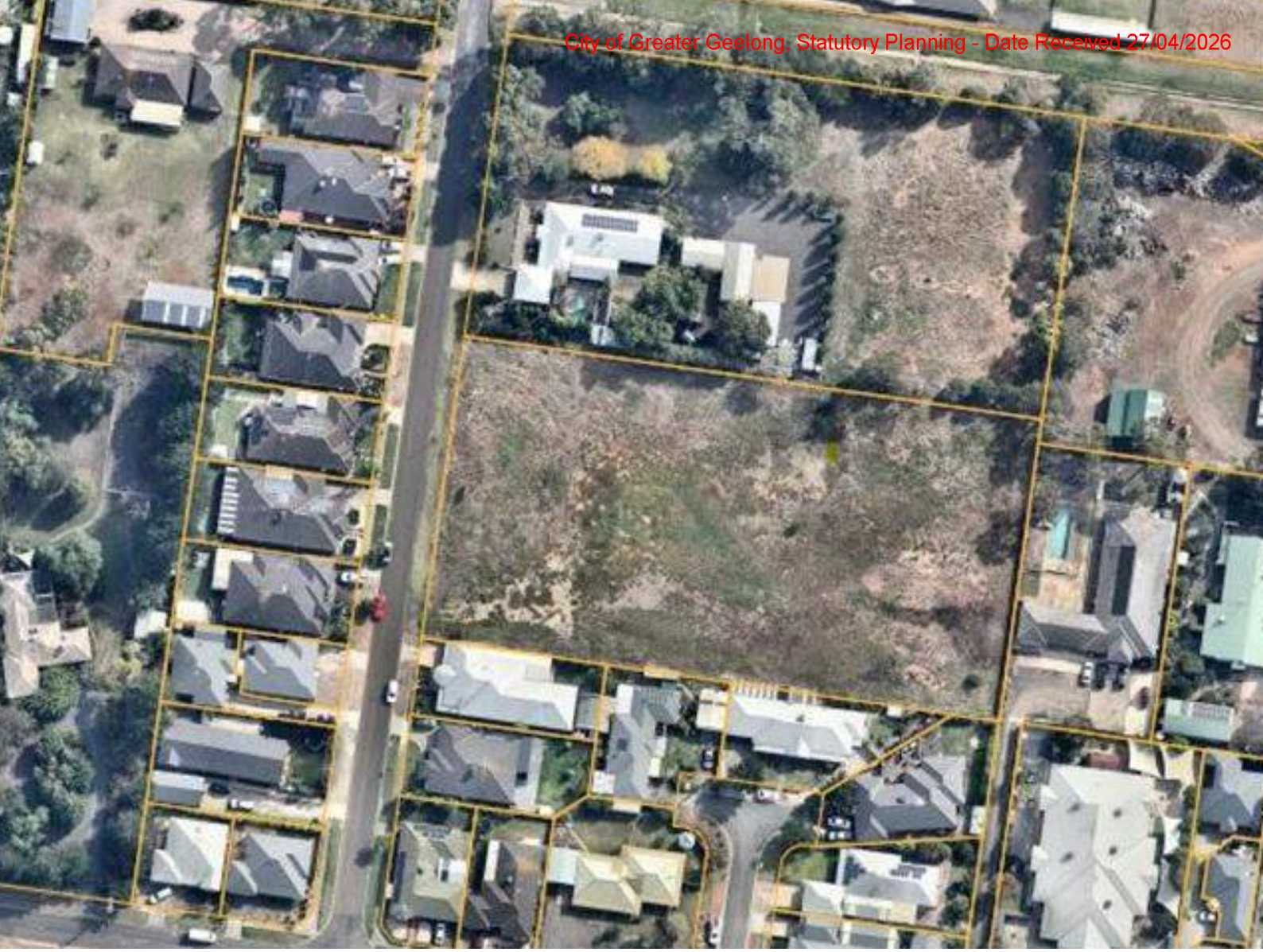
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10-20 BATH STREET, LARA

STORMWATER MANAGEMENT PLAN

APRIL 2026

Version Rev00

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1 BACKGROUND

1.1 INTRODUCTION

Loetis has been engaged by L Bisinella Developments Pty Ltd to complete a Stormwater Management Plan to accompany the planning permit application for a proposed residential subdivision at 10-20 Bath Street. This property will be herein referred to as the 'subject site'.

The site is a located within the township of Lara and currently zoned as General Residential under the Victorian Planning Provisions. The subject site has a total area of 1.63 hectares and generally falls in a north-easterly direction towards the existing Elcho Drain.

Development of the site will include construction of approximately 34 residential allotments and associated road network along with the required drainage assets identified within this report.

The subject site can be seen in Figure 1 below.



Figure 1 - Aerial Image (Nearmap - 22/3/2026)

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2 STUDY OBJECTIVES

The objective of this Stormwater Management Plan is to demonstrate a proposal for stormwater treatment as a part of development works which accord to local authority and best practice guidelines for stormwater quality and stormwater quantity treatment. This will enable the subdivision to meet anticipated conditions and requirements to be set in the planning permit for stormwater management and ensure that stormwater quality and quantity targets are achieved and maintained.

The site is located within the City of Greater Geelong (CoGG) boundary, as such stormwater objectives are based on local regulatory requirements as outline in the Infrastructure Design Manual, and our professional understanding of Council's preferred infrastructure delivery mechanisms for stormwater treatment.

Stormwater runoff generated within the site will be collected and conveyed via a combination of underground piped drainage infrastructure and designated overland flow paths. Runoff will be directed to integrated stormwater treatment assets prior to discharge at the site's Legal Point of Discharge (LPOD).

Specific objectives are detailed below.

2.1 SITE STORMWATER OBJECTIVES

The site stormwater objectives are detailed below.

1. Best Practice reductions for Water Quality:
   - 80% reduction in Suspended solids (SS)
   - 45% reduction in total nitrogen (TN)
   - 45% reduction in total phosphorus (TP)
   - 70% reduction in gross pollutants (GP)

2. Stormwater Conveyance

   Conveyance of flows up to and including the 1% AEP flows to the Legal Point of Discharge (LPOD).

3. Stormwater Quantity

   Designed to ensure that flows downstream of the subdivision site are restricted to pre-development levels.

Throughout this report the '20% AEP Storm Event' and '1% AEP Year Storm Event' will be referred to as the minor and major storm events respectively.

The following stormwater management strategy will provide details on the stormwater treatment nodes and associated infrastructure requirements for the mitigation of runoff from the development to ensure stormwater discharge targets are achieved at the designated LPOD.

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3 CATCHMENT ASSESSMENT

3.1 EXISTING SITE CONDITIONS

The site is bounded by Bath Street to the west, the Elcho Drain (Council drainage reserve) to the north and existing residential properties to the east and south.

The subject site currently features two residential properties, multiple sheds and existing vegetation which are proposed to be demolished and removed to facilitate the development of the proposed subdivision.

Further details relating to the existing site conditions are provided in the Venant Solutions Flood Report – 15 April 2026, included as Appendix A.



Figure 2 - Site Plan & Contours (Swanson Surveying)

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3.2 DEVELOPED SITE CONDITIONS

Development of the site will include construction of 32 residential allotments along with an associated road network along with the required drainage reserve.

The proposed development consists of a variety of different sized allotments ranging in size from 306m^2 up to 588m^2.

The proposed development layout is demonstrated in Figure 3 below.

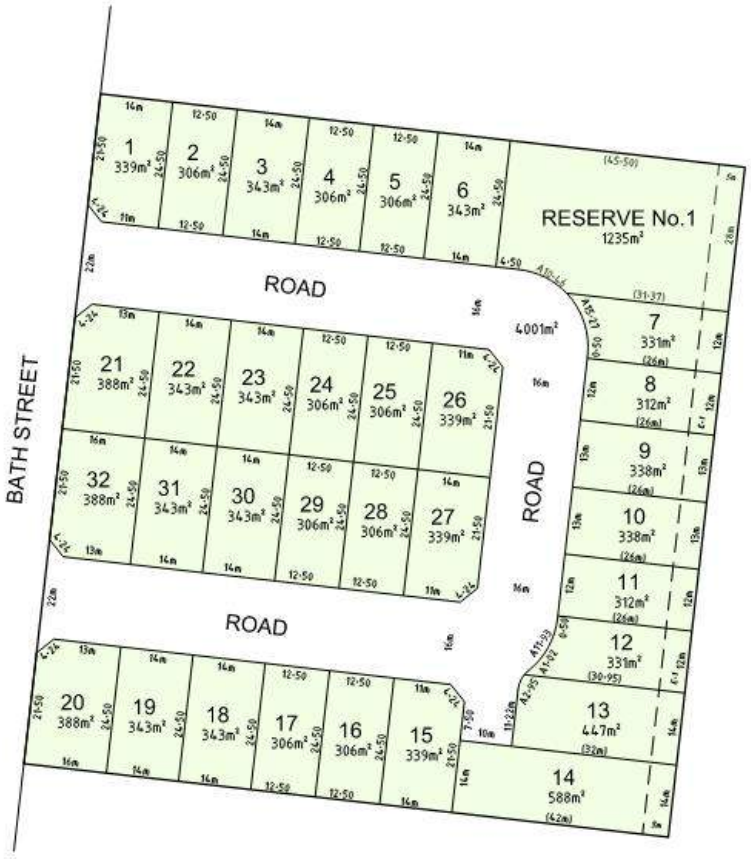


Figure 3 - Proposed Plan of Subdivision (Swanson Surveying, V7)

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4 PROPOSED STORMWATER CONVEYANCE

As part of the flood modelling of the subject site, Loetis provided a conceptual 3D design surface to Venant Solutions for input into their flood modelling, which included assessment on the detention basin, roads, allotments and Elcho Drain.

Refer to Venant Solutions – Flood Report (Appendix A) for further commentary and results.

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5 STORMWATER DETENTION DESIGN

Stormwater detention requirements to achieve the targeted outcomes set out within this strategy were modelled as part of the Venant Solutions Flood Report (Appendix A). Please refer to this report for further commentary and results.

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6 STORMWATER QUALITY

6.1 STORMWATER QUALITY MONITORING

To demonstrate compliance with stormwater quality objectives, MUSIC software has been utilised. The model has generally been produced in accordance with Melbourne Water's MUSIC Modelling Guidelines (2023) and we have adopted recommendations from City of Greater Geelong (COGG) 'Design Note 3'. Refer below for the assigned model parameters.

It is noted that an original development proposal was limited to the property known as No. 10 Bath Street. Given the infill nature of the site, a number of dispensations were agreed by Council when the proposal only included No. 10 Bath Street, nominally:

- Allowance for the use of privately owned raingardens for individual allotments were proposed/ agreed.
- A Raingarden/ Bioretention area in the proposed culdesac (Council owned) was also agreed.
- A GPT (Atlan Vortceptor or equivalent) was agreed, with no Nitrogen removal allowed.
- Rainwater tanks with re-use for toilet flushing for all lots were proposed.

As can be seen, this comprised a significant deviation from typical Council requirements, reflective of the constrained nature of the site. With the inclusion of No. 20 Bath Street effectively doubling the development area, a more conventional arrangement is proposed with a wetland and detention basin above, with considerably reduced dispensations requested (more thorough commentary below):

- 2kL Rainwater tanks per lot (not consider a true dispensation, more a reflection on the true modelling of the site).
- A GPT (Atlan Ecoceptor or equivalent – No TP or TN removal proposed) in lieu of a sedimentation forebay.
- Reduction of the maintenance track width from 4m to 3.5m around the basin.

With the introduction of a GPT in lieu of the sedimentation forebay typically found in wetlands, the need for a drying pad area has been removed. Also, now as there is less need (if at all) for full resetting of the basin to remove sediment (now via vacuum/ sucker truck), the more likely maintenance vehicles needing to access the basin will be utility vehicles for weed management rather than excavators, allowing the maintenance track to be reduced to 3.5m (typical traffic lane width) from 4m.

Given the significant improved outcomes both for Council and future households, we trust these relatively minor dispensations compared to what was previously agreed are acceptable. We also note that this comprises an almost identical arrangement approved for another L.Bisinella Developments subdivision at 73-85Ash Road in Leopold.

The modelled scenario with these features are described below.

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6.1.1 Rainfall Data

A local data set was sourced for this project as per Geelong design note guidelines, adopting Little River data for Lara. The original data set included data from 1992 – 2001.

6.1.2 Rainfall Runoff / Catchment Parameters

Melbourne Water guidelines for residential developments ranging from 300m^2 to 600m^2 lot sizes indicate a typical fraction imperviousness of 0.75 (75%). For this particular development, the catchments were broken up into the indicative roof area and the balance. This is to allow roof runoff to be directed to rainwater tanks as required for energy ratings (reuse) and the balance bypassing the tanks.

Table 1 – Catchment Split/ Properties

Catchment	Roof	Balance
Catchment spilt	75%	25%
Fraction Impervious applied	99%	30%
Effective Combined Fraction Impervious	83%	
Melb. Water Typical Guideline	75%	

As the site lot sizes are generally closer to the lower range for the Melbourne Water guidelines, the calculated overall fraction imperviousness of 83% compared to the 75% indication is considered appropriate.

Table 2 - MUSIC Simulations – Catchment Properties

Catchment Characteristics	
Catchment Name	See Table 1 above
Catchment Area (m^2)	See Table 1 above
Zoning/Surface Type	Roof/ Mixed
Impervious Area (%)	99 / 30
Impervious Area Properties	
Rainfall Threshold (mm/day)	1.00
Pervious Area Properties	
Soil Storage Capacity (mm)	120
Initial Storage (% of Capacity)	30
Field Capacity (mm)	50
Infiltration Capacity Coefficient -a	200
Infiltration Capacity Coefficient – b	1

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Groundwater Properties	
Initial Depth (mm)	10
Daily Recharge Rate (%)	25
Daily Baseflow Rate (%)	5
Daily Deep Seepage Rate (%)	0

6.2 STORMWATER QUALITY TREATMENT TRAIN

6.2.1 MUSIC Layout

The MUSIC layout used to determine stormwater quality requirements for the ultimate scenario is shown in Figure 4 below.

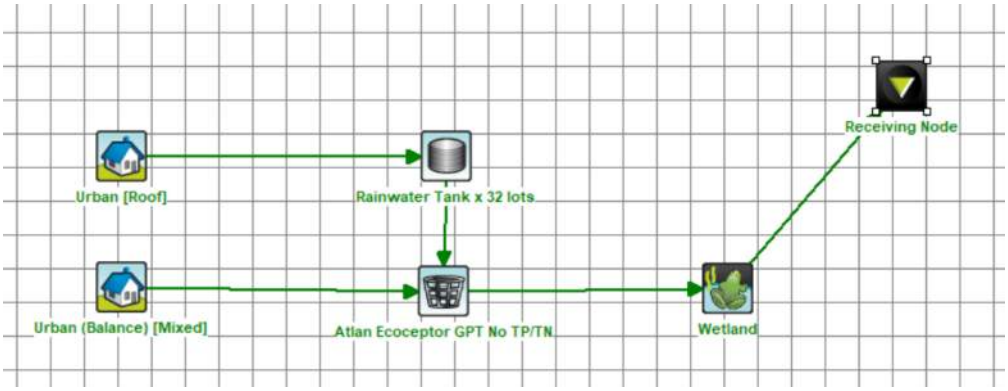


Figure 4 - Conceptual Music Model

6.2.2 Treatment System Parameters

Water quality treatment is proposed to be achieved through the implementation of stormwater treatment train consisting of a rainwater capture and reuse of roof water for toilet flushing, etc. followed by a GPT (in lieu of the sedimentation forebay) and a wetland system to provide the required tertiary treatment.

It is assumed that the average roof area in the development is 75% of the total site No consideration has been given to capture and reuse of additional structures such as sheds and garages

Tables 3, 4 & 5 below describes the parameters of the proposed treatment train modelled in MUSIC.

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Table 3 – Rainwater Tanks and Reuse – MUSIC Inputs

Inlet Properties	
Low Flow By-pass (m^3/s)	0.0
High Flow By-pass (m^3/s)	100.0
Storage Properties	
Surface Area (m^2)	1.12
Initial Volume (kL/m^3)	2
Volume below outfall (kL/m^3)	2
Overflow Diameter (mm)	50
Reuse	
Daily Demand (L/day) *	130
Number of Tanks (total)	32

Table 4 – GPT Atlan Ecoceptor – MUSIC Inputs

Inlet Properties	
Low Flow By-pass (m^3/s)	0.0
High Flow By-pass (m^3/s)	0.024 (24L/s)
Treatment removal	
Gross Pollutants	95%
Total Suspended Solids (TSS)	71%
Total Phosphorus (TP) *	0%
Total Nitrogen (TN) *	0%

Table 5 – Wetland System – MUSIC Inputs

Inlet Properties	
Low Flow By-pass (m^3/s)	0.0
High Flow By-pass (m^3/s)	100.0
Inlet Pond Volume (m^3) (Allowance for GPT)	1
Storage Properties	
Surface Area (m^2)	297
Extended Detention Depth (m)	0.15
Permeant Pool Volume (m^3)	61
Initial Volume (m^3)	61
Exfiltration Rate (m^3)	0
Reuse	
Equivalent Pipe Diameter (mm)	14
Overflow Weir Width (m)	3
Notational Detention Time (Hrs)	70.0

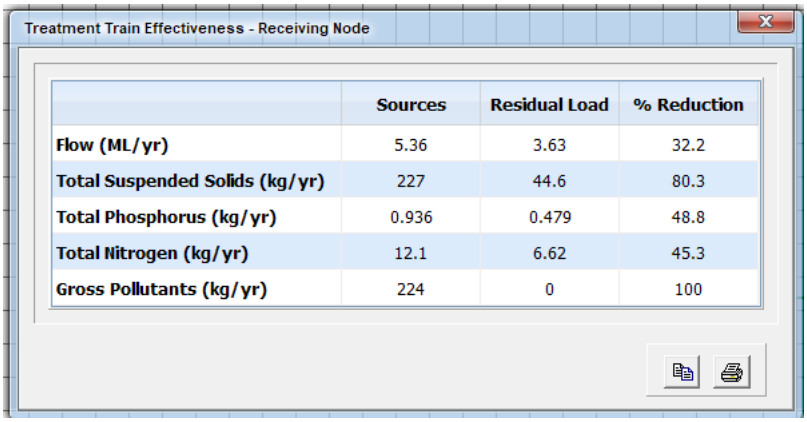
*No allowance for TP/TN treatment as per Council directions.

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6.2.3 Results

Table 6 below presents the MUSIC results achieved from the model for the various scenarios.

Table 6 - MUSIC Results – Ultimate



	Sources	Residual Load	% Reduction
Flow (ML/yr)	5.36	3.63	32.2
Total Suspended Solids (kg/yr)	227	44.6	80.3
Total Phosphorus (kg/yr)	0.936	0.479	48.8
Total Nitrogen (kg/yr)	12.1	6.62	45.3
Gross Pollutants (kg/yr)	224	0	100

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7 CONCLUSION & RECOMMENDATIONS

The site stormwater objectives for the development of 10 & 20 Bath Street can achieve stormwater quality pollutant removal targets by adopting a treatment train strategy as shown above. The proposed system now comprises:

All Lots:

- x1 No 2kL rainwater tank to be provided per lot for rainwater capture and reuse on each allotment.
- Each allotment will be connected to the underground drainage network via house connections in accordance with IDM Standard Drawings SD505, SD510, SD515, SD516 or SD520 to convey the minor storm event.
- Minor flows (20% AEP) to be directed to the underground drainage network.
- Major flows are to be conveyed via the road network for flows up to and including the 1% AEP event in accordance with the provided Venant Solutions report.

Overall Development:

- x1 No Atlan Ecoceptor (or equivalent) to treat the bulk removal of the gross pollutants and suspended solids.
- Conventional Wetland (with Detention Basin above) to provide for tertiary treatment of the Phosphorus and Nitrogen Removal.
- Reduced maintenance track width (from 4m to 3.5m) taking into consideration the reduced reset needs of the wetland due to the GPT.
- Detention Basin above wetland to provide attenuation of site generated runoff and flood storage.

Refinement of the hydraulic modelling should be completed during the detailed design phase. This will allow for optimised delivery requirements which can be tailored to meet specific development constraints that are raised as the development progresses.

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LOETIS

APPENDIX A

VENANT SOLUTIONS – FLOOD REPORT

City of Greater Geelong, Statutory Planning - Date Received 27/04/2026

VENANT SOLUTIONS

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ABN: 15 166 193 219

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Our Ref: L.M00635.001.00.10-20BathStLaraFloodReport.docx

15 April 2026

Unit 4
2-6 Rutland Street
Newtown VIC 3220

Attention: [redacted]

Dear [redacted]

RE: 10-20 BATH STREET, LARA – FLOOD REPORT

Venant Solutions has been engaged to complete a flood assessment of the proposed development at 10-20 Bath Street, Lara (the Site). City of Greater Geelong (CoGG) flood mapping indicates that the Site would be subject to inundation in a 1% Annual Exceedance Probability (AEP) flood event. The purpose of this assessment is to demonstrate the management of overland flows passing through the Site.

This letter report presents the details of the assessment undertaken and assessed the outcomes against CoGG's requirements for flood impacts and safety as specified in the CoGG Planning Scheme and Department of Engineering, Land, Water and Planning (DELWP 2019) and lot fill requirements. This Flood Impact Assessment will address the following aspects:

- Confirm proposed lots within the development are elevated above the 1% AEP flood level and road reserves are not impact by flooding that exceeds safety design criteria as per Australian Rainfall and Runoff 2019.
- Confirm the proposed development does not adversely impact neighbouring properties.

Background

The Site is located in close proximity to Elcho Drain, which is a constructed channel flowing west to east. The Site covers an area of approximately 4,467 m^2. The Site currently features two residential dwellings and multiple sheds that will be demolished for the proposed subdivision. The subdivision consists of thirty-four lots and a single lot allocated for a detention basin. A layout and further details are provided in plans attached in Appendix A.

An initial review of the previous flood modelling indicates that the majority of the site is covered by the 1% Annual Exceedance Probability (AEP) flood extent with an average depth of approximately 0.12 m. This flooding will need to be considered when assessing the safe conveyance of flow through the development and protection of the proposed properties on the Site.

The Site generally slopes from the southwest toward the northeast. Due to the large lot size of the Site, flows travel in both the northern and northeastern directions, with several high points located through the middle of the Site influencing these flow paths. The Site location is shown in Figure 1.

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Figure 1 Site Locality

Flood Assessment`

Water Technology undertook a preliminary flood impact assessment for a smaller development on the southern portion of the Site. The Water Technology TUFLOW hydraulic model was provided to Venant Solutions for this assessment. The TUFLOW model was a cutdown version of that used for the Lara Flood Study. Inflow boundaries for the TUFLOW model were from a RORB hydrological model also developed for the Lara Flood Study. The RORB model was not provided to Venant Solutions by Water Technology as CoGG would not provide permission for its release. This means that the RORB model has not been updated to reflect changes in impervious fraction for the Site. This will not materially impact the results and overall outcomes given the Site area is only a small fraction of the entire catchment and is at the lower end of the catchment with peak runoff occurring earlier in the storm event before the peak flow from the larger catchment arrives.

Hydrology

The parameters used in the RORB and TUFLOW models for the Lara Flood Study calibration were used to inform the final parameters adopted in the design modelling. The Lara township and broader urban area is impacted by both stormwater flooding caused by shorter intense storm events within the urban area as well as widespread riverine flooding from the Hovells Creek catchment.

The hydrology design parameters, critical storm duration and critical temporal pattern were consistent with the 10 Bath Street Lara Flood Assessment which were adopted from the Lara Flood Study. As per the 10 Bath Street Lara Flood Assessment, refer to the Lara Flood Study report for the recommended design hydrology parameters, along with justification for their adoption.

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Hydraulic

The TUFLOW model was used to define the flood behaviour of the Site and assess the proposed development. The model layout is shown in Figure 2 and Figure 3. TUFLOW version 2025.2.1-iSP-w64 was used for this assessment. The models were run with TUFLOW's HPC solver.

The supplied model was reviewed and found to be suitable for the assessment albeit with some updates completed. Details of the existing conditions model development include:

- The model was run using a 2 m grid cell size and quadtree level 3, with sample distances of 1 m, 0.5 m, and 0.25 m applied within the Site. For the remaining area of the catchment, Sub-Grid Sampling (SGS) with a sampling frequency of 5 was used to incorporate sub–2D-cell terrain data and ensure that finer flow paths were adequately represented.
- The base topography was the same as the LiDAR data adopted in the Lara Flood study (2020).
- Ground level survey was provided by Loetis (Export faces tin super exist 20251014.dwg) and incorporated in the model.
- The adopted Manning's 'n' surface roughness values are summarised in Table 1 for each surface (material) type.
    - The Manning's 'n' value of 0.100 was adopted for the Site and remainder of surrounding properties given it is a large land.
- Existing pit and pipe information was incorporated into the model.
- Inflow data for the 1% AEP event was adopted from the RORB model. The routed flow was applied as QT (flow-time) polygons located over the rural properties upstream of the 1D inflow. The 1D inflow polygon was divided between the site and the remaining catchment to represent a more realistic distribution of flow, with an inflow factor adopted based on the contributing area.
- The downstream model boundary (outflow) was located at Kanowna Place, 1.3km away from the Site to avoid influencing assessment results and was modelled using a normal depth (HQ) boundary with slope derived from the bed level in the LiDAR data as an approximation of the hydraulic gradient.

Table 1 Adopted Manning's 'n' Values

Surface type (Material)	Manning's 'n'
Road & Nature Strip	0.020
Residential lot	0.200
Large Residential lot	0.100
Pasture & some tall trees	0.060
Railway	0.045
Ponds	0.030
Industrial	0.300
Carpark	0.050
Cemetery	0.150
Large grassed areas	0.035
Unpaved road	0.030
Creek with vegetation/Dense bushed	0.100
Vegetated Waterway	0.070

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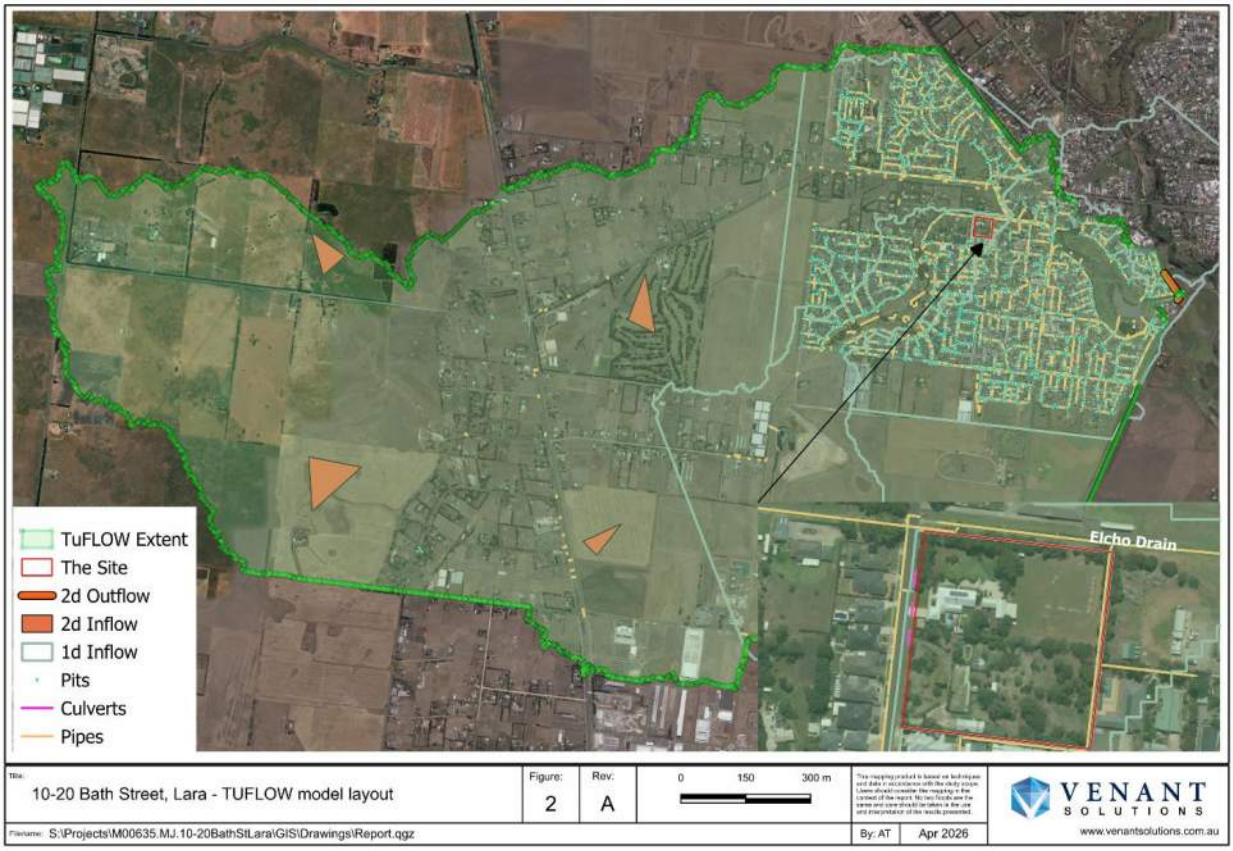


Figure 2 TUFLOW model layout

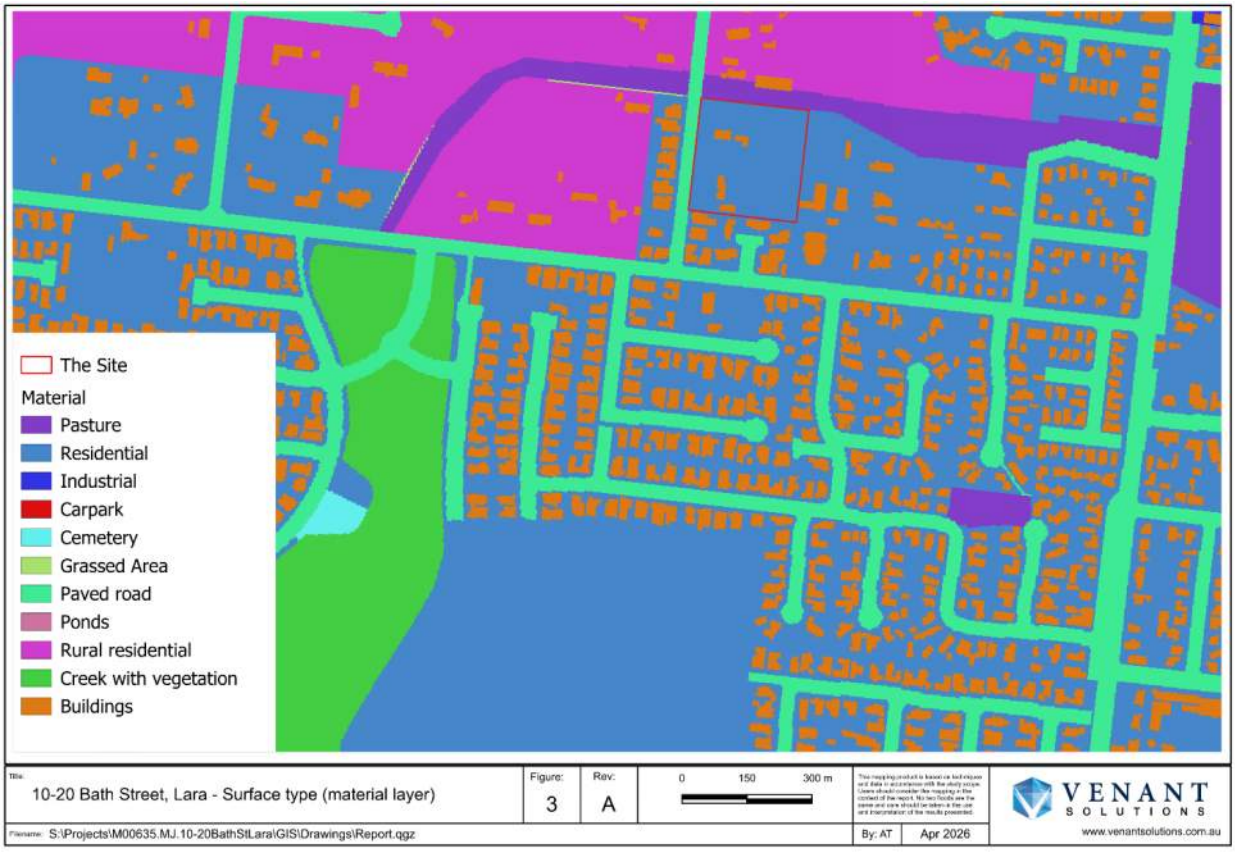


Figure 3 Surface type (material layer)

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Existing conditions modelling and mapping

Mapping of the existing conditions modelling results is provided as follows:

- Figure 4: Proposed Case Peak 1% AEP Depth
- Figure 5: Proposed Case Peak 1% AEP Velocity
- Figure 6: Proposed Case Peak 1% AEP Flood Hazard

The Flood depths during the 1% AEP event for existing conditions show that the Site experiences partial inundation. As per Figure 4, the Site is subject to flooding from the Elco Drain further upstream breakaway into Buckingham Street that flows into Bath Street coupled with local catchment to the south which also flows along Bath Street. There is also overland flow onto the Site from the properties immediately to the south. Depths in Bath Street and the Site are subject to depths in the range of 0.07 to 0.4 metres.

Figure 5 shows the Site and Bath Street are subject to slow moving flood water. The flood hazard vulnerability classifications in Figure 6 are calculated in accordance with from the 2019 edition of Australian Rainfall & Runoff with descriptions of each category provided in Table 2. Majority of the hazard within this area is classified as H1 with the exception of minor area on Bath Street that is classified as H2 as per Figure 6.

Table 2 Hazard Vulnerability Classification

Hazard Vulnerability Classification	Maximum Velocity (m/s)	Maximum Depth (m)	Description
H1	2	0.3	Generally safe for vehicles, people and buildings.
H2	2	0.5	Unsafe for small vehicles.
H3	2	1.2	Unsafe for vehicles. children and the elderly.
H4	2	2	Unsafe for vehicles and people.
H5	4	4	Unsafe for vehicles and people. All buildings vulnerable to structural damage. Some less robust buildings subject to failure.
H6	-	-	Unsafe for vehicles and people. All building types considered vulnerable to failure.

Proposed development modelling and mapping

The design went through numerous iterations to meet CoGG flood requirements. The proposed development is shown in the drawings attached at Appendix A and the representation of the development in the flood model is summarised below:

- The finished surface DEM for the proposed design provided by Loetis (Export faces tin super final 20251219.dwg) was included in the model.
- The DEM included a single lot allocated for a detention basin on the northeastern corner with NWL at 9 m AHD (Set as an initial water level in TUFLOW).
- 375mm pipe outlet from the detention basin.
- 2 orifices within a pit at the basin outlet structure as shown in Appendix A:
    - Orifice 1: 0.80×0.10 m^2 at 9.15 m AHD
    - Orifice 2: 0.26×0.12 m^2 at 9.3 m AHD

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- Grated inlet on top of outlet structure with dimensions 900 mm × 900 mm

- 600mm pipe along Bath Street from the front of 6 Bath Street until it splits to 450mm pipe towards the Elco drain (western outfall) and 300mm towards the Site at 10 Bath Street.
- The stormwater pit and pipe network within the Site was designed by Loetis with pipe sizes varies between 300mm – 450mm.

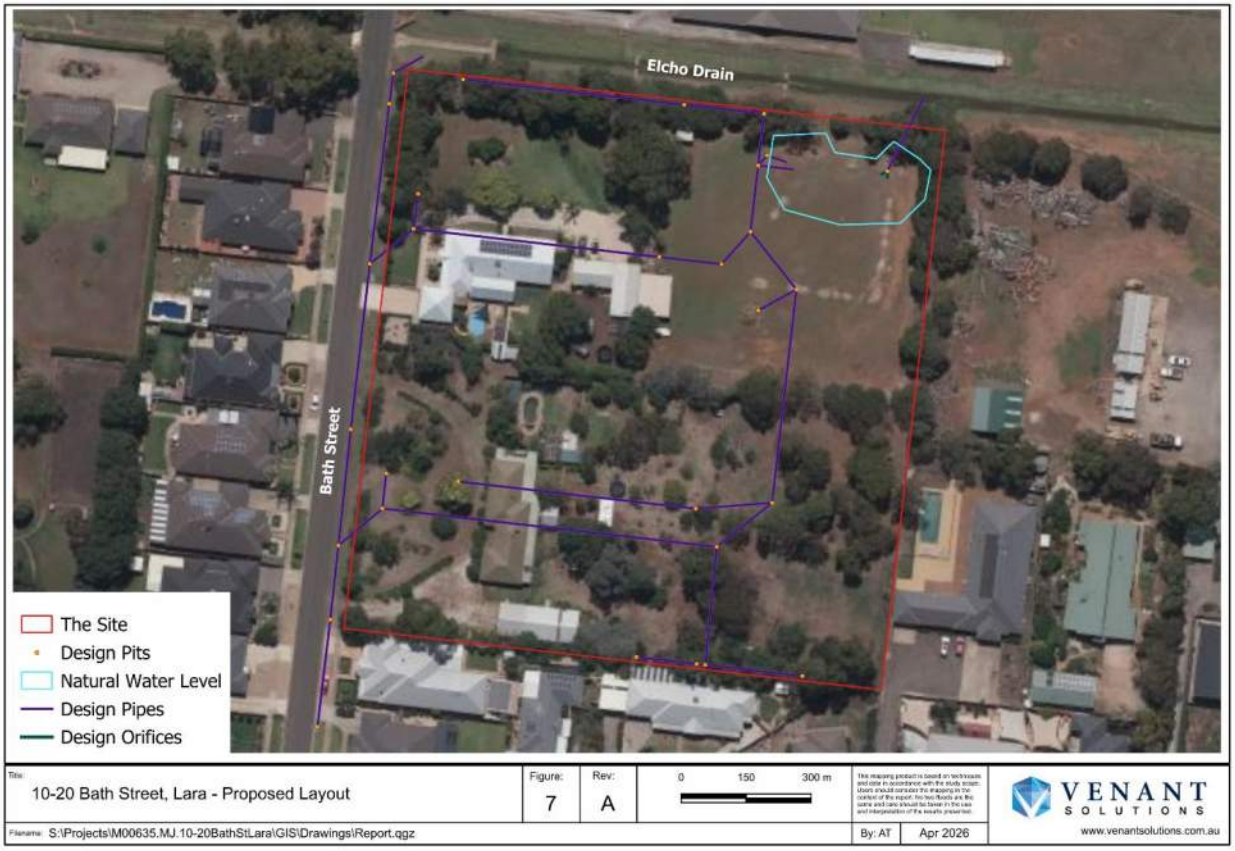


Figure 7 Proposed layout

The lots have been filled above the flood level to achieve a consistent level of flood protection in accordance with Council requirements and as a result, the lots are now flood-free. A retarding basin has been designed to attenuate the 1% AEP flood flow to pre-development conditions, ensuring no increase in flooding impacts on neighbouring properties. A permanent pool has been incorporated within the basin to support vegetation.

In lieu of a weir over the basin embankment, outlet structure containing two orifices and an inlet grate over the structure. This approach provides improved flood detention performance by enhancing the efficiency of the basin. The outlet structure includes 375 mm pipe connecting into the Elco Drain.

To minimise impacts on developable area while mitigating afflux effects on western properties along Bath Street, a pipe network has been proposed along the Street, connecting to the Elco Drain as well as the internal drainage network within the Site. This configuration enables flow to be split between the retarding basin and the Elco Drain, which runs along the northern boundary of the Site, via two connection points.

The table drain and underground pipes at the southern end of the Site have been designed to capture the overland flow from the properties to the south. This measure assists in mitigating increased afflux impacts on neighbouring properties to the south. The remaining drainage infrastructure collects local runoff and directs it toward the retarding basin from Bath Street, as described above.

Mapping of the proposed case flood assessment results is provided as follows:

- Figure 8: Developed Case Peak 1% AEP Depth
- Figure 9: Developed Case Peak 1% AEP Velocity
- Figure 10: Developed Case Peak 1% AEP Flood Hazard
- Figure 11: Change in Peak 1% AEP Flood Level

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The flood depth mapping indicates that floodwaters which previously traversed the Site are now conveyed along the proposed road corridor, where they are effectively managed by the local drainage system and contained within the road kerbs. Flood depths across the Site are generally limited to up to 0.2 m, with the exception of the retarding basin area. Flood depths along Bath Street remain at up to 0.4 m.

Flood safety

The Guidelines for Development in Flood Affected Areas (DELWP 2019) specify maximum flood depth, velocity, and velocity x depth (VD) for access/egress for subdivision of land:

- Maximum depth of 0.3 m
- Maximum velocity of 2.0 m/s
- Maximum velocity x depth (hazard) of 0.35 m^2/s

Figure 8, Figure 9 and Figure 10 show the peak flood depth, velocity, and hazard of the proposed development, respectively. The flood hazard is classified as H1 across the Site except at the detention basin. The safety criteria including safe access and egress are met across the whole site.

Flood impact

To satisfy CoGG requirements and meet safety design criteria, all new proposed dwellings are to be free from inundation during a 1% AEP event. This is achieved by filling the new lots above flood level.

To assess the effects of the proposed development on flood behaviour, a comparison was undertaken between existing and mitigated developed conditions for the 1% AEP event. Figure 14 presents the resulting changes in peak flood levels and flood extents.

In this figure, changes in flood level are shown using the colour ranges provided in the legend. The green shades show areas where there would be a reduction in flood level with the development constructed and the brown/red shades show where there would be increases. The lemon shade shows where changes are within 50 mm as per CMA's requirement. The pink shading shows areas where the flood extent is reduced as a result of the proposed development (was wet now dry) and the blue shading shows areas where the flood extent is increased (was dry now wet).

The modelling demonstrates that all increases in flood levels greater than 5 mm are contained entirely within the Site boundary and the Elco Drain, with no adverse flood impacts on neighbouring properties.

Summary

The analysis reported on herein shows:

- Safety requirements for access/egress have been met.
- Minimum fill levels have been met.
- The proposed works do not adversely impact on neighbouring properties during the 1% AEP event.
- The proposed works do not obstruct flow and provides for passage of floodwaters.

Please do not hesitate to contact the undersigned should you require any further information.

Yours sincerely,

[redacted]

PE0008552
Senior Flood & Hydrology Engineer

City of Greater Geelong, Statutory Planning - Date Received 27/04/2026

References

Ball J, Babister M, Nathan R, Weeks W, Weinmann E, Retallick M, Testoni I (Ed) (2019), *Australian Rainfall and Runoff: A Guide to Flood Estimation*, Commonwealth of Australia (Geoscience Australia).

(DELWP) Department of Engineering, Land, Water and Planning (2019), *Guidelines for Development in Flood Affected Areas,* Department of Engineering, Land, Water and Planning.

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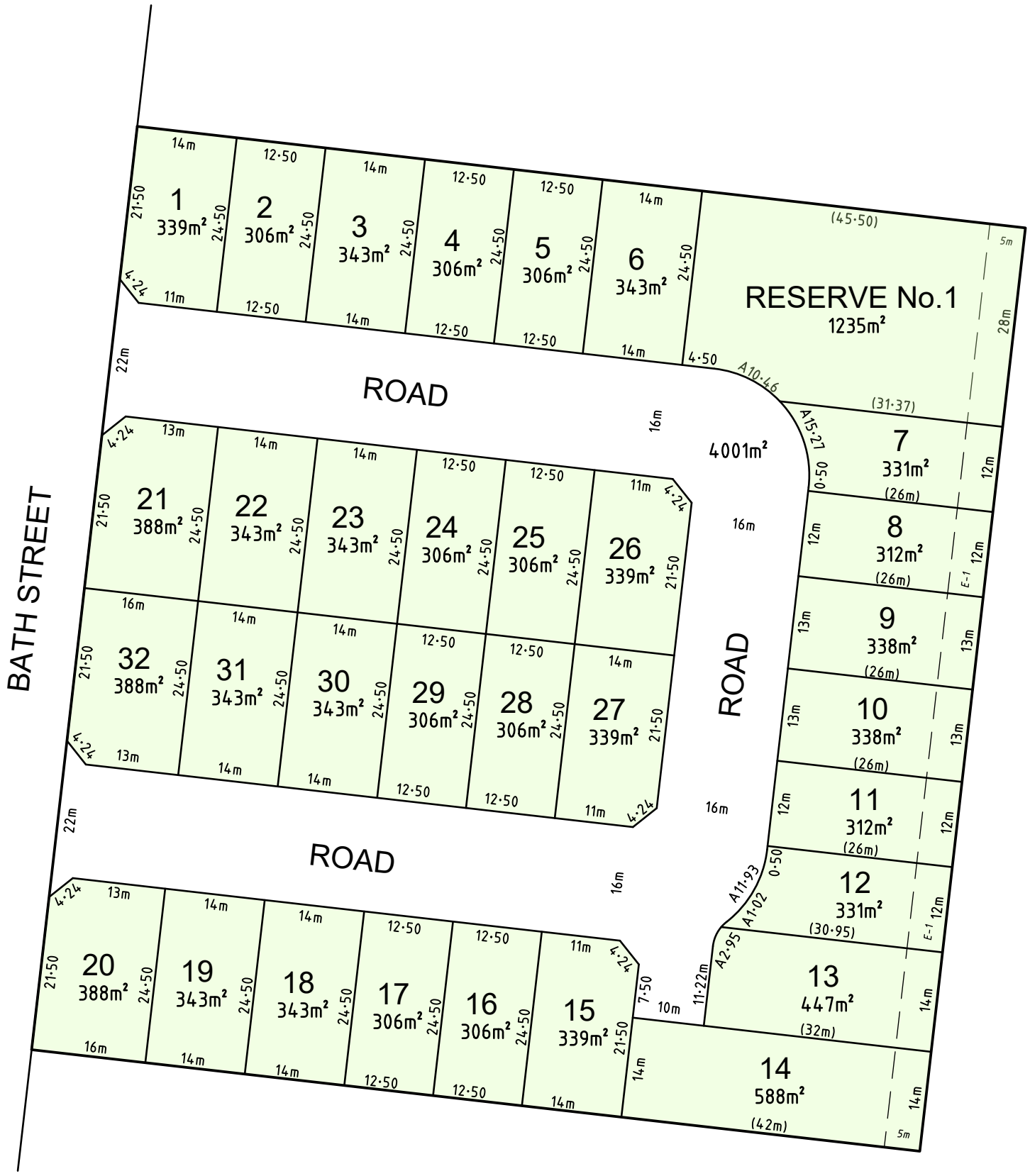
Attachment A: Proposed Drawings

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10 & 20 BATH STREET, LARA, 3212

PROPOSED SUBDIVISION

MGA2020
ZONE 55



PLAN OF PROPOSED SUBDIVISION:

SCALE 1:750 @ A3

7.5 0 7.5 15 22.5 30
LENGTHS ARE IN METRES

SWANSON SURVEYING PTY. LTD.
ABN 53 626 291 647
GEELONG - MELBOURNE - BALLARAT
1300 990 075 *info@swansonsurveying.com.au*
www.swansonsurveying.com.au

FILE REF. 14303 PPOS03V7

SHEET 1 OF 3

CLIENT: L. BISINELLA DEVELOPMENTS PTY LTD
CO-ORDINATE DATUM: MGA2020
DRAFTED: LPM
QA: MA

NOTATIONS

This plan has been prepared for design and planning purposes.
It should not be used for any other purpose.

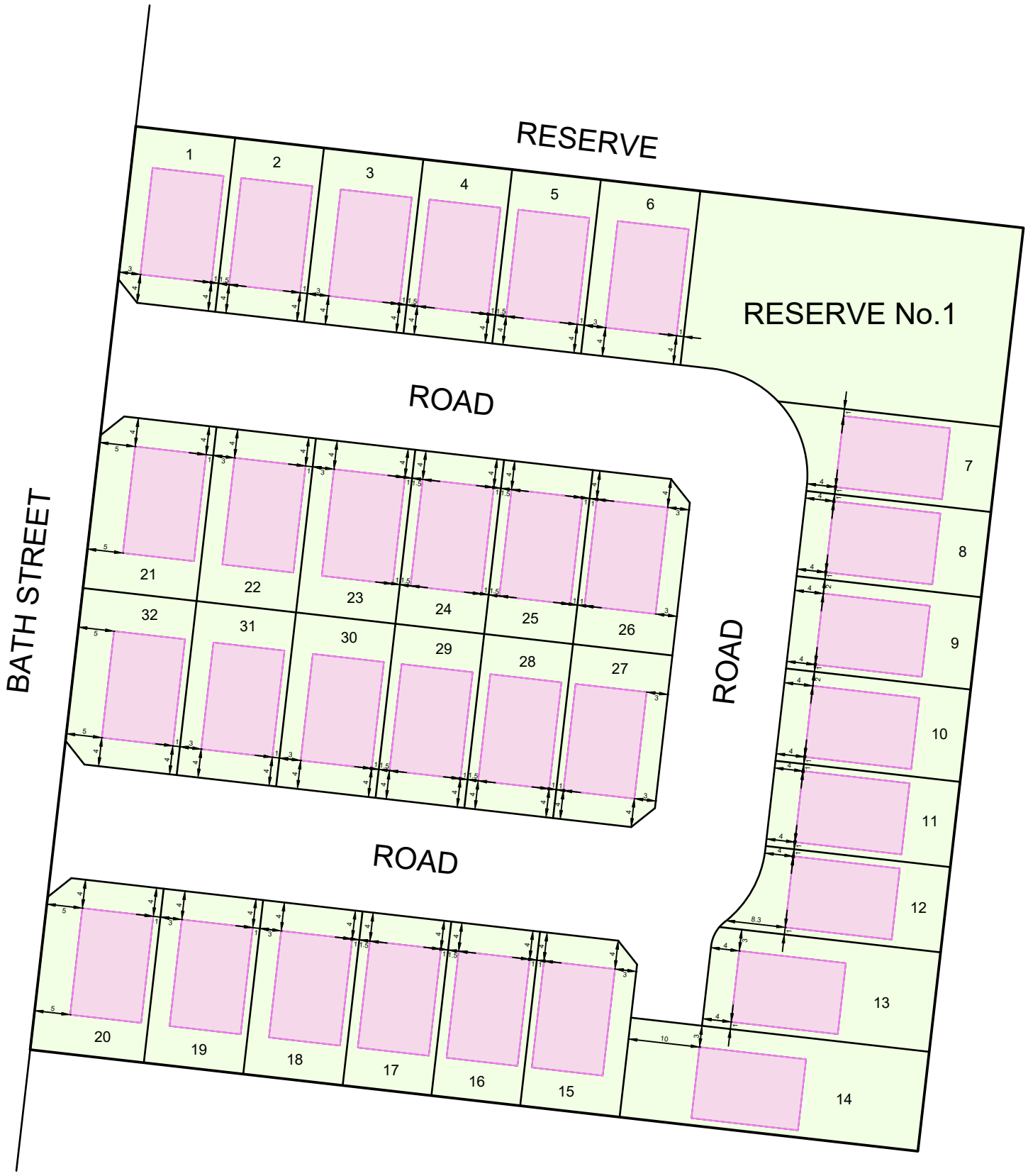
All dimensions are in metres

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10 & 20 BATH STREET, LARA, 3212

PROPOSED SUBDIVISION & INDICATIVE BUILDING ENVELOPES

MGA2020
ZONE 55



PLAN OF PROPOSED SUBDIVISION:

All building envelopes are shown thus:

and unless otherwise noted, are 150m²
(10m x 15m).

SCALE 1:750 @ A3

7.5 0 7.5 15 22.5 30
LENGTHS ARE IN METRES

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FILE REF. 14303 PPOS03V7

SHEET 2 OF 3

CLIENT: L. BISINELLA DEVELOPMENTS PTY LTD
CO-ORDINATE DATUM: MGA2020
DRAFTED: LPM
QA: MA

NOTATIONS

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10 & 20 BATH STREET, LARA, 3212

GARDEN AREAS

MGA2020
ZONE 55



PLAN OF PROPOSED SUBDIVISION:

GARDEN AREA TABLE						
	GARDEN AREA		DRIVEWAY		BUILDING ENVELOPE	
	m^2	%	m^2	%	m^2	%
LOT 1	177	52%	12	4%	150	44%
LOT 2	144	47%	12	4%	150	49%
LOT 3	181	53%	12	3%	150	44%
LOT 4	144	47%	12	4%	150	49%
LOT 5	144	47%	12	4%	150	49%
LOT 6	181	53%	12	3%	150	44%
LOT 7	168	51%	12	4%	150	45%
LOT 8	150	48%	12	4%	150	48%
LOT 9	176	52%	12	4%	150	44%
LOT 10	176	52%	12	4%	150	44%
LOT 11	150	48%	12	4%	150	48%
LOT 12	168	51%	12	4%	150	45%
LOT 13	285	64%	12	3%	150	34%
LOT 14	388	66%	50	9%	150	26%
LOT 15	177	52%	12	4%	150	44%
LOT 16	144	47%	12	4%	150	49%

GARDEN AREA TABLE						
	GARDEN AREA		DRIVEWAY		BUILDING ENVELOPE	
	m^2	%	m^2	%	m^2	%
LOT 17	144	47%	12	4%	150	49%
LOT 18	181	53%	12	3%	150	44%
LOT 19	181	53%	12	3%	150	44%
LOT 20	226	58%	12	3%	150	39%
LOT 21	226	58%	12	3%	150	39%
LOT 22	181	53%	12	3%	150	44%
LOT 23	181	53%	12	3%	150	44%
LOT 24	144	47%	12	4%	150	49%
LOT 25	144	47%	12	4%	150	49%
LOT 26	177	52%	12	4%	150	44%
LOT 27	177	52%	12	4%	150	44%
LOT 28	144	47%	12	4%	150	49%
LOT 29	144	47%	12	4%	150	49%
LOT 30	181	53%	12	3%	150	44%
LOT 31	181	53%	12	3%	150	44%
LOT 32	226	58%	12	3%	150	39%

SCALE 1:750 @ A3

7.5 0 7.5 15 22.5 30
LENGTHS ARE IN METRES

Swanson Surveying

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FILE REF. 14303 PPOS03V7

SHEET 3 OF 3

CLIENT: L. BISINELLA DEVELOPMENTS PTY LTD
CO-ORDINATE DATUM: MGA2020
DRAFTED: LPM
QA: MA

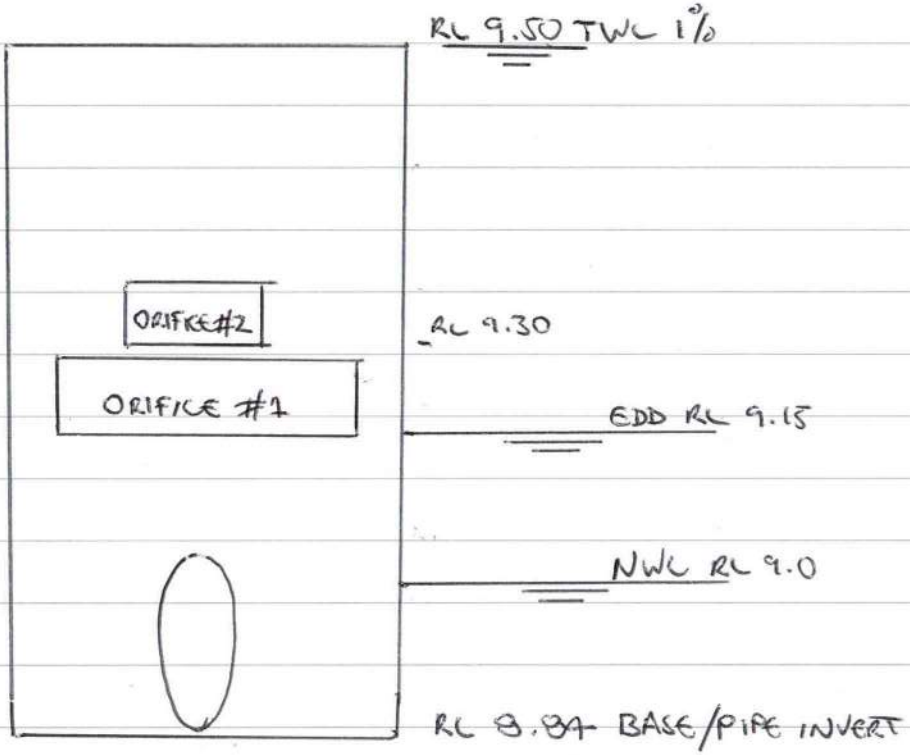
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PIT INTERNAL DIMENSION 900 x 900



ORIFICE #1 - WIDTH 0.8m
HEIGHT 0.1m
INVERT RL 9.15

ORIFICE #2 - WIDTH 0.26m
HEIGHT 0.12m
INVERT RL 9.30

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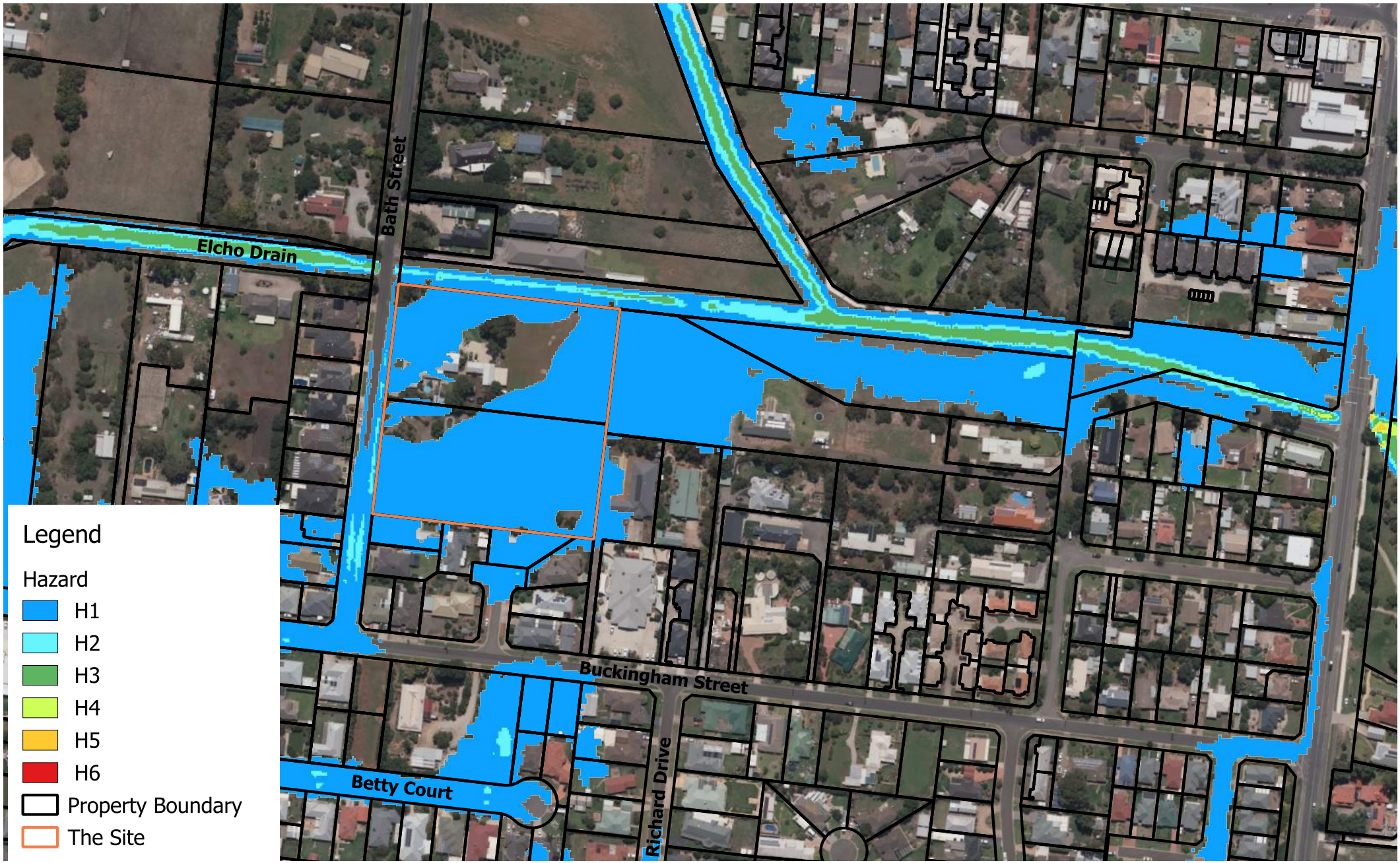
Title: 10-20 Bath Street, Lara - Flood Risk Assessment 1% AEP Peak Flood Depth - Existing Case	Figure: 4	Rev: A	0 150 300 m	This mapping product is based on techniques and data in accordance with the study scope. Users should consider the mapping in the context of the report. No two floods are the same and care should be taken in the use and interpretation of the results presented.	VENANT SOLUTIONS www.venantsolutions.com.au	
Filename: S:\Projects\M00635.MJ.10-20BathStLara\GIS\Drawings\Fig4_Bath_E001_100yr_2hr_TP25_005_d_Max.qgz				By: AT	Apr 2026	

City of Greater Geelong, Statutory Planning - Date Received 27/04/2026



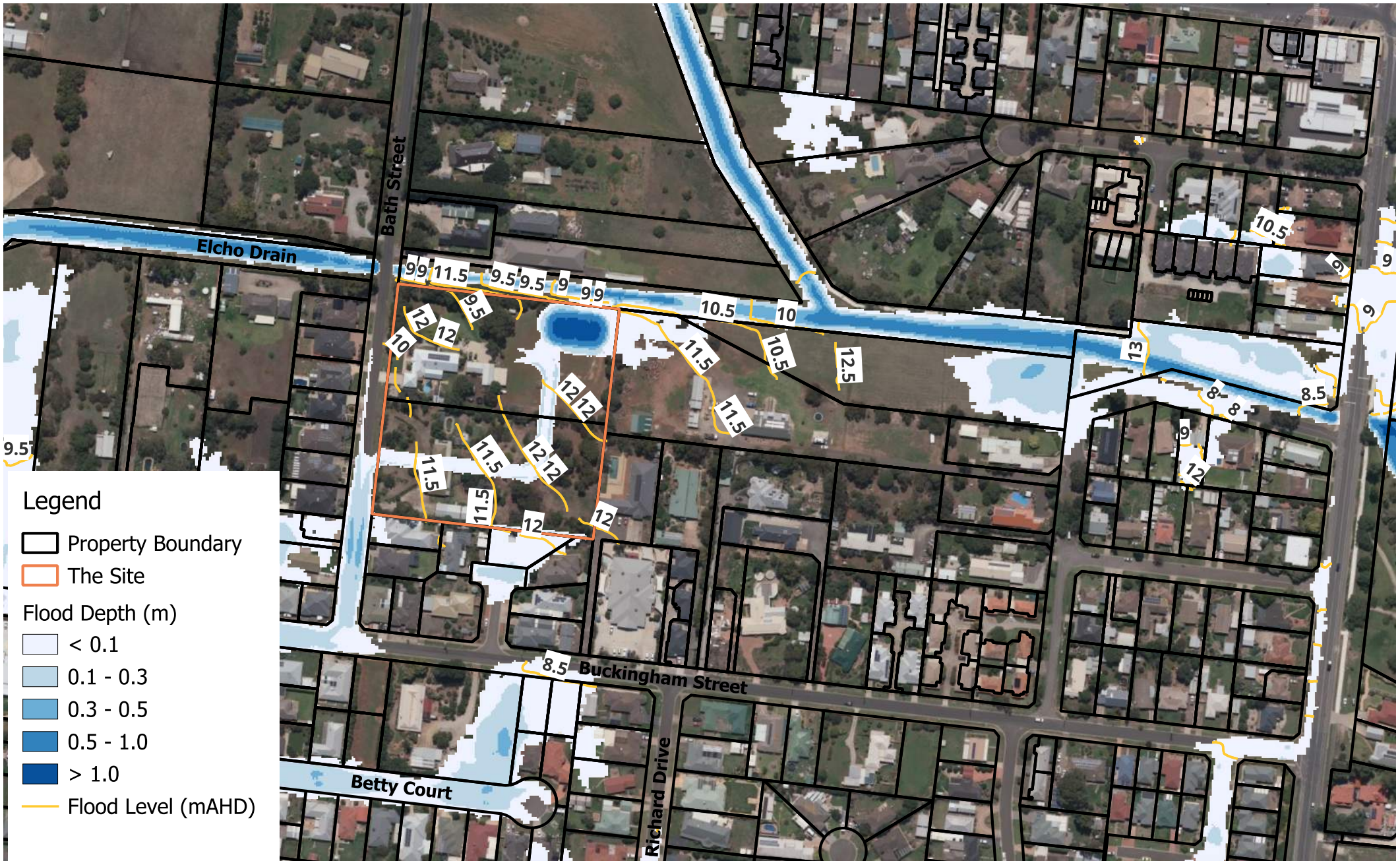
Title: 10-20 Bath Street, Lara - Flood Risk Assessment 1% AEP Peak Flood Velocity - Existing Case	Figure: 5	Rev: A	0 150 300 m	This mapping product is based on techniques and data in accordance with the study scope. Users should consider the mapping in the context of the report. No two floods are the same and care should be taken in the use and interpretation of the results presented.	VENANT SOLUTIONS www.venantsolutions.com.au
Filename: S:\Projects\M00635.MJ.10-20BathStLara\GIS\Drawings\Fig5_Bath_E001_100yr_2hr_TP25_005_V_Max.qgz				By: AT	Apr 2026

City of Greater Geelong, Statutory Planning - Date Received 27/04/2026



Title: 10-20 Bath Street, Lara - Flood Risk Assessment 1% AEP Peak Flood Hazard - Existing Case	Figure: 6	Rev: A	0 150 300 m	This mapping product is based on techniques and data in accordance with the study scope. Users should consider the mapping in the context of the report. No two floods are the same and care should be taken in the use and interpretation of the results presented.	VENANT SOLUTIONS www.venantsolutions.com.au
Filename: S:\Projects\M00635.MJ.10-20BathStLara\GIS\Drawings\Fig6_Bath_E001_100yr_2hr_TP25_005_ZAEM1_Max.qgz				By: AT	Apr 2026

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Title: 10-20 Bath Street, Lara - Flood Risk Assessment 1% AEP Peak Flood Depth - Developed Case	Figure: 8	Rev: A	0 150 300 m	This mapping product is based on techniques and data in accordance with the study scope. Users should consider the mapping in the context of the report. No two floods are the same and care should be taken in the use and interpretation of the results presented.	VENANT SOLUTIONS www.venantsolutions.com.au	
Filename: S:\Projects\M00635.MJ.10-20BathStLara\GIS\Drawings\Fig8_Bath_D018_100yr_2hr_TP25_005_d_Max.qgz				By: AT	Apr 2026	

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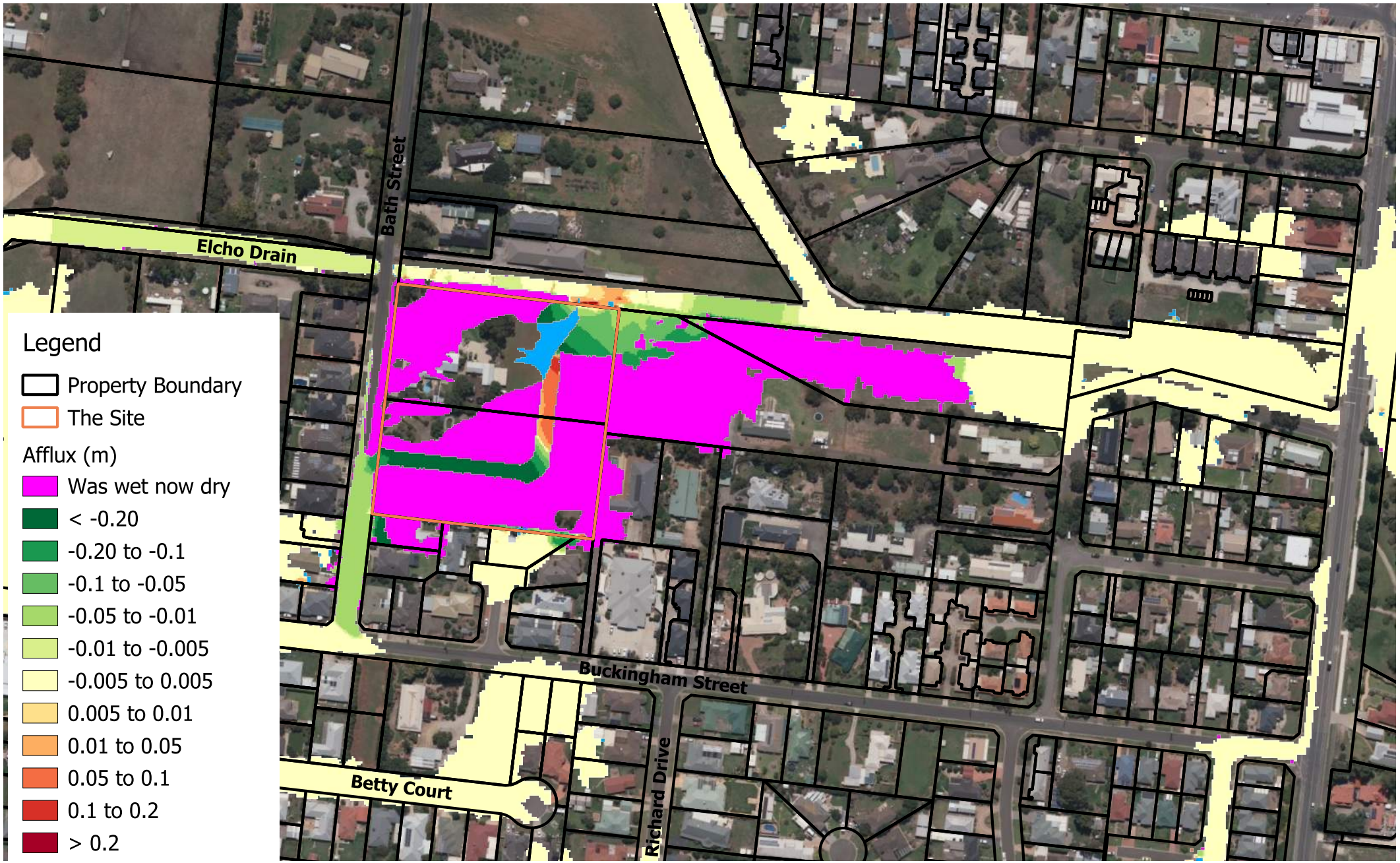
Title: 10-20 Bath Street, Lara - Flood Risk Assessment 1% AEP Peak Flood Velocity - Developed Case	Figure: 9	Rev: A	0 150 300 m	This mapping product is based on techniques and data in accordance with the study scope. Users should consider the mapping in the context of the report. No two floods are the same and care should be taken in the use and interpretation of the results presented.	VENANT SOLUTIONS www.venantsolutions.com.au
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Title: 10-20 Bath Street, Lara - Flood Risk Assessment 1% AEP Peak Flood Hazard - Developed Case	Figure: 10	Rev: A	0 150 300 m	This mapping product is based on techniques and data in accordance with the study scope. Users should consider the mapping in the context of the report. No two floods are the same and care should be taken in the use and interpretation of the results presented.	VENANT SOLUTIONS www.venantsolutions.com.au
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Title: 10-20 Bath Street, Lara - Flood Risk Assessment 1% AEP Change in Peak Flood Level	Figure: 11	Rev: A	0 150 300 m	This mapping product is based on techniques and data in accordance with the study scope. Users should consider the mapping in the context of the report. No two floods are the same and care should be taken in the use and interpretation of the results presented.	VENANT SOLUTIONS www.venantsolutions.com.au
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