

# **IPART**

## **Supplementary Submission Review**

**Hunter Water Corporation**

**Final Report**

**July 2005**

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## Document History

JOB NUMBER: 5030488			DOCUMENT REF: 5030488/74/DG/113			
Revision	Purpose and Description	Originated	Checked	Reviewed	Authorised	Date
0	Draft for Review	JNSJ	AMD	RBS	RBS	08.07.05
1	Final	JNSJ	CJO	RBS	RBS	01.08.05

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## GLOSSARY OF TERMS

<i>Term</i>	<i>Meaning / Definition</i>
AIR	Annual Information Return
capex	capital expenditure
Determination	The price limits set by a regulator
DEC	Department of Environment and Conservation
DSP	Developer Services Plans
FY	Financial Year. We express expenditure in all tables related to the end of each financial year. For example, the financial year 2005/06 is shown as 2006.
HWA	Hunter Water Australia
HWC	Hunter Water Corporation
IFRS	International Financial Reporting Standards
IPART	Independent Pricing and Regulatory Tribunal
KPI	Key Performance Indicator
NSW	New South Wales
LPR	Linear Polarisation Resistance
opex	operating expenditure
price control period	The period over which price limits are determined
price path review	The review of price limits for the price control period
price base	All expenditure is reported as the cost in year 2004/05
PSC	Port Stephens Council
SCADA	Systems Control And Data Acquisition
SIR	Special Information Return
WAMS	Work and Asset Management System
WWTW	Wastewater Treatment Works
	Throughout this report, all capital and operating expenditure is reported by financial year ending 30 June for each year. For example expenditure in year 2006 refers to the financial year commencing on 1 July 2005 and ending 30 June 2006

# 1 Introduction

In September 2004, the Independent Pricing and Regulatory Pricing Authority of New South Wales (IPART) appointed Atkins/ Cardno to carry out a review of the capital expenditure, operating expenditure and asset management practices of the Hunter Water Corporation (HWC). We prepared a Final Report<sup>1</sup> dated February 2005 on HWC's submission to IPART dated September 2004 including the Annual Information Return (AIR) and Special Information Return (SIR) both dated 2 November 2004. IPART issued its Draft Determination and Report<sup>2</sup> in June 2005.

Hunter Water Corporation prepared a Supplementary Submission on operating and capital expenditure proposals to IPART dated March 2005. We were appointed by IPART to carry out a review of this Supplementary Submission. Our brief in respect of the HWC was

For operating expenditure, to;

- (i) *“provide the consultant’s opinion as to the efficiency of the agency’s proposed additional level of operating expenditure for each year between 2005/2006 and 2008/2009 and provide for each year estimates, with supporting reasons, of the level of operating expenditure that is required to efficiently undertake their regulated functions;*
- (ii) *Identify and analyse any additional transfers of costs between regulated and unregulated parts of the water business, subsidiary or parent agency or businesses and comment on any such transfers which in the opinion of the consultant are inappropriate.*

For capital expenditure, to;

- (i) *provide an opinion as to the efficiency of each agency’s capital expenditure program for the period from 2005/2006 to 2008/2009 and provide for each year estimates, with supporting reasons, of the level of capital expenditure that the consultant considers efficient in order to undertake each agency’s business and functions.*
- (ii) *identify and segregate the capital works projects associated with assets for which developers will either contribute to the cost of provision or will build and possibly hand over to the agency and reconcile actual and proposed developer funded capital expenditure with forecast capital expenditure in Development Servicing Plans.”*

We undertook an initial desk top review of the submission in April 2005. We then issued an Information Request to the Agency, through IPART, to seek clarification of various aspects of the submission. The Agency provided a detailed response in June 2005.

Our Supplementary Report addresses only those issues raised by the Agency in its Supplementary Submission. Reference should be made to our Final Report

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<sup>1</sup> Capex Asset Management and Opex Review Hunter Water Corporation Final Report, Atkins, February 2005

<sup>2</sup> Hunter Water Corporation etc Draft Report and Draft Determination, IPART, June 2005

dated February 2005 for a comprehensive view on the level of operating and capital efficiencies applied to the Agency's submission.

## 2 Methodology

### 2.1 The Supplementary Submission

Our methodology for the review of the Agency's Supplementary Submission differs in some respects from our approach to the main efficiency review. This is because our main review looked at all aspects of operational expenditure and capital programs. For this Submission, we have not re-opened the complete efficiency review but have assessed the changes in expenditure reported by HWC against our understanding of the Agency's asset base, program drivers and expenditure proposals included in our Main Report.

In our review, we considered several factors in determining whether changes in operating and capital expenditure can be considered as efficient expenditure. These are set out below.

#### ***Extent of Review***

We have reviewed expenditure proposals presented in Hunter Water's March 2005 submission. Where additional information was provided in June 2005 in response to our Information Request, we have taken into account only significant changes in costs. This is consistent with our view that changes in operating and capital expenditure should be managed within the overall ceiling expenditures set out in the Draft Determination.

#### ***Materiality***

Where reported changes in operating and capital expenditure do not have a material impact on price limits, then they should not be considered as a 'material' change. Materiality for the HWC as defined by IPART<sup>3</sup> was \$70,000 for operating costs and \$80,000 for capital expenditure.

#### ***Errors and Omissions***

In our efficiency review we were not required to audit the costs presented. Where errors and omissions, increasing or reducing expenditure, were subsequently identified by an Agency, we have after due scrutiny recommended that these costs are included within the price control.

#### ***Operating Cost Increases due to External Requirements***

We have scrutinised any additional operating costs due to external drivers, for example demand management and DEC requirements. Where there is a clear additional external requirement to undertake more activities or construct additional assets then these costs have been included in the recommended expenditure.

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<sup>3</sup> email IPART to Atkins 24 June 2005, 'Materiality'



### ***Changes in Operating Costs due to Management Action***

Where changes to operating costs from the main submission are reported and are due to management action, we consider whether the savings should be included within the efficiency targets set in the Draft Determination. For example, provision of vehicles where a change in procurement is to move from lease arrangements to purchase with resulting savings in total costs. We normally consider these changes to be management actions to pursue efficiencies which we should encourage. We consider two options, firstly to accept the changes in operating cost and capital expenditure and adjust the efficiency target, as we did for the main submission; or we assume that these are management actions to achieve the efficiency targets set and assume no changes to opex, capex or the efficiency targets. We consider each case on its merits and discuss in subsequent sections of the report.

### ***Prudent Capital Expenditure***

Our view of prudent expenditure has changed with further information from agencies on the actual expenditure in year ending June 2005. We identify the scale of the reduction in expenditure and the reasons for change. We also identify the reasons for the reduction in expenditure; through for example slippage (outputs deferred), efficiencies gained or outputs not required.

### ***Changes in Capital Expenditure due to External Drivers***

We have reviewed and comment on additional information where the timing and scope of works are to meet external drivers such as growth, quality programs and priority sewerage.

### ***Changes in Expenditure due to Costs or Timing***

Revised priorities and changes in the timing and scope of schemes within the capital expenditure are normally a matter for the agency in managing its program. However we have looked at and commented at any significant changes in expenditure so soon after the main Submission.

We also reviewed additional information provided by agencies to support changes to the timing and scope of their original Submissions; for example specific schemes identified by HWC.

We have reviewed our opinion on achievability following the reported actual expenditure in 2005 compared with planned expenditure reported in November 2004. Where the impact of slippage is to result in a significant increase in expenditure between 2005 and 2006, we have challenged the achievability of this increase and have, in some instances applied a small element of reprofiling to reflect the most likely outcomes.

### ***Identification of Efficiencies in 2005***

From our analysis of the reasons for change in the 2005 expenditure between planned and actual, we have identified some efficiency. This confirms our view that there are efficiencies to be gained within the current planned programs.

## 2.2 Methodology for deriving Efficiency Targets

### **Approach**

Our approach to the efficient level of capital and operating expenditure of the agencies is based on a methodology developed by Ofwat<sup>4</sup> and applied to water companies in England and Wales over three price controls in 1994, 1999 and 2004. This methodology applies the concepts of continuing and catch-up efficiency described below. The methodology is a quantitative approach based on information supplied by water companies.

For the New South Wales agencies, there is insufficient information to allow a robust quantitative assessment to be made. We have therefore applied a qualitative assessment, following the same methodology, based on an assessment of processes, interviews with agency staff and a review of sample capital and operational schemes.

In regulatory reviews of this nature there is usually a wide information asymmetry between agencies and reviewer. As reviewer, we therefore make an assessment of the agency's performance and apply our judgement, developed from wide experience of undertaking efficiency views for price controls, asset management, water engineering and utility management in Australia and internationally, to form our independent professional opinions. We summarise our methodology below, addressing capital and operating expenditure.

### **Capital Expenditure**

For each agency's capital expenditure IPART requires us to:

- *“Provide an opinion as to the efficiency of each agency's capital expenditure program for the period from 2005/2006 to 2009/2010 and provide for each year estimates, with supporting reasons, of the level of capital expenditure that the consultant considers efficient in order to undertake each agency's business and functions.”*

### *Historical and Current Expenditure*

In order to evaluate the prudence of historical expenditure we reviewed a representative sample of completed schemes. We reviewed the need for each scheme, its timing, the difference between anticipated and out turn costs and any cost control measures that were employed, to form a view on this aspect of the agency's expenditure. We identified any scheme that was not, in our opinion, consistent with the core business of the agency. Finally, we compared actual expenditure against that allowed by IPART in its 2003 Determination and reviewed the reasons for any variances.

### *Future Expenditure*

Our approach to determining recommended allowable future capital expenditure is based on an assessment of the capital expenditure submission drawn from a review of a representative sample of schemes, our views on asset management, procurement and the robustness of cost estimates. We also confirmed the drivers

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<sup>4</sup> Future Water and Sewerage Charges 2005-10 Final Determinations, Ofwat 2004

of expenditure and the timing of programs of work; in particular for growth and new standards.

From our assessment, we excluded expenditure which was not related to the agency's core business. We made specific adjustments to the expenditure profile to reflect our comments on the scope, cost and timing of schemes. For some agencies we reprofiled areas of expenditure to reflect likely limitations in achievability. Finally we made adjustments to expenditure to reflect the potential for continuing and catch-up efficiencies.

### **Capital Efficiency Methodology**

Our assessment of capital efficiency is based on the concepts of continuing and catch-up efficiency following the Ofwat methodology.

**Continuing efficiency** is the scope for top performing or frontier companies (agencies) to continue to improve their efficiency. It reflects the continuing efficiencies being gained across all major sectors through innovation and new technologies.

**Catch-up efficiency** is the scope for all other utilities to reach the performance of a frontier utility.

This concept was developed and applied by the Office of Water Services (Ofwat) in England and Wales for the 1999 Periodic Review and also used in the 2004 Periodic Review<sup>5</sup> and subject to independent scrutiny by the UK Competition Commission<sup>6</sup>.

There are two methods that Ofwat applied to assess the scope of capital efficiencies; firstly the use of econometric models built up from time series data across the companies. Secondly, the use of a 'Cost Base' analysis.

The Cost Base analysis requires companies to submit the unit costs for a range of activities within their investment plans; for example mains laying in various diameters, mains rehabilitation, sewer laying, construction of treatment works and replacement of pump assets. Ofwat then analyses the range of unit costs for each item, or groups of items, and identifies a benchmark or 'frontier' company. This analysis is based on companies' data and subject to independent review. Ofwat then assumes that other companies will progress towards the benchmark company over the price control period; the extent of this catch-up is a policy decision made by Ofwat. The analysis resulted in significant targets being set for companies to achieve.

Trends in unit cost savings over the period 1994 to 1999 and 1999 to 2004 were analysed by London Economics<sup>7</sup> in November 2003. It looked at the change in the Cost Base standard costs as submitted by companies over the period PR94 to PR99 and PR99 and PR04. This was based on company data which was subject to independent review and is summarised in **Error! Reference source not found.** below.

<sup>5</sup> Future Water and Sewerage Charges 2005-10 Final Determinations, Ofwat 2004

<sup>6</sup> Sutton and East Surrey Water plc, A report on the references under sections 12 and 14 of the Water Industry Act 1991, Competition Commission 2000 and Mid Kent Water plc, A report on the references under sections 12 and 14 of the Water Industry Act 1991, Competition Commission 2000.

<sup>7</sup> PR04 Scope for Efficiency Studies Final Report to Ofwat, London Economics et al, Nov 2003.

Investment Area (PR = Periodic Review)		Calculated change PR94 to PR99 (%)	Calculated change PR99 to PR04 (%)	Typical standard costs used in the analysis
Water Service	Infrastructure	-10	-15	Mains laying and rehabilitation
	Non-infrastructure	-28	-30	New and replacement pump assets
Sewerage Service	Infrastructure	-9	-20	Sewer laying and insituform rehabilitation
	Non-infrastructure	-14	-5	Sewage treatment assets
	Other assets	No data	-10	Storage tanks

Table 1 Cost Base Comparisons

Source: London Economics<sup>4</sup> tables 5.3 and 5.4

London Economics reviewed the company and independent reporter comments on the submissions and explanation for the reduction in standard costs. Some 60% of the changes are due to improved procurement and program management practices; 30% of the change was due to previous errors, better understanding or methodology changes. The application of value engineering was also identified. Reductions apportioned to standardisation and technological change was 10%. While these relative weightings are subjective, the analysis identified the key areas of improvements.

Companies also identified in annual reports to Ofwat that the main reasons for these savings were related to improved procurement and management practices, for example framework agreements, contract alliancing, risk management, contract batching and project synergies. In essence, reducing risk to companies and contractors through their early involvement in the implementation processes and smoothing workloads which allow contractor efficiencies to be shared with companies.

Ofwat was able to collect and analyse extensive data sets on costs and performance to allow a quantitative assessment of catch-up efficiencies to be made. In New South Wales, the extent of data is not sufficient to carry out a quantitative analysis. We have therefore applied a qualitative assessment of the capital processes currently in use, or recently developed, by each agency to manage capital expenditure, and the methods and costs used to prepare the capital expenditure proposals in the SIR. We have thus reviewed four key processes, identified by the London Economics report as being fundamental to the efficient delivery of the capital program:

- asset management;
- cost estimating;
- procurement; and
- program management.

The approach is consistent with the methods we applied to efficiency studies to support price controls in the postal sector in the UK and to gas and electricity sectors in Northern Ireland.

We focussed our approach on asset management process in place, being applied and to be implemented. We looked at the methods used to prepare cost estimates and the extent of contingencies included. We evaluated the current and proposed procurement processes, compared these with best practice and assessed the impact of improved procurement practices on the capital expenditure proposals. Our views on program management were influenced by the analysis of historical expenditure, planned and actual expenditure in 2005, and outputs delivery and discussions with agency staff.

### *Catch-up Efficiency*

We applied our judgement to determine the level of catch-up efficiency that could be achieved by 2009, based on our detailed experience of best practice applied in England and Wales, the results of what has been achieved by water companies in England and Wales, and our qualitative assessment of each agency's capital planning processes.

The London Economics analysis in **Error! Reference source not found.** showed a range of savings from 5% to 30%. London Economics suggested that, disregarding some data issues, the likely range is 4% to 20% over the five year period. These values include catch-up and continuing efficiency.

From our qualitative assessments of the NSW agencies, we identified several areas where there is potential to improve capital processes up to the frontier company or agency. These are discussed in our February 2005 reports on the agencies. Our findings from this review are that the best performing agencies in NSW are equivalent to the average large water and sewerage utilities in England and Wales. Our assessment resulted in recommended catch-up efficiencies in the range 2 to 3% in 2006, increasing to 9% in 2009. When continuing efficiency assumptions are included, these targets are broadly equivalent to about half the efficiencies gained by England & Wales companies over an equivalent period.

Our approach has been to phase catch-up efficiency over the price control period, recognising that the benefits arising from improvements to processes will take some time to realise.

### *Continuing Efficiency*

We have assumed a continuing capital efficiency of 0.5% per annum over the period 2006 to 2009 to reflect the impact of new technology and innovation which all agencies, including a frontier agency, should achieve. This figure is factored down from the identified potential for continuing efficiency to reflect other factors which may affect these comparisons. This assumption is informed by productivity information in Australia<sup>8</sup> and assumptions by Ofwat in 1999 and 2004. We suggest that any significant differences between the forecast and outturn continuing efficiency should be considered from a retrospective analysis of prudent expenditure at the next price path review.

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<sup>8</sup> Productivity in the Market Sector, National Accounts Table 22, Australian Bureau of Statistics, 2004.

### **Operating Expenditure**

For operating expenditure IPART requires us to:

- *Identify and analyse the agencies' potential for cost reduction for each function and make recommendations, with supporting reasons, about efficiency gains that the Tribunal can consider when determining efficient operating expenditure levels for price setting. If current expenditure in an area of operations is assessed as inadequate, specification and quantification of recommended additional expenditure should be undertaken.*
- *Provide the consultant's opinion as to the efficiency of each agency's proposed level of operating expenditure for each year between 2005/2006 and 2009/2010 and provide for each year estimates, with supporting reasons, of the level of operating expenditure that is required to efficiently undertake each agency's regulated functions*

### **Future Expenditure**

Our approach to determining recommended allowable future operating expenditure is similarly based on the Ofwat methodology of continuing and catch-up efficiencies. There is insufficient quantitative data to apply econometric modelling for this review. We therefore followed a qualitative approach examining operating cost processes, assessing the agency's operating costs by service area, the management structures it has in place, the processes that are established to manage operating costs, and specific agency issues impacting on operating costs.

We excluded expenditure not related to the core business. We made specific adjustments to areas of expenditure to reflect the findings of our review of costs and processes. We made general adjustments to the expenditure to reflect continuing and catch-up efficiencies. For some agencies we recognised that a proportion of operating costs are not directly controllable.

### **Operating Efficiency Methodology**

Our approach to operating efficiency is similar to capital, using the concepts of continuing and catch-up efficiency. Continuing efficiency is the scope for top performing, or frontier, companies (agencies) to continue to improve their efficiency. Catch-up efficiency is the scope for all other companies to catch up with the frontier agencies or utilities.

Our assessment is consistent with a methodology developed and applied by Ofwat in England and Wales for the 1999 Periodic Review and also used in the 2004 Periodic Review. The method was independently scrutinised by the UK Competition Commission<sup>9</sup>. The limited extent of data available from agencies in New South Wales does not allow the application of a detailed quantitative approach. Our opinion is therefore based on an assessment of operating cost processes against best practice, the potential for savings identified from our detailed reviews and a comparison with the level of efficiencies achieved by water utilities in England and Wales.

Our assessment took into account of:

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<sup>9</sup> Sutton and East Surrey Water plc, A report on the references under sections 12 and 14 of the Water Industry Act 1991, Competition Commission 2000 and Mid Kent Water plc, A report on the references under sections 12 and 14 of the Water Industry Act 1991, Competition Commission 2000.



- Actual performance of companies in England and Wales over the period 1999 to 2004, as discussed below;
- The proposed efficiency savings by the Scottish Water Industry Commissioner<sup>10</sup> which proposed a one-off efficiency of 18% on baseline operating costs for the four year price control;
- The final Water Price Review for the Victorian Water agencies by the Essential Services Commission<sup>11</sup> which applied a 1% per annum productivity factor to operating costs.

Our qualitative review of agencies' operating costs included assessments of processes, management structures, the extent of activity based costing and identification and monitoring cost drivers; we compared these with current best practice. We commented in our agency reports on the possible scope for efficiencies. We also took account of each agency's approach to efficiency savings and its own efficiency proposals.

Water companies in England and Wales were set challenging operating expenditure targets for the period 2000 to 2004 and most achieved these. For example, the average annual continuing efficiency target set by Ofwat at the 1999 Periodic Review was 1.4% per annum and the annual catch-up efficiency ranged from 0-3.5%, with an average 1% per annum. These percentages were applied to the total operating expenditure and no differential was made between controlled and uncontrolled costs.

Several companies moved closer ("caught-up" with) to the frontier company over this time, as shown in Figure 1 **Error! Reference source not found..**

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<sup>10</sup> Draft Determination of Price Limits for Scottish Water, Water Industry Commissioner Scotland, June 2005

<sup>11</sup> Water Price Review: Metropolitan and Regional Businesses' Water Plans Final Decision, Essential Services Commission, June 2005

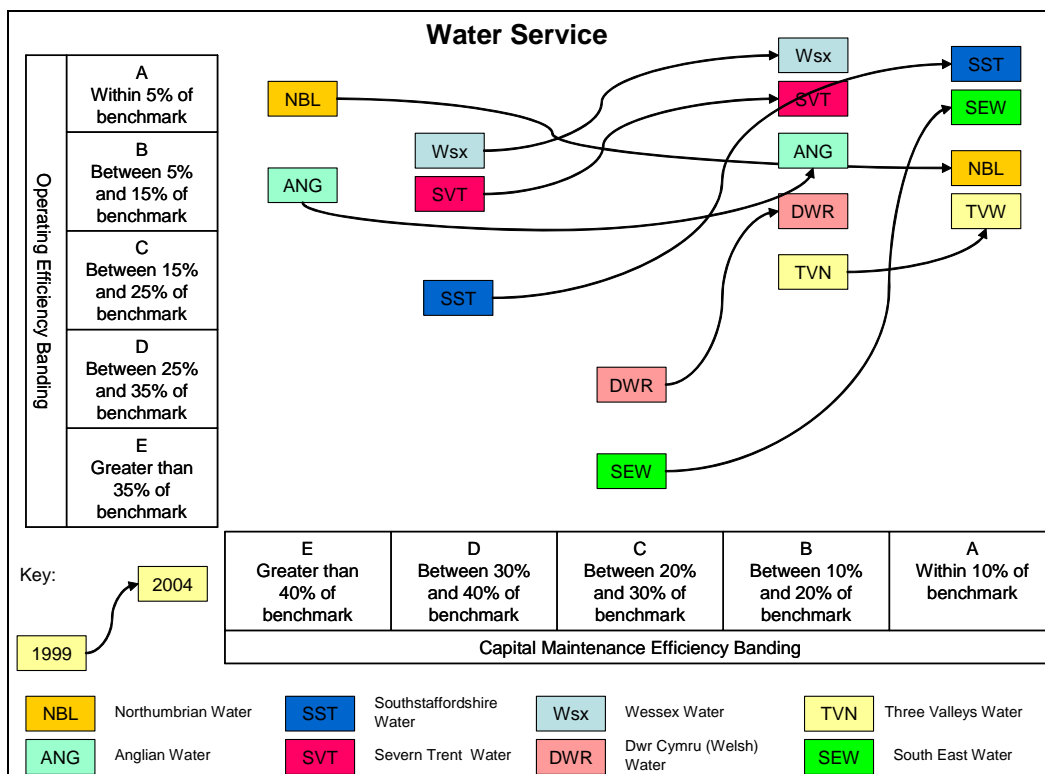


Figure 1 Movement of English Companies towards the Frontier – Water Service

Source: Ofwat Periodic Review – Final Determinations 1999 and 2004

### Continuing Efficiency

The continuing improvement element of efficiency relates to the increased productivity derived from process innovation and new technology that all well performing businesses should achieve, including frontier agencies. This applies to a range of industry sectors. Information from the Australian Productivity Commission and the Bureau of Statistics suggest that productivity in Australia is increasing on average at about 1% per annum. Comparative data from regulators in England and Scotland suggest a range of continuing efficiency values from 1.4% in 2000 to 0.6% in 2004. We have taken a figure of 0.8% per annum to recognise exogenous factors which may restrict the agency's ability to achieve continuing efficiency.

Our view is that using just the utility sector as a measure for productivity is not appropriate due to its relatively small size and sensitivity to the influence of large utilities on sector trends. However, it is appropriate to compare productivity within similar sectors of industry to assess the impact of innovation and new technology in more competitive areas of business.

We noted that one agency is developing a total factor productivity methodology to understand trends in its own productivity over time for comparison with the utility sector and other sectors. The initial results are encouraging and the approach provides a good basis for further development. A key issue is the definition of outputs and how the influence of quality and service performance may be modelled. There is clearly scope for further work in this area over the price control period to develop total factor productivity methodologies within and across utilities to provide an econometric approach to the assessment of future efficiencies.



### *Catch-up Efficiency*

Our qualitative approach included examining operating cost processes, assessing the agency's operating costs by service area, the management structures it has in place, the processes that are established to manage operating costs, and specific agency issues impacting on operating costs. From this analysis of each agency, we proposed a range of catch-up efficiencies from 1% per annum up to 1.5% per annum across the agencies. These percentages take account of elements of operating costs which are not controllable. These efficiencies are of a similar order as the Ofwat proposals in 2004. We have not factored the Ofwat proposals down as, from our assessments of the agencies capability, there is scope for efficiency improvements. Indeed, Sydney Water's own proposals are to outperform our assumed efficiencies in the first two years of the price control period.

## 2.3 Relative Price Increases

Agencies have commented in their Submissions on the relative increase in construction costs in New South Wales compared with CPI and the impact on the outturn costs for assets. Our view is that setting efficiency targets is independent of changes in construction price indices. Our brief from IPART relates to advice on the level of efficiency for operating and capital efficiencies; it does not cover forecasts on the likely variance between construction prices and CPI over the coming four years.

The Tribunal confirmed that the issue of relative price increases was a matter for IPART to consider taking into account submissions from agencies and the level of contingencies built into current capital programs.

## 3 Operating Expenditure

### 3.1 Identification of Opex Issues

The Hunter Water Corporation Supplementary Submission, dated March 2005, identifies a number of areas where justification for additional opex increases has been identified, including:

- The impact of international financial reporting standards (IFRS) projected at \$3.6M in 2006;
- Unidentified opex associated with growth ranging from \$0.08M in 2006 to \$0.21M in 2009;
- Inclusion of revised energy cost projections amounting to \$0.27M in 2009;
- Additional costs associated with developer activity estimated at \$0.1M p.a.; and
- Clarification of disaster recovery centre costs resulting in an increase of \$0.08M p.a.

The Supplementary Submission now indicates a \$4.8M (real) increase in total opex from 2005 to 2009, compared with a \$3.5M increase in the November 2004 submission, an increase of \$1.3M. Over the price control period, this additional \$1.3M has been indicated as a \$0.8M increase in water opex, \$0.8M increase in wastewater opex and a \$0.3M decrease in corporate opex.

The Hunter Water Submission raises the question of expensing costs associated with infrastructure that will be funded by developers.

### 3.2 Cost Increases in Supplementary Submission

The following table outlines the difference in cost allocations between the revised 2004 submission and the 2005 supplementary submission.

<b>\$M 2004/05</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
<b>Nov 2004 AIR/SIR</b>				
Water	25.4	25.6	26.0	26.4
Wastewater	25.5	25.6	26.1	26.4
Stormwater drainage	1.0	1.0	1.0	1.0
Corporate	17.1	17.2	17.4	17.6
<b>Total</b>	<b>69.0</b>	<b>69.5</b>	<b>70.5</b>	<b>71.5</b>
<b>March 2005 AIR/SIR</b>				
Water	26.5	26.3	26.7	27.3
Wastewater	28.0	27.2	27.1	27.2
Stormwater drainage	1.0	1.0	1.0	1.0

<b>\$M 2004/05</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
Corporate	16.6	16.6	17.1	17.3
<b>Total</b>	<b>72.1</b>	<b>71.1</b>	<b>71.8</b>	<b>72.8</b>
<b>Nov Opex Increase Identified in Supplementary Submission</b>				
Water	1.1	0.7	0.7	0.8
Wastewater	2.5	1.6	1.0	0.8
Stormwater drainage	0.0	0.0	0.0	0.0
Corporate	-0.5	-0.6	-0.3	-0.3
<b>Total</b>	<b>3.1</b>	<b>1.7</b>	<b>1.4</b>	<b>1.3</b>

Table 2: Water Opex Variations Between November 2004 and March 2005 AIRs (\$M 04/05)

Source: HWC SIRs November 2004 and March 2005

Note: Numbers may not add due to rounding.

### Energy Costs

The previous Atkins/Cardno Review, dated February 2005, dealt with the issue of increased energy costs. During our evaluation, Hunter Water was able to provide an independent evaluation of energy cost projections and these were included in our previous recommendations as indicated in Table 3 **Error! Reference source not found..**

<b>AIR/SIR</b>	<b>Nominal \$'M</b>			
	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
Original Nov 2004 AIR	5.698	5.840	5.986	6.136
Energy Costs in updated AIR evaluated by Atkins/Cardno and included in previous review	5.698	5.840	6.270	6.435
Energy Costs in Supplementary AIR March 2005	5.698	5.840	6.270	6.435

Table 3: Energy costs in 2004 and 2005 AIRs

Source: HWC SIRs November 2004 and March 2005

### Growth Related Opex

Hunter Water had previously included increases in “opex not due to capex” in its SIR for wastewater but not water. HWC has now advised that this was an omission in their earlier SIR. We consider this cost is justified for inclusion in the opex projections for the current pricing path.

### Disaster Recovery Centre

The Hunter Water Supplementary Submission includes details of a change in costing associated with the fitting out and renting of an off-site disaster recovery centre. The establishment of an off-site facility is considered prudent especially in our current security environment. While the additional costs are not material, the identification of the line item adjustments has facilitated our identification of the changes in opex now under review.

### **International Financial Reporting Standards**

Hunter Water has advised that ‘research’ expenditure, which is predominately associated with forward infrastructure planning, will now be expensed under new accounting standards, increasing opex by \$3.6M in 2006. Hunter Water had previously identified this expenditure at \$1M in the November 2004 Submission. Hunter Water has now advised that the reclassified research expenditure will be split between growth related and non-growth related. HWC has requested guidance from IPART on an approach to recover growth related costs, i.e. through developer charges or annual charge. Our view is that growth related expenditure should be separated from non-growth, as the growth element should be identified and included in developer service plans and associated developer charges. While we have included this increase in recommended operating costs, we have also separately identified developer related costs.

### **Developer Activity**

Hunter Water has proposed increased opex associated with processing developer applications. While the costs associated with this activity at \$0.1M p.a. are only just material to this review, the cost raises the issue of why increased developer activity in processing a higher level of applications should be funded by existing customers. This issue is of a similar nature to the new accounting standards and points to the need to separately identify those costs that should be recovered from developers.

### **Developer Related Costs**

The impact of expensing growth related research expenditure and increased costs associated with processing developer applications are outlined in the following table.

	\$'M 04/05			
	2006	2007	2008	2009
Growth Related Research Expenditure	1.5	1.2	1.2	1.1
Developer Applications	0.1	0.1	0.1	0.1
<b>Total</b>	<b>1.6</b>	<b>1.3</b>	<b>1.3</b>	<b>1.2</b>

*Table 4: Developer Related Costs*

We recommend that for pricing purposes these costs should be recognised as developer related and taken into account accordingly. While we have insufficient information to accurately separate these costs between water, wastewater and stormwater it would appear from information contained with the SIR that approximately 60% are due to wastewater, 30% are due to water and 10% to stormwater.

### 3.3 Revised Operating Cost Efficiency Projections

We have adjusted our recommended efficiency targets based on efficiencies identified in the supplementary data provided by Hunter Water. The reassessment has resulted in a slight change to the efficiency targets for water and corporate. The significant changes affect wastewater efficiency targets, where previously identified efficiencies have been replaced with cost increases. The following table outlines our recommended opex efficiency targets.

	Efficiency (%)			
	2006	2007	2008	2009
Continuing efficiency p.a.	0.8	0.8	0.8	0.8
Catch-up efficiency p.a.	1.0	1.0	1.0	1.0
Combined efficiency p.a.	1.8	1.8	1.8	1.8
Cumulative effect	1.8	3.6	5.4	7.2
<b>Target Efficiencies Adjusted for Controllable Costs</b>				
Water (55%)	1.0	2.0	3.0	4.0
Wastewater (75%)	1.4	2.7	4.1	5.4
<b>Less HWC identified efficiency (cumulative)</b>				
Water	0.6	0.6	0.7	0.7
Wastewater	0.7	1.8	2.2	2.3
Stormwater (unidentified)	2.5	7.7	7.6	7.5
Corporate	1.5	1.0	1.6	1.1
<b>Net Efficiency Proposed (cumulative)</b>				
Water	0.4	1.4	2.3	3.3
Wastewater	0.7	0.9	1.9	3.1
Stormwater	0.0	0.0	0.0	0.0
Corporate	0.3	2.6	3.8	6.1

Table 5: Derivation of Recommended Operating Efficiencies (% per annum)

### 3.4 Revised Operating Cost Projections

The cumulative result from our review considerations are outlined in Table 6 **Error! Reference source not found.** Section A of the table outlines the quantum of adjustments proposed by the Agency. Section B outlines the Agency's reasons for adjusting base year opex. Section C outlines the Agency's identified cost savings and cost increases, while Section D outlines the recommended opex adjustments based on this review.

Section A									
Hunter Water Corporation Projections									
Real OPEX (2004/05 \$M) Proposed by Agency									
Variation from base Year		BASE YEAR							
		2003	2004	2005	2006	2007	2008	2009	2010
Water	projected OPEX	22.350	25.171	25.431	26.527	26.323	26.690	27.252	27.430
	total adjustment from base year	-3.081	-0.260	0.000	1.096	0.892	1.259	1.821	1.999
		-12.12%	-1.02%	0.00%	4.31%	3.51%	4.95%	7.16%	7.86%
Wastewater	projected OPEX	22.934	24.295	25.442	28.002	27.214	27.057	27.225	27.404
	total adjustment from base year	-2.508	-1.147	0.000	2.560	1.772	1.615	1.783	1.962
		-9.86%	-4.51%	0.00%	10.06%	6.96%	6.35%	7.01%	7.71%
Stormwater	projected OPEX	0.959	0.750	0.967	0.968	0.975	0.990	1.001	1.011
	total adjustment from base year	-0.008	-0.217	0.000	0.001	0.008	0.023	0.034	0.044
		-0.80%	-22.41%	0.00%	0.09%	0.82%	2.41%	3.53%	4.55%
Corporate	projected OPEX	19.108	14.550	16.140	16.576	16.626	17.101	17.304	17.393
	total adjustment from base year	2.968	-1.590	0.000	0.436	0.486	0.961	1.164	1.253
		18.39%	-9.85%	0.00%	2.70%	3.01%	5.95%	7.21%	7.77%
<b>Total</b>	<b>projected OPEX</b>	<b>65.351</b>	<b>64.766</b>	<b>67.980</b>	<b>72.072</b>	<b>71.138</b>	<b>71.838</b>	<b>72.782</b>	<b>73.239</b>
	<b>total adjustment from base year</b>	<b>-2.629</b>	<b>-3.214</b>	<b>0.000</b>	<b>4.092</b>	<b>3.158</b>	<b>3.858</b>	<b>4.802</b>	<b>5.259</b>
		<b>-3.87%</b>	<b>-4.73%</b>	<b>0.00%</b>	<b>6.02%</b>	<b>4.64%</b>	<b>5.68%</b>	<b>7.06%</b>	<b>7.74%</b>

Section B									
Reason for variation									
		2003	2004	2005	2006	2007	2008	2009	2010
Water	due to Capex	0.000	0.000	0.000	-0.050	-0.050	-0.050	-0.050	-0.050
	not due to Capex	21.273	24.557	25.431	1.146	0.942	1.309	1.871	2.049
Wastewater	due to Capex	0.000	0.000	0.000	0.083	0.300	0.460	0.603	0.635
	not due to Capex	21.829	23.702	25.442	2.477	1.472	1.155	1.180	1.327
Stormwater	due to Capex	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	not due to Capex	0.913	0.732	0.967	0.001	0.008	0.023	0.034	0.044
Corporate	due to Capex	0.000	0.000	0.000	0.112	0.042	0.042	0.042	0.042
	not due to Capex	18.187	14.195	16.140	0.324	0.444	0.919	1.122	1.211
<b>TOTAL</b>		<b>62.202</b>	<b>63.186</b>	<b>67.980</b>	<b>4.093</b>	<b>3.158</b>	<b>3.858</b>	<b>4.802</b>	<b>5.258</b>

Section C										
Improvements and Increases										
		2006	2007	2008	2009	2006	2007	2008	2009	2010
Water	business improvement	-0.61%	-0.59%	-0.74%	-0.66%	-0.156	-0.156	-0.196	-0.175	-0.150
	opex increases					1.237	0.875	0.770	1.062	0.959
	one off costs of opex					0.015	0.173	0.685	0.934	1.190
Wastewater	business improvement	-0.72%	-1.83%	-2.18%	-2.31%	-0.184	-0.513	-0.593	-0.624	-0.477
	opex increases					2.691	1.997	1.763	1.754	1.758
	one off costs of opex					0.053	0.288	0.460	0.653	0.681
Stormwater	business improvement	-2.48%	-7.65%	-7.59%	-7.47%	-0.024	-0.074	-0.074	-0.074	-0.074
	opex increases					0.025	0.082	0.097	0.108	0.118
	one off costs of opex									
Corporate	business improvement	-1.47%	-1.01%	-1.55%	-1.09%	-0.237	-0.167	-0.257	-0.187	-0.257
	opex increases					0.479	0.474	1.295	1.432	1.576
	one off costs of opex					0.194	0.179	-0.077	-0.081	-0.066
<b>TOTAL</b>						<b>4.093</b>	<b>3.158</b>	<b>3.873</b>	<b>4.802</b>	<b>5.258</b>

Section D									
Proposed OPEX (real 2004/05 \$M)									
		2006	2007	2008	2009	2006	2007	2008	2009
Water	Proposed OPEX Projection					26.527	26.323	26.690	27.252
	Efficiency adjustment	-0.4%	-1.4%	-2.3%	-3.3%	-0.106	-0.369	-0.614	-0.899
	<b>Total Adjustment</b>					<b>-0.106</b>	<b>-0.369</b>	<b>-0.614</b>	<b>-0.899</b>
	<b>Recommended OPEX Projection</b>					<b>26.421</b>	<b>25.955</b>	<b>26.076</b>	<b>26.353</b>
Wastewater	Proposed OPEX Projection					28.002	27.214	27.057	27.225
	Efficiency adjustment	-0.7%	-0.9%	-1.9%	-3.1%	-0.196	-0.245	-0.514	-0.844
	<b>Total Adjustment</b>					<b>-0.196</b>	<b>-0.245</b>	<b>-0.514</b>	<b>-0.844</b>
	<b>Recommended OPEX Projection</b>					<b>27.806</b>	<b>26.969</b>	<b>26.543</b>	<b>26.381</b>
Stormwater	Proposed OPEX Projection					0.968	0.975	0.990	1.001
	Efficiency adjustment	0.0%	0.0%	0.0%	0.0%	0.000	0.000	0.000	0.000
	<b>Total Adjustment</b>					<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
	<b>Recommended OPEX Projection</b>					<b>0.968</b>	<b>0.975</b>	<b>0.990</b>	<b>1.001</b>
Corporate	Proposed OPEX Projection					16.576	16.626	17.101	17.304
	Efficiency adjustment	-0.3%	-2.6%	-3.7%	-6.1%	-0.050	-0.432	-0.633	-1.056
	<b>Total Adjustment</b>					<b>-0.050</b>	<b>-0.432</b>	<b>-0.633</b>	<b>-1.056</b>
	<b>Recommended OPEX Projection</b>					<b>16.526</b>	<b>16.194</b>	<b>16.468</b>	<b>16.248</b>
<b>TOTAL Recommended OPEX</b>						<b>71.720</b>	<b>70.092</b>	<b>70.078</b>	<b>69.983</b>

Table 6: Derivation Proposed Opex Projections (\$M 04/05)

Note: Amounts shown may be rounded

### 3.5 Recommended Operating Expenditure

Recommended operating costs are summarised in Table 7: Opex Recommendations (\$M 04/05)

below.

<b>\$M 04/05</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>Total</b>
<b>Hunter Water proposal (Oct 2004)</b>					
Water	25.4	25.6	26.0	26.4	103.4
Wastewater	25.5	25.7	26.1	26.4	103.7
Stormwater drainage	1.0	1.0	1.0	1.0	4.0
Corporate	17.1	17.2	17.4	17.6	69.3
<b>Total agency proposed</b>	<b>69.0</b>	<b>69.5</b>	<b>70.5</b>	<b>71.5</b>	<b>280.4</b>
<b>Atkins/Cardno recommendation (Feb 05) and Tribunal's Draft Determination Jun 05</b>					
Water	25.3	25.3	25.5	25.5	101.6
Wastewater	25.5	25.7	25.9	26.0	103.1
Stormwater drainage	1.0	1.0	1.0	1.0	3.9
Corporate	17.1	16.8	16.8	16.6	67.3
<b>Total</b>	<b>68.9</b>	<b>68.8</b>	<b>69.2</b>	<b>69.1</b>	<b>276.0</b>
<b>Hunter Water's Supplementary Submission</b>					
Water	26.5	26.3	26.7	27.2	106.7
Wastewater	28.0	27.2	27.1	27.2	109.5
Stormwater drainage	1.0	1.0	1.0	1.0	4.0
Corporate	16.6	16.6	17.1	17.3	67.6
<b>Total</b>	<b>72.1</b>	<b>71.1</b>	<b>71.8</b>	<b>72.8</b>	<b>287.8</b>
<b>Atkins/Cardno Supplementary Report</b>					
Water	26.4	26.0	26.1	26.4	104.9
Wastewater	27.8	27.0	26.5	26.4	107.7
Stormwater drainage	1.0	1.0	1.0	1.0	4.0
Corporate	16.5	16.2	16.5	16.2	65.4
<b>Total including developer related research &amp; processing costs</b>	<b>71.7</b>	<b>70.2</b>	<b>70.1</b>	<b>70.0</b>	<b>282.0</b>
<b>Total excluding developer related costs</b>	<b>70.1</b>	<b>68.9</b>	<b>68.8</b>	<b>68.8</b>	<b>276.6</b>

Table 7: Opex Recommendations (\$M 04/05)

## 4 Capital Expenditure

### 4.1 Review of Capital Expenditure Issues

*Hunter Water Corporation has submitted a revised SIR dated March 2005 which reports variations in expenditure when compared with the SIR submitted in November 2004. This revised SIR is summarised in Table 8: Comparison of March 2005 Expenditure with November SIR by Service (\$M 04/05)*

below.

\$M (04/05)	2005	2006	2007	2008	2009
		<b>Price Control Period</b>			
<b>November SIR</b>					
Water	26.1	19.1	16.9	27.2	35.6
Wastewater	27.9	53.0	66.8	54.9	39.7
Stormwater	0.3	0.1	0.7	1.0	0.6
Corporate	24.5	11.8	3.7	3.7	4.5
<b>Total</b>	<b>78.8</b>	<b>84.0</b>	<b>88.1</b>	<b>86.8</b>	<b>80.4</b>
<b>March SIR</b>					
Water	26.1	18.1	16.4	28.2	36.0
Wastewater	28.1	57.8	71.4	53.8	43.5
Stormwater	0.3	0.1	0.7	1.0	0.6
Corporate	24.5	12.1	3.5	3.5	4.3
<b>Total</b>	<b>79.0</b>	<b>88.1</b>	<b>92.0</b>	<b>86.4</b>	<b>84.3</b>
<b>Variance March - Nov</b>					
Water	0.0	-1.0	-0.5	1.0	0.4
Wastewater	0.2	4.8	4.6	-1.1	3.8
Storm drainage	0.0	0.0	0.0	0.0	0.0
Corporate	0.0	0.3	-0.2	-0.2	-0.2
<b>Variance</b>	<b>0.2</b>	<b>4.1</b>	<b>3.9</b>	<b>-0.3</b>	<b>4.0</b>

*Table 8: Comparison of March 2005 Expenditure with November SIR by Service (\$M 04/05)*

Note: Expenditure shown for 2005 relates to the previous price control period.  
 Source: HWC SIRs November 2004 and March 2005

We noted three key issues which are discussed further in the following sections;

- (i) There is no material change in the forecast outturn reported for 2005. However, Hunter Water's response to our Information Request confirmed that the forecast outturn at 30 April 2005 was \$74.2M;
- (ii) Expenditure in 2006 shows a 12% increase on the 2005 outturn;
- (iii) The significant increase in expenditure for the wastewater service (\$11.5M), over the price control period.



## 4.2 Expenditure in 2005

*Hunter Water explained in response to our supplementary queries that expenditure for the year 2004/05 was now forecast to outturn at \$74.2M compared with the \$78.8M in the November SIR. Hunter Water provided a detailed explanation of these changes in response to our Information Request. The reasons for the reduction in expenditure are summarised in Table 9 Table 9 Analysis of Expenditure in 2005 (\$M 04/05)*

below.

<b>\$M 2004/05</b>	<b>Nov 2004</b>	<b>Jun 2005</b>	<b>Difference Jun – Nov</b>	<b>Comments</b>
Water Service	26.1	27.4	+1.3	
Wastewater Service	27.9	25.3	-2.6	
Stormwater	0.3	0.3	0	
Corporate	24.5	21.2	-3.3	
<b>Total</b>	<b>78.8</b>	<b>74.2</b>	<b>-4.6</b>	5.8% reduction on the November 2004 SIR

*Table 9 Analysis of Expenditure in 2005 (\$M 04/05)*

Source: HWC Response to Atkins Cardno Information Request Attachment 3

We are unclear to what extent this reduction in expenditure represents slippage of schemes or efficiency.

Our view of prudent expenditure presented in the February report needs to recognise this reduction in reported expenditure in the June 2005 response to our Information Request. While we have not audited the 2005 expenditure in detail, from the range of schemes we reviewed for the main Submission and this supplementary review, we are able to confirm that this expenditure is prudent.

We conclude that there has been a marginal reduction in expenditure for the year ending June 2005, which may be attributable to scheme slippage and efficiencies.

## 4.3 Expenditure for 2006 to 2010

The Hunter Water capital expenditure proposals in the March 2005 Supplementary Submission show a net increase of \$11.5M (4.9%) on the proposals in the November Submission.

### **Water Service**

Hunter Water reports two changes to the water expenditure compared with the September SIR. These relate to some costs being considered as opex following the IFRS, and the inclusion of a trunk main renewal scheme discussed below. The HWC proposed expenditure is shown in Table 10 below.

Driver or Project (\$M 04/05)	2005	2006	2007	2008	2009	2010
		<b>Proposed price control period</b>				
Replace CTGM main Tarro to Shortland	0.0	0.4	1.0	6.0	3.0	0
Water main replacement	2.0	2.0	2.0	1.5	1.6	1.7
Services Replacement	0.5	0.6	0.9	2.6	2.6	0.3
Replace Tarro Beresfield main	0.0	0.2	0.2	0.0	1.0	2.2
Replace above ground assets	1.9	1.9	1.9	1.9	2.7	1.9
Other asset replacement	3.2	3.2	2.2	0.0	0.2	1.2
Major growth Schemes	2.5	8.1	5.6	9.4	18.6	15.1
Grahamstown Dam	11.0	1.3	0.0	0.0	0.0	0
Additional trunk main replacement	0.0	0.0	0.0	1.5	1.0	7
Other growth schemes	5.0	1.4	3.1	5.8	5.9	7
Impact of IFRS	0.0	-1.0	-0.5	-0.5	-0.6	0
<b>Total Expenditure</b>	<b>26.1</b>	<b>18.1</b>	<b>16.4</b>	<b>28.2</b>	<b>36.0</b>	<b>29.4</b>

Table 10 Water Service Expenditure by driver (\$M 04/05)

### **Trunk Mains Replacement**

HWC identified one scheme in the March Supplementary Submission for the replacement of trunk mains. The additional scope of work includes the replacement of trunk mains at Fennel Bay Bridge, Boolaroo and Thorne St, Toronto in the West Lake area.

In response to our Information Request, HWC provided further information to support inclusion of these additional trunk mains. Condition assessment reports dated March 2003 and August 2004, prepared by Hunter Water Australia for the various trunk mains were also provided. A business case dated April 2005 was tabled.

The condition assessments used LPR assessments to predict the future performance of pipelines. These assessments identified lengths of main in the West Lake area as having significant pitting and presenting a high risk of failure. Records showed that there were eleven historical failures of the Boolaroo main, and three of the Fennel Bay Bridge and the Thorne St main. A present worth analysis was carried out for the three mains, comparing the capital costs of replacement against the likely maintenance and social costs of further breaks. The benefit/ cost ratio for the Boolaroo main was significant although marginal for the other two mains. The analysis is sensitive to cost assumptions and discount rates.

The Business Case was to seek funding for the concept and detailed design of these schemes. This is to replace a 2.5 km length of 500mm and 375mm trunk mains in 2008 and 2009. The scheme is being advanced to concept design level at a cost of \$0.45M. Scheme estimates are based on replacement although HWC confirmed that alternative renewal techniques would be considered in the design stage. The cost estimates are preliminary and include a 20% contingency, 12.5% for design and 10% for project management of design.

HWC confirmed that these trunk mains form part of the West Lake Macquarie water supply system which supplies about 30,000 people. The agency added that the scheme forms part of an action plan to address Operating Licence performance which it had recently submitted to IPART.

*From our overview of the proposals, we formed the view that these schemes were needed to maintain the long term capability of the trunk distribution system, although the costs are preliminary and include a high level of contingency for the type of work proposed. Alternative renewal options have yet to be considered. This is a good example of a scheme where there is scope for capital efficiencies to be made. The additional 2.4km output should be included in the Determination. The impact on the capex proposals is shown in Table 11*

*Table 11 Impact of the West Bay Critical Main Replacement Schemes*

below.

\$M (04/05)	2006	2007	2008	2009	Total
<b>Trunk Mains</b>	<b>Price Control Period</b>				
Nov 2004 SIR	0.5	0.5	0.0	0.5	1.5
Mar 2005 SIR	0.5	0.5	1.5	1.5	4.0
Recommended	0.5	0.5	1.5	1.5	4.0
Impact on Nov 04 capex proposals	0.0	0.0	1.5	1.0	+2.5

*Table 11 Impact of the West Bay Critical Main Replacement Schemes*

### **Wastewater Service**

*Hunter Water reports several changes to the wastewater expenditure compared with the September SIR. These relate to some costs being considered as opex following the IFRS. HWC has identified four wastewater schemes where the scope and cost of schemes has been refreshed after further design work. These schemes are at Belmont, Morpeth, Boulder Bay and Newcastle. The HWC proposed expenditure is shown in Table 12*

*Table 12 Wastewater service expenditure by driver (\$M 04/05)*

below.

(\$M 04/05)	2005	2006	2007	2008	2009
		<b>Proposed price control period</b>			
Mandatory Standards	2.1	4.7	3.1	0.8	0.4
New Mandatory Standards	11.8	21.3	27.8	12.3	12.2
Growth	9.0	14.4	26.3	29.8	18.7
Priority Sewerage Program	1.6	9.0	6.4	8.5	4.6
Business Efficiency	3.6	3.5	3.1	3.4	3.7
Impact of IFRS	0.0	-2.5	-1.6	-1.0	-0.8
Belmont	0.0	4.0	3.0	-3.0	0.0
Morpeth	0.0	0.5	0.7	1.3	4.7
Boulder Bay	0.0	0.3	2.0	1.0	0.0
Newcastle	0.0	2.6	0.6	0.7	0.0

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<b>TOTAL</b>	<b>28.1</b>	<b>57.8</b>	<b>71.4</b>	<b>53.8</b>	<b>43.5</b>
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*Table 12 Wastewater service expenditure by driver (\$M 04/05)*

Source: HWC March SIR and Supplementary Submission

### *Belmont WWTW Upgrade*

The main driver for the Belmont scheme is growth. The original concept design report for this project was produced by consultants in June 2003. The cost estimate including design and project management and scope contingencies of \$2.6M was \$14.7M. A further concept design report review undertaken by consultants in June 2004 included scope changes and presented an expenditure of \$14.45M. Following a review of this document in August 2004 the proposed capital cost was increased to \$15.7M. The September 2004 SIR could have incorporated the first of these changes but it did not do so. At the time of our audit HWC could have made the case for an increase in the costs of this scheme.

*The consultants issued a post design preliminary estimate in March 2005 with an estimated \$19.8M, including \$2.9M contingency. An internal memo dated 8 April 2005 requested capital funding for the Belmont WWTW Stage 3 Upgrade Secondary Treatment Plant in the sum of \$20M with the phasing as shown in Table 13 Table 13 Belmont WWTW Proposed Expenditure (\$M 04/05)*

below.

We reviewed the consultant's report and formed the view that the increased scope of works proposed is reasonable. We are not in a position to comment in detail on the breakdown of costs but these have been based on detailed designs; we have no reason to doubt their validity.

We accept that the cost for this scheme are likely to be substantially more than that shown in the September 2004 SIR and, as a result of the detailed design work, more than the estimate put forward in the March 2005 submission. At the same time we would expect the level of contingency to reduce as the scope of work and costs are more clearly defined. In addition, the time profile of the costs in the March Supplementary Submission does not match that submitted following detailed design; we consider the latest program to be more reliable.

Hunter Water commented in response to our draft report<sup>12</sup> that;

*"The Corporation is pleased to note that the Consultants had confirmed the need for the increase scope of works. The Corporation believes that the level of contingencies (currently \$3M or 15%) are reasonable given the Corporation is yet to complete detailed design and that tenders are called in an upward construction market. The Corporation's view therefore is that the total cost of \$20M not the \$18.5M is prudent and should be included as requested."*

Our view is that costs have increased significantly from the original submission in September 2004 as shown in Table 13 below. We have accepted the reasons for an increase in costs by over 50% on the September Submission; this significant increase in cost over a short period has caused us to question the robustness of estimates. In accepting the level of contingency still within the scheme, we consider there is scope to reduce costs through capital efficiencies.

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<sup>12</sup> Response to Atkins [draft] Review of the Supplementary Submission, Hunter Water, July 2005

\$M (04/05)	2006	2007	2008	2009	Total
<b>Belmont WTW</b>	<b>Price Control Period</b>				
Sep 2004 SIR	1.0	8.0	3.0	0.0	12.0
Mar 2005 SIR	5.0	11.0	0.0	0.0	16.0
June response	0.4	12.0	7.6	0.0	20.0
Recommended	0.4	12.0	7.6	0.0	20.0
Impact on Sep 04 capex proposals	-0.6	+4.0	+4.6	0.0	+8.0

Table 13 Belmont WWTW Proposed Expenditure (\$M 04/05)

Source: HWC SIRs Sep 2004 and Mar 2005 and Response to Information request June 2005

### *Morpeth WWTW*

The Morpeth scheme is driven entirely by growth. The ‘Morpeth WWTW Catchment Wastewater Transportation System Servicing Strategy’ was produced by consultants in February 2004. This report indicated that because of growth and projected growth within the contributing catchments the wastewater flows and associated pollution loadings of the wastewater are substantially higher than had previously been allowed.

The September SIR could have included the projected work arising from this report but it did not do so. At the time of our review in November 2004, HWC could have made the case for the inclusion of this scheme which it failed to do.

The work may be limited to increasing the size of process units to cope with the increased flows. However, because of the increased flow the issue of whether the total pollutant load being discharged is capped at its existing level becomes very relevant. If it is capped this leads to the enforcement of more stringent discharge consents with increased treatment processing required. This decision will need to be taken following consultation between HWC and the EPA/DEC.

In May 2004, HWC approved an allowance of \$10.5M for the stage 2 upgrade of Morpeth WWTW within the forward program and, contrary to the consultant’s report, HWC still considered that this scheme work would not commence until 2011, outside the current price path. In its March 2005 Submission, HWC commented that this upgrade was not expected within the price control period but information on likely growth in the Thornton and Black Hill areas caused it to review timing.

An internal HWC business case produced in November 2004 requested that 67% of this \$10.5M expenditure be brought forward within the current price path. In addition, expenditures of \$0.1M in 2005 and \$0.5M in 2006 would be allocated for the development of an upgrade strategy, a concept design and an environmental impact assessment. These studies will be needed prior to the consultation between HWC and the EPA/ DEC to determine the level of treatment required. We understand that if the outcome of this consultation leads to more stringent discharge consents then the capital expenditure of \$10.5M may need to be increased.

We accept that work will be needed to upgrade Morpeth WWTW within this price path to deal with the increased flows although the timing is dependent on the development of the identified growth areas. The \$10.5M in the March 2005 SIR is

based on preliminary and broad estimates and further studies are needed to confirm the scope, timing and cost of the scheme proposals. Any units dealing with hydraulic capacity only, for example the inlet works, can be designed at this stage but any process units needed to remove the pollutant loads cannot be designed until the discharge consent has been set.

*HWC's March 2005 SIR has indicated a capital expenditure within the price control period as shown in Table 14 Table 14 Morpeth WWTW proposed expenditure (\$M 04/05)*

. This is 67% of the total \$10.5M scheme cost. The timing of the scheme is still dependent on the level of growth assumed. The scheme timing and costs may be established once the total works needed has been ascertained, but until the scope of the works has been determined such a profile and level of cost is at best a preliminary estimate.

*Our recommended expenditure and profile is shown in Table 14 Table 14 Morpeth WWTW proposed expenditure (\$M 04/05)*

; the impact on the price control is also shown.

\$M (04/05)	2006	2007	2008	2009	Total
<b>Morpeth WWTW</b>	<b>Price Control Period</b>				
Sep 2004 SIR	0.0	0.0	0.0	0.0	0.0
Mar 2005 SIR	0.5	0.6	1.4	4.7	7.2
Recommended	0.5	0.6	1.4	4.7	7.2
Impact on Sep 04 capex proposals	0.5	0.6	1.4	4.7	7.2

*Table 14 Morpeth WWTW proposed expenditure (\$M 04/05)*

Source: HWC SIRs September 2004 and March 2005 and Response to Information Request June 2005

### *Boulder Bay WWTW*

The main driver for the Boulder Bay scheme is growth. In an internal report dated 29 March 2004 entitled 'Boulder Bay WWTW Stage 2 Upgrade Business Case Papers' the upgrade timing requirements are listed as Stage 2 being required in 2008 and Stage 3 in 2013. The statement is also made that the Stage 3 works are quite discrete from the Stage 2 works and no significant construction savings would result from combining the construction of the two stages.

The Stage 2 works comprise Aeration capacity upgrade, Return Activated sludge system upgrade, sludge thickening and dewatering upgrade, PLC system upgrade and the screenings and grit handling system upgrade. The capital cost put forward is \$3.2M. The Stage 3 works comprise the provision of aerobic digestion, additional return activated sludge system modifications and an additional sludge thickener. The capital cost put forward is \$2.8M.

A report was produced in May 2004 by HWA entitled 'Boulder Bay WWTW Projected Loadings, Capacity Review and Upgrade Strategy'. Another report was produced in April 2005 by consultants entitled 'Boulder Bay Wastewater Transport Servicing Strategy'. A further report was produced in October 2002 by Port Stevens Council entitled 'Port Stevens Urban Settlement Strategy'. All these reports considered population growth.



In an internal report which is undated entitled 'Boulder Bay WWTW Stage 2 Upgrade (Extract from planning papers) Expected Growth in the Catchment' growth projections are considered for both permanent residents and tourist populations. Population growth is notoriously difficult to predict and this is especially true for tourist populations. There is some divergence of opinion between the growth predicted by Port Stephens Council (PSC) and HWA, with growth by HWA exceeding that predicted by PSC.

*As a result of its projected growth rates HWA predicts that the sludge digestion may be needed as early as 2009. It suggests that contrary to the opinion formed in its earlier report that the economies of combining both stages 2 and 3 into one project are to be considered and it puts forward a program in the March 2005 Submission as shown in Table 15*

\$M (04/05)	2006	2007	2008	2009	Total
<b>Boulder Bay WWTW</b>	<b>Price Control Period</b>				
Sep 2004 SIR	0.4	2.0	1.0	0.0	3.4
Mar 2005 SIR	0.8	4.0	2.0	0.0	6.8
Recommended	0.8	3.8	2.0	0.0	6.6
Impact on Sep 04 capex proposals	0.4	1.8	1.0	0.0	3.2

Table 15 Boulder Bay Proposed Expenditure (\$M 04/05)

Source: HWC SIRs Sep 2004 and Mar 2005 and response to Information request June 2005

Hunter Water provided further information in response to our draft Supplementary Report. This anecdotal evidence suggests that the level and timing of development is consistent with the HWC 2004 forecasts.

On the basis of our overview of the scheme, we have no reason to doubt that the costs put forward have been carried out in accordance with HWA normal costing and relate to the market costs prevalent in the area. However, the level of contingency is unclear and we assume a similar percentage as other schemes.

Our view is that the September 2004 SIR proposal is reasonably derived, but based on recent information we accept that stage 3 is likely to be required within the price control period, as shown in Table 15.

#### *Newcastle Stage 1 Wastewater Transport System Upgrade*

The main driver for this Newcastle scheme is to comply with the DEC licence requirements as detailed in the Upgrade Management Plan for the wastewater transport system. Total expenditure has been apportioned 90% to New Mandatory Standards and 10% to growth. The works comprise four projects (S2, S5, S8 & S92) as shown below.



\$M (04/05)	2006	2007	2008	2009	Total
<b>Newcastle Wastewater Transport System</b>	<b>Price Control Period</b>				
S2 - Construct Newcastle wet weather pumping system	7.6	13.0	2.9	0.0	23.5
S5 – Lambton No 1 and Mayfield WWTPs additional storage	0.2	0.0	0.0	0.0	0.2
S8 – Construct carrier upgrades 5b, 5i & 5g in Mayfield & Waratah	0.5	1.7	1.5	0.0	3.7
S92 – Downsize capacity of Newcastle 5 and Newcastle East WWTPs	0.2	0.0	0.0	0.0	0.2
<b>Total</b>	<b>8.5</b>	<b>14.7</b>	<b>4.4</b>	<b>0.0</b>	<b>27.6</b>

Table 16 Newcastle Wastewater Transport System Proposed Expenditure (\$M 04/05)

Source: HWC SIR Sep 2004 and response to Information request June 2005

We note that the NSW EPA licence number 1683 states that the works listed above must be completed by 1 July 2007. We therefore confirm that all this work needs to be undertaken during the current price path. HWC showed us a Board Paper dated December 2003 detailing the above costs for these works.

We note that the original scheme was covered in a report by consultants in September 2000. In June 2004 a Quantity Surveyor produced a detailed cost for the 'over the hill' pipeline from Lockyer Street to Burwood Beach STP. Further data was obtained by Hunter Water from the tender for a contract for a large diameter pipeline (water main) at Wallsend. An estimate was obtained from consultants for the use of directional drilling for this pipeline 'under the hill' in place of the open cut 'over the hill'. A contractor deemed to be the most experienced contractor in Australia for horizontal directional drilling provided a target price for the 'under the hill' option. The costs for this were substantially more than had been previously estimated. Hunter Water has carried out cost-benefit analyses for both the 'over the hill' and the 'under the hill' options and using net present value calculations the horizontal directional drilling was deemed the preferable option.

We noted that the cost for the S2 project – 'construct Newcastle wet weather pumping system' - has increased from \$23.5M to \$28.4M. In the detailed costings put forward the contingencies have not been clearly identified. However, we noted that the earlier consultant's report dated January 2004 showed that 30% had been included for contingencies, which seems a high safety margin to adopt.

We also noted that the cost for project S8 – construct carrier upgrades 5b, 5i & 5g in Mayfield & Waratah - has been reduced from \$3.7M to \$2.8M by delaying the construction of the Waratah carrier main. This carrier main is not a requirement of the current wastewater systems licence and can be constructed later, outside the current price path, along with other upgrades.

Hunter Water is now proposing the expenditure profile shown in Table 17.

\$M (04/05)	2006	2007	2008	2009	Total
<b>Newcastle Wastewater Transport System</b>	<b>Price Control Period</b>				
S2 – Construct Newcastle wet weather pumping system	10.4	14.0	3.8	0.0	28.2

S5 – Lambton No 1 and Mayfield WWTPs additional storage	0.2	0.0	0.0	0.0	0.2
S8 – Construct carrier upgrades 5b, 5i & 5g in Mayfield & Waratah	0.3	1.3	1.1	0.0	2.7
S92 – Downsize capacity of Newcastle 5 and Newcastle East WWTPs	0.2	0.0	0.0	0.0	0.2
<b>Total</b>	<b>11.1</b>	<b>15.3</b>	<b>4.9</b>	<b>0.0</b>	<b>31.3</b>
Sept SIR	8.5	14.7	4.4	0.0	27.6
Increase on Sept SIR	2.6	0.6	0.5	0.0	3.7
Recommended expenditure	6.5	15.3	7.5	0.0	29.3
Impact on Sep 04 capex proposals	-2.0	0.6	3.1	0.0	1.7

Table 17 Newcastle Wastewater Transport System Proposed Expenditure (\$M 04/05)

We accept that these works need to be carried out in the current price path. We have some concerns regarding the phasing of work where HWC comments in its March submission that;

*“..... detailed design is expected to be completed by late 2005. Tenders for construction of works are expected to be called before the end of 2005. Hunter Water is confident that the Stage 1 works will be operational by mid 2007 as per the DEC Licence.”*

This implies a 12 to 15 month contract period for what is a complex project and that expenditure in 2005 will only recognise the start-up expenditure. On the basis of our overview, we have doubts that the scheme can be completed by July 2007. In subsequent discussions with HWC, it acknowledged that some elements of the scheme will not be complete within the Licence completion dates and it was planning to discuss revised milestone dates with the DEC.

We are also concerned that, from what we have seen, the level of contingency at 30% for some elements of work is significantly greater than what we would expect where design work has been progressing over the last three years. We have therefore proposed some adjustments shown in Table 17 above.

#### *Cessnock WWTW and Pumping Station*

In the June response to our Information Request, Hunter Water has reported an increase in scheme estimates for the Cessnock Schemes following receipt of tenders. A \$10.8M increase in expenditure is reported. Hunter Water provided a detailed explanation of the cost changes which relate mainly to tenders received for works which were significantly greater than estimates. HWC attributed this increase mainly to change in input costs with a smaller change in scope. We have accepted the \$10.8M increase mindful that there is scope for capex efficiency through the overall targets we have proposed.

### Wastewater Quality Schemes

In our February 2005 Report<sup>13</sup> Section 8.4, we discussed the significant increase in the wastewater quality programme and questioned the timing and detail of the proposed schemes. As a result of our discussions with HWC and DEC at that time, we concluded that the timing and detail of the proposed standards were not clear and open to further discussion on scope and timing.

Subsequent consultation with the DEC has confirmed that two of HWC's five pollution reduction programs, Belmont and Newcastle wastewater transport systems, need to be completed by 1 July 2007 to meet licence requirements.

We have reviewed the capital expenditure profile for the quality programme to allow for these confirmed schemes. We have accepted expenditure for the Belmont and Newcastle schemes and have reprofiled expenditure for the remaining schemes for the reasons fully detailed in our February 2005 report. At that time we wrote;

*"We have engaged in further discussions and correspondence with the member of staff who represents DEC in dealing with quality standards in HWC's area. We have been advised by them that the pollution reduction program has not yet been finalised and the works needed have not been totally defined. Various investigations, system operations management plans and environmental monitoring programs are scheduled for completion at dates between June 2005 and June 2008. Many of these studies will lead to capital works programs but the extent of the works needed will be dependent on the outcomes of the investigations."*

*Given the nature of this work, which needs detailed investigations and time to evaluate options, our view is that the program is optimistic and some slippage of these schemes is likely. As such we proposed to re-profile this expenditure as shown in Figure 24."*

Our revised proposals are presented in Table 18. We emphasise that the reasons for the rephasing of schemes subject to further investigations and options appraisal for presentation to DEC is that both the timing and scope of work is uncertain. Our view is that it is unreasonable to ask customers to pay for these improvements until these uncertainties are resolved. There is a facility for IPART to consider the level of prudent expenditure at the next price review.

(\$M 04/05)	2006	2007	2008	2009
<b>Proposed price control period</b>				
Sep 04 and Mar 05 SIRs	21.3	27.8	12.3	12.2
Atkins/ Cardno reprofiled Feb 05	16.0	20.8	19.2	17.6
Recommended	17.9	24.1	14.9	16.7
Impact on Sep 04 capex proposals	-3.4	-3.7	2.6	4.5

Table 18 New Mandatory Standards Expenditure (\$M 04/05)

<sup>13</sup> Capex Asset Management and Opex Review Hunter Water Corporation Final Report, Atkins, February 2005

### **Corporate Expenditure**

Changes in corporate expenditure relate to the new Head Office scheme and the Disaster Recovery Centre.

#### *New Head Office*

Hunter Water advised in June 2005 that expenditure had been deferred from 2005 into 2006. This explains in part the likely outturn in 2005 discussed above. The March 2005 SIR reported \$4.3M in 2005. We have recognised this slippage in the recommended expenditure in section 4.4 below.

#### *Disaster Recovery Centre*

We have reviewed the documentation provided by HWC and have accepted the additional \$0.5M for equipping the disaster recovery centre. This expenditure is mainly in 2006. There is no significant change to corporate expenditure as this increase is offset by \$0.6m reduction related to the impact of the IFRS.

## **4.4 Recommended Capital Expenditure**

Our approach to determining recommended allowable capital expenditure is based on our detailed assessment of the Hunter Water Supplementary Report and subsequent response to our Information Request in June 2005, our February 2005 Report on HWC's earlier Submission and the IPART Draft Determination.

We commented in our February 2005 report that Hunter Water's asset management planning processes were consistent with current good practice. The significant changes to the capital expenditure between the September 2004 and March 2005 submissions call us to question the sufficiency of Hunter Water's translation of its asset management processes into a robust medium and long term investment plan including the planning and estimating processes. This is an area where there is scope for Hunter Water to review and improve its planning processes to provide more robust estimates for the four year investment program.

We have followed a staged approach based on our findings discussed in earlier sections.

- (i) We have included an additional critical mains replacement scheme in the water service expenditure;
- (ii) We have made adjustments to expenditure profiles related to five wastewater schemes identified by HWC in its March 2005 submission;
- (iii) We have revisited our proposals for New Obligations to recognise the defined completion dates for the Belmont and Newcastle schemes;
- (iv) We have adjusted the expenditure to allow for the impact of the IFRS;
- (v) We have included additional costs related to the Disaster Recovery program;
- (vi) We have applied capital efficiencies at the same level as proposed in our February 2005 Report.

We summarise water and wastewater expenditure proposals by driver in Table 18 and Table 19 respectively. We consider that the resulting capital program provides the basis for HWC to generate incentives and encourage innovation to undertake its business and functions.

Driver or Project (\$M 04/05)	2005	2006	2007	2008	2009
		<b>Proposed price control period</b>			
Replace CTGM main Tarro to Shortland	0.0	0.4	1.0	6.0	3.0
Water main replacement	2.0	2.0	2.0	2.0	2.0
Services Replacement	0.5	0.6	0.9	2.0	2.0
Replace Tarro Beresfield main	0.0	0.2	0.2	0.0	1.0
Replace above ground assets	1.9	1.9	1.9	1.9	2.7
Other asset replacement	3.2	3.2	2.2	0.0	0.2
Major growth Schemes	2.5	8.1	5.6	7.5	14.9
Grahamstown Dam	11.0	1.3	0.0	0.0	0.0
Additional trunk main replacement	0.0	0.0	0.0	1.5	1.0
Other growth schemes	5.0	1.4	3.1	4.6	4.7
Impact of IFRS	0.0	-1.0	-0.5	-0.5	-0.6
<b>Total</b>	<b>26.1</b>	<b>18.1</b>	<b>16.4</b>	<b>25.0</b>	<b>30.9</b>
Capital Efficiency %	0	3.5	5.5	7.5	9
<b>Total Expenditure</b>	<b>26.1</b>	<b>17.5</b>	<b>15.5</b>	<b>23.1</b>	<b>28.1</b>

Table 19 Derivation of Recommended Water Capital Expenditure by Driver (\$M 04/05)

(\$M 04/05)	2005	2006	2007	2008	2009
		<b>Proposed price control period</b>			
Mandatory Standards	2.1	4.7	3.1	0.8	0.4
New Mandatory Standards	11.7	17.9	24.1	14.9	16.7
Growth	8.9	13.0	21.0	24.0	20.0
Priority Sewerage Program	1.6	9.0	6.4	8.5	4.6
Business Efficiency	3.5	3.5	3.1	3.4	3.7
Impact of IFRS	0.0	-2.5	-1.6	-1.0	-0.8
Belmont	0.0	-0.6	4.0	4.6	0.0
Morpeth	0.0	0.5	0.6	1.4	4.7
Boulder Bay	0.0	0.4	2.0	1.0	0.0
Newcastle	0.0	-2.0	0.6	3.1	0.0
Cessnock	0.0	5.4	5.4	0.0	0.0
<b>TOTAL</b>	<b>27.8</b>	<b>49.3</b>	<b>68.7</b>	<b>60.7</b>	<b>49.3</b>
Capital Efficiency %	0	3.5	5.5	7.5	9
<b>Total Expenditure</b>	<b>27.8</b>	<b>47.6</b>	<b>64.9</b>	<b>56.1</b>	<b>44.9</b>

Table 20 Derivation of Recommended Wastewater Capital Expenditure by Driver (\$M 04/05)

The brief asks us to identify and segregate the capital works associated with assets for which developers will either contribute to the cost of provision or will build and hand over to the Agency. Expenditure for growth funded by developers is

classified as 'growth' in the above tables. We are not aware of any assets provided free by developers which are included in the above tables.

Our view of prudent expenditure in 2005 has changed from the February 2005 Report as a result of further information provided by HWC in June 2005. We confirmed that the final outturn expenditure was \$74.2M. While we have not audited the 2005 expenditure in detail, from the range of schemes we reviewed for the main Submission and this supplementary review, we are able to confirm that this work is prudent. We noted from our analysis of 2005 expenditure that some 5.8% of the variance was due to slippage and efficiency. This supports our view that there has scope for further efficiencies within the expenditure proposals.

We summarise recommended expenditure in Table 21 below which compares our proposals with the March SIR submission and the Draft Determination. We have taken into account slippage of the Head Office schemes and increase expenditure on the Newcastle, Belmont, Morpeth and Cessnock wastewater schemes.

\$M (04/05)	2006	2007	2008	2009	Total
	<b>Price Control Period</b>				
<b>March SIR</b>					
Water	18.1	16.4	28.2	36	<b>98.7</b>
Wastewater	57.8	71.4	53.8	43.5	<b>226.5</b>
Stormwater	0.1	0.7	1	0.6	<b>2.4</b>
Corporate	12.1	3.5	3.5	4.3	<b>23.4</b>
<b>Total</b>	<b>88.1</b>	<b>92</b>	<b>86.4</b>	<b>84.3</b>	<b>350.8</b>
<b>Atkins Cardno Feb 2005 report and Draft Determination</b>					
Water	17.9	15.5	21.8	27.3	<b>82.5</b>
Wastewater	44.2	51	51.3	41.7	<b>188.2</b>
Stormwater	0.1	0.6	0.9	0.5	<b>2.1</b>
Corporate	11.4	3.5	3.4	4.1	<b>22.4</b>
<b>Total</b>	<b>73.6</b>	<b>70.6</b>	<b>77.4</b>	<b>73.6</b>	<b>295.2</b>
<b>Recommended Expenditure</b>					
Water	17.5	15.5	23.1	28.1	84.2
Wastewater	47.6	64.9	56.1	44.9	213.5
Storm drainage	0.1	0.6	0.9	0.5	2.1
Corporate	15.8	3.3	3.3	3.9	26.3
<b>Total</b>	<b>80.9</b>	<b>84.3</b>	<b>83.5</b>	<b>77.4</b>	326.1

Table 21 Recommended Capital Expenditure by Service Area (\$M 04/05)

## 5 Summary of Recommended Expenditure

### 5.1 Operating Expenditure

The recommended expenditure is shown in Table 22 below and is compared with the Agency forecast and the Tribunal's Draft Determination.

\$M 04/05	2006	2007	2008	2009	Total
<b>Hunter Water proposal (Oct 2004)</b>					
Water	25.4	25.6	26.0	26.4	103.4
Wastewater	25.5	25.7	26.1	26.4	103.7
Stormwater drainage	1.0	1.0	1.0	1.0	4.0
Corporate	17.1	17.2	17.4	17.6	69.3
<b>Total agency proposed</b>	<b>69.0</b>	<b>69.5</b>	<b>70.5</b>	<b>71.5</b>	<b>280.4</b>
<b>Atkins/Cardno recommendation (Feb 05) and Tribunal's Draft Determination Jun 05</b>					
Water	25.3	25.3	25.5	25.5	101.6
Wastewater	25.5	25.7	25.9	26.0	103.1
Stormwater drainage	1.0	1.0	1.0	1.0	3.9
Corporate	17.1	16.8	16.8	16.6	67.3
<b>Total</b>	<b>68.9</b>	<b>68.8</b>	<b>69.2</b>	<b>69.1</b>	<b>276.0</b>
<b>Hunter Water's Supplementary Submission</b>					
Water	26.5	26.3	26.7	27.2	106.7
Wastewater	28.0	27.2	27.1	27.2	109.5
Stormwater drainage	1.0	1.0	1.0	1.0	4.0
Corporate	16.6	16.6	17.1	17.3	67.6
<b>Total</b>	<b>72.1</b>	<b>71.1</b>	<b>71.8</b>	<b>72.8</b>	<b>287.8</b>
<b>Atkins/Cardno Supplementary Report</b>					
Water	26.4	26.0	26.1	26.4	104.9
Wastewater	27.8	27.0	26.5	26.4	107.7
Stormwater drainage	1.0	1.0	1.0	1.0	4.0
Corporate	16.5	16.2	16.5	16.2	65.4
<b>Total including developer related research &amp; processing costs</b>	<b>71.7</b>	<b>70.2</b>	<b>70.1</b>	<b>70.0</b>	<b>282.0</b>
<b>Total excluding developer related costs</b>	<b>70.1</b>	<b>68.9</b>	<b>68.8</b>	<b>68.8</b>	<b>276.6</b>

Table 22 Recommended Operating Expenditure, Net of Efficiency (\$M 04/05)



We confirm that there were no issues of transfer of costs between the regulated and unregulated parts of the Business related to the Supplementary Submission.

## 5.2 Capital Expenditure

We conclude that there has been a significant reduction in expenditure for the year ending June 2005. The \$4.6M reduction (5.8% of total program) was mainly due to slippage of schemes, with some change in scope, efficiency and double counting.

We commented in our February 2005 report that Hunter Water’s asset management planning processes were consistent with current good practice. The significant changes to the capital expenditure between the September 2004 and March 2005 submissions call us to question the sufficiency of Hunter Water’s translation of its asset management processes into a robust medium and long term investment plan including the planning and estimating processes. This is an area where there is scope for Hunter Water to review and improve its planning processes to provide more robust estimates for the four year investment program.

The recommended expenditure for the price control period is shown in Table 21 below. We compare our proposals with the IPART Draft Determination. This profile takes account of slippage from 2005 and additional expenditure related to schemes identified by Hunter Water. We have reprofiled New Obligations expenditure following confirmation of completion dates for the Belmont and Newcastle schemes. There were no changes to the growth expenditure proposals as the profile reflected the proposals in our February 2005 report. This recommended expenditure includes the capital efficiencies we proposed in our February 2005 report.

\$M (04/05)	2006	2007	2008	2009	Total
<b>Price Control Period</b>					
<b>Hunter Water March SIR</b>					
Water	18.1	16.4	28.2	36	98.7
Wastewater	57.8	71.4	53.8	43.5	226.5
Stormwater	0.1	0.7	1	0.6	2.4
Corporate	12.1	3.5	3.5	4.3	23.4
<b>Total</b>	<b>88.1</b>	<b>92</b>	<b>86.4</b>	<b>84.3</b>	350.8
<b>Atkins Cardno Feb 2005 report and Draft Determination</b>					
Water	17.9	15.5	21.8	27.3	82.5
Wastewater	44.2	51	51.3	41.7	188.2
Stormwater	0.1	0.6	0.9	0.5	2.1
Corporate	11.4	3.5	3.4	4.1	22.4
<b>Total</b>	<b>73.6</b>	<b>70.6</b>	<b>77.4</b>	<b>73.6</b>	295.2
<b>Recommended Expenditure</b>					
Water	17.5	15.5	23.1	28.1	84.2
Wastewater	47.6	64.9	56.1	44.9	213.5
Storm drainage	0.1	0.6	0.9	0.5	2.1
Corporate	15.8	3.3	3.3	3.9	26.3
<b>Total</b>	<b>80.9</b>	<b>84.3</b>	<b>83.5</b>	<b>77.4</b>	326.1



*Table 23 Recommended Capital Expenditure (\$M 04/05)*

We have made no change to the level of capital efficiencies applied.

We confirm that the expenditure proposals do not include for assets for which developers will either contribute to the cost of provision or will build and hand over to the Agency. Expenditure related to growth is for funding by developers although contributions and funding do not balance within the price control. Existing customers are being asked to fund the deficit between growth and contributions. We have not verified the latest growth expenditure with developer service plans although given the recent changes to proposed expenditure it seems likely that these plans will need to be revisited to be consistent with the agreed investment plan.

## 6 References

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## 7 Appendices

***Appendix A: PROJECT BRIEF***

## Consultancy Agreement

The Tribunal will extend the existing Agreement to include a review of supplementary capital expenditure and operating expenditure proposals made by Hunter Water Corporation (HWC), Sydney Water Corporation (SWC) and Sydney Catchment Authority (SCA). Consistent with the objectives outlined in the Agreement, this involves assessing for each agency's supplementary submission:

1. the efficiency of the businesses' estimates of additional operating expenditure for the period from 2005/2006 through to 2008/2009, that is, from 1 July 2005 until 30 June 2009.
2. the efficiency of proposed additional capital expenditure for the period from 2005/2006 to 2008/2009.

Atkins will also be required to participate in a roundtable discussion of issues raised in the primary and supplementary expenditure reviews. The Tribunal has reviewed the findings presented in Atkins final report and each agency's response to the findings. A roundtable discussion will provide an opportunity for each agency to debate outstanding issues regarding Atkins recommendations and methodology with the consultant in the presence of the Tribunal.

The Tribunal offers to extend the Agreement as follows:

1. Schedule 2 (Services)

- (a) In Operating Expenditure include:

For this aspect of the review, in respect of each agency's supplementary operating expenditure proposals the consultant will be specifically required to:

- (i) provide the consultant's opinion as to the efficiency of the agency's proposed additional level of operating expenditure for each year between 2005/2006 and 2008/2009 and provide for each year estimates, with supporting reasons, of the level of operating expenditure that is required to efficiently undertake their regulated functions.
    - (ii) identify and analyse any additional transfers of costs between regulated and unregulated parts of the water business, subsidiary or parent agency or businesses and comment on any such transfers which in the opinion of the consultant are inappropriate.

- (b) In Capital Expenditure include:

For this aspect of the review, in respect of each agency's supplementary capital expenditure proposals the consultant will be specifically required to:

- a) provide an opinion as to the efficiency of each agency's capital expenditure program for the period from 2005/2006 to 2008/2009 and provide for each year estimates, with supporting reasons, of the level of capital expenditure that the consultant considers efficient in order to undertake each agency's business and functions.
    - b) identify and segregate the capital works projects associated with assets for which developers will either contribute to the cost of provision or will build and possibly hand over to the agency and reconcile actual and proposed developer

funded capital expenditure with forecast capital expenditure in Development Servicing Plans.

(c) In Outputs include:

The required outputs from the supplementary consultancy are:

- a final written report for each agency which addresses the objectives of the consultancy;
- discussions and meetings with water agencies, the Tribunal and/or Tribunal Secretariat;
- participation in roundtable discussion with the Tribunal and water agencies on issues and findings from both the primary and supplementary reviews.