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# **GUNNEDAH SHIRE COUNCIL**

# DEVELOPMENT SERVICING PLAN (DSP) - SEWERAGE

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# **DEVELOPMENT SERVICING PLAN - SEWERAGE**

### SUMMARY

This Development Servicing Plan (DSP) covers sewerage developer charges (DC) for the Gunnedah Shire Council. This relates to assets such as treatment facilities, transfer and collection systems.

This DSP has been prepared with consideration to *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater* (2002). These are the final relevant guidelines, managed by the Department of Primary Industries, Utilities (DPI).

This DSP aims to:

- 1. Allow Council to require an equitable monetary contribution for the provision of sewerage infrastructure to meet the loading generated by development.
- 2. Facilitate the future provision of sewerage services to the Gunnedah Shire Council area which meets the required levels of service with regard to pump station capacity, collector main capacity and treated effluent quality.
- 3. Set out the schedule and programme of proposed works to meet increasing sewerage loads generated by development.
- 4. Detail the contribution charges and Gunnedah Shire Council's payment policies.

To enable this, a future demand estimate of sewerage load for the Council has been undertaken. The demand estimate is the basis used for determining the infrastructure required to meet the need generated by future development.

Developer contributions are applicable for existing and proposed works which serve future development. Section 3 details the existing works and proposed works schedule for sewerage infrastructure to meet the expected loading.

The calculated DC, based on full cost recovery, is tabulated below.

Location	Developer Charge / ET (\$09/10)
Gunnedah	6,431
Curlewis	2,907
Weighted Average (Gunnedah and Curlewis)	5,991
	Developer Charge / ET (\$13/14)
Western Servicing Area	\$3,230

Gunnedah Shire Council Sewerage Calculated Developer Charges

Allowing for annual indexing the weighted average (Gunnedah and Curlewis) charge in the table above becomes:

Developer Charge for 2013/14 for Gunnedah and Curlewis is \$6,743 per ET.

Developer Charge for 2013/14 for Western Servicing Area is \$3,230 per ET.

#### General Notes:

Developer charges calculations relating to this DSP will be reviewed after a period of five to six years, or when any significant changes occur in proposed works, growth projections or standards.

In accordance with the DPI guidelines, in the period between any reviews, developer charges will be revised on 1 July each year on the basis of movements in the Consumer Price Index (CPI) for Sydney, in the preceding 12 months to December, excluding the impact of GST.

There are a number of payment methods for DC and works-in-kind contributions are allowable subject to certain conditions.

The developer shall be responsible for the full cost of the design and construction of sewerage reticulation works within subdivisions.

# 1. Introduction

#### 1.1 Legislation

Section 64 of the *Local Government Act 1993* enables a local government council to levy developer charges for water supply, sewerage and stormwater. This derives from a cross-reference in that Act to Section 306 of the *Water Management Act 2000*.

This Developer Servicing Plan (DSP) has been prepared in accordance with the *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater* (2002), managed by DPI, pursuant to Section 306 (3) of the *Water Management Act 2000.* 

#### 1.2 Purpose of the DSP

The purpose of the DSP is to achieve the following objectives:

- 1. Allow Gunnedah Shire Council to require an equitable monetary contribution for the provision of sewerage infrastructure to meet the loads generated by new development.
- 2. Facilitate the provision of sewerage services to the Gunnedah Shire Council area which meets the required levels of service with regard to pump station capacity, collector main capacity and treated effluent quality.
- 3. Identify the existing relevant works and set out a schedule and programme of proposed works to meet increasing sewerage loads generated by development.
- 4. Detail the contribution rates and Gunnedah Shire Council's payment policies.

The sewerage system for which Gunnedah Shire Council seeks to levy Developer Charges (DC) includes collector mains, pump stations and treatment facilities. Reticulation is provided by developers as part of the subdivision/development works.

#### 1.3 Land to Which the DSP Applies

This DSP applies to all land in Gunnedah Shire Council area that is within the sewerage benefit area which is to be connected to the sewerage system as a result of development. This includes connection of land with existing residences and/or non-residential buildings if sewerage DC have not been paid previously; and may be in addition to costs for shared, special extension of system outside the general sewerage benefit area.

The sewerage benefit area also includes the area known as the Western Servicing Area. The Western Servicing Area is on the western side of Gunnedah township and includes the land along Torrens and Quai Roads and the land of the former abattoir site on Farrar and Blackjack Roads.

This DSP has been updated to include sewerage DC for the Western Servicing Area, refer to Section 3.2.

The areas to which this DSP applies are referred to as Gunnedah, Curlewis and the Western Servicing Area.

Maps of sewerage areas can be found in Appendix 4.

#### 1.4 Calculation Guidelines

This DSP has been prepared with consideration given to *Guidelines - Developer* Charges for Water Supply, Sewerage and Stormwater, 2002. These were the latest

relevant guidelines from the DPI, at the time of DC calculation, and are based on recommendations of the Independent Pricing and Regulatory Tribunal (IPART).

#### 1.5 Date From Which This DSP Comes Into Effect

The DSP for Gunnedah and Curlewis was adopted by Gunnedah Shire Council on 15/02/2012 and came into effect on 01/07/2012.

This DSP has been amended (July 2014) to include the Western Servicing Area and was adopted by Gunnedah Shire Council on XXX/2014 and came into effect on XXX/2014.

Charges will be levied pursuant to this DSP, as a condition of development consent granted on or after the day this DSP came into effect.

#### 1.6 Relationship Between this DSP and other Existing Policies or Plans

A number of environmental planning instruments apply to the development of land to which this DSP relates. They include State Environmental Planning Policies.

A full listing of State Environmental Planning Policies applying to Gunnedah Shire Council is attached to this DSP as Appendix No. 1. Various other Wentworth Shire Council Development Servicing Plans are also relevant, as listed in Appendix 2.

This DSP supersedes any other requirements related to sewerage DC for the area covered by this DSP. This DSP takes precedence over any of Gunnedah Shire Council's codes or policies where there are any inconsistencies relating to sewerage developer charges. (The term "Developer Contributions" may formerly have been used to refer to Developer Charges.)

#### 1.7 Assets Relevant to the DSP

The purpose of the DSP is that new developments should pay for assets from which they benefit. Collection systems and treatment works are provided by Gunnedah Shire Council and paid for through developer charges. Reticulation works are provided by the developer. Asset categories are defined as follows:

#### 1.7.1 Collection Systems

For the purposes of this DSP sewage collection systems comprise trunk mains, major pumping stations and rising mains.

#### 1.7.2 Treatment Works

The capacity of the treatment works can be expressed in terms of equivalent tenements. This assumes a domestic strength sewage with pollutant concentrations similar to that from residential areas.

For developments with domestic strength sewage, the number of additional equivalent tenements is directly related to volume of discharge.

For developments with high strength sewage, the number of additional equivalent tenements is related to the pollutant load.

#### 1.7.2 Reticulation

Reticulation generally consists of all the internal distribution pipes within the subdivision or which specifically serve that subdivision. In some instances, Gunnedah Shire Council is the developer.

The developer shall be responsible for the full cost of the design and construction of sewerage reticulation works within subdivisions.

Plans of sewerage infrastructure are in Appendix 4.

# 2. Methodology

#### 2.1 Calculation Method for Developer Charges

#### 2.1.1 General Methodology

In its most simplistic description, the calculation determines the equivalent cost of one brand new set of assets to serve development as if those assets could be constructed now. Practically, however, sewerage infrastructure consists of an ongoing progression of old and new assets with complex interconnection. Sewerage assets may be constructed many years ahead of full capacity to reflect cost effective and practical staging of works.

Only collection system and treatment works have been taken into account in the DC calculation. The construction of any reticulation pipework required will be the responsibility of the developer.

The methodology used was developed with consideration given to the latest (final) guidelines, managed by DPI, *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater* (2002). The NPV of Annual Charges Method was used and this is based on the following general equation, as recommended by the Independent Pricing and Regulatory Tribunal (IPART).

#### Developer charge = Capital charge – Reduction amount.

The *capital charge* is the cost of beneficial assets plus a return on investment, which reflects the cost incurred by Council of providing the assets ahead of development.

The *reduction amount* is the present value of those capital works costs included in the total capital charge which may be deemed to be already included in annual charges.

The calculated DC is based on full cost recovery.

#### 2.1.2 Background Report/ Detailed Methodology

The methodology and calculation is shown in more detail in the DSP background spreadsheets, in Appendix 5  $\,$ 

#### 2.2 Tenement and Demand Estimates

Most types of development will increase the demand on the sewerage system. Sewerage assets may directly or indirectly benefit a development by allowing increased loading to be serviced. Growth of equivalent tenements (ET) is based on population growth as shown in the table and graph over.

### **Gunnedah Shire Council Population Projections**



For residential subdivisions, the increased demand is directly related to the number of additional tenements created.

For medium density development each unit is considered to increase demand by two thirds (2/3) of a tenement. Therefore charges may be multiplied by 0.67 in the case of town houses less than 3 bedrooms, cluster housing, villa units, medium density, dual occupancy and 1 bedroom flats.

The increased demands generated by other types of development (including nonresidential) in Gunnedah and Curlewis need to be assessed in terms of additional <u>equivalent</u> tenements. The number of additional equivalent tenements is calculated in accordance with the Public Works Department's *Manual of Practice: Sewer Design* (1984) now managed by DPI and/or historical data for similar developments respectively.

The increased demand generated by developments in the Western Servicing Area need to be assessed in terms of additional <u>equivalent</u> tenements.in accordance with the Water Services Association of Australia's Sewerage Code of Australia, Part 1: Planning and Design, Second Edition, Version 2.2, 2002.

Planned development of the sewerage system is based on these long-term growth projections.

DC pay for the provision of system capacity to suit new development. New development may be served by a combination of existing and/or new works.

#### 2.3 Works Covered by This DSP

The existing and proposed works covered by this DSP are itemised in Section 3. All Gunnedah Shire Council's collection systems and treatment works, subject to DC Guidelines, are shown on these tables.

Separate tables list the works associated with Gunnedah, Curlewis and the Western Servicing Area.

### 2.4 Cost Estimates

"Current replacement" cost estimates of the existing and proposed works are based on unit rates for construction published in the *NSW Reference Rates for Valuation of Existing Water Supply, Sewerage and Stormwater Assets* by NSW Department of Land and Water Conservation, managed by DPI. These cost estimates are shown in Section 3.

# 3. Works Included and Calculations

#### 3.1 Gunnedah and Curlewis

Both existing and proposed works which are relevant for inclusion in this DSP are itemised in updated calculation tables in Appendix 5. Cost estimates and year of construction information are included.

### 3.2 Western Servicing Area

The sewage collection system for the Western Servicing Area was sized in accordance with the Water Services Association of Australia's Sewerage Code of Australia, Part 1: Planning and Design, Second Edition, Version 2.2, 2002.

The proposed works required to provide a sewerage collection system to the Western Servicing Area are included in Appendix 6. The capital charge includes two wastewater pump stations, rising mains, associated trunk gravity mains and reticulation mains to be constructed in 5 stages (Stages 1 - 4A) over a 6 year period. The DC calculations include the augmentation of the treatment works to cater for future development in the Western Servicing Area.

A reduction amount of \$2,032 was adopted and estimated (simplified reduction amount method) based on the results from the 2012/2013 financial year.

# 4. Levels of Service and Design Parameters for Sewerage

## 4.1 Levels of Service

System design and operation are based on providing the following Levels of Service to Gunnedah Shire Council:

## Sewerage Levels of Service

DESCRIPTION	UNIT	LEVEL OF SERVICE	
		Current	Target
SERVICE AVAILABILITY <ul> <li>Extent of area serviced</li> </ul>	Serviced area	DSA (75m from mains)	Gunnedah and Curlewis
SYSTEM FAILURES (overflows to the environment) Category One: - Failure due to rainfall and deficient capacity <sup>®</sup>	No./year	3 (excluding flood or drought situations)	2
<ul> <li>Category Two:</li> <li>Failures due to pump or other breakdown including power failure</li> </ul>	No./years	1	1
<ul> <li>Category Three:</li> <li>Failures due to main blockages and collapses<sup>@</sup></li> </ul>	No. /year	G - 75 C - 2	G < 50 C - 2
<b>Response Times for System Failures</b> (Defined as the maximum time to have staff	on site to commence	rectification for 95%	of times)
<ul> <li>Priority One:</li> <li>(Major spill, significant environmental or health impact, or affecting large number of consumers i.e. a major main)</li> <li>During working hours:</li> <li>During after hours:</li> </ul>	Minutes Minutes	G – 30 C - 60 G – 60 C – 60	G – 30 C - 60 G – 30 C – 60
<ul> <li>Priority Two:</li> <li>(Moderate spill, some environmental or health impact, or affecting small number of consumers i.e. other mains)</li> <li>During working hours</li> <li>During after hours</li> </ul>	Minutes Minutes	G – 30 C - 60 G – 60 C – 60	G – 30 C - 60 G – 30 C – 60
<ul> <li>Priority Three:</li> <li>(Minor spill, little environmental or health impact, or affecting a couple of consumers)</li> <li>During working hours</li> <li>During after hours</li> </ul>	Minutes Minutes	G – 30 C - 60 G – 60 C – 60	G – 30 C - 60 G – 30 C – 60

	Current	
	Current	Target
2		
No./ 1000 connections	32	<20
No./ 1000 connections	1	0
	1 1	0 0
No./ 1000 connections	0	0
No./ 1000 connections	0	0
ts		
%	100	100
Working days Working days	5 1	5 1
% of total volume of sewage treated	5 95 -	5 95 -
% total volume of wastewater treated	G - 100	G - 100
% of samples/ year	90	100
	connections No./ 1000 connections No./ 1000 connections ts % Working days Working days Working days Working days Working days Working days	connections1No./ 1000 connections111No./ 1000 connections0No./ 1000 connections0No./ 1000 connections0No./ 1000 connections100Vorking days Working days5% of total volume of sewage treated5% of total volume of wastewater treated5% total volume of wastewater treated6 - 100% of samples/ year90

C - Curlewis; G - Gunnedah; @ - NWI Performance Indicators

Note: The Levels of Service are the targets, which Council aims to meet; they are not intended as a formal customer contract.

#### 4.2 Design Parameters

Investigation and design of sewerage system components is based on the *Manual of Practice: Sewer Design* (1984) and the *Manual of Practice: Sewerage Pumping Station Design* (1986). These manuals were prepared by NSW Public Works and are now managed by DPI.

Technical reports relating to the system components in the DSP are included in Section 6, References.

# 5. Developer Charges

#### 5.1 Reticulation

Gunnedah Shire Council does not charge a monetary charge for the construction of reticulation pipework as developers are responsible for the provision of these works. These may be handed over to Gunnedah Shire Council upon completion of the development.

#### 5.2 Collection Systems and Treatment Works

The calculated DC, for collection systems and treatment works is tabulated below. This is based on full cost recovery.

Location	Capital Charge /ET	Reduction/ET	Developer Charge / ET (\$09/10)
Gunnedah	\$9,414	\$2,983	6,431
Curlewis	\$5,890	\$2,983	2,907
Weighted Average (Gunnedah and Curlewis)	\$8,974	\$2,983	5,991
			Developer Charge / ET (\$13/14)
Western Servicing Area	5,262	2,032	3,230

#### Calculated Sewerage Developer Charge

The DC for the villages of Carroll, Mullaley and Tambar Springs have not been determined, since they are currently served by septic tanks, not a reticulated system.

Since developer charges offset the cost of capital works, a Construction Cost Index adjustment of 3% has been used to convert \$09/10 to \$2013/14 (Based on annual indices provided by Department of Resources and Energy for the NSW Reference Rates Manual).

# Developer Charges for 2013/14 is \$6,743 per ET for Gunnedah and Curlewis.

# Developer Charges for 2013/14 is \$3,230 per ET for Western Servicing Area.

Details of the derivation of the calculated DC is included in Section 3.

#### 5.3 Payment of Developer Charges

#### 5.3.1 Timing of Payments

Subject to clauses 5.3.2 and 5.3.3 the timing for payments of developer charges is as follows:

For complying development	Following the issuing of a complying development certificate and prior to the commencement of work (whether or not the certificate is issued by Council or an accredited certifier).
For other development	Prior to the release of the Construction Certificate or the issuing of a Notice of Commencement of Work

should the proposed development not involve construction.

For <u>subdivision</u> Prior to the release of the Linen Plan.

#### 5.3.2 Method of Payment

Developer charges must be made in the form of monetary payments to Gunnedah Shire Council. Development consents requiring the payment of a DC will contain a condition specifying the amount payable in monetary terms at the time the consent is issued. A note will be attached to the consent condition which will advise that the DC will be at the rate which applies at the time of payment. That is the rate may increase, through indexation or replacement of this DSP with a new one, from the time the condition appears on the notice of development consent until the time the DC is actually paid to Council.

The deferral of payment of contributions is only permissible subject to formal resolution by Council prior to this occurring. Any request should provide detailed reasons and should agreement be granted, deferral will be subject to the following requirements:

- The applicant is to arrange for a Bank Guarantee to be prepared to the value of contributions payable as agreed to by Council (this is to include indexation where applicable),
- The Bank Guarantee is to be made in favour of Council,
- Council is to be the custodian of the original Bank Guarantee, and
- The maximum time frame granted for deferment is six (6) months. Should the contributions not be paid by this time, Council will exercise its right under the agreement to call in the Bank Guarantee without notice. Should the approved deferment overlap into the following financial year, then the contribution(s) payable will be subject to indexation.

Council does not permit the payment of contributions in instalments, rather opting for the preparation of a Bank Guarantee in lieu of payment of contributions.

#### 5.3.3 Works in Kind Contributions

Upon written request, Council will consider an offer by the applicant to make a contribution by way of "works in kind" provided that:

- (a) The proposed work satisfies the demands for the kind of public amenities and facilities for which the contribution is sought,
- (b) The proposed work will not prejudice the timing or the manner of the provision of the amenity or facility for which the contribution was required,
- (c) The value of the work is at least equal to the value of the contribution assessed in accordance with this plan and that this value is adequately documented,
- (d) Agreement has been reached as to the standard of work to be undertaken, and
- (e) Where the difference of the value of the work in kind is less than the contribution assessed in accordance with this plan, the balance shall be made by way of monetary contribution.

As part of the Council's decision making process, a request would only be considered provided the applicant was agreeable to all of the following stipulations:

- An agreement between the applicant and Council on the cost of the works (and value of the work in kind) which is to be determined by reference to satisfactory plans, breakdown of costs, review of audited statements and accounts or similar submitted by the applicant. There would be no indexing of the value of the work in kind or credits so granted.
- The number of credits for a particular type of contribution will be determined by dividing the agreed value of the proposed work by the rate applying to that contribution at the time of the agreement. The credits so agreed will be progressively reduced as the development proceeds. The agreed works schedule may specify those works that may be considered as works in kind.
- An agreed 12 month Defects Liability Period for the cost of the agreed work.
- An agreed standard of workmanship.
- An agreed timetable for the inspection of the works.
- An agreed program for the completion of works.

Please note that Council will not acknowledge any costs incurred associated with the agreement of Works in Kind as part of above itemised statement.

The decision to accept settlement of a contribution by way of a work in kind is at the sole discretion of Council and will require a Council resolution prior to implementation.

It is Council's preference that for broad acre release areas that Council accepts works in kind and that these are to be fully constructed prior to the release of the Linen Plan or at such time as identified in a "written agreement" between Council and the developer.

Should works in kind that have been agreed to by Council be later withdrawn by the applicant for any reason, then the applicant will be liable for the payment of contributions in accordance with the conditions of development consent or complying development certificate plus any indexations that may have occurred since the approval date.

#### 5.4 Staged Subdivision/Development

In the event of a staged subdivision or development, Gunnedah Shire Council will accept the staged payment of developer charges as specified above, ie prior to the release of the linen plan for each stage of subdivision and prior to the release of any building approval for a particular stage of a development.

Deferred payment of DC other than in accordance with Gunnedah Shire Council's requirements for Staged Subdivision and Development, is not permitted by Gunnedah Shire Council.

#### 5.5 DC Waiver

Gunnedah Shire Council may waive DC ordinarily attributable to subdivision and development, where the proponent demonstrates to Gunnedah Shire Council's satisfaction that it is a non-profit and charitable organisation, which by virtue of carrying out such development, is considered by the Gunnedah Shire Council to be making a significant and positive contribution to the community.

#### 5.6 Reviewing and Revising of Developer Charges

Developer charges calculations relating to this DSP will be reviewed after a period of five to six years, or when any significant changes occur in proposed works, growth projections or standards.

In the period between any reviews, developer charges will be revised on 1 July each year on the basis of movements in the Consumer Price Index (CPI) for Sydney, in the preceding 12 months to December, excluding the impact of GST.

# 6. References

- (1) NSW Public Works, *Manual of Practice: Sewer Design* (1984).
- (2) NSW Public Works, Manual of Practice: Sewerage Pumping Station Design (1986)
- (3) NSW Public Works, Water Supply and Sewerage Management Guidelines (1991).
- (4) Department of Land and Water Conservation, *Guidelines Developer Charges for Water Supply, Sewerage and Stormwater* (2002)

# STATE ENVIRONMENTAL PLANNING POLICIES APPLYING TO GUNNEDAH SHIRE COUNCIL SEWERAGE

State Environmental Planning Policies applicable to the Gunnedah Shire Council's sewerage at the time of preparation of this DSP are as follows:

Nil

If applicable during the life of this DSP, any further relevant SEPP's should be listed in this appendix

## **OTHER RELEVANT DSPs**

Section 64 Water Supply

## DEVELOPMENT CATEGORIES AND CORRESPONDING APPLICABLE CHARGES FOR GUNNEDAH AND CURLEWIS SERVICING AREAS

Residential Allotments and corresponding ET factors:

Small Residential Allotment	0.75
Medium Residential Allotment	1.0
Large Residential Allotment	1.05
Small Unit	0.33
Medium Unit	0.4
Large Unit	0.67

## PLANS OF SEWERAGE SCHEMES



FIGURE 1 - MAP OF GUNNEDAH SEWERAGE SERVICE AREA (2014)





FIGURE 2 - MAP OF WESTERN SERVICING SEWERAGE AREA (2014)

# FIGURE 3 – MAP OF CURLEWIS SEWERAGE SERVICE AREA



# INCLUDED ASSETS AND CALCULATIONS FOR GUNNEDAH AND CURLEWIS (2011) DSP SEWERAGE BENEFIT AREA

# INCLUDED ASSETS AND CALCULATIONS FOR WESTERN SERVICING AREA

#### DEVELOPER CONTRIBUTION CALCULATIONS - GUNNEDAH SHIRE COUNCIL

#### WESTERN SERVICING AREA

#### CAPITAL CHARGE - RETURN ON INVESTMENT FACTOR METHOD

Component	Year Commissioned	Effective Year of commissioning for ROI 1	Capital cost (2013/2014 \$)	PV of Capital cost (2013/2014 \$)	Capacity (ET)	Cost Per ET (\$ per ET)	Year when capacity taken up	Take up period (Ye
Stage 1 (35% gravity reticulation mains, pump station and rising main + loan)	2015/2016	2015/2016	\$1,650,000	\$1,441,174	2,794	\$515.81	2045/2046	30
Stage 2 (Stage 2 and remainder of Stage 1 gravity reticulation mains, pump station and rising main)	2017/2018	2017/2018	\$1,000,000	\$762,895	2,794	\$273.05	2045/2046	28
Stage 3 (Gravity reticulation and trunk mains)	2020/2021	2020/2021	\$2,820,000	\$1,756,154	2,794	\$628.54	2045/2046	25
Stage 4 (Gravity reticulation and trunk mains)	2020/2021	2020/2021	\$920,000	\$572,930	2,794	\$205.06	2045/2046	25
Stage 4a (Gravity reticulation and trunk mains)	2020/2021	2020/2021	\$720,000	\$448,380	2,794	\$160.48	2045/2046	25
STP Capacity Augmentations	2015/2016	2015/2016	\$5,280,000	\$4,611,756	5,803	\$794.72	2037/2038	23
TOTAL					۱ <u> </u>			

SIMPLIFIED REDUCTION AMOUNT CALCULATIONS	
Annual Operating Result (2013)	\$1,068,000
Number of ET	4000
\$/ET	\$267
PV (30 yrs at 7%)	\$2,032

Capital Charge	\$5,262
Reduction Amount	\$2,032
Developer Charge - Western Servicing Area (\$/ET)	\$3,230