Water Engineering Partners Pty Ltd

Providence West ROL 2
Flood Report

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Disclaimer

The flood modelling presented in this report was based and relies on Council flood modelling.

The flood modelling presented in this report is based and relies on survey data and other data obtained from third parties. While all reasonable steps have been taken to verify the data, Water Engineering Partners does not guarantee the data obtained or supplied for the investigation

Rainfall is variable in nature. The modelling presented in this report is based on available rainfall data sourced from government agencies, with appropriate factors added to account for climate change estimates in accordance with guidance from local and state government bodies relevant to the study location in their planning schemes. Actual rainfall patterns and totals in the future could vary from those adopted for this report.

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1 Introduction

1.1 Overview

Stockland is proposing to reconfigure 833-865 Ripley Road, South Ripley (Lot 196 on SP157517, the **Site**) as part of the overall proposed Providence West master-planned community development.

The Site is located within the northeastern part of the Providence West development and is located west of Bundamba Creek and Ripley Road and south of Centenary Highway.

The locality map is shown in Figure 1-1.

The reconfiguration of lot plan (**ROL 2**) for the Site was completed by Therefor Group Pty Ltd. Revision E of the plan (23-0573SP-ROL-00) is shown in Figure 1-2.

ROL 2 comprises:

- residential lots;
- parklands;
- waterway zones; and
- a balance lot for future development.

The Site is located within the Bundamba Creek catchment floodplain and has the potential to impact on flooding in Bundamba Creek.

Water Engineering Partners Pty Ltd (WEP) was commissioned by Stockland to complete a flood impact assessment to accompany the development application.

The assessment was based on the currently adopted model of Bundamba Creek, as supplied under licence to Stockland.

This report documents the methodology and outcomes of the detailed hydrologic and hydraulic modelling undertaken by WEP, to demonstrate that the proposed works will not result in an adverse flood impact beyond the boundaries of the Site.

The previous version of the report (Issue 1, 21 May 2025) was updated to reflect changes to the design and to respond to the information request issued by Council.

Scope of Modelling

It is important to note that the Providence West development is located immediately adjacent to the Catalyst Roads (including Ripley Road and Watsons Road). These roads currently do not have immunity to the 1% AEP event and will be upgraded as part of the overall development of Ripley Valley.

The Catalyst Roads cross the floodplain and are subject to overtopping over a considerable length of road. Replacing the existing roads with culverts and a road set above the 1% AEP flood level will inevitably result in flood impacts that in turn will require negotiation with key stakeholders. This negotiation will necessarily consider the overall impact of development in Ripley Valley and the Catalyst Roads.

The flood modelling completed in relation to the Catalyst Roads is detailed in the report Ripley Valley Catalyst Roads, Flood Report (Issue 2, 11 November 2025).

The report details the results of modelling the Catalyst Roads in isolation and in combination with ROL2 (as documented in isolation in this report).



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TITLE: Site Locality Map

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Figure 1-2 ROL2 Final Concept Design

1.2 Information Request Response

Issue 1 of this report was submitted in support of the Providence West ROL2 application (reference 3406/2025/PDA).

The report has been revised to include the updated design developed with respect to ROL2.

The following is provided in response to the stormwater quantity and flood-related issues in the information request issued by Council on 3 July 2025. The response to those elements relevant to the design of the stormwater quality system is provided in the response by DesignFlow (6 November 2025).

'Item 8: Stormwater management plan

The report titled Providence West ROL 2 Stormwater Quality Management Plan by DesignFlow 4540 Ver 01) dated 20 May 2025 is acknowledged. Whilst the SMP presents a site-based solution for stormwater management (quality and quantity), it has not demonstrated that the proposed development will not result in detrimental impacts to upstream, downstream or surrounding properties or to road immunity within the catchment. The applicant is requested to submit a revised version of this report addressing:

8 c) Stormwater Quality Management Plan prepared by DesignFlow (4540 Ver 01) dated 20 May 2025 proposes two bioretention facilities for the development. However, the report does not include details of flow volumes from the developed catchment or how the treatment facilities are sized to demonstrate the proposal is sufficient for the development. Accordingly, the applicant is requested to address the following:

- ***(i) Provide details of inlet and outlet volumes demonstrating the outflows are limited to predeveloped flows.***
- ***(ii) Include further details on the typical cross sections, proposed footprint of the facilities, and how they integrate within the lot in terms of maintenance access, safety and landscaping outcomes.***
- ***(iii) Detention basin depths are to be limited to 1.2m in the 5% AEP design storm for public safety (QUDM section 5.12). Safety fencing around proposed detention basins would not be supported.***
- ***(iv) Indicate proposed finished surface levels, batter slope, Q20 & Q100 water depth, minimum freeboard, emergency spillway, inlet/outlet pits and/or pipes, etc.***

Note: Batter slopes for detention basins are to be 1:6 in accordance with QUDM for safety. Isolated sections of batter slopes to absolute maximum 1:4 may be considered, subject to the batter being landscaped.'

Consistent with the AMEX West Report and previous approvals (refer Section 2.2), it is proposed to provide the necessary amelioration with respect to development online via the storage created upstream of crossings within the proposed drainage reserve.

Unlike a standard offline detention basin, the drainage of the ROL2 area was included in the hydraulic model.

As the detention will occur within a drainage reserve, it is not considered appropriate to use the depth criterion for a standard basin. In any case, with reference to Figures C9 to C16 in Appendix C, it is noted that the depth of water in the 5% AEP event is generally less than 1.2 metres.

The drawings for the drainage reserve are included in Appendix A.

'8 g) Provide details, including stage -storage -discharge curves for all storm events up to and including the 1% AEP for all proposed basins and demonstrate that any expected basin overtopping will cause no worsening to flooding or safety hazard to surrounding properties or roads (particularly Ripley Road) in accordance with QUDM.'

As noted in response to item 8 c) above, consistent with the AMEX West Report and previous approvals (refer Section 2.2) it is proposed to provide the necessary amelioration with respect to development online via the storage created upstream of crossings within the proposed drainage reserve. The drainage reserve was included in the hydraulic model via the earthworks model for the works prepared by civil consultants KN Group.

Consequently, as the detention will occur within a flow corridor rather than a standard detention basin, it is not considered appropriate to provide stage-storage discharge curves.

In terms of changes in flood level, Section 5.4.2 presents a comparison between the changes in flood level obtained in the AMEX West Report and the current modelling. Overall, it is considered that the impacts are consistent with the impacts previously nominated in the AMEX West Report and are acceptable.

With reference to Figures D17-D24 (change in velocity) and Figures D25 to D32 (change in flood hazard), it is considered that there will be a small area of Ripley Road and in the area between buildings H2 and H3 affected by an increase in velocity for about a 5% AEP event or higher.

However, as there is minimal associated change in flood hazard with the increase in velocity, the increase is not considered to be of significance. Further, Ripley Road will be raised as part of the Catalyst Roads project and provided with immunity to the 1% AEP event.

'9. Flood Assessment

The report titled Providence West ROL 2 Flood Report by Water Engineering Partners (30024.001.01 Ver 01) dated 21 May 2025 is acknowledged. The applicant is requested to submit a revised version of this report addressing:

9 a) There is no information about how the flow from the proposed development is discharged to the ultimate outfall. The current studies are limited within the development site without any reference to how/where it is discharged. Provide more details on, but not limited to, the flow volumes, pre-post-mitigated, their impact on the waterway, how the flows are conveyed past the proposed boundary and to the outfall to Bundamba Creek, the constraints (if any) including conflicting invert levels, velocities, water surface levels etc.'

As noted in response to item 8 c) above, consistent with the AMEX West Report and previous approvals (refer Section 2.2) it is proposed to provide the necessary amelioration with respect to development online via the storage created upstream of crossings within the proposed drainage reserve. As the proposed drainage reserve is located within the current drainage reserve, this means that flows will continue to drain to the current points of drainage to Bundamba Creek.

The DesignFlow Waterways Strategy Report (V2, November 2025) presents information drawn from the flood model in relation to the velocity of flow within waterways to demonstrate that an acceptable situation exists.

'9 b) There is proposed culvert crossing in the access road for 3 x 1.8 x 0.9m box culverts. Include details substantiating this design.'

As part of the development of the design, the 3 x 1.8 x 0.9 m box culverts beneath the main access were increased to 3 x 1.8 x 1.2m box culverts. The culverts were sized iteratively to limit the peak flow downstream of the crossing while also limiting the depth of water upstream of the crossing.

'9 (c) There are 3 culverts proposed in Ripley Road and East West Arterial road along the south of the development. However, there is no information about those culverts in the current report. Please amend the report to address and include this detail.'

There are a number of culverts proposed as part of the Catalyst Roads. These were not included in the assessment of the Providence West ROL2 development presented in this report.

'9 (d) Include additional mapping to cover the impacts of flood velocity and hazard.'

Additional mapping has been provided as follows:

- ***Appendix B (Pre-development):***
  - Flood hazard (Figures B17 to B24); and
  - Peak Velocity (Figure B25 to B32).
- ***Appendix C (Post-development):***
  - Flood hazard (Figures B17 to B24); and
  - Peak Velocity (Figure B25 to B32).
- ***Appendix D (Impacts):***
  - Change in flood hazard (Figures D17 to D24); and
  - Change in velocity (Figures D25 to D32).

'9 (e) The report nominates further study on the impact of Catalyst roads and levels are required to demonstrate the flood impacts in the ultimate scenario. Please update the studies to reflect the same.'

The flood modelling completed in relation to the Catalyst Roads is detailed in the report *Ripley Valley Catalyst Roads, Flood Report* (Issue 2, 11 November 2025).

The report details the results of modelling the Catalyst Roads in isolation and in combination with ROL2 (as documented in isolation in this report).

2 Previous Flood Studies

2.1 Overview

This section of the report summarises the previous flood modelling that is of relevance to the consideration of ROL 2.

2.2 Amex West Flood Study

Cardno Pty Ltd completed a flood study to support the development application lodged with respect to the AMEX West (now Providence West).

The details of the study are documented in the Cardno report *'Amex Ripley Project (ARP) West Flood Study'* (Version 4, June 2013, the **AMEX West Report**).

The flood modelling was completed based on the flood model of Bundamba Creek developed for Council by consultants KBR (the **KBR Model**) that was adopted by Council at the time the flood modelling was completed. The model was updated to provide a higher resolution in the vicinity of Amex West. Other changes to the model are detailed in Section 4.2.4 of thee AMEX West Report.

The hydrology for the KBR model was based on the 1987 edition of the *Australian Rainfall and Runoff* (ARR) guidelines.

Of particular relevance, the flood study considered events up to and including the 1% AEP event without climate change. The study identified that the proposed Ripley Road upgrade (raising) resulted in an unavoidable external flood impacts adjacent to residential properties next to Ripley Road due to the location of the road being in the low-lying part of the floodplain.

The AMEX West Report provided the basis for the approvals issued previously with respect to Providence West.

- ***Context Plan Approval (MCU DEV2012/13-26 March 2014)***

  The AMEX West Report was a supporting document to the approval, with Condition 11 (Stormwater) requiring that an IMP for stormwater should be generally consistent with the AMEX West Report.

- ***ROL Approval (9820/2019/MAPDA/A- 26 July 2021)***

  The AMEX West Report was referenced in the approval, with Condition 38 requiring completed works to comply with the AMEX West Report.

  The report was approved by Council as part of its overall approval for the AMEX West development, being a supporting document to

  The report was used to provide guidance in relation to the impacts that were considered acceptable as part of the approval and therefore allow consistency to be achieved between the previously approved development and the works associated with ROL 2.

As noted in Section 4.3.4 of the Amex West Report, the stormwater quantity/ flooding solution involves forming a number of online basins. Figure 2-1 presents an excerpt from Figure 3 of the AMEX West Report that shows the overall quantity and flooding solution nominated in the AMEX West Report.

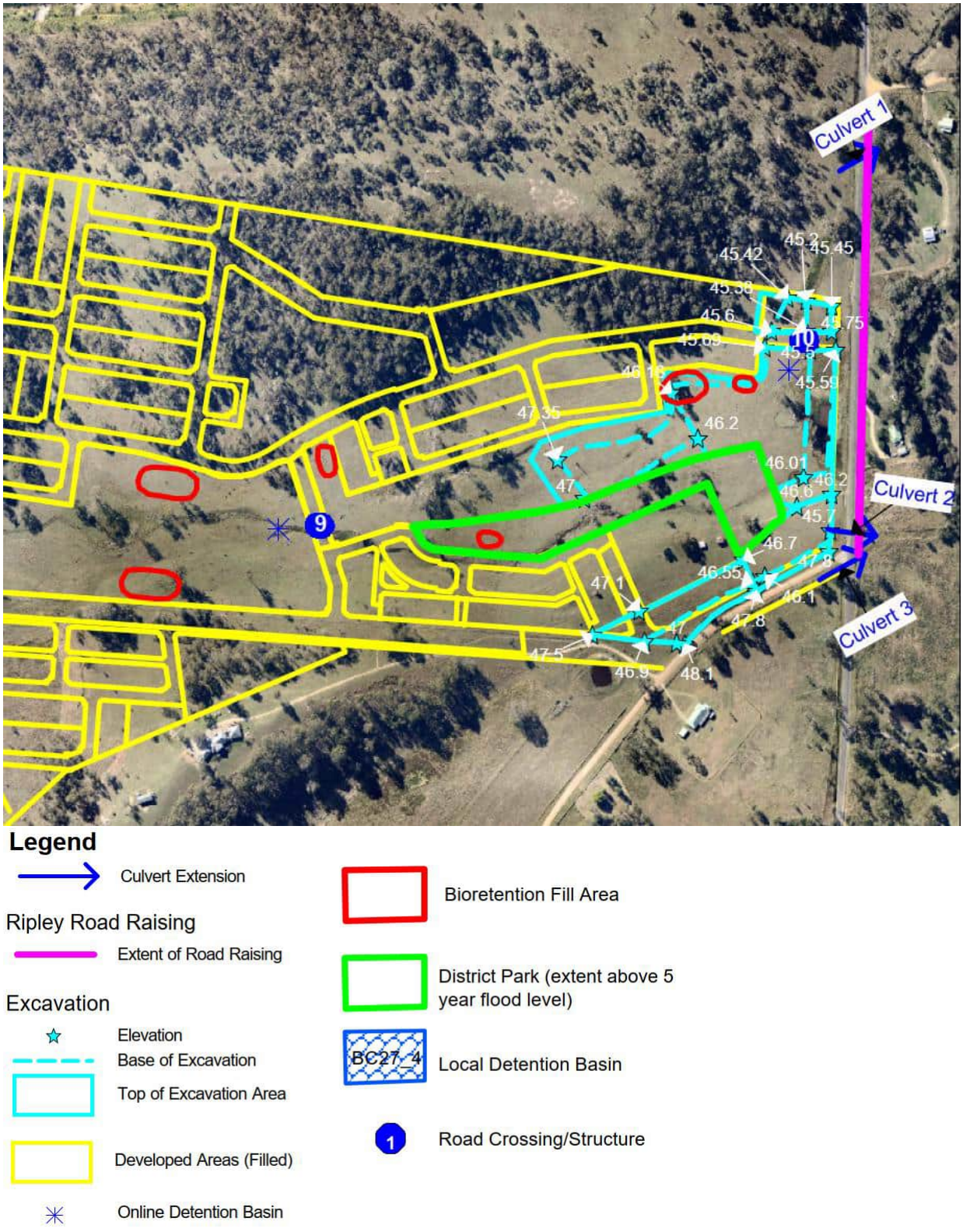


Figure 2-1 Stormwater Quantity/ Flood Solution, AMEX West Report

2.3 Providence SUCE Approved Stormwater Management Plan

The Ripley Providence Secondary Urban Centre East (**SUCE**) master-planned community development is located east of Bundamba Creek. The development is underway and currently houses over 4,000 residents.

BMT Commercial Australia Pty Ltd (BMT) completed the approved stormwater management plan, the details of study being documented in the report *'Ripley Providence Secondary Urban Centre East (SUCE) - Updated Stormwater Management Plan'* (BMT, October 2020, the SUCE SMP).

Similar to the AMEX West flood modelling, modelling completed in support of the first and many subsequent approvals for the development was based on the adopted Council KBR Model.

To be consistent with the initial approvals issued with respect to SUCE, the SUCE SMP was based on the Council KBR Model and therefore considered events up to the 1% AEP event without climate change.

2.4 Updated Bundamba Creek Flood Study

Water Technology Pty Ltd on behalf of Council completed a flood study update of Bundamba Creek catchment. The development of the model is documented in the Water Technology report '*Bundamba Creek Flood Study'* (March 2024, the **WT 2024 Model**).

The study utilised the URBS hydrologic and TUFLOW hydraulic packages to undertake detailed hydrologic and hydraulic modelling of Bundamba Creek catchment in accordance with the latest (2019) edition of ARR.

It is noted that the URBS model for the design flood modelling conservatively utilised the ultimate land use types throughout Bundamba Creek catchment (including the future Providence development sites) based on Council's land use planning mapping.

The URBS and TUFLOW components of the WT 2024 Model were issued to Stockland under licence by Council to be used as the basis for the assessment of the Catalyst Roads and therefore Providence West.

The WT Model was used as the basis for the assessment. Appropriate site-specific modifications were made to the models to allow for a more detailed assessment of the hydrologic and hydraulic impacts associated with ROL 2.

3 Hydrologic Modelling Methodology

3.1 Model Review

3.1.1 Overview

A review of the WT 2024 Model indicated that the catchments associated with Providence West development area were not sufficiently delineated to allow for a detailed post-development assessment. This is not a criticism of the WT 2024 Model and reflects the reality that the model covers a large catchment, and it is not possible to set catchment boundaries that anticipate future development.

Consequently, the catchment model was modified to incorporate more refined catchment areas within Providence West, as described in the following sections.

Noting that the model will be subsequently used to model the remainder of the Providence West development and for future modelling consistency, the refinement considered all of the Providence West and not just the Site.

Similarly, as the model will be used in the future as part of separate modelling to consider the Providence South development (to the east of Bundamba Creek and south of SUCE) the catchments relevant to Providence South were also adjusted to provide improved definition.

3.1.2 Original Catchment Delineation

Figure 3-1 shows the URBS catchment model as per the WT 2024 Model. The Site and therefore ROL2 intersects with catchments 206, 207 and 210. As noted in Section 2.1, the WT 2024 Model utilised the ultimate land use throughout Bundamba Creek catchment based on Council's land use planning mapping.

Consequently, the Providence West and Providence South catchments shown were therefore assumed to be fully urbanised (developed) in the WT 2024 Model.

3.1.3 Modified Catchment Delineation

Figure 3-2 shows the modified URBS catchment model incorporating finer catchment delineation adopted for the current study.

The following site-specific modifications were made:

- Additional catchments 3004 to 3029 were delineated within the Providence West site. It is noted that the Site intersects with catchments 210, 3018 and 3021.
- Additional catchments 3030 to 3040 were delineated within and around the Providence South site.

3.2 Hydrologic Scenarios

As noted in Section 2.4, the WT 2024 Model assumed catchment development and assumed fraction impervious values in accordance with future development in accordance with the zoning under the planning scheme.

Given that it is necessary to demonstrate that the development will not result in unacceptable flooding impacts downstream of the Site as a result of the introduction of impervious areas (i.e., that sufficient attenuation of flow is provided within the development), fraction impervious values were adjusted as appropriate to reflect the current level of development in the pre-development case and then increased to reflect the development proposed as part of ROL2.

The location of the Site in the downstream part of Providence West was also considered. As detention storage will be provided in those areas of Providence West upstream of ROL2 to ameliorate the impact of development of these areas, the fraction impervious values for areas within Providence West that drain to ROL2 or potentially affect ROL2 were set to the fraction impervious values applicable to the current situation for both the pre-development and post-development (with basin) cases.

This resulted in a number of catchments in addition to those associated with ROL2 being assigned a fraction impervious value that reflects the current situation for the pre-development case. For the post-development case, the fraction impervious value was increased for only those catchments affected by the development associated with ROL2 to reflect the development associated with ROL2.

In summary:

- the Providence South catchments were assumed to be urbanised for both the pre-development and post-development scenarios, with a fraction impervious value matching that adopted in the WT 2024 Model (i.e., no change from the WT2024 Model other than increased catchment delineation);
- as Providence West catchments 3024 to 3029 drain away from ROL2, these catchments were assumed to be urbanised for both the pre-development and post-development scenarios, with a fraction impervious value matching that adopted in the WT 2024 Model (i.e., no change from the WT2024 Model other than increased catchment delineation);
- the remainder of the catchments within Providence West (except Lot 817) were assumed to be undeveloped (de-urbanised from the WT 2024 Model) for both the pre-development and post-development scenarios; and
- the catchments associated with ROL2 (210, 3018 and 3021) were assumed to be undeveloped for the pre-development scenario. For the post-development scenario, the catchments were assumed to be urbanised in accordance with the plan of development.

Table 3-1 presents the land-use breakdown within the Site based on the ROL2 concept plan that was used as the basis to calculate the impervious percentage for the post-development scenario (refer Figure 1-2).

The adopted impervious percentage values throughout Providence West and Providence South are listed in Table 3-2.

Table 3-1 Land Use Breakdown within Providence West Lot 817

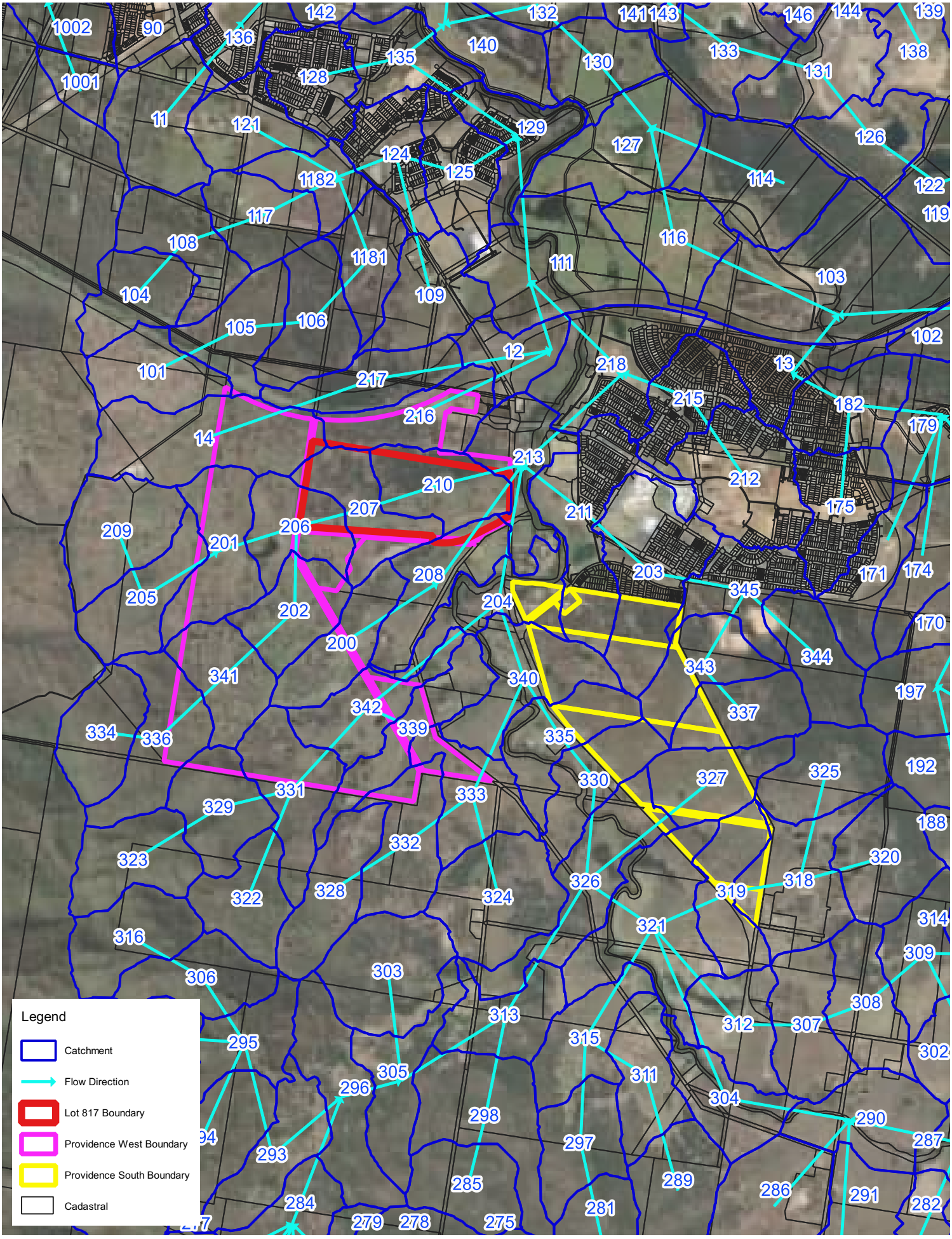
Catchment	Area (ha)			
	Total	Urban (fi 0.85)*	Park/green Space (fi 0.0)*	Catalyst Road (fi 0.9)*
210	34.9	24.3	10.1	0.5
3018	5.4	2.1	2.4	0.9
3021	18.4	12.9	4.4	1.1

Note: ****fi denotes the fraction impervious* **value for the respective land use type

Table 3-2 Pre-development versus Post-development Catchment Characteristics

Catchment	Area (ha)	Pre-development Imperviousness (%)	Post-development Imperviousness (%)
Lot 817			
210	34.9	25.0	61
3018	5.4	0.0	50
3021	18.4	0.0	65
Remainder of Providence West			
201	4.5	0.0	As per pre-development
202	24.9	0.0	As per pre-development
206	6.2	0.0	As per pre-development
207	2.7	0.0	As per pre-development
331	41.2	0.0	As per pre-development
339	9.3	0.0	As per pre-development
341	34.7	0.0	As per pre-development
342	12.9	0.0	As per pre-development
3004	4.1	0.0	As per pre-development
3005	3.6	55.4	As per pre-development
3006	11.5	73.3	As per pre-development
3007	6.24	68.7	As per pre-development
3008	3	0.0	As per pre-development
3009	6.04	0.0	As per pre-development
3010	13.67	0.0	As per pre-development
3011	19.6	33.6	As per pre-development
3012	5.6	0.0	As per pre-development
3013	4	26.6	As per pre-development
3014	12.5	0.0	As per pre-development
3015	10.4	0.0	As per pre-development
3016	5.3	0.0	As per pre-development
3017	2.7	0.0	As per pre-development
3019	3.6	0.0	As per pre-development
3020	5.7	62.4	As per pre-development
3022	6.7	0.0	As per pre-development
3023	14.8	0.0	As per pre-development
3024	2.3	85.0	As per pre-development
3025	3.2	85.0	As per pre-development

Catchment	Area (ha)	Pre-development Imperviousness (%)	Post-development Imperviousness (%)
3026	1.6	85.0	As per pre-development
3027	2.9	85.0	As per pre-development
3028	6.2	85.0	As per pre-development
3029	6.7	85.0	As per pre-development
Providence South			
3030	7.1	85.0	As per pre-development
3031	9.9	85.0	As per pre-development
3032	7.4	85.0	As per pre-development
3033	12.5	85.0	As per pre-development
3034	10.6	85.0	As per pre-development
3035	9.7	85.0	As per pre-development
3036	4.9	83.0	As per pre-development
3037	11.5	85.0	As per pre-development
3038	3.3	85.0	As per pre-development
3039	8.7	85.0	As per pre-development
3040	14.4	85.0	As per pre-development



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TITLE: WT 2024 URBS Catchment Model

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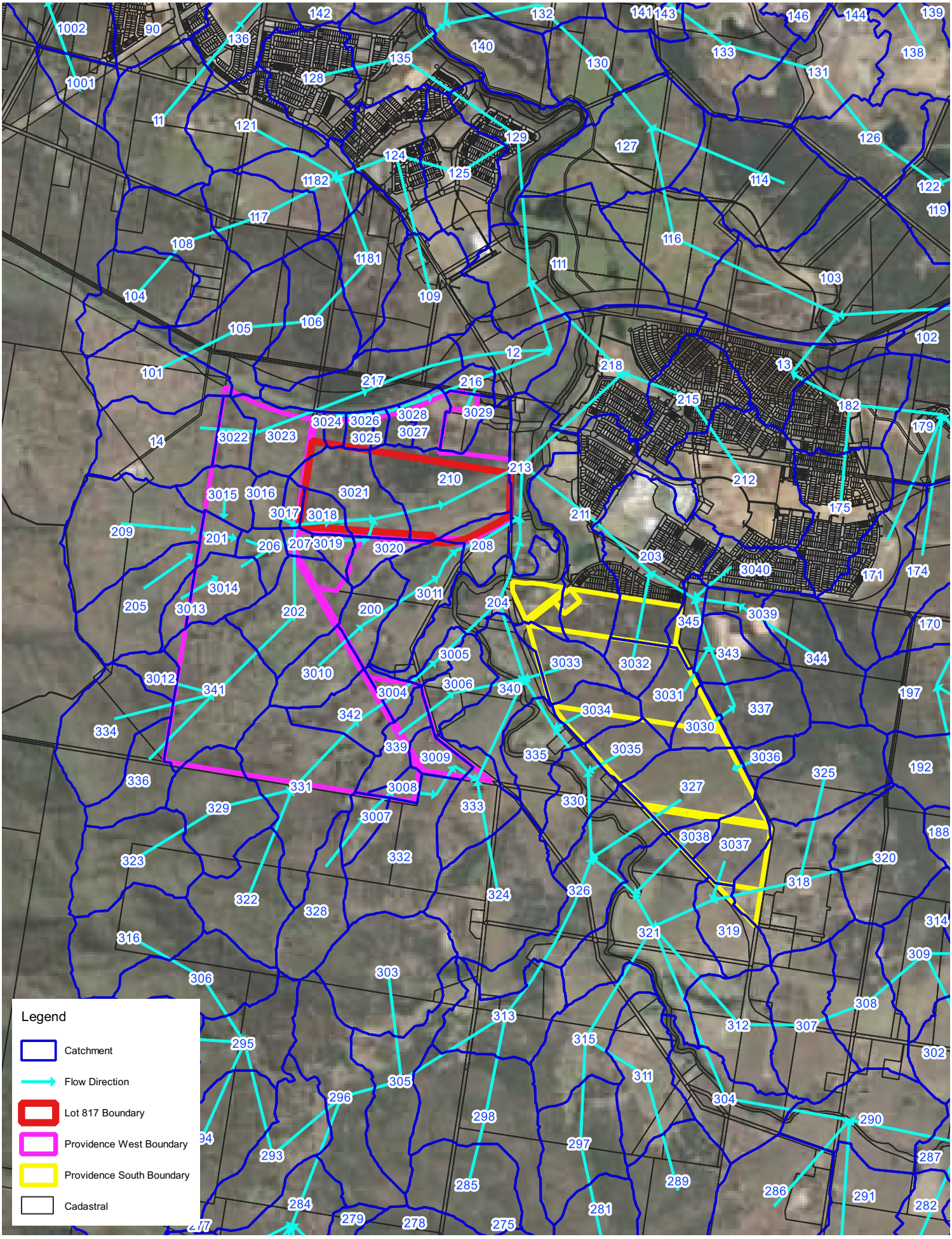
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REVISION:

DATE: 21-May-2025

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TITLE: Modified URBS Catchment Model

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FIGURE NUMBER: 3-2

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4 Hydraulic Modelling Methodology

4.1 Overview of the WT 2024 TUFLOW Model

The TUFLOW WT 2024 Model was used as the basis for the hydraulic modelling of ROL2. The main components of the WT 2024 Model pertinent to this assessment are summarised below:

- the model covers the entire Bundamba Creek catchment extending from its headwaters to its confluence with Bremer River;
- the study approach used a fixed grid mesh model adopting 5m square cell size;
- the model assessed the standard design flood events of varying Annual Exceedance Probability (AEP), ranging from 63% AEP, 39% AEP, 18% AEP, 10% AEP, 5% AEP, 2% AEP, 1% AEP, 1% AEP with climate change, 0.5% AEP, 0.2% AEP, 0.05% AEP events to the probable maximum flood (PMF) event;
- for the design flood modelling, the model simulated the standard durations ranging from 60 minutes to 1,440 minutes, and ten (10) temporal patterns per duration;
- the model included the Providence SUCE development reflecting conditions at the time of the model development that did not include the recently constructed southern detention basin outlet into Bundamba Creek; and
- the design flood levels for each event were determined by enveloping the various durations and temporal patterns and taking the results for the temporal pattern that produces the median from the range of results (i.e., five of the temporal patterns will produce levels lower than the median while four of the temporal patterns will produce levels higher than the median).

Based on a review of the existing topography and local tributaries traversing Providence West and the proposed works, the 5m cell size adopted within the WT 2024 TUFLOW model was deemed sufficient to represent the flood paths and design features that would need to be modelled throughout the project site.

4.2 Selection of Events

The assessment considered a spectrum of design flood events ranging from the 63% AEP, 39% AEP, 18% AEP, 10% AEP, 5% AEP, 2% AEP, 1% AEP and 1% AEP with climate change.

Based on the WT 2024 model results issued to WEP, the critical durations and median temporal patterns were selected with the intention of quantifying offsite flood impacts. The selection focused on key areas including:

- Ripley Road adjacent to the Site; and
- the Bundamba Creek floodplain adjacent to and downstream of the Site.

It is noted that the relatively long durations (greater than 180 minute) are critical at these locations, compared to the short durations (less than 180minute) that are critical within Providence West itself. As the focus of this flood management is to assess offsite flood impacts, the long duration storms were considered. Table 4-1 contains the critical durations and median temporal patterns.

It is noted that the shorter durations less than 270-min will be relevant for the determination of peak flood levels within ROL2 and the confirmation of final fill levels. These durations will be considered as part of the overall consideration of Providence West and the Catalyst Roads.

Table 4-1 Selected Design Events

AEP	Storm Duration	Temporal Pattern
1% AEP with climate change	270min	TP03
	360min	TP06 & TP10
	1080min	TP01, TP02 & TP09
1% AEP	270min	TP03 & TP09
	360min	TP05, TP06 and TP10
	1080min	TP02 & TP06
	1440min	TP06
2% AEP	270min	TP02, TP03 & TP09
	360min	TP06
	1080min	TP01, TP06 & TP09
	1440min	TP06 & TP10
5% AEP	1080min	TP01 & TP06
	1440min	TP04 & TP06
10% AEP	1080min	TP01, TP06 & TP09
	1440min	TP04, TP06 & TP10
18% AEP	1080min	TP01 & TP04
	1440min	TP05
39% AEP	1080min	TP01 and TP04
	1440min	TP05
63% AEP	1440min	TP01 and TP05

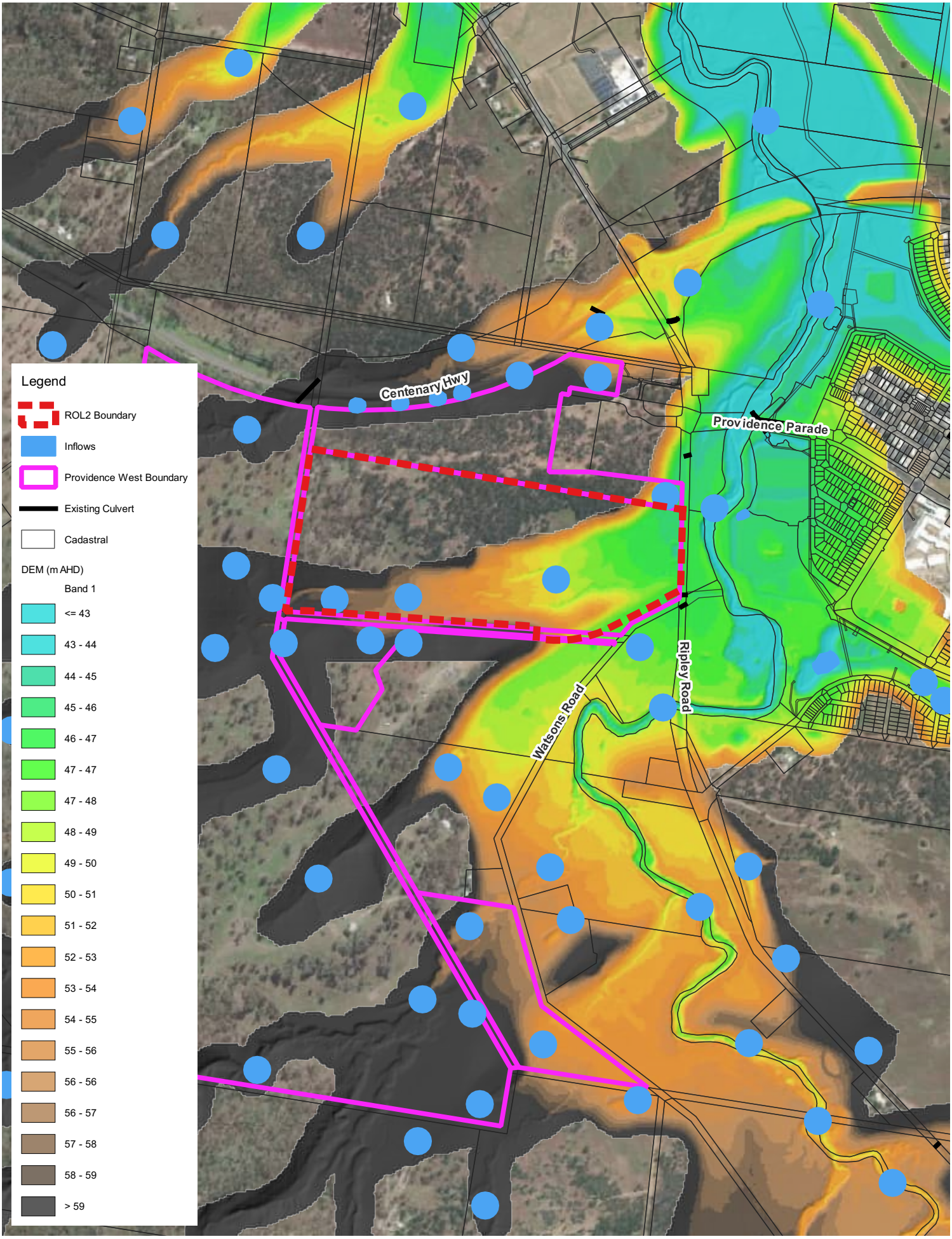
4.3 Hydraulic Scenarios

4.3.1 Pre-development Scenario

The pre-development TUFLOW model included the following key elements and modifications:

- Inflow hydrographs were extracted from the modified pre-development URBS model described in Section 3.2.
- topography within Providence West (including ROL2) was modelled as per the WT March 2014 model.
- the recently constructed SUCE southern detention basin outlet into Bundamba was added based on details sourced from the SUCE approved SMP (BMT, October 2020).
- the recently constructed Bayliss Road culvert and associated upstream earthworks have been added based on their details sourced from the SUCE approved SMP (BMT, October 2020).

Figure 4-1 shows the pre-development TUFLOW model layout within Providence West.



Data Sources:

Photography: © Nearmap, captured 2025-07-07

Topography:

Cadastre:

Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: Pre-Development TUFLOW Layout

N

0 200 400 m

FIGURE NUMBER: 4-1

REVISION:

DATE: 06-November-2025

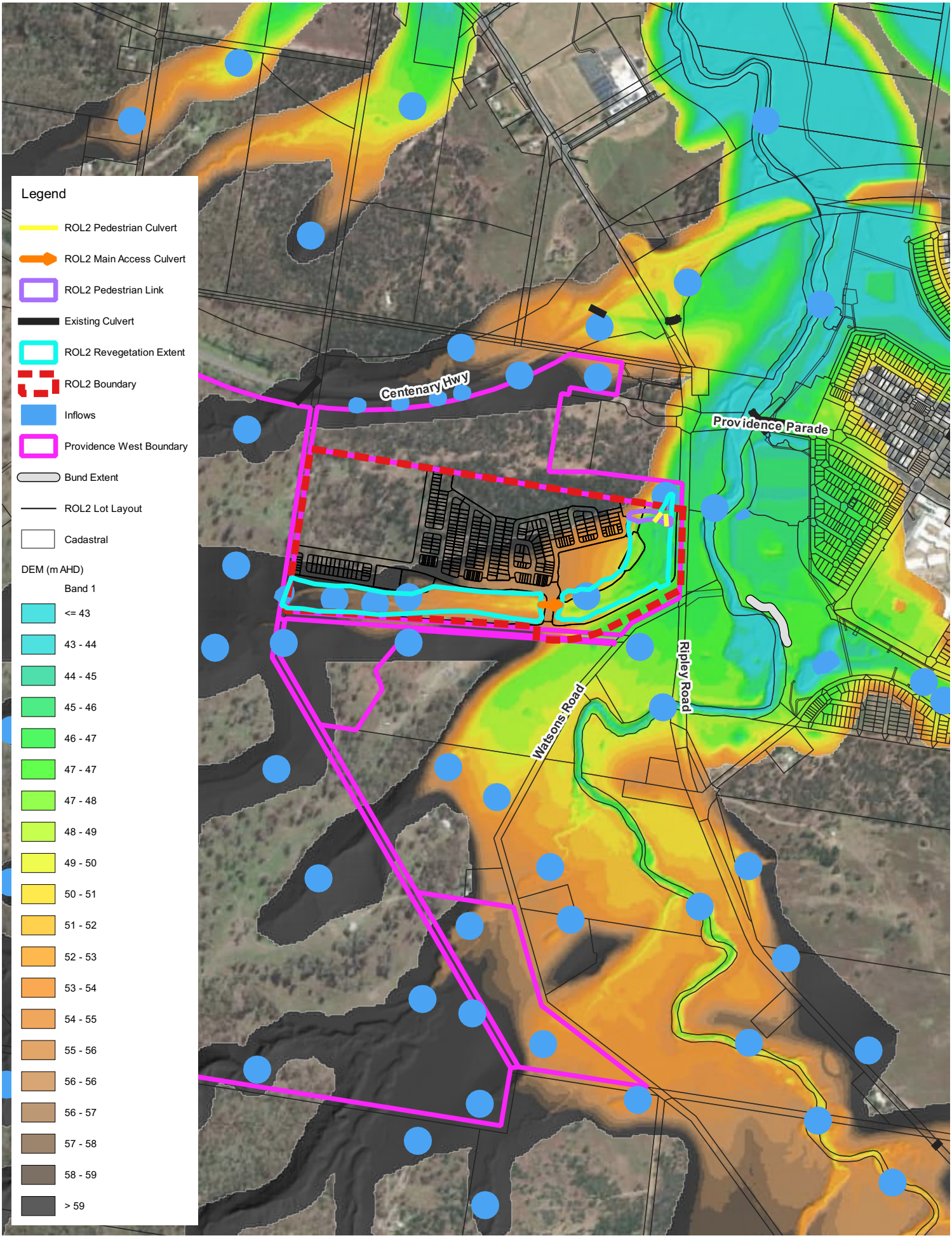
Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\Fig4-1\Fig4-1.qgz

4.3.2 Post-development Scenario

The post-development scenario included the following modifications:

- **ROL 2**
    - Inflow hydrographs were extracted from the post-development URBS model described in Section 3.2 (i.e., incorporating the urbanised flows from sub-catchments 210, 3018 and 3021);
    - ROL2 design surface TIN in MGA1994 coordinates (File reference: "251028_24154_DEM_ROL2.grd") supplied by Design Flow, with relevant civil drawings presented in Appendix A.
    - Main access road crossing 3 x 1.8m x 1.2m box culvert, with upstream and downstream invert levels 50.1 mAHD and 49.80 mAHD, respectively.
    - pedestrian path at the northern end of ROL2 that crosses the proposed eastern and western waterways and linking with Ripley Road. The path was represented with a design surface that has varying levels with an overflow crest level of 46.7 mAHD (File reference: 251028_24154_DEM_BW_MGA94.grd") supplied by Design Flow. The representation included culvert crossings at two locations, consisting of 2 x 1.8m x 0.9m box culverts at both the eastern and western waterway crossings;
    - The proposed revegetation within ROL2 was modelled with a Manning's n value of 0.08 to reflect interim conditions until the construction of the Catalyst Roads. With the construction of the Catalyst Roads, the ultimate Manning's n is anticipated to range from 0.10 to 0.15. Given that the Catalyst Roads will be constructed in the short-medium term, this level of vegetation is considered to be reasonable for the representation of interim conditions.
- **Inclusion of works within SUCE:**
    - A bund is proposed to be formed by raising the existing access track on the eastern bank of Bundamba Creek (adjacent to the southern SUCE southern sports field) as part of the Catalyst Roads. The bund, with a crest level of 47.0 mAHD. It would be necessary to raise the access road by between zero and 600 mm, with the majority of the levee 300-500 mm above the level of the current access road. The bund is required to mitigate flood impact in the SUCE Stage 4-6 area, providing a reduction in flood level in the short term. It is noted that the bund will be required to mitigate the impact of Catalyst Roads, providing non-worsening outcomes in the Stage 4-6 in the long term.

Figure 4-2 shows the post-development TUFLOW model layout within Providence West. Figure 4-3 shows the topography difference between the pre-development and post-development scenarios.



Data Sources:
Photography: © Nearmap, captured 2025-07-07
Topography:
Cadastre:
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: Post-Development TUFLOW Layout

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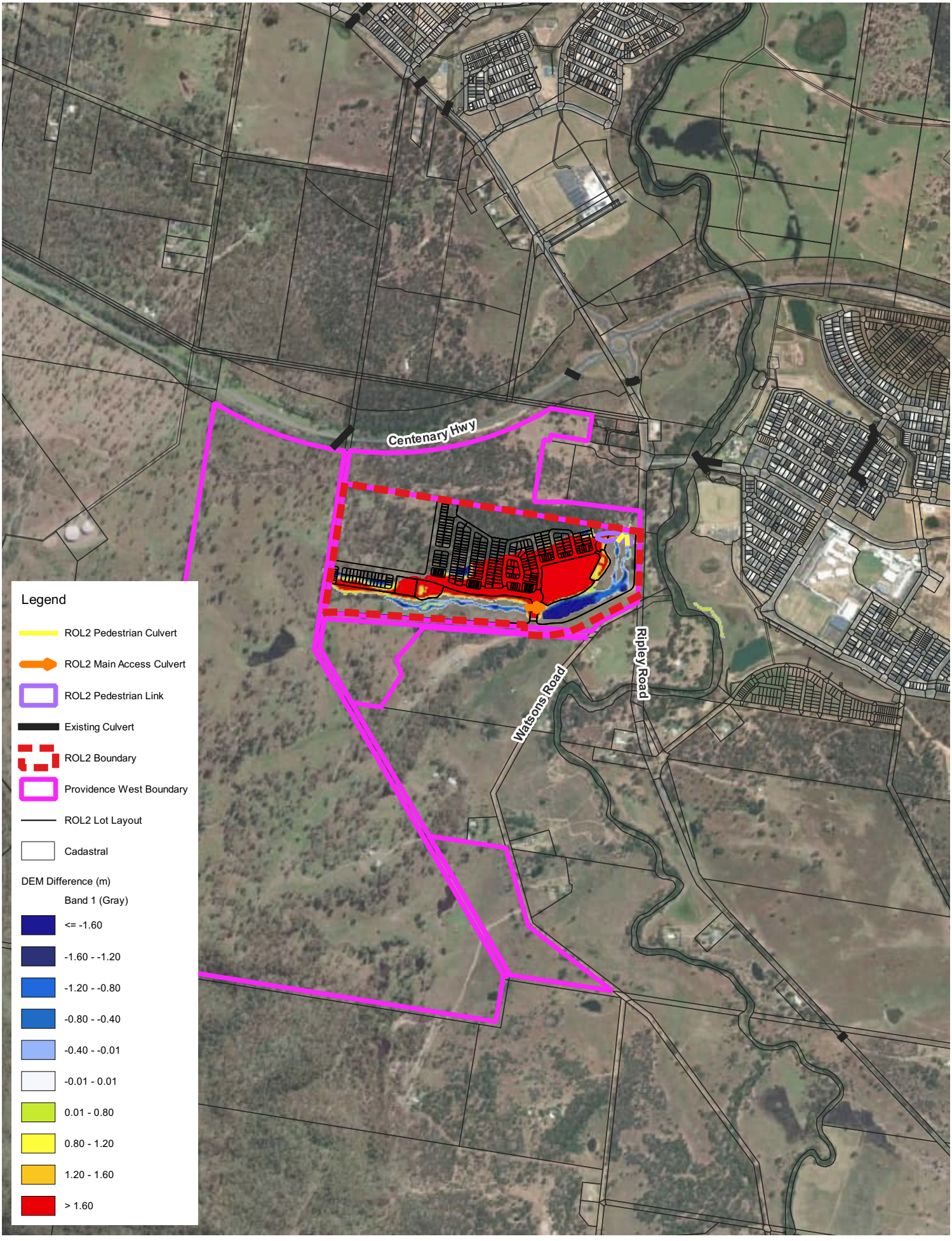
0 200 400 m

FIGURE NUMBER: 4-2

REVISION:

DATE: 06-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\Fig4-2\Fig4-2.qgz



Data Sources:

Photography: © Nearmap, captured 2025-07-07

Topography:

Cadastre:

Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: Post-development minus Pre-development Topography

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0 300 600 m

FIGURE NUMBER: 4-3

REVISION:

DATE: 06-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\Fig4-3\Fig4-3.qgz

5 Hydraulic Modelling Results

5.1 Pre-Development Flood Extents

Based on the TUFLOW modelling results, the pre-development flood levels and depth within the Site for the 63% AEP event to 1% AEP event with climate change are presented in Appendix B:

- ***Flood Level:***
  - Figure B1: 1% AEP with climate change flood level – pre-development;
  - Figure B2: 1% AEP flood level – pre-development;
  - Figure B3: 2% AEP flood level – pre-development;
  - Figure B4: 5% AEP flood level – pre-development;
  - Figure B5: 10% AEP flood level – pre-development;
  - Figure B6: 18% AEP flood level – pre-development;
  - Figure B7: 39% AEP flood level – pre-development; and
  - Figure B8: 63% AEP flood level – pre-development.
- ***Flood Depth:***
  - Figure B9: 1% AEP with climate change flood depth – pre-development;
  - Figure B10: 1% AEP flood depth – pre-development;
  - Figure B11: 2% AEP flood depth – pre-development;
  - Figure B12: 5% AEP flood depth – pre-development;
  - Figure B13: 10% AEP flood depth – pre-development;
  - Figure B14: 18% AEP flood depth – pre-development;
  - Figure B15: 39% AEP flood depth – pre-development; and
  - Figure B16: 63% AEP flood depth – pre-development.
- ***Flood Hazard:***
  - Figure B17: 1% AEP with climate change flood hazard – pre-development;
  - Figure B18: 1% AEP flood hazard – pre-development;
  - Figure B19: 2% AEP flood hazard – pre-development;
  - Figure B20: 5% AEP flood hazard – pre-development;
  - Figure B21: 10% AEP flood hazard – pre-development;
  - Figure B22: 18% AEP flood hazard – pre-development;
  - Figure B23: 39% AEP flood hazard – pre-development; and
  - Figure B24: 63% AEP flood hazard – pre-development.

- ***Flood Velocity:***
  - Figure B25: 1% AEP with climate change flood velocity– pre-development;
  - Figure B26: 1% AEP flood velocity – pre-development;
  - Figure B27: 2% AEP flood velocity – pre-development;
  - Figure B28: 5% AEP flood velocity – pre-development;
  - Figure B29: 10% AEP flood velocity – pre-development;
  - Figure B30: 18% AEP flood velocity – pre-development;
  - Figure B31: 39% AEP flood velocity – pre-development; and
  - Figure B32: 63% AEP flood velocity – pre-development.

5.2 Post-Development Flood Extents

Based on the TUFLOW modelling results, the post-development flood level and depth within the Site for the 63% AEP event to 1% AEP event with climate change are presented in Appendix C:

- ***Flood Level:***
  - Figure C1: 1% AEP with climate change flood level – post-development;
  - Figure C2: 1% AEP flood level – post -development;
  - Figure C3: 2% AEP flood level – post -development;
  - Figure C4: 5% AEP flood level – post -development;
  - Figure C5: 10% AEP flood level – post -development;
  - Figure C6: 18% AEP flood level – post -development;
  - Figure C7: 39% AEP flood level – post -development; and
  - Figure C8: 63% AEP flood level – post -development.
- ***Flood Depth:***
  - Figure C9: 1% AEP with climate change flood depth – post -development;
  - Figure C10: 1% AEP flood depth – post -development;
  - Figure C11: 2% AEP flood depth – post -development;
  - Figure C12: 5% AEP flood depth – post -development;
  - Figure C13: 10% AEP flood depth – post -development;
  - Figure C14: 18% AEP flood depth – post -development;
  - Figure C15: 39% AEP flood depth – post -development; and
  - Figure C16: 63% AEP flood depth – post -development.
- ***Flood Hazard:***
  - Figure B17: 1% AEP with climate change flood hazard – post-development;
  - Figure B18: 1% AEP flood hazard – post-development;
  - Figure B19: 2% AEP flood hazard – post-development;
  - Figure B20: 5% AEP flood hazard – post-development;
  - Figure B21: 10% AEP flood hazard – post-development;

- Figure B22: 18% AEP flood hazard – post-development;
- Figure B23: 39% AEP flood hazard – post-development; and
- Figure B24: 63% AEP flood hazard – post-development.

- ***Flood Velocity:***
  - Figure B25: 1% AEP with climate change flood velocity– post-development;
  - Figure B26: 1% AEP flood velocity – post-development;
  - Figure B27: 2% AEP flood velocity – post-development;
  - Figure B28: 5% AEP flood velocity – post -development;
  - Figure B29: 10% AEP flood velocity – post-development;
  - Figure B30: 18% AEP flood velocity – post-development;
  - Figure B31: 39% AEP flood velocity – post-development; and
  - Figure B32: 63% AEP flood velocity – post-development.

5.3 Flood Immunity

The flood immunity of the various parts of the proposed development with respect to the storm durations of relevance to the Bundamba Creek floodplain is summarised below.

- the proposed lots have flood immunity of 1% AEP event with climate change;
- the proposed main access has flood immunity of 1% AEP event with climate change; and
- the proposed pedestrian link has flood immunity equivalent to the 18% AEP event.

5.4 Flood Level Impacts

5.4.1 Mapping of Impacts

The peak flood level impact (afflux) was calculated for each design event (i.e., 63% AEP event to 1% AEP event with climate change). The afflux was determined by the difference between the post-development and pre-development median flood level.

It is noted that for each AEP event, there are multiple durations and median temporal patterns across the study area, resulting in the need to create multiple median afflux grids per AEP. To minimise the number of afflux grids per AEP, a simplified approach was adopted wherein the resultant multiple afflux grids were enveloped to calculate a single maximum afflux grid per AEP for the purpose of flood mapping.

It is noted that the above approach may potentially overestimate the impacts at some locations. Notwithstanding, where required for a specific area of interest, the afflux values quoted within this report were extracted from the relevant critical duration and associated median temporal pattern.

The flood level impacts based on the maximum grid are presented in Appendix D.

Due to the size of the catchment, mapping was completed with respect to conditions in the vicinity of the Site and for the area downstream of the Centenary Highway with respect to flood level:

- ***Flood Level Impacts- Adjacent to Providence West:***
  - Figure D1: 1% AEP with climate change flood level impact;
  - Figure D2: 1% AEP flood level impact;
  - Figure D3: 2% AEP flood level impact;
  - Figure D4: 5% AEP flood level impact;
  - Figure D5: 10% AEP flood level impact;
  - Figure D6: 18% AEP flood level impact;
  - Figure D7: 39% AEP flood level impact; and
  - Figure D8: 63% AEP flood level impact.
- ***Flood Level Impacts- Downstream of Centenary Highway:***
  - Figure D9: 1% AEP with climate change flood impact;
  - Figure D10: 1% AEP flood impact;
  - Figure D11: 2% AEP flood impact;
  - Figure D12: 5% AEP flood impact;
  - Figure D13: 10% AEP flood impact;
  - Figure D14: 18% AEP flood impact;
  - Figure D15: 39% AEP flood impact; and
  - Figure D16: 63% AEP flood impact.

Due to the relatively small change in levels external to the Site, mapping of flood velocity impacts and flood hazard impacts was limited to the area in the vicinity of the Site.

- ***Flood Velocity Impacts- Adjacent to Providence West:***
  - Figure D17: 1% AEP with climate change flood impact;
  - Figure D18: 1% AEP flood impact;
  - Figure D19: 2% AEP flood impact;
  - Figure D20: 5% AEP flood impact;
  - Figure D21: 10% AEP flood impact;
  - Figure D22: 18% AEP flood impact;
  - Figure D23: 39% AEP flood impact; and
  - Figure D24: 63% AEP flood impact.
- ***Flood Hazard Impacts- Adjacent to Providence West:***
  - Figure D25: 1% AEP with climate change hazard impact;
  - Figure D26: 1% AEP hazard impact;
  - Figure D27: 2% AEP hazard impact;
  - Figure D28: 5% AEP hazard impact;
  - Figure D29: 10% AEP hazard impact;

- Figure D30: 18% AEP hazard impact;
- Figure D31: 39% AEP hazard impact; and
- Figure D32: 63% AEP hazard impact.

5.4.2 Impacts Upstream of Centenary Highway

Similar to the approved AMEX West Report, modelling of AMEX West (and the road upgrades proposed at the time) indicated increases in flood level in excess of the default 10 mm impact.

Section 5.3 of the approved AMEX West Report considered impacts in terms of changes in flood level at a number of existing buildings and in general external to the development.

- ***Existing Buildings***

  For consistency with the AMEX West Report, this report presents the afflux for the 1% AEP event which was the design standard at the time of the preparation of the AMEX West Report and for the 1% AEP event with climate change (the design standard under the recently adopted planning scheme).

  The affluxes at the existing buildings (labelled H1 to H6 in Figures D1 to D8) were extracted and compared against those of the impacts under the approved AMEX West report.

  The result of the comparison is presented in Table 5-1.

Table 5-1 Afflux at Existing Buildings

Location	Floor Level (mAHD)	1% AEP Event				1% AEP with climate change (mm)	
		AMEX West Report		Current Modelling			
		Developed Level (mAHD)	Impact (mm)	Developed Level (mAHD)	Impact (mm)	Developed Level (mAHD)	Impact (mm)
H1	46.22	45.06	-10	45.69	-43	46.02	-34
H2	45.95	N/A	-	45.93	-52	46.25	-62
H3	47.46	46.70	110	46.97	77	47.24	85
H4	48.74	47.58	0	47.40	5	47.50	19
H5	48.53	48.25	0	48.43	3	48.58	3
H6	51.08	50.79	0	51.32	0	51.50	0

With reference to Table 5-1, for the 1% AEP event, the impacts at all the existing buildings are either less than those nominated in the approved AMEX West Report or 10 mm or less.

For the 1% AEP event including climate change:

- There is either no change or a reduction in level at buildings H1, H2 and H6, and the increase at H5 is less than 10 mm;
- The increase at building H3 is less than that approved for the 1% AEP event in the AMEX West Report and is below the floor level of the building;
- While there is an increase in excess of 10mm at building H4, the flood level is below the floor level of the building.

- ***SUCE***

  The use of the WT 2014 Model produces higher levels compared to the KBR Model. This, combined with the redistribution of flow associated with Providence West results in an increase in level in the SUCE area (refer Figure D1 and Figure D2 in Appendix D for the impact mapping for the 1% AEP event with climate change and the 1% AEP event respectively).

  - *Stages 1 to 3 of SUCE*

    For stages 1 to 3 of SUCE near the Centenary Highway, the increase is:

    - -7 mm for the 1% AEP event; and
    - 2 mm for the 1% AEP event including climate change.

    The increase is located within the open space area of SUCE. It is noted that modelling of the combined Catalyst Road and Providence West design completed to date suggests that the increase in this area will be removed due to the influence of the Catalyst Roads on flow distribution.

  - *Stages 4 to 6 of SUCE*

    For stages 4 to 6 of SUCE further to the south, a reduction in level is achieved:

    - -160 mm for the 1% AEP event; and
    - -2 mm for the 1% AEP event including climate change.

    The inclusion of the mitigation bund results in a reduction in flood level in the Stage 4-6 area which is considered beneficial given that Stage 4-6 was set relative to the (lower) 1% AEP flood level obtained from the KBR Model. It is noted that the bund will be required to mitigate the impact of Catalyst Roads, providing non-worsening outcomes in this area in the long term with the Catalyst Roads in place.

  - *SUCE Stages 43 and 44 (Alcove)*

    Stages 43 and 44 abut and are located immediately to the south of the SUCE southern wetland. The changes in flood level in the southern wetland are:

    - 96 mm for the 1% AEP event; and
    - 100 mm for the 1% AEP event including climate change.

    In this case, a review of the Stage 43 and 44 as-constructed level earthworks model indicated that the lowest road level adjacent to the southern wetland is 47.85 mAHD. In comparison, the flood levels for the 1% AEP event and 1% AEP event with climate change are 47.24 mAHD and 47.38 mAHD, respectively. Consequently, Stages 43 and 44 are not affected by the change in level and have adequate freeboard to the 1% AEP event including climate change.

    Given this, the increase in flood level in the southern wetland is considered to be acceptable.

- ***General Floodplain***

  For comparative purposes, Figure 5-1 presents Figure C.5 from the AMEX West Report which shows the flood level impact for the 1% AEP event.

  Figure 5-2 presents an excerpt from Figure D2 which shows the flood level impact for the 1% AEP event and is comparable to the afflux presented in Figure 5-1. Figure 5-3 presents an excerpt from Figure D1 which shows the flood level impact for the 1% AEP event including climate change.

For the 1% AEP event (comparing Figure 5-1 with Figure 5-2):

- in the area generally between building H2 in the north and buildings H4 and H5 in the south, the impacts associated with modelling of ROL2 are lower than those nominated in the AMEX West Report; and
- while there is an impact less than 20 mm on the western bank of Bundamba Creek in the area to the north and east of building H4, the majority of the affected area is already inundated to a depth in excess of 2 metres.

For the 1% AEP event including climate change (Figure 5-3):

- in the area generally between building H2 in the north and buildings H4 and H5 in the south, the impacts associated with modelling of ROL2 are lower than those nominated in the AMEX West Report for the lesser 1% AEP event; and
- while there is an impact less than 20 mm on the western bank of Bundamba Creek in the area to the north and east of building H4, the majority of the affected area is already inundated to a depth in excess of 2 metres.

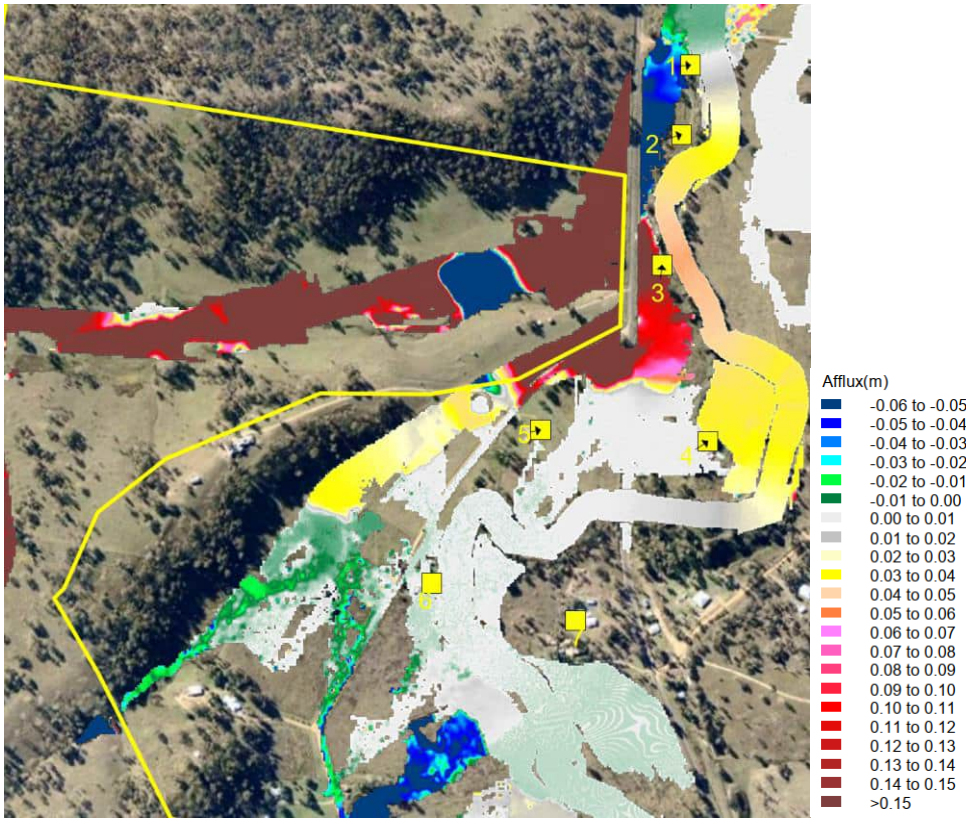


Figure 5-1 Approved Amex West Report – Afflux for 1% AEP Event

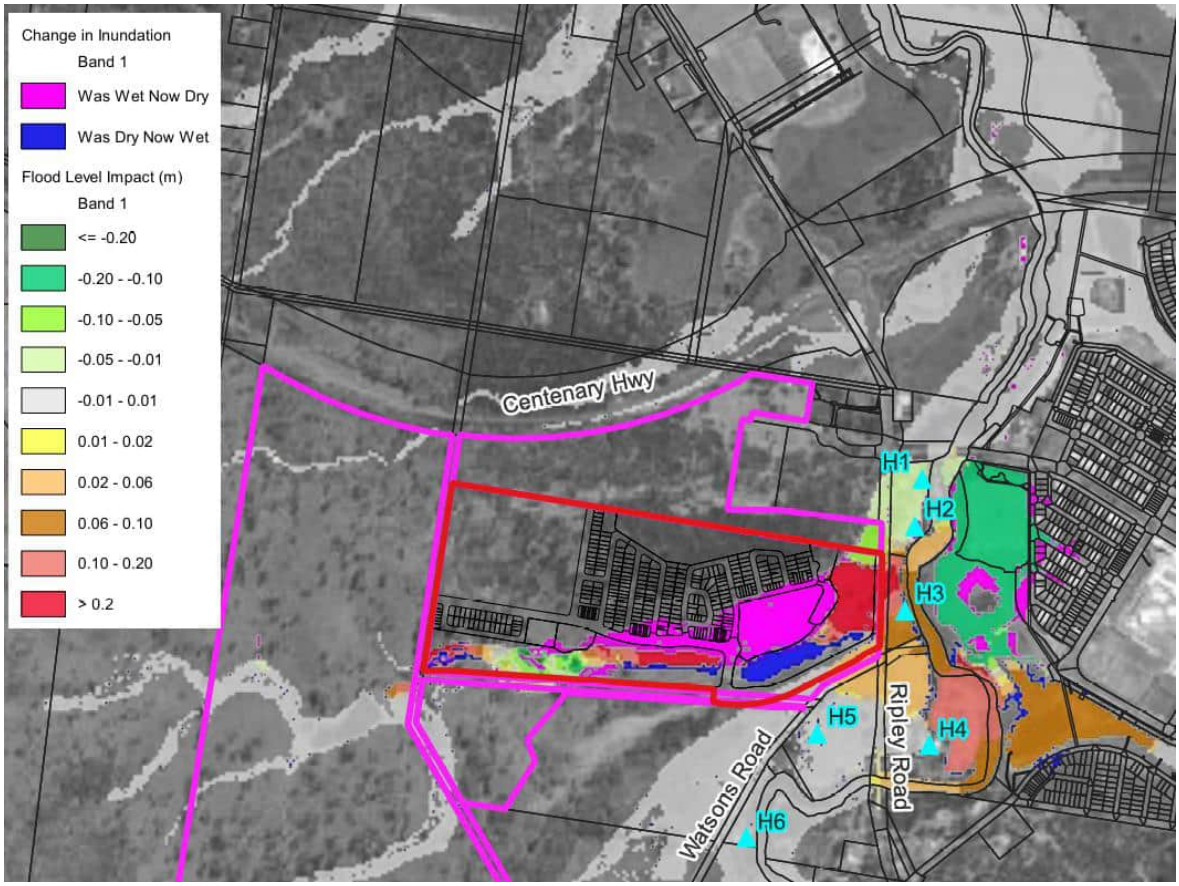


Figure 5-2 Current ROL2 Modelling – Afflux for 1% AEP Event

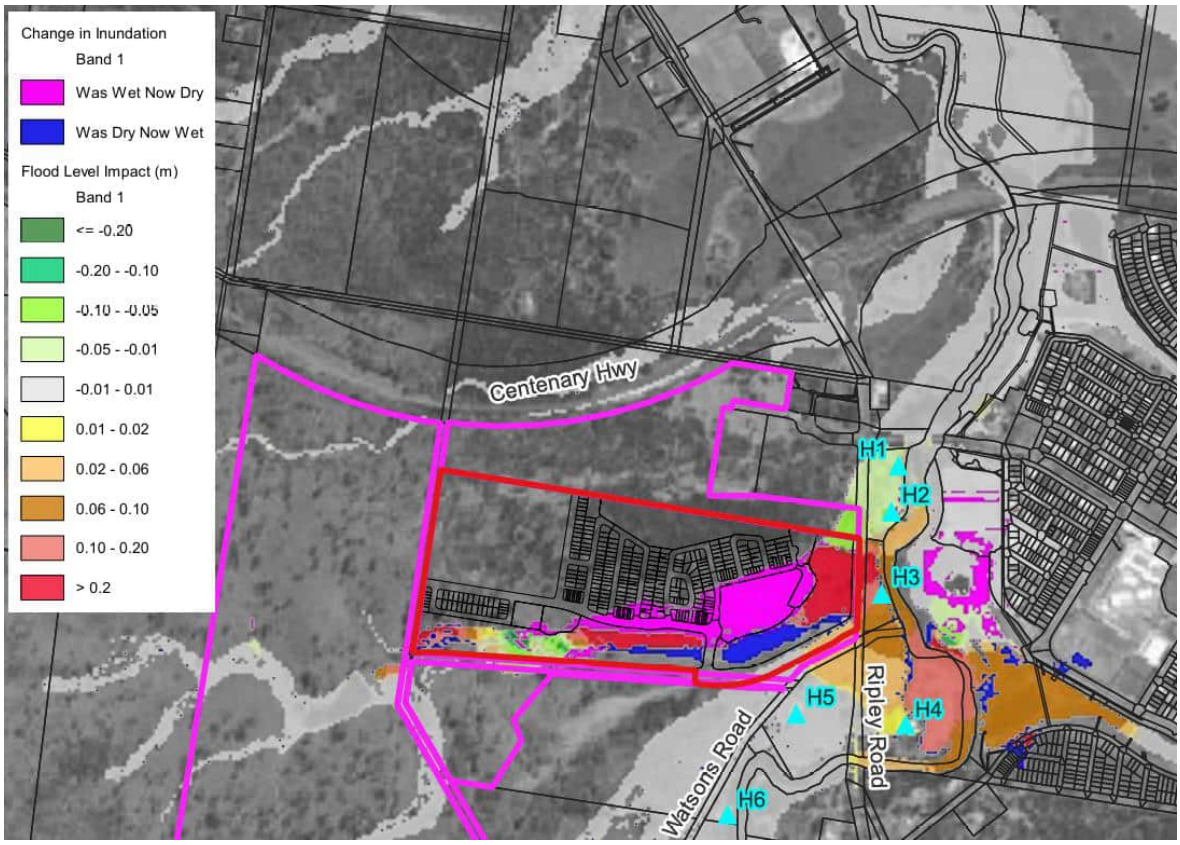


Figure 5-3 Current ROL2 Modelling – Afflux for 1% AEP Event including Climate Change

5.4.3 Impacts Downstream of Centenary Highway

For major events, typically no impacts were obtained apart from in a tributary of Bundamba Creek well downstream of the Centenary Highway and approaching the mouth of the creek. Based on a review of the impact, it is considered that the increase is anomalous due to its location in a tributary at distance from the Site.

For the minor events (39% and 63% AEP events), small impacts were predicted that are contained within the creek banks.

6 Conclusion

Stockland is proposing to reconfigure 833-865 Ripley Road, South Ripley (Lot 196 on SP157517) as part of the overall proposed Providence West master-planned community development.

WEP completed a flood impact assessment using Council's Bundamba Creek Flood models to quantify the impact of the development in Bundamba Creek.

The results of the flood modelling are discussed with reference to the previous approval issued with respect to AMEX West in Section 5.4.

It is important to note that the modelling presented in this report reflects the development of 833-865 Ripley Road. The development will necessarily occur within the development of the wider floodplain which will include the Catalyst Roads.

The upgrading of the Catalyst Roads to provide immunity to the 1% AEP event will result in the redistribution of flow and the need to negotiate with affected landowners. As this work is in progress at the time of writing this report, it is not possible to include the adopted Catalyst Roads in the flood model.

Consequently, the report presents the results of modelling the development in isolation. It is noted that the modelling will need to be updated to reflect the adopted Catalyst Road solution and for minimum levels to be set relative to the resultant flood levels to ensure compliance with the planning scheme.

As a consequence, the flood levels presented in this report are not final flood levels to allow the finalisation of development and minimum lot levels.

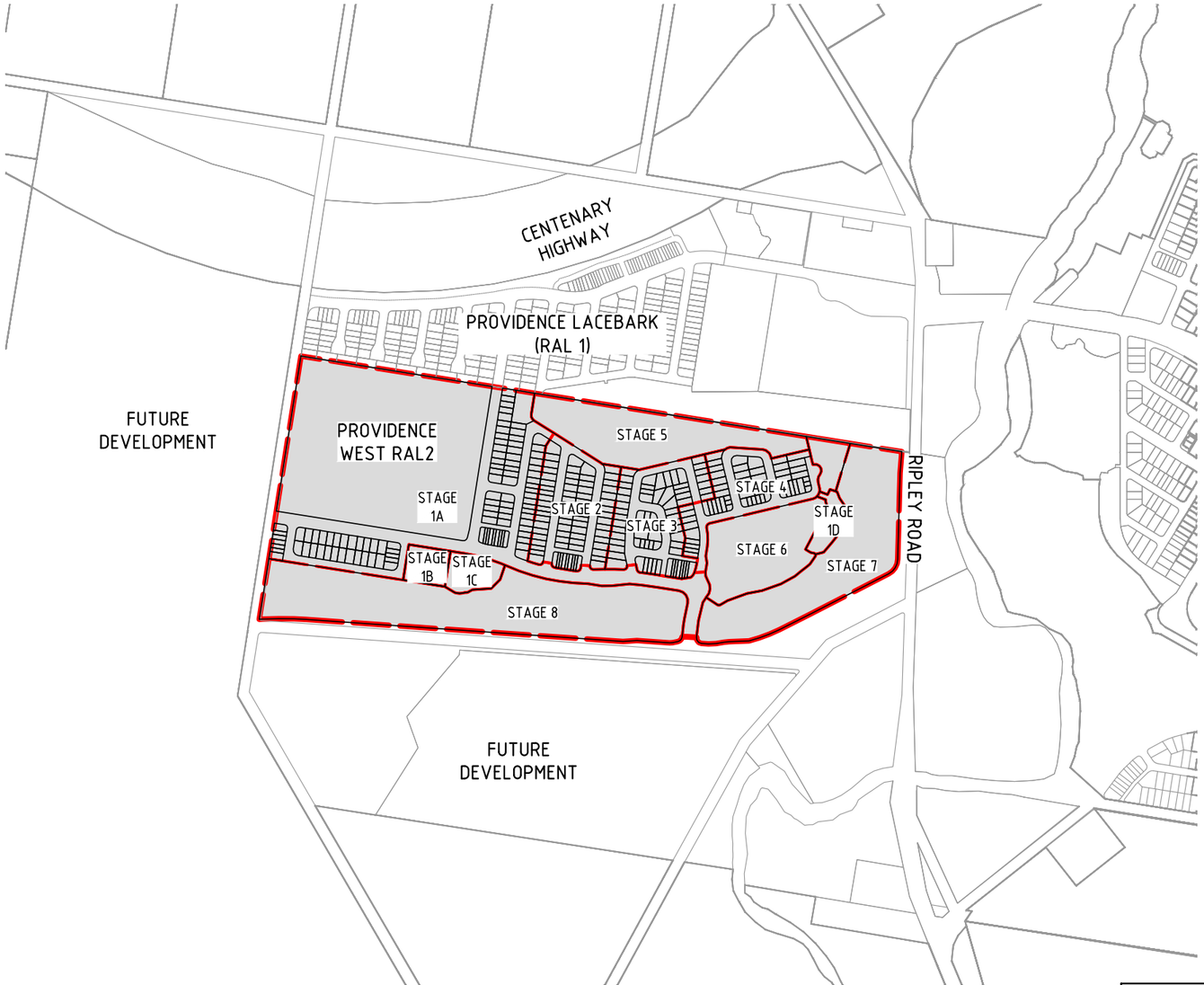
Appendix A Civil Design Drawings

Stockland

PROVIDENCE WEST
RAL 2 CIVIL FUNCTIONALS

DRAWING INDEX

DRAWING NO.	DRAWING TITLE
24-154-01	GENERAL - LOCALITY PLAN, DRAWING INDEX AND NOTES
24-154-11	ROAD - HIERARCHY LAYOUT PLAN
24-154-21	ROAD - CHAINAGE PLAN
24-154-31	ROAD - TYPICAL SECTIONS - SHEET 1
24-154-32	ROAD - TYPICAL SECTIONS - SHEET 2
24-154-33	ROAD - TYPICAL SECTIONS - SHEET 3
24-154-35	ROAD 01 - BUS STOPS
24-154-41	ROAD 01 - LONGITUDINAL SECTION - SHEET 1
24-154-42	ROAD 02 - LONGITUDINAL SECTION - SHEET 1
24-154-43	ROAD 02 - LONGITUDINAL SECTION - SHEET 2
24-154-44	ROAD 07 - LONGITUDINAL SECTION - SHEET 1
24-154-51	EARTHWORKS - SITE LAYOUT PLAN
24-154-52	EARTHWORKS - LAYOUT PLAN - SHEET 1
24-154-53	EARTHWORKS - LAYOUT PLAN - SHEET 2
24-154-54	EARTHWORKS - LAYOUT PLAN - SHEET 3
24-154-55	EARTHWORKS - LAYOUT PLAN - SHEET 4
24-154-56	EARTHWORKS - LAYOUT PLAN - SHEET 5
24-154-57	EARTHWORKS - LAYOUT PLAN - SHEET 6
24-154-58	EARTHWORKS - LAYOUT PLAN - SHEET 7
24-154-59	EARTHWORKS - LAYOUT PLAN - SHEET 8
24-154-60	EARTHWORKS - RETAINING WALL DETAILS
24-154-61	EARTHWORKS - CROSS SECTIONS - SHEET 1
24-154-62	EARTHWORKS - CROSS SECTIONS - SHEET 2
24-154-63	EARTHWORKS - CROSS SECTIONS - SHEET 3
24-154-64	EARTHWORKS - CROSS SECTIONS - SHEET 4
24-154-65	EARTHWORKS - CROSS SECTIONS - SHEET 5
24-154-71	EARTHWORKS - LAYOUT PLAN - CUT & FILL DEPTH RANGE
24-154-81	EARTHWORKS - LAYOUT PLAN - EXISTING SLOPE ANALYSIS
24-154-91	COMBINED SERVICES - LAYOUT PLAN - SHEET 1
24-154-92	COMBINED SERVICES - LAYOUT PLAN - SHEET 2
24-154-93	COMBINED SERVICES - LAYOUT PLAN - SHEET 3
24-154-94	COMBINED SERVICES - LAYOUT PLAN - SHEET 4
24-154-95	COMBINED SERVICES - LAYOUT PLAN - SHEET 5
24-154-96	COMBINED SERVICES - LAYOUT PLAN - SHEET 6
24-154-97	COMBINED SERVICES - LAYOUT PLAN - SHEET 7
24-154-98	COMBINED SERVICES - LAYOUT PLAN - SHEET 8
24-154-111	ROAD GRADING - INTERNAL TURN PATHS - SHEET 1
24-154-112	ROAD GRADING - INTERNAL TURN PATHS - SHEET 2
24-154-113	ROAD GRADING - INTERNAL TURN PATHS - SHEET 3
24-154-114	ROAD GRADING - INTERNAL TURN PATHS - SHEET 4
24-154-115	ROAD GRADING - INTERNAL TURN PATHS - SHEET 5
24-154-116	ROAD GRADING - INTERNAL TURN PATHS - SHEET 6
24-154-131	SIGHT LINE CHECKS - LAYOUT PLAN - SHEET 1
24-154-132	SIGHT LINE CHECKS - LAYOUT PLAN - SHEET 2
24-154-133	SIGHT LINE CHECKS - LAYOUT PLAN - SHEET 3
24-154-134	SIGHT LINE CHECKS - LAYOUT PLAN - SHEET 4
24-154-135	SIGHT LINE CHECKS - LAYOUT PLAN - SHEET 5
24-154-136	SIGHT LINE CHECKS - LAYOUT PLAN - SHEET 6
24-154-137	SIGHT LINE CHECKS - LAYOUT PLAN - SHEET 7
24-154-138	SIGHT LINE CHECKS - LAYOUT PLAN - SHEET 8



LOCALITY PLAN
SCALE 1:5000

NOTE
PRELIMINARY ONLY. FINAL DETAILS TO BE PROVIDED AT DETAIL DESIGN.

SCALE
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1 : 5000 (A1 UNREDUCED)

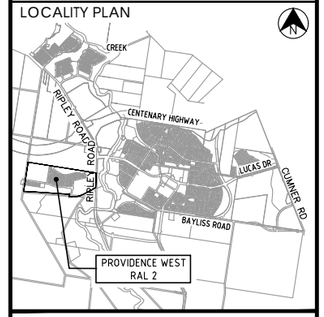
NOT FOR CONSTRUCTION

\\kn-svr-02\projects\2024\24-154 Providence West - 817 - Preliminary Support\Engineering\Acad\24-154-01-COVER.dwg Plotted by: TRP on 31/10/2025 4:34:53 PM

DO NOT SCALE THIS DRAWING
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NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
B	ISSUED FOR APPROVAL	31.10.2025	TRP

Client
Stockland PROVIDENCE

Project
PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER
3406/2025/PDA

kn group
L1, 62 Astor Terrace, Spring Hill, QLD 4000
www.kngroup.com.au | 07 3017 1900

Approved
Digitally signed by
Amy Bamford
B.E.(Civil),
MIEAust, CPEng, NER,
RPEQ 36180
Date: 31/10/2025

Drawing Title
GENERAL
LOCALITY PLAN,
DRAWING INDEX AND NOTES

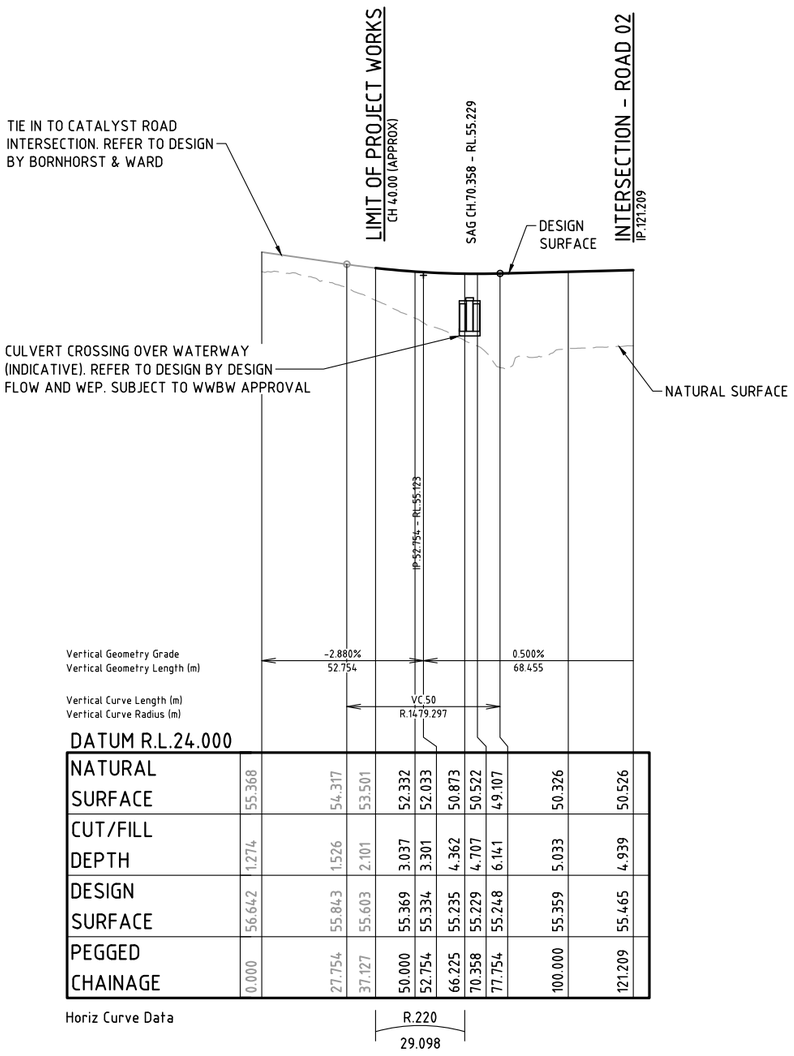
Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	01 of 53

	Drawing No	Revision
A1	24-154-01	B

NOTE
PRELIMINARY ONLY. FINAL DETAILS TO BE PROVIDED AT DETAIL DESIGN.

POSTED SPEED	50 kM/hr
DESIGN SPEED	60 kM/hr



DATUM R.L.24.000

NATURAL SURFACE	55.368		54.317	53.501	52.332	52.033	50.873	50.522	49.107	50.326	50.526
CUT/FILL DEPTH	1.274		1.526	2.101	3.037	3.301	4.362	4.707	6.141	5.033	4.939
DESIGN SURFACE	56.642		55.843	55.603	55.369	55.334	55.235	55.229	55.248	55.359	55.465
PEGGED CHAINAGE	0.000		27.754	37.127	50.000	52.754	66.225	70.358	77.754	100.000	121.209

Horiz Curve Data

R.220
29.098

LONGITUDINAL SECTION - ROAD 01

SCALE - 1:1000 (H)
1:200 (V)

NOT FOR CONSTRUCTION

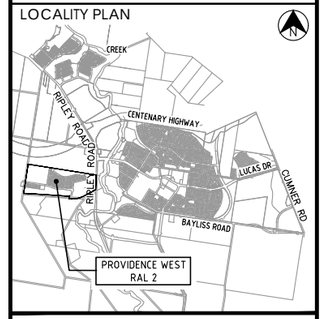
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10 5 0 10 20 30 40 50 60 70 80 90 100m

B 1:200 (Vert.)
2 1 0 2 4 6 8 10 12 14 16 18 20m

(A1 UNREDUCED)

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LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
B	ISSUED FOR APPROVAL	31.10.2025	TRP

Client

Stockland
PROVIDENCE

Project

PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER

3406/2025/PDA

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Approved

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Amy Bamford
B.E.(Civil),
MIEAust, CPEng, NER,
RPEQ 36180
Date: 31/10/2025

Drawing Title

ROAD 01
LONGITUDINAL SECTION
SHEET 1

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	08 of 53

	Drawing No	Revision
A1	24-154-41	B

\\kn-svr-02\projects\2024\24154 Providence West - 817 - Preliminary Support\Engineering\Acad\24-154-41-RD_LONG.dwg Plotted by: TRP on 31/10/2025 4:35:11 PM

LEGEND

- RAL 2 BOUNDARY
- 3.5 DESIGN SURFACE CONTOURS
- 2.0 EXISTING SURFACE CONTOURS
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- ENVIRONMENTAL PROTECTION ZONE
- EXTENT OF CUT
- EXTENT OF FILL
- NEIGHBOURHOOD PARK(DESIGNED BY OTHER)

TIE INTO PROVIDENCE LACEBARK LEVELS COVERED UNDER RAL APPROVAL 2342/2024/ MAPDA/A

EXISTING DEVELOPMENT

FUTURE DEVELOPMENT

A 61

B 61

C 62

D 62

E 63

F 64

G 65

PEDESTRIAN PATH TO TIE INTO RIPLEY ROAD VERGE (INTERIM & ULTIMATE)

ENVIRONMENTAL PROTECTION ZONE

ROAD 02

ROAD 03

ROAD 05

ROAD 06

ROAD 07

ROAD 08

ROAD 09

ROAD 10

ROAD 11

DRIVEWAY 03

LANEWAY 01

LANEWAY 02

LANEWAY 03

NEIGHBOURHOOD PARK

DRAINAGE RESERVE

LOT 370 SP 198119

LIMIT OF PROJECT WORKS. REFER TO CATALYST ROAD DESIGN SUBMISSION BY OTHERS

REFER TO FUNCTIONAL LAYOUT PLANS PREPARED BY DESIGNFLOW FOR DRAINAGE RESERVE DETAILS

REFER TO PARK FUNCTIONAL LAYOUT PLANS PREPARED BY RPS FOR LOW LEVEL LANDSCAPING WALLS

LOT 100 SP279900

LOT 197 SP279900

FUTURE DEVELOPMENT

INDICATIVE FUTURE EAST-WEST CATALYST ROAD CORRIDOR BOUNDARY. REFER TO SEPARATE DESIGN SUBMISSION BY OTHERS.

LOT 97 SP145995

LOT 197 SP 279900

NOTE
PRELIMINARY ONLY. FINAL DETAILS TO BE PROVIDED AT DETAIL DESIGN.

CUT FILL SUMMARY

TOTAL CUT	248,726m³
TOTAL FILL	602,616m³
TOTAL IMPORT	353,890m³

VOLUMES ASSUME FULLY COMPACTED AND IN PLACE. RAL 2 BOUNDARY ONLY

NOT FOR CONSTRUCTION

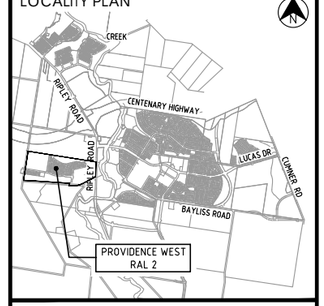
EARTHWORKS LAYOUT PLAN
SCALE 1:2000

SCALE 20 10 0 20 40 60 80 100 120 140 160 180 200m
1 : 2000 (A1 UNREDUCED)

DO NOT SCALE THIS DRAWING
IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
B	ISSUED FOR APPROVAL	31.10.2025	TRP
C	ISSUED FOR APPROVAL	07.11.2025	SA

Client
Stockland
PROVIDENCE

Project
PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER
3406/2025/PDA

kn group
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Approved
Digitally signed by Amy Bamford
B.E.(Civil), MIEAust, CPEng, NER, RPEQ 36180
Date: 7/11/2025

Drawing Title
EARTHWORKS
SITE LAYOUT PLAN

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	12 of 53

	Drawing No	Revision
A1	24-154-51	C

\\kn-svr-02\projects\2024\24154 Providence West - 817 - Preliminary Support\Engineering\Acad\24-154-51-EW-FL.dwg Plotted by SA on 7/11/2025 4:46:50 PM

REFER KNg DWG No 24-154-56

REFER KNg DWG No 24-154-53

ROAD 02

ROAD 03

2001 71.77
2002 71.99
2003 72.28
2004 72.66
2005 73.05
2006 73.41
2007 73.69
2008 73.10
2009 72.33
2010 71.64
2011 70.87
2012 70.18
2013 69.49
2014 68.72
2015 67.84
2016 67.18
2017 66.59
2018 66.02
2019 65.49
2020 63.06
2021 63.39
2022 63.86
2023 64.43
2024 65.11
2025 66.00
2026 66.77
2027 67.47
2028 68.16
2029 68.94
2030 69.63
2031 70.36
2032 62.99
2033 63.57
2034 63.72
2035 63.86
2036 64.13

CUT FILL SUMMARY

TOTAL CUT	248,726m³
TOTAL FILL	602,616m³
TOTAL IMPORT	353,890m³

VOLUMES ASSUME FULLY COMPACTED AND IN PLACE. RAL 2 BOUNDARY ONLY

NOTE

PRELIMINARY ONLY. FINAL DETAILS TO BE PROVIDED AT DETAIL DESIGN.

LEGEND

- RAL 2 BOUNDARY
- 3.5 DESIGN SURFACE CONTOURS
- 2.0 EXISTING SURFACE CONTOURS
- PROPOSED RETAINING WALL 0.5m-1.5m
- PROPOSED RETAINING WALL 1.5m-2.0m
- PROPOSED RETAINING WALL 2.0m-3.0m
- PROPOSED RETAINING WALL 3.0m
- PROPOSED RETAINING WALL >3.0m
- PROPSOED DRIVEWAY LOCATION
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- ENVIRONMENTAL PROTECTION ZONE
- EXTENT OF CUT
- EXTENT OF FILL
- * INDICATIVE STAIR / RAMP LOCATION

NOT FOR CONSTRUCTION

LOW HEIGHT SANDSTONE BLOCK WALLS TO BE INTEGRATED INTO BATTER TO RETAIN EXSITING TREES. TO BE CONFIRMED AS PART OF DETAILED DESIGN MODELLING

DRAINAGE RESERVE

EARTHWORKS LAYOUT PLAN
SCALE 1:500

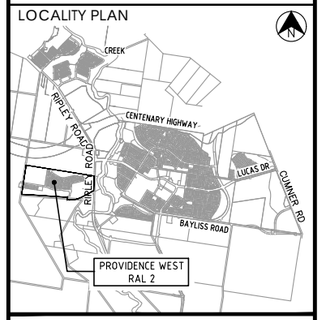
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NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
B	ISSUED FOR APPROVAL	31.10.2025	TRP

Client
Stockland
PROVIDENCE

Project
PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER
3406/2025/PDA

kn group
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Approved
Digitally signed by
Amy Bamford
B.E.(Civil),
MIEAust, CPEng, NER,
RPEQ 36180
Date: 31/10/2025

Drawing Title
EARTHWORKS
LAYOUT PLAN
SHEET 1

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	13 of 53

	Drawing No	Revision
A1	24-154-52	B

REFER KNg DWG No 24-154-57

REFER KNg DWG No 24-154-52

REFER KNg DWG No 24-154-54

NEIGHBOURHOOD PARK

DRAINAGE RESERVE

9002

LANEWAY 01

LANEWAY 02

ROAD 02

LEGEND

- RAL 2 BOUNDARY
- 3.5 DESIGN SURFACE CONTOURS
- 2.0 EXISTING SURFACE CONTOURS
- PROPOSED RETAINING WALL 0.5m-1.5m
- PROPOSED RETAINING WALL 1.5m-2.0m
- PROPOSED RETAINING WALL 2.0m-3.0m
- PROPOSED RETAINING WALL 3.0m
- PROPOSED RETAINING WALL >3.0m
- PROPSOED DRIVEWAY LOCATION
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- ENVIRONMENTAL PROTECTION ZONE
- EXTENT OF CUT
- EXTENT OF FILL
- INDICATIVE STAIR / RAMP LOCATION

NOT FOR CONSTRUCTION

NOTE
PRELIMINARY ONLY. FINAL DETAILS TO BE PROVIDED AT DETAIL DESIGN.

CUT FILL SUMMARY

TOTAL CUT	248,726m³
TOTAL FILL	602,616m³
TOTAL IMPORT	353,890m³

VOLUMES ASSUME FULLY COMPACTED AND IN PLACE. RAL 2 BOUNDARY ONLY

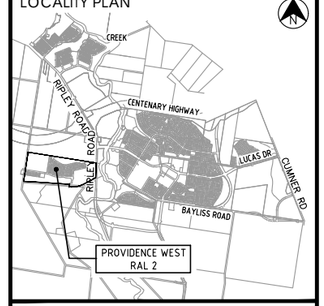
EARTHWORKS LAYOUT PLAN
SCALE 1:500

SCALE 10 5 0 10 20 30 40 50m
1 : 500 (A1 UNREDUCED)

DO NOT SCALE THIS DRAWING
IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
B	ISSUED FOR APPROVAL	31.10.2025	TRP

Client

Stockland
PROVIDENCE

Project

PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER
3406/2025/PDA

kn group
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Approved

Digitally signed by
Amy Bamford
B.E.(Civil),
MIEAust, CPEng, NER,
RPEQ 36180
Date: 31/10/2025

Drawing Title
EARTHWORKS
LAYOUT PLAN
SHEET 2

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	14 of 53

	Drawing No	Revision
A1	24-154-53	B

\\kn-syr-02\project\2024\24154 Providence West - 817 - Preliminary Support\Engineering\Acad\24-154-51-EW-FL.dwg Plotted by TRP on 31/10/2025 4:36:11 PM

REFER KNg DWG No 24-154-58

REFER KNg DWG No 24-154-53

REFER KNg DWG No 24-154-55

LANEWAY 03

ROAD 02

ROAD 01

PMT WALL
FINAL LOCATION TO BE CONFIRMED
AND SUBJECT TO ENERGEX APPROVAL

LOCALISED SHAPING AROUND CULVERT HEADWALL TO SUIT. GROUTED ROCK TO BE PLACED AROUND HEADWALL AND LOCALISED AREAS OF STEEP BATTER

DRAINAGE RESERVE

LIMIT OF PROJECT WORKS.
REFER TO CATALYST ROAD
DESIGN SUBMISSION BY OTHERS

LEGEND

- RAL 2 BOUNDARY
- 3.5 DESIGN SURFACE CONTOURS
- 2.0 EXISTING SURFACE CONTOURS
- PROPOSED RETAINING WALL 0.5m-1.5m
- PROPOSED RETAINING WALL 1.5m-2.0m
- PROPOSED RETAINING WALL 2.0m-3.0m
- PROPOSED RETAINING WALL 3.0m
- PROPOSED RETAINING WALL >3.0m
- PROPSOED DRIVEWAY LOCATION
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- ENVIRONMENTAL PROTECTION ZONE
- EXTENT OF CUT
- EXTENT OF FILL
- * INDICATIVE STAIR / RAMP LOCATION

NOT FOR CONSTRUCTION

EARTHWORKS LAYOUT PLAN
SCALE 1:500

SCALE 10 5 0 10 20 30 40 50m
1 : 500 (A1 UNREDUCED)

NOTE
PRELIMINARY ONLY. FINAL DETAILS TO BE PROVIDED AT DETAIL DESIGN.

CUT FILL SUMMARY

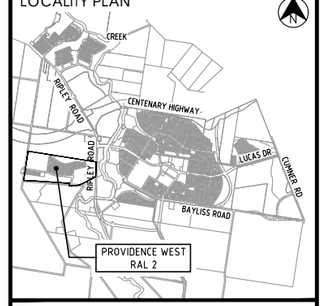
TOTAL CUT	248,726m³
TOTAL FILL	602,616m³
TOTAL IMPORT	353,890m³

VOLUMES ASSUME FULLY COMPACTED AND IN PLACE. RAL 2 BOUNDARY ONLY

DO NOT SCALE THIS DRAWING
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NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
B	ISSUED FOR APPROVAL	31.10.2025	TRP
C	ISSUED FOR APPROVAL	07.11.2025	SA

Client: Stockland PROVIDENCE

Project: PROVIDENCE WEST RAL 2

AUTHORITY REFERENCE NUMBER: 3406/2025/PDA

kn group
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www.kngroup.com.au | 07 3017 1900

Approved

Digitally signed by
Amy Bamford
B.E.(Civil),
MIEAust, CPEng, NER,
RPEQ 36180
Date: 7/11/2025

Drawing Title: EARTHWORKS LAYOUT PLAN SHEET 3

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	15 of 53

	Drawing No	Revision
A1	24-154-54	C

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REFER KNg DWG No 24-154-59

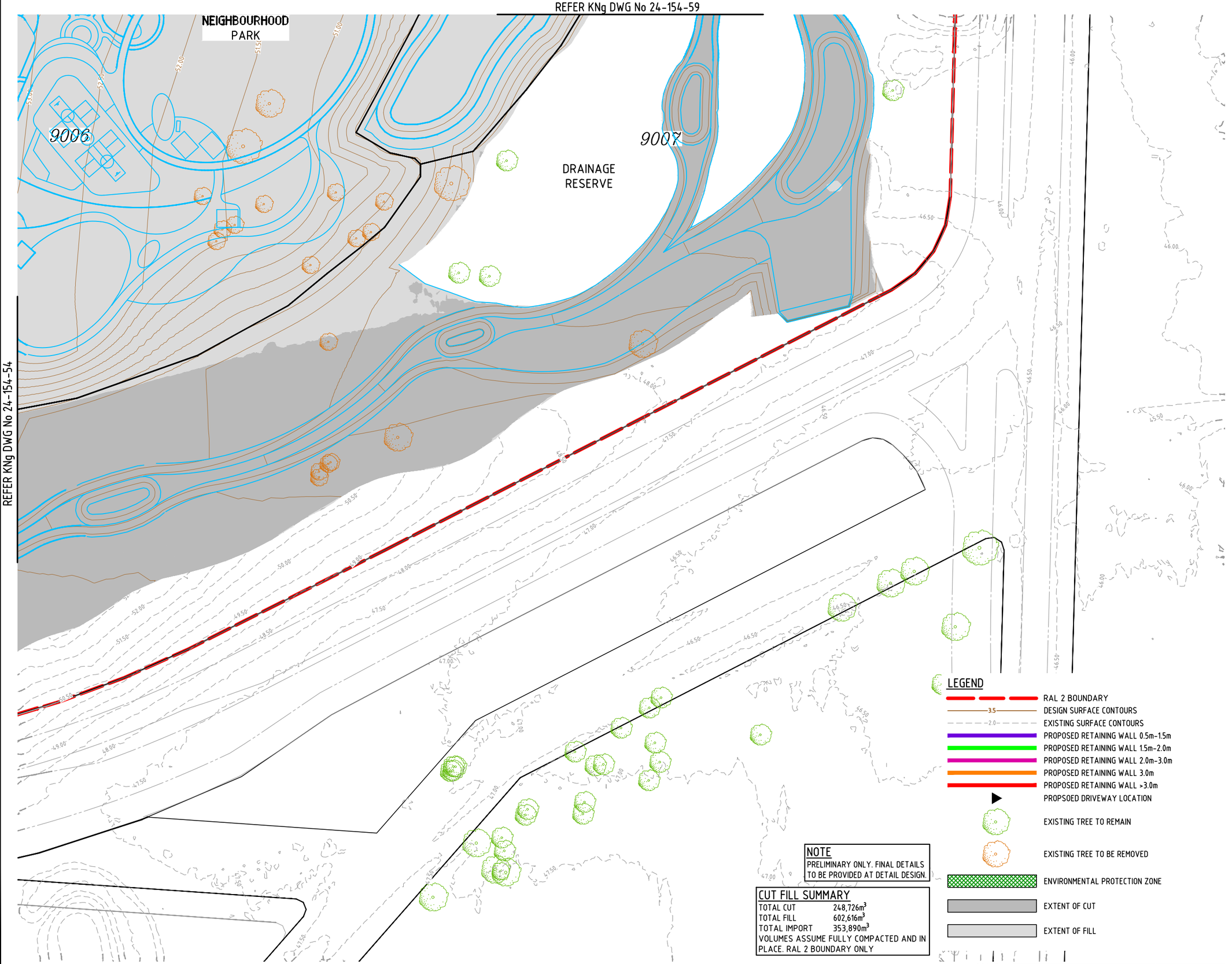
REFER KNg DWG No 24-154-54

NEIGHBOURHOOD PARK

9006

9007

DRAINAGE RESERVE



LEGEND

- RAL 2 BOUNDARY
- 3.5 DESIGN SURFACE CONTOURS
- 2.0 EXISTING SURFACE CONTOURS
- PROPOSED RETAINING WALL 0.5m-1.5m
- PROPOSED RETAINING WALL 1.5m-2.0m
- PROPOSED RETAINING WALL 2.0m-3.0m
- PROPOSED RETAINING WALL 3.0m
- PROPOSED RETAINING WALL >3.0m
- PROPSOED DRIVEWAY LOCATION
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- ENVIRONMENTAL PROTECTION ZONE
- EXTENT OF CUT
- EXTENT OF FILL

NOTE
PRELIMINARY ONLY. FINAL DETAILS TO BE PROVIDED AT DETAIL DESIGN.

CUT FILL SUMMARY

TOTAL CUT	248,726m³
TOTAL FILL	602,616m³
TOTAL IMPORT	353,890m³

VOLUMES ASSUME FULLY COMPACTED AND IN PLACE. RAL 2 BOUNDARY ONLY

SCALE 10 5 0 10 20 30 40 50m

1 : 500 (A1 UNREDUCED)

EARTHWORKS LAYOUT PLAN
SCALE 1:500

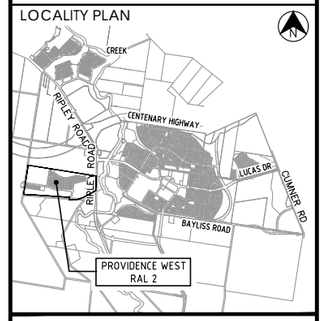
NOT FOR CONSTRUCTION

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NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
B	ISSUED FOR APPROVAL	31.10.2025	TRP

Client

Stockland
PROVIDENCE

Project

PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER
3406/2025/PDA

kn group
L1, 62 Astor Terrace, Spring Hill, QLD 4000
www.kngroup.com.au | 07 3017 1900

Approved

Digitally signed by
Amy Bamford
B.E.(Civil),
MIEAust, CPEng, NER,
RPEQ 36180
Date: 31/10/2025

Drawing Title

EARTHWORKS
LAYOUT PLAN
SHEET 4

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	16 of 53

	Drawing No	Revision
A1	24-154-55	B

LEGEND

- RAL 2 BOUNDARY
- 3.5 DESIGN SURFACE CONTOURS
- 2.0 EXISTING SURFACE CONTOURS
- PROPOSED RETAINING WALL 0.5m-1.5m
- PROPOSED RETAINING WALL 1.5m-2.0m
- PROPOSED RETAINING WALL 2.0m-3.0m
- PROPOSED RETAINING WALL 3.0m
- PROPOSED RETAINING WALL >3.0m
- PROPSOED DRIVEWAY LOCATION
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- ENVIRONMENTAL PROTECTION ZONE
- EXTENT OF CUT
- EXTENT OF FILL

CUT FILL SUMMARY

TOTAL CUT	248,726m^3
TOTAL FILL	602,616m^3
TOTAL IMPORT	353,890m^3

VOLUMES ASSUME FULLY COMPACTED AND IN PLACE. RAL 2 BOUNDARY ONLY

NOTE

PRELIMINARY ONLY. FINAL DETAILS TO BE PROVIDED AT DETAIL DESIGN.

8001

REFER KNg DWG No 24-154-57

NOT FOR CONSTRUCTION

EARTHWORKS LAYOUT PLAN
SCALE 1:500

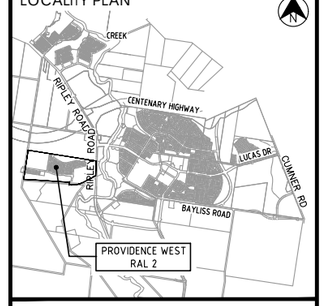
REFER KNg DWG No 24-154-52

SCALE
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1 : 500 (A1 UNREDUCED)

DO NOT SCALE THIS DRAWING
IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
B	ISSUED FOR APPROVAL	31.10.2025	TRP

Client

Stockland
PROVIDENCE

Project

PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER

3406/2025/PDA

kn group
L1, 62 Astor Terrace, Spring Hill, QLD 4000
www.kngroup.com.au | 07 3017 1900

Approved

Digitally signed by
Amy Bamford
B.E.(Civil),
MIEAust, CPEng, NER,
RPEQ 36180
Date: 31/10/2025

Drawing Title

EARTHWORKS
LAYOUT PLAN
SHEET 5

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	17 of 53

	Drawing No	Revision
A1	24-154-56	B

\\kn-svr-02\projects\2024\24154 Providence West - 817 - Preliminary Support\Engineering\Acad\24-154-51-EW-FIL.dwg Plotted by: TRP on 31/10/2025 4:37:10 PM

LEGEND

- RAL 2 BOUNDARY
- 3.5 DESIGN SURFACE CONTOURS
- 2.0 EXISTING SURFACE CONTOURS
- PROPOSED RETAINING WALL 0.5m-1.5m
- PROPOSED RETAINING WALL 1.5m-2.0m
- PROPOSED RETAINING WALL 2.0m-3.0m
- PROPOSED RETAINING WALL 3.0m
- PROPOSED RETAINING WALL >3.0m
- PROPSOED DRIVEWAY LOCATION
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- ENVIRONMENTAL PROTECTION ZONE
- EXTENT OF CUT
- EXTENT OF FILL

CUT FILL SUMMARY

TOTAL CUT	248,726m^3
TOTAL FILL	602,616m^3
TOTAL IMPORT	353,890m^3

VOLUMES ASSUME FULLY COMPACTED AND IN PLACE. RAL 2 BOUNDARY ONLY

NOTE

PRELIMINARY ONLY. FINAL DETAILS TO BE PROVIDED AT DETAIL DESIGN.

REFER KNg DWG No 24-154-56

REFER KNg DWG No 24-154-58

ROAD 05

ROAD 06

ROAD 07

8002

NOT FOR CONSTRUCTION

EARTHWORKS LAYOUT PLAN
SCALE 1:500

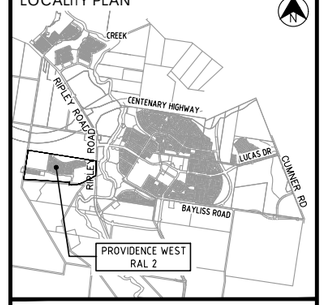
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1 : 500 (A1 UNREDUCED)

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NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
B	ISSUED FOR APPROVAL	31.10.2025	TRP

Client

Stockland
PROVIDENCE

Project

PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER

3406/2025/PDA

kn group
L1, 62 Astor Terrace, Spring Hill, QLD 4000
www.kngroup.com.au | 07 3017 1900

Approved

Digitally signed by
Amy Bamford
B.E.(Civil),
MIEAust, CPEng, NER,
RPEQ 36180
Date: 31/10/2025

Drawing Title

EARTHWORKS
LAYOUT PLAN
SHEET 6

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	18 of 53

A1	Drawing No	Revision
	24-154-57	B

\\kn-svr-02\projects\2024\24154 Providence West - 817 - Preliminary Support\Engineering\Acad\24-154-51-EW-PL.dwg Plotted by: TRP on 31/10/2025 4:37:31 PM

LEGEND

- RAL 2 BOUNDARY
- 3.5 DESIGN SURFACE CONTOURS
- 2.0 EXISTING SURFACE CONTOURS
- PROPOSED RETAINING WALL 0.5m-1.5m
- PROPOSED RETAINING WALL 1.5m-2.0m
- PROPOSED RETAINING WALL 2.0m-3.0m
- PROPOSED RETAINING WALL 3.0m
- PROPOSED RETAINING WALL >3.0m
- PROPSOED DRIVEWAY LOCATION
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- ENVIRONMENTAL PROTECTION ZONE
- EXTENT OF CUT
- EXTENT OF FILL

NOTE
PRELIMINARY ONLY. FINAL DETAILS TO BE PROVIDED AT DETAIL DESIGN.

CUT FILL SUMMARY

TOTAL CUT	248,726m³
TOTAL FILL	602,616m³
TOTAL IMPORT	353,890m³

VOLUMES ASSUME FULLY COMPACTED AND IN PLACE. RAL 2 BOUNDARY ONLY

PMT WALL
FINAL LOCATION TO BE CONFIRMED
AND SUBJECT TO ENERGEX APPROVAL

REFER KNg DWG No 24-154-57

REFER KNg DWG No 24-154-59

ROAD 05 ROAD 08 ROAD 09 ROAD 10

NOT FOR CONSTRUCTION

EARTHWORKS LAYOUT PLAN
SCALE 1:500

REFER KNg DWG No 24-154-54

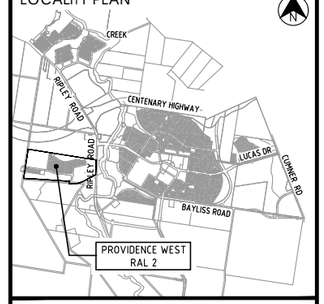
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1 : 500 (A1 UNREDUCED)

\\kn-svr-02\projects\2024\24154 Providence West - 817 - Preliminary Support\Engineering\Acad\24-154-51-EW-FL.dwg Plotted by SA on 7/11/2025 4:48:00 PM

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NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
B	ISSUED FOR APPROVAL	31.10.2025	TRP
C	ISSUED FOR APPROVAL	07.11.2025	SA

Client

Stockland
PROVIDENCE

Project
PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER
3406/2025/PDA

kn group
L1 62 Astor Terrace, Spring Hill QLD 4000
www.kngroup.com.au | 07 3017 1900

Approved
Digitally signed by Amy Bamford
B.E.(Civil), MIEAust, CPEng, NER, RPEQ 36180
Date: 7/11/2025

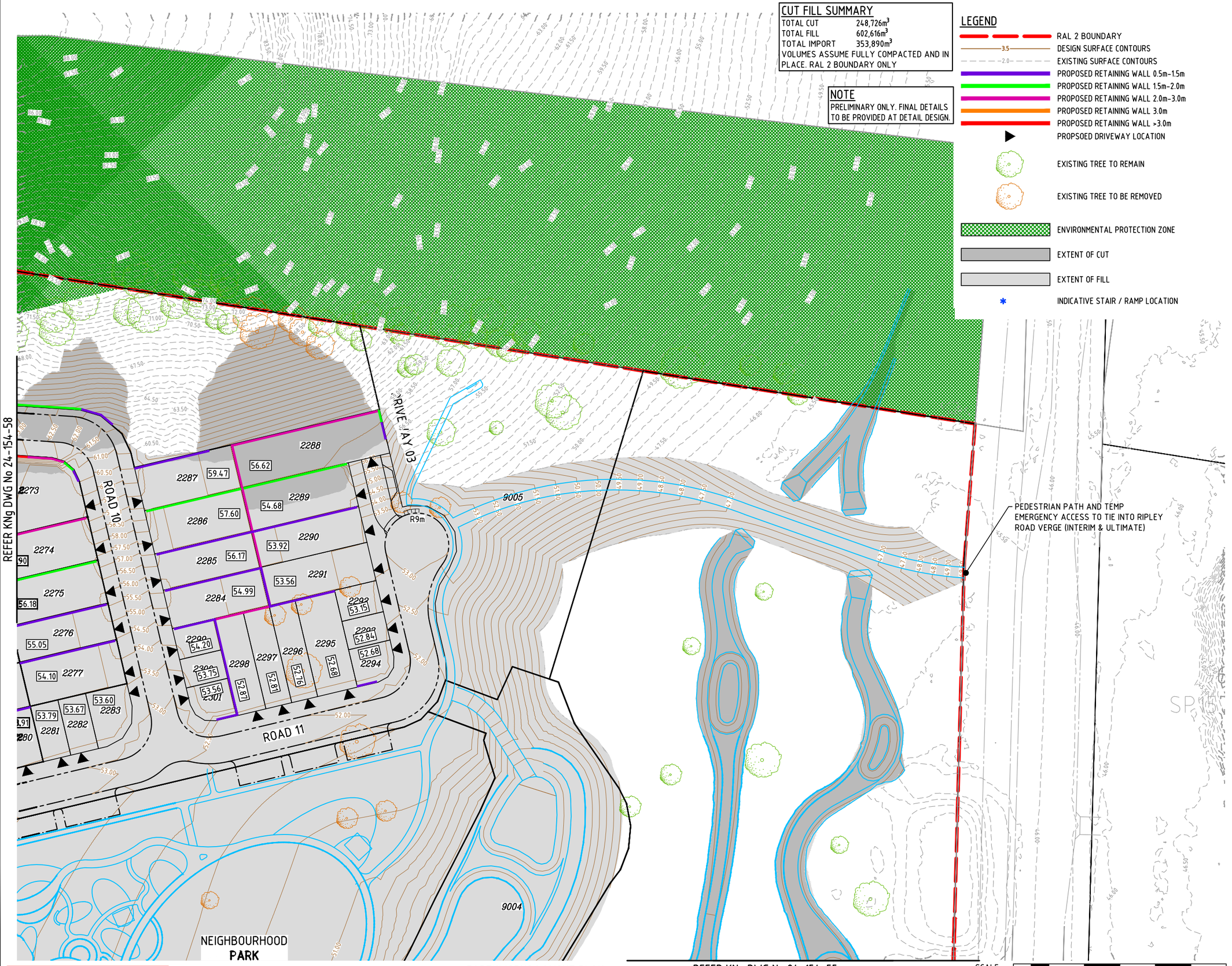
Drawing Title
EARTHWORKS LAYOUT PLAN SHEET 7

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	19 of 53

Drawing No	Revision
24-154-58	C

A1



REFER KNg DWG No 24-154-58

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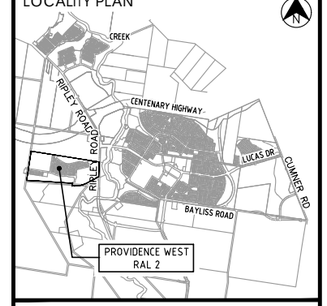
EARTHWORKS LAYOUT PLAN
SCALE 1:500

SCALE
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1 : 500 (A1 UNREDUCED)

DO NOT SCALE THIS DRAWING
IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
B	ISSUED FOR APPROVAL	31.10.2025	TRP

Client

Stockland
PROVIDENCE

Project

PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER

3406/2025/PDA

kn group
L1, 62 Astor Terrace, Spring Hill, QLD 4000
www.kngroup.com.au | 07 3017 1900

Approved

Digitally signed by
Amy Bamford
B.E.(Civil),
MIEAust, CPEng, NER,
RPEQ 36180
Date: 31/10/2025

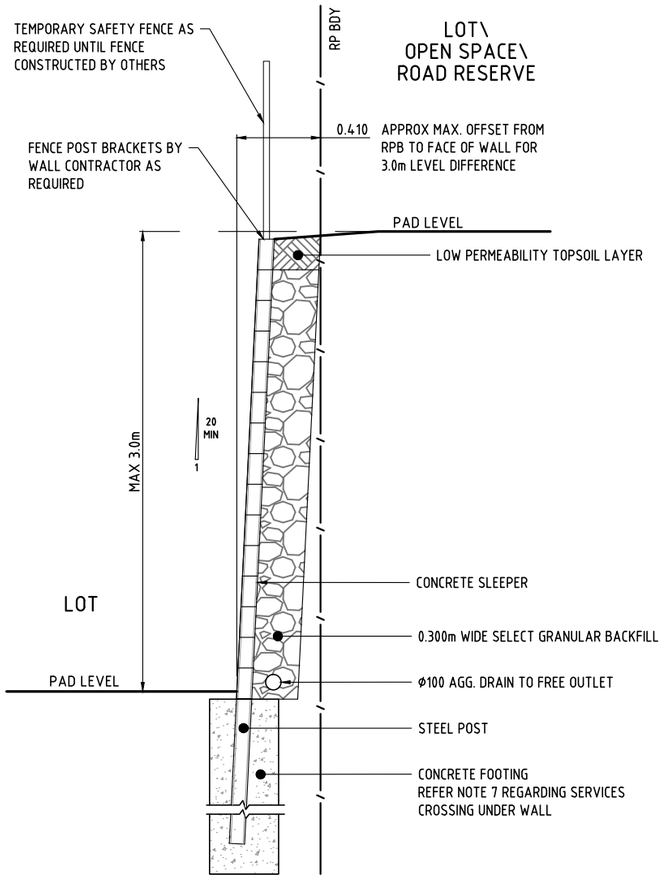
Drawing Title

EARTHWORKS
LAYOUT PLAN
SHEET 8

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

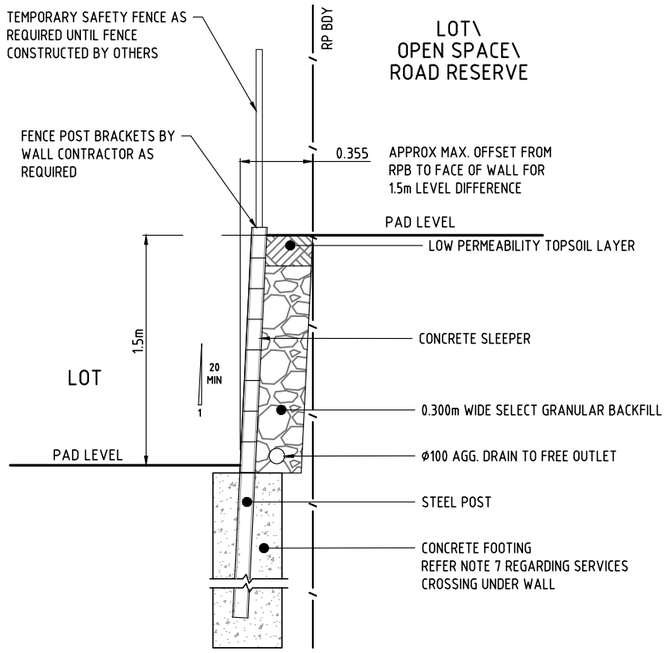
Scale	Sheet
AS SHOWN	20 of 53

	Drawing No	Revision
A1	24-154-59	B



CONCRETE SLEEPER WALL DETAIL 1a
REAR / SIDE BOUNDARY AND
STREET FRONTAGE (LOT LOWER)
BETWEEN LOTS UP TO 3.0m

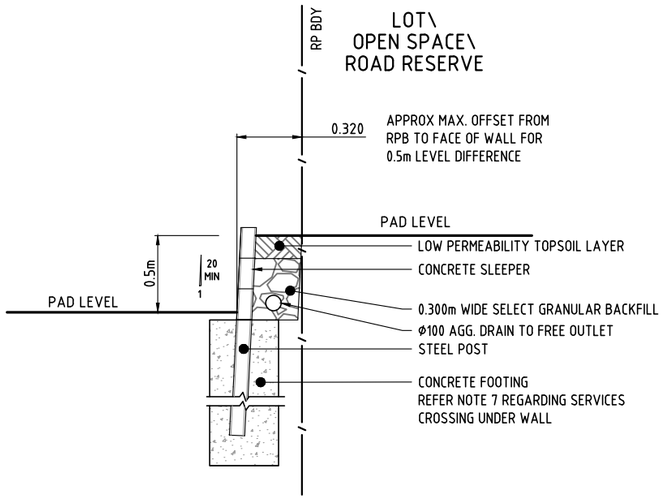
SCALE 1:200



CONCRETE SLEEPER WALL DETAIL 1b
REAR / SIDE BOUNDARY AND
STREET FRONTAGE (LOT LOWER)
BETWEEN LOTS UP TO 1.5m

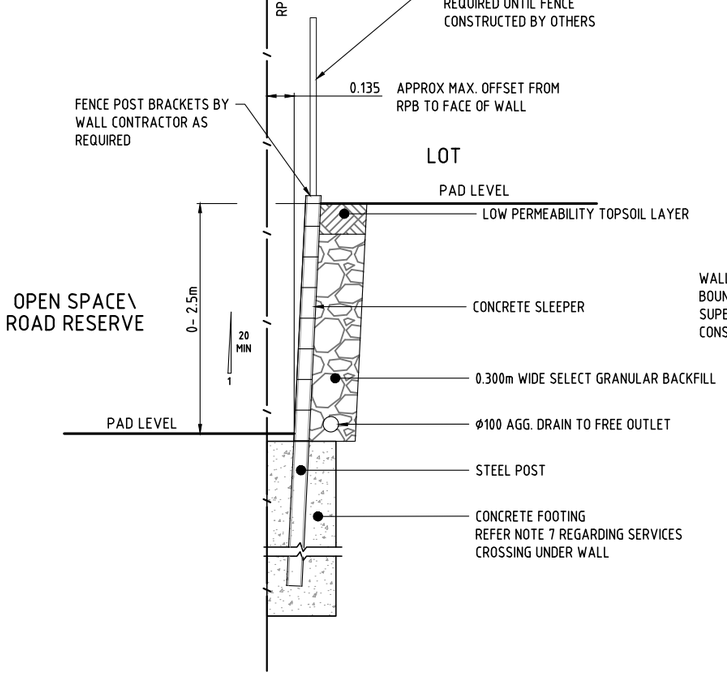
SCALE 1:200

RETAINING WALL GENERAL ARRANGEMENTS PROVIDED AS A GUIDE ONLY. CONTRACTOR TO PROVIDE ALL FORM 15 AND FORM 12 CERTIFICATIONS INCLUDING ALL GLOBAL STABILITY ASSESSMENT AND CERTIFICATION. RETAINING WALL DESIGNER TO COMPLETE ALL DEED POLLS AND CERTIFICATIONS IN ACCORDANCE WITH THE EDQ CPM



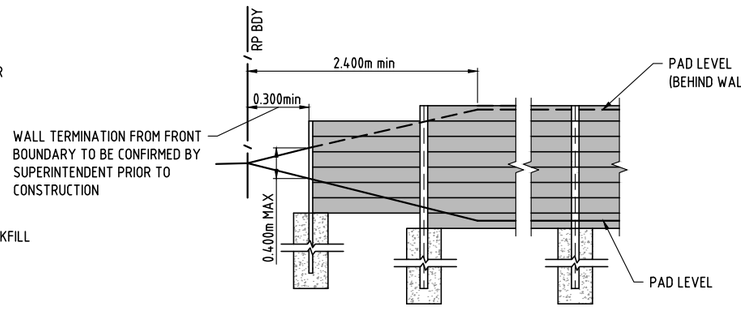
CONCRETE SLEEPER WALL DETAIL 1a
REAR / SIDE BOUNDARY AND
STREET FRONTAGE (LOT LOWER)
BETWEEN LOTS UP TO 0.5m

SCALE 1:200



CONCRETE SLEEPER WALL DETAIL 2
STREET FRONTAGE (LOT HIGHER)
BETWEEN LOTS 0.5m to 2.5m

SCALE 1:200



TYPICAL SIDE RETAINING WALL (DESIGNED BY OTHERS)
ELEVATION AT FRONT OF ALLOTMENTS

SCALE NTS

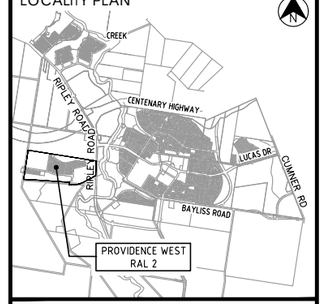
NOTE
PRELIMINARY ONLY. FINAL DETAILS TO BE PROVIDED AT DETAIL DESIGN.

SCALE
0.5 0 0.5 1.0 1.5 2.0 2.5m
1 : 25 (A1 UNREDUCED)

NOT FOR CONSTRUCTION

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LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
B	ISSUED FOR APPROVAL	31.10.2025	TRP

Client

Stockland

PROVIDENCE

Project

PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER

3406/2025/PDA

kn group
L1, 62 Astor Terrace, Spring Hill, QLD 4000
www.kngroup.com.au | 07 3017 1900

Approved

Digitally signed by
Amy Bamford
B.E.(Civil),
MIEAust, CPEng, NER,
RPEQ 36180
Date: 31/10/2025

Drawing Title

EARTHWORKS
RETAINING WALL DETAILS

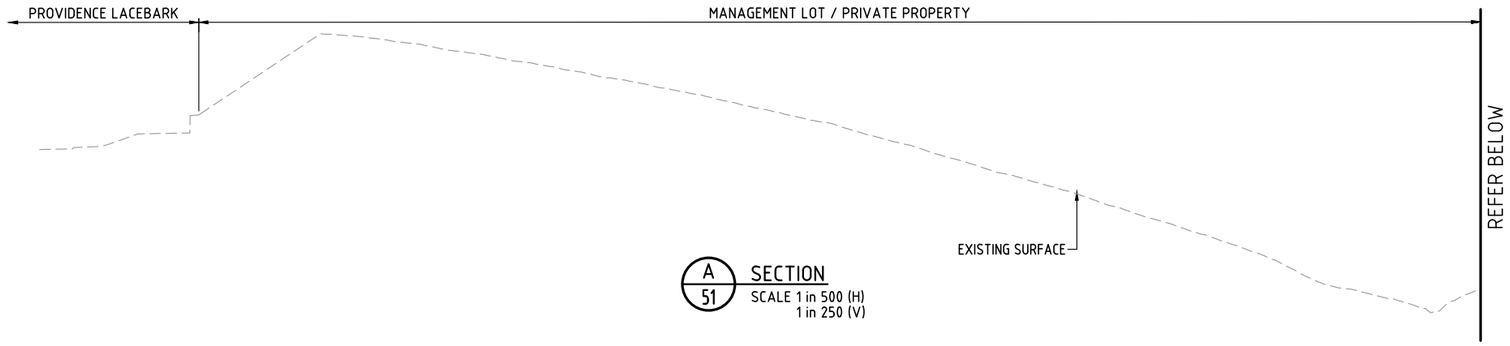
Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	21 of 53

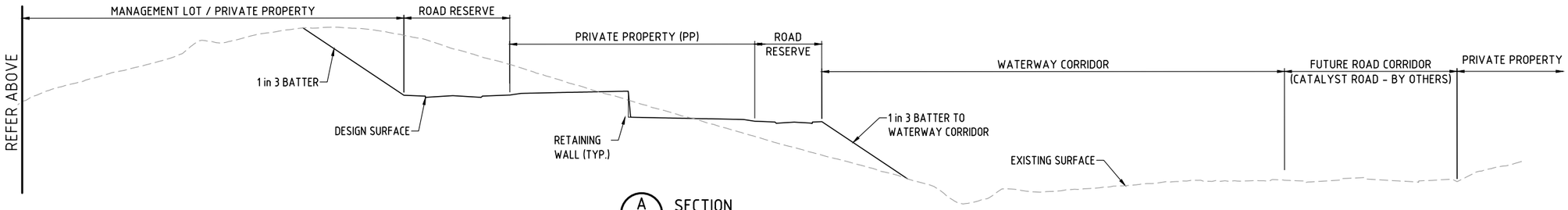
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	24-154-60	B

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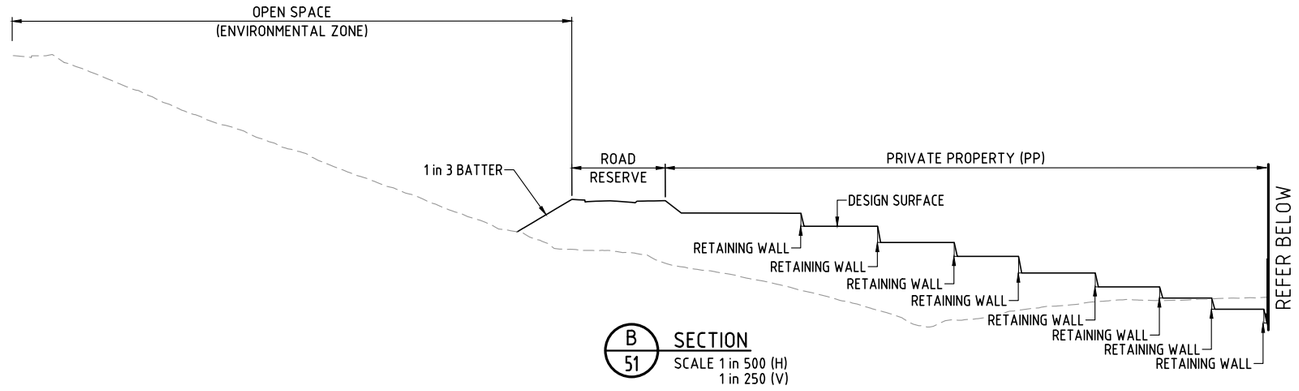
NOTE
PRELIMINARY ONLY. FINAL DETAILS TO BE PROVIDED AT DETAIL DESIGN.



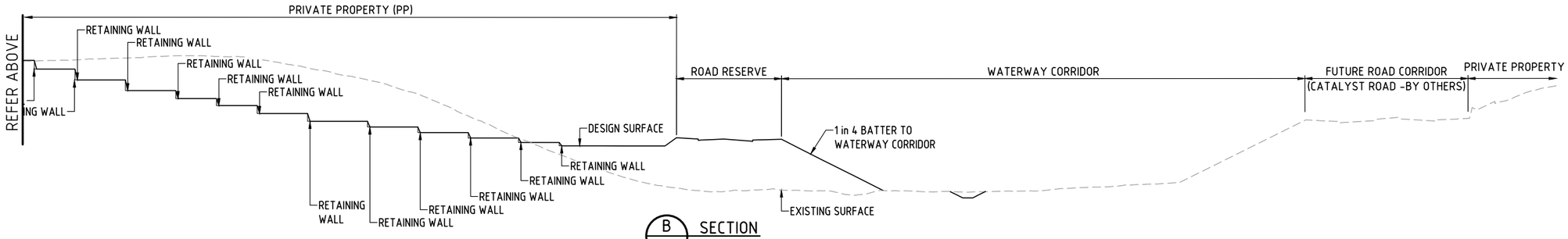
A/51 SECTION
SCALE 1 in 500 (H)
1 in 250 (V)



A/51 SECTION
SCALE 1 in 500 (H)
1 in 250 (V)



B/51 SECTION
SCALE 1 in 500 (H)
1 in 250 (V)



B/51 SECTION
SCALE 1 in 500 (H)
1 in 250 (V)

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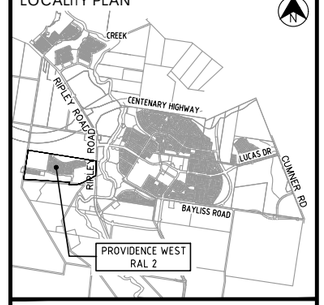
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NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
B	ISSUED FOR APPROVAL	31.10.2025	TRP

Client
Stockland
PROVIDENCE

Project
PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER
3406/2025/PDA

kn group
L1, 62 Astor Terrace, Spring Hill, QLD 4000
www.kngroup.com.au | 07 3017 1900

Approved
Digitally signed by Amy Bamford
B.E.(Civil), MIEAust, CPEng, NER, RPEQ 36180
Date: 31/10/2025

Drawing Title
EARTHWORKS
CROSS SECTIONS
SHEET 1

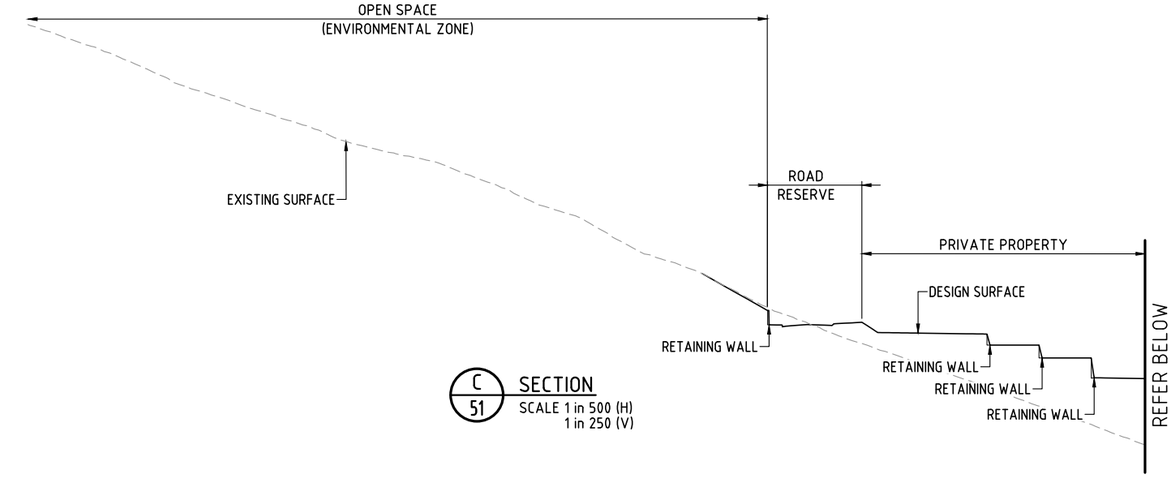
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TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	22 of 53

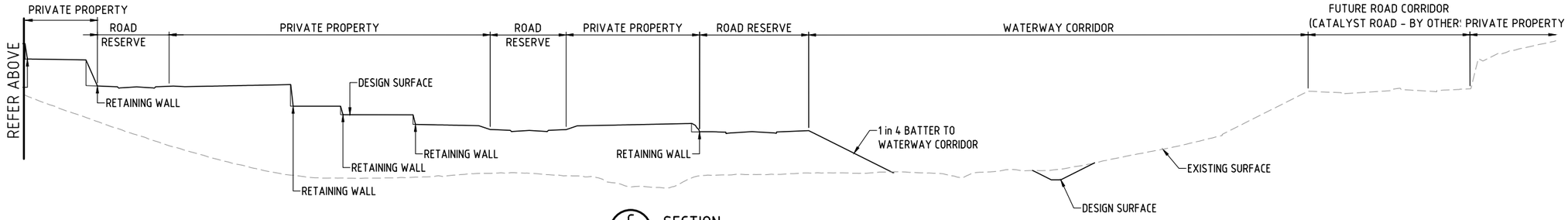
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A1	24-154-61	B

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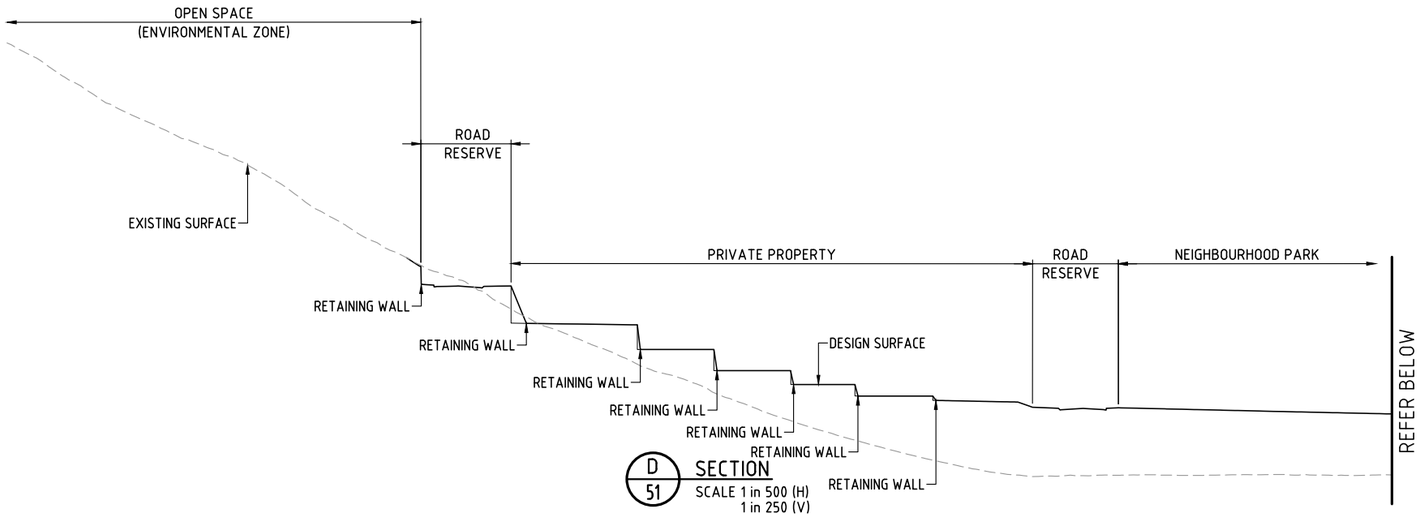
NOTE
PRELIMINARY ONLY. FINAL DETAILS TO BE PROVIDED AT DETAIL DESIGN.



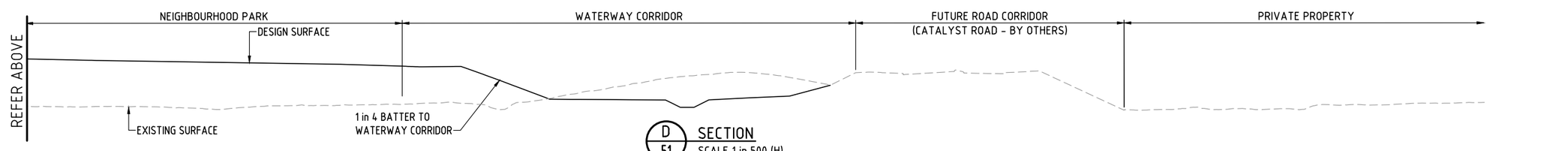
C/51 SECTION
SCALE 1 in 500 (H)
1 in 250 (V)



C/51 SECTION
SCALE 1 in 500 (H)
1 in 250 (V)



D/51 SECTION
SCALE 1 in 500 (H)
1 in 250 (V)



D/51 SECTION
SCALE 1 in 500 (H)
1 in 250 (V)

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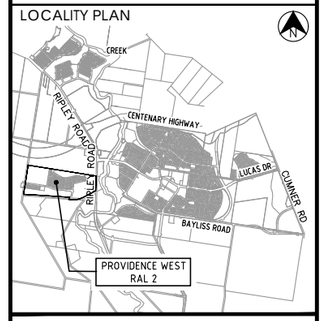
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1 in 500 (A1 UNREDUCED)

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NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
B	ISSUED FOR APPROVAL	31.10.2025	TRP

Client
Stockland
PROVIDENCE

Project
PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER
3406/2025/PDA

kn group
L1, 62 Astor Terrace, Spring Hill, QLD 4000
www.kngroup.com.au | 07 3017 1900

Approved
Digitally signed by
Amy Bamford
B.E.(Civil),
MIEAust, CPEng, NER,
RPEQ 36180
Date: 31/10/2025

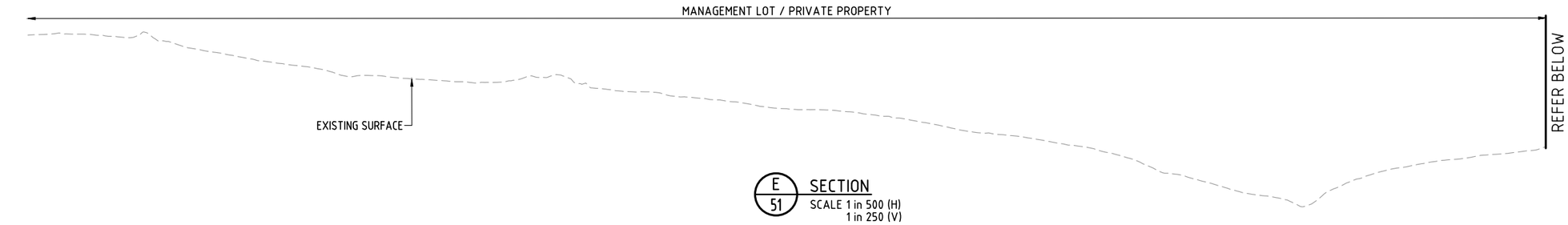
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EARTHWORKS
CROSS SECTIONS
SHEET 2

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

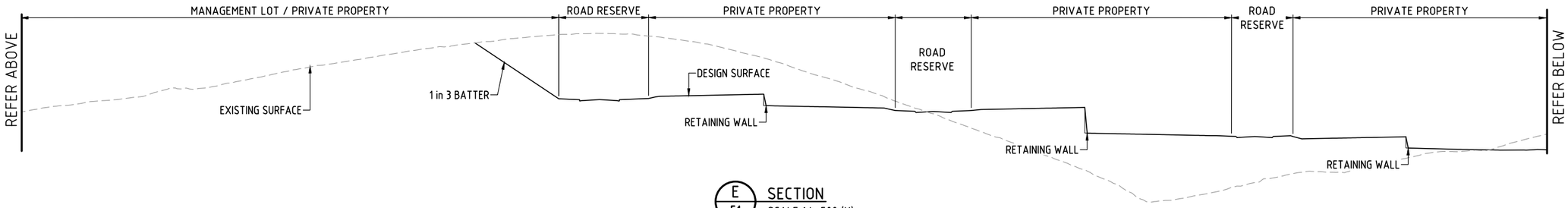
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AS SHOWN	23 of 53

A1	Drawing No	Revision
	24-154-62	B

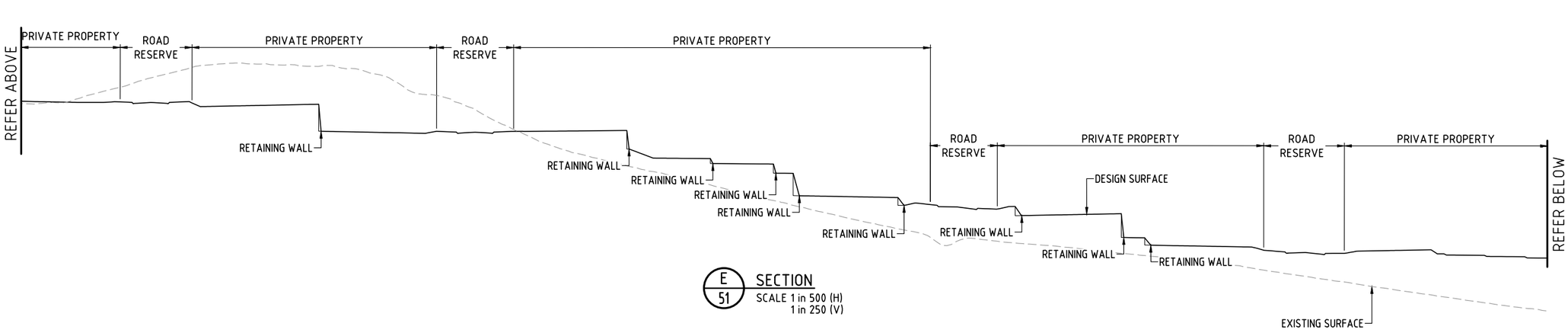
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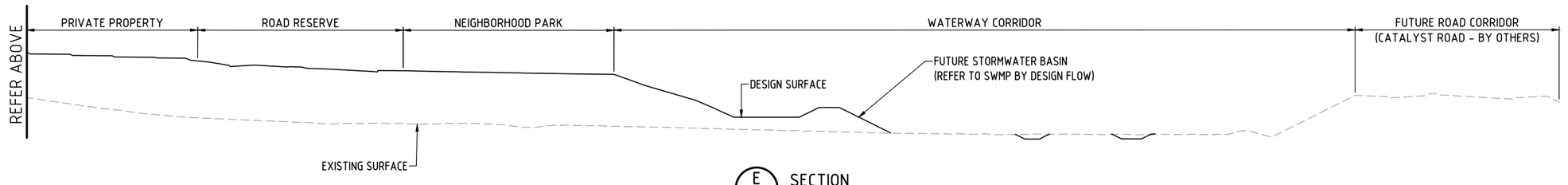
E 51 SECTION
SCALE 1 in 500 (H)
1 in 250 (V)



E 51 SECTION
SCALE 1 in 500 (H)
1 in 250 (V)



E 51 SECTION
SCALE 1 in 500 (H)
1 in 250 (V)



E 51 SECTION
SCALE 1 in 500 (H)
1 in 250 (V)

NOTE
PRELIMINARY ONLY. FINAL DETAILS TO BE PROVIDED AT DETAIL DESIGN.

NOT FOR CONSTRUCTION

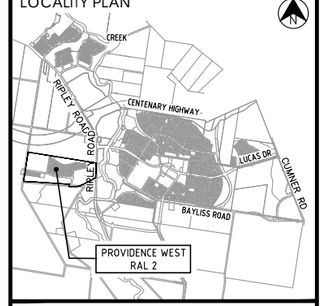
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1 in 250 (A1 UNREDUCED)

SCALE 10 5 0 10 20 30 40 50m
1 in 500 (A1 UNREDUCED)

DO NOT SCALE THIS DRAWING
IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
B	ISSUED FOR APPROVAL	31.10.2025	TRP

Client
Stockland
PROVIDENCE

Project
PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER
3406/2025/PDA

kn group
L1, 62 Astor Terrace, Spring Hill, QLD 4000
www.kngroup.com.au | 07 3017 1900

Approved
Digitally signed by
Amy Bamford
B.E.(Civil),
MIEAust, CPEng, NER,
RPEQ 36180
Date: 31/10/2025

Drawing Title
EARTHWORKS
CROSS SECTIONS
SHEET 3

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

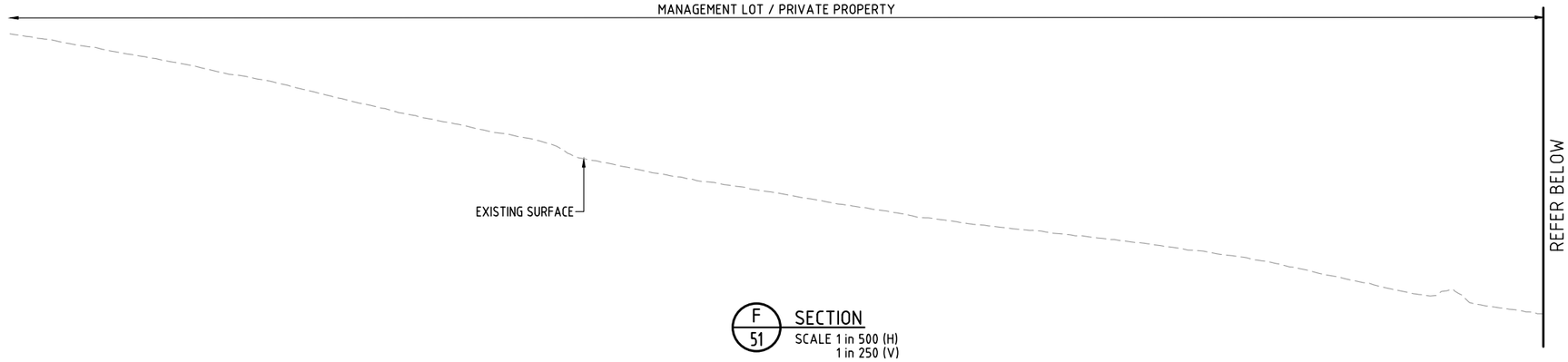
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Drawing No	Revision
24-154-63	B

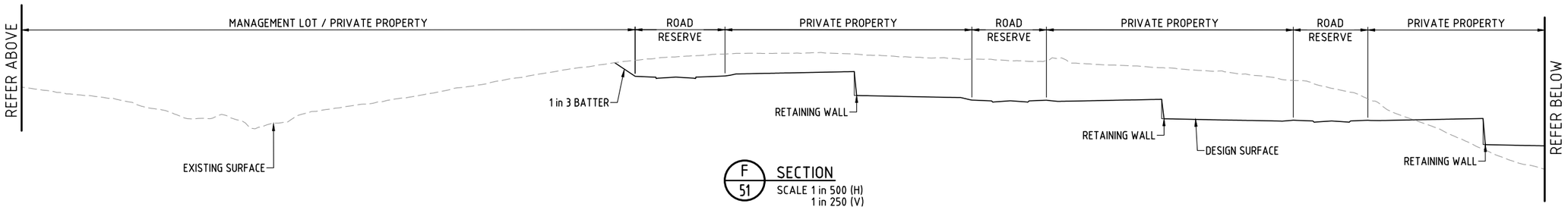
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\\kn-svr-02\projects\2024\24-154-Providence West - 817 - Preliminary Support\Engineering\Acad\24-154-61-EW_SECTIONS.dwg Plotted by: TRP on 31/10/2025 4:38:23 PM

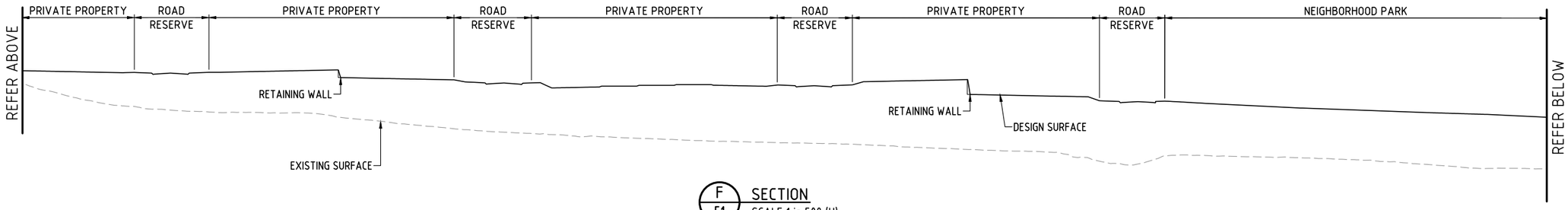
NOTE
PRELIMINARY ONLY. FINAL DETAILS TO BE PROVIDED AT DETAIL DESIGN.



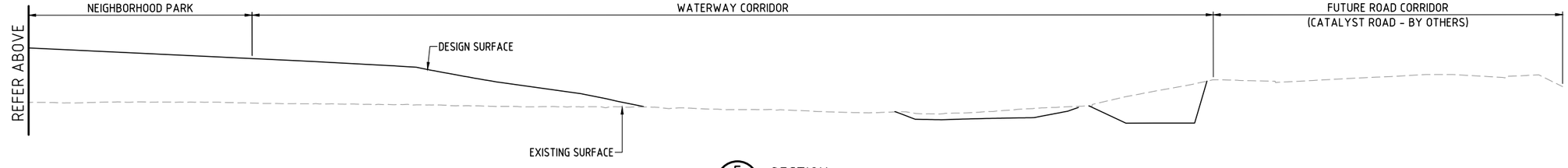
F/51 SECTION
SCALE 1 in 500 (H)
1 in 250 (V)



F/51 SECTION
SCALE 1 in 500 (H)
1 in 250 (V)



F/51 SECTION
SCALE 1 in 500 (H)
1 in 250 (V)



F/51 SECTION
SCALE 1 in 500 (H)
1 in 250 (V)

SCALE 5 0 5 10 15 20 25m
1 in 250 (A1 UNREDUCED)

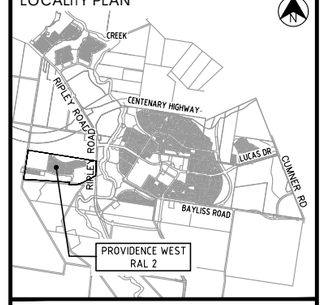
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1 in 500 (A1 UNREDUCED)

NOT FOR CONSTRUCTION

DO NOT SCALE THIS DRAWING
IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
B	ISSUED FOR APPROVAL	31.10.2025	TRP

Client
Stockland
PROVIDENCE

Project
PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER
3406/2025/PDA

kn group
L1, 62 Astor Terrace, Spring Hill, QLD 4000
www.kngroup.com.au | 07 3017 1900

Approved
Digitally signed by
Amy Bamford
B.E.(Civil),
MIEAust, CPEng, NER,
RPEQ 36180
Date: 31/10/2025

Drawing Title
EARTHWORKS
CROSS SECTIONS
SHEET 4

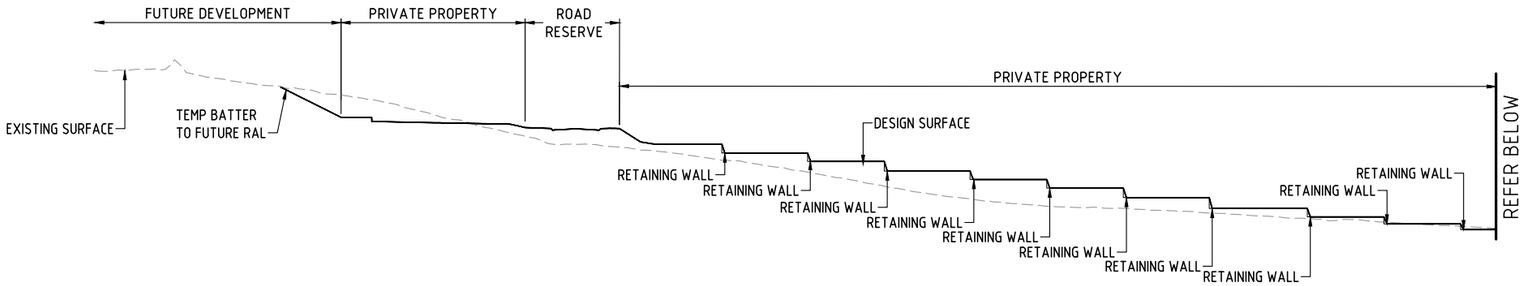
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TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	25 of 53

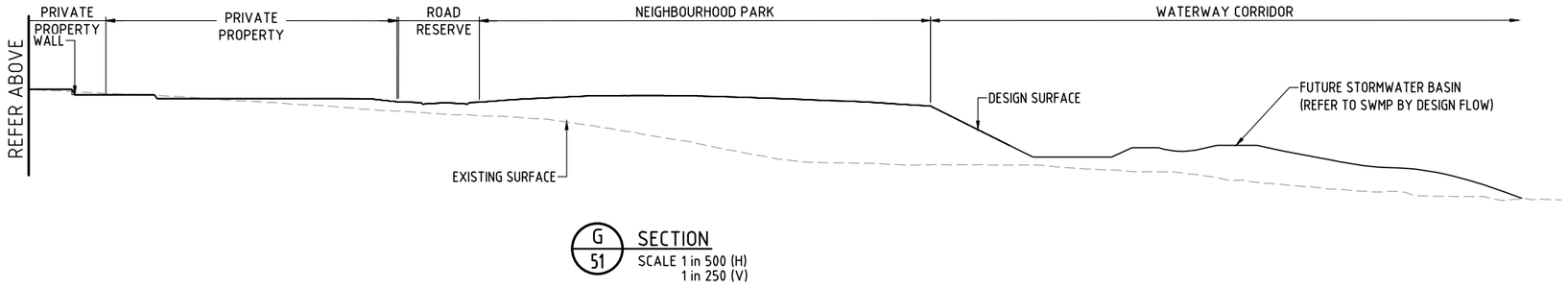
A1	Drawing No	Revision
	24-154-64	B

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NOTE
PRELIMINARY ONLY. FINAL DETAILS TO BE PROVIDED AT DETAIL DESIGN.



G 51 SECTION
SCALE 1 in 500 (H)
1 in 250 (V)



G 51 SECTION
SCALE 1 in 500 (H)
1 in 250 (V)

SCALE 5 0 5 10 15 20 25m
1 in 250 (A1 UNREDUCED)

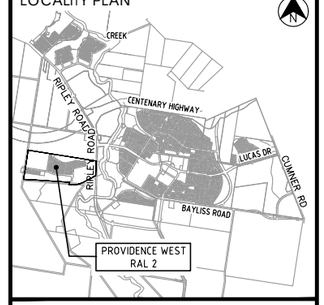
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1 in 500 (A1 UNREDUCED)

NOT FOR CONSTRUCTION

DO NOT SCALE THIS DRAWING
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LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
B	ISSUED FOR APPROVAL	31.10.2025	TRP

Client
Stockland
PROVIDENCE

Project
PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER
3406/2025/PDA

kn group
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www.kngroup.com.au | 07 3017 1900

Approved
Digitally signed by
Amy Bamford
B.E.(Civil),
MIEAust, CPEng, NER,
RPEQ 36180
Date: 31/10/2025

Drawing Title
EARTHWORKS
CROSS SECTIONS
SHEET 5

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	26 of 53

A1	Drawing No	Revision
	24-154-65	B

\\kn-svr-02\projects\2024\24-154-Providence West - 817 - Preliminary Support\Engineering\Acad\24-154-61-EW_SECTIONS.dwg Plotted by: TRP on 31/10/2025 4:38:24 PM



NOTE
PRELIMINARY ONLY. FINAL DETAILS TO BE PROVIDED AT DETAIL DESIGN.

DEPTH RANGE

CUT GREATER THAN 12.00m	FILL 0.00m - 2.00m
CUT 12.00m - 10.00m	FILL 2.00m - 4.00m
CUT 10.00m - 8.00m	FILL 4.00m - 6.00m
CUT 8.00m - 6.00m	FILL 6.00m - 8.00m
CUT 6.00m - 4.00m	FILL 8.00m - 10.00m
CUT 4.00m - 2.00m	FILL 10.00m - 12.00m
CUT 2.00m - 0.00m	FILL GREATER THAN 12.00m

NOT FOR CONSTRUCTION

EARTHWORKS DEPTH RANGE - LAYOUT PLAN
SCALE 1:2000

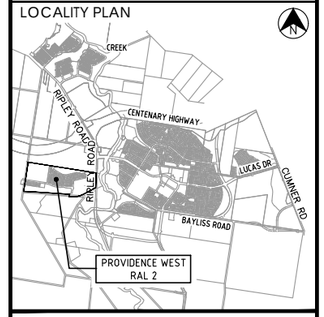
LEGEND
RAL 2 BOUNDARY

SCALE
20 10 0 20 40 60 80 100 120 140 160 180 200m
1 : 2000 (A1 UNREDUCED)

DO NOT SCALE THIS DRAWING
IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
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Client
Stockland
PROVIDENCE

Project
PROVIDENCE WEST
RAL 2

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Date: 31/10/2025

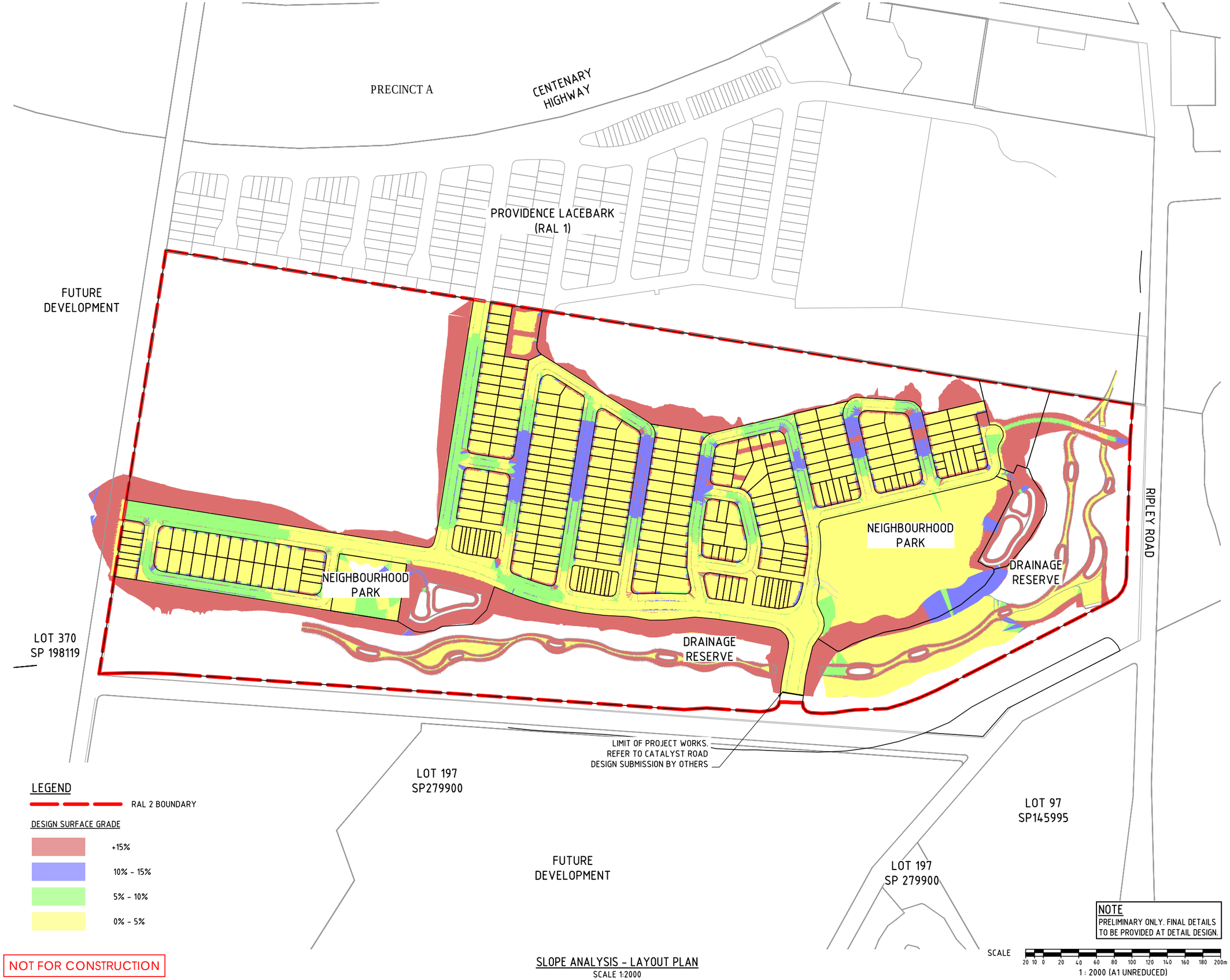
Drawing Title
EARTHWORKS LAYOUT PLAN CUT & FILL DEPTH RANGE

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	27 of 53

	Drawing No	Revision
A1	24-154-71	B

\\kn-svr-02\projects\2024\24154-Providence West - 817 - Preliminary Support\Engineering\Acad\24-154-71-CUT_FILL.dwg Plotted by TRP on 31/10/2025 4:38:31 PM



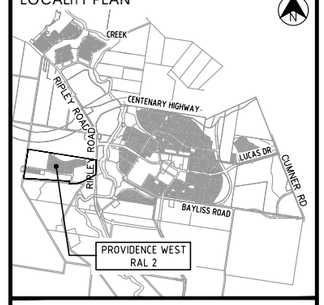
NOT FOR CONSTRUCTION

SLOPE ANALYSIS - LAYOUT PLAN
SCALE 1:2000

DO NOT SCALE THIS DRAWING
IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN



REVISIONS

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Client

Stockland
PROVIDENCE

Project

PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER

3406/2025/PDA

kn group
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Approved

Digitally signed by
Amy Bamford
B.E.(Civil),
MIEAust, CPEng, NER,
RPEQ 36180
Date: 31/10/2025

Drawing Title

EARTHWORKS
LAYOUT PLAN
EXISTING SLOPE ANALYSIS

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	28 of 53

A1	Drawing No	Revision
	24-154-81	B

\\kn-syr-02\projects\2024\24154 Providence West - 817 - Preliminary Support\Engineering\Acad\24-154-81-SLOPE.dwg Plotted by: TRP on 31/10/2025 4:38:36 PM

REFER KNg DWG No 24-154-95

REFER KNg DWG No 24-154-92

ROAD 02

ROAD 03

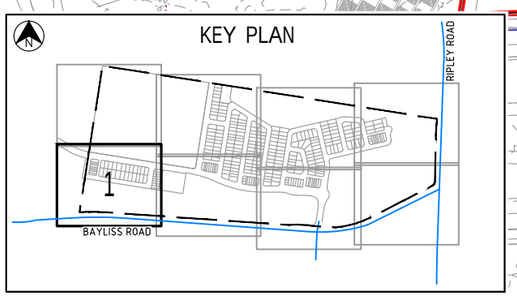
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2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031

2032 2033 2034 2035 2036

LOT 370
SP 198119

KEY PLAN



NOT FOR CONSTRUCTION

COMBINED SERVICES - LAYOUT PLAN
SCALE 1:500

SCALE
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1 : 500 (A1 UNREDUCED)

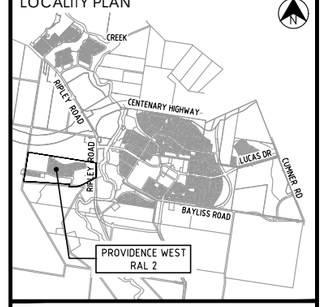
NOTE
PRELIMINARY ONLY. FINAL DETAILS TO BE PROVIDED AT DETAIL DESIGN.

LEGEND
- RAL 2 BOUNDARY
- S — PROPOSED SEWER RETICULATION
- TS — PROPOSED TRUNK SEWER
- SW — PROPOSED STORMWATER
- W — PROPOSED WATER MAIN
- DESIGN SURFACE CONTOURS
- PROPOSED DRIVEWAY LOCATIONS
- ENVIRONMENTAL PROTECTION ZONE
- WATER SERVICE LOCATION
- ELECTRICAL PILLAR (BY OTHERS)

DO NOT SCALE THIS DRAWING
IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
B	ISSUED FOR APPROVAL	31.10.2025	TRP
C	ISSUED FOR APPROVAL	07.11.2025	SA

Client
Stockland
PROVIDENCE

Project
PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER
3406/2025/PDA

kn group
L1, 62 Astor Terrace, Spring Hill, QLD 4000
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Approved
Digitally signed by
Amy Bamford
B.E.(Civil),
MIEAust, CPEng, NER,
RPEQ 36180
Date: 7/11/2025

Drawing Title
COMBINED SERVICES
LAYOUT PLAN
SHEET 1

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	29 of 53

	Drawing No	Revision
A1	24-154- 91	C

\\kn-svr-02\projects\2024\24-154 Providence West - 817 - Preliminary Support\Engineering\Acad\24-154-91-SERV_ALL.dwg Plotted by: SA on 7/11/2025 4:48:14 PM

REFER KNg DWG No 24-154-96

REFER KNg DWG No 24-154-91

REFER KNg DWG No 24-154-93

PROPOSED PMT.SUBJECT TO ENERGEX APPROVAL

NEIGHBORHOOD PARK

PARK DESIGN BY RPS. REFER TO LANDSCAPE FUNCTIONAL PLANS FOR DETAILS

STORMWATER BASIN DESIGN BY DESIGN FLOW. REFER TO SWMP FOR DETAILS

DRAINAGE RESERVE

WATERWAY RECONSTRUCTION AND FLOOD MODELLING BY OTHERS. REFER TO DESIGN BY WEP & DESIGN FLOW

LANEWAY 01

LANEWAY 02

ROAD 02

2037 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 9002 9008

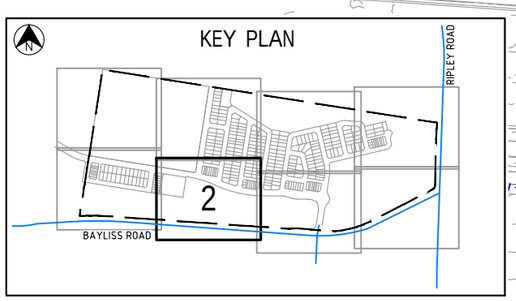
NOTE
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LEGEND

- RAL 2 BOUNDARY
- S — PROPOSED SEWER RETICULATION
- TS — PROPOSED TRUNK SEWER
- SW — PROPOSED STORMWATER
- W — PROPOSED WATER MAIN
- DESIGN SURFACE CONTOURS
- PROPOSED DRIVEWAY LOCATIONS
- ENVIRONMENTAL PROTECTION ZONE
- WATER SERVICE LOCATION
- ELECTRICAL PILLAR (BY OTHERS)

NOT FOR C

KEY PLAN



COMBINED SERVICES - LAYOUT PLAN
SCALE 1:500

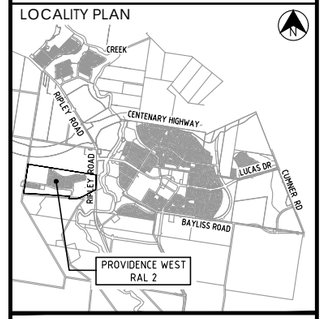
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NORTH

LOCALITY PLAN



REVISIONS

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B	ISSUED FOR APPROVAL	31.10.2025	TRP
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Client

Stockland

PROVIDENCE

Project

PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER

3406/2025/PDA

kn group
L1, 62 Astor Terrace, Spring Hill, QLD 4000
www.kngroup.com.au | 07 3017 1900

Approved

Digitally signed by
Amy Bamford
B.E.(Civil),
MIEAust, CPEng, NER,
RPEQ 36180
Date: 7/11/2025

Drawing Title

COMBINED SERVICES
LAYOUT PLAN
SHEET 2

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	30 of 53

A1	Drawing No	Revision
	24-154- 92	C

REFER KNg DWG No 24-154-97

REFER KNg DWG No 24-154-92

REFER KNg DWG No 24-154-94

LANEWAY 03

ROAD 02

ROAD 01

PARK DESIGN BY RPS. REFER TO LANDSCAPE FUNCTIONAL PLANS FOR DETAILS

PROPOSED PMT.SUBJECT TO ENERGEX APPROVAL

DRAINAGE RESERVE

CULVERT SIZING INDICATIVE. FINAL SIZE TO BE CONFIRMED AT DETAILED DESIGN IN LINE WITH FLOOD MODELLING REQUIREMENTS AS PREPARED BY WEP, SUBJECT TO WWBW APPROVAL.

WATERWAY RECONSTRUCTION AND FLOOD MODELLING BY OTHERS. REFER TO DESIGN BY WEP & DESIGN FLOW

LIMIT OF PROJECT WORKS. REFER TO CATALYST ROAD DESIGN SUBMISSION BY OTHERS

LOW LEVEL WATER MAIN EXTENSION FROM RIPLEY RD TO BE CONSTRUCTED WITH CATALYST ROAD WORKS

COACH PARKING FOR DISTRICT REC PARK

TRUNK SEWER MAIN EXTENSION FROM BUNDAMBA CREEK CATALYST TRUNK SEWER

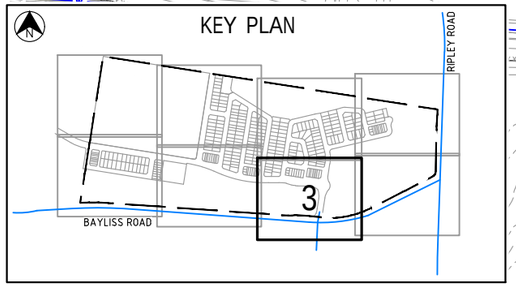
INDICATIVE FUTURE EAST-WEST CATALYST ROAD CORRIDOR BOUNDARY. REFER TO SEPARATE DESIGN SUBMISSION BY OTHERS.

NOTE
PRELIMINARY ONLY. FINAL DETAILS TO BE PROVIDED AT DETAIL DESIGN.

LEGEND

- RAL 2 BOUNDARY
- S — PROPOSED SEWER RETICULATION
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- ENVIRONMENTAL PROTECTION ZONE
- WATER SERVICE LOCATION
- ELECTRICAL PILLAR (BY OTHERS)

KEY PLAN



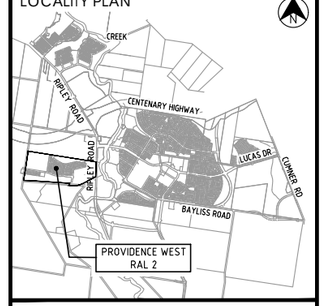
COMBINED SERVICES - LAYOUT PLAN
SCALE 1:500

SCALE 10 5 0 10 20 30 40 50m
1 : 500 (A1 UNREDUCED)

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NORTH

LOCALITY PLAN



REVISIONS

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B	ISSUED FOR APPROVAL	31.10.2025	TRP
C	ISSUED FOR APPROVAL	07.11.2025	SA

Client

Stockland

PROVIDENCE

Project

PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER

3406/2025/PDA

kn group
L1, 62 Astor Terrace, Spring Hill, QLD 4000
www.kngroup.com.au | 07 3017 1900

Approved

Digitally signed by Amy Bamford
B.E.(Civil), MIEAust, CPEng, NER, RPEQ 36180
Date: 7/11/2025

Drawing Title

COMBINED SERVICES LAYOUT PLAN SHEET 3

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	31 of 53

Drawing No	Revision
24-154- 93	C

A1

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REFER KNg DWG No 24-154-98

REFER KNg DWG No 24-154-93

NEIGHBORHOOD PARK

9006

9007

DRAINAGE RESERVE

WATERWAY RECONSTRUCTION AND FLOOD MODELLING BY OTHERS. REFER TO DESIGN BY WEP & DESIGN FLOW

TRUNK SEWER MAIN EXTENSION FROM BUNDAMBA CREEK CATALYST TRUNK SEWER TO SERVICE SUBJECT DEVELOPMENT. TO BE DESIGNED IN CONSIDERATION OF ULTIMATE CATALYST ROAD ALIGNMENTS

INDICATIVE FUTURE EAST-WEST CATALYST ROAD CORRIDOR BOUNDARY. REFER TO SEPARATE DESIGN SUBMISSION BY OTHERS.

NOT FOR CONSTRUCTION

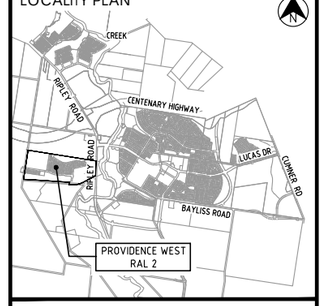
COMBINED SERVICES - LAYOUT PLAN
SCALE 1:500

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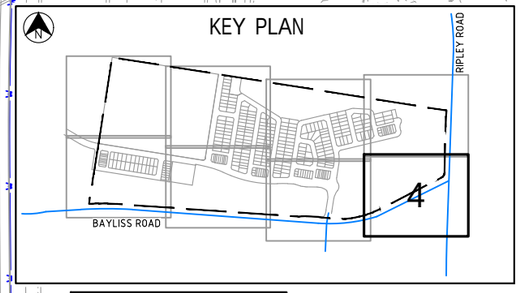
DO NOT SCALE THIS DRAWING
IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN



KEY PLAN



NOTE
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LEGEND

- RAL 2 BOUNDARY
- PROPOSED SEWER RETICULATION
- PROPOSED TRUNK SEWER
- PROPOSED STORMWATER
- PROPOSED WATER MAIN
- DESIGN SURFACE CONTOURS
- PROPOSED DRIVEWAY LOCATIONS
- ENVIRONMENTAL PROTECTION ZONE
- WATER SERVICE LOCATION
- ELECTRICAL PILLAR (BY OTHERS)

SCALE 10 5 0 10 20 30 40 50m
1 : 500 (A1 UNREDUCED)

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Client

Stockland

PROVIDENCE

Project

PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER
3406/2025/PDA

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Approved

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RPEQ 36180
Date: 7/11/2025

Drawing Title

COMBINED SERVICES
LAYOUT PLAN
SHEET 4

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	32 of 53

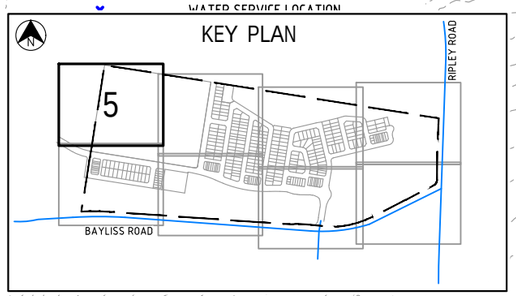
A1	Drawing No	Revision
	24-154- 94	C

NOTE
PRELIMINARY ONLY. FINAL DETAILS TO BE PROVIDED AT DETAIL DESIGN.

LEGEND

- RAL 2 BOUNDARY
- S — PROPOSED SEWER RETICULATION
- TS — PROPOSED TRUNK SEWER
- SW — PROPOSED STORMWATER
- W — PROPOSED WATER MAIN
- DESIGN SURFACE CONTOURS
- PROPOSED DRIVEWAY LOCATIONS
- ENVIRONMENTAL PROTECTION ZONE
- WATER SERVICE LOCATION

KEY PLAN



REFER KNg DWG No 24-154-91

REFER KNg DWG No 24-154-96

8001

NOT FOR CONSTRUCTION

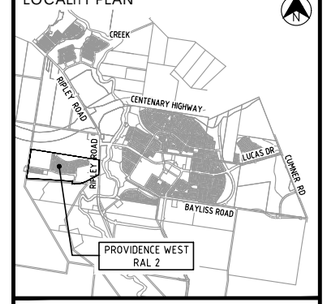
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SCALE 1:500

SCALE 10 5 0 10 20 30 40 50m
1 : 500 (A1 UNREDUCED)

DO NOT SCALE THIS DRAWING
IF IN DOUBT - ASK!

NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
B	ISSUED FOR APPROVAL	31.10.2025	TRP
C	ISSUED FOR APPROVAL	07.11.2025	SA

Client: Stockland PROVIDENCE

Project: PROVIDENCE WEST RAL 2

AUTHORITY REFERENCE NUMBER: 3406/2025/PDA

kn group
L1, 62 Astor Terrace, Spring Hill, QLD 4000
www.kngroup.com.au | 07 3017 1900

Approved
Digitally signed by Amy Bamford
B.E.(Civil), MIEAust, CPEng, NER, RPEQ 36180
Date: 7/11/2025

Drawing Title: COMBINED SERVICES LAYOUT PLAN SHEET 5

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	33 of 53

	Drawing No	Revision
A1	24-154- 95	C

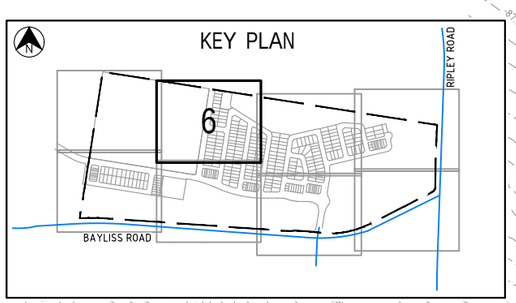
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NOTE
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LEGEND

- RAL 2 BOUNDARY
- S — PROPOSED SEWER RETICULATION
- TS — PROPOSED TRUNK SEWER
- SW — PROPOSED STORMWATER
- W — PROPOSED WATER MAIN
- DESIGN SURFACE CONTOURS
- PROPOSED DRIVEWAY LOCATIONS
- ENVIRONMENTAL PROTECTION ZONE
- WATER SERVICE LOCATION
- ELECTRICAL PILLAR (BY OTHERS)

KEY PLAN



NOT FOR CONSTRUCTION

COMBINED SERVICES - LAYOUT PLAN
SCALE 1:500

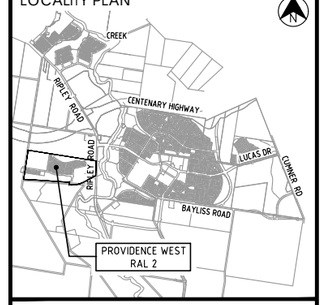
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LOCALITY PLAN



REVISIONS

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B	ISSUED FOR APPROVAL	31.10.2025	TRP
C	ISSUED FOR APPROVAL	07.11.2025	SA

Client
Stockland
PROVIDENCE

Project
PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER
3406/2025/PDA

kn group
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Approved
Digitally signed by Amy Bamford
B.E.(Civil), MIEAust, CPEng, NER, RPEQ 36180
Date: 7/11/2025

Drawing Title
COMBINED SERVICES LAYOUT PLAN
SHEET 6

Drawn	Designed	Checked	Date
TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	34 of 53

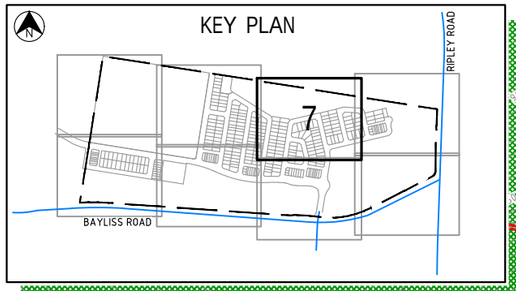
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	24-154- 96	C

NOTE
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LEGEND

- RAL 2 BOUNDARY
- S — PROPOSED SEWER RETICULATION
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- DESIGN SURFACE CONTOURS
- PROPOSED DRIVEWAY LOCATIONS
- ENVIRONMENTAL PROTECTION ZONE
- WATER SERVICE LOCATION
- ELECTRICAL PILLAR (BY OTHERS)

KEY PLAN



NOT FOR CONSTRUCTION

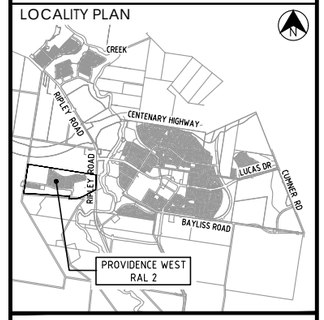
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SCALE 1:500

SCALE
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1 : 500 (A1 UNREDUCED)

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NORTH

LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
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C	ISSUED FOR APPROVAL	07.11.2025	SA

Client
Stockland
PROVIDENCE

Project
PROVIDENCE WEST
RAL 2

AUTHORITY REFERENCE NUMBER
3406/2025/PDA

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Approved
Digitally signed by
Amy Bamford
B.E.(Civil),
MIEAust, CPEng, NER,
RPEQ 36180
Date: 7/11/2025

Drawing Title
COMBINED SERVICES
LAYOUT PLAN
SHEET 7

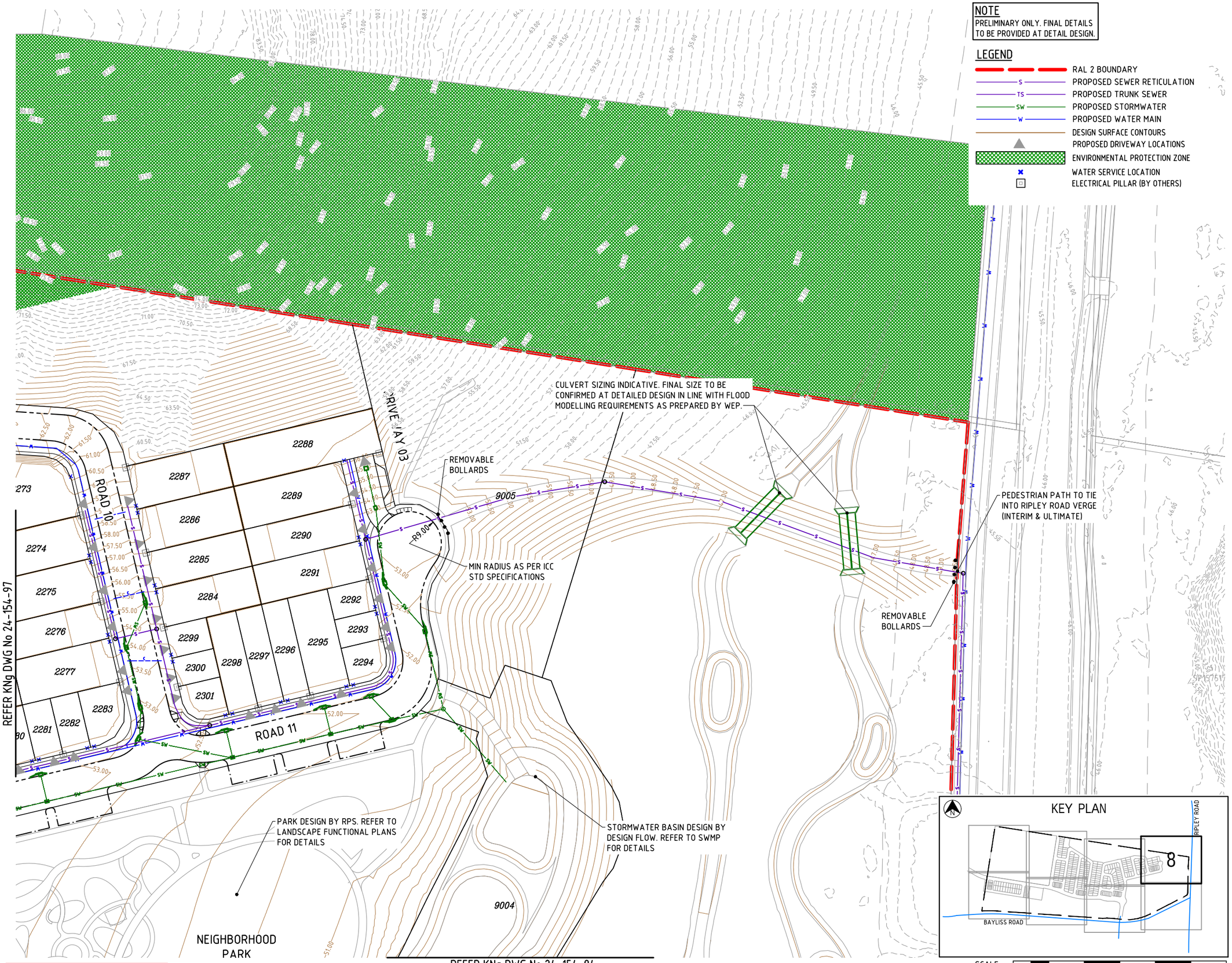
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TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	35 of 53

Drawing No	Revision
24-154- 97	C

A1

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LEGEND

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- ENVIRONMENTAL PROTECTION ZONE
- WATER SERVICE LOCATION
- ELECTRICAL PILLAR (BY OTHERS)

KEY PLAN

SCALE 10 5 0 10 20 30 40 50m
1 : 500 (A1 UNREDUCED)

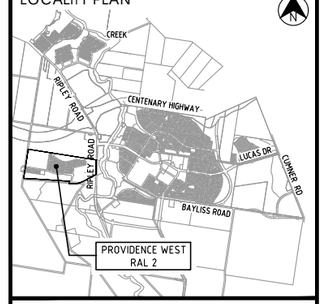
COMBINED SERVICES - LAYOUT PLAN
SCALE 1:500

NOT FOR CONSTRUCTION

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LOCALITY PLAN



REVISIONS

No	Description	Date	By
A	ISSUED FOR APPROVAL	19.10.2025	APB
B	ISSUED FOR APPROVAL	31.10.2025	TRP
C	ISSUED FOR APPROVAL	07.11.2025	SA

Client: Stockland PROVIDENCE

Project: PROVIDENCE WEST RAL 2

AUTHORITY REFERENCE NUMBER: 3406/2025/PDA

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Approved
Digitally signed by Amy Bamford
B.E.(Civil), MIEAust, CPEng, NER, RPEQ 36180
Date: 7/11/2025

Drawing Title: COMBINED SERVICES LAYOUT PLAN SHEET 8

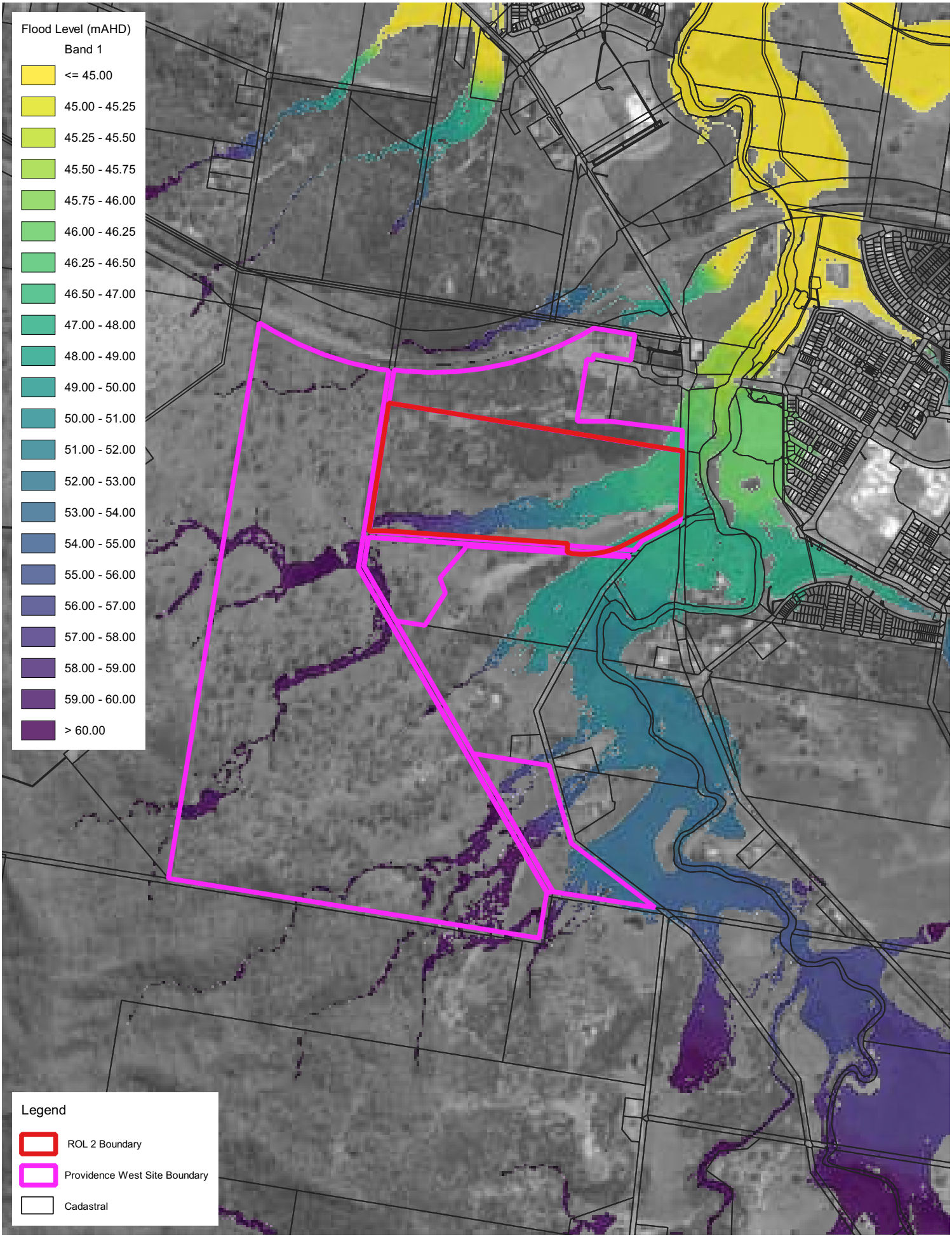
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TRP	AG	APB	OCT' 25

Scale	Sheet
AS SHOWN	36 of 53

A1	Drawing No	Revision
	24-154- 98	C

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Appendix B Pre-Development Flood Maps



Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 1% AEP with climate change Flood Level - Pre-development

N

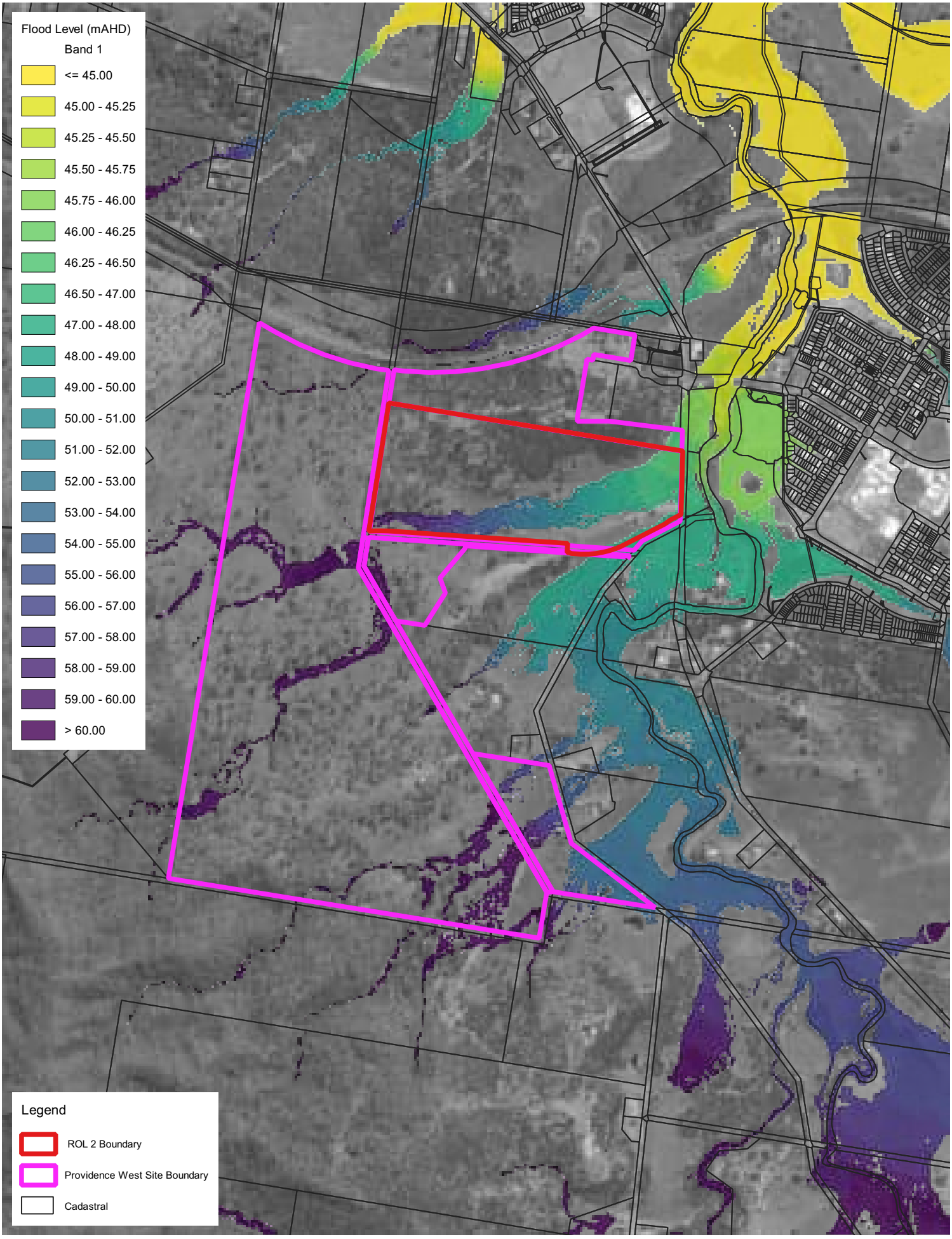
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FIGURE NUMBER: B1

REVISION:

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Photography:
Topography:
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Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 1% AEP Flood Level - Pre-development

N

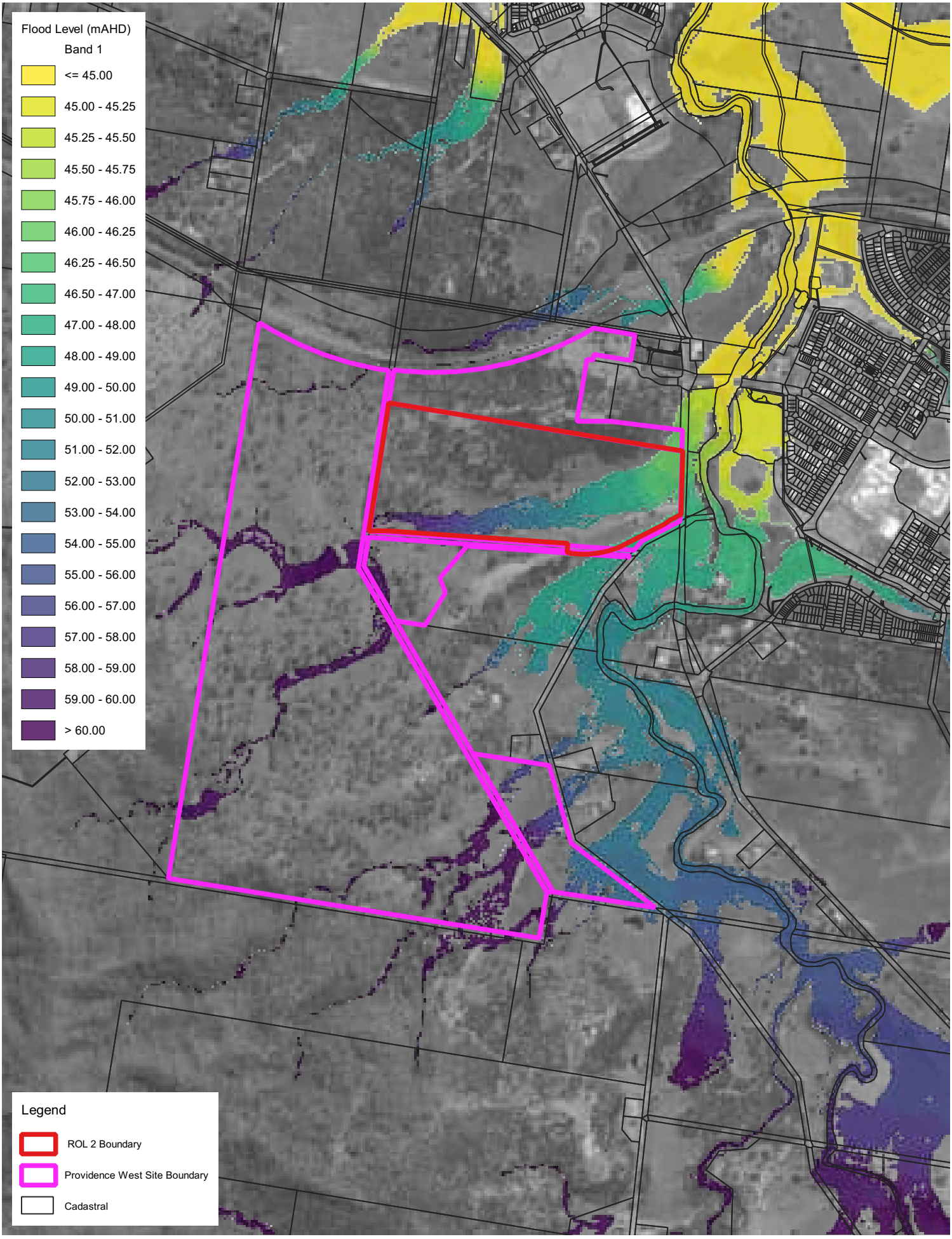
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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 2% AEP Flood Level - Pre-development

N

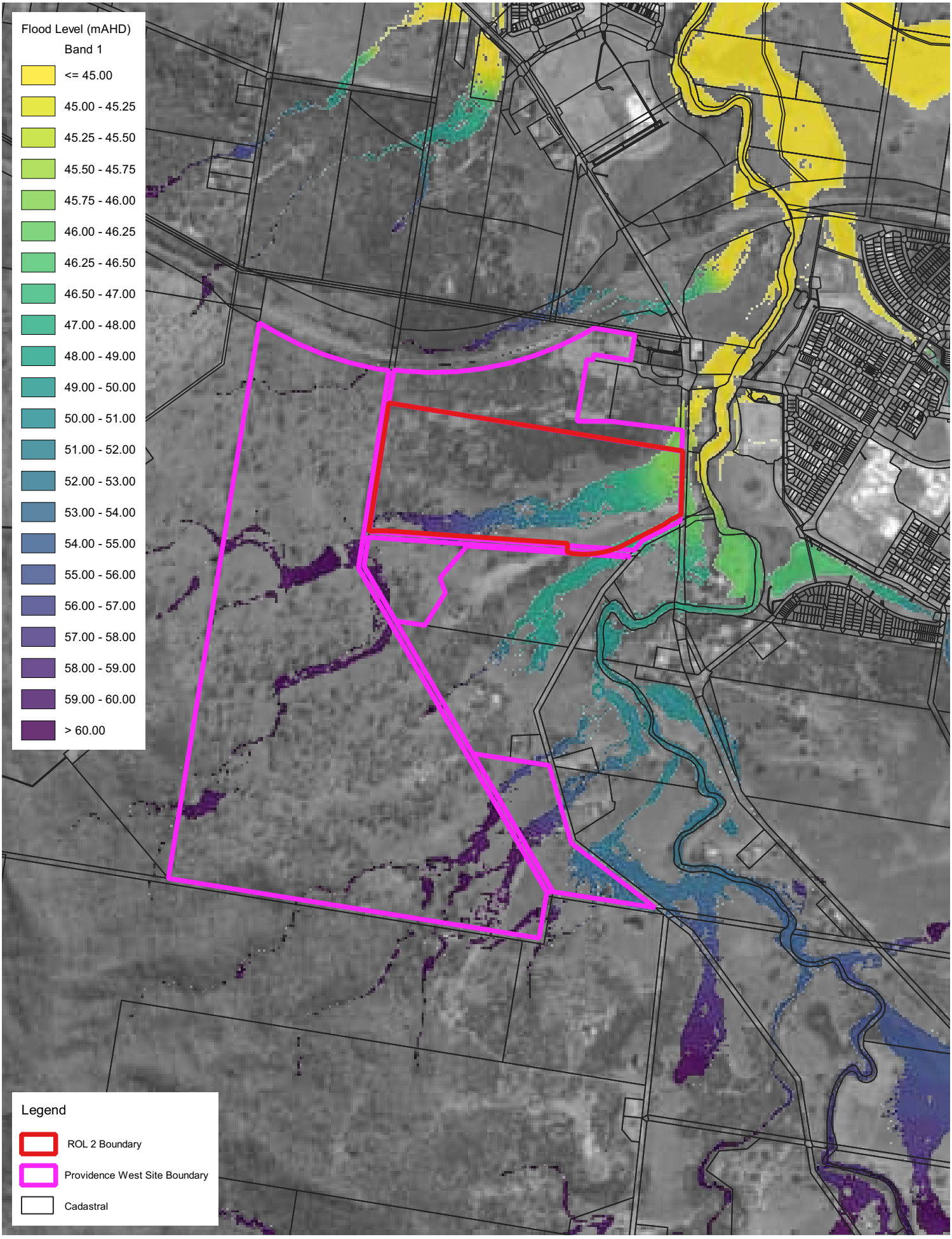
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REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
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TITLE: 5% AEP Flood Level - Pre-development

N

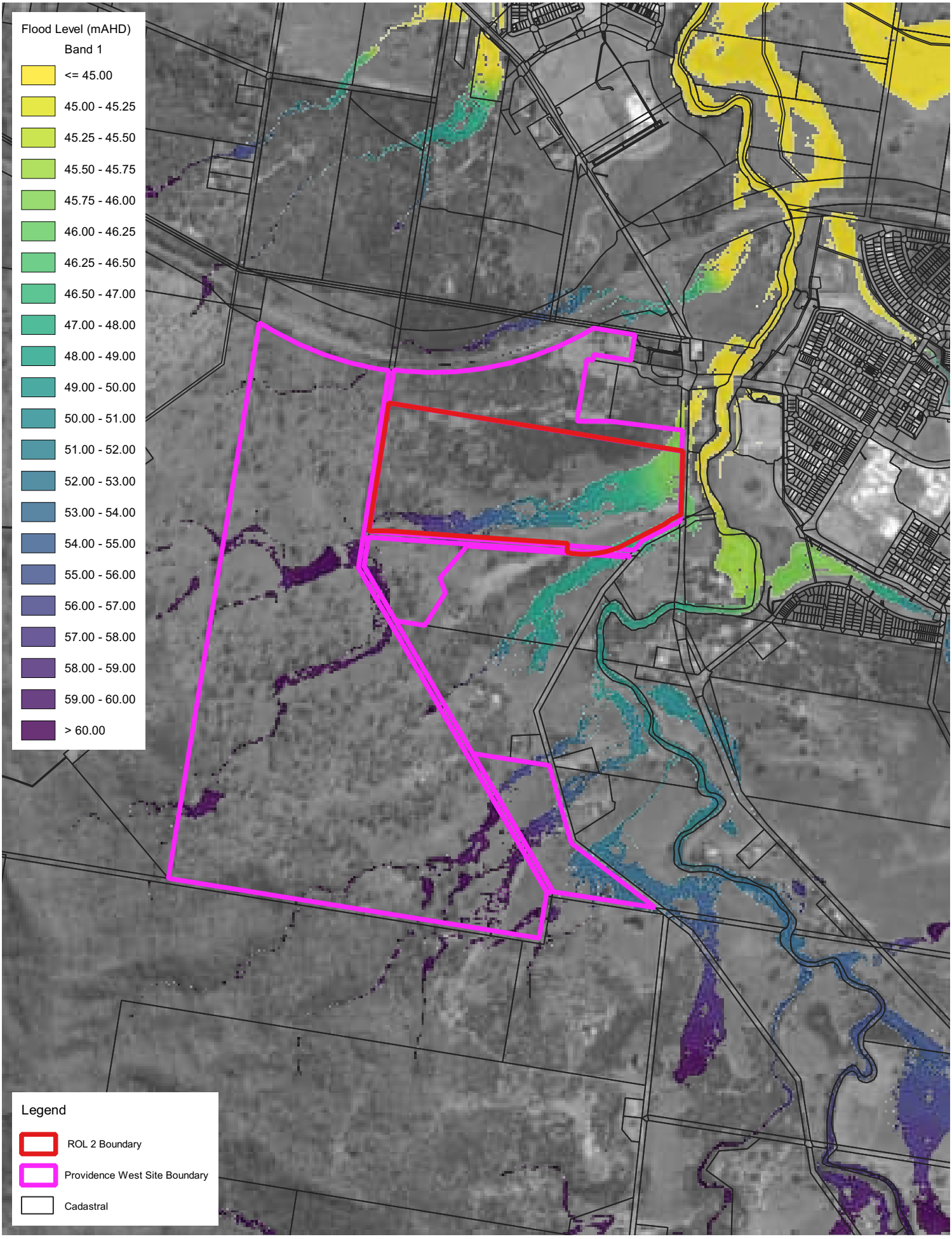
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FIGURE NUMBER: B4

REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 10% AEP Flood Level - Pre-development

N

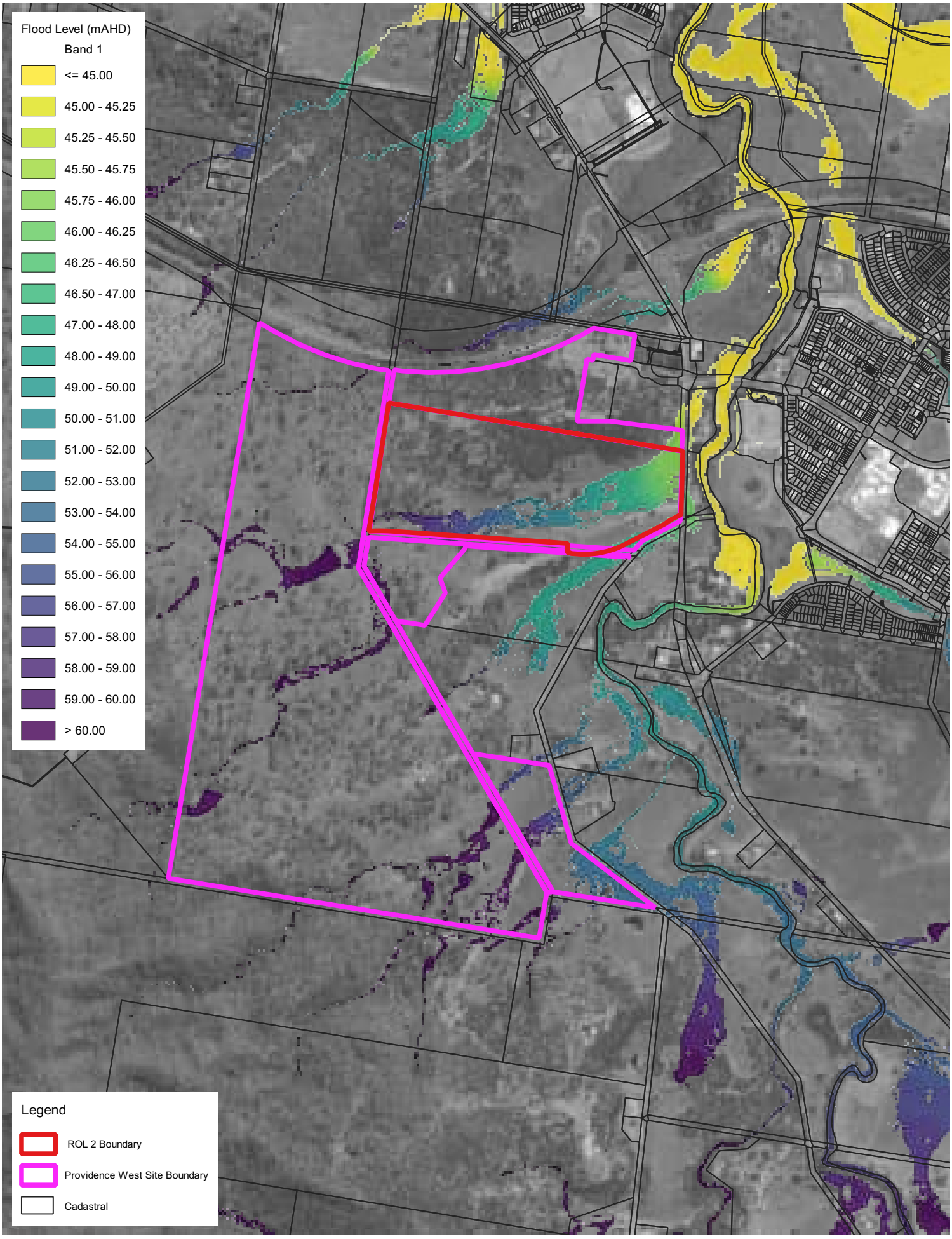
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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
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TITLE: 18% AEP Flood Level - Pre-development

N

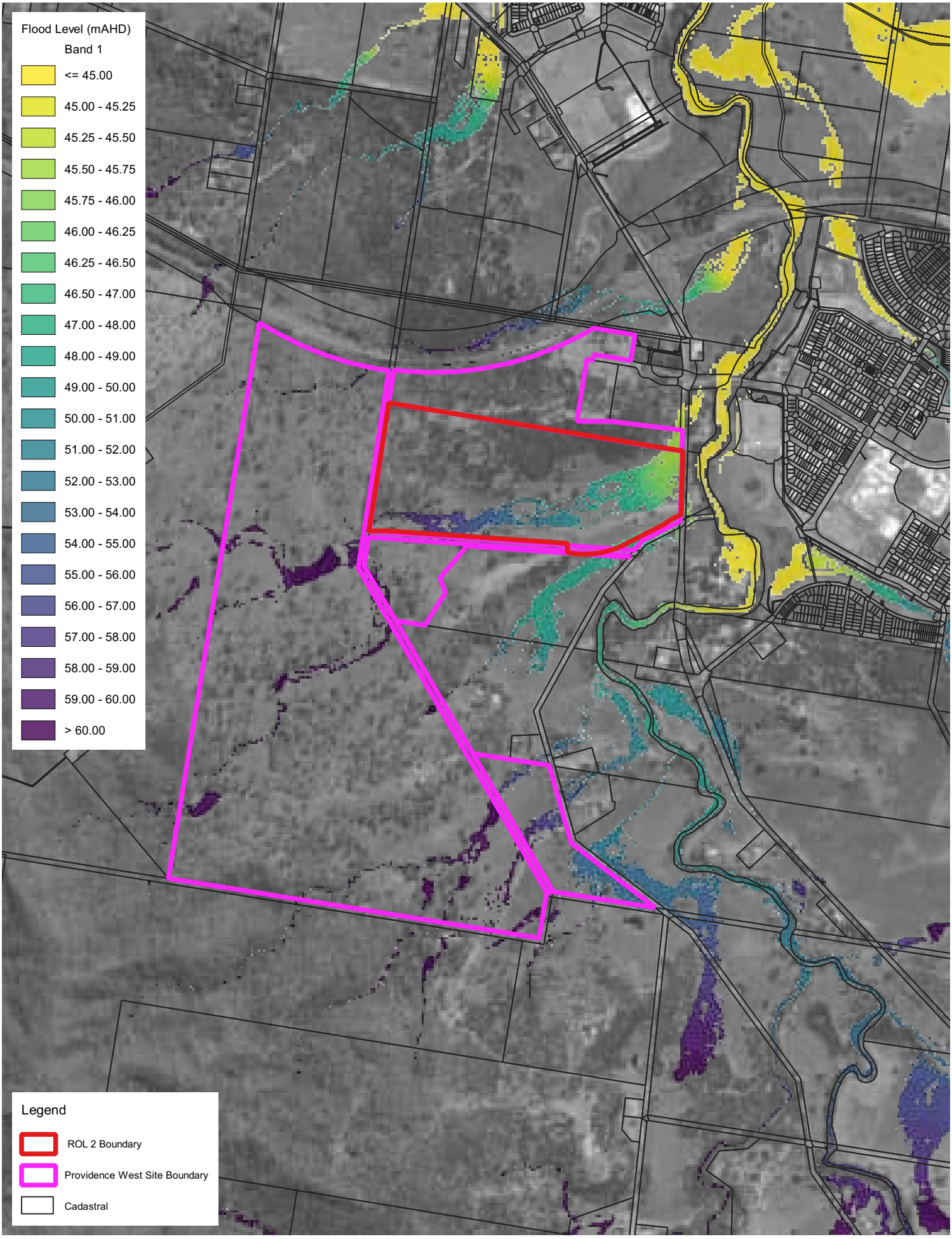
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Photography:
Topography:
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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 39% AEP Flood Level - Pre-development

N

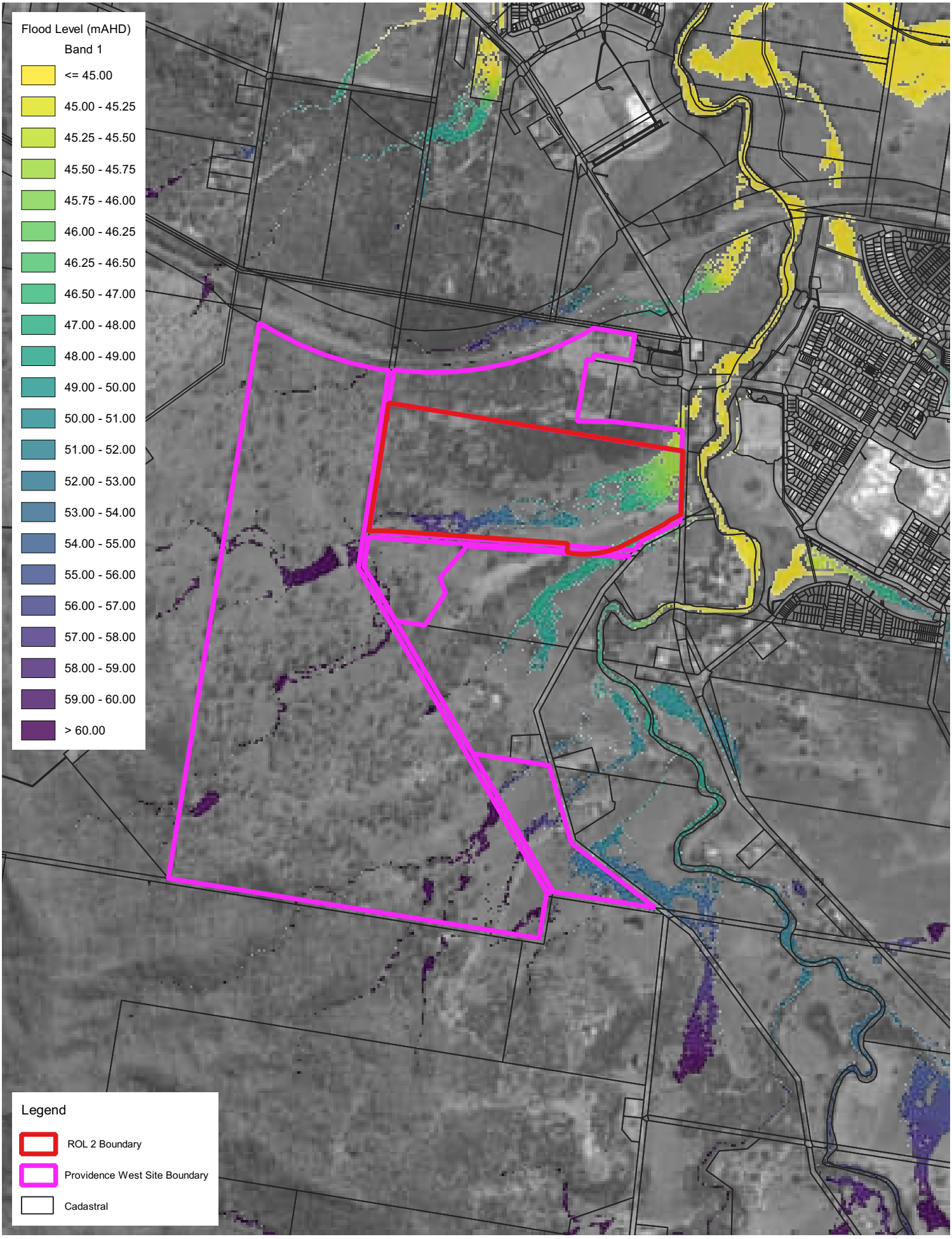
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DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
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TITLE: 63% AEP Flood Level - Pre-development

N

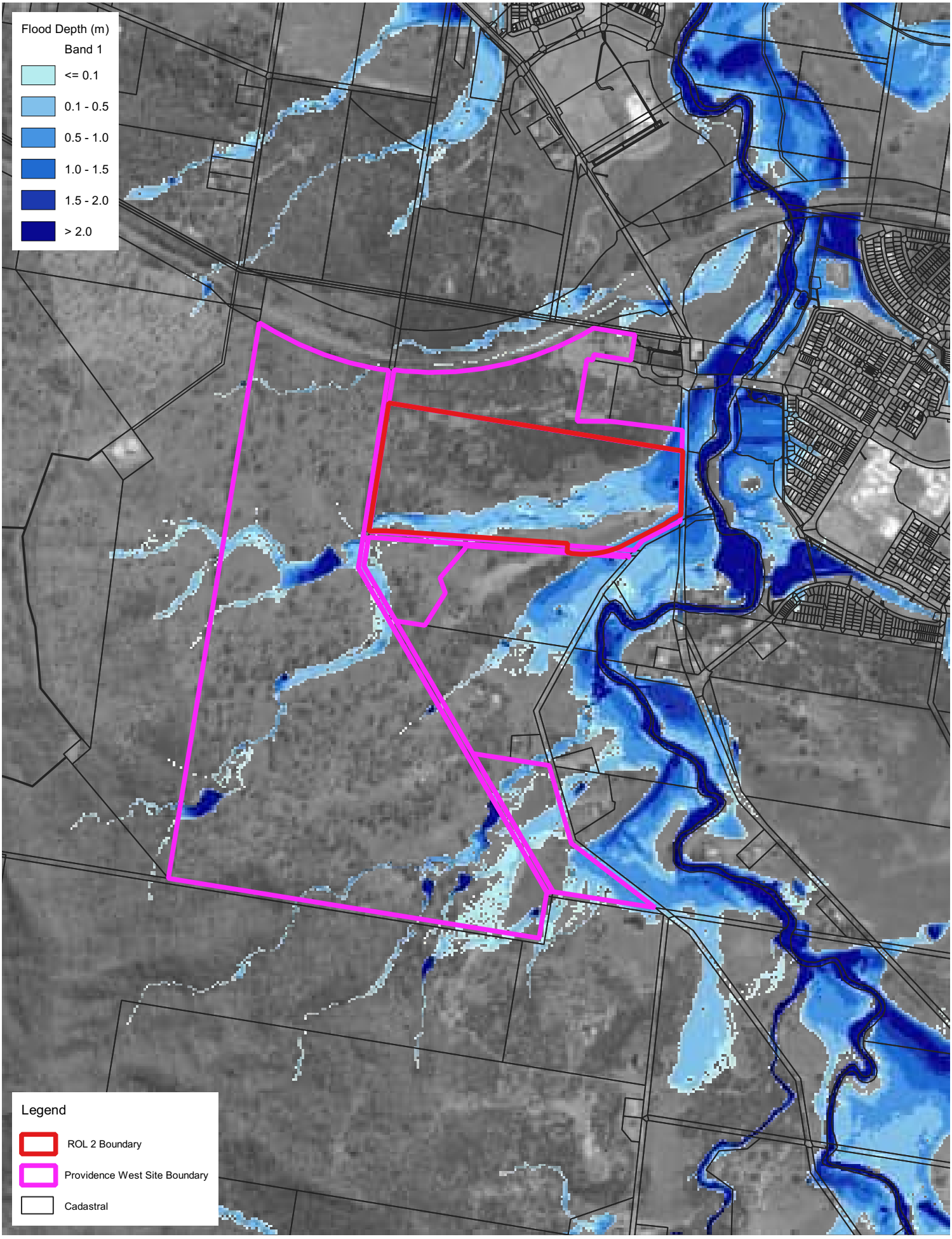
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Photography:
Topography:
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Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 1% AEP with climate change Flood Depth - Pre-development

N

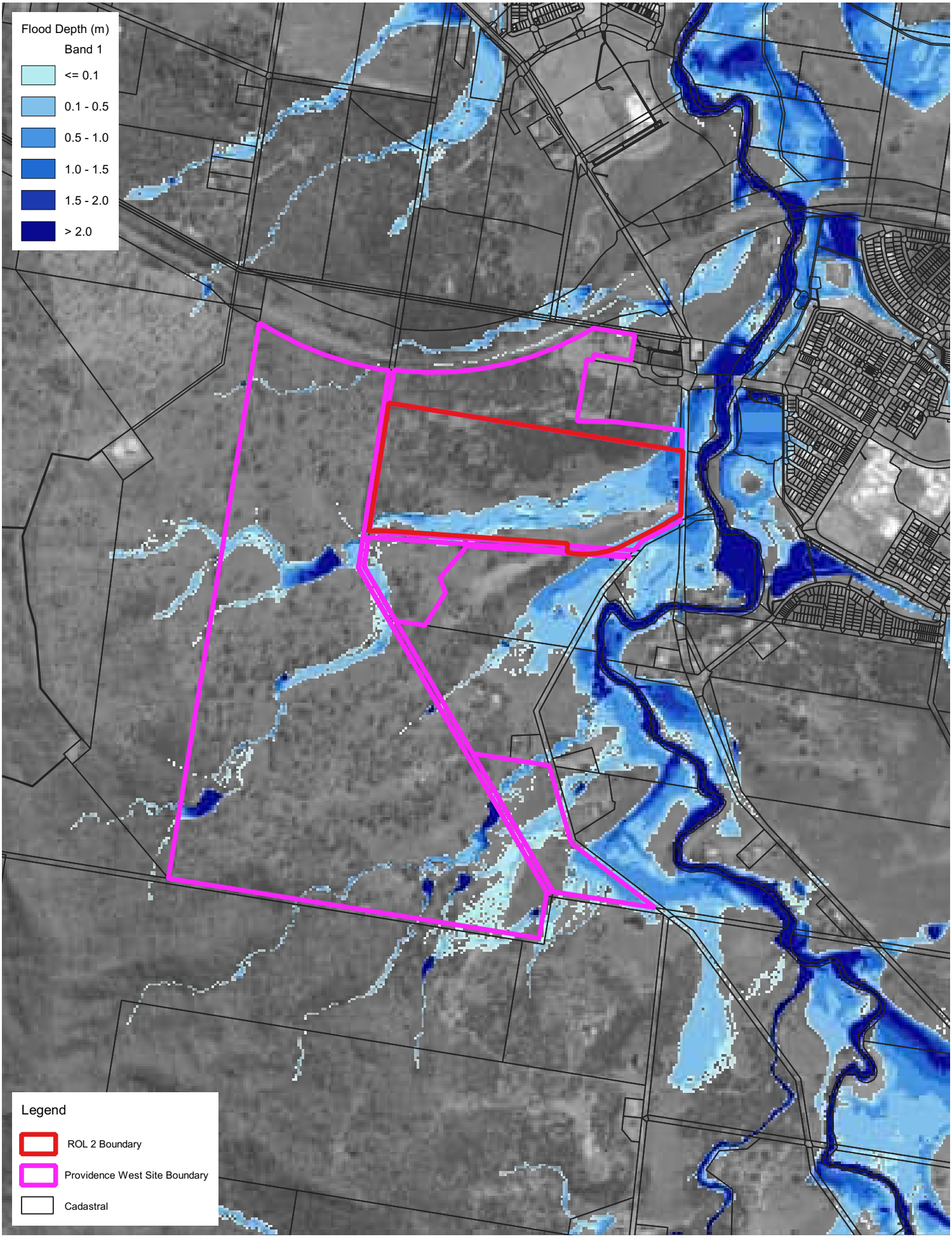
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DATE: 10-November-2025

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Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
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TITLE: 1% AEP Flood Depth - Pre-development

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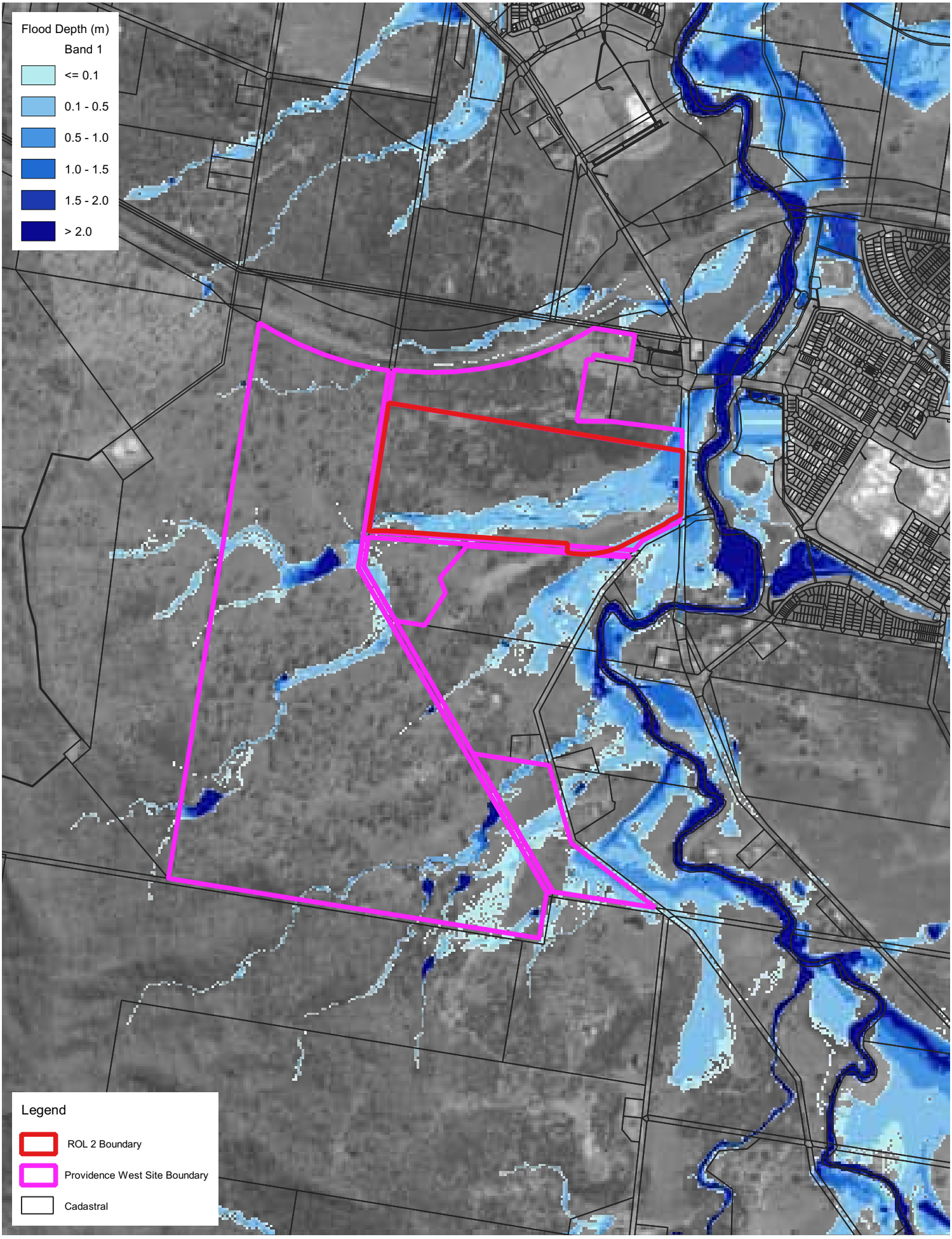
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REVISION:

DATE: 10-November-2025

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Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 2% AEP Flood Depth - Pre-development

N

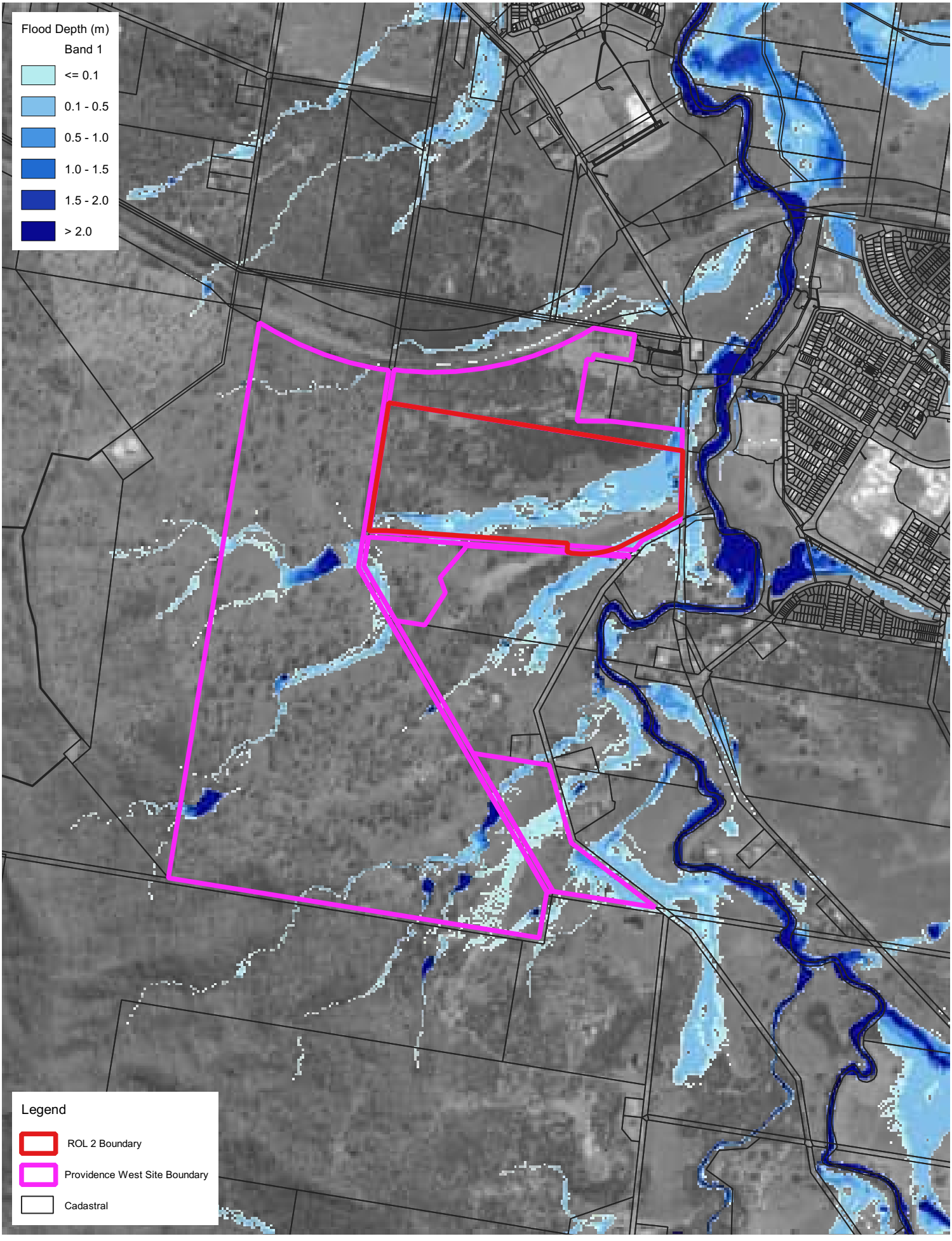
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REVISION:

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Topography:
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Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 5% AEP Flood Depth - Pre-development

N

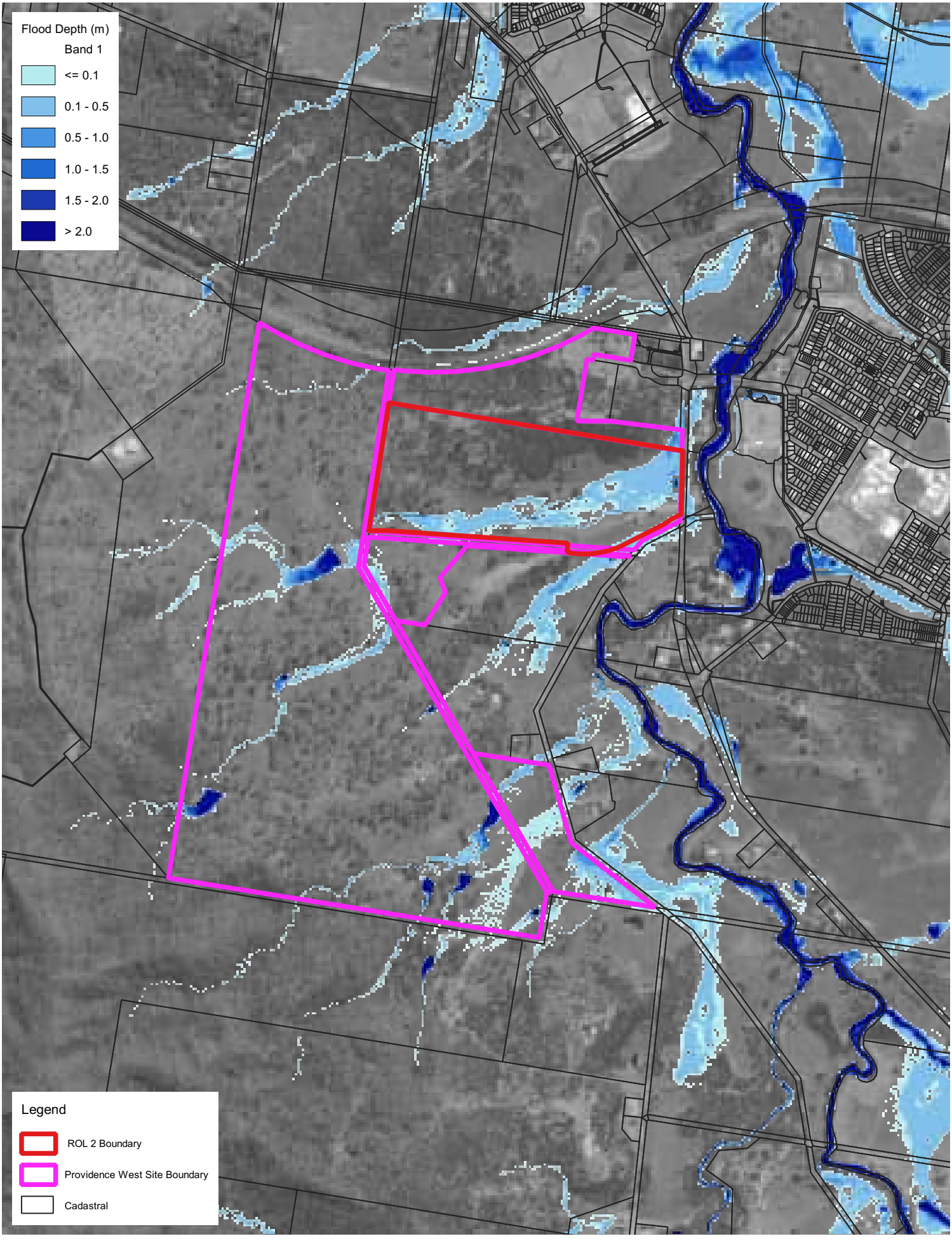
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Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
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TITLE: 10% AEP Flood Depth - Pre-development

N

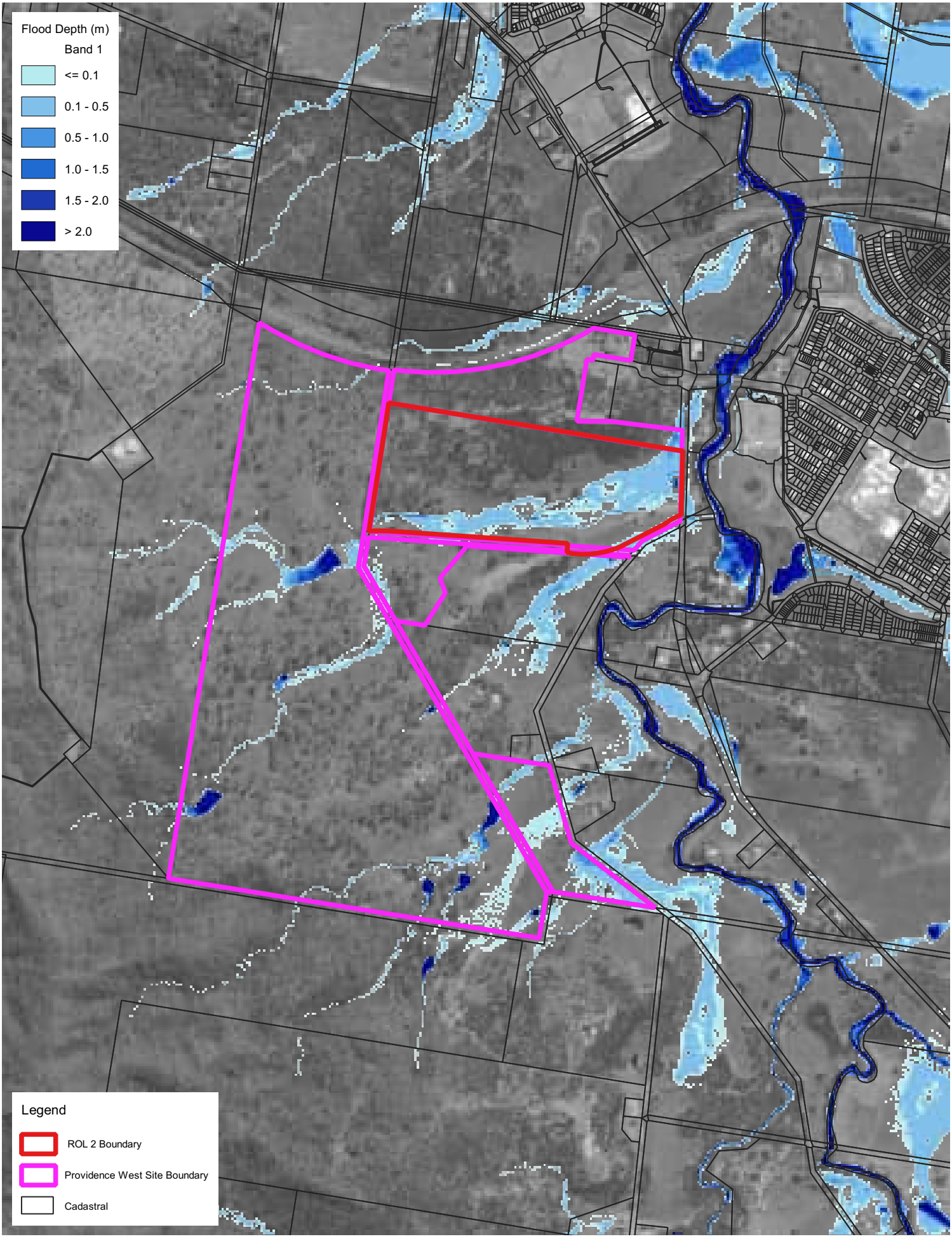
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REVISION:

DATE: 10-November-2025

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Photography:
Topography:
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Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
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TITLE: 18% AEP Flood Depth - Pre-development

N

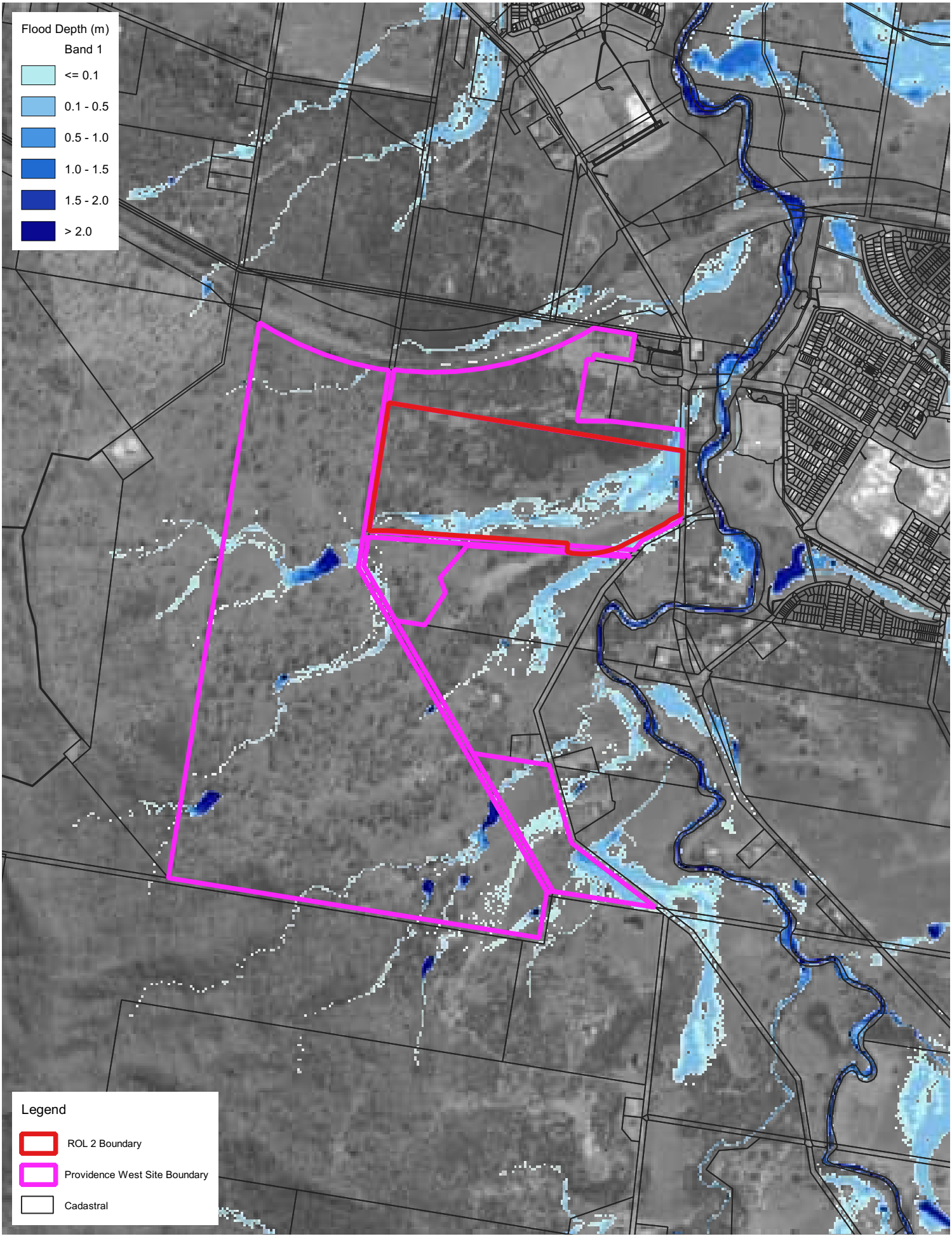
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FIGURE NUMBER: B14

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppB\AppB.qgz



Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 39% AEP Flood Depth - Pre-development

N

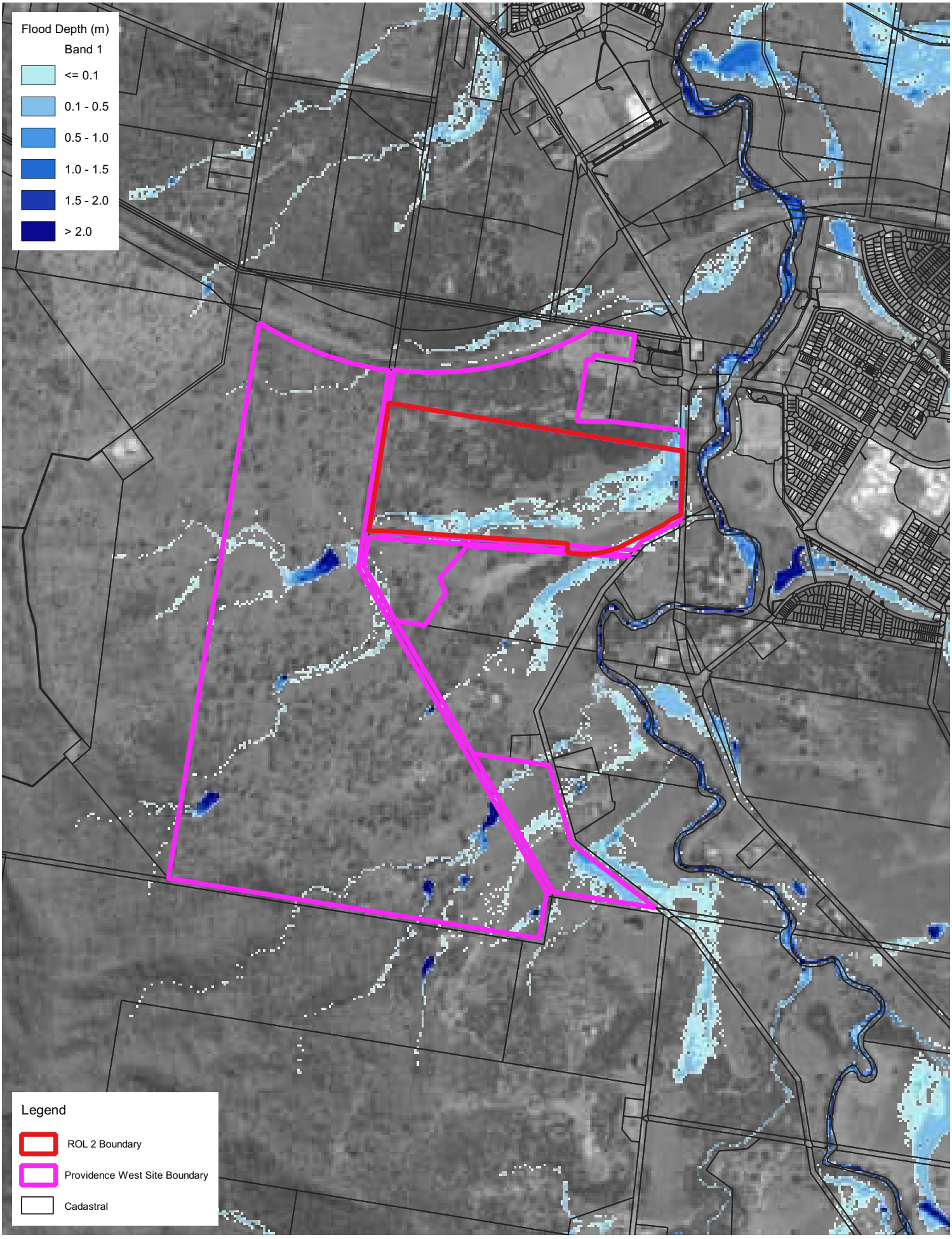
0 300 600 m

FIGURE NUMBER: B15

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppB\AppB.qgz



Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 63% AEP Flood Depth - Pre-development

N

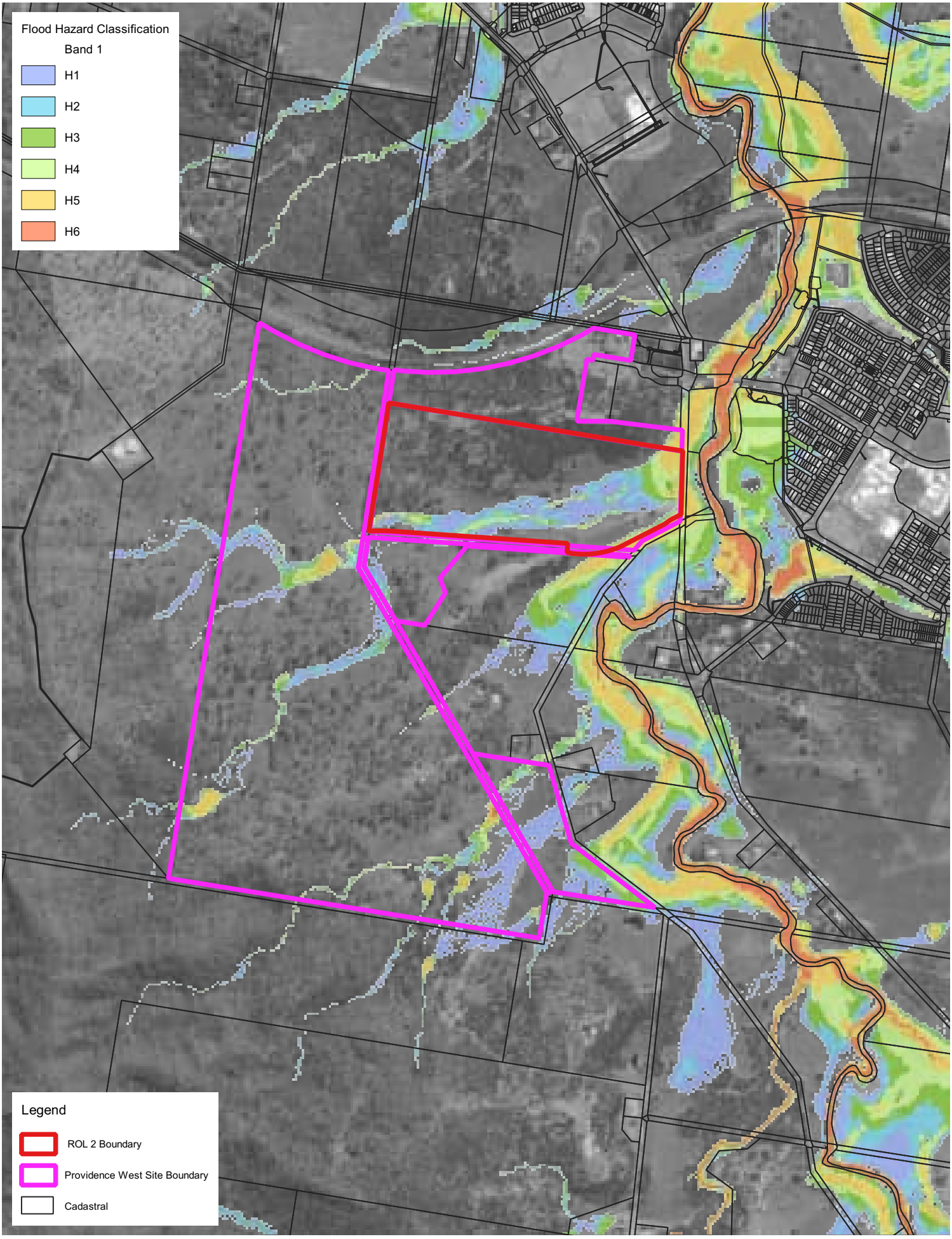
0 300 600 m

FIGURE NUMBER: B16

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppB\AppB.qgz



Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 1% AEP with climate change Flood Hazard - Pre-development

N

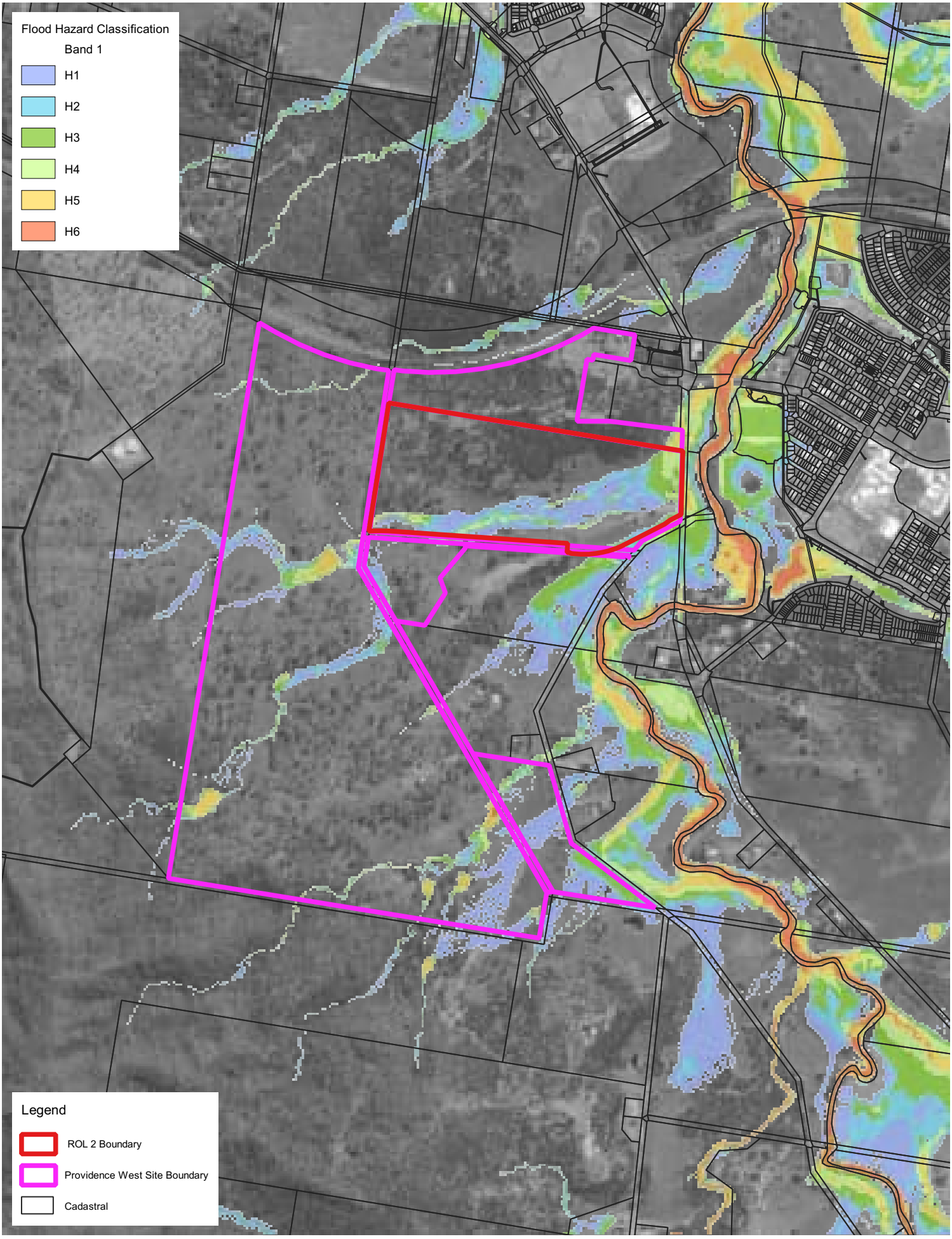
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FIGURE NUMBER: B17

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppB\AppB.qgz



Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 1% AEP Flood Hazard - Pre-development

N

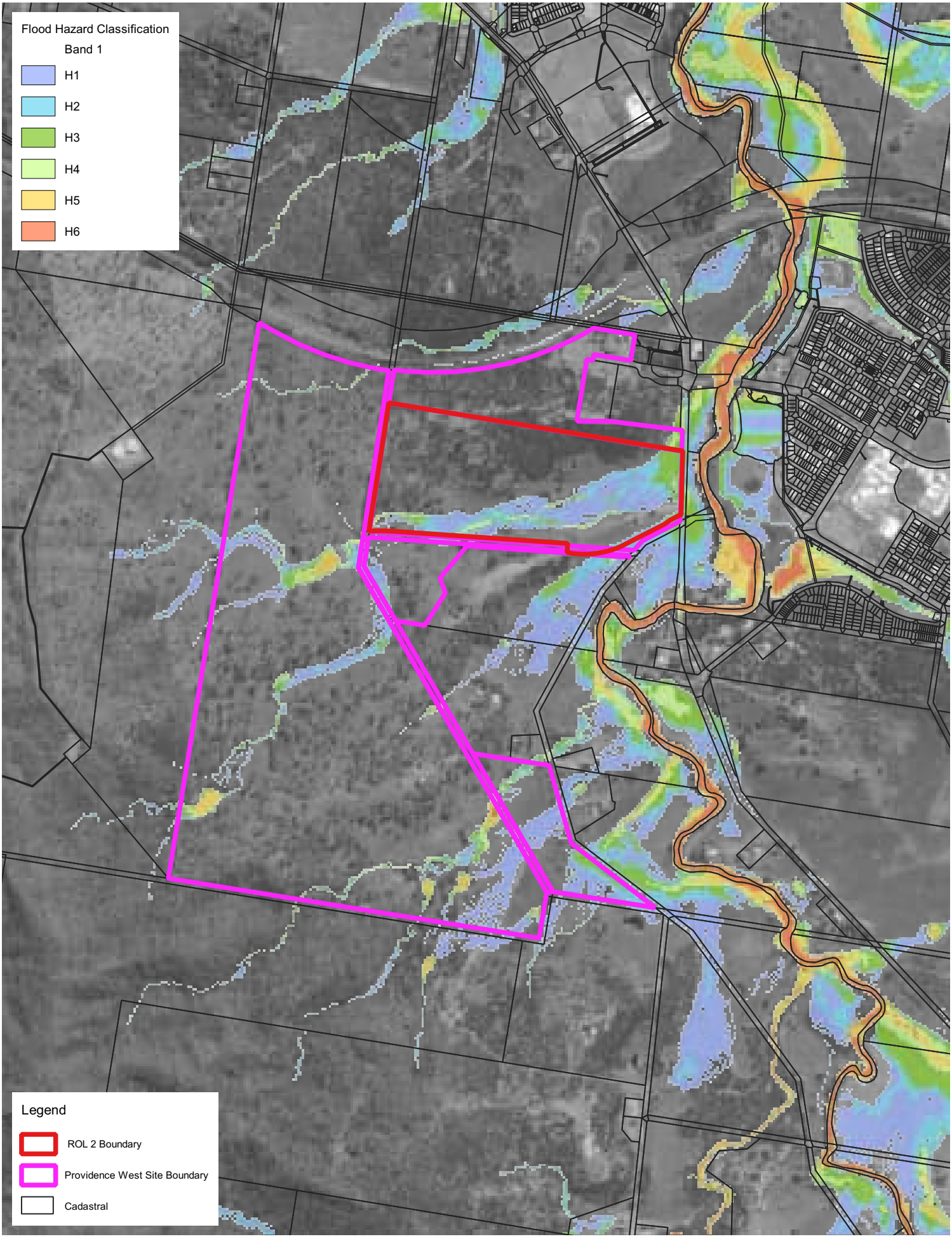
0 300 600 m

FIGURE NUMBER: B18

REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 2% AEP Flood Hazard - Pre-development

N

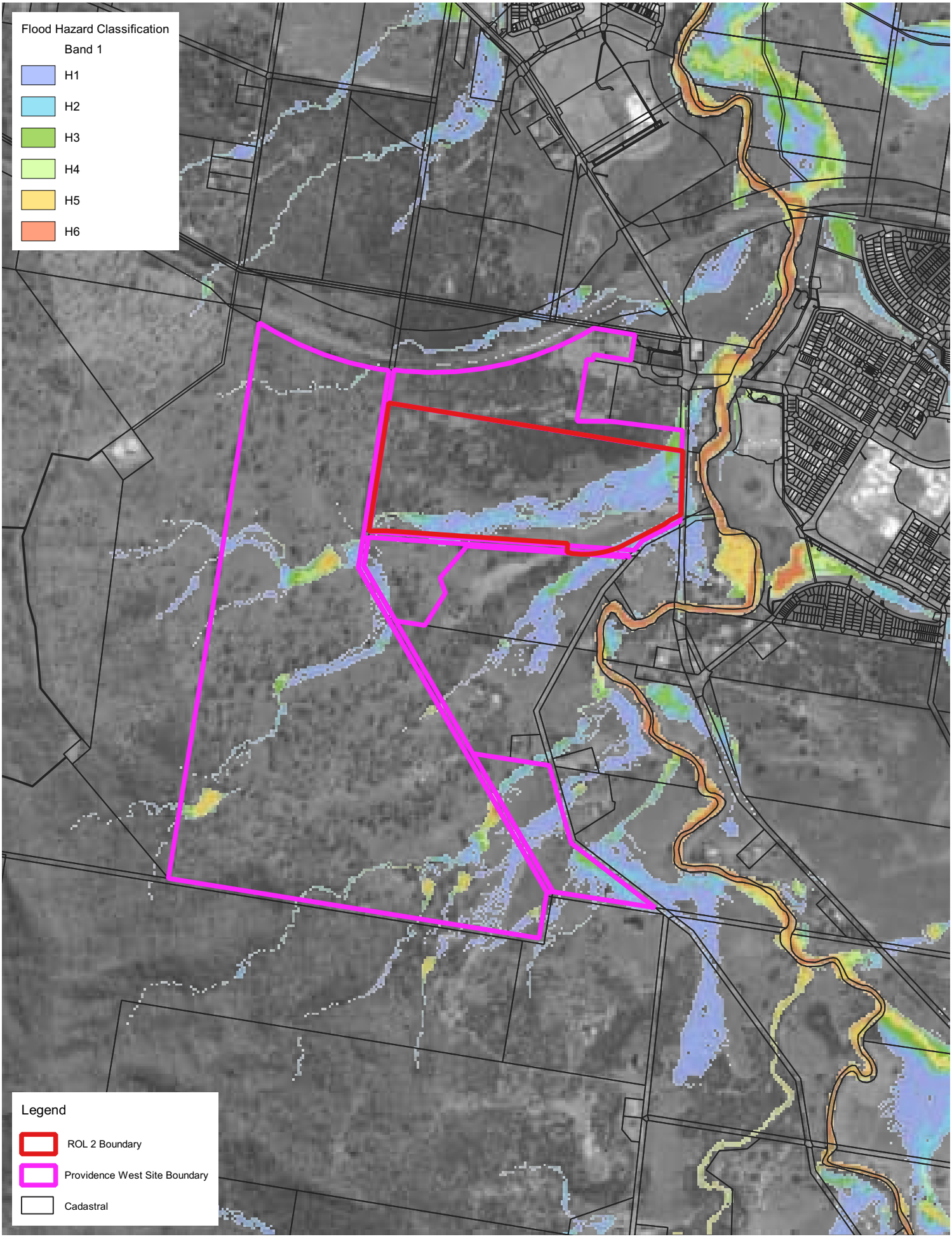
0 300 600 m

FIGURE NUMBER: B19

REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 5% AEP Flood Hazard - Pre-development

N

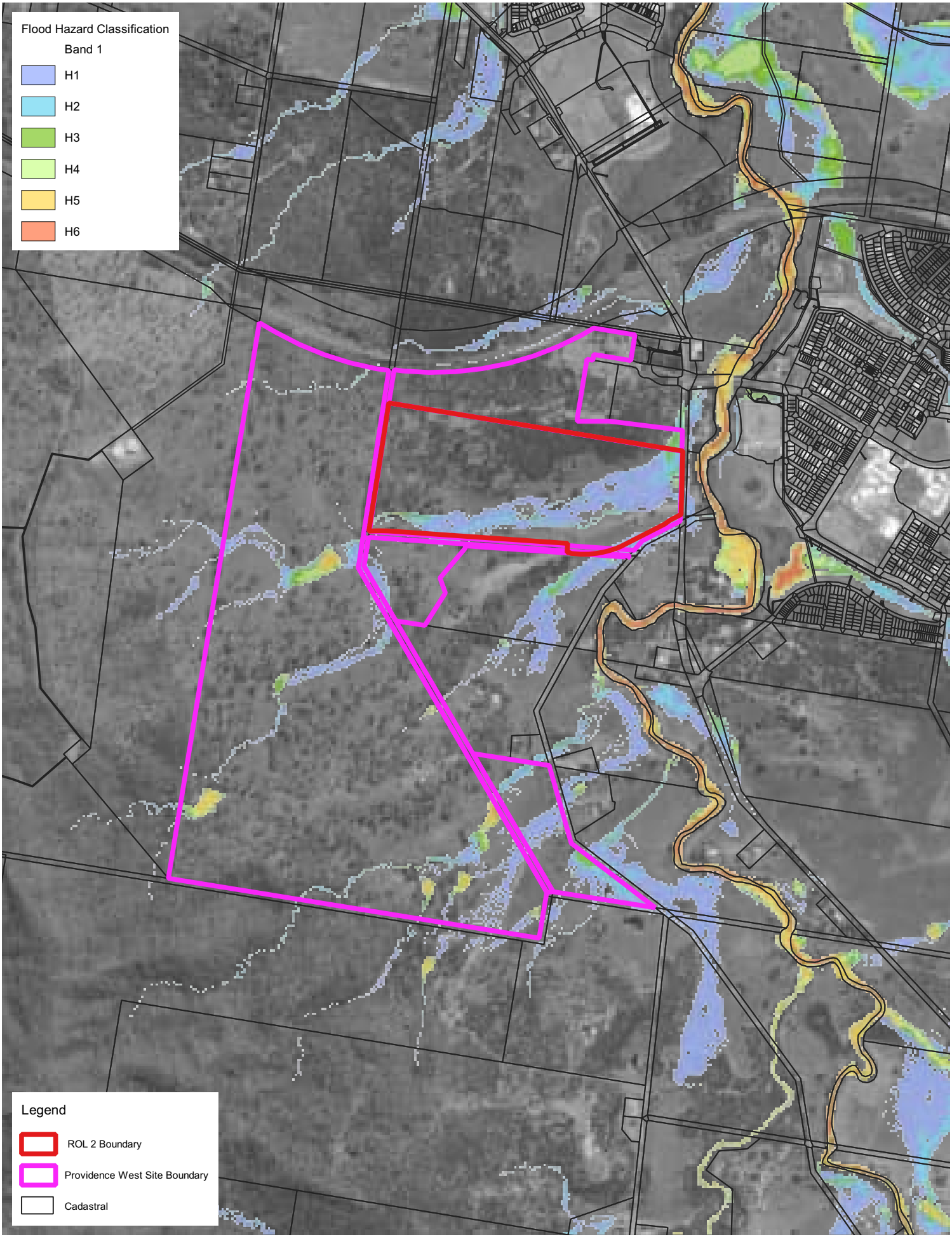
0 300 600 m

FIGURE NUMBER: B20

REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 10% AEP Flood Hazard - Pre-development

N

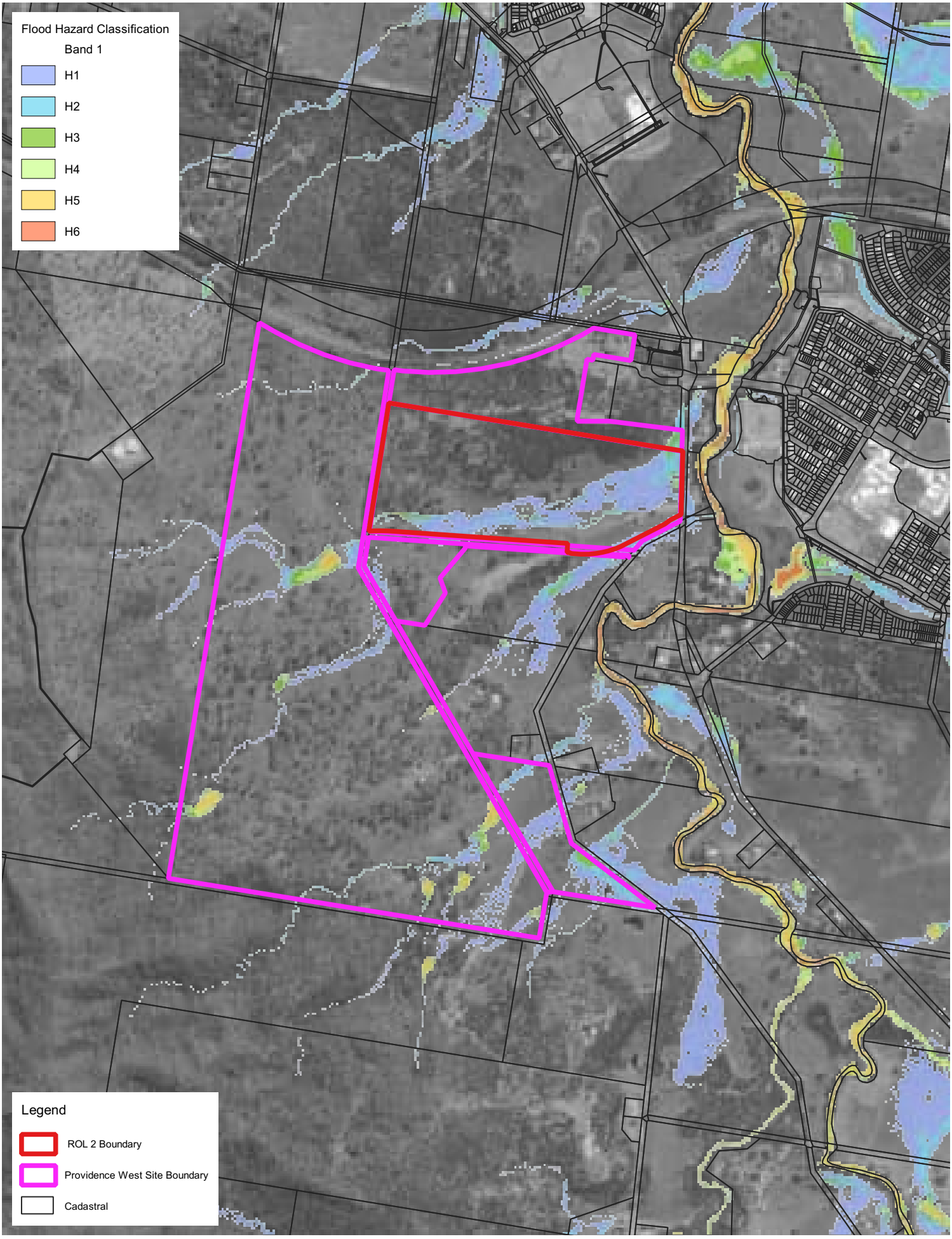
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FIGURE NUMBER: B21

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppB\AppB.qgz



Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 18% AEP Flood Hazard - Pre-development

N

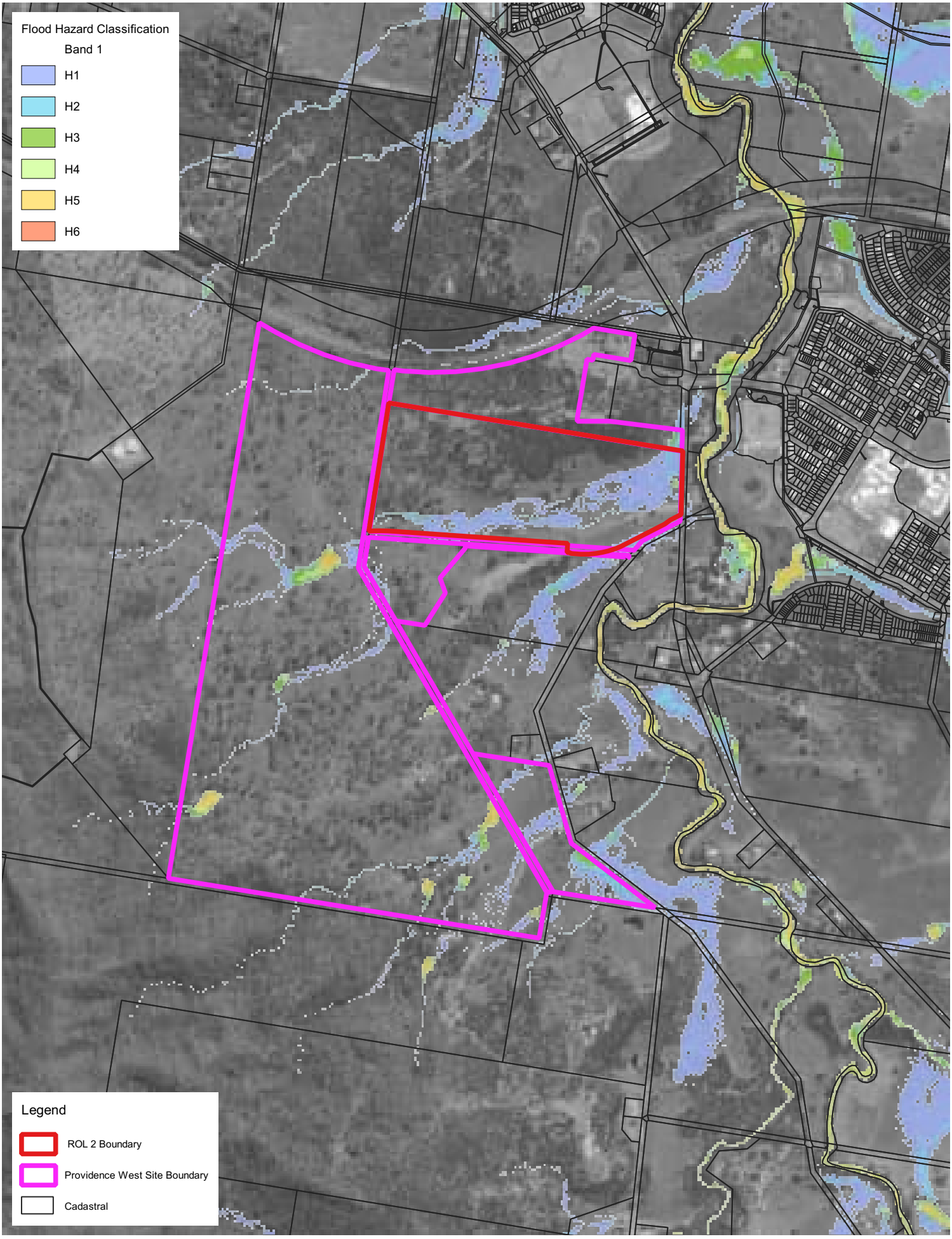
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FIGURE NUMBER: B22

REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 39% AEP Flood Hazard - Pre-development

N

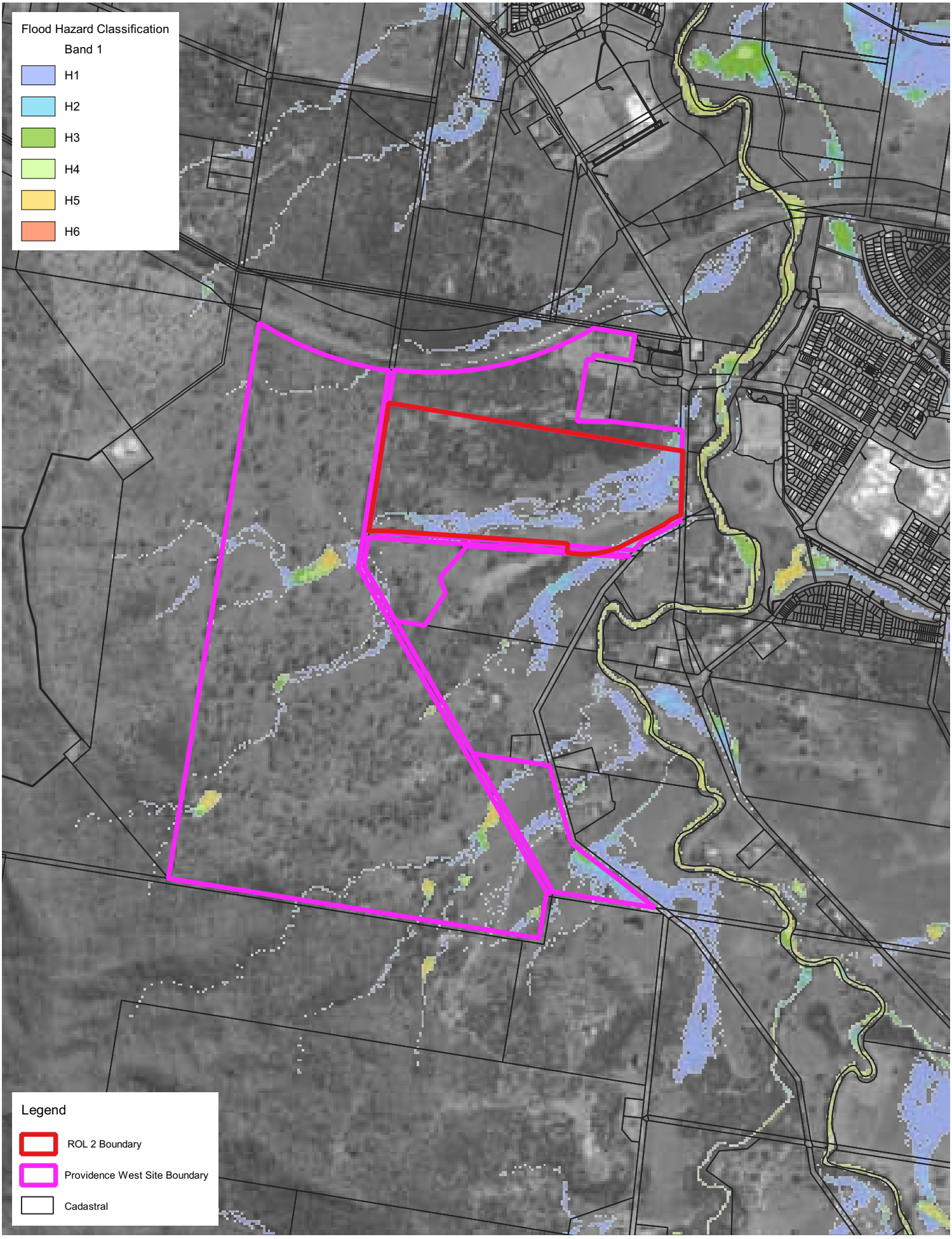
0 300 600 m

FIGURE NUMBER: B23

REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 63% AEP Flood Hazard - Pre-development

N

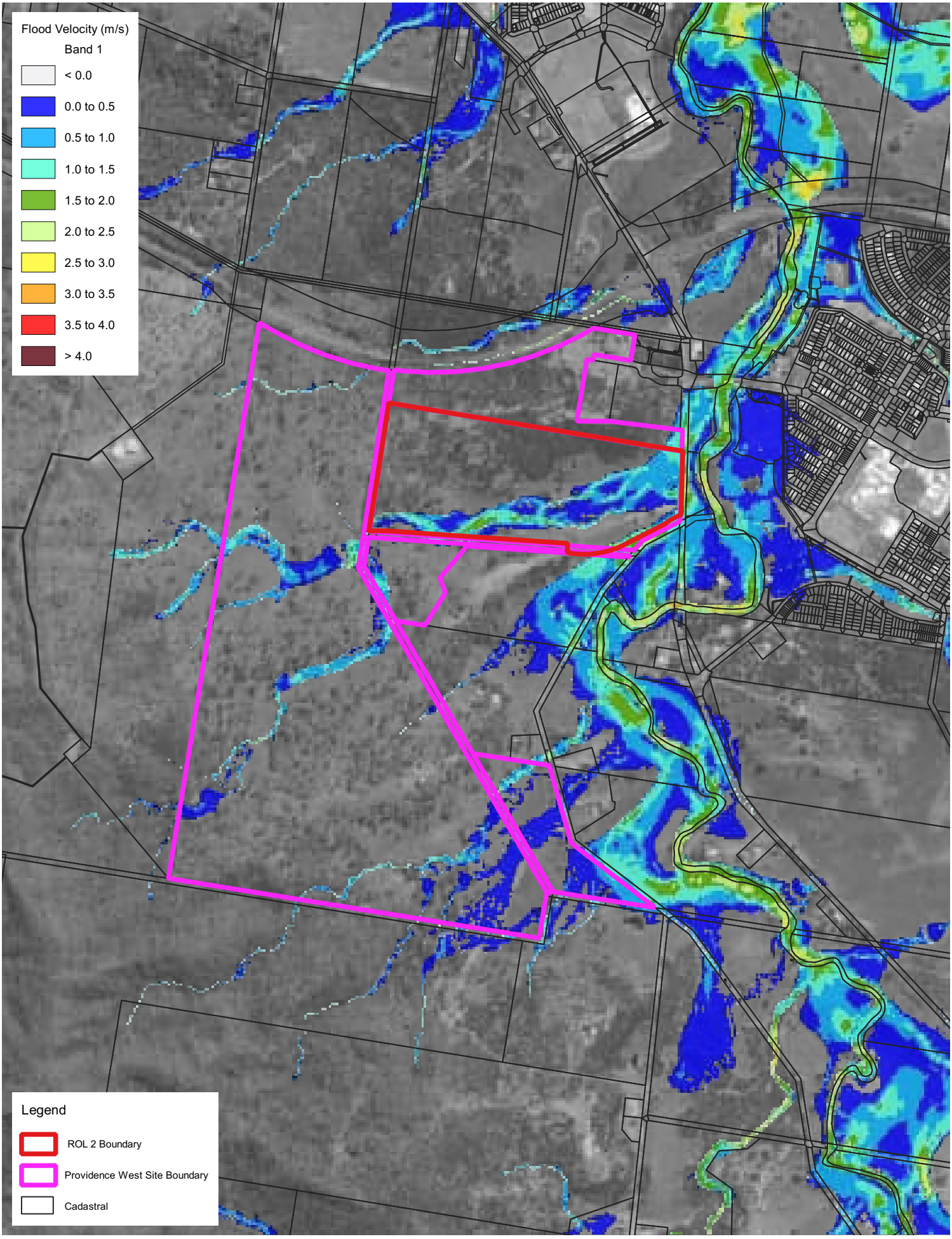
0 300 600 m

FIGURE NUMBER: B24

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppB\AppB.qgz



Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 1% AEP with climate change Flood Velocity - Pre-development

N

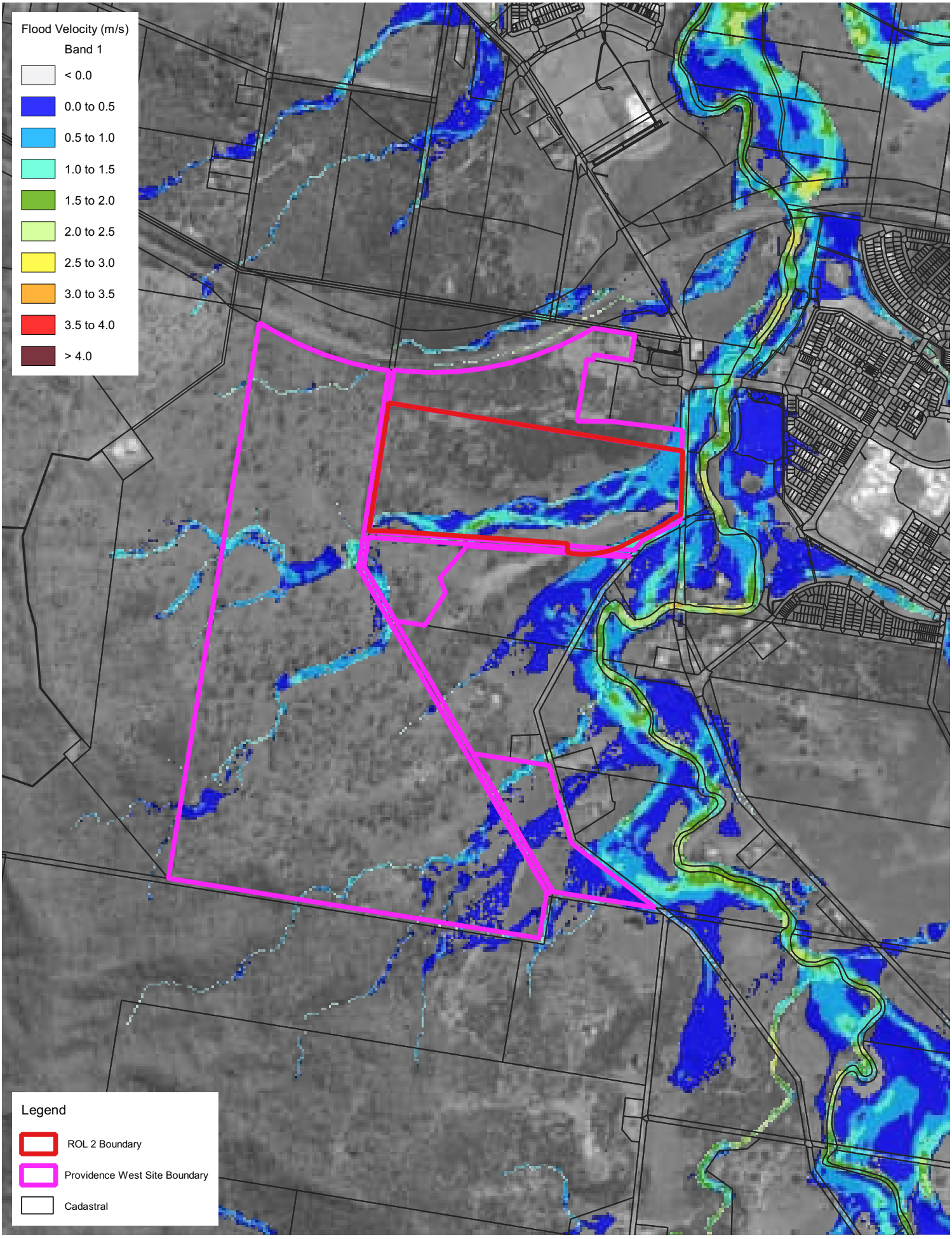
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FIGURE NUMBER: B25

REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 1% AEP Flood Velocity - Pre-development

N

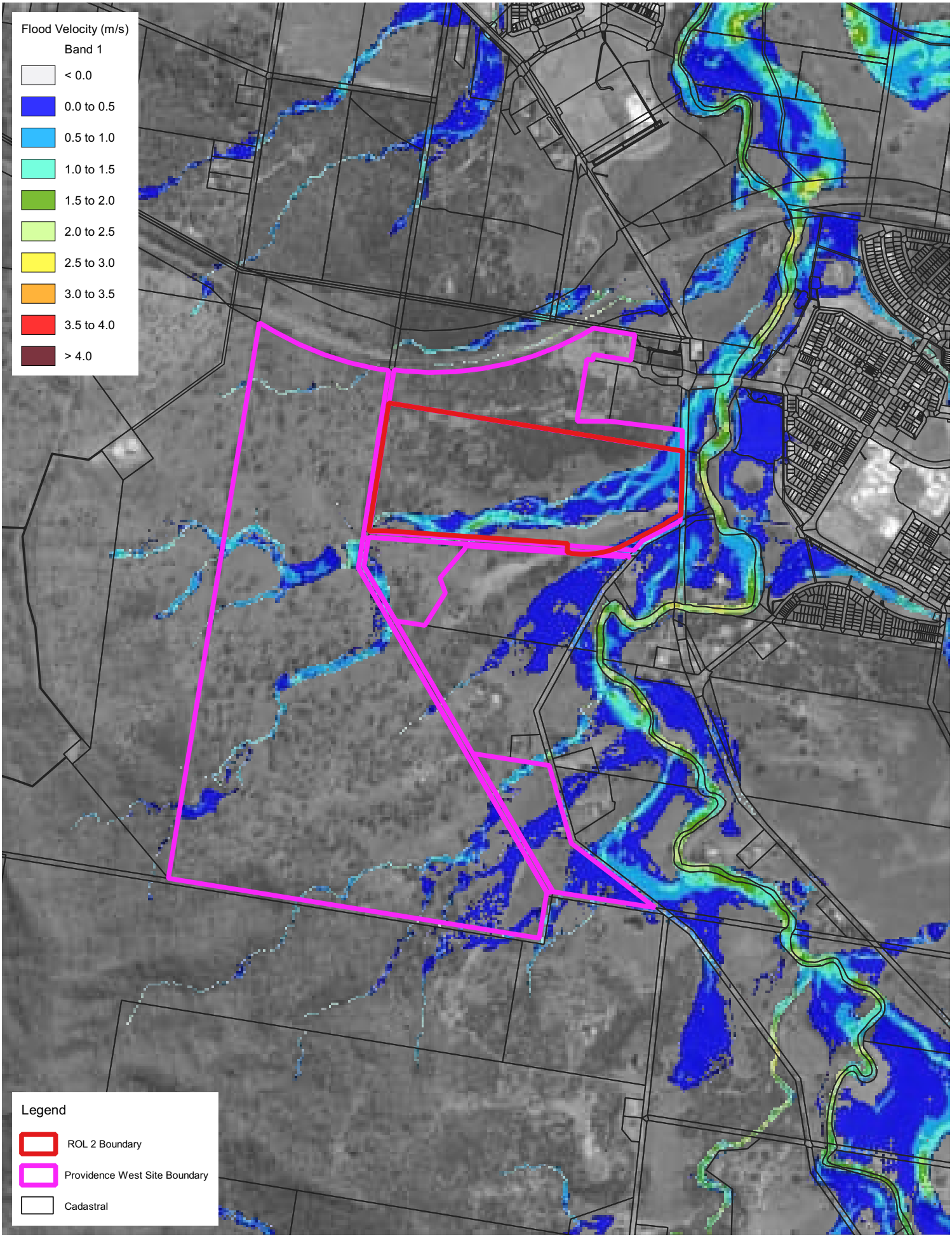
0 300 600 m

FIGURE NUMBER: B26

REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 2% AEP Flood Velocity - Pre-development

N

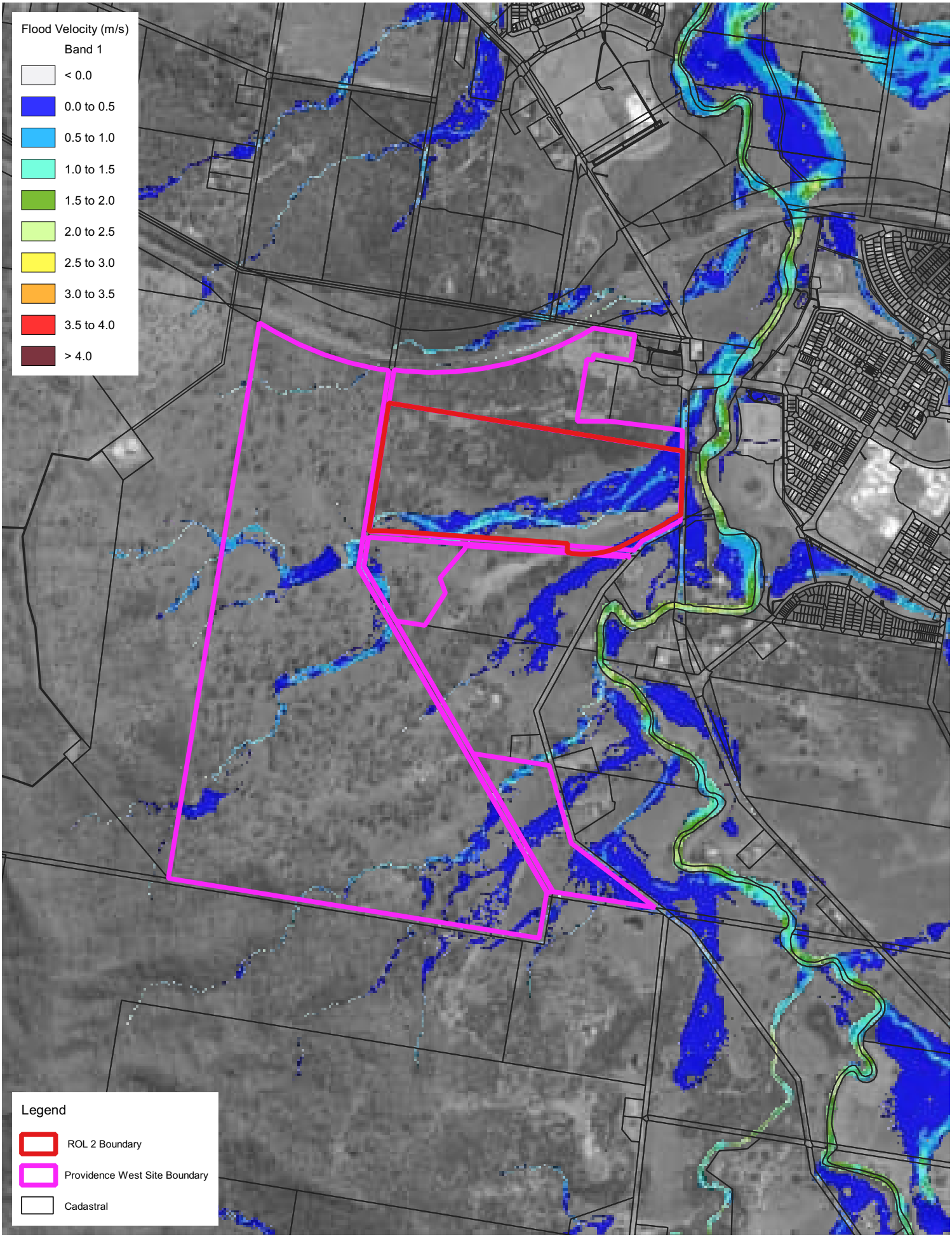
0 300 600 m

FIGURE NUMBER: B27

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppB\AppB.qgz



Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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WWW.WEP.COM.AU

TITLE: 5% AEP Flood Velocity - Pre-development

N

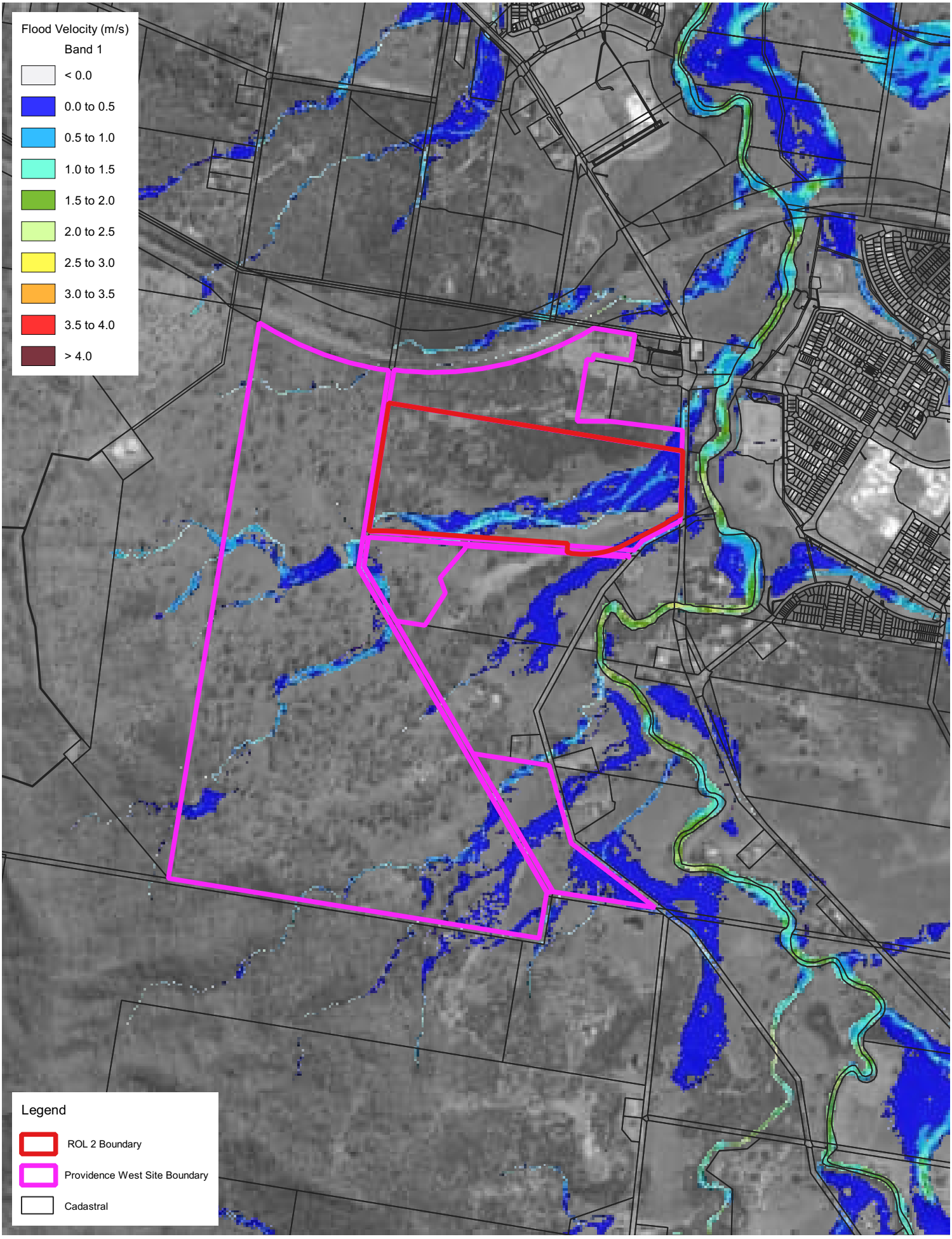
0 300 600 m

FIGURE NUMBER: B28

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppB\AppB.qgz



Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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WWW.WEP.COM.AU

TITLE: 10% AEP Flood Velocity - Pre-development

N

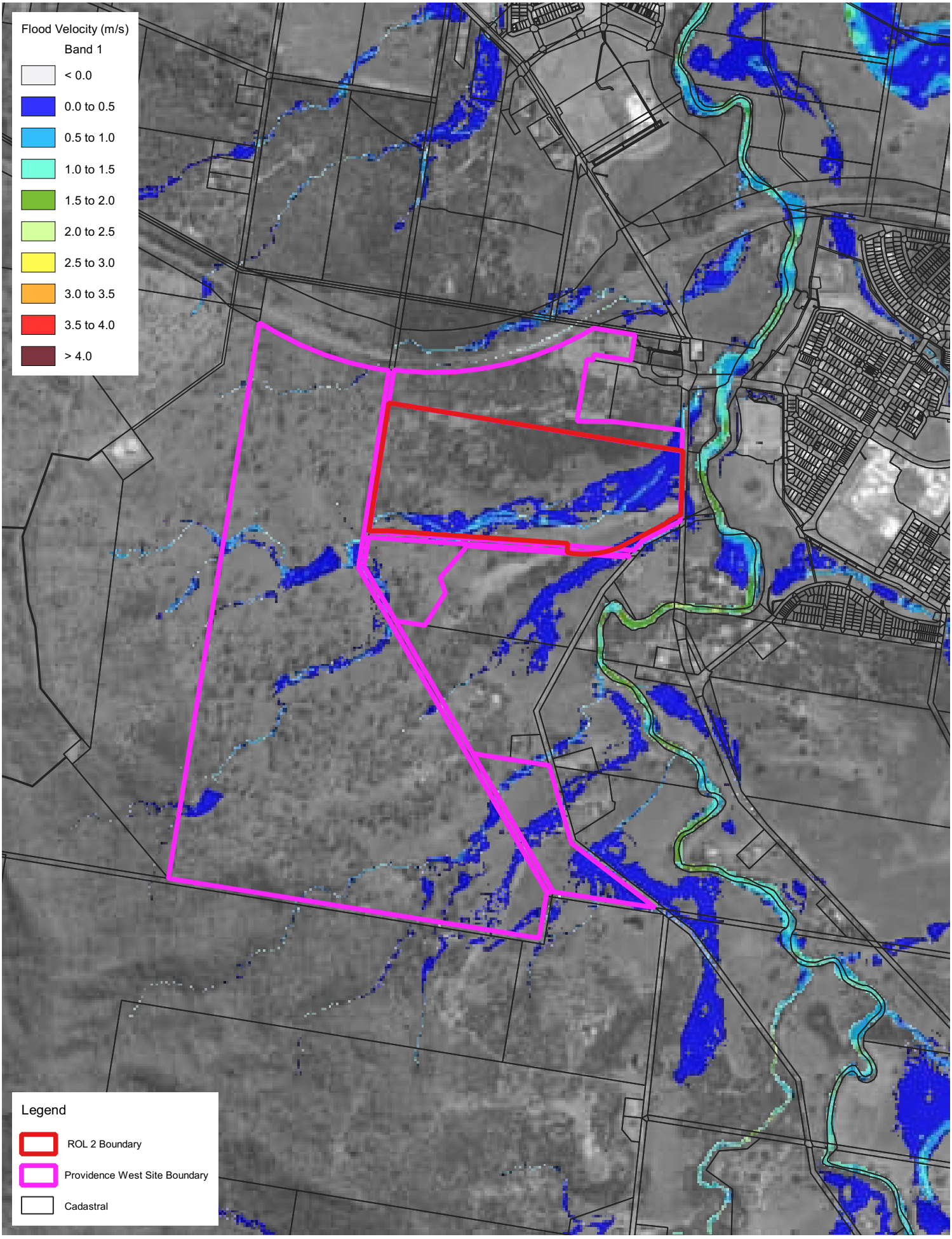
0 300 600 m

FIGURE NUMBER: B29

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppB\AppB.qgz



Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 18% AEP Flood Velocity - Pre-development

N

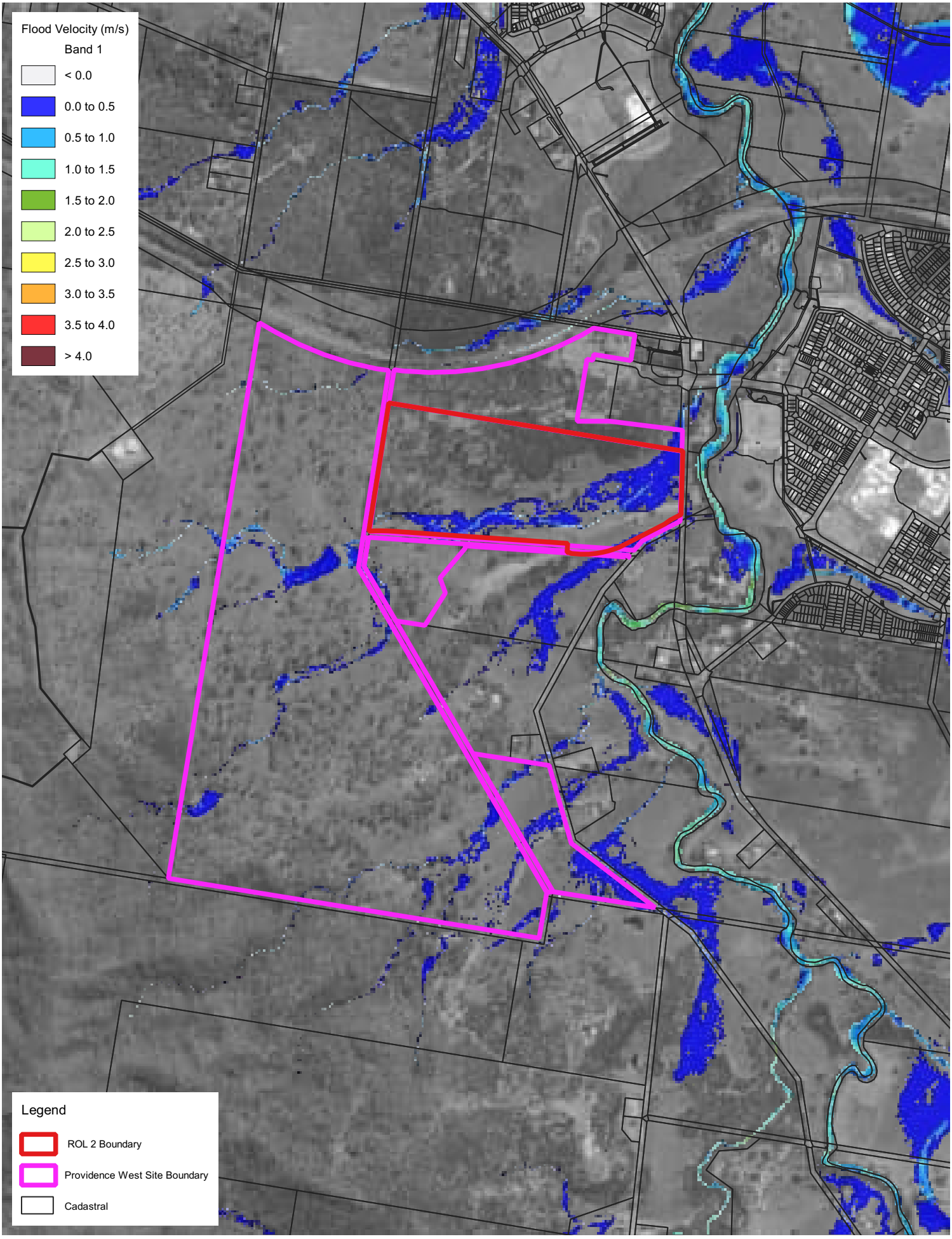
0 300 600 m

FIGURE NUMBER: B30

REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 39% AEP Flood Velocity - Pre-development

N

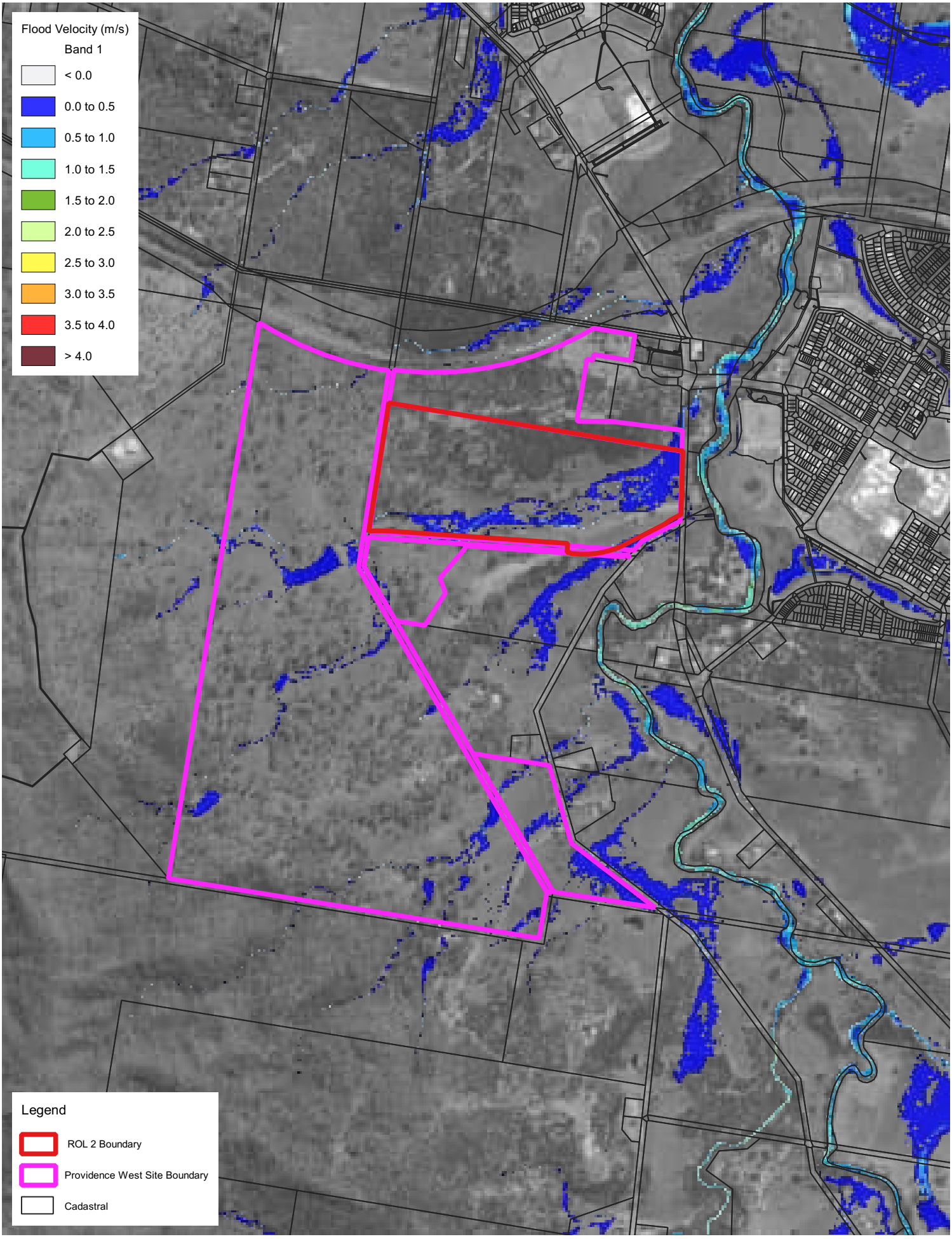
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FIGURE NUMBER: B31

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppB\AppB.qgz



Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 63% AEP Flood Velocity - Pre-development

N

0 300 600 m

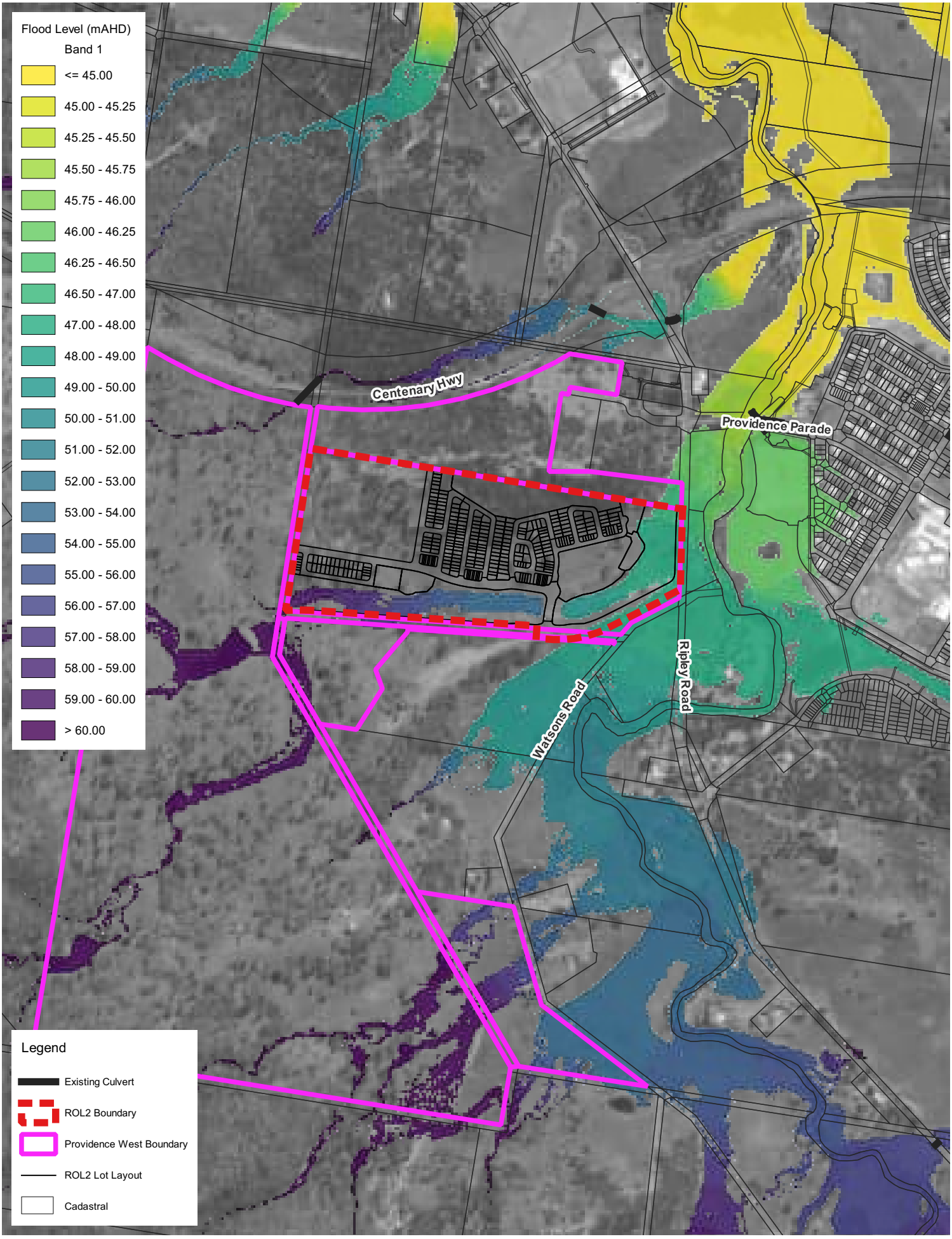
FIGURE NUMBER: B32

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppB\AppB.qgz

Appendix C Post-development Flood Maps



Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 1% AEP with climate change Flood Level - Post-development

N

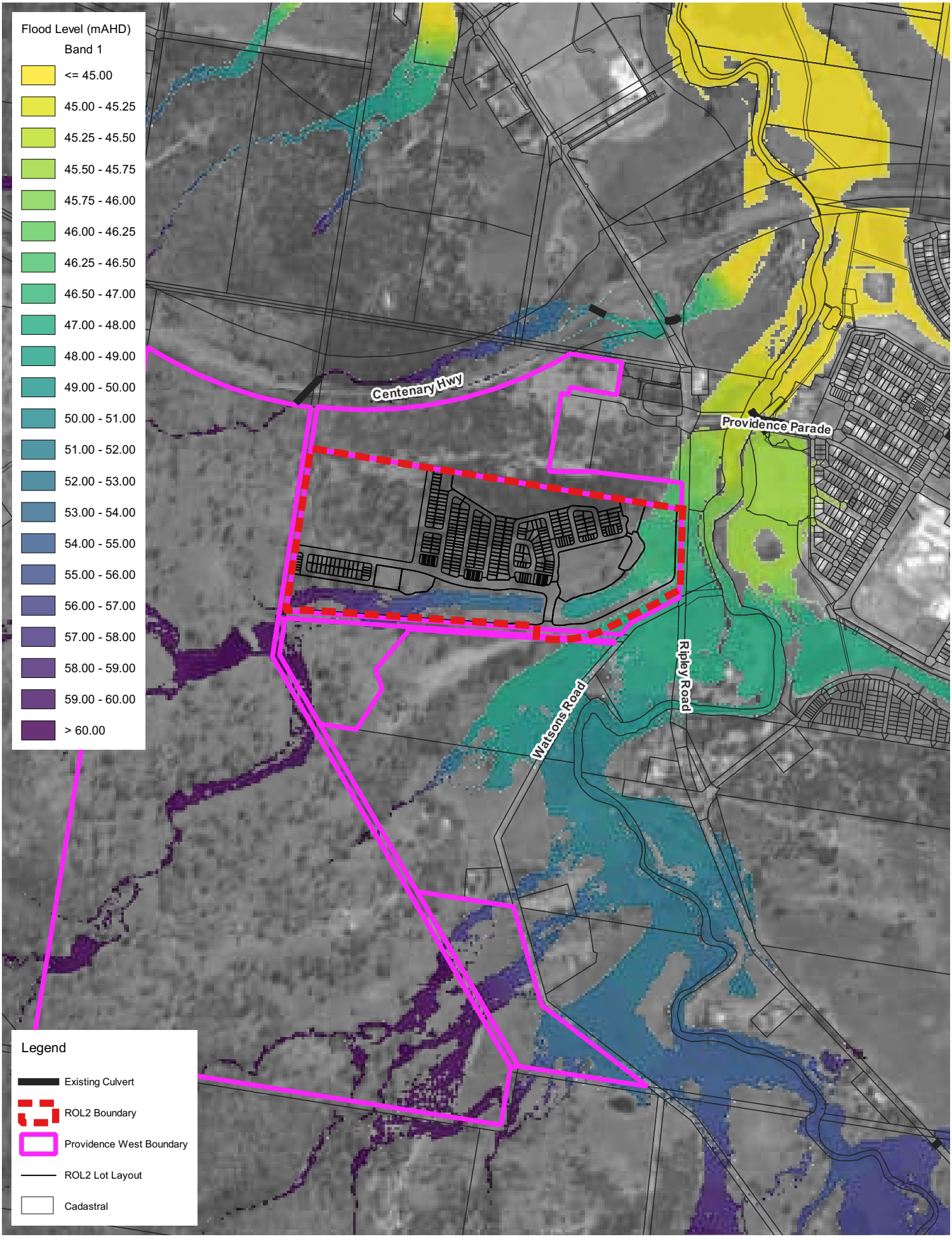
0 200 400 m

FIGURE NUMBER: C1

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppC\AppC.qgz



Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 1% AEP Flood Level - Post-development

N

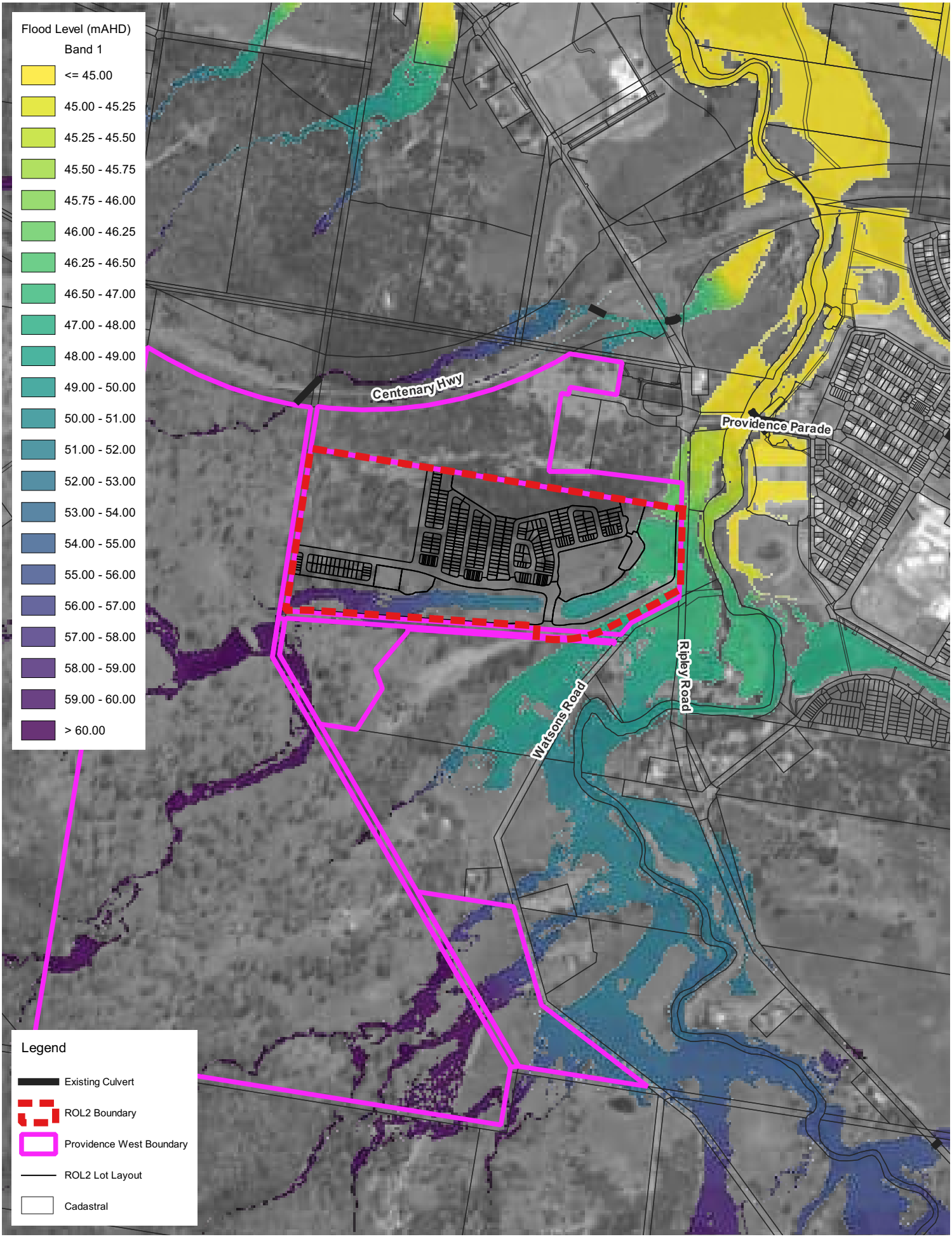
0 200 400 m

FIGURE NUMBER: C2

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppC\AppC.qgz



Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 2% AEP Flood Level - Post-development

N

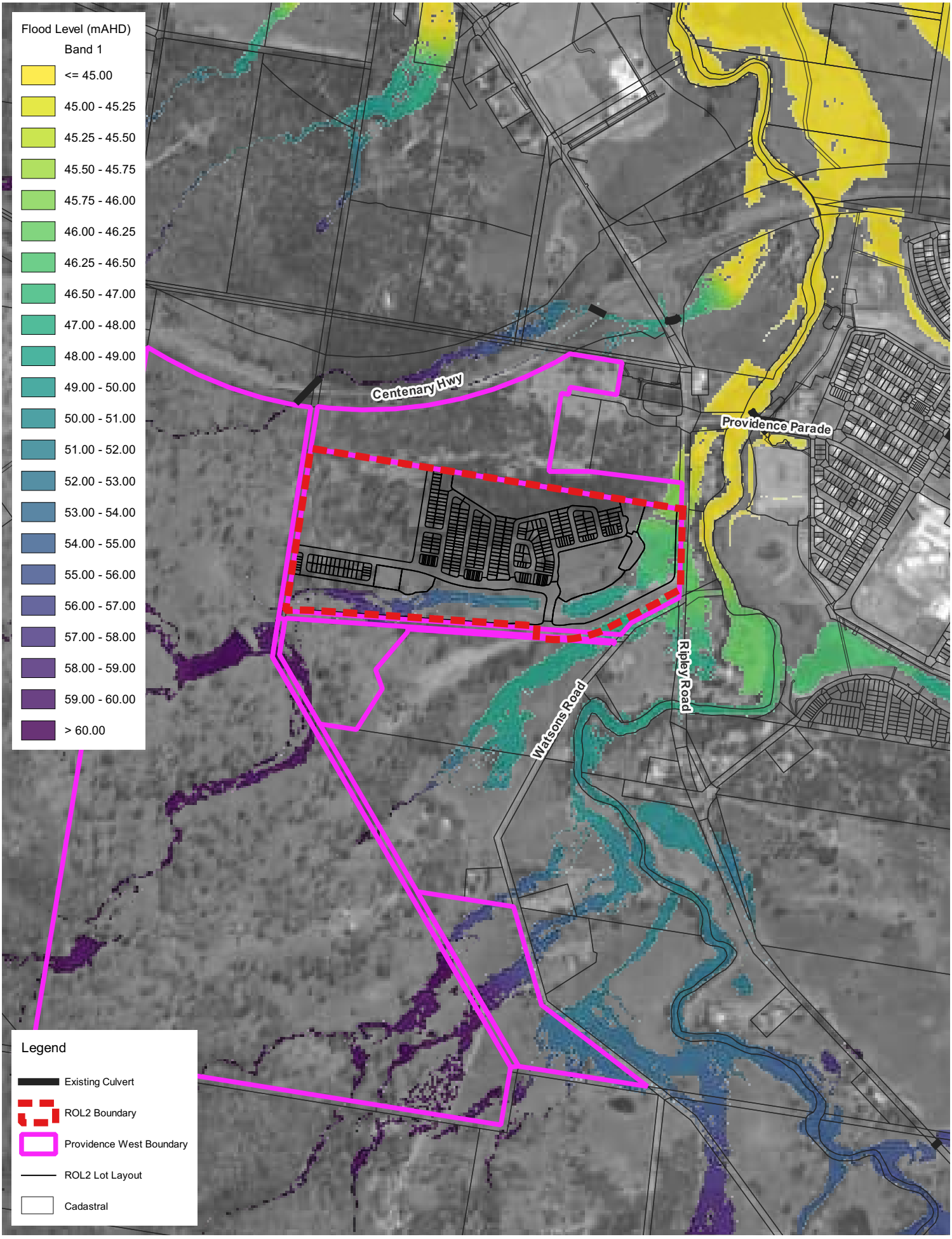
0 200 400 m

FIGURE NUMBER: C3

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppC\AppC.qgz



Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 5% AEP Flood Level - Post-development

N

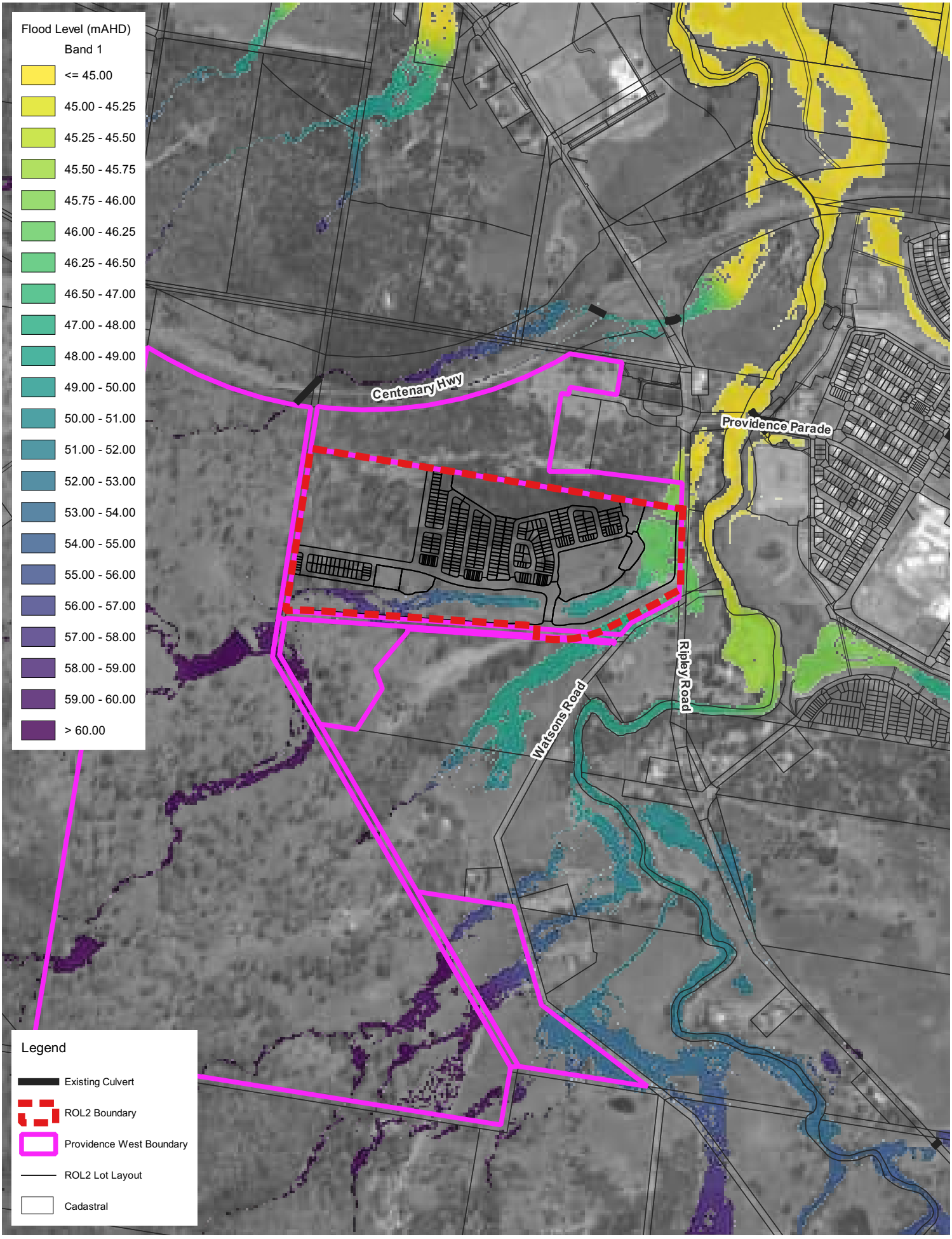
0 200 400 m

FIGURE NUMBER: C4

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppC\AppC.qgz



Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 10% AEP Flood Level - Post-development

N

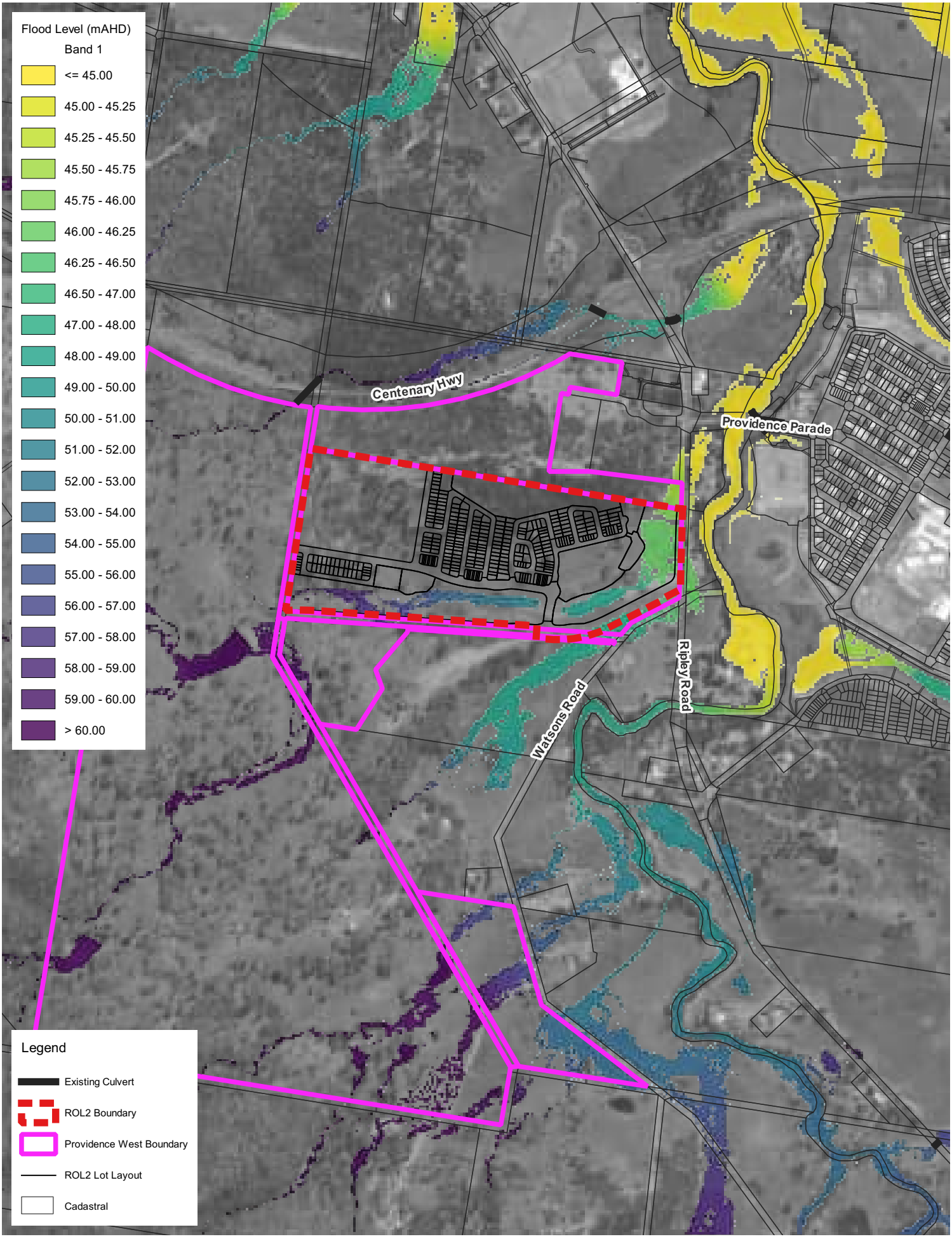
0 200 400 m

FIGURE NUMBER: C5

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppC\AppC.qgz



Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 18% AEP Flood Level - Post-development

N

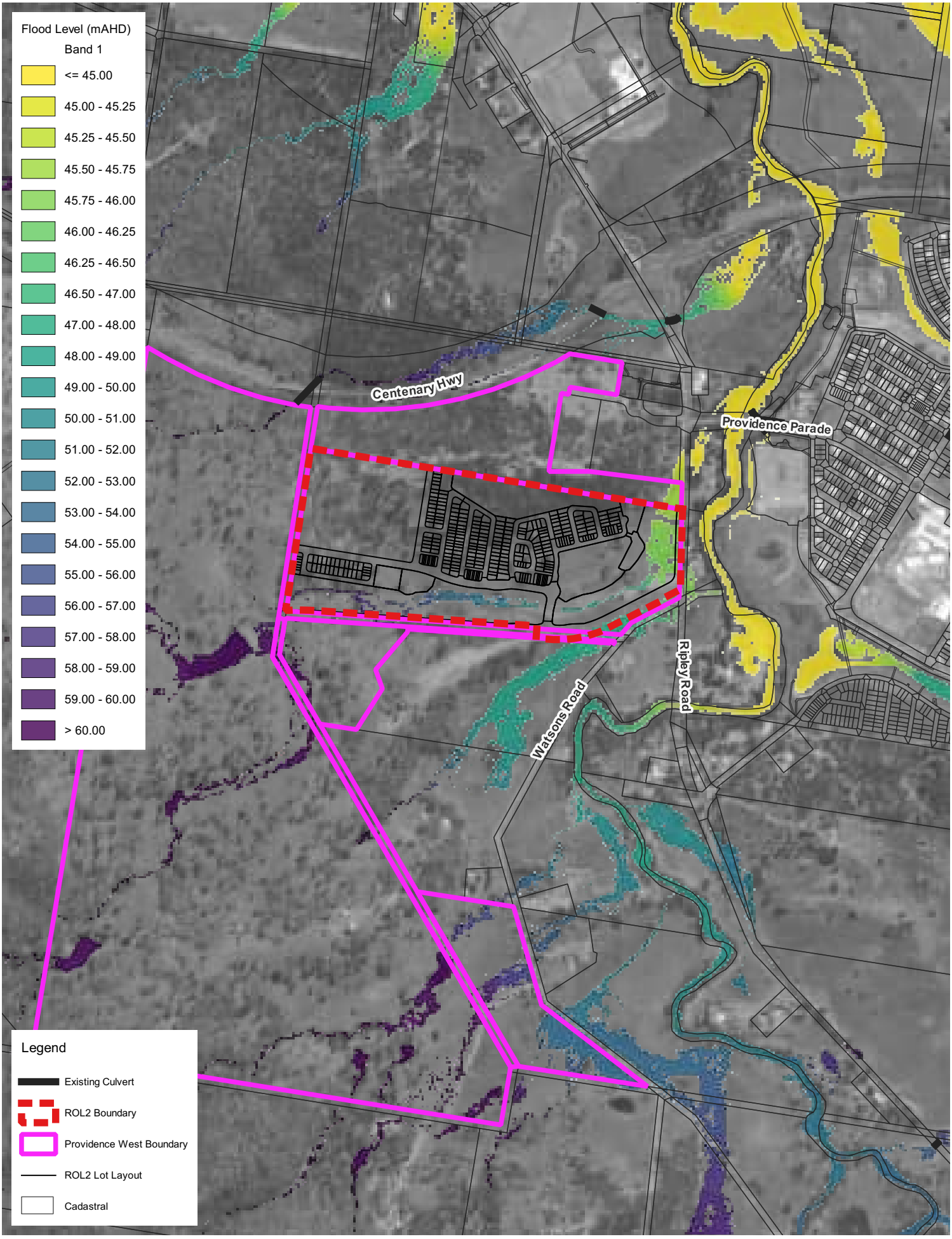
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FIGURE NUMBER: C6

REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
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TITLE: 39% AEP Flood Level - Post-development

N

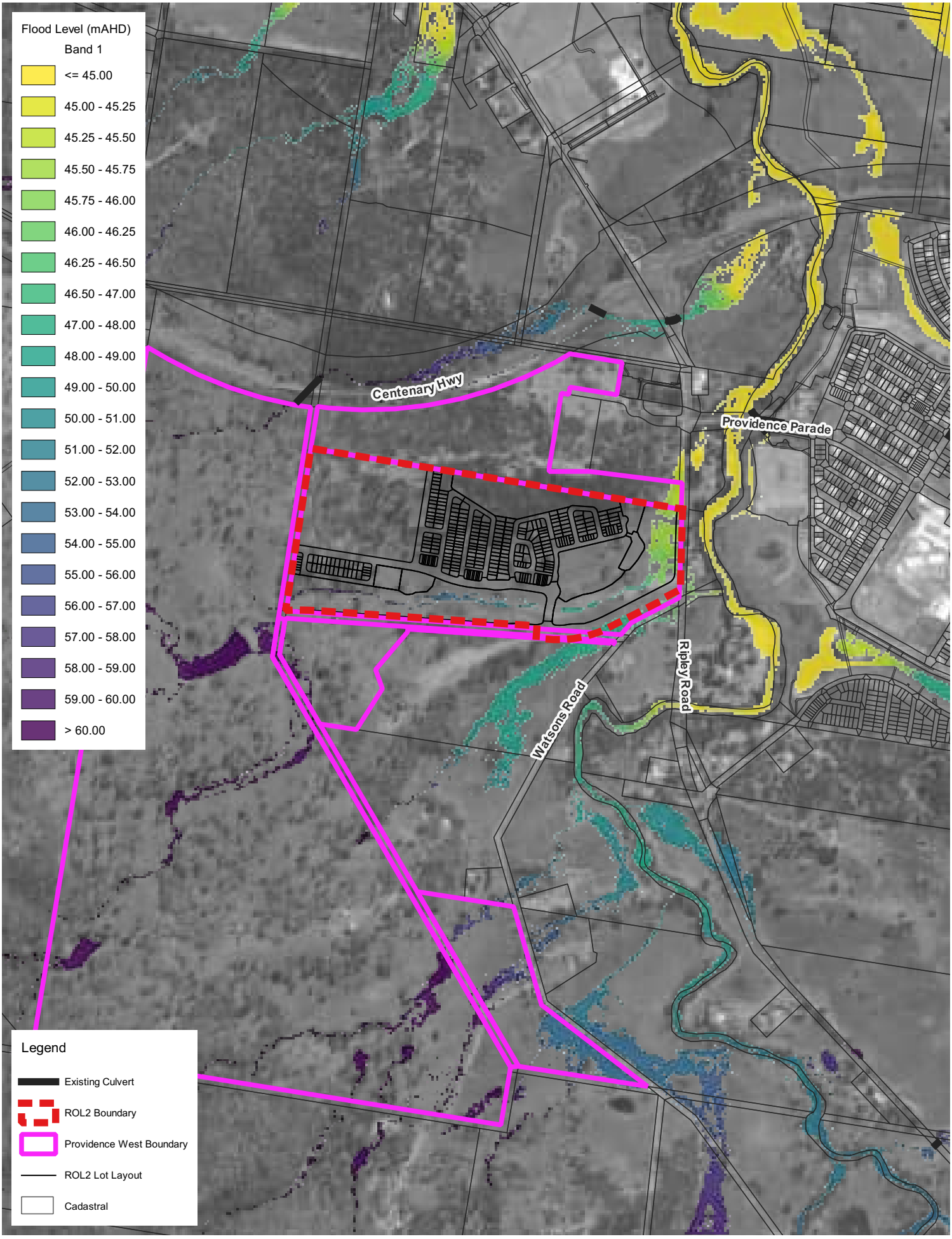
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FIGURE NUMBER: C7

REVISION:

DATE: 10-November-2025

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Topography:
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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 63% AEP Flood Level - Post-development

N

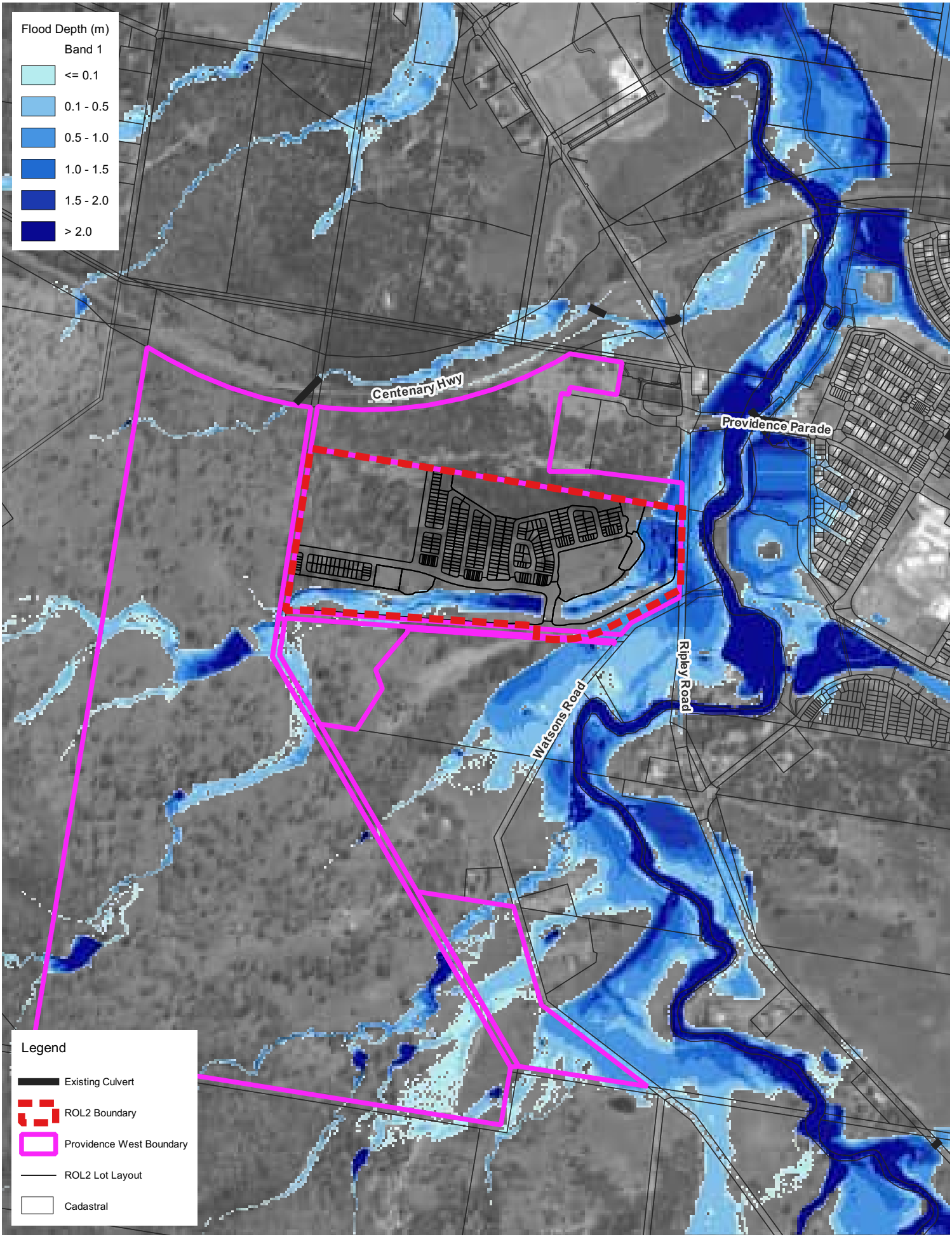
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FIGURE NUMBER: C8

REVISION:

DATE: 10-November-2025

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Topography:
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Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
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TITLE: 1% AEP with climate change Flood Depth - Post-development

N

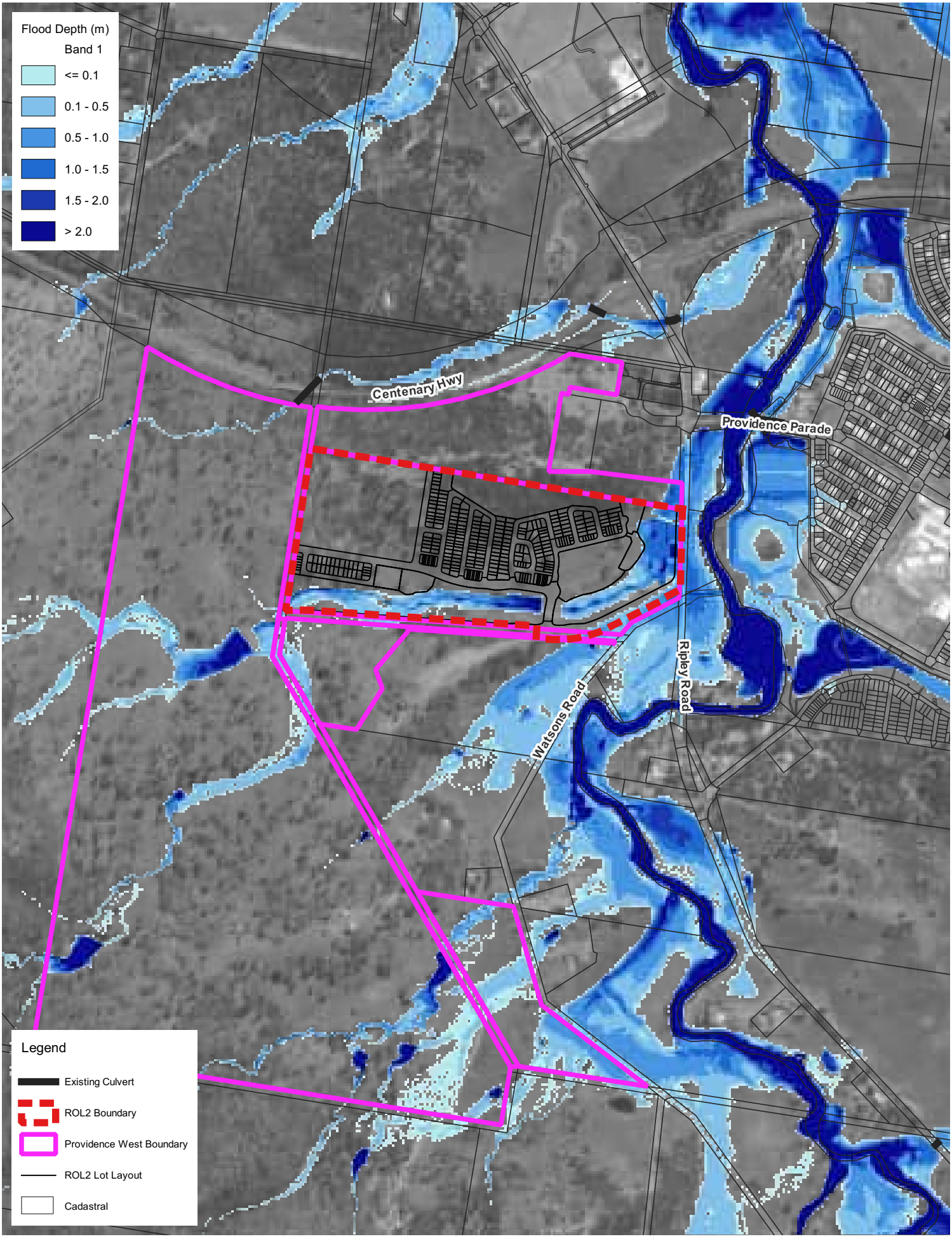
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FIGURE NUMBER: C9

REVISION:

DATE: 10-November-2025

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Topography:
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Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 1% AEP Flood Depth - Post-development

N

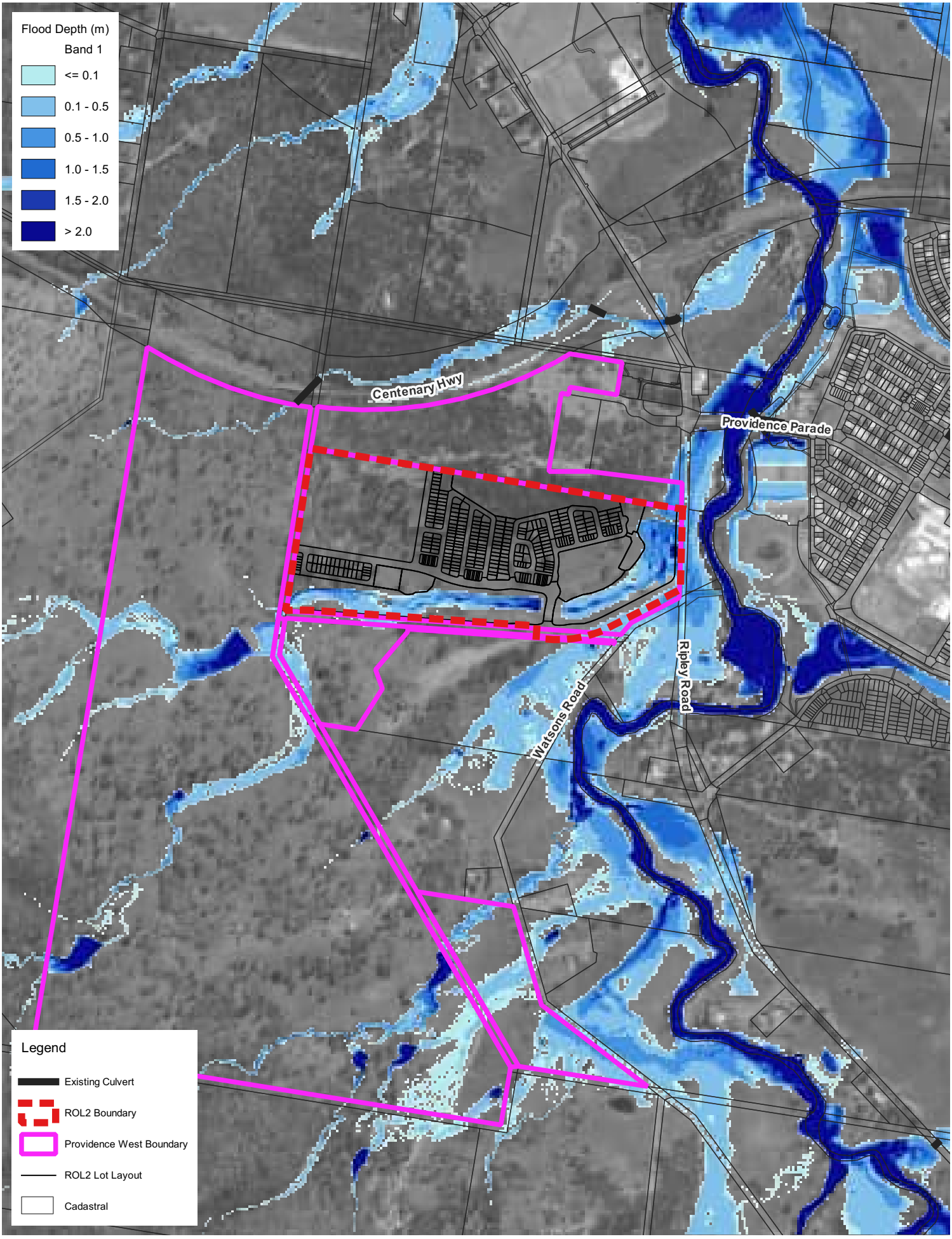
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FIGURE NUMBER: C10

REVISION:

DATE: 10-November-2025

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Topography:
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Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
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TITLE: 2% AEP Flood Depth - Post-development

N

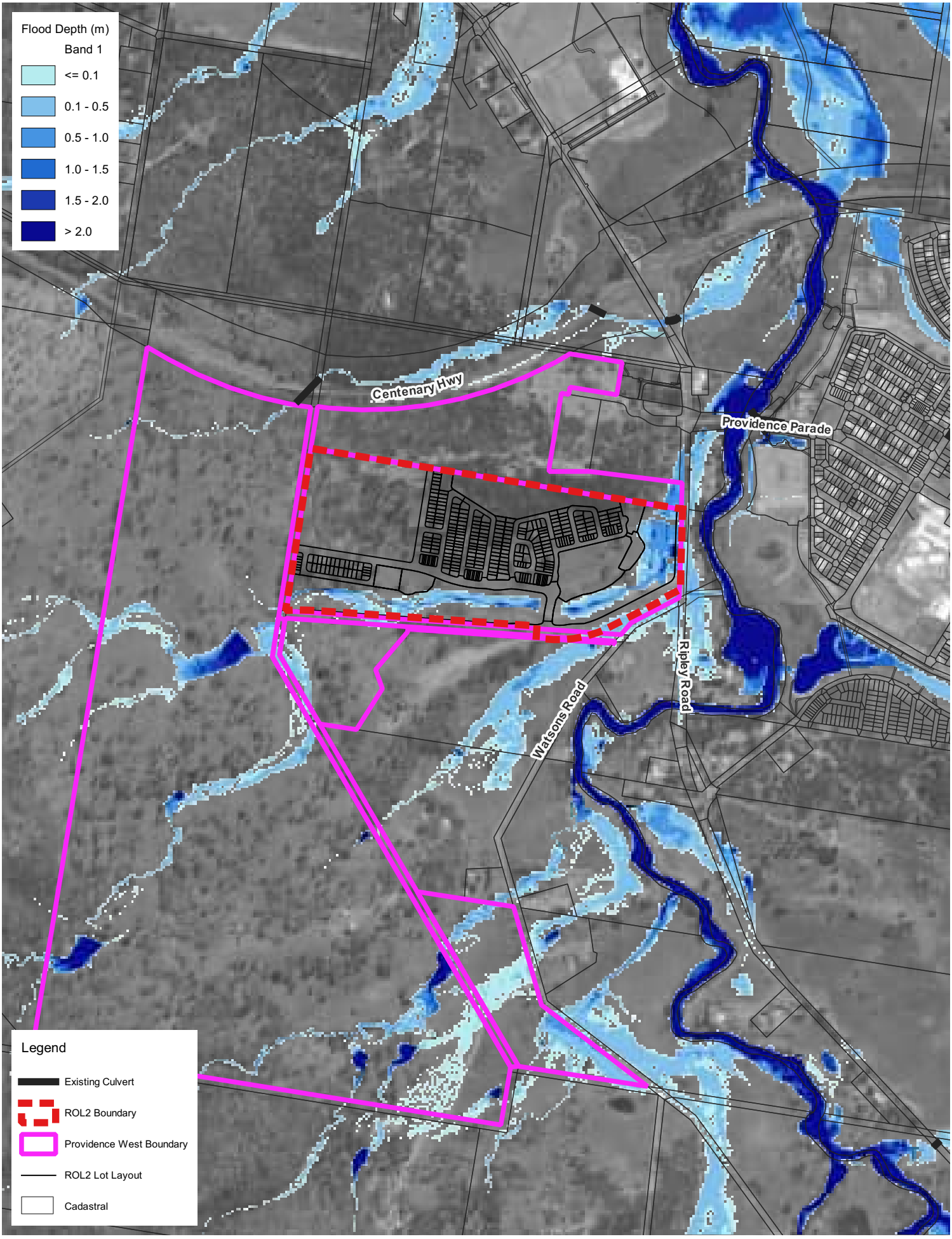
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FIGURE NUMBER: C11

REVISION:

DATE: 10-November-2025

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Topography:
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Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
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TITLE: 5% AEP Flood Depth - Post-development

N

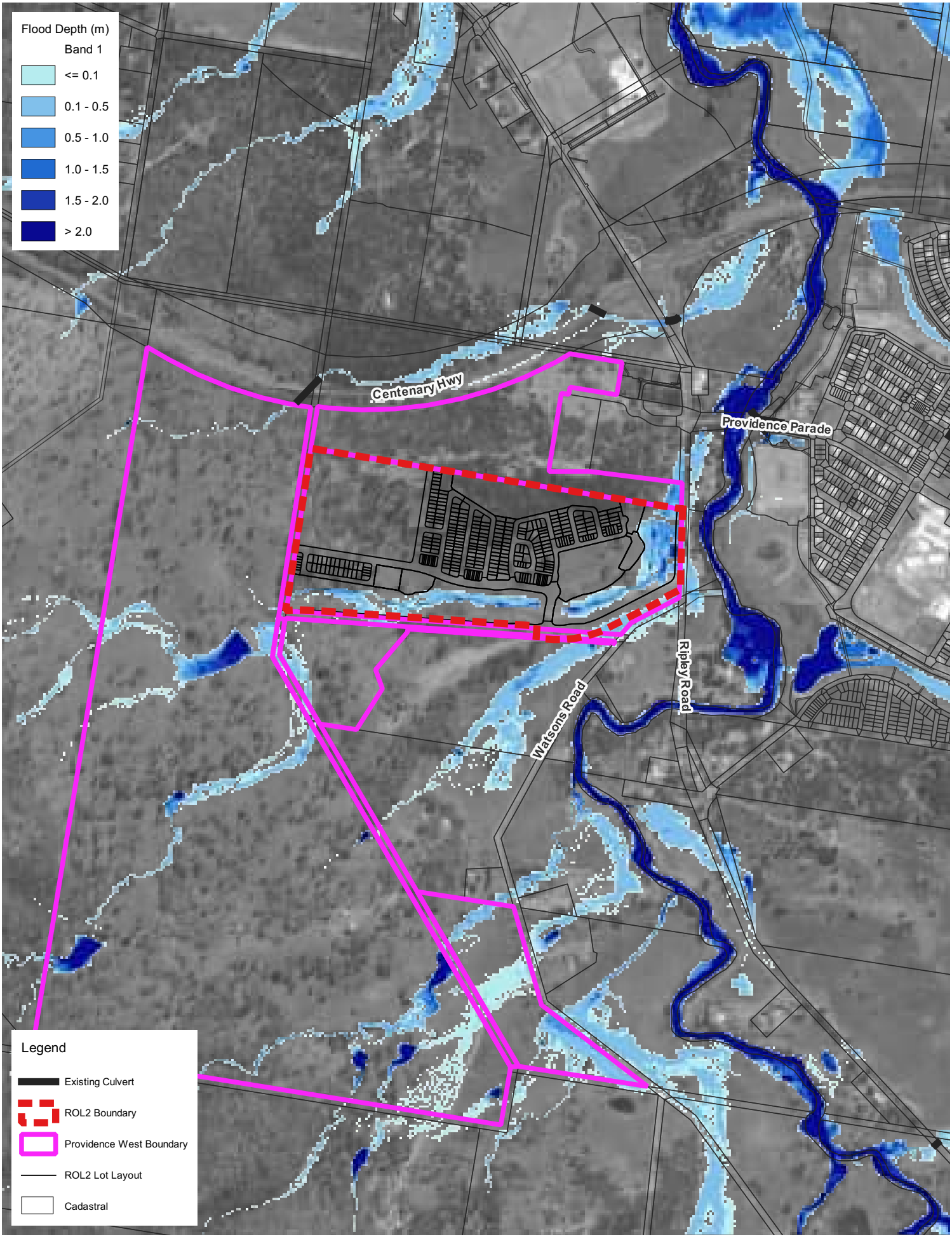
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FIGURE NUMBER: C12

REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
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Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 10% AEP Flood Depth - Post-development

N

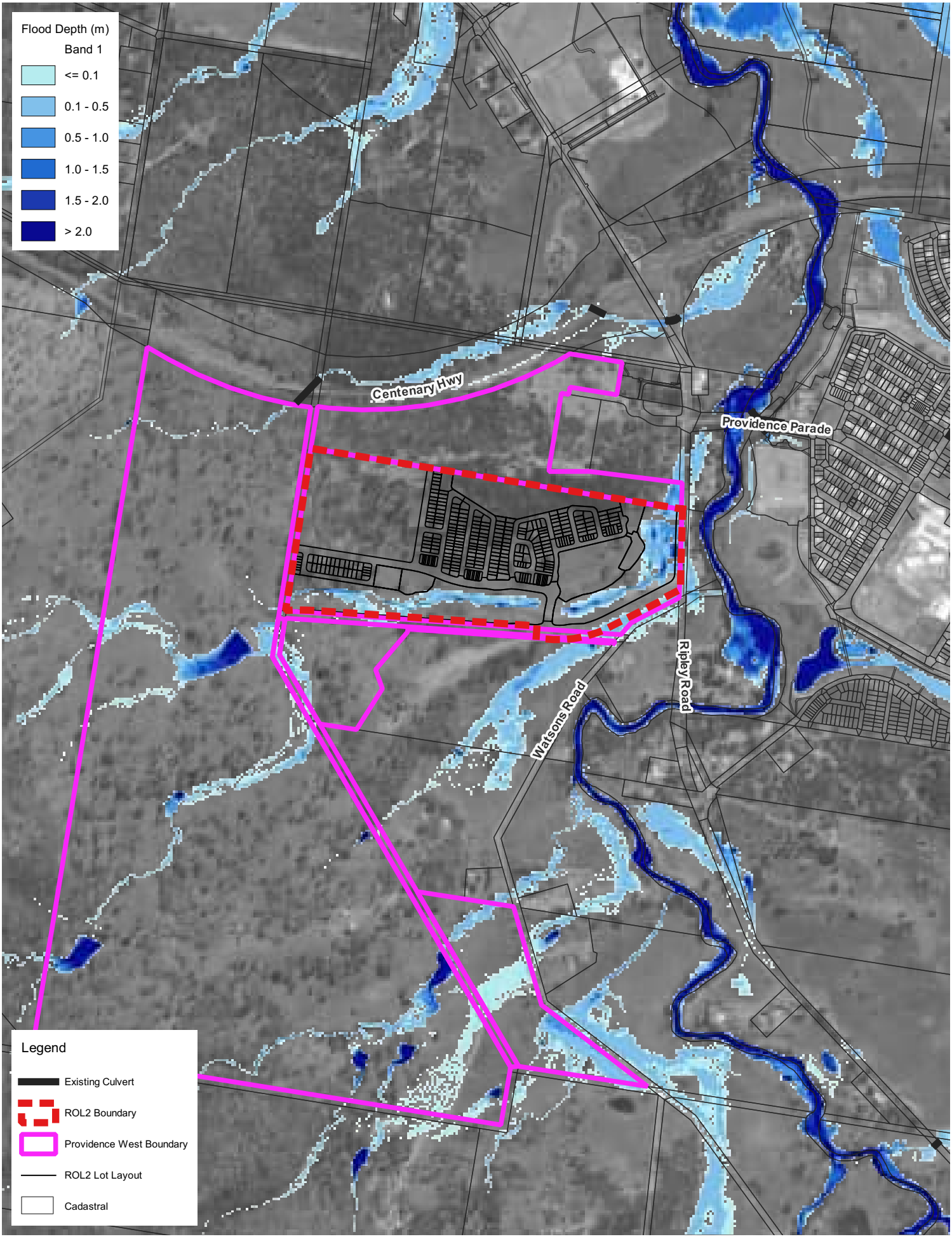
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FIGURE NUMBER: C13

REVISION:

DATE: 10-November-2025

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Data Sources:
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Topography:
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Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 18% AEP Flood Depth - Post-development

N

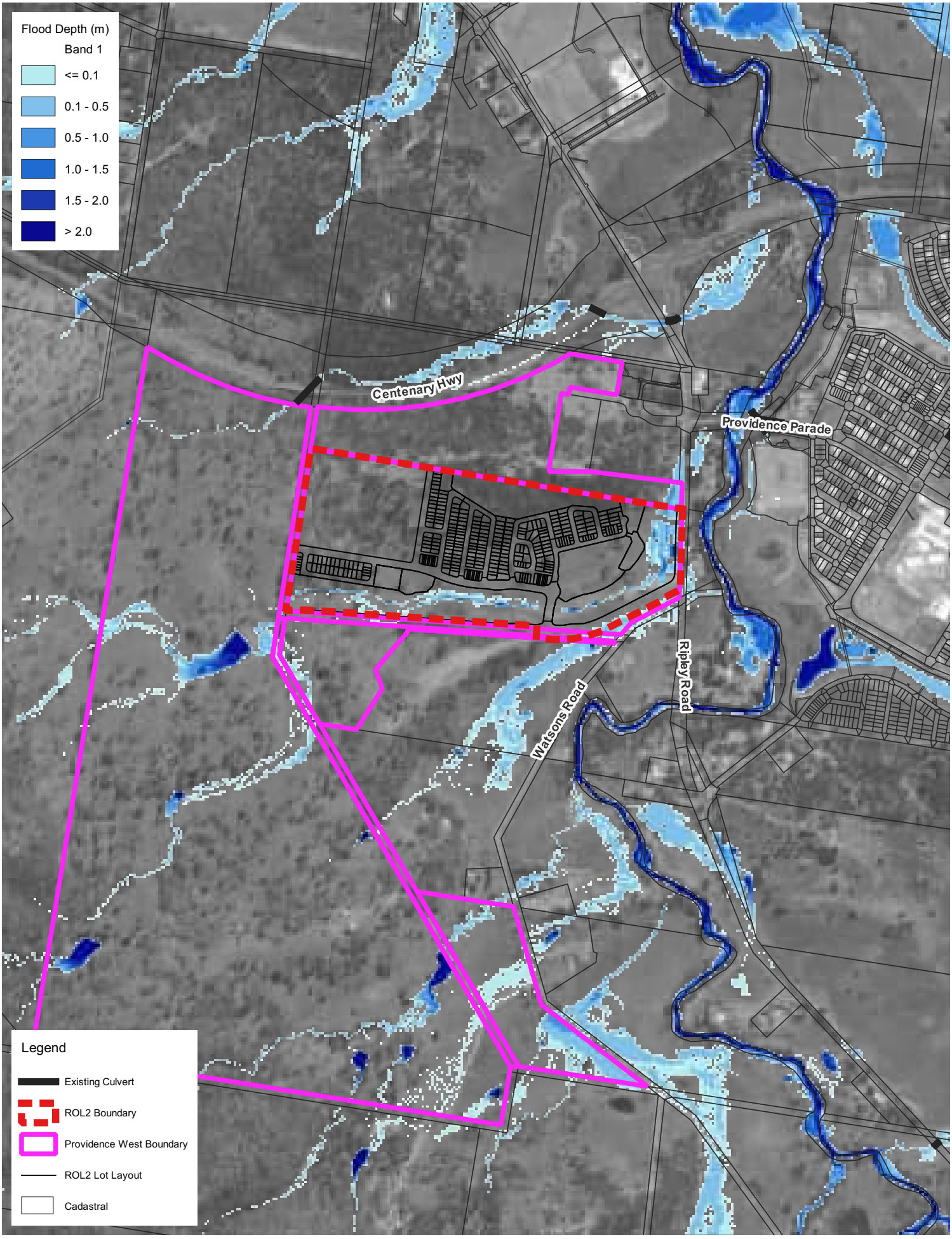
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FIGURE NUMBER: C14

REVISION:

DATE: 10-November-2025

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Data Sources:
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Topography:
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Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 39% AEP Flood Depth - Post-development

N

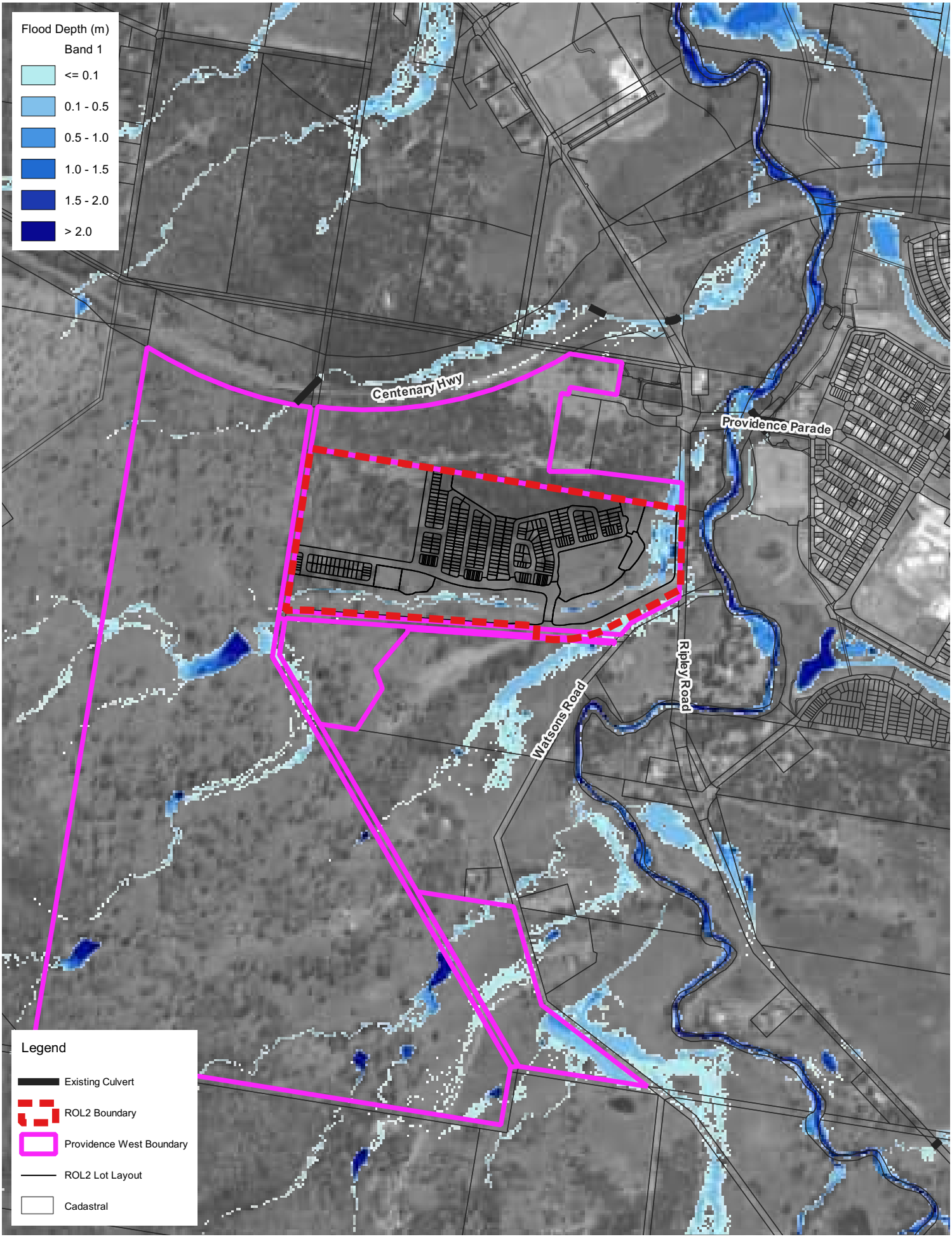
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FIGURE NUMBER: C15

REVISION:

DATE: 10-November-2025

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Data Sources:
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Topography:
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Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 63% AEP Flood Depth - Post-development

N

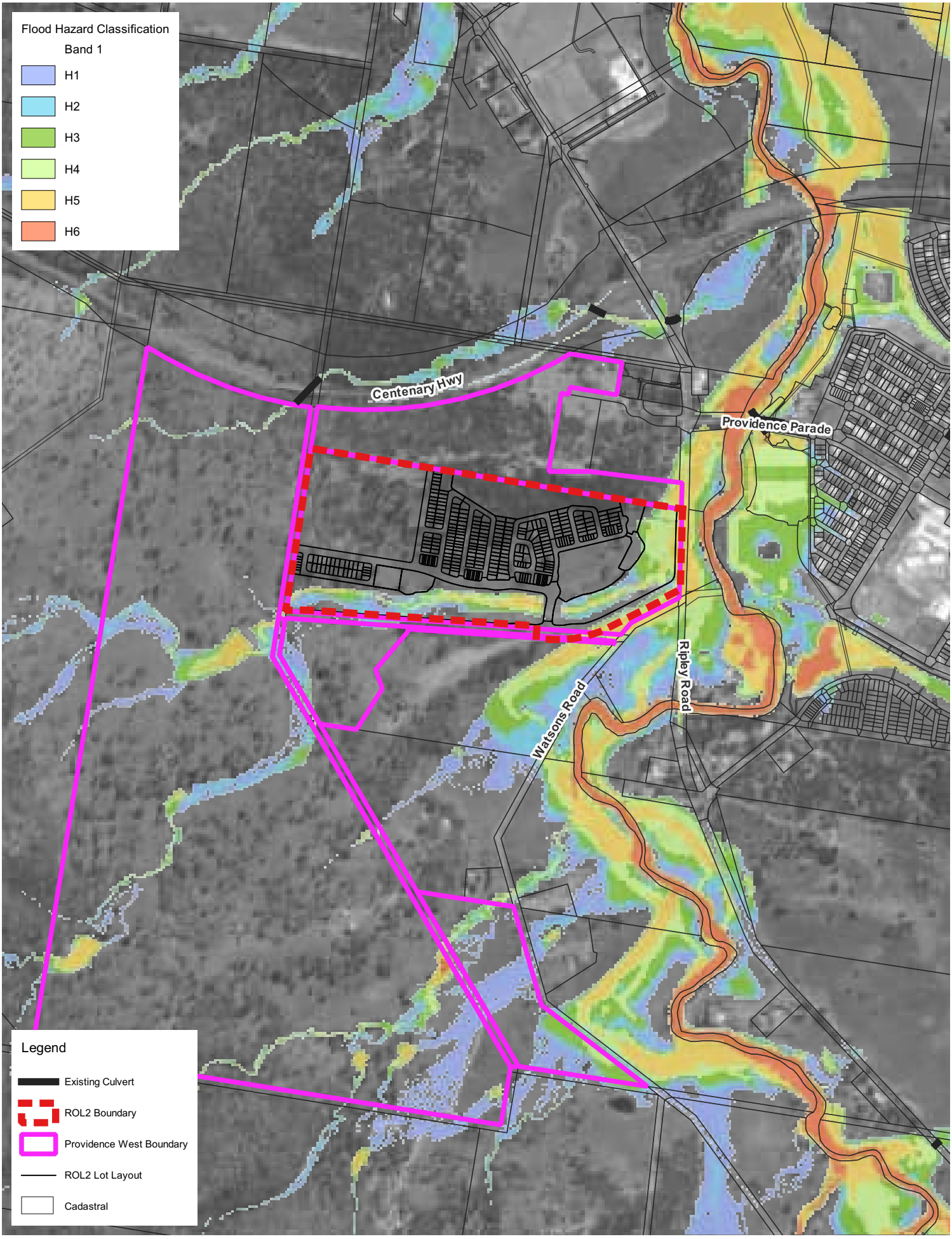
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FIGURE NUMBER: C16

REVISION:

DATE: 10-November-2025

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Data Sources:
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Topography:
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Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 1% AEP with climate change Flood Hazard - Post-development

N

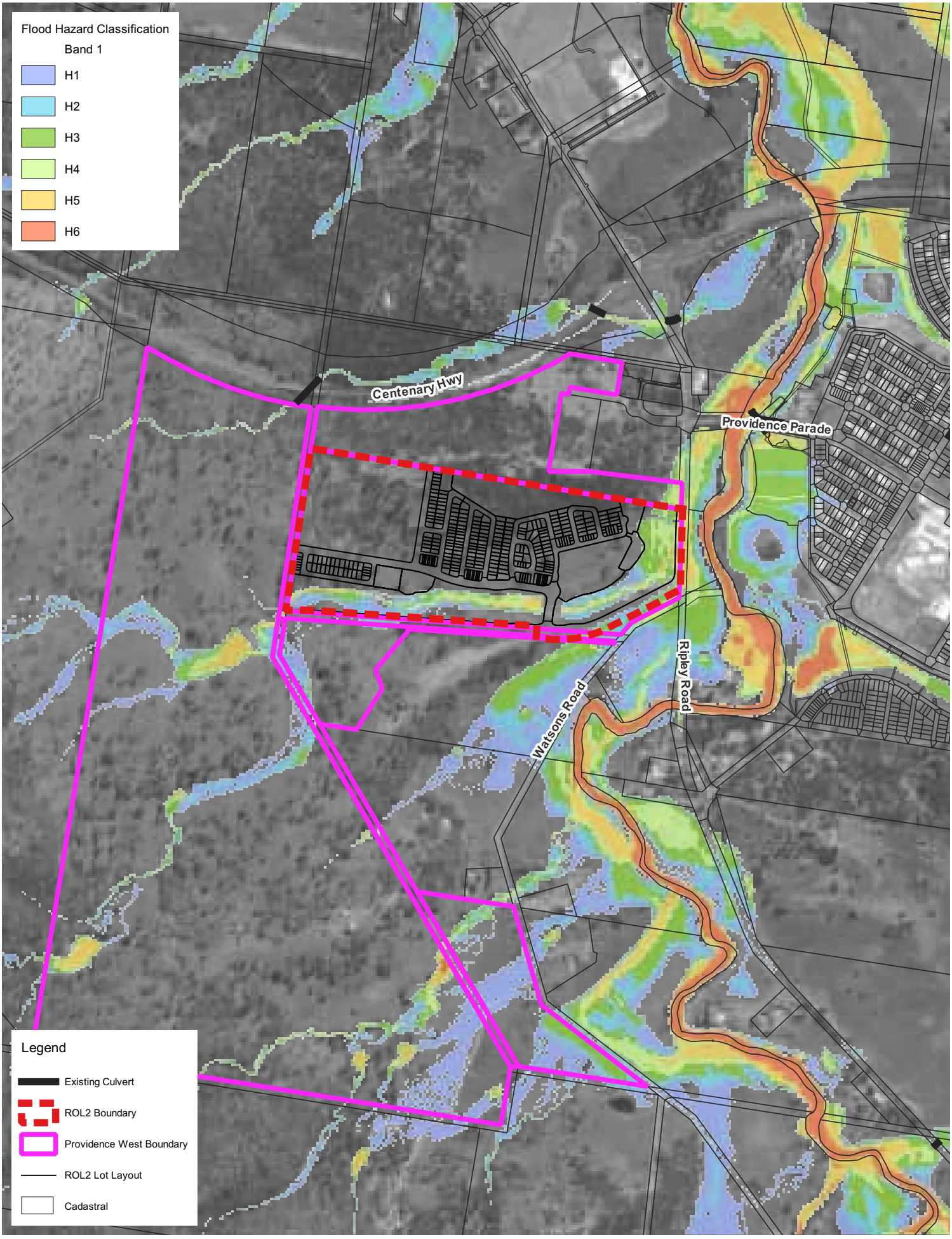
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FIGURE NUMBER: C17

REVISION:

DATE: 10-November-2025

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Data Sources:
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Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 1% AEP Flood Hazard - Post-development

N

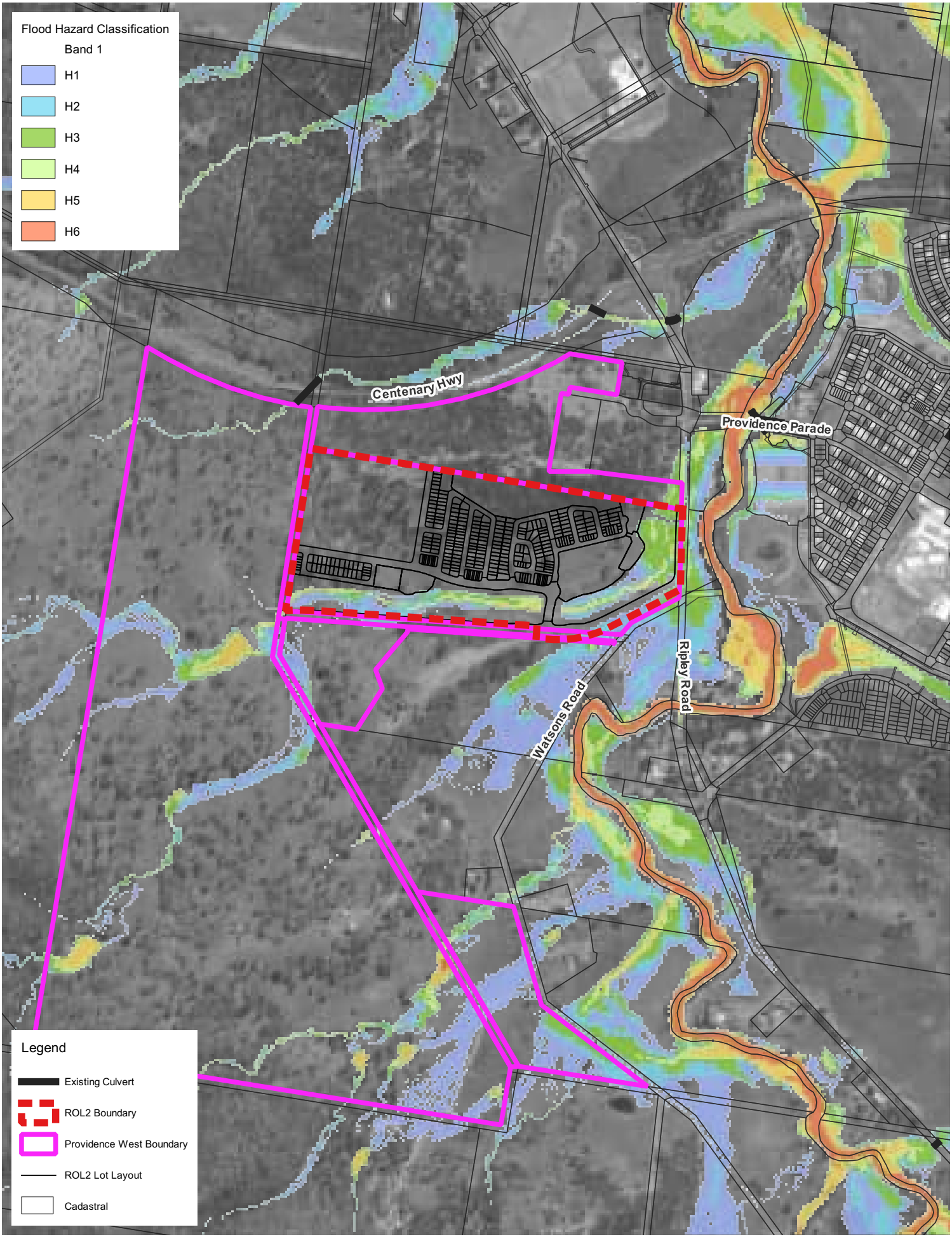
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FIGURE NUMBER: C18

REVISION:

DATE: 10-November-2025

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Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 2% AEP Flood Hazard - Post-development

N

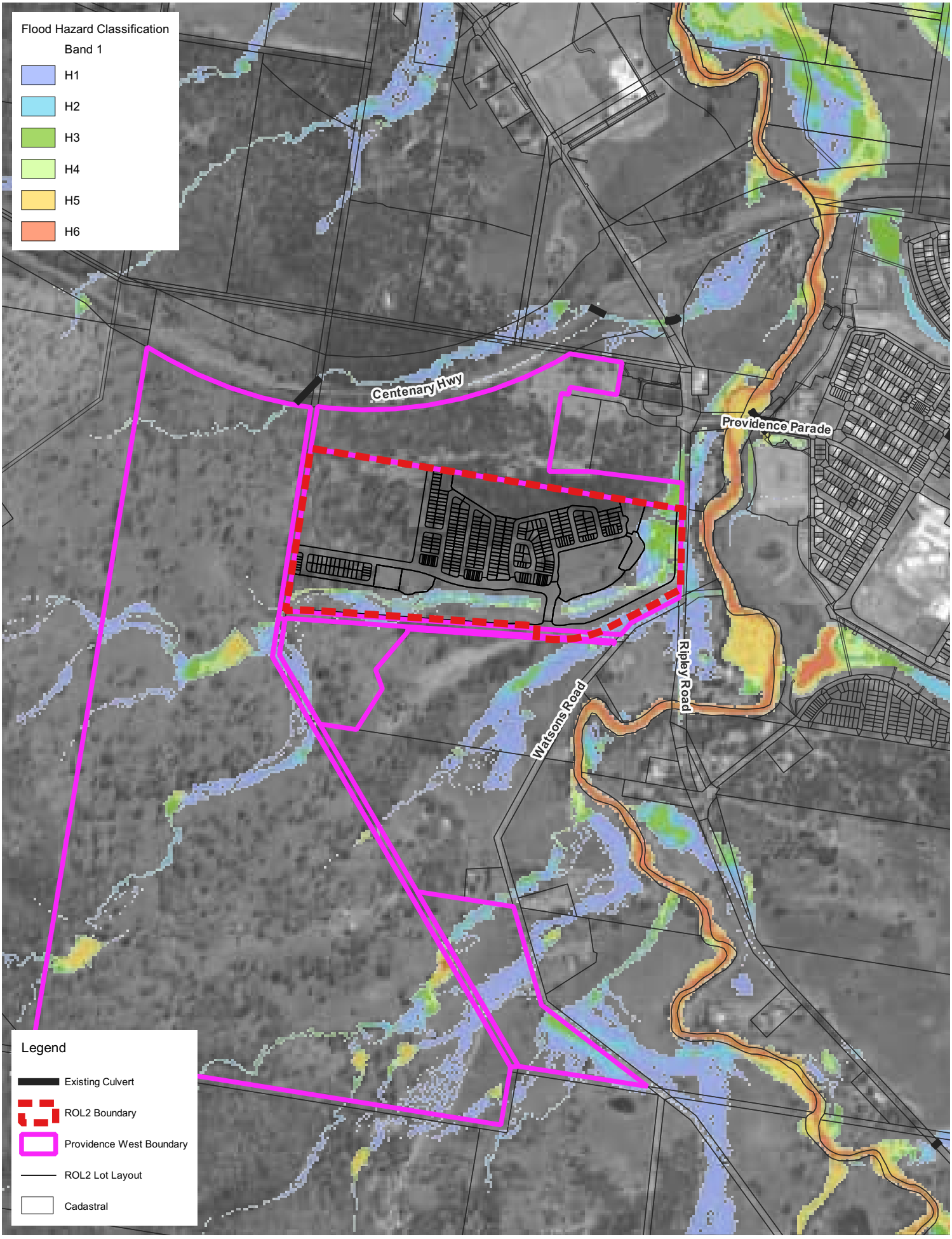
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FIGURE NUMBER: C19

REVISION:

DATE: 10-November-2025

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Data Sources:
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Topography:
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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 5% AEP Flood Hazard - Post-development

N

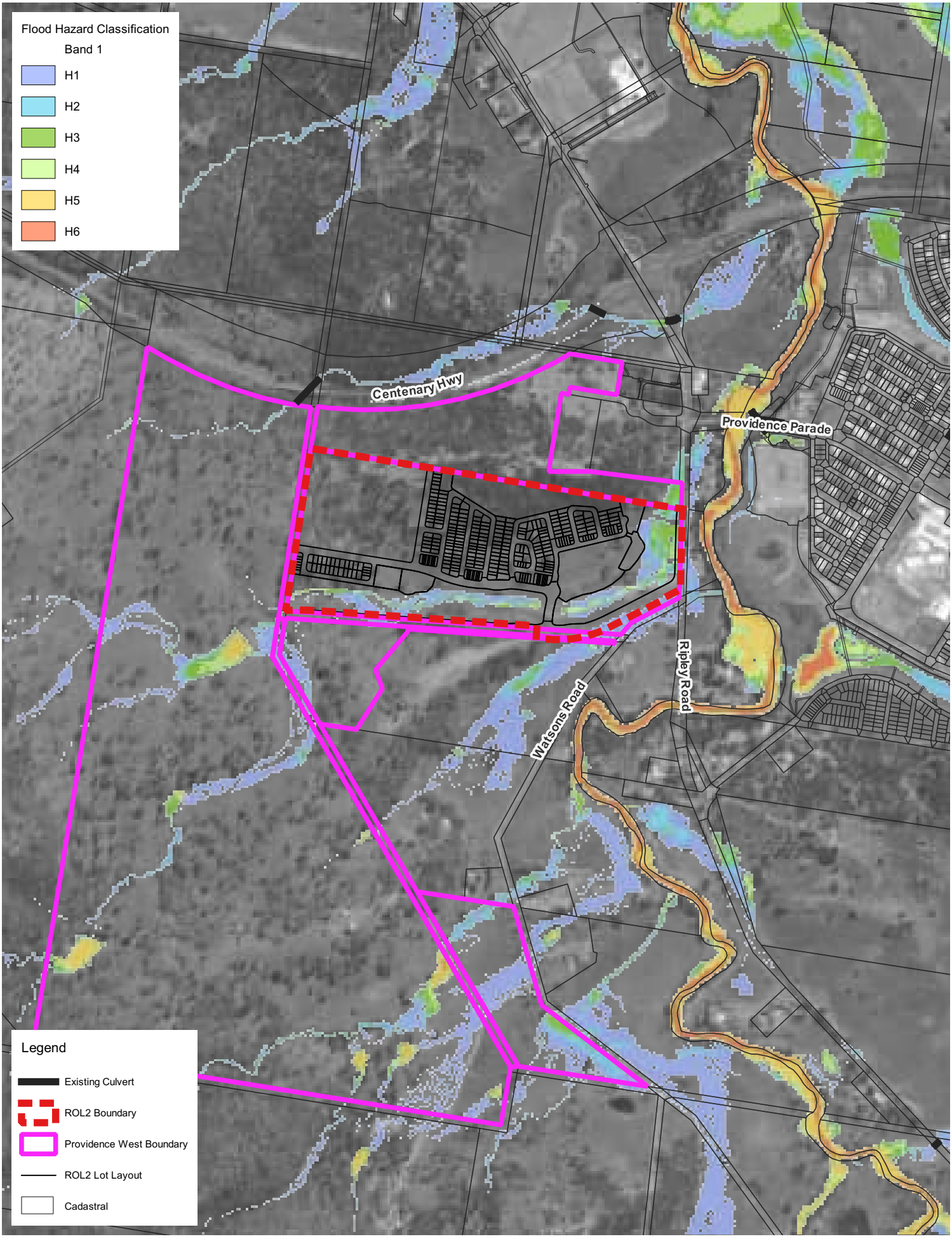
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FIGURE NUMBER: C20

REVISION:

DATE: 10-November-2025

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Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 10% AEP Flood Hazard - Post-development

N

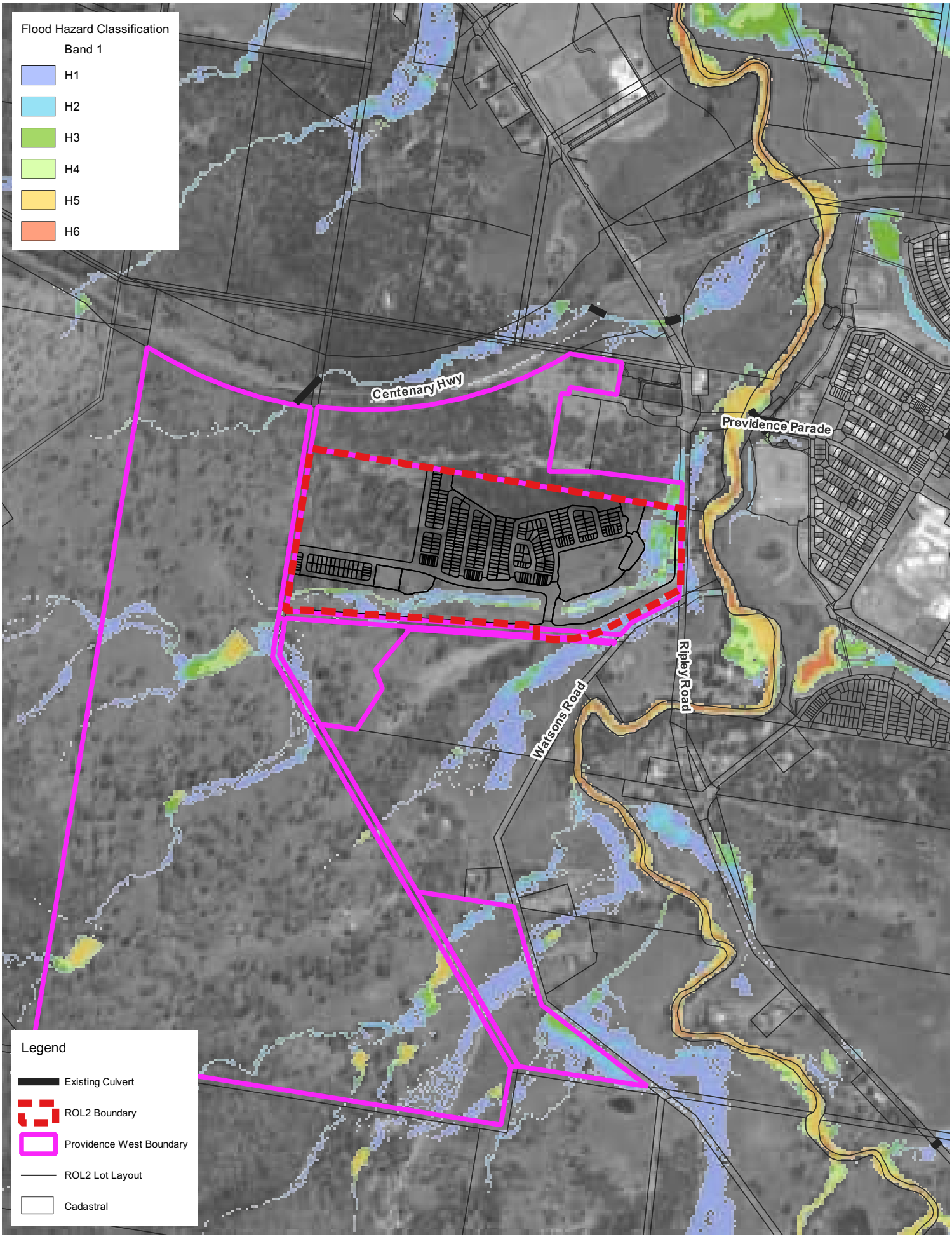
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FIGURE NUMBER: C21

REVISION:

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 18% AEP Flood Hazard - Post-development

N

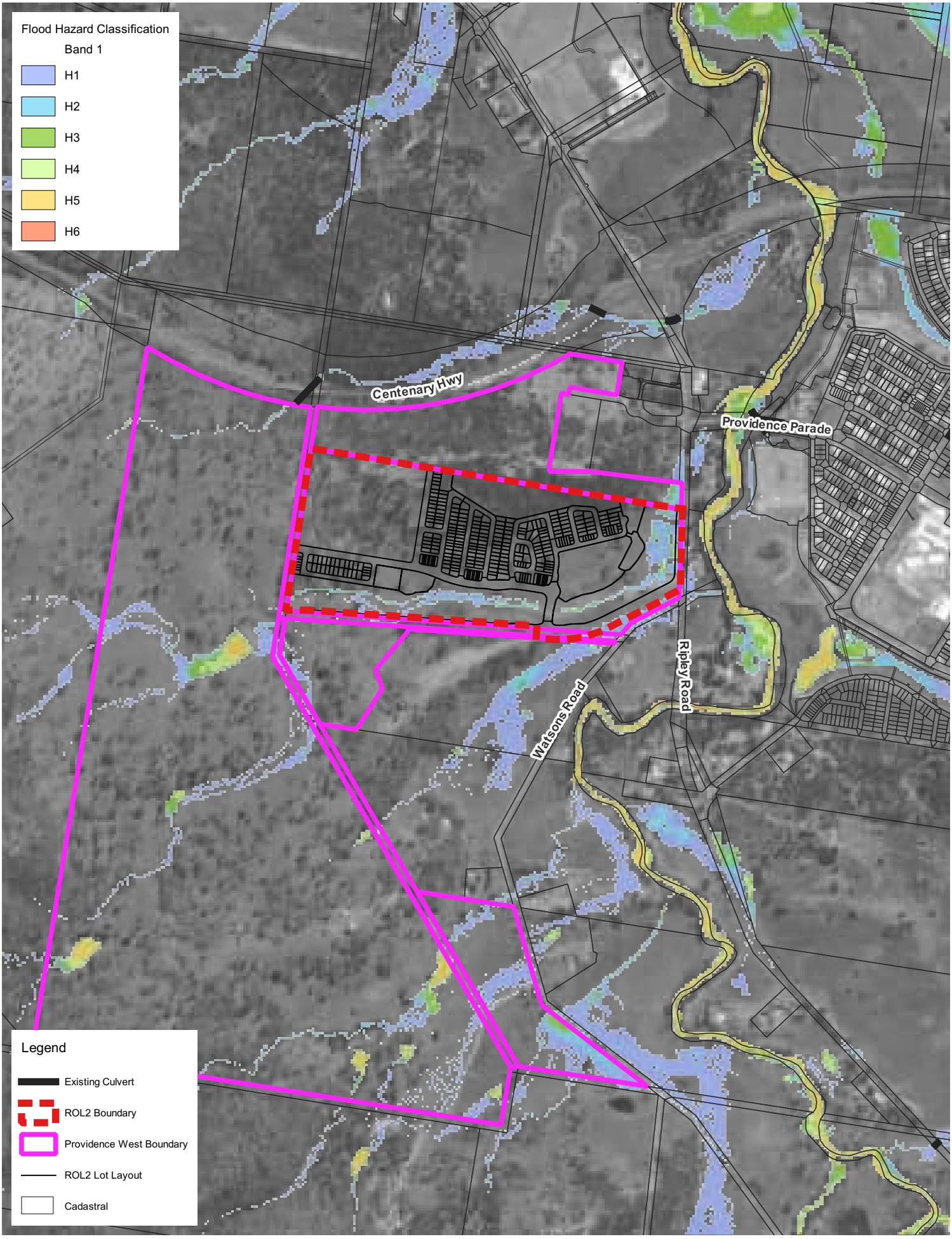
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FIGURE NUMBER: C22

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
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TITLE: 39% AEP Flood Hazard - Post-development

N

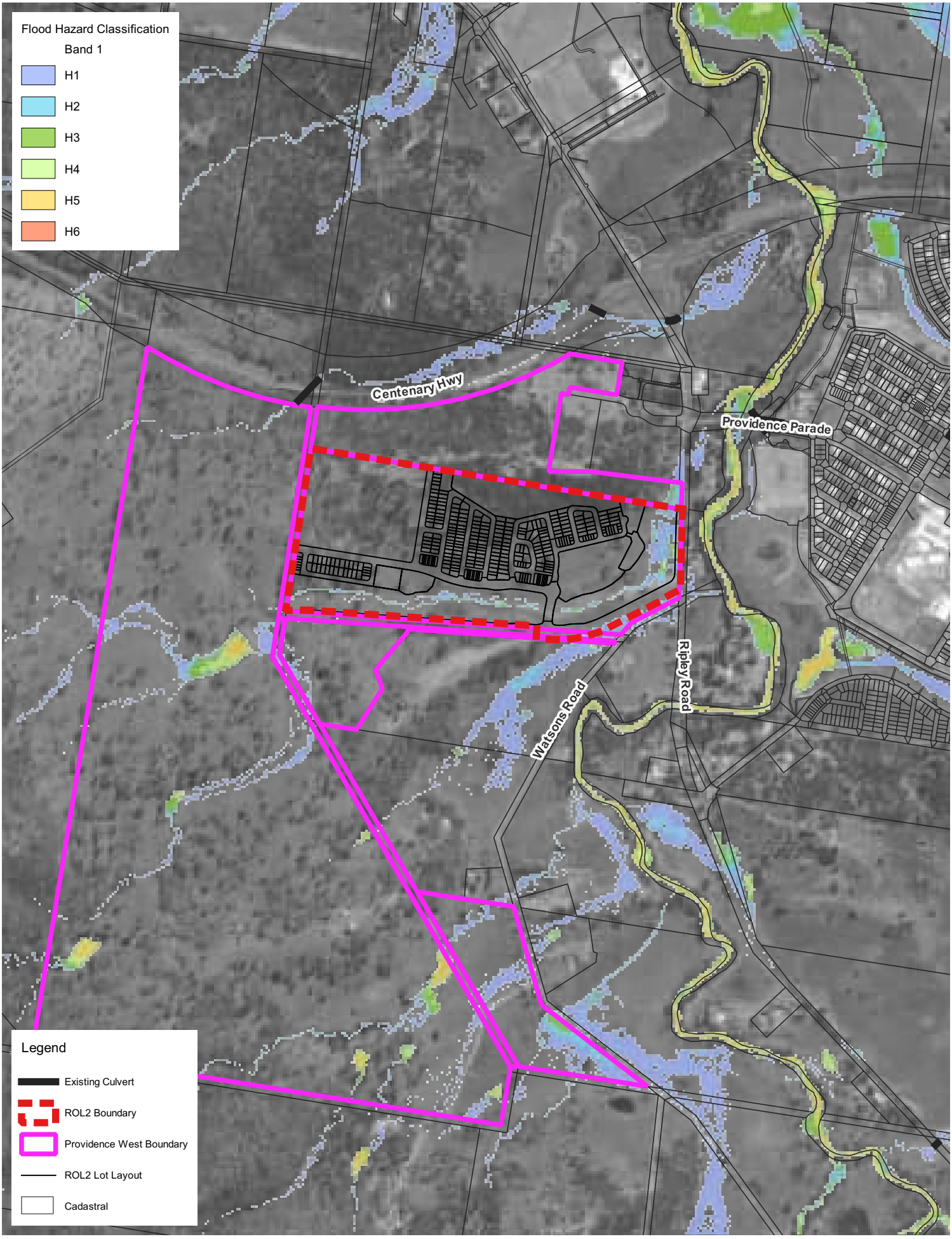
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FIGURE NUMBER: C23

REVISION:

DATE: 10-November-2025

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 63% AEP Flood Hazard - Post-development

N

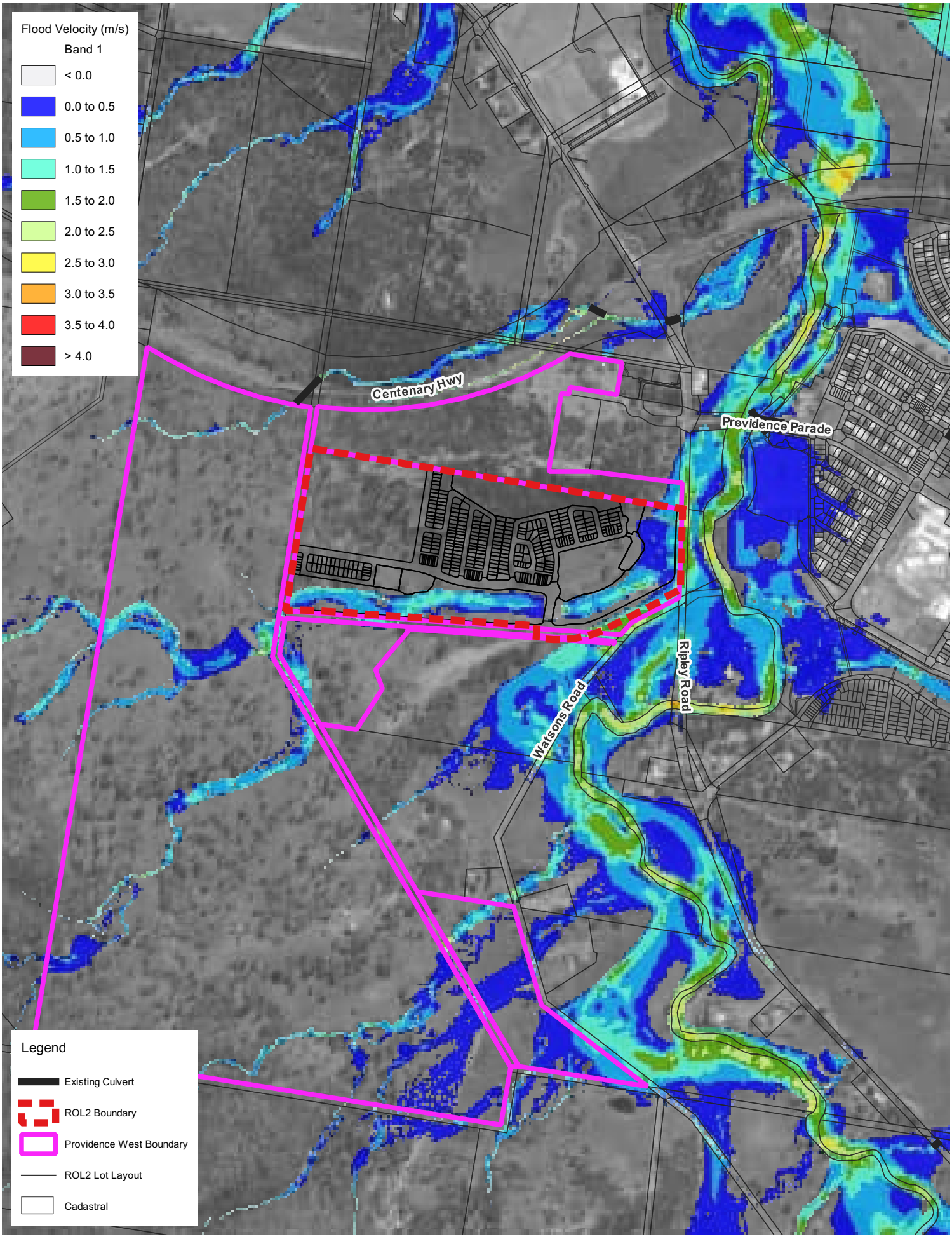
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FIGURE NUMBER: C24

REVISION:

DATE: 10-November-2025

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Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
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TITLE: 1% AEP with climate change Flood Velocity - Post-development

N

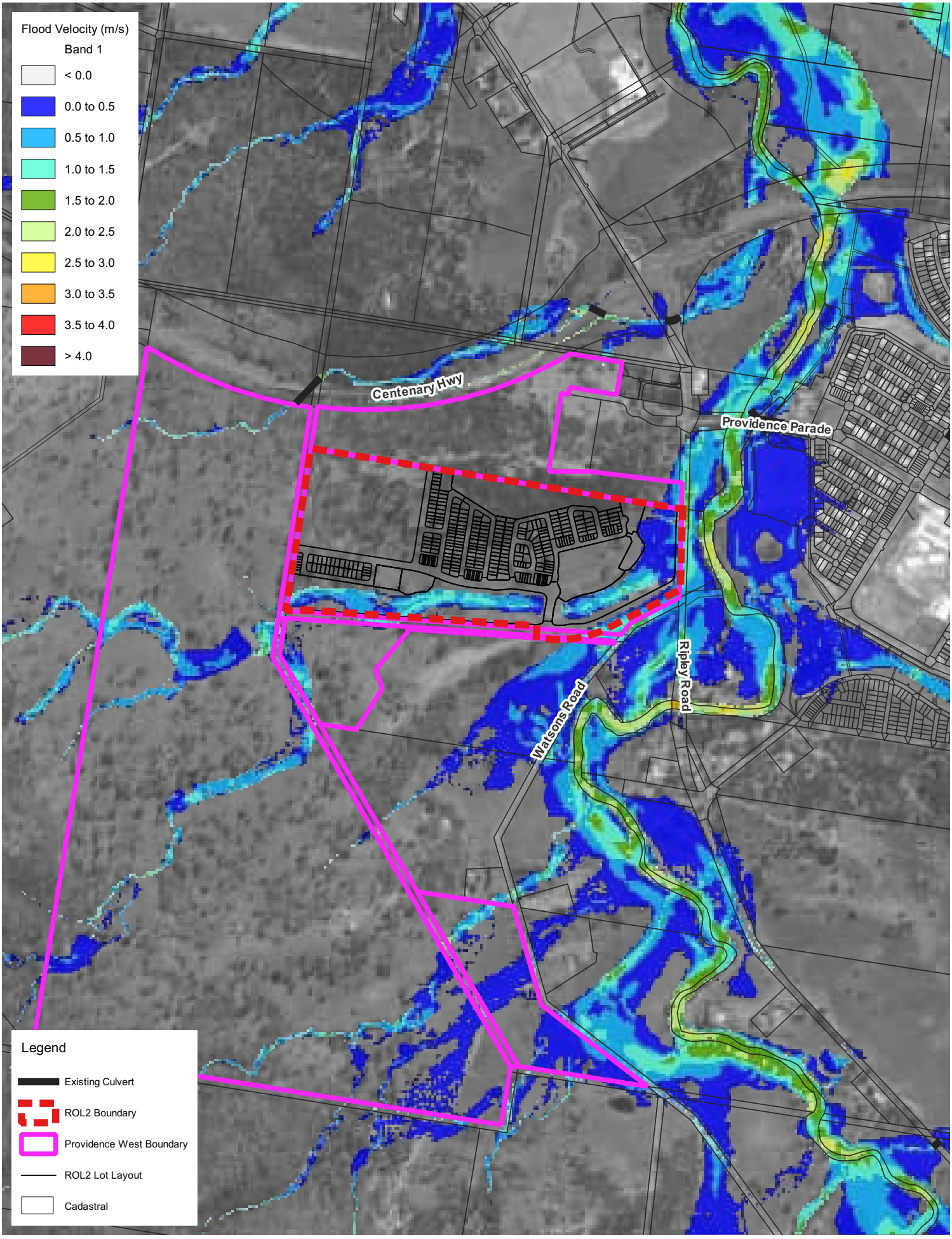
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FIGURE NUMBER: C25

REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 1% AEP Flood Velocity - Post-development

N

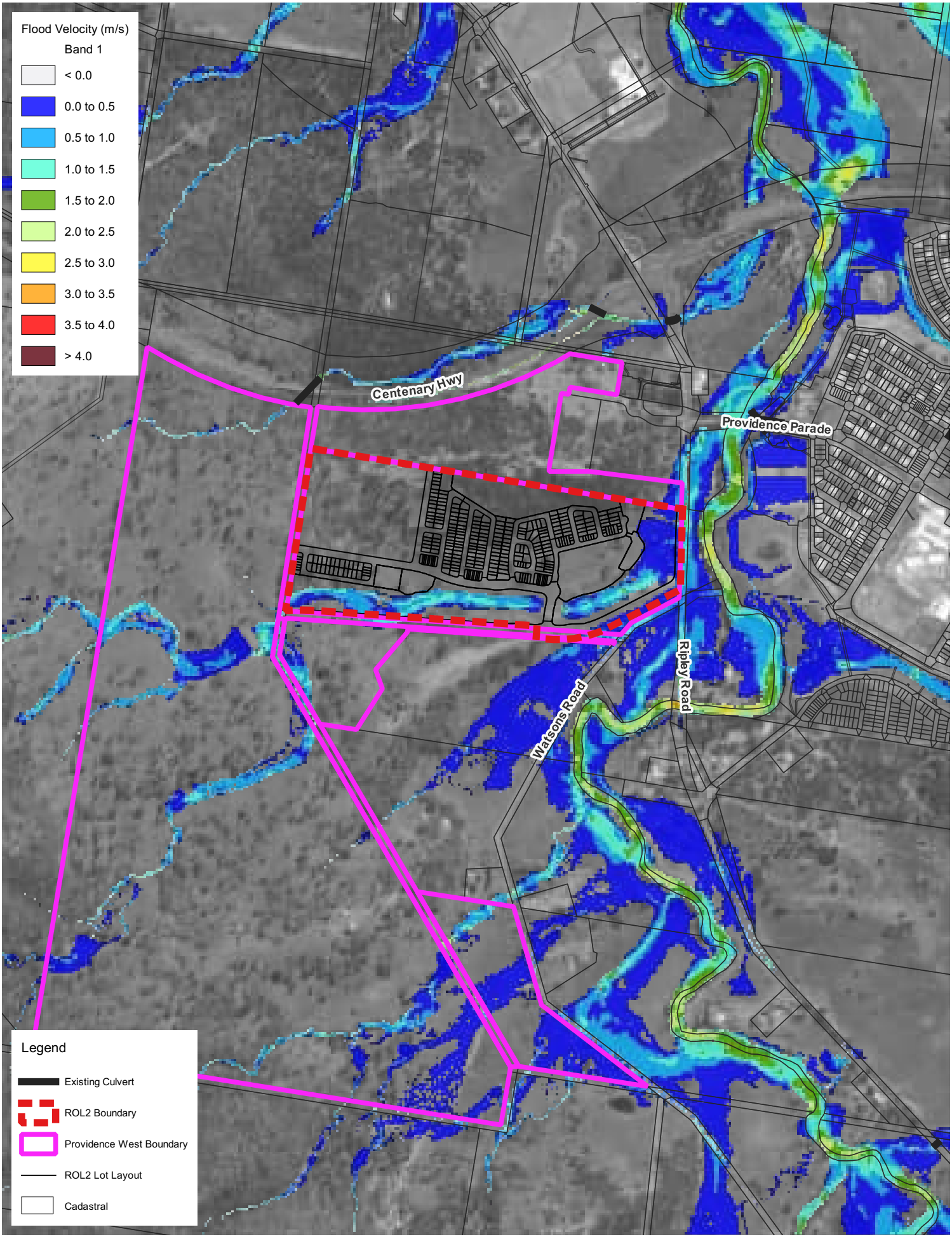
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FIGURE NUMBER: C26

REVISION:

DATE: 10-November-2025

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Data Sources:
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Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 2% AEP Flood Velocity - Post-development

N

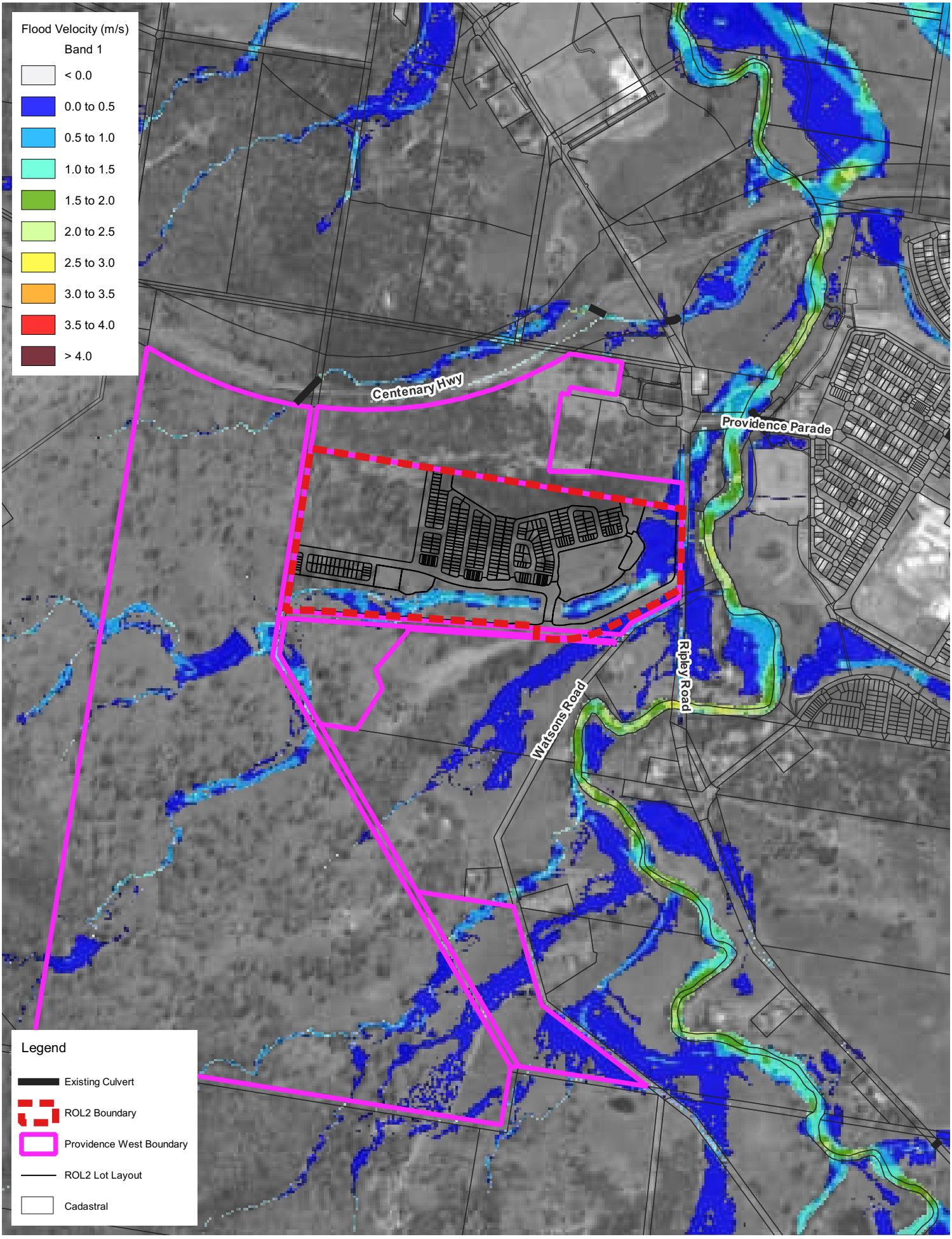
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FIGURE NUMBER: C27

REVISION:

DATE: 10-November-2025

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Data Sources:
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Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 5% AEP Flood Velocity - Post-development

N

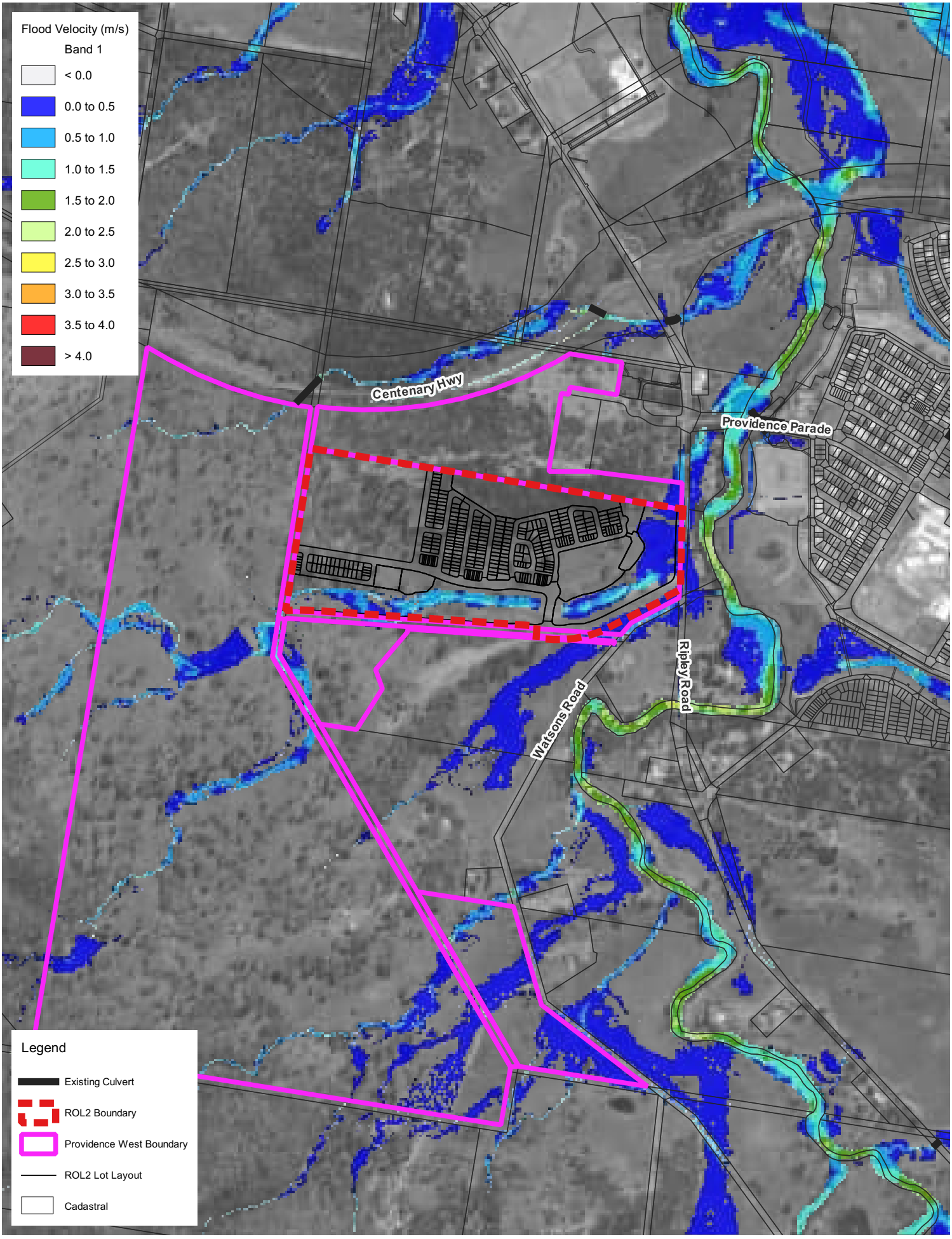
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FIGURE NUMBER: C28

REVISION:

DATE: 10-November-2025

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Topography:
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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 10% AEP Flood Velocity - Post-development

N

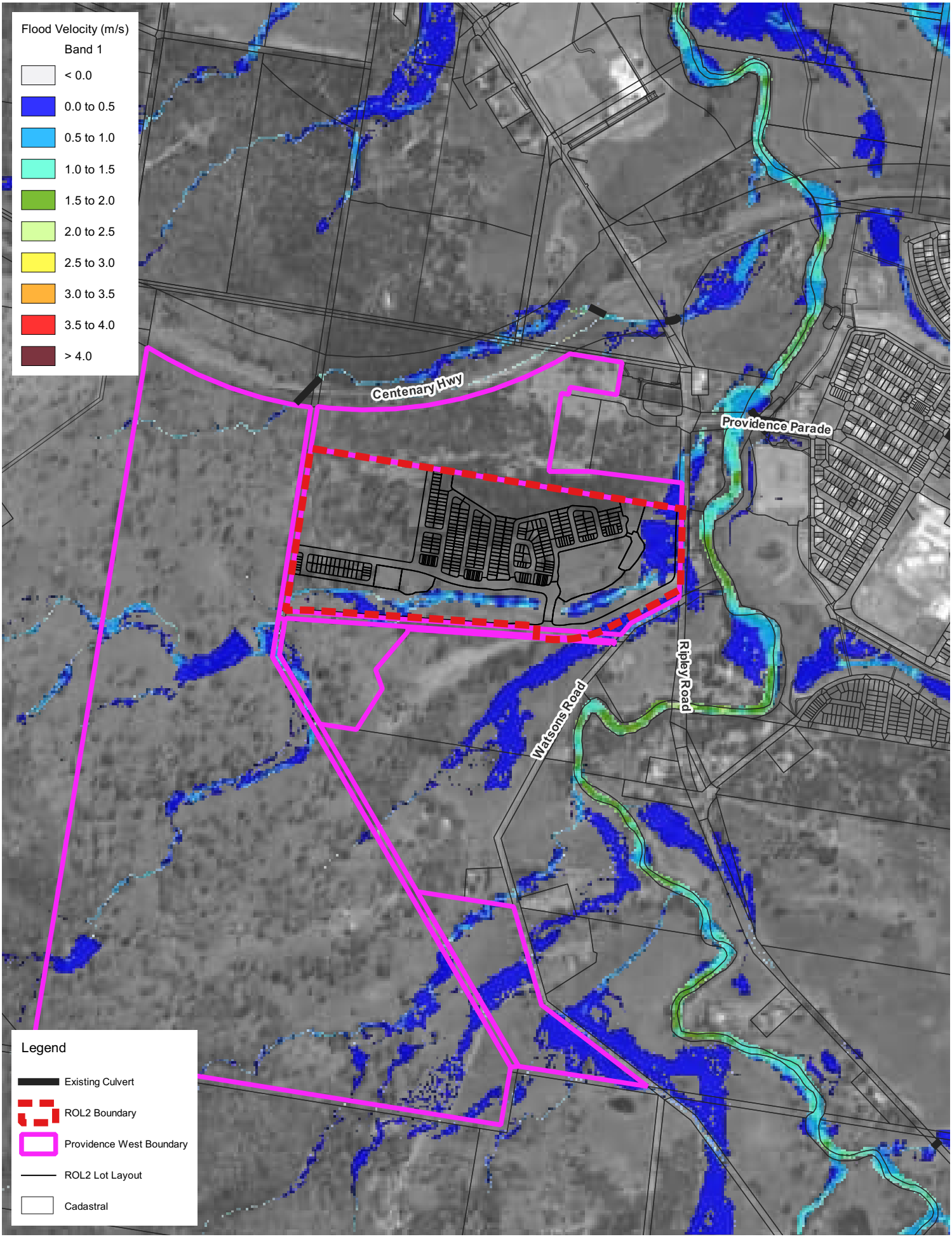
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FIGURE NUMBER: C29

REVISION:

DATE: 10-November-2025

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Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 18% AEP Flood Velocity - Post-development

N

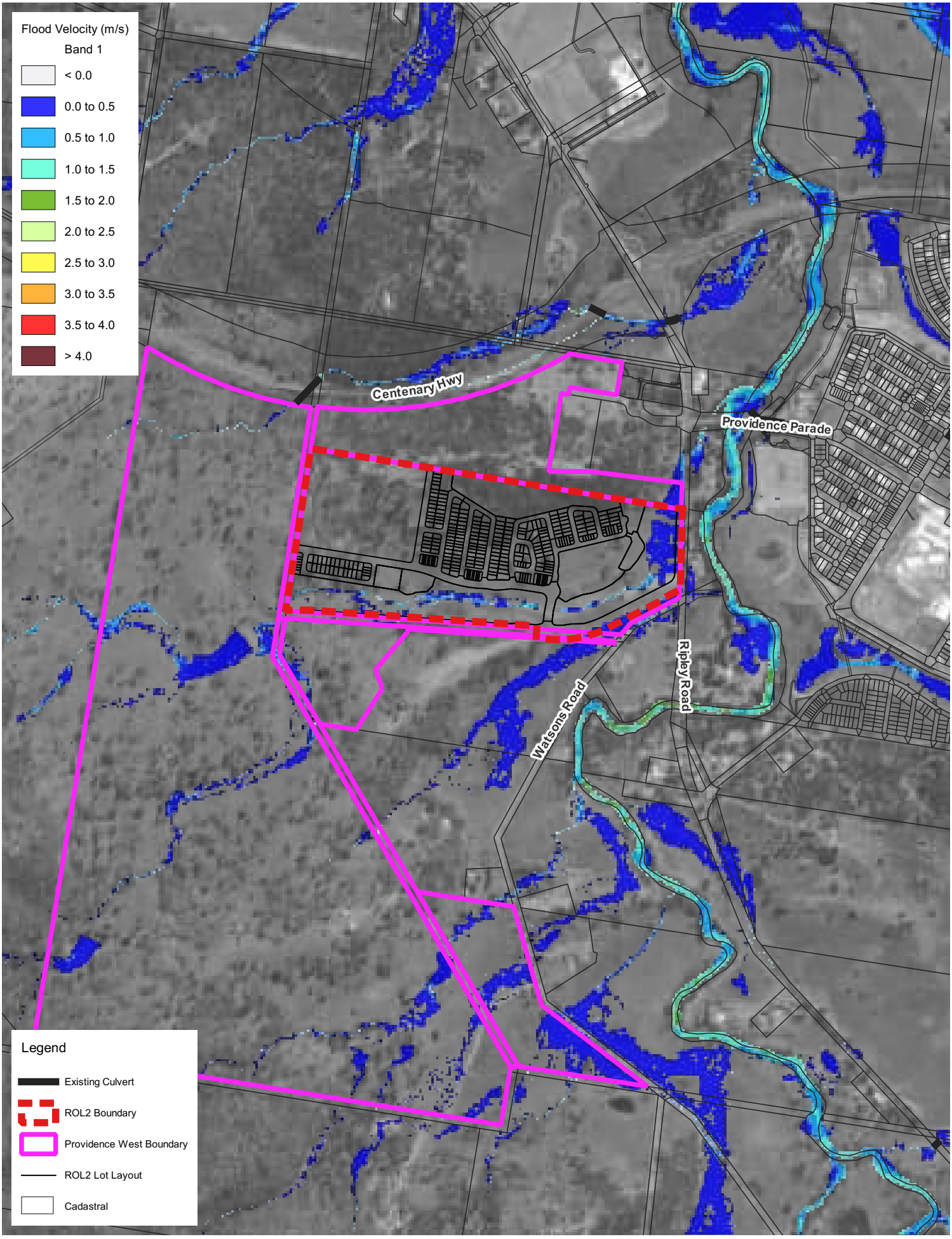
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FIGURE NUMBER: C30

REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 39% AEP Flood Velocity - Post-development

N

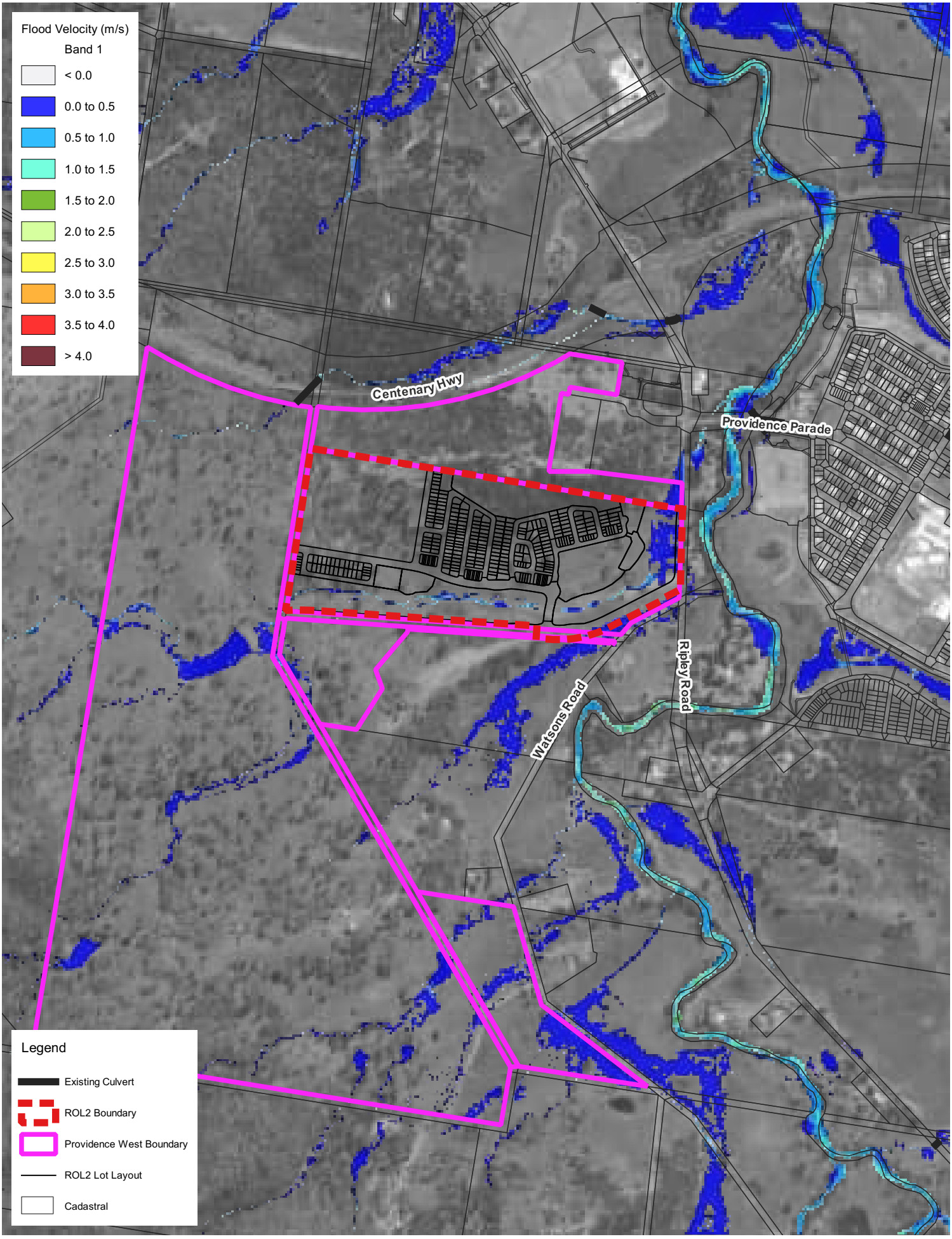
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FIGURE NUMBER: C31

REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 63% AEP Flood Velocity - Post-development

N

0 200 400 m

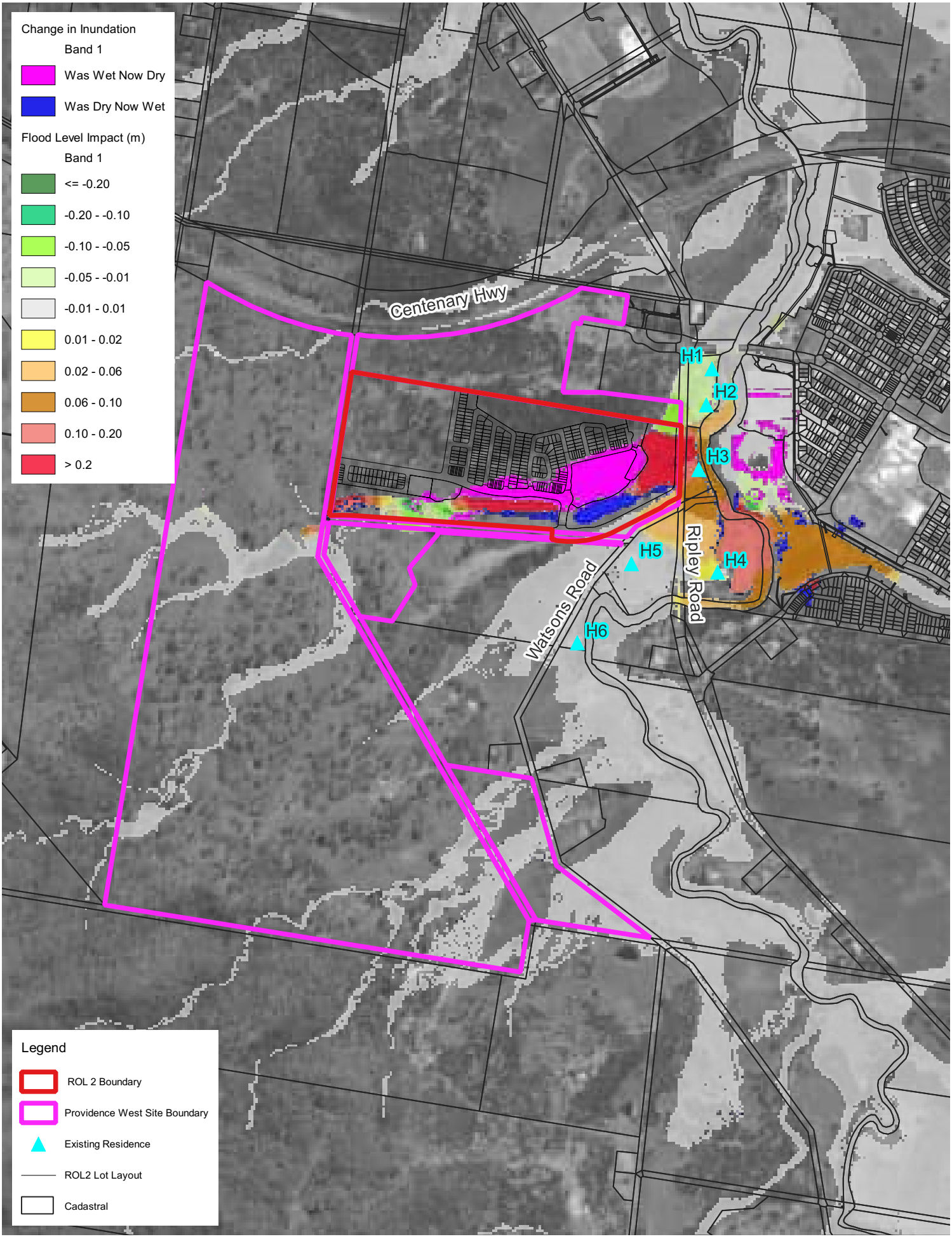
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REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppC\AppC.qgz

Appendix D Flood Level Impact Maps



Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 1% AEP with climate change Flood Level Impact - Upstream of Centenary Highway

N

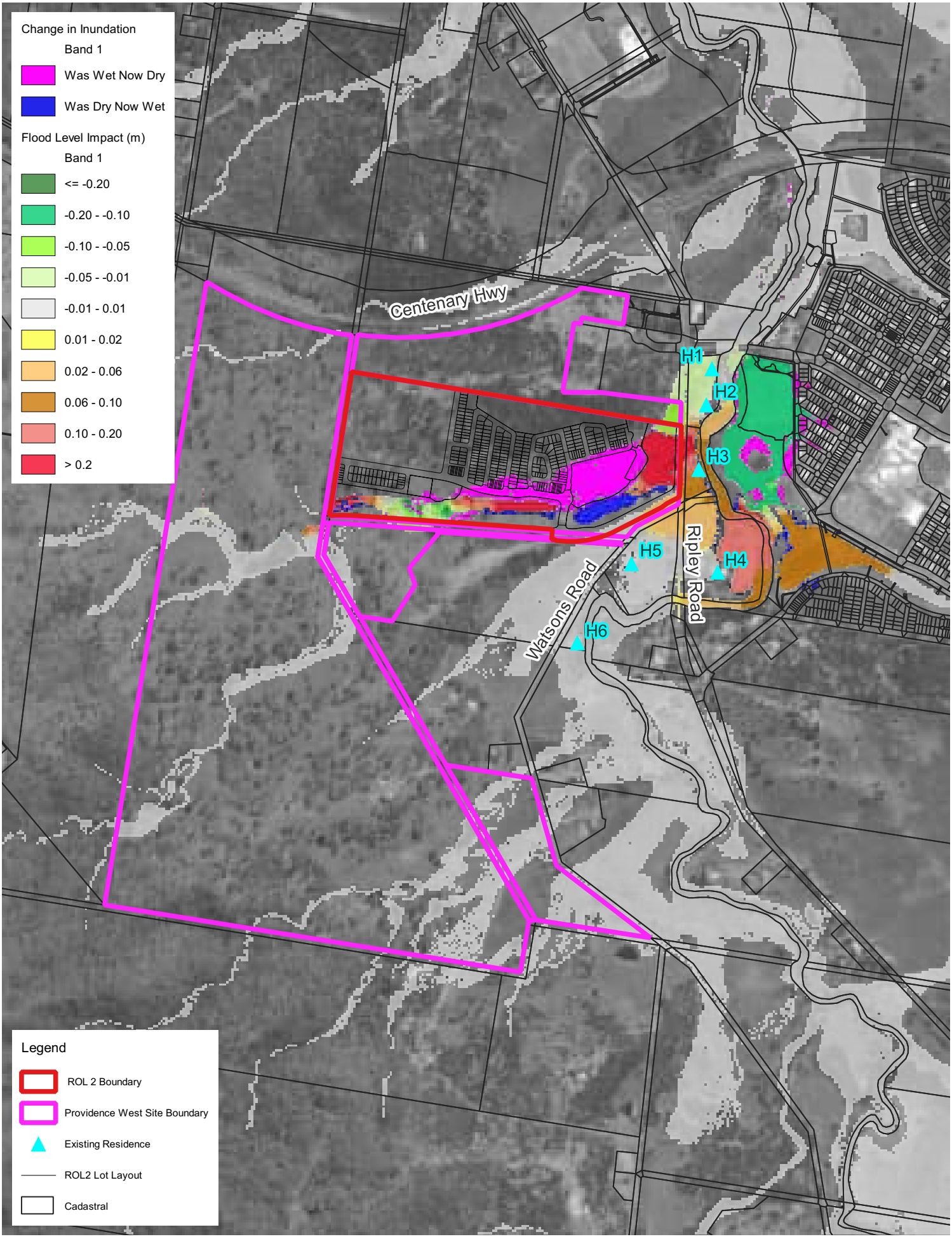
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FIGURE NUMBER: D1

REVISION:

DATE: 06-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 1% AEP Flood Level Impact - Upstream of Centenary Highway

N

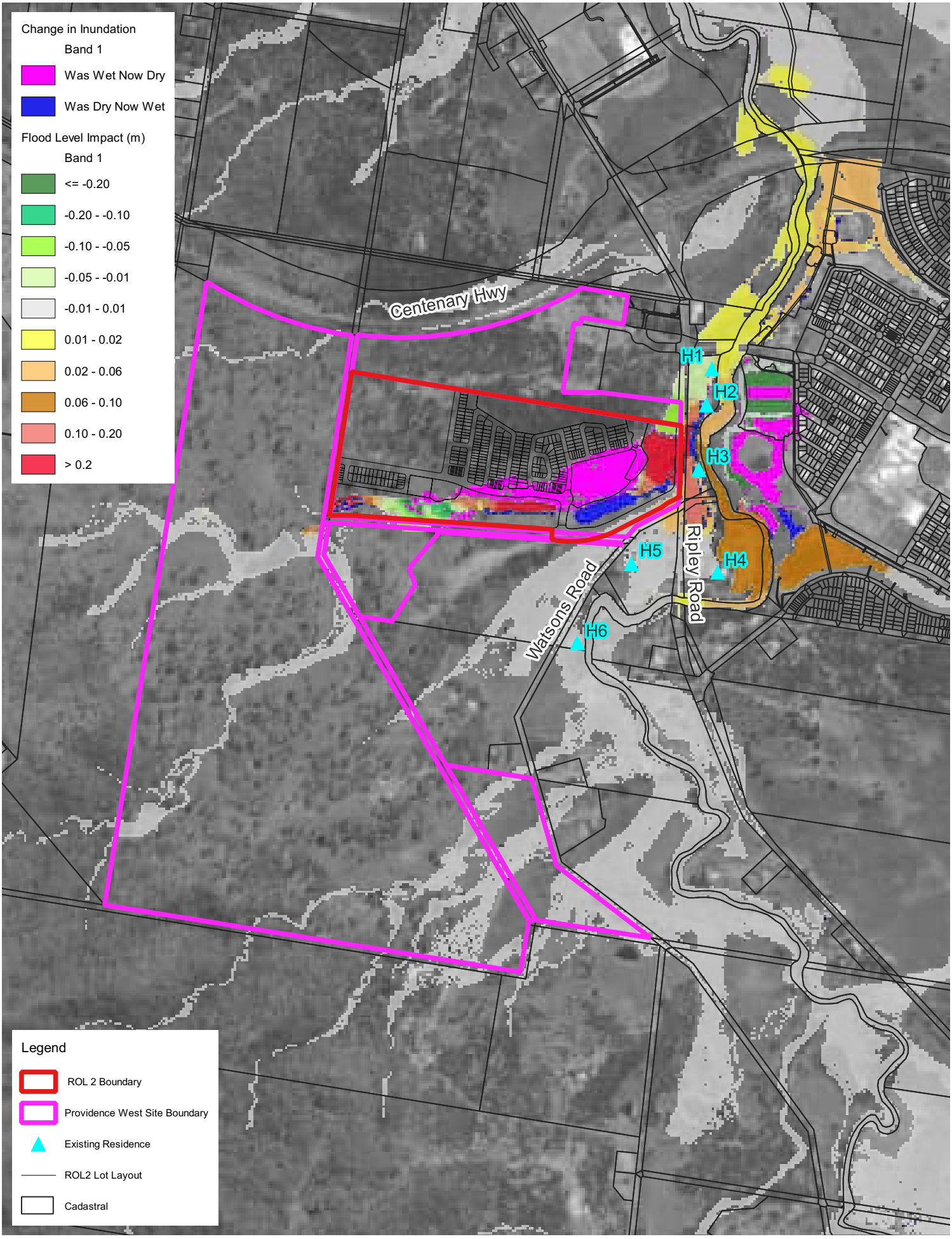
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FIGURE NUMBER: D2

REVISION:

DATE: 06-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 2% AEP Flood Level Impact - Upstream of Centenary Highway

N

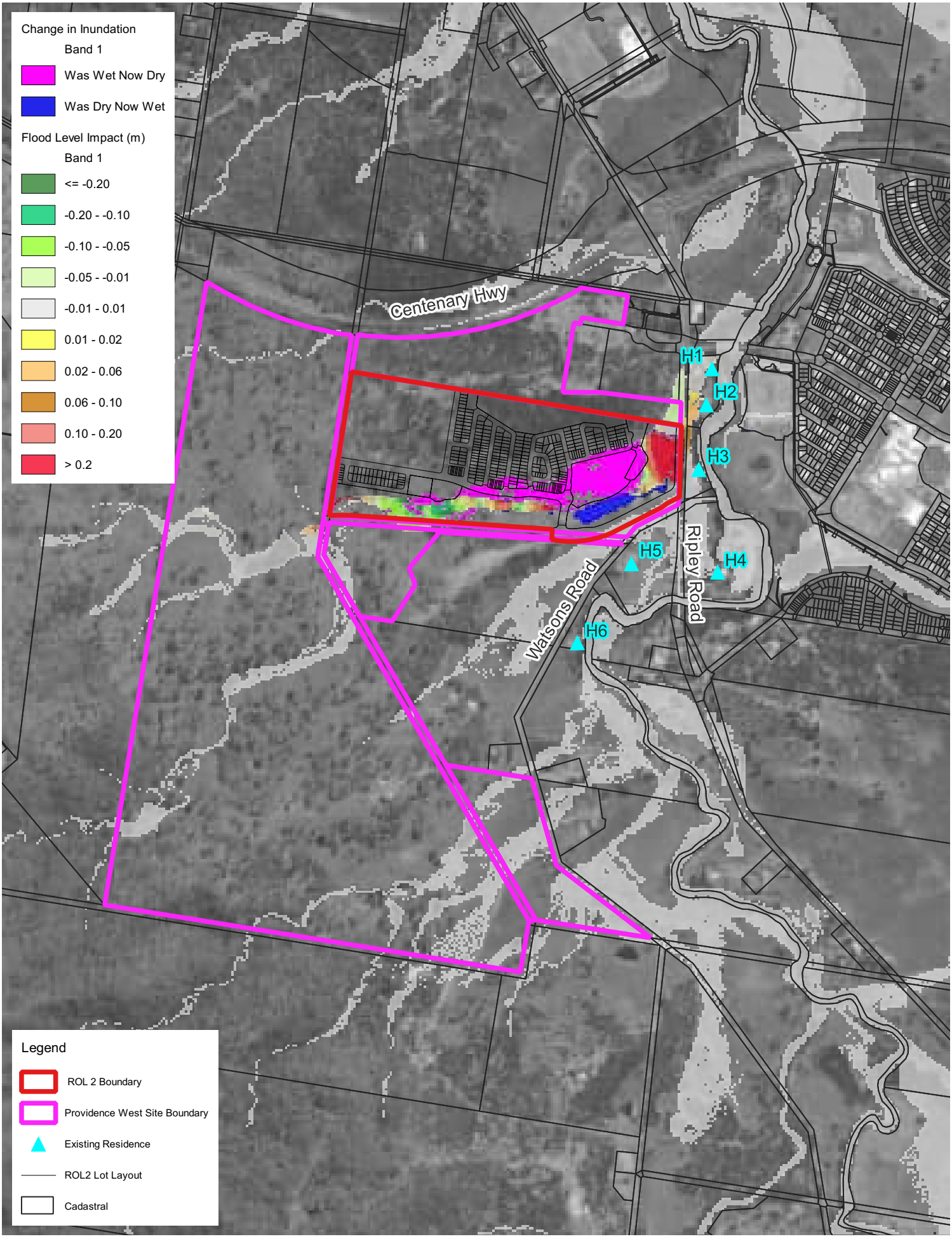
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FIGURE NUMBER: D3

REVISION:

DATE: 06-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 5% AEP Flood Level Impact - Upstream of Centenary Highway

N

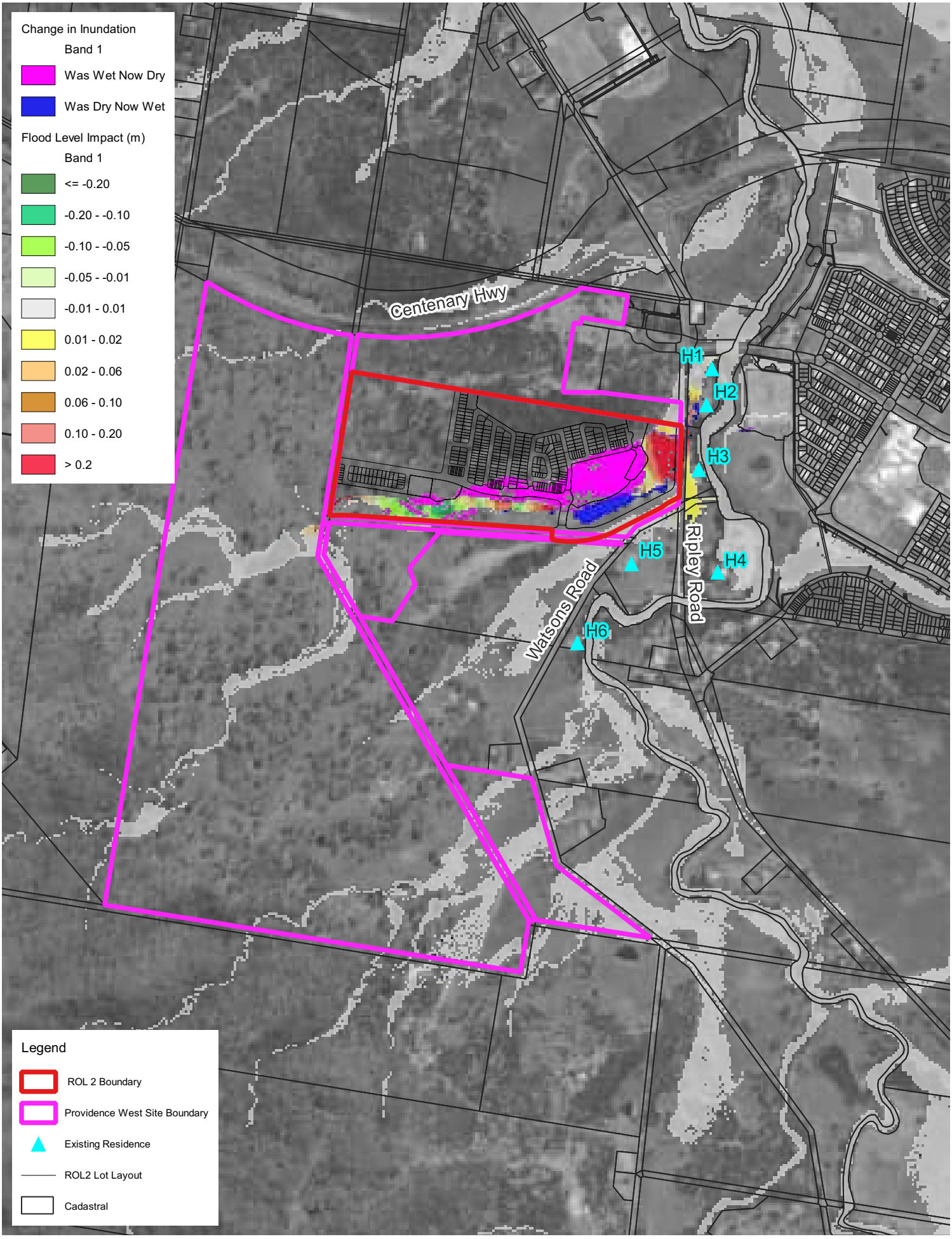
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FIGURE NUMBER: D4

REVISION:

DATE: 06-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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WWW.WEP.COM.AU

TITLE: 10% AEP Flood Level Impact - Upstream of Centenary Highway

N

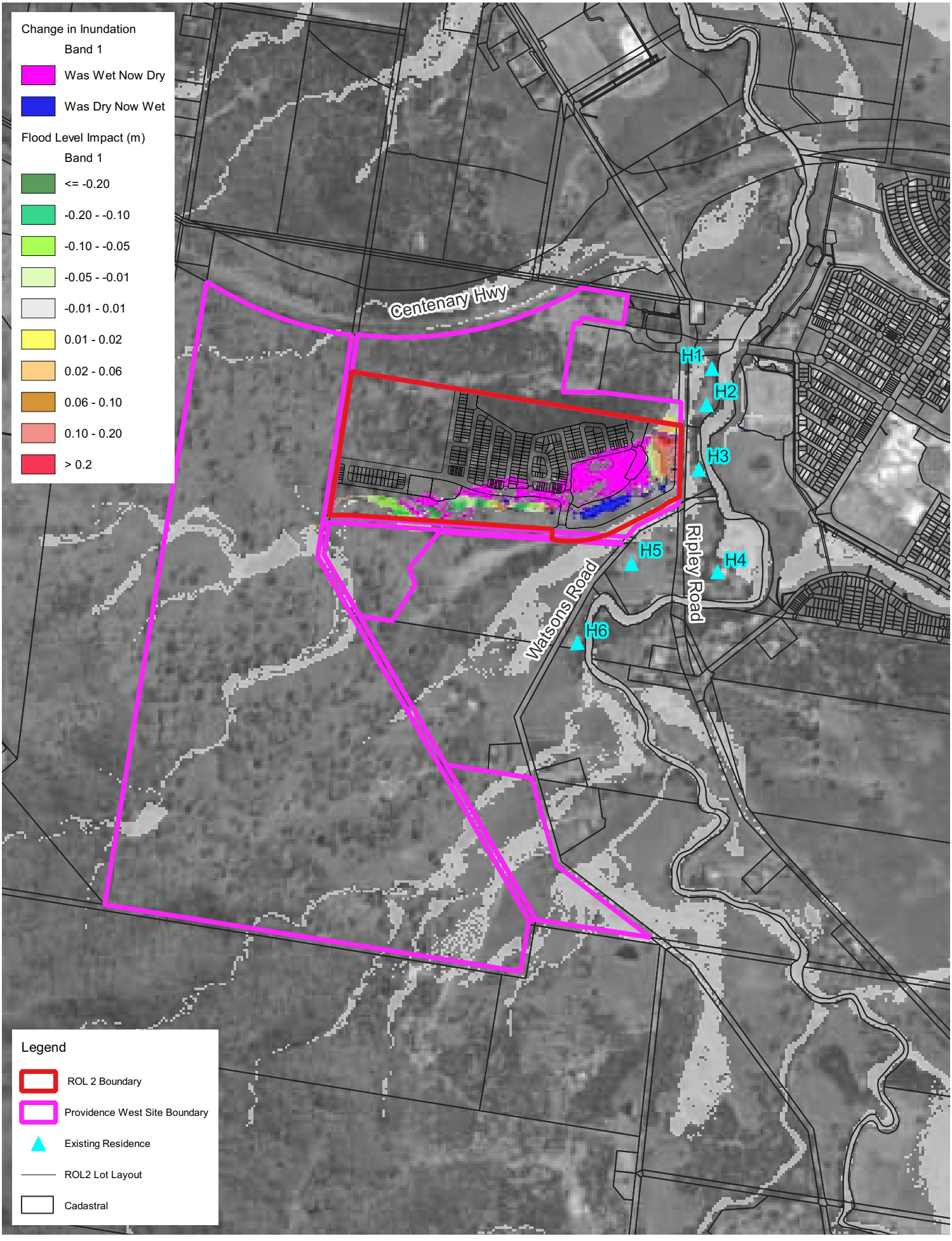
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FIGURE NUMBER: D5

REVISION:

DATE: 06-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 18% AEP Flood Level Impact - Upstream of Centenary Highway

N

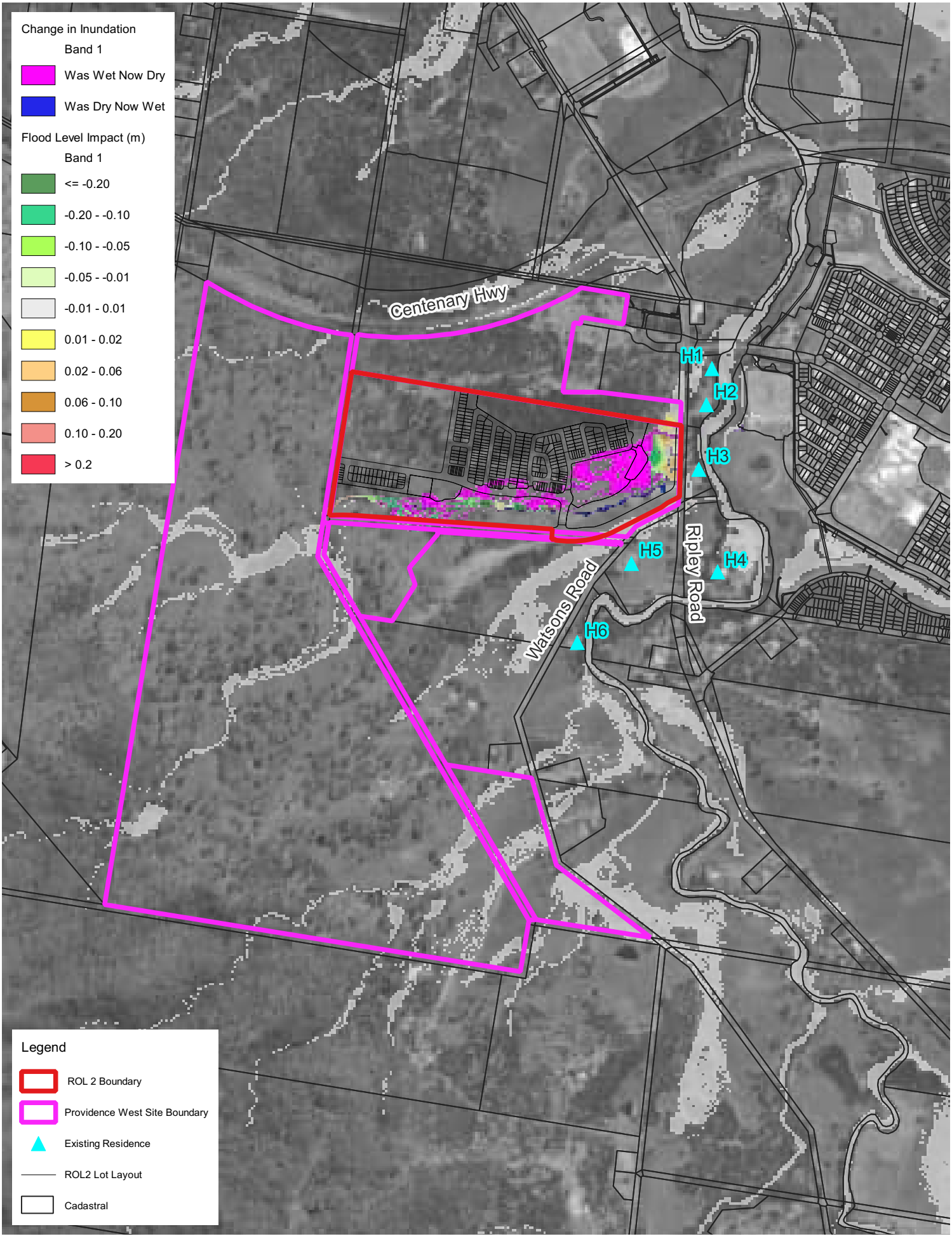
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FIGURE NUMBER: D6

REVISION:

DATE: 06-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 39% AEP Flood Level Impact - Upstream of Centenary Highway

N

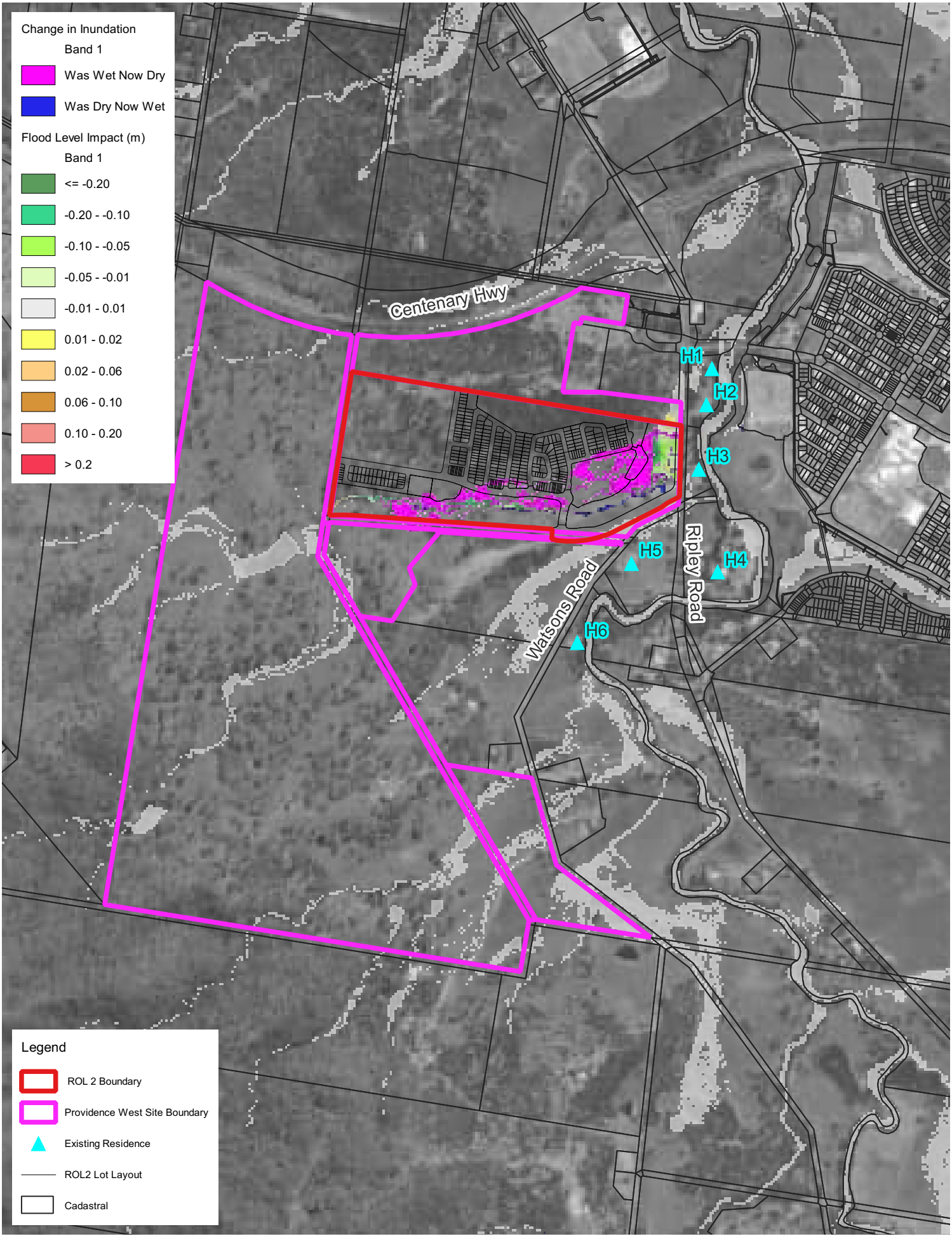
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FIGURE NUMBER: D7

REVISION:

DATE: 06-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 63% AEP Flood Level Impact - Upstream of Centenary Highway

N

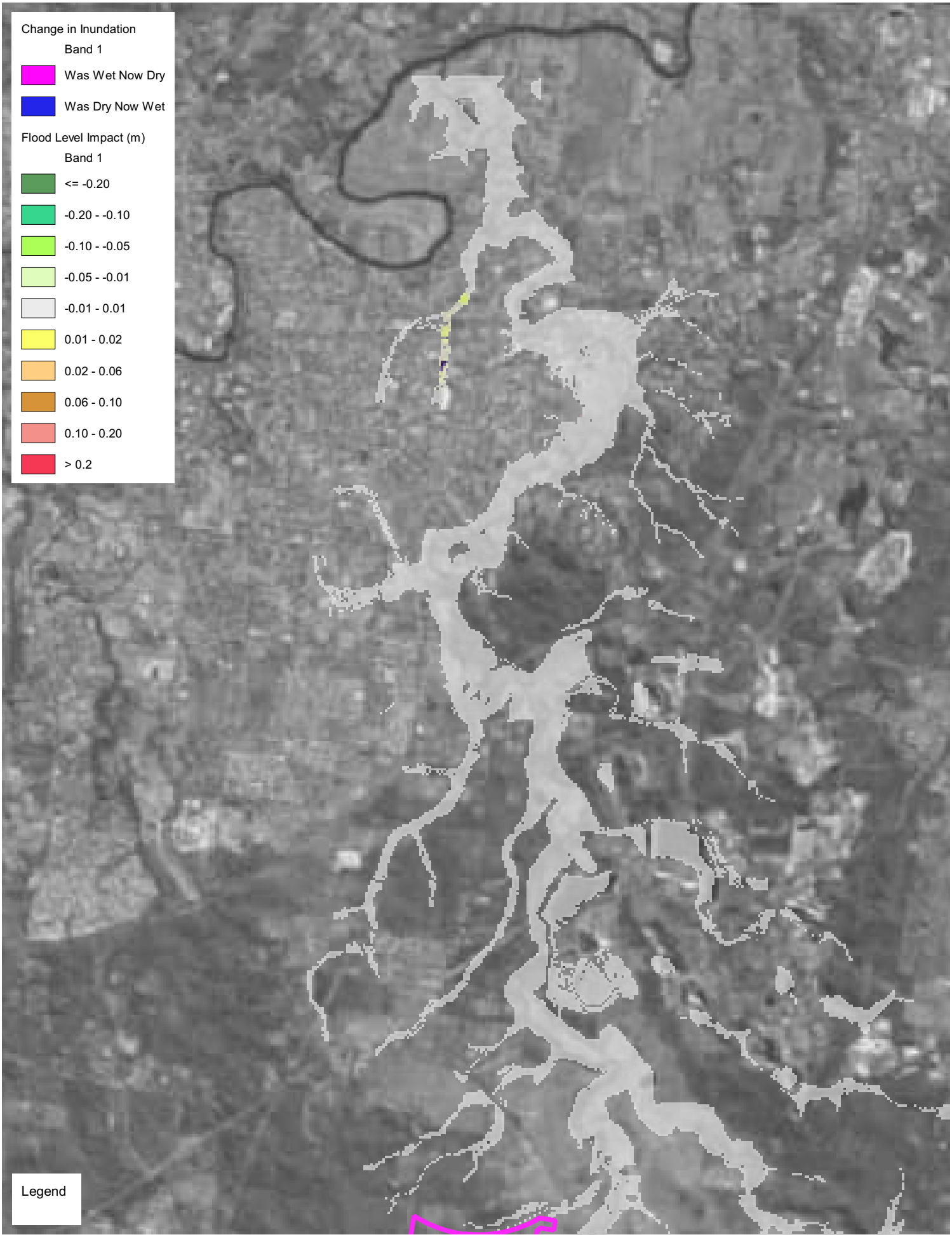
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FIGURE NUMBER: D8

REVISION:

DATE: 06-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 1% AEP with climate change Flood Level Impact - Downstream of Centenary Highway

N

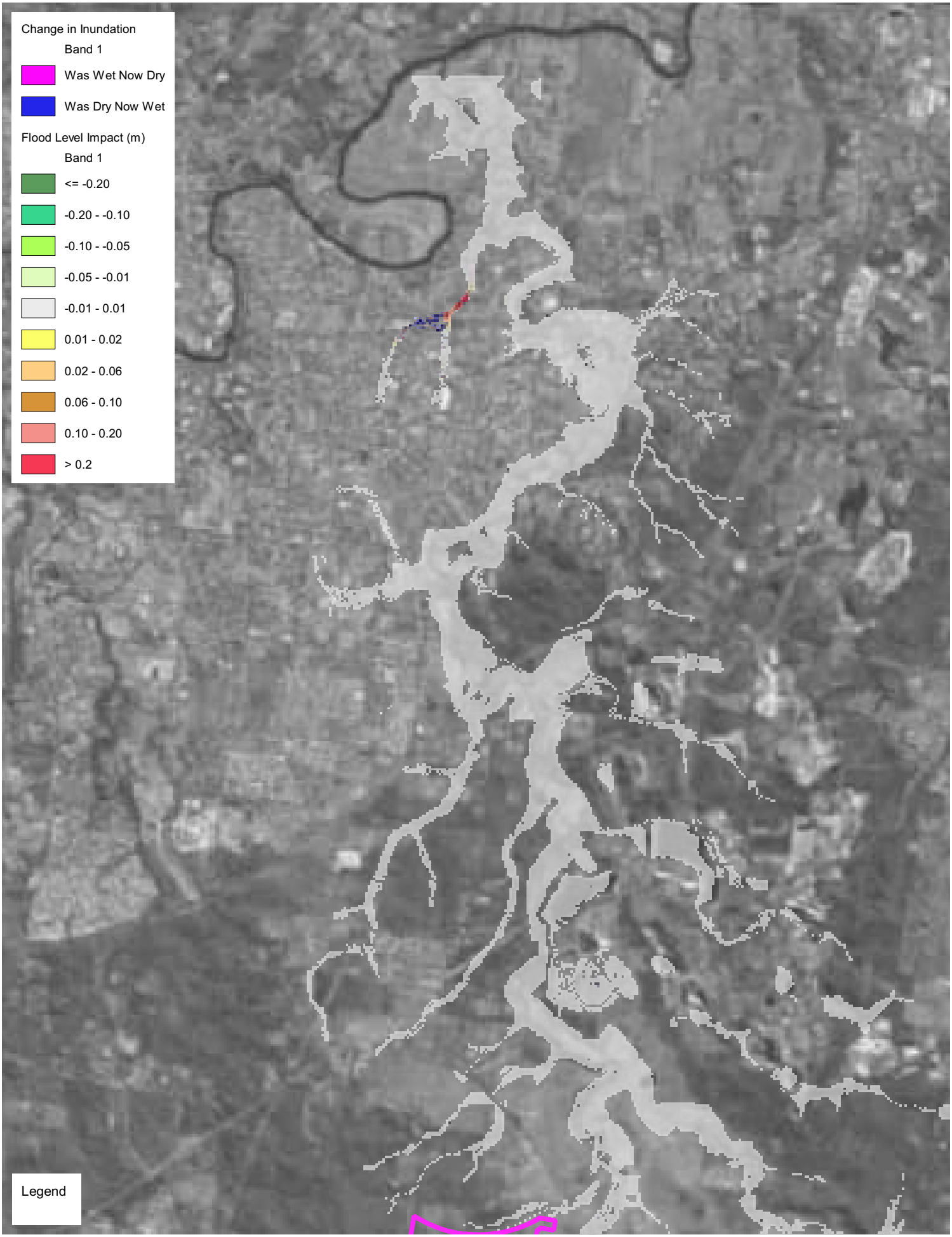
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FIGURE NUMBER: D9

REVISION:

DATE: 06-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 1% AEP Flood Level Impact - Downstream of Centenary Highway

N

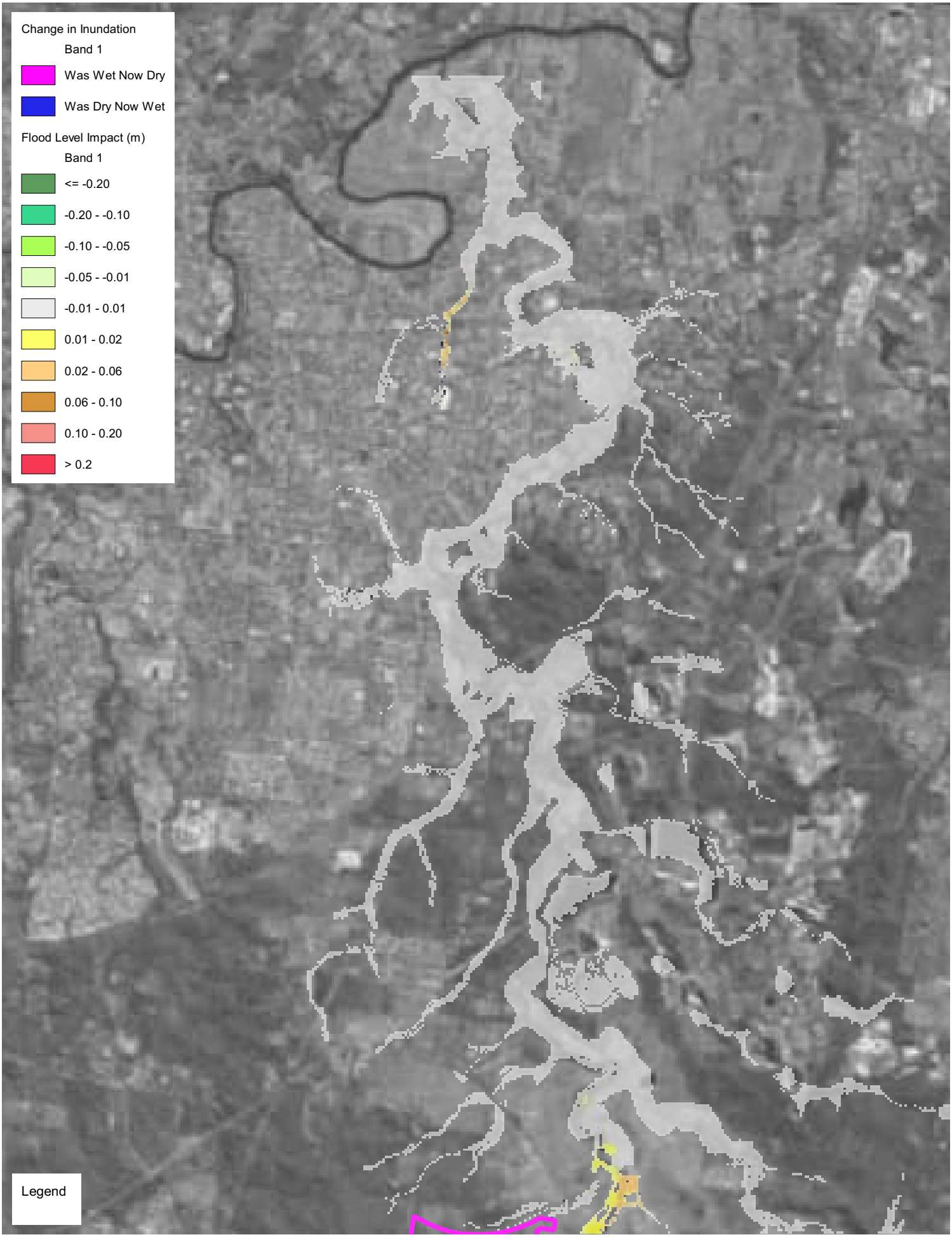
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REVISION:

DATE: 06-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 2% AEP Flood Level Impact - Downstream of Centenary Highway

N

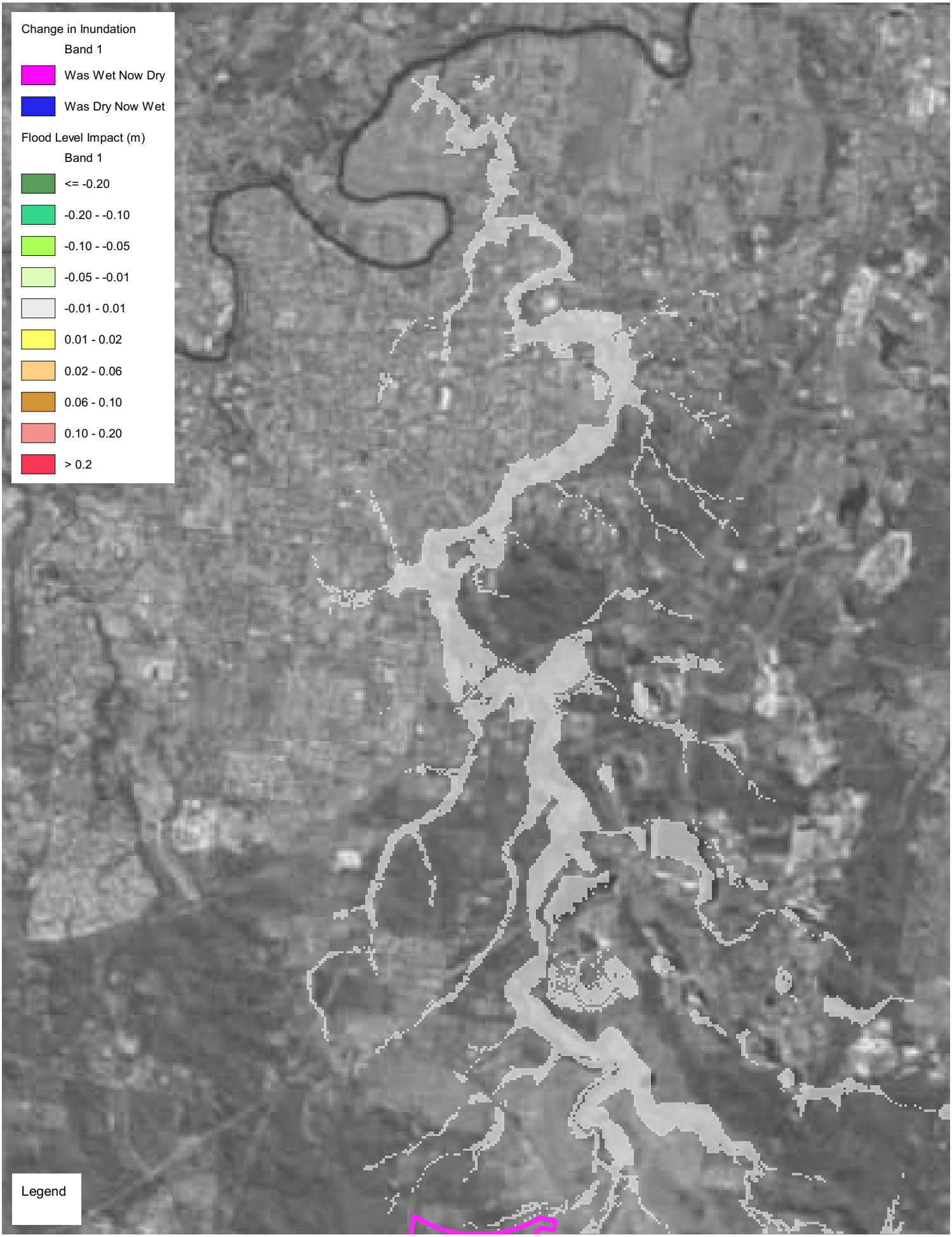
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Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 5% AEP Flood Level Impact - Downstream of Centenary Highway

N

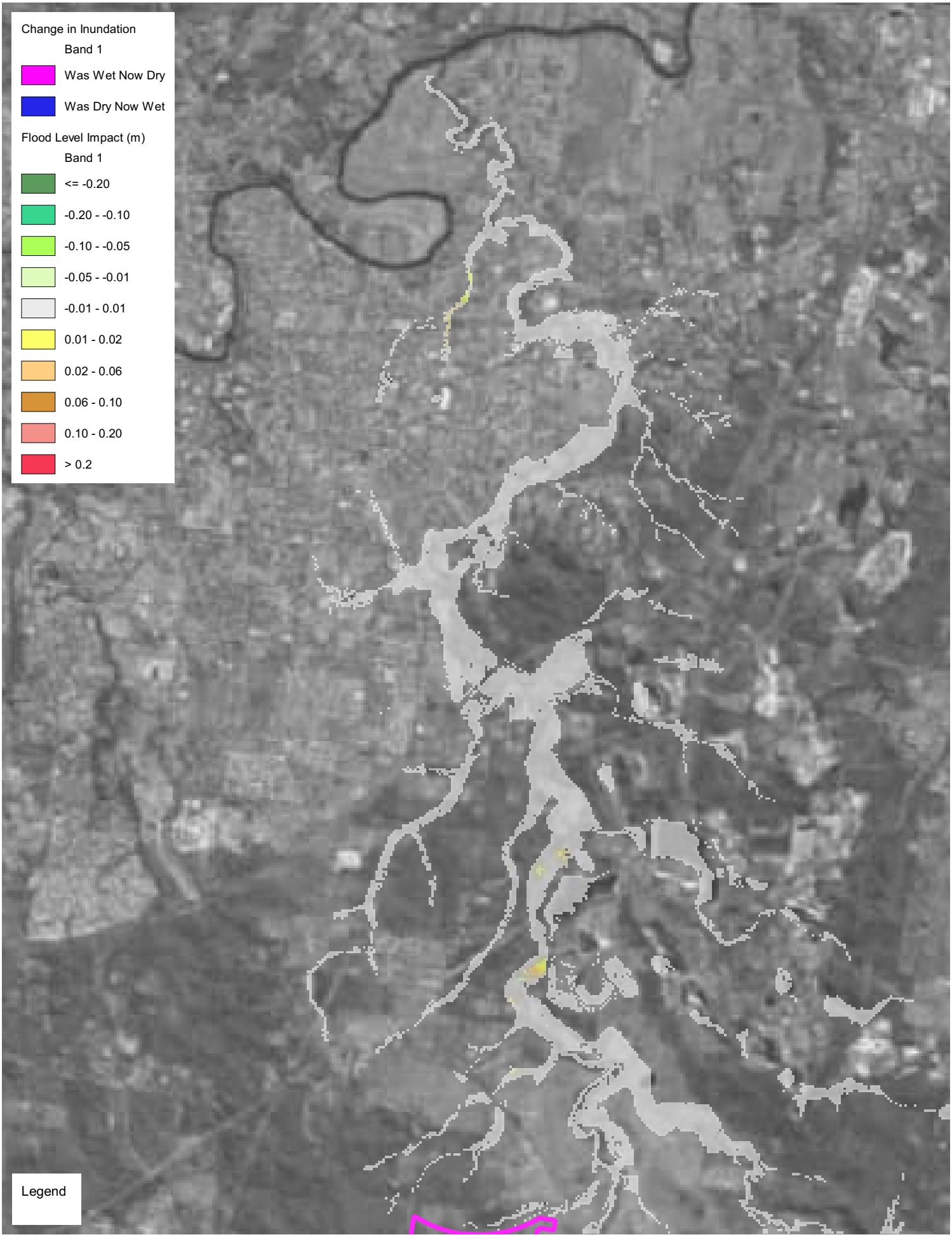
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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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WWW.WEP.COM.AU

TITLE: 10% AEP Flood Level Impact - Downstream of Centenary Highway

N

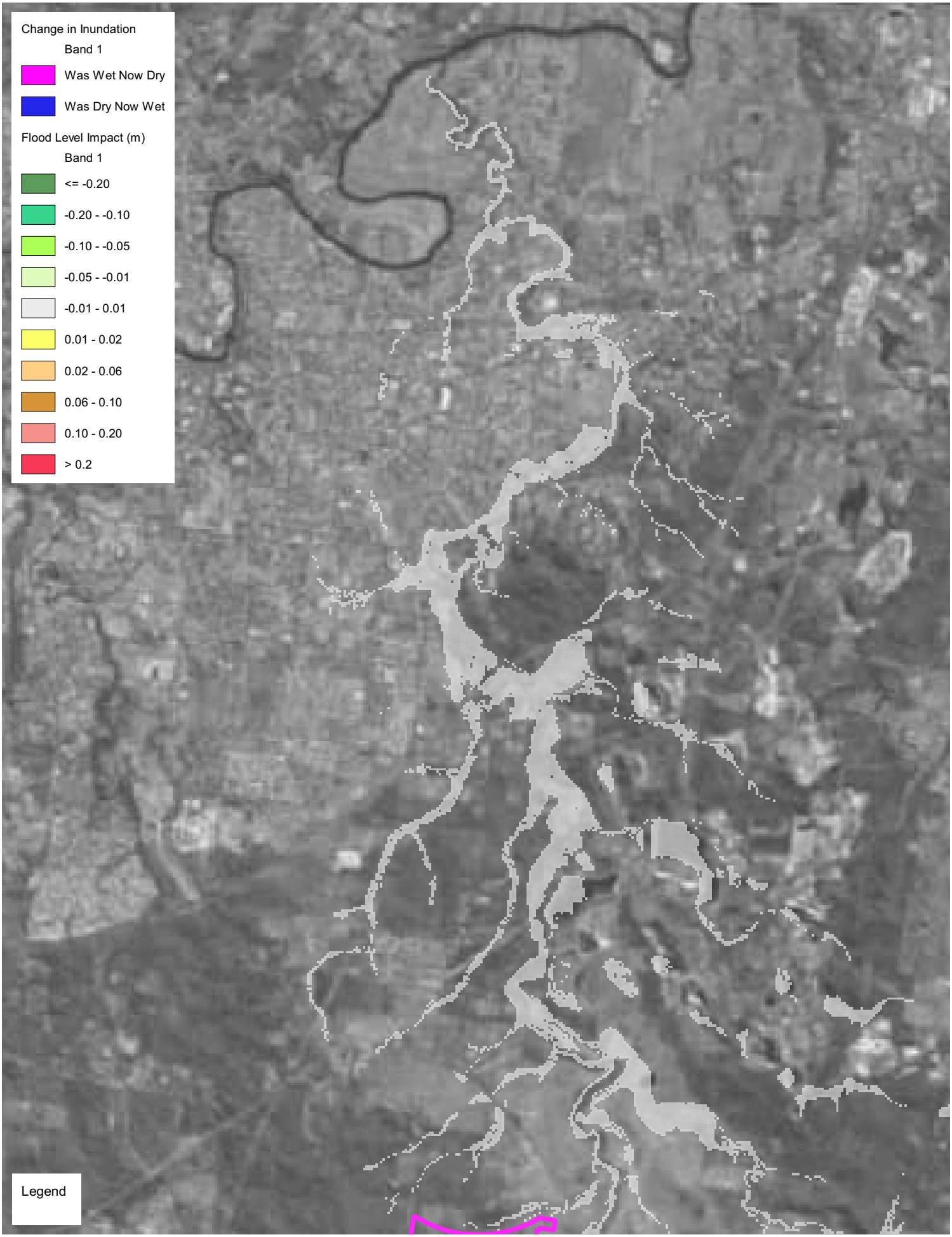
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Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 18% AEP Flood Level Impact - Downstream of Centenary Highway

N

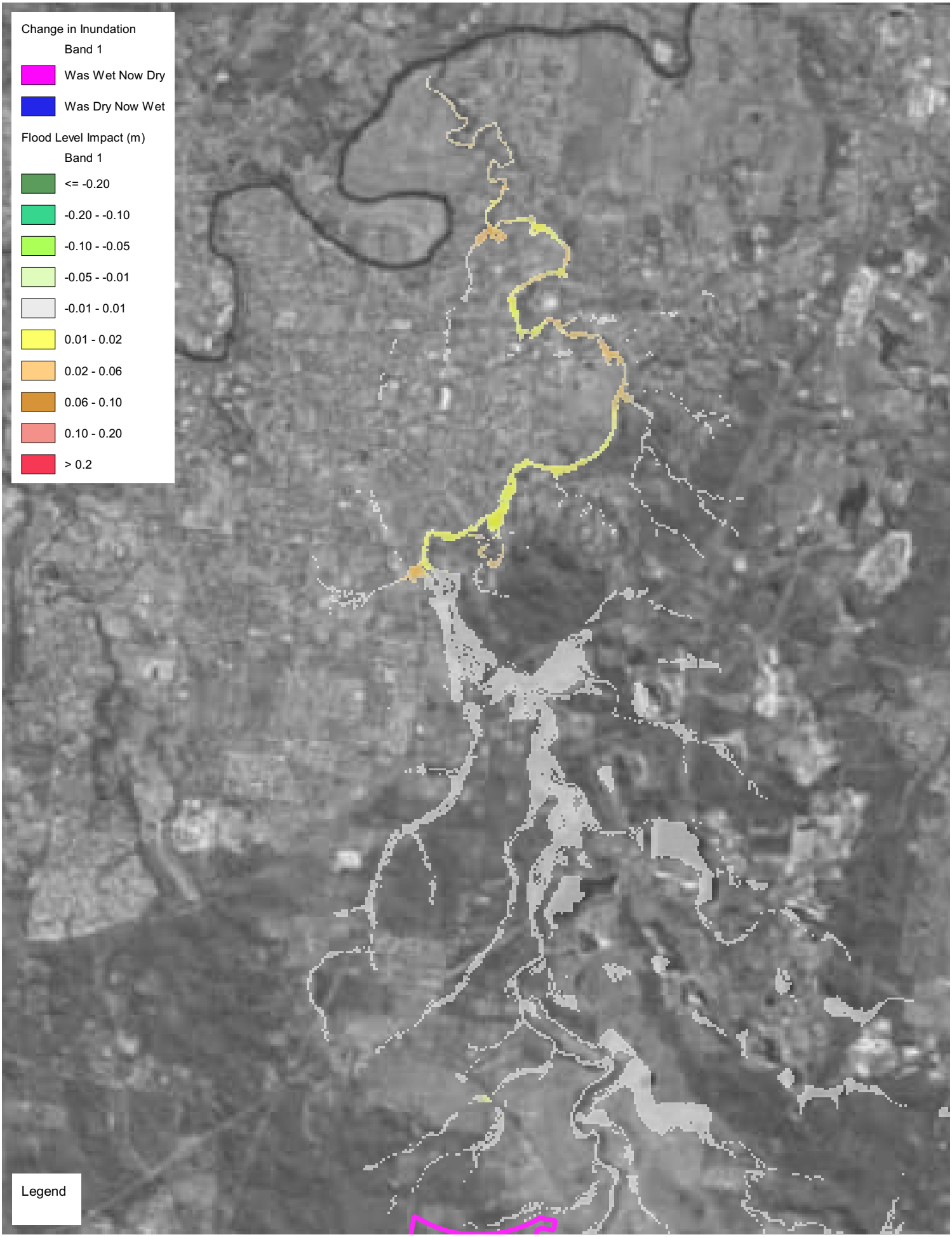
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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 39% AEP Flood Level Impact - Downstream of Centenary Highway

N

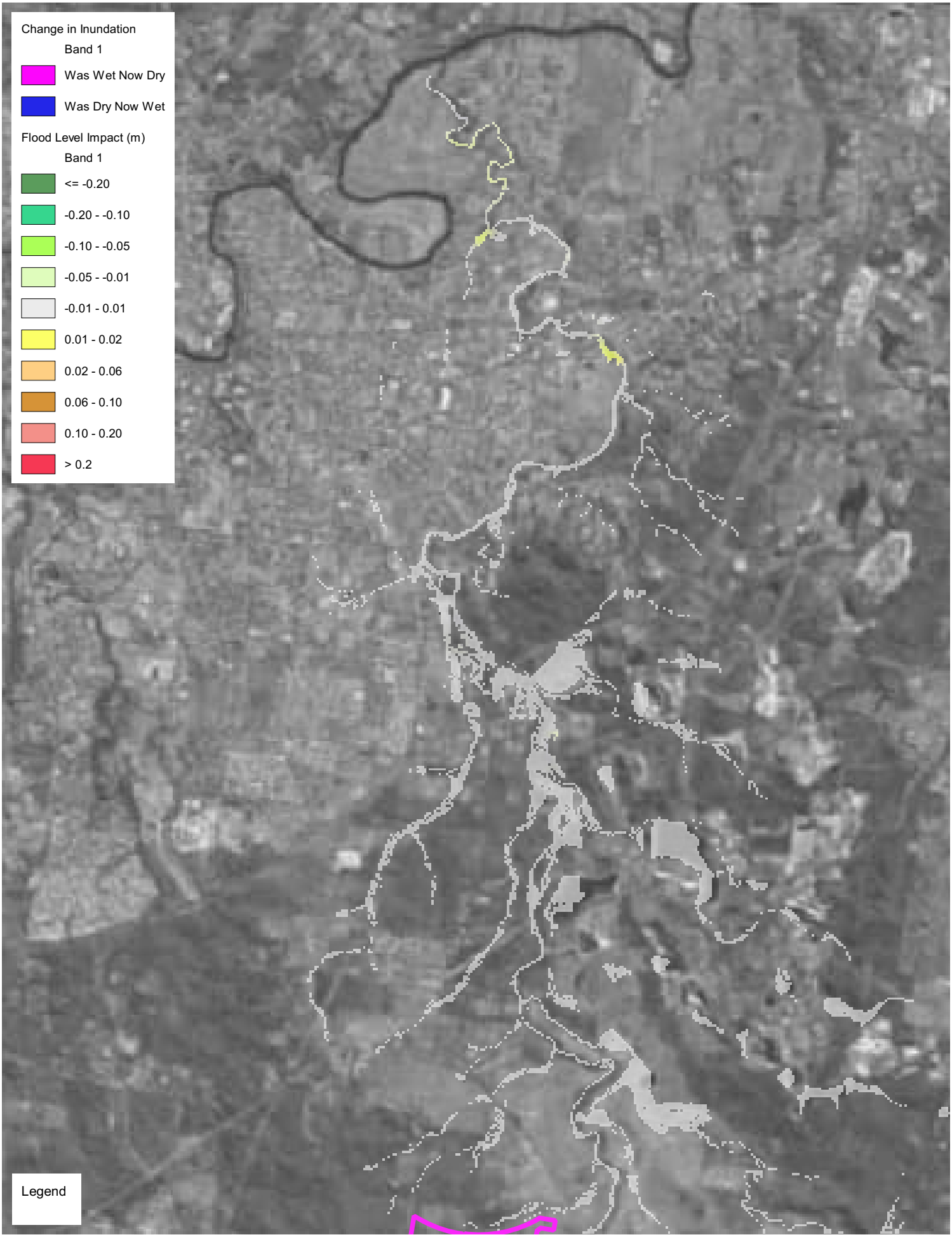
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Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 63% AEP Flood Level Impact - Downstream of Centenary Highway

N

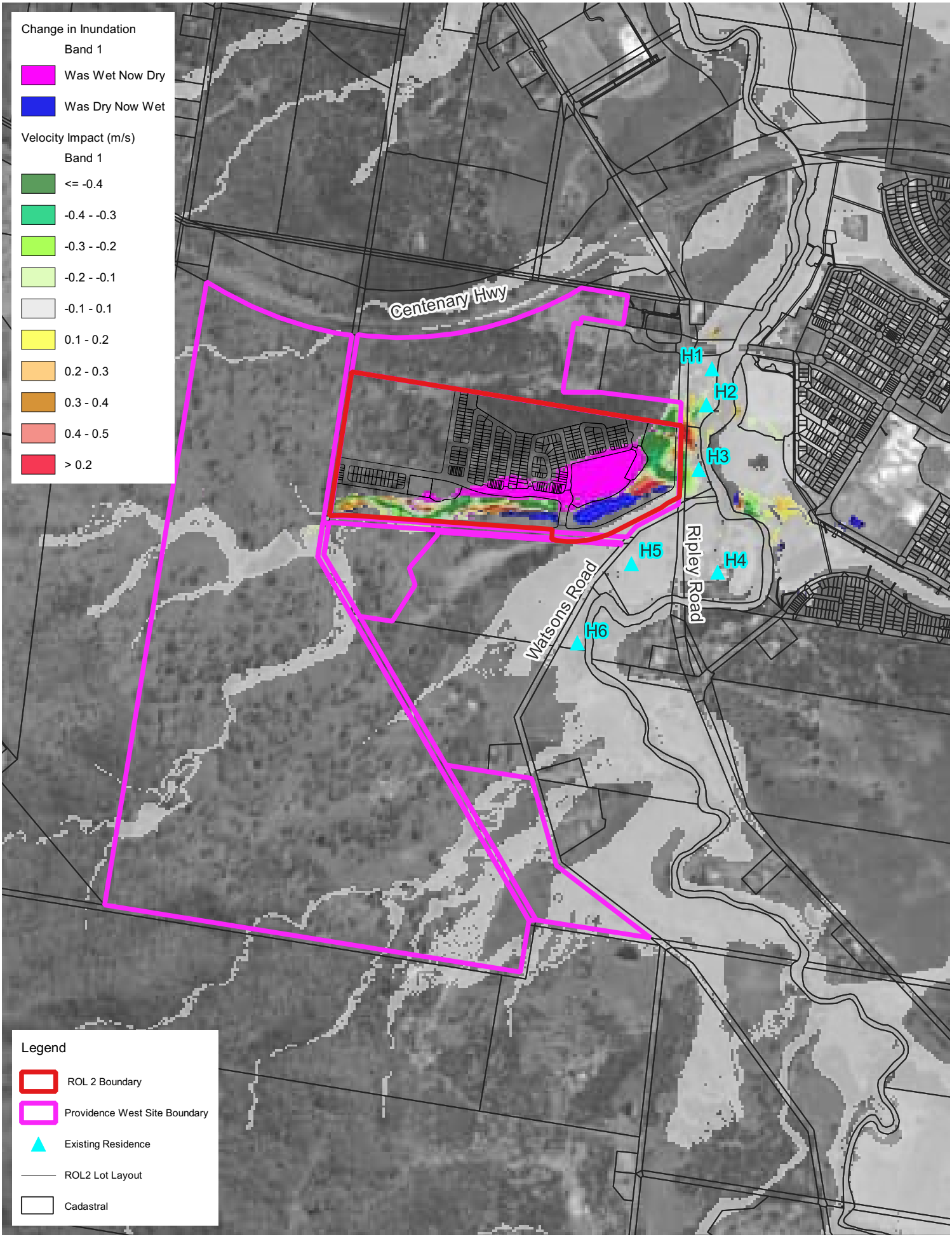
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FIGURE NUMBER: D16

REVISION:

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 1% AEP with climate change Velocity Impact - Upstream of Centenary Highway

N

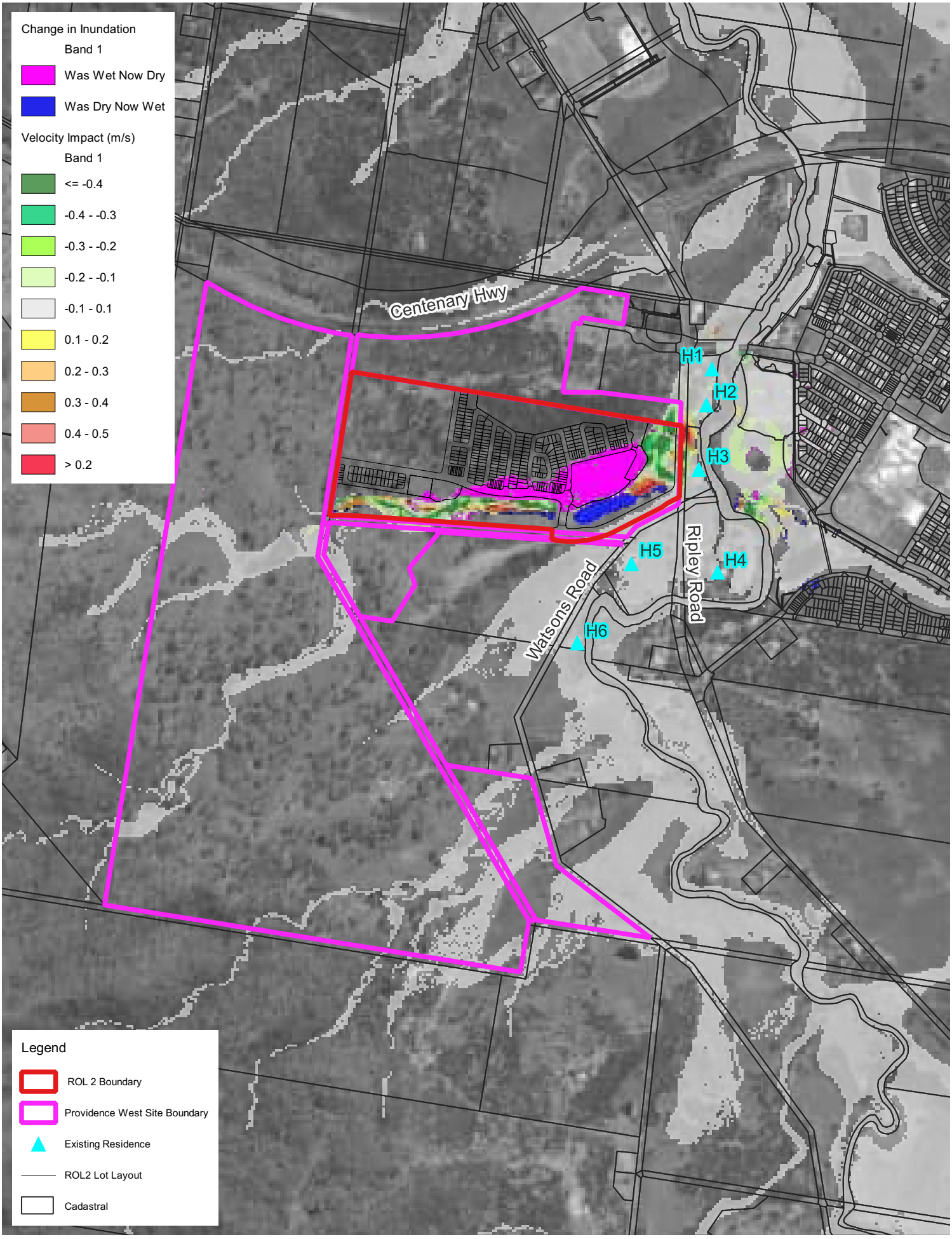
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FIGURE NUMBER: D17

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppD17-D32y\AppD17-D32.qgz



Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 1% AEP Velocity Impact - Upstream of Centenary Highway

N

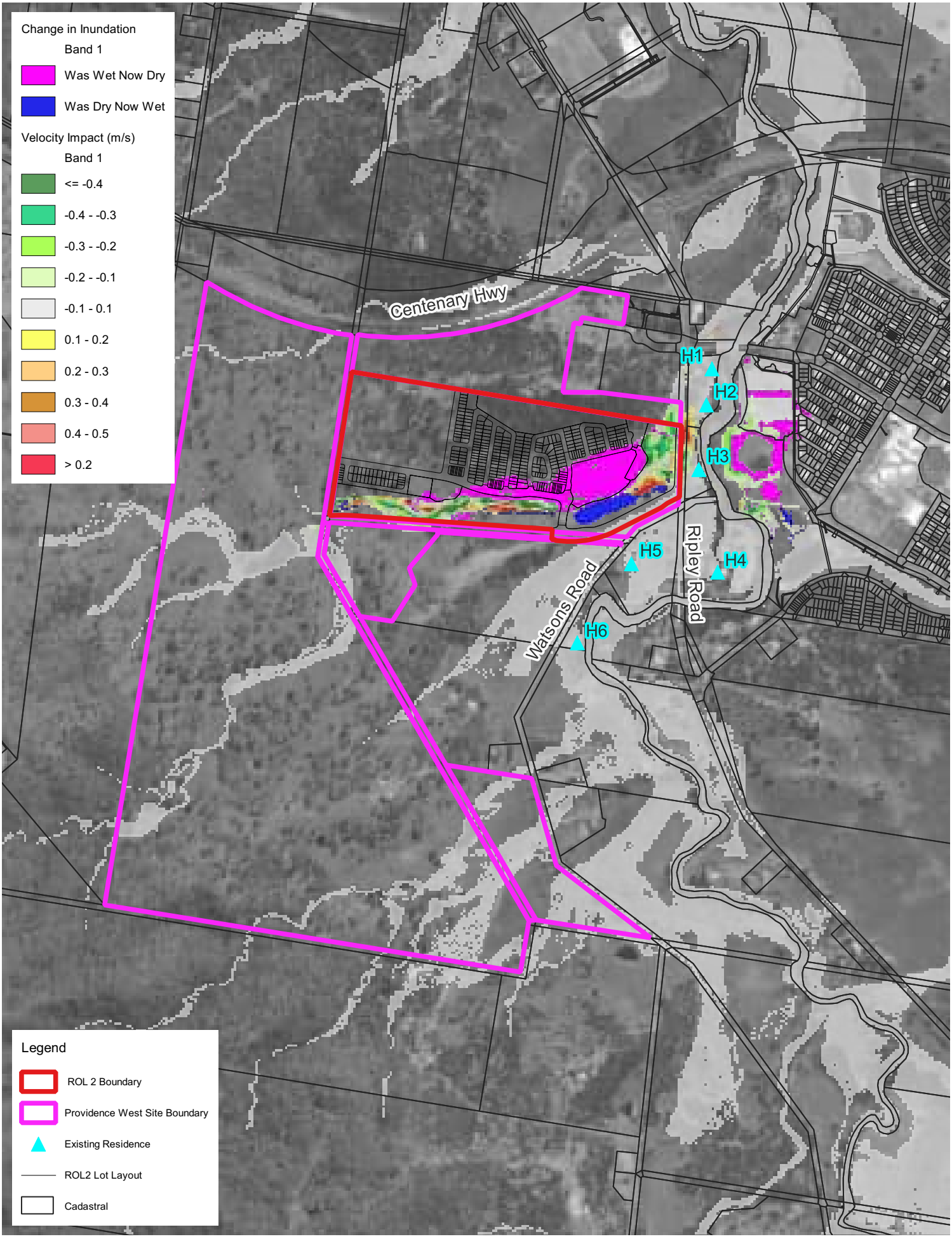
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FIGURE NUMBER: D18

REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 2% AEP Velocity Impact - Upstream of Centenary Highway

N

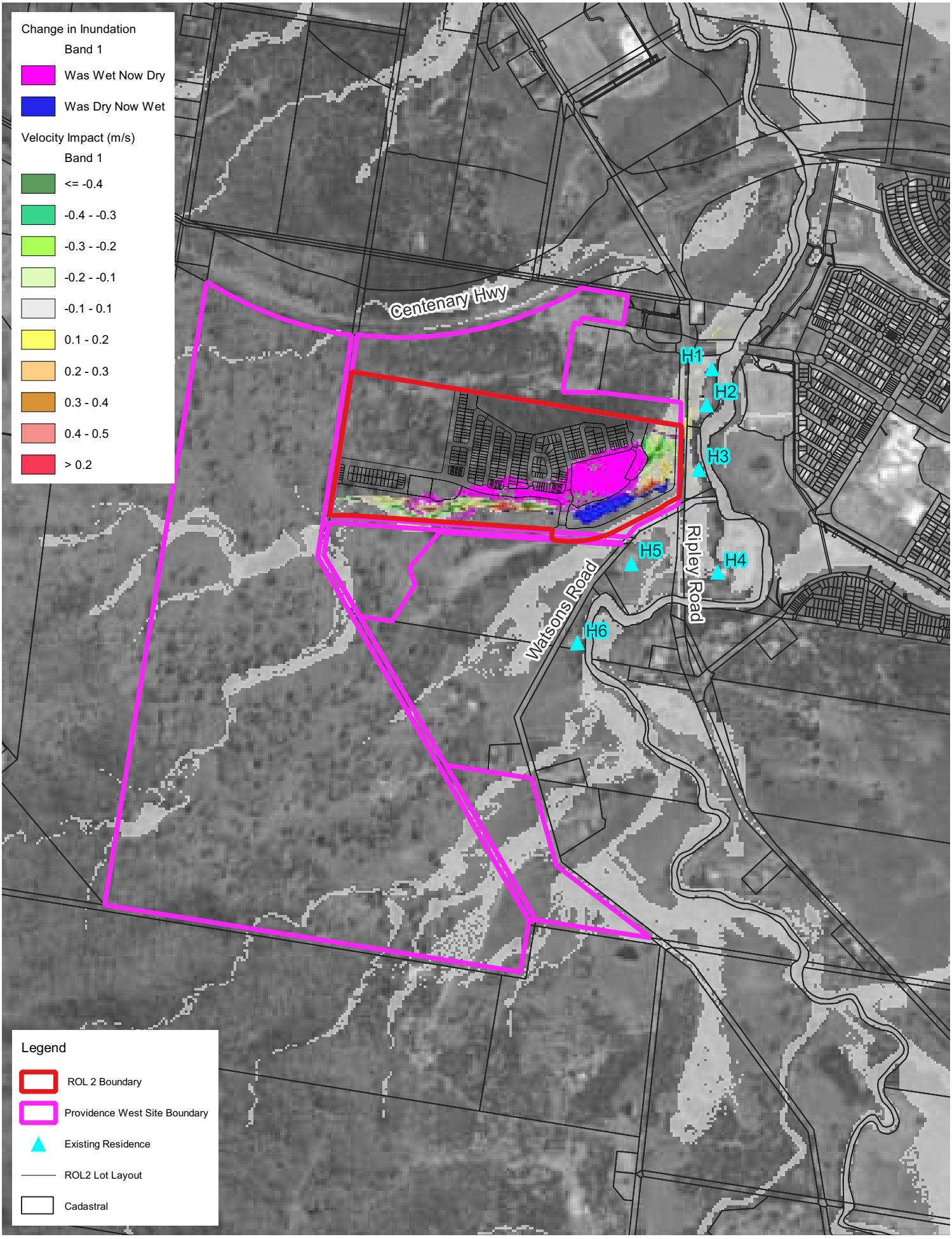
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FIGURE NUMBER: D19

REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 5% AEP Velocity Impact - Upstream of Centenary Highway

N

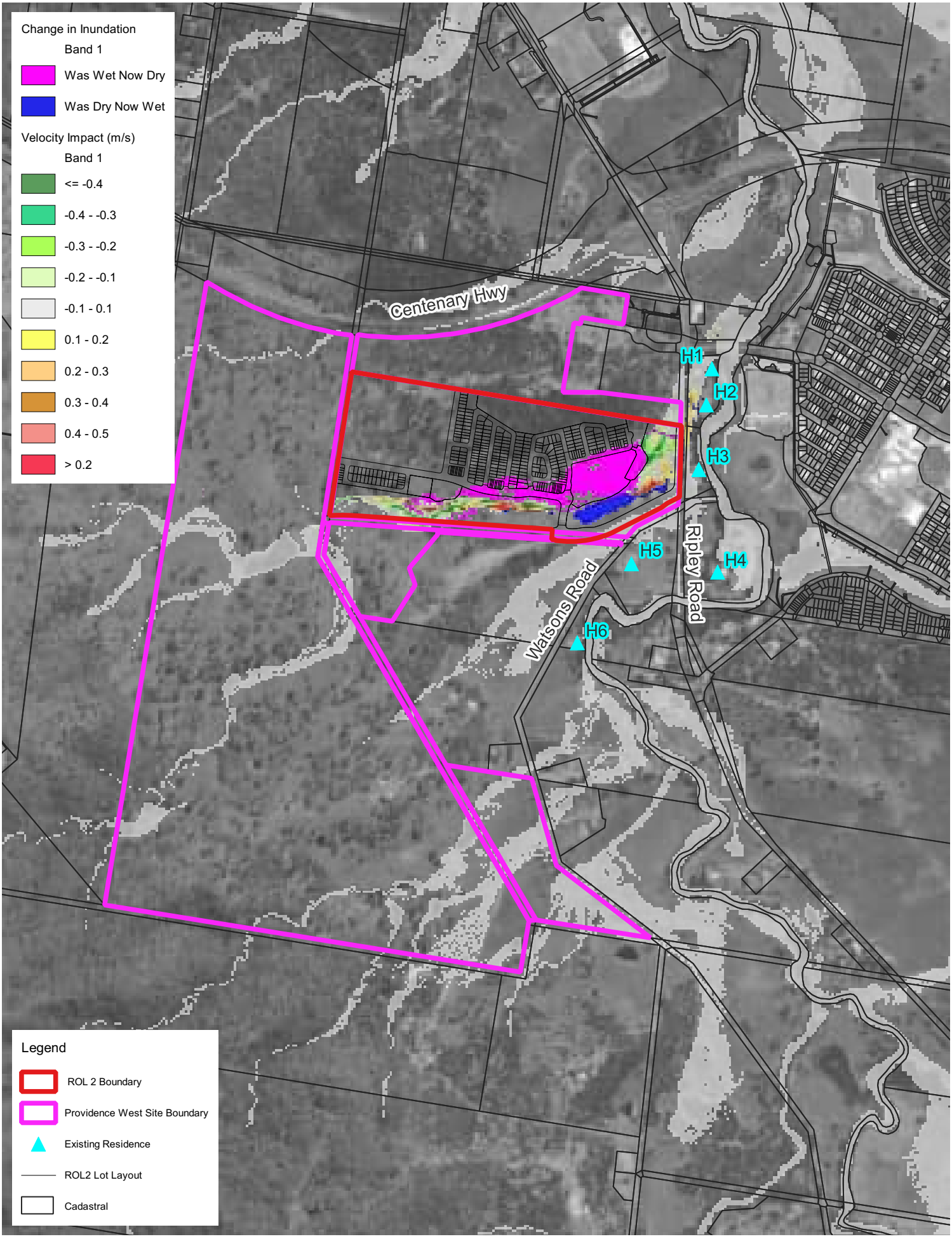
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FIGURE NUMBER: D20

REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 10% AEP Velocity Impact - Upstream of Centenary Highway

N

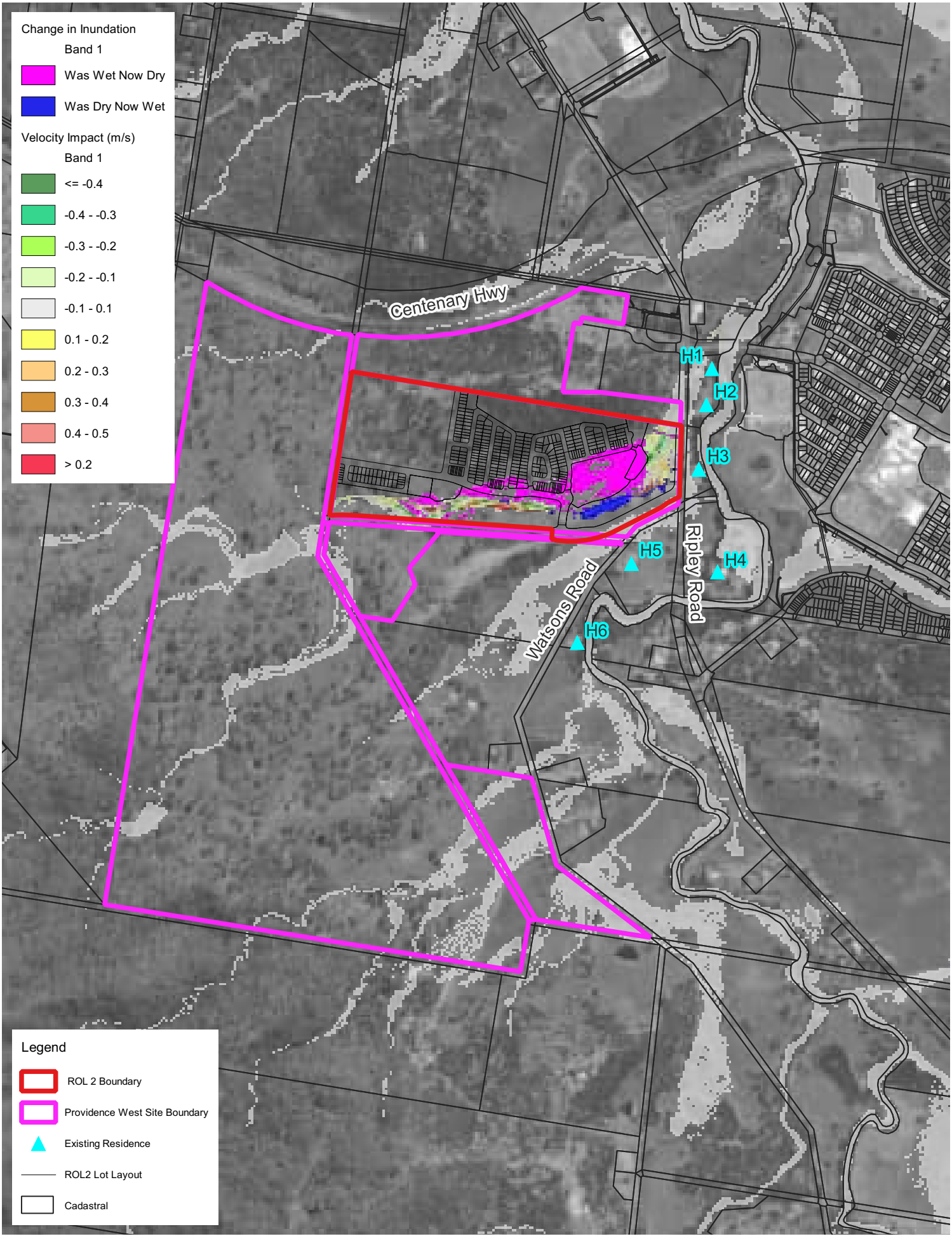
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FIGURE NUMBER: D21

REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 18% AEP Velocity Impact - Upstream of Centenary Highway

N

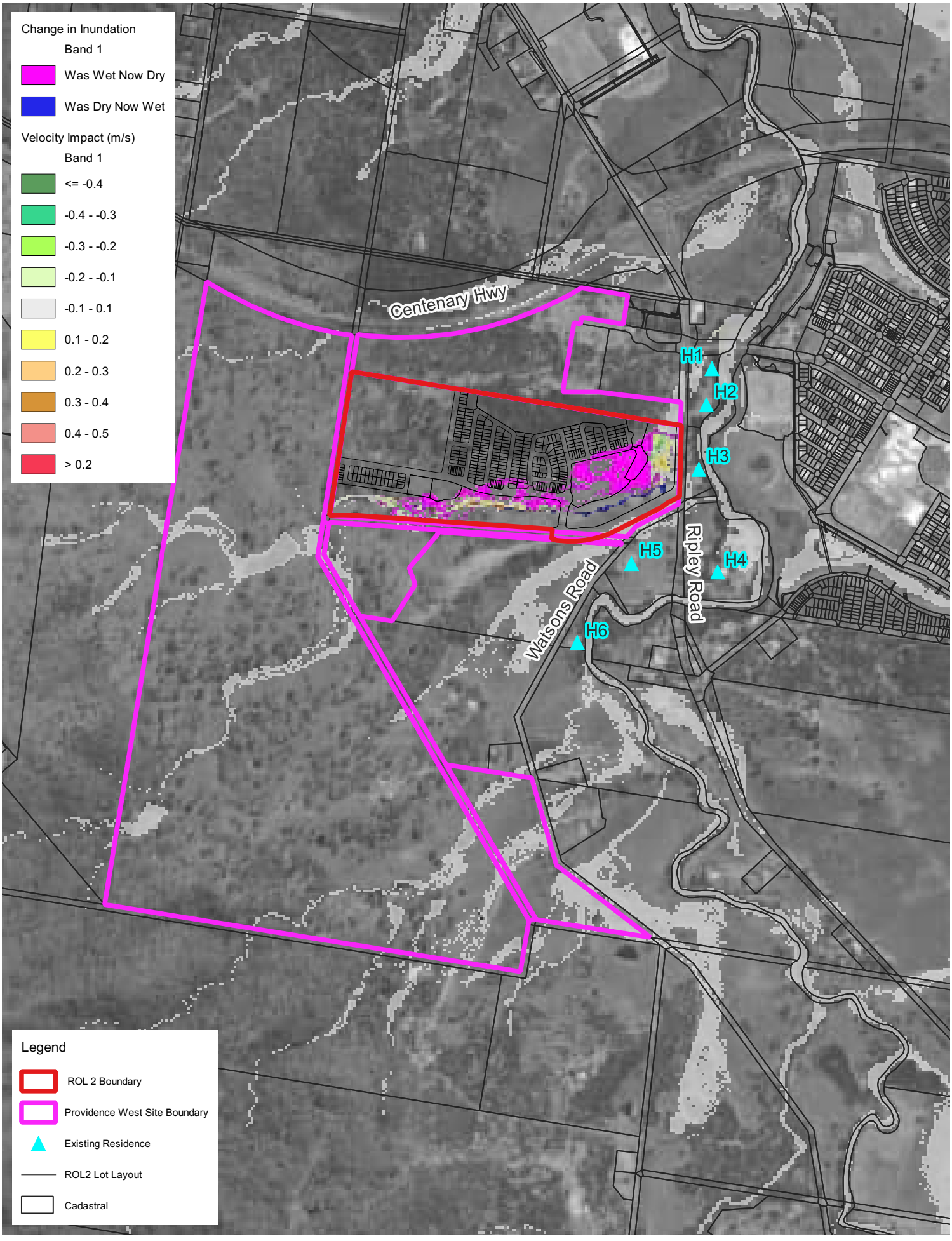
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FIGURE NUMBER: D22

REVISION:

DATE: 10-November-2025

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Data Sources:
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Cadastre
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PROJECT: Providence West ROL 2

CLIENT: Stockland

WEP | Water Engineering Partners
WWW.WEP.COM.AU

TITLE: 39% AEP Velocity Impact - Upstream of Centenary Highway

N

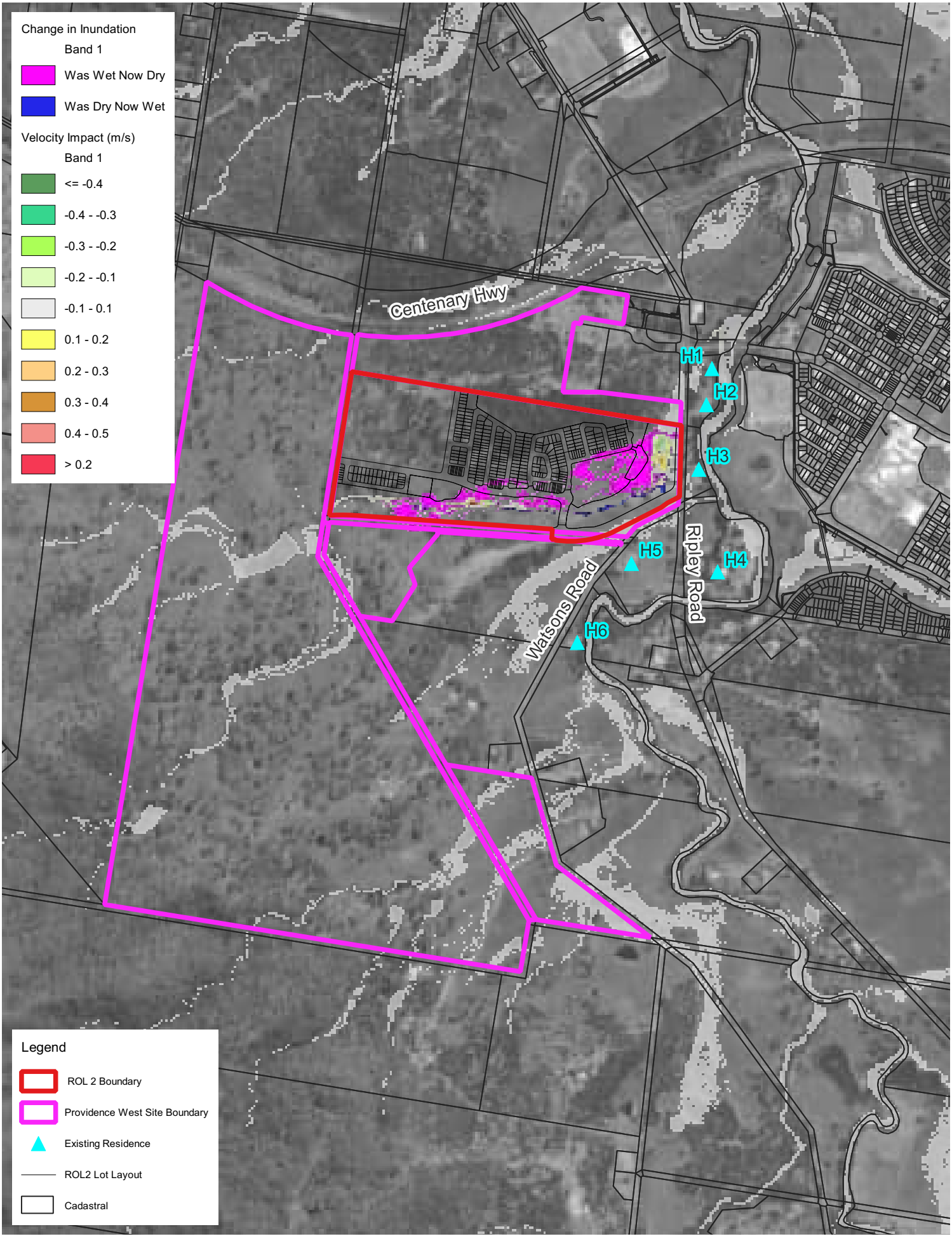
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FIGURE NUMBER: D23

REVISION:

DATE: 10-November-2025

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 63% AEP Velocity Impact - Upstream of Centenary Highway

N

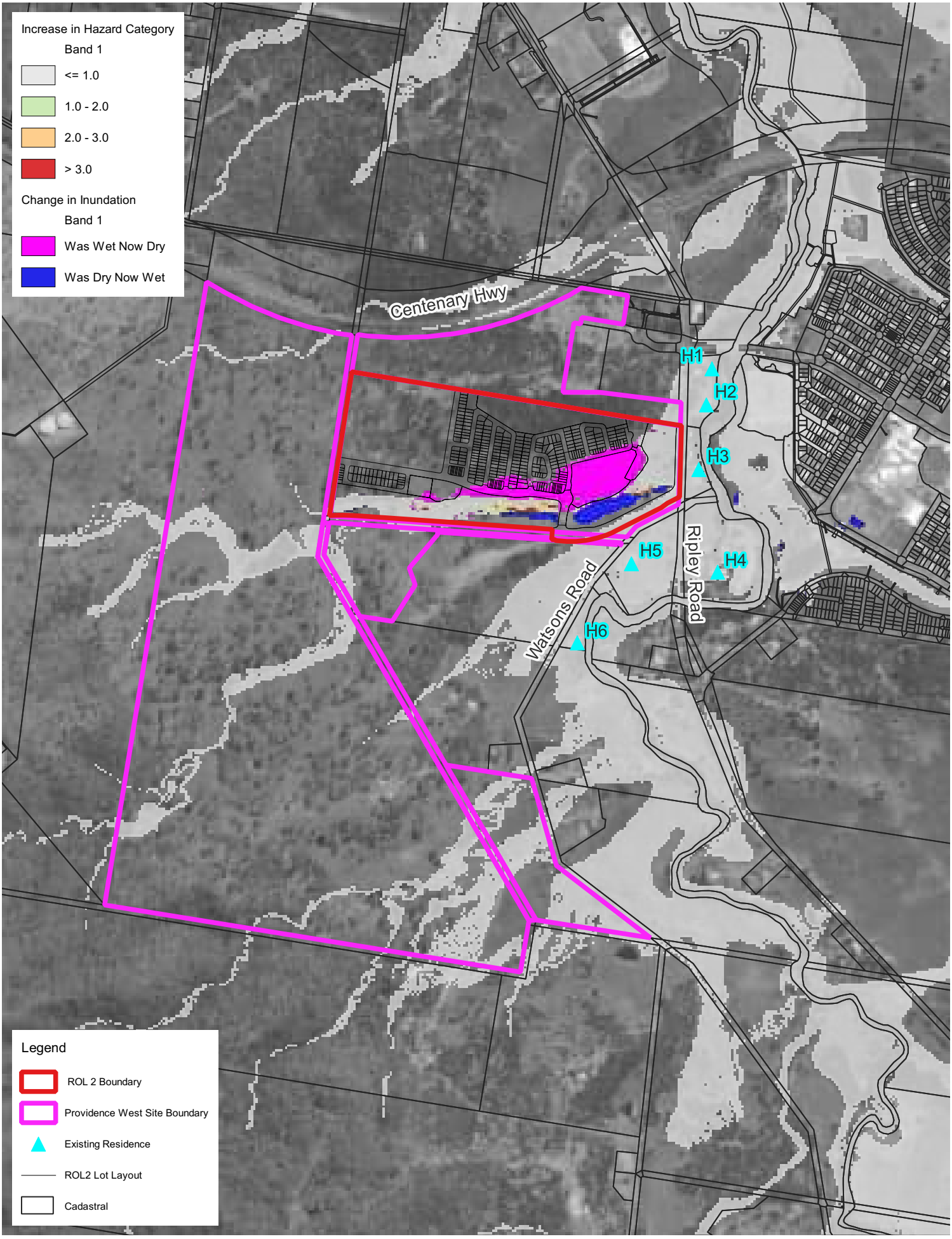
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FIGURE NUMBER: D24

REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 1% AEP with climate change Hazard Impact - Upstream of Centenary Highway

N

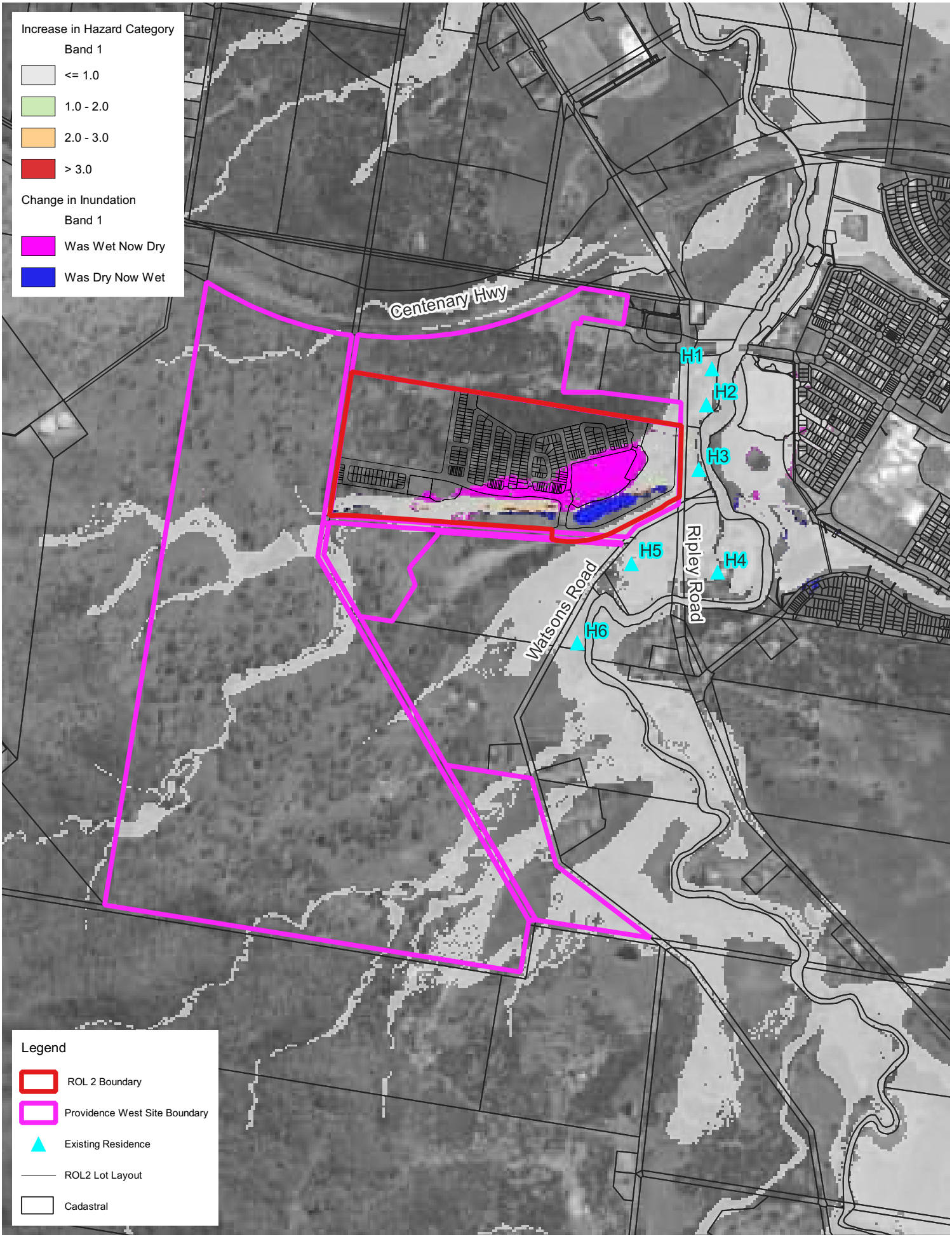
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FIGURE NUMBER: D25

REVISION:

DATE: 10-November-2025

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Data Sources:
Photography:
Topography:
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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 1% AEP Hazard Impact - Upstream of Centenary Highway

N

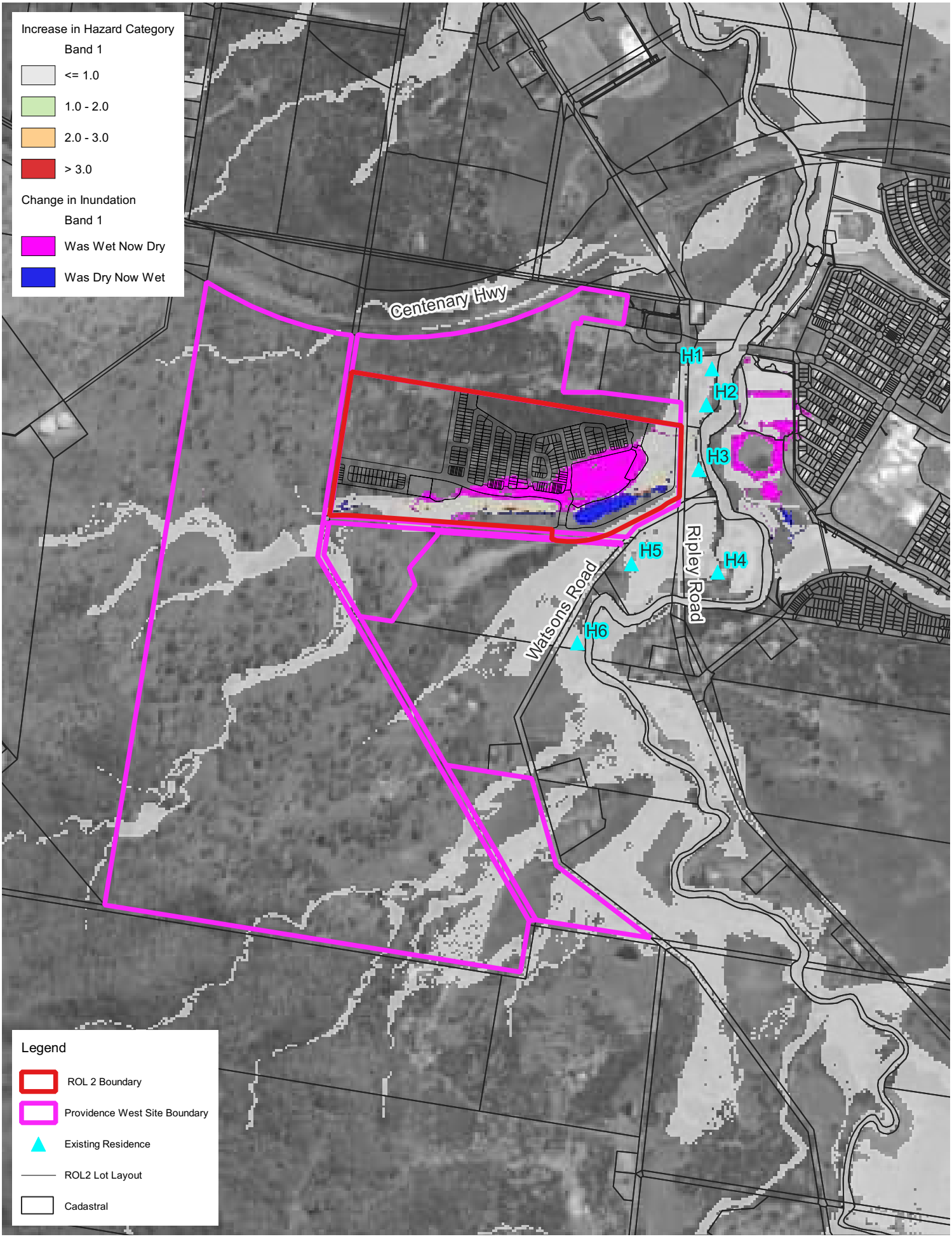
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FIGURE NUMBER: D26

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppD17-D32y\AppD17-D32.qgz



Data Sources:
Photography:
Topography:
Cadastre
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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 2% AEP Hazard Impact - Upstream of Centenary Highway

N

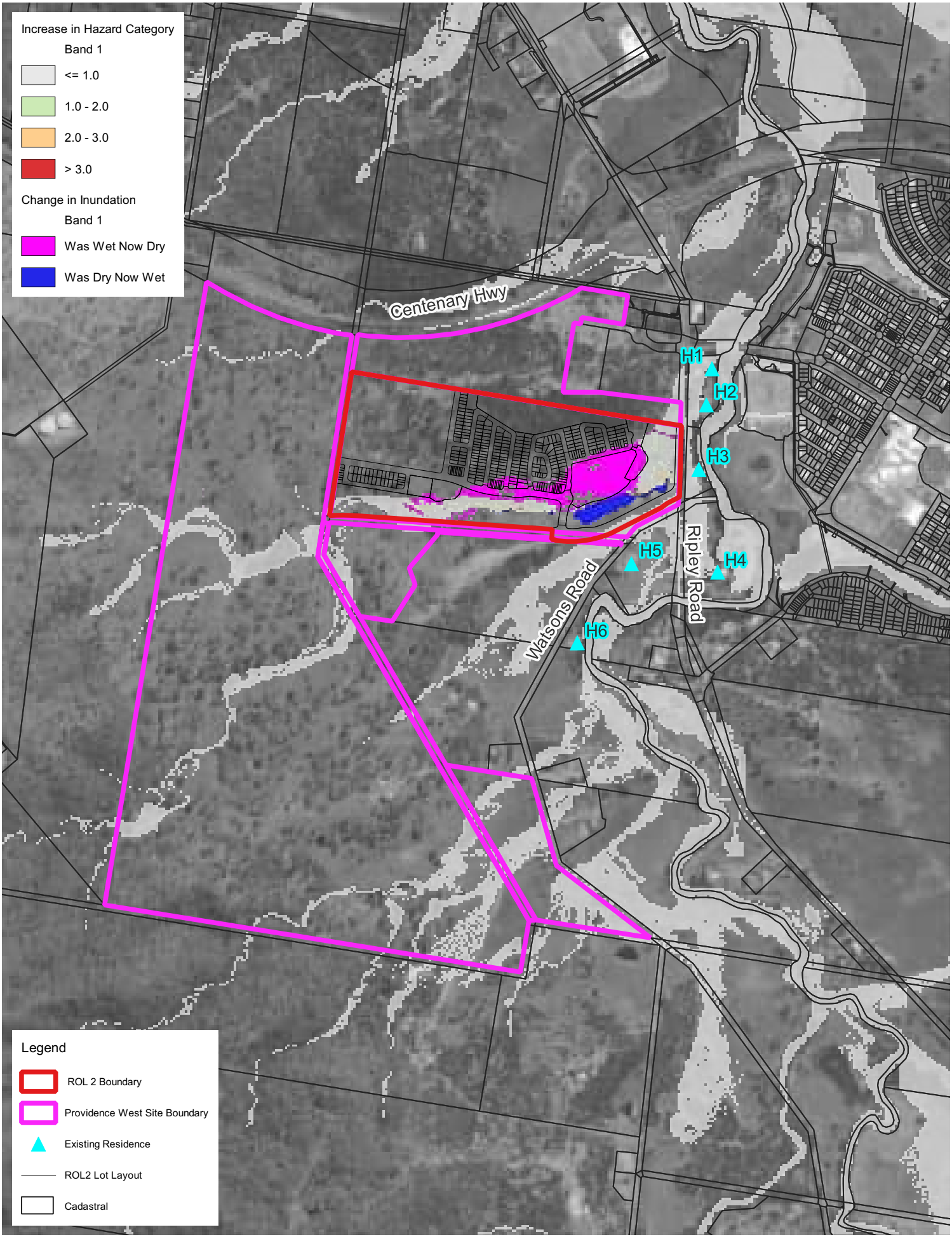
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FIGURE NUMBER: D27

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppD17-D32y\AppD17-D32.qgz



Data Sources:
Photography:
Topography:
Cadastre
Coordinate System: GDA94 / MGA zone 56

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 5% AEP Hazard Impact - Upstream of Centenary Highway

N

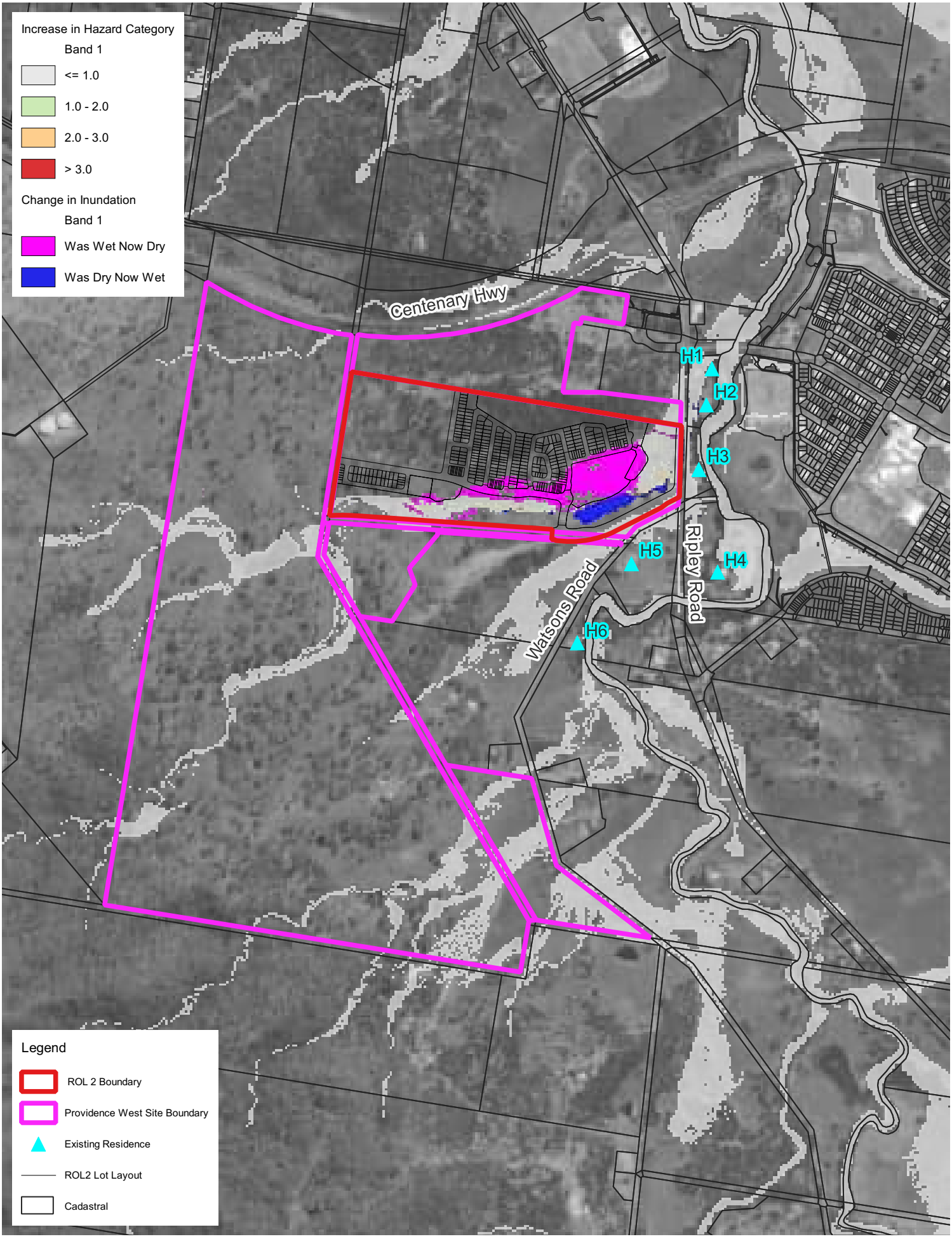
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FIGURE NUMBER: D28

REVISION:

DATE: 10-November-2025

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Photography:
Topography:
Cadastre
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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 10% AEP Hazard Impact - Upstream of Centenary Highway

N

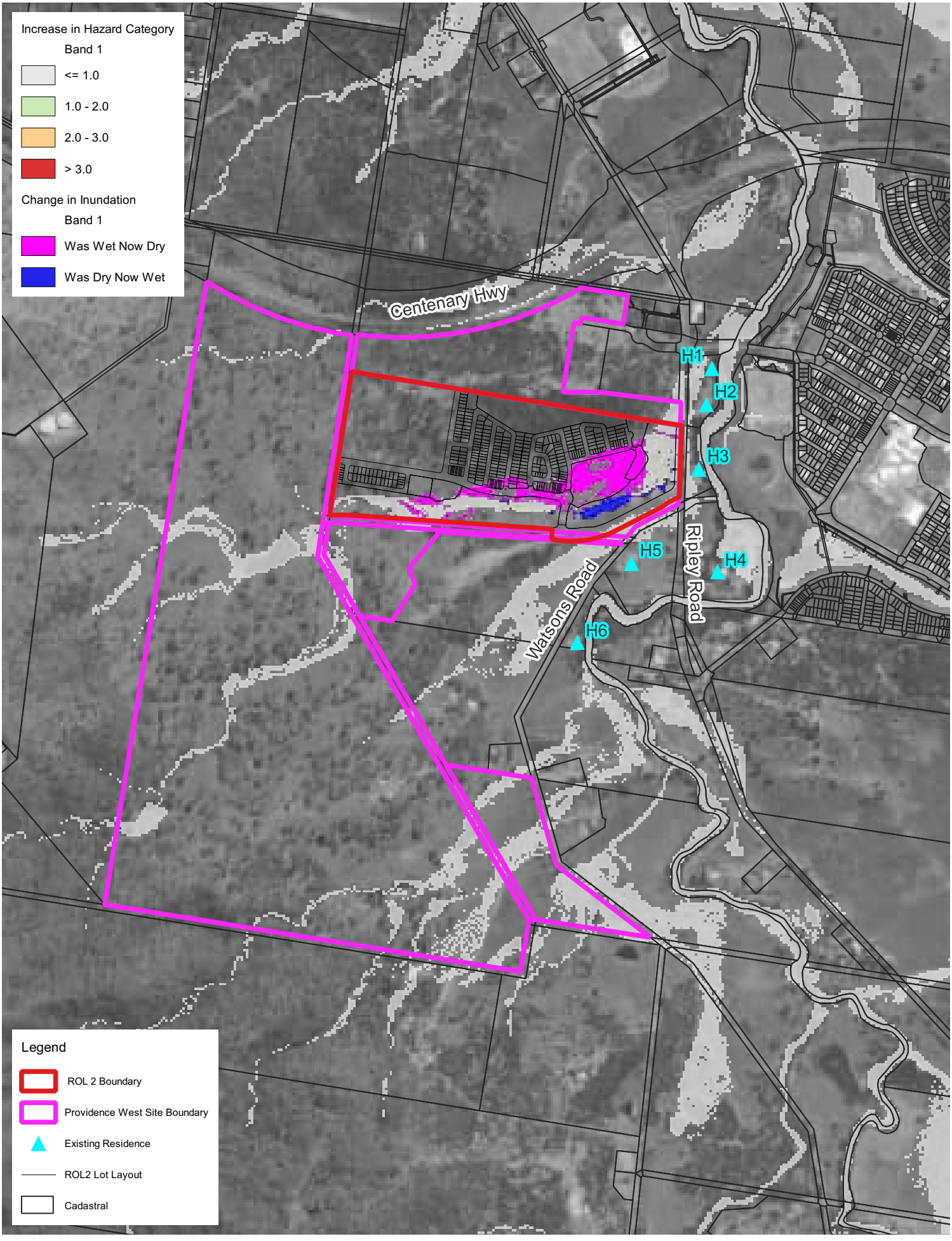
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FIGURE NUMBER: D29

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppD17-D32y\AppD17-D32.qgz



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Topography:
Cadastre
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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 18% AEP Hazard Impact - Upstream of Centenary Highway

N

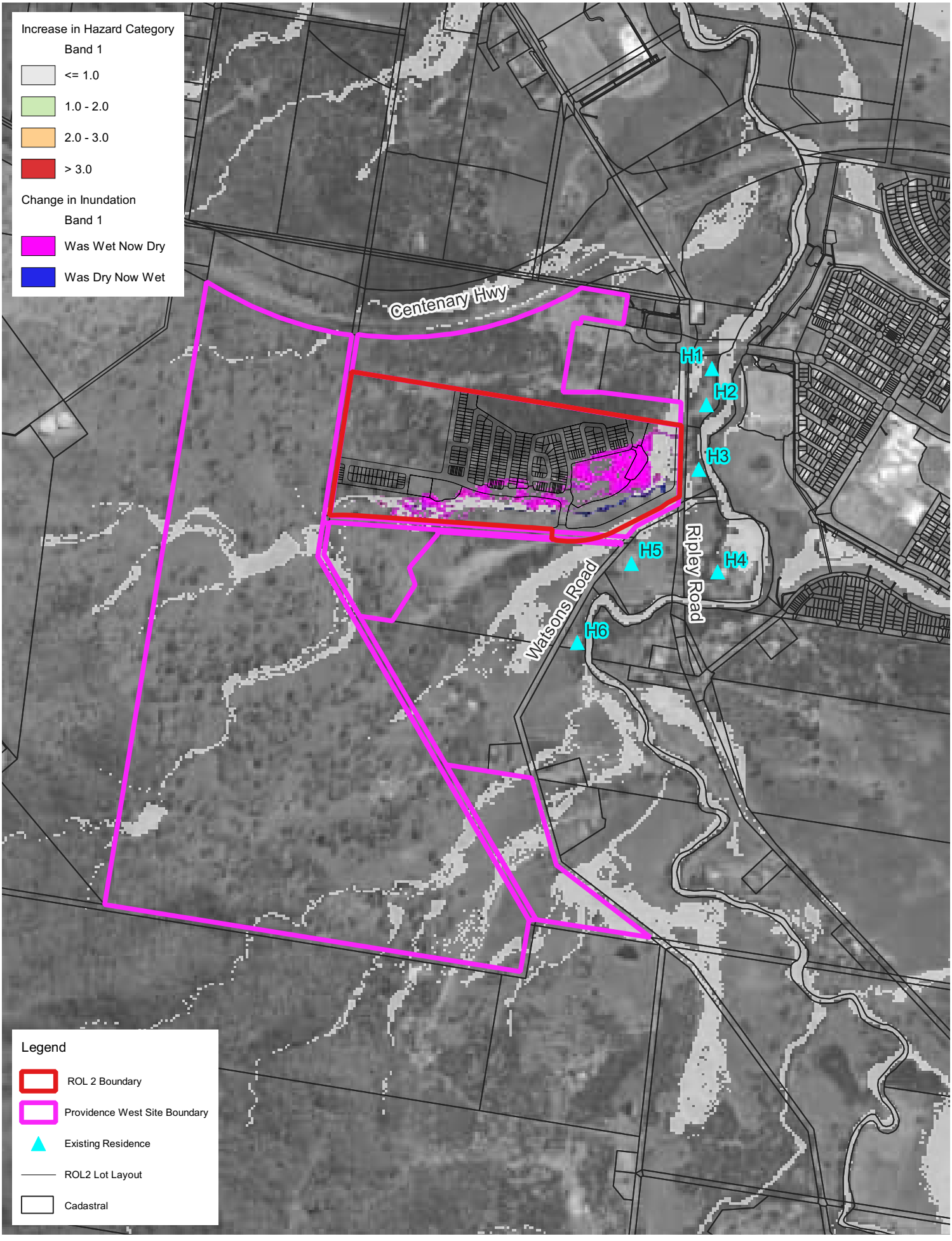
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FIGURE NUMBER: D30

REVISION:

DATE: 10-November-2025

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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 39% AEP Hazard Impact - Upstream of Centenary Highway

N

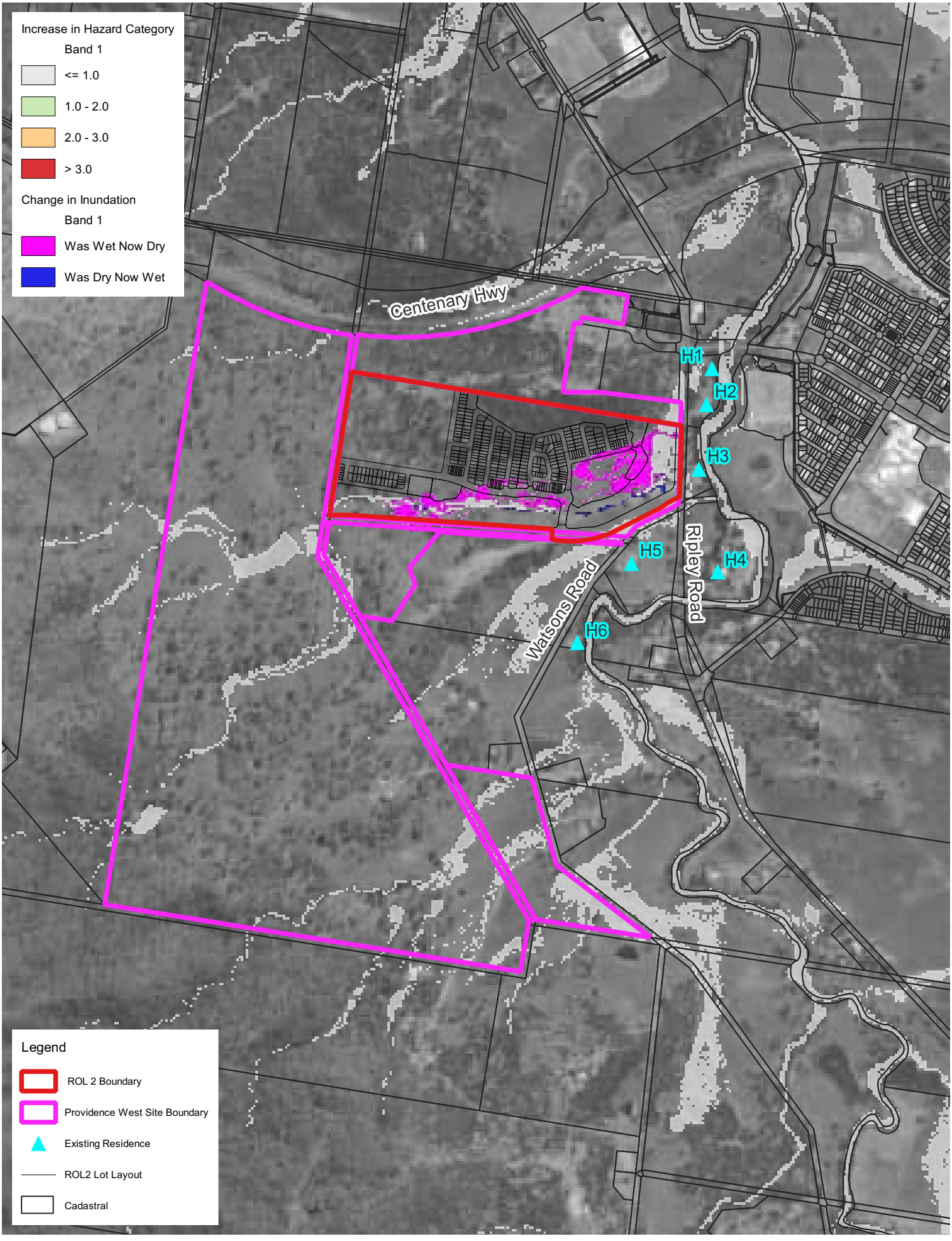
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FIGURE NUMBER: D31

REVISION:

DATE: 10-November-2025

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Topography:
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PROJECT: Providence West ROL 2

CLIENT: Stockland

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TITLE: 63% AEP Hazard Impact - Upstream of Centenary Highway

N

0 300 600 m

FIGURE NUMBER: D32

REVISION:

DATE: 10-November-2025

Filepath: Y:\Jobs\30024_Stockland_Ripley Road Catalyst Works\6_GIS\R.30024.001.02\AppD17-D32y\AppD17-D32.qgz