UPPER LACHLAN SHIRE COUNCIL

DEVELOPMENT SERVICING PLAN

WATER SUPPLY SCHEMES

CROOKWELL, GUNNING, TARALGA and DALTON

OCTOBER 2008

This plan has been prepared in accordance with Section 64 *Local Government Act 1993* and Section 306 *Water Management Act 2000*

Adopted by Council on 19 February 2009

Effective from 20 February 2009

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1. Part A – Summary Schedule

1.1 Executive Summary

This Development Servicing Plan (DSP) details water developer charges relative to the development areas served by Upper Lachlan Shire Council being Crookwell, Gunning, Taralga and Dalton.

This DSP has been prepared in accordance with the *Developer Charges Guidelines for Water Supply, Sewerage, and Stormwater* (2002) as issued by the Minister for Land and Water Conservation (now Department of Water and Energy (DWE)), pursuant to section 306(3) of the Water Management Act, 2000. This DSP comprises the following components:

Part A: includes this section, and provides a summary of this DSP and the developer charge required per Equivalent Tenement (ET).

Part B: provides details of the statutory framework of this DSP, including objectives, definitions, and reviewing/updating mechanisms.

Part C: provides details relative to water infrastructure services. Included within this section are details pertaining to demographic and land use planning information including growth projections, infrastructure valuations, timing and expenditures, and calculations supporting the final developer charge.

1.2 Summary of Developer Charges

A summary of developer charges for the areas covered by this DSP are provided in Table 1.1:

Table 1.1: Water Contribution Rate – 2008/09

DSP Area	Service Area	Developer Charge ($/ET)
A	Crookwell	$3,152
B	Gunning	$3,152
C	Taralga	$3,152
D	Dalton	$3,152

The total developer charge required in consequence of servicing a proposed development in the respective DSP area will be assessed by multiplying the additional demand (ET) of the proposed development by the developer charge ($/ET) in the Contribution Rate table above. Loadings and credits will be assessed in accordance with the NSW Local Government Water Industry Directorate Section 64 Determinations of Equivalent Tenements Guidelines 2005.

Upper Lachlan Council anticipates that it will:-

- Review this DSP once, and no more than once, in each five year period from the implementation of this plan; and

- Review Developer Charges when and to the extent required by the Department of Water and Energy.

In the period between any review, developer charges will be indexed annually (1st day of July) on the basis of movements on the CPI for Sydney, in the preceding 12 months to December, excluding the impact of GST.

The developer shall be responsible for the full cost of the design and construction of water supply, sewerage reticulation, and stormwater drainage works associated with new development.

2. Part B – Administration

2.1 Citation

This Development Servicing Plan is called the "Upper Lachlan Development Servicing Plan- Water Supply Schemes".

2.2 Purpose of the Plan

The aim and objectives of this DSP are to:

(a) ensure that adequate water infrastructure is provided for as part of new development;

(b) provide a comprehensive strategy for the assessment, collection, expenditure accounting and review of contributions on an equitable basis;

(c) ensure that the existing community is not burdened by the provision of water infrastructure as a result of future development.

(d) enable council to be both publicly and financially accountable in its assessment and administration of the Development Servicing Plan.

2.3 Area to which the Plan applies

This plan applies to all lands that are likely to require connection and/or additional capacity within the water infrastructure systems servicing the Upper Lachlan Shire Council towns of Crookwell, Gunning, Taralga and Dalton.

A plan detailing the areas served by the respective infrastructure is included in Appendix A.

This DSP supplements the provision of the Crookwell Local Environmental Plan (1994), Gunning Local Environmental Plan (1997), Mulwaree Local Environmental Plan (1995) and any amendment or Local Environmental Plan that may supersede them. (Note Upper Lachlan LEP 2008).

This DSP supersedes all previous water contributions policies and charges adopted by the Council prior to the adoption of this DSP.

2.4 Definitions

ABS	Australian Bureau of Statistics
ADWF	Average Dry Weather Flow
Annual Demand	Estimated total annual water consumption
AWWF	Average Wet Weather Flow
BOD	Biological Oxygen Demand, used as a measure of the 'strength' of sewerage
Capital Cost	Capital Cost of assets per ET x Return on investment (ROI) factor.
CPI	Consumer Price Index (All Groups) for Sydney in the preceding 12 months to December, excluding the impact of GST.
Developer Charge	A charge applied to new development to recover part of the capital cost incurred by Council in providing infrastructure to new development
Discount Rate	A rate used to calculate the present value of money arising in the future
DSP	Development Servicing Plan
DLWC	Department of Land and Water Conservation (now DWE)
DWE	Department of Water and Energy (formerly DLWC)
EP	Equivalent Persons, used as a measure of sewer loading.
ET	Equivalent Tenement, equivalent demand or loading from a standard household.
IPART	Independent Pricing and Regulatory Tribunal
KL/d	Kilolitres per day
Lead-in	A main that passes through lands other than the subject land which may be subdivided and/or developed
LEP	Local Environmental Plan
Major Works	Works such as trunk mains, carriers, sub-mains, service reservoirs and pumping stations used to connect either the water headworks or sewer tailworks system to the local reticulation system.

MEERA	Modern Equivalent Engineering Replacement
ML/d	Megalitres per day
NPV	Net Present Value; the summation of future expenditures / incomes expressed in today's dollars taking account the impact of financing costs due to interest rates
Peak Day Demand	Highest water consumption on one day in a year
PMT	Spreadsheet function which calculates the required uniform annual loan payments
Post – 1996 Asset	An Asset that was commissioned by a water utility on or after 1 January 1996 or that is yet to be commissioned
Pre – 1996 Asset	An asset that was commissioned by a water utility before January 1996.
PS	Pumping Station
PV	Present Value, The value of money now or ET's in the future
PWWF	Peak Wet Weather Flow
Real Terms	The value of a variable adjusted for inflation by a CPI adjustment
Recoupment	The payment of a monetary contribution to a water utility to offset the cost (plus any interest) which the water utility has already incurred in providing water and sewer services in anticipation of development
Reduction Amount	The amount by which the capital charge is reduced to arrive at the developer charge. This amount reflects the capital contribution that will be paid by the occupier of a development as part of future annual charges
Reticulation	Local supply pipes providing water or sewer services to individual properties
ROI	Return on Investment Represents the income that is, or could be, generated by investing money
Rising Main	A pipeline that is pressurised to transport water
System	The integration of infrastructure assets into a network to service an area or catchment
UDP	NSW Government Urban Development Program
Water Utility	Upper Lachlan Shire Council
WTP	Water Treatment Plant

2.5 Legislation

The power for Local Government Councils to levy developer charges for water supply, sewerage and stormwater derives from Section 64 of the *Local Government Act,* 1993 by means of a cross reference in the Act to Section 306 of the *Water Management Act, 2000.*

Prior to the introduction of the *Local Government Act, 1993* Council used the provisions of Section 94 of the *Environmental Planning and Assessment Act, 1979* to obtain developer contributions for water supply and sewerage services. As part of the *Local Government (Consequential Provisions) Act, 1993* amendment was made to the *Environment Planning and Assessment Act* so that Section 94 no longer applied for water supply and sewerage services.

Section 306 (2) and (3) of the Water Management Act 2000 states:

(2) as a pre-condition to granting a certificate of compliance for development, a water supply authority may, by notice in writing served on the applicant, require the applicant to do either or both of the following:

(a) to pay a specified amount to the Authority by way of contribution towards the cost of such water management works as are specified in the notice, being existing works or projected works, or both,

(b) to construct water supply works to serve the development

(3) In calculating an amount for the purpose of subsection (2)(a):

(a) The value of existing water supply management works and the estimated costs of projected water supply management works may be taken into consideration, and

(b) The amount of any government subsidy or similar payment is not to be deducted from the relevant values or cost of the water management works; and

(c) Consideration is to be given to any guidelines issued for the time being for the purpose of this section by the Minister for Public Works and Services.

In 1995, the Minister for Land and Water Conservation (now Minister for Water Utilities) took over the responsibilities of the Minister for Public Works in regard to non-metropolitan NSW town water services. The Minister for Water Utilities is responsible for the issue of guidelines for water utilities on the calculation of water supply, sewerage and stormwater drainage developer charges.

The *Local Government (Savings and Transitional) Regulation, 1993* covers the matter of developer contributions which had previously been obtained by Councils under the *Environmental Planning and Assessment Act 1979* as follows:

Any monetary contribution held by a Council immediately before the commencement of this Regulation, being a contribution arising from a condition:

(a) That was imposed under Section 94 of the *Environmental Planning and Assessment Act, 1979*; and

(b) That specifies that the contribution is to be applied towards providing specified water supply services or towards providing sewer or sewerage services generally,

Is to be applied towards the construction of works within the meaning of Division 2 of Part 3 of the *Water Supply Authorities Act, 1987* or towards the repayment of money borrowed for the construction of such works, and is not to be applied towards any other purpose.

2.6 Operation of the Development Servicing Plan

When a development consent has been issued (and that development will increase the previous demand upon water and/or sewerage systems within the area), Council will impose a condition as part of the consent requiring the submission of a Compliance Certificate under the Water Management Act. A Compliance Certificate states that the developer has satisfied Upper Lachlan Shire Council that works and / or payment of a contribution has occurred in order to meet the additional demand likely to be created by that development.

The contribution is based on the demand of the development and is a contribution to the cost of infrastructure currently incurred (or planned to be expended) by Council in the provision of water and/or sewerage services in the area. The contribution required by Council is dependent upon the type of development and the demand likely to be placed on the water and/or sewerage scheme. The greater the demand, the greater the proportion of the scheme's capacity will be required and hence creating the nexus for the contribution. The contribution may become accumulated funds for future augmentations in anticipation of future development or alternatively may be recoupment of costs previously incurred by Council for previous augmentation works.

2.7 When Contributions are Payable

Payment of development contributions should be finalised at the following stages:

(a) development applications involving subdivision – prior to the release of the subdivision certificate;

(b) development applications involving building work – prior to the release of the construction certificate;

(c) development applications involving both subdivisions and building work (e.g. integrated housing developments) – prior to the release of the construction certificate;

(d) development applications where no construction certificate is required - prior to commencement of the approved development.

(e) prior to release of complying development certificate.

2.8 Deferred / Periodic Payments

The contributions levied by this Plan are required to provide service infrastructure to new development as it comes on line.

To fund completion of this work all contributions must be paid prior to release of any subdivision or construction certificate.

Consideration will not be given to deferred, staged or periodic payments in order to settle contributions.

2.9 Works in Kind

The Council may accept an offer by the applicant to make a contribution by way of an 'in-kind' contribution or through provision of a material public benefit.

The offer may only be accepted if the applicant satisfies the Council that:

(a) Payment of the contribution in accordance with the provisions of this DSP is unreasonable or unnecessary in the circumstances of the case; and

(b) The 'in-kind' contribution will not prejudice the timing or manner of the provision of any particular facility or service for which the contribution is required; and

(c) The value of the works to be undertaken is at least equal to the value of the contribution assessed in accordance with this DSP.

2.10 Indexation of Calculated Developer Contributions

Where contributions have been imposed under this plan but not yet paid, these will be indexed, on an annual basis, by movements in the Consumer Price index (CPI, All groups – Sydney). Such indexation shall occur on, or about, the 1st day of July each year.

2.11 Review of the Plan

Upper Lachlan Shire Council anticipates that it will review this DSP after a period of five (5) years. Matters for review may include lot production, proposed capital works, proposed investments, discounts rates and changes to standards.

In the period between any review, developer charges will be indexed annually (1st day of July) on the basis of movements in the CPI for Sydney, in the preceding 12 months to December, excluding the impact of GST.

2.12 Use of Development Contributions

Water development contributions may only be used for water supply purposes.

2.13 Consultation and Dispute Resolution

A developer who is dissatisfied with how a water utility has calculated a developer charge has a right of appeal pursuant to the DLWC 'Guidelines for Calculating Developer Charges of Water Supply, Sewerage, and Stormwater, 2002'.

1. A developer who is dissatisfied with the way in which a water utility has calculated a developer charge may complain to the utility.

2. The General Manager of the utility is to review the complaint or cause it to be reviewed.

3. The developer, if still dissatisfied, may request that an arbitrator review the matter by way of arbitration. The arbitrator is to be appointed by agreement between the developer and the water utility.

4. The decision of the arbitrator is to be binding on both the developer and the utility.

5. Costs of the arbitration are to be borne equally by the utility and the customer.

6. The Commercial *Arbitration Act 1984* applies to any such arbitration.

It should be noted that not all aspects of the developer charge calculation are arbitral. That is, those matters of detail which are prescribed in DLWC's Guidelines are not subject to arbitration. For example, discount rates and the forecast horizon for expected net revenues and costs are parameters that are prescribed by DLWC.

3. Part C – Water

3.1 Area Covered by this DSP

This section of the Upper Lachlan Development Servicing Plan- Water Supply Schemes details the expected development to be serviced by the Upper Lachlan Shire Council water supply system. It includes costs for amplification requirements in the reticulation system and increases in capacity of storage, treatment and pumping (headworks) infrastructure, for the respective four service areas of Crookwell, Gunning, Taralga and Dalton required to service development. The areas serviced by this DSP are detailed in the plans located in Appendix A.

3.2 Existing System

The water supply assets of the Upper Lachlan Shire Council include those located in the towns of Crookwell, Gunning, Taralga and Dalton. The following sections detail the infrastructure in the respective towns.

3.2.1 Crookwell

The water supply for the town of Crookwell is sourced from Kentgrove Dam located approximately 5 km north of the township on the Kentgrove Creek (formerly known as Back Creek). The concrete arch dam, constructed in 1932, has a height of 15m, a crest length of 106m, a catchment area of 24.6km^2 and when full has a capacity of about 470ML. The town supply is supplemented by two bores capable of providing up to 1ML per day directly to the Hay Street service reservoir. Due to lower water quality the bores are only used during emergency drought conditions.

Drinking water for Crookwell is treated via two conventional water filtration plants, located just downstream of the dam, operating in parallel. The original filtration plant was constructed in 1935. In 1991, the plant was upgraded with added infrastructure to increase the plant capacity to (up to) 2ML/day. Both filtration plants share common chemical dosing plants which include powder activated carbon, alum, soda ash and chlorine. Fluoride dosing plant will also be installed in the near future. The combined treatment plants are reaching the end of their effective life. Plans have begun for a new replacement treatment plant with capacity up to 4ML/d, at an estimated cost of $5.0M. The new treatment plant is currently expected to be constructed in 2015.

The town is served by two service reservoirs with a combined capacity of 4.5ML and some 39km of trunk and reticulation mains. Crookwell's current water supply assets are valued at some $13M.

3.2.2 Gunning

The water supply for the town of Gunning is sourced directly from the Lachlan River via a well located in the bed of the river. The water receives basic filtration via media located in the well, is chlorinated and pumped via a 3.5km rising main to a 909kL service reservoir located on the outskirts of the village. The village reticulation system consists of approximately 10km of asbestos cement pipes. The system is approximately 40 years old.

Whilst the village water supply, valued at some $2M is generally meeting the current requirements of the village, the supply has significant limitations in terms of water quality and security of supply. Plans are underway to augment the village water supply via the construction of a water treatment plant and off-stream water storage facility. These works are estimated at $2.0M and are expected to be constructed in 2010/2011.

3.2.3 Taralga

The water supply for the village of Taralga is sourced from a small weir located on the Woolshed creek. Water is pumped via a 1.2km rising main to a 25ML polyethylene lined off-stream water storage facility. Treatment is limited to basic filtration and UV disinfection. Reticulation serving the village consists of AC and uPVC pipe approximately 9km in length. Existing infrastructure is typically in excess of 40 years of age.

The existing water supply has significant limitations in terms of water quality and water supply reliability. Two high production water bores have been drilled and are planned to be utilised together with a 2km rising main, 300kL service reservoir and chlorination system to form a new water supply system for the village. The new system is expected to provide capacity for a future population in excess of 1000 people, has an estimated total capital cost of $1.4M and is anticipated to be constructed during 2009/2010.

3.2.4 Dalton

The existing water supply system in Dalton comprises a disinfected reticulated water scheme sourced from two groundwater bores. The system includes a 100mm diameter AC rising main 1250m in length, a 330kL concrete service reservoir and 3.5km of AC reticulation. The existing system has a replacement value in excess of $0.9M, and is typically in excess of 30 years of age.

While the Dalton water supply has sufficient capacity to meet the demands of the existing 80 connections, water quality is of a poor standard. A reverse osmosis treatment plant of 50kL/day capacity is proposed to be constructed during 2009/10 to address the shortcomings of the existing system. The capacity of the new system can be increased to cater for any future growth, with the initial upgrade estimated at $0.50M.

3.3 Basis of defining the Water DSP Boundary

The Water DSP areas for Upper Lachlan have been determined in accordance with the requirements of the Department of Land and Water Conservation (now DWE) 'Developer Charges for Water Supply, Sewerage and Stormwater Guidelines' 2002.

The DSP areas for the Upper Lachlan Water Supply System have been determined based on the group of assets contributing to the storage, extraction, treatment and delivery of water throughout the Upper Lachlan serviced towns of Crookwell, Gunning, Taralga and Dalton.

3.4 Demographic and Land Use Planning Information

Upper Lachlan Shire has an area of 7,243 square kilometres and is located in the Southern Tablelands of NSW. The Shire is bound by Oberon, Bathurst and Cowra Council areas to the north, Boorowa Council to the west, Yass and Palerang to the south and Goulburn Mulwarree to the east. The Shire has a total population of 7053. The major centres of Crookwell, Gunning, Taralga and Dalton have populations of 1993, 488, 312 and approx. 100 respectively. The remainder (4160) reside in rural villages and properties and are not serviced with public water and sewerage infrastructure.

The Shire is located on the Sydney-Canberra and on the Melbourne-Sydney road and the rail corridor. The commuting time to Canberra is approximately 1 hour from many parts of the Shire. Commuting time to Sydney is approximately 2.5-3.0 hours. As a consequence of its accessibility and proximity to Canberra, Goulburn and Sydney, there has been pressure for parts of the shire to be developed for non-urban housing, particularly in the form of rural residential and villages. Growth pressure and comparatively affordable housing opportunities within the shire, together with alternative rural lifestyle, provides the opportunity for some growth in the serviced areas of Crookwell, Gunning, Taralga and Dalton.

The percentage growth rate of the population of the area has declined in the past twenty years. This trend is typical of rural areas, reflecting the gradual ageing of the farming population, rural recessions and adverse market conditions, improvements in farm mechanisation, movement away of younger adults and some tendency of retired farmers to move to larger towns in the regions. In recent times, Crookwell has recorded an annual growth rate of 0.6% per annum. The NSW Department of Local Government predicts an equivalent growth rate of 0.1% per annum for the shire, it is expected that the serviced towns areas would be the areas to accommodate growth.

Table 3.1: Growth Projections for the Crookwell Township

Year	Avg Growth Rate	Population	Cumulative ET
1996 (census)	N/A	1926	802.5
2006 (census)	2%	1993	830
2016	2%	2392	997
2026	2%	2870	1196
2036	2%	3444	1435
Future	N/A	5188	2162

Table 3.2: Growth Projections for the Gunning Township

Year	Avg Growth Rate	Population	Cumulative ET
1996 (census)	N/A	N/A	N/A
2006 (census)	N/A	488	203
2016	2%	585	244
2026	2%	703	293
2036	2%	843	351
Future	N/A	1824	760

Table 3.3: Growth Projections for the Taralga Township

Year	Avg Growth Rate	Population	Equivalent Tenements
1996 (census)	N/A	341	105
2006 (census)	-8.5%	312	111
2016	2%	374	156
2026	2%	449	187
2036	2%	539	225
Future	N/A	1087	453

Table 3.4: Growth Projections for the Dalton Township

Year	Avg Growth Rate	Population	Cumulative ET
1996 (census)	N/A	N/A	N/A
2006 (census)	2%	100	42
2016	2%	120	50
2026	2%	144	60
2036	2%	173	72
Future	N/A	412	172

3.5 Infrastructure

3.5.1 General

The Department of Land and Water Conservation clearly define the parameters for the identification of relevant assets to be included in the DSP. The parameters that have been applied in the identification of assets to be included on the Upper Lachlan Water DSP are detailed in Table 3.5:

Table 3.5: Water Asset Parameters

Category	Group	Parameters
Water	Existing	Exclude reticulation sized pipe assets. Exclude all assets commissioned before 1970 (expect water supply headworks including a dam, weir, water treatment works, headworks pumping station and associated pipelines or tunnels).
	Future	Include amplification assets to be constructed within the 5 year planning horizon (include future assets beyond 5 years where there is a clear nexus to the development i.e. water treatment plants). Exclude proposed reticulation sized assets. Exclude future renewals.

3.5.2 Existing Assets

Details pertaining to the existing water assets have been sourced from Upper Lachlan Shire Council's Fixed Assets Registers. Only amplification assets (i.e. excluding reticulation sized assets) constructed since 1 January 1970 have been identified, with the exception of those major assets that are associated with the treatment and delivery of water from the source to the reticulated system.

Valuation of the existing assets has been undertaken in accordance with the Department of Land and Water Conservation *'Developer Charges for Water Supply, Sewerage and Stormwater Guidelines',* 2002. The valuation method is therefore that of the Modern Engineering Equivalent Replacement Asset (MEERA) cost estimated in accordance with the *NSW Reference Rates for Existing Water Supply, Sewerage and Stormwater Assets*, 2007 as published by DWE.

Tables 3.6 to 3.9 provide a summary of existing assets included in the developer charges calculations:

Table 3.6 Existing Water Assets – Crookwell Township

Category	Asset Type	Description	Recoverable MEERA cost (2007/8$)
Water	Water Headworks	Crookwell Dam	$2,000,000
		Crookwell Water Treatment Plant	$Nil*
		4km 250mm diameter DICL Rising Main	$620,000

*Note: value of existing plant not included in capital charge-new plant value used. Avoid double counting ref. page 17 guidelines.

Table 3.7: Existing Water Assets – Gunning Township

Category	Asset Type	Description	Recoverable MEERA cost (2007/8$)
Water	Water Headworks	Intake Well	$80,000
		Raw Water Pump Station	$100,000
		Chlorination System	$5,000
		3.5km 200mm AC Rising Main	$332,500

Table 3.8: Existing Water Assets – Taralga Township

Category	Asset Type	Description	Recoverable MEERA cost (2007/8$)
Water	Water Headworks	Woolshed Creek Weir	$Nil*
		Raw Water Pump Station	$Nil*
		1.2km 150mm AC Rising Main	$Nil*
		25ML Off-stream Storage Reservoir	$Nil*
		UV Disinfection System	$Nil*

*Note: value of existing plant not included in capital charge-new plant value used. Avoid double counting ref. page 17 guidelines. Existing plant will become redundant.

Table 3.9: Existing Water Assets – Dalton Township

Category	Asset Type	Description	Recoverable MEERA cost (2007/8$)
Water	Water Headworks	Bore 1	$20,000
		Bore 2	$20,000
		1.2km 100mm AC Rising Main	$84,000
		Chlorination System	$15,000

3.5.3 Future Assets

The Upper Lachlan Shire Council Capital Works Program provides details of expenditures proposed over the next 5 years relative to the Upper Lachlan Water Supply systems. Works proposed by Upper Lachlan Shire Council over the ensuing 5 years include major water source and Treatment Plant upgrade works. These major works provide for improvement in levels of service and also additional capacity for future growth, therefore a developer charge in consequence of future works is required.

Tables 3.10 to 3.13 provide a summary of existing assets included in the developer charges calculations.

Table 3.10: Proposed Future Works – Crookwell

Category	Asset Type	Description	Construction Date (Year)	Cost ($2008/9)
Water	Water Headworks	Proposed New Water Treatment Plant	2015	$5.0M

Note: although the proposed WTP is to be constructed after 5 years the plant has a clear nexus with development to be undertaken within the current 5 year period.

Table 3.11: Proposed Future Works – Gunning

Category	Asset Type	Description	Construction Date (Year)	Cost ($2008/9)
Water	Water Headworks	Proposed New Water Treatment Plant and Off stream storage	2011	$2.0M

Table 3.12: Proposed Future Works – Taralga

Category	Asset Type	Description	Construction Date (Year)	Cost ($2008/9)
Water	Water Headworks	New Production Bores, Rising Main, 300kL Steel Reservoir and Treatment system and telemetry	2009	$1.4M

Table 3.13: Proposed Future Works – Dalton

Category	Asset Type	Description	Construction Date (Year)	Cost ($2008/9)
Water	Water Headworks	Proposed New Water Treatment Plant	2009	$0.50M

For details pertaining to the timing and expenditures of water related works proposed to be undertaken by Upper Lachlan Shire Council over the ensuing 5 years, reference should be made to Councils proposed Capital Works Program. Further information relative to the extent of upgrade works to the Upper Lachlan Shire Water supply systems can be sourced from investigation studies held by Upper Lachlan Shire Council.

3.6 Standards of Service

The following standards of service are to be provided to customers serviced by the Upper Lachlan Water Supply System.

- Treated water to NHMRC/ARMCANZ *Australian Drinking Water Guidelines* 98% of the time.
- Minimum water pressure of 12 metres at the property boundary for at least 90% of properties.
- Water quality complaints less than 10 per 1,000 connected properties per annum.
- Nil unplanned interruptions greater than 6 hours
- Nil programmed interruptions greater than 12 hours
- Water restrictions applying for not greater than 10% of the time on average.

3.7 Design Parameters

Investigation and design of water supply system components are generally based on the Water Supply Investigation Manual (1986), prepared by NSW Public Works(now managed by the Department of Water and Energy). Respective Water supply specific data has been used to design and size infrastructure for the Upper Lachlan Shire Council water service areas with development of these design detailed in a number of reports as indicated in the 'references' section of this DSP.

3.8 Calculated Developer Charges

The Department of Water and Energy require that developer charges be assessed using the Net Present Value (NPV) approach. The fundamental principle of the NPV approach is that the investment by a water utility in assets for serving a development are fully recovered from that development. The investment is recovered from the total up-front charges (i.e. developer charges) and that part of annual charges received from the development in excess of operation, maintenance and administration (OM&A) costs.

Under this approach, the NPV of investment in assets for a development must equate to the revenue from developer charges and annual charges (in excess of OM&A costs).

Developer charges are therefore calculated as:

- the present value (PV) of the capital expenditures over time to service the development area (the "**capital charge**")

  less

- the PV of the expected net income over time from providing services to the development area (the "**reduction amount**").

In addition to this general principle, DWE have stipulated the Discount Rates (Rate of Return) to apply to the specific asset groups. The discount rates are detailed in Table 3.14.

Table 3.14: Prescribed Discount Rates

Asset Group	Discount Rate (Rate of Return)
Pre -1996	3% real
Post-1996	7% real

3.8.1 Calculation of the Capital Charge

In order to facilitate the calculation of the capital charge component, the DLWC prescribed *Return on Investment Factor Approach* has been adopted. This approach is implemented in two steps as follows:

STEP1: Calculated the Return on Investment (ROI) factor

The ROI factor is the multiplier required to bring the Present Value (PV) of future income stream to the PV of the expenditure, at a given discount rate. The following DLWC prescribed formula has been adopted to calculate the ROI:

ROI = - PMT(r/100,t,1)*t/(1=r/100)

Where r = discount rate (%)
t = take-up period (years)
PMT ( ) = MSExcel function which calculates the required uniform annual loan payments

STEP 2: Multiply the Capital cost per ET by the ROI factor

In calculating the ROI, it is appropriate to consider that the take-up of capacity commences in the year that the asset was commissioned. This is based on an assumption, for the purposes of the calculation that the asset is commissioned in January and that, due to the time lag between subdivision and building, all development in that financial year (July to June) is served by the assets commissioned in January.

3.8.2 Agglomeration

As detailed in the Developer Charges for Water Supply, Sewerage and Stormwater Guidleines, the capital charges for two or more service areas should be agglomerated into a single DSP where such charges are within 30% of each other.

Table 3.15 details the outcome of agglomeration of water capital charges in the case of Upper Lachlan Council water supplies.

Table 3.15: Agglomeration of Capital Charges for Upper Lachlan Water

Service Area	Capital charge ($/ET)	% of highest	Proportion of growth	Weighted capital charge ($/ET)	Capital charge for DSP area ($/ET 2007/08)
Dalton	$6,355	100%	5%	319.09	**$6,304**
Crookwell	$6,326	91%	50%	3133	
Gunning	$6,225	90%	32%	2012	
Taralga	$6,196	89%	14%	840	
Total				6304	

Accordingly the agglomerated capital charge of $6,304 applies to each of the water supply schemes.

3.8.3 Calculation of Reduction Amount

The calculation of the Reduction Amount has been undertaken using the Under 2000 assessments method. The DLWC developed the Under 2000 method to provide a simple approach for calculation the reduction amount based on presently known data.

The rationale for this method is that in the long-term developer charges should cover the capital charge for serving a development area less the present value (discount rate 7% pa real) of projected renewals expenditure per property over the next 50 years. This is because the capital charge is based on the capital cost of new assets, the bulk of which have an economic life of 50 to 80 years and would therefore not require significant expenditure on renewals. For utilities with under 2000 assessments the reduction amount is 50% of the capital charge.

3.8.4 Calculated (Maximum) Developer Charge

The calculated developer charge is derived from the following:

Developer Charge = Capital Charge - Reduction Amount
Cost of providing the assets (cost recovered through annual bill)

The total maximum developer charge calculated for the Upper Lachlan Water DSP is summarised in Table 3.16:

Table 3.16: Maximum Developer Charges – Upper Lachlan Water

Service Area	Capital Charge ($/ET)	Reduction Amount ($/ET)	Calculated Developer Charge ($/ET) 2007/8$
Crookwell	$6,304	$3,152	$3,152
Gunning	$6,304	$3,152	$3,152
Taralga	$6,304	$3,152	$3,152
Dalton	$6,304	$3,152	$3,152

3.9 Cross-Subsidies

The *Developer Charges for Water Supply, Sewerage and Stormwater Guideline* document identifies that the calculated (maximum) developer charge is the maximum that may be levied by Council.

In considering the developer charge to be adopted, Council has considered financial, social and environmental factors. The underlying principal is that new development should meet the full costs of assets serving the development, but consideration should be given to DSP areas where the calculated developer charge is unacceptably high.

Where Council considers that developer charges are unacceptably high, then Council may consider cross-subsidisation between existing customers and new development. A high level of cross-subsidy from existing customers is not considered to be best-practice.

Upper Lachlan Council has considered the necessity for cross-subsidisation between existing customers and new development. Council has concluded that the level of developer charges is balanced, fair and equitable in the circumstances of the Upper Lachlan Local Government Area. As cross-subsidisation between existing customers and new development is not necessary in the case of the operation of the Upper Lachlan Water business, a cross-subsidy is not reported in this instance.

3.10 Developer Charges to be Levied

The Water developer chargers to be levied by Upper Lachlan Council for the provision of water services to new development is summarised in Table 3.17:

Table 3.17: Developer Charges – Upper Lachlan Water

	Capital Charge ($/ET)	Reduction Amount ($/ET)	Calculated Developer Charge ($/ET) 2007/8$
Crookwell	$6,304	$3,152	$3,152
Gunning	$6,304	$3,152	$3,152
Taralga	$6,304	$3,152	$3,152
Dalton	$6,304	$3,152	$3,152

3.11 Phasing-in Developer Charges

The *Developer Charges for Water Supply, Sewerage and Stormwater Guideline* document states that:

> *If the developer charges adopted in the DSP are significantly greater than those presently levied, a water utility may elect to phase-in the higher charges over a period of 3 years. The utility should disclose any cross-subsidy at the end of the phase-in period of the new developer charges in accordance with the disclosure of cross-subsidies requirements.*

Upper Lachlan Council will implement the developer charge as detailed in Section 3.10 – *Developer Charges to be Levied*. A phase-in of the developer charge will not be applied.

3.12 Reference Documents

The following documents have been referred to or utilised in the preparation of the Upper Lachlan Water DSP:

- *Developer Charges for Water Supply, Sewerage and Stormwater Guidelines*, Department of Land and Water Conservation, 2002.
- *NSW Reference Rates for Valuation of Existing Water Supply, Sewerage and Stormwater Assets,* Department of Land and Water Conservation, 2007
- *Capacity Assessment and Water Quality Treatment Investigation for Crookwell Water Supply* NSW Department of Commerce 2008.
- *Crookwell Water Supply Investigations using AutoCAD model March 2006*
- *Gunning Village Expansion-Water Master plan* GHD 2005
- *Report for Gunning Water Supply Master plan-Phase 2* GHD 2006
- *Report for Dalton Water Augmentation Feasibility Study, Concept Report* GHD 2006
- *Report for Taralga Water Augmentation Feasibility Study*, GHD 2006
- *Report for Taralga Water Supply Upgrade-Concept Report,* GHD 2008.
- *Gunning Shire Local Environmental Plan 1997,* Gunning Shire Council
- *Crookwell Shire Council Local Environmental Plan 1994,.Crookwell Shire Council*
- *Mulwaree Shire Council Local Environmental Plan 1995, Mulwaree Shire Council*
- *Water & Sewerage Business Planning Review 2001* Upper Lachlan Council, 2001
- *Upper Lachlan Council Total Asset Management Plan,* Upper Lachlan Council, 2000

Appendix A

Plans showing areas serviced by this DSP

1. Crookwell
2. Gunning
3. Taralga
4. Dalton