4.07.5 Council maintained Pressure Sewerage System on private property

<table>
<thead>
<tr>
<th>Directorate</th>
<th>Transport and Utilities Group</th>
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<tr>
<td>Responsible Officer</td>
<td>Manager</td>
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Contents

Council maintained Pressure Sewerage System on private property 1

Introduction 3

1(a) Maps 3

1(b) Dwellings and Commercial Developments 3

2 Connection requirements for existing dwellings 3

3 Connection of single, vacant allotments 4

4 Vacant allotments as at 27 October 2003 4

5 Non-Residential Development 4

6 New Subdivisions 4

7 Allocation of Spare Capacity to New Subdivisions 4

8 Special Circumstances Applying to Certain Land 5

Appendix 1 6

Background information on pressure sewerage schemes 6

Definition 6

General Description 6

Conventional Sewerage Systems VS Pressure Sewerage Systems 6

Ownership 6

Maintenance Agreement 7

Pumping Units 7

Delivery Line 8

Fees & Charges & Responsibilities 8

Appendix 2 13

Lot 6, DP 840046, 10 Georgia Lane, Candelo – Council Resolution: 13

Council resolutions Relating To Scenario 1 13
Lot 4 DP 1048386, Gillespie Street, Cobargo – Council Resolution 13
Lot 92 DP 826839, Hoyer Street, Cobargo – Council Resolution 13
Lot 6 DP 758219 Section 18, 7 Kameruka Street, Candelo – Council Resolution 13
Lot 2 Section 6 DP 997, 2 Bega Street, Wolumla – Council Resolution 14
Council Resolutions relating to Scenario 3 14
Introduction

This procedure applies to the Council sewerage schemes in the areas of Cobargo, Candelo, Kalaru, Wolumla and Wallaga Lake.

Appendix 1 of this procedure provides background information on the pressure sewerage system.

1(a) Maps

Council has prepared maps of each pressure sewerage scheme area. The map boundaries have been developed based on village zone boundaries with minor variation to allow for potential public health concerns relating to on-site sewerage systems. The maps depict the various types of development as follows:

- Assessments as at the date of the contract for the Bega Valley Sewerage Program contract being 27 October 2003).
- Existing approvals as at 27 October 2003, which contained a dwelling.
- Vacant allotments as at 27 October 2003.

1(b) Dwellings and Commercial Developments

Dwelling and commercial developments within the nominated sewer boundaries are required to connect to the scheme.

2 Connection requirements for existing dwellings

As at 27 October 2003, as identified in the appended maps, each householder will be liable for:

- $1,000 contribution to Council’s cost of the scheme (payable over ten years)
- Annual sewer charges from date of scheme commencement
- Cost to connect the dwelling to the pressure pump
- Decommissioning of the on-site sewerage management system
- Ongoing power costs for the pressure pump
- Council will provide the boundary kit, connection between the pump and the boundary kit, install the pump and wire pump to the switchboard.
- No Section 64 charges will be payable.
3  Connection of single, vacant allotments

Where a single vacant allotment comprises the whole of an assessment as at 27 October 2003;

The developer of a lot for a dwelling will be liable for:

- Plumbing to the pump unit from dwelling
- Providing a compliant household switchboard
- Section 64 charges
- Connected annual sewer charges
- Ongoing power costs for the pressure pump

4  Vacant allotments as at 27 October 2003

Vacant allotments which are only part of an existing assessment as at 27 October 2003:

- One lot within the assessment will attract the provisions of section 3 above i.e. one lot will be provided with a boundary kit at no cost.
- The developer of a lot for a dwelling will be liable for all matters specified in section 3 above.

5  Non-Residential Development

- For existing premises, where loadings are similar or less than a dwelling, the provisions of part 2 of the procedure will apply.
- For existing premises where loadings exceed that of a dwelling, charges, pump sizes, etc. will be based on the actual equipment required.
- For vacant lots, parts 3 or 4 will apply as per dwellings, but an individual assessment will be made of loadings, charges, pump sizes, etc. and will be based on the actual equipment required.
- For all new non-residential development the proponent will provide a report to Council as part of the Development Application, defining the expected hydraulic loadings of the development.

6  New Subdivisions

Subdivisions of land after 27 October 2003 will be required to provide all street sewerage infrastructure (and delivery systems where necessary).

Subdividers of vacant land will pay current Developer Servicing Charges per lot for every lot in the subdivision.

Subdividers of land containing lots with existing dwellings will pay Developer Servicing Charges only for the vacant allotments.

7  Allocation of Spare Capacity to New Subdivisions

Council will allocate spare treatment plant and system capacity on a “first approved first allocated” basis (i.e. capacity will be allocated as developments are approved).

Where proposed development results in necessary augmentation of treatment plants and/or associated mains then all costs will be the responsibility of the developer.
8  Special Circumstances Applying to Certain Land

Appendix 2 specifies special circumstances applying to certain land.
Appendix 1

Background information on pressure sewerage schemes

Definition

Pressure sewerage systems use the pressure created by a dedicated pumping unit on the serviced property to discharge the sewage generated on the property into a pressurised sewerage reticulation system.

This system applies to the Bega Valley Sewerage Program (specifically the villages of Cobargo, Candelo, Kalaru, Wallaga Lake and Wolumla).

General Description

Pumping units comprise a pump, storage vessel, electrical controls and alarm connected to the property power supply. A standard domestic unit is typically 1.0m in diameter and 2.0m deep.

The pump discharges through pipe laid at minimum depth, not at grade, and discharge either to a wastewater treatment plant or conventional gravity sewer system. The discharge heads of these domestic pumping units are sufficient to ensure sewerage is conveyed to the designated delivery points.

The pumping units have a grinder unit installed in them to reduce the domestically generated wastewater to a water slurry and this allows much smaller diameter pipelines to be used in both the household delivery line and the reticulation lines.

The pumping unit also includes a storage vessel with sufficient volume to be able to cater for either electrical failure or mechanical breakdown. The pumping unit also incorporates a reliable alarm system to warn the householder of a malfunction. The house owner will then notify the Council maintenance team, to effect repairs to the unit.

Conventional Sewerage Systems VS Pressure Sewerage Systems

Pressure sewerage systems may be used in preference to conventional sewerage systems, where they represent a more economical whole of life solution.

Typical applications:

- Large flat areas
- Where conventional mains will need to be laid quite deep
- In water charged ground
- In rocky areas or where there is a high rock table
- Where there is considerable distance between properties, in rural villages; and
- Where existing development might make a conventional scheme more expensive.

Ownership

Council will own and maintain the pump unit and associated fittings and connection pipework downstream of the pump.

The reliability of the pump will be a key element of the maintenance and hence the pump unit must be approved by Council. Council staff will need to be satisfied as to the likely operational and maintenance cost of these units as part of the assessment and approval process.
A maintenance agreement between the Bega Valley Shire Council and the property owner sets out the provision of a maintenance service to the householder under a pressure system. This agreement will define what is expected of each party, the nature of the maintenance arrangement that has been entered into and how access will be gained to any system assets that are publicly owned. A Householder Pump Owner’s Manual will be provided to ensure residents know what to do if problems arise.

Pumping Units

The pumping unit will be installed as a total package, with one pumping unit to be installed per domestic property in general. Joint arrangements are undesirable except where a duly constituted body corporate or similar can take responsibility for the notification of alarms from the pumping unit.

- The pumping unit will have a minimum size in accordance with the requirements of the NSW Department of Health (a minimum storage capacity of 600L for single domestic applications).
- Where there is a swimming pool to be serviced by the pressure sewerage unit, the pool owner must install an appropriate sized storage retention tank to control backwash discharges to the pumping unit with restricted outflow.
- Pump capacity and storage vessel requirements for multi-occupancy dwelling or strata title applications will be site specific and require specialist input to determine appropriate tank size and the required number of pumping units.
- For commercial applications, pump unit requirements will be site specific. A design incorporating a basic form of hydraulic model will be required from an accredited hydraulic designer.
- The location of the pumping unit should be as near to the residential dwelling as is practicable and should be located in a non-trafficable area. Access to the unit will be required from time to time for maintenance and the householder should not unreasonably limit this access.
- The pumping units are to have both audible and visual alarms fitted to them, with the audible alarm to comply with EPA noise requirements and to be fitted with a silencing switch. The visual alarm should be readily visible to the residents, and close neighbours but should be such that only the Council maintenance staff can turn it off. The alarm location must also be in sight of the pump unit. The alarm should however automatically switch off, if the alarm is triggered by a temporary surcharge and the volume in the storage vessel returns to normal operational parameters.
- The pumping unit is to be wired into the household switchboard via a separate circuit breaker. Each pump unit is to have an external (15 Amp) power connection point for portable generator connection.
- The pumping unit is to be vented through the top of the unit or household plumbing system.
- The pumping unit is to include an anti-siphon device.
- The pumping unit is to include an approved lifting chain or rope.
- The pumping unit is to be protected against over-pressure conditions.
- The pump unit is to contain non-return and isolating valves that allow maintenance to be conducted to the pump unit, as well as removal of the unit if required. All connections are to be such that they facilitate the quick removal of the pumping units.
- All mechanical and electrical fittings are to be in accordance with relevant Australian Standards.
- The pumping units are to be ‘childproof’ and not readily accessible by the resident.
• No confined space entry requirements should be required in maintaining these units.

**Delivery Line**

The delivery line must be capable of being isolated from both the pumping unit and the reticulation main.

• The route for the household connection pipelines should be appropriately marked on a household drawing that will become the work as executed drawings. Ideally the property owner is to sign this drawing as the agreed pipeline route before construction commences.

• Where possible, the pipeline should be parallel with existing boundaries. Approval for the householder to discharge into the Council sewerage pipe system will not be permitted without approved service location drawings being provided to the Council.

• The boundary valve arrangement shall consist of an isolating valve, tee-piece and non-return valve. These valves are to be located inside a designated metre pit or valve box, at the property boundary.

• The tee-piece is to be provided in such a way that it can be used to:
  o Check on the system pressure
  o Release air from the system
  o Be used as a flush point
  o Provide an emergency connection to a tanker
  o Clean the pipeline in case of system blockages.

• If the reticulation main is on the other side of the road to the property connection, directional drilling under the road is required as well as an additional non-return valve near the connection to the reticulation main.

• The pipeline must be from a continuous roll of medium or high density black polyethylene, and capable of withstanding a minimum static head of 80m. All fittings must be standard readily available fittings, applicable to these pipes.

• Minimum pipe size for residential connection is to be 32mm nominal internal diameter.

• The pipeline colour is to be black or black striped and laid at a minimum depth of 600mm from the top of the pipe to the ground level. A highly visible marker tape (and energisable trace wire) is to be laid at a depth of 200mm immediately above the pipeline. Appropriate markers are to put at the boundary.

**Fees & Charges & Responsibilities**

• Maintenance cost for the pump unit and downstream piping will be included in the Council annual sewer charges.

• Power costs are the responsibility of the property owner.

• New connection charges depend on the size of the pump unit used and will be reviewed annually in Council’s schedule of Fees and Charges.

• A service fee will apply to all service visits beyond two per year per property except where the installed equipment has malfunctioned.
Procedure 4.06.5 Council maintained Pressure Sewerage System on private property
Version: 4
Issued: 27 February 2018
Next review: November 2019

MAP 2: Wolumla Sewer Project
Existing Dwellings and Assessments as at 27/10/2003

FUTURE VILLAGE SEWER AREA 'C' (long term)
(future areas to be staged)
5.03ha zero allowance until area to east developed

FUTURE VILLAGE SEWER AREA 'D' (long term)
(future areas to be staged)
7.81ha (61 lot capacity estimate)

FUTURE VILLAGE SEWER AREA 'A'
11.05ha (88 lot capacity estimate)

FUTURE VILLAGE SEWER AREA 'B'
(future areas to be staged)
9.87ha (79 lot capacity estimate)

CAPACITY CALCULATIONS
1. Existing dwellings = 151et
2. Existing loadings July 2006 including
   existing commercial = 160et
3. Plant capacity 800ep @ 2.4ep/et = 333et
4. Estimated spare capacity as at July 2006 = 173et

- Wolumla Assessments
- Allotments containing no dwelling 2003 (90)
- Allotments containing a dwelling 2003 (151)
- Allotments considered unsuitable for building
Procedure 4.06.5 Council maintained Pressure Sewerage System on private property
Version: 4
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MAP 3: Kalaru Sewer Project Existing Dwellings and Assessments as at 27/10/2003

FUTURE SEWER AREA 'A'
4.96ha (for business, allow 10 lots for industrial)

FUTURE SEWER AREA 'B'
11.16ha (69 lot capacity)

CAPACITY CALCULATIONS:
1. Existing dwellings = 72et
2. Countryside Caravan Park
   38 long term sites @ 1et = 38et
   134 short term sites @ 0.63et = 84et
   38 + 84 = 122et
3. Existing loadings July 2003 = 194ep
4. Plant capacity 600ep @ 2.4ep/et = 1393et
5. Estimated spare capacity as at July 2003 = 139et

INITIAL VILLAGE SEWER BOUNDARY

- Kalaru Assessments
- Two Dwellings
- Subdivision Pending
- Allotments containing no dwellings (6)
- Allotments containing dwellings (72)
Appendix 2

Lot 6, DP 840046, 10 Georgia Lane, Candelo – Council Resolution:
The owners of Lot 6 DP 840046, Candelo be offered a period of 12 months to pay for the headworks of $5,335 by way of monthly instalments commencing from date of connection.

Council resolutions Relating To Scenario 1

That the following property owners be required to connect to reticulated sewer once commissioned subject to payment of headworks of $5,335 as at connection plus payment of the subsidised connection fee of $1,000 payable in 10 equal annual instalments.

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<thead>
<tr>
<th>Property</th>
<th>Street</th>
<th>DA#</th>
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<tr>
<td>Wallaga Lake Sewer Project</td>
<td>35 Beauty Point Road</td>
<td>2004.0105</td>
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<tr>
<td>Lot 28 DP 23653</td>
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<td>Candelo Sewer Project</td>
<td>18-20 Bega Street</td>
<td>2004.0492</td>
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<td>Lot 3 DP 758219 Sec. 15</td>
<td>10 Georgia Lane</td>
<td>2003.0944</td>
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<td>Lot 6 DP 840046</td>
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<td>Kalaru Sewer Project</td>
<td>Old Wallagoot Road</td>
<td>2004.0041</td>
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<td>Lot 291 DP 1061487</td>
<td>25 Old Wallagoot Road</td>
<td>2003.1038</td>
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Lot 4 DP 1048386, Gillespie Street, Cobargo – Council Resolution

The owners of Lot 4 DP 1048386, Gillespie Street, Cobargo be required to connect to the reticulated sewerage scheme subject to a prior payment of $12,500 (pump infrastructure) if paid in 2006 with annual indexation to apply to any payment received after 2006 plus payment of the $1,000 subsidised connection fee in 10 equal annual instalments.

Should Development Consent 2003.0917 lapse, then any subsequent application for a dwelling would attract the full sewer and headworks charge applicable at that time.

Lot 92 DP 826839, Hoyer Street, Cobargo – Council Resolution

The owners of Lot 92 DP 826839, Hoyer Street, Cobargo be required to connect to the reticulated sewerage scheme for a total cost of $10,700 plus indexation for each year since consent issued until the time payment is received.

Should Development Consent 2004.0722 lapse, then any subsequent application for a dwelling would attract the full sewer and headworks charge applicable at that time.

Lot 6 DP 758219 Section 18, 7 Kameruka Street, Candelo – Council Resolution

The owner of Lot 6 DP 758219 Section 18, 7 Kameruka Street, Candelo be required to connect to the reticulated sewer scheme for a total cost of $15,200 subject to indexation for each year from issue of consent until payment.
is made. Further that Council permit the owner to commence construction of the dwelling at their own risk with regard to connection to sewer with the payment to be made at time of connection.

Should Development Consent 2005.0515 lapse, then any subsequent application for a dwelling would attract the full sewer and headworks charge applicable at that time.

**Lot 2 Section 6 DP 997, 2 Bega Street, Wolumla – Council Resolution**

The owner of Lot 2 Section 6 DP 997, Wolumla be offered a period of 12 months to pay the headworks by way of monthly instalments and Council agree not to draw down on her bank guarantee for the period of 12 months.

**Council Resolutions relating to Scenario 3**

That the following property owners be required to connect to reticulated sewer subject to payment at time of connection of $12,500 for pump kit and fitting plus headworks of $5,335. Further that indexation apply to these payments on an annual basis from February 2006 and that should the development consents listed below lapse, any new development be required to meet the current advertised connection cost to sewer.

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<tr>
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<td>Wolumla Sewer Project</td>
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<td></td>
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<tr>
<td>Lot 21 DP 3808 Sec. 2</td>
<td>19 Phillip Street</td>
<td>2005.0290</td>
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<td>Lot 13 DP 997 Sec. 6</td>
<td>3 Clarke Street</td>
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<td>Wallaga Lake Sewer Project</td>
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<tr>
<td>Lot 13 DP 794078</td>
<td>Endeavour Drive</td>
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