15,3.72,17.85,7.8,,,
6395,4320,180,Southern Slopes
(mainland),intermediate,2.91,2.84,6.81,1.73,1.88,1.03,2.22,0.93,4.2,4.21,7.13,4.59,4.68,13.86,15.83,6.08,5.13,1.85,7.14
,1.15,1.29,2.33,0.18,0,,,
6396,4320,180,Southern Slopes
(mainland),intermediate,3.76,2.69,4.03,3.36,1.34,0,0,0.27,0,1.08,2.82,3.76,7.53,5.38,6.99,18.41,2.42,4.44,6.32,3.09,0.1
3,0.54,13.84,7.8,,,
6398,4320,180,Southern Slopes
(mainland),intermediate,0,0,0,0.37,2.46,5.12,8.23,5.3,1.45,1.63,3.94,3.33,4.32,6.84,4.94,6.16,6.85,11.82,7.48,5.01,2.74,
4.79,4.57,2.65,,,
6401,4320,180,Southern Slopes
(mainland),intermediate,1.56,1.68,3.13,2.89,3.25,2.77,9.39,5.29,3.73,0.12,2.29,0,0.12,0.12,2.29,10.71,5.42,5.05,10.71,3
.13,1.68,0.96,13.12,10.59,,,
4218,4320,180,Southern Slopes
(mainland),rare,1.47,1.47,3.83,9.23,9.52,6.07,7.31,9.02,7.03,2.61,3,2.22,2.67,3.75,4.97,3.76,0.96,1.99,2.64,3.35,3.58,3.
63,3.42,2.5,,,
4231,4320,180,Southern Slopes
(mainland),rare,4.21,5.44,4.46,4.32,7.16,5.22,12.72,13.96,7.96,5.51,3.55,5.39,2.28,2.57,2.8,1.87,1.14,1.16,0.24,1.02,1.7
4,1.3,1.62,2.36,,,
6243,4320,180,Southern Slopes
(mainland),rare,2.8,5.48,2.27,2.01,2.67,0,7.75,3.21,6.42,4.14,0,0,0,8.16,3.88,8.69,0.27,5.21,4.55,1.74,4.68,18.05,8.02,
,,,
6309,4320,180,Southern Slopes
(mainland),rare,3.49,5.13,5.97,4.76,12.52,5.95,4.69,4.75,9.72,10.14,4.89,3.25,2.36,2.29,0.08,0.08,1.52,0.78,1.47,0.43,0.
59,1.99,9.08,4.07,,,

6318,4320,180,Southern Slopes
(mainland),rare,12.33,2.52,1.03,0.37,0.19,2.34,4.58,9.91,5.05,3.18,0,0.28,0,2.9,7.01,5.14,8.22,4.77,7.94,0.93,0.09,4.58,8.6,8.04,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6363,4320,180,Southern Slopes
(mainland),rare,2.09,5.95,4.99,1.4,2.18,2.68,1.9,3.02,4.25,7.63,5.77,2.49,1.62,0.26,1.42,7.44,2.85,6.63,9.22,7.23,9.53,7.07,2.38,0,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6382,4320,180,Southern Slopes
(mainland),rare,2.14,0.61,1.74,2.77,2.67,0.31,1.95,5.23,4.1,1.33,3.59,8.62,9.44,8.72,10.87,9.03,8.82,1.03,0,0,2.77,4.82,5.44,4,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6388,4320,180,Southern Slopes
(mainland),rare,9.05,25.78,2.03,0.51,0.73,1.75,5.21,3.17,0,0,0,1.5,0.96,0.9,0.38,4.31,4.92,8.95,22.77,5.17,0.55,0.14,0,1.22,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6389,4320,180,Southern Slopes
(mainland),rare,8.03,2.46,3.11,7.6,2.74,0.87,0.26,0.46,2.86,2.6,2.95,9.43,4.66,4.85,7.81,10.28,16.65,3.4,0.19,3.03,0.63,0,0.9,4.23,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6391,4320,180,Southern Slopes
(mainland),rare,6.12,3.23,3.7,5.09,1.39,0,0,0.35,0,1.62,2.54,3.12,7.75,13.41,8.79,10.52,1.85,4.97,6.59,1.04,0.12,0.12,6.47,11.21,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6425,5760,180,Southern Slopes
(mainland),frequent,3.74,10.88,0.25,6.16,4.86,8.86,12.55,5.53,0.88,0.55,0,0,0.8,1.68,1.32,0.25,0.31,0.83,0.02,0,0,0,0,0.83,0.9,1.96,2.75,1.52,15.13,15.85,0.38,1.21,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6426,5760,180,Southern Slopes
(mainland),frequent,2.63,4.09,5.43,3.6,3.98,4.12,2,3.45,6.47,8.59,14.34,13.78,7.72,2.21,1.7,1.36,1.39,0,0.19,1.03,2.13,0.56,1.08,0.32,1.28,1.44,2.15,2.11,0,0.85,0,0,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6428,5760,180,Southern Slopes
(mainland),frequent,4.33,4.91,2.61,3.51,3.88,3.23,5.1,3.92,7.03,9.58,1.96,2.14,3.29,3.22,0,0.34,4.47,1.74,4.92,6.64,2.95,3.54,4.68,2.08,0.32,0.21,1.68,0.22,0.21,1.36,2.25,3.68,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6429,5760,180,Southern Slopes
(mainland),frequent,0,0.64,0.81,3.59,1.8,1.47,18.95,7.68,5.07,0.98,0.82,0.98,0.82,1.96,5.72,1.63,4.58,0.98,2.29,4.58,0.98,1.96,2.78,2.78,5.23,0.98,2.29,1.31,0.65,7.68,4.74,3.27,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6430,5760,180,Southern Slopes
(mainland),frequent,0.69,1.86,3.25,5.06,2.88,4.36,3.34,0.56,0.97,1.11,0.37,3.39,4.96,7.51,9.97,4.36,2.97,1.39,2.23,5.61,2.41,0.56,0.56,0.37,2.97,4.31,4.73,0.88,5.47,3.25,2.92,4.73,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6431,5760,180,Southern Slopes
(mainland),frequent,8.9,0.11,0,0,16.99,0,0,0.33,2.17,1,0.44,4,1.73,0.17,1,7.17,7.93,2.89,0.33,0.17,0,0,0,1.33,5.61,5.5,8,5.56,3.33,9.11,3.23,3,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6432,5760,180,Southern Slopes
(mainland),frequent,0,0.53,0.55,0.49,1.14,2.82,4.26,7.69,7.17,4.98,5.14,9.31,5.81,4.69,4.82,3.04,3.35,0.97,0.84,0.27,1.91,1.4,1.49,0,0,0,2.9,0.67,3.83,10.41,7.81,1.71,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6433,5760,180,Southern Slopes
(mainland),frequent,1.52,6.8,1.7,0,0,0,0,0,0,2.87,3.03,9.41,9.24,0.01,0,0,0,0,0,0,0,0,0,8.34,13.37,7.52,5.41,6.95,10.17,

6434,5760,180,Southern Slopes
(mainland),frequent,0,0.2,6.54,11.89,3.45,0,0,0,0,0,0,0,0,0,0,0,0,2.13,1.73,8.64,7.58,9.15,22.01,3.09,7.8,2.11,5.2,5.4
,2.89,0.19,,,,,,,,,,,,,,,,,,,,,

6435,5760,180,Southern Slopes
(mainland),frequent,1.98,3.93,3.37,4.62,8.03,2.09,0.92,0.15,0,0,1.92,1.73,0,0.06,16,1.59,0.11,0,2.6,0.5,0,2.88,1.86,0,2.9
6,6.67,12.88,6.11,3.79,2.08,8.03,3.14,,,,,,,,,,,,,,,,,,,,,

6280,5760,180,Southern Slopes
(mainland),intermediate,3.12,1.81,0.92,1.73,0.68,0.31,0.41,0.98,1.77,1.46,2.34,2.4,0.85,0.36,5.04,2.23,0.45,3.97,6.62,8.18,6.17,5.23,4.79,5.77,7.75,6.86,5.65,4.54,3.65,2.55,0.97,0.44,,,,,,,,,,,,,,,,,,,,,

6314,5760,180,Southern Slopes
(mainland),intermediate,4.3,0.71,0.23,1.72,1.92,1.65,0.39,1.14,1.19,1.53,1.14,1.94,1.54,1.51,1.68,7.14,6.62,3.31,1.68,3.41,6.41,6.2,5.09,3.85,11.19,8.82,2.51,0.28,0.9,2.7,3.4,3.9,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6397,5760,180,Southern Slopes
(mainland),intermediate,2.26,3.56,2.37,3.08,2.97,1.78,0,0,0.24,0,0.12,3.2,2.61,6.76,4.51,6.17,16.01,3.2,2.85,6.29,3.08,0
.24,0,9.49,7.35,2.73,0,0.12,1.66,2.49,2.49,2.37,,,,,,,,,,,,,,,,,,,,,

6408,5760,180,Southern Slopes
(mainland),intermediate,4.99,5.68,0.18,1.4,0.17,9.07,4.55,11.42,5.5,0.88,1.39,1.05,2.09,5.76,1.75,4.53,1.39,11.51,3.14,
1.57,1.75,5.94,1.39,0.17,0.17,0,0.17,0.7,3.5,2.35,5.32,0.52,,,,,,,,,,,,,,,,,,,,,

6418,5760,180,Southern Slopes
(mainland),intermediate,0.36,0,10.49,4.16,6.98,3.2,7.42,0.96,6.02,9.04,3.63,2.35,0.36,0.18,0,0,1.51,4.1,1.27,1.26,2.71,2
.23,2.48,4.16,0,0,0.18,0.18,4.22,8.36,12.01,0.18,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6419,5760,180,Southern Slopes
(mainland),intermediate,2.33,3.1,5.05,5.26,3.73,3.84,7.47,14.18,14.39,5.62,5.93,0.71,0.12,1.39,0.34,0.75,0.45,1.97,2.34
,2.09,1.44,1.31,0.71,0.82,0.73,2.27,2.49,2.06,0.9,0,2.35,3.86,,,,,,,,,,,,,,,,,,,,,

6421,5760,180,Southern Slopes
(mainland),intermediate,2.72,1.61,0.08,0,0.27,1.75,2.19,2.17,9.27,3.03,6.88,12.51,12.22,6.79,0.74,1.44,3.04,1.96,1.08,1
.71,5.06,2.35,1.23,2.79,1.18,0.43,0.6,4.24,4.59,5.32,0.53,0.22,,,,,,,,,,,,,,,,,,,,,

6422,5760,180,Southern Slopes
(mainland),intermediate,11.02,0.67,0,1.05,0.16,2.04,3.42,2.25,6.39,5.62,7.31,5.21,1.39,4.46,5.19,0.4,3.21,2.76,1.04,2.6,
1.81,0.64,5.95,3.49,2.95,1.62,4.32,2.99,2.8,3.69,2.79,0.76,,,,,,,,,,,,,,,,,,,,,

6423,5760,180,Southern Slopes
(mainland),intermediate,4.14,0.19,0,1.43,2.52,1.73,5.04,6.52,7,4.06,6.72,14.81,10.42,6.94,3.34,1.26,0,0,0,4.48,5.33,2.9
3,2.45,2.87,2.4,0.18,0.36,0,2.16,0.54,0,0.18,,,,,,,,,,,,,,,,,,,,,

6424,5760,180,Southern Slopes
(mainland),intermediate,2,0.15,0,4.87,17.56,5.52,0,0,0,0,0,0,0,0,0,0,0.72,0.42,3.68,3.61,0,2.38,1.86,8.03,1.27,15.2
1,20.37,5.4,6.95,,,,,,,,,,,,,,,,,,,,,

2621,5760,180,Southern Slopes
(mainland),rare,8.15,2.71,0,0,1.11,0,0,0.44,1.85,0.33,10.23,4.79,3.16,1.52,4.57,5.77,2.5,2.07,1.63,0.65,0,0,0,0,14.15,1.8
5,2.29,7.18,0.54,5.77,10.45,7.29,,,,,,,,,,,,,,,,,,,,,

2685,5760,180,Southern Slopes
(mainland),rare,13.2,1.01,7.3,0.17,0.55,0,0,0,0,3.84,0,0,0,0,0,0,0,0.05,0.72,1.48,8.14,11.94,23.02,8.55,4.18,7.65,3.64,2.35,2.21,0,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

4219,5760,180,Southern Slopes
(mainland),rare,0.81,1.07,1.11,2.87,5.59,10.89,7.09,5.83,9.12,6.91,4.29,3.07,2.12,1.83,4.11,4.5,3.58,2.07,0.9,3.31,2.69,2.88,3.74,3.2,3.19,1.08,0.88,0.76,0.18,0.03,0.17,0.13,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

4232,5760,180,Southern Slopes
(mainland),rare,0.22,0.45,1.93,3.91,5.24,4.21,4.13,6.83,4.96,11.95,13.31,7.86,5.13,3.56,5.02,2.36,2.41,2.69,1.82,1.11,1.12,0.22,0.9,1.72,1.25,1.55,2.21,1.16,0.53,0.24,0,0,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6244,5760,180,Southern Slopes
(mainland),rare,8.99,4.16,0,0,0,0.45,3.37,1.01,0.22,4.04,3.6,1.91,1.8,1.24,3.37,5.17,2.13,4.04,3.37,0,0,0,0.45,6.52,8.99,1.57,1.24,6.18,1.35,4.16,6.29,14.38,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6319,5760,180,Southern Slopes
(mainland),rare,9.99,3.96,8.41,2.83,0.89,0.82,0.07,0.82,3.72,7.22,4.62,3.13,0.52,0.15,0.07,1.04,5.29,4.54,6.03,4.24,7.45,0.67,0.22,0.89,8.71,6.78,1.19,1.71,2.76,0.37,0.52,0.37,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6383,5760,180,Southern Slopes
(mainland),rare,7.47,0.52,0,1.89,1.2,3.77,1.29,1.2,0.51,1.54,1.11,1.63,2.57,1.11,0.09,5.15,2.92,1.97,1.63,5.75,8.83,7.2,4.29,12.61,3.77,6.52,0.17,0,0.51,3.77,4.12,4.89,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6392,5760,180,Southern Slopes
(mainland),rare,1.95,5.45,2.88,3.3,4.53,1.24,0,0,0.31,0,1.44,2.27,2.78,6.9,11.95,7.83,9.37,1.65,4.43,5.87,0.93,0.1,0.1,5.77,9.99,0.62,0.1,1.24,1.96,1.54,2.47,1.03,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6416,5760,180,Southern Slopes
(mainland),rare,2.02,1.96,2.44,1.33,1.41,0.41,0.14,4.42,2.75,1.17,0.5,0.1,0,0,8.32,10.12,4.36,2.94,2.04,2.15,3.11,2.06,5.07,8.61,7.7,6.06,5.45,3.82,0.36,2.23,6.13,0.82,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6417,5760,180,Southern Slopes
(mainland),rare,4.5,1.74,5.5,1.83,2.49,0.39,2.18,8.57,0,0,0,0,0,0,0,0,0,0,0,4.65,2.31,2.88,0.85,4.77,0.97,2.55,6.6,19.77,20.21,7.24,,,,,,,,,,,,,,,,,,,,,,,,,,,,,

6427,7200,180,Southern Slopes
(mainland),frequent,2.35,3.65,4.85,3.21,3.56,3.67,1.79,3.08,5.77,7.67,12.8,12.29,6.89,1.97,1.52,1.21,1.24,0,0.17,0.92,1.9,0.5,0.97,0.28,1.14,1.28,1.92,1.89,0,0.76,0,0,0,0,4.38,0.26,0.09,3.07,1.62,1.33,,,,,,,,,,,,,,,,,,,,,

6460,7200,180,Southern Slopes
(mainland),frequent,0,3.78,1.9,3.88,1.29,1.19,0.42,8.48,11.1,11.69,4.53,0.1,2.19,4.75,0,0,0,0,0,0,7.82,8.56,3.85,0.28,0.35,1.17,11.38,2.21,0.06,0,0.16,0,0.99,5.1,0,0,0.06,0,0,2.71,,,,,,,,,,,,,,,,,,,,,

6461,7200,180,Southern Slopes
(mainland),frequent,1.82,7.86,7,3.77,7.61,6.4,7.68,4.18,5.25,4.08,0.66,0.18,0.42,0.23,0.65,1.21,0.19,1.96,0.23,0,0,0,0,0.07,0.93,1.1,0.53,0,0.15,0.91,0.99,2.13,3.85,3.78,7.37,6.75,1.6,2.97,0.88,4.61,,,,,,,,,,,,,,,,,,,,,

6462,7200,180,Southern Slopes
(mainland),frequent,7.19,11.14,8.4,6.88,5.26,2.62,0.19,2.45,1.82,4.34,3.02,2.63,1.76,2.15,0.8,3.07,1.16,1.07,1.47,1.04,2.81,0.54,0.73,0.79,0.73,0.27,0.54,1.16,1.12,2.03,4.11,1.8,4.05,2.41,1.08,3.3,2.41,0,1.21,,,,,,,,,,,,,,,,,,,,,

6463,7200,180,Southern Slopes
(mainland),frequent,0,0.15,0.95,0.16,4.27,0.95,1.74,12.18,9.65,6.8,0.95,0.16,1.9,1.11,4.11,3.32,0.79,3.8,1.27,2.69,3.8,1.

11,2.06,3.48,2.37,5.22,0.63,2.06,0.95,1.11,4.59,5.7,3.64,0.16,0.16,0.79,1.9,0.79,2.53,,,,,,,,,,,,,

6464,7200,180,Southern Slopes

(mainland),frequent,1.8,0,0,0.74,0.17,4.53,0.61,1.76,1.46,4.5,2.16,7.53,3.13,2.02,0.58,0.05,0,0,3.34,0,0.05,0.07,15.98,0.07,0.05,0.05,2.73,0.05,0.57,3.32,0.44,0.23,5.6,9.96,9.59,2.37,3.68,1.77,7.88,1.16,,,,,,,,,,,,,

6465,7200,180,Southern Slopes

(mainland),frequent,10.99,6.68,5.85,8.41,0.86,0.43,0,0,0,0,0,0,0,0,0,0,1,0.14,4.14,9.16,7.1,6.52,2.33,0,0,0,0.14,0.57,2.1,0.91,2.72,13.22,3.19,5.16,3.09,3.28,0.86,0.86,0.29,,,,,,,,,,,,,

6467,7200,180,Southern Slopes

(mainland),frequent,4.91,9.74,0,0,0,0,0,0,9.9,2.09,0,0,0,0,0,0,0,0,0,0,0.3,7.53,12.53,0.15,0,2.34,11.49,1.8,15.38,18.95,0.5,0,0,0,1.33,1.06,,,,,,,,,,,,,

6468,7200,180,Southern Slopes

(mainland),frequent,3.21,8.35,1.61,1.44,3.69,6.9,1.77,0.96,0.16,0.32,0.16,1.93,8.03,1.93,0.64,0.48,0.32,0.64,2.73,0.32,0,0,0,0,0,5.14,9.63,3.85,2.57,0,0.32,3.37,1.28,0.48,2.73,3.69,6.9,8.03,3.69,2.73,,,,,,,,,,,,,

6470,7200,180,Southern Slopes

(mainland),frequent,5.32,9.21,5.47,1.43,0.68,5.75,2.82,0.75,0.16,1.92,1.91,0.26,0.17,0.35,0.67,5.04,4.76,0.06,0.08,0,0,0,0.06,0.08,0,0,0,0,0,1.02,1.35,5.52,3.37,0,2.09,3.26,0.81,1.08,9.69,19.55,5.31,,,,,,,,,,,,,

2765,7200,180,Southern Slopes

(mainland),intermediate,7.05,9.71,9.38,0.01,2.17,2.04,1.38,1.51,0.9,0,0.18,2.08,2.37,0.39,4.28,3.84,0.45,1.04,1.65,3.05,3.07,2.23,2.23,2.46,0.27,0,0.01,0.5,0.91,0.06,1.63,1.86,3.3,4.66,5.05,4.1,7.06,5.39,1.27,0.46,,,,,,,,,,,,,

4290,7200,180,Southern Slopes

(mainland),intermediate,1.39,0.74,0.74,0.85,0,4.89,0.2,12.54,1.64,0,0,0,0,0,0.31,0.1,12.45,4.09,0.52,3.87,2.41,2.68,2.72,7.78,5.25,4.51,0,0,0,0,0,0.68,3.25,5.04,2.08,0.51,6.83,0.04,0,11.89,,,,,,,,,,,,,

6409,7200,180,Southern Slopes

(mainland),intermediate,0.81,4.09,0.16,0,0,0.16,1.15,0.16,2.13,7.35,0.65,0.33,1.14,0.5,8.49,8.18,10.44,1.14,1.48,0.82,2.29,1.15,5.72,0.82,4.41,3.6,10.11,1.96,0.33,2.62,5.56,0.49,0.16,0,0,0.33,3.11,0.98,3.1,4.08,,,,,,,,,,,,,

6420,7200,180,Southern Slopes

(mainland),intermediate,1.67,2.3,1.75,2.16,4.05,4.2,4.39,3.34,5.08,8.65,13.19,11.64,4.71,3.16,0.62,0.33,0.99,0.48,0.77,0.69,2.78,1.53,1.41,1.5,0.77,0.97,0.49,1.14,2.04,2.26,1.58,0.63,0.28,2.34,3.11,0.35,0.45,0.87,0.63,0.7,,,,,,,,,,,,,

6452,7200,180,Southern Slopes

(mainland),intermediate,0,0,0,1.08,2.55,1.87,1.6,19.65,7.35,3.48,0.4,1.74,0.53,2.67,4.01,4.81,1.47,2.27,0.94,0.53,5.61,1.07,2.54,2.27,2.81,2.81,1.34,2.27,1.07,0.94,5.48,5.61,1.07,0.13,0,0.27,1.34,1.74,2.01,2.67,,,,,,,,,,,,,

6453,7200,180,Southern Slopes

(mainland),intermediate,0,0,0.37,9.3,0,0,2.44,0.7,0,3.58,1.95,0.88,5.59,5.73,1.33,2.21,3,2.58,1.9,1.09,9.66,2.45,1.87,0.98,2.2,3.22,2.93,8.33,2.19,2.78,5.06,1.23,0,0,3.2,2.44,4.87,0.3,0.16,3.48,,,,,,,,,,,,,

6454,7200,180,Southern Slopes

(mainland),intermediate,1.31,0,1.47,2.24,2.38,4.9,4.73,5.11,10.13,5.12,6.1,1.41,0,0,0.39,0.3,0.06,0,0.06,3.06,2.33,5.57,8.03,4.27,3.02,1.33,0.17,1.9,0.29,0.27,0,1.94,0.27,0.14,0.79,2.12,4.67,5.17,5.81,3.14,,,,,,,,,,,,,

6456,7200,180,Southern Slopes

(mainland),intermediate,2.19,0.08,0.2,0.2,0.39,3.37,16.68,4.34,0.38,5.16,2.21,1.58,1.77,0,0,0,0,6.43,4.25,1.25,0.21,6.34,7.82,14.74,5.29,1.61,0.51,0.17,0.93,1.83,1.25,0,0.49,0.19,1.16,0.2,0.39,0.19,6.2,0,,,,,,,,,,,,,

6457,7200,180,Southern Slopes
(mainland),intermediate,2.95,0.39,1.05,0.29,1.05,0.57,0.76,3.89,1.42,0.19,0,1.52,1.61,0.57,0,0.38,0.28,0.95,0.57,0.28,0.28,0.66,0.57,3.89,1.71,1.52,2.94,5.7,10.07,11.21,6.55,4.18,0.76,1.04,0.09,0,2.28,5.03,9.69,13.11,,,,,,,,,,,,,

6458,7200,180,Southern Slopes
(mainland),intermediate,2.73,6.17,1.12,0.64,2.98,0.37,0.52,0.63,0.26,1.04,4.43,1.05,0.07,0.93,2.38,1.92,2.01,1.75,0.31,0.92,0.07,0.71,1.12,0.27,0.29,0.36,2.42,9.48,6.3,3.36,5.7,7.02,6.22,8.89,5.57,1.74,1.95,2.94,0.85,2.51,,,,,,,,,,,,,

2643,7200,180,Southern Slopes
(mainland),rare,1.94,2.82,3.89,2.87,5.93,3.47,0.51,1.19,1.52,2.58,4.41,6.43,6.13,2.8,3.56,0.05,2.45,4.27,6.7,0.11,0.4,1.17,0.32,0.09,0,0.14,0.15,0,0,0,0.58,0.45,0,3.06,7.32,8.1,2.92,3.11,8.56,,,,,,,,,,,,,

2653,7200,180,Southern Slopes
(mainland),rare,1.58,0.7,0.96,0,0.19,3.78,3.41,3.93,0,0.29,0,0,0,0,0.45,19.04,0.62,1.62,3.08,3.02,2.86,16.83,10,2.8,0.99,0,0,0,0,1.36,5.55,1.56,1.05,3.4,2.87,0.27,0,7.79,,,,,,,,,,,,,

2689,7200,180,Southern Slopes
(mainland),rare,2.66,0,0.72,0.51,0.42,0.63,0.11,0,0,11.15,0,4.04,0.11,0.11,0,0,3.36,5.57,0.1,0,0,0,0,0.12,0,0,0,0.35,4.62,7.75,7.05,9.55,17.4,11.87,7.74,1.87,1.57,0.62,0,0,,,,,,,,,,,,,

2692,7200,180,Southern Slopes
(mainland),rare,3.45,0,0.8,0.8,1.06,0.8,0,0,0,15.74,0,1.58,0.01,0,0,0,3.32,5.29,0,0,0,0,0,0,0,0,0,3.45,6.85,6.41,15.95,12.3,11.84,7.43,0.8,1.59,0.53,0,0,,,,,,,,,,,,,

2717,7200,180,Southern Slopes
(mainland),rare,5.45,10.09,5.67,0,0,0.16,0.82,0.72,1.52,1.65,3.06,2.23,1.12,0.23,0.05,0,1.82,1.23,0.03,1.13,6.01,2.09,0.53,0.56,6.75,1.88,0.87,9.71,2.23,1,0.63,2.05,4.76,8.02,7.21,0.32,0,1.45,3.43,3.52,,,,,,,,,,,,,

2727,7200,180,Southern Slopes
(mainland),rare,2.54,5.29,8.1,11.02,4.23,0.76,0.87,5.09,1.29,3.7,4.47,0.75,1.57,0.66,6.46,3.52,2.15,0.98,0.21,1.13,1.25,4.16,0.2,0,0,0.31,0.16,0.25,0.46,0.12,0.05,3.52,6.69,2.92,2.24,1.99,0.84,1.57,4.06,4.42,,,,,,,,,,,,,

4233,7200,180,Southern Slopes
(mainland),rare,0.23,0.46,1.94,3.95,5.11,4.2,4.07,6.74,4.91,11.98,13.14,7.5,5.19,3.35,5.08,2.14,2.42,2.64,1.77,1.07,1.09,0.23,0.96,1.64,1.23,1.52,2.22,1.08,0.53,0.21,0,0,0,0.28,0.99,0.07,0.03,0,0,0.03,,,,,,,,,,,,,

6384,7200,180,Southern Slopes
(mainland),rare,6.73,1.35,1.42,0.82,0.3,0.3,1.27,3.29,1.94,6.5,0.6,0,0.07,2.54,2.99,1.49,1.05,0.22,1.42,0.45,1.94,2.17,1.12,0.15,2.91,3.44,2.17,1.27,4.04,7.03,6.13,5.31,10.91,2.91,6.73,0.15,0,0.22,3.06,3.59,,,,,,,,,,,,,

6436,7200,180,Southern Slopes
(mainland),rare,5.52,3.88,0.29,0,1.68,4.12,0.64,2.62,1.33,1.23,1.66,0.46,1.21,1.49,2.28,0.96,2.42,6.5,6.98,6.14,3.75,6.63,3.84,2.02,0.06,2.71,2.07,2.15,8.2,2.26,0,0,0.52,4.95,2.8,0.64,0.18,0.75,1.14,3.92,,,,,,,,,,,,,

6447,7200,180,Southern Slopes
(mainland),rare,0,0,4,1.95,2.47,0.1,0,0.1,0.2,1.43,0.2,0,0.31,8.6,0,0.1,0.2,0.92,0.41,4.3,8.39,3.58,5.32,4.61,2.76,1.23,0.31,0.2,1.23,3.28,5.53,0.2,0.72,3.17,12.9,9.83,2.35,4.4,3.68,1.02,,,,,,,,,,,,,

6466,8640,180,Southern Slopes
(mainland),frequent,0,0,4.55,8.1,8.18,8.9,0.4,1.07,0,0,0,0,0,0,0,0,0.8,0.27,0.13,10.3,4.15,9.11,3.21,0.54,0,0,0,0.27,1.88,1.07,1.61,5.22,11.38,0,7.07,3.14,0.74,1.34,0.13,0.68,1.61,2.54,0.13,0.67,0.81,,,,,,,,,,

6475,8640,180,Southern Slopes
(mainland),frequent,8.11,12.86,1.76,0,0,3.39,3.29,0,0,17.43,6.51,0.89,0.56,0.84,0.47,0.56,0.56,0,0,1.53,0.47,0.12,0.93,0

6459,8640,180,Southern Slopes
(mainland),intermediate,0.66,1.48,0.11,0.14,0.1,0.38,0.3,1.89,3.13,4.02,0.67,1.87,1.92,0.55,0,0.79,0.32,0.79,4.29,1.01,0
,1.84,1.42,2.01,3.35,0.31,0.03,0.92,0.7,0.35,0.81,0.27,0.43,1.68,2.29,9.12,6.17,2.5,9.49,3.72,8.43,7.23,3.02,1.27,3.23,1.
83,0.37,2.79,,,,,,,,,

6469,8640,180,Southern Slopes
(mainland),intermediate,2.75,7.17,1.38,1.24,3.18,5.94,1.52,0.83,0.14,0.28,0.14,1.66,6.91,1.66,0.55,0.41,0.28,0.55,2.35,
0.28,0,0,0,0,4.42,8.29,3.31,2.21,0,0.28,2.9,1.1,0.41,2.35,3.18,5.94,6.91,3.18,2.35,0,0.55,4.56,3.18,4.83,0.55,0.14,0.14,
,,,,,,,,

6471,8640,180,Southern Slopes
(mainland),intermediate,9.36,3.27,2.72,2.39,0.77,0,0,0.27,0.14,0,0.36,3.17,0.62,0,0,0.18,2.02,5.32,3.76,0.91,2.79,3.68,2
.32,1.33,0.27,2.76,2.95,3.48,1.01,2.58,0.94,0,0,0,1.1,2.44,0.14,0,0,0.83,7.6,7.1,6.7,0.58,4.37,6.21,1.03,2.53,,,,,,,,,

6472,8640,180,Southern Slopes
(mainland),intermediate,1.73,0.92,2.65,2.55,1.28,0.24,4.85,0.93,3.72,3.65,2.65,1.71,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
0,0,0,0,4.63,15.05,0.08,5.73,14.48,11.47,10.75,3.53,3.4,2.94,0.59,0.47,0,,,,,,,,,

6474,8640,180,Southern Slopes
(mainland),intermediate,17.67,8.57,0,0,0,0,0,0,4.33,0,13.19,3.58,7.14,0.23,1.14,
0.35,3.12,4.8,1.63,9.82,13.59,0,0,0,0,0,10.84,,,,,,,,,

2294,8640,180,Southern Slopes
(mainland),rare,0.18,1.27,1.32,0.73,1.32,2.77,2.22,1.5,1.1,1.32,3.07,2.04,1.77,1.65,1.36,0.94,1.44,3.45,2.93,1.38,0.85,1.
16,3.67,0.89,0.28,0.04,0.04,0.12,0.18,0.74,0.96,1.52,0.46,0.74,1,2.11,5.38,5.24,1.2,3.62,4.38,4.11,1.86,6.4,7.19,10.68,1.
09,0.33,,,,,,,,,

2453,8640,180,Southern Slopes
(mainland),rare,1.54,1.45,0.75,1.66,1.33,0.99,2.01,3.37,0.78,2.69,3.48,2.58,4.41,2.87,4.09,3.69,10.92,10.11,1.08,0.4,0,0
.07,6.6,2.22,0.05,0.08,0.07,0.06,0.28,1.63,0.44,1.08,1.84,4.61,4.61,4.11,3.55,0.65,0,0.22,1,0.04,0.08,0.8,4.94,0.77,0,0,,
,,,,

2654,8640,180,Southern Slopes
(mainland),rare,1.52,0.67,0.93,0,0.19,3.67,3.3,3.81,0,0.28,0,0,0,0,0.44,18.46,0.6,1.57,2.99,2.93,2.77,16.31,9.69,2.71,0
.96,0,0,0,0,0,1.32,5.38,1.51,1.02,3.3,2.79,0.26,0,7.55,0,0.2,0,1.09,1.59,0.19,0,0,,,,,,,,,

2718,8640,180,Southern Slopes
(mainland),rare,3.82,6.94,8.73,1.79,0,0,0.43,0.8,1.08,0.77,1.69,3.79,1.39,0.44,0.2,0,0.03,2.25,0.53,0.06,2.77,5.31,0.39,0
.49,3.2,5.07,0.15,4.04,6.34,1.87,0.67,1.69,1.29,9.66,5.55,2.58,0,0.07,2.9,2.84,2.82,4.42,0.56,0.31,0.27,0,0,0,,,,,,,,,

2728,8640,180,Southern Slopes
(mainland),rare,4.29,0,0,0,0,0.05,0.08,0.06,0.49,5,5.94,10.03,6.14,2.53,1.32,1.48,4.47,2.04,4.21,2.49,0.07,2.08,0.94,8.0
6,1.8,1.48,0.31,0.87,1.03,4.05,0.49,0.19,0,0.11,0.32,0.2,0.06,0.56,0.04,1.72,4.89,4.67,3.32,1.74,0.8,1.64,2.95,4.99,,,,,,,,,

2766,8640,180,Southern Slopes
(mainland),rare,6.38,8.8,8.5,0.01,1.97,1.85,1.25,1.37,0.81,0,0.16,1.89,2.15,0.36,3.88,3.48,0.41,0.95,1.5,2.76,2.78,2.02,2
.02,2.23,0.25,0,0.01,0.46,0.82,0.06,1.47,1.68,2.99,4.23,4.58,3.72,6.4,4.89,1.15,0.42,0.11,0.02,0.33,0.23,0.13,1.64,4.13,2
.75,,,,,,,,,

4234,8640,180,Southern Slopes
(mainland),rare,0.21,0.42,1.82,3.69,4.95,3.97,3.9,6.44,4.68,11.28,12.56,7.41,4.84,3.36,4.74,2.23,2.28,2.54,1.72,1.05,1.0
6,0.21,0.85,1.62,1.17,1.46,2.09,1.09,0.5,0.22,0,0,0,0.24,0.98,0.07,0.03,0,0,0,0.06,0,1.68,0.93,1.21,0.44,0,0,,,,,,,,,

4304,8640,180,Southern Slopes
(mainland),rare,0.64,0.95,2.84,0.94,2.02,1,0.73,0.52,1.08,2.46,1.2,3.26,3.13,4.74,7.52,5.13,3.7,1.4,2.13,0.29,2.25,2.58,1.21,0.12,1.08,0.23,0.74,0.53,1.46,2.91,1.05,1.96,3.91,4.93,3.44,4.3,2.16,1.99,2.62,0.26,2.13,5.58,3.96,2.82,0.1,0,0,0,,,,,,
,

4322,8640,180,Southern Slopes
(mainland),rare,8.35,9.41,8.27,15.02,1.86,0.98,2.53,3.59,1.16,0,0,0,0,1.75,0.09,0.18,0.82,0,0,0,0,0,0,0,0,0,0,1.91,0,0,2.77,6.98,2.68,0.53,0,0,0,0,0.57,5.83,5.43,0,6.16,2.09,1.21,1.29,3.61,4.93,,,,,,

6437,8640,180,Southern Slopes
(mainland),rare,1.34,1.16,0.73,1.92,0.79,0,0.85,5.05,2.75,2.35,0.09,0.37,3.61,1.91,0.47,2.52,0.63,1.86,1.21,0.24,1.13,2.86,0.64,1.41,4.39,6.53,6.26,3.6,3.88,6.48,2.08,0.95,0.11,3.67,1.21,6.32,4.51,0.15,0,0.32,1.39,4.8,1.37,0.37,0.16,0.7,3.13,1.73,,,,,,

6478,10080,180,Southern Slopes
(mainland),frequent,4.71,0.18,0.25,0.89,0,0,0.88,4.05,10.45,7.37,7.71,8.38,6.24,0.82,1.4,1.17,0,0,0.232,0.34,0.29,0.24,0.72,0.18,0.28,0,0,0,0,0,0,0.48,0.3,0,0,0,0,0.69,1.38,1.78,4.78,0.67,0.39,0,0.7,3.96,6.36,0.72,2.3,0.87,7.75

6502,10080,180,Southern Slopes
(mainland),frequent,3.37,7.22,11.36,5.24,2.24,0.75,0.3,0.9,4.89,5.5,0,0,0,0.3,0.15,0,0,0.02,6.92,9.8,4.32,0,0,0.12,0.15,0,0,0,0,0,0,0,0,0.196,5.92,3.71,1.2,1.95,1.81,5.11,3.03,2.38,1.36,0.45,2.27,4.22

6503,10080,180,Southern Slopes
(mainland),frequent,2.34,0.1,0.143,0.42,0,0.74,0.54,3.03,1.23,1.97,0.92,1.85,1.02,5.37,1.66,8.67,10.83,3.98,2.05,0.117,6.32,0,0,0,0,0,0,0,0.31,1.75,4.3,3.29,0.16,0,1.17,6.07,2.82,1.33,0,0,0,0,0.249,7.24,8.75,0.22,1.42,1.64,0.16,0.44,0.8

6504,10080,180,Southern Slopes
(mainland),frequent,5.23,0,0,0,0,0.275,8.25,4.35,1.04,5.74,0.17,0,0,0.17,0,0,0,0,0,0.87,0.35,3.24,9.16,6.51,7.11,3.26,0.17,0,0.35,0.87,5.4,1.23,0,0,0.35,23.15,1.91,1.74,0.35,1.75,1.63,0.29,0.7,1.74,0.17,0,0

6505,10080,180,Southern Slopes
(mainland),frequent,18.3,5.01,1.24,0.12,2.32,5.3,6.24,1.67,1.49,0.87,1.78,1.69,1.36,0.87,1.99,0.41,0.58,0.25,0.75,0,0,0,0,0,0.12,0,0,0,0,0,0,0.66,1.16,0,0,0,0,0.12,0.37,0.458,8.67,7.81,6.68,6.2,4.46,0.87,0.12,0,0

6506,10080,180,Southern Slopes
(mainland),frequent,4.48,6.41,0,0,0,0,0,0,0.88,6.31,1.33,0.497,0.48,0,0,0,0,0.813,1.09,1.43,2.9,11.38,0.73,2.01,2.67,0.26,3.8,0.31,0.092,0.04,6.73,11.67,3.64,4.92,0.12,0,0,0.44,5.68,0,0,0,0,0.118,2.49,2.6

6507,10080,180,Southern Slopes
(mainland),frequent,0.92,2.86,0.63,2.61,1.35,0.12,0.62,0.05,1.15,2.41,4.11,4.46,2.83,1.33,0.66,1.88,3.99,4.36,4.19,3.27,1.95,0.73,1.14,0.97,3.15,5.99,5.08,4.37,5.56,4.74,1.24,0.4,0.16,0.41,1.18,1.2,0,0,0,0.45,1.88,1.98,1.1,0.13,0.74,0.13,4.15,1.67,0.8,0.21,3.07,0.64,0.98

6508,10080,180,Southern Slopes
(mainland),frequent,0.62,0.16,4.86,0.596,4.86,0,0.16,0.79,0.63,0.47,0.16,1.58,0.31,0,0,0.189,2.2,0,0,0,0,0,0,0,0,0.299,0.47,4.56,2.04,4.54,1.89,0.78,1.33,2.12,6.13,11.45,9.72,8.8,6.6,0.31,6.45,1.56,1.26,0.47,0.31,0.16,0.63,0.78

6509,10080,180,Southern Slopes
(mainland),frequent,11.66,0,0,0,0.184,3.58,4.2,0.74,0.56,0,0,0,0,0,0,0,0,0,0,0.37,3.94,5.82,19.17,6.46,6.34,4.45,0.53,0.302,5.23,5.92,1.72,4.45,0.9,0.74,0.37,5.08,1.43,0.37,1.11

6510,10080,180,Southern Slopes
(mainland),frequent,0.84,1.67,2.04,1.91,0.5,1.63,1.35,1.71,1.58,0.58,0,0.07,1.11,0.42,1.92,1.31,1.77,1.86,0.98,0,0,0,0,0,0,0.58,0.58,2.52,8.98,3.93,2.14,0.54,0.08,1.13,1.16,1.99,4.07,4.5,4.33,5.28,1.5,1.08,3.46,6.04,6.64,8.11,4.13,

3.03,0.41,0.54

2860,10080,180,Southern Slopes
(mainland),intermediate,6.62,0.89,3.23,9.91,0.69,5.27,12.59,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0.12,0.35,
0.11,0,0,0.72,0.65,2.53,4.99,0.84,0.38,0.17,0.16,1.71,0,0,1.42,22.55,4.76,4.92,3.15,9.16,2.11

6269,10080,180,Southern Slopes
(mainland),intermediate,3.98,6.27,0.11,0,0,0,0,0,0,0,0,0,0,10.49,0,0,0,0,0,0.11,0,0,0,1.14,0,1.37,0.57,0.23,1.14,0,0.9
1,2.74,1.14,0.11,1.03,1.03,2.28,1.25,2.74,0.34,0.8,0.8,0.34,1.03,4.45,4.68,3.42,3.65,2.74,8.32,13.8,11.4,4.56,1.03

6399,10080,180,Southern Slopes
(mainland),intermediate,2.71,1.28,0.61,4.62,4.82,5.31,1.26,0,0,0.29,1.23,1.08,0.2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
0,0,0.29,1.21,3.61,6.83,4.08,1.3,1.46,2.83,2.61,3.03,5.38,3.65,4.62,5.27,8.43,6.07,4.55,2.21,3.35,3.75,2.06

6484,10080,180,Southern Slopes
(mainland),intermediate,0,0.94,3.49,4.4,11.67,5.2,3.67,1.67,0.53,0.75,1.01,0.2,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,1.31,0.24,0.2,0
.08,0.28,0.29,1.29,0.97,1.4,2.01,0.46,0,0,0,0,0.29,1.23,0.37,0.5,4.1,7.31,13.75,7.13,10.62,8.57,1.62,0.63,0.58,0.45,0.79

6493,10080,180,Southern Slopes
(mainland),intermediate,7.64,7.47,2.81,5.83,0.87,0,0.35,6.66,
1.8,1.72,0.6,0,1.36,0,10.36,0.31,2.52,6.77,0.94,8.07,9.61,16.55,4.35,3.41,0

6495,10080,180,Southern Slopes
(mainland),intermediate,1.41,0.74,0.89,1.73,2.21,3.01,0.39,3.54,3.72,1.47,0.65,1,0.02,0,0,0,0.8,4.11,1.44,0.67,0.04,2.28
,3.89,4.83,12.66,3.99,0.94,1.12,0.85,0,0.32,0.4,0.6,1.29,1.22,0.12,0.33,0,0,0.01,1.94,2.88,2.2,0,0,3.8,4.36,4.21,6.36,0.65
,1.35,2.23,2.59,1.15,1.04,2.55

6496,10080,180,Southern Slopes
(mainland),intermediate,0.13,0.35,0.8,4.53,0,0.93,0.6,1.56,0,0,0.44,4.86,9.43,8.98,0.43,0.58,3.53,2.91,0,0,0,0,0,0,0,0,0,
0,1.6,4.99,2.69,0,0,1.58,3.06,0.68,1.06,0,0,0,0,0.15,5.14,5.34,7.97,3.05,6.41,0.62,2.22,3.45,2.56,0,2.25,2.84,0.29,1.99

6497,10080,180,Southern Slopes
(mainland),intermediate,4.22,0,2.97,2.48,0.12,0,1.45,1.33,1.09,0.97,1.76,0.3,0.12,0.24,0.25,1.57,0.12,0,0,0,0,0,0,0,0,0,0,
,0,0,2.42,0.12,1.57,1.87,5.84,2.29,0.48,0.24,3.19,9.22,11.13,8.79,10.91,2.41,0.49,4.77,0.54,1.33,1.09,0.54,0.54,1.45,0.6,
1.82,2.5,1.87,2.99

6499,10080,180,Southern Slopes
(mainland),intermediate,3.92,1.03,1.57,5.93,3.79,4.86,2.55,0.64,0.98,1.37,0.6,0.19,0.33,0.39,2.49,5.91,0.96,0.28,1.15,1.
78,0.14,0.71,0,0.43,0.56,0,0,0,2.04,0,0,0,0,0,0,0,0.04,3.99,4.76,2.73,0.22,0,3.17,1.53,2.32,2.11,1.62,1.66,2.16,3.74,6.2
9,8.13,5.47,2.32,3.14

6501,10080,180,Southern Slopes
(mainland),intermediate,0.77,3.47,0,0.18,0,0.18,13.72,1.06,4.23,0.53,0.35,0,
0.41,3.12,4.12,10.56,15.32,13.86,2.11,1.58,0.53,0,0.35,1.95,2.37,5.45,5.52,2.47,1.73,1.23,1.77,0.53,0.53

2614,10080,180,Southern Slopes
(mainland),rare,0,0.1,2.8,0.14,0,0,0,0.01,0.06,0,0,0.01,1.49,0,0,0,0,0,6.21,12.17,0,0,0,0,0,0.88,0,0.25,0.09,0.36,1.17,0.1
4,1.46,21.55,0,0,0,0,0,0,1.03,2.95,0.57,0.18,0.1,0,0.06,1.23,1.76,1.48,1.14,3.54,11.69,9.88,8.5,7

2729,10080,180,Southern Slopes
(mainland),rare,3.14,0.19,0.06,4.33,0,0,0,0,0.05,0.07,0.06,0.38,4.36,5.09,9.06,6.77,2.71,1.42,0.74,4.71,1.55,4.2,2.64,0.1
4,1.87,0.76,7.66,1.77,1.55,0.29,0.72,1.09,2.37,1.93,0.18,0,0.07,0.32,0.12,0.14,0.53,0.04,1.54,4.27,4.63,3.27,1.51,0.99,1.
57,1.86,4.66,1.42,1.2,0,0,0

2784,10080,180,Southern Slopes
(mainland),rare,1.74,1.93,0,0.1,0,0,0.2,0,1.22,0.1,0.31,0,0.1,0,8.04,0,0,6.31,0.1,0,0,0,0,0.2,0,0.1,2.44,4.17,1.02,0.51,2.85,0.71,0.1,0,0,0,0.1,1.53,2.85,3.56,0.31,0,0,0,0.61,2.54,8.85,0.61,5.19,20.14,9.46,3.76,6.31,1.83,0.1

2827,10080,180,Southern Slopes
(mainland),rare,1.31,5.42,8.41,10.87,2.75,3.91,0,0.77,0,0,0,0,0,0,0,0,0,0,0.63,0,1.27,0.08,0,0,0,0,0,1.03,0,0,0,0,2.55,22.39,11.51,0.08,0,0,0,0,1.37,1.32,0.34,0.13,1.07,7.98,0,0,0,12.05,2.76

2831,10080,180,Southern Slopes
(mainland),rare,8.35,5.68,0.13,0.09,0.45,0.81,0.38,8.96,1.66,0.59,0,0.88,5.49,0,0,0.49,5.14,3.41,0.32,0.19,0.06,0,0,0,0.42,0.51,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0.81,3.26,5.51,7.59,7.05,11.03,12.1,2.32,1.86,4.46

4323,10080,180,Southern Slopes
(mainland),rare,3.43,0.2,2.9,5.64,7.1,6.94,12.22,1.46,2.07,1.03,3.6,1.39,0,0,0,0,1.41,0,0.22,0.66,0,0,0,0,0,0,0,0,0,1.27,0.27,0,1.11,6.14,2.66,0.56,0,0,0,0,3.03,6.52,0,3.25,3.34,0.52,1.43,2.28,3.68,5.04,2.79,1.63,1.35,2.86

4328,10080,180,Southern Slopes
(mainland),rare,0.86,0.04,6.7,7.73,1,3.17,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0.14,2.4,0.54,1.84,3.87,1.55,3.02,2.46,11.14,0.72,0.57,6.94,0.78,0.05,5.05,1.93,4.97,12.46,14.87,5.2

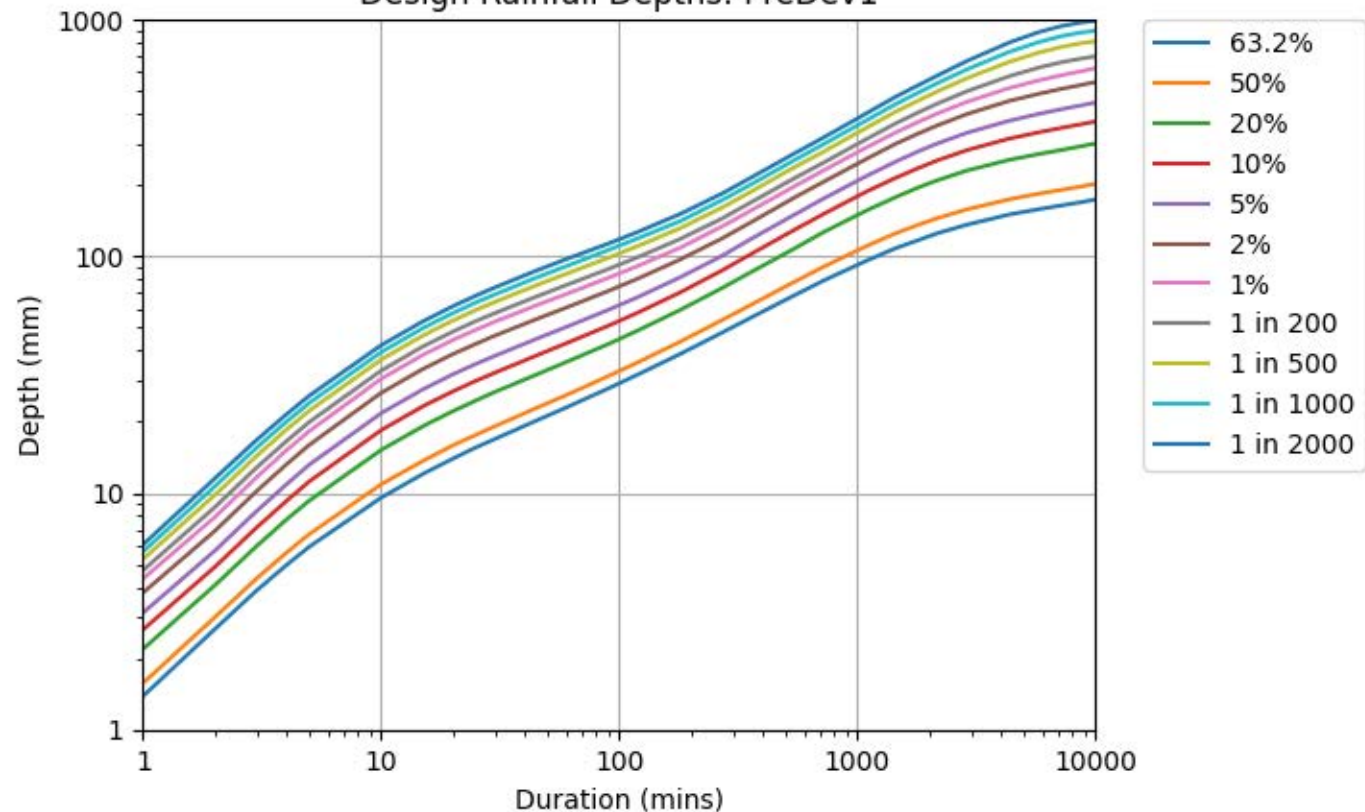
4332,10080,180,Southern Slopes
(mainland),rare,2.73,5.49,5.04,1.88,0.29,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0.581,0.23,0.63,0,1.54,0.81,0.07,0.86,0,0.14,1.08,1.48,0.09,0.15,5.38,7.89,5.64,8.47,1.37,11.77,9.17,4.77,3.46,1.85,2.24,0.85,0.72,0.39,1.97,0.88,0.32,0.47,2.5,1.57

6438,10080,180,Southern Slopes
(mainland),rare,3.44,1.51,1.54,0.78,0.23,0.43,0,0,0.2,1.99,0.53,1.51,1.09,0.16,0.39,3.68,3.07,3.01,0.09,0.08,2.4,2.95,0.32,0.02,1.02,1.42,1.27,0.17,1.13,2.36,0.78,1.07,2.27,6.38,5.41,4.47,3.29,6.3,2.61,1.25,0.05,2.76,1.54,2.38,6.36,1.66,0,0,0.46,5.55,1.22,0.3,0.15,0.68,1.18,3.11

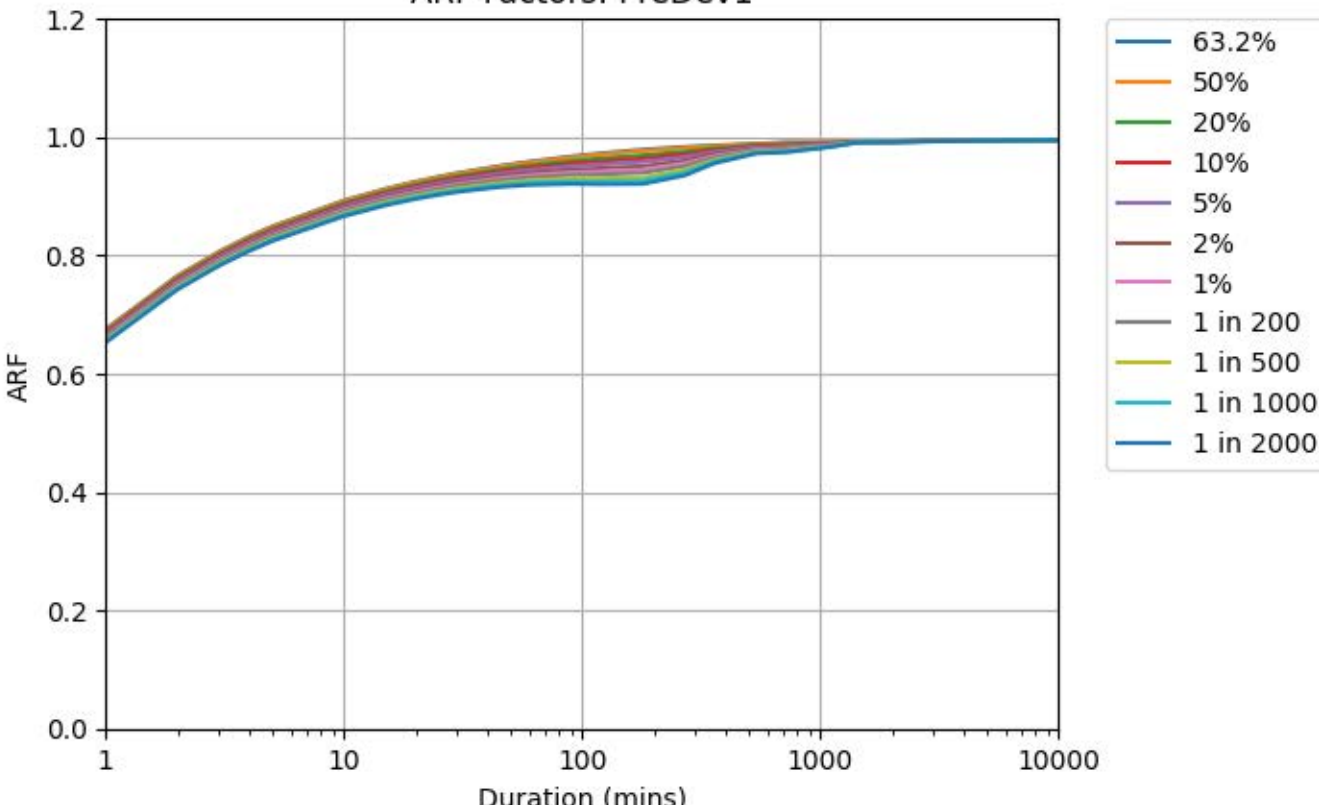
6486,10080,180,Southern Slopes
(mainland),rare,2.07,0.95,6.4,3.92,0.2,1.34,3.27,2.41,1.07,0.77,0.19,0.44,0.56,1.66,2.29,0.33,0.51,0,0,0,0,0,0,0.54,1.61,3.32,1.9,0.51,0,0,0,0,0.89,3.42,7.97,5.52,4.76,1.75,5.64,2.2,1.12,2.57,1.72,1.78,0.71,0.11,0.78,3.37,8.79,1.1,1.41,0.03,1.56,0.73,1.49,4.32

[ENDPATTERNS]

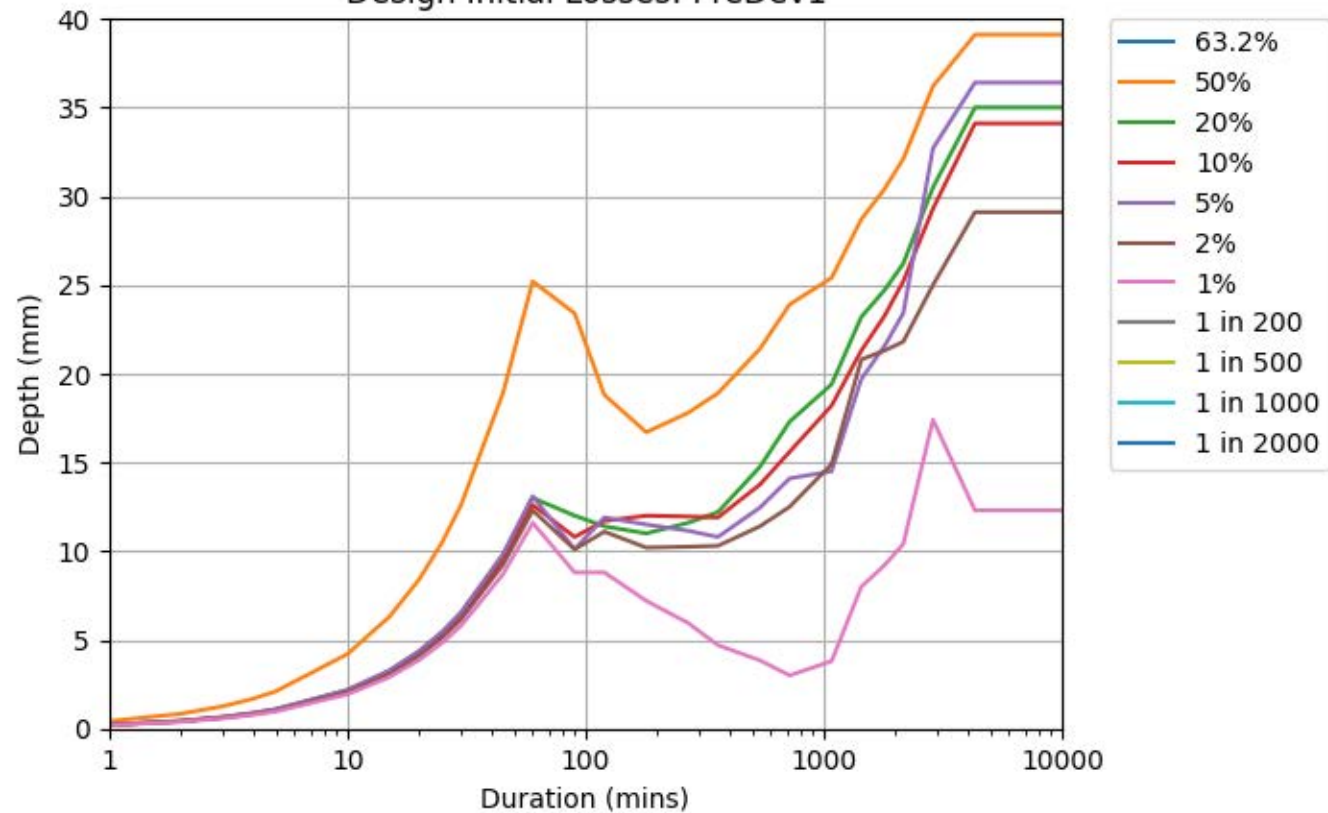
Design Rainfall Depths: PreDev1



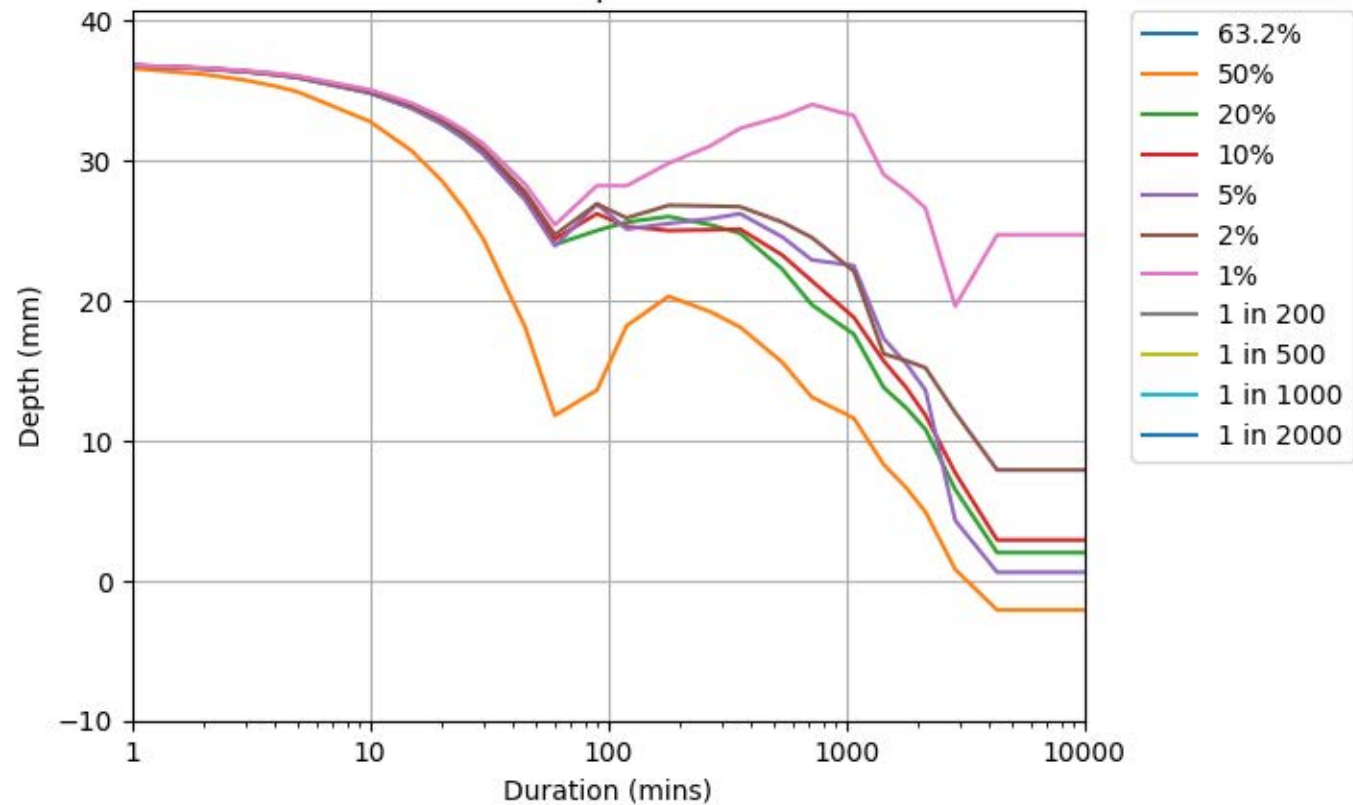
ARF Factors: PreDev1



Design Initial Losses: PreDev1



Pre-burst Depths: PreDev1





APPENDIX C:

Climate Change Rainfall Data

This file has been generated using ARR_to_TUFLOW. The losses have been calculated for the scenario "2100_SSP2-4.5" which uses the following parameters- Horizon 2100; SSP SSP2-4.5; Baseline change 0.0; User temperature change -1.0; Final temperature change 2.5.

	63.20%	50%	20%	10%	5%	2%	1%	1 in 200	1 in 500	1 in 1000	1 in 2000
1		0.462156	0.238414	0.231078	0.240248	0.225576	0.212738				
2		0.924311	0.476827	0.462156	0.480495	0.451152	0.425477				
3		1.386467	0.715241	0.693233	0.720743	0.676728	0.638215				
4		1.848622	0.953654	0.924311	0.96099	0.902304	0.850953				
5		2.310778	1.192068	1.155389	1.201238	1.12788	1.063691				
10		4.621555	2.384136	2.310778	2.402475	2.255759	2.127383				
15		6.932333	3.576204	3.466167	3.603713	3.383639	3.191074				
20		9.243111	4.768271	4.621555	4.80495	4.511518	4.254765				
25		11.55389	5.960339	5.776944	6.006188	5.639398	5.318457				
30		13.86467	7.152407	6.932333	7.207426	6.767277	6.382148				
45		20.797	10.72861	10.3985	10.81114	10.15092	9.573222				
60		27.72933	14.30481	13.86467	14.41485	13.53455	12.7643				
90		25.74867	13.20444	11.884	11.11374	11.11374	9.683259				
120		20.68696	12.54422	12.87433	13.09441	12.21411	9.683259				
180		18.37618	12.10407	13.20444	12.65426	11.22378	7.922666				
270		19.58659	12.7643	13.14943	12.26913	11.2788	6.547203				
360		20.797	13.42452	13.09441	11.884	11.33381	5.171741				
540		23.54792	16.23046	15.13009	13.69961	12.54422	4.236426				
720		26.29885	19.03641	17.16578	15.51522	13.75463	3.301111				
1080		27.94941	21.34718	20.02674	15.95537	16.39552	4.181407				
1440		31.58063	25.52859	23.43789	21.6773	22.8877	8.802963				
1800		33.45126	27.17915	25.58361	23.71298	23.43789	10.12341				
2160		35.32189	28.8297	27.72933	25.74867	23.98807	11.44385				
2880		39.83341	33.56129	32.24085	35.98211	27.50926	19.14644				
4320		43.02448	38.51296	37.52263	40.05348	32.02078	13.53455				
5760		43.02448	38.51296	37.52263	40.05348	32.02078	13.53455				
7200		43.02448	38.51296	37.52263	40.05348	32.02078	13.53455				

8640		43.02448	38.51296	37.52263	40.05348	32.02078	13.53455				
10080		43.02448	38.51296	37.52263	40.05348	32.02078	13.53455				

This file has been generated using ARR_to_TUFLOW. The rainfall depths have been calculated for the scenario "2100_SSP2-4.5" which uses the following parameters- Horizon 2100; SSP SSP2-4.5; Baseline change 0.0; User temperature change -1.0; Final temperature change 2.5.

	63.20%	50%	20%	10%	5%	2%	1%	1 in 200	1 in 500	1 in 1000	1 in 2000
1	1.962291	2.227895	3.103918	3.748763	4.417753	5.368999	6.149542	6.681563	7.444579	8.014412	8.571061
2	3.76541	4.22782	5.766387	6.890649	8.07257	9.783833	11.19392	12.32968	13.8689	15.09381	16.31107
3	5.489319	6.169524	8.456732	10.13485	11.88239	14.42994	16.52388	18.15709	20.32013	22.04186	23.75314
4	7.027516	7.927852	10.93778	13.10678	15.40328	18.7164	21.44476	23.46362	26.25277	28.35818	30.45092
5	8.413574	9.511871	13.17831	15.88866	18.70253	22.66712	25.91576	28.31942	31.62073	34.10811	36.58056
10	13.54462	15.42842	21.54298	26.12878	30.81295	37.55751	43.04675	46.64256	51.89907	55.81232	59.7016
15	17.0821	19.39204	27.17119	32.99622	38.91398	47.42986	54.40573	59.05746	65.63745	70.5976	75.40085
20	19.79885	22.52895	31.43858	38.10416	44.98721	54.74452	62.81156	68.13261	75.90032	81.64808	87.23106
25	22.09344	24.9771	34.87358	42.23936	49.81875	60.54408	69.4334	75.54728	84.11046	90.5121	96.74206
30	23.97105	27.13699	37.87943	45.67464	53.81201	65.49539	75.06789	81.58205	90.93427	97.85633	104.7293
45	28.72889	32.46555	44.91153	54.09764	63.61442	77.07834	88.1407	95.96383	107.1332	115.4634	123.5982
60	32.61819	36.78183	50.76429	60.91519	71.38458	86.19003	98.31149	107.2922	119.7221	128.9144	138.1569
90	38.12663	42.99145	58.73288	70.17562	81.90119	98.44837	111.8474	121.8893	135.854	146.6761	156.1175
120	42.83814	48.27191	65.78514	78.26765	91.00113	108.9201	123.2315	134.2171	149.5994	161.2866	171.5933
180	51.08996	57.57431	78.40183	92.97579	107.7542	128.1506	143.6285	156.4301	173.667	186.0854	199.557
270	61.50232	69.52289	94.92882	112.6658	129.8528	153.8337	172.8369	186.7326	207.4873	223.4622	238.0594
360	70.49516	79.83981	109.788	130.9055	151.6466	178.2857	199.9697	216.5974	240.2484	257.8511	275.3424
540	85.59968	97.57969	134.8583	161.8136	187.4471	221.4977	246.9343	267.3803	297.3963	318.9001	340.3313
720	97.95352	112.0259	156.8921	187.2301	217.4684	256.0105	286.0196	308.6383	343.1308	369.1973	393.9677
1080	116.655	134.5635	190.116	228.6722	265.954	313.9572	351.0925	380.9315	425.0563	457.1785	489.2453
1440	131.0089	151.4379	215.1187	259.5669	304.0091	361.6542	403.6796	440.8938	493.7087	532.1121	571.7113
1800	141.9089	164.7548	236.8889	286.1712	336.6491	400.3361	448.394	491.6372	551.69	596.1212	640.5464
2160	151.5975	175.6566	253.837	307.952	363.2624	432.9892	485.8771	535.15	602.4406	652.9003	703.353
2880	164.94	191.4224	279.2831	340.6541	403.2204	483.821	545.1643	604.0925	685.8602	747.1759	810.8894
4320	181.9454	210.859	309.6338	380.6912	452.9436	549.2653	622.6994	698.5322	803.2399	885.0694	969.296
5760	191.6853	223.025	327.8776	404.9979	484.5182	589.3238	671.2292	760.3535	879.5695	974.6896	1073.411
7200	198.9933	231.5505	341.2653	423.2368	507.6085	618.4795	706.4413	801.624	930.5237	1032.908	1140.099
8640	205.0823	238.8551	353.4256	437.8321	525.8453	641.5703	733.1736	829.5876	963.3446	1069.373	1179.003
10080	211.1627	246.1497	364.3655	451.2035	542.8552	662.224	757.4654	850.2817	984.0678	1090.119	1200.979

[illegible][illegible]



APPENDIX D:

Critical Duration Hydrographs

10% AEP Hydrographs

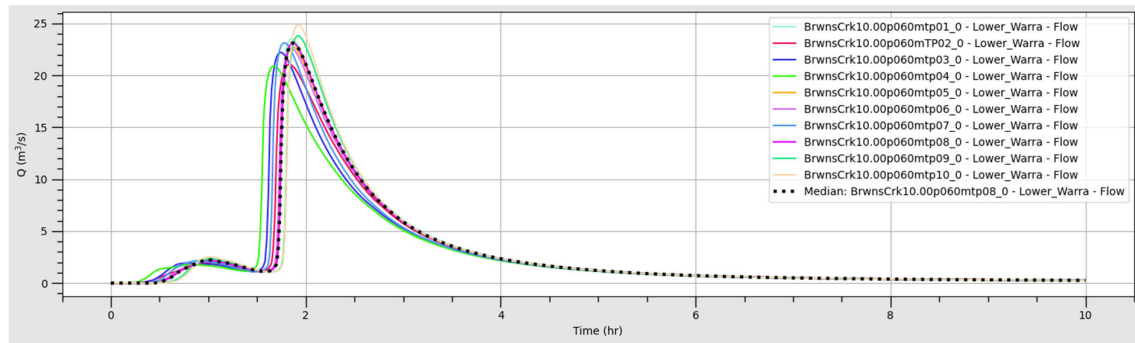


Figure 5: 60 Minute Duration

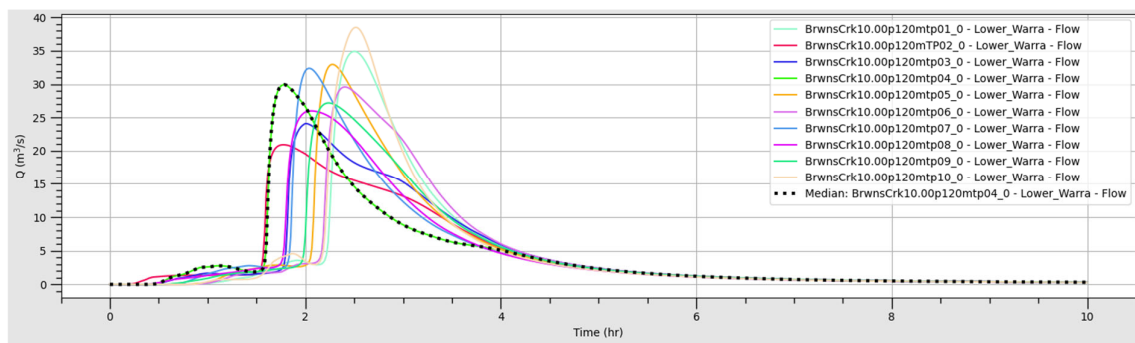


Figure 6: 120 Minute Duration

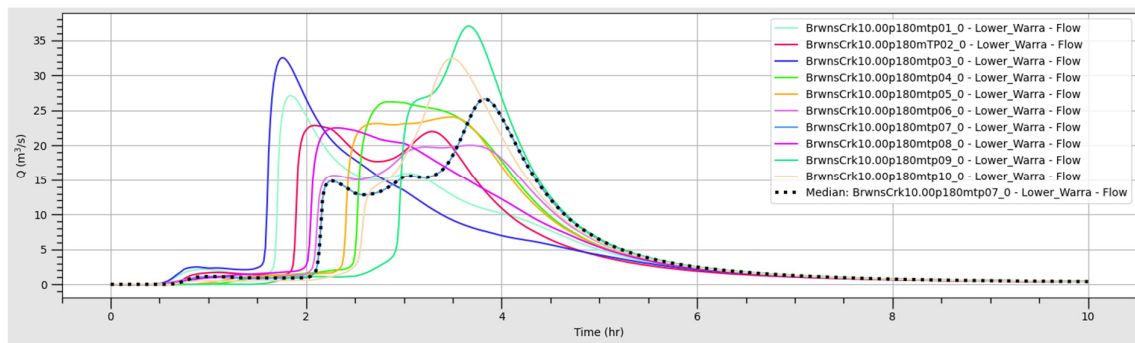


Figure 7: 180 Minute Duration

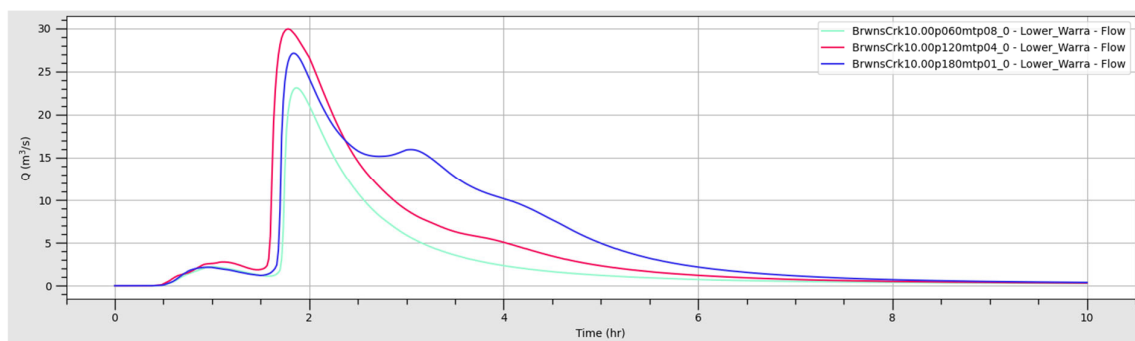


Figure 8: 10% AEP Critical Duration

1% AEP Hydrographs

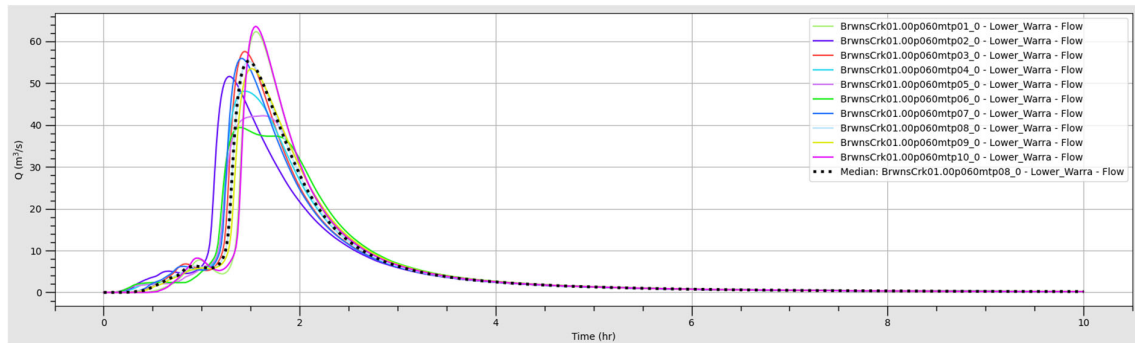


Figure 1: 60 Minute Duration

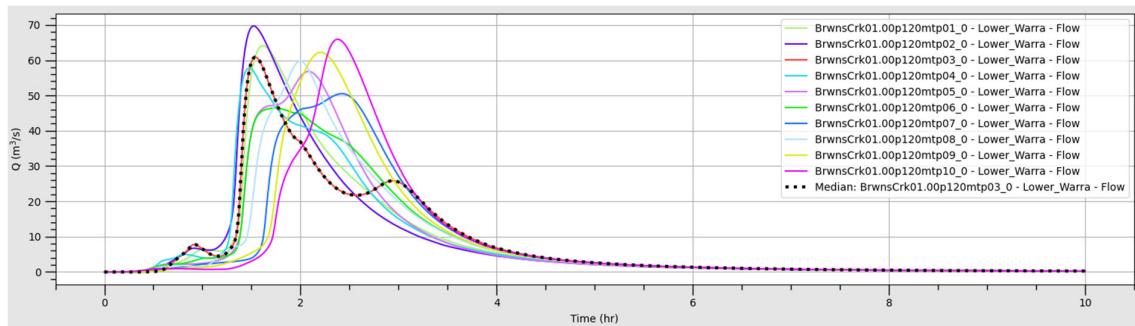


Figure 2: 120 Minute Duration

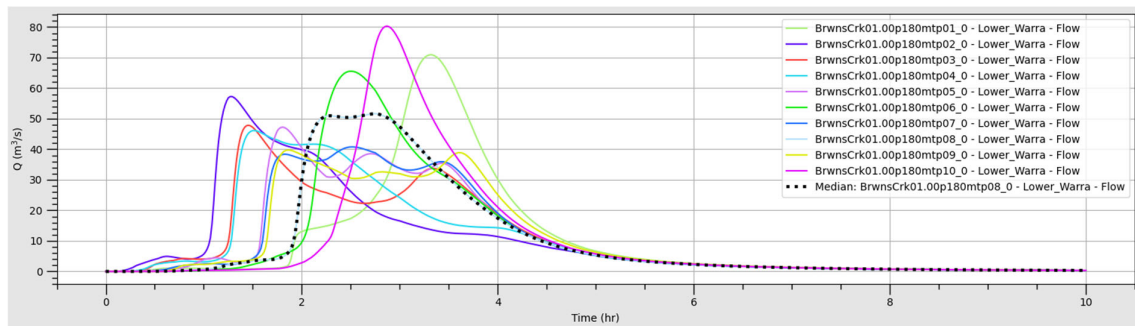


Figure 3: 180 Minute Duration

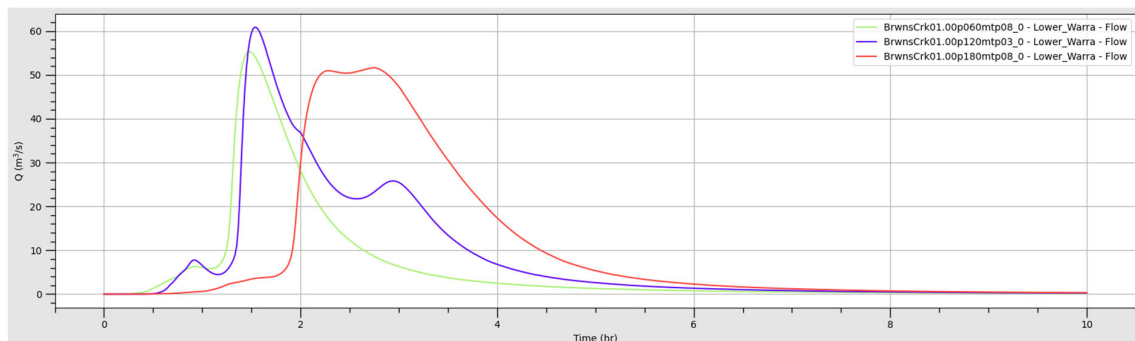


Figure 4: 1% AEP Critical Duration

0.2% AEP Hydrographs

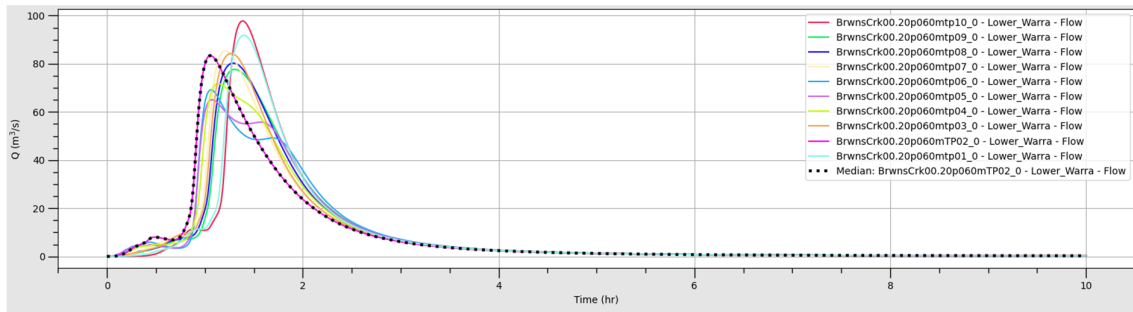


Figure 9: 60 Minute Duration

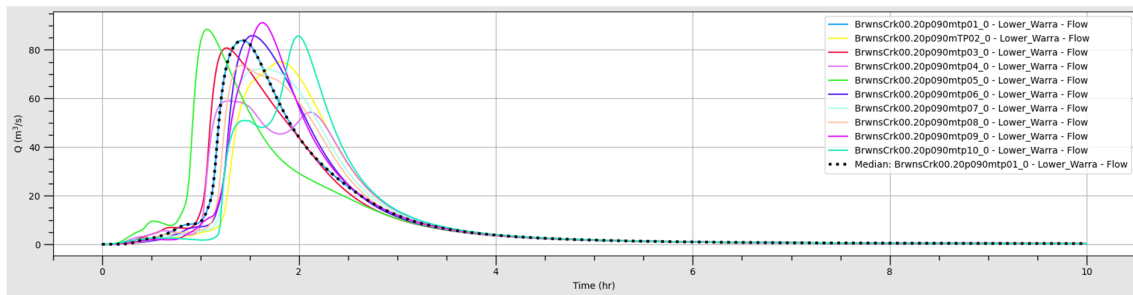


Figure 10: 90 Minute Duration

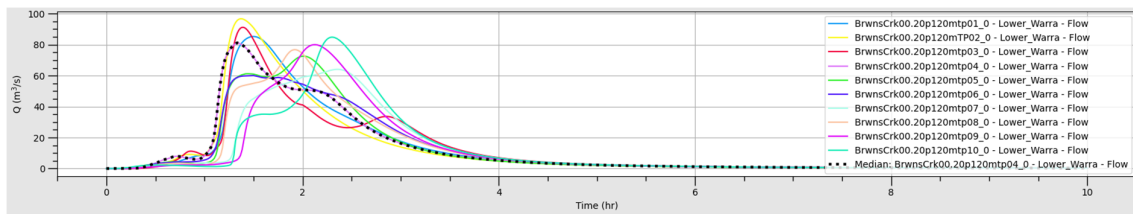


Figure 11: 120 Minute Duration

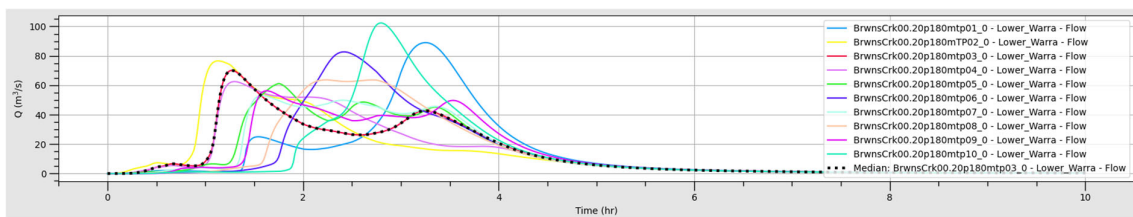


Figure 12: 180 Minute Duration

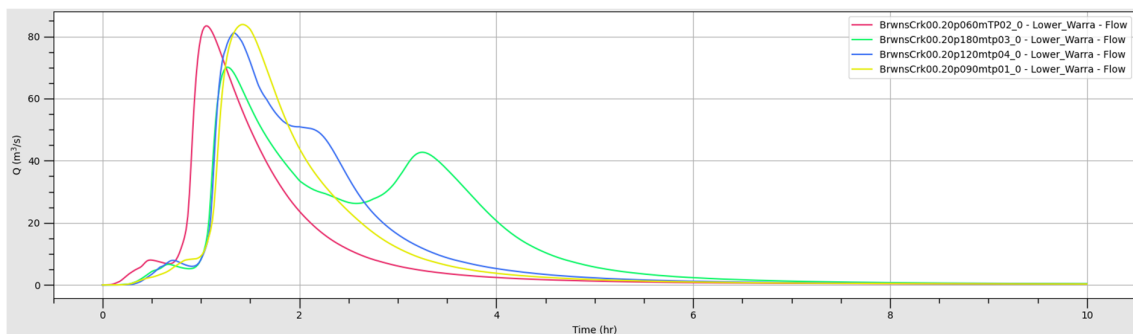


Figure 13: 0.2% AEP Critical Duration

0.05% AEP Hydrographs

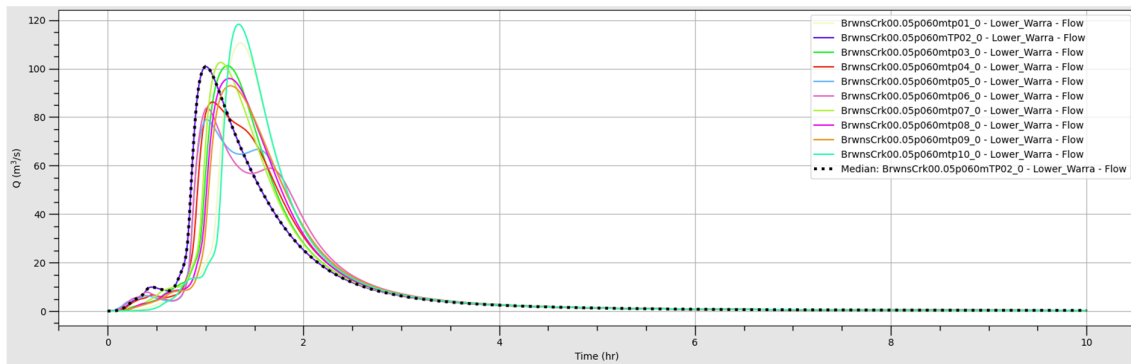


Figure 14: 60 Minute Duration

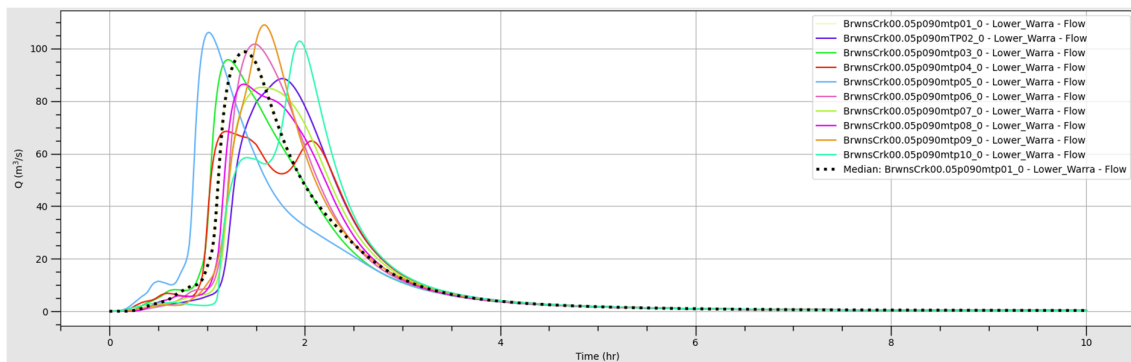


Figure 15: 90 Minute Duration

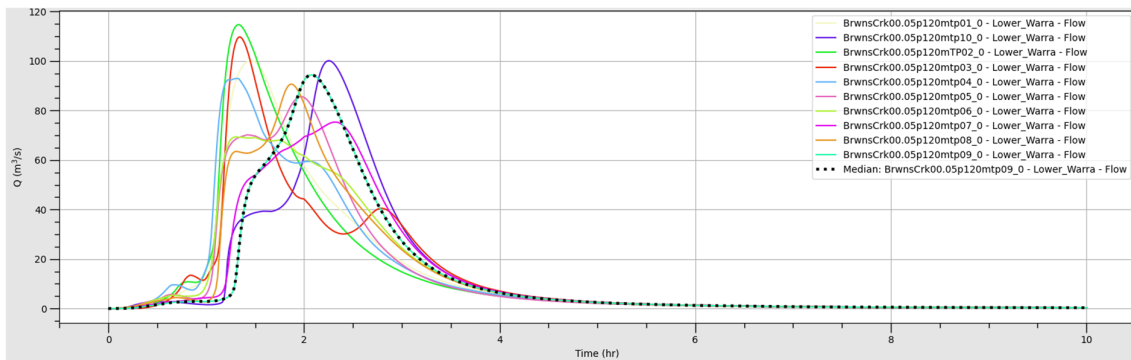


Figure 16: 120 Minute Duration

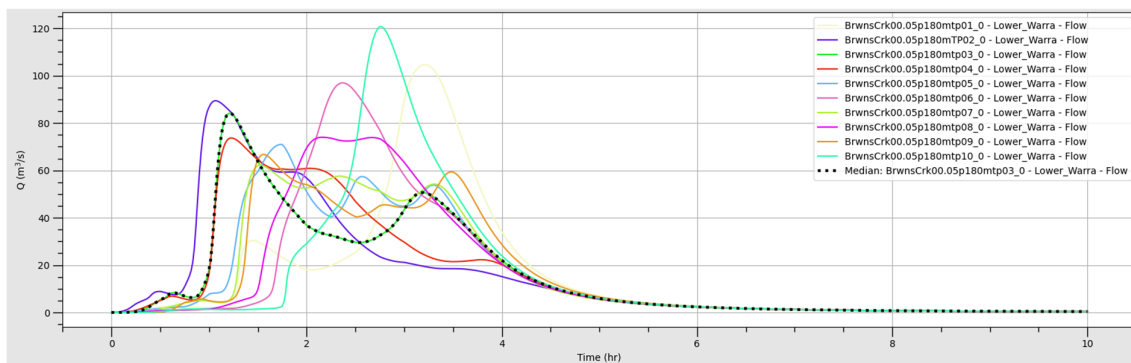


Figure 17: 180 Minute Duration

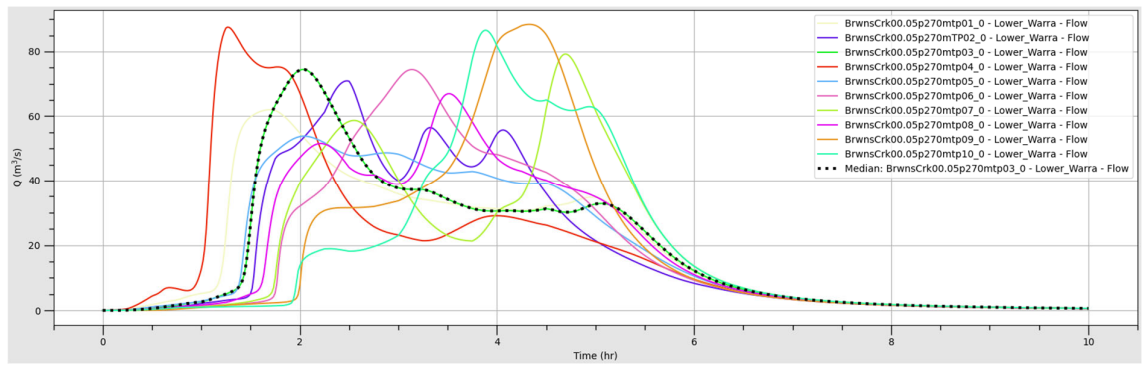


Figure 18: 270 Minute Duration

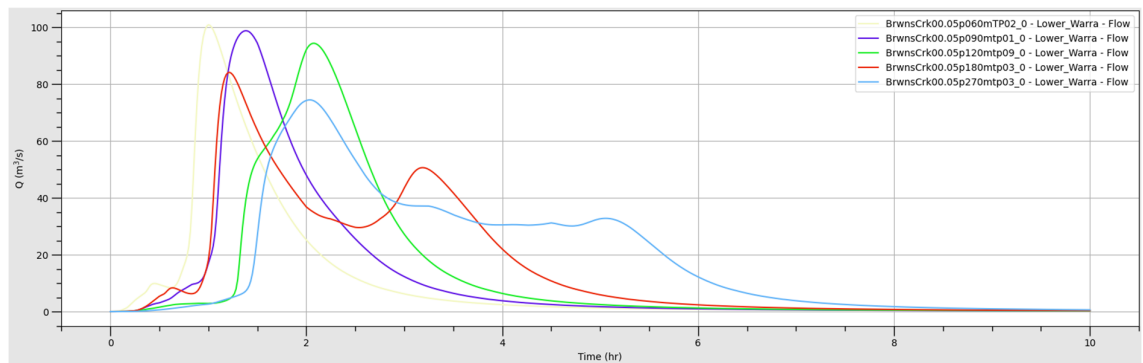


Figure 19: 0.05% AEP Critical Duration



APPENDIX E:

Probable Maximum Flood (PMF)
Calculations

GSDM Calculation Sheet

Location Information				
Catchment State Latitude	Quinns Lane	Area (km2)	51.88	
	NSW	Duration Limit (hrs)	6	
	-34.909	Longitude	150.608	
Proportion of Area Considered:				
Smooth S= (0.0 - 1.0)	1	Rough R= (0.0-1.0)	0	
Elevation Adjustment Factor (EAF)				
Mean Elevation (m AHD)			40	
Adjustment for Eelvation (-0.05 per 300m above 1500m)			0	
EAF = (0.85-1.00)			1	
Moisture Adjustment Factor (MAF)				
MAF = (0.40 - 1.00)			0.66	
PMP Values				
Duarion (hrs)	Initial Depth - Smooth	Initial Depth - Rough	PMP Estimate	Rounded PMP Estimate (nearest 10mm)
0.25	180	0	119	120
0.50	270	0	178	180
0.75	340	0	224	220
1.0	410	0	271	270
1.5	470	0	310	310
2.0	530	0	350	350
2.5	560	0	370	370
3.0	590	0	389	390
4.0	660	0	436	440
5.0	710	0	469	470
6.0	760	0	502	500

15 Minute Pattern

Time (mins)	mm/h
0	600
3	648
6	552
9	408
12	192
15	

30 Minute Pattern

Time (mins)	mm/h
0	360
3	540
6	504
9	468
12	432
15	396
18	360
21	252
24	180
27	108
30	

45 Minute Pattern

Time (mins)	mm/h
0	367
9	396
18	337
27	249
36	117
45	

1 hour Pattern

Time (mins)	mm/h
0	216
3	324
6	432
9	378
12	378
15	378
18	378
21	324
24	378
27	270
30	324
33	270
36	270
39	270
42	216
45	162
48	162
51	108
54	108
57	54
60	

1.5 hour Pattern

Time (mins)	mm/h
0	207
9	310
18	289
27	269
36	248
45	227
54	207
63	145
72	103
81	62
90	

2hr Pattern

Time (mins)	mm/h
0	140
6	210
12	280
18	245
24	245
30	245
36	245
42	210
48	245
54	175
60	210
66	175
72	175
78	175
84	140
90	105
96	105
102	70
108	70
114	35
120	

2.5hr Pattern

Time (mins)	mm/h
0	148
15	222
30	207
45	192
60	178
75	163
90	148
105	104
120	74
135	44
150	

3hr Pattern

Time (mins)	mm/h
0	104
9	156
18	208
27	182
36	182
45	182
54	182
63	156
72	182
81	130
90	156
99	130
108	130
117	130
126	104
135	78
144	78
153	52
162	52
171	26
180	

4hr Pattern

Time (mins)	mm/h
0	88
12	132
24	176
36	154
48	154
60	154
72	154
84	132
96	154
108	110
120	132
132	110
144	110
156	110
168	88
180	66
192	66
204	44
216	44
228	22
240	

5hr Pattern

Time (mins)	mm/h
0	75
15	113
30	150
45	132
60	132
75	132
90	132
105	113
120	132
135	94
150	113
165	94
180	94
195	94
210	75
225	56
240	56
255	38
270	38
285	19
300	

6hr Pattern

Time (mins)	mm/h
0	67
18	100
36	133
54	117
72	117
90	117
108	117
126	100
144	117
162	83
180	100
198	83
216	83
234	83
252	67
270	50
288	50
306	33
324	33
342	17
360	