



AGENDA APPENDIX
Council Meeting
Wednesday 25 March 2015

AGENDA ITEM FOR SEPARATE DISTRIBUTION TO COUNCILLORS AND EXECUTIVE LEADERSHIP TEAM DUE TO DOCUMENT SIZE.

THE ITEM IS ACCESSIBLE VIA THE COUNCIL WEBSITE OR BY CONTACTING COUNCIL ON 03 5662 9200.

E.8 PLANNING SCHEME AMENDMENT C105 – MEENIYAN WASTEWATER TREATMENT PLANT (REZONE TO PUBLIC USE ZONE 1 AND APPLY ENVIRONMENTAL SIGNIFICANCE OVERLAY 4) - REQUEST TO PREPARE AMENDMENT

Appendix 1 – Proponent's Amendment Request



Infrastructure Government Power

Kellogg Brown & Root Pty Ltd • PO Box 7440 • Melbourne VIC 3004 • Australia

MG9060-0004

18 December 2014

Fiona Mottram
Strategic Planning Officer
South Gippsland Shire Council
Private Bag 4
LEONGATHA VIC 3953

Dear Ms Mottram,

RE: PLANNING SCHEME AMENDMENT REQUEST: C105 MEENIYAN WASTEWATER TREATMENT PLANT (REZONE FZ TO PUZ1 (SERVICE AND UTILITY) AND APPLY ESO 4 (SEWAGE TREATMENT PLANT AND ENVIRONS)

BACKGROUND

Kellogg Brown & Root (KBR) has been engaged by the South Gippsland Water Corporation (SGW) to undertake a planning scheme amendment for the rezoning and associated buffer zone of the Meeniyen Wastewater Treatment Plant (WWTP) located at 1870 South Gippsland Highway, Stony Creek.

The amendment proposes to rezone the Meeniyen WWTP from Farming Zone to Public Use Zone Schedule 1 (Service and Utility) and apply an Environmental Significance Overlay Schedule 4 (Sewage Treatment Plant and Environs) to the subject site and adjacent land.

PURPOSE AND EXTENT

The purpose of the amendment is to facilitate existing use and development of the Meeniyen WWTP by reflecting its current use as a WWTP in the South Gippsland Planning Scheme.

The proposed associated buffer zone (shown on planning scheme map as ESO4) will protect the Meeniyen WWTP from inappropriate development encroaching on the site and protect sensitive uses from any potential odour emissions generated by the WWTP. This amendment proposal is consistent with other WWTPs within the South Gippsland Shire.

KBR engaged a qualified odour issues specialist who assessed current conditions at the site and reviewed the proposed buffer zone distances against current EPA guidelines as stated in the *Recommended Separation Distances for Industrial Residual Air Emissions* publication 1518 (March 2013). The report concluded that the proposed buffer zone area is appropriate for a future population of 700 residents at Meeniyen as per the EPA guidelines.

CONSULTATION

KBR and SGW have recently engaged with Council and a range of other stakeholders including the Department of Environment, Land, Water and Planning (previously the Department of Transport Planning and Local Infrastructure) as well as the three landholders who are impacted by the proposed buffer zone (ESO4) on the proposed amendment process. These properties include:

- 48 Stony Creek Road, Stony Creek
- 134 Jacks Road, Stony Creek
- 1880 South Gippsland Highway, Stony Creek

As part of these consultations, held in November 2014, KBR explained the proposed rezoning on SGW land and associated buffer zone and the implications the ESO4 would have for use and development on SGW and adjoining land. The landholder engagement meetings were positive with no significant concerns raised. Some general questions about effect on agricultural uses were discussed.

KBR is pleased to provide Council with the completed amendment documentation. Included in the amendment information is the following:

- Completed amendment checklist
- Amendment C105 Explanatory Report
- Amendment instruction sheet - South Gippsland Shire Planning Scheme
- Odour issues assessment report

Should you require any further information please don't hesitate to get in touch on 03 9828 5264 or at christian.vasconcelo@kbr.com

Regards,

Christian Vasconcelo

Land Use Planner

Kellogg Brown & Root

Attachments:

- Completed amendment checklist
- Amendment C105 Explanatory Report
- Amendment instruction sheet - South Gippsland Shire Planning Scheme
- Odour issues assessment report

South Gippsland PLANNING SCHEME

AMENDMENT C105

EXPLANATORY REPORT

WHO IS THE PLANNING AUTHORITY?

This amendment has been prepared by the South Gippsland Shire Council, which is the planning authority for this amendment.

The amendment has been made at the request of South Gippsland Water Corporation.

LAND AFFECTED BY THE AMENDMENT

The amendment applies to the land described as follows:

The lots that are proposed to be rezoned from Farming Zone to Public Use Zone 1 - Service and Utility are 1870 South Gippsland Highway, Stony Creek, also known as:

- Crown Allotment 53E Parish of Meeniyan
- Crown Allotment 53F Parish of Meeniyan
- Lot 1/TP555627T

The owner of the land proposed to be rezoned is South Gippsland Water.

The amendment also affects parts of adjoining land upon which the Environmental Significance Overlay Schedule 4 (Sewage treatment plant and environs) is to be applied.

The affected lots are:

- 1880 South Gippsland Highway, Stony Creek - Lot 1/TP211257
- 48 Stony Creek Road, Stony Creek - Lot 1/TP84396
- 134 Jacks Road, Stony Creek - Lot 1/LP65916

There are no encumbrances, caveats or easements shown on any of the affected titles which are affected by the rezoning and associated buffer zone.

WHAT THE AMENDMENT DOES

The amendment proposes to:

- Rezone 1870 South Gippsland Highway, Stony Creek from Farming Zone (FZ) to Public Use Zone 1 (PUZ1) 'Service and Utility'.
- Apply Environmental Significance Overlay 4 (Sewage treatment plant and environs) to the subject site and land surrounding the Meeniyan Waste Water Treatment Plant (WWTP)

STRATEGIC ASSESSMENT OF THE AMENDMENT

Why is the amendment required?

The amendment is required to establish the standard controls and provisions that apply under the Victorian Planning Provisions to a public WWTP facility. The current Farming Zone is an inappropriate zoning of the land under the Victorian Planning Provisions.

The proposal will provide a net community benefit through application of the appropriate zone and overlay under the Victorian Planning Provisions and recognition of the existing use and development. The amendment will allow for appropriate management of the waste water treatment plant and protection from inappropriate use and development, consistent with the appropriate Victorian Planning Provisions controls.

The amendment rezones the land and applies an environmental significance overlay. It does not repeat provisions already applicable under the South Gippsland Shire Planning Scheme as applied to the subject land. The rezoning and environmental significance overlay will result in application of the Victorian Planning Provisions controls best suited to provide for efficient use, development and management of the waste water treatment plant.

How does the amendment implement the objectives of planning in Victoria?

The proposed amendment implements the objectives of planning in Victoria as set out in Part 1 - Section 4(1) of the Planning and Environment Act 1987, in the following way:

- The rezoning and an addition of the overlay recognises existing conditions, use and development and is consistent with providing for the fair, orderly, economic and sustainable use and development of land
- The rezoning and overlay provides for the protection of an important man-made community resource
- The rezoning and overlay specifically aims to protect a public utility asset and will assist in the orderly provision and coordination of the waste water treatment plant for the benefit of the community
- The rezoning and overlay balances the present and future interests of all Victorians.

How does the amendment address any environmental, social and economic effects?

Environmental effects

The rezoning of the land recognises existing use and development and does not propose a change of use or further development. However it is recognised that the Public Use Zone will allow some future development consistent with the waste water treatment plant use.

The addition of the environmental significance overlay protects the waste water treatment plant from encroachment of inappropriate use and development as well as maintaining a safe buffer distance from sensitive land uses, therefore minimising the risk of air emissions detrimentally impacting residents and other sensitive land uses.

Social and economic effects

The rezoning will facilitate a more efficient maintenance, use and development of the waste water treatment plant and better enable it to cater for future growth in Meeniyah. This will support population growth and tourism (through use of the newly constructed public wetlands), which will have positive social and economic benefits for the community.

The addition of a buffer zone via the environmental significance overlay will protect adjacent sensitive land uses from any air or odour issues arising by restricting use and development within the overlay. These restrictions are not expected to have any material economic or social effect on the impacted landowners and users.

This amendment provides a greater level of security of tenure for the public utility asset, which will benefit the local community.

Does the amendment address relevant bushfire risk?

Bushfire risk is not applicable to this amendment. It is not located in a bushfire risk area.

Does the amendment comply with the requirements of any Minister's Direction applicable to the amendment?

The amendment is of local significance only and complies with all Minister's Directions under Section 12(2) of the Planning and Environment Act 1987.

The amendment complies with Minister's Direction No.11 'Strategic Assessment of Amendments'. All requirements to be met under the Direction have been considered and met in the preparation of the amendment.

The amendment follows the process as detailed in Ministerial Direction No.15 'The planning scheme amendment processes'.

The amendment is consistent with the Ministerial Direction on the Form and Content of Planning Schemes under Section 7(5) of the Act.

How does the amendment support or implement the State Planning Policy Framework and any adopted State policy?

Clause 11 of the State Planning Policy Framework (SPPF) refers to Settlement.

This amendment seeks to support the need to prevent environmental problems created by siting incompatible land uses close together by the addition of the environmental significance overlay as a buffer zone between sensitive land use and development and the waste water treatment plant.

Clause 19.03-2 of the SPPF refers to Water supply, sewerage and drainage

The objective of this clause is:

"To plan for the provision of water supply, sewerage and drainage services that efficiently and effectively meet State and community needs and protect the environment".

This amendment deals with the proper zoning under the Victorian Planning Provisions and appropriate protection of the waste water treatment plant as a public utility asset to meet current and future community needs.

How does the amendment support or implement the Local Planning Policy Framework, and specifically the Municipal Strategic Statement?

Clause 21.03-9 of the Local Planning Policy Framework (LPPF) refers to Infrastructure and the need to provide reticulated water and sewerage services and drainage improvements to local towns to encourage population growth in the towns.

The waste water treatment plant already provides reticulated water and sewerage services to the Meeniyan township. The rezoning would facilitate any future improvements to the plant and protect it from any inappropriate development.

Clause 21.13-1 of the LPPF refers to Waste management and stormwater drainage.

The objective of this clause is to *'plan for the provision of efficient and effective wastewater management systems to all towns within the Shire'*.

The amendment responds to the strategy provided in the Municipal Strategic Statement to protect land in the vicinity of sewerage treatment plants from incompatible use or development.

Does the amendment make proper use of the Victoria Planning Provisions?

The amendment proposal applies the specific Public Use Zone 1 (Service and Utility) and Environmental Significance Overlay 4 (Sewage Treatment Plant and Environs) which are the appropriate and intended Victorian Planning Provisions controls to be applied to waste water treatment plants. The amendment does not conflict with other planning scheme provisions.

How does the amendment address the views of any relevant agency?

The amendment is not expected to affect the interests of any referral authorities other than the proponent South Gippsland Water Corporation.

Formal notice is given to relevant referral authorities and agencies as part of the amendment exhibition.

Does the amendment address relevant requirements of the Transport Integration Act 2010?

The Transport Integration Act 2010 is not relevant to this amendment. The proposed amendment will not have an impact on this Act.

RESOURCE AND ADMINISTRATIVE COSTS

What impact will the new planning provisions have on the resource and administrative costs of the responsible authority?

It is considered that the proposed amendment will not unduly impact upon the resource and administrative costs of the Responsible Authority. The amendment can be expected to potentially reduce the administrative costs associated with having to obtain planning permits if the subject land remains as Farming Zone.

The creation of an Environmental Significance Overlay Schedule 4 may add to the administrative workload of Council but equally will provide necessary protection to the surrounding land.

WHERE YOU MAY INSPECT THIS AMENDMENT

The amendment is available for public inspection, free of charge, during office hours at the following places:

South Gippsland Shire Council
9 Smith Street
Leongatha, VIC 3953

The amendment can also be inspected free of charge at the Department of Transport, Planning, and Local Infrastructure website at www.dtpli.vic.gov.au/publicinspection and on South Gippsland Shire Council's web site at www.southgippsland.vic.gov.au

SUBMISSIONS

Any person who may be affected by the amendment may make a submission to the planning authority. Submissions about the amendment must be received by [insert submissions due date].

A submission must be sent to: South Gippsland Shire Council, Attention: Fiona Mottram - Planning Scheme Amendment C105, Private Bag 4, LEONGATHA Vic 3953

PANEL HEARING DATES

In accordance with clause 4(2) of Ministerial Direction No.15 the following panel hearing dates have been set for this amendment:

- directions hearing: [insert directions hearing date]
- panel hearing: [insert panel hearing date]

CONSULTING ENVIRONMENTAL ENGINEERS

Environmental Scientists and Engineers

Level 1, 90 Bridge Road, PO Box 201, Richmond VIC 3121

Phone 03 9429 4644 Fax 03 9428 0021

Email wallis@cee.com.au

19 November 2014

Christian Vasconcelo

Planner and Stakeholder Engagement Consultant

Kellogg Brown & Root Pty Ltd

Level 3, 441 St Kilda Rd, Melbourne, Victoria, 3004

Dear Christian,

Assessment of Appropriate Odour Buffer for Meeniyan Treatment Works

CEE is pleased to provide KBR with this assessment of an appropriate buffer zone for the Meeniyan wastewater treatment plant (WWTP). The assessment is based on an inspection of the WWTP and the surrounding areas, examination of zoning for the area, the application of EPA Guidelines for separation distances for sewage treatment plants, buffer zones for other similar treatment plants and consideration of the local meteorology and topography at the Meeniyan WWTP.

1. Meeniyan WWTP

This description of the Meeniyan WWTP is drawn from the following report:

Meeniyan Sewerage Scheme - Wastewater Treatment Plant Functional Design Report
Report Prepared by KBR for South Gippsland Water, 29 October 2008

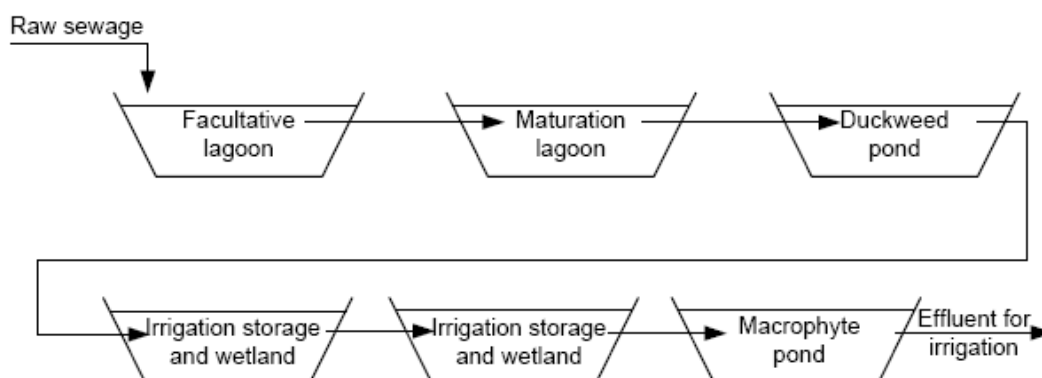
The town of Meeniyan (current population of about 450 persons) has been sewered using a modified conventional gravity sewerage system with a central sewage pump station and rising main to the treatment plant site. The plant has been designed for 600 EP (person equivalent) with scope to add a second facultative lagoon or aeration on the first facultative lagoon.

The treatment section of the plant has been designed with one facultative lagoon, one maturation lagoon and a series of wetlands, with a final macrophyte lagoon. It is envisaged that the plant will ultimately be expanded to treat flows from a population of 600 to 660 persons, which would require a second facultative lagoon to be installed and one of the wetlands to be converted to a maturation lagoon.

The buffer zone is defined for the ultimate plant and the conservative assumption has been made that the two planned facultative lagoons will ultimately be in operation and that the plant will serve an ultimate population of 700 persons.

A basic schematic of the current plant is shown in Figure 1. At present there is one facultative lagoon in the southern part of the site and one maturation lagoon. The polishing and storage section of the plant consists of a duckweed pond and two wetland storages. This process has been designed to produce Class C recycled water in accordance with EPA Publication No. 464.2, 2003. These lagoons progressively lower the nutrient, suspended solids and pathogen concentrations in the water and store effluent in winter, when there is no demand for recycled water. A macrophyte pond is provided to further remove nutrients from a part of the flow.

Figure 1. Schematic Process Diagram for Meeniyen WWTP



The treated effluent from the plant is used for irrigation on properties surrounding the plant with the Stony Creek Racecourse being the main reuse customer.

The facultative lagoon (south pond in Figure 2) treats the organic load in the sewage. This occurs through a facultative process whereby the upper section of the lagoon is aerobic for BOD treatment and the lower section is anaerobic for BOD treatment as well as sludge digestion and consolidation. The upper section of the lagoon also oxidises methane, hydrogen sulphide and other odorous gases produced by BOD treatment in the lower anaerobic section. The Meeniyen facultative lagoon(s) size is based on a loading rate of 50 kg BOD/ha.d which is conventional for this latitude and site exposure.

The maturation lagoon allows time for disinfection of pathogens in the sewage and for helminth reduction to Class C requirements. A small amount of biosolids will settle in this lagoon but it should not require desludging. The maturation lagoon size is based on a 30 day detention time at 2060 flows. The Meeniyen maturation lagoon(s) will have an ultimate loading rate of 5 kg BOD/ha.d which is conventional for this latitude. The odour assessment takes the BOD loading into account in defining the size of the buffer zone.

The duckweed pond removes nutrients from the treated effluent. The duckweed also assists in further removing *E. coli* and pathogens from the treated water. The duckweed pond size is based on a 21 day detention time at 2060 flows. The storage wetlands provide further treatment and winter storage when it is too wet for irrigation (11 months of storage except in

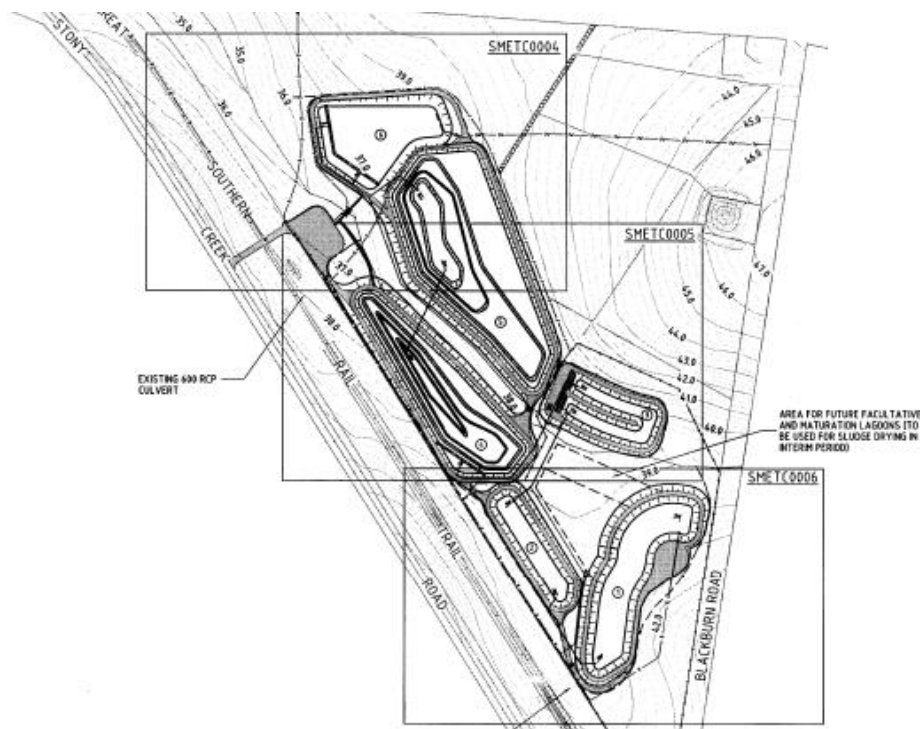
very wet years). They correspond to lightly loaded lagoons for the purpose of the odour assessment.

The macrophyte pond (north pond in Figure 2) will remove algae or other suspended solids from the water prior to irrigation. The macrophytes limit algae or cyanobacteria blooms by shading. The macrophyte pond size is for 10 days detention time at 2060 maximum irrigation flow. The macrophyte pond is considered to have lower odour generation than the other ponds because of the gravel bed, surface shading and the fact that the sewage will have had one year of treatment and storage before reaching the macrophyte pond.

2. Inspection of Meeniyan WWTP and Surrounding Area

Figure 2 shows the layout of the Existing Meeniyan WWTP. The site is a triangular shape, bordered by Stony Creek Road and the Gippsland Rail Trail on the west, Blackburn Road on the east and the South Gippsland Highway on the north. The Stony Creek Racecourse is 500 m east of the WWTP and the township of Stony Creek extends south-east from approximately 300 m south of the site.

Figure 2. Site Layout of Meeniyan WWTP



Sewage enters the facultative pond (No 1) at the south of the site. The flow is through the maturation pond on the western boundary, through the horseshoe-shaped duckweed pond and then into the two wetland storages.

3. Zoning for the Area

The site of the treatment plant is owned by South Gippsland Water and is currently

Farming Zone – but is proposed to be rezoned to Public Use – Service and Utility. The land to the west, east and north is zoned Farming Zone and used for grazing. Stony Creek township is zoned for urban uses (Township Zone). The Gippsland Rail Trail is zoned public park and recreation zone.

There are six existing residences along the South Gippsland Highway and Blackburn Road, as shown in Figure 3, and about 20 residences in Stony Creek township. As these residences existed at the time the treatment plant was built, they constitute a prior use and the buffer zone should not extend across them.

4. Application of EPA Guidelines for Separation Distances

The EPA has recently published separation distances for sewage treatment plants in the following guideline: Recommended Separation Distances for Industrial Residual Air Emissions. EPA Publication 1518, March 2013

The EPA Guideline sets out recommended separation distances between land uses, such as sewage treatment plants, and sensitive land uses (such as residences or cafes). As stated in the publication “It is written for planning authorities, responsible authorities, EPA, industry, developers and the community to be used in the preparation and consideration of planning scheme amendments and planning scheme applications”.

The Guideline contains a list of recommended minimum separation distances to minimise the off-site impacts on sensitive land uses from odour emissions. The objective of the buffer zone is to protect the interests of existing residents of Meeniyen and Stony Creek by avoiding encroachment of odour-sensitive land uses close to the treatment plant (and necessitating costly and energy-consuming mitigation measures) and to protect the interests of future residents by preventing them locating in a zone where they will be subjected to nuisance odour.

Table 6 of the Guideline lists the separation distances recommended by the EPA for various types of sewage treatment installations, linked to the size of the population served by the plant. For the anticipated ultimate population of 700 persons, the corresponding separation distances are as follows:

-

Facultative ponds = separation of 270 m;

-

Aerobic pondage systems = separation of 135 m.

Based on the EPA Guideline and experiences with odour from other similar treatment plants, the following separation distances are recommended for the Meeniyen plant;

- Facultative ponds = separation of 270 m;
- Maturation pond = separation of 200 m;
- Wetland storage ponds = separation of 200 m; and
- Macrophyte pond = separation of 100 m.

The recommended buffer zone is shown in Figure 3.

Figure 3. Recommended Buffer Zone (ESO4) for Meeniyan WWTP



5. Buffer Zones for Similar Treatment Plants

There are several existing towns within the South Gippsland Shire that have ESO4's incorporated in to the planning scheme. These are listed in the table below, together with the minimum separation distance recommended by the EPA (but for the current population, as the ultimate population is not known) and the approximate -buffer zone shown in the planning scheme.

Town	Population	EPA minimum buffer	Buffer area in zoning plan
Leongatha	4,320	165 m (mech/boil plant)	300 m
Mirboo North	2,220	470 m	500 m
Foster	1,680	410 m	500 m
Waratah Bay	207	150 m	350 m
Port Welshpool	180	140 m	250 m
Meeniyan	700	270 m	270 m (proposed)

It can be seen that the recommended buffer for Meeniyan WWTP is comparable to that recommended for other towns, taking account of population size.

6. Consideration of Local Meteorology and Topography at Meeniyan WWTP

The Meeniyan site is in a shallow valley that slopes gently toward the north-west corner. Thus light winds at night will tend to flow down this valley and escape to the north.

The plant is well-located in this respect, as all the adjacent houses are on higher ground than the treatment lagoons, and thus unlikely to be affected by the residual odour in the night drainage flow. It also is noted that the facultative lagoon(s), which are the most odorous part of the plant, are located in the upper part of the site, and thus odour from these lagoons will disperse as the flow travels across the other lagoons, reaching a low level before crossing the South Gippsland Highway at around 500 m downwind from the facultative lagoons.

7. Conclusion

A buffer zone is essential for a treatment plant to avoid future conflict between the site of the plant and odour-sensitive premises. An appropriate buffer zone is shown in Figure 3 and it will achieve the objectives without compromising any existing residences.

Consulting Environmental Engineers

Ian Wallis

Ian Wallis

Planning and Environment Act 1987

SOUTH GIPPSLAND PLANNING SCHEME

AMENDMENT C105

INSTRUCTION SHEET

The planning authority for this amendment is the South Gippsland Shire Council.

The South Gippsland Planning Scheme is amended as follows:

Planning Scheme Maps

The Planning Scheme Maps are amended by a total of 2 attached maps sheets.

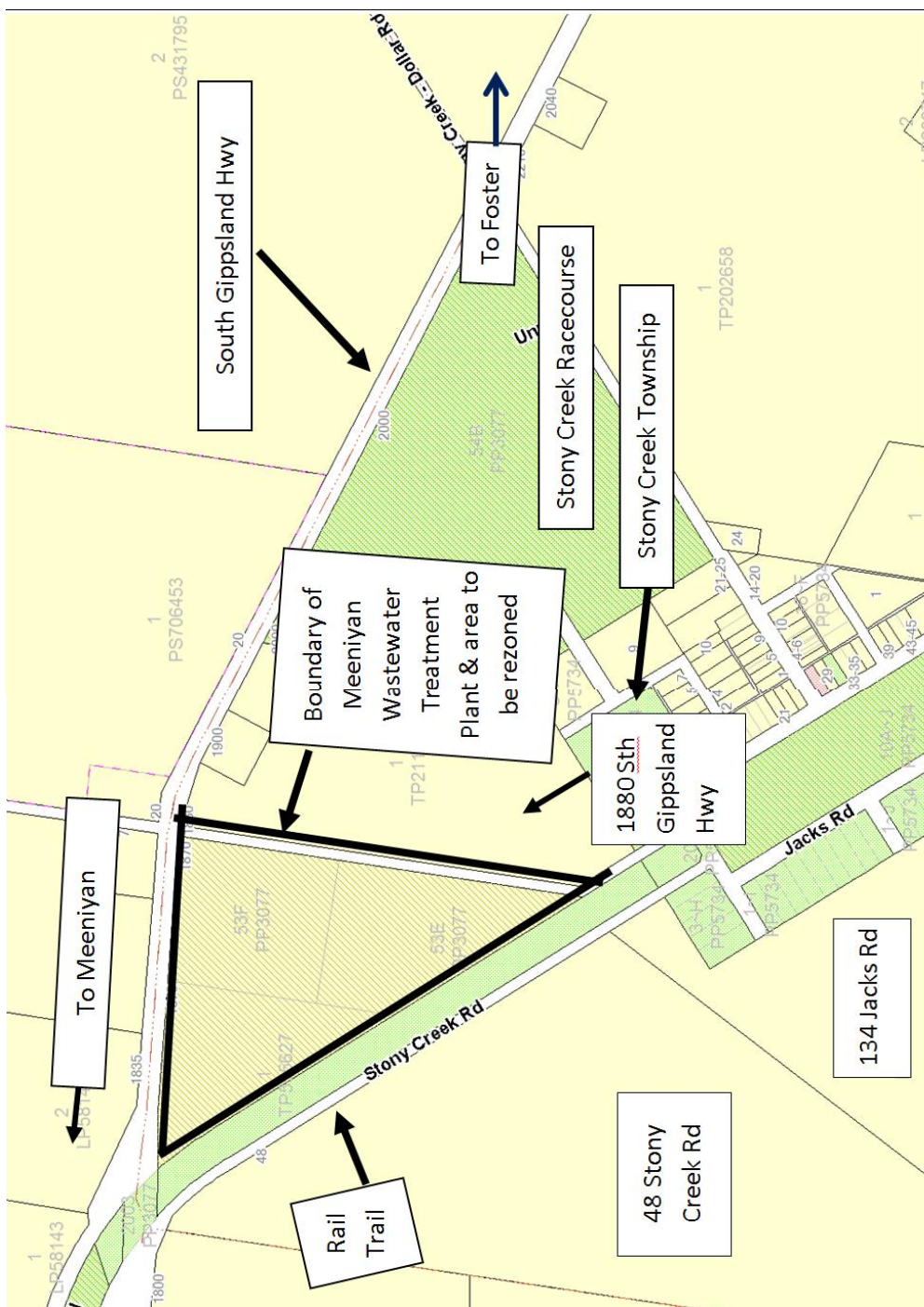
Zoning Maps

1. Amend Planning Scheme Map No.18 in the manner shown on the one attached map marked "South Gippsland Planning Scheme, Amendment C105"

Overlay Maps

2. Amend Planning Scheme Map No. 18 in the manner shown on the one attached map marked "South Gippsland Planning Scheme, Amendment C105".

End of document



C105 – Proposed rezoning – Meeniyian Wastewater Treatment Plant
Farming Zone to Public Use Zone 1 (Service and Utility) **▲ North**

Proposed Environmental Significance Overlay 4 – Sewage Treatment Plant and environs

