

POLICY NAME: PRESSURE SEWER

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OBJECTIVE

~~This policy provides~~ **To provide** a framework for the provision of pressure sewer systems ~~within the Shire of Ballina, where the use of such systems is justified, and detail~~ **In particular it details** the responsibilities of Council, developers and individual property owners with respect to the construction, maintenance and operation of **pressure sewer systems within Ballina Shire, associated infrastructure,** ~~and provides a basic guide to Council's expectations from such systems.~~

POLICY

Design and Construction of Pressure Sewer Systems

As a general principle, gravity sewer systems are preferred to pressure sewer systems in Ballina Shire Council. The installation of pressure sewer systems to provide sewerage services will be permitted where gravity sewer systems cannot be effectively or economically used, or where pressure sewer systems have particular environmental, social or economic benefits.

Factors determining the choice of whether pressure or gravity sewer systems are preferred for a given area or development include:

- Technical feasibility of complying with the technical specifications of the Northern Rivers Development Design Guidelines (D12)
- The overall lifecycle cost to Council of the alternate options
- Particular circumstances which makes the use of pressure sewer preferred e.g. where conventional gravity systems are considered to present a high risk of future infiltration.

Pressure Sewer System for a New Development

Developer Responsibilities

Any proposal ~~would also~~ **will** require justification as to why the provision of conventional gravity sewer systems ~~was~~ **is** unfeasible or why the provision of pressure sewer systems ~~is~~ **was** preferable. The process in relation to how a pressure sewer application may apply to a new development is shown diagrammatically in Figure A2 in Attachment 1.

In all such developments the Developer is responsible for the provision of the whole pressure sewer system as detailed in this policy. This will include the developer carrying out the following:

- The design for the reticulation sewers and its submission to Council before proceeding. Only experienced pressure sewer designers are to be used.
- The construction of all necessary pressure sewer reticulation infrastructure including the ~~connection to the~~ property **boundary assembly.**
- **Certification of Compliance from the pressure sewer designer confirming their review of the Work as Executed documentation and confirmation of compliance with their design.**
- ~~The payment of an on-property levy to allow for those on-property works to be carried out after the homes are built. This levy is set out in Council's annual fees and charges. This cost will be notified to the developer as at the time of approval of the development application.~~

- Ensuring all any real estate agents associated with the sale of the land have basic information on what a pressure sewer system is, and what it will mean for the prospective future-home buyer.

~~The developer will also be required to meet the other typical developer charges to Council such as the Section 64 contributions and these will be outside of the property levy.~~

~~In some instances Council may be the Developer and will be required to meet all of the above provisions.~~

6.2 Council Responsibilities

Council will in respect to any pressure sewer development application initially advise the developer as to whether pressure sewer will be allowed for their particular development. Subject to the pressure sewer system being allowed, Council will further be responsible for:

- Ensuring that the design is adequate to what Council sees as the minimum requirements for a pressure sewer system.
- Providing the minimum technical standards for the consistent construction of any pressure sewer application in the Ballina Shire.
- ~~Acceptance of the reticulation system subject to it meeting the handover requirements as set out in the technical standards.~~
- Ongoing maintenance of the whole pressure sewer system.
- ~~Administering the ultimate installation of the pressure sewer units on the vacant blocks as these are developed. This will include providing a pumping unit to the accredited installers and making a contribution towards the individual property installation from the property levy fund.~~
- ~~Maintaining all reticulation and property records into the future.~~
- ~~Ensuring the property owners are provided with a home owner's manual for the pressure sewer system.~~

1. What does this policy apply to?

~~This policy applies to the design, construction, maintenance and operation of pressure sewer systems within the Ballina Shire.~~

2. Where does this policy apply?

~~This policy applies to the whole of the Ballina Shire, with the following exceptions:~~

- ~~Riverbend manufactured home estate, Lot 12 DP 1092324, Corner Riverbend Drive and Pacific Highway, Ballina.~~
- ~~Sovereign Gardens aged accommodation development, Lot 10 DP 1105478, North Creek Road, North Ballina.~~
- ~~'Clark Street' industrial estate, (property details listed in table below).~~

<i>Lots</i>	<i>DP Number</i>
3,4,10,11,12,22,23,24,25,26	240895
29,30,31,32	244892
17,18	563852
37,38	590312
39,40	591547
41,42	607329
33,34	706854
161,162	788077
1	810524
40	827376

~~These three areas have previous development consent, to allow pressure sewer systems.~~

~~3. What factors influence the choice of whether pressure or gravity sewer systems are provided to a given area or development; and how are pressure sewer systems designed?~~

~~Factors determining the choice of whether pressure or gravity sewer systems are provided to a given area or development, are outlined within a separate Council document entitled "Ballina Shire Council Pressure Sewer Guidelines". This document also provides details on how pressure sewer systems are to be designed.~~

Even though pressure sewer may, in some locations, be a lower cost technology, this will not necessarily mandate its use, as other factors may mitigate against its usage. Accordingly **Subdividers/Developers** proposing to use **pressure sewer** **this technology** will need to **justify why** **convince** Council **should permit these systems** **as to why this technology should be used** in their particular application. The preferred option will always be to install a gravity sewer system in all cases where gravity sewer is able to be installed, even where the cost to do so is higher.

Replacing a Conventional Gravity System with Pressure Sewer

When investigating network renewals and/or upgrades, Council may consider replacing an existing conventional gravity system with a pressure sewer system. Any business case proposing the use of pressure sewer shall be required to address the same factors detailed in the section above.

~~4. The Roles of Council and the Home Owner in Connecting Existing Properties to a Pressure Sewer System~~

Connecting to Wastewater Reticulation with a Pressure Sewer Unit

~~The Council and Property Owner's roles may change in respect to the differing applications of pressure sewer systems as set out below:~~

~~5.1 Unsewered Existing Urban Developments~~

~~Council may elect to connect unsewered areas to its sewerage schemes, using pressure sewer systems, as part of its backlog sewer program. At present this is limited to approximately 130 properties in six distinct precincts. Further details, relating to the definition of these precincts and responsibilities for the construction of pressure sewer infrastructure as part of Council's backlog sewer program, are outlined within a separate policy entitled "Ballina Shire Council - Backlog Sewer Program Policy".~~

~~6.3 Individual Property owners~~

Unconnected Property (Vacant Land) in a New Pressure Sewer Development

Individual property owners ~~will~~ must lodge a **building development** application to construct on the property ~~and application for Section 68 approval~~ and will be provided with the names of accredited installers of ~~the pressure sewer systems technology~~. Thereafter the property owner will be required to organise with one of these accredited installers to carry out the installation on the property. ~~Only installations that are carried out by an accredited installer using approved technology will be accepted by Council.~~

~~Once these works have been carried out and the plans have been provided to Council they can make application to Council for refund of that part of the property levy put aside for their "on property" installation.~~

The individual property owner is responsible ~~for the costs to connect the pumping unit to the dwelling itself plus~~ for all on property costs as well as any additional installation requirements they may have for their unique installation.

~~The installation of the pumping unit can only be carried out by an accredited installer using approved technology. Any individual who fails to comply with this requirement will not be issued with a certificate of occupancy and will be made to replace the pumping unit with one that is approved by Council, entirely at their costs.~~

To Service Unsewered Property in an Existing Reticulated Area.

The Owner/s of any unsewered property ~~located~~ ~~ies that may exist~~ in a sewerage area, ~~can~~ may apply to Council to be ~~considered for~~ connected ~~ion~~ to that reticulated system using a pressure sewer unit.

Where ~~this is possible and a~~ ~~the~~ property owner has been paying a wastewater *Not Connected Access Charge* ~~n availability sewer rate, due to the proximity of the other sewerage system,~~ Council will provide the sewerage system up to and including the pump well at no cost to the property owner. ~~The reason for this is that the property owner has been paying the availability sewer rate~~ and is therefore entitled to be connected to the sewer system, ~~Council will provide the sewerage system up to and including the pump well at no cost to the property owner.~~ The property owner ~~is then required to~~ shall be responsible for meeting the ~~on property~~ costs to

connect to the pump well and ~~would need to approach~~ **must engage** an accredited installer to carry out these works.

Where the property owner has ~~ve~~ not been paying sewer rates, they will be required to meet all costs to carry out the **design, installation and certification** including the extension of any reticulated sewer mains and any connection fees as per Council's ~~Management Plan Fees and Charges. If more than one property is being serviced, then the reticulation costs will be shared equally amongst all of the participants.~~ This includes the case of brownfield subdivisions. ~~The property owner shall be responsible for arranging all works including connecting the on property works to the Council specified discharge point. An accredited installer shall be engaged to carry out these works using Council approved technology.~~

Pressure sewer will only be **approved** ~~accepted as an option~~ where it is impossible or impractical to install a gravity system. ~~Council will be the sole determiner of this.~~

The process for applying to service an unsewered property with a pressure sewer system, is shown diagrammatically in figure A1 in Attachment 1.

To Replacement of a Private "Pump Ups"

Any existing property that discharges into a reticulated main through a private pumping arrangement (pump up) may continue to operate their private system and is not compelled to change to ~~the a Council owned and maintained~~ pressure sewer systems, ~~unless within the identified backlog sewer area as per Council's backlog sewer policy.~~ These pump ups are not covered by this policy and remain the responsibility of the property owner and resident.

Residential property owners may apply to convert their existing private system to a Council approved **pumping unit pump station** that will be **owned and maintained** by Council. Property owners will be responsible for all costs associated with the changeover including **the on property works and** any reticulation mains extension **or upgrade (if that may have been required).**

Once installed **to Council's satisfaction**, Council will **be assume** responsibility ~~le~~ for the ongoing maintenance up to and including the ~~individual pump stations on each property, inclusive of the pump well, pump, electrical control cabinet and associated fittings.~~

Council will not assume ownership and maintenance responsibility for private pumping arrangements on commercial or industrial properties except where the property water consumption is less than 450 litres of water per day (based on the average residential consumption adjusted for typical commercial/industrial discharge factors). For these properties, Council will assume ownership and maintenance responsibilities for the property boundary assembly and pressure sewer lateral only. The boundary assembly must be kept clear and accessible by the property owner.

Extension of the Existing Reticulated System

Council will not, ~~as a general principle,~~ extend the reticulated sewer system beyond the boundaries of the designated urban area. ~~The only exceptions to this will be~~ except where there are specific and unique reasons such as **for public health or environmental benefits.**

Should such an extension be **allowed approved** the property owner/s ~~will in these instances~~ shall be required to meet **both** the costs of the **design, construction and certification of the extension of the reticulation system to their property/properties, as well as the "on property works" costs to be incurred** and any connection fees as per Council's ~~Management Plan Fees and Charges (including Section 64 Sewer Charges).~~

~~Council will design the extension to the mains as part of the process and will carry out these works invoicing the property owners involved.~~ The property owner shall be responsible for arranging all ~~will organise the on-property~~ works and must engage an accredited installer to carry out these works using Council approved technology.

The Property Owner's Role On Property Works - All Instances

The property owner ~~is~~ will be required, in all instances other than where the property owner has been paying a wastewater *Not Connected Access Charge*, ~~other than those detailed in Council's backlog sewer policy (refer to section 5.1)~~ to arrange for the ~~on-property~~ installation of the on property works ~~pumping unit~~. These ~~must to be~~ carried out by an installer who has been formally accredited by the technology supplier so that all of the warranties and guarantees attached to the ~~pump station pumping unit~~ remain valid ~~will not be voided~~. Council will maintain a list of these "accredited" installers ~~for the information of~~ and make it available to property owners upon request.

~~For those installing~~ Where the ~~pump station pumping units~~ is being installed on a property ~~ies~~ with an existing dwellings ~~these~~ accredited installers ~~have been trained to~~ is also required to carry out ~~the a~~ home audits ~~required~~ before a connection can be made to the existing building. These audits are ~~is~~ critical to ensuring the safe connection of the ~~pump station pumping units~~ and its ongoing operation. ~~The property owner will need to meet the costs of any upgrading works required that is identified from the audit work.~~

The property owner ~~will also be~~ is required to meet the costs of connecting the sewage ~~pressure sewer pumping unit~~ to the house/dwelling on the property. ~~The property owner is further required to meet as well as~~ any costs associated with any upgrade to their points of attachment or the general household drainage systems determined from the home audit (if required). ~~an audit of an existing property by the accredited installers as part of the installation process.~~ This is in addition to meeting the costs for the on property works where specified.

Handover of On Property Works

Where the on property or other connection works are carried out by an accredited installer, the following must be undertaken before Council will accept handover of the works:

- Provide to Council the commissioning certificate including results of a draw down test and warranties for the pump station
- Submit to Council the NSW Fair Trading Final Compliance Certification completed by the accredited installer.
- Inspection by a Council Wastewater Officer and payment of the inspection fee (per Council's Fees and Charges)
- Provide Works as Executed plans showing location of all on property works and reticulation extension (where applicable).
- Signed maintenance agreement.

~~5. The Roles of Council, the Developer and the Home Owner in New Subdivisions being Serviced by a Pressure Sewer System~~

~~6.1 The Developer~~

~~Developers may propose to provide pressure sewer infrastructure to service a proposed development in accordance with this policy statement. Such proposals would be subject to:~~

- ~~• Lodgement of a development application in accordance with Part 4 of the Environmental Planning and Assessment Act.~~
- ~~• Lodgement of an application to carry out sewer work and to connect a private sewer to a public sewer under the control of Council; in accordance with Section 68 of the Local Government Act.~~
- ~~• Council approval of the above applications.~~

Who is responsible for the Ownership, Operation, Maintenance and Replacement of Residential Pressure Sewer Infrastructure?

Council will not assume ownership and maintenance responsibility for private pumping arrangements on commercial or industrial properties, except where the property water consumption is less than 450 litres of water per day (based on the average residential consumption adjusted for typical commercial/industrial discharge factors). For these properties, Council will assume ownership and maintenance responsibilities for the property boundary assembly and pressure sewer lateral only. The boundary assembly must be kept clear and accessible by the property owner.

The responsibility for the operation, maintenance and possible replacement of pressure sewer infrastructure, following its installation, is a joint responsibility; shared between Council, individual property owners and residents where these differ from the property owners, ~~as outlined below~~. In the case of infrastructure provided by developers, the developers also share the responsibility for a limited time following its installation up until its eventual handover to Council.

Normal Operation of the Pump Station Collection/Pumping Unit

The ~~collection/pumping-units~~ pump station operates automatically and does not require any specific input from the resident. The collection tank is sufficiently sized to cater for power outages that might be experienced as part of normal operation.

A Home Owner's Manual will be provided by Council to all home owners to outline the operation and maintenance requirements of the ~~pumping-units~~ pump station. The Manual ~~is to include~~s:

- ~~• Emergency contact numbers and/or website details for further enquires in respect to this technology.~~
- What to do if the alarm sounds.
- What to do in the case of a power failure.
- Ensuring access to the unit for operation.
- What can be safely discharged into the sewerage system.

The Resident is expected to familiarise themselves with this document and use it when required. It will be supported by further detail on pressure sewer systems contained on Council's website.

Property Owner's Responsibilities

Individual ~~The~~ property owners shall be responsible for the following activities ~~with their roles~~ in respect to pressure sewer systems ~~defined in greater~~ ~~which are further~~ detailed ~~ed~~ in the home owner's manual:

- Maintaining ~~an~~ ~~enance of the~~ electrical connection to the electrical control cabinet of the ~~sewage pumping unit pump station~~ located on the property.
- ~~Making the connection of the~~ ~~Connecting~~ internal plumbing to the ~~sewage pumping unit pump station~~.
- Maintaining ~~enance of~~ the gravity plumbing on the property, up to the inlet of the pumping unit.
- Entering ~~into~~ a maintenance agreement with Council ~~where the service is to an existing property. This to~~ provides Council with access to their property for the purpose of maintenance or replacement of pressure sewer infrastructure located on their property. ~~The agreement also outlines responsibilities with respect to Any new property owners will be required to enter into a new agreement with Council, covering the continued operation and maintenance of pressure sewer infrastructure located on the property. The pro-forma agreement would apply. This agreement will not be is not required where the property is covered by a positive covenant.~~
- ~~The property owners shall be required to~~ ~~Informing~~ real estate agents, or prospective purchasers, of the nature of the pressure sewer system located on their property and the need to enter into an agreement with Council for the continued maintenance and operation of this infrastructure. ~~(These requirements are specified within the agreement entered into between Council and property owners). This agreement will not be is not required where the property is covered by a positive covenant.~~
- ~~The property owner shall be responsible for~~ ~~Where the property owner does not reside on the property,~~ communicating the ~~above~~ Resident's Responsibilities to the tenant and ~~will ensure~~ ~~that~~ a copy of the home owner's manual is available to the tenant at the time of occupancy.
- Payment of the annual sewer charges, applicable from the time the connection to the sewer is made.

Resident's Responsibilities

Recognising that the resident will not always be the property owner, those resident on the property will be responsible for the following activities:

- Provision of electrical power to the pump station, including payment of associated power costs.
- Providing Council access to the property, for the purpose of operation, maintenance or replacement of pressure sewer infrastructure located on their property.

- Notifying Council immediately if any alarms are generated within the electrical control cabinet of the pump station, or of any other problems with the performance of the pressure sewer system.
- Ensuring no deleterious material is discharged to the sewer
- Undertaking any other requirements as set out in the Pressure Sewer Property Owner Manual and Agreement for Provision of Pressure Sewer Service.

All on-property works covered by this section of the policy are owned by Council and will be maintained by Council as part of its normal sewerage maintenance. Residents interfering with on property works without Council's approval may be subject to action under Section 635 of the Local Government Act 1993. This is in addition to meeting any costs arising from the loss of warranty on the pumping unit and/or damage to that unit and/or any costs associated with unauthorised works.

Special Requirements for Swimming Pools, Spas or other High Discharge Water Applications

While pressure sewer systems do not prohibit high discharge applications such as swimming pools and spas, appropriate provisions need to be made to accommodate these discharges.

Council may impose special requirements on properties which are proposing the installation of spas or swimming pools which will be dealt with on a case by case basis. The same provisions shall apply to persons wanting to drain their existing swimming pools or spas.

Any costs incurred as a result of these requirements shall be the responsibility of the property owner

7.1—Maintenance of the Pump Station Collection/Pumping Unit and Pressure Sewer System

Council Responsibilities

Council shall own and be responsible for the operation and maintenance of the following items of infrastructure after handover by the property owner ~~it has assumed responsibility for them:~~

- Individual Sewage Pump Stations on each property, including the pump well, pump, electrical control cabinet and associated fittings.
- All pressurised sewer mains and associated fittings, including the property boundary kits assembly and boundary kit assembly boxes.
- Ongoing flushing of the pressure sewer mains.
- The discharge point.

Council shall be responsible for the replacement of these items as part of the resident's ongoing maintenance agreement with Council. Council will note the need for that maintenance agreement to be entered into between Council and the Property Owner on any Section 149 10.7 Certificate issued for these properties.

Developer Responsibilities

Until handover of the reticulation system is affected, the developer will be responsible for all of the above responsibilities attributed to Council. This will particularly include the ongoing

flushing of the mains until sufficient development has occurred. After handover, Council shall assume these responsibilities.

~~For new developments, the developer however will be required to provide register a positive covenant on each property title to identify a pressure sewer system is required for that lot, that allows Council access to service the pumping units at all times. This shall avoid the need for new maintenance agreements to be signed each time a property is sold. All costs associated with the creation of covenants shall be borne by the developer. The need for creation of covenants shall be addressed through placement of appropriate conditions of development consent on the proposed subdivision.~~

~~A pro forma will be developed by Council's solicitor for such a covenant. This wording shall be included within any Section 88B Instruments attached to the linen plan of subdivision at the time of its registration.~~

~~7.5 How Will The Resident Know How to Operate the Pumping Unit~~

~~6. Can the Resident Repair the Pumping Unit?~~

~~The unit is Council property and is not to be touched by the resident.~~

~~7. Can the Developer/Property Owner install their own Technology to Service the Properties?~~

~~Only Council approved technology will be accepted for handover by Council and this will cover not just the pumping unit but also the boundary kits and the flushing points. The Developer or property owner can procure their own approved technology or can obtain this from Council, which will enter into a long term supply contract to gain the best possible price for residents.~~

~~Council will limit the number of technologies it will support to minimise overall maintenance costs and the list of accredited technologies will be contained in the "Ballina Shire Council Pressure Sewer Guidelines".~~

~~8. Why Does the Property Owner/Developer need to Use an Accredited Installer?~~

~~A number of installers in the Shire will be formally accredited by the Technology Supplier and a list of these will be provided to all persons wishing to install a pressure sewer unit on their property. Use of these installers will ensure the warranty provisions provided by the manufacturer are guaranteed and the installer will also be trained in the service diagrams required by Council as a permanent record of the works on the properties that will be stored by Council. Please contact Councils Plumbing & Drainage Officer for a list of these installers.~~

~~What are the Minimum Levels of Service that will apply to Pressure Sewer?~~

~~In general Council will endeavour to mirror the services provided for more traditional sewer services, the same level of service as provided in gravity sewerage systems, particularly during business hours. However for after-hours service, Council will specifically provide the makes the following additional provisions services:~~

- Next day repairs or replacement of the pumps for after-hours responses to high level alarms. This is to minimise inconvenience to the resident by utilising the emergency storage in the pumping unit.
- Immediate response to any emergency situation with the potential for an overflow.

The Home Owner's manual details what a resident should do in response to any emergency (or alarm) situation.

~~9. Where can More Detail be Found in Relation to the Design, Construction and Operation of Pressure Sewer Systems?~~

~~Specific details can be found in the "Ballina Shire Council Pressure Sewer Guidelines" and the Ballina Shire Technical Specification for Pressure Sewer as well as documentation set out in Attachment 2. Council will also maintain a more detailed home owners manual to pressure sewer on its website <http://www.ballina.nsw.gov.au/file.asp?i=4185>.~~

BACKGROUND

Pressure sewer refers to a system of providing sewer services to developed areas, which involves the installation of separate, small sewage pump stations to each property or dwelling. These pump stations are interconnected by a network of small diameter, pressurised pipelines which transfer sewage to a nominated discharge point, usually to a point in Council's existing gravity sewer system. A more detailed explanation of what constitutes a formal pressure sewer system is detailed in the definitions below. These systems should not be confused with private pump up arrangements.

Pressure sewer systems provide an alternative to conventional gravity sewer systems. Gravity sewer systems service properties by a network of large diameter gravity pipelines. This network of gravity pipelines usually discharges to a larger, centralised sewage pump station, serving a large number of properties, which transfers sewage further within the overall sewer system.

As a general rule, gravity sewer systems are preferred to pressure sewer systems in Ballina Shire. However, pressure sewer systems have considerable merit in providing opportunity to sewer areas in which the provision of conventional gravity sewer systems is technically, or economically not feasible.

The use of pressure sewer systems raises several unique issues not normally associated with the operation of conventional sewer schemes. Of prime importance is the need to define responsibilities for the maintenance and operation of the infrastructure (~~i.e., small pump stations and related items~~) installed on individual private properties.

~~What are the different components of a pressure sewer scheme?~~

~~A pressure sewer system comprises the following elements, which need to be understood in determining the roles to be played by all bodies in relation to the ongoing construction, operation and maintenance of these systems:~~

- ~~A discharge point that will be nominated by Council.~~
- ~~A reticulation or common pipe collection system that comprises the pipe network that links this discharge point to the properties served and includes the connection of the~~

~~individual properties to these reticulation pipelines. Thus the termination point on the property for the reticulation system will be the boundary kit (including the same).~~

- ~~• The on property works that includes the installation of the pumping unit and all of the connections required to make it operational but not including the connection of the existing property sewer system to the pumping unit.~~

DEFINITIONS

On Property Works

The pump station, property boundary assembly and property discharge line. Excludes the property connection to the pump well and all upstream plumbing (sanitary drainage).

Pressure Sewer Lateral

The continuation of the property discharge line from the property boundary assembly to the reticulation system pipeline including any road crossings (where applicable).

Pressure Sewer System

In pressure sewer systems the household (or other) sewer drains flow by gravity into the ~~pumping unit~~ pump station. From the ~~pumping unit~~ pump station flows are then moved to the designated system discharge point via the collective pressure generated by the pumps in the property ~~pumping units~~ pump stations. The pump will also contain a grinder to prevent blockages happening in the pipe systems, and an alarm system to warn the resident that the ~~unit~~ pump station is not operating within pre-set parameters. Typically these systems are based on much smaller pipelines, laid at minimum depth with no requirement for grade, which do not contain manholes, lampholes, or other conventional sewer system fixtures and fittings.

A pressure sewer system comprises the following elements, ~~which need to be understood in determining the roles to be played by all bodies in relation to the ongoing construction, operation and maintenance of these systems:~~

- A discharge point ~~that will be~~ nominated by Council.
- A reticulation or common pipe collection system that comprises the pipe network that links this discharge point to the properties served and includes the connection of the individual properties to these reticulation pipelines. Thus the termination point on the property for the reticulation system will be the ~~property~~ boundary ~~kit~~ assembly (including the same).
- The on property works that includes the installation of the ~~pumping unit~~ pump station and all of the connections required to make it operational but not including the connection of the existing property sewer system to the ~~pumping unit~~ pump station.
- ~~• Connection of the pumping units to Council's pressure sewer reticulation system.~~
- ~~• A reticulation system capable of supporting a number of such individual pumping units and conveying the domestic sewage to the nominated discharged point in a time frame that minimises any odour generation. This reticulation system will be operating under pressure, not gravity.~~
- ~~• Pumping units that have been specifically designated as pressure sewer pumping units within the wider water industry.~~

~~Council will only accept the handover of systems specifically designed as a pressure sewer system and systems that have been operated at other locations as full pressure sewer system. Newer technology will be expected to overcome any lack of proven performance, with extended warranties.~~

Property Boundary Assembly

Valving that allows the property to be isolated from the system and also provides flow protection, preventing flow from other properties entering into the individual system under pressure.

Property Discharge line

The pipeline that connects the sewage pump station to the property boundary assembly.

Sewage Pump Station

An individual ~~pressure~~ sewer pumping unit usually located on each property and draining the individual property. ~~A pump station consists of on each property, inclusive of the pump well a collection tank,~~ pump, electrical control cabinet, ~~alarm control panel~~ and associated fittings.

SCOPE OF POLICY

This policy applies to:

- Council employees
- Developers/Builders
- Individual Property Owners ~~(see section 2 for exceptions).~~

RELATED DOCUMENTATION

Related legislation, policies and documents:

- Environmental Planning and Assessment Act 1979.
- Local Government Act 1993
- The Wastewater Services Association Pressure Sewer Code (WSA – 007)
- **Ballina Shire Council Pressure Sewer Home Owners/Home Occupiers Manual**
- ~~Ballina Shire Council Pressure Sewer Guidelines~~
- ~~Backlog Sewer Program Policy~~
- ~~Ballina Shire Technical Specification~~

REVIEW

This policy is to be reviewed every four years.

Attachment 1 - Diagrammatic Representations of the Pressure Sewer Process

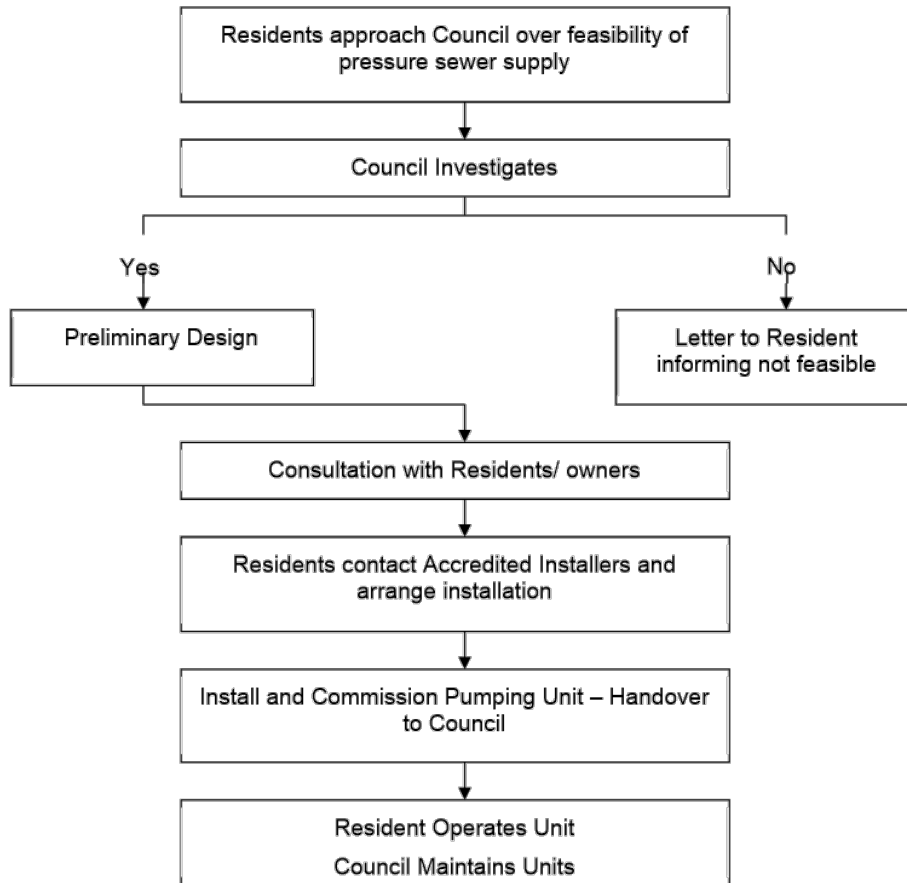


Figure A1. Diagrammatic Representation of the Pressure Sewer Process for an Extension of the Existing Sewer Service

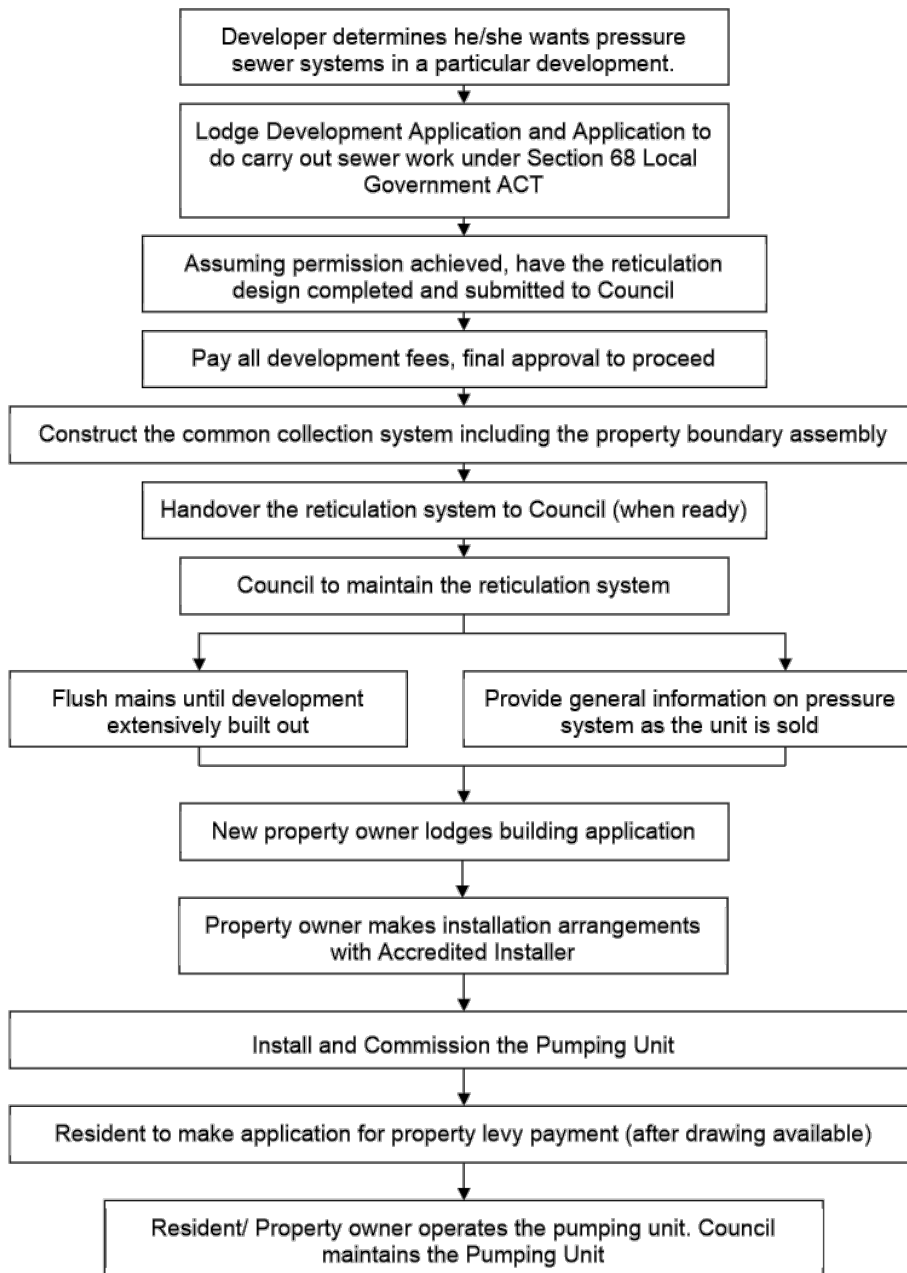


Figure A2. Diagrammatic Representation of Pressure Sewer Systems for a New Development

Attachment 2 - Supporting Documentation on Pressure Sewer Systems

In support of this policy statement, is the following documentation:

- ~~WSA – 007, The Wastewater Services Association Pressure Sewer Code~~
- ~~The Ballina Shire Technical Specification covering the supply and installation of the pressure sewer pumping units in Ballina Shire in detail.~~
- ~~A Home Owner's Manual to inform the resident of what they can and cannot do in relation to the pressure sewer system on their property, as well as what to do if their system should fail.~~
- ~~The Ballina Shire Council Pressure Sewer Guidelines~~
- ~~General information on the nature and operation of the technology, particularly for potential land on home purchasers where the property is serviced by a pressure sewer system.~~

~~In addition to this documentation, Council will also support the residents where approved pressure sewer systems have been installed by the including the pressure systems repairs and maintenance into Council's 24 hour a day call centre arrangements.~~



Pressure Sewer Property Owner / Property Occupier Manual

Council's Emergency Contact Numbers

Business hours 1300 864 444

After hours 6626 6954

It is strongly recommended that you read this manual and thereafter keep it in a safe, but readily accessible place. You should re-familiarise yourself with it each year. If the property is rented then the manual should be provided to the tenant along with instructions for them to familiarise themselves with the document. Additional copies of the document are available from Council.

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1 INTRODUCTION

This manual has been prepared for owners and tenants (where applicable) of properties which are connected to sewer using pressure sewer systems. It provides important information regarding the use of your onsite pump station.

If your pump station breaks down, an alarm will sound to warn you that the system is not working. When this occurs you should follow the steps set out in Section 6 of this manual as these will guide you through the actions you need to take.

2 WHAT IS PRESSURE SEWER?

Pressure Sewer refers to a system of providing sewerage services to developed areas through separate, dedicated pumping units (pump stations) on each property or dwelling. These pump stations are interconnected by a network of small diameter, pressurised pipelines (reticulation) which transfer sewage to a nominated discharge point, usually to a point in Council's existing gravity sewerage system.

Pressure Sewer systems provide an alternative to conventional gravity sewer systems and are used where they offer a better solution than conventional sewerage for a particular location. Pressure sewer technology has been in use for over 30 years. The diagram below illustrates a typical pressure sewer installation within a residential property.

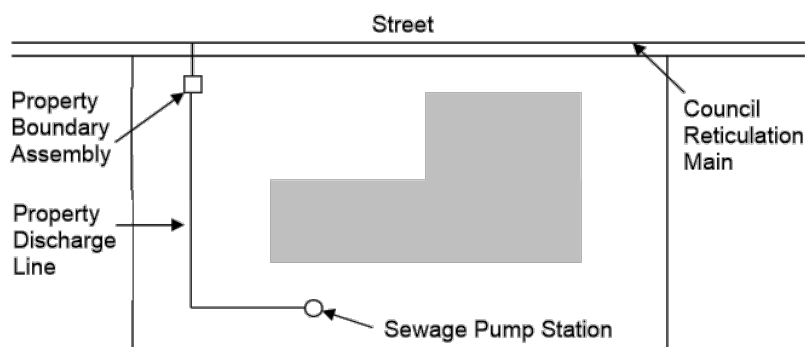


Figure 1: Typical Pressure Sewer Installation

A property pressure sewer installation, called the **on property works**, is made up of several key components:

The **pump station** which consists of:

- An underground pump well, usually made from fibreglass or plastic, which receives flows from the plumbing located within the property.
- A submersible pump, located in the pump well, which pumps sewage received in the pump well to the property discharge line.
- An electrical control and alarm panel cabinet which is generally located on the wall of the dwelling close to the pump station.

The **property discharge line** which is a pressurised sewer delivery pipeline that runs through the property and transfers pumped sewage from the pump well to the common collection system via the property boundary assembly.

The **property boundary assembly**, located on the pressurised sewer pipeline serving each property. The property boundary assembly is generally located just within the front boundary of the property and contains a series of valves that allow the property to be isolated. Only authorised Council staff can operate these valves and, like your water meter, these remain the property of Council.

3 RESPONSIBILITY FOR THE OPERATION & MAINTENANCE OF PRESSURE SEWER SYSTEMS

The operation and maintenance of pressure sewer infrastructure is a joint responsibility shared between Council, individual property owners and residents/tenants where these differ from the property owners.

3.1 Council's Responsibilities

Council is responsible for the operation and maintenance of the:

- Pump station on the property including all connections and fittings.
- Property discharge line and associated fittings.
- Property boundary assembly and assembly box.
- All pressurised common collection pipelines (reticulation) and associated fittings.

Council is also responsible for the replacement of any of these items, should this be required.

Council staff will respond to any request for assistance and will carry with them photographic identification. If persons come to your property without warning or without this photographic identification then do not grant them access and contact the police and Ballina Shire Council.

3.2 The Property Owner's Responsibilities

There are specific actions required of the property owner:

- Maintenance of the electrical connection to the electrical panel of the pump station on the property.
- Connection of internal sanitary plumbing to the pump well. **Do not** connect your roof or yard stormwater drains into to the pressure sewer system, as the system is not designed to accommodate these.
- Maintenance of the internal plumbing on the property up to the inlet of the pump well.
- The payment of the annual sewer charges.
- Providing tenants with a copy of this property owner manual (where applicable). Spare copies can be obtained from Council.

3.3 Responsibilities of Those Resident on the Property

The pump station operates automatically, turning itself off and on based upon the level of the sewerage in the pump well. The pump station will also cater for extras in the home as a result of visitors coming to stay during the holiday periods.

Recognising that the property owner will not always be the property resident this section identifies what is expected of the resident in the operation of the pressure sewer system (unless otherwise determined by the terms of the lease agreement between the owner and tenant).

- The provision of electrical power to the pump station, including payment of associated electricity costs.

- Providing Council access to the property, for the purpose of maintenance or replacement of pressure sewer infrastructure located on the property.
- Notifying Council immediately if any alarms are generated or of any other problems with the performance of the pressure sewer system (refer Section 6).
- Ensuring none of the materials identified in Section 4 are discharged to the sewer.
- When going on holidays, flush the pressure sewer system (refer Section 5).
- If evacuating in an emergency, turn off all power, including the power to the pumping unit. Otherwise do not turn these off when turning off the power to the rest of the house.
- Maintain clear access to the pump station, property discharge line and property boundary assembly (refer Section 8)
- Make sure the venting into the pump well remains clear at all times, so that it can function properly.
- Familiarise yourself with the location of the property discharge line, and avoid damage to the pipeline and pump station.
- **Do not** attempt to repair any part of the pressure sewer system yourself. Council maintains the pressure sewer system on your behalf and your actions may void any warranties attached to the system.
- **Do not** go into the pump well - do not even take the lid off of it. The inside of the pump well is a confined space working environment that could be dangerous without the appropriate training and equipment.
- **Do not** touch the valves in the property boundary assembly box.
- If in doubt contact Council before acting in relation to the pressure sewer system.

3.4 All Parties

- There is no specific charge for normal repairs carried out by the Council as these are funded through annual sewerage charges. However in cases where the property owner and/or resident has failed to undertake requirements as set out in this manual, or where the pressure sewer system has been deliberately damaged, Council may seek costs from the property owner and this may be done before effecting repairs.
- You do not have to be there for repairs to be carried out on the unit if you have followed the rules in respect to Council access. The exception will be where there is a secured yard involved.
- When installing spas, swimming pools or other water using appliances, provisions need to be made to prevent overflows from sudden high discharges. Please contact Council for details on what will be required in these instances.

4 WHAT SHOULD NOT BE DISCHARGED INTO THE SEWER SYSTEM

To avoid blockages or damage to the pump the following substances should not be discharged into your pressure sewer system:

- Wet wipes including those labelled 'flushable' or 'degradable'
- Oil and grease (cooking, lubricating or otherwise)
- Glass
- Metal
- Gravel/sand etc.
- Seafood shells
- Goldfish stone (aquarium gravel)
- Nappies, socks, rags or clothes
- Plastic objects
- Sanitary napkins or tampons
- Kitty litter
- Explosives
- Flammable materials
- Strong chemicals
- Gasoline
- Diesoline

It should be noted that none of these substances should be discharged into a conventional sewer system either.

5 GOING ON HOLIDAYS

Where no one will be present at the property for more than four days, the pump well must be flushed out before going away to avoid any potential for odour generation.

To do this, run clean water into your home sanitary plumbing (e.g. a bath or sink) until the pump activates and runs for about 30 seconds. Filling the bathtub and discharging it will achieve such a flush.

Do not turn off the power to the pump station if you are turning off the power to the rest of the house. This is in case there are any leaking taps which might fill the storage vessel. The pump station will be on a separate circuit and should be clearly labelled.

Where a resident fails to flush their pump well before going on holidays and Council has to clear the system in response to complaints from surrounding neighbours, it may charge the resident for the costs to carry out that work.

6 WHAT TO DO IF AN ALARM SOUNDS

The sounding of the pump station alarm does not mean that you can no longer use your sewer system. The pump station still has around 400 or more litres of storage when the alarm is triggered. Use of this emergency storage is one of the advantages of pressure sewer systems, however some precautions must be adopted to minimise wastewater and/or prevent overflows when using this emergency storage.

Step 1 Turn off the audible alarm

The audible alarm can be turned off by pressing the button on the underside of the alarm panel, (refer to figure 4.1). This panel is usually mounted on the wall of the house or garage in the vicinity of the pump well but may be mounted on a stand-alone post if located away from the home.

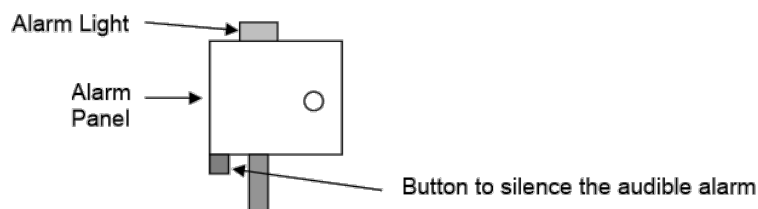


Figure 2: Location of Audible Alarm silencing switch

The alarm light cannot be turned off by the resident. It will turn itself off when the repairs are completed and the pump station is operating normally.

Step 2 Determine if there has been a power blackout

If the alarm sounds immediately after power is restored following a general power failure (on a street/town-wide basis), wait for one hour to see if the alarm clears before calling Council.

In these instances the alarm may sound when the power is restored simply due to the stored volume that has occurred during the power outage. There could be a number of units trying to pump, and the system will limit the number of units that can pump at the same time. The system will therefore take a short time to clear overall.

Silence the audible component in the interim as per step 1 if desired. If the alarm does not stop after one hour, proceed to Step 3.

Step 3 Report the alarm to Council

You should contact Council at the numbers listed on the cover of this manual or on the electrical panel. However before you report the alarm you should investigate the following:

- Is there any sewage coming from the Overflow Relief Gully?
- Are there any discharges coming from the ground or are there any wet spots?
- Are there any perceptible odour problems?
- Has there been a power failure (as per step 2) and have you waited the suggested one hour before calling?

- Is the pump making any unusual noises?

The operator will ask you these questions, as well as the nearest cross street for reference purposes.

Step 4 Minimise wastewater generation until the pump station is repaired

You can continue to use your toilets if there are no overflows but in the period whilst the alarm is active you should try and minimise the overall volumes of wastewater being generated. This can be done in the following manner:

- Don't use washing machines or dishwashers..
- Keep showers brief.
- If using the bath, leave the plug in or bucket out the water onto the lawn.
- Switch off any drainage (automated or not) from swimming pools, spas or other water using appliances.
- Practice good water savings techniques such as not leaving taps running etc.

Step 5 Ensure Council officers have access to the pump station

Council's repair officer/s might need to carry the pump on a trolley to their vehicle and therefore a clear pathway will be required for them. The following actions should be taken:

- Ensure that any property gates are unlocked.
- Ensure that the driveway or pathway leading to these gates is clear to allow access.
- Lock up any pets that might escape the property.
- Ensure the lid of the pump well is clear of any mulch, pot plants etc. and clearly visible for the Council officer.
- Ensure obstacles in the yard that might prohibit the trolley from gaining access to the pump station are cleared away and have a preferred pathway to the pump well.
- Ensure someone is present if it is a "secured" property.

Step 6 Confirm the pump station is repaired before reverting to normal operation

Council personnel will inform the resident before leaving the site that all repairs have been carried out. If you were away from the property while the repairs were being made you should check that the alarm light is no longer illuminated.

7 WHAT TO DO IF THE DISCHARGE PIPELINE BREAKS

The pipeline from the pumping unit to Council's sewer reticulation mains is:

- Polyethylene Class 16 pipe (flexible)
- Black in Colour (the pipe should however have a cream coloured stripe)
- Buried at a depth of 450mm
- Under pressure

Being a sealed pipe system there are no (or few) joints that should allow tree root ingress, nor should the pipeline normally break as a result of ground movement. The most likely cause of pipe breaks will be from digging near the pipeline and accidentally striking the main. Therefore always ensure you are aware of where the pipe is before commencing any digging.

In the event that this line should be broken then you should take the following steps:

Step 1 Identify the type of pipe

Try and determine if the broken pipe is a water main or a sewer main. Indicators as to whether the broken pipe is a sewer main are:

- Smell
- Colour of the Pipe
- Location of the main (is it where you expected the sewer main to be?)
- Pulsing of flows, as the sewage is pumped generally in short bursts. A water main will flow fairly constantly until isolated.

If the above are inconclusive, try turning off the household water main and see if this makes a difference.

Step 2 Turn off the power to the pump station

If you believe it is a broken sewer pipeline, turn off the power to the pump station, in the household switchboard. The pump station has a separate circuit and will be clearly labelled. Turning this off should not impact the remainder of the house.

Step 3 Report the break to Council

Report the broken main to Council and tell them you have turned off the power to the pump station.

Step 4 Minimise wastewater generation until the pipe is repaired

The pump station has spare storage capacity to utilise during an emergency but you should still try and minimise the amount wastewater discharged into the sewer system until repairs are carried out. See Step 4 of Section 6 "What to do if an alarm sounds" for suggestions.

Step 5 Confirm the pump station is not in alarm before reverting to normal operation

Once Council has made the repairs to the pipeline they will turn the power back on to the pump station. It is likely that while the pump station has been off the wastewater in the pump well will have reached a high level and triggered the alarm. This should automatically switch off once the well level has pumped back down. Check that the alarm light is no longer illuminated before reverting to normal operation.

8 COUNCIL ACCESS TO THE ON PROPERTY WORKS

It is important that Council has unobstructed access to the pump station, property discharge line and property boundary assembly in order to carry out routine or emergency maintenance when required.

The pump station must not be buried, paved/concreted over or permanently covered in any other manner. However the pump well may be lightly covered by tanbark or pot plants that can be quickly moved by the resident when repairs are required. When Council comes to repair the pump station the lid to the pump well must be uncovered and accessible. If Council officers are unable to locate the pump well because it has been covered, Council may:

- Refuse to carry out repairs until the owner/resident uncovers the pump well and charge the resident a service call, even if the pump station is not repaired.
- Pass on to the resident any additional costs Council has incurred to locate and uncover the pump well.

If pets are not secured, Council officers may refuse to enter the property where they cannot contact the resident to secure the pets. In these instances Council will not be held liable for any repairs not being carried out and it may charge the resident a service call.

Clear access from any gates to the pump well will be required. The Council officer will need to place a lifting frame above the pump well to lift out the pump and then wheel the pump away to their vehicle on a trolley. Any resident that closes off this access will be responsible for any additional costs incurred to remove the pump particularly if additional equipment, such as a crane, is required.

Any resident with a "secured" property must be present to allow the Council officer access to the property at an agreed time, based upon arrangements made when the resident calls to notify Council of the system failure.

9 COUNCIL NOT LIABLE

Council will not be held liable for any overflows that may occur on the property where the resident has failed to notify Council of the service failure. Residents will be liable for any flows off their property that might happen and may be prosecuted for environmental breaches if they have failed to notify Council. A record of all notifications will be maintained by Council.

AGREEMENT FOR PROVISION OF PRESSURE SEWER SERVICE

TO LOT..... DP.....

This agreement is made between Ballina Shire Council (the Council) and
..... (the Owner)
It relates to Lot DP
..... (the Property).
(street address & locality)

Council and the Owner agree that:

1. The Property is to be connected to Council's sewer using a pressure sewer system. As part of this pressure sewer system, a sewage pump station, pressurised sewer pipeline and associated fittings are to be located on the Property.

Note: further information regarding pressure sewer systems is available within the following Council documents:

- *Ballina Shire Council Pressure Sewer Policy*
- *Ballina Shire Council Pressure Sewer Home Owners / Occupiers Manual.*

2. Council shall be responsible for the operation and maintenance of the following items of infrastructure located on the Property:

- sewage pump station, including the pump well, pump, electrical control cabinet and associated fittings.
- pressurised sewerage mains and associated fittings, including boundary kit and boundary kit box.

Should any of these items require replacement, Council shall be responsible for the replacement of these items.

3. The Owner shall be responsible for:

- maintenance of the electrical connection to the electrical control cabinet of the sewage pump station located on the Property.
- provision of electrical power to the pump station, including payment of associated power bills.
- connection of internal plumbing to the sewage pump station.
- maintenance of gravity plumbing on the Property, up to the inlet of the pump station wet well.
- providing Council with access to the Property for the purpose of operation, maintenance or replacement of pressure sewerage infrastructure located on the Property.
- ensuring no materials which would harm the pressure sewer system are discharged to the sewer.

10.2 Policy (Review) - Pressure Sewer.DOC

- notifying Council immediately if any alarms are generated within the electrical control cabinet of the pump station, or of any other problems with the performance of the pressure sewer system.
 - payment of annual sewerage charges. These shall be applicable from the time potential for connection to the sewer is made available.
4. In the event that the property owner leases the property, the following responsibilities shall transfer from the Owner to the lessee. (Unless otherwise determined by the terms of the lease agreement between the owner and the lessee).
- provision of electrical power to the pump station, including payment of associated power bills.
 - providing Council with access to the property, for the purpose of operation, maintenance or replacement of pressure sewerage infrastructure located on the Property.
 - notifying Council immediately if any alarms are generated within the electrical control cabinet of the pump station, or of any other problems with the performance of the pressure sewer system.
 - ensuring no materials which would harm the pressure sewer system are discharged to the sewer.

The Owner shall be responsible for communicating the above responsibilities to the lessee.

5. In the event that the Property is sold, any new owner will be required to enter into an agreement with Council, similar to this Agreement, covering the continued operation and maintenance of pressure sewer infrastructure located on the Property.

Council will include a statement within any Section 149 Certificates, issued with respect to the Property, advising of the need for any new owner to enter such an agreement with Council.

In the event of the proposed sale of the Property, the Owner shall inform real estate agents or prospective purchasers of the nature of the pressure sewer system located on the Property and the need for any new owner to enter into an agreement with Council for the continued maintenance and operation of this infrastructure.

Signed:	Signed:
Name:	Name: On behalf of Ballina Shire Council
Witness:	Witness:
Name:	Name: