



A Review of Sydney Water Corporation's Draft 2006 Developer Charges

**A submission of the Urban Development Institute
of Australia NSW (UDIA NSW) to Sydney Water
Corporation and the Independent Pricing and
Regulatory Tribunal**



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This report comprises the Urban Development Institute of Australia's NSW submission for the Sydney Water Corporation's five year pricing review, undertaken in 2005-06.

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1.0 EXECUTIVE SUMMARY

The Sydney Water Corporation (SWC) is required to undertake a pricing review every five years in accordance with *Determination Number 9* issued by the NSW Independent Pricing and Regulatory Tribunal (IPART) in 2000. UDIA NSW has undertaken a comprehensive review of the 75 draft 2006 developer servicing plans (DSPs). UDIA NSW concludes that the scale and immediate nature of the DSP price increases in Western Sydney and the Illawarra will have a significant impact on land assembly costs by compromising development feasibilities creating a serious disincentive for investment, reducing lot production rates and further eroding housing affordability in Sydney.

For example UDIA NSW estimates that Sydney Water's combined sewer and water charges on the Shell Cove development in the Shellharbour LGA will increase by \$11 million at present value. The draft DSP has the effect of escalating the developer charges from a current fee per lot of \$5,434 to \$11,500 effectively doubling costs to homebuyers. Sydney Water's sudden and dramatic escalation in charges in Western Sydney and the Illawarra have the potential to discourage investment, limit land supply and will be detrimental to employment prospects in Western Sydney and the Illawarra.

UDIA NSW therefore has two primary concerns about Sydney Water's proposed developer charges. The first is a matter of principle associated with government policy while the latter is of procedural nature concerned with the application of the IPART Guidelines.

UDIA NSW acknowledges that 17 new draft water DSPs and 11 draft sewer DSPs have had their developer charges set at zero. These mostly account for Sydney's eastern suburbs and reflect the presence of existing infrastructure where the capital cost for such services has been discharged.

The initial investment for those pipes and pumps was paid by the NSW Government from consolidated revenue. This is in contrast to those looking to buy in Western Sydney and the Illawarra where price signals have been established to recoup the investment on such infrastructure.

Accordingly new home buyers in the eastern suburbs of Sydney benefit from the investment and foresight of previous generations while new home buyers in Western Sydney and the Illawarra pay the full cost, upfront for infrastructure for themselves and successive generations. This presents considerable intergenerational and geographical inequities. Those that have the least ability to pay (the young and geographically marginalised), pay for everything, while the comparatively wealthy of earlier generations pay relatively nothing.

UDIA NSW recognises that this is not necessarily a concern for Sydney Water, as it is governed by the IPART Guidelines which are a reflection of government policy. Furthermore, UDIA NSW understands that Sydney Water favours this model as it provides immediate returns on its investment that a 'postage stamp' rate could not provide.

Nevertheless, it is this matter of principle that UDIA NSW will pursue with IPART and the NSW Government as it applies not merely to Sydney Water but all agencies that seek to recover infrastructure costs such as councils, electricity suppliers and the RTA.

The remainder of this report shall therefore be concerned with the application of the draft Sydney Water DSPs. In August 2006 SWC provided UDIA NSW with electronic copies of 41 draft 2006 water supply DSPs, 33 sewer DSPs and one stormwater DSP. This report forms the basis of the UDIA review of the SWC draft DSPs.

UDIA NSW's concerns regarding the water and wastewater calculations largely relate to the following issues:

1. the sudden and dramatic escalation in costs in Western Sydney and the Illawarra;
2. significant increases in operating costs (OPEX);
3. assumptions and method employed by Sydney Water in its DSP calculations;
4. asset valuation; and a
5. disproportionate increase in light commercial and light industrial charges.

Of the 41 new draft 2006 water supply DSPs provided:

- developer charges in 17 new draft water supply DSPs have been set at zero;
- another six DSPs have had their developer charge reduced from the 2001 amount; and
- the remaining 18 draft DSPs have had their developer charge increased from the 2001 amount.

Of the 33 new draft 2006 sewer DSPs provided:

- developer charges in 11 new draft sewer DSPs have been set at zero;
- another six DSPs have had their developer charge reduced from the 2001 amount; and
- the remaining 16 draft DSPs have had their developer charge increased from the 2001 amount.

The one stormwater DSP, applicable to the Rouse Hill development area, has had its developer charge increased from the 2001 amount.

UDIA NSW has identified the following 13 issues associated with the calculation of the developer charges by Sydney Water:

- 1) Average net operating revenue is the present value @ 7% real discount rate of annual rate revenues less system operating and maintenance costs. The industry believes that average net revenue should be calculated for all ETs, pre- and post-1970, and that overall total should be included in the revenue offset figure. This is in keeping with the IPART principles;
- 2) The difference in the PVs of net revenues between the 2001 DSPs and the draft 2006 DSPs is marked. There is real industry concern that many new sewer and water schemes have negative net revenue offsets. Effectively, this means that the PV of net system maintenance is being added to the upfront capital charge for new ETs. Consequently, new ETs are subsidising the system maintenance costs for all ETs, including existing and pre-1970 ETs, where they are being served by a new system;
- 3) The SWC method of determining present values appears to start one year early in the calculations. The "Year 1" amount is being discounted as well as all future years, whereas conventional PV calculation methodology is to discount the "Year 2" amount and all future years and then add the undiscounted Year 1 figure to the total of the discounted years from Year 2 onwards;

- 4) There appears to be a discrepancy between the methodologies used by SWC and Hunter Water Corporation. SWC has moved their new draft DSP starting dates to 2006, a move which is supported by the industry as it overcomes the erroneous time and value principle inherent in previous DSPs. The Hunter Water still start their new 2006 DSPs at 1996.
- 5) In the vast majority of the new draft 2006 SWC DSPs where developer charges have been increased from the 2001 amount, there are substantial reductions in future and current ET projections. This erroneously suggests that Sydney is shrinking.

While the number of current and future ETs is considerably reduced in these draft DSPs, the present value of current and future capital expenditure has increased. It seems illogical that the planned expenditure would rise and the future development needs would simultaneously fall. Why is SWC intending to increase their capital asset spend in the future when they will be servicing less development in the supply area?

- 6) Where current and future ETs have been reduced in the new DSPs, costs appear to just have been spread across a lesser denominator to determine a present value of cost per ET, without any thought of the system capacity used per ET. The IPART Determination Number 9 is clear that, where system capacity is not fully used up over the evaluation period, the unused amount of capacity should be taken out of any calculation of developer charges.

For example, the draft 2006 Kurnell sewer DSP increases the charge per ET by 1,035% because the number of future ETs has been reduced, apparently due to zoning changes. Just because the number of future ETs has been reduced, it is highly unlikely that new ETs would now use 10 times the amount of sewerage services required by existing ETs.

- 7) Different methods have been used for assessing the number of ETs in water supply DSPs. Both "peak demand" and "average demand" ET numbers have been used. The industry agrees that peak usage amounts should be used for system design but system costs should be allocated across average ETs, not peak.
- 8) The industry needs access to the "modern MEERA" cost rates used by SWC, and indeed all water supply authorities, in both electronic and hard copy to verify the considerable increases in asset costs in the draft 2006 DSPs.
- 9) Both Picton sewerage and Gerringong – Gerroa sewerage DSPs include sewerage reticulation costs. These costs should be removed from the DSPs.
- 10) The Wollongong sewerage diversion and treated effluent reuse scheme is an example of an environmental upgrade which, while commendable and supported by the industry, should not be included in a DSP charge. The IPART Determination Number 9 clearly stated that overall system environmental improvement works should not be included in DSP charges.
- 11) The threshold date for the use of 3% and 7% discount rates should move forward as DSPs are updated over time. SWC and the other water supply agencies have now had 10 years of developer charges to recoup the initial costs of post-1995 assets.
- 12) Light Industrial and Light Commercial sewer charges have increased dramatically on a proportional basis than residential charges between the 2001 and draft 2006 DSPs.

One of the reasons for this is SWC's considerable increase in the equivalent ET classification per pure net hectare.

For Light Commercial, the equivalent ET classification in 2001 was 27 ETs per pure net hectare (pnHa). This has been increased in the 2006 DSPs to 30 ETs per pnHa. The Light Industrial equivalent ET classification in 2001 was 27 per pnHA. This has been more than doubled in the 2006 draft DSPs to 54 per pnHa.

The NSW Water Directorate recommends that an ET equivalent of 15 per pnHA should be used for Light Industrial for both water supply and sewer calculations. The Water Directorate recommended figure is less than 30% that used in the SWC draft 2006 DSPs.

- 13) The implementation of BASIX has generated considerable water savings. A pre BASIX home used on average 240kL/yr while a post BASIX home uses 150kL/year. Sydney Water recognises that these savings paid for by the homebuyer's investment in demand management benefit the entire network and should create offsets even if it is exhibited by extra capacity in the system. However, it is apparent that Sydney Water's business model interprets water savings as a loss of revenue and the IPART Guidelines translate this perceived loss as increased DSP charges. Accordingly, the homebuyer is charged twice. Once in order to save water and secondly because water was saved. This anomaly requires urgent attention. UDIA NSW advocates that incentives not penalties should be provided for BASIX compliance.

In conclusion, UDIA NSW seeks a reasonable and equitable cost allocation for the provision of infrastructure. It is the scale and immediate nature of the price increases that create the largest hurdle to urban development.

UDIA NSW recognises that Sydney Water's operating environment is a function of government policy and it therefore has limited discretion on managing the social and economic implications of its activities. Nevertheless, it is hoped that Sydney Water will be able to address the 13 issues described above to improve affordability within the boundaries of the regulatory framework provided by IPART.

2.0 BACKGROUND TO THIS REVIEW

In early 2005 UDIA NSW commissioned the preparation of a preliminary submission to SWC on their five-year pricing review. The SWC five-year pricing review is required as part of SWC's obligations under Determination Number 9 issued by IPART in 2000.

UDIA NSW's preliminary submission addressed:

- i. asset selection;
- ii. inclusion of pre-170 ETs; and
- iii. potential offsets associated with BASIX.

The UDIA submission was lodged with SWC in February 2006 and was used as a basis for subsequent discussion between the utility and the industry. SWC have since provided electronic copies of their draft 2006 DSPs to UDIA for review. This report therefore represents a comprehensive analysis of the SWC draft DSPs for submission to Sydney Water and IPART.

3.0 IMPACT ON URBAN DEVELOPMENT FEASIBILITIES

The geographical and intergenerational inequities created by the IPART model and applied through the Sydney Water DSPs are realised in disproportionately higher development costs in Western Sydney and the Illawarra. Escalations in developer charges jeopardise feasibilities creating a serious disincentive for investment, reducing lot production rates and further eroding housing affordability and employment growth in Sydney. UDIA NSW has examined two developments to illustrate the impact on affordability. The first is the Shell Cove development south of Wollongong and the second is a Western Sydney example.

3.1 Shell Cove

Shell Cove is a significant urban development project being undertaken as a joint venture between the private sector and Shellharbour City Council in the Shellharbour LGA (approx 20 minutes south of Wollongong). When complete the project will include 3,000 residential dwellings, a championship golf course, 300 berth boat harbour, district retail facilities and main street town centre, mixed use commercial precinct and tourism infrastructure including a hotel of approximately 150 suites. To date the golf course has been completed and approximately 1,200 residential lots developed and sold.

UDIA NSW estimates that Sydney Water's combined sewer and water charges on the Shell Cove development in the Shellharbour LGA will increase by \$11 million at present value. The draft DSP has the effect of escalating the developer charges from a current fee per lot of \$5,434 to \$11,500 effectively doubling costs to homebuyers.

The draft DSPs that relate to the site are the Avon Water System and Shellharbour Waste Water System. These effects will be experienced across the Illawarra and will compromise projected growth in the area.

3.2 Western Sydney

A development in Western Sydney has been used to illustrate the impact on feasibilities in the area. The analysis revealed that the development will be subject to a cost escalation of \$17 million. The project chosen is a development comprising several landowners. The developer charges pertaining to the land are contained in the following Sydney Water DSPs:

- i. Liverpool Wastewater System;
- ii. Liverpool Water System; and the
- iii. Campbelltown South West Water System

The urban development has a forecast dwelling yield of 7631 homes which will accommodate approximately 20,000 people. UDIA NSW recognises that the Campbelltown South Water DSP actually reduces developer charges by \$1,256,174. However this is greatly outweighed by the increased charges for the Liverpool Wastewater and the Liverpool Water DSPs which describe an increase in costs of \$17,503,107 and \$1,423,328 respectively. These changes exclude the Recycled Water charges, which require the developer to contribute another \$37,500,000 to Sydney Water.

Escalating DSP charges therefore have the potential to discourage investment, limit land supply and will be detrimental to employment prospects in Western Sydney and the Illawarra. Evidence for the impact of the charges on the Western Sydney development is contained in Appendix 1.

3.0 2001 SWC WATER SUPPLY HEADWORKS CHARGES

In the 2001 DSP pricing structure, every SWC water supply DSP had a part of its cost made up by a major headworks charge. The major headworks charge was a combination of one or more of 14 components. These components were:

1. Dams
2. Warragamba Pipelines
3. Upper Canal
4. Prospect Reservoir Complex
5. Prospect to Pipehead
6. Delivery "A" - Avon
7. Delivery "B" - Warragamba
8. Delivery "C" - Orchard Hills, Blue Mountains
9. Delivery "D" - Nepean Dam
10. Delivery "E" - Macarthur
11. Delivery "F" - Prospect South (WPS 184)
12. Delivery "G" - Prospect North and East, Ryde
13. Delivery "H" - Potts Hill and Woronora
14. Delivery "J" – North Richmond

All delivery areas except "14" (i.e. North Richmond) take water from Dams (component "1"). North Richmond delivery area uses water directly drawn from the Hawkesbury River, which is then treated at SWC's North Richmond water treatment plant and from there distributed to consumers.

Some delivery areas use the Dams infrastructure (component "1") and one other component. Others, such as area "G", Prospect North and East, Ryde, use up to 6 components. Area "G" uses components 1 to 5 and then 12.

In component 1, the "Dams" component, the following asset items were included with 2001 MEERA values:

<u>Item</u>	<u>2000/1 MEERA value (\$'M)</u>
Shoalhaven and associated works	
Wingecarribee Dam & Glenquarry Gate <i>(included deviation of Moss Vale-Wollongong Railway)</i>	32.56
Fitzroy Falls Dam <i>(includes Wildlife Refuge, multiple outlet works, saddle dams)</i>	24.82
Tunnel from Nepean Reservoir to Avon Reservoir <i>(includes intake shaft & flow control)</i>	9.38
Tallowa Dam	109.81
Bendeela Pipeline	3.25
Kangaroo Pipeline	22.20
Kangaroo Tunnel	12.82
Fitzroy Canal	17.92
Wildes Meadow Canal	10.37
Bendeela Pondage	16.68
Burrawang Tunnel	14.81
Glenquarry Cut	6.42
Burrawang Canal	4.22
Glenquarry Cut Pipeline	<u>6.42</u>
Subtotal Shoalhaven and associated works	<u>292.92</u>
Shoalhaven pumping stations	
Bendeela WPS	26.12
Kangaroo WPS	53.00
Burrawang WPS	8.36
Gauging Stations on Shoalhaven System	<u>0.99</u>
Subtotal Shoalhaven pumping stations	<u>88.47</u>
Amplification of the transfer capacity from Wingecarribee Dam to Nepean and Warragamba storages.	-
Total Shoalhaven to Nepean and Warragamba storages	<u>381.39</u>

In 2001, SWC argued that the costs of these assets should only be borne by post-1970 ETs and ascribed 61% of the \$381.39M (\$232.51M) to post-1996 ETs, as per their Headworks – water components table above.

SWC then discounted the annual projected increase in ETs between 1996 and 2031 to derive the “NPV” of post-1996 ETs. This “NPV” figure of 526,864 was used to divide the \$232.51M to produce a cost per ET for the “Dams” component in the Water Headworks charge of \$441.

SWC has advised UDIA NSW that they have stopped levying a separate “water headworks” DSP charge for the 2006 water supply DSPs. In the 2006 charges, a component for the water headworks cost will be included within the individual water supply DSP charge. SWC have now deleted the “Dams” and “Shoalhaven and associated works” components from the draft 2006 water supply DSP charges, reducing the 2006 “water headworks” component of the charges.

4.0 SWC DSPs ISSUED

SWC have provided UDIA NSW with electronic copies of 41 draft 2006 water supply DSPs, 33 sewer DSPs and one stormwater DSP. UDIA NSW appreciates Sydney Water's growing commitment to transparency by making these DSPs available in electronic form.

Of the 41 new draft 2006 water supply DSPs:

- developer charges in 17 new draft water supply DSPs have been set at zero
- another six DSPs have had their developer charge reduced from the 2001 amount
- the remaining 18 draft DSPs have had their developer charge increased from the 2001 amount

Of the 33 new draft 2006 sewer DSPs:

- developer charges in 11 new draft sewer DSPs have been set at zero
- another six DSPs have had their developer charge reduced from the 2001 amount
- the remaining 16 draft DSPs have had their developer charge increased from the 2001 amount

The one stormwater DSP, applicable to the Rouse Hill development area, has had its developer charge increased from the 2001 amount.

UDIA NSW's concerns regarding the water and wastewater calculations largely relate to the following issues:

1. the sudden and dramatic escalation in costs in Western Sydney and the Illawarra;
2. significant increases in operating costs (OPEX);
3. assumptions and method employed by Sydney Water in its DSP calculations;
4. asset valuation; and a
5. disproportionate increase in light commercial and light industrial charges.

UDIA NSW considers that Sydney Water's application of the IPART Guidelines distort an existing onerous developer charges regime further limiting development potential and reducing affordability through increased costs and decreased supply. The following chapters examine the briefly comment on specific DSPs and the observed costs escalations.

5.0 DRAFT 2006 WATER SUPPLY DSPs WITH INCREASED CHARGES

The following is an analysis of the 18 draft 2006 water supply DSPs which have had their developer charges increased from the 2001 amount. Time constraints dictated that these DSPs be given priority as cost increases necessarily impact on urban development feasibilities.

a. Residential ET developer charges

Review comments on the residential developer charge increases for these 18 draft water supply DSPs are set out below:

5.1 Appin – Wilton – Douglas Park

The Appin Water DSP charge for residential ETs has increased from \$1,402 per ET in the 2001 DSP to \$2,856. This is an increase of \$1,454 per ET or 104%. SWC attributes this increase to *“an increase in OPEX (operating costs)”*.

5.2 Avon

The Avon Water DSP charge for residential ETs has increased from \$1,315 per ET in the 2001 DSP to \$2,277. This is an increase of \$962 per ET or 73%. SWC attributes this increase to *“amplification of the system to service Wollongong CBD plus an increase in OPEX”*.

5.3 Cascades

The Cascades Water DSP charge for residential ETs has increased from \$2,313 per ET in the 2001 DSP to \$6,247. This is an increase of \$3,934 per ET or 170%. SWC attributes this increase to *“mains, pumping stations and a surface reservoir to service Katoomba and Leura plus an increase in OPEX”*.

5.4 Cecil Park

The Cecil Park Water DSP charge for residential ETs has increased from \$1,083 per ET in the 2001 DSP to \$1,993. This is an increase of \$910 per ET or 84%. SWC attributes this increase to *“trunk mains to service development at Hoxton Park”*.

5.5 Dural

The Dural Water DSP charge for residential ETs has increased from \$1,362 per ET in the 2001 DSP to \$2,726. This is an increase of \$1,364 per ET or 100%. SWC attributes this increase to *“an elevated reservoir at Dural to service development on Old Northern Road”*.

5.6 Engadine

The Engadine Water DSP charge for residential ETs has increased from \$321 per ET in the 2001 DSP to \$2,667. This is an increase of \$2,346 per ET or 731%. SWC attributes this increase to *“an increase in OPEX”*. It is unclear what the operating costs represent in order to yield such a price increase.

5.7 Helensburgh

The Helensburgh Water DSP charge for residential ETs has increased from \$3,887 per ET in the 2001 DSP to \$9,926. This is an increase of \$6,039 per ET or 155%. SWC attributes this increase to *“an increase in OPEX”*.

5.8 Hornsby Heights - Berowra

The Hornsby Heights – Berowra Water DSP charge for residential ETs has increased from \$1,083 per ET in the 2001 DSP to \$1,993. This is an increase of \$910 per ET or 84%. SWC attributes this increase to *“trunk mains to service Brooklyn and Mt. Colah”*.

5.9 Liverpool

The Liverpool Water DSP charge for residential ETs has increased from \$694 per ET in the 2001 DSP to \$1,338. This is an increase of \$644 per ET or 93%. SWC attributes this increase to *“trunk mains to service release areas”*.

5.10 Lucas Heights

The Lucas Heights Water DSP charge for residential ETs has increased from \$1,348 per ET in the 2001 DSP to \$1,387. This is an increase of \$39 per ET or 3%. SWC attributes this increase to *“an increase in OPEX (operating costs)”*.

5.11 Minchinbury

The Minchinbury Water DSP charge for residential ETs has increased from \$1,389 per ET in the 2001 DSP to \$2,375. This is an increase of \$986 per ET or 71%. SWC attributes this increase to *“pumping stations and a surface reservoir to service development”*.

5.12 Narellan

The Narellan Water DSP charge for residential ETs has increased from \$380 per ET in the 2001 DSP to \$628. This is an increase of \$248 per ET or 65%. SWC attributes this increase to *“trunk mains, pumping stations and an elevated reservoir to service Mt. Annan, Spring Farm, Harrington Park and Turner Road”*.

5.13 Nepean

The Nepean Water DSP charge for residential ETs has increased from \$5,063 per ET in the 2001 DSP to \$5,273. This is an increase of \$210 per ET or 4%. SWC attributes this increase to *“trunk mains to service development at Picton”*.

5.14 North Richmond

The North Richmond Water DSP charge for residential ETs has increased from \$3,431 per ET in the 2001 DSP to \$3,934. This is an increase of \$503 per ET or 15%. SWC attributes this increase to *“trunk mains to service development at Toorah”*.

5.15 Orchard Hills

The Orchard Hills Water DSP charge for residential ETs has increased from \$2,103 per ET in the 2001 DSP to \$2,488. This is an increase of \$385 per ET or 18%. SWC attributes this increase to *“trunk mains, pumping stations and an elevated reservoir to service the ADI site, Dunheved, Cranebrook and Penrith Lakes”*.

5.16 Parklea - Marayong

The Parklea – Marayong Water DSP charge for residential ETs has increased from \$775 per ET in the 2001 DSP to \$1,628. This is an increase of \$853 per ET or 110%. SWC attributes this increase to *“trunk mains, pumping stations and an elevated reservoir to service Second Ponds Creek, Balmoral Road and North Kellyville”*.

5.17 Ryde Gravity

The Ryde Gravity Water DSP charge for residential ETs has increased from \$396 per ET in the 2001 DSP to \$942. This is an increase of \$546 per ET or 138%. SWC attributes this increase to *“trunk mains to service development in Parramatta CBD”*.

5.18 Warringah

The Warringah Water DSP charge for residential ETs has increased from \$871 per ET in the 2001 DSP to \$1,913. This is an increase of \$1,042 per ET or 120%. SWC attributes this increase to *“trunk mains to service development in Ingleside”*.

The increases to residential ET water supply developer charges are set out in Table 1 below:

TABLE 1
2006 SWC DRAFT WATER SUPPLY DSP CHARGES INCREASED FROM 2001

DSP	2001 charge (\$/ET)	Draft 2006 charge (\$/ET)	\$ increase in charge per ET	% increase in charge per ET
Appin–Wilton-Douglas Park	1,402	2,856	1,454	104
Avon	1,315	2,277	962	73
Cascades	2,313	6,247	3,934	170
Cecil Park	1,083	1,993	910	84
Dural	1,362	2,726	1,364	100
Engadine	321	2,667	2,346	731**
Helensburgh	3,887	9,926	6,039	155
Hornsby Heights - Berowra	2,822	3,224	402	14
Liverpool	694	1,338	644	93
Lucas Heights	1,348	1,387	39	3
Minchinbury	1,389	2,475	986	71
Narellan	380	628	248	65
Nepean	5,063	5,273	210	4
North Richmond	3,431	3,934	503	15
Orchard Hills	2,103	2,488	385	18
Parklea - Marayong	775	1,628	853	110
Ryde Gravity	396	942	546	138
Warringah	871	1,913	1,042	120

b. Light commercial water supply developer charges

When the draft 2006 water supply DSPs that had increased from the 2001 amount were investigated for the developer charges for light commercial development, the charges were found to have increased consistently at the same rate on a pure net hectare basis as those for residential ETs. The increased charges for these DSPs for light commercial development are set out in Table 2 below:

**TABLE 2
2006 SWC DRAFT WATER SUPPLY DSP LIGHT COMMERCIAL
CHARGES INCREASED FROM 2001**

DSP	2001 light commercial charge (\$/pure net Ha)	Draft 2006 light commercial charge (\$/PNHa)	% increase in light commercial charge per Pure net Ha	% increase in residential charge per ET charge
Appin–Wilton–Douglas Park	22,432	55,053	145	104
Avon	21,040	43,894	109	73
Cascades	37,008	120,416	225	170
Cecil Park	17,328	38,407	122	84
Dural	21,792	55,542	155	100
Engadine	5,136	51,594	901**	731**
Helensburgh	62,192	191,333	208	155
Hornsby Heights - Berowra	45,152	62,135	38	14
Liverpool	9,504	25,783	171	93
Lucas Heights	21,568	26,732	24	3
Minchinbury	22,224	45,772	106	71
Narellan	6,080	12,107	99	65
Nepean	81,008	101,636	25	4
North Richmond	54,896	75,834	38	15
Orchard Hills	33,648	47,948	42	18
Parklea - Marayong	13,500	31,402	133	110
Ryde Gravity	6,336	18,164	187	138
Warringah	13,936	36,867	165	120

c. Light Industrial water supply developer charges

When the draft 2006 DSPs that had increased from the 2001 amount were investigated for the developer charges for light industrial development, the charges were found to have also increased consistently at the same rate on a pure net hectare basis as the residential ET rate.

The increased charges for these DSPs for light industrial development are set out in Table 3 below:

**TABLE 3
2006 SWC DRAFT WATER SUPPLY DSP LIGHT INDUSTRIAL
CHARGES INCREASED FROM 2001**

DSP	2001 light industrial charge (\$/pure net Ha)	Draft 2006 light industrial charge (\$/PNHa)	% increase in light industrial charge per Pure net Ha	% increase in residential charge per ET charge
Appin–Wilton–Douglas Park	36,452	80,928	122	104
Avon	34,190	64,525	89	73
Cascades	60,138	177,012	194	170
Cecil Park	28,158	56,458	101	84
Dural	35,412	77,236	118	100
Engadine	8,346	75,566	805**	731**
Helensburgh	101,062	281,259	178	155
Hornsby Heights - Berowra	73,372	91,338	24	14
Liverpool	15,444	37,901	145	93
Lucas Heights	35,048	39,296	12	3
Minchinbury	36,114	67,284	86	71
Narellan	9,880	17,797	80	65
Nepean	131,638	149,404	13	4
North Richmond	89,206	111,476	25	15
Orchard Hills	54,678	70,484	29	18
Parklea - Marayong	14,500	63,611	339**	110
Ryde Gravity	10,296	26,701	159	138
Warringah	22,646	54,194	139	120

7.0 DRAFT 2006 SEWER DSPs WITH INCREASED CHARGES

UDIA NSW has undertaken an analysis of the 16 draft 2006 sewer DSPs which have had their developer charges increased from the 2001 amount.

a. Residential ET developer charges

Review comments on the residential developer charge increases for these 16 draft sewer DSPs are set out below:

7.1 Gerringong – Gerroa

The Gerringong - Gerroa DSP charge for residential ETs has increased from \$12,693 per ET in the 2001 DSP to \$16,479. This is an increase of \$3,786 per ET or 30%. SWC attributes this increase to *“an increase in asset values”*.

7.2 Glenfield

The Glenfield sewer DSP charge for residential ETs has increased from \$1,226 per ET in the 2001 DSP to \$1,422. This is an increase of \$196 per ET or 16%. SWC attributes this increase to *“trunk mains to service development”*.

7.3 Kiama

The Kiama sewer DSP charge for residential ETs has increased from \$1,978 per ET in the 2001 DSP to \$8,652. This is an increase of \$6,674 per ET or 337%. SWC attributes this increase to *“asset value increases”*. This is a considerable increase in asset value.

7.4 Kurnell

The Kurnell sewer DSP charge for residential ETs has increased from \$449 per ET in the 2001 DSP to \$4,461. This is an increase of \$4,012 per ET or 894%. SWC attributes this increase to *“lower development rates due to environmental constraints”*.

7.5 Liverpool

The Liverpool sewer DSP charge for residential ETs has increased from \$3,676 per ET in the 2001 DSP to \$7,881. This is an increase of \$4,205 per ET or 114%. SWC attributes this increase to *“trunk mains, pumping stations (\$34M) and an upgrade to Liverpool STP (\$49M) to service development”*.

7.6 North Richmond

The North Richmond sewer DSP charge for residential ETs has increased from \$5,299 per ET in the 2001 DSP to \$6,769. This is an increase of \$1,470 per ET or 28%. SWC attributes this increase to *“an increase in OPEX”*.

7.7 Penrith

The Penrith sewer DSP charge for residential ETs has increased from \$4,052 per ET in the 2001 DSP to \$8,112. This is an increase of \$4,060 per ET or 100%. SWC attributes this increase to *“pumping stations (\$7M) and an upgrade to Penrith STP (\$1.8M) to service development”*.

7.8 Picton

The Picton sewer DSP charge for residential ETs has increased from \$11,950 per ET in the 2001 DSP to \$13,005. This is an increase of \$1,055 per ET or 9%. SWC attributes this increase to *“increase in OPEX”*.

7.9 Quakers Hill

The Quakers Hill sewer DSP charge for residential ETs has increased from \$1,277 per ET in the 2001 DSP to \$1,462. This is an increase of \$185 per ET or 14%. SWC attributes this increase to *“trunk mains to service future development”*.

7.10 Richmond

The Richmond sewer DSP charge for residential ETs has increased from \$1,640 per ET in the 2001 DSP to \$9,480. This is an increase of \$7,840 per ET or 478%. SWC attributes this increase to *“asset value increase”*. Again, this is a comparatively large asset revaluation.

7.11 Rouse Hill

The Rouse Hill sewer DSP charge for residential ETs has increased from \$4,271 per ET in the 2001 DSP to \$4,686. This is an increase of \$415 per ET or 10%. SWC attributes this increase to *“trunk mains and pumping stations (\$20M) and an upgrade to Rouse Hill STP (\$116M) to service development”*.

7.12 Shellharbour

The Shellharbour sewer DSP charge for residential ETs has increased from \$4,119 per ET in the 2001 DSP to \$9,223. This is an increase of \$5,104 per ET or 124%. SWC attributes this increase to *“trunk mains and pumping stations (\$3.9M) and an upgrade to Shellharbour STP (\$28.9M) to service development”*.

7.13 St. Marys

The St. Marys sewer DSP charge for residential ETs has increased from \$3,031 per ET in the 2001 DSP to \$3,643. This is an increase of \$612 per ET or 20%. SWC attributes this increase to *“trunk mains and pumping stations to service the ADI site and Dunheved”*.

7.14 West Camden

The West Camden sewer DSP charge for residential ETs has increased from \$3,169 per ET in the 2001 DSP to \$5,878. This is an increase of \$2,709 per ET or 85%. SWC attributes this increase to *“trunk mains and pumping stations (\$31.6M) and an upgrade to West Camden STP (\$38.7M) to service Elderslie, Spring Farm and Smeaton Grange”*.

7.15 West Hornsby

The West Hornsby sewer DSP charge for residential ETs has increased from \$2,036 per ET in the 2001 DSP to \$6,539. This is an increase of \$4,503 per ET or 221%. SWC attributes this increase to *“trunk mains and pumping stations (\$4.7M) and an upgrade to West Hornsby STP (\$4M) to service development”*.

7.16 Winmalee

The Winmalee sewer DSP charge for residential ETs has increased from \$6,652 per ET in the 2001 DSP to \$19,125. This is an increase of \$12,473 per ET or 188%. SWC attributes this increase to *“upgrades to STP’s and development of a scheme to transfer wastewater flows through the Blue Mountains plus an increase in OPEX”*.

The increases to residential ET sewer developer charges are set out in Table 4 below.

**TABLE 4
2006 SWC DRAFT SEWER SUPPLY DSP CHARGES INCREASED FROM 2001**

DSP	2001 charge (\$/ET)	Draft 2006 charge (\$/ET)	\$ increase in charge per ET	% increase in charge per ET
Gerringong – Gerroa	12,693	16,479	3,786	30
Glenfield	1,226	1,442	196	16
Kiama	1,978	8,652	6,674	337**
Kurnell	449	4,461	4,012	894**
Liverpool	3,676	7,881	4,205	114
North Richmond	5,299	6,769	1,470	28
Penrith	4,052	8,112	4,060	100
Picton	11,950	13,005	1,055	9
Quakers Hill	1,277	1,462	185	14
Richmond	1,640	9,480	7,840	478**
Rouse Hill	4,271	4,668	415	10
Shellharbour	4,119	9,223	5,104	124
St. Marys	3,031	3,643	612	20
West Camden	3,169	5,878	2,709	85
West Hornsby	2,036	6,539	4,503	221
Winmalee	6,652	19,125	12,473	188

b. Light commercial sewer supply developer charges

When the draft 2006 sewer DSPs that had increased from the 2001 amount were investigated for the developer charges for light commercial development, the charges were found to have increased consistently more on a pure net hectare basis than those for residential ETs.

The increased charges for these DSPs for light commercial development are set out in Table 5 below:

**TABLE 5
2006 SWC DRAFT SEWER DSP LIGHT COMMERCIAL
CHARGES INCREASED FROM 2001**

DSP	2001 light commercial charge (\$/pure net Ha)	Draft 2006 light commercial charge (\$/PNHa)	% increase in light commercial charge per Pure net Ha	% increase in residential charge per ET charge
Gerringong – Gerroa	342,711	492,711	44	30
Glenfield	33,102	42,508	28	16
Kiama	53,406	258,708	384**	337**
Kurnell	12,123	133,370	1,000**	894**
Liverpool	88,209	235,638	167	114
North Richmond	143,073	202,396	41	28
Penrith	109,404	242,543	122	100
Picton	322,650	388,838	21	9
Quakers Hill	34,479	43,725	27	14
Richmond	44,280	283,455	540**	478**
Rouse Hill	115,317	140,107	21	10
Shellharbour	111,213	275,776	148	124
St. Marys	81,837	108,913	33	20
West Camden	85,563	175,745	105	85
West Hornsby	54,972	195,530	256**	221**
Winmalee	179,604	571,835	218	188

c. Light Industrial sewer supply developer charges

When the draft 2006 DSPs that had increased from the 2001 amount were investigated for the developer charges for light industrial development, the charges were found to have increased consistently much more on a pure net hectare basis than for residential ETs, and even higher than the charges for light commercial DSPs.

The increased charges for these DSPs for light industrial development are set out in Table 6 below:

**TABLE 6
2006 SWC DRAFT SEWER DSP LIGHT INDUSTRIAL
CHARGES INCREASED FROM 2001**

DSP	2001 light industrial charge (\$/pure net Ha)	Draft 2006 light industrial charge (\$/PNHa)	% increase in light industrial charge per Pure net Ha	% increase in residential charge per ET charge
Gerringong – Gerroa	342,711	911,269	166**	30
Glenfield	33,102	78,168	136**	16
Kiama	53,406	478,480	796**	337**
Kurnell	12,123	246,668	1,935**	894**
Liverpool	88,209	435,812	394**	114
North Richmond	143,073	347,330	162**	28
Penrith	109,404	448,583	310**	100
Picton	332,650	719,155	123**	9
Quakers Hill	34,479	80,869	135**	14
Richmond	44,280	524,250	1,084**	478**
Rouse Hill	115,317	259,128	125**	10
Shellharbour	111,213	510,048	359**	124
St. Marys	81,837	201,434	146**	20
West Camden	85,563	325,041	280**	85
West Hornsby	54,972	361,632	558**	221**
Winmalee	179,604	1,057,608	489**	188

8.0 ISSUES IDENTIFIED FROM THIS REVIEW

UDIA NSW has therefore identified 13 specific issues associated with the method and assumptions employed by Sydney Water in calculating the developer charges:

- 1) Average net operating revenue is the present value @ 7% real discount rate of annual rate revenues less system operating and maintenance costs. The industry believes that average net revenue should be calculated for all ETs, pre- and post-1970, and that overall total should be included in the revenue offset figure. This is in keeping with the IPART principles;
- 2) The difference in the PVs of net revenues between the 2001 DSPs and the draft 2006 DSPs is marked. There is real industry concern that many new sewer and water schemes have negative net revenue offsets. Effectively, this means that the PV of net system maintenance is being added to the upfront capital charge for new ETs. Consequently, new ETs are subsidising the system maintenance costs for all ETs, including existing and pre-1970 ETs, where they are being served by a new system;
- 3) The SWC method of determining present values appears to start one year early in the calculations. The "Year 1" amount is being discounted as well as all future years, whereas conventional PV calculation methodology is to discount the "Year 2" amount and all future years and then add the undiscounted Year 1 figure to the total of the discounted years from Year 2 onwards;
- 4) There appears to be a discrepancy between the methodologies used by SWC and Hunter Water Corporation. SWC has moved their new draft DSP starting dates to 2006, a move which is supported by the industry as it overcomes the erroneous time and value principle inherent in previous DSPs. The Hunter Water still start their new 2006 DSPs at 1996.
- 5) In the vast majority of the new draft 2006 SWC DSPs where developer charges have been increased from the 2001 amount, there are substantial reductions in future and current ET projections. This erroneously suggests that Sydney is shrinking.

While the number of current and future ETs is considerably reduced in these draft DSPs, the present value of current and future capital expenditure has increased. It seems illogical that the planned expenditure would rise and the future development needs would simultaneously fall. Why is SWC intending to increase their capital asset spend in the future when they will be servicing less development in the supply area?

- 6) Where current and future ETs have been reduced in the new DSPs, costs appear to just have been spread across a lesser denominator to determine a present value of cost per ET, without any thought of the system capacity used per ET. The IPART Determination Number 9 is clear that, where system capacity is not fully used up over the evaluation period, the unused amount of capacity should be taken out of any calculation of developer charges.

For example, the draft 2006 Kurnell sewer DSP increases the charge per ET by 1,035% because the number of future ETs has been reduced, apparently due to zoning changes. Just because the number of future ETs has been reduced, it is highly unlikely that new ETs would now use 10 times the amount of sewerage services required by existing ETs.

- 7) Different methods have been used for assessing the number of ETs in water supply DSPs. Both “peak demand” and “average demand” ET numbers have been used. The industry agrees that peak usage amounts should be used for system design but system costs should be allocated across average ETs, not peak.
- 8) The industry needs access to the “modern MEERA” cost rates used by SWC, and indeed all water supply authorities, in both electronic and hard copy to verify the considerable increases in asset costs in the draft 2006 DSPs.
- 9) Both Picton sewerage and Gerringong – Gerroa sewerage DSPs include sewerage reticulation costs. These costs should be removed from the DSPs.
- 10) The Wollongong sewerage diversion and treated effluent reuse scheme is an example of an environmental upgrade which, while commendable and supported by the industry, should not be included in a DSP charge. The IPART Determination Number 9 clearly stated that overall system environmental improvement works should not be included in DSP charges.
- 11) The threshold date for the use of 3% and 7% discount rates should move forward as DSPs are updated over time. SWC and the other water supply agencies have now had 10 years of developer charges to recoup the initial costs of post-1995 assets.
- 12) Light Industrial and Light Commercial sewer charges have increased dramatically on a proportional basis than residential charges between the 2001 and draft 2006 DSPs. One of the reasons for this is SWC’s considerable increase in the equivalent ET classification per pure net hectare.

For Light Commercial, the equivalent ET classification in 2001 was 27 ETs per pure net hectare (pnHa). This has been increased in the 2006 DSPs to 30 ETs per pnHa. The Light Industrial equivalent ET classification in 2001 was 27 per pnHA. This has been more than doubled in the 2006 draft DSPs to 54 per pnHa.

The NSW Water Directorate recommends that an ET equivalent of 15 per pnHA should be used for Light Industrial for both water supply and sewer calculations. The Water Directorate recommended figure is less than 30% that used in the SWC draft 2006 DSPs.

- 13) The implementation of BASIX has generated considerable water savings. A pre BASIX home used on average 240kL/yr while a post BASIX home uses 150kL/year. Sydney Water recognises that these savings paid for by the homebuyer’s investment in demand management benefit the entire network and should create offsets even if it is exhibited by extra capacity in the system. However, it is apparent that Sydney Water’s business model interprets water savings as a loss of revenue and the IPART Guidelines translate this perceived loss as increased DSP charges. Accordingly, the homebuyer is charged twice. Once in order to save water and secondly because water was saved. This anomaly requires urgent attention. UDIA NSW advocates that incentives not penalties should be provided for BASIX compliance.

9.0 CONCLUSION

It is evident that Western Sydney and the Illawarra cannot sustain the cost increases proposed by Sydney Water. Shell Cove, a joint venture between the private sector and Shellharbour Council will experience a \$11 million increase in developer charges.

Similarly, a proposed urban development in Western Sydney will attract a \$17 million increase in developer charges. These produce an effective doubling of costs to homebuyers or in a flat market establish decreasing returns to the investor, eroding NSW's economic competitiveness. Failure to realise the Western Sydney project alone will result in a loss of 7,631 homes to the market in the short to medium term, which could accommodate approximately 20,000 people.

UDIA NSW's concerns regarding the water and wastewater calculations largely relate to the following issues:

1. the sudden and dramatic escalation in costs in Western Sydney and the Illawarra;
2. significant increases in operating costs (OPEX);
3. assumptions and method employed by Sydney Water in its DSP calculations;
4. asset valuation; and a
5. disproportionate increase in light commercial and light industrial charges.

UDIA NSW considers that Sydney Water's application of the IPART Guidelines distort an existing onerous developer charges regime further limiting development potential and reducing affordability and employment growth through increased costs and decreased supply. The following chapters examine the briefly comment on specific DSPs and the observed costs escalations.

In conclusion, UDIA NSW seeks a reasonable and equitable cost allocation for the provision of infrastructure. It is recognised that Sydney Water's operating environment is a function of government policy and it therefore has limited discretion on managing the social and economic implications of its activities. Nevertheless, it is hoped that Sydney Water will be able to address the 13 issues described above to improve affordability within the boundaries of the regulatory framework provided by IPART.

APPENDICES

APPENDIX 1 – Western Sydney: Changes in Developer Charges

Liverpool Wastewater System						
Locality	Dwellings per ha	No. of dwellings	Existing DSP	Draft DSP	Increase per lot	Net Result
A	>55	88	2573	4098	1525	-\$134,200
	29 - 40	31	2940	4334	1394	-\$43,214
	21 - 28	1292	2940	5517	2577	-\$3,329,484
B	21 - 28	241	2940	5517	2577	-\$621,057
	20 or less	18	3676	7881	4205	-\$75,690
C	>55	57	2573	4098	1525	-\$86,925
	29 - 40	28	2940	4334	1394	-\$39,032
	21 - 28	1103	2940	5517	2577	-\$2,842,431
D	21 - 28	341	2940	5517	2577	-\$878,757
E	21 - 28	195	2940	5517	2577	-\$502,515
F	>55	284	2573	4098	1525	-\$433,100
	29 - 40	121	2940	4334	1394	-\$168,674
	21 - 28	637	2940	5517	2577	-\$1,641,549
G	>55	589	2573	4098	1525	-\$898,225
	29 - 40	295	2940	4334	1394	-\$411,230
	21 - 28	295	2940	5517	2577	-\$760,215
H	21 - 28	120	2940	5517	2577	-\$309,240
	20 or less	24	3676	5517	1841	-\$44,184
	Rural Res.	6	3676	7881	4205	-\$25,230
I	>55	258	2573	4098	1525	-\$393,450
	29 - 40	110	2940	4334	1394	-\$153,340
	21 - 28	171	2940	5517	2577	-\$440,667
J	>55	261	2573	4098	1525	-\$398,025
	29 - 40	88	2940	4334	1394	-\$122,672
	21 - 28	793	2940	5517	2577	-\$2,043,561
	20 or less	168	3676	7881	4205	-\$706,440
K	Rural Res.	17	3676	7881	4205	-\$71,485
						-\$17,503,107

Liverpool Water System						
Locality	Dwellings per ha	No. of dwellings	Existing DSP	Draft DSP	Increase per lot	Net Result
A	>55	88	305	518	213	-\$18,744
	29 - 40	31	416	747	331	-\$10,261
	21 - 28	1292	416	747	331	-\$427,652
B	21 - 28	241	416	747	331	-\$79,771
	20 or less	18	694	1338	644	-\$11,592
C	>55	57	305	518	213	-\$12,141
	29 - 40	28	416	747	331	-\$9,268
	21 - 28	1103	416	747	331	-\$365,093
D	21 - 28	341	416	747	331	-\$112,871
E	21 - 28	195	416	747	331	-\$64,545
F	>55	284	305	518	213	-\$60,492
	29 - 40	121	416	747	331	-\$40,051
	21 - 28	637	416	747	331	-\$210,847
						-\$1,423,328

Campbelltown South Water System						
Locality	Dwellings per ha	No. of dwellings	Existing DSP	Draft DSP	Increase per lot	Net Result
A	>55	589	305	0	-305	\$179,645
	29 - 40	295	417	0	-417	\$123,015
	21 - 28	295	417	0	-417	\$123,015
						\$0
B	21 - 28	120	417	0	-417	\$50,040
	20 or less	24	695	0	-695	\$16,680
	Rural Res.	6	695	0	-695	\$4,170
						\$0
C	>55	258	305	0	-305	\$78,690
	29 - 40	110	417	0	-417	\$45,870
	21 - 28	171	417	0	-417	\$71,307
						\$0
D	>55	261	305	0	-305	\$79,605
	29 - 40	88	417	0	-417	\$36,696
	21 - 28	793	417	0	-417	\$330,681
	20 or less	168	695	0	-695	\$116,760
E	Rural Res.	17	695	0	-695	\$11,815
						\$1,256,174
					Net DSP position	-\$17,670,261

Recycled water (estimate of charges)						
Locality	Dwellings per ha	No. of dwellings	Existing DSP	Draft DSP	Increase per lot	Net Result
All		7500	0	5000	-5000	-\$37,500,000

APPENDIX 2

ITEMISED ANALYSIS OF DRAFT 2006 WATER SUPPLY DSPs WITH INCREASED CHARGES

A more detailed breakdown analysis was conducted individually on the 18 draft 2006 water supply DSPs which have had their developer charges increased. Details of changes in the basic cost and revenue components of the 18 DSPs are set out in the summary tables below.

1.1 DSP REVIEW SUMMARY TABLE

DSP NAME	Appin – Wilton – Douglas Park water supply			
	2001 DSP amount	2006 DSP amount	Actual change	Percentage Charge
PV Head Works @ 7% Discount	\$442	\$1	-\$441	-
PV 1970 – 1995 capital expenditure @ 7%	\$1,019,587	\$988,498	-\$31,089	-3%
PV System takeup in ETs @ 7%	446	395	-51	-11%
Charge per ET pre 1996	\$2,284	\$2,503	+\$219	+10%
PV 1996 – present capital expenditure @ 7%	\$0	\$0	\$0	0%
PV System takeup in ETs @ 7%	295	241	-54	-18%
Charge per ET post 1996	\$0	\$0	\$0	0%
PV future capital expenditure @ 7%	\$0	\$0	\$0	0%
PV System takeup in ETs @ 7%	295	241	-54	-18%
Charge per ET for future assets	\$0	\$0	\$0	0%
Total DSP capital works charge per ET	\$2,726	\$2,504	-\$222	-8%
PV net revenue offset/OM @ 7%	(\$408,324)	\$97,436	-\$505,760	-123%
PV System takeup in ETs @ 7%	269	276	+7	+3%
PV net revenue offset per ET	(\$1,516)	\$353	\$1,869	-123%
Net DSP charge per ET	\$1,210	\$2,857	+\$1,647	+136%

Reasons found for change in charge per ET

The DSP charge for residential ETs has increased from \$1,210 per ET in the 2001 DSP to \$2,857 in 2006. This is an increase of \$1,647 or 136%. SWC indicate the increase is due to an increase in OPEX.

There is no capital expenditure post 1996 and ETs have declined slightly however there has been an increase in operation and maintenance costs that have not been fully covered by operating revenue.

1.2 DSP REVIEW SUMMARY TABLE

DSP NAME	Avon water supply			
	2001 DSP AMOUNT	2006 DSP AMOUNT	ACTUAL CHANGE	PERCENTAGE CHANGE
PV-HeadWorks/ET @7% Discount Rate	\$465	\$10	-\$455	-\$98%
PV 1970 – 1995 Capital Expenditure @ 7%	\$21,440,568	\$23,041,195	+\$1,600,627	+7%
PV System Takeup in ETs @ 7%	18,799	21,785	+2,986	+16%
Charge per ET pre 1996	\$1,140	\$1,058	-\$82	-7%
PV 1996 – Present Capital Expenditure @ 7%	\$792,745	\$15,884,128	+\$15,091,383	+\$1,904%
PV System Take-up in ETs @ 7%	12,832	14,158	1,326	10%
Charge per ET post 1996	\$62	\$1,122	+\$1,060	+\$1,710%
PV Future Capital Expenditure @ 7%	\$8,836,772	\$7,527,148	-\$1,309,624	-15%
PV System Take-up in ETs @ 7%	12,832	14,158	+1,326	+10%
Charge per ET for Future Assets	\$689	\$532	-\$157	-23%
Total DSP Capital Works Charge per ET	\$2,356	\$2,722	+\$366	+15%
PV Net Revenue Offset @ 7%	(\$14,532,487)	(\$727,603)	-\$13,804,884	-95%
PV System Take-up in ETs @ 7%	12,060	16,383	+4,323	+36%
PV Net Revenue Offset per ET	(\$1,205)	(\$444)	-\$761	-\$63%
Net DSP Charge per ET	\$1,233	\$2,278	+\$1,045	+85%

Reasons found for change in charge per ET

The DSP charge for residential ETs has increased from \$1,233 per ET in the 2001 DSP to \$2,278 in 2006. This is an increase of \$1,045 per ET or 85%. SWC advise that the increase is due to amplification of system to service Wollongong and to an increase of OPEX. Post-1996 capital expenditure has increased by \$15M (1,904%)

1.3 DSP REVIEW SUMMARY TABLE

DSP NAME	Cascades water supply			
	2001 DSP AMOUNT	2006 DSP AMOUNT	ACTUAL CHANGE	PERCENTAGE CHANGE
PV – Head Works/ET @ 7 % Discount Rate	\$1,113	\$642	+\$471	+42%
PV 1970 – 1995 Capital Expenditure @ 7%	\$742,094	\$2,748,909	+\$2,006,815	+270%
PV System Take-up in ETs @ 7%	2,978	3,220	+242	+8%
Charge per ET pre 1996	\$249	\$854	+\$605	+243%
PV 1996 – Present Capital Expenditure @ 7%	\$0	\$5,682,310	+ \$5,682,310	N/A
PV System Take-up in ETs @ 7%	1,750	2,085	+335	+19%
Charge per ET post 1996	\$0	\$2,726	+ \$2,726	N/A
PV Future Capital Expenditure @ 7%	\$1,746,027	\$2,757,910	+\$1,011,883	+58%
PV System Take-up in ETs @ 7%	1750	2,085	+335	+19%
Charge per ET for Future Assets	\$998	\$1,323	+\$325	+33%
Total DSP Capital Works Charge per ET	\$2,360	\$5,545	+\$3,185	+135%
PV Net Revenue Offset @ 7%	(\$651,318)	\$1,569,352	-\$2,220,670	-341%
PV System Take-up in ETs @ 7%	1,927	2,232	+305	+16%
PV Net Revenue Offset per ET	(\$338)	\$703	-\$1,041	-3%
Net DSP Charge per ET	\$2,022	\$6,248	+\$4,226	209%

Reasons found for change in charge per ET

The DSP charge for residential ETs has increased from \$1,022 per ET in the 2001 DSP to \$6,248 in 2006. This is an increase of \$4,226 per ET or 209%. SWC advise that the increase is due to mains, pumping stations and a surface reservoir to service Katoomba and Leura plus an increase in OPEX.

Overall capital expenditure has increased since 2001 by \$9M (pre 1995, \$2M, post-1996 \$6M and future \$1M). This has resulted in capital works charges per ET increasing by \$3,185 (135%).

Further investigation is warranted to determine why the 1970-1995 capital expenditure has increased by 270%. This cost should have been incurred for the 2001 DSP and would not have been spent since 2001.

1.4 DSP REVIEW SUMMARY TABLE

DSP NAME	Cecil Park water supply			
	2001 DSP AMOUNT	2006 DSP AMOUNT	ACTUAL CHANGE	PERCENTAGE CHANGE
PV – Head Works/ET @ 7 % Discount Rate	\$618	\$195	-\$423	-68%
PV 1970 – 1995 Capital Expenditure @ 7%	\$2,900,034	\$5,318,195	+\$2,418,161	+83%
PV System Take-up in ETs @ 7% Discount Rate	1,717	2,678	+961	+56%
Charge per ET pre 1996	\$1,689	\$1,986	+\$297	+18%
PV 1996 – Present Capital Expenditure @ 7%	\$0	\$0	\$0	0%
PV System Take-up in ETs @ 7%	1,156	2,021	+865	+75%
Charge per ET post 1996	\$0	\$0	\$0	0%
PV Future Capital Expenditure @ 7%	\$0	\$2,090,350	\$2,090,350	N/A
PV System Take-up in ETs @ 7%	1,156	2,041	+885	+77%
Charge per ET for Future Assets	\$0	\$1,034	+ \$1,034	N/A
Total DSP Capital Works Charge per ET	\$2,307	\$3,215	+\$908	+39%
PV Net Revenue Offset @ 7%	(\$2,146,551)	(\$2,732,727)	+\$586,176	+27%
PV System Take-up in ETs @ 7%	1,581	2,233	+652	+41%
PV Net Revenue Offset per ET	(\$1,358)	(\$1,223)	-\$135	-10%
Net DSP Charge per ET	\$949	\$1,922	+\$973	+103%

Reasons found for change in charge per ET

The DSP charge for residential ETs has increased from \$949 per ET in the 2001 DSP to \$1,922 in 2006. This is an increase of \$973 per ET or 103%. SWC advise that the increase is due to trunk mains to service development at Hoxton Park.

The main factor in the residential rate increase is that overall capital expenditure has increased since 2001 by \$4M (pre 1995 \$2M and future \$2M). This has resulted in capital works charges per ET increasing by \$908 (39%). ETs have also increased for present (75%) and future capital expenditure (77%).

1.5 DSP REVIEW SUMMARY TABLE

DSP NAME	Dural water supply			
	2001 DSP AMOUNT	2006 DSP AMOUNT	ACTUAL CHANGE	PERCENTAGE CHANGE
PV – Head Works/ET @ 7 % Discount Rate	\$764	\$355	-\$409	-53%
PV 1970 – 1995 Capital Expenditure @ 7%	\$7,174,250	\$4,822,074	\$2,352,176	-33%
PV System Take-up in ETs @ 7%	4,257	1,859	-2,398	-56%
Charge per ET pre 1996	\$1,685	\$2,594	+\$909	+54%
PV 1996 – Present Capital Expenditure @ 7%	\$0	\$132,780	+ \$132,780	N/A
PV System Take-up in ETs @ 7%	2,933	1,268	-1,665	-57%
Charge per ET post 1996	\$0	\$105	+ \$105	N/A
PV Future Capital Expenditure @ 7%	\$0	\$2,115,089	+ \$2,115,089	N/A
PV System Take-up in ETs @ 7%	2,933	1,268	-1,665	-57%
Charge per ET for Future Assets	\$0	\$1,668	+ \$1,668	N/A
Total DSP Capital Works Charge per ET	\$2,449	\$4,722	+\$2,273	+93%
PV Net Revenue Offset @ 7%	(\$3,033,532)	(\$3,155,604)	+\$122,072	+ 4%
PV System Take-up in ETs @ 7%	2.415	1,581	-834	-34%
PV Net Revenue Offset per ET	(\$1,256)	(\$1,995)	+\$739	+59%
Net DSP Charge per ET	\$1,193	\$2,727	+\$1,534	+129%

Reasons found for change in charge per ET

The DSP charge for residential ETs has increased from \$1,193 per ET in the 2001 DSP to \$2,727 in 2006. This is an increase of \$1,534 per ET or 129%. SWC advise that the increase is due to construction of an elevated reservoir at Dural to service development on Old Northern road.

Pre-1995 capital expenditure has decreased significantly since 2001 (\$2M, a 33% decrease) but ETs decreased by 56%. This resulted in the charge for pre-1995 capital works increasing by \$909 per ET. In addition future capital works increased by \$2M and with reduced ETs has lead to an overall capital works increase of \$2,273/ET (+93%).

1.6 DSP REVIEW SUMMARY TABLE

DSP NAME	Engadine water supply			
	2001 DSP AMOUNT	2006 DSP AMOUNT	ACTUAL CHANGE	PERCENTAGE CHANGE
PV – Head Works/ET @ 7 % Discount Rate	\$900	\$530	-\$370	-41%
PV 1970 – 1995 Capital Expenditure @ 7%	\$2,361,061	\$1,130,971	-\$1,230,090	-52%
PV System Take-up in ETs @ 7%	3,777	1,479	-2,298	-61%
Charge per ET pre 1996	\$625	\$765	+\$140	+22%
PV 1996 – Present Capital Expenditure @ 7%	%0	\$2,095,019	+ \$2,095,019	N/A
PV System Take-up in ETs @ 7%	2,536	1,056	-1,480	-58%
Charge per ET post 1996	\$0	\$1,984	+ \$1,984	N/A
PV Future Capital Expenditure @ 7%	\$0	\$0	\$0	0%
PV System Take-up in ETs @ 7%	2,536	1,056	-1,480	-58%
Charge per ET for Future Assets	\$0	\$0	\$0	0%
Total DSP Capital Works Charge per ET	\$1,525	\$3,279	+\$1,754	+115%
PV Net Revenue Offset @ 7%	(\$3,344,878)	(\$887,405)	-\$2,457,473	-73%
PV System Take-up in ETs @ 7%	2,807	1,451	-1,356	-48%
PV Net Revenue Offset per ET	(\$1,192)	(\$612)	-\$580	-49%
Net DSP Charge per ET	\$333	\$2,667	+\$2,334	701%

Reasons found for change in charge per ET

The DSP charge for residential ETs has increased from \$333 per ET in the 2001 DSP to \$2,667 in 2006. This is an increase of \$2,334 per ET or 701%. SWC advise that the increase is due to the increase in OPEX.

A main factor that can be attributed to the increase in residential ETs is that the 1995 to present capital expenditure has increased by \$2M and that there has been a reduction in the residential ETs by 58%. It is to be noted that total capital works charges per ET have increased from 2001 by 115%.

It is apparent in the new 2006 draft Engadine water supply DSP that SWC have effectively reduced the present value of future ETs by 60% from the 2001 amount (1,479/3,777) but they have increased the present value of asset costs to be recovered, from \$2,361,061 to (\$1,130,971 + \$2,095,019). This means that, rather than apportioning the cost per ET of assets on a per capacity basis, they have just divided the PV of asset costs by a lower denominator.

This approach goes entirely against the IPART Determination Number 9, which states that agencies regulated by the Tribunal recover only the efficient costs of water and sewerage works. It is obvious that SWC have not levied the new 2006 Engadine water supply developer charge on an efficient basis, but rather have just spread the existing costs over a lesser projection of future new users. If SWC revise their projected future growth upwards in the future, new development paying the developer charge in the interim will pay an inflated upfront charge.

1.7 DSP REVIEW SUMMARY TABLE

DSP NAME	Helensburgh water supply			
	2001 DSP AMOUNT	2006 DSP AMOUNT	ACTUAL CHANGE	PERCENTAGE CHANGE
PV – Head Works/ET @ 7 % Discount Rate	\$900	\$530	-\$370	-41%
PV 1970 – 1995 Capital Expenditure @ 7%	\$1,177,339	\$2,285,663	+\$1,108,324	+94%
PV System Take-up in ETs @ 7%	470	438	-32	-7%
Charge per ET pre 1996	\$2,506	\$5,222	+\$2,716	+108%
PV 1996 – Present Capital Expenditure @ 7%	\$572,472	\$658,479	+\$86,007	+15%
PV System Take-up in ETs @ 7%	339	278	-61	-18%
Charge per ET post 1996	\$1,690	\$2,367	+\$677	+40%
PV Future Capital Expenditure @ 7%	\$0	\$0	\$0	0%
PV System Take-up in ETs @ 7%	339	278	-61	-18%
Charge per ET for Future Assets	\$0	\$0	\$0	0%
Total DSP Capital Works Charge per ET	\$5,096	\$8,119	+\$3,023	+59%
PV Net Revenue Offset @ 7%	(\$464,527)	\$572,310	-\$1,036,837	-223%
PV System Take-up in ETs @ 7%	279	317	+38	+14%
PV Net Revenue Offset per ET	(\$1,700)	\$1805	-\$3,505	-206%
Net DSP Charge per ET	\$3,396	\$9,924	+\$6,528	192%

Reasons found for change in charge per ET

The DSP charge for residential ETs has increased from \$3,396 per ET in the 2001 DSP to \$9,924 in 2006. This is an increase of \$6,528 per ET or 192%. SWC advise that the increase is due to the increase in OPEX.

The main increase in the residential ET charge can be attributed to the 1970 to 1995 capital expenditure of \$1M, with a corresponding decline in ETs. This increase may well be due to a MEERA asset revaluation. This is coupled with a 15% increase in post-1996 capital expenditure with a reduction in ETs of 18%.

1.8 DSP REVIEW SUMMARY TABLE

DSP NAME	Hornsby Heights water supply			
	2001 DSP AMOUNT	2006 DSP AMOUNT	ACTUAL CHANGE	PERCENTAGE CHANGE
PV – Head Works/ET @ 7 % Discount Rate	\$764	\$355	-\$409	-54%
PV 1970 – 1995 Capital Expenditure @ 7%	\$4,004,276	\$1,289,822	-\$2,714,454	-68%
PV System Take-up in ETs @ 7%	2,741	1,484	-1,257	-46%
Charge per ET pre 1996	\$1,461	\$869	-\$592	-41%
PV 1996 – Present Capital Expenditure @ 7%	\$0	\$2,715	+ \$2,715	N/A
PV System Take-up in ETs @ 7%	1,728	941	-787	-46%
Charge per ET post 1996	\$0	\$3	\$3	N/A
PV Future Capital Expenditure @ 7%	\$2,399,425	\$3,183,562	+\$784,137	+33%
PV System Take-up in ETs @ 7%	1,728	941	-787	-46%
Charge per ET for Future Assets	\$1,389	\$3,383	+\$1,994	+144%
Total DSP Capital Works Charge per ET	\$3,614	\$4,610	+\$996	+28%
PV Net Revenue Offset @ 7%	(\$2,202,855)	(\$1,657,750)	-\$545,105	-25%
PV System Take-up in ETs @ 7%	1,923	1,196	-727	-38%
PV Net Revenue Offset per ET	(\$1,146)	(\$1,386)	-\$1,146	-21%
Net DSP Charge per ET	\$2,468	\$3,224	+\$756	+31%

Reasons found for change in charge per ET

The DSP charge for residential ETs has increased from \$2,468 per ET in the 2001 DSP to \$3,224 in 2006. This is an increase of \$756 per ET or 31%. SWC advise that the increase is due to the construction of trunk mains to service Brooklyn and Mt Colah.

While pre 1970-95 capital expenditure declined significantly by \$3M (68%) with a corresponding decline in ETs, future capital expenditure increased by \$0.8M or 33% with a reduction in ETs of 46%. It is to be noted that total capital works charges per ET have increased from 2001 by 28%.

Again, it seems illogical that the PV of future capital expenditure should increase by 33% while the PV of future ETs drops by almost a half.

1.9 DSP REVIEW SUMMARY TABLE

DSP NAME	Liverpool water supply			
	2001 DSP AMOUNT	2006 DSP AMOUNT	ACTUAL CHANGE	PERCENTAGE CHANGE
PV – Head Works/ET @ 7 % Discount Rate	\$618	\$195	-\$423	-68%
PV 1970 – 1995 Capital Expenditure @ 7%	\$18,715,372	\$18,799,946	+\$84,574	+1%
PV System Take-up in ETs @ 7%	16,039	14,051	-1,988	-12%
Charge per ET pre 1996	\$1,167	\$1,338	+\$171	+15%
PV 1996 – Present Capital Expenditure @ 7%	\$397,348	\$11,159,270	+\$10,761,922	+2,708%
PV System Take-up in ETs @ 7%	10,083	10,462	+379	4%
Charge per ET post 1996	\$39	\$1,067	+\$1,028	+2,636%
PV Future Capital Expenditure @ 7%	\$2,328,036	\$13,506,710	+\$11,178,674	+480%
PV System Take-up in ETs @ 7%	10,083	10,462	+379	+4%
Charge per ET for Future Assets	\$231	\$1,291	+\$1,060	+459%
Total DSP Capital Works Charge per ET	\$2,055	\$3,891	+\$1,836	+9%
PV Net Revenue Offset @ 7%	(\$13,726,187)	(\$31,376,098)	+17,649,911	+129%
PV System Take-up in ETs @ 7%	9,495	12,290	+2,795	+29%
PV Net Revenue Offset per ET	(\$1,446)	(\$2,553)	-\$1,107	-77%
Net DSP Charge per ET	\$609	\$1,338	+\$729	+120%

Reasons found for change in charge per ET

The DSP charge for residential ETs has increased from \$609 per ET in the 2001 DSP to \$1,338 in 2006. This is an increase of \$729 per ET or 120%. SWC advise that the increase is due to the construction of trunk mains to service release areas.

The increase in the residential rate charge is due to the increase in the PV of post-1996 capital expenditure of \$11M and the PV of future capital expenditure of \$11M, combined totalling \$22M. The increase in capital expenditure is quite significant when compared to the change in ETs of 4%.

This draft 2006 DSP warrants further investigation as time permits.

1.10 DSP REVIEW SUMMARY TABLE

DSP NAME:	Lucas Heights water supply			
	2001 DSP AMOUNT	2006 DSP AMOUNT	ACTUAL CHANGE	PERCENTAGE CHANGE
PV – Head Works/ET @ 7 % Discount Rate	\$900	\$530	-\$370	-41%
PV 1970 – 1995 Capital Expenditure @ 7%	\$3,547,516	\$584,903	-\$2,962,613	-84%
PV System Take-up in ETs @ 7%	1,911	280	-1,631	-85%
Charge per ET pre 1996	\$1,857	\$2,085	+\$228	+12%
PV 1996 – Present Capital Expenditure @ 7%	\$46,708	\$5,409	-\$41,299	-88%
PV System Take-up in ETs @ 7%	1,442	255	-1,187	-82%
Charge per ET post 1996	\$32	\$21	-\$11	-3%
PV Future Capital Expenditure @ 7%	\$0	\$0	\$0	0%
PV System Take-up in ETs @ 7%	1,442	255	-1,187	-82%
Charge per ET for Future Assets	\$0	\$0	\$0	0%
Total DSP Capital Works Charge per ET	\$2,789	\$2,636	-\$153	-5%
PV Net Revenue Offset @ 7%	(\$1,579,996)	(\$330,282)	-\$1,249,714	-79%
PV System Take-up in ETs @ 7%	981	264	-717	-73%
PV Net Revenue Offset per ET	(\$1,610)	(\$1,251)	-\$359	-22%
Net DSP Charge per ET	\$1,179	\$1,385	+\$206	+17%

Reasons found for change in charge per ET

The DSP charge for residential ETs has increased from \$1,179 per ET in the 2001 DSP to \$1,385 in 2006. This is an increase of \$206 per ET or 17%. SWC advise that the increase is due to the increase in OPEX, but the main reason for the increase in the residential charge is due to the decrease in ETs from the 2001 DSP to the 2006 draft DSP.

1.11 DSP REVIEW SUMMARY TABLE

DSP NAME	Minchinbury water supply			
	2001 DSP AMOUNT	2006 DSP AMOUNT	ACTUAL CHANGE	PERCENTAGE CHANGE
PV – Head Works/ET @ 7 % Discount Rate	\$618	\$195	-\$423	-68%
PV 1970 – 1995 Capital Expenditure @ 7%	\$10,535,459	\$7,423,304	-\$3,112,155	-30%
PV System Take-up in ETs @ 7%	7,911	4,349	-3,562	-45%
Charge per ET pre 1996	\$1,332	\$1,707	+\$375	+28%
PV 1996 – Present Capital Expenditure @ 7%	\$64,265	\$337,607	+\$273,342	+425%
PV System Take-up in ETs @ 7%	4,961	3,071	-1,890	-38%
Charge per ET post 1996	\$13	\$110	+\$97	+746%
PV Future Capital Expenditure @ 7%	\$2,793,644	\$8,451,221	+\$5,657,577	+203%
PV System Take-up in ETs @ 7%	4,961	3,071	-1,890	-38%
Charge per ET for Future Assets	\$563	\$2,752	+\$2,189	+389%
Total DSP Capital Works Charge per ET	\$2,526	\$4,764	+\$2,238	+89%
PV Net Revenue Offset @ 7%	(\$6,805,771)	(\$9,329,384)	-\$2,523,613	-37%
PV System Take-up in ETs @ 7%	5,196	3,905	-1,291	-25%
PV Net Revenue Offset per ET	(\$1,310)	(\$2,389)	+\$1,079	+82%
Net DSP Charge per ET	\$1,216	\$2,375	+\$1,159	+95%

Reasons found for change in charge per ET

The DSP charge for residential ETs has increased from \$1,216 per ET in the 2001 DSP to \$2,375 in 2006. This is an increase of \$1,159 per ET or 95%. SWC advise that the increase is due to construction of pumping stations and a surface reservoir to service development.

The main reason for the increase in the residential charge is due to the increase in the PV of future capital expenditure which has increased by \$6M (203%) even though present and future ETs have decreased considerably.

1.12 DSP REVIEW SUMMARY TABLE

DSP NAME	Narellan water supply			
	2001 DSP AMOUNT	2006 DSP AMOUNT	ACTUAL CHANGE	PERCENTAGE CHANGE
PV – Head Works/ET @ 7 % Discount Rate	\$442	\$1	-\$441	-99%
PV 1970 – 1995 Capital Expenditure @ 7%	\$17,671,024	\$12,964,267	-\$4,706,757	-27%
PV System Take-up in ETs @ 7%	16,025	14,460	-1,565	-10%
Charge per ET pre 1996	\$1,103	\$897	-\$206	-19%
PV 1996 – Present Capital Expenditure @ 7%	\$5,992	\$8,621	+\$2,629	+44%
PV System Take-up in ETs @ 7%	10,298	9,960	-338	-3%
Charge per ET post 1996	\$1	\$1	\$0	0%
PV Future Capital Expenditure @ 7%	\$3,486,048	\$16,514,506	+\$13,028,458	+374%
PV System Take-up in ETs @ 7%	10,298	9,960	-338	-3%
Charge per ET for Future Assets	\$339	\$1,658	+\$1,319	+389%
Total DSP Capital Works Charge per ET	\$1,885	\$2,557	+\$672	36%
PV Net Revenue Offset @ 7%	(\$14,961,361)	(\$20,860,433)	+\$5,899,072	+39%
PV System Take-up in ETs @ 7%	9,661	10,820	+1,159	+12%
PV Net Revenue Offset per ET	(\$1,549)	(\$1,928)	+\$379	+24%
Net DSP Charge per ET	\$336	\$629	+293	+87%

Reasons found for change in charge per ET

The DSP charge for residential ETs has increased from \$336 per ET in the 2001 DSP to \$629 in 2006. This is an increase of \$293 per ET or 87%. SWC advise that the increase is due to construction of trunk mains, pumping stations and an elevated reservoir to service Mt Annan, Spring Farm, Harrington Park and Turner Road.

The main reason for the increase in the residential charge is due to the increase in future capital expenditure which has increased by \$13M (374%) and a slight decrease in ETs of 3%.

This has been offset by an increase in the net revenue offset of 24%.

1.13 DSP REVIEW SUMMARY TABLE

DSP NAME	Nepean water supply			
	2001 DSP AMOUNT	2006 DSP AMOUNT	ACTUAL CHANGE	PERCENTAGE CHANGE
PV – Head Works/ET @ 7 % Discount Rate	\$873	\$419	-\$454	-52%
PV 1970 – 1995 Capital Expenditure @ 7%	\$11,377,009	\$11,545,523	+\$168,514	+1%
PV System Take-up in ETs @ 7%	2,887	3,164	+277	+15
Charge per ET pre 1996	\$3,941	\$3,649	-\$292	-7%
PV 1996 – Present Capital Expenditure @ 7%	\$0	\$0	\$0	0%
PV System Take-up in ETs @ 7%	1,754	1,982	+228	+13%
Charge per ET post 1996	\$0	\$0	\$0	0%
PV Future Capital Expenditure @ 7%	\$683,861	\$2,014,043	+\$1,330,182	+195%
PV System Take-up in ETs @ 7%	1,754	1,982	+228	+13%
Charge per ET for Future Assets	\$390	\$1,016	+\$626	+161%
Total DSP Capital Works Charge per ET	\$5,204	\$5,084	-\$120	-2%
PV Net Revenue Offset @ 7%	(\$1,548,151)	\$398,831	-\$1,946,982	-126%
PV System Take-up in ETs @ 7%	1,986	2,112	+126	+6%
PV Net Revenue Offset per ET	(\$779)	\$189	-\$968	-121%
Net DSP Charge per ET	\$4,425	\$5,273	+\$848	+19%

Reasons found for change in charge per ET

The DSP charge for residential ETs has increased from \$4,425 per ET in the 2001 DSP to \$5,273 in 2006. This is an increase of \$848 per ET or 19%. SWC advise that the increase is due to construction of trunk mains to service development at Picton.

The main reason for the increase in the residential charge is due to the 195% increase in the PV of future capital expenditure together with a reduction in almost \$1,000 per ET in the net revenue offset amount.

1.14 DSP REVIEW SUMMARY TABLE

DSP NAME	North Richmond water supply			
	2001 DSP AMOUNT	2006 DSP AMOUNT	ACTUAL CHANGE	PERCENTAGE CHANGE
PV – Head Works/ET @ 7 % Discount Rate	\$901	\$761	-\$140	-16%
PV 1970 – 1995 Capital Expenditure @ 7%	\$17,852,690	\$9,848,770	-\$8,003,920	-45%
PV System Take-up in ETs @ 7%	5,813	2,786	-3,027	52%
Charge per ET pre 1996	\$3,071	\$3,535	+\$464	+15%
PV 1996 – Present Capital Expenditure @ 7%	\$0	\$105,570	+ \$105,570	N/A
PV System Take-up in ETs @ 7%	3,305	1,656	-1,649	-50%
Charge per ET post 1996	\$0	\$64	+ \$64	N/A
PV Future Capital Expenditure @ 7%	\$0	\$640,832	+ \$640,832	N/A
PV System Take-up in ETs @ 7%	3,305	1,656	-1,649	-50%
Charge per ET for Future Assets	\$0	\$387	+ \$387	N/A
Total DSP Capital Works Charge per ET	\$3,972	\$4,747	+\$775	+20%
PV Net Revenue Offset @ 7%	4,056,874)	(\$1,863,664)	-\$2,193,210	-54%
PV System Take-up in ETs @ 7%	4,174	2,293	-1,881	-45%
PV Net Revenue Offset per ET	(\$972)	(\$813)	-\$159	-16%
Net DSP Charge per ET	\$3,000	\$3,934	+\$934	+31%

Reasons found for change in charge per ET

The DSP charge for residential ETs has increased from \$3,000 per ET in the 2001 DSP to \$3,934 in 2006. This is an increase of \$934 per ET or 31%. SWC advise that the increase is due to construction of trunk mains to service development at Toorah.

The main reason for the increase in the residential charge is due to an increase in post-1996 and future works costs together with a 50% reduction in ETs. There has been a significant reduction in pre-1995 capital expenditure of \$8M or 45%.

1.15 DSP REVIEW SUMMARY TABLE

DSP NAME	Orchard Hills water supply			
	2001 DSP AMOUNT	2006 DSP AMOUNT	ACTUAL CHANGE	PERCENTAGE CHANGE
PV – Head Works/ET @ 7 % Discount Rate	\$1,113	\$642	-\$471	-42%
PV 1970 – 1995 Capital Expenditure @ 7%	\$45,855,047	\$36,157,711	-\$9,697,336	-21%
PV System Take-up in ETs @ 7%	19,431	14,826	-4,605	-24%
Charge per ET pre 1996	\$2,360	\$2,439	+\$79	+3%
PV 1996 – Present Capital Expenditure @ 7%	\$592,655	\$2,024,683	+\$1,432,028	+242%
PV System Take-up in ETs @ 7%	11,913	9,688	-2,225	-19%
Charge per ET post 1996	\$50	\$209	+\$159	+318%
PV Future Capital Expenditure @ 7%	\$300,788	\$7,556,021	+\$7,255,233	+2,412%
PV System Take-up in ETs @ 7%	11,913	9,688	-2,225	-19%
Charge per ET for Future Assets	\$25	\$780	+\$730	+2,920%
Total DSP Capital Works Charge per ET	\$3,548	\$4,070	+\$522	+15%
PV Net Revenue Offset @ 7%	(\$22,035,051)	(\$18,220,556)	-\$3,814,495	-17%
PV System Take-up in ETs @ 7%	12,892	11,517	-1,575	-12%
PV Net Revenue Offset per ET	(\$1,709)	(\$1,582)	-\$127	-7%
Net DSP Charge per ET	\$1,839	\$2,488	+\$649	+35%

Reasons found for change in charge per ET

The DSP charge for residential ETs has increased from \$1,839 per ET in the 2001 DSP to \$2,488 in 2006. This is an increase of \$649 per ET or 35%. SWC advise that the increase is due to construction of trunk mains, pumping station and an elevated reservoir to service ADI site, Dunheved, Cranebrook and Penrith Lakes.

The main reason for the increase in the residential charge is due to the significant increase in future capital expenditure of \$7M combined with a reduction in ETs of 19%.

1.16 DSP REVIEW SUMMARY TABLE

DSP NAME	Parklea – Marayong water supply			
	2001 DSP AMOUNT	2006 DSP AMOUNT	ACTUAL CHANGE	PERCENTAGE CHANGE
PV – Head Works/ET @ 7 % Discount Rate	\$504	\$285	-\$219	-43%
PV 1970 – 1995 Capital Expenditure @ 7%	\$17,346,146	\$20,543,801	+\$3,197,655	+18%
PV System Take-up in ETs @ 7%	22,911	22,532	-379	-2%
Charge per ET pre 1996	\$757	\$912	+\$155	+20%
PV 1996 – Present Capital Expenditure @ 7%	\$2,409,051	\$11,476,210	+\$9,067,159	+376%
PV System Take-up in ETs @ 7%	15,448	19,419	+3,971	+26%
Charge per ET post 1996	\$156	\$591	+\$435	+279%
PV Future Capital Expenditure @ 7%	\$10,027,543	\$24,817,527	+\$14,789,984	+147%
PV System Take-up in ETs @ 7%	15,448	19,419	+3,971	+26%
Charge per ET for Future Assets	\$649	\$1,278	+\$629	+97%
Total DSP Capital Works Charge per ET	\$2,066	\$3,066	+\$1,000	+48%
PV Net Revenue Offset @ 7%	(\$15,221,755)	(\$10,961,409)	-\$4,260,346	-28%
PV System Take-up in ETs @ 7%	12,669	7,722	-4,947	-39%
PV Net Revenue Offset per ET	(\$1,201)	(\$1,420)	+\$219	+18%
Net DSP Charge per ET	\$865	\$1,646	+\$781	+90%

Reasons found for change in charge per ET

The DSP charge for residential ETs has increased from \$865 per ET in the 2001 DSP to \$1,646 in 2006. This is an increase of \$781 per ET or 90%. SWC advise that the increase is due to construction of trunk mains, pumping station and an elevated reservoir to service Seconds Ponds Creek, Balmoral Road and North Kellyville.

The main reason for the increase in the residential charge is due to the significant increase in post-1996 capital expenditure of \$9M (376%) plus an increase in future capital expenditure of \$15M or 147%.

Future ETs have been estimated to increase by 26% yet the ETs for the net revenue offset have been reduced by 39%. This presents an inconsistency.

1.17 DSP REVIEW SUMMARY TABLE

DSP NAME:	Ryde Gravity water supply			
	2001 DSP AMOUNT	2006 DSP AMOUNT	ACTUAL CHANGE	PERCENTAGE CHANGE
PV – Head Works/ET @ 7 % Discount Rate	\$764	\$355	-\$409	-54%
PV 1970 – 1995 Capital Expenditure @ 7%	\$1,917,863	\$1,668,624	-\$249,239	-13%
PV System Take-up in ETs @ 7%	5,254	3,514	-1,740	-33%
Charge per ET pre 1996	\$365	\$475	+\$110	+30%
PV 1996 – Present Capital Expenditure @ 7%	\$0	\$273,190	+ \$273,190	N/A
PV System Take-up in ETs @ 7%	3,323	2,268	-1,055	-32%
Charge per ET post 1996	\$0	\$120	+ \$120	N/A
PV Future Capital Expenditure @ 7%	\$559,002	\$2,904,170	+\$2,345,168	+420%
PV System Take-up in ETs @ 7%	3,323	2,268	-1,055	-32%
Charge per ET for Future Assets	\$168	\$1,281	+\$1,113	+662%
Total DSP Capital Works Charge per ET	\$1,297	\$2,231	+\$934	+72%
PV Net Revenue Offset @ 7%	(\$4,781,556)	(\$4,208,122)	-\$573,434	-12%
PV System Take-up in ETs @ 7%	5,039	3,266	-\$1,773	-35%
PV Net Revenue Offset per ET	(\$949)	(\$1,288)	+\$339	+36%
Net DSP Charge per ET	\$348	\$943	+\$595	+171%

Reasons found for change in charge per ET

The DSP charge for residential ETs has increased from \$348 per ET in the 2001 DSP to \$943 in 2006. This is an increase of \$595 per ET or 171%. SWC advise that the increase is due to construction of trunk mains to service development in Parramatta CBD.

The main reason for the increase in the residential charge is due to the increase in future capital expenditure (\$2M) combined with a 32% decrease in future ETs.

Again, it seems illogical that SWC should increase future capital investment to service development, yet reduce the number of future ETs in the DSP.

1.18 DSP REVIEW SUMMARY TABLE

DSP NAME	Warringah water supply			
	2001 DSP AMOUNT	2006 DSP AMOUNT	ACTUAL CHANGE	PERCENTAGE CHANGE
PV – Head Works/ET @ 7 % Discount Rate	\$764	\$355	-\$409	-54%
PV 1970 – 1995 Capital Expenditure @ 7%	\$7,007,498	\$7,876,833	+\$869,335	+12%
PV System Take-up in ETs @ 7%	5,658	6,275	+617	+11%
Charge per ET pre 1996	\$1,238	\$1,255	+\$17	+2%
PV 1996 – Present Capital Expenditure @ 7%	\$0	\$912,376	+ \$912,376	N/A
PV System Take-up in ETs @ 7%	3,451	3,614	+163	+5%
Charge per ET post 1996	\$0	\$252	+ \$252	N/A
PV Future Capital Expenditure @ 7%	\$0	\$6,805,025	+ \$6,805,025	N/A
PV System Take-up in ETs @ 7%	3,451	3,614	+163	+5%
Charge per ET for Future Assets	\$0	\$1,883	+ \$1,833	N/A
Total DSP Capital Works Charge per ET	\$2,002	\$3,745	+\$1,743	+87%
PV Net Revenue Offset @ 7%	(\$5,664,217)	(\$7,732,489)	+\$2,068,272	+37%
PV System Take-up in ETs @ 7%	4,571	4,218	-353	-8%
PV Net Revenue Offset per ET	(\$1,239)	(\$1,833)	+\$594	+48%
Net DSP Charge per ET	\$763	\$1,912	+\$1,149	+151%

Reasons found for change in charge per ET

The DSP charge for residential ETs has increased from \$763 per ET in the 2001 DSP to \$1,912 in 2006. This is an increase of \$1,149 per ET or 151%. SWC advise that the increase is due to construction of trunk mains to service development in Ingleside.

The main reason for the increase in the residential charge is due to the increase in 1996 to present capital expenditure (\$1M) plus the increase in future capital expenditure (\$7M). ETs have been estimated to increase by 5%.

APPENDIX 3

ITEMISED ANALYSIS OF SWC DRAFT 2006 WATER SUPPLY DSPs WITH INCREASED CHARGES

A more detailed breakdown analysis was conducted individually on the 16 draft 2006 sewer supply DSPs which have had their developer charges increased. Details of changes in the basic cost and revenue components of the 16 DSPs are set out in the summary tables below.

2.1 DSP REVIEW SUMMARY TABLE

DSP NAME	Gerringong – Gerroa sewerage system			
	2001 DSP amount	2006 DSP amount	Actual change	Percentage change
PV 1970 – 1995 capital expenditure @ 7% discount rate	\$0	\$0	\$0	0%
PV System takeup in ETs @ 7%	\$0	687	+ \$687	N/A
Charge per ET pre 1996	\$0	\$0	\$0	0%
PV 1996 – present capital expenditure @ 7%	\$0	\$58,913,133	+\$58,913,133	N/A
PV System takeup in ETs @ 7%	0	2,819	+ 2,819	N/A
Charge per ET post 1996	\$0	\$20,898	+ \$20,898	N/A
PV future capital expenditure @ 7%	\$35,496,735	\$0	-\$35,496,735	- 100%
PV System takeup in ETs @ 7%	4,016	483	- 3,533	- 88%
Charge per ET for future assets	\$9,095	\$0	- \$9,095	N/A
Total DSP capital works charge per ET	\$9,095	\$20,898	+ \$11,803	+ 130%
PV net revenue offset @ 7%	\$3,010,008	(\$2,133,440)	+ \$5,143,448	+ 171%
PV System takeup in ETs @ 7%	1,336	483	- 853	- 64%
PV net revenue offset per ET	+\$2,253	(\$4,419)	+ \$6,672	+ 296%
Net DSP charge per ET	\$11,413	\$16,479	+ \$5,066	+ 44%

Reasons found for change in charge per ET

The reason for the increase in the Gerringong – Gerroa sewer DSP charge between 2001 and 2006 is that the assets have moved from “future assets”, where they were discounted at 7% real per annum, to “post-1996 assets”, where they have been compounded by the 7% per annum factor.

2.2 DSP REVIEW SUMMARY TABLE

DSP NAME	Glenfield sewerage system			
	2001 DSP amount	2006 DSP amount	Actual change	Percentage change
PV Glenfield STP charge per ET @ 7% discount rate	\$1,192	\$2,324	+ \$1,132	+ 95%
PV 1970 – 1995 capital expenditure @ 7%	\$22,489,363	\$21,855,063	- \$634,300	- 3%
PV System takeup in ETs	10,849	11,820	+ 971	+ 9%
Charge per ET pre 1996	\$2,073	\$1,849	- 224	- 11%
PV 1996 – present capital expenditure @ 7%	\$0	\$0	\$0	0%
PV System takeup in ETs @ 7%	7,382	8,223	+ 841	+ 11%
Charge per ET post 1996	\$0	\$0	\$0	0%
PV future capital expenditure @ 7%	\$56,857	\$996,636	+ \$939,779	+1,653%
PV System takeup in ETs @ 7%	7,382	8,223	+ 841	+ 11%
Charge per ET for future assets	\$8	\$121	+ \$113	+1,413%
Total DSP capital works charge per ET	\$2,081	\$1,970	- \$111	- 5%
PV net revenue offset @ 7%	(\$13,078,930)	(\$23,621,157)	(\$10,542,227)	+ 81%
PV System takeup in ETs @ 7%	5,945	8,223	+ 2,278	+ 38%
PV net revenue offset per ET	(2,200)	(\$2,872)	+ \$672	+ 31%
Net DSP charge per ET	\$1,073	\$1,422	+ \$349	+ 33%

To the 2001 net DSP charge of (\$119) per ET for Glenfield sewerage system is added a charge for Glenfield STP of \$1,192 per ET to give a final 2001 developer charge for Glenfield sewer of \$1,073 per ET.

To the 2006 net DSP charge of (\$902) per ET for Glenfield sewerage system is added a charge for Glenfield STP of \$2,324 per ET to give a final 2006 draft developer charge for Glenfield sewer of \$1,422 per ET.

Reasons found for change in charge per ET from 2001 to 2006

The change in the Glenfield sewerage charge per ET results mainly from the increase for the Glenfield STP charge per ET of \$1,132, a 95% increase from the 2001 level. There is also an increase in the charge for future assets, of \$113 per ET, but this is insignificant compared to the increase in the Glenfield STP charge.

2.3 DSP REVIEW SUMMARY TABLE

DSP NAME	Glenfield Park sewerage system			
	2001 DSP amount	2006 DSP amount	Actual change	Percentage change
PV 1970 – 1995 capital expenditure @ 7% discount rate	\$7,451,700			
PV System takeup in ETs @ 7% discount rate	2,926			
Charge per ET pre 1996	\$2,547			
PV 1996 – present capital expenditure @ 7% discount rate	\$943,899			
PV System takeup in ETs @ 7% discount rate	2,556			
Charge per ET post 1996	\$369			
PV future capital expenditure @ 7% discount rate	\$0			
PV System takeup in ETs @ 7% discount rate	2,556			
Charge per ET for future assets	\$0			
Total DSP capital works charge per ET	\$2,916			
PV net revenue offset @ 7% discount rate	(\$425,037)			
PV System takeup in ETs @ 7% discount rate	501			
PV net revenue offset per ET	(\$848)			
Net DSP charge per ET	\$2,068			

To the 2001 net DSP charge for Glenfield Park sewerage system of \$2,068 per ET is added a charge for Penrith STP of \$1,569 per ET to give a final 2001 developer charge for Glenfield Park sewer of \$3,637 per ET.

Reasons found for change in charge per ET from 2001 to 2006

There is no Glenfield Park sewer DSP in the draft 2006 DSPs. It is presumed that future ETs in the former Glenfield Park DSP area are now covered by the Glenfield sewer DSP. If that is the case, then the developer charge per ET has fallen from \$3,637 in 2001 to \$1,422 in the draft 2006 Glenfield sewer DSP.

2.3 DSP REVIEW SUMMARY TABLE

DSP NAME	Kiama sewer			
	2001 DSP amount	2006 DSP amount	Actual change	Percentage change
PV DDD STP charge per ET @ 7% discount rate	\$809	\$6,555	+ \$5,746	+ 710%
PV 1970 – 1995 capital expenditure @ 7%	\$3,000,667	\$2,484,389	- \$516,278	- 17%
PV System takeup in ETs @ 7%	1,403	1,170	- 233	- 17%
Charge per ET pre 1996	\$2,139	\$2,123	- \$16	0%
PV 1996 – present capital expenditure @ 7%	\$0	\$329,392	+ \$329,392	N/A
PV System takeup in ETs @ 7%	936	703	- 233	- 25%
Charge per ET post 1996	\$0	\$468	+ \$468	N/A
PV future capital expenditure @ 7%	\$0	\$111,763	+ \$111,763	N/A
PV System takeup in ETs @ 7%	936	703	- 233	- 25%
Charge per ET for future assets	\$0	\$159	+ \$159	N/A
Total DSP capital works charge per ET	\$2,139	\$2,750	+ \$611	+ 29%
PV net revenue offset @ 7%	(\$892,604)	(\$458,854)	- \$433,750	- 49%
PV System takeup in ETs @ 7%	733	703	- 30	- 4%
PV net revenue offset per ET	(\$1,218)	(\$652)	- \$566	- 46%
Net DSP charge per ET	\$1,730	\$8,652	+ \$6,922	+ 400%

To the 2001 net DSP charge for Kiama sewerage system of \$921 per ET is added a charge for DDD STP of \$809 per ET to give a final 2001 developer charge for Kiama sewer of \$1,730 per ET. No breakdown is given for the DDD STP charge of \$809 per ET.

To the 2006 net draft DSP charge for Kiama sewerage system of \$2,097 per ET is added an STP charge of \$6,555 per ET to give a final 2006 developer charge for Kiama sewer of \$8,652 per ET.

Reasons found for change in charge per ET from 2001 to 2006

Although there have been some new and future assets added to the draft 2006 Kiama sewer DSP, the main reason for the increase in the Kiama sewer developer charge is the \$5,746 per ET increase in the STP charge.

2.4 DSP REVIEW SUMMARY TABLE

DSP NAME	Kurnell sewer			
	2001 DSP amount	2006 DSP amount	Actual change	Percentage change
PV Kurnell STP charge per ET @ 7% discount rate	\$1,177	\$1,083	- \$94	- 8%
PV 1970 – 1995 capital expenditure @ 7%	\$1,668,536	\$708,121	- \$960,415	- 58%
PV System takeup in ETs @ 7%	8,007	115	-7,892	- 99%
Charge per ET pre 1996	\$208	\$6,147	+ \$5,939	+2,855%
PV 1996 – present capital expenditure @ 7%	\$0	\$0	\$0	0%
PV System takeup in ETs @ 7%	5,301	76	- 5,225	- 99%
Charge per ET post 1996	\$0	\$0	\$0	0%
PV future capital expenditure @ 7%	\$8,856	\$0	- \$8,856	- 100%
PV System takeup in ETs @ 7%	5,301	76	- 5,225	- 99%
Charge per ET for future assets	\$2	\$0	- \$2	- 100%
Total DSP capital works charge per ET	\$210	\$6,147	+ \$5,937	+ 2,827%
PV net revenue offset @ 7%	(\$7,211,444)	(\$210,684)	- \$7,000,760	- 97%
PV System takeup in ETs @ 7%	7,257	76	- 7,181	- 99%
PV net revenue offset per ET	(\$994)	(\$2,769)	(\$1,775)	+ 179%
Net DSP charge per ET	\$393	\$4,461	+ \$4,068	+ 1,035

To the 2001 net DSP charge for Kurnell sewerage system of (\$784) per ET is added a charge for Kurnell STP of \$1,177 per ET to give a final 2001 developer charge for Kurnell sewer of \$393 per ET. No breakdown is given for the Kurnell STP charge of \$1,177 per ET.

To the 2006 net draft DSP charge for Kurnell sewerage system of \$3,378 per ET is added a charge for Kurnell STP of \$1,083 per ET to give a final 2001 developer charge for Kurnell sewer of \$4,461 per ET.

Reasons found for change in charge per ET from 2001 to 2006

The main reason for the increase in the Kurnell sewer developer charge in 2006 is the dramatic reduction of 99% in ETs. There is no real explanation for this, but SWC have just divided the present and future costs by this greatly reduced number of ETs. This means that, rather than apportioning the cost per ET of assets on a per capacity basis, they have just divided the PV of asset costs by a lower denominator.

This approach goes entirely against the IPART Determination Number 9, which states that agencies regulated by the Tribunal recover only the efficient costs of water and sewerage works. It is evident that SWC have not levied the new draft 2006 Kurnell sewer developer charge on an efficient basis, but rather have just spread the existing costs over a lesser projection of future new users. If SWC revise their projected future growth upwards in the future, new development paying the developer charge in the interim will pay an inflated upfront charge.

2.5 DSP REVIEW SUMMARY TABLE

DSP NAME	Liverpool sewer			
	2001 DSP amount	2006 DSP amount	Actual change	Percentage change
PV Liverpool STP charge per ET @ 7% discount rate	\$2,477	\$4,664	+ \$2,187	+ 88%
PV 1970 – 1995 capital expenditure @ 7%	\$1,140,166	\$19,035,949	+\$17,895,783	+1,570%
PV System takeup in ETs @ 7%	3,674	16,153	+12,479	+ 340%
Charge per ET pre 1996	\$2,488	\$1,178	- \$1,310	- 53%
PV 1996 – present capital expenditure @ 7%	\$2,935	\$37,097,197	+\$37,094,262	1,263,859%
PV System takeup in ETs @ 7%	2,566	12,019	+9,453	+ 368%
Charge per ET post 1996	\$1	\$3,087	+\$3,086	+308,600%
PV future capital expenditure @ 7%	\$66,333	\$28,027,966	+\$27,961,633	+42,153%
PV System takeup in ETs @ 7%	2,566	12,019	+9,453	+ 368%
Charge per ET for future assets	\$26	\$2,332	+\$2,306	+ 8,869%
Total DSP capital works charge per ET	\$2,515	\$6,597	+\$4,082	+162%
PV net revenue offset @ 7%	(\$2,357,230)	(\$40,626,197)	+\$38,268,967	+1,623%
PV System takeup in ETs @ 7%	1,874	12,019	+10,145	+541%
PV net revenue offset per ET	(\$1,258)	(\$3,380)	+ \$2,122	+169%
Net DSP charge per ET	\$3,734	\$7,881	+ \$4,147	+111%

To the 2001 net DSP charge for Liverpool sewerage system of \$1,257 per ET is added a charge for Liverpool STP of \$2,477 per ET to give a final 2001 developer charge for Liverpool sewer of \$3,734 per ET. No breakdown is given for the Liverpool STP charge of \$2,477 per ET.

To the 2006 net draft DSP charge for Liverpool sewerage system of \$3,217 per ET is added a charge for Liverpool STP of \$4,664 per ET to give a final draft 2006 developer charge for Liverpool sewer of \$7,881 per ET.

Reasons found for change in charge per ET from 2001 to 2006

There has been a major augmentation of all aspects of the Liverpool sewerage system between 2001 and 2006. Stage 4A of the Liverpool STP has been commissioned and the wastewater transfer system has also been changed. The number of future ETs that will be serviced by the modified sewerage system has increased many times over.

The costs included in all aspects of this DSP should be investigated more thoroughly when time permits.

2.6 DSP REVIEW SUMMARY TABLE

DSP NAME	North Richmond sewer			
	2001 DSP amount	2006 DSP amount	Actual change	Percentage change
PV North Richmond STP charge per ET @ 7% discount rate	\$3,142	\$3,450	+ \$308	+ 10%
PV 1970 – 1995 capital expenditure @ 7%	\$305,612	\$410,509	+ \$104,897	+ 34%
PV System takeup in ETs @ 7%	906	792	- 114	- 13%
Charge per ET pre 1996	\$337	\$518	+ \$181	+ 54%
PV 1996 – present capital expenditure @ 7%	\$0	\$0	0	0%
PV System takeup in ETs @ 7%	477	419	- 58	- 12%
Charge per ET post 1996	\$0	\$0	0	0%
PV future capital expenditure @ 7%	\$8,856	\$0	- \$8,856	- 100%
PV System takeup in ETs @ 7%	477	419	- 58	- 12%
Charge per ET for future assets	\$19	\$0	- \$19	- 100%
Total DSP capital works charge per ET	\$356	\$518	+ \$162	+ 46%
PV net revenue offset @ 7%	\$750,879	\$1,173,971	- \$423,092	- 56%
PV System takeup in ETs @ 7%	662	419	- 243	- 37%
PV net revenue offset / ET	- \$1,134	- \$2,801	- \$1,667	- 147%
Net DSP charge per ET	\$4,632	\$6,769	+ \$2,137	+ 46%

To the 2001 net DSP charge for North Richmond sewerage system of \$1,490 per ET is added a charge for North Richmond STP of \$3,142 per ET to give a final 2001 developer charge for Liverpool sewer of \$4,632 per ET.

To the 2006 net draft DSP charge for North Richmond sewerage system of \$3,319 per ET is added a charge for North Richmond STP of \$3,450 per ET to give a final 2006 draft developer charge for Liverpool sewer of \$6,769 per ET.

Reasons found for change in charge per ET from 2001 to 2006

The reasons for the increase in the draft 2006 DSP charge for North Richmond sewer above the 2001 level are:

- a \$308 (10%) increase in the North Richmond STP charge per ET,
- a reduction of the PV of ETs of about 12%,
- a 147% reduction in the net revenue offset amount equal to \$1,667 per ET. The 2001 amount was negative and the draft 2006 figure is \$1,667 worse.

2.7 DSP REVIEW SUMMARY TABLE

DSP NAME	Penrith sewer			
	2001 DSP amount	2006 DSP amount	Actual change	Percentage change
PV Penrith STP charge per ET @ 7% discount rate	\$1,569	\$3,782	+ \$2,213	+141
PV 1970 – 1995 capital expenditure @ 7%	\$32,085,017	\$24,180,065	- \$7,904,952	- 25%
PV System takeup in ETs @ 7%	12,192	7,596	- 4,596	- 38%
Charge per ET pre 1996	\$2,632	\$3,183	+ \$551	+ 21%
PV 1996 – present capital expenditure @ 7%	\$923,531	\$4,927,807	+ \$4,004,276	+434%
PV System takeup in ETs @ 7%	8,642	4,276	- 4,366	- 51%
Charge per ET post 1996	\$107	\$1,152	+ \$1,045	+977%
PV future capital expenditure @ 7%	\$1,378,888	\$1,468,505	+\$89,617	+ 6%
PV System takeup in ETs @ 7%	8,642	4,276	-4,366	- 51%
Charge per ET for future assets	\$160	\$343	+ \$183	+114%
Total DSP capital works charge per ET	\$2,898	\$4,679	+ \$1,781	+ 61%
PV net revenue offset @ 7%	(\$2,615,866)	(\$1,493,443)	- \$1,122,423	- 43%
PV System takeup in ETs @ 7%	4,732	4,276	- 456	- 10%
PV net revenue offset per ET	(\$553)	(\$349)	- \$204	- 37%
Net DSP charge per ET	\$3,914	\$8,112	+ \$ 4,198	+107%

To the 2001 net DSP charge for Penrith sewerage system of \$2,345 per ET is added a charge for Penrith STP of \$1,569 per ET to give a final 2001 developer charge for Penrith sewer of \$3,914 per ET.

To the 2006 net draft DSP charge for Penrith sewerage system of \$4,330 per ET is added a charge for Penrith STP of \$3,782 per ET to give a final 2006 draft developer charge for Penrith sewer of \$8,112 per ET.

Reasons found for change in charge per ET from 2001 to 2006

The 2006 draft Penrith sewer DSP charge has increased by \$4,198 or 107% above the 2001 charge. This is made up of a number of factors:

- a \$2,213 (141%) increase in the Penrith STP charge per ET,
- a reduction of the PV of ETs of more than 40%,
- a 37% reduction in the net revenue offset amount equal to \$204 per ET.

The 2006 draft Penrith sewer DSP warrants further investigation when time permits as the development situation appears to have undergone several significant changes since 2001 in the DSP area.

2.8 DSP REVIEW SUMMARY TABLE

DSP NAME	Picton sewer			
	2001 DSP amount	2006 DSP amount	Actual change	Percentage change
PV Picton STP charge per ET @ 7% discount rate	\$0	\$0	\$0	0%
PV 1970 – 1995 capital expenditure @ 7%	\$0	\$0	\$0	0%
PV System takeup in ETs @ 7%	4,148	1,701	- 2,447	- 59%
Charge per ET pre 1996	\$0	\$0	\$0	0%
PV 1996 – present capital expenditure @ 7%	\$26,355,716	\$55,027,798	+\$28,672,082	+109%
PV System takeup in ETs @ 7%	3,300	4,986	+ 1,686	+ 51%
Charge per ET post 1996	\$7,986	\$11,037	+ \$3,051	+ 38%
PV future capital expenditure @ 7%	\$0	\$0	\$0	0%
PV System takeup in ETs @ 7%	3,300	1,090	- 2,210	- 67%
Charge per ET for future assets	\$0	\$0	\$0	0%
Total DSP capital works charge per ET	\$7,986	\$11,037	+ \$3,051	+ 38%
PV net revenue offset @ 7%	\$589,703	\$2,145,093	- \$1,555,390	-264%
PV System takeup in ETs @ 7%	695	1,090	+ 395	+ 57%
PV net revenue offset per ET	\$848	\$1,968	- \$1,120	- 132%
Net DSP charge per ET	\$8,834	\$13,005	+ \$4,171	+ 47%

Reasons found for change in charge per ET from 2001 to 2006

The charge in the draft 2006 Picton sewer charge has increased by \$4,171 or 47% from the 2001 DSP amount for the following reasons:

- an increase in the PV of the value of assets installed from 1996 to the present has increased by \$28,672,082 or 109%. This equates to an increase of \$3,051 or 38% per ET.
- the PV of the net revenue offset amount has worsened from -\$848 per ET to -\$1,968 per ET. This is equal to an increased deficit of \$1,120 per ET or 132%.

The 2006 draft Picton sewer DSP warrants further investigation when time permits as the value of existing assets has increased dramatically since 2001.

2.9 DSP REVIEW SUMMARY TABLE

DSP NAME	Quakers Hill sewer			
	2001 DSP amount	2006 DSP amount	Actual change	Percentage change
PV Quakers Hill STP charge per ET @ 7%	\$1,403	\$2,791	+ \$1,388	+ 99%
PV 1970 – 1995 capital expenditure @ 7%	\$21,530,895	\$10,405,723	-\$11,125,1	- 52%
PV System takeup in ETs @ 7%	14,141	6,616	- 7,525	- 53%
Charge per ET pre 1996	\$1,523	\$1,573	+ \$50	+ 3%
PV 1996 – present capital expenditure @ 7%	\$0	\$93,853	+ \$93,853	N/A
PV System takeup in ETs @ 7%	9,170	4,694	- 4,476	- 49%
Charge per ET post 1996	\$0	\$20	+ \$20	N/A
PV future capital expenditure @ 7%	\$50,698	\$1,516,768	+\$1,466,070	+2,892%
PV System takeup in ETs @ 7%	9,170	4,694	- 4,476	- 49%
Charge per ET for future assets	\$6	\$323	+ \$317	+5,283%
Total DSP capital works charge per ET	\$1,529	\$1,916	+ \$387	+ 25%
PV net revenue offset @ 7%	(\$12,921,819)	(\$15,229,008)	+\$2,307,189	+ 18%
PV System takeup in ETs @ 7%	7,127	4,694	- 2,433	- 34%
PV net revenue offset per ET	(\$1,813)	(\$3,245)	+ \$1,432	+ 79%
Net DSP charge per ET	\$1,119	\$1,462	+ \$343	+ 31%

To the 2001 net DSP charge for Quakers Hill sewerage system of (\$284) per ET is added a charge for Quakers Hill STP of \$1,403 per ET to give a final 2001 developer charge for Quakers Hill sewer of \$1,119 per ET.

To the 2006 net draft DSP charge for Quakers Hill sewerage system of (\$1,329) per ET is added a charge for Quakers Hill STP of \$2,791 per ET to give a final 2006 developer charge for Quakers Hill sewer of \$1,462 per ET.

Reasons found for change in charge per ET from 2001 to 2006

The charge in the draft 2006 Quakers Hill sewer charge has increased by \$343 or 31% from the 2001 DSP amount for the following reasons:

- an increase in the PV per ET of the charge for Quakers Hill STP of \$1,388 or 99%.
- the PV of the future asset investment has increased from \$50,698 to \$1,516,768 which equates to an extra \$317 per ET.
- to counter these increases, the net revenue offset amount has increased by \$1,432 per ET or 79%.

2.10 DSP REVIEW SUMMARY TABLE

DSP NAME	Richmond sewer			
	2001 DSP amount	2006 DSP amount	Actual change	Percentage change
PV Richmond STP charge per ET @ 7%	\$2,250	\$8,839	+ \$6,589	+ 293%
PV 1970 – 1995 capital expenditure @ 7%	\$204,430	\$60,644	- \$143,786	- 70%
PV System takeup in ETs @ 7%	867	282	- 585	- 67%
Charge per ET pre 1996	\$236	\$215	- \$21	- 9%
PV 1996 – present capital expenditure @ 7%	\$0	\$600,427	+ \$600,427	N/A
PV System takeup in ETs @ 7%	554	190	- 364	- 66%
Charge per ET post 1996	\$0	\$3,163	+ \$3,163	N/A
PV future capital expenditure @ 7%	\$0	\$0	\$0	0%
PV System takeup in ETs @ 7%	554	190	- 364	- 66%
Charge per ET for future assets	\$0	\$0	\$0	0%
Total DSP capital works charge per ET	\$236	\$3,378	+ \$3,142	+1,331
PV net revenue offset @ 7%	(\$464,750)	(\$519,492)	+ \$54,742	+ 12%
PV System takeup in ETs @ 7%	442	190	- 252	- 57%
PV net revenue offset per ET	(\$1,050)	(\$2,737)	+ \$1,687	+161%
Net DSP charge per ET	\$1,436	\$9,480	+ \$8,044	+560%

To the 2001 net DSP charge for Richmond sewerage system of (\$814) per ET is added a charge for Richmond STP of \$2,250 per ET to give a final 2001 developer charge for Richmond sewer of \$1,436 per ET.

To the 2006 net draft DSP charge for Richmond sewerage system of \$641 per ET is added a charge for Richmond STP of \$8,839 per ET to give a final draft 2006 developer charge for Richmond sewer of \$9,480 per ET.

Reasons found for change in charge per ET from 2001 to 2006

The charge in the draft 2006 Richmond sewer charge has increased by \$8,044 or 560% from the 2001 DSP amount for the following reasons:

- an increase in the PV per ET of the charge for Richmond STP of \$6,589 or 293%.
- the PV of the post-1996 asset investment has increased from zero to \$600,427 which equates to an extra \$3,163 per ET.
- to counter these increases, the net revenue offset amount has increased by \$1,687 per ET or 161%.

2.11 DSP REVIEW SUMMARY TABLE

DSP NAME	Rouse Hill sewer			
	2001 DSP amount	2006 DSP amount	Actual change	Percentage change
PV Rouse Hill STP charge per ET @ 7%	\$3,032	\$4,304	+ \$1,272	+ 42%
PV 1970 – 1995 capital expenditure @ 7%	\$23,685,071	\$14,250,179	- \$9,434,892	- 40%
PV System takeup in ETs @ 7%	31,075	16,203	- 14,872	- 48%
Charge per ET pre 1996	\$742	\$879	+ \$137	+ 18%
PV 1996 – present capital expenditure @ 7%	\$4,812,463	\$6,787,895	\$1,975,432	+ 41%
PV System takeup in ETs @ 7%	18,775	12,059	- 6,716	- 36%
Charge per ET post 1996	\$256	\$563	+ \$307	+120%
PV future capital expenditure @ 7%	\$13,311,517	\$17,840,561	+ \$4,529,044	+ 34%
PV System takeup in ETs @ 7%	18,775	12,059	- 6,716	- 36%
Charge per ET for future assets	\$709	\$1,479	+\$770	+ 109%
Total DSP capital works charge per ET	\$1,728	\$2,922	+ \$1,194	+ 69%
PV net revenue offset @ 7%	(\$20,142,274)	(\$30,629,345)	++ \$10,487,071	+ 52%
PV System takeup in ETs @ 7%	19,612	12,059	- 7,553	- 39%
PV net revenue offset per ET	(\$1,027)	(\$2,540)	+ \$1,513	+ 147%
Net DSP charge per ET	\$3,733	\$4,686	+ \$953	+ 26%

To the 2001 net DSP charge for Rouse Hill sewerage system of \$701 per ET is added a charge for Rouse Hill STP of \$3,032 per ET to give a final 2001 developer charge for Rouse Hill sewer of \$3,733 per ET.

To the 2006 net draft DSP charge for Rouse Hill sewerage system of \$382 per ET is added a charge for Rouse Hill STP of \$4,304 per ET to give a final draft 2006 developer charge for Rouse Hill sewer of \$4,686 per ET.

Reasons found for change in charge per ET from 2001 to 2006

The charge in the draft 2006 Rouse Hill sewer charge has increased by \$953 or 26% from the 2001 DSP amount for the following reasons:

- an increase in the PV per ET of the charge for Rouse Hill STP of \$1,272 or 42%.
- the PV of the post-1996 asset investment has increased by \$1,975,432 or 41% which equates to an extra \$307 per ET.
- the PV of the future asset investment has increased by \$4,529,044 or 34% which equates to an extra \$770 per ET.
- to counter these increases, the net revenue offset amount has increased by \$1,513 per ET or 147%.

2.12 DSP REVIEW SUMMARY TABLE

DSP NAME	Shellharbour sewer			
	2001 DSP amount	2006 DSP amount	Actual change	Percentage change
PV Shellharbour STP charge per ET @ 7%	\$2,597	\$7,172	+ \$4,575	+ 176%
PV 1970 – 1995 capital expenditure @ 7%	\$13,417,643	\$14,825,595	+ \$1,407,952	+ 10%
PV System takeup in ETs @ 7%	7,540	7,330	- 210	- 3%
Charge per ET pre 1996	\$1,779	\$2,023	+ \$244	+ 14%
PV 1996 – present capital expenditure @ 7%	\$271,918	\$4,557,865	+ \$4,285,947	+1,576%
PV System takeup in ETs @ 7%	4,955	4,922	- 33	0%
Charge per ET post 1996	\$55	\$930	+ \$875	+1,591%
PV future capital expenditure @ 7%	\$3,503,136	\$3,165,227	- \$337,909	- 10%
PV System takeup in ETs @ 7%	4,955	4,922	-33	0%
Charge per ET for future assets	\$707	\$643	- \$64	- 9%
Total DSP capital works charge per ET	\$2,541	\$3,596	+ \$1,055	+ 42%
PV net revenue offset @ 7%	(\$7,195,488)	(\$7,599,568)	+ \$404,080	+ 6%
PV System takeup in ETs @ 7%	4,683	4,922	+ 239	+ 5%
PV net revenue offset per ET	(\$1,537)	(\$1,544)	+ \$7	0%
Net DSP charge per ET	\$3,601	\$9,223	+ \$5,622	+ 156%

To the 2001 net DSP charge for Shellharbour sewerage system of \$1,004 per ET is added a charge for Shellharbour STP of \$2,597 per ET to give a final 2001 developer charge for Shellharbour sewer of \$3,601 per ET.

To the 2006 net draft DSP charge for Shellharbour sewerage system of \$2,051 per ET is added a charge for Shellharbour STP of \$7,172 per ET to give a final 2001 developer charge for Shellharbour sewer of \$9,223 per ET.

Reasons found for change in charge per ET from 2001 to 2006

The charge in the draft 2006 Shellharbour sewer charge has increased by \$5,622 or 156% from the 2001 DSP amount for the following reasons:

- an increase in the PV per ET of the charge for Shellharbour STP of \$4,575 or 176%.
- the PV of the post-1996 asset investment has increased by \$4,285,947 or 1,576% which equates to an extra \$307 per ET.
- to counter this, the PV of the future asset investment has decreased by \$337,909 or 10%.

The major factor is the increase in the Shellharbour STP charge of \$4,575 per ET.

2.13 DSP REVIEW SUMMARY TABLE

DSP NAME	St. Marys sewer			
	2001 DSP amount	2006 DSP amount	Actual change	Percentage change
PV St. Marys STP charge per ET @ 7%	\$2,327	\$2,361	+ \$34	+ 1%
PV 1970 – 1995 capital expenditure @ 7%	\$31,625,062	\$22,517,500	- \$9,107,562	- 29%
PV System takeup in ETs @ 7%	17,951	10,736	- \$7,215	- 40%
Charge per ET pre 1996	\$1,762	\$2,097	+ \$335	+ 19%
PV 1996 – present capital expenditure @ 7%	\$0	\$1,762,641	+ \$1,762,641	N/A
PV System takeup in ETs @ 7%	9,839	7,634	- 2,205	- 22%
Charge per ET post 1996	\$0	\$231	+ \$231	N/A
PV future capital expenditure @ 7%	\$256,652	\$7,378,518	+ \$7,121,866	+ 2,775
PV System takeup in ETs @ 7%	9,839	7,634	- 2,205	- 22%
Charge per ET for future assets	\$26	\$967	+ \$941	+ 3,619%
Total DSP capital works charge per ET	\$1,788	\$3,295	+ \$1,507	+ 84%
PV net revenue offset @ 7%	(\$17,695,376)	(\$15,367,242)	- \$2,328,134	- 13%
PV System takeup in ETs @ 7%	12,083	7,634	- 4,449	- 37%
PV net revenue offset per ET	(\$1,465)	(\$2,013)	+ \$548	+ 37%
Net DSP charge per ET	\$2,650	\$3,643	+ \$993	+ 37%

To the 2001 net DSP charge for St. Marys sewerage system of \$323 per ET is added a charge for St. Marys STP of \$2,327 per ET to give a final 2001 developer charge for St. Marys sewer of \$2,650 per ET.

To the 2006 net draft DSP charge for St. Marys sewerage system of \$1,282 per ET is added a charge for St. Marys STP of \$2,361 per ET to give a final draft 2006 developer charge for St. Marys sewer of \$3,643 per ET.

Reasons found for change in charge per ET from 2001 to 2006

The charge in the draft 2006 St. Marys sewer charge has increased by \$993 or 37% from the 2001 DSP amount for the following reasons:

- the PV of the post-1996 asset investment has increased by \$1,762,641 which equates to an extra \$231 per ET.
- the PV of the future works asset investment has increased by \$7,121,866 or 2,775% which equates to an extra \$941 per ET.
- to counter this, the PV of the net revenue offset has increased by \$548 per ET or 37%.

The major factor is the increase in the future works capital charge of \$941 per ET.

2.14 DSP REVIEW SUMMARY TABLE

DSP NAME	West Camden sewer			
	2001 DSP amount	2006 DSP amount	Actual change	Percentage change
PV West Camden STP charge per ET @ 7%	\$2,860	\$4,055	+ \$1,195	+ 42%
PV 1970 – 1995 capital expenditure @ 7%	\$13,656,565	\$14,904,336	+\$1,247,771	+ 9%
PV System takeup in ETs @ 7%	14,841	14,027	- 814	- 5%
Charge per ET pre 1996	\$920	\$1,063	+ \$143	+ 16%
PV 1996 – present capital expenditure @ 7%	\$0	\$0	\$0	0%
PV System takeup in ETs @ 7%	9,330	9,901	+571	+ 6%
Charge per ET post 1996	\$0	\$0	\$0	0%
PV future capital expenditure @ 7%	\$4,483,372	\$26,865,995	+ \$22,382,623	+ 499%
PV System takeup in ETs @ 7%	9,330	9,901	+ 571	+ 6%
Charge per ET for future assets	\$481	\$2,714	+ \$2,233	+ 464%
Total DSP capital works charge per ET	\$1,401	\$3,776	+ \$2,375	+ 170%
PV net revenue offset @ 7%	(\$13,448,446)	(\$19,336,653)	+ \$5,888,207	+ 44%
PV System takeup in ETs @ 7%	9,033	9,901	+ 571	+ 6%
PV net revenue offset per ET	(\$1,489)	(\$1,953)	+ \$464	+ 31%
Net DSP charge per ET	\$2,772	\$5,878	+ \$3,106	+ 112%

To the 2001 net DSP charge for West Camden sewerage system of (\$88) per ET is added a charge for West Camden STP of \$2,860 per ET to give a final 2001 developer charge for West Camden sewer of \$2,772 per ET.

To the 2006 net draft DSP charge for West Camden sewerage system of \$1,823 per ET is added a charge for West Camden STP of \$4,055 per ET to give a final draft 2006 developer charge for West Camden sewer of \$5,878 per ET.

Reasons found for change in charge per ET from 2001 to 2006

The charge in the draft 2006 West Camden sewer charge has increased by \$3,106 or 112% from the 2001 DSP amount for the following reasons:

- the PV of the West Camden STP charge has increased from \$2,860 per ET to \$4,055 per ET. This is an increase of \$1,195 per ET or 42%.
- the PV of the future works asset investment has increased by \$22,382,623 or 499% which equates to an extra \$2,233 per ET.
- to counter this, the PV of the net revenue offset has increased by \$464 per ET or 31%.

The major factor is the increase in the future works capital charge of \$2,233 per ET.

2.15 DSP REVIEW SUMMARY TABLE

DSP NAME	West Hornsby sewer			
	2001 DSP amount	2006 DSP amount	Actual change	Percentage change
PV West Hornsby STP charge per ET @ 7%	\$1,628	\$4,724	+ \$3,096	+ 190%
PV 1970 – 1995 capital expenditure @ 7%	\$7,794,916	\$6,823,994	- \$970,922	- 12%
PV System takeup in ETs @ 7%	6,942	2,094	- 4,848	- 70%
Charge per ET pre 1996	\$1,123	\$3,259	+ \$2,136	+ 190%
PV 1996 – present capital expenditure @ 7%	\$8,253	\$9,726	+ \$1,473	+ 18%
PV System takeup in ETs @ 7%	4,684	1,398	3,286	- 70%
Charge per ET post 1996	\$2	\$7	+ \$5	+ 250%
PV future capital expenditure @ 7%	\$30,419	\$3,544,896	+ \$3,514,477	+ 11,554%
PV System takeup in ETs @ 7% discount rate	4,684	1,398	- 3,286	- 70%
Charge per ET for future assets	\$6	\$2,536	+ \$2,530	+ 4,217%
Total DSP capital works charge per ET	\$1,131	\$5,801	+ \$4,670	+ 413%
PV net revenue offset @ 7%	(\$6,727,927)	(\$5,572,428)	- \$1,155,499	- 17%
PV System takeup in ETs @ 7%	3,633	1,398	- 2,235	- 62%
PV net revenue offset per ET	(\$1,852)	(\$3,986)	+ \$2,134	+ 115%
Net DSP charge per ET	\$907	\$6,539	+ \$5,632	+ 621%

To the 2001 net DSP charge for West Hornsby sewerage system of (\$721) per ET is added a charge for West Hornsby STP of \$1,628 per ET to give a final 2001 developer charge for West Hornsby sewer of \$907 per ET.

To the 2006 net draft DSP charge for West Hornsby sewerage system of \$1,815 per ET is added a charge for West Hornsby STP of \$4,724 per ET to give a final draft 2006 developer charge for West Hornsby sewer of \$6,539 per ET.

Reasons found for change in charge per ET from 2001 to 2006

The charge in the draft 2006 West Hornsby sewer charge has increased by \$5,632 or 621% from the 2001 DSP amount for the following reasons:

- the PV of the West Hornsby STP charge has increased from \$1,628 per ET to \$4,724 per ET. This is an increase of \$3,096 per ET or 190%.
- the PV of the future works asset investment has increased by \$3,514,477 or 11,544% which equates to an extra \$2,530 per ET.
- to counter this, the PV of the net revenue offset has increased by \$2,134 per ET or 115%.

The major factors are the increase in the future works capital charge of \$2,530 per ET and the West Hornsby STP charge of \$3,096 per ET. It is remarkable that the STP charge and future works charge should both increase so much, when the PV of future ETs has reduced by more than 60%. These charges require further investigation when time permits.

2.16 DSP REVIEW SUMMARY TABLE

DSP NAME	Winmalee sewer			
	2001 DSP amount	2006 DSP amount	Actual change	Percentage change
PV Winmalee STP charge per ET @ 7%	\$2,327	\$13,341	+ \$11,014	+ 473%
PV 1970 – 1995 capital expenditure @ 7%	\$14,315,115	\$16,893,793	+ \$2,578,678	+ 18%
PV System takeup in ETs @ 7%	4,321	4,039	- 282	- 7%
Charge per ET pre 1996	\$3,313	\$4,182	+ \$869	+ 26%
PV 1996 – present capital expenditure @ 7%	\$881,033	\$2,306,163	+ \$1,425,130	+ 162%
PV System takeup in ETs @ 7%	2,561	2,613	+ 52	+ 2%
Charge per ET post 1996	\$344	\$882	+ \$538	+ 156%
PV future capital expenditure @ 7%	\$354,884	\$0	- \$354,884	-100%
PV System takeup in ETs @ 7%	2,561	2,613	+ 52	+ 2%
Charge per ET for future assets	\$139	\$0	- \$139	- 100%
Total DSP capital works charge per ET	\$3,796	\$5,065	+ \$1,269	+ 33%
PV net revenue offset @ 7%	(\$791,094)	\$1,878,747	- \$2,669,841	- 337%
PV System takeup in ETs @ 7%	2,555	2,613	+ 58	+ 2%
PV net revenue offset per ET	(\$310)	\$719	- \$1,029	- 332%
Net DSP charge per ET	\$5,813	\$19,125	+ \$13,312	+ 229%

To the 2001 net DSP charge for Winmalee sewerage system of \$3,486 per ET is added a charge for Winmalee STP of \$2,327 per ET to give a final 2001 developer charge for Winmalee sewer of \$5,813 per ET.

To the 2006 net draft DSP charge for Winmalee sewerage system of \$5,784 per ET is added a charge for Winmalee STP of \$13,341 per ET to give a final 2001 developer charge for Winmalee sewer of \$19,125 per ET.

Reasons found for change in charge per ET from 2001 to 2006

The charge in the draft 2006 Winmalee sewer charge has increased by \$13,312 or 229% from the 2001 DSP amount for the following reasons:

- the PV of the Winmalee STP charge has increased from \$2,327 per ET to \$13,341 per ET. This is an increase of \$11,014 per ET or 473%.
- the PV of the post-1996 works asset investment has increased by \$1,425,130 or 162% which equates to an extra \$538 per ET.
- the PV of the net revenue offset has reduced by \$1, 029 per ET or 332%.

The major factor is the increase in the Winmalee STP charge of \$11,014 per ET.