

Planning and Environment Act 1987

Panel Report

South Gippsland Planning Scheme Amendment C116

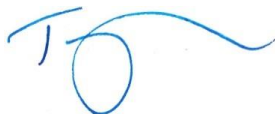
15 November 2019

Planning and Environment Act 1987

Panel Report pursuant to section 25 of the Act

South Gippsland Planning Scheme Amendment C116

15 November 2019



Trevor McCullough, Chair



Geoffrey Carruthers, Member

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p**Glossary and abbreviations**

Act	<i>Planning and Environment Act 1987</i>
AEP	Average Exceedance Probability ¹
ARI	Average Recurrence Interval
CMA	Catchment Management Authority
Council	South Gippsland Shire Council
DELWP	Department of Environment, Land, Water and Planning
FZ	Farming Zone
LPPF	Local Planning Policy Framework
LSIO	Land Subject to Inundation Overlay
MSS	Municipal Strategic Statement
MW	Melbourne Water Corporation
PCRZ	Public Conservation and Resource Zone
PPF	Planning Policy Framework
PPRZ	Public Park and Recreation Zone
TZ	Township Zone
VPP	Victoria Planning Provisions
WGCMA	West Gippsland Catchment Management Authority
WMP	Waterway Management Plan

¹ A flood with a 1 percent AEP has a one in a hundred chance of being exceeded in any year.

Overview

Amendment summary	
The Amendment	South Gippsland Planning Scheme Amendment C116
Brief description	<p>Introduces a Land Subject to Inundation Overlay (LSIO) in accordance with updated flood mapping data from Melbourne Water Corporation and West Gippsland Catchment Management Authority.</p> <p>Corrects zone mapping errors by rezoning private freehold land adjoining waterways from Public Conservation and Resource Zone (PCRZ) and Public Park and Recreation Zone (PPRZ) to Farming Zone (FZ) or Township Zone (TZ).</p>
Subject land	<p>The Amendment applies an LSIO to Lang Lang River, Little Lang Lang River and their tributaries, and to a section of Muddy Creek on the western urban edge of Toora.</p> <p>Amended zoning is proposed to land adjoining the Tarwin River and its branches, at 79 Jupiter Boulevard Venus Bay, 4 Paris Crescent Venus Bay, and Part of 28 Linforths Road and Crown Allotment 25C Section A at Welshpool where private land is incorrectly included in public land zoning.</p>
The Proponent	South Gippsland Shire Council
Planning Authority	South Gippsland Shire Council
Authorisation	28 November 2018
Exhibition	13 December 2018 to 8 February 2019
Submissions	Number of Submissions: 16 (with 2 withdrawn) Opposed: 14
Panel process	
The Panel	Trevor McCullough (Chair) and Geoffrey Carruthers (Member)
Directions Hearing	Council Offices Leongatha on 23 September 2019
Panel Hearing	Council Offices Leongatha on 29 October 2019
Site inspections	Unaccompanied on 23 September and 29 October 2019
Appearances	Listed in Appendix B
Citation	South Gippsland PSA C116 [2019] PPV
Date of this Report	15 November 2019

Executive summary

South Gippsland Planning Scheme Amendment C116 (the Amendment) seeks to:

- apply the Land Subject to Inundation Overlay (LSIO) to Lang Lang River, Little Lang Lang River and their tributaries
- apply the LSIO to a section of Muddy Creek on the western urban edge of Toora
- amend zoning to lands adjoin the Tarwin River and its branches, at 79 Jupiter Boulevard Venus Bay, 4 Paris Crescent Venus Bay, Part of 28 Linforths Road and Crown Allotment 25C Section A at Welshpool where private land is incorrectly included in public land zoning.

The LSIO applies to land assessed by West Gippsland Catchment Management Authority (WGCMA) and Melbourne Water (MW) as being at risk of inundation. The areas affected are determined by the modelling undertaken by the WGCMA and MW.

Key issues raised in submissions included:

- impact on land values, land sales and insurance
- flooding along Muddy Creek and responsibility for maintenance
- the culverts and infrastructure at Victoria Street and on the South Gippsland Highway need to be increased in size
- liability if the area floods
- compensation if the area floods
- LSIO is unnecessary, inappropriate, and incorrectly assessed.

The Panel has assessed the strategic basis for the Amendment and concludes that it is strongly supported by, and implements, the relevant sections of the Planning Policy Framework and is consistent with the relevant Ministerial Directions. The Amendment responds to the state policy framework by allowing Council to plan for and manage land in the South Gippsland Shire that is at risk of potential flood impacts of climate change.

The final form of the Amendment will need to be updated to align with minor changes to the flooding mapping as a result of reviews and in situ ground proofing.

The Panel is satisfied that the modelling methodology and inundation mapping carried out by MW has been done using best practice, contemporary methods. The Panel concludes that the modelling and mapping carried out forms a sound base for the mapping of the LSIO.

The Panel supports proposed corrections to the extent of the LSIO. Melbourne Water proposed changes will correct minor mapping anomalies at 160 Treadwell Road, Poowong North. The WGCMA has similarly proposed minor correctios at 26A Foster Road, and 23 Victoria Street, Toora.

The Amendment also includes several corrections to zoning errors in the Planning Scheme.

The Council review of Foster Creek and parts of the upper ends of the Powlett River that identified private land currently zoned Public Conservation and Resource Zone (PCRZ) or Public Park and Recreation Zone (PPRZ) was thorough and exhibited to the Panel's satisfaction. Properties incorrectly zoned PCRZ are proposed to be rezoned to the adjoining (underlying) property zoning, Farming Zone or Township Zone. Only one property is to be rezoned from PPRZ to FZ. Two privately owned lots in the Venus Bay township are to have

part of their land rezoned from PCRZ to TZ. The PCRZ identifies land that was formerly a coastal access walkway which is now privately owned.

Applying the correct zoning removes an anomaly from the Planning Scheme and reduces the burden on landowners.

Several minor errors were identified by Council during the Amendment process in the PPRZ and PCRZ zone correction mapping; specifically on Planning Scheme maps 6, 12 and 13. These maps were updated by Council to correct the errors, and tabled at the Panel Hearing. The Panel is satisfied that these are minor administrative corrections that can be made by Council, should the Amendment be adopted.

The Panel concludes that:

- The Amendment is well founded and strategically justified, and the Amendment should proceed subject to the minor changes in flood extent mapping.
- Correcting the zone errors as proposed is appropriate.

Recommendations

Based on the reasons set out in this Report, the Panel recommends that South Gippsland Planning Scheme Amendment C116 be adopted as exhibited, subject to the following changes:

- 1. Amend the Land Subject to Inundation Overlay at 160 Treadwells Road, Poowong North as shown in Figure 7.**
- 2. Amend the Land Subject to Inundation Overlay at 26A Foster Road, Toora as shown in Figure 8.**
- 3. Amend the Land Subject to Inundation Overlay at 23 Victoria Street, Toora as shown in Figure 9.**
- 4. Amend the mapping of the proposed rezoning as shown in Figures 4 and 6.**

1 Introduction

1.1 The Amendment

(i) Amendment overview

The purpose of the Amendment is to apply the Land Subject to Inundation Overlay (LSIO) in accordance with updated flood mapping data from Melbourne Water (MW) and the West Gippsland Catchment Management Authority (WGCMA).

The Amendment also includes corrections of zone mapping errors by rezoning private freehold land adjoining waterways from Public Conservation and Resource Zone (PCRZ) and Public Park and Recreation Zone (PPRZ) to Farming Zone (FZ) or Township Zone (TZ); specifically:

- Rezone 79 Jupiter Boulevard and 4 Paris Crescent Venus Bay from PCRZ to TZ; and
- Rezone part of 28 Linforths Road and Crown Allotment 25C Section A at Welshpool from PCRZ to the FZ.

(ii) Proposed changes to the LSIO

Planning Scheme Map Numbers: 1LSIO, 6LSIO, 28LSIO and 30LSIO are to be amended in the manner shown on the following Figures 1 and 2.

Figure 1 Exhibited Melbourne Water LSIO mapping

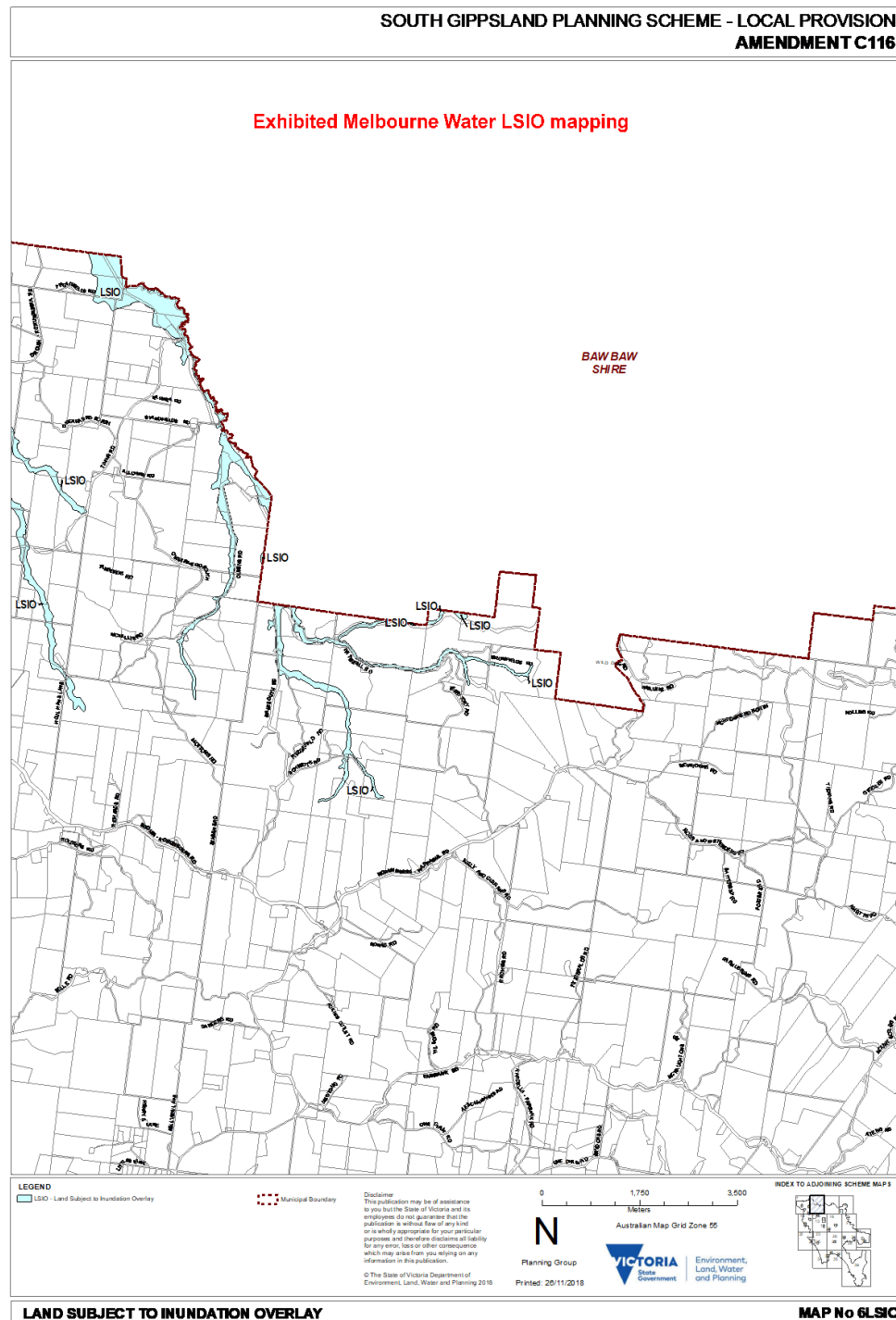
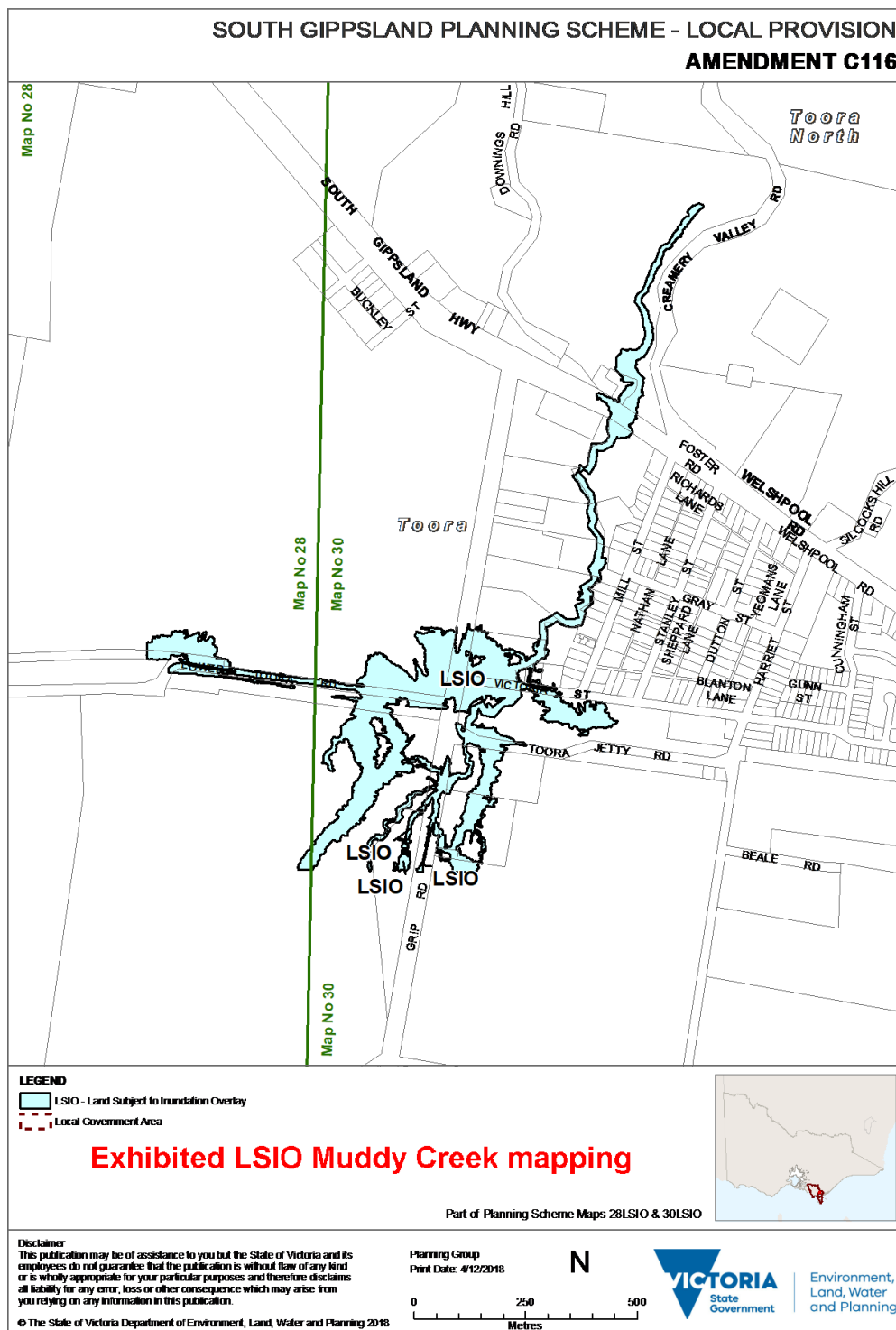


Figure 2 Exhibited Muddy Creek LSIO mapping (WGCMA)



(iii) Correcting zone errors

The Amendment includes corrections of zone mapping errors by rezoning private freehold land adjoining waterways from Public Conservation and Resource Zone (PCRZ) and Public Park and Recreation Zone (PPRZ) to Farming Zone (FZ) or Township Zone (TZ).

Council advised at the Hearing that some minor errors had been made in the mapping of the proposed zone corrections. The exhibited mapping is shown in Figures 3 and 5, the corrected mapping is shown in Figures 4 and 6.

Figure 3 Exhibited mapping for amended zones – Fairbank Road

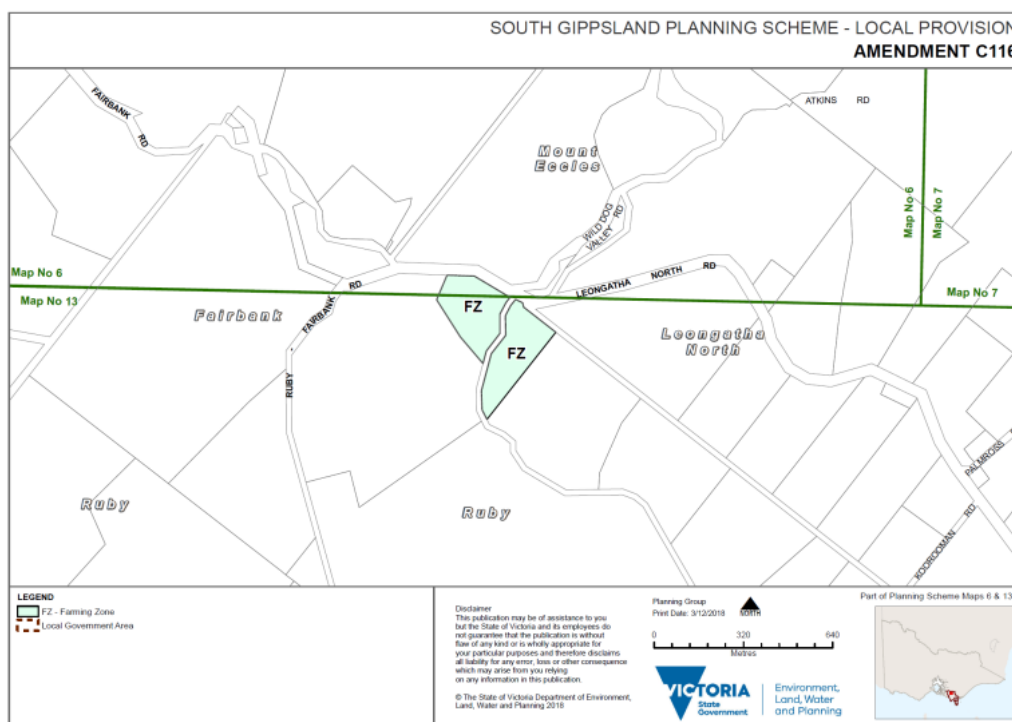


Figure 4 Corrected mapping for amended zones – Fairbank Road

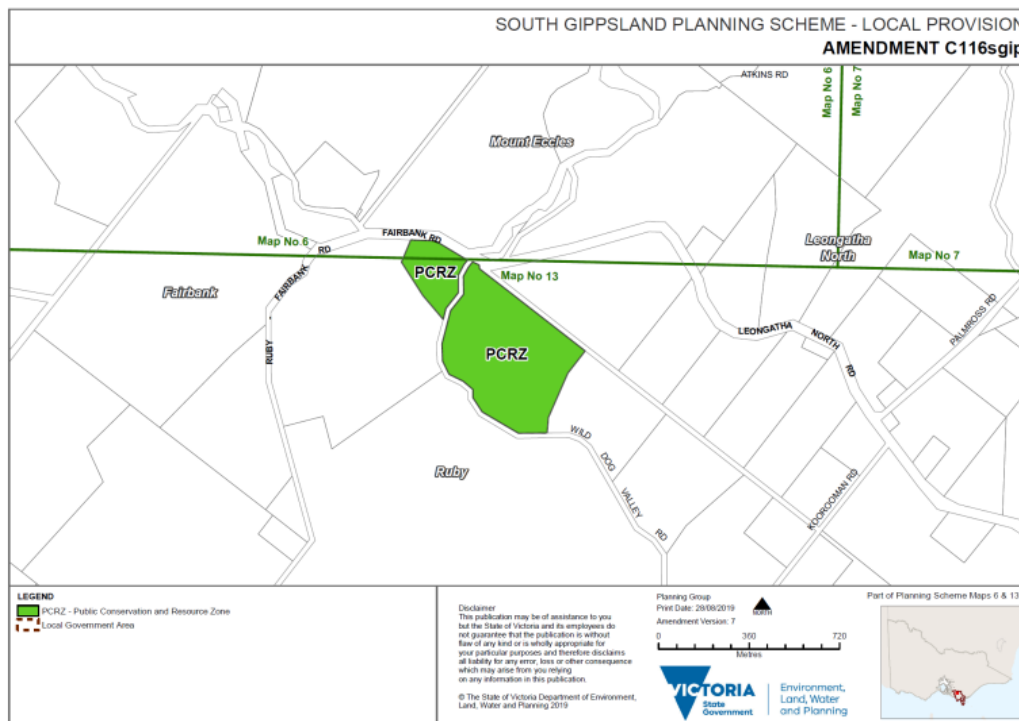
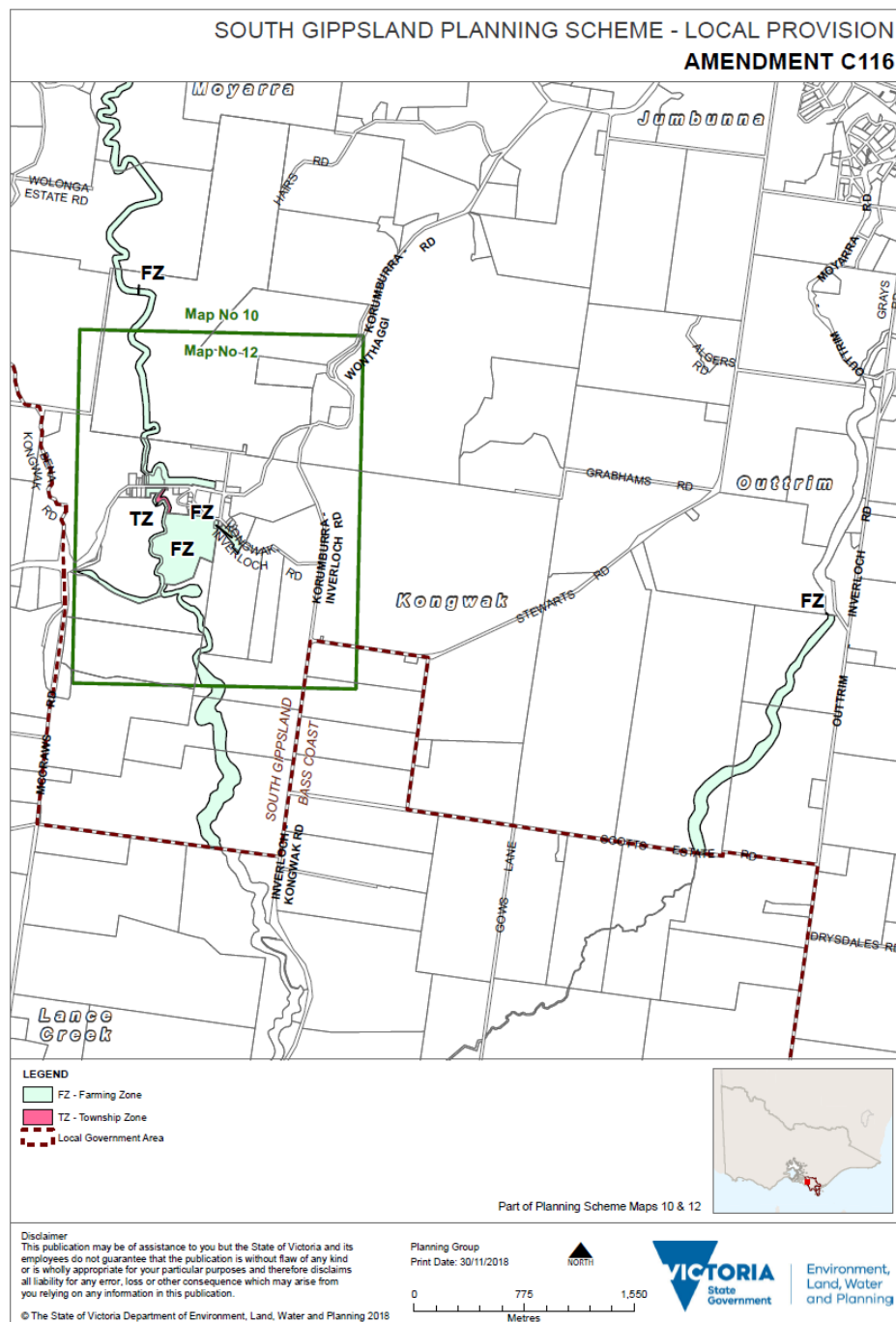
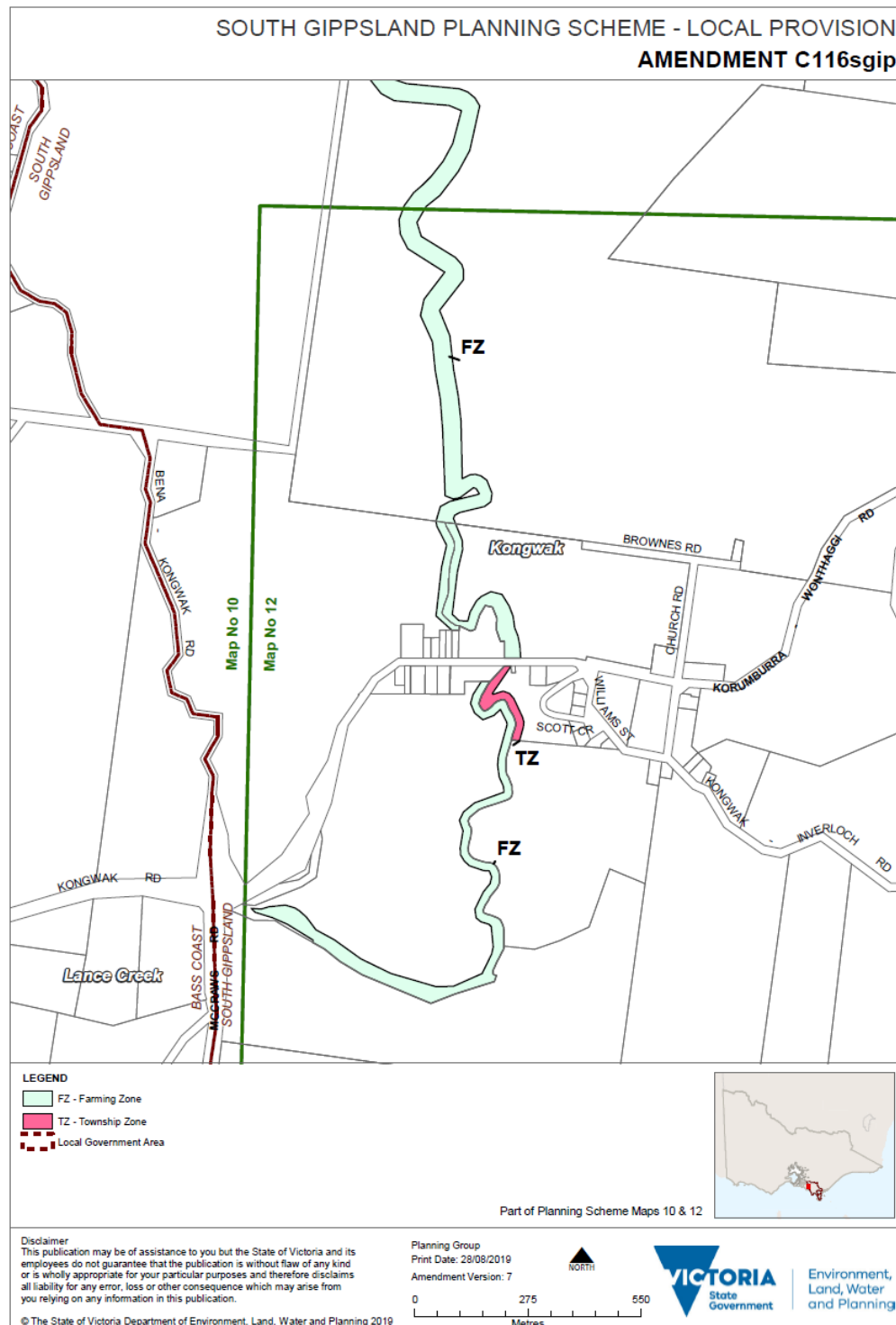


Figure 5 Exhibited mapping for amended zones - Kongwak

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Figure 6 Corrected mapping for amended zones - Kongwak



1.2 Background

MW provided Council with updated flood mapping in late 2017 of the Nyora area and asked it to be included in a planning scheme amendment. The mapping was of inland waterways based on a 1 percent AEP. The WGCMA approached Council to include new mapping of a section of Muddy Creek in Toora under an LSIO.

WGCMA advised of the mapping to be included with the Amendment subject to approval from MW. MW accepted the additional mapping.

At its Ordinary Meeting on 28 March 2018 Council resolved to seek authorisation from the Minister for Planning to prepare Planning Scheme Amendment C116 to apply the LSIO to the areas identified in the mapping supplied by MW and WGCMA. Council resolved to exhibit Amendment C116 in accordance with the procedural requirements of the *Planning and Environment Act 1987*.

An unrelated application for a permit for a proposed subdivision highlighted an anomaly in the zoning maps of the South Gippsland Planning Scheme.

1.3 Procedural issues

At the commencement of the Hearing, Alan O'Brien (submission 14) provided a list of questions that the affected Toora residents sought to be answered during the Hearing (document 6). The Panel requested that Council, WGCMA, and MW seek to respond to all unresolved questions during the Hearing.

Council provided the Panel with an in-confidence map showing the location of the submitters to the Amendment.

1.4 Summary of issues raised in submissions

(i) Planning Authority (Council)

The key issues for Council were:

- response to issues raised by submitters
- mapping incorrectly predicting flooding extent along Muddy Creek in Toora
- the size of the VicRoads culvert at Muddy Creek on South Gippsland Highway, Toora
- maintenance of Muddy Creek in Toora.

(ii) WGCMA

The key issues for WGCMA were:

- flood mapping methodology
- criteria used to modify the mapping to exclude properties with minor flooding extents
- differences between mapped flood extent and observations of flooding
- waterway maintenance and regulation of works on waterways on private land
- changes to the Amendment documentation proposed as a result of the issues raised in submissions at 26A Foster Road (Figure 8) and 23 Victoria Street (Figure 9) Toora.

(iii) MW

The key issue for MW was a change to the exhibited flood mapping at 160 Treadwell Road, Poowong North (Figure 7). Issues raised in other submissions were entirely resolved prior to the Hearing.

(iv) Submissions on the flood overlay

Key issues raised in submissions included:

- impact on land values, land sales and insurance
- flooding along Muddy Creek and responsibility for maintenance
- the culverts and infrastructure at Victoria Street and on the South Gippsland Highway need to be increased in size
- liability if the area floods
- compensation if the area floods
- LSIO is unnecessary, inappropriate, and incorrectly assessed.

(v) Correction of zone errors

The only issue raised in submissions in relation to the correction of zones was an error in private ownership of land (submission 1). This was resolved by Council in the updated maps (Figures 4 and 6).

1.5 The Panel's approach

The Panel has assessed the Amendment against the principles of net community benefit and sustainable development, as set out in Clause 71.02-3 (Integrated decision making) of the Planning Scheme.

The Panel considered all written submissions made in response to the exhibition of the Amendment, observations from site visits, and submissions, evidence and other material presented to it during the Hearing. It has reviewed a large volume of material and has had to be selective in referring to the more relevant or determinative material in the Report. All submissions and materials have been considered by the Panel in reaching its conclusions, regardless of whether they are specifically mentioned in the Report.

This Report deals with the issues under the following headings:

- Planning context
- Land Subject to Inundation Overlay
- Correcting zone errors.

2 Planning context

2.1 Planning policy framework

Council submitted that the Amendment is supported by relevant clauses in the Planning Policy Framework, which the Panel has summarised below.

(i) Victorian planning objectives

The Amendment will assist in implementing State policy objectives set out in section 4 of the Act:

- To provide for the fair, orderly, economic and sustainable use, and development of land.
- To provide for the protection of natural and man-made resources and the maintenance of ecological processes and genetic diversity.
- To secure a pleasant, efficient and safe working, living and recreational environment for all Victorians and visitors to Victoria.
- To conserve and enhance those buildings, areas or other places which are of scientific, aesthetic, architectural or historical interest, or otherwise of special cultural value.
- To protect public utilities and other assets and enable the orderly provision and co-ordination of public utilities and other facilities for the benefit of the community.
- To facilitate development in accordance with the objectives set out in the points above.
- To balance the present and future interests of all Victorians.

Clause 13.01-1S (Natural hazards and climate change)

This clause has the following Objective:

To minimise the impacts of natural hazards and adapt to the impacts of climate change through risk-based planning.

The most relevant Strategy is:

Site and design development to minimise risk to life, property, the natural environment and community infrastructure from natural hazards.

Clause 13.03 (Flood Plain Management)

Relevant to inland application of the LSIO, Clause 13.03-1S has the objectives *“to assist the protection of”*:

- Life, property and community infrastructure from flood hazard.
- The natural flood carrying capacity of rivers, streams and flood ways.
- The flood storage function of floodplains and waterways.
- Floodplain areas of environmental significance or of importance to river health.

Most relevant Strategies are to:

- Identify land affected by flooding, including land inundated by the 1 in 100 year flood event or as determined by the floodplain management authority in planning schemes.

- Avoid intensifying the impact of flooding through inappropriately located use and development.

The riverine LSIO mapping was prepared by MW and the WGCMA. It identifies areas at risk of inundation (inland) and its application will discourage the siting of buildings and works and subdivisions in areas at risk. Where it is practical on a lot, new buildings should be located in areas not prone to inundation (outside of the LSIO).

Clause 14.02-2S (Water Quality)

Amendment C116 seeks to protect water quality in accordance with this Clause. The relevant strategy in relation to Amendment C116 is:

Discourage incompatible land use activities in areas subject to flooding, severe soil degradation, groundwater salinity or geotechnical hazards where the land cannot be sustainably managed to ensure minimum impact on downstream water quality or flow volumes.

Council submitted that allowing development in areas prone to flooding increases the risk of water contamination. Flood waters inundate wastewater treatment systems and can lead to contamination, especially in farming areas. The application of the LSIO identifies the areas of risk and discourages the establishment of inappropriate developments in these areas. Wastewater treatment systems are required in areas where sewage is not available and includes the LSIO area of Nyora and in sections of Toora to the west of Muddy Creek.

(ii) Local Planning Policy Framework

Clause 21.03-3 (Environmental Risk)

The relevant 'Key issues' policy statements are:

The anticipated impact of climate change on the local environment, and the need to monitor and continue to plan for these impacts in the context of broader climate change policy and new knowledge.

Pressure for development and subdivision along the coast and other environmentally sensitive areas (including potable water supply catchments), and the associated impacts of vegetation clearing, introduction of pest and animals, erosion and a decline in water quality.

Clause 21.07-1 (Climate Change)

The policy 'Overview' statement states:

The effects of climate change on the local environment are also starting to appear and will continue into the future, including a hotter, drier climate with fewer rainy days but an increased intensity of rainfall events. The potential flow-on effects from these changing climatic conditions include reduced agricultural production, decreased and more erratic environmental flows in waterways and wetlands, increased risk of bushfire, and decreased water security for settlements and activities. Direct impacts of climate change are also likely to include an increase in storm surges, increased and altered patterns of erosion of beach and dune systems, undercutting of cliffs, increased peak flows in coastal rivers and estuaries and damage to coastal infrastructure (piers, jetties, breakwaters and seawalls).

2.2 Ministerial Directions and Practice Notes

Ministerial Directions

The Ministerial Direction on the Form and Content of Planning Schemes states “A *planning scheme may only include land in a Public Use Zone, a Public Park and Recreation Zone or a Public Conservation and Resource Zone if the land is Crown land or is owned by, vested on or controlled by a Minister, government department, public authority or municipal council.*”

Amendment C116 is consistent with the Ministerial Direction as it will correct zone errors where privately owned land is incorrectly zoned PCRZ or PPRZ.

Planning Practice Notes

Practice Note 12 (Applying the Flood Provisions in Planning Schemes) provides guidance regarding the use of flood provisions in planning schemes, identifying what overlay or zone should be applied, and basing LSIOS on the 100 year ARI flood. The LSIOS is the appropriate flood zone or overlay as it applies to mainstream flooding in both rural and urban areas, modelling demonstrates that flood depths and velocities are low, and there is a low potential flood risk, consistent with the principles in Practice Note 12.

2.3 Conclusion

The Panel concludes that the Amendment is supported by, and implements, the relevant sections of the PPF, and is consistent with the relevant Ministerial Directions and Practice Notes.

The Amendment is strategically justified and should be supported subject to the Panel’s comments on the issues discussed in the following chapters.

3 Land Subject to Inundation Overlay

3.1 The issues

Issues raised in submissions included:

- is the LSIO necessary and appropriate?
- method of consultation by Council
- impact upon land values, land sales, and insurance
- flood mapping compared to observations (submission numbers 4, 7, 8, 9, 14)
- waterway management and responsibility for maintenance works on waterways (submissions 3, 4, 8, 13) along Muddy Creek through Toora.

3.2 Submissions

(i) The need for the LSIO

Mr O'Brien submitted that the West Gippsland Flood Management Strategy (WGCMA 2017) details flood mitigation actions to be implemented over ten years (2018 to 2027), subject to funding and feasibility. He noted that no works on the Muddy Creek at Toora are included. Mr O'Brien questioned why an LSIO was now required when Muddy Creek was not included in the strategy in 2017. The WGCMA response was that an original flood risk assessment undertaken in 2016 did not include Toora because mapping was not available at that time. It explained that an Authority's flood plain management role under the *Water Act 1989* is to assess and provide advice on inundation from any source. The Victorian Floodplain Management Strategy (April 2016) aims to improve the evaluation and communication of flood risks across the State, so that communities and agencies can take better informed action to manage floods. Councils are responsible for ensuring that planning schemes correctly identify the areas at risk of a 1 percent AEP flood.

(ii) Consultation

Several affected landowners in Toora raised the objection that the detail in the mapping supplied by Council and the WGCMA was inadequate. Submitters were not satisfied with the consultation process.

Council responded to these submissions by explaining that providing small scale maps to each affected property owner was beyond the resources of Council. Property-scale flood advice maps were sent to those owners that requested maps; either via email, in-person, or post mail. These maps also depicted the 30 metre waterway buffer for 'Works on Waterways' requiring a WGCMA permit, which some owners then confused with the extent of the LSIO. Council sought to address the confusion with individual property owners at a community meeting convened by Council and WGCMA on 14 February 2019.

Council explained that the public exhibition of Amendment C116 commenced on 13 December 2018 and concluded on 8 February 2019. The exhibition period was extended due to the Christmas festive season. The exhibition period was extended again at the request of residents to accommodate the community meeting. The reasons for applying the LSIO, and the flood mapping methodology, were explained at the meeting.

(iii) Impact upon land values and insurance

A concern was expressed in a number of submissions that application of the LSIO will detrimentally affect land values, make it more difficult to sell land, and increase insurance premiums.

Council submitted that it is a common fear that the application of a new planning scheme overlay will affect land values. Council submitted that, in the majority of cases, the risks identified by an overlay (like fire, flood, landslip) are evident to most informed land buyers regardless of the presence of an overlay. Council noted that the LSIO would not prohibit development and should not impact the potential to sell the land.

Similar concerns were raised by submitters about increased insurance premiums. Council noted that insurance companies already possess and consider the flood data used to map the LSIO when they make their insurance assessments. These matters are primarily private sector or market force issues, and Council is not required to consider market forces in its administration of the Planning Scheme. Council submitted that experience in councils elsewhere has found that application of the LSIO, or similar inundation or flooding controls, has not had any significant or lasting effect on land values, land sales, or insurance premiums.

(iv) Mapping methodology

The Toora community submission presented by Mr O'Brien questioned the methodology of the mapping, in that it did not take into account the condition of Muddy Creek (particularly weed infestation and blockages), the existing stormwater drainage infrastructure, or the road culverts. Mr O'Brien submitted that the application of an LSIO would not stop flooding occurring in this section of Muddy Creek.

Other submitters could not recall any previous flooding to the extent predicted in the new flood mapping.

Mr Dunn (WGCMA) responded in his Part B submission that the WGCMA and MW work closely with Council to ensure that the Planning Scheme controls align with the risk of flooding. The hierarchy of data used for the Amendment included:

- flood studies or inundation modelling
- records of actual inundation
- ground truthing
- anecdotal information from local residents and others (noting that recollections frequently differ and are also time variable)
- existing inundation mapping from sources such as the Victorian Flood Database, the Planning Scheme, and other agencies.

The inundation mapping undertaken for the Amendment was done on a fully functional Geographic Information System, using standard VicMap layers (such as cadastral property boundaries and watercourse delineations).

MW's Part A submission provided a detailed explanation and chronology of the method it employed to map the overlay. It explained that the production of flood maps involves a

number of activities. In general, the required methodology to produce reliable flood maps involves the following four stages:

- production of topographic information for the area being mapped
- estimation of the magnitude of flows along drainage paths (i.e. hydrologic analysis)
- estimation of flood depths and flow velocities along the drainage lines (i.e. hydraulic analysis); and
- delineation of flood extent and determination of properties subject to inundation.

Flood mapping in South Gippsland in the area where MW has drainage responsibility has been undertaken over the last 30 years with a range of methods adopted.

The mapping was prepared using a one-dimensional/two-dimensional hydraulic model and aerial photogrammetry of the Toora township combined with previously collected LiDAR (Light Detection and Ranging) elevation data. Input hydrology was estimated based on the Regional Flood Frequency Estimation tool made available by the Australian Rainfall and Runoff Project (2016).²

Flooding assessment was undertaken in 1987 that included assessing the flood extent for all of the waterways draining to Western Port between Stoney Creek at Shoreham around to Peacock Road Drain adjacent to the Holden Lang Lang proving ground, just north of The Gurdies. Waterways mapped in this assessment were: Red Bluff Creek, Adams Creek, Little Lang Lang River, Eliza Creek, Pheasant Creek and Lang Lang River (Upper) and their tributaries.

New mapping was undertaken on the Little Lang Lang River commencing in 2002, and was completed in early 2003. New mapping was done for Red Bluff Creek in 2015.

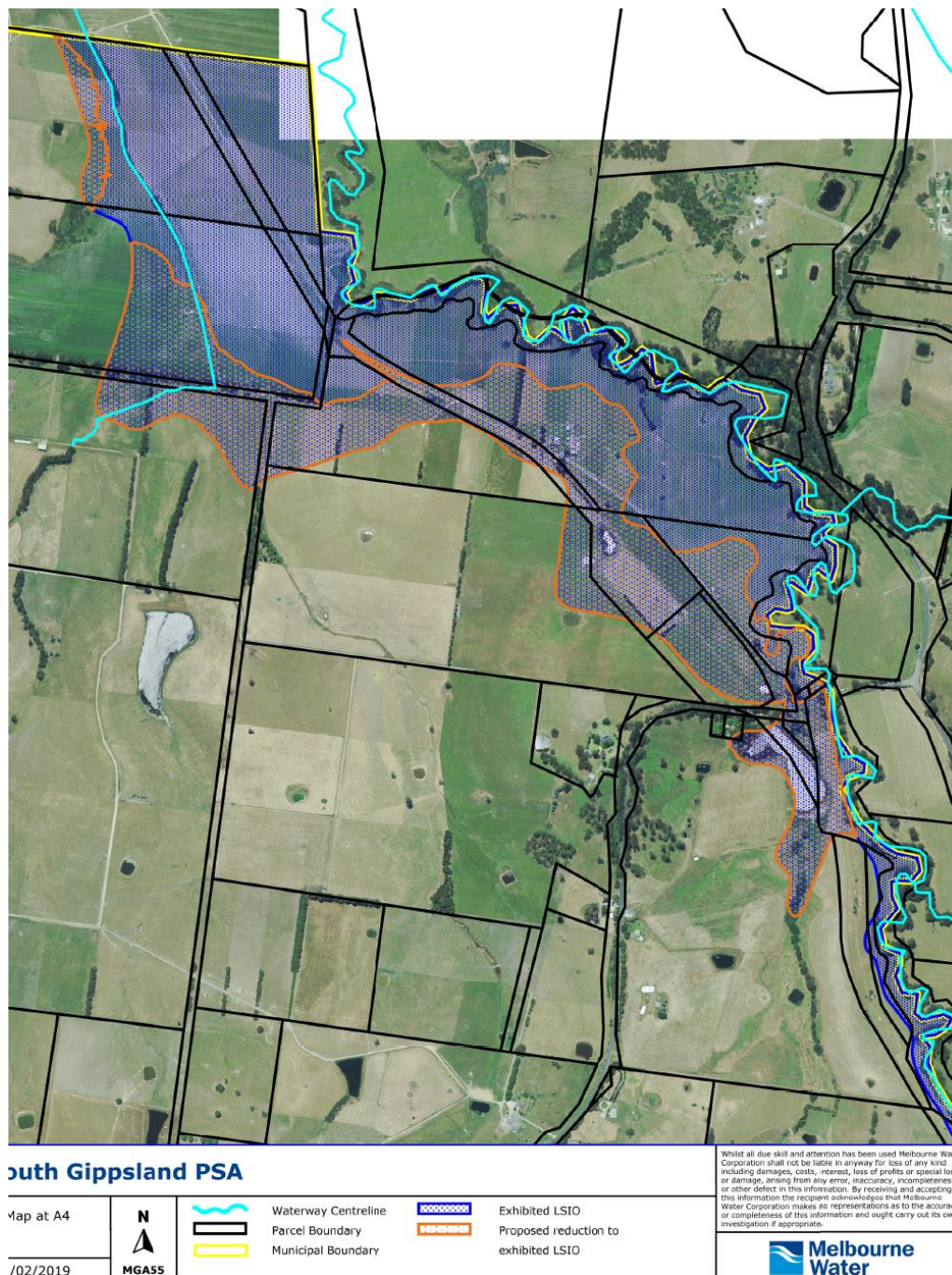
Flood mapping of the Bass River and its tributaries was undertaken in 2009. This flood mapping formed the basis of a LSIO in the Planning Scheme in 2016. Only the Bass River and its tributaries had been included in the LSIO previously. The flood extents on the other waterways have since been provided to Council, and have been used to provide guidance to Council Planners on where advice is required from MW in relation to permit applications.

The inclusion of all the waterway flood extents as LSIOs in the Planning Scheme will make the information more accessible and provide a consistent trigger for planning proposals to have flooding issues properly considered. More detailed modelling may be undertaken by the relevant authorities when future development proposals are considered.

MW's Part B submission advised the Panel that a review was undertaken by MW's Engineers at 160 Treadwells Road, Poowong North at the property owner's request (submission 1). This resulted in a reduction in the extent of the LSIO as shown in Figure 7. The property owner was satisfied with the review (Mr McNamara's submission 1 was therefore resolved before the Hearing).

² Further details of the modelling process were documented in the MW Part B attachment report: *"Floodplain mapping for 100 Grip Road, Toora"* (WGCMA, 2017).

Figure 7 Proposed amended LSIO 160 Treadwells Road, Poowong North



Mr Kearney (MW) noted that the issues raised by MF Quarries Pty Ltd (submission 10) had been resolved during consultations with the submitter prior to the Hearing. Any future

development or expansion at the Hookers Road / South Gippsland Highway site would be in consultation with MW and Council.

He advised that Panel at the Hearing that all issues at both 160 Treadwell Road and MF Quarry Pty Ltd had been resolved.

Mr O'Brien submitted that there were apparent discrepancies between the property boundaries depicted on the flood mapping with those shown on aerial photographs. He submitted that the zonings of the subject land should have also been considered by the WGCMA and Council, in particular the 'Toora Panels' business of R&A Weatherill.

Mr Dunn reiterated that only the cadastral plans were used to establish property boundaries, and that the land zones were not relevant to the compilation of flood mapping.

Mr Weatherill (submission 9) submitted that his business located at 26A Foster Road had never been inundated by flood water. He was concerned that the 30 metre works permit buffer distance along Muddy Creek, covering the entire industrial property, might impede any future development.

WGCMA reviewed the mapping at 26A Foster Road, Toora and recommended to the Panel that a minor correction be made to the extent of the LSIO (Figure 8).

Council acknowledged that some confusion arose during the exhibition period, that appears to have been the result of property-scale Flood Advice documents being issued by the WGCMA. These included maps depicting both the proposed LSIO, and a 30 metre 'Works on Waterways' permit buffer along the Muddy Creek.

(v) Waterway management

Mr O'Brien submitted that the WGCMA had last cleaned out Muddy Creek in 2013-4, and that the creek should be cleared over the entire course of the waterway to Corner Inlet. The infestation of blackberry and other non-indigenous weeds was identified by Council and WGCMA in 2017, and WGCMA offered to spray weeds if funding became available. No subsequent action had been taken. He stated that some landowners were elderly and could not handle the weed problem or cleaning of the banks themselves.

He noted that the culverts at the South Gippsland Highway and Victoria Street restrict water flows, and that the bulrushes in the creek impede flows during rain events.

Council advised the Panel that enquiry had been made of VicRoads regarding the state of the pipe culverts at South Gippsland Highway, but no response had been received.

Mrs Van Dyke, who has resided in Toora for 37 years, stated that she and her husband have personally witnessed flooding extend beyond the 1 percent AEP mapping predictions. The most recent flooding in 2011-12 was apparently caused by some blockage in the Muddy Creek waterway. When the Van Dykes subdivided their property in Mill Street in 1987, contributions were paid to Council to mitigate potential flooding. She submitted that these works had never been delivered.

Mr Dunn (WGCMA) submitted that maintenance of waterways on private land are the responsibility of the landholder. Maintenance of waterways on public land may be the

responsibility of DELWP or Council. The role of a Catchment Management Authority (CMA) is to regulate works and development on waterways and floodplain land.

Where a waterway flows through private property, the landholder may apply to the WGCMA for a 'Works on Waterways' permit for the removal of large debris from the waterway. All works within 30 metres of the centreline of a designated waterway require a 'Works on Waterways' permit from the CMA, issued under the *Water Act 1989*.

Mr Dunn (WGCMA) explained that no two floods are the same, and that flood behaviour may be influenced by specific catchment conditions during an actual flood. The modelling did not include any specific blockages of the channel due to debris. Debris within the channel has the potential to cause flood flows to behave differently to what is indicated in the modelling and the LSIO. Recent flood events on the Muddy Creek system are likely to have been smaller than the modelled 1 percent AEP flood.

Based upon the submissions, WGCMA proposed minor changes to the LSIO for 26A Foster Road Toora (Lot 2 LP118370), and at the driveway of 23 Victoria Street Toora (Lot 12 LP206067), shown in the following Figures 8 and 9. These changes take into consideration existing development, and appropriate referral triggers for new developments.

Figure 8 Flooding mapping correction at 26A Foster Road, Toora

Figure 9 Flood mapping correction at 23 Victoria Street, Toora

3.3 Discussion

(i) Need for the LSIO

The inclusion of the LSIO into the Planning Scheme is to achieve compliance with Victorian Government policy in response to the predicted impacts of climate change. The Victoria Floodplain Management Strategy 2016 is a state-wide initiative applying to all municipalities. Council is consequently responsible for ensuring that its Planning Scheme correctly identifies areas at risk of a 1 percent AEP flood.

(ii) Consultation

The exhibition followed normal procedures and community information processes by Council have been satisfactory, notwithstanding submissions by several submitters to the contrary. There was some apparent confusion created relating to the property maps and the 30 metre 'Works on Waterways' permits buffer, and Council and the WGCMA sought to clarify these matters with individual landowners, and at a town meeting. The Panel is satisfied with the extent of consultation and engagement with affected landowners.

(iii) Impact on land values and insurance

There are a number of previous Planning Panels Victoria reports in which the issue of land value has been considered in detail and addressed. It is concluded that the application of an LSIO does not impede development, and that land values and insurance premiums are not relevant planning considerations. No evidence was provided to the Panel that suggested that this long held position should be re-examined.

(iv) Mapping methodology

The flood mapping applying the most current LiDAR data (2007-9) has been used as the basis for the methodology that has been applied similarly across Victoria by several CMAs and MW. WGCMA noted that the data accuracy was +/- 0.02 metres (2 centimetres), which is close to that achieved by a ground survey. Where any potential anomalies become apparent, the CMAs and MW conduct reviews and (if the need arises) ground proofing of the levels shown by LiDAR.

WGCMA's Part B submission detailed the filtering revision of the raw flood contour predictions, to exclude flood depths less than 50 millimetres, and isolated patches of inundation ponds of up to 500 square metres. The outer edges of the flood maps have been smoothed out to produce the proposed LSIO extent.

The Panel considers that the methodology adopted by WGCMA and MW is appropriate.

The Panel accepts the changes proposed to the LSIO extent at 160 Treadwells Road, Poowong North as shown in Figure 7.

(v) Waterway management

Current government policy is that WGCMA must apply for funding to undertake works on waterways, and that private landowners are responsible for management of waterways flowing through their property.

The Panel sought advice at the Hearing from WGCMA and Council regarding compiling a Waterway Management Plan (WMP) in conjunction with the private landowners along Muddy Creek at Toora. The maintenance of a waterway is a balance between environmental conservation within the riparian zone and achieving practical water flows during rain events. Shared funding arrangements between the property owners, Council, and WGCMA to implement a Muddy Creek WMP would be an equitable outcome in the opinion of the Panel.

It was evident at the site inspections that the pipe culverts at South Gippsland Highway are affected by silt build up and debris. These restrictions, and the size of the culverts, could impact flooding upstream of the highway more than the subject LSIO area downstream. VicRoads should be consulted regarding the capacity and maintenance of the current pipe culverts and be involved in the compilation of a future WMP for Muddy Creek at Toora. Council should similarly examine the size and maintenance of the culvert at Victoria Street, and ensure that any increased flows under the highway at Victoria Street are not restricted.

The Panel also sought advice from WGCMA at the Hearing in relation to a mid-term review of the West Gippsland Waterway Management Strategy 2018-27, and whether a funding application could be considered if Muddy Creek works were warranted in a WMP. Mr Dunn (WGCMA) advised that a review would be undertaken at some juncture, and that a joint works funding application to DELWP could be considered. Mr Dunn noted that the WGCMA was not currently funded for such works.

The Panel suggests that WGCMA and Council work in concert with the affected landowners to compile a WMP for this section Muddy Creek, that could inform a future mid-term review of the 10 year Strategy. Maintenance of the waterway through private land will reduce the potential flood risk of rain events. The suggestion by Mr O'Brien that WGCMA and Council would be liable for the impact of flooding is not of relevance to this Amendment, and the Panel makes no comment.

The current Schedule to the LSIO already covers works along a waterway, but the Panel suggests that maintenance works undertaken by a private landowner that are generally accordance with a future WMP should also be exempt. This should be considered by Council when adopting the Amendment.

3.4 Conclusions

The Panel concludes:

- The proposed changes to the extent of the LSIO at 160 Treadwells Road, Poowong North as shown in Figure 7 should be adopted.
- The proposed minor changes to the LSIO for 26A Foster Road, Toora and at 23 Victoria Street, Toora as shown in Figures 8 and 9 should be adopted.
- The introduction of the LSIO is required by Victorian Government policy and is appropriate.
- The exhibition of the Amendment and information to affected property owners was satisfactory.
- Land values, land sales and insurance premiums are not relevant planning considerations.

- Council and WGCMA should progress toward the compilation of a WMP for the private properties abutting the Muddy Creek, Toora involving affected landowners and VicRoads, and should consider including an exemption in the LSIO schedule for private landowner works that are generally in accordance with the WMP.

3.5 Recommendations

The Panel makes the following recommendations in relation to the proposed LSIO:

- 1. Amend the Land Subject to Inundation Overlay at 160 Treadwells Road, Poowong North as shown in Figure 7.**
- 2. Amend the Land Subject to Inundation Overlay at 26A Foster Road, Toora as shown in Figure 8.**
- 3. Amend the Land Subject to Inundation Overlay at 23 Victoria Street, Toora as shown in Figure 9.**

4 Correcting zone errors

(i) Council submission

Council's Part A submission outlined that an unrelated application for a permit for a proposed subdivision had highlighted an anomaly in the zoning maps of the South Gippsland Planning Scheme. Private freehold land adjoining Foster Creek and parts of the upper ends of the Powlett River were found to be zoned Public Conservation and Resource Zone (PCRZ) or Public Park and Recreation Zone (PPRZ) even though the land is privately owned. This is contrary to the requirements of the Ministerial Direction on the Form and Content of Planning Schemes. Council explained that the affected land needed to be rezoned to Farming Zone (FZ) or Township Zone (TZ) (the appropriate underlying zone).

Council sought permission from WGCMA, MW, and DELWP to correct these zoning errors as part of Amendment C116. All parties agreed to include the changes in the proposed Amendment.

The initial officer's report to Council for approval to seek authorisation for Amendment C116 did not mention the zoning anomalies. However permission to include the zoning changes in the Amendment was sought and granted pursuant to section 8A of the *Planning and Environment Act 1987*.

Further investigation was undertaken to ensure all PPRZ and PCRZ zone errors were identified and included in the Amendment. Two minor errors were detected in the mapping as noted in section 1.4(v). The corrected versions of the mapping are shown in Figures 4 and 6.

No submissions were received in relation to this part of the Amendment (noting that submission 1 was resolved prior to the Hearing).

(ii) Discussion

The Council review of Foster Creek and parts of the upper ends of the Powlett River that identified the zoning anomalies was thorough and exhibited appropriately. Properties incorrectly zoned PCRZ are proposed to be rezoned to the adjoining (underlying) property zoning, FZ or TZ. Only one property is to be rezoned from PPRZ to FZ. Two privately owned lots in the Venus Bay township are to have part of their land rezoned from PCRZ to TZ. The PCRZ identifies land that was formerly a coastal access walkway which is now privately owned. Applying the correct zoning removes an anomaly from the Planning Scheme and reduces the burden on landowners.

The minor mapping errors later found by Council need to be corrected in the final Amendment. The Panel is satisfied that these are minor changes that do require re-advertisement and can be made administratively should the Amendment be adopted.

(iii) Conclusion

The Panel concludes that correcting the zone errors is appropriate, and the Amendment should be adopted subject to the corrections shown in Figures 4 and 6.

(iv) Recommendation

- 4. Amend the mapping of the proposed rezoning as shown in Figures 4 and 6.**

Appendix A Submitters to the Amendment

No.	Submitter
1	Anthony McNamara
2	Tara Hollier
3	Jan King
4	B. Horner
5	Marie and Neil McIntosh
6	Linda and Jason Tay
7	Kerry and Terry Corcoran
8	Cindy Byers
9	Alison and Rob Weatherill
10	MF Quarry Pty Ltd
11	Kathryn and Rhyce Ireland
12	Pat Stephenson
13	Toora residents joint submission
14	Debra and Alan O'Brien
15	Paul Goldfinch
16	Les Osbourne

Appendix B Parties to the Panel Hearing

Submitter	Represented by
South Gippsland Shire Council	Ms Chantal Lenthall and Ms Lyndall Peterson
West Gippsland Catchment Management Authority	Mr Adam Dunn
Melbourne Water	Mr Michael Kearney
Mr Alan O'Brien	Representing signatories to the Toora residents joint submission 13
Mr Robert Weatherill	
Ms Lee-Ann van Dyke	
Mr Neil McIntosh	

Appendix C Document list

No.	Date	Description	Provided by
1	22/10/19	Council Part A submission	Ms Peterson
2	"	WGCMA Part A submission	Mr Dunn
3	"	MW Part A submission	Mr Kearney
4	23/10/19	HWL Ebsworth letter for MF Quarry P/L	HWL Ebsworth
5	29/10/19	Submitters location maps	Council
6	"	List of issues to be resolved (on behalf of Toora Community)	Mr O'Brien
7	"	Council Part B submission	Ms Lenthall
8	"	WGCMA Part B submission	Mr Dunn
9	"	MW Part B submission	Mr Kearney
10	"	Alan O'Brien submission	Mr O'Brien
11	"	Robert Weatherill submission	Mr Weatherill
12	"	Lee-Ann van Dyke submission	Ms Van Dyke
13	"	Neil McIntosh submission	Mr McIntosh