



# ON-SITE SEWAGE MANAGEMENT POLICY

## P2.0199.1

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# ON-SITE SEWAGE MANAGEMENT POLICY

**DIVISION:** Planning and Environment

**BRANCH:** Environment and Regulatory Services

**CATEGORY:** 2

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# PART 1 - INTRODUCTION

## 1. BACKGROUND

- 1.1 Camden Local Government Area (LGA) covers an area of approximately 206 square kilometres and is approximately 61km south west of the Sydney CBD. It is estimated that there are approximately 3000 on-site sewage management (OSSM) systems installed within the Camden LGA.
- 1.2 Existing OSSM systems vary greatly in age, design, installation, user loading and operation. User knowledge and maintenance standards greatly influence the performance of these systems.
- 1.3 At the time of writing this policy, the unsewered areas of Camden include parts of Cobbitty, Catherine Field, Bringelly, Cawdor, Rossmore, Leppington, Bickley Vale, Ellis Lane, Grasmere, Kirkham, sections of Elderslie and Spring Farm as well as isolated streets/properties where Sydney Water Corporations (SWC's) reticulated sewerage is unavailable.
- 1.4 Council is committed to implementing a program that regulates the installation and ongoing operation of OSSM systems to ensure best practice and to protect public health and the environment.
- 1.5 This policy seeks to:
  - Adopt a partnership approach with property owners, installers and service agents to support continual improvement and sustainable on-site sewage management
  - Define Council's role in the effective regulation of OSSM systems in the Camden LGA to protect public health and the environment
  - To set out the criteria and objectives for the assessment of OSSM systems
  - To set out the processes for the approval and installation of new OSSM systems and the on-going operation of OSSM systems
  - Assist Council to prioritise resources for the efficient regulation and monitoring of OSSM systems within the LGA.

## 2. OBJECTIVE

- 2.1 The objectives of this policy are to ensure that OSSM systems in the Camden LGA make appropriate provision for the following:
  - Preventing the spread of disease by micro-organisms
  - Preventing the spread of foul odours
  - Preventing contamination of water
  - Preventing degradation of soil and vegetation
  - Discouraging insects and vermin

- Ensuring that persons do not come into contact with untreated sewage or effluent (whether treated or not) in their ordinary activities on the premises concerned
- The re-use of resources (including nutrients, organic matter and water)
- The minimisation of any adverse impacts on the amenity of the land on which it is installed or constructed and other land in the vicinity of that land.<sup>1</sup>

### **3. SCOPE**

3.1 This policy applies to:

- All unsewered properties in the Camden LGA
- Any seweraged property in the Camden LGA that is required to pump to SWC infrastructure
- Existing and proposed domestic OSSM systems
- Existing and proposed commercial OSSM systems
- All subdivisions of land within the unsewered areas of the Camden LGA
- All development including development, modification and review applications, complying development and exempt development for new, amended or altered works on land defined above.

### **4. EXEMPTIONS**

4.1 There are no exemptions to this policy. Certain installations that are unusual or large, due to particular circumstances, may not be covered in detail by this policy. Such systems may require separate or additional application and approval from the relevant state government authorities.

### **5. VARIATIONS**

5.1 All new unsewered developments (including an extension to an existing development) shall comply with this policy. The Manager of Environment and Regulatory Services may consider variations to this policy where it can be demonstrated that:

- There will be no adverse impacts to public health and the environment.
- The variation meets legislative requirements, Australian Standards and industry standards.

5.2 For existing development, Council will assess each application based on its merits.

### **6. RELATIONSHIP TO OTHER DOCUMENTS**

6.1 This policy has been prepared with consideration of:

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<sup>1</sup> Local Government (General) Regulation 2021 – Reg 29

- The *Local Government Act 1993*
- The *Local Government (General) Regulation 2021*
- The Environment and Health Protection Guidelines for On-site Sewage Management for Single Households
- The *Protection of the Environment Operations Act 1997*
- The NSW Guideline for Greywater Reuse in Sewered, Single Household Residential Premises
- Designing and Installing On-Site Wastewater Systems– A Water NSW Current Recommended Practice
- Australian Standards:
  - (AS/NZS 1547:2012) On-Site Domestic Wastewater Management
  - (AS/NZS 1546.1:2008) On-site domestic wastewater treatment units Septic Tanks
  - (AS1546.3:2017) – Onsite domestic wastewater treatment units Secondary treatment systems
  - (AS/NZS 3500) Plumbing and Drainage.

6.2 In the event that relevant legislation, guidelines or Australian Standards are revised after the adoption of this policy, the revised documents are to replace the repealed documents.

## 7. DEFINITIONS

7.1 Refer to Appendix 1 of this policy.

## PART 2 - POLICY STATEMENT

### 8. APPROVAL TO INSTALL AN ON-SITE SEWAGE MANAGEMENT SYSTEM

#### 8.1 INSTALLATION APPROVALS

8.1.1 The installation, construction or alteration of an OSSM system requires approval from Council under section 68 of the *Local Government Act 1993*. An application to install/construct/alter shall be made to Council for:

- Any new installations
- Any alterations to existing installations (including any additional drainage works or increase in the number of bedrooms to an existing dwelling).

#### 8.2 PERFORMANCE CONSIDERATIONS

8.2.1 Council will consider the following during site assessments for installation approvals:

- Impacts, or potential impacts, on the water catchment
- Impacts, or potential impacts on public health and the environment
- Suitability of the site
- Suitability of any proposed or existing systems.

### 8.3 ASSESSMENT PROCESS

8.3.1 The assessment process related to an application to install an OSSM system is detailed in Appendix 2 of this policy.

8.3.2 Council will make determination of an application within 40 days in accordance with the requirements of section 105 of the *Local Government Act 1993*.

Note: This timeframe is suspended when additional information is requested by Council. Where additional information is required, Council will write to the applicant and request further details.

8.3.3 The application will then be:

- **Approved** subject to conditions of approval and amendments where required, or
- **Refused** if it is established that the proposal would not provide a satisfactory level of human health protection and environmental wellbeing. Council will provide details supporting the decision to refuse an application.

#### NOTE:

- An applicant or his/her contractor shall not commence work on the installation of an OSSM system until an Approval to Install a sewage management system has been obtained from Council.
- Council is both the Consent Authority and Certifying Authority for the approval and installation inspections associated with OSSM systems covered by this policy.

### 8.4 APPLICATION TO INSTALL PROCESS

8.4.1 Prior to submitting an application to install an OSSM system for a domestic premises, the owner is required to obtain the sizing for a Sustainable Effluent Application Area (SEAA) for their site from Council. This information is obtained by submitting a Request for a SEAA form to Council and paying the prescribed fee. The Request for a SEAA form can be downloaded from Council's website.

8.4.2 When submitting an Application to Install, Construct or Alter a Sewage Management System, the applicant shall ensure that it is accompanied by the supporting documentation detailed in Appendix 3 of this policy.

## 8.5 REQUIREMENT FOR AN OSSM SYSTEM TO BE ACCREDITED

8.5.1 Council will only approve domestic systems that are accredited by NSW Health.

## 8.6 DESIGN WASTEWATER FLOW ALLOWANCES

8.6.1 To ensure adequate treatment capacity of the proposed treatment system, the following design wastewater flow allowance is to apply, unless otherwise stated by Council.

- **Residential development number of people (equivalent persons):** For residential development, the design daily flow calculations shall be based on the maximum potential occupancy of the dwelling, being the number of bedrooms plus two. Council reserves the right to increase the occupancy rate per bedroom for larger dwellings where Council believes the base figures are insufficient for the size and design of the dwelling.

Council may classify studies and other rooms that have the potential to be used as sleeping rooms as bedrooms.

- **For commercial development:** Design flow allowances shall comply with the relevant Australian Standards and guidelines.

## 8.7 SIZING OF EFFLUENT APPLICATION AREAS

- For all sites, the minimum area permitted for onsite disposal of effluent shall comply with the SEAA provided by Council.
- Council does not accept the submission of wastewater reports for domestic allotments unless there are extenuating circumstances in which case Council may request one. Any such request shall be at the discretion of Council. Prior to preparing any wastewater report, the owner shall seek pre-lodgment advice from Council's Environmental Health Officers.

Wastewater reports (if requested by council) shall use the following minimum figures when undertaking nutrient calculations:

- i. Total Nitrogen calculations are to be based on an expected quality of wastewater after treatment in an AWTS of 30mg/L
  - ii. Total Phosphorus calculations are to be based on an expected quality of wastewater after treatment in an AWTS of 12mg/L.
- A reserve area must be incorporated into the design of all systems.
  - For existing Council approved AWTS that require tank replacement due to structural or performance failure, Council may consider allowing the previously approved effluent application area design and sizing to remain. This shall be at the discretion of Council and will only be considered if Council deems that the performance of the existing related effluent application area is satisfactory.

## 8.8 RESERVE AREAS



8.8.1 A reserve area is an area set aside to accommodate future replacement related effluent application areas. The reserve area is not required to be installed at the time of the OSSM system installation. However, no development is permitted on the reserve area and this land is to be made available if required in the future for effluent disposal.

#### 8.8.2 Sizing of Reserve Areas:

- For an AWTS with fixed surface spray or subsurface drip irrigation, the reserve area shall be 50% the size of the primary area.
- Where the disposal area incorporates the use of evapo-transpiration beds, transpiration beds, trenches or mounds, irrespective of system type, the minimum reserve area required is 100% of the total primary area plus sidewall allowance.

8.8.3 The reserve area shall be protected from any development that would prevent it being used in the future.

### 8.9 DESIGN OF RELATED EFFLUENT APPLICATION AREAS (REAA)

8.9.1 The design of any REAA must comply with the relevant Australian Standards and Guidelines detailed in section 6 of this policy. REAAs shall be located on natural ground only (i.e. not to be located on cut or filled land).

#### 8.9.2 IRRIGATION DESIGN – applicable to secondary treated effluent only

- For AWTS irrigation areas: fixed surface spray, or sub-surface drip irrigation shall be used. The irrigation of treated effluent from the AWTS shall be restricted to within a designated REAA. Appendix 4 of this policy shows the detail that is to be provided on a site plan for fixed spray or subsurface drip irrigation.
- Council may consider the use of semi-fixed irrigation only if the following are complied with:
  - The property is not located within an Environmentally Sensitive Area.
  - The distribution line shall be buried between the tank(s) and the REAA.
  - The REAA shall be designed to incorporate quick release coupling valves (QCV) whereby a maximum 15m irrigation line shall be attached with a minimum of two sprinklers per line.
  - The applicant shall demonstrate that the REAA consists of a sufficient number of quick release coupling valve points to ensure even coverage of the entire REAA.
  - Moveable hoses shall be limited in length so that they are not able to extend outside the boundaries of the REAA.
  - The pump within the AWTS shall be suitably sized for the proposed use.

- Compliance with the buffer distances detailed in section 8.10 of this policy can be demonstrated.

### **8.9.3 EVAPORATIVE TRANSPIRATION AREA (ETA) BEDS, TRANSPIRATION BEDS AND MOUNDS:**

The design of the beds or mounds must comply with Australian Standards.

- Transpiration bed design for a conventional system must comply with Appendix 5 of this policy.
- ETA beds connected to an AWTS shall be pressure dosed and designed in accordance with the 'Designing and Installing On-Site Wastewater Systems – A Water NSW Current Recommended Practice'.
- When designing an OSSM system using ETA beds, transpiration beds or mounds, it is recommended that the design incorporates the use of two or more beds or mounds (refer to Appendix 6).

This will assist in managing hydraulic loading during periods of wet weather or peak use and will allow resting of effluent application areas, in turn promoting longevity of the REAA.

- Council may consider the installation of a single bed where the total size does not exceed the recommended maximum length or width specified in the Australian Standards.

## **8.10 BUFFER DISTANCES**

- 8.10.1 Buffer distances are the setback requirements (measured in metres) between the effluent disposal area and other features on a site or surrounding area. They are designed to ensure that your OSSM system is operating with minimal impact on public health and the environment.
- 8.10.2 Buffer distances may vary depending on the type of system and level of treatment of the wastewater.

**Table 1: STANDARD BUFFER DISTANCES**

<b>SYSTEM</b>	<b>BUFFER DISTANCES – PRIMARY TREATED EFFLUENT</b>	<b>BUFFER DISTANCES – MINIMUM OF SECONDARY TREATED EFFLUENT</b>
all land application systems	<ul style="list-style-type: none"> <li>• 100 metres to permanent surface waters (river, stream, lake etc.).</li> <li>• 250 metres to domestic groundwater well.</li> <li>• 40 metres to other waters (farm dams, intermittent waterways and drainage channels).</li> </ul>	<ul style="list-style-type: none"> <li>• 100 metres to permanent surface waters (river, stream, lake etc.).</li> <li>• 250 metres to domestic groundwater well.</li> <li>• 40 metres to other waters (farm dams, intermittent waterways and drainage channels).</li> </ul>
surface spray irrigation (including semi-fixed)	not applicable	<ul style="list-style-type: none"> <li>• 6 metres if area up-gradient and 3 metres if area down-gradient of driveways and property boundaries.</li> <li>• 15 metres to dwellings and any other habitable building.</li> <li>• 3 metres to paths and walkways.</li> <li>• 6 metres to swimming pools and any other non-habitable building or structure.</li> <li>• 40m to any market garden</li> </ul>
sub-surface irrigation or surface drip and trickle irrigation	not applicable	<ul style="list-style-type: none"> <li>• 6 metres if area up-gradient and 3 metres if area down-gradient of swimming pools, property boundaries, driveways, paths, dwellings and any other non-habitable building or structure.</li> <li>• 20 metres if area up-gradient and 10 metres if area down-gradient of any market garden.</li> </ul>
absorption or evapo-transpiration or mound system	<ul style="list-style-type: none"> <li>• 12 metres if area up-gradient and 6 metres if area down-gradient of property boundary.</li> <li>• 6 metres if area up-gradient and 3 metres if area down-gradient of swimming pools, driveways, paths and buildings.</li> <li>• 20 metres if area up-gradient and 10 metres if area down-gradient of any market garden.</li> </ul>	<ul style="list-style-type: none"> <li>• 6 metres if area up-gradient and 3 metres if area down-gradient of swimming pools, paths, property boundaries, driveways and buildings.</li> <li>• 20 metres if area up-gradient and 10 metres if area down-gradient of any market garden.</li> </ul>
<p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li>1. Primary and Secondary Treated Effluent relates to effluent quality discharge at the exit of the tank prior to being applied to the land application area (REAA).</li> <li>2. Buffer distances shall be measured in a direct line from the feature to the disposal area/tank(s).</li> <li>3. Council may impose additional site specific buffer distances.</li> <li>4. Council will assess each application and or existing commercial system based on its merits.</li> </ol>		

### **8.10.3 ADDITIONAL BUFFER DISTANCES**

#### **8.10.3.1 Market gardens:**

Any proposed new system or replacement system for a property that incorporates market gardens shall comply with the following:

- The REAA is required to be fenced.

- Fruit/vegetables/herbs or any consumables are not to be grown on top of or within the designated REAAs and associated buffer zones.
- The REAA is required to be turfed unless sufficient existing ground cover (grass) is provided.

**NOTE:** As an alternative for a property with existing market gardens an OSSM system which requires upgrading or replacement, Council may consider the installation of a pump-out system. In this instance the dwelling may need to be provided with a separate water meter (sub-meter/check meter).

#### 8.10.3.2 Properties located adjacent to an existing market garden:

Any proposed new system or replacement system for a property that is located adjacent to an existing market garden shall be required to comply with the buffer distances detailed in Part 2 – Section 8.10 of this policy. Where compliance with this requirement is unable to be achieved, Council may condition alternative requirements such as buffer zone plantings and or alternative application methods.

#### 8.10.3.3 Retaining Walls:

A minimum buffer distance (based on the level of treatment of the wastewater) is required between any retaining wall and REAA.

Level of Treatment	Buffer distance (minimum)
Primary	2m downslope and where flat, or 6m upslope of the feature
Secondary (disinfected)	2-6m (<3m only for drip irrigation on low rate)

*Source: Water NSW Designing and Installing On-Site Wastewater Systems*

#### 8.10.3.4 Inground Water Tanks:

- Where the inground water tank is not being used as a potable water source the OSSM system shall be a minimum of six (6) metres downslope from any in-ground water storage tank.
- Where the inground water tank is being used as a potable water source the OSSM system shall be a minimum of fifteen (15) metres from any inground water storage tank.
- The overflow from any water tank shall be directed away and downslope of any OSSM system (including tank and REAA).
- The overflow from any water tank shall not be piped through the REAA.
- Where water tanks provide water for potable/domestic use separation distance between services shall comply with Australian Standards.

#### 8.10.3.5 Septic Tanks & Treatment Tanks:

- A minimum buffer distance of five metres shall be provided between any septic and or treatment tank(s) and any property boundary.
- The septic and or treatment tanks must be located a minimum of 2.5 metres from any dwelling, habitable building, or other structure.

NOTE: This figure is based on the assumption that the installation will be in clay soils where the angle of repose is 45<sup>0</sup>, (i.e. the depth of the tank is equal to the distance to the base of the footings of the dwelling).

- Where possible, the location of the tank(s) is expected to comply with the buffer distances as detailed in Table 1 for permanent surface waters, groundwater wells and other waters.
- The location of the tank(s) shall be a minimum of six metres from any market garden.
- The join between the tank and the tank lid shall be 100mm above ground level to prevent the ingress of surface water.
- Where risers are installed, the manufacturer may be required by Council to provide certification (in writing) that suitable safe access will still be provided for servicing.

## 8.11 RISERS

8.11.1 Septic tank(s) and or treatment tank(s) shall be appropriately located on the site to eliminate or minimise the need for the use of risers. Where the site constraints require the use of a riser ring, compliance with the following shall be demonstrated:

- Single whole-of-tank risers shall be used (individual man hole risers will not be accepted).
- Risers shall be appropriately cast, fitted, and sealed and shall be protected against lateral movement and ingress of water.
- Risers shall ensure that the design of the system is serviceable (all serviceable components of the system shall be raised to the tank lid opening).
- Risers used shall be designed and installed in accordance with AS/NZS 1546:2008.

## 8.12 FLOOD POTENTIAL

- 1% AEP (1:100) Flood Contours  
The location of the onsite wastewater treatment facility (tanks) shall be above the 1% AEP (1:100) flood contour (the tank(s) shall be located above the flood line on flood free land).
- 5% AEP (1:20) Flood Contours

No portion of the REAA is permitted to be located below the 5% AEP (1:20) flood contour.

- Where there is potential for the REAA to be inundated by surface water run-off from roads or other properties, swales or bunding shall be constructed upslope of the application area to direct the water around such areas.
- Where an existing system servicing an existing development is to be renewed on an allotment that is unable to comply with this section of this policy, a wastewater report may be provided by a suitably qualified wastewater consultant to support the application. The wastewater report shall consider the effects of flooding on the proposed system's tank(s) and disposal area and provide mitigation measures to minimise the impacts of flooding on the system. Advice from a Council Environmental Health Officer shall be sought prior to engaging a wastewater consultant.

### **8.13 PUMP-OUT SYSTEMS**

8.13.1 Pump-out systems are not considered a viable or sustainable on-site wastewater management technique and will be considered as a last option and only on existing sites where existing site constraints or environmental or health risks preclude other options.

- New development that relies on the use of a pump-out system will not be supported by Council.
- Council will not consider pump-out systems unless suitable safe road access for the pump-out truck can be provided.
- Applications for a pump-out system must comply with the following:
  - The pump-out system shall consist of a septic tank and collection well.
  - The collection well shall be sized to contain a minimum of one week's daily flow plus an additional minimum 25% safety factor.
  - The collection well shall be suitably anchored during installation in accordance with the manufacturer's recommendations to prevent hydrostatic uplift after removal of effluent.
  - The system shall be pumped out weekly (unless otherwise approved by Council).
  - A suitable service provider is to be engaged to pump-out the tank/s and dispose of the waste at a licensed wastewater facility.
  - A 50mm draw off line shall be provided to the front property boundary.
  - The draw off line shall be fitted with a gate valve and a cam lock fitting and cap.

- The pump-out line shall be protected from damage.
- The holding well shall be fitted with a highwater alarm that is both visual and audible.

## **8.14 DUAL OCCUPANCY & SECONDARY DWELLINGS**

8.14.1 Any proposal for a new or altered system for a dual occupancy or secondary dwelling, including both attached and detached dwellings and any other building deemed by Council as self-contained shall comply with the following:

- Each dwelling shall have its own independent sewage management facility, including an independent designated REAA.
- Effluent disposal (for any Aerated Wastewater Treatment System) should be via a sub-soil method.
- Where fixed surface irrigation area(s) are proposed, they must be fenced (including provisions for an access gate) to define the limits of the disposal area and to impede the unintended passage of persons.
- Where a secondary dwelling consists of no more than one potential sleeping room Council may consider the connection of the secondary dwelling to the main dwelling's OSSM system subject to the following criteria being met:
  - Only domestic sized systems up to total 10 Equivalent Population (EP) accredited by NSW Health will be considered.
  - If the existing system is an AWTS and it is greater than five (5) years old, Council may require water quality sampling and testing to be undertaken in accordance with Councils requirements to ensure that the system is operating within its accreditation requirements.
  - EP shall be calculated per dwelling and then added to determine the total EP.
  - Disposal of effluent shall be via a sub-soil method (spray irrigation will not be approved).

## **8.15 SUBDIVISIONS**

- Any proposed unsewered subdivision in the Camden LGA will need to demonstrate that each allotment can comply with the SEAA provided by Council and shall be designed to accommodate a minimum of a four (4) bedroom dwelling. The SEAA required for a proposed subdivision can be obtained by submitting a 'Request for a Sustainable Effluent Application Area – Proposed Subdivision' form to Council and paying the prescribed fee.
- Where a proposed subdivision includes an existing dwelling, the assessment shall demonstrate that the subdivision will not impact on the dwelling's existing OSSM system.

- If the proposed subdivision impacts on any existing OSSM system that services a development which is to remain part of the subdivision, the system will need to be upgraded and/or replaced in accordance with this policy.
- Where the proposed subdivision does not impact on the existing dwelling's OSSM system, it must be demonstrated that sufficient land is available to upgrade the system in accordance with this policy in the event the system fails in the future.

## **8.16 COMMERCIAL SYSTEMS**

- 8.16.1 Any proposal not of a domestic nature (including domestic sized systems receiving commercial or industrial type waste), that is expected to receive a daily wastewater volume of between 10EP and 2500EP, is typically regarded as a commercial sewage management system.
- 8.16.2 An application for a Commercial OSSM system must be supported by a wastewater report completed by a suitably qualified wastewater consultant. The wastewater consultant shall ensure that all information detailed in Appendix 7 of this policy is addressed within the wastewater report.
- 8.16.3 At a minimum nutrient calculations shall be based on the Nitrogen and Phosphorus figures detailed in section 8.7 of this policy.
- 8.16.4 Pre-lodgement advice should be sought from Council to confirm the supporting information that needs to be provided before an application form is submitted to 'Install a Commercial Sewage Management System'.

## **8.17 COMMISSIONING OF A SYSTEM**

- 8.17.1 Prior to operation of the OSSM system, the system shall be fully commissioned. Commissioning has occurred only when the following has been satisfied:
- On completion of installation of the OSSM system, it shall be inspected and checked by the manufacturer or the manufacturer's agent. The manufacturer or agent is to certify that the system has been installed and commissioned in accordance with its design, conditions of accreditation and any additional requirements specified by Council. Certification shall be provided in writing directly from the manufacturer or agent to Council.
  - Final Council inspection (including approval to operate). The owner and or applicant shall ensure that they have arranged for a final inspection to be conducted by a Council officer. The Council officer will check that the tanks and disposal area have been installed in accordance with the Conditions of Approval issued by Council.

**NOTE:** Council will not issue an approval to operate a sewage management system unless Council has completed a satisfactory final inspection and received a commissioning certificate from the manufacturer or agent for the system.



## 9. APPROVAL TO OPERATE

### 9.1 APPROVAL REQUIRED TO OPERATE A SEWAGE MANAGEMENT SYSTEM

9.1.1 Section 68 of the *Local Government Act 1993* states that Council approval is required to operate an OSSM system. This includes both new and existing OSSM systems.

9.1.2 Approval to operate inspections are undertaken by Council as part of the following:

- On-going approval to operate inspections across the Camden LGA (refer to appendix 8 of this policy).
- At the completion of the installation/alteration of an OSSM system.
- Pre-purchase inspection – upon request as part of the change of ownership of an unsewered property.

9.1.3 The Approval to Operate issued by Council expires annually and renewal fees are attached to the annual rates notice for the property. Payment of the annual fee automatically renews the Approval to Operate (unless revoked by Council).

9.1.4 The Approval to Operate an OSSM system is issued to the owner of the property (not the property itself). New owners, either by acquisition of established property or installation of new systems, are therefore required to submit an Application for Approval to Operate an OSSM to Council.

### 9.2 INSPECTION REGIME

9.2.1 Existing installations which, during the course of inspections carried out by Council, are found to be functioning in a manner that meets the applicable performance standards and not requiring alteration, will be given a risk classification. A rating given from the risk assessment inspection will be:

- For domestic systems:
  - Low (requiring re-inspection in six years), or
  - Moderate (requiring re-inspection in four years), or
  - High (requiring re-inspection in two years).
- Commercial systems require annual inspections and will be subject to an hourly inspection rate in accordance with Council's adopted fees and charges.

#### NOTE:

- Additional inspections may be carried out at Council's discretion. Additional inspections may incur additional inspection fee(s).
- If Council finds that a condition of the Approval to Operate has not been complied with, Council may modify or revoke the approval, or require remedial works to be undertaken to ensure

compliance.

- Council may also issue penalty notices for operating a system without approval or operating a system in a manner other than in accordance with the terms of the approval.

### **9.3 ADDITIONAL REQUIREMENTS FOR AERATED WASTEWATER TREATMENT SYSTEMS (AWTS)**

9.3.1 AWTS are required to be serviced by an experienced service agent in accordance with the NSW Health Accreditation issued for the system (service intervals are generally quarterly unless specified otherwise in the accreditation). The service shall be carried out in accordance with the manufacturer's instructions. The system owner is responsible for organising service inspections for their system and ensuring a copy of the service report is forwarded to Council.

NOTE: The above service requirements also apply to other NSW Health Accredited alternative systems such as Biological Filter Systems.

### **9.4 FAILING SYSTEMS**

9.4.1 If an OSSM is found to be functioning in a manner which Council deems unsatisfactory (i.e. not operating in accordance with the applicable performance standards), and is a risk to the environment and/or public health, Council will take appropriate action under relevant legislation to address the issues with the system and to ensure that the system operates in a satisfactory manner.

9.4.2 This action is irrespective of whether or not the system is being operated under a current Approval to Operate. If that is the case, Council holds the authority to revoke the Approval to Operate.

### **9.5 FAILING SYSTEMS – WITHIN THE STATE GOVERNMENT DESIGNATED GROWTH AREAS.**

9.5.1 If a failing OSSM system servicing an existing development is located within a NSW State Government growth area, Council may consider a variation to the requirement of this policy based on the availability/timing of the Sydney Water sewer connection. Such variations may include but are not limited to the following:

- Aggregate used for the replacement transpiration bed – Council may consider the use of recycled aggregate for the construction of the bed instead of blue metal. In such cases the owner of the premises is required to provide written correspondence to Council accepting liability for the reduced lifespan of the bed due to the use of the recycled material.
- Other proposals for replacement systems will be assessed based on their merit and risk.

### **9.6 RESPONSIBILITY OF THE OWNER OR OCCUPIER**

- It is the responsibility of the homeowner and/or the occupier to ensure that the OSSM system on their property is maintained and operated in a

manner which does not pose any risk to public health and/or the environment.

- The owner and the occupier should be aware of the operation and maintenance requirements of their OSSM system and must ensure that the necessary service contracts are in place.
- The owner or occupier must notify Council if their OSSM system is failing prior to arranging the necessary repairs or replacement of the system in accordance with this policy.

## 10. CONNECTING TO MAINS SEWER (SYDNEY WATER)

10.1 Mains sewer systems are provided to ensure safe collection, treatment and disposal of domestic, commercial and industrial wastewater. Properties located within an area that is serviced by a mains sewer are required to be connected to such mains.

### 10.1.1 EXISTING SEWERED AREAS

OSSM systems will not be permitted where a mains sewer is available and a connection is possible.

### 10.1.2 NEWLY SEWERED AREAS

Properties situated within 75 metres of a sewer main (including newly sewered areas) may be required to connect to such mains within 12 months of a connection becoming available. Properties that fail to connect may be directed to connect in accordance with the provisions of section 124 of the *Local Government Act 1993* and the *Local Government (General) Regulation 2021*.

- Upon connection of a property to a mains sewer, any existing OSSM system is required to be decommissioned in accordance with the relevant guidelines.

### 10.1.3 VARIATION CRITERIA

Where properties are situated within 75m of a sewer main Council will consider allowing an existing OSSM System to remain where it can be demonstrated that:

- The existing system is operating in accordance with:
  - The Approval to Operate issued.
  - Australian Standards and Guidelines as detailed in section 6 of this Policy.
- No changes to the site and or development are proposed that would:
  - Reduce the area available for effluent disposal.

- Increase the potential occupancy of the existing development (unless it can be demonstrated that the existing REAA complies with section 8.7 of this Policy).
- There will be no environmental or health risks.

Each application will be assessed based on its merits.

## **11. REUSING GREYWATER**

11.1 The *Local Government (General) Regulation 2021 Subdivision 6 Domestic Greywater Diversion* and the 'NSW Guidelines for Greywater Reuse in Sewered, Single Household Residential Premises' sets out the requirements for greywater reuse.

11.2 The 'NSW Guidelines for Greywater Reuse in Sewered, Single Household Residential Premises' provide advisory information to homeowners or occupiers regarding greywater reuse options. Council has adopted this Guideline for the regulation of greywater reuse in the Camden LGA.

## **12. FEES AND CHARGES**

12.1 Council has adopted a fee schedule for cost recovery to cater for the implementation of the policy including inspections, education and administration. The fees for inspections and approvals have been determined in accordance with section 608 of the *Local Government Act 1993*.

## **13. POLICY REVIEW AND AMENDMENTS**

13.1 Council is committed to the continual improvement of OSSM systems in the Camden LGA in accordance with current Australian Standards and best practice. This policy is subject to review by Council to ensure that it continues to meet the needs of the community, health and environment.

# APPENDIX 1: DEFINITIONS

## **Absorption**

The uptake of effluent into the soil by infiltration and capillary action.<sup>2</sup>

## **AEP**

Annual Exceedance Probability. The chance of a flood of a given or larger size occurring in any one year, usually expressed as a percentage, for example, a 1% AEP flood has a 1 in 100 chance of happening each and every year.

## **Aerated Wastewater Treatment System (AWTS)**

A wastewater treatment process typically involving settling of solids and flotation of scum, oxidation and consumption of organic matter through aeration, clarification – secondary settling of solids, and disinfection of wastewater before surface irrigation.<sup>3</sup>

## **Authority's Sewer (Sydney Water Corporation)**

Centralised sewerage system, consisting of a sewage transport network, pumping stations, and treatment systems designed to service multiple users concurrently.

## **Bedroom**

A room that has the potential to be used for sleeping, including a study.

## **Buffer Distance**

The distance that a wastewater treatment system and related effluent application area must be situated from any habitable building, boundary, driveway, path, recreational facility, watercourse, body of water, environmentally sensitive area or other feature as specified by Council.

## **Council**

Camden Council.

## **Domestic Wastewater**

Wastewater arising from household activities, including wastewater from bathrooms, kitchens and laundries.

## **Drainage Channel**

Defined low points that carry water during a rainfall event but dry out quickly when rainfall stops.

## **Dual Occupancy**

A dual occupancy (attached) and a dual occupancy (detached).

## **Dual Occupancy (attached)**

Two dwellings on the one lot of land that are attached to each other but does not include a secondary dwelling.

## **Dual Occupancy (detached)**

Two detached dwellings on one lot of land but does not include a secondary dwelling.

## **Effluent**

The liquid discharged from a wastewater-treatment unit.<sup>4</sup>

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<sup>2</sup> AS/NZS 1547:2012, Onsite domestic wastewater management

<sup>3</sup> Environment & Health protection Guidelines – On-site Sewage Management for single households

<sup>4</sup> AS/NZS 1547:2012, Onsite domestic wastewater management

## **Environment**

Surroundings, including natural and physical resources, community and neighbourhood.<sup>5</sup>

## **Environmentally Sensitive Area**

As defined in the *Local Government (General) Regulation 2021* and includes any land or area:

- Within 100 metres of a natural waterbody, wetland or coastal dune field, or
- With a high watertable, or
- With highly permeable soils or acid sulphate, sodic or saline soils, or
- Within a drinking water catchment, or
- Within the water catchment area of an estuary where the entrance to the sea is intermittently open.

It also includes any land or area set out in the 'environmentally sensitive area' definition Part 4 of Schedule 3 of the *Environmental Planning and Assessment Regulation 2000*.

## **Equivalent Population (EP)**

A measure typically used in the design of wastewater management systems. Because there are differences in wastewater generation rates between properties with and without reticulated water supplies, and properties with dry composting toilet technologies, it is usually easier to stipulate design limits by an 'equivalent' number of people rather than the total flow.

## **Groundwater**

The body of water in the soil, all the pores of which are saturated with water. If the body of water is present at all times it represents permanent or true groundwater.<sup>6</sup>

## **Hydraulic Loading Rate (hydraulic load, hydraulic loading)**

The amount of liquid applied to land over a specified time interval. Can be expressed as either a depth or a volume (with one millimeter of application equal to one litre per square meter)<sup>7</sup>.

## **LGA**

Local Government Area.

## **New Development**

Includes but is not limited to the following:

- The subdivision of land.
- Change in use of the site (e.g. agricultural use – market garden).
- The erection or extension/modification of a dwelling (including extensions), or other building, swimming pool, shed, awning, pergola, driveway, footpath, or any other site works that will reduce the available area for the disposal of effluent on the site.
- The demolition of a building.

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<sup>5</sup> AS/NZS 1547:2012, Onsite domestic wastewater management

<sup>6</sup> AS/NZS 1547:2012, Onsite domestic wastewater management

<sup>7</sup> Environment & Health protection Guidelines – On-site Sewage Management for single households

- Construction of a dam.

### **On-site Sewage Management (OSSM) Facility**

A system that stores and treats wastewater on-site (does not include the REAA).

### **On-site Sewage Management (OSSM) System**

A system (including tanks and related effluent application area) that stores, treats and disposes of wastewater incorporating both the tanks and REAA. Also referred to as an 'on-site sewage management system'.

### **Potable**

Water of a quality suitable for drinking and domestic use that does not deteriorate on storage and that does not contain pathogenic organisms<sup>8</sup>.

### **Primary Treated Effluent (Primary Treatment)**

The separation of suspended material from wastewater by settlement and/or flotation in a septic tank prior to the effluent discharge to either a secondary treatment process or to a land application area.<sup>9</sup>

### **Pump-out**

A septic system where all accumulated wastewater is removed from site by a licensed waste service.

### **Regulatory Authority**

An authority that is empowered by statute to be responsible for managing or controlling an aspect of on-site domestic-wastewater systems.<sup>10</sup>

### **Related Effluent Application Area (REAA)**

An area of land specifically designated for the application of effluent.

### **Reserve Area**

An area set aside for future use as a REAA to replace or extend the original REAA.<sup>11</sup>

### **Run-off**

The part of the precipitation and/or irrigated effluent that becomes surface flow because it is not immediately absorbed into or detained on the soil<sup>12</sup>.

### **Secondary Dwelling**

A self-contained dwelling that:

- Is established in conjunction with another dwelling (the *principal dwelling*).
- Is on the same lot of land as the principal dwelling.
- Is located within, or is attached to, or is separate from, the principal dwelling.
- For more information on residential accommodation including secondary dwellings, refer to the Camden Local Environmental Plan 2010 and appropriate State Environmental Planning policies.

### **Secondary Treated Effluent (Secondary Treatment)**

Aerobic biological processing and settling or filtering of effluent received from a primary

<sup>8</sup> Environment & Health protection Guidelines – On-site Sewage Management for single households

<sup>9</sup> AS/NZS 1547:2012, Onsite domestic wastewater management

<sup>10</sup> AS/NZS 1547:2012, Onsite domestic wastewater management

<sup>11</sup> AS/NZS 1547:2012, Onsite domestic wastewater management

<sup>12</sup> Environment & Health protection Guidelines – On-site Sewage Management for single households

treatment unit. Effluent quality following secondary treatment is expected to be equal to or better than 20mg/L 5-day Biochemical oxygen demand and 30mg/L suspended solids.

### **Septic Tank**

A single or multiple chambered tank through which wastewater is allowed to flow slowly to permit suspended matter to settle and be retained, so that organic matter retained therein can be decomposed (digested) by anaerobic bacterial action in the liquid. The term covers tanks used to treat all-waste, greywater or blackwater.<sup>13</sup>

### **Sewage**

Waste matter that passes through sewers. Sewage includes any effluent of a kind referred to in the definition of waste.

### **Sewerage**

The network of collection drains carrying domestic wastewater or effluent away from properties for off-site treatment.<sup>14</sup>

### **Sewage Management**

Any activity carried out for the purpose of holding or processing, or reusing or otherwise disposing of, sewage or by-products of sewage.<sup>15</sup>

### **Sewage Management Facility**

A human waste storage facility, or a waste treatment device intended to process sewage, and includes a drain connected to such a facility or device. (as defined in the *Local Government (General) Regulation 2021*).

### **Sustainable Effluent Application Area (SEAA)**

The sustainable effluent application area is the area required for sustainable disposal of wastewater and is based on the soil landscapes (as defined by the 1:100000 Penrith and Wollongong Soil Landscape Sheets produced by the Soil Conservation Service of NSW), soil facets, rainfall data and topography of the site, taking into consideration the proposed development of the site and the surrounding land uses. Sustainable effluent application areas are provided by Council to the owner of the property upon request in compliance with the requirements of this policy.

### **Waste**

- Effluent, being any matter or thing, whether solid or liquid or a combination of solids and liquids, which is of a kind that may be removed from a human waste storage facility, sullage pit or grease trap, or from any holding tank or other container forming part of or used in connection with a human waste storage facility, sullage pit or grease trap, or
- Trade waste, being any matter or thing, whether solid, gaseous or liquid or a combination of solids, gases and liquids (or any of them), which is of a kind that comprises refuse from any industrial, chemical, trade or business process or operation, including any building or demolition work, or
- Garbage, being all refuse other than trade waste and effluent, and includes any other substance defined as waste for the purposes of the *Protection of the Environment Operations Act 1997*. A substance is not precluded from being waste merely because it is capable of being refined or recycled.

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<sup>13</sup> AS/NZS 1547:2012, Onsite domestic wastewater management

<sup>14</sup> AS/NZS 1547:2012, Onsite domestic wastewater management

<sup>15</sup> Environment & Health protection Guidelines – On-site Sewage Management for single households



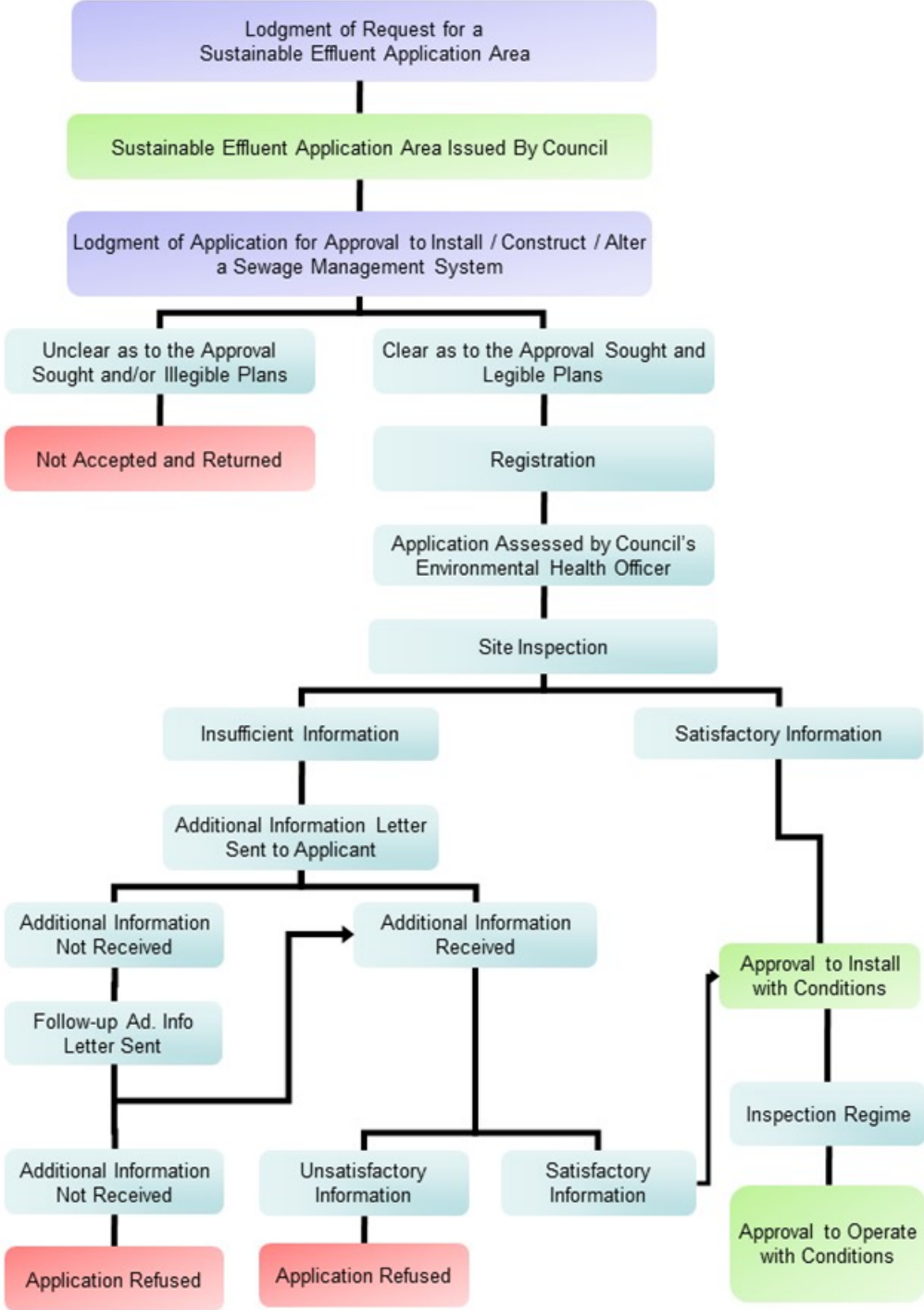
**Wastewater**

The used water arising from domestic activities in dwellings, institutions or commercial facilities consisting of all-waste, greywater or blackwater.<sup>16</sup>

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<sup>16</sup> AS/NZS 1547:2012, Onsite domestic wastewater management

# APPENDIX 2: APPLICATION TO INSTALL AN ON-SITE SEWAGE MANAGEMENT SYSTEM FLOWCHART



# APPENDIX 3: MATTERS TO ACCOMPANY APPLICATIONS FOR APPROVAL TO INSTALL, CONSTRUCT OR ALTER ON-SITE SEWAGE MANAGEMENT SYSTEMS:

## MATTERS TO ACCOMPANY APPLICATIONS FOR APPROVAL TO INSTALL, CONSTRUCT OR ALTER SEWAGE MANAGEMENT SYSTEMS

**Note:** It is the statutory responsibility of the applicant to provide documents as specified overleaf to enable Council to determine the application.

Please indicate  documents/information included with this Application.

- Sustainable Effluent Application Area.** The owner of the allotment has obtained the sustainable effluent application area required for the allotment from Council. A copy of the sustainable effluent application area required for the allotment is attached to this application.
  
- Site Assessment.** Details of the
 

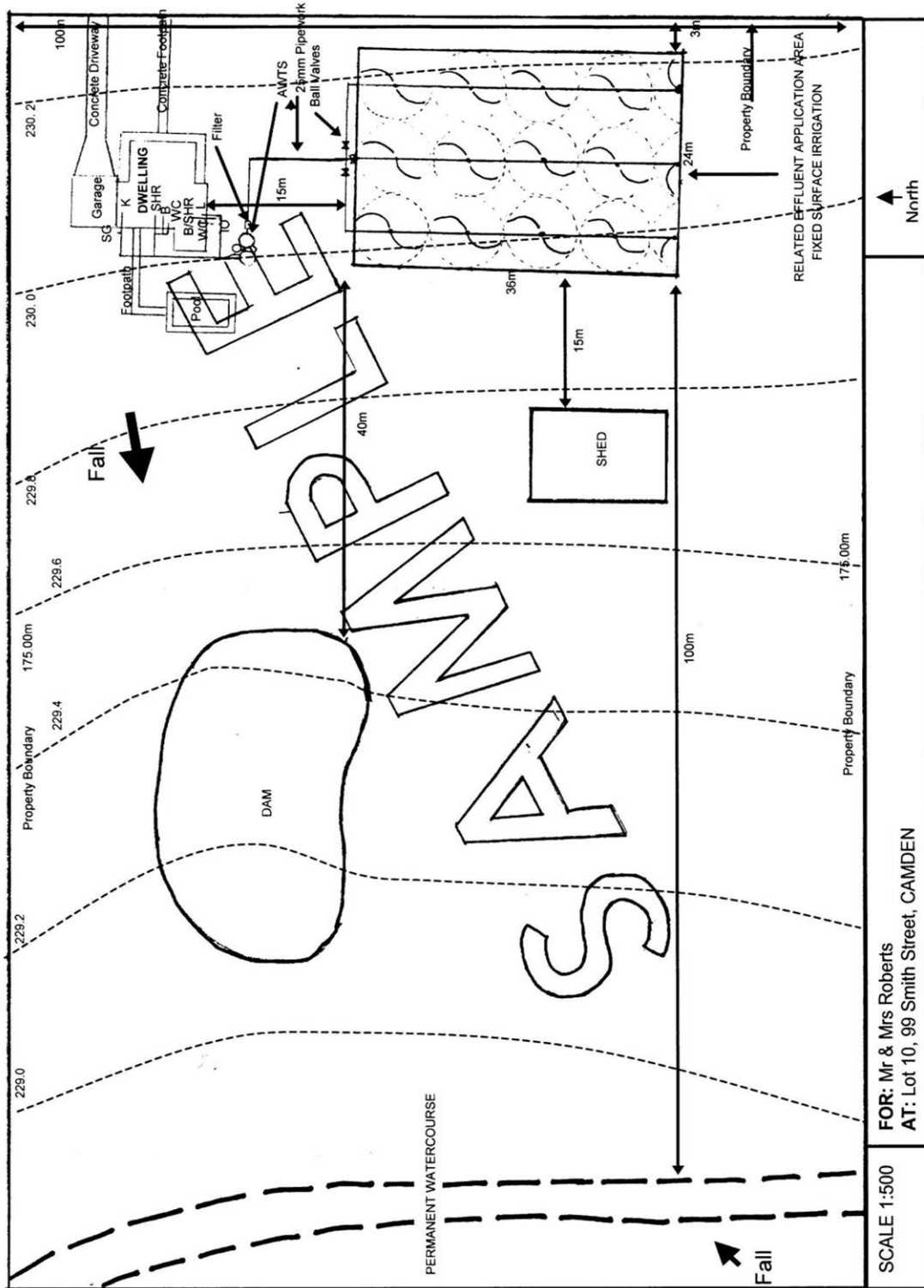
topography:	<input type="checkbox"/> Flat	<input type="checkbox"/> Loams (Varying mix of sand & clay)
	<input type="checkbox"/> Even Slope	<input type="checkbox"/> Light Clay
	<input type="checkbox"/> Undulating	<input type="checkbox"/> Heavy Clay
	<input type="checkbox"/> Steep Slope	<input type="checkbox"/> Exposed Rocks

  - vegetation within any effluent application areas related to the sewage management system, together with an assessment of the site in the light of those details.
  
- Site Plan.** The application must be accompanied by a minimum of three (3) copies of a plan, to scale, showing the location of:
  - the sewage management facility proposed to be installed or constructed on the premises, and
  - any related effluent application areas (REAA), including reserve areas (dimensions of REAA(s) shall be displayed in metres), and
  - demonstration of how even distribution of wastewater is to be achieved within the REAA (e.g. for an AWTS with fixed surface irrigation or subsurface drip irrigation the location of all sprinklers or driplines, valves, filters etc), and
  - any buildings or facilities existing on any land located within 100 metres of the sewage management facility or effluent application areas, and
  - any environmentally sensitive areas of any land located within 100 metres of the sewage management facility or effluent application areas, and
  - any related drainage lines or pipe-work (whether natural or constructed, including an external drainage diagram).
  
- Specifications.** A minimum of three (3) copies of the full specifications of the sewage management facility proposed to be installed or constructed on the premises, including the NSW Department of Health Accreditation Certificate for the system, together with details of the proposed effluent application system(s).
  
- Operation and maintenance.** (Required for AWTS) Details of:
  - the operation and maintenance requirements for the proposed sewage management facility, and
  - the proposed operation, maintenance and servicing arrangements intended to meet those requirements,
  - the action to be taken in the event of a breakdown in, or other interference with, its operation.
  
- Geotechnical Report** – Should an existing development with specific existing site constraints not be capable of complying with the sustainable effluent application area for the allotment as detailed in the Sewage Management Strategy, the applicant may be required submit a detailed wastewater report prepared by a qualified soil hydraulic consultant. Geotechnical reports will not be accepted unless they have been specifically requested by council.
 

**NOTE:** The information that is to accompany such applications (and applications for approval to alter a sewage management facility) is to be determined by the council in each particular case. Section 81 of the Local Government Act 1993 provides that an application for an approval under Part 1 of Chapter 7 of that Act (in which category such applications fall) must be accompanied by “such matters as may be prescribed by the regulations and such matters specified by the Council as may be necessary to provide sufficient information to enable the Council to determine the application”.
  
- Application for Approval to Operate** – A completed Application for Approval to Operate a Sewage Management System form must be included with your application.

# APPENDIX 4: SAMPLE SITE PLANS:

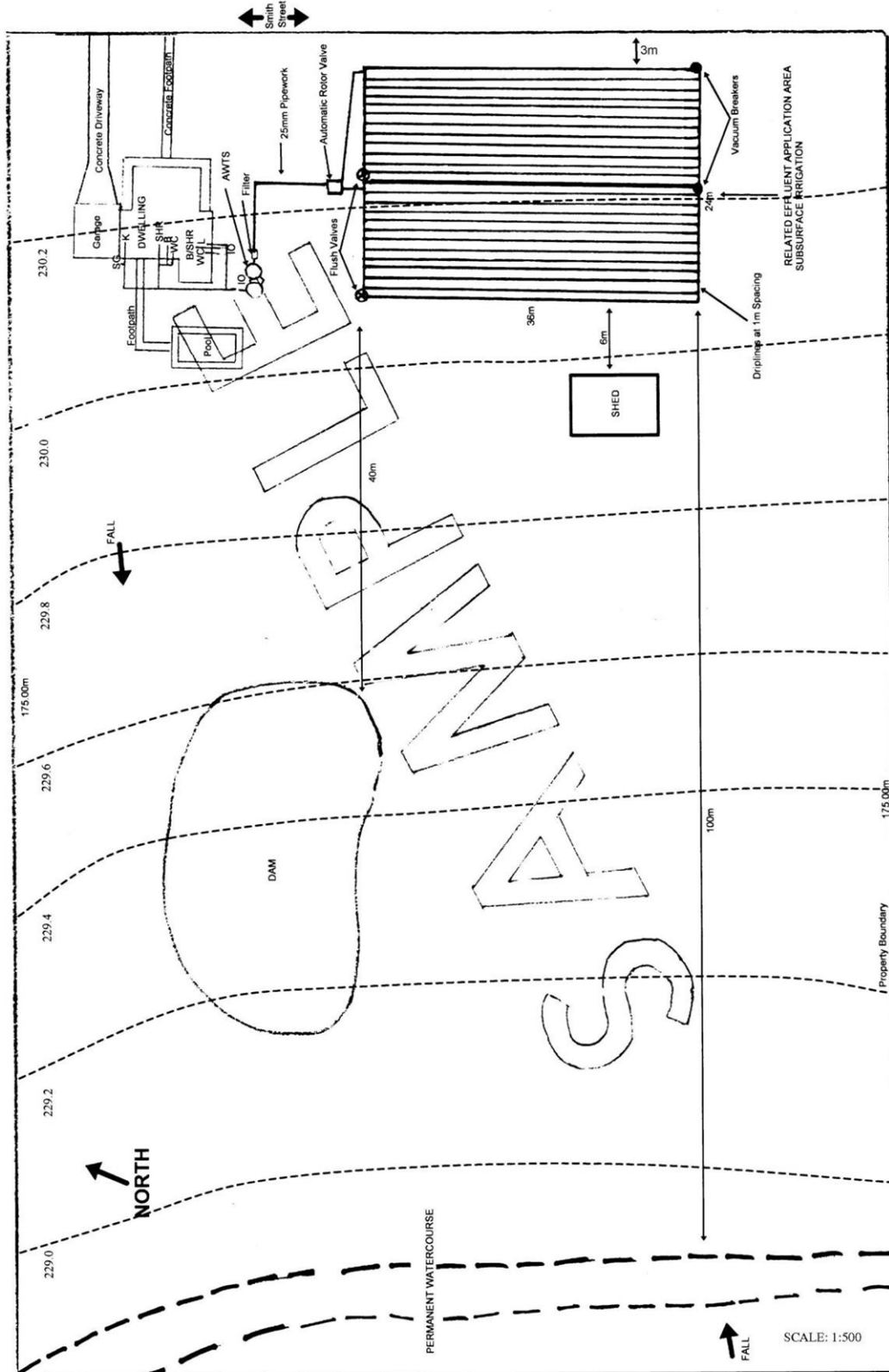
## Site Plan 1: Fixed Surface Spray Irrigation



FOR: Mr & Mrs Roberts  
 AT: Lot 10, 99 Smith Street, CAMDEN

SCALE 1:500

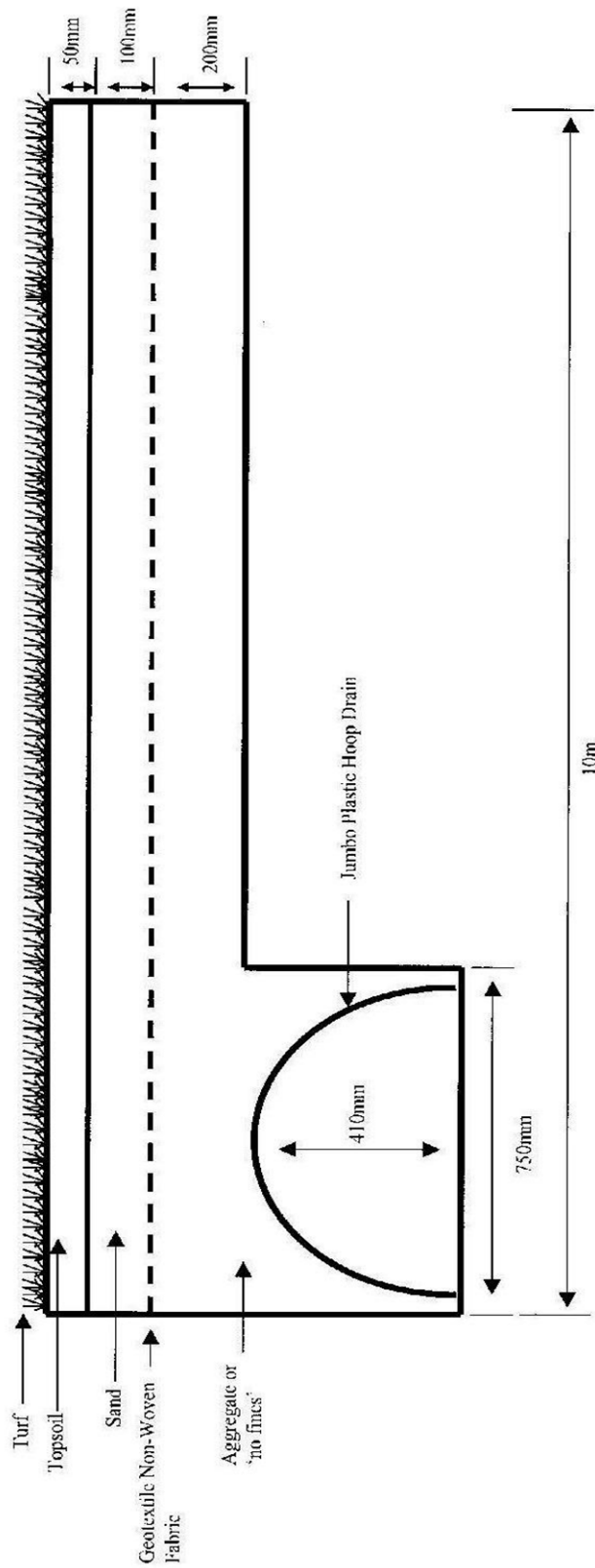
# Site Plan 2: Sub-Surface Drip Irrigation



# APPENDIX 5: TRANSPIRATION BED:

PLAN VIEW (Not to Scale)

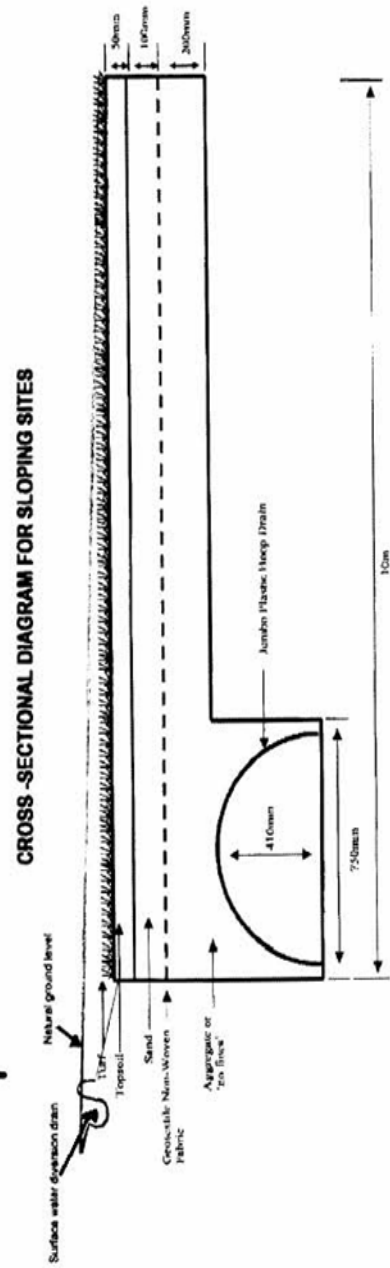
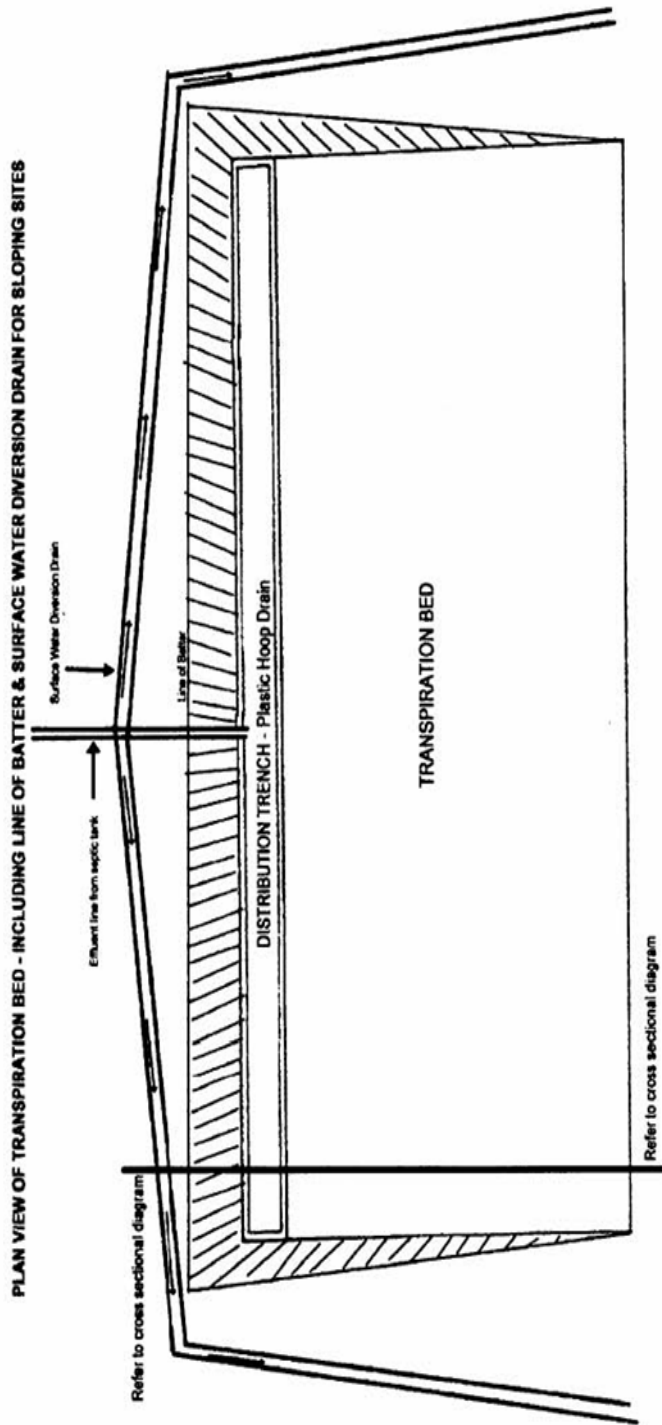
Cross-sectional Diagram of an Evapo-transpiration Bed



**NOTE:**

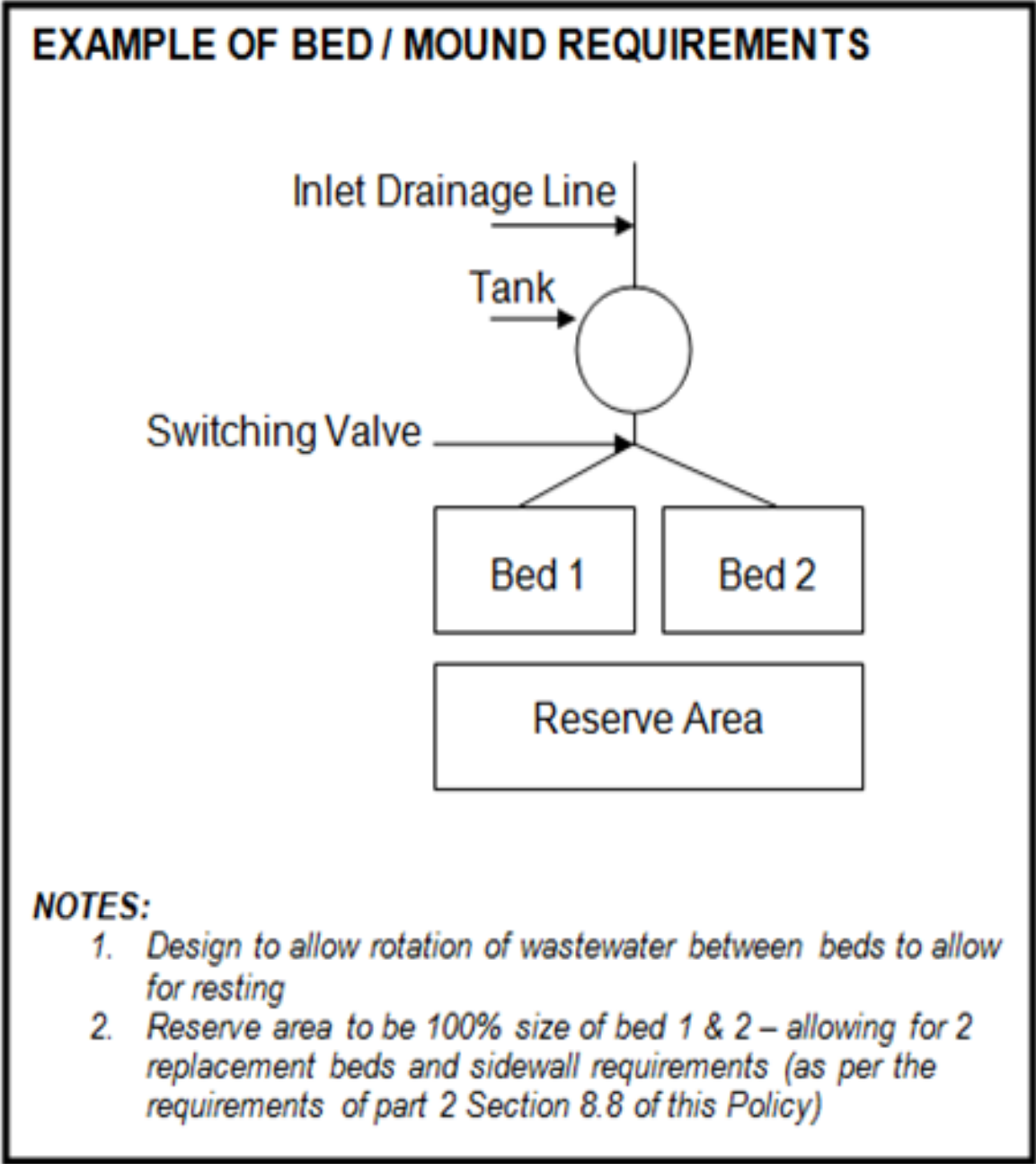
1. Length of Transpiration Bed to comply with Councils site specific effluent application areas
2. T-Bed not suitable on sites with a slope greater than 25 Degrees

TOP VIEW (Not to Scale)



- NOTE:**
1. Length of Transpiration Bed to comply with Councils site specific effluent application areas
  2. Bed not suitable on sites with a slope greater than 2.5 Degree

**APPENDIX 6: EXAMPLE OF BED / MOUND REQUIREMENTS**





## APPENDIX 7: MATTERS TO ACCOMPANY APPLICATIONS TO INSTALL, CONSTRUCT OR ALTER COMMERCIAL SEWAGE MANAGEMENT SYSTEMS

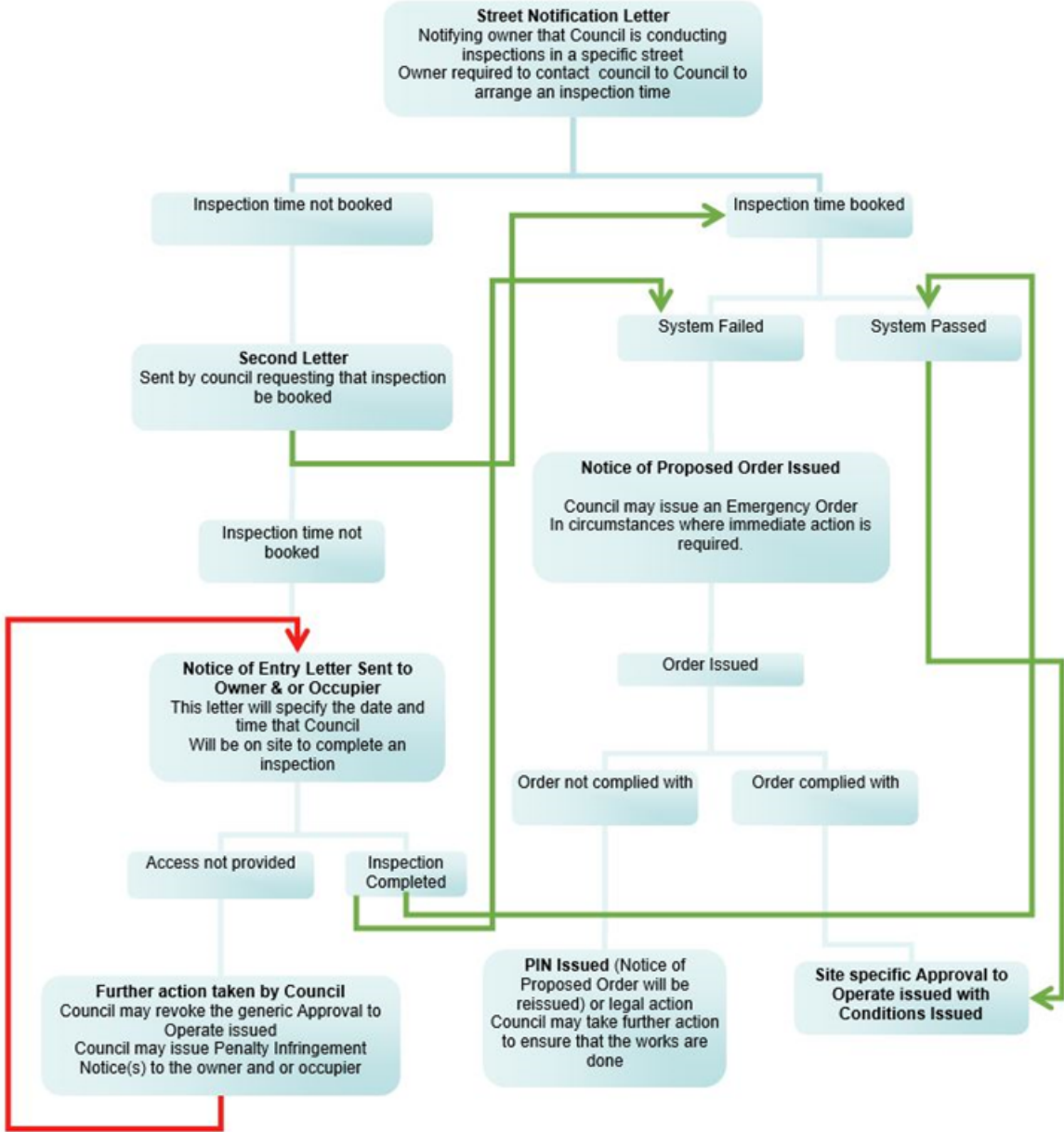
INFORMATION SOUGHT	SPECIFIC DETAILS	REASON
<b>Project description</b>		
A broad outline of the proposal.	Type and size of facility to be served. Proposed installation. Means of utilisation or disposal of the final effluent.	To facilitate a quick initial understanding of the proposal.
<b>Site plans</b>		
A locality plan.	Showing the site location in relation to public roads or places and any natural or artificial waters and proposed buffer zones.	To show the system in relation to adjoining properties and sensitive off-site receptors.
A contoured site plan.	Showing the location of the proposed plant and land application area or discharge point, if applicable, in relation to the principal buildings and the boundaries of the premises.	To facilitate site inspection. To show the system in relation to the on-site structures.
<b>Drainage and stormwater management plans</b>		
	Flood levels.	
	Proposed stormwater management measures, including any proposal to divert stormwater around the site.	To ensure stormwater is kept clear of the treatment system and land application area.
	In the case of industrial and commercial premises Drainage diagram and in the case of a residential development or municipal sewerage scheme a sewerage compilation plan.	To ensure wastewater systems and drainage systems are kept separate and are appropriately treated.
<b>Flow and load assessment</b>		
Details of processes generating load.	List each load generating process (eg, commercial kitchen, laundry etc).	To assess hydraulic, nutrient and organic load.
Size and type of facility to be served.	Types of facility served and per capita flow calculation (L/day) and BOD <sub>5</sub> load (g/day). Calculation of peak flow and average flow.	To determine flow balancing requirement.

<b>INFORMATION SOUGHT</b>	<b>SPECIFIC DETAILS</b>	<b>REASON</b>
<b>Expected wastewater quality</b>		
Quantification of expected influent wastewater quality.	<p>Analysis of or estimated quality of expected wastewater load in terms of:</p> <ul style="list-style-type: none"> <li>• Temperature</li> <li>• pH,</li> <li>• BOD<sub>5</sub> at 20<sup>o</sup>C,</li> <li>• Suspended solids (non-filtrable residue),</li> <li>• Faecal coliforms,</li> <li>• Radioactivity,</li> <li>• Oil, grease, floating solids</li> <li>• Infectious or contagious materials</li> <li>• Restricted substances</li> <li>• Nutrient content (N and P).</li> </ul>	To ascertain the composition of the wastewater and any special provision required of the treatment system.
<b>System selection</b>		
Rationale for and justification of type of system selected	Consider advantages and disadvantages of various system types and limitations of systems.	To ensure appropriate system selection and sizing.
<b>Treatment process description</b>		
Description of treatment process selected.	<p>Schematic flow diagram to show stages in treatment process.</p> <p>Details of major components of treatment system equipment, such as aerators, sprays, pumps, etc and their operating efficiencies.</p>	To ensure integrity and effectiveness of chosen design.
<b>Staged development plan</b>		
Description of staged development, if planned.	Indication of the size and timing of stages of the development served by the package treatment plant.	To ensure compatibility of the overall development with the planned growth of the package treatment plant.
<b>Drawings</b>		
Plan and section drawings of the proposed plant, ponds and baffles, land application area or discharge point.	Inlet and outlet arrangements. Major chambers and components.	To illustrate proposed system type and means of operation.

INFORMATION SOUGHT	SPECIFIC DETAILS	REASON
<b>Estimated load for land application or discharge</b>		
Qualification of expected load for land application or discharge.	<p>Expected maximum volume of load to be land applied or discharged (L/day).</p> <p>Expected average volume of load to be land applied or discharged (L/day).</p> <p>Proposed method of measurement of load to be land applied or discharged.</p> <p>Description of sludge disposal method and estimated quantity of sludge to be generated.</p>	<p>To calculate the size of the required land application area.</p> <p>To calculate load based licence charge.</p> <p>To determine appropriate sludge disposal method.</p>
<b>Expected treated wastewater quality</b>		
Quantification of expected treated wastewater quality.	<p>Analysis of, or estimated quality of expected wastewater load in terms of:</p> <ul style="list-style-type: none"> <li>• Temperature</li> <li>• pH</li> <li>• BOD<sub>5</sub> at 20°C</li> <li>• Suspended solids (non-filtrable residue)</li> <li>• Faecal coliforms</li> <li>• Radioactivity</li> <li>• Oil, grease, floating solids</li> <li>• Infectious or contagious materials</li> <li>• Restricted substances</li> <li>• Nutrient content (N and P).</li> </ul>	To ascertain the composition of the treated wastewater prior to land application or discharge.
<b>Disinfection</b>		
Description of selected Disinfection system.	<p>Necessity for Disinfection and, if required relative merits of disinfection options.</p> <p>Description of the chosen method of disinfection appropriate for selected land application or discharge.</p>	To provide appropriate disinfection in the light of the final land application or disposal option selected.
<b>Land application or disposal system selection</b>		
Rationale for and justification of type of land application or disposal system selected.	<p>Consider advantages, disadvantages and suitability of various land application and disposal systems.</p> <p>A schematic flow sheet of the land application or discharge method proposed.</p>	To ensure suitable land application or disposal system is chosen to provide the necessary public health and Environmental protection.

INFORMATION SOUGHT	SPECIFIC DETAILS	REASON
<b>Land application system sizing</b>		
<p>Site and soil assessment for land application area sizing.</p>	<p>Soil characteristics:</p> <ul style="list-style-type: none"> <li>• Soil profile - horizons</li> <li>• Soil textural analysis</li> <li>• Soil hydraulic conductivity</li> <li>• Appropriate loading rate</li> <li>• Erosion potential</li> <li>• Emersion test</li> </ul> <p>Topography:</p> <ul style="list-style-type: none"> <li>• Gradient &amp; Slope form</li> <li>• Flood potential</li> <li>• Aspect</li> </ul> <p>Description of climate:</p> <ul style="list-style-type: none"> <li>• Rainfall</li> <li>• Evaporation</li> <li>• Storm intensities</li> <li>• Prevailing wind</li> </ul> <p>Vegetation:</p> <ul style="list-style-type: none"> <li>• Cover/proposed cover</li> <li>• Crop factor</li> </ul> <p>Water balance calculations</p> <p>Nutrient balance (N and P)</p> <p>Groundwater:</p> <ul style="list-style-type: none"> <li>• Depth to groundwater</li> <li>• Location of existing wells</li> <li>• On-site / Adjacent to site</li> <li>• Current use of groundwater</li> <li>• Groundwater recharge area?</li> <li>• Groundwater chemistry</li> </ul> <p>Surface waters:</p> <ul style="list-style-type: none"> <li>• Proximity</li> <li>• Current use</li> <li>• Flow characteristics</li> </ul> <p>Pre-treatment:</p> <ul style="list-style-type: none"> <li>• Design of pre-treatment</li> <li>• Effect on constituents loads</li> <li>• Disinfection method</li> <li>• Implications for soil</li> </ul> <p>Type of irrigation system:</p> <ul style="list-style-type: none"> <li>• spray, trickle or drip,</li> <li>• surface or sub-surface.</li> </ul> <p>Site Plan:</p> <ul style="list-style-type: none"> <li>• Proximity to dwellings, etc.</li> <li>• Proximity to sensitive receptors, eg, play areas etc.</li> <li>• Applicable buffer zones.</li> </ul> <p>A schematic diagram of the system controls including pipes, pumps valves, timers and alarms.</p>	<p>To ensure suitable land application location and sizing.</p>

# APPENDIX 8: APPROVAL TO OPERATE PROCESS FLOWCHART



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**RELEVANT LEGISLATIVE INSTRUMENTS:** *Environmental Planning and Assessment Act 1979*  
*Environmental Planning and Assessment Regulation 2000*  
*Local Government Act 1993*  
  
*Local Government (General) Regulation 2021*  
*Protection of the Environment Operations Act 1997*

**RELATED POLICIES, PLANS AND PROCEDURES:** The Environment and Health Protection Guidelines for On-site Sewage Management for Single Households  
The NSW Guideline for Greywater Reuse in Sewered, Single Household Residential Premises  
Designing and Installing On-Site Wastewater Systems – Water NSW  
Camden Local Environmental Plan 2010  
Australian Standards:  
AS/NZS 1547 On-Site Domestic Wastewater Management  
AS/NZS 1546.1: On-Site Domestic Wastewater Treatment Units Septic tanks  
AS/NZS 1546.3 On-Site Domestic Wastewater Treatment Units Secondary Treatment Systems  
AS/NZS 3500 Plumbing and Drainage

**RESPONSIBLE DIRECTOR:** Planning and Environment

**APPROVAL:** Council

**HISTORY:**

Version	Approved by	Changes made	Date	EDMS Number
1	Approved by Council	New	14 June 2022	EDM22/226813