Application to Amend a Planning Application S50/S57A

Section 1: PERMIT DETAILS

Planning Application No:	PLA0262/24
Address:	47 PRINCES AVE LONGWARRY 3816

Section 2: PERMIT APPLICANT

Name:	
Business:	PETER THOMAS BUILDING DESIGN
Postal Address:	
Telephone No. (H)	
Email Address:	

Section 3: OWNER DETAILS (If different to the Applicant)

Name(s):	
Postal Address:	
Telephone No. (H)	
Email Address:	

Section 4: AMENDMENT CATEGORY Please tick ✓

Section 50 – Amendment to the application at request of the applicant **before** notice	☑
Section 57A – Amendment to the application **after** notice of application is given (please note, this will incur a fee)	☐

AMENDMENT DETAILS List the changes being applied for and highlight changes on corresponding plans if applicable. A copy of the plans must be submitted with this application. If you need more space, please attach these details separately.

change to reason for application to add:
including Create an new Vehicle Crossover and remove the existing Vehicle Crossover to a road in a Transport Zone 2

Section 5: DEVELOPMENT COST

State the estimated total cost of the proposed development, including amendment.	☑ Unchanged from initial application Or total cost $
Does the amendment proposal introduce any additional Permit Triggers? (eg: creation of easement, parking reduction) If yes, an additional application fee may be required.	☐ Yes ☑ No

Section 6: DECLARATION This form must be signed. **PLEASE COMPLETE **EITHER** box A or B

A. I declare that I am the Applicant and Owner of this land and that all information given is true and correct.	Owner/ Applicant signature:	Date:
B. I/We the Applicant declare that I/We have notified the owner about this application and that all information given is true and correct.	Applicant Signature:	Date: 17/03/2025

PLEASE FORWARD THIS APPLICATION TO

E-mail: planning@bawbawshire.vic.gov.au

Mail: Planning Department, Baw Baw Shire Council
PO Box 304
Warragul VIC 3820

Phone: 5624 2411

In Person: Customer Service Centre: 33 Young Street Drouin

The personal information requested on this form is being collected to enable council to consider the permit application. Council will use this information for this purpose or one closely related and may disclose this information to third parties for the purpose of their consideration and review of the application.

These third parties generally include, but are not limited to:

- Transport Infrastructure Agencies such as VicRoads and VLine
- Energy/Utilities Providers
- Catchment Management Authorities and Water Corporations

The specific referral bodies will be dependent on factors such as the proposed activities and the location of the applicable property. Applicants are encouraged to familiarise themselves with potential referral bodies.

Any material submitted with this application, including plans and personal information, will be made available for public viewing, including electronically, and copies may be made for interested parties for the purpose of enabling consideration and review of the application as part of a planning process specified in the Planning and Environment Act 1987.

All information collected and held by Council is managed in accordance with Councils Privacy Policy which is available on our website. If you choose not to supply the requested information it may impair the ability of Council to consider your application or prevent Council from communicating with you in relation to your application.

If you have any concerns or require access to the information held by Council, please contact us on 5624 2411.

Design Response for Proposed Multi-Dwelling Development at:

47 Princes Avenue, LONGWARRY

Peter Thomas
Building Design 11/2024

Rev B - 17/01/2025
Rev C - 17/03/2025

Contents

N.B.: This design response is to be read in conjunction with all other supplied documentation.

Site Description:

The subject site is located at 47 Princes Ave LONGWARRY.
The Site has a total area of 1095sqm. and is a vaguely rectangular shaped block, with its North/East Street boundary of 24.48m abutting Princes Avenue. The depth of the Site is 45.73m, and the Site narrows to a rear boundary of 23.39m.

The Site currently has a fire damaged single storey Dwelling, Metal Garage, carport / BBQ area and shed on the Site all to be removed prior to the start of this development.

The Site has a slight fall to the rear, from the street, total 0.27m (1:170 approx.). All levels are consistent between the subject site and adjoining properties.

There are no significant trees on the Site (that require a permit for removal).

There is no covenant on the title that affects the Property.

There is a 4m wide easement along the north boundary of the Property containing sewer & stormwater pipes.

Currently, there is no restriction of solar access or views to or from adjoining properties.

The Development has Vehical aceess to a Catorgory 2 Road

Neighbourhood Description:

The Site is zoned: General Residential Zone - Schedule 1 - GRZ1

Overlays:
Development Contributions Overlay - Schedule 1 - DCPO1
Land Subject to Inundation Overlay - LSIO

The Property is not Bushfire Prone.

This Site is not of Aboriginal Cultural Significance.

General neighbourhood character is comprised of predominately single & two storey dwellings, with a mixture of pitched & gable form tiled & metal roofs. The cladding is also a mixture of brick, weatherboard and rendered finishes.

Generally, there is little providing any distinction to the character of this area.

The Site is within an easy walk to the bus & shops, workplaces, Schools and parkland.

An easy walk to these facilities makes it an ideal site for development as car reliance is minimised.

Opportunities & Constraints:

Primary opportunities for this Site are:

The Site has a significant amount of space to allow for the proposed dwellings and Carparking.

The Site has a minimal fall, which enables the proposed FFL to be nearer to Natural Ground Level and minimise any opportunity for overlooking or overshadowing

Primary constraints for this Site are:

There are a number of existing trees on or adjoining the Site to be considered within the design.

There is a large (4.0m wide) easement containing sewer & stormwater pipes along the north boundary of the property.

There is a Land Subject to Inundation Overlay on the site mandating flood levels.

Clause 13.01-1S – Natural Hazards & Climate Change

The proposed development is a typical multi dwellling development, proposed within a Residentual Zone.

The Site overlay Land Subject to Inundation Overlay – LSIO, determine that the site is subject to flooding.

Melbourne water Engineers have assessed the application and provided appropriate floor levels and other measures to mitigate risk from flooding.

Clause 13.03-1S – Floorplains

As the site is at the very upper end of the floodplain, and with the latest data Melbourne Water have determined proposed floor levels are 300mm lower than would be required within Melbourne Water "Guidelines for Development within the Koo Wee Rup and Longwarry Flood Protection District - July 2019". This would therefore be detemining that while the property is in a floodplain, this site is a lower risk then is typical within Flood Zone 1 that covers the majority of land in the Longwary to Tooradin reagion.

Clause 19.03-3S Intergrated Water Managment

The objectives of this clause have been anssess and responded to through the preperation of a Insite Assessment, and WSUD plan prepaired by SJF & Associates. This Plan implements Stratagies to reduce flood risk though measures such as water detention and resues. Down stream Waterway protection, through Trash Filtering within Site Pits, and Discharge Quality being assessed to meet Best Practice demonstrated by achieving a STORM Score of 100.

Clause 53.18 Stormwater Management in Urban Development.

Refer Drainage & Paving Design prepaired by SJF & Associates. This Plans is prepaied to meet the objectives of this standard.

Design response incorporating an assessment of the proposal against planning policy expectations and Clause 55:

The proposal complies with all standards and/or objectives of the Rescode provisions having regard to the decision guidelines.

Further analysis and commentary on the more critical aspects of the Site, its environs and the design response to them is considered below.

Responsiveness to policy and neighbourhood character

The proposal responds appropriately to the policy directions and guidelines as outlined above. Such directions can broadly be considered as comprising three main themes:

- Promotion of increased housing densities in areas with convenient access to both services and community facilities.
- Promotion of medium density housing that does not prejudice valued neighbourhood character and amenity and which promotes housing choice and high levels of amenity for future occupants.
- Promotion of development outcomes that is compatible with the environmental and landscape characteristics of the land and its environs.

While also meeting the Purpose of the Zone

- To implement the State Planning Policy Framework and the Local Planning Policy
  Framework, including the Municipal Strategic Statement and local planning policies.

- To recognise areas of predominantly single and double storey residential development

- To manage and ensure that development respects the identified neighbourhood character, heritage, environmental or landscape characteristics

Elements such as its proximity to public transport and local business facilities, large block sizes and limited opportunity for impact on existing residential amenity have seen new multi-unit development occurring in the broader neighbourhood. It is clear that neighbourhood re-development and renewal is going to continue into this immediate precinct area, as it is already starting to do so.

The proposed dwellings are consistent with the changing neighbourhood character of the area while respectful of the existing neighbourhood character. The scale and form of the residential development draws on those residential elements that give some sense of cohesion.

The proposal also picks up on neighbourhood themes such as entry porches, and provides a modern variation on these themes to be both respectful of the existing, but looking forward to modern living and building design.

The proposal is considered to accord with the neighbourhood objectives and Standard B1 in that:

- The proposal represents a medium density development that is respectful of its neighbourhood in terms of scale, form, building rhythm and materials; With a typically proportioned street elevation.
- Consistency in front building setbacks.
- The manner of the site layout is typical to this type of development in a suburban location.

Site layout & integration with the street

The proposed site layout is a rational response to the context of the Site, as demonstrated by the following features.

- The Site has adequate width to provide vehicle access as proposed, with garages having an increased setback to reduce dominance.
- The proposed Dwelling is well setback from all boundaries, particularly where adjoining more sensitive interfaces such as outdoor entertaining areas, thus further reducing its impact.
- With the open spaces oversized and orientated to gain significant solar access.
- Car parking and vehicle access is fully compliant and provides 6 Car spaces.
- The new driveway location will require the creation of a New Vehicle Crossover and the removal of the existing Vehicle Crossover to a road in a Transport Zone 2

The proposal complies with Clause 52.06 in respect of the number of spaces provided per Dwelling providing 2 car spaces for each three bedroom dwellings and 1 car space for each 2 bedroom dwelling. & 1 Visitor car space for each 5 dwellings.

Requiring a total of 6No. car spaces on the Site, and the proposal provides 6No.car spaces.

Adequate space is provided to enable safe and efficient movements and for all cars, with reversing exiting onto a quiet street. The proposed car parks are secure and convenient to each Dwelling.

Landscaping

Vegetation on this Site is not protected by any Planning Overlays.

This report is accompanied by an Arborist report to assess the existing trees and impacts. This has informed the proposed layout and proposed Tree protection and removal.

While vegetation has recently been removed from the site, No trees of significance have been removed from the site in the last twelve months.

While no separate landscape plan was submitted with the application, a site plan provides a basic landscape concept layout plan with Canopy trees (proposed and retained) nominated locations to meet Schedule Standard B13, providing space for a variety of planting, from small shrubs and ground covers to a select number of canopy trees.

It is submitted that the concept layout satisfies the requirements of Standard B13, though a condition of approval requiring a detailed landscape scheme to be prepared to the satisfaction of the Responsible Authority and approved prior to development commencing is considered appropriate.

Energy efficiency

New dwellings within the development must achieve a 7 star rating under building regulations and with this meet the objectives of Standard B10. The proposal has adopted solar passive design principles.

Being proximate to public transport facilities should also play a positive role in minimising reliance on private transport and therefore a reduction in greenhouse emissions.

Impacts on neighbours

The proposed development will have negligible impacts on neighbours.
The development proposes a double storey dwelling fronting the street & two single-storey dwellings to the rear. This has a nominal impact on the adjoining properties. This will result in very little change in impact to adjoining properties.

Ceiling heights are standard for the type of development at 2.74m above the finished floor level. The floor levels are a minimum above natural Surface Level, and the proposal is a single storey.

Internal amenity

The proposed dwellings provide quality living environments suited to a range of household types and contemporary lifestyles.

Private open spaces exceed the requirements of Clause 55, Standard B28, and the Schedule to the Zone, in terms of their dimensions, accessibility and provide a useful extension of internal living spaces.

The open plan layouts of dwellings enable the optimisation of space and flexibility to suit a range of lifestyle desires/needs and layout options.

Site facilities

The full range of site facilities will be provided as part of the proposal. Lockable external storage is available to each dwelling in sheds & Dwelling 3's oversized garage.

All domestic necessities such as mailboxes, clotheslines, bin storage, and water tanks are shown on the plans.

Conclusion

The development of the Site for medium density housing as proposed provides an appropriate response to planning policy and makes excellent use of the Site in an efficient way that is consistent with the neighbourhood character.

The proposed development is of an appropriate form and design and responds well to the opportunities and constraints of the Site and its environs.

A high level of performance against Clause 55 further demonstrates the suitability of the proposal for the Site.

For the foregoing reasons, it is respectfully requested that Council allow the application and grant a permit.

Clause 55 Assessment

55.02 NEIGHBOURHOOD CHARACTER AND INFRASTRUCTURE

STANDARD	COMPLIANCE	COMMENT
Neighbourhood character objectives: *To ensure that the design respects the existing neighbourhood character or contributes to a preferred neighbourhood character.* *To ensure that development responds to the features of the Site and the surrounding area.* Standard B1: The design response must be appropriate to the neighbourhood and the Site. The proposed design must respect the existing or preferred neighbourhood character and respond to the features of the Site.	Meets Objectives Complies	Refer to submission Refer to submission
Residential policy objectives: *To ensure that residential development is provided in accordance with any policy for housing in the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.* *To support medium densities in areas where development can take advantage of public transport and community infrastructure and services.* Standard B2: An application must be accompanied by a written statement to the satisfaction of the responsible authority that describes how the development is consistent with any relevant policy for housing in the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.	Meets objectives Complies	Refer to submission Written statement provided.
Dwelling diversity objective: *To encourage a range of dwelling sizes and types in developments of ten or more dwellings.* Standard B3:	n/a	

Developments of ten or more dwellings should provide a range of dwelling sizes and types, including: • Dwellings with a different number of bedrooms. • At least one Dwelling that contains a kitchen, bath or shower, and a toilet and wash basin at ground floor level.	n/a	
Infrastructure objectives: *To ensure development is provided with appropriate utility services and infrastructure.* *To ensure development does not unreasonably overload the capacity of utility services and infrastructure.* Standard B4: Development should be connected to reticulated services, including reticulated sewerage, drainage, electricity and gas, if available. Development should not reasonably exceed the capacity of utility services and infrastructure, including reticulated services and roads. In areas where utility services or infrastructure have little or no space capacity, developments should provide for the upgrading of or mitigation of the impact on services or infrastructure.	Meets objectives Complies	The Site is presently connected to all essential services.
Integration with the street objective: *To integrate the layout of development with the street*. Standard B5: Developments should provide adequate vehicle and pedestrian links that maintain or enhance local accessibility. Development should be orientated to front existing and proposed streets. High fencing in front of dwellings should be avoided if practicable. Development next to existing public open space should be laid out to complement the open space.	Meets objective Complies	Vehicle and pedestrian links provided.

55.03 SITE LAYOUT AND BUILDING MASS

Street setback objective: *To ensure that the setbacks of buildings from a street respect the existing or preferred neighbourhood character* Standard B6: Walls of buildings should be setback from streets: • At least the distance specified in the schedule to the zone, or • If no distance is specified in the schedule to the zone, the distance specified in Table B1.	Meets objective Consistant	See Discussion
Discussion: Dwelling 1: 8.2m to front of Dwelling 1 6.8m to porch of Dwelling 1 which has a wall height of 3.6m above the flood plane Dwellings 2 & 3 are set behind Dwelling 1 THe adjoining dwellings are set back 8.4m at No. 45 & 9.1m at No. 49 however No. 43A which adjoins No 45 is setback 7.2m. Therefore the proposed street setback is consistent with the standard & meets the objective.		
Building height objective: *To ensure that the height of buildings respects the existing or preferred neighbourhood character.* Standard B7: The maximum building height should not exceed: • The maximum height specified in the schedule to the zone, or • If no maximum height is specified in the schedule to the zone, 9 metres. 10m when Fall Exceeds 2.5deg Changes of building height between existing buildings and new buildings should be graduated.	Meets objective Complies	Dwelling 1: 8.5m Dwelling 2: 6.2m Dwelling 3: 6.7m O/A Height above NSL
Site coverage objective: *To ensure that the site coverage respects the existing or preferred neighbourhood character and responds to the features of the Site.* Standard B8: The site area covered by buildings should not exceed: • The maximum site coverage specified in the schedule to the zone, or If no maximum site coverage is specified in the schedule to the zone, 60 per cent.	Meets objective Complies	Site coverage is 44.5%

Permeability objective: *To reduce the impact of increased stormwater run-off on the drainage system.* *To facilitate on-site stormwater infiltration.* Standard B9: • At least 20 per cent of the Site should not be covered by impervious surfaces. The minimum Permeability specified in the schedule to the zone	Meets objective Complies	40.7% Proposed
Energy efficiency objectives: *To achieve and protect energy efficient dwellings and residential buildings.* *To ensure the orientation and layout of development reduce fossil fuel energy use and made appropriate use of daylight and solar energy* Standard B10: Buildings should be: • Oriented to make appropriate use of solar energy. • Sited and designed to ensure that the energy efficiency of existing dwellings on adjoining lots is not unreasonably reduced. Living areas and private open space should be located on the north side of the development, if practicable. Developments should be designed so that solar access to north facing windows is maximised.	Meets objective Complies	Will meet the energy 7 star rating and efficient lighting requirements of BCA.
Open space objective: *To integrate the layout of development with any public and communal open space provided in or adjacent to the development* Standard B11: If any public or communal open space is provided on Site, it should: • Be substantially fronted by dwellings, where appropriate • Provide outlook for as many dwellings as practicable • Be designed to protect any natural features on the Site Be accessible and useable	Meets objective Complies	

Safety objective: *To ensure the layout of development provides for the safety and security of residents and Property* Standard B12: Entrances to dwellings and residential buildings should not be obscured or isolated from the street and internal access ways. Planting which creates unsafe spaces along streets and access ways should be avoided. Developments should be designed to provide good lighting, visibility and surveillance of car parks and internal access ways. Private spaces within the developments should be protected from inappropriate use as public thoroughfares.	Meets objective Complies	Refer to submission All entrances are clearly identifiable from street.
Landscaping objectives: *To encourage development that respects the landscape character of the neighbourhood.* *To encourage development that maintains and enhances habitat for plants and animals in locations of habitat importance.* *To provide appropriate landscaping.* *To encourage the retention of mature vegetation on the Site.*	Meets objective	Refer to submission

Standard B13: The landscape layout and design should: • Protect any predominant landscape features of the neighbourhood • Take into account the soil type and drainage patterns of the Site • Allow for intended vegetation growth and structural protection of buildings • In locations of habitat importance, maintain existing habitat and provide for new habitat for plants and animals • Provide a safe, attractive and functional environment for residents Development should provide for the retention of planting of trees, where these are part of the character of the neighbourhood. Development should provide for the replacement of any significant trees that have been removed in the 12 months prior to the application being made. The landscape design should specify landscape themes, vegetation (location and species), paving and lighting.	Complies	Provision for 5 medium Canopy Trees.
Access objectives: *To ensure vehicle access to and from a development is safe, manageable and convenient.* *To ensure the number and design of vehicle crossovers respects the neighbourhood character.* Standard B14: Access ways should: • Be designed to allow convenient, safe and efficient vehicle movements and connections within the development and to the street network. • Be designed to ensure vehicles can exit a development in a forward direction if the access way serves five or more car spaces, three or more dwellings, or connects to a road in a Road Zone. • Be at least 3 metres wide • Have an internal radius of at least 4 metres at changes of direction.	Meets objective Complies	Refer to plans and submission.

• Provide a passing area at the entrance that is at least 5 metres wide and 7 metres long if the access way serves ten or more spaces and connects to a road in a Road Zone. The width of access ways or car spaces should not exceed: • 33 per cent of the street frontage, or • if the width of the street frontage is less than 20 metres, 40 per cent of the street frontage. No more than one single-width crossover should be provided for each Dwelling fronting a street. The location of crossovers should maximise the retention of on-street car parking spaces. The number of access points to a road in a Road Zone should be minimised. Developments must provide for access for service, emergency and delivery vehicles.		
Parking location objectives: *To provide convenient parking for resident and visitor vehicles. To avoid parking and traffic difficulties in the development and the neighbourhood.* *To protect residents from vehicular noise within developments.* Standard B15: Car parking facilities should: • Be reasonably close and convenient to dwellings and residential buildings. • Be secure. • Be designed to allow safe and efficient movements within the development. • Be well ventilated if enclosed. Large access ways or car parks of other dwellings and residential buildings should be located at least 1.5 metres from the windows of habitable rooms. This setback may be reduced to 1 metre where there is a fence at least 1.5 metres high or where window sills are at least 1.4 metres above the access way.	Meets objectives. Complies	Refer to submission Refer to submission.

<table>
<tr><td colspan="4">Parking provision:
To be in accordance with Clause 52.06

Car parking for residents should be provided as follows:
• One space for each one or two bedroom dwelling.
• Two spaces for each three or more bedroom dwelling, with one space under cover.
Studies or studios that are separate rooms must be counted as bedrooms.
Developments of five or more dwellings should provide visitor car parking of one space for every five dwellings. The spaces should be clearly marked as visitor parking.
In developments of five or more dwellings, bicycle parking spaces should be provided.
Car spaces and access ways should have the minimum dimensions specified in Table B2.</td><td>Meets objective</td><td>Refer to submission.
6 Required
6 Provided</td></tr>
<tr><td>ANGLE OF CAR SPACES TO ACCESSWAY</td><td>ACCESSWAY WIDTH</td><td>CAR SPACE WIDTH</td><td>CAR SPACE LENGTH</td><td colspan="2">Complies</td></tr>
<tr><td>Parallel</td><td>3.6 m</td><td>2.3 m</td><td>6.7 m</td><td colspan="2"></td></tr>
<tr><td>45º</td><td>3.5 m</td><td>2.6 m</td><td>4.9 m</td><td colspan="2"></td></tr>
<tr><td>60º</td><td>4.9 m</td><td>2.6 m</td><td>4.9 m</td><td colspan="2"></td></tr>
<tr><td>90º</td><td>6.4 m
5.8 m
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3.0 m
3.2 m</td><td>4.9 m
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4.9 m</td><td colspan="2"></td></tr>
<tr><td colspan="4">A building may project into the space if it is at least 2.1 metres above the space.
Car spaces in garages, carports or otherwise constrained by walls should be at least 6 metres long and 3.5 metres wide for a single space and 5.5 metres wide for a double space measured inside the garage or carport.
Car parking facilities should:
• Be designed for efficient use and management
• Minimise the area of hard surface.
Be designed, surfaced and graded to reduce run-off and allow stormwater to drain into the Site.</td><td></td><td>The internal dimensions of all garages comply.</td></tr>
</table>

55.04 AMENITY IMPACT

Side and rear setbacks objective: *To ensure that the height and setback of a building from a boundary respects the existing or preferred neighbourhood character and limits the impact on the amenity of existing dwellings.* Standard B17: A new building not on or within 200mm of a boundary should be set back from side or rear boundaries: • At least the distance specified in the schedule to the zone, or • If no distance is specified in the schedule to the zone, 1 metres, plus 0.3 metres for every metre of height over 3.6 metres up to 6.9 metres, plus 1 metre for every metre of height over 6.9 metres. Sunblinds, verandah's, porches, eaves, fascias, gutters, masonry chimneys, flues, pipes, domestic fuel or water tanks, and heating or cooling equipment or other services may encroach not more than 0.5 metres into the setbacks of this standard. Landing having an area of not more than 2 square metres and less and than 1 metre high, stairways, ramps, pergolas, shade sails and carports may encroach into the setbacks of this standard.	Meets objective Complies	Refer to submission. Refer to development plans.
Walls on boundaries objective: *To ensure that the location, length and height of a wall on a boundary respects the existing or preferred neighbourhood character and limits the impact on the amenity of existing dwellings.* Standard B18: A new wall constructed on or within 200mm of a side or rear boundary of a lot or a carport constructed on or within 1 metre of a side or rear boundary of lot should abut the boundary for a length of more than: • 10 metres plus 25 per cent of the remaining length of the boundary of an adjoining lot, or Where there are existing or simultaneously constructed walls or carports abutting the boundary on an abutting lot, the length of the existing or simultaneously constructed walls or carports whichever is greater. A new wall or carport may fully abut a side or rear boundary where slope	Meets objective Consistant	 See discussion below

and retaining walls or fences would result in the effective height of the wall or carport being less than 2 metres on the abutting property boundary. A building on a boundary includes a building set back up to 150mm from a boundary. The height of a new wall constructed on or within 150mm of a side or rear boundary or a carport constructed on or within 1 metre of a side or rear boundary should not exceed an average of 3.2 metres within no part higher than • 3.6 metres unless abutting a higher existing or simultaneously constructed wall.		
Discussion: There is a garage proposed along the south side boundary. It is 7.21m long with a maximum height of 3.3m adjoining a driveway. The proposed wall on boundary is consistent with the standard & meets the objective.		
Daylight to existing windows objective: *To allow adequate daylight into existing habitable room windows.* Standard B19: Buildings opposite an existing habitable room window should provide for a light court to the existing window that has a minimum area of 3 square metres and minimum dimension of 1 metre clear to the sky. The calculation of the area may include land on the abutting lot. Walls or carports more than 3 metres in height opposite an existing habitable room window should be set back from the window at least 50 per cent of the height of the new wall if the wall is within a 55 degree arc from the centre of the existing window. The arc may be swung to within 35 degrees of the plane of the wall containing the existing window.	Meets objective Complies	Refer to development plans.
North-facing windows objective: *To allow adequate solar access to existing north-face habitable room windows.* Standard B20:	Meets objective	

If a north-facing habitable room window of an existing dwelling is within 3 metres of a boundary on an abutting lot, a building should be setback from the boundary 1 metres, plus 0.6 metres for every metre of height over 3.6 metres up to 6.9 metres, plus 1 metre for every metre of height over 6.9 metres, for a distance of 3 metres from the edge of each side of the window. A north facing window is a window with an axis perpendicular to its surface orientated north 20 degrees west to north 30 degrees east.	Complies	No north facing windows within 3m of site.
Overshadowing open space objective *To ensure buildings do not significantly overshadow existing secluded private open space.* Standard B21: Where sunlight to the secluded private open space of an existing dwelling is reduced, at least 75 per cent, or 40 square metres with minimum dimension of 3 metres, whichever is the lesser area, of the secluded private open space should receive a minimum of five hours of sunlight between 9 am and 3 pm on 22 September. If existing sunlight to the secluded private open space of an existing dwelling is less than the requirements of this standard, the amount of sunlight should not be further reduced.	Meets objective Complies	Proposed Dwelling does not produce significant overshadowing to any adjoining private open spaces.
Overlooking objective: *To limit views into existing secluded private open space and habitable room windows.* Standard B22: A habitable room window, balcony, terrace, deck or patio should be located and designed to avoid direct views into the secluded private open space of an existing dwelling within a horizontal distance of 9 metres (measured at ground level) of the window, balcony, terrace, deck or patio. Views should be measured within a 45 degree angle from the plane of the window or perimeter of the balcony, terrace, deck or patio, and from a height of 1.7 metres above floor level. A habitable room window, balcony, terrace, deck or patio with a direct view into a habitable room window of existing Dwelling within a horizontal distance of 9 metres (measured at ground level) of the window, balcony, terrace, deck or patio should be either:	Meets objective Complies	Refer to submission Boundary fence to be 1.95h with 0.45h lattice creating a total height of 2.4m which prevents overlooking from all ground floor windows. First floor windows are placed to prevent

• Offset a minimum of 1.5 metres from the edge of one window to the edge of the other • Have still heights of at least 1.7 metres above floor level. • Have fixed, obscure glazing in any part of the window below 1.7 metre above floor level. • Have permanently fixed external screens to at least 1.7 metres above floor level and be no more than 25 per cent transparent. Obscure glazing in any part of the window below 1.7 metres above floor level may be openable provided that there are no direct views as specified in this standard. Screens used to obscure a view should be: • Perforated panels or trellis with a maximum of 25 per cent openings or solid translucent panels. • Permanent, fixed and durable. • Designed and coloured to blend in with the development. This standard does not apply to a new habitable room window, balcony, terrace, deck or patio which faces a property boundary where there is a visual barrier at least 1.6 metres high and the floor level of the habitable room, balcony, terrace, deck or patio is less than 0.8 metres above ground level at the boundary.		overlooking of obscure to 1.7m above the floor level.
Internal views objective: *To limit views into the secluded private open space and habitable room windows of dwellings and residential buildings within a development.* Standard B23: Windows and balconies should be designed to prevent overlooking of more than 50 per cent of the secluded private open space of a lower-level dwelling or residential building directly below and within the same development.	Meets objective Complies	
Noise impacts objective: *To contain noise sources in developments that may affect existing dwellings.* *To protect residents from external noise* Standard B24:	Meets objective	

Noise sources, such as mechanical plant, should not be located near bedrooms of immediately adjacent existing dwellings. Noise sensitive rooms and secluded private open spaces of new dwellings and residential buildings should take account of noise sources on immediately adjacent properties. Dwellings and residential buildings close to busy roads, railway lines or industry should be designed to limit noise levels in habitable rooms.	Complies	

55.05 ON-SITE AMENITY AND FACILITIES

Accessibility objective: *To encourage the consideration of the needs of people with limited mobility in the design of developments.* Standard B25: The ground floor of dwellings and residential buildings should be accessible or able to be easily made accessible to people with limited mobility.	Meets objective Complies	 Meets livable housing standard.
Dwelling entry objective: *To provide each Dwelling or residential building with its own sense of identity.* Standard B26: Entries to dwellings and residential buildings should: • Be visible and easily identifiable from streets and other public areas. • Provide shelter, a sense of personal address and a transitional space around the entry.	Meets objective Complies	 Refer to plans & submission.
Daylight to new windows objective: *To allow adequate daylight into new habitable room windows.* Standard B27: A window in a habitable room should be located to face: • An outdoor space open to the sky or a light court with a minimum area of 3 square metres and minimum dimension of 1 metre clear to the sky, not including land on an abutting lot, or • A verandah provided it is open for at least one third of its perimeter, or • A carport provided it has two or more open sides and is open for at least one third of its perimeter.	Meets objective Complies	 Refer to plans & submission.
Private open space objective: *To provide adequate private open space for the reasonable recreation and service needs of residents* Standard B28:	Meets objective	

A dwelling or residential building should have private open space of an area and dimensions specified in the schedule to the zone. If no area or dimensions are specified in the schedule to the zone, a dwelling or residential building should have private open space consisting of: • An area of 40 square metres, with one part of the private open space to consist of secluded private open space at the side or rear of the Dwelling or residential building with a minimum area of 25 square metres, a minimum dimension of 3 metres and convenient access from a living room, or • A balcony of 8 square metres with a minimum width of 1.6 metres and convenient access from a living room, or A roof-top area of 10 square metres with a minimum width of 2 metres and convenient access from a living room.	Complies	Refer to plans & submission.
Solar access to open space objective: *To allow solar access into the secluded private open space of new dwellings and residential buildings.* Standard B29: The private open space should be located on the north side of the Dwelling or residential building, if appropriate. The southern boundary of secluded private open space should be set back from any wall on the north of the space at least (2 + 0.9h) metres, where 'h' is the height of the wall.	Meets objective Complies	Refer to plans and submission.
Storage objective: *To provide adequate storage facilities for each dwelling* Standard B30: Each Dwelling should have convenient access to at least 6 cubic metres of externally accessible, secure storage space.	Meets objective Complies	

55.06 DETAILED DESIGN

Design details objective: *To encourage design detail that respects the existing or preferred neighbourhood character.* Standard B31: The design of buildings, including: • Façade articulation and detailing, • Window and door proportions, • Roof form, and • Verandahs, eaves and parapets Should respect the existing or preferred neighbourhood character. Garages and carports should be visually compatible with the development and the existing or preferred neighbourhood character.	Meets objective Complies	Refer to plans and submission.
Front fences objective: *To encourage front fence design that respects the existing or preferred neighbourhood character.* Standard B32: The design of front fences should complement the design of the Dwelling or residential building and any front fences on adjoining properties. A front fence within 3 metres of a street should not exceed: • The maximum height specified in the schedule to the zone, or • If no maximum height is specified in the schedule to the zone, the maximum height specified in Table B3.	Meets objective Complies	No front fence proposed.
TABLE B3 MAXIMUM FRONT FENCE HEIGHT		
STREET CONTEXT	MAXIMUM FRONT FENCE HEIGHT	
Streets in a Road Zone Other streets	2 metres 1.5 metres	
Common property objectives: To ensure that communal open space, car parking, access areas and site facilities are practical, attractive and easily maintained. To avoid future management difficulties in areas of common ownership.	Meets objective	

Standard B33: Developments should clearly delineate public, communal and private areas. Common Property, where provided, should be functional and capable of efficient management	Complies	
Site services objectives: *To ensure that site services can be installed and easily maintained.* *To ensure that site facilities are accessible, adequate and attractive.* Standard B34: The design and layout of dwellings and residential buildings should provide sufficient space (including easements where required) and facilities for services to be installed and maintained efficiently and economically. Bin and recycling enclosures, mailboxes and other site facilities should be adequate in size, durable, waterproof and blend in with the development. Bin and recycling enclosures should be located for convenient access by residents. Mailboxes should be provided and located for convenient access as required by Australia Post.	Meets objective Complies	Refer to submission.

Peter Thomas Building Design

Building Design & Town Planning Consultants

13/03/2025

Baw Baw Council
Town Planning Dept.

Dear Sir/Madam,

Application No: PLA0262/24
Proposal: Development of Three Dwellings on a Lot
Address: 47 Princes Avenue LONGWARRY

I write in response to your letter dated 10/01/2025, and responded to each item in order of your letter:

Request for Further information:

1. Ammeded Planning Report
    a. Floor Levels where based on Melbourne Water Pre-development advice Sept 2024, referring to “Guidelines for Development within the Koo Wee Rup and Longwarry Flood Protection District - July 2019”
    Melbourne Water have since responded to the Referral of this application, and provided a Design specific response, including a reduction in Proposed Finished floor levels.
    b. Rev B Planning Report Attached for response these requested Clauses.
    This response also includes an Insite Report, WSUD Plan.

2. Stormwater Management:
    We have attached a Drainage & Paving Plan Prepared by SJF & Associates. Civil Engineer. That address the Management of Storm Water and provides a Best Practice solution achieving a STORM Score 100.

    Melbourne Water have provided a response to the development dated 15/Jan/2025. Proving required Minimum Floor Levels to mitigate risk of onsite Flooding impacting the proposed dwellings.
    Melbourne Water Engineers have also Assessed Neighbouring Impacts and provided Conditions 4-7 to manage and mitigate impacts on neighbouring properties.

    Revised Development Drawings provided, respond to this condition as follows:

Office: 12 Edinburgh Drive, Beaconsfield 3807
Phone: 0413 731 101
Email peter@ptbuildingdesign.com.au
Web: ptbuildingdesign.com.au
ABN: 16.278.349.884
RBP: DP-AD1670

4) North/East – Front Boundary & North/West Boundary, maintain clear setbacks as required. Storage Sheds have be removed, and External Storage provided within proposed Garages.

5) Driveway Ramp note added to the development Plan & Driveway levels are on the Drainage & Paving Plan.
Annotation added to Development Plan TP-05

6) Notation added on the development Plan (Ground Level) that no fill is to occur within the Private open spaces.

7) Internal Fence Detail 50% open – added to TP-07

Response to Issues of Concern:

A. Attached Flood Impact Assessment by SWM Consulting.

Should the Council find any of the requested further information to be incomplete or insufficient, we ask that the Council notify us of this as soon as possible, and we request that Council extend our time to respond to the request for further information items to 30 days from the date of such notification.

We also request that at the time that Council has concluded a report to determine the decision of this application, and before issuing the permit, that Council would afford us the opportunity, as the applicant, to review any proposed Condition 1 Items and grant two working days to comment on this items. In the past, we have found this process produces better outcomes on the permit that avoid later correction.

Kind regards,

Guidelines for Development within the Koo Wee Rup and Longwarry Flood Protection District - July 2019

VICTORIA State Government

Melbourne Water
Enhancing Life and Liveability

Contents

Get in touch with Melbourne Water - early in the development process

We recommend that permit applicants in the Koo Wee Rup and Longwarry Flood Protection District and surrounding areas contact us early in the planning and design process. This will also enable a timely appreciation of any applicable site-specific requirements.

Development Enquiries:
Melbourne Water
PO Box 4342
Melbourne VIC 3001
Telephone 131 722
Email kooweerup@melbournewater.com.au

Further information on development requirements can be found in:

- Melbourne Water's Planning for Sea Level Rise Guidelines (2017)
- the Department of Environment, Land, Water and Planning's *Guidelines for Development in Flood Affected Areas* (2019)

1

Introduction

The area within and surrounding the Koo Wee Rup and Longwarry Flood Protection District forms one of Melbourne's largest and most unique floodplains. A consistent approach to floodplain management in the area is required, given the extent of intensive agricultural activity and associated development.

1.1 Purpose of these guidelines

Melbourne Water has prepared *Guidelines for Development within the Koo Wee Rup and Longwarry Flood Protection District* to set out specific requirements that apply to development proposals in the district and surrounding flood-prone areas (the District). The guidelines supplement the statewide *Guidelines for Development in Flood Affected Areas* (2019) prepared by the Department of Environment, Land, Water and Planning (DELWP).

The aim of Melbourne Water's guidelines is to ensure that proposed subdivision and development is compatible with any flood risk and takes into consideration the unique flooding nature and history of the District. These guidelines were developed to:

- assist property owners, developers, designers and builders to understand the specific requirements that apply in the District
- outline the relevant considerations to be taken into account by Melbourne Water when assessing development proposals in relation to minimising flood damage, limiting offsite impacts, ensuring flood safety, and waterways and floodplain protection
- provide for consistency and transparency in decision making.

These guidelines apply to the District (refer to Figure 1) and detail the approach used by Melbourne Water to determine flood levels for planning purposes. In addition, the guidelines specify appropriate freeboard and minimum floor level requirements for different development types. Melbourne Water will also apply sea level rise guidelines when assessing development in coastal areas in the District.

1.2 Melbourne Water's role within the District

Melbourne Water is the designated caretaker of waterway health for the Port Phillip and Westernport region, and the regional drainage and floodplain management authority. Melbourne Water has floodplain management functions under the *Water Act 1989*, with related functions under the *Planning and Environment Act 1987* and the *Building Regulations 2018*.

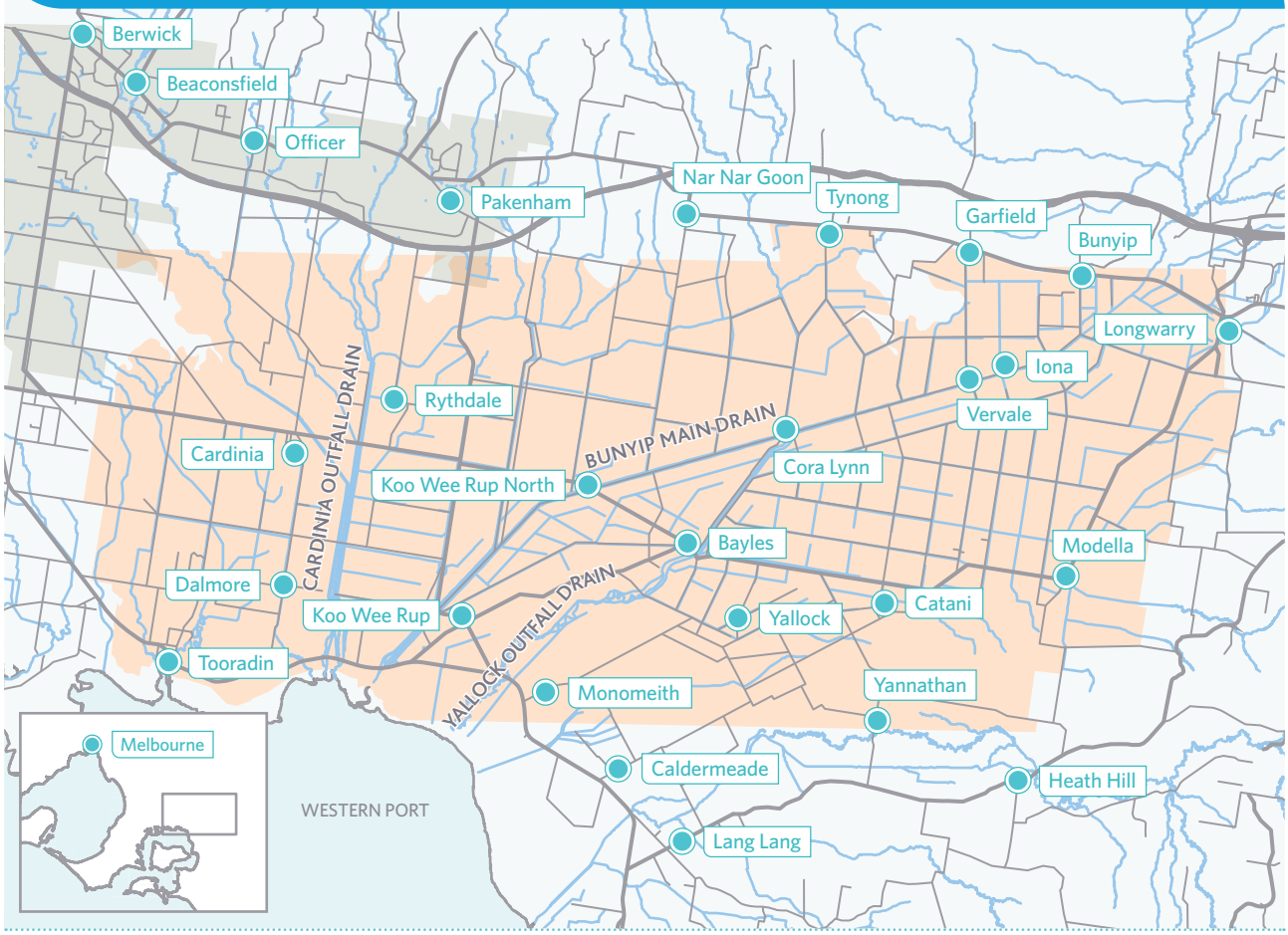
As part of our floodplain management responsibilities, Melbourne Water has prepared these guidelines for development within the District. Development includes the construction, alteration or demolition of a building or works and the subdivision or consolidation of land.

The District is subject to flooding and is largely contained within a Land Subject to Inundation Overlay (LSIO) in the Casey, Cardinia and Baw Baw planning schemes. Parts of the District are also within a Floodway Overlay (FO).

Melbourne Water is a determining referral authority under Clause 66.03 of the *Victoria Planning Provisions* (VPP) for planning permit applications to develop land affected by a flood overlay control in a planning scheme. In this capacity, we assess proposals and ensure developments are compatible with any flood risk through the application of appropriate development requirements. Melbourne Water also has a role in recommending minimum floor levels for building permits issued under regulation 153 of the *Building Regulations 2018*.

THESE GUIDELINES ARE TO BE USED IN CONJUNCTION WITH THE INFORMATION AND DEVELOPMENT REQUIREMENTS CONTAINED IN DELWP'S STATEWIDE *GUIDELINES FOR DEVELOPMENT IN FLOOD AFFECTED AREAS* (2019) AND MELBOURNE WATER'S *PLANNING FOR SEA LEVEL RISE GUIDELINES* (2017).

Figure 1. Koo Wee Rup and Longwarry Flood Protection District and surrounds



1.3 History of the District

The District lies in what was originally known as the Koo Wee Rup Swamp, formed from a tectonically depressed basin between the Tyabb and Heath Hill faults, and covers an area of approximately 400 square kilometres. The swamp was fed by a 2208-square-kilometre catchment that included the three major drainage basins of Cardinia Creek, Bunyip River and Lang Lang River catchments.

Prior to European settlement, the Yallock Creek formed the only permanent outlet from the swamp into Western Port. In the late 19th century, the swamp was slowly drained with a network of constructed channels and improved outfalls to Western Port. This early drainage system allowed limited agricultural activities within the reclaimed swamp between floods, and passage through the swamp to Gippsland.

Today, the drainage system that includes the two main carrier drains (the Cardinia Outfall Drain and the Bunyip Main Drain) provides a relatively high level of flood protection for a rural area and allows intensive agricultural activities and associated development.

1.4 Flooding within the District

The District has flooded many times. The largest flood on record (approximately a 0.5-0.7 per cent Annual Exceedance Probability (AEP) event) occurred in 1934, when the entire District was inundated and more than 1000 people became temporarily homeless. AEP is the likelihood of the occurrence of a flood of a given size happening in any one year.

Following the 1934 flood and subsequent regular flooding of the District, construction of the Yallock Outfall Drain commenced in the 1950s. The outfall splits the flow of the Bunyip Main Drain at Cora Lynn. The resultant decrease in flows in the Bunyip Main Drain reduces the frequency of overtopping the drain levees and thereby provides flood mitigation benefits to the Koo Wee Rup township.

Flooding in the District results from overtopping of drain levees but also when floodwaters from the local catchments exceed the capacity of the local drainage system.

Due to the extremely flat terrain of the District, even relatively minor floods can inundate large areas. The flat terrain results in slow water movement and, when flooding occurs, it can last for a number of days or even weeks.

2

Description of flood zones and flood level determination

Given the unique characteristics of the floodplain and associated drainage, five flood zones have been identified based on different types of flood behaviour.

2.1 Floodplain characteristics and site suitability

Flooding within the District is characterised by large expanses of slow-moving water, with considerable water pondages, concentrated flow paths and localised areas of higher ground scattered throughout the floodplain.

Ponded areas occur where the passage of floodwaters are restricted, blocked or contained due to raised roads, levees, railways or natural depressions.

In locations of flow paths or depressions, flows will be concentrated either along shallow gullies or defined channels, and the velocity and depth of flow will be greater than the surrounding area. Most forms of development should be avoided in these areas due to this hazard.

New dwellings or buildings should be sited on high ground wherever possible. These are areas where the flood depth is lower or the land is not subject to flooding for a 1 per cent AEP event[1].

1. The 1 per cent AEP flood is the current design flood event for land use planning and building systems in Victoria. It is a flood with a 1 per cent chance of occurring in any given year.

2.2 Flood level determination

Generally, Melbourne Water adopts a flood zone approach to determine flood levels within the District. The District has been divided into five flood zones, which are distinguished by similar flood characteristics and flood depths (refer to Figure 2).

Melbourne Water uses a combination of available survey information of ground surface levels and flood depths to determine the applicable flood level to the Australian Height Datum (AHD). The flood level is determined by adding the average flood depth for the applicable flood zone to the average surrounding ground level for the subject site. We require floor levels to be raised above the applicable flood level, as outlined in the next section.

Additionally, flood modelling has been undertaken within some flood zones and a specific flood level may be available from Melbourne Water on request. This includes the Koo Wee Rup township where flood levels have been mapped (refer to Figure 3). Similarly, specific flood levels are available from Melbourne Water for ponded areas.

Where available, specific flood levels will be adopted rather than the more general flood zone approach.

Flood levels are determined either by flood zone or specific flood levels, as follows:

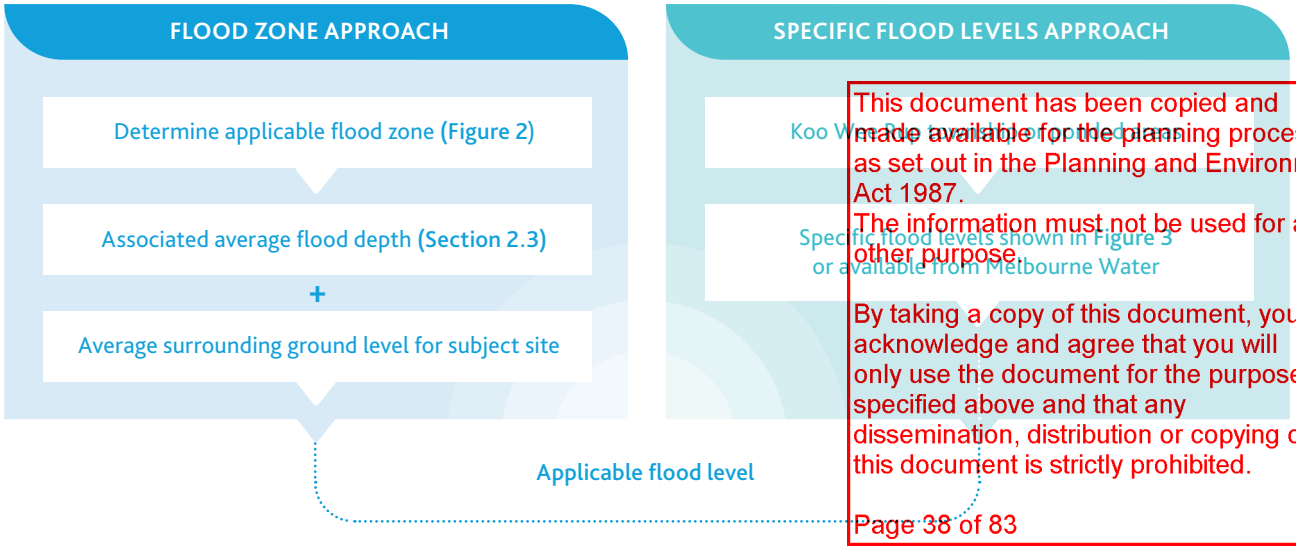


Figure 2. Flood zones within the District

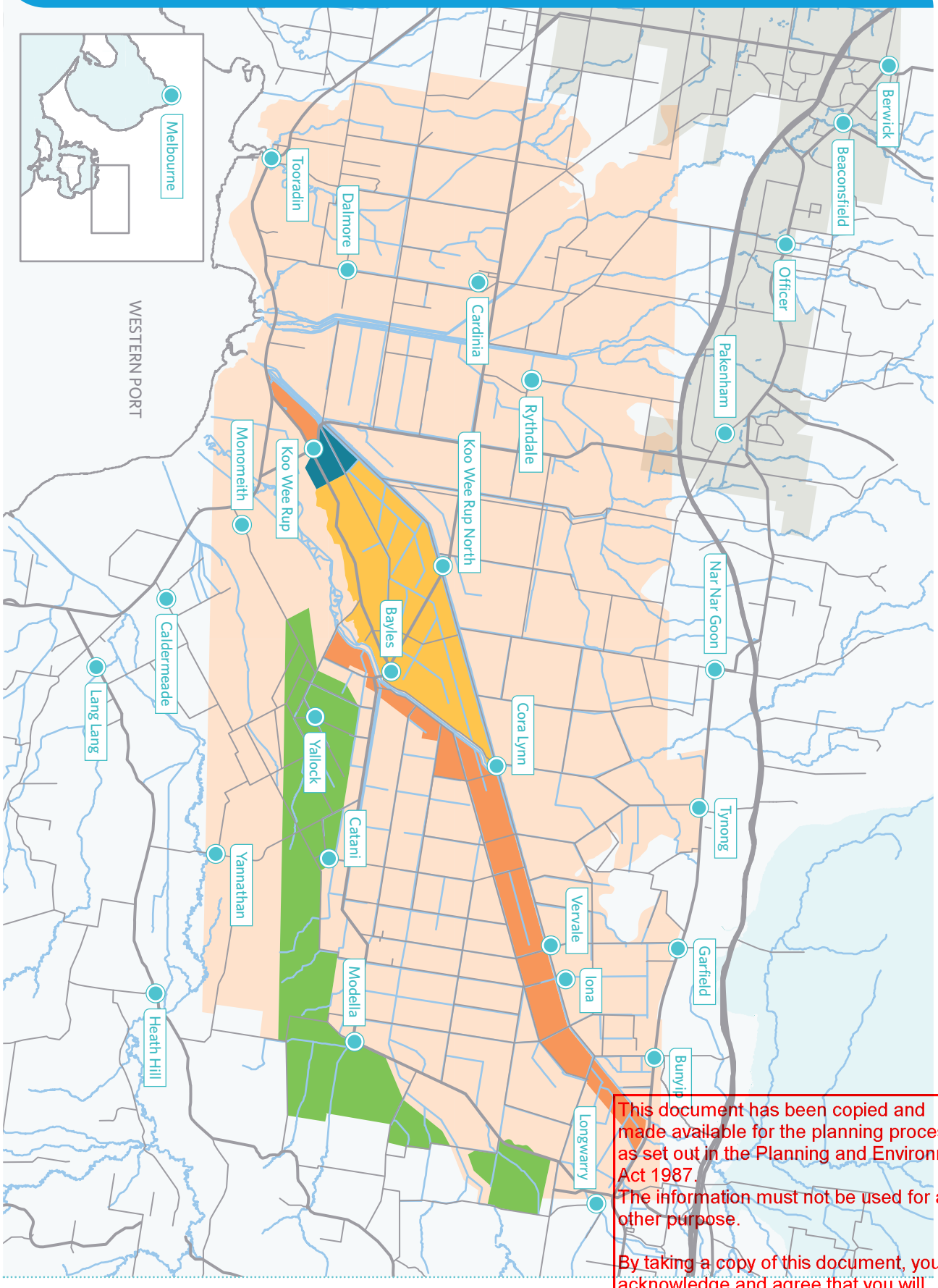
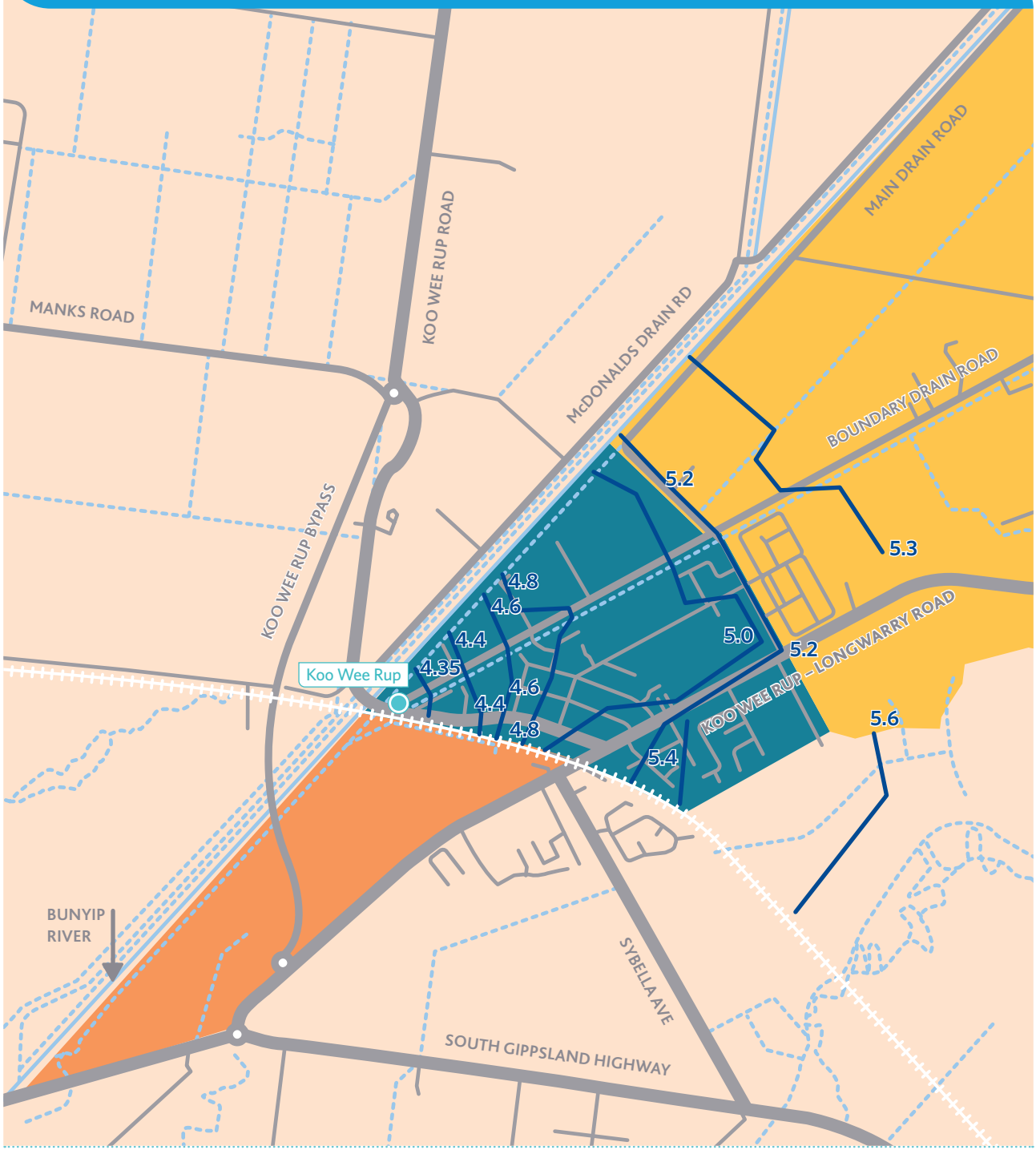


Figure 3. Koo Wee Rup township flood levels



2.3 Flood zone descriptions and flood depths

The five flood zones shown in Figure 2 are described below.

Flood zone 1

This flood zone contains the majority of the District (areas bordering the District are similar in nature). Flood zone 1 is subject to overland flooding due to overflows from drains. The 1 per cent AEP flood depth is approximately 300 millimetres above the average surrounding ground level.

Flood zone 2

Flood zone 2 is liable to deep flooding as a result of concentrated overflows from a major drain. The 1 per cent AEP flood depth is approximately 700 millimetres above the average surrounding ground level. Buildings are generally discouraged in flood zone 2, as building at a proposed site may be unsafe where flood depths are greater than 500 millimetres. Site-specific advice should be sought from Melbourne Water.

Note: Some flood modelling has been undertaken within flood zones 1 and 2 and a specific flood level may be available from Melbourne Water on request.

Flood zone 3

This area has a high level of protection from the Bunyip floodwaters because of the Yallock Outfall and the Bunyip Main Drain levee banks. Flood zone 3 is liable to flooding from the local drainage system and minor overflows of the main levee bank system. The 1 per cent AEP flood depth is approximately 150 millimetres above the average surrounding ground level.

Flood zone 4: the Koo Wee Rup township

The township of Koo Wee Rup is liable to flooding from local floodwaters and minor overflows of the Bunyip Main Drain. Flood levels are shown in Figure 3.

Flood zone 5

This area is not affected by overflows from any of the main waterways. Parts of the area are liable to shallow overland flows from local catchments and need to be considered in the site layout. The 1 per cent AEP flood depth is approximately 150 millimetres above the average surrounding ground level.

3

Development requirements

There are specific development requirements for each flood zone in the District and for different development types.

3.1 Freeboard and fill pad requirements

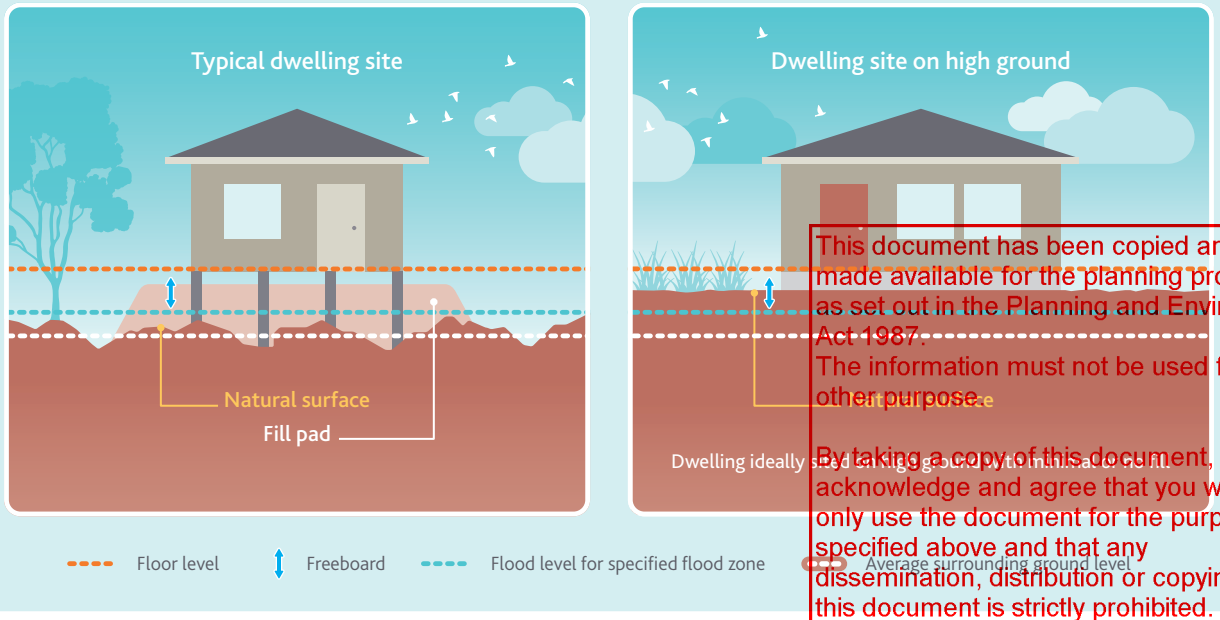
Freeboard is the height above a defined flood level that is required to provide a factor of safety when setting floor levels for developments. It allows for factors such as wave action, settlement of levees and the possibility of events greater than the adopted standard.

The Victorian *Building Regulations 2018* specify a minimum general freeboard requirement of 300 millimetres above the 1 per cent AEP flood level, or as otherwise determined by the floodplain management authority. However, Melbourne Water considers a higher freeboard requirement is applicable for development in the majority of the District. This is due to the large expanses of water that will occur during a flood event and the increased risk of higher levels due to wave action.

Due to the nature of the flooding within the District (that is, the extent of flooding and possible duration of floodwaters), Melbourne Water requires fill pads for all new dwellings (with the exception of flood zones 3 and 5 where flooding is shallow, and where dwellings are built on stumps). For non-urban areas, fill pads provide an area around a dwelling that may act as a place of refuge for livestock and storage for machinery (refer to Figure 4).

Maintenance of flood storage across the District is important to ensure flooding is not increased. Therefore, the size of fill pads should be limited to the size necessary for a particular development including providing refuge during a flood, as detailed in section 3.2. Furthermore, the placement of fill pads should not obstruct overland flow paths.

Figure 4. Dwelling and fill pad cross-sections relative to average surrounding ground level



3.2 Minimum floor level and fill level requirements

This section details the freeboard requirements for different development types. The freeboard is added to the applicable flood level to establish the minimum floor level requirements for development and the minimum fill levels for subdivision.

3.2.1 Dwelling requirements

Requirements for dwellings in each flood zone are described below (a summary table of the development requirements can be found in Appendix 1).

Note: Where development can be sited on high ground and outside areas subject to flooding in a 1 per cent AEP event, minimum floor level requirements for the surrounding flood zone will still apply.

FREEBOARD REQUIREMENT

Applicable flood level

+

Freeboard

=

Minimum floor level for development/
fill level for subdivision

Flood zone 1 requirements – dwellings

- Flood zone 1 contains the majority of the District and the 1 per cent AEP flood depth is approximately 300 millimetres above the average surrounding ground level.
- Floor levels of any new dwelling are to be a minimum of 600 millimetres above the applicable flood level.
- For dwellings on stumps, a fill pad is to be a minimum of 150 millimetres above the applicable flood level. For slabs on ground, a fill pad is to be a minimum of 450 millimetres above the applicable flood level.
- Fill pad area:
  - for dwellings on lots less than 800 square metres, a fill pad is to cover the building envelope (unless otherwise filled at subdivision stage)
  - for dwellings on lots greater than 800 square metres, a fill pad is to extend at least 5 metres beyond the building (unless otherwise filled at subdivision stage).

Flood zone 2 requirements – dwellings

- Flood zone 2 is liable to deep flooding and the 1 per cent AEP flood depth is approximately 700 millimetres above the average surrounding ground level.
- Floor levels of any new dwelling are to be a minimum of 600 millimetres above the applicable flood level. Where flood depths exceed 500 millimetres, Melbourne Water may determine that a new building is inappropriate and filling or building may be refused.
- Fill pad requirements as for flood zone 1.

Flood zone 3 requirements – dwellings

- Flood zone 3 is liable to flooding from the local drainage system and the 1 per cent AEP flood depth is approximately 150 millimetres above the average surrounding ground level.
- Floor levels are to be a minimum of 450 millimetres above the natural ground surface or 300 millimetres above the applicable flood level, whichever is greater.
- For dwellings on stumps, no fill pads are required. For slabs on ground, a fill pad is to be a minimum of 150 millimetres above the applicable flood level.
- Fill pad area for slabs on ground:
  - for dwellings on lots less than 800 square metres, a fill pad is to cover the building envelope (unless otherwise filled at subdivision stage)
  - for dwellings on lots greater than 800 square metres, a fill pad is to extend at least 5 metres beyond the building (unless otherwise filled at subdivision stage).

Flood zone 4 requirements – dwellings

- Flood zone 4 is the Koo Wee Rup township. Flood levels are shown in Figure 3.
- Floor levels of any new dwelling are to be a minimum of 600 millimetres above the applicable flood level.
- A fill pad is required at a minimum of 150 millimetres above the applicable flood level.
- Fill pad area:
  - for lots less than 800 square metres, a fill pad is required to cover the building envelope (unless otherwise filled at subdivision stage)
  - for lots greater than 800 square metres, a fill pad is required that extends at least 5 metres beyond the building (unless otherwise filled at subdivision stage).

Flood zone 5 requirements – dwellings

- Flood zone 5 is liable to shallow overland flows and the 1 per cent AEP flood depth is approximately 150 millimetres above the average surrounding ground level.
- Floor levels of any new dwelling are to be a minimum of 450 millimetres above the natural ground surface or 300 millimetres above the applicable flood level, whichever is greater.
- Fill pad requirements as for flood zone 3.

3.2.2 Non-habitable outbuilding requirements

For any non-habitable outbuilding constructed within the District, floor levels should be a minimum of 300 millimetres above the applicable flood level for a building with a concrete floor or 150 millimetres above the applicable flood level for an earthen floor. Some concessions may be made for open-sided structures, such as carports or hay sheds.

3.2.3 Special cases and requirements

Extensions to existing buildings

Melbourne Water aims to achieve floor level and freeboard requirements set out above for extensions to existing buildings, but acknowledges that some concessions may need to be made considering the location and size of any extension, access and design.

Floor level requirements for extensions to dwellings as specified in the statewide *Guidelines for Development in Flood Affected Areas* (2019) also need to be considered.

Milking sheds

Milking sheds are to be constructed in consultation with Environment Protection Authority (EPA) Victoria and DELWP. Sheds are to be constructed at or above the applicable flood level and adequate waste treatment must be provided on site to ensure that no material from the milking operations is discharged into the drainage system for up to a 1 per cent AEP event.

Poultry farms

Victorian Code for Broiler Farms (2009) with 2018 amendments[2] provides "a framework for the economically and environmentally sustainable development and operation of the broiler farming industry in Victoria, recognising the needs of the industry and the community". The code was incorporated into the VPP and all planning schemes in Victoria in 2009. Compliance with the code is mandatory for the establishment of all new broiler farms and expansions in Victoria with a capacity of more than 10,000 birds.

Melbourne Water requirements for broiler or poultry farms include the following criteria:

1. Sheds are to be constructed on a clay fill pad that is a minimum of 600 millimetres above the applicable flood level. Some consideration may be given to reduced freeboard requirements if flood-proofing measures are undertaken to the satisfaction of Melbourne Water.
2. All developments must incorporate an on-site stormwater detention dam that controls runoff from only the impervious surfaces within the development. The requirements of this detention are:
   a. 900 cubic metres of storage in a dam above full supply level per hectare of impervious catchment area (including the dam area).
   b. Storage above full supply level to be no more than 450 millimetres deep.
   c. Outlet works to discharge no more than 3 litres per second per hectare of catchment (including dam area).
   d. The dam should be lined with an impervious lining and the freeboard provision should be above the natural surface to avoid possible groundwater problems.
3. Material other than stormwater must not be discharged into the drainage system (including the site detention dam). Adequate waste treatment must be provided on site to cater for this requirement.
4. All buildings or dams associated with the poultry farm are to be appropriately set back from waterways to avoid adverse impacts, to the satisfaction of Melbourne Water.
5. Dead birds, litter, shavings, etc. arising from the use of the poultry farm must not be spread or stored on site.
6. Design drawings and details of the site layout must be submitted to Melbourne Water for comment and approval prior to commencement of any works on site.

Other intensive land uses and larger developments

Additional intensive land uses, such as cattle feedlots, piggeries and intensive animal industries, and larger developments that significantly increase impervious surfaces, such as airports, need to be consistent with the floodplain development principles detailed in the statewide *Guidelines for Development in Flood Affected Areas* (2019).

These land uses and developments also have the potential to adversely impact waterways, and stormwater quality and quantity leaving the development site. All developments must incorporate on-site stormwater detention and treatment to control runoff from impervious surfaces, to the satisfaction of Melbourne Water. Other intensive land uses will have similar flood detention requirements to poultry farms.

2. See: http://agriculture.vic.gov.au/agriculture/livestock/poultry-and-eggs/poultry-legislation-regulations-and-standards/the-victorian-code-for-broiler-farms

3.2.4 Subdivision referrals and requirements

To ensure that new allotments provide a suitable area for the construction of new buildings, fill pads may be required for subdivisions within the District where siting a development on high ground is not possible. Potential adverse impacts on adjacent, upstream or downstream areas resulting from the introduction of fill in the floodplain will be considered. Fill pad requirements include those mentioned below (unless otherwise agreed to in writing by Melbourne Water).

For subdivision into lots:

Less than 800 m² in built up areas

- filling will be required to cover the building envelope and flood impacts need to be considered
- the fill level is the applicable flood level plus the relevant freeboard
- the building envelope is to be shown on a Plan of Subdivision.

Less than 800 m² in greenfield areas

- filling of all residential lots to the lot boundary is required
- the fill level is the applicable flood level plus the relevant freeboard
- filling is to be in accordance with a plan showing the drainage strategy for the subdivision. Roads can provide for overland flows.

Greater than 800 m² and less than 1 hectare

- a fill pad is required that covers the entire building envelope
- the fill level is the applicable flood level plus the relevant freeboard
- the building envelope is to be shown on a Plan of Subdivision.

Greater than 1 hectare

- a fill pad of at least 1000 square metres is required
- the fill level is the applicable flood level plus the relevant freeboard
- a Plan of Subdivision should specify a building envelope covering the fill pad.

For flood zones 3 and 5

- no fill pad is required at the subdivision stage
- a fill pad may be required to construct a dwelling depending on the foundation type (see 3.2.1 Dwelling requirements).

3.2.5 Sea level rise

Coastal, tidal and storm surge flooding is becoming an increasing concern in the face of a changing climate. Sea levels are predicted to rise and extreme coastal events are projected to increase in intensity and frequency.

In 2017, Melbourne Water released its *Planning for Sea Level Rise Guidelines*, detailing specific requirements that apply to development proposals in areas that will be affected by tidal inundation (including storm surge and wave action) as a result of predicted sea level rise. These guidelines aim to ensure that proposed development is compatible with any flood risk.

Some parts of the District have been identified as land predicted to be affected by tidal inundation as a result of predicted sea level rise. Flood levels for Western Port vary around the bay. Contact Melbourne Water for site-specific flood levels.

Sea level rise requirements

Where a development proposal is located in an area that will be affected by tidal inundation as a result of predicted sea level rise (see Appendix 2), floors are to be a minimum of 600 millimetres above the relevant predicted future flood level in accordance with Melbourne Water's *Planning for Sea Level Rise Guidelines*[3], or above the minimum floor level requirements detailed in these guidelines, whichever is greater.

3. See: https://www.melbournewater.com.au/sites/default/files/Planning-for-sea-levels.pdf.

3.3 Flood safety and access

Proposed developments need to consider the extent, velocity and duration of any flood and issues associated with flood safety, access and isolation to meet the statewide *Guidelines for Development in Flood Affected Areas* (2019) objective "to protect human life and health, and provide safety from flood hazard".

To address the potential flood risk to life, health and safety associated with any development, flood risk factors considered with any proposed development include:

- the frequency, duration, extent, depth and velocity of flooding of the site and access way
- the flood warning time available
- the danger to the occupants of the development, other floodplain residents and emergency personnel if the site or access way is flooded.

Impacts from isolation are also considered, as the prolonged loss of critical services, such as electricity, water and sewerage, can place a greater burden on households and emergency services.

Safety and access requirements

All developments should aim to provide access to the property where the depth of floodwater is no more than 500 millimetres and the product of velocity and depth is no more than 0.35 metres squared per second, and which otherwise complies with the requirements of Melbourne Water's floodway safety criteria guidelines[4] *in the Land Development Manual*.

4. See: https://www.melbournewater.com.au/planning-and-building/developer-guides-and-resources/standards-and-specifications/floodway-safety

3.4 Waterway and floodplain protection

The natural environment of the former Koo Wee Rup Swamp has changed significantly since the drainage of the swamp and the clearance of large areas of native vegetation for agriculture and urban development. However, there are remnant populations of threatened species, such as the Southern Brown Bandicoot, and it is important to protect and enhance the environmental features of waterways and the floodplain.

To address waterway and flood protection, Melbourne Water considers the effect of any proposed development on river health values, including wetlands, natural habitat, stream stability, erosion, environmental flows, water quality and sites of environmental significance. How a development may enhance habitat connectivity and ensure sediment management is of particular importance.

Waterway and floodplain protection requirements

All developments must consider how they will maintain or improve waterway and floodplain condition and maintain or improve water quality.

Note: Any proposed development needs to consider the requirements of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* and the protection of threatened species and habitat, such as the Southern Brown Bandicoot.

Glossary

Term	Definition
Annual exceedance probability	The likelihood of a flood of a given size happening in any one year. AEP is usually expressed as a percentage; for example, if a flood of a particular size (volume of water) has an AEP of 5 per cent, that means there is a 5 per cent (or 1 in 20) chance of a flood of that size happening in any given year.
Flood level	The maximum level that would be reached by floodwaters during a particular flood event. For example, a 1 per cent AEP flood level is the maximum level that would be reached by floodwaters during a 1 per cent AEP event.
Floodplain	An area of low-lying land adjacent to a waterway. It is normally dry, but is subject to flooding during periods of high rainfall.
Fill pad	An area of land that is filled to a level above flood level. In a rural setting it may act as a place of refuge for livestock and storage for machinery.
Freeboard	The height above the design flood level. It is a factor of safety typically used in relation to the setting of floor levels, apex of underground carpark entrances and so on. Freeboard compensates for a range of factors, including wave action and localised flow effects. It can also compensate for uncertainties in the accuracy of the 1 per cent AEP flood level estimate.
Outbuilding	A building subordinate to but separate from a main building.
Subdivision	The division of land into two or more parts which can be disposed of separately (*Subdivision Act 1988*).

Appendix 1

Summary development requirements for the District

Flood zone	Avg. flood depths	Remarks	Building applications		
			Dwellings	Outbuildings	Extensions
1	Approx. 300 mm	Liable to overland flooding due to overflows from drains.	• Floor levels to be a minimum of 600 mm above the applicable flood level. • For dwellings on stumps, a fill pad is to be a minimum of 150 mm above the applicable flood level. For slabs on ground, a fill pad is to be a minimum of 450 mm above the applicable flood level. • Fill pad area (unless otherwise filled at subdivision stage): - for dwellings on lots less than 800 m^2, a fill pad is to cover the building envelope. - for dwellings on lots greater than 800 m^2, a fill pad is to extend at least 5 m beyond the building.	Outbuildings to be constructed with floor levels a minimum of 300 mm above the applicable flood level for concrete floors and 150 mm above applicable flood levels for earthen floors. Some concessions may be accepted for open-sided structures, such as carports or hay sheds.	As per dwellings and outbuildings. Some concessions may be applied considering location and size of extension, access and design.
2	Approx. 700 mm	Liable to deep flooding as a result of concentrated overflows from a major drain – **filling/building may be refused.**	• Floor levels to be a minimum of 600 mm above the applicable flood level; where depths exceed 500 mm, Melbourne Water may determine that a new building is inappropriate. • Fill pad requirements as for flood zone 1.	As for flood zone 1.	As for flood zone 1.

Flood zone	Avg. flood depths	Remarks	Building applications		
			Dwellings	Outbuildings	Extensions
3	Approx. 150 mm	This area has a high level of protection because of the Yallock Outfall and the Bunyip River levee banks – liable to flooding from local drainage and from minor overflows of the main levee bank system.	• Floor levels to be a minimum of 450 mm above the natural ground surface or 300 mm above the applicable flood level, whichever is greater. • For dwellings on stumps, no fill pads are required. For slabs on ground, a fill pad is to be a minimum of 150 mm above the applicable flood level. • Fill pad area for slabs on ground (unless otherwise filled at subdivision stage): - for dwellings on lots less than 800 m^2, a fill pad is to cover the building envelope. - for dwellings on lots greater than 800 m^2, a fill pad is to extend at least 5 m beyond the building.	As for flood zone 1.	As for flood zone 1.
4	Variable	The Koo Wee Rup township is liable to flooding from local floodwaters and minor overflows of Bunyip River Drain.	• Dwellings to be constructed with floor levels a minimum of 600 mm above the applicable flood level. • A fill pad is required a minimum of 150 mm above the applicable flood level. • Fill pad area (unless otherwise filled at subdivision stage): - for lots less than 800 m^2, a fill pad is required to cover the building envelope. - for lots greater than 800 m^2, a fill pad is required that extends at least 5 m beyond the building.	As for flood zone 1.	As for flood zone 1.
5	Approx. 150 mm	This area is not affected by overflows from any of the main creeks – parts of the area are liable to flooding from local catchments.	• Floors to be a minimum of 450 mm above the natural ground surface or 300 mm above the applicable flood level, whichever is greater. • Fill pad requirements as for flood zone 3.	As for flood zone 1.	As for flood zone 1.

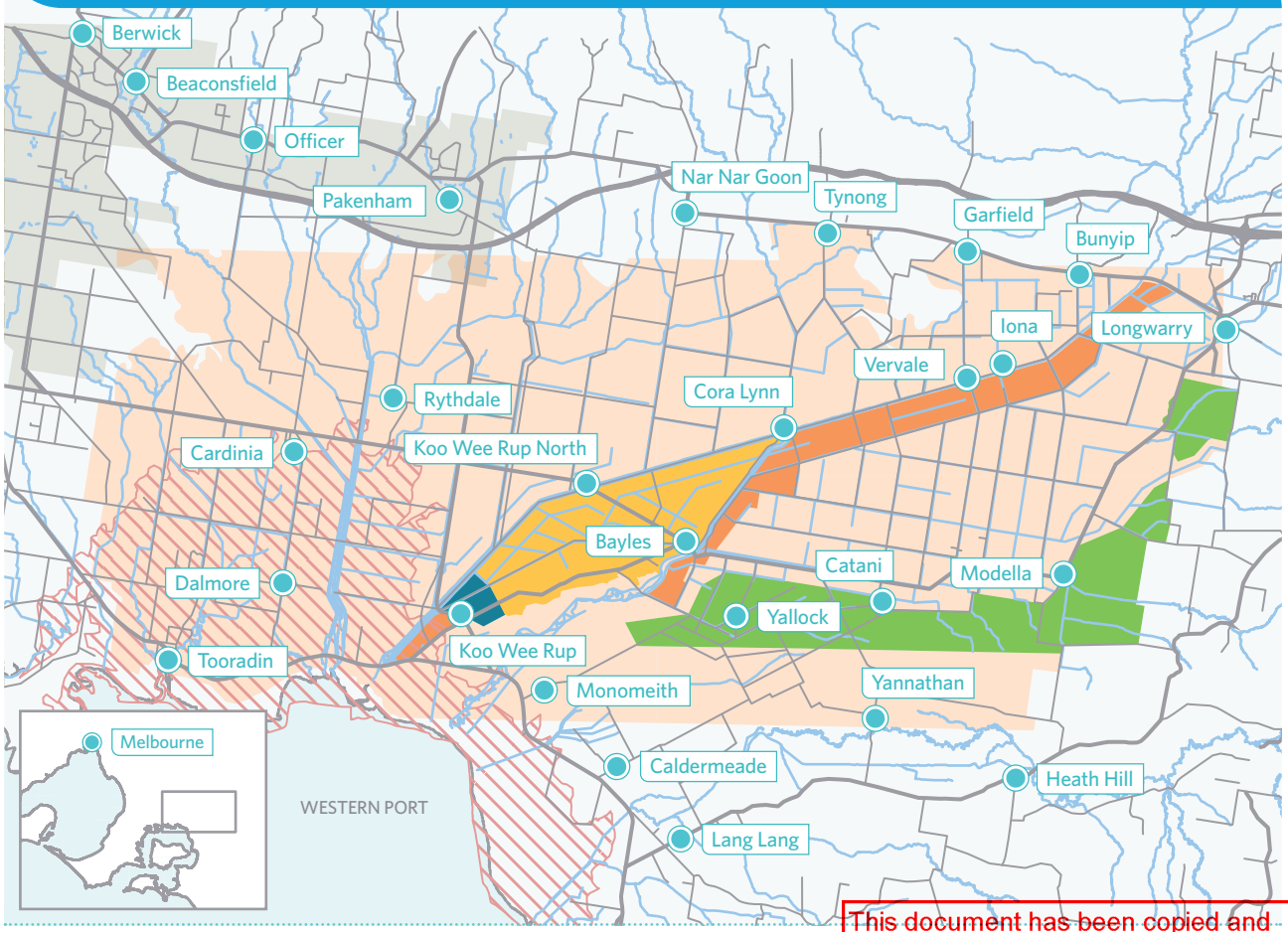
a. Sea level rise may further increase flood depth and minimum floor level requirements – refer to Melbourne Water's *Planning for Sea Level Rise Guidelines*.
b. As well as floor level and fill pad requirements, consider safety and access, and waterway and floodplain protection requirements.
c. For all flood zones, please see specific requirements for milking sheds, poultry farms and other intensive land use and larger developments.
d. Also refer to floor level requirements for extensions to dwellings as specified in the statewide *Guidelines for Development in Flood Affected Areas* (2019).

Subdivision area or flood zone	Requirements
For subdivision into lots less than 800 m² in built up areas	• Filling will be required to cover the building envelope and flood impacts need to be considered • The fill level is the applicable flood level plus the relevant freeboard • The building envelope is to be shown on a Plan of Subdivision.
For subdivision into lots less than 800 m² in greenfield areas	• Filling of all residential lots to the lot boundary is required • The fill level is the applicable flood level plus the relevant freeboard • Filling is to be in accordance with a plan showing the drainage strategy for the subdivision. Roads can provide for overland flows.
For subdivision into lots greater than 800 m² and less than 1 ha	• A fill pad is required that covers the entire building envelope • The fill level is the applicable flood level plus the relevant freeboard • The building envelope is to be shown on a Plan of Subdivision.
For subdivision into lots greater than 1 ha	• A fill pad is required of at least 1000 m² • The fill level is the applicable flood level plus the relevant freeboard • A Plan of Subdivision should specify a building envelope covering the fill pad.
For flood zones 3 and 5	• No fill pad is required at the subdivision stage • A fill pad may be required to construct a dwelling depending on the foundation type – see 3.2.1 Dwelling requirements.

Appendix 2

Tidal inundation areas as a result of sea level rise

Figure 5. Tidal inundation areas as a result of sea level rise



Appendix 3

Floodplain management information

Legislation, strategies and guidelines relevant to the District and floodplain management are briefly outlined below.

Water Act 1989 (Victoria)	Part 10 of the *Water Act 1989* enables floodplain management authorities, such as Melbourne Water, to have waterway, regional drainage and floodplain management functions. A key floodplain management function is to provide advice about flooding and controls on development to councils, the Secretary to the Department and the community.
Planning and Environment Act 1987 (Victoria)	Victoria's statutory land use planning system operates through planning schemes that are subordinate instruments under the *Planning and Environment Act 1987*. Section 62(e) of the Act enables planning schemes to 'regulate or prohibit any use or development in hazardous areas, or areas likely to become hazardous'. As a result, planning schemes contain land use and development controls to enable flood risk to be managed. Floodplain management authorities are referral authorities for development on land covered by the flood planning controls in planning schemes. Development includes the construction, alteration or demolition of a building or works and the subdivision or consolidation of land.
Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)	The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places. Listed threatened species and ecological communities are matters of national environmental significance under the Act. For example, any proposed development within the District which may impact on a population, or part of a population (as defined under the EPBC Act), of Southern Brown Bandicoots, would require referral to the Commonwealth before commencement.
State Government strategies	The *Victorian Floodplain Management Strategy* (2016)[5]– sets out a systematic approach to evaluating Victoria's flood risks. It also provides a systematic approach to sharing information between individuals, communities, government agencies and other organisations responsible for managing the various aspects of flood risk. Most importantly, it clarifies which agency is accountable for each aspect of floodplain management. The *Victorian Waterway Management Strategy* (2013)[6] provides the framework for government, in partnership with the community, to maintain or improve the condition of rivers, estuaries and wetlands so that they can continue to provide environmental, social, cultural and economic values for all Victorians. The framework is based on regional planning processes and decision making within the broader system of integrated catchment management in Victoria. The *Victorian Rural Drainage Strategy* (Draft)[7] proposes a series of policies and actions to enable landholders to choose how to manage their drainage and drainage systems into the future. The *Victorian Coastal Strategy* (2014)[8] provides guidance for agencies and statutory decision making along the coast and in marine and estuarine environments, provides a framework for related regional plans, strategies and management plans for coastal Crown land, and engages the community to continue to value the coast and marine environments and to participate in its planning and management.

State guidelines	The *Guidelines for Development in Flood Affected Areas* (2019)[9] provide a clear, consistent and transparent process for facilitating development in flood-affected areas in Victoria. Consistency and transparency are established by applying relevant development standards against four defined objectives relating to: flood safety, flood damage, offsite impacts, and waterway and floodplain protection. This document explains that floodplain management authorities, such as Melbourne Water, have discretion to vary from the State guidelines when considering local circumstances. The *Guidelines for Development within the Koo Wee Rup and Longwarry Flood Protection District* do this for the District.
Melbourne Water strategies and guidelines	The *Flood Management Strategy for Port Phillip and Westernport* (2015)[10] sets out how Melbourne Water will continue to work with other agencies and the community to understand, avoid and better manage flood risks. It also outlines how Melbourne Water can support flood emergency preparation and response across the Port Phillip and Westernport region. The *Land Development Manual*[11] provides details of processes and procedures to be followed by land developers and their technical consultants in relation to drainage and flood protection requirements in the Port Phillip and Westernport region. *Planning for Sea Level Rise Guidelines* (2017)[12] sets out the specific requirements that apply to development proposals in areas that will be affected by tidal inundation (including storm surge and wave action) as a result of predicted sea level rise. The aim of these guidelines is to ensure that proposed development is compatible with any flood risk. The *Koo Wee Rup and Longwarry Flood Protection District Customer Service Charter* (2014)[13] outlines landowner rights and obligations as a user of Melbourne Water's flood protection and drainage services, and sets out the minimum standards of customer service.
Assessments	The South East Councils Climate Change Alliance (SECCCA) *Western Port Local Coastal Hazard Assessment*[14] is a detailed and comprehensive hazard assessment, with a focus on inundation and erosion hazards around all shorelines of Western Port and French Island, as well as the northern shorelines of Phillip Island. Information developed by the project will assist to better understand, plan for and manage coastal hazards.

5. See: https://www.water.vic.gov.au/managing-floodplains/new-victorian-floodplain-management-strategy
6. See: https://www.water.vic.gov.au/waterways-and-catchments/rivers-estuaries-and-waterways/strategies-and-planning
7. See: https://engage.vic.gov.au/ruraldrainage
8. See:https://www.coastsandmarine.vic.gov.au/coastal-management/victorian-coastal-strategy
9. See https://www.water.vic.gov.au/__data/assets/pdf_file/0025/409570/Guidelines-for-Development-in-Flood_finalAA.pdf
10 See: https://www.melbournewater.com.au/sites/default/files/2017-10/Flood-Management-Strategy-2015.pdf
11. See: https://www.melbournewater.com.au/planning-and-building/developer-guides-and-resources/ldm-index
12. See: https://www.melbournewater.com.au/sites/default/files/Planning-for-sea-levels.pdf
13. See: https://www.melbournewater.com.au/sites/default/files/KWRL%20Customer%20Charter.pdf
14. See: http://www.seccca.org.au/project/western-port-local-coastal-hazard-assessment/

Melbourne Water
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www.melbournewater.com.au

ISBN 978-1-921603-04-4 (Web)

VICTORIA State Government

Melbourne Water
Enhancing Life and Liveability

11 September 2024

PETER THOMAS BUILDING DESIGN

Dear ,

Proposal: Flood level certificates
Site location: Lot 4, 47 PRINCES AVENUE LONGWARRY VIC 3816
Melbourne Water reference:MWA-1343417
Date referred: 28/08/2024

Applicable Flood Level:

Information available to Melbourne Water indicates that the requested property falls within the Koo Wee Rup Flood Protection District under Zone 1. Because of this the estimated applicable flood level is approximately 300mm above the natural surface level of the property.

Please note that whilst the above level is based on a storm event that has an AEP, that is, a 1% probability of being equalled or exceeded in any one year. The property may be affected by more frequent flooding. To determine whether the property is affected by flooding from the local drainage system, please consult your local Council.

Important to note:

Melbourne Water provides flood advice under Section 202(2) of the Water Act 1989.

This letter does not constitute approval for any proposed development for planning or building.

To obtain flow rate velocity information or Melbourne Water's requirements for any proposed development, please contact our Customer Service Centre on 131 722 or make an application here.

The flood level advice provided is based on the most accurate information currently available. This estimated flood information may change and is valid for 3 months from the date of this letter. If you are proposing to develop this land after such time, it is recommended that new advice be obtained from Melbourne Water.

Melbourne Water ABN 81 945 386 953
990 La Trobe Street Docklands VIC 3008
PO Box 4342 Melbourne VIC 3001 Australia
T 131 722 F +61 3 9679 7099
melbournewater.com.au

Disclaimer

This letter does not constitute approval for any proposed development for planning or building. Melbourne Water provides flood advice under Section 202(2) of the Water Act 1989.

This certificate provides information as a general reference source only and has taken all reasonable measures to ensure that the material in this letter is as accurate as possible at the time of publication. However, Melbourne Water makes no representation and gives no warranty about the accuracy, reliability, completeness or suitability for any particular purpose of the information. To the full extent that it is able to do so in law, Melbourne Water disclaims all liability, (including liability in negligence), for losses and damages, (including indirect and consequential loss and damage), caused by or arising from anyone using or relying on the information for any purpose whatsoever.

The flood information provided represents the best estimates based on currently available information. This information is subject to change as new information becomes available and as further studies are carried out.

This estimated flood information may change and is valid for 3 months from the date of this letter. If you are proposing to develop this land after such time, it is recommended that new advice be obtained from Melbourne Water.

Advice

For information regarding flooding or additional services that Melbourne Water can provide, please refer to Guidelines for Development within the Koo Wee Rup and Longwarry Flood Protection District. Click the following link: https://www.melbournewater.com.au/media/586/download This guide has additional information about flooding in the district and general requirements for development. Alternatively visit our website.

For general development enquiries contact our Customer Service Centre on 131 722.

Regards,

CSR

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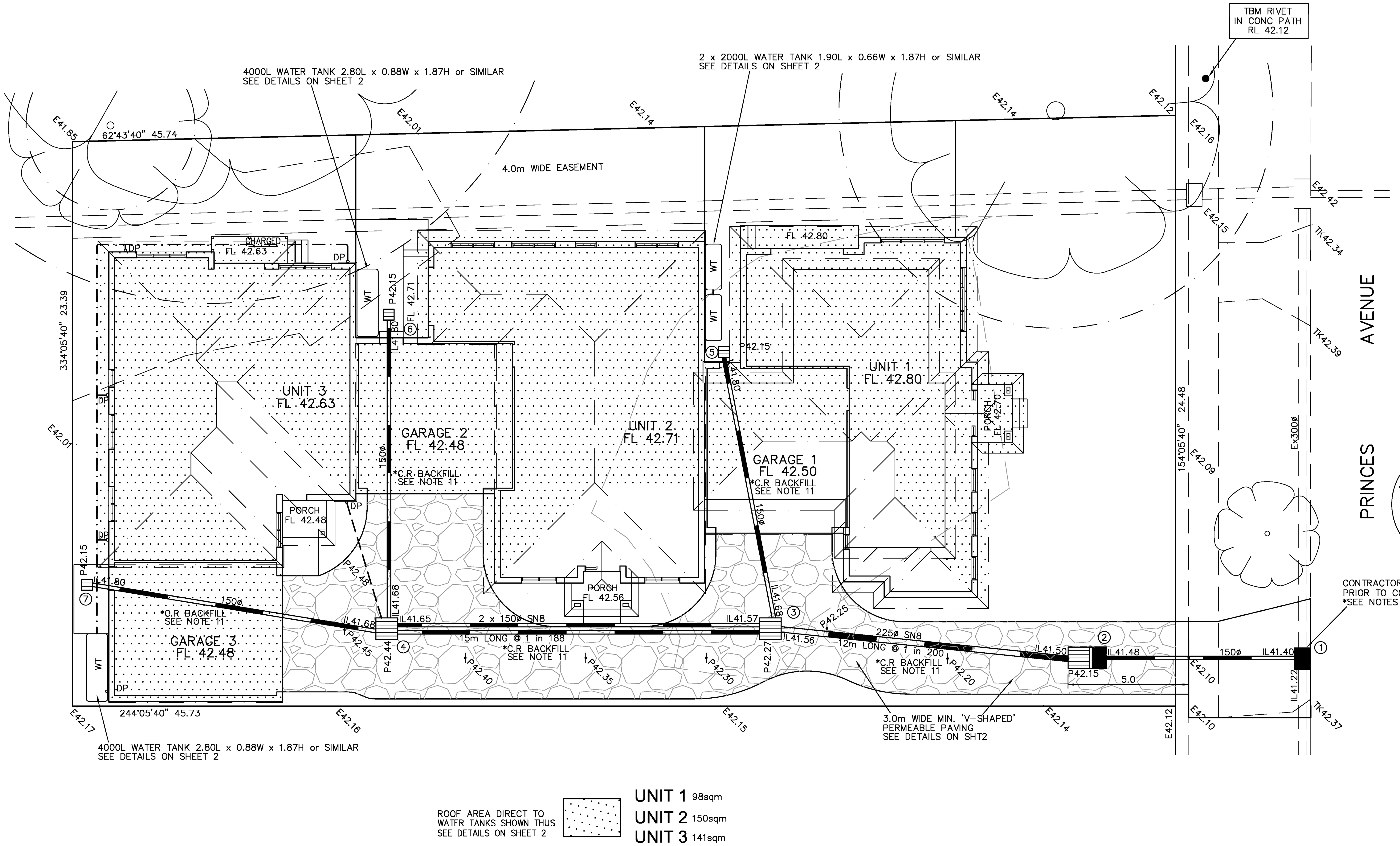
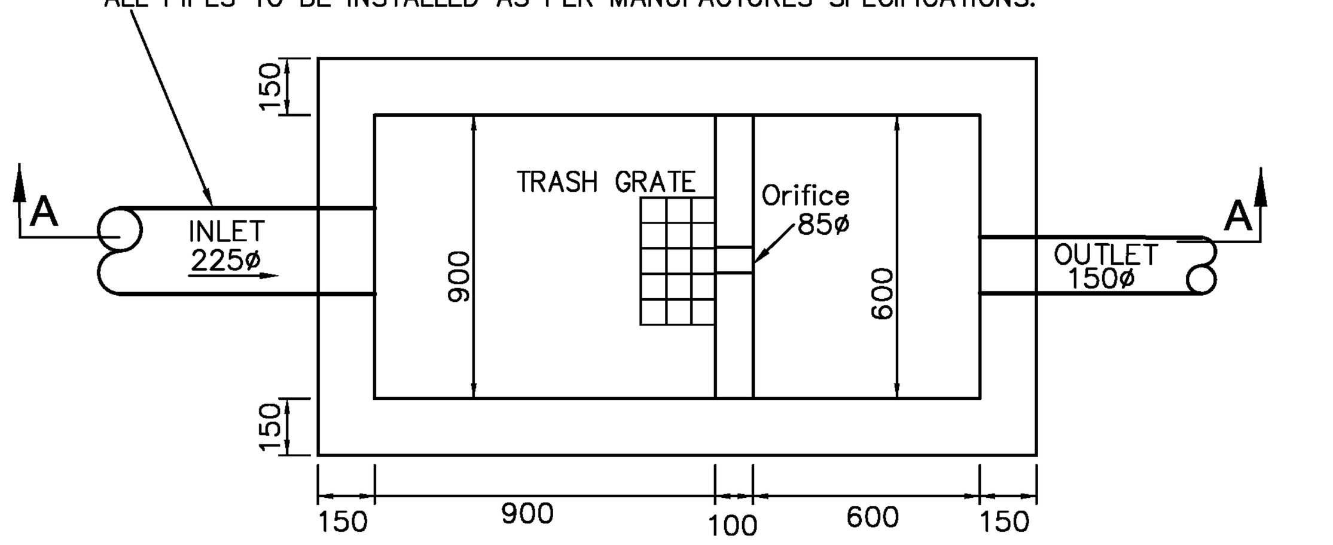


PIT SCHEDULE

PIT No.	PIT TYPE	SIZE INTERNAL	INVERT INLET	INVERT OUTLET	DEPTH	TOP	GRADE OF OUTLET & REMARKS
1	JUNCTION PIT	900 X 600	41.40	Ex41.27	1.15	42.37	CONSTRUCT JUNCTION PIT OVER THE Ex300ø PIPE TO COUNCIL STANDARDS FIT CLASS C GATIC COVER
2	DETENTION PIT	SEE DETAIL A LEFT	41.50	41.48	0.67	42.15	FIT CLASS C BIKE SAFE GRATE 1 in 100 min.
3	GRATING PIT	900 X 900	41.57 41.68	41.56	0.71	42.2	FIT CLASS C BIKE SAFE GRATE 1 in 200
4	GRATING PIT	900 X 900	41.68 41.68	41.65	0.79	42.44	FIT CLASS C BIKE SAFE GRATE 1 in 188
5	GRATING PIT	450 X 450		41.80	0.35	42.15	1 in 100 min.
6	GRATING PIT	450 X 450		41.80	0.35	42.15	1 in 100 min.
7	GRATING PIT	450 X 450		41.80	0.35	42.15	1 in 100 min.

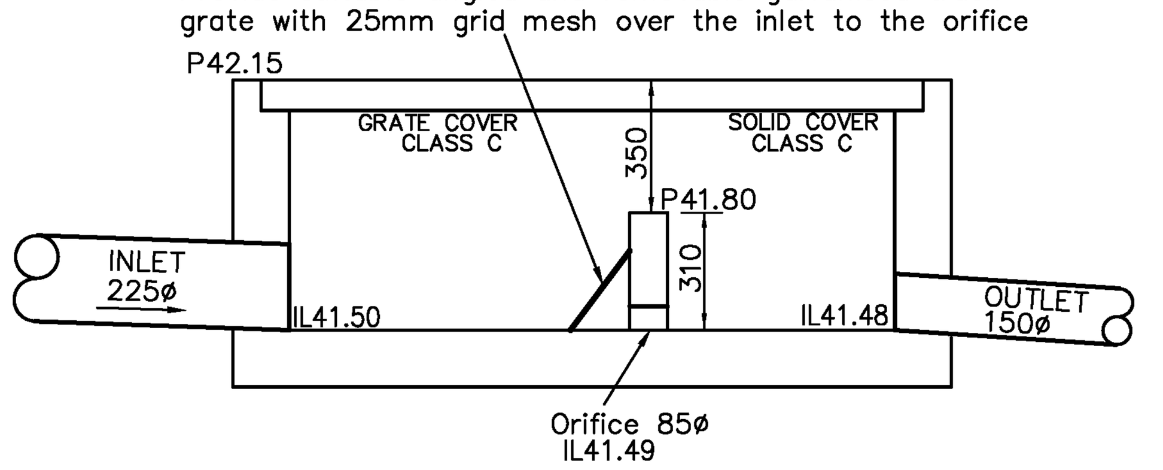
*THE SLOPE OF ALL PIT LIDS TO MATCH THE SURROUNDING EXISTING or FINISHED SURFACE

225ø SN8 PIPES, 12m Long @ 1 in 200 THEN
2 x 150ø SN8 PIPES, 15m Long @ 1 in 188
CRUSHED ROCK BACKFILL REQUIRED UNDER PAVING, SEE NOTE 11.
ALL PIPES TO BE INSTALLED AS PER MANUFACTURES SPECIFICATIONS.



PLAN - LIDS REMOVED
DETENTION SYSTEM PIT DETAIL A
NOT TO SCALE

Provide suitable angled and removable galvanised trash grate with 25mm grid mesh over the inlet to the orifice



SECTION A-A
DETENTION SYSTEM PIT DETAIL A
NOT TO SCALE

NOTES

1. E16.04 Denotes Existing surface
   P15.80 Denotes Proposed surface
2. Size & Type of pipe as shown
   150ø UPVC SEWER CLASS PIPE
   100ø UPVC SEWER CLASS PIPE
   DP I.0

DP—denotes Possible Down Pipe Locations. Refer to architectural drawings for size, style & correct locations. All water tanks, downpipes and stormwater drainage are to be installed in accordance with V.B.A. Regulations 2018 and plumbing industry association standards current at the time of construction.

I.0 —denotes Inspection Opening (Cast Iron cover to surface)

DP\0—denotes Down Pipe Overflow (Rain Head pop only), Refer to architectural drawings

3. All external paving and drainage works to be in accordance with Baw Baw City Council's standard & specifications, to the satisfaction of council.

3.1 All internal drainage works to be in accordance with AS/NZS: 3500.3 2018 – Part 3 Stormwater Drainage Systems and in accordance with the manufacturers specifications.

3.2 ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE COUNCIL APPROVED PLANS.

4. All pit walls to be 150 thick concrete
5. Grate covers to be Class C Medium Duty in Driveways, Light Duty in Garden areas.

5.1 Pits greater than 1.0m in depth are to be reinforced with SL81 square mesh, placed centrally in pit walls.

5.2 All trench grates shown or additional to site must be 150 wide min x 150 deep min internal dimensions, with 225 wide bike safe grate cover or similar unless otherwise specified. Channel Gradient 1 in 200 minimum, with 150ø outlet pipe to nearest pit unless otherwise specified.

6. Prior to the commencement of any Stormwater Drainage Works, the Contractor shall Verify the Invert Level (shown on this drawing) at the Downstream end of the documented Outfall Drain. If that Level Varies from that shown on the drawing, the Contractor shall Immediately notify the Project Manager.
7. Before the commencement of any Works, the Contractor shall contact "Dial Before You Dig on 1100" 72 hours prior to any excavation in the Road Reserve, to verify Depth & Location of any Services.
8. Sawn Joints: 40mm deep X 3mm wide. Saw cut to be made within 24 hours of concrete pour. Fill with an approved joint filler and formed at; (i) Not more than 4.0m in spacing in any direction within large areas of pavement.
9. Refer to approved Town Planning Drawings for setout dimensions.
10. All works within the site are to be inspected and approved by the relevant building inspector prior to backfilling. At least 24 hours notice is required. It is the contractors responsibility to ensure that all areas are reinstated to the councils satisfaction.
11. All pipes under proposed paved areas are to be SEWER CLASS and backfilled with Class 2/20 crushed rock, laid in a maximum of 150mm layers and compacted to 95% modified maximum dry density (AS 1289 5.2–1).
12. It is the users responsibility to study these plans prior to commencement of works. If any discrepancies or the information supplied differs from the existing conditions on site, they must contact the design engineer immediately.
13. All Grate covers to be shall be heavily galvanised in accordance with AS 1650–1981.
14. Install galvanised step irons in all pits deeper than 1.0m. Commence step iron 450 from the base of pit with maximum 300 spacing to within 300 from the top.
15. The compressive strength of the concrete shall be not less than 25MPa at 28 days.
16. The Contractor is advised to sight and confirm the written approval, conditions and the stamped approved drainage plans from the Council prior to the commencement of any works.
17. Works must be conducted in accordance with the Occupational Health and Safety Act 2004.

WARNING
ALL SERVICES SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY AND EXACT LOCATION IS TO BE CONFIRMED ON SITE BY CONTRACTOR PRIOR TO COMMENCEMENT OF ANY WORKS.

LEGEND

GAS MAIN	—G—	POWER POLE	O	EXISTING DRAIN	— D —
WATER MAIN	—W—	LIGHT	—>—x—>—	EXISTING DRAIN PIT	□
POWER CABLE	—E—	TELSTRA PIT		PROPOSED DRAIN	
FIRE PLUG	● F.P.	TELSTRA CABLE	—T—	PROPOSED DRAIN PIT	■
FIRE HYDRANT	● F.H.	EXISTING K & C		EXISTING SEWER	—S—
VALVE	—x— SV	PROPOSED K & C		SEWER PIT	—(S)—

REVISIONS

No.	DATE	DESCRIPTION	APP'D

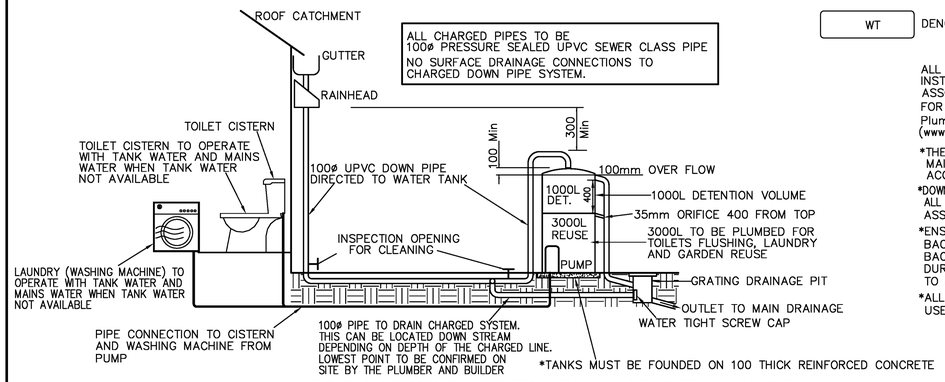
SJF & Associates
Consulting Surveyors & Civil Engineers
STEVE JURY
BLA Registration No. PE0001423
PO Box 190
Boronia, VIC. 3155

CLIENT: PT Building Design

Coords: N/A	SCALE AT A1 1: 100
Levels: AHD	
Designed by SJF	Checked by
Drawn by SJF	Approved by

THREE UNIT DEVELOPMENT AT
47 PRINCES AVENUE, LONGWARRY
CONCEPT DRAINAGE PLAN
NOT FOR CONSTRUCTION 12-2-25

PROJECT NO. 25009
DATE : FEB 25
SHEET 1 OF 2
PLAN No. 25009 REV



UNIT 2 & 3 STORMWATER DRAINAGE DETAILS FOR CHARGED SYSTEM 4000L RAINWATER TANK

ROOF AREA DIRECT TO WATER TANKS SHOWN THUS SEE DETAILS LEFT & RIGHT

UNIT 1 98sqm
UNIT 2 150sqm
UNIT 3 141sqm

WT — DENOTES – 2 x 2000L WATER TANK 1.90L x 0.66W x 1.87H or SIMILAR – UNIT 1
4000L WATER TANK 2.80L x 0.88W x 1.87H or SIMILAR – UNIT 2 & 3
www.waterline.com.au

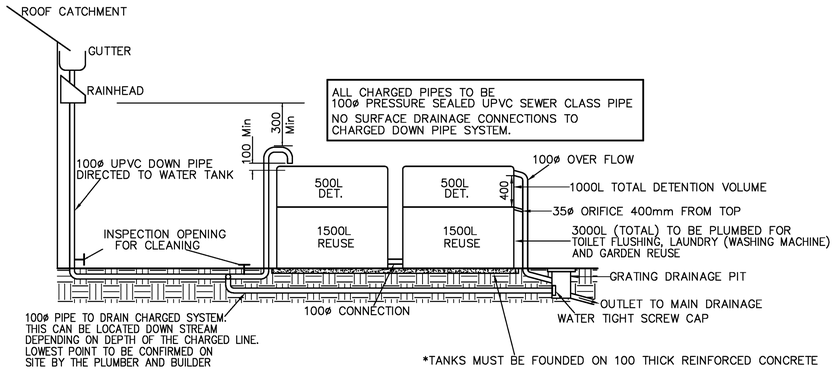
ALL WATER TANKS, DOWNPIPES AND STORMWATER DRAINAGE ARE TO BE INSTALLED IN ACCORDANCE WITH B.C.A. AND PLUMBING INDUSTRY ASSOCIATION STANDARDS CURRENT AT THE TIME OF CONSTRUCTION
FOR TECHNICAL DETAILS SEE
Plumbing Industry Commission; Victoria Australia
(www.pic.vic.gov.au/resources/documents/3388_BC_TechSol-Roof_Plumbing_06.pdf)

*THE PROPERTY OWNER IS RESPONSIBLE FOR THE CONTINUING OPERATION, MAINTENANCE AND REPLACEMENT OF THE RAINWATER TANK SYSTEM IN ACCORDANCE WITH THE APPROVED PLANS.

*DOWN PIPE LOCATIONS TO BE CONFIRMED FOR SIZE, STYLE & CORRECT LOCATIONS, REFER TO ARCHITECTURAL DRAWINGS. ALL DOWNPIPES AND STORMWATER DRAINAGE ARE TO BE INSTALLED IN ACCORDANCE WITH B.C.A. AND PLUMBING INDUSTRY ASSOCIATION STANDARDS CURRENT AT THE TIME OF CONSTRUCTION

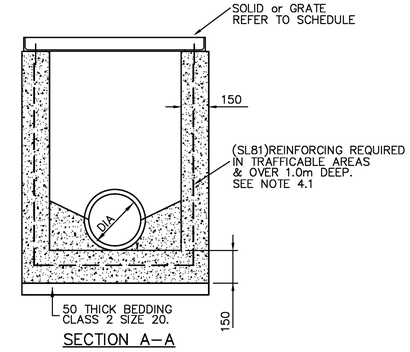
*ENSURE 100 DIA CHARGED DRAINAGE LINES ARE PRIMED, GLUED AND PRESSURE\AIR TESTED PRIOR TO BACKFILLING. 75mm THICK MINIMUM DEPTH OF SCREENINGS TO BE PLACED UNDER DRAINAGE LINES AND BACKFILLED WITH CRUSHED ROCK. PROTECTION OF CHARGED DRAINAGE LINES MUST BE A PRIORITY DURING CONSTRUCTION. ENSURE ALL CONTRACTORS ARE MADE AWARE OF DRAINAGE PIPE LOCATIONS TO AVOID STAR PICKETS DAMAGING PIPES.

*ALL 100ø CHARGED DOWN PIPES MUST BE GLUED WITH MINIMUM 'DWV' SOLVENT CEMENT. ADVISED TO USE 'TYPE P' PRESSURE GLUE. JOINTED AS PER CURRENT PLUMBING REGULATIONS.



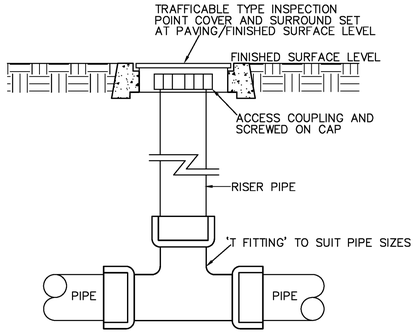
UNIT 1 - STORMWATER DRAINAGE DETAILS FOR CHARGED SYSTEM TO 2 x 2000L RAINWATER TANKS

NOT TO SCALE



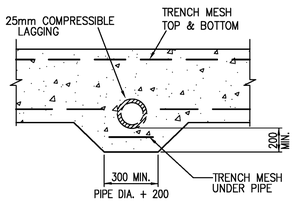
SECTION A–A

DRAINAGE PIT DETAILS



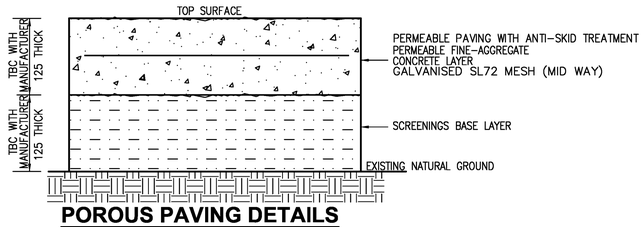
TYPICAL INSPECTION OPENING DETAILS

NOT TO SCALE



PIPE PENETRATION DETAIL THROUGH FOOTING

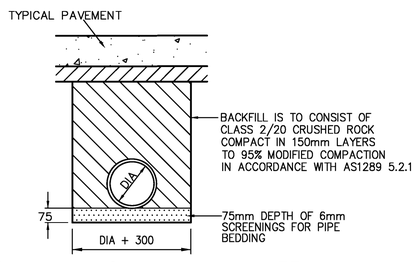
NOT TO SCALE



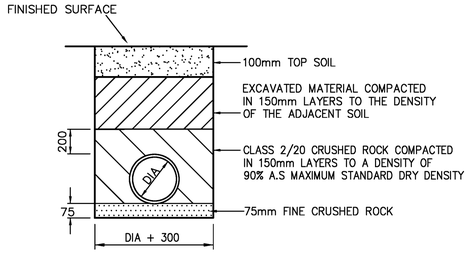
POROUS PAVING DETAILS

(or APPROVED EQUIVALENT)

REFER TO MANUFACTURERS WEBSITE, EXAMPLES BELOW
www.waterpave.com.au
www.newdawnpermeablepaving.com.au



PIPE TRENCH DETAIL UNDER ALL PAVEMENT



PIPE TRENCH DETAIL UNDER LANDSCAPE AREAS

LEGEND

GAS MAIN	G	POWER POLE	O	EXISTING DRAIN	D
WATER MAIN	W	LIGHT		EXISTING DRAIN PIT	
POWER CABLE	E	TELSTRA PIT		PROPOSED DRAIN	
FIRE PLUG	F.P.	TELSTRA CABLE	T	PROPOSED DRAIN PIT	
FIRE HYDRANT	F.H.	EXISTING K & C		EXISTING SEWER	S
VALVE	SV	PROPOSED K & C		SEWER PIT	S

REVISIONS

No.	DATE	DESCRIPTION	APP'D

SJF & Associates
Consulting Surveyors & Civil Engineers
STEVE JURY
BLA Registration No. PE0001423
PO Box 190
Boronia, VIC. 3155

CLIENT: PT Building Design

Coords: N/A	SCALE AT A1 1: 100
Levels: AHD	
Designed by SJF	Checked by
Drawn by SJF	Approved by

THREE UNIT DEVELOPMENT AT
47 PRINCES AVENUE, LONGWARRY
CONCEPT DRAINAGE PLAN
NOT FOR CONSTRUCTION 12-2-25

PROJECT NO. 25009
DATE FEB 25
SHEET NO. 2 OF 2
PLAN No. 25009 REV

RIVERINE AND STORMWATER
SWM CONSULTING

47 Princes Avenue
Longwarry VIC 3816
Australia

SWM Consulting Pty Ltd
A | PO Box 4073
Reservoir VIC 3073 Australia
P | 0493 224 496
E | admin@swmconsulting.com.au
W | swmconsulting.com.au
Ref | 24-1210-A
Date | 12 March 2025

Desktop Flood Assessment– 47 Princes Avenue Longwarry VIC 3816

Dear ,

SWM Consulting was engaged to conduct a Desktop Flood Assessment in response to the Request for Additional Information from Baw Baw Shire Council (BBSC) for the proposed residential subdivision at 47 Princes Avenue Longwarry VIC 3816 (referred to as 'the site' or 'the subject site'), shown in Figure 1-1. This assessment is a desktop assessment, meaning it is based solely on the information provided.

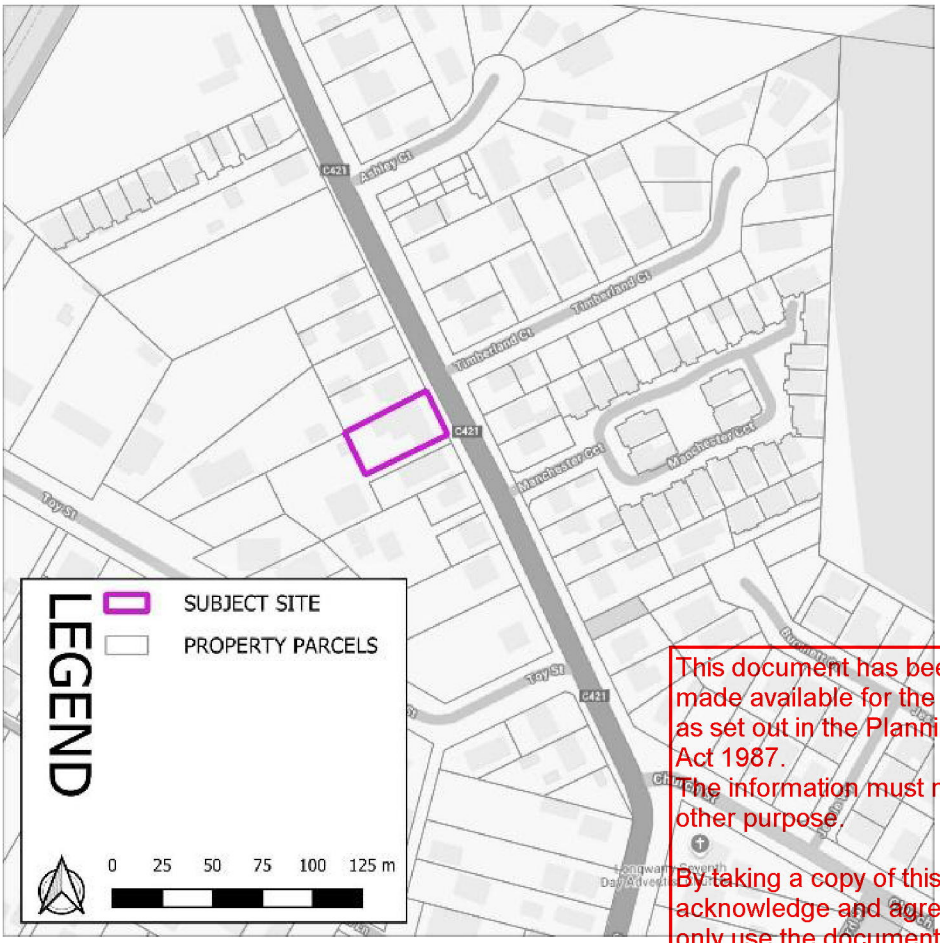


Figure 1.1 Subject Site

1. INTRODUCTION

1.1. SITE OVERVIEW

The subject site is located approximately 80km southeast of Melbourne's CBD within lands, waters and skies of the Wurundjeri People of the Kulin Nation. Longwarry is on the eastern edge of the Koo Wee Rup plains and swampland, and nearby the foothills of the Great Dividing Range to the north. The site is zoned General Residential (GRZ & GRZ1), with Land Subject to Inundation (LSIO) and Development Contributions Plan (DCPO & DCPO1) Overlays. The Land Subject to Inundation Overlays typically relate to a known riverine flood risk. The purpose of these overlays is:

- To identify flood prone land in a riverine or coastal area affected by the 1 in 100 (1 per cent Annual Exceedance Probability) year flood or any other area determined by the floodplain management authority.
- To ensure that development maintains the free passage and temporary storage of floodwaters, minimises flood damage, responds to the flood hazard and local drainage conditions and will not cause any significant rise in flood level or flow velocity.
- To minimise the potential flood risk to life, health and safety associated with development.

1.2 PROPOSED DEVELOPMENT

The residential development application, PLA0262/24, is for the development of three (3) dwellings with associated garages (V 9103 F 613, Lot 4 LP 114938, Drouin West Parish). The concept design, DP-AD 1670, is shown in Appendix A.

1.3 SCOPE OF PROJECT

The primary scope of the project is a desktop assessment to determine whether the proposed development meets the Stormwater Management requirement, as requested in the Request for Additional Information from BBSC (application no. PLA0262/24) dated 10/01/2025.

The scope provides the best possible solutions for the client. The key scoping points include:

- Confirm overland flow through the property, up to the estimated 1% AEP event, can be managed; and
- Confirm the development mitigates any potential impact on flood behaviours to neighbouring properties, in events up to the estimated 1% AEP event.

1.4 STATUTORY AUTHORITIES

Melbourne Water have provided a flood level certificate, MWA-1343417, for the subject site on the 11/09/2024. This certificate identifies the subject site as being within the Koo Wee Rup Flood Protection District under Zone 1.

Melbourne Water has also provided a response to the planning permit for development, MWA-1343417, on the 15/01/2025, stating that it **does not object** to the proposed development. Melbourne Water has listed several conditions, these conditions have all been met in the latest design drawings by Peter Thomas Building Design dated 17/01/2025.

Council has also identified the site being inundated during the estimated 1% AEP flood event. Council has requested a Flood Impact Assessment to demonstrate that to proposed development will not have any adverse impacts. SWM Consulting requested flows for this assessment, and were directed to contact Melbourne Water, which was done.

2. LOCAL FLOOD IMPACTS

2.1. KOO WEE RUP FLOOD PROTECTION DISTRICT

Melbourne Water defines five different zones within the Koo Wee Rup Flood Protection District. The definition for the relevant zone is as follows:

- **Zone 1:** Land that is subject to flooding as a result of drain overflows, where the 100-year ARI flood depth would be approximately 300 mm above the existing ground level in the vicinity. This particular zone describes the majority of the zoned land in the Koo Wee Rup Flood Protection District.

2.2. FLOOD BEHAVIOUR

The subject site is inundated during the estimated 1% AEP flood event from break away flow from Johnsons Drain. This is demonstrated in the Longwarry Township Flood Mapping Flood Study (2020). The key flood behaviour characteristics include:

- The peak estimated 1% AEP flood level at the subject site grades from 42.51 metres to Australian Height Datum (m AHD) at the front to Princes Avenue to 42.27 m AHD at the wrested property boundary, provided by Melbourne Water; and
- The subject site is within the Koo Wee Rup Flood Protection District under Zone 1, provided by Melbourne Water, which indicates in the estimated 100-year ARI flood event the flood depth would be approximately 300 mm above the existing ground at the subject site.
- The subject site is unlikely to have depths at 300mm based on its location in the floodplain i.e. Princes Avenue acting as a hydraulic control and the minimal flows.

2.3. ASSESSMENT OF IMPACTS

The subject site is categorised as Zone 1 under the Koo Wee Rup Flood Protection District, meaning during the estimated 1% AEP flood event there would be approximately 300 mm of flood depth above the existing ground level. To ensure there are no negative impacts on the neighbouring properties the flood storage and peak flow flood conveyance within the subject site must not be changed significantly.

2.3.1 FLOOD STORAGE

The comparison showing the existing scenario, proposed scenario and change in flood storage area and flood storage volume is available in Table 1-1. The points below describe how the information was gathered and how the change to the flood storage area and volume was assessed.

- The local flood behaviour, provided by Melbourne Water, was used to assess the change in flood storage area and volume using the estimated 1% AEP flood depth of 300 mm above the natural ground surface.
- The existing scenario, area and volume values are based on the previous design drawings by Peter Thomas Building Design (dated 12/11/2024) and considering all buildings on the subject site.
- The proposed scenario, area and volume values are based on the latest design drawings by Peter Thomas Building Design (dated 17/01/2025).
- The estimated ground levels at the subject site are from Vicmap Digital LiDAR Data, 2017-18 Greater Melbourne LiDAR Project.

Table 1-1: Approximate Changes to Flood Storage Area and Volume

	Existing Scenario	Proposed Scenario	Change (Existing – Proposed)
Building Area within flood storage area (m^2)	225	490	- 265
Building Volume within flood storage area (m^3)	67.5	147	- 79.5

The proposed development is likely to result in an approximate loss of 80 m^3 of flood storage volume. The development must compensate for this loss as part of an endorsement of plans. The recommended condition for Council is as follows:

- *The proposed development must demonstrate 1:1 compensatory floodplain storage within the property parcel. There shall be no decrease in floodplain storage i.e. 80m^3 of flood storage must be created.*

The proposed development has three (3) options to compensate for floodplain storage loss.

1. **Construct a series of bunds** i.e. wooden sleepers with metal posts, around the property boundary to create increased floodplain storage. This must allow for the natural conveyance of flows.
2. **Excavate the site** i.e. reducing the backyards or the driveway, across the property. This must allow for the natural conveyance of flows.
3. **Combination of the two**.

These options, in combination with the permeable pavement and stormwater system the driveway will temporarily hold flows to ensure mitigation of impacts on neighbouring properties, due to loss of storage.

2.3.2. PEAK FLOW FLOOD CONVEYANCE

The comparison showing the existing scenario, proposed scenario and change in flood conveyance is available in Table 1-2. The points below describe how the information was gathered and how the change to the peak flow flood conveyance was assessed.

- The local flood behaviour, provided by Melbourne Water, was taken from the 2020 Longwarry Township Flood Mapping flood study. Based on the information available it was assumed that the flows from PO_44 cross Princes Avenue before splitting with half of the flows head north west (towards the subject site) and the other half flow south west.
- The existing scenario, area and volume values are based on the previous design drawings by Peter Thomas Building Design (dated 12/11/2024) and considering all buildings on the subject site.
- The proposed scenario, area and volume values are based on the latest design drawings by Peter Thomas Building Design (dated 17/01/2025).
- The estimated ground levels at the subject site are from Vicmap Digital LiDAR Data, 2017-18 Greater Melbourne LiDAR Project.
- Calculations for the estimated peak flows in the pipes are based on 150 mm diameter pipes and assuming that the pipes are installed at a 1 in 10 grade.

The proposed development will result in a change in peak flow flood conveyance, due to the change in layout and size of the buildings. To compensate for this, two (2) pipes will be installed from the lowest part of the driveway (western end) and convey flows beneath garage 2 and 3 and discharge to the west to replicate the existing peak flow flood conveyance. Table 1-2 demonstrates the change in the flow conveyance between the existing and proposed scenario.

Table 1-2: Approximate Changes to Peak Flow Conveyance through Property

	Existing Scenario	Proposed Scenario	Change (Existing – Proposed)
Northern Easement (m^3/s)	≈ 0.017	≈ 0.017	0
Open space at the rear of the property (m^3/s)	≈ 0.020	-	
Piped Beneath Garages (m^3/s)	-	Capacity for up to 0.50	
Total Flows (m^3/s)	0.37	0.37	0

As a result of the proposed development, it is unlikely that there will be a change to the peak flow conveyance across the site. Flows to the north of the existing dwelling are likely to remain unchanged as there are no proposed changes in the easement along the northern boundary of the subject site. Flows to the south of the existing dwelling will be conveyed beneath garages 2 and 3 in the proposed scenario and are likely to remain unchanged. The proposed pipes are of adequate capacity to convey flows beneath the garage and not impact the peak flow conveyance through the property.

2.4. ASSUMPTIONS

- **Preliminary Information:** The findings and advice we have provided are preliminary and based on the most accurate information available at this time.
- **Limitations:** Since no detailed hydrologic or hydraulic modelling has been performed, the conclusions drawn are subject to change if new data becomes available.
- **Future Updates:** Our advice may be updated as new information comes to light, ensuring that our recommendations remain accurate and relevant.

We aim to provide the most reliable guidance possible, but please be aware of these limitations as you review our findings.

3. SUMMARY

SWM Consulting was engaged to conduct a Desktop Flood Assessment in for the proposed development at 47 Princes Avenue Maitland NSW 2320. This is a desktop assessment; SWM Consulting has provided preliminary information only, which has been based on the information provided.

Based on this assessment, the proposed design, with compensatory storage and conveyance infrastructure, is complaint with the requirements of Baw Baw Shire Council (BBSC). This Desktop Flood Assessment supports the proposed residential subdivision.

Please do not hesitate to contact me if you require further clarification.

Yours sincerely,

Director | Engineer

Advertised

LEGEND:
CANOPY TREE (PROPOSED)
SMALL SHRUBS & GROUND COVERS (PROPOSED)
EXISTING TREES AND SHRUBS TO BE RETAINED (H=HEIGHT IN METRES)
TREE STRUCTURAL ROOT ZONE SRZ NO CONSTRUCTION TO OCCUR IN SRZ
TREE PROTECTION ZONE TPZ LOW IMPACT FOOTING TO BE USED IN TPZ REFER TO ARBORIST REPORT
EXISTING TREES / LARGE SHRUBS TO BE REMOVED
ALL LEVELS ARE INDICATED TO AHD. (AUSTRALIAN HEIGHT DATUM)
NON-HABITABLE ROOM WINDOW
HABITABLE ROOM WINDOW
PAVED PATH / TERRACE AREA
GRAVEL PATH: COMPACTED TOPPINGS (PERVIOUS)
GARDEN BEDS OR LAWN AREA
PATH
COLOURED CONCRETE DRIVEWAY: DRIVEWAY & PARKING AREAS ARE TO BE MAINTAINED FOR THESE PURPOSES AT ALL TIMES. CONSTRUCTION DETAILS, LEVELS AND EXTENTS OF IMPERMEABLE/PERVIOUS PAVING TO BE AS PER PAVING & DRAINAGE PLAN. TO THE RESPONSIBLE AUTHORITIES APPROVAL.
EXITING TIMBER PALING FENCE (1.8M OR HEIGHT INDICATED)
TRELLIS FENCE SCREEN (2.4M OR HEIGHT INDICATED) SELF SUPPORTING ADJOINING EXISTING FENCE OR STRUCTURALLY INTEGRATED IN NEW FENCE 25% MAX TRANSPARENT
PROPOSED TIMBER PAILING FENCING (1.95M OR HEIGHT INDICATED)
PROPOSED SLEEPER RETAINING WALL (HEIGHT INDICATED)
NO SITE CUT/FILL UNLESS INDICATED ON PLAN/ELEVATION
CLOTHES LINE
LETTER BOX MAX 900MM HIGH FACING THE STREET IN ACCORDANCE WITH AUSTRALIA POST GUIDELINES.
GARBAGE & RECYCLING BINS
ELECTRICAL METER BOX LOCATION, SUBJECT TO RESPONSIBLE AUTHORITY APPROVAL
WINDOWS TO BE SCREENED WILL HAVE FIXED OBSCURE GLAZING MAX. 25% TRANSPARENCY (NON-OPENABLE) TO A HEIGHT OF 1.7 METRES ABOVE FFL. ADHESIVE FILM MUST NOT BE USED.
THE WINDOWS MAY BE CLEAR AND OPENABLE ABOVE 1.7 METRES.
DRIVEWAY SIGHT LINE AREAS: SHALL BE CLEAR OF VISUAL OBSTRUCTION. ALL STRUCTURES (INCLUDING FENCES, LETTERBOXESAND METER BOXES) MUST BE CONSTRUCTED TO A MAXIMUM HEIGHT OF 900MM OR CLEAR OF A SPLAYED AREA NEAR THE ACCESS WAY TO ENSURE SAFE SIGHT DISTANCES.
RAINWATER TANK: CONNECTED TO: ALL WC'S FOR FLUSHING REFER CIVIL PLAN / STORM REPORT / WSUD DESIGN FOR ALL DETAILS (ENDORSED DRAINAGE PLAN TO TAKE PRECEDENTS)
RAINWATER TANK
2000
STREET
PRINCES AVENUE
DWELLING 1
DWELLING 2
DWELLING 3
GARAGE 1
GARAGE 2
GARAGE 3
E-1 (4.0m DRAINAGE EASEMENT)
SPOS 58m² >3m WIDE
SPOS 78m² >3m WIDE
SPOS 52m² >3m WIDE
SINGLE STOREY TILED W.B. RESIDENCE
ROOFED
G.I. SHED
GARAGE
NO. 45A

GROUND FLOOR PLAN

SCALE 1:100

MELBOURNE WATER REQUIREMENTS:

A minimum setback of 6m from the north-eastern property boundary and 4m from the north-western property boundary must be maintained for flow conveyance and free from any obstruction.

No fill is permitted outside of the proposed development building envelopes with the exception of achieving minimal length of ramping into proposed garages.

The open space areas within the property must be constructed at natural surface levels and no fill or retaining walls must be used in the development of this land.

Any new fence/gate, including internal fence/gate, must be open style (minimum 50% open) of construction or timber paling to allow for the conveyance of overland flow.

SITE ANALYSIS:

SITUATION	AREA (M²)	COVERAGE (SITE %)	REQUIRED
SITE AREA	1095		
DWELLINGS	350		
GARAGES	120		
PORCHES	10		
DECKING	11		
TOTAL SITE COVERAGE	491	44.8%	60% 657m² MAX.
CAR SPACES	6		6
DRIVEWAY (IMPERMEABLE)	0		
DRIVEWAY (PERVIOUS)	168		
TOTAL DRIVEWAY	**168**		
OPEN SPACE	386		
PATH (IMPERMEABLE)	0		
GARDEN AREA	412	37.6%	35% 383m² MIN.
TOTAL IMPERMEABLE	480	43.8%	
TOTAL PERVIOUS	615	56.2%	20% 219m² MIN.

AREAS:

	DWELLING 1	DWELLING 2	DWELLING 3
GROUND FLOOR	99m²	130m²	121m²
FIRST FLOOR	83m²	0m²	0m²
GARAGE	40m²	40m²	40m²
PORCH	3m²	3m²	3m²
DECKING	4m²	3m²	4m²
TOTAL BUILDING:	229m²	176m²	168m²
SITE COVERAGE (IMPERMEABLE)	146m²	176m²	168m²
SECLUDED P.O.S. (3m WIDE min)	52m²	78m²	58m²
TOTAL OPENSPACE:	221m²	78m²	86m²

VERSION:		© COPYRIGHT 2024
NO.	DATE:	DESCRIPTION:
(A)	12/11/2024	FIRST ISSUE
(B)	13/03/2025	UPDATED FOR RFI RESPONSE: INCLUDING MELBOURNE WATER LEVELS & FLOOD / CIVIL ITEMS

Peter Thomas Building Design
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Phone: 0413 731 101
Email: peter@ptbuildingdesign.com.au
ABN: 16 278 349 884 - RBP - DP-AD 1670

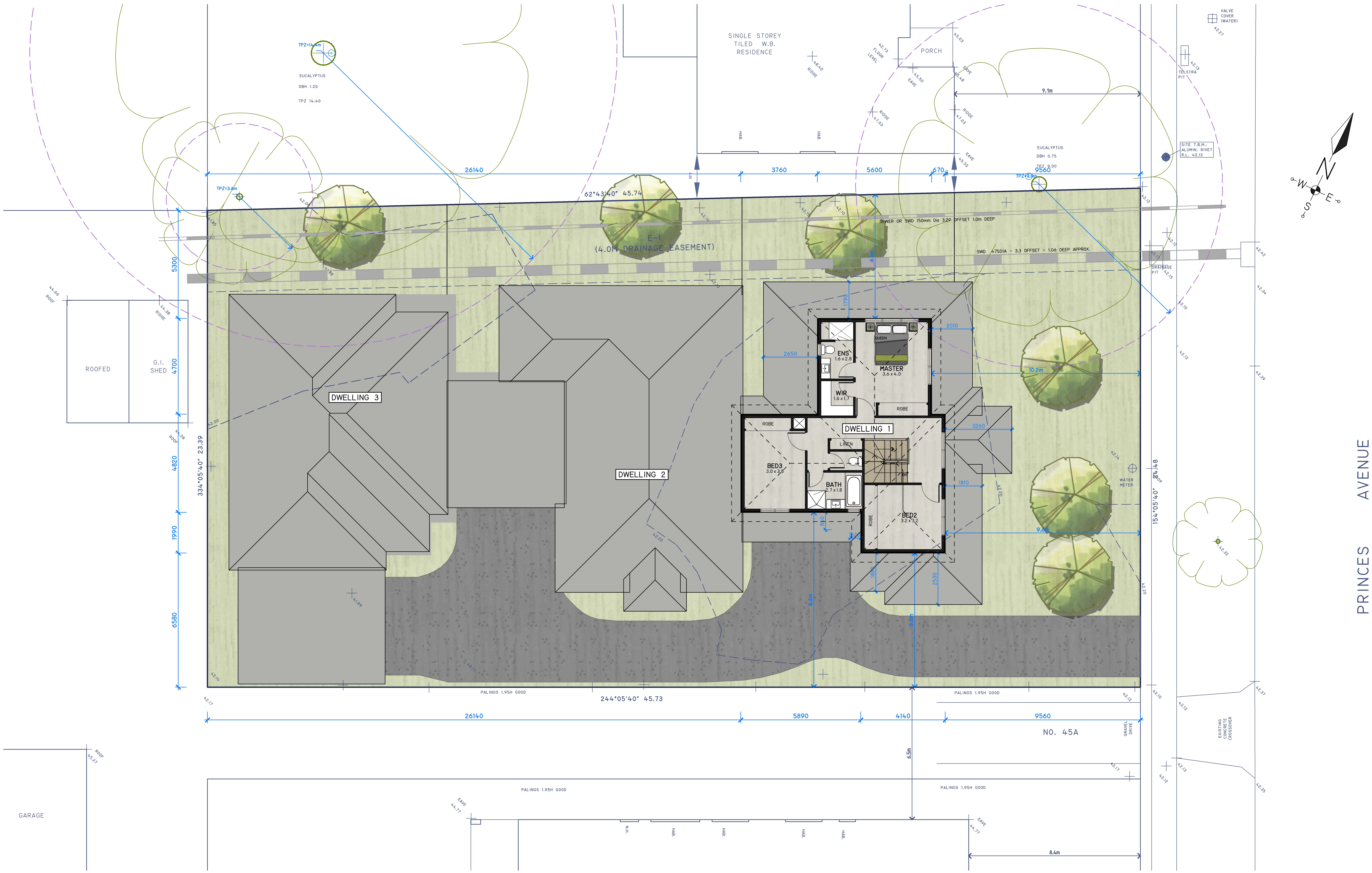
47 PRINCES AVENUE
LONGWARRY 3816

SITE LAYOUT PLAN - GROUND FLOOR

BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

TP-05 (B)

ORIGINAL PAGE SIZE: A1



FIRST FLOOR PLAN
SCALE 1:100

SITE ANALYSIS:

SITUATION	AREA (M²)	COVERAGE (SITE %)	REQUIRED
SITE AREA	1095		
DWELLINGS	350		
GARAGES	120		
PORCHES	10		
DECKING	11		
TOTAL SITE COVERAGE	491	44.8%	60% 657m² MAX.
CAR SPACES	6		6
DRIVEWAY (IMPERMEABLE)	0		
DRIVEWAY (PERVIOUS)	168		
TOTAL DRIVEWAY	**168**		
OPEN SPACE	386		
PATH (IMPERMEABLE)	0		
GARDEN AREA	412	37.6%	35% 383m² MIN.
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TOTAL PERVIOUS	615	56.2%	20% 219m² MIN.

AREAS:

	DWELLING 1	DWELLING 2	DWELLING 3
GROUND FLOOR	99m²	130m²	121m²
FIRST FLOOR	83m²	0m²	0m²
GARAGE	40m²	40m²	40m²
PORCH	3m²	3m²	3m²
DECKING	4m²	3m²	4m²
TOTAL BUILDING:	229m²	176m²	168m²
SITE COVERAGE (IMPERMEABLE)	146m²	176m²	168m²
SECLUDED P.O.S. (3m WIDE min)	52m²	78m²	58m²
TOTAL OPENSPACE:	221m²	78m²	86m²

Advertised

LEGEND:

CANOPY TREE (PROPOSED)

SMALL SHRUBS & GROUND COVERS (PROPOSED)

EXISTING TREES AND SHRUBS TO BE RETAINED (H=HEIGHT IN METRES)

TPZ=2.0m

TREE STRUCTURAL ROOT ZONE SRZ NO CONSTRUCTION TO OCCUR IN SRZ

TREE PROTECTION ZONE TPZ LOW IMPACT FOOTING TO BE USED IN TPZ REFER TO ARBORIST REPORT

EXISTING TREES / LARGE SHRUBS TO BE REMOVED

FFL 105.98 — ALL LEVELS ARE INDICATED TO AHD. (AUSTRALIAN HEIGHT DATUM)

NH — NON-HABITALBE ROOM WINDOW

HAB — HABITABLE ROOM WINDOW

PAVED PATH / TERRACE AREA

GRAVEL PATH: COMPACTED TOPPINGS (PERVIOUS)

GARDEN BEDS OR LAWN AREA

PATH

IMPERMEABLE PERVIOUS — COLOURED CONCRETE DRIVEWAY: DRIVEWAY & PARKING AREAS ARE TO BE MAINTAINED FOR THESE PURPOSES AT ALL TIMES. CONSTRUCTION DETAILS, LEVELS AND EXTENTS OF IMPERMEABLE/PERVIOUS PAVING TO BE AS PER PAVING & DRAINAGE PLAN, TO THE RESPONSIBLE AUTHORITIES APPROVAL.

1.8m HIGH — EXITING TIMBER PALING FENCE (1.8M OR HEIGHT INDICATED)

TRELLIS FENCE SCREEN (2.4M OR HEIGHT INDICATED) SELF SUPPORTING ADJOINING EXISTING FENCE OR STRUCTURALLY INTEGRATED IN NEW FENCE 25% MAX TRANSPARENT

1.95m HIGH — PROPOSED TIMBER PAILING FENCING (1.95M OR HEIGHT INDICATED)

0.4m HIGH RETAINING — PROPOSED SLEEPER RETAINING WALL (HEIGHT INDICATED)

NO SITE CUT/FILL UNLESS INDICATED ON PLAN/ELEVATION

CLOTHES — CLOTHES LINE

MAIL BOX — LETTER BOX MAX 900MM HIGH FACING THE STREET IN ACCORDANCE WITH AUSTRALIA POST GUIDELINES.

BINS — GARBAGE & RECYCLING BINS

ELEC METER — ELECTRICAL METER BOX LOCATION, SUBJECT TO RESPONSIBLE AUTHORITY APPROVAL

1700 — WINDOWS TO BE SCREENED WILL HAVE FIXED OBSCURE GLAZING MAX. 25% TRANSPARENCY (NON-OPENABLE) TO A HEIGHT OF 1.7 METRES ABOVE FFL. ADHESIVE FILM MUST NOT BE USED.

THE WINDOWS MAY BE CLEAR AND OPENABLE ABOVE 1.7 METRES.

2500 DRIVEWAY, 2000 STREET — DRIVEWAY SIGHT LINE AREAS: SHALL BE CLEAR OF VISUAL OBSTRUCTION. ALL STRUCTURES (INCLUDING FENCES, LETTERBOXESAND METER BOXES) MUST BE CONSTRUCTED TO A MAXIMUM HEIGHT OF 900MM OR CLEAR OF A SPLAYED AREA NEAR THE ACCESS WAY TO ENSURE SAFE SIGHT DISTANCES.

RAINWATER TANK — RAINWATER TANK: CONNECTED TO: ALL WC'S FOR FLUSHING REFER CIVIL PLAN / STORM REPORT / WSUD DESIGN FOR ALL DETAILS (ENDORSED DRAINAGE PLAN TO TAKE PRECEDENTS)

MELBOURNE WATER REQUIREMENTS:

A minimum setback of 6m from the north-eastern property boundary and 4m from the north-western property boundary must be maintained for flow conveyance and free from any obstruction.

No fill is permitted outside of the proposed development building envelopes with the exception of achieving minimal length of ramping into proposed garages.

The open space areas within the property must be constructed at natural surface levels and no fill or retaining walls must be used in the development of this land.

Any new fence/gate, including internal fence/gate, must be open style (minimum 50% open) of construction or timber paling to allow for the conveyance of overland flow.

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ABN: 16 278 349 884 DP-AD 1670

47 PRINCES AVENUE
LONGWARRY 3816

SITE LAYOUT PLAN - FIRST FLOOR

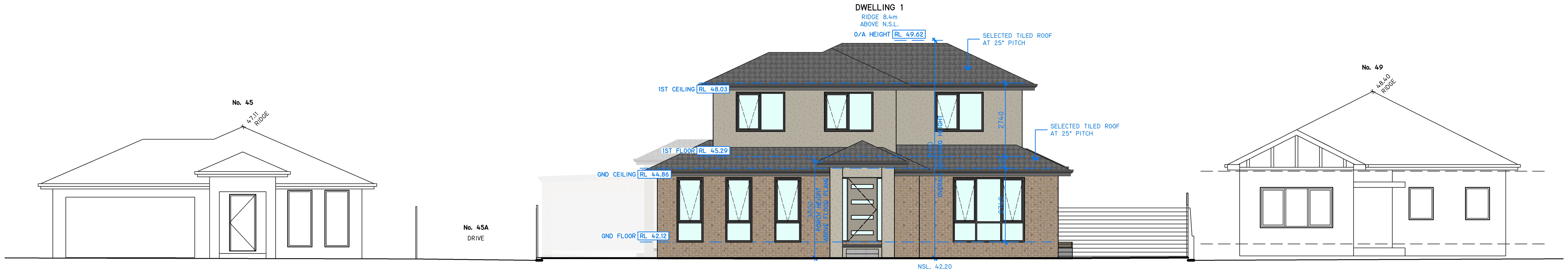
BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

TP-06 (B)

ORIGINAL PAGE SIZE: A1

SOUTH ELEVATION

1 SCALE 1:100

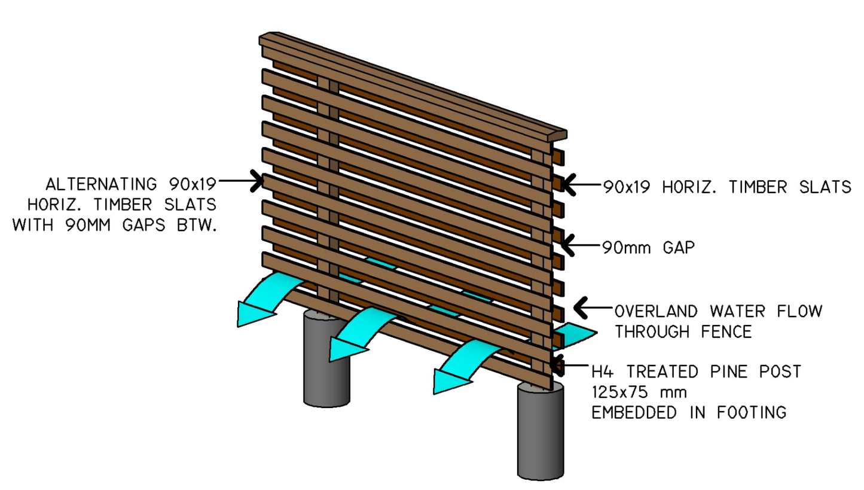


EAST ELEVATION

1 SCALE 1:100

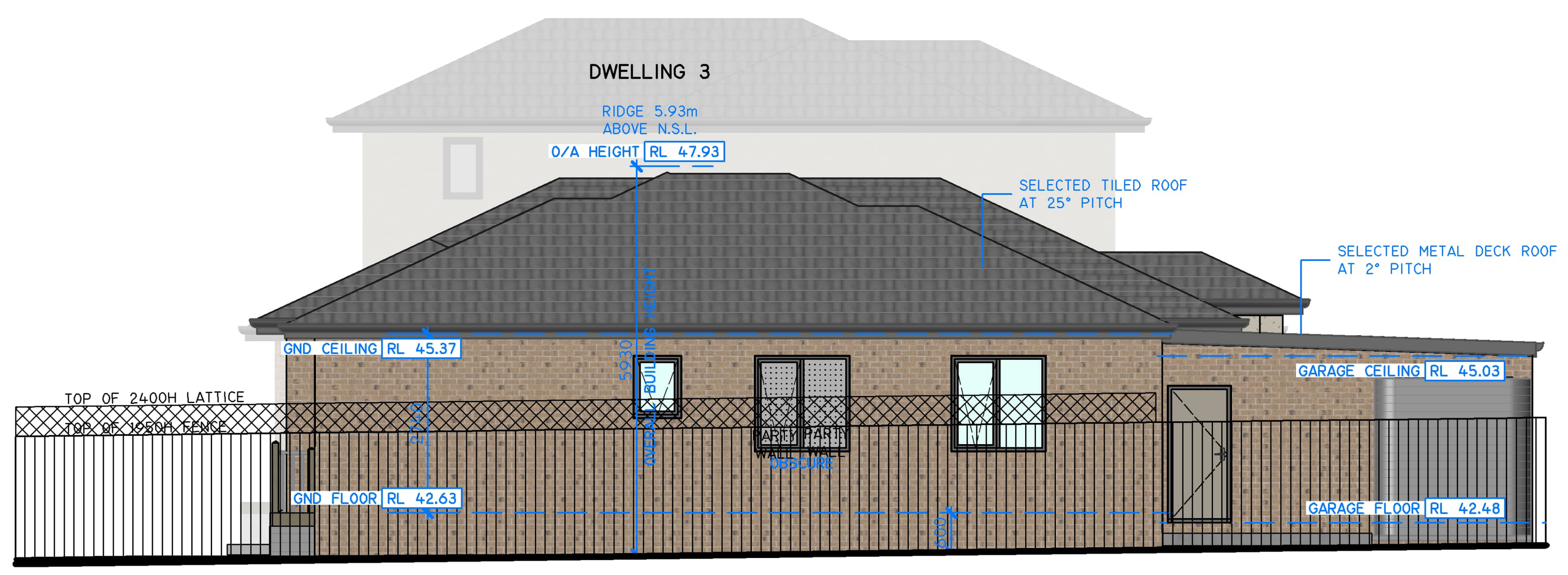
NORTH ELEVATION

1 SCALE 1:100



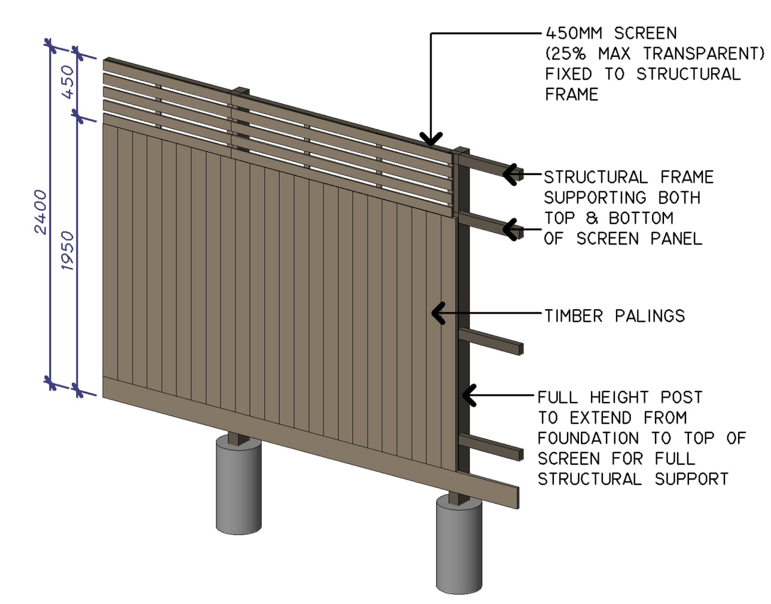
DETAIL: INTERNAL FENCING

HORIZONTAL SLAT FENCE IN FLOOD PRONE AREA



WEST ELEVATION

1 SCALE 1:100



DETAIL: FENCE

2.4M HIGH BOUNDARY PALING FENCE WITH INTEGRATED SCREENING

COLOUR & MATERIALS SCHEDULE:

BK01	SELECTED FACE BRICK CREAM/BROWN BLEND OR RED BLEND
R01	ACRYLIC RENDER FINISH OF CREAM OR LIGHT GREY COLOUR
	METAL (FLASHINGS & COLORBOND ROOFING) WOODLAND GREY OR DUNE (COLORBOND)
	ROOF TILES GREY/CHARCOAL COLOUR
	DRIVEWAY COLOURED CONCRETE ALL WEATHER SEAL
	WINDOW FRAMES POWDER COAT FINISH WOODLAND GREY OR DUNE
1700	WINDOWS TO BE SCREENED WILL HAVE FIXED OBSCURE GLAZING MAX. 25% TRANSPARENCY (NON-OPENABLE) TO A HEIGHT OF 1.7 METRES ABOVE FFL. ADHESIVE FILM MUST NOT BE USED. THE WINDOWS MAY BE CLEAR AND OPENABLE ABOVE 1.7 METRES.

ANY ADDITIONAL COLOURS USED ARE TO BE IN NATURAL EARTH TONES RANGE ALL COLOURS ARE INDICATIVE AND MAY BE VARIED DUE TO PRINTING PROCESS COLOUR MAY VARY WITH SELECTION OF ALTERNATIVE BRANDS

VERSION:

NO.	DATE:	DESCRIPTION:
(A)	12/11/2024	FIRST ISSUE
(B)	13/03/2025	UPDATED FOR RFI RESPONSE: INCLUDING MELBOURNE WATER LEVELS & FLOOD / CIVIL ITEMS

Peter Thomas Building Design
Office: 12 Edinburgh Drive Beaconsfield 3807
Phone: 0413 731 101
Email: peter@ptbuildingdesign.com.au
ABN: 16 278 349 884 RBP: DP-AD 1670

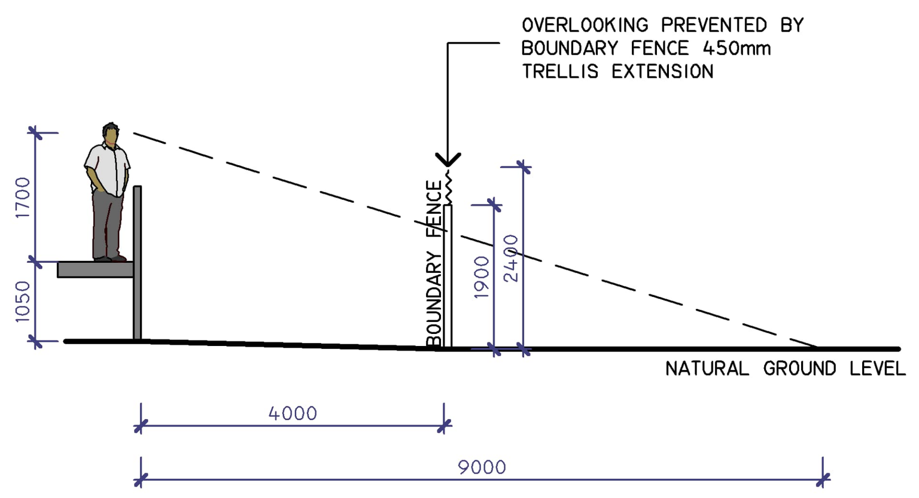
47 PRINCES AVENUE
LONGWARRY 3816

ELEVATIONS

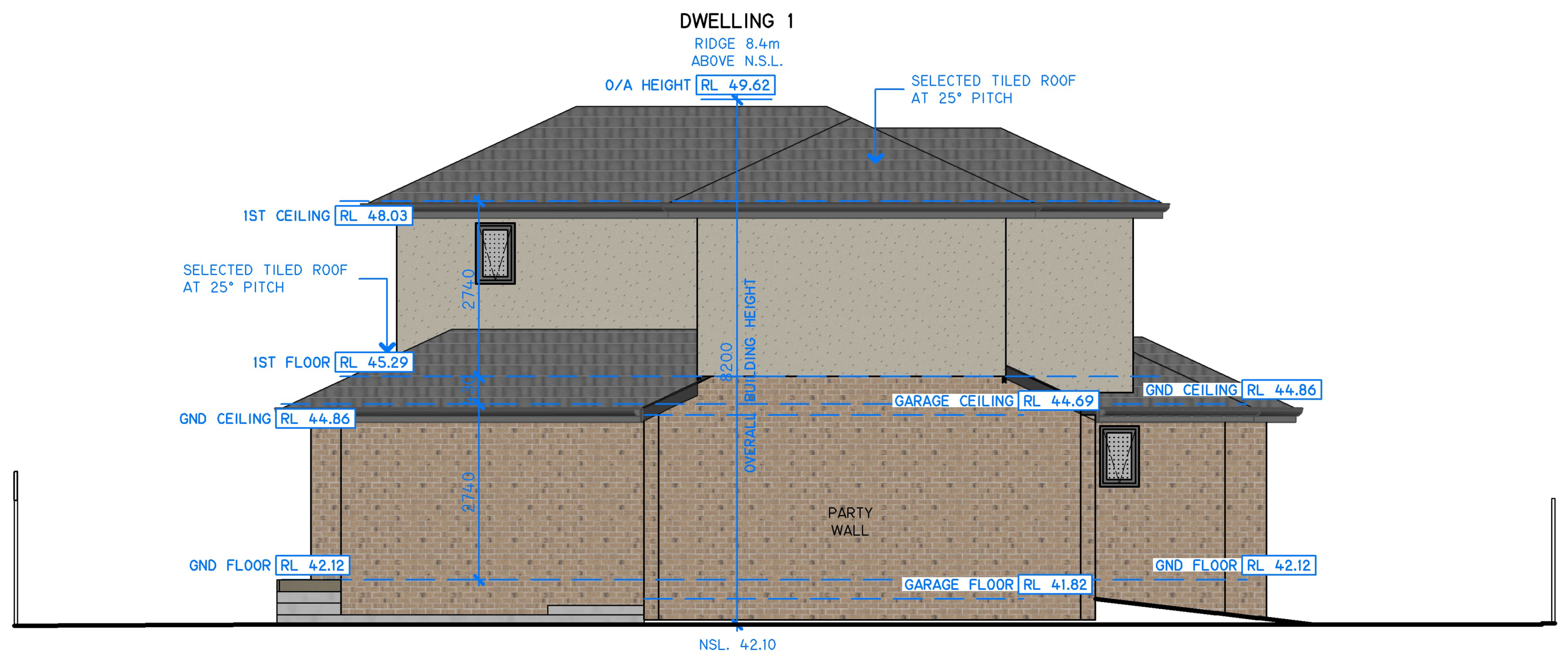
BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

TP-07 (B)

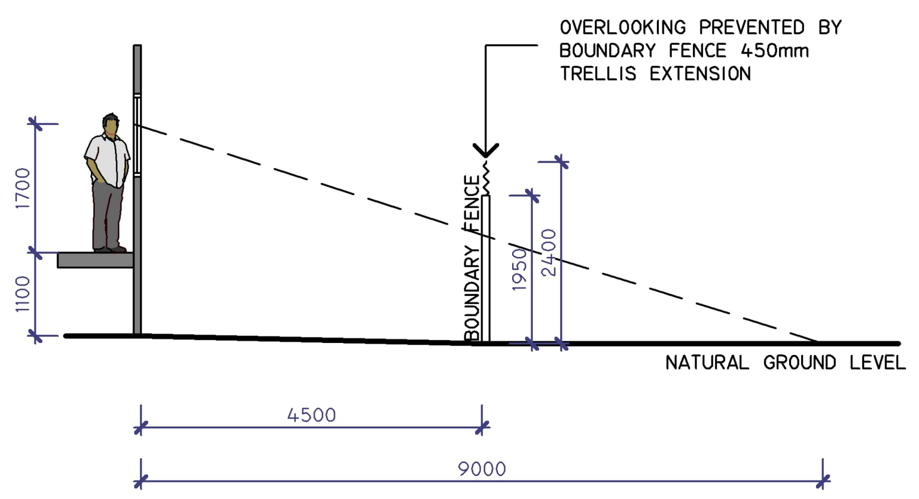
ORIGINAL PAGE SIZE: A1



OVERLOOKING – SCREENING
SCALE 1:100 DWELLING 3 DECK



WEST ELEVATION
DWELLING 1 SCALE 1:100



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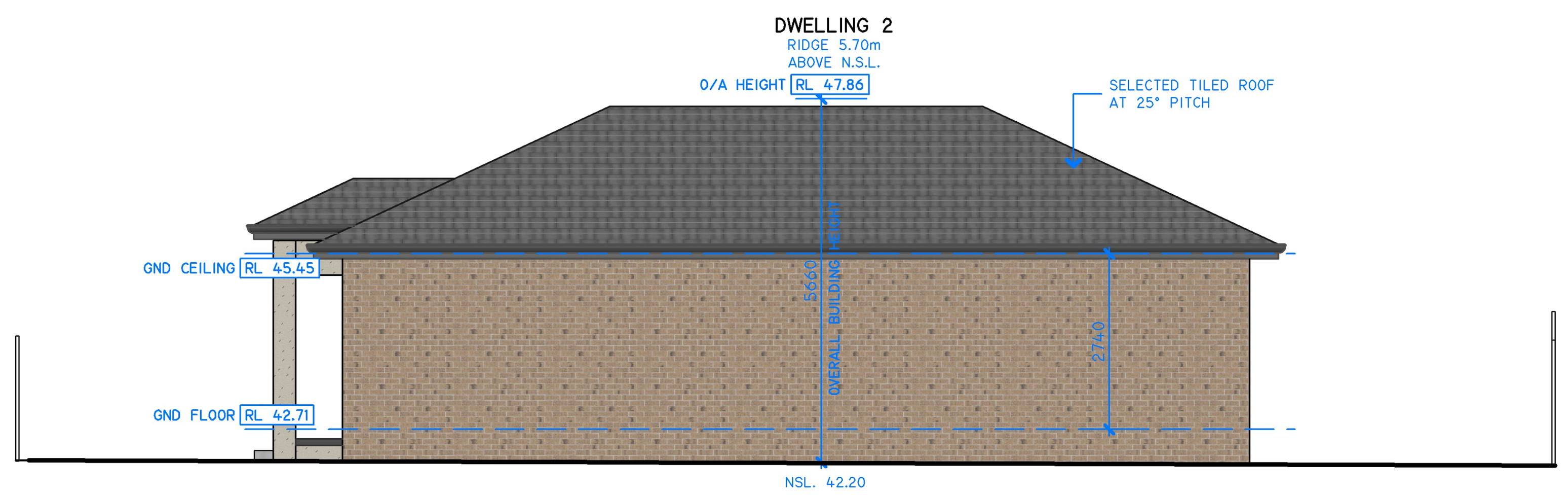
SCALE 1:100 DWELLING 2 – LOUNGE WINDOW



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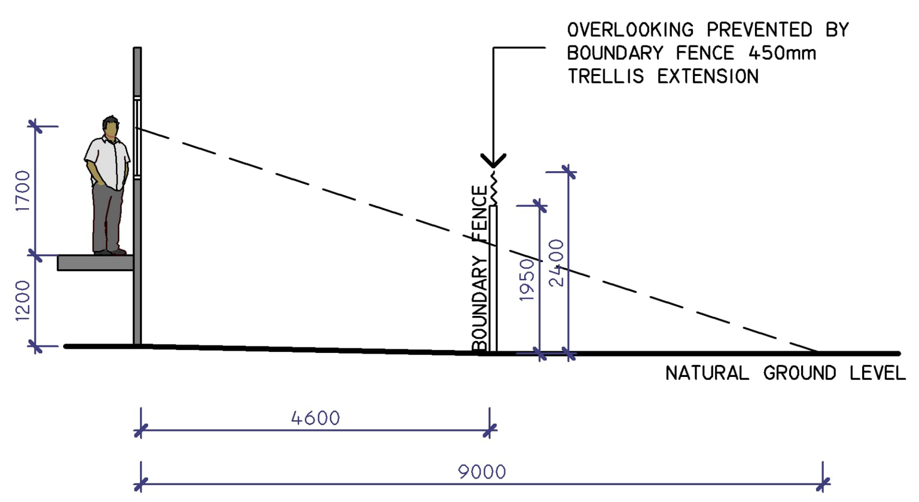
DWELLING 2 SCALE 1:100



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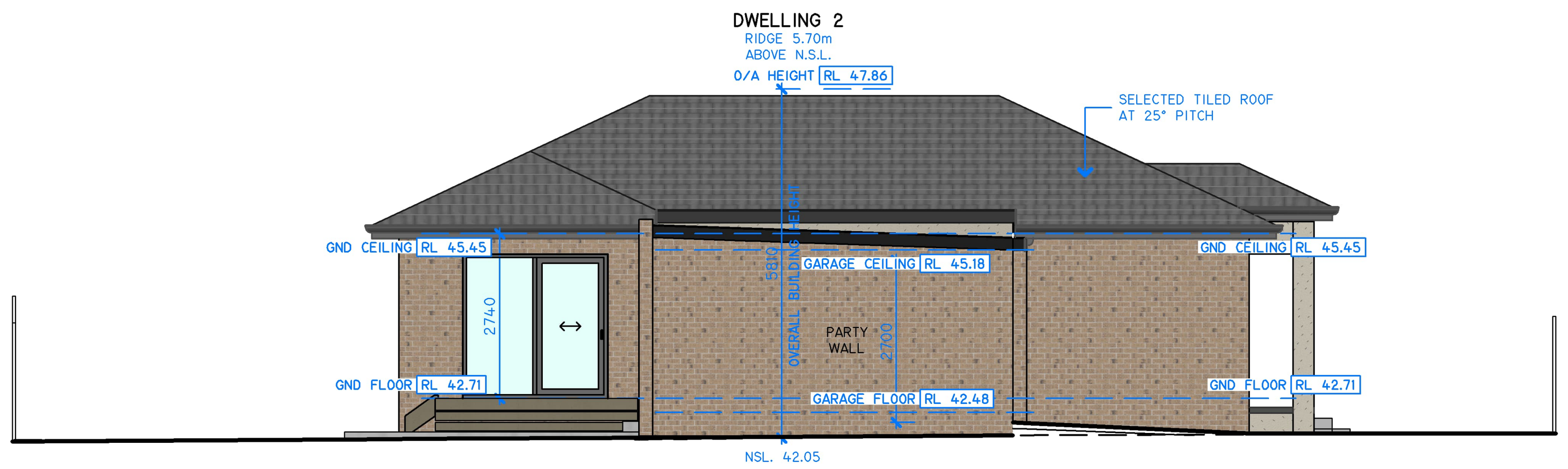
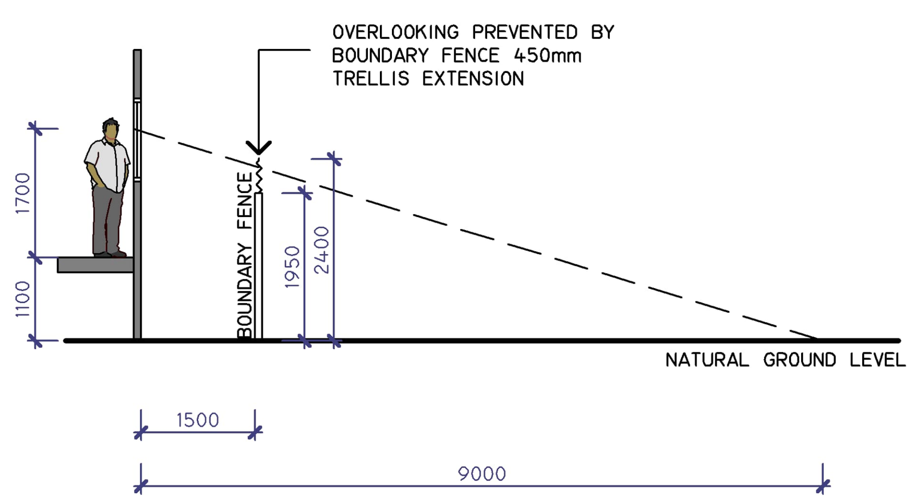
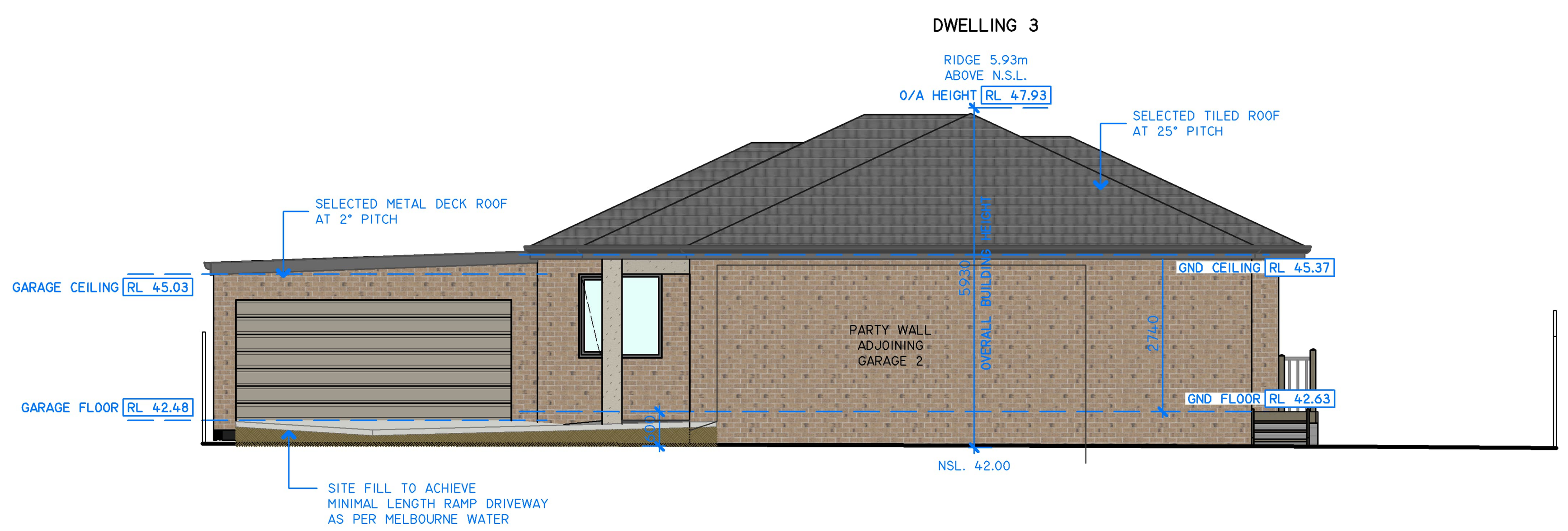


WEST ELEVATION
DWELLING 2 SCALE 1:100



OVERLOOKING – SCREENING
SCALE 1:100 DWELLING 3 – BED 3 WINDOW



EAST ELEVATION
DWELLING 3 SCALE 1:100

COLOUR & MATERIALS SCHEDULE:

BK01	SELECTED FACE BRICK CREAM/BROWN BLEND OR RED BLEND
R01	ACRYLIC RENDER FINISH OF CREAM OR LIGHT GREY COLOUR
	METAL (FLASHINGS & COLORBOND ROOFING) WOODLAND GREY OR DUNE (COLORBOND)
	ROOF TILES GREY/CHARCOAL COLOUR
	DRIVEWAY COLOURED CONCRETE ALL WEATHER SEAL
	WINDOW FRAMES POWDER COAT FINISH WOODLAND GREY OR DUNE
1700	WINDOWS TO BE SCREENED WILL HAVE FIXED OBSCURE GLAZING MAX. 25% TRANSPARENCY (NON-OPENABLE) TO A HEIGHT OF 1.7 METRES ABOVE FFL. ADHESIVE FILM MUST NOT BE USED. THE WINDOWS MAY BE CLEAR AND OPENABLE ABOVE 1.7 METRES.

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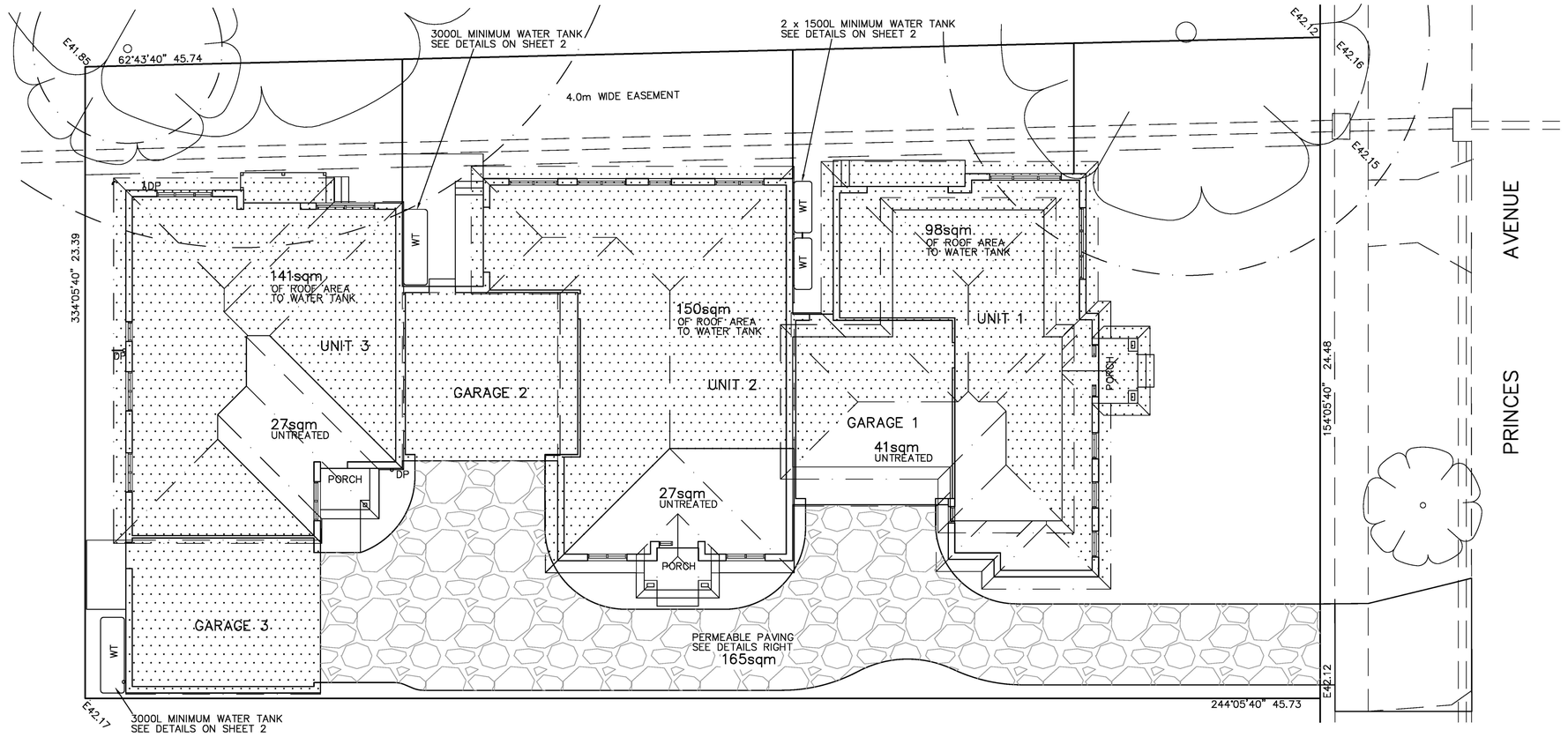
47 PRINCES AVENUE
LONGWARRY 3816

ELEVATIONS

BUILDING DESIGNERS ASSOCIATION OF AUSTRALIA

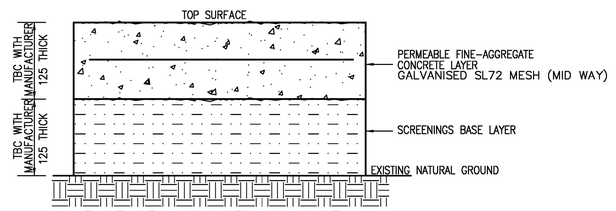
TP-08 (B)

ORIGINAL PAGE SIZE: A1



ROOF AREA DIRECT TO WATER TANKS SHOWN THUS
SEE DETAILS ON SHEET 2

UNIT 1 98sqm
UNIT 2 150sqm
UNIT 3 141sqm



POROUS PAVING DETAILS

(or APPROVED EQUIVALENT)

REFER TO MANUFACTURERS WEBSITE, EXAMPLES BELOW
www.waterpave.com.au
www.newdawnpermeablepaving.com.au

PERMEABLE PAVING MAINTENANCE DETAILS

The important part of maintaining permeable paving is cleaning it to prevent blockage. Accumulation of dust on the surface will not block the paving under normal use. However at the end of the dust summer or other dusty periods, thoroughly hose clean the paving with a normal garden hose to flush the dust through the paving.

Resealing the paving every 2–4 years should be done to ensure longevity of the paving. It's very similar to the recommended maintenance needed with exposed aggregate concrete. Resealing involves carefully recoating the paving surface with a primer and binding resin. It brings a new shine and brightness to your paving, helps cover any scuffs and stains, and ensures that your pavement gets stronger over time.

Rainwater Tank Maintenance Plan

Item	Evidence Maintenance Required	Maintenance Works	Frequency of Maintenance Works
Tank + Tank Roof	▪ Check structural integrity of the tank including the roof and access cover(s). ▪ Check for any visible signs of leaks, holes or cracks.	▪ Ensure all support bars and fittings are not loose and installed to manufacturers specifications. ▪ Any leaks, holes or gaps should be repaired to manufacturers specifications.	▪ Minimum inspection once a year or at the time a defect is detected.
House Roof + Shed Roof	▪ Check for the presence of accumulated debris, leaves, droppings, dead insects and the like.	▪ Any material should be cleared and dispose offsite to waste collection. If you feel your roof needs a clean, ensure that your water tank is disconnected from the water flow prior to cleaning.	▪ Minimum inspection once a year or at the time a defect is detected.
Gutters + Leaf Filters + First Flush Devices	▪ Check for build-up and blockage of devices which prevent good operation and flow into the tank.	▪ Remove any built-up leaves and debris. Remove water and any blockages from first flush device as necessary. Dispose offsite to waste collection. ▪ If the coarse grain leaf filters have become damaged remove and replace the filter to manufacturers specification.	▪ Minimum inspection once every 6 months. Preferably timed at start of winter and start of spring.
Inflow + Overflow Screens	▪ Ensure screens around your tank and on any accessories are properly clean, secured and unbroken. These prevent mosquitoes, frogs and vermin from entering your tank and breeding.	▪ If screens are broken, repair or replace to manufacturers specification. ▪ Inspect inside the tank for any visible signs of animals nesting or breeding.	▪ Minimum inspection once a year or at the time a defect is detected.
Internal Inspection	▪ Check for evidence of animals, mosquitoes, insects or algae inside the tank.	▪ If present, identify and remove. ▪ Ensure any access points are properly sealed and light entry is fully blocked.	▪ Minimum inspection once a year or at the time a defect is detected.
Tank Fittings + Pump + Pipes + Mains Switch	▪ Inspect all to ensure they are in full working order. ▪ Ensure pump is activated when toilet or laundry taps are turned. ▪ Ensure bypass regulator is operational and is not stuck on clean water from the street.	▪ Repair items where possible. ▪ Any electrical or plumbing repairs should be done by a licensed electrician or licensed plumber where required.	▪ Minimum inspection once a year or at the time a defect is detected.

Melbourne Water STORM Rating Report

TransactionID: 0
Municipality: BAW BAW
Rainfall Station: BAW BAW
Address: 47 Princes Avenue
Longwarry
VIC 3816
Assessor: SJF & ASSOCIATES
Development Type: Residential - Multiunit
Allotment Site (m2): 1,095.00
STORM Rating %: 103

Description	Impervious Area (m2)	Treatment Type	Treatment Area/Volume (m2 or L)	Occupants / Number Of Bedrooms	Treatment %	Tank Water Supply Reliability (%)
Unit 1 roof to WT	98.00	Rainwater Tank	3,000.00	5	182.00	82.00
Unit 1 roof to none	41.00	None	0.00	0	0.00	0.00
Unit 2 roof to WT	150.00	Rainwater Tank	3,000.00	4	113.40	94.90
Unit 2 roof to none	27.00	None	0.00	0	0.00	0.00
Unit 3 roof to WT	141.00	Rainwater Tank	3,000.00	4	118.80	93.50
Unit 3 roof to none	27.00	None	0.00	0	0.00	0.00

Please note that an additional occupant has been input in STORM for each dwelling to account for laundry connection. We have assumed that on average a household will have a 3 WELS star washing machine and will run two loads per week. Based on data from WELS, 3–Star washing machine have an average consumption per load of 102 L. With two loads per week, this would represent 204L/week for laundry or 29L/day. STORM input assumes that one bedroom/occupant represent a daily consumption of 20L/day therefore connection to laundry (29L/day) has been input as an additional occupant.

Date Generated: 11-Feb-2025 Program Version: 1.0.0

LEGEND

GAS MAIN —G—	POWER POLE O	EXISTING DRAIN — D —	
WATER MAIN —W—	LIGHT —>—✕—>—	EXISTING DRAIN PIT □	
POWER CABLE —E—	TELSTRA PIT	PROPOSED DRAIN	
FIRE PLUG ● F.P.	TELSTRA CABLE —T—	PROPOSED DRAIN PIT ■	
FIRE HYDRANT ● F.H.	EXISTING K & C	EXISTING SEWER —S—	
VALVE —✕— SV	PROPOSED K & C	SEWER PIT —(S)—	

REVISIONS

No.	DATE	DESCRIPTION	APP'D

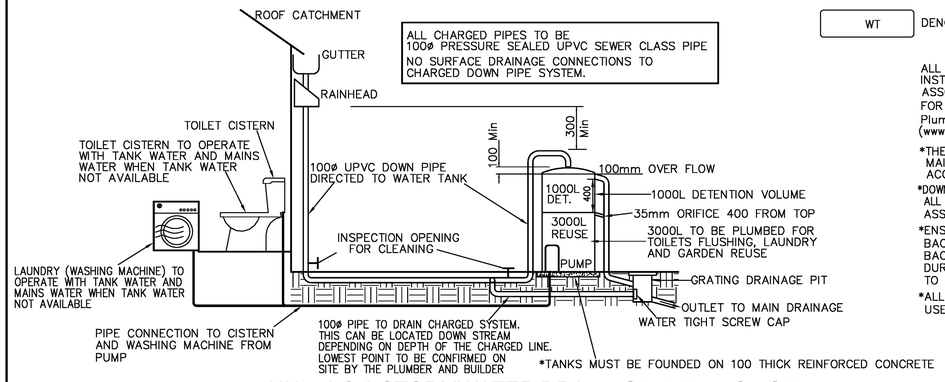
SJF & Associates
Consulting Surveyors & Civil Engineers
STEVE JURY
BLA Registration No. PE0001423
PO Box 190
Boronia, VIC. 3155

CLIENT: PT Building Design

Coords: N/A	SCALE AT A1 1: 100
Levels: AHD	
Designed by SJF	Checked by
Drawn by SJF	Approved by

THREE UNIT DEVELOPMENT AT 47 PRINCES AVENUE, LONGWARRY
PROPOSED WATER QUALITY PLAN
NOT FOR CONSTRUCTION 12-2-25

PROJECT NO. 25009
DATE FEB 25
SHEET No. 2 OF 2
PLAN No. 25009 REV



UNIT 2 & 3 STORMWATER DRAINAGE DETAILS FOR CHARGED SYSTEM 4000L RAINWATER TANK

ROOF AREA DIRECT TO WATER TANKS SHOWN THUS SEE DETAILS LEFT & RIGHT

UNIT 1 98sqm
UNIT 2 150sqm
UNIT 3 141sqm

WT DENOTES – 2 x 2000L WATER TANK 1.90L x 0.66W x 1.87H or SIMILAR – UNIT 1
4000L WATER TANK 2.80L x 0.88W x 1.87H or SIMILAR – UNIT 2 & 3
www.waterline.com.au

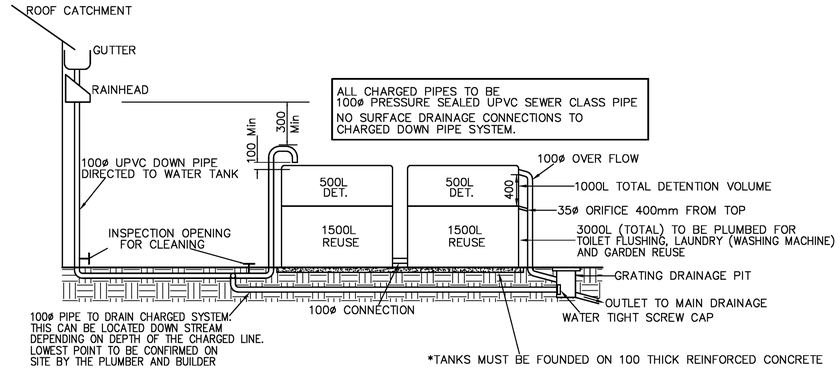
ALL WATER TANKS, DOWNPIPES AND STORMWATER DRAINAGE ARE TO BE INSTALLED IN ACCORDANCE WITH B.C.A. AND PLUMBING INDUSTRY ASSOCIATION STANDARDS CURRENT AT THE TIME OF CONSTRUCTION
FOR TECHNICAL DETAILS SEE
Plumbing Industry Commission; Victoria Australia
(www.pic.vic.gov.au/resources/documents/3388_BC_TechSol-Roof_Plumbing_06.pdf)

*THE PROPERTY OWNER IS RESPONSIBLE FOR THE CONTINUING OPERATION, MAINTENANCE AND REPLACEMENT OF THE RAINWATER TANK SYSTEM IN ACCORDANCE WITH THE APPROVED PLANS.

*DOWN PIPE LOCATIONS TO BE CONFIRMED FOR SIZE, STYLE & CORRECT LOCATIONS, REFER TO ARCHITECTURAL DRAWINGS. ALL DOWNPIPES AND STORMWATER DRAINAGE ARE TO BE INSTALLED IN ACCORDANCE WITH B.C.A. AND PLUMBING INDUSTRY ASSOCIATION STANDARDS CURRENT AT THE TIME OF CONSTRUCTION

*ENSURE 100 DIA CHARGED DRAINAGE LINES ARE PRIMED, GLUED AND PRESSURE\AIR TESTED PRIOR TO BACKFILLING. 75mm THICK MINIMUM DEPTH OF SCREENINGS TO BE PLACED UNDER DRAINAGE LINES AND BACKFILLED WITH CRUSHED ROCK. PROTECTION OF CHARGED DRAINAGE LINES MUST BE A PRIORITY DURING CONSTRUCTION. ENSURE ALL CONTRACTORS ARE MADE AWARE OF DRAINAGE PIPE LOCATIONS TO AVOID STAR PICKETS DAMAGING PIPES.

*ALL 100ø CHARGED DOWN PIPES MUST BE GLUED WITH MINIMUM 'DWV' SOLVENT CEMENT. ADVISED TO USE 'TYPE P' PRESSURE GLUE. JOINTED AS PER CURRENT PLUMBING REGULATIONS.



UNIT 1 - STORMWATER DRAINAGE DETAILS FOR CHARGED SYSTEM TO 2 x 2000L RAINWATER TANKS

NOT TO SCALE

LEGEND

GAS MAIN —G—	POWER POLE O	EXISTING DRAIN — D —	
WATER MAIN —W—	LIGHT	EXISTING DRAIN PIT	
POWER CABLE —E—	TELSTRA PIT	PROPOSED DRAIN —D—	
FIRE PLUG F.P.	TELSTRA CABLE —T—	PROPOSED DRAIN PIT	
FIRE HYDRANT F.H.	EXISTING K & C	EXISTING SEWER —S—	
VALVE —X— SV	PROPOSED K & C	SEWER PIT —(S)—	

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THREE UNIT DEVELOPMENT AT
47 PRINCES AVENUE, LONGWARRY
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SHEET 2 OF 2
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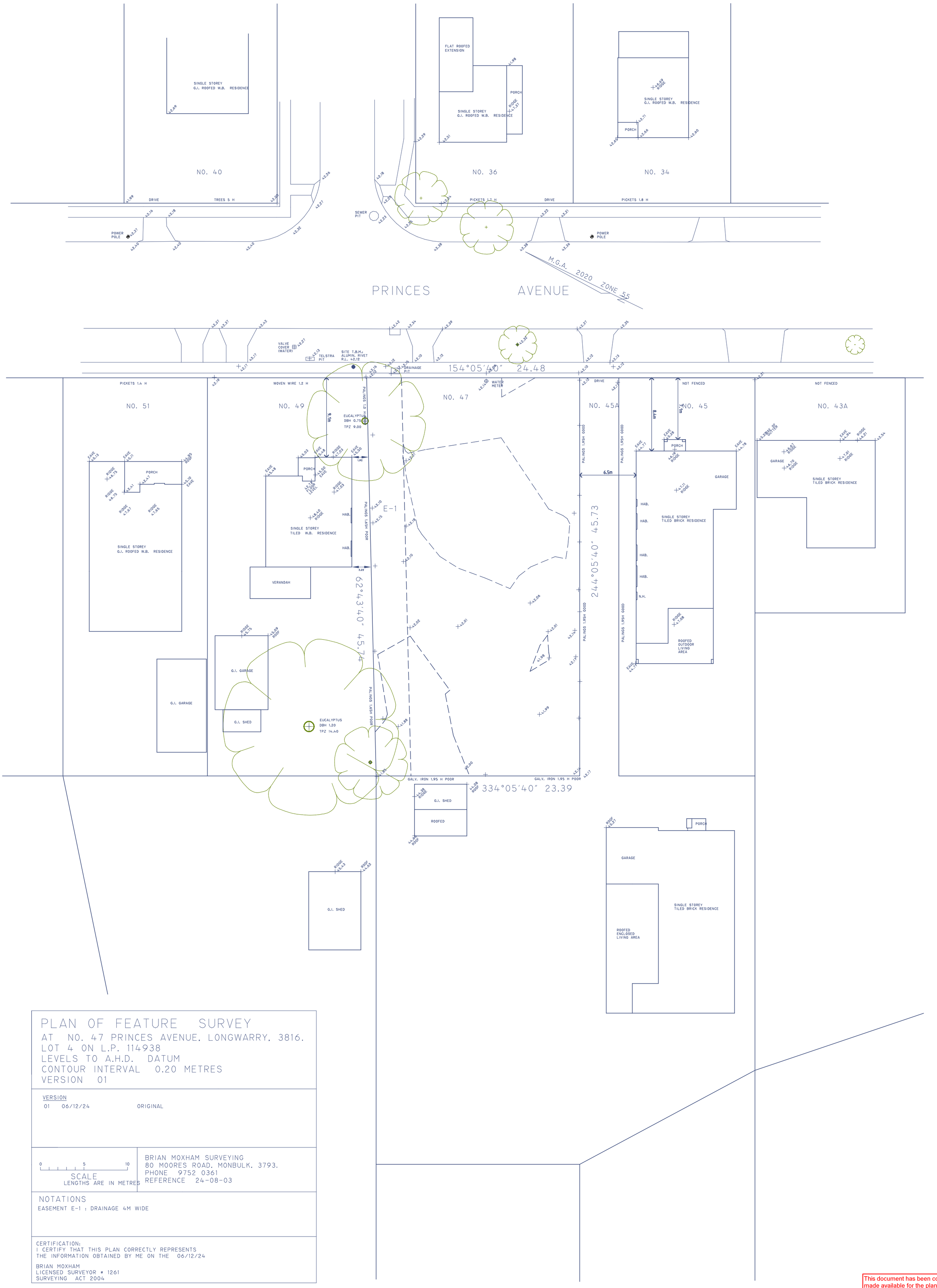


PLAN OF FEATURE SURVEY

AT NO. 47 PRINCES AVENUE, LONGWARRY, 3816.
LOT 4 ON L.P. 114938
LEVELS TO A.H.D. DATUM
CONTOUR INTERVAL 0.20 METRES
VERSION 01

VERSION		
01	06/12/24	ORIGINAL

0 5 10
SCALE
LENGTHS ARE IN METRES

BRIAN MOXHAM SURVEYING
80 MOORES ROAD, MONBULK, 3793.
PHONE 9752 0361
REFERENCE 24-08-03

NOTATIONS
EASEMENT E-1 : DRAINAGE 4M WIDE

CERTIFICATION:
I CERTIFY THAT THIS PLAN CORRECTLY REPRESENTS
THE INFORMATION OBTAINED BY ME ON THE 06/12/24

BRIAN MOXHAM
LICENSED SURVEYOR # 1261
SURVEYING ACT 2004

ARBORICULTURAL & IMPACT ASSESSMENT REPORT

47 PRINCES AVENUE, LONGWARRY

REPORT PREPARED FOR: PETER THOMAS DESIGN

REPORT PREPARED BY: DAMIEN BURGESS
CONSULTING ARBORIST - DB HORTICULTURE PTY LTD.

21/10/2024

www.dbhorticulture.com.au

Contents

1. Brief

The client has requested an Arboricultural & Impact Assessment Report for specified trees within and around the property at 47 Princes Avenue, Longwarry.

2. Overview

The site is in the Baw Baw Council area, Planning Scheme Zone GRZ1 and Planning Scheme Overlays DCPO1 and LSIO. The site contains a single dwelling. This is to be demolished and three new dwellings are proposed.

3. Methodology

A visual site inspection of the trees took place on October 25th, 2024.

The trees were photographed on site using an iphone 14. Height and Spread of trees was recorded via visual estimation. Diameter at Breast Height (DBH) was taken at 1.4 metres above ground level using a diameter tape.

Only specified trees were included in this report.

A Retention Value for each tree has been determined using tree condition factors and values as listed on Page 10 of this report.

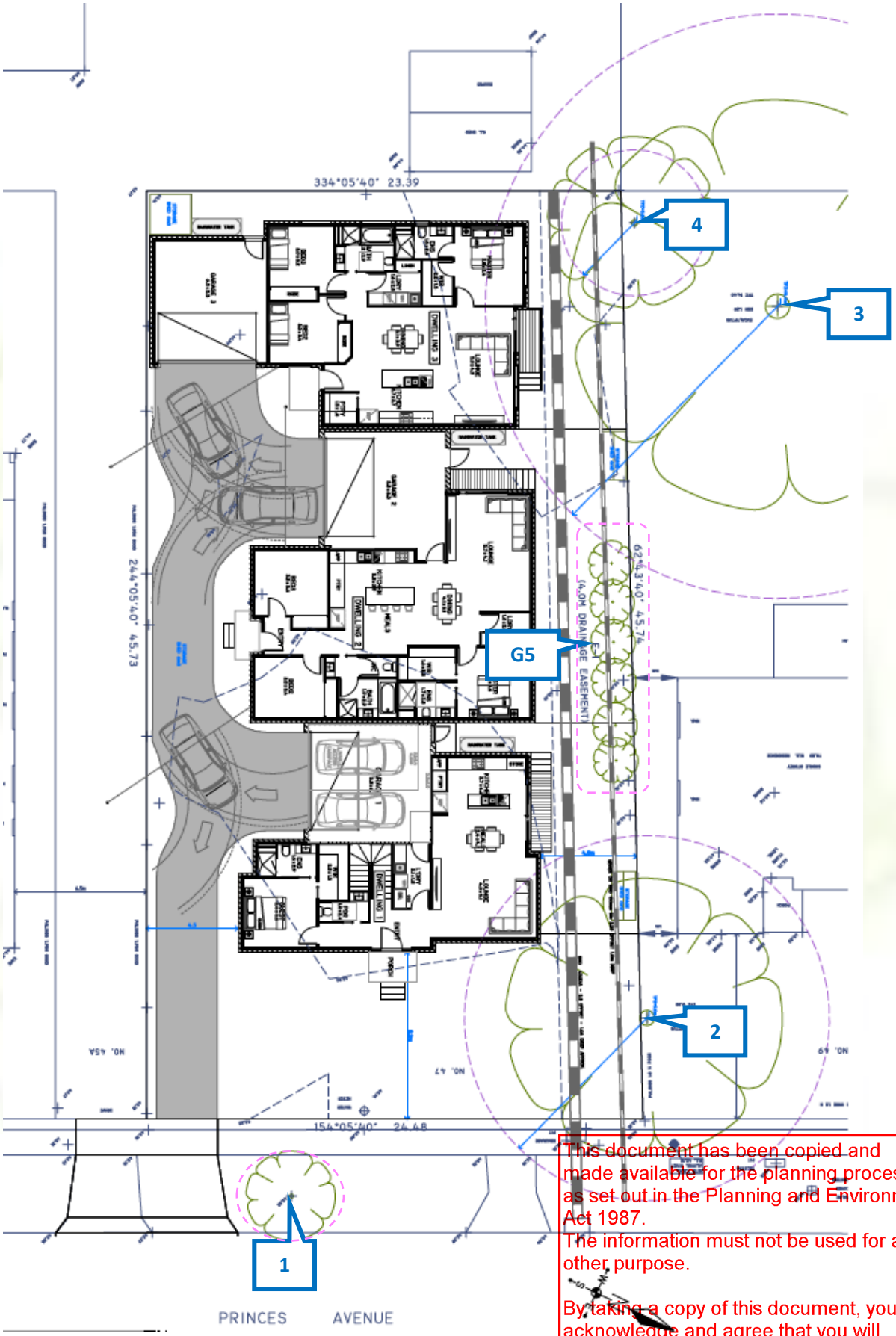
4. Tree Protection Zones (TPZ's)

Where appropriate, Tree Protection Zones and Structural Root Zones have been applied as per AS4970-2009, 'Protection of Trees on Development Sites'.

Tree Protection Zones are determined by multiplying the Trunk Diameter @ Breast Height (DBH) x 12. TPZ's are measured from the centre of the trunk.

Structural Root Zones are the area required for tree stability and are only necessary where major encroachment into the TPZ is to occur. The SRZ radius = (Diameter x 50) $^{0.42}$ x 0.64.

5. Site Plan (proposed)



6. Tree Assessment Table

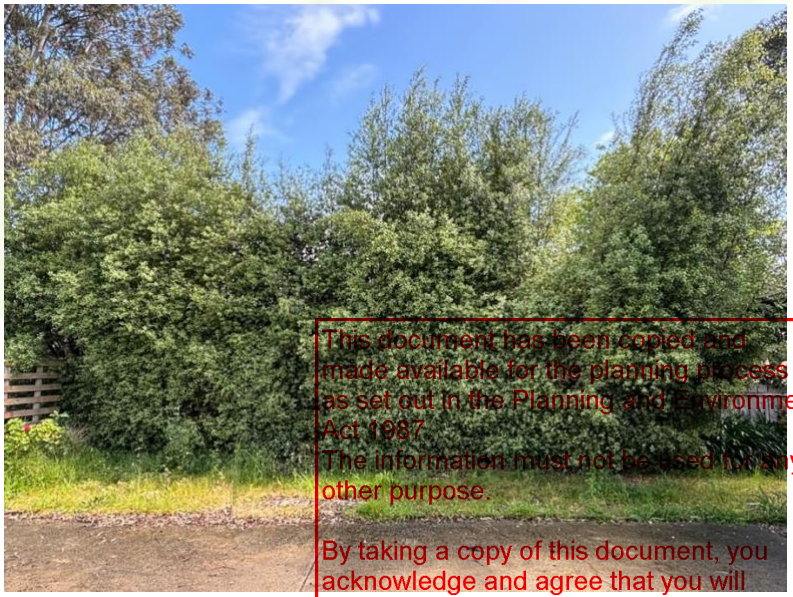
#	Species	Common name	Native/ Exotic	Height (m)	Spread (m)	DBH (cm)	TPZ (m)	SRZ (m)	Age	SULE	Condition	Structure	Form	Amenity Value	Retention value	Comments
1	*Betula pendula*	Silver Birch	E	12	4	20	2.4	2.0	M	L	G	G	G	F	M	Street tree
2	*Eucalyptus saligna*	Sydney Blue Gum	N	14	12	75	9.0	3.1	M	L	G	G	G	G	H	Neighbouring tree
3	*Eucalyptus sp.*	Eucalypt	N	19	18	120	14.4	3.7	M	L	G	G	G	G	H	Neighbouring tree
4	*Salix sp.*	Willow	E	9	3	40	4.8	2.5	OM	R	P	P	P	P	L	Neighbouring tree, weed species
Group 5	*Pittosporum tenuifolium*	James Stirling	E	9	3	10/10/10	2.0	1.6	M	L	G	F	F	P	L	Row of trees assessed as a group
**Dimensions listed for neighbouring trees are estimates*																

7. Photos

Tree 1

Tree 2

Tree 3



Group 5

8. Construction Impact Assessment

- Tree 1: TPZ = 2.4m. The existing driveway crossing is to be removed and a new crossing is to be constructed to the south of this tree. This will be outside the TPZ and therefore this tree will not be affected.
- Tree 2: TPZ = 9.0m. Proposed encroachment into the TPZ of this tree is 5%. Under the guidelines of AS4970-2009, 'Protection of Trees on Development Sites', this is classified as minor encroachment (<10%) and there is adequate permeable surface contiguous with the TPZ to the north-east to compensate for this loss. This tree will not be adversely affected and can be viably retained.
- Tree 3: TPZ = 14.4m. Proposed encroachment into the TPZ of this tree is 5.3%. Under the guidelines of AS4970-2009, 'Protection of Trees on Development Sites', this is classified as minor encroachment (<10%) and there is adequate permeable surface contiguous with the TPZ to the north to compensate for this loss. This tree will not be adversely affected and can be viably retained.
- Tree 4: TPZ = 4.8m. There will be no encroachment into the TPZ of this tree and therefore it will not be affected.
- Group 5: TPZ = 2.0m. There will be no encroachment into the TPZ's of these trees and therefore they will not be affected.

Damien Burgess
Consulting Arborist/Director
DB Horticulture Pty Ltd.

Grad. Cert. Arboriculture (AQF 8) Cert. Horticulture ISA TRAQ

October 25th, 2024.

Retention value should be considered in the context of a tree being worthy of being a material constraint on the site. Low retention value trees are by definition not worthy of being a material constraint, however, Low Retention value trees should not necessarily always be removed in all cases. Trees of Moderate Retention Value should be considered for retention where they are not a material constraint on the site. Where they conflict with plans for the site, either retention or removal are considered as appropriate options. High Retention Value trees should be retained and designed around.

9. Tree Descriptors

Age

Y	Young	Tree is juvenile or recently planted
SM	Semi-mature	Tree is established and actively growing
M	Mature	Tree has reached expected maximum size
OM	Over Mature	Tree is over mature and in decline

Condition

G	Good	Full crown, free of disease, good colour, good extension growth of twigs, no dieback
F	Fair	Tree shows one or more of the following: <25% deadwood, dieback, unbalanced canopy, minor pathogens
P	Poor	Tree shows one or more of the following: >25% deadwood, major pathogen presence, structural faults
D	Dead	Tree is dead

Structure

G	Good	Good branch attachments and no structural defects present, no co-dominant stems, good branch and trunk taper, good buttressing at base of trunk
F	Fair	Some minor structural defects or cavities may be present
P	Poor	Major defects to trunk, branches or roots, poor attachment points, missing bark, likely points of failure
H	Hazardous	Tree poses immediate danger and should be removed

Form

G	Good	Full and balanced canopy
F	Fair	Minor asymmetry in canopy shape
P	Poor	Major asymmetry, unbalanced appearance

Amenity Value

G	Good	Attractive tree which contributes significantly to the surrounding landscape and public realm, may provide good screening and shade qualities
F	Fair	Tree contributes to its immediate surroundings, may be one of a group of trees and/or provide moderate screening and shading qualities
P	Poor	Tree does not make a positive contribution to the landscape and could be considered for removal

Safe Useful Life Expectancy (SULE)

L	Long	Tree appears retainable for 40+ years
M	Medium	Tree appears retainable for 15 – 40 years
S	Short	Tree appears retainable for 5 – 15 years
R	Removal	Tree should be removed within next 5 years
MO	Move or Replaced	Trees which can be readily moved or replaced

Retention Value

L	Low	An assessment rating which incorporates all the above criteria
M	Moderate	
H	High	

10. References

- Barrell, J. (2001), *SULE, its use and status into the new millennium,* NAAA Conference proceedings
- Clark, J.R. & Matheny N.P. (1998), *Trees and Development: A Technical guide to preservation of trees during land development*, ISA Publishing
- Standards Australia (2009), *AS4970-2009 Protection of Trees on Development Sites*, Standards Australia

REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 09103 FOLIO 613

Security no : 124120646389Y
Produced 13/12/2024 04:07 PM

LAND DESCRIPTION

Lot 4 on Plan of Subdivision 114938.
PARENT TITLE Volume 07356 Folio 040
Created by instrument LP114938 18/09/1975

REGISTERED PROPRIETOR

Estate Fee Simple

ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan or imaged folio set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE LP114938 FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NUMBER		STATUS	DATE
AY339430D (E)	DISCHARGE OF MORTGAGE	Registered	26/08/2024
AY540868L (E)	TRANSFER CONTROL OF ECT	Completed	29/10/2024

----------END OF REGISTER SEARCH STATEMENT----------

Additional information: (not part of the Register Search Statement)

Street Address: 47 PRINCES AVENUE LONGWARRY VIC 3816

ADMINISTRATIVE NOTICES

NIL

eCT Control 19328G PORTELLI & CO
Effective from 29/10/2024

DOCUMENT END

Imaged Document Cover Sheet

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Document Type	**Plan**
Document Identification	**LP114938**
Number of Pages (excluding this cover sheet)	**1**
Document Assembled	**13/12/2024 16:07**

LP114938
EDITION 1
APPROVED 28/ 7 /75

PLAN OF SUBDIVISION OF
CROWN ALLOTMENT 40 & PART OF C.A.39
SECTION 6 TOWNSHIP OF LONGWARRY
PARISH OF DROUIN WEST
COUNTY OF BULN BULN

VOL.7356 FOL.040

LENGTHS IN METRES

DEPTH LIMITATION: 15·24m

APPROPRIATIONS

THE LAND COLOURED BLUE IS APPROPRIATED OR SET APART FOR EASEMENTS OF DRAINAGE

THE LAND COLOURED BROWN IS APPROPRIATED OR SET APART FOR EASEMENTS OF CARRIAGEWAY

COLOUR CONVERSION
E-1 = BLUE
R1 = BROWN