

# **FINAL BUSINESS PLAN**

## **CHAPTER B7**

### **FINANCIAL PROJECTIONS**

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**Chapter B7- 1: The Financing Plan**

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**B7 Section 1 – The Financing Plan****FINANCING OUR PLANS****MAIN THEMES**

- Our view remains, as for our draft plan, that a real cost of capital of 4.7% (post tax) is appropriate
- This generates financial ratios that, as a package, are at the limit of what would be acceptable to sustain a solid investment grade rating
- We have not included a financeability uplift
- We have assumed deflation of -1.5% in 2009-10
- We have assumed inflation of 2.2% in 2010-11 and 2.5% in the following four years
- We have assumed that Ofwat uses a notional gearing level for PR09 of 60% from April 2010, which will be very close to our actual gearing
- We have modelled dividends paid by Northumbrian Water Limited (the regulated company) in line with the cost of equity in the cost of capital calculation. This mirrors Ofwat's approach at PR04
- We have assumed that 23% of debt in April 2010 is index linked (reflecting NWL's current position)

**Introduction**

In the section on 'Key challenges' we described why it is important for all stakeholders that water companies have a stable financial position and are able to finance their functions.

To obtain finance for the high levels of investment required to maintain and improve services, the company must remain attractive to financial institutions willing to lend to the sector. Investors require a fair return on their investment in line with the associated risks and need to have confidence that the company will meet its repayment obligations. We have developed our financing plan to meet these requirements.

In this section we set out how we will finance our plans. We describe our view of the weighted average cost of capital (WACC) and our financing and dividend policies.

**Determining the Weighted Average Cost of Capital (WACC)**

Key issue for customer bills

When an investor buys shares in a company (an equity investment) or lends money to a company (a debt investment), this is done to earn a fair return, just as an individual expects interest when placing money in a savings account.

The WACC for a company is the average of its cost of debt and cost of equity capital, weighted according to its balance of debt and equity. If the WACC is too low, it will not be sufficient to allow the company to service existing debt and raise money at

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reasonable rates to finance future investment programmes. If it is too high, customers will pay more than is necessary.

The WACC is material to prices as financing costs account for around 35% of water company bills. It is, therefore, important to use an appropriate value for the WACC when setting prices.

We believe the WACC should be determined by reviewing a range of evidence, with the primary source being a “CAPM” analysis. “CAPM” is the Capital Asset Pricing Model, an established method used to assess the cost of capital.

The ‘credit crunch’ and the deteriorating economic outlook have generated volatile and uncertain conditions in financial markets and have increased the costs of borrowing money. It is, therefore, particularly difficult to assess a reliable forward estimate for the WACC with any degree of confidence at this time.

### Components of WACC

Our view of the value of the components that make up the WACC is provided in the table below. We show for comparison the assumptions made by Ofwat in the PR04 Final Determination and the values identified by NERA in its report for Water UK in January 2009.

**Value of CAPM components NWL FBP and Ofwat PR04**

CAPM component	Ofwat PR04 FD (%)	NERA 2009 (%)	NWL final plan 2009 (%)
Risk Free Rate	2.80	2.5	
Debt Premium	1.50		
Real Cost of Debt (pre tax)	4.30	3.8 – 4.3	3.70
Equity Risk Premium	4.85		
Cost of Equity (post tax)	7.65	7.4 – 8.2	7.75
Gearing	55	60	60
Post tax WACC	5.10	4.6 – 5.1	<b>4.70</b>
Mixed (Vanilla) WACC	5.81	5.3 – 5.8	<b>5.32</b>

It should be noted there is a potential range for each of these components and, therefore, some judgement has to be made.

In determining our view of the components, we have sought to identify a balanced position that takes into account the benefits of the low-cost index linked funding available three years ago but also of the pressure on the capital markets from recent events. This results in a WACC that is almost 10% lower than that assumed for PR04.

We have taken some account of the NERA report (Cost of Capital for PR09: January 2009) for Water UK, the water industry association, in our analysis of the WACC. NERA’s proposed range for the WACC increased between draft and final plans, taking into account latest market evidence.

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Despite the deterioration in economic conditions and tightening of financial markets that has taken place we have not changed our cost of capital from that proposed in our draft plan. This is because we have placed greater weight on longer term trends.

There is a risk that market conditions do not improve or may even deteriorate further. In this case we would look to the safeguards inherent in the regulatory framework, including interim determinations, the substantial effect clause and the regulator's duty to ensure that companies can finance their functions to provide appropriate remedies as the circumstances dictate.

The cost of capital used in our final plan, at 4.7%, is within the range of 4.6% - 5.1% proposed by NERA.

We have taken account of the extensive analysis by NERA of the risk free rate and associated cost of debt and have assumed a cost of equity in the middle of the range quoted by the NERA report.

Whilst we do not intend to repeat the full NERA analysis here, we make the following observations on the findings of the report.

### Key points from the NERA report

- We agree with NERA that UK government index linked gilts do not provide an accurate measure of the real risk free rate for the cost of capital due to distortions in the financial markets. We support the use of swap rates as a more robust basis for estimating the risk free rate.
- We agree with NERA's use of a composite of time series data and current rates to calculate the cost of debt. We believe this provides a realistic view of the debt funding mix that companies face and aligns with Ofwat's own PR09 approach of considering a range of data on the cost of debt over the interest rate cycle.
- We agree that use of the Dividend Growth Model (DGM) is a useful cross check for estimating the cost of equity. It supports a cost of equity towards the upper end of the CAPM range indicated by NERA, hence our assumption of 7.75%.

We have assumed gearing of 60% for the generic CAPM calculation. This happens to be close to our own level of gearing but is also consistent with Ofwat's PR09 Methodology and Approach stating that a 'conservative approach' will be taken and that 'market developments lead us to expect that there will be very few companies materially below our gearing assumption'.

### Cost of debt

In our modelling, we have considered separately the cost of existing debt from the cost of new debt.

Our existing debt (at March 2009) has a weighted average cost of around 5.8% in nominal terms. Our view of future debt costs of 7.4% nominal reflects a combination of new bonds and EIB debt. This increase is directly attributable to the impact of the credit crunch and subsequent recession that has ended the benign debt market for an indefinite period.

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The weighted average of these rates, given the NWL financing mix of 80% historical debt, 20% new debt is around 6.2% nominal which translates to the 3.7% real cost of debt used in our modelling.

This 3.7% cost of debt is slightly below the NERA range for two reasons:

1. NERA assume a higher proportion of debt from new rather than historical sources (30% rather than NWL's 20%).
2. We have reflected the fact that we are currently pre-financed to late 2011, by which time we anticipate debt markets may be more favourable.

In our financial projections we have calculated interest payable as the sum of our forecast actual interest costs for all debt existing at 31 March 2009, and the cost of new debt described above. In our view, unlike PR04, Ofwat will have to take separate views on the costs of existing and future debt and model accordingly. Using the current blended cost of debt for future financing costs would underestimate the cost of new debt.

We have assumed 23% of our debt in April 2010 is index linked. This is based on our current (JR08) level of index linked debt.

We do not anticipate raising further index linked debt (ILD) in the foreseeable future. Current market conditions mean the cheaper (monoline insured) ILD products of three years ago are no longer available and, in general, ILD is only available at rates that are not attractive by comparison with conventional debt. We do not foresee the market for lower cost ILD re-opening for the period covered by this plan.

### The WACC in context

Whilst we provide details of each component of the WACC to support our assessment, it is important to recognise that the resulting overall figure must be sufficient to generate a sustainable financial position. Adjusting the value of individual components of the WACC without checking the overall position could result in a WACC that is unsustainable.

Our view, based on current information, is that a real post tax WACC of 4.70% will produce sustainable financing ratios.

The WACC we have identified relates to the plan and assumptions we have set out in this document. If any assumptions Ofwat make are different, and this changes the risk profile, then an appropriate adjustment to the WACC will be required. For example, if the company faces higher financial risks investors will require a higher return on investment to reflect those risks.

### Financing our operations

The company finances its operations through a mixture of retained profits and borrowings. The continued high level of investment means that cash outflows exceed annual revenues and, therefore, income from bills alone is insufficient to finance the business.

In our modelling we have assumed that external financing requirements for the period of the plan are met by issuing further debt. The cost of debt remains lower than the cost of equity and we assume that sufficient debt finance will be available at

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reasonable rates to meet our financing requirements. Continued reliance on debt financing will, therefore, minimise the impact of financing costs on customers' bills.

It is our intention to maintain, in broad terms, our existing financing strategy. This entails raising medium to long term debt that provides a balance sheet match with long term assets and fixing a major proportion of interest rates. Northumbrian Water Group has a policy to keep a minimum of 60% of its borrowings at fixed rates of interest. Index linked borrowings are treated as variable rate debt.

We have assumed that all debt is issued on a conventional basis with an appropriate mix of fixed and variable rate debt. We will continue to seek a spread of maturities such that re-financing requirements in any five year period are not excessive. We do not envisage major changes on the proportion of borrowings coming from corporate bonds, EIB and other sources over the period.

NWL's policy is to ensure that debt in the regulated business does not exceed 65% of the RCV. Currently, gearing in the regulated business is around 58%. Gearing of 60% has been assumed in the final plan. Regulatory gearing remains broadly stable over the period to 2014-15.

It should be noted that if Ofwat assumes a higher level of gearing than this, then a tax dis-benefit may arise if tax on interest costs is only allowed at that higher level.

**Financeability and credit ratings**

In our view, the cost of capital should be set such that financeability uplifts are unnecessary. A real cost of capital of 4.7% generates financial indicators that, taken as a package, are at the limit of what would be acceptable to retain a solid investment grade rating. We have not included a financeability uplift in our plan.

Should financeability uplifts be required then Ofwat needs to be explicit about the regulatory treatment. Financeability uplifts were included at PR04 and, despite the more recent turbulence in the financial markets, companies have in the main not seen financial ratios under stress. The regulatory treatment of the PR04 financeability uplifts at PR09 needs to be clarified. NWL abated K in the final three years of AMP4 (2% in total) to reflect the fact that it's financeability uplift was not required.

The key credit rating agencies are Moody's, Standard & Poor's (S&P) and Fitch. All three have published ratings for NWL. Moody's and S&P rate corporate bonds for the appointed business. For the ILD issuance, a joint rating by Moody's and S&P has been required by monoline insurers.

It should be noted that each of the main rating agencies adopts a slightly different view regarding the key financial ratios and, as a result, specific ratios may be considered problematic by one agency but not others. Investors will necessarily default to the lowest rating with any higher rating being ignored.

If financeability uplifts are required (which is likely if a lower WACC is assumed), we believe that each of the options proposed by Ofwat has downsides as follows.

**'A more flexible approach to financial ratios'**

Measures of cash interest cover, including the Post Maintenance Interest Cash Ratio (PMICR), appear to be of primary importance for credit rating agencies. For these

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key ratios Ofwat cannot take 'a more flexible approach' since the credit ratings agencies do not have the same flexibility of interpretation.

### 'Index linked debt (ILD)'

Whilst this debt has, at first sight, improved financial ratios such as cash interest cover, there are some important provisos.

First, S&P include the indexation part of the interest charge when calculating cash interest cover. This removes the improvement in ratios initially gained through ILD. For NWL, this reduces cash interest cover by as much as 0.5x. We are glad to see that Ofwat have introduced this ratio into the Reservoir model (Cash Interest Cover (profit and loss interest)).

Second, the market for new issuance is much reduced. We believe Ofwat should not assume any new debt can be issued as ILD, although average industry levels of ILD might be considered for the opening notional balance sheet.

Finally, when considering the proportion of ILD to use in the cost of capital calculation Ofwat should not include swap based ILD since the cost of this debt is in line with that of conventional debt. It may be appropriate to include swap based ILD when considering the requirement for financeability uplifts but the proviso relating to S&P's treatment of ILD applies here.

### 'Equity Investment'

Investor surveys indicate that there is a negative perception of rights issues. We believe Ofwat should only assume a rights issue in exceptional circumstances, such as where a company has adopted an imprudent level of gearing or has an exceptionally large capital programme. Where new equity is assumed the full costs of issuance should be allowed.

### Conclusions on financeability

The difficulties in generating a net present value (NPV) neutral financeability adjustment described above inform our view that the WACC should be set at a level that avoids the need for a financeability uplift.

### Dividend policy

It should be noted that discussion on dividends in this plan refer solely to the dividend paid by the regulated business of Northumbrian Water Limited to its parent company. The external dividend paid by Northumbrian Water Group to shareholders is a matter for the NWG Board. This is not subject to regulatory oversight and is outside the scope of this plan.

We have assumed the regulated business adopts a dividend policy in line with Ofwat's PR04 approach. This entails a total shareholder return reflecting the assumed cost of equity. We have, therefore, assumed a dividend yield based on the cost of equity less 2%, with 2% real growth each year.

This approach requires a re-basing of the dividend at March 2010, to take account of the equity (RCV less Debt) in the regulated business at that point. This re-basing results in a small reduction in the regulatory dividend modelled.

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This approach is consistent with our current dividend policy and that applied by Ofwat at PR04. Any reduction from this policy could have serious consequences for future equity participation.

### Overview of our financing proposals

Our financing strategy, based on raising medium to long term debt, will minimise the impact of financing costs on customers' bills.

Despite the further deterioration in economic conditions and tightening of financial markets that has taken place we have not changed our cost of capital from that proposed in our draft plan. It is significantly lower than that assumed by Ofwat at PR04.

We have assumed a dividend paid by the regulated business consistent with the cost of equity implied in this cost of capital.

This plan generates financial ratios which are at the limit of those consistent with retaining a solid investment grade credit rating. We have not assumed a financeability uplift.

Although we have not used them to derive a financeability adjustment, we believe that the financial ratio thresholds used by Ofwat in the 2004 Periodic Review still apply for PR09:

Ratio	Investment Grade Threshold
Cash Interest Cover (both conventional and the P&L approach)	Around 3 times
Adjusted Cash Interest Cover (capital charges)	Around 1.6 times
Adjusted Cash Interest Cover (capital expenditure)	Around 2 times
Funds from operations: debt	Greater than 13%
Retained Cash flow: debt	Greater than 7%

In the Ofwat DBP feedback, we were asked how uncertainty over the Cost of Capital had been communicated to stakeholders.

In our discussions with key stakeholders including the quadripartite group, we have stressed that WACC is a key variable to which considerable uncertainty is attached.

NWL has supported collaborative industry publications and events such as:

The NERA Jan 2009 Cost of Capital report  
 The Water UK City Conference on 26<sup>th</sup> February 2009  
 The Indepen Investors Survey

In the final analysis, we decided to maintain the cost of capital used in our DBP for the FBP.



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### Table B7.1 – Financial Projections

NWL has explained and exposed all the key assumptions that have a material impact on the financial projections. All projections are taken from Reservoir, for which the financial inputs are explained in Section C9 and this Section.

All data in this Table has been transferred back from the Reservoir system.

All 2007/08 data is as per JR08.

#### Line 1: Proposed Price Limits

NWL has abated K for 2008/09 and 2009/10, so these inputs are zero.

NWL has submitted the Reservoir download of the financial model with smoothed K factors per below:

Our approach has been as follows:

- 1 We input all the FBP and TB ICS data into Reservoir.
- 2 We opened the Financial Model and noted the unsmoothed K factors.
- 3 We then smoothed the K factors over the first 3 years of AMP5 in Reservoir. We did this using the Overwrite K option. Our NPV smoothing ensured that the 2010-15 NPV of total revenue (RT00260T) equalled the 2010-15 NPV of total revenue after smoothing (RT00260D).
- 4 Although this approach did lead to Water and Sewerage K factors we agree with in total, it did not quite smooth (ie equal in each of the three years) the separate Water and Sewerage K factors (although it did restrict them in the first three years). We have therefore had to manually smooth the K factors in Excel so they are equal for each year, but have the same NPV as the Reservoir K factors.
- 5 Note that this 'off Reservoir' service K smoothing is presentational only. It does not affect total K or total K smoothing and we are happy to discuss with Ofwat how separate service K factors could be smoothed given the current restrictions of Reservoir.

The unsmoothed annual K factors derived from Reservoir are:

Year	10/11	11/12	12/13	13/14	14/15	Total
<b>Total</b>	<b>11.2%</b>	<b>1.8%</b>	<b>1.2%</b>	<b>0.2%</b>	<b>-0.1%</b>	<b>14.3%</b>
Water	14.5%	2.2%	1.6%	-0.1%	0.1%	18.3%
Sewer	6.7%	1.3%	0.5%	0.6%	-0.1%	9.0%

Water and sewerage K factors are taken from the KSATN page of Reservoir.

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Once the Aquarius K factors are smoothed over 3 years, on an NPV neutral basis, we calculated annual K Factors of:

Year	10/11	11/12	12/13	13/14	14/15	Total
<b>Total</b>	<b>5.6%</b>	<b>5.6%</b>	<b>5.6%</b>	<b>0%</b>	<b>0%</b>	<b>16.8%</b>
Water	8.8%	6.0%	6.0%	-0.3%	0.1%	20.6%
Sewer	1.5%	5.1%	5.0%	0.4%	-0.1%	11.9%

Although this approach did lead to Water and Sewerage K factors we agree with in NPV terms, it did not quite smooth (ie equal in each of the three years) the separate Water and Sewerage K factors (although it did restrict them in the first three years). We have therefore had to manually smooth the K factors in Excel so they are equal for each year, but have the same NPV as the Reservoir K factors:

Year	10/11	11/12	12/13	13/14	14/15	Total
<b>Total</b>	<b>5.6%</b>	<b>5.6%</b>	<b>5.6%</b>	<b>0%</b>	<b>0%</b>	<b>16.8%</b>
Water	7.1%	7.1%	7.1%	0%	0%	21.3%
Sewer	3.5%	3.5%	3.5%	0%	0%	10.5%

These K factors are the ones used in Part A Commentary and Tables. We further amended the Water K factors for a North/South K adjustment which is covered in Part B8.

Note – NWL did consider a full 5 year smoothing approach, which, on an NPV neutral basis was as follows:

Year	10/11	11/12	12/13	13/14	14/15	Total
<b>Total</b>	<b>4.5%</b>	<b>4.5%</b>	<b>4.5%</b>	<b>4.5%</b>	<b>4.5%</b>	<b>22.5%</b>
Water	5.7%	5.7%	5.7%	5.7%	5.7%	28.5%
Sewer	2.9%	2.9%	2.9%	2.9%	2.9%	14.5%

So, a 5 year smoothing approach increases total K by 5.7% compared to 3 year smoothing. We feel this is too large an increase for what is a marginal benefit of delaying K increases.

Further, 5 year K smoothing produces unacceptable financial ratios in early years.

#### **Line 4: Net interest receivable less payable**

This line is derived from Reservoir, and is based on a combination of fixed, floating and index linked interest costs plus a modelled overdraft with a 6.20% interest rate.

#### **Line 13: Dividends**

This line shows ordinary dividends growing at 2.0% real pa, apart from 2010/11, when they are rebased downwards.

We have assumed the regulated business adopts a dividend policy in line with Ofwat's PR04 approach. This entails a total shareholder return reflecting the assumed cost of equity. We have, therefore, assumed a dividend yield based on the cost of equity less 2%, with 2% real growth each year.

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This approach requires a re-basing of the dividend at March 2010, to take account of the equity (RCV less Debt) in the regulated business at that point. This re-basing results in a small reduction in the regulatory dividend modelled in 2010/11.

**Line 18: Post tax return on RCV**

As NWL has not included a financeability adjustment, this line was initially set at 5.32% (our cost of capital) for each year of AMP5. However, the returns vary slightly from this level due to the K smoothing we have modelled in Reservoir. Early years are lower and later years are higher.

**Lines 19 & 20: Opening RCV by Service**

We have used the opening RCV as per the Ofwat letter of 9 December 2008 for each service;

Our case for logging up for both the water and sewerage services is made in Section C5.

Many of our financial assumptions are outlined previously in this section, or in the commentary to section C9.1.

**Financial Ratios**

In general, we concur with Ofwat's formulas for calculating financial ratios. We do feel that the Cash Interest Cover (P&L interest) ratio that is in the Financial Model (Executive summary) should have been included in Table B7.1 and in the KSAT section as a ratio to target. It is often the first ratio to fall below the investment grade threshold under certain scenarios.

One point to note is that Moody's propose to add Pension deficits to net debt and any Ofwat commitment to fund them will be added to the RCV. Even if these are equal, adding say 10% to debt and the same amount to RCV for NWL would increase gearing by around 2.3%. This would take NWL gearing above the 60% level and would reduce FFO/Debt ratio by around 0.6%, a material amount. For it's determination, Ofwat will need to:

- 1 Ascertain from Moody's whether they intend to apply this policy.
- 2 If so, then extract the pension deficit values from companies that will be added to debt.
- 3 Model this for companies before making the usual notional gearing adjustment.

We have not made any adjustment for this in our FBP.

**Line 23: Cash interest cover**

This ratio is calculated in the conventional way and is consistently above the 3.0x threshold, although it does decline in AMP5 compared to current levels.

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However, as S&P interpret the ratio, with the non cash interest charge added to the interest paid, this falls by around 0.5x, bringing this ratio down to the 3.0x floor. We note Ofwat has included this form of the ratio in the Reservoir model and, as it is almost always lower (apart from a deflationary year) than the version presented here, we believe it should be included when reviewing financeability.

**Line 24: Adjusted cash interest cover (FFO less Capital Charges)**

This falls slightly below the 1.60x investment grade threshold in 2009/10 and 2010/11, but then recovers.

**Line 25: Adjusted cash interest cover (FFO less Capital Maintenance Expenditure)**

This ratio falls slightly below the 2.0x threshold in 2010/11 but then recovers. This is primarily due to the increase in Capital Maintenance forecast for AMP5.

**Line 27: Total net debt**

This rises by £249m from 2007/08 to 2014/15.

**Line 28: Gearing Debt:RCV**

This rises to 59% in 2009/10, then falls marginally over AMP5.

**Line 29: Debt payback (FFO/Debt)**

This falls below the 13% threshold in 2010/11, but then recovers. See the note on Moody's treatment of pension deficits however.

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**Table B7.2 – Cash Flow Projections**

All data in this Table up to Block F has been transferred back from the Reservoir system

**Line 13: Net cash flow from Investing Activities**

In AMP5, there is a total £1.3bn of net capex forecast to be spent.

**Line 15: Equity dividends**

The dividends are rebased in 2010/11 and then increased by 2.0% real pa.

**Line 17: Net Cash flow before Financing**

This indicates that NWL will be 'cash negative' throughout AMP5, a total deficit of around £327m for AMP5.

**Block E: Financing****Line 21: Repayment of bank loans**

The repayment of £158m of EIB debt is forecast for AMP5. These loans are to be refinanced by the modelled overdraft. A further £38m is repaid through finance leases.

**Line 23: Increase/(decrease) in cash in the year**

This totals over £522m in AMP5 comprising the combination of around £327m total cash deficit plus £195m of refinancing.

**Block F – Working Capital Assumptions**

NWL has used JR08 data to calculate the 'days' data per Block F:

Line	Numerator (N)	Denominator (D)	Days (N/D) *365
Debtor days measured	T26 L2&4 £21.2m	T23 L16-3 £260.255m (£595.33m-£335.1m)	29.7
Debtor days unmeasured	T26 L3&5 £29.8m	T23 L3 £335.1m	32.5
Creditor days	T26 L9 £5.6m	T21L22 & T22 21 £237.3m	8.6
Capex creditor days	T26 L11 £41.0m	TC L2&4 £250.6m	59.7
Advance receipt days unmeasured	T26 L10 £13.9m	T23 L3 £335.1m	15.1

Note – all advanced receipts are unmeasured, hence the nil value for advance receipts days – measured.

We have repeated these working capital assumptions for all future years.

## Chapter B7-2: MEAV &amp; Depreciation

**B7 Section 2 - Current Cost Depreciation Commentary**

We have completed our MEAV revaluation which generates annual gross CCD of £154m on assets existing at 31 March 2008.

In recognition of the degree of assumptions implicit in the revaluation and with the impact on customer bills in mind, we have reduced the GMEAVs and hence gross CCD by 10% - **£139m**.

The 10% figure is derived from a confidence grade banding of A3 for the revaluation – it is a plus or minus range around the **central value of £154m** CCD

The choice of an A3 confidence grade is based on NWL's use of cost models for major works.

This level of CCD easily passes the broad equivalence test, indeed, were the test symmetrical, CCD would have to increase.

Further analysis of the net CCD increase from JR08 (£125m net) to FBP (£136m net) indicates the full £11m increase is attributable to the water service.

Within this increase, approx £14m is due to the full inclusion and correct calculation of CCD on meters (£8m) and service reservoirs (£6m) – this corrects for omissions in previous valuations.

A full reconciliation of the CCD movements and the approach taken to the asset revaluation is shown in Section C3

**Current Cost Depreciation Commentary**

All CCD in this table is net of the amortisation of grants and contributions.

<b>Net CCD 07/08 prices £m</b>	<b>Water</b>	<b>Sewerage</b>	<b>Total</b>
Actual JR08 CCD for 2007/08	£57.2m	£67.7m	£124.9m
Revalued CCD for assets existing at 31/3/08	£68.5m	£67.3m	£135.8m
Forecast CCD by 2014/15	£76.8m	£73.5m	£150.3m

So, we have a £10.9m (9%) increase in annual CCD on assets existing at 31/3/2008 compared to JR08 levels.

This revaluation is entirely based on the water service, with meters (£7.6m increase) and service reservoirs (£6.5m increase) being the main drivers.

Capex on enhancements in AMP5 coupled with a decline in amortisation produces a net increase of £14.5m in CCD levels [£150.3m less £135.8m].

## Chapter B7-2: MEAV & Depreciation

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### What is driving the increase in base (31/3/2008) CCD?

Full details of the approach and impact on CCD and MEAV of the asset revaluation are in the commentaries to B7.13 and B7.14 and in Section C3.

### Other observations

#### 1 Indexation of CCD by RPI, but costs rising by more

Since NWL's revaluation in 2004/05, we have inflated GMEAV by RPI, and hence 'base' CCD by the same amount. In practice, COPI has risen by 26.7% since 2002/03, whereas RPI has only risen by 17.5%. As noted, our asset revaluation is based on a bottom up appraisal of GMEA values and is not simply a COPI uplift. However, the movement of COPI relative to RPI does explain why GMEAV values do not generally reduce with technological advances, as is sometimes postulated.

#### 2 Increases in CCD due to the enhancement capex in the capital programme

Tables B7.3 and B7.5 (block F) show a constant level of CCD on base service (the sum of lines 20-22 are constant for all years). This is consistent with a like for like replacement policy for base service. It is in line with Ofwat's expectations (B7 company guidance page 3 – 'broadly flat').

The increases in CCD since 2008/09 are therefore driven entirely by CCD on enhancements, taken from Lines 23 & 24 of Tables B7.3 and B7.5:

Service	CCD on enhancements £m, 07/08p
Water	8.0
Sewerage	5.2
Total	<b>13.2</b>

Thus, the increase in net CCD of £14.5m is due to a £13.2m increase in the CCD on capital enhancements and a decline in amortisation of existing grants of £1.3m.

### Note on Asset Re-Lifing

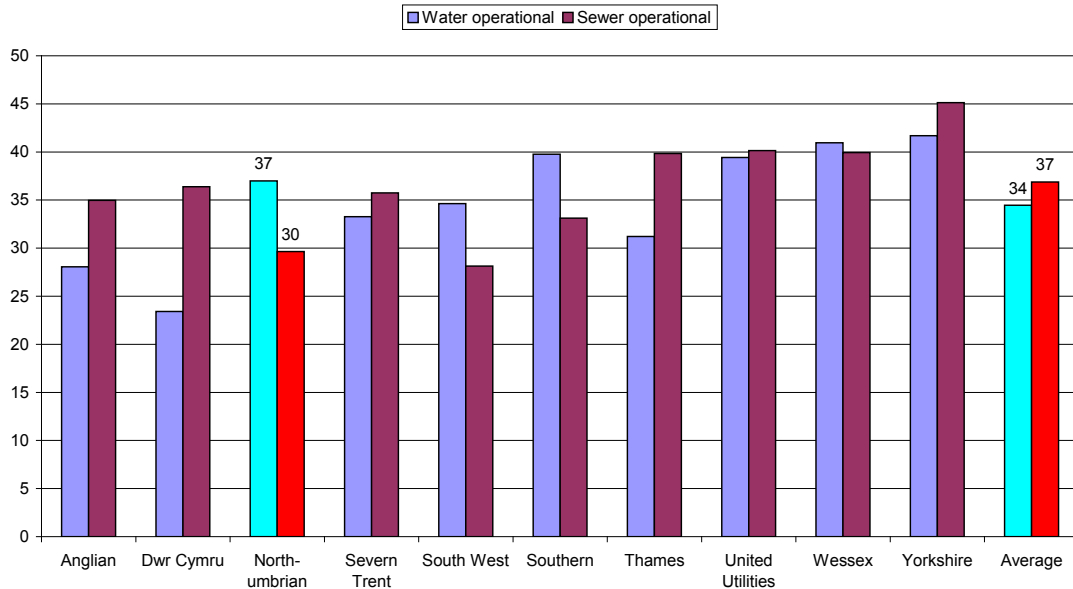
We have reviewed the forecast replacement dates for M&G assets in conjunction with the business owners in an attempt to align the modelled assets to the real world. In some cases this has resulted in replacement dates that differ from the standard asset lives i.e. extended overall the asset lives of some **individual** assets.

**We have not re-lifed any assets (M&G, Operational) that have fully been written off.** Any assets fully written off have not been included in the MEAV Asset Register.

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Comparisons of Operational Asset Lives with the Industry

JR08 Average Operational Lives (GMEAV/CCD)

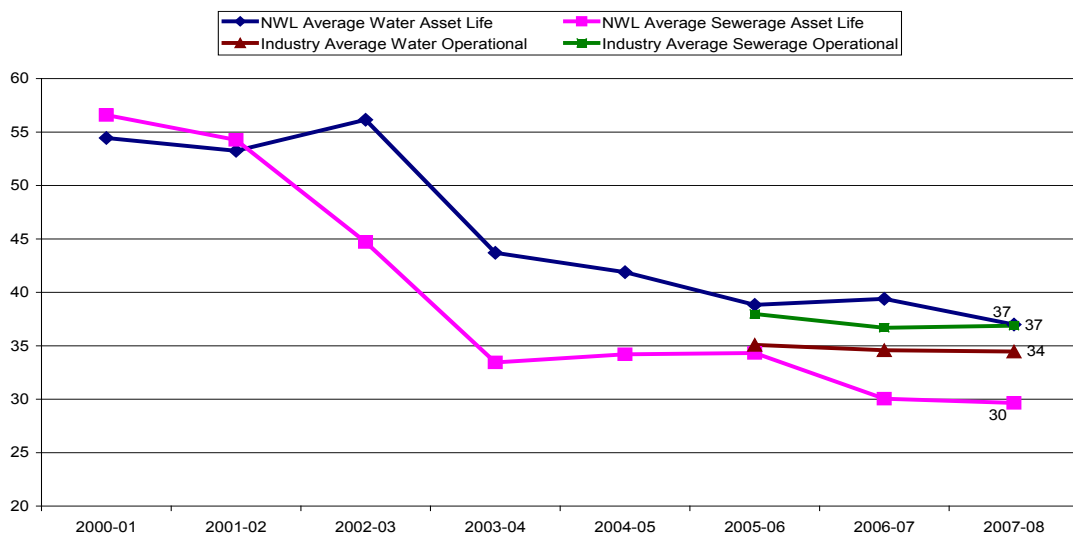


A simple division of GMEA by CCD gives the average asset lives for each company. Using JR08 data, we see that NWL asset lives are in the middle of the pack. The water average life of 37 years is higher than the industry average of 34 years. The sewerage average life of 30 years is below the industry average of 37 years.

Evidence of Declining Industry Operational Asset Lives

The NWL average operational asset lives have been consistently declining over time. Given that they broadly match the industry lives, we must assume this is an industry trend.

Average Operational Asset Lives for NWL (GMEAV/CCD)





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### Asset Lives and Asset Mix

It should be noted that NWL has not changed any of its standard capex lives in the FBP, indeed these lives have remained consistent since AMP3. What has changed is the type of assets being built. NWL inherited a capital base at privatisation that had a large proportion of long life (civil) assets. Since then, apart from building some major new sewage treatment works in AMP2, capex additions have tended to have more mechanical and electrical components as works are de-manned, automated and had more sophisticated operational requirements made on them.

### Non Infrastructure Maintenance Increases

Non Infrastructure Maintenance Capex £m 2007/08 prices	AMP4 (FD)	AMP4 (Actual)	AMP5	AMP6
Water	226	222	306	345
Sewer	188	229	275	272
Total	414	451	581	616

As can be seen from the above table there is a 29% increase in MNI from AMP4 to AMP5 and a further 6% projected for AMP6. This compares to the 9% increase in total CCD, due to the revaluation. MNI is clearly increasing in line with the CCD increases, although it does still lag as the older long life assets are depreciated yet do not yet require matching maintenance (see commentary to Table B7.10 Line 5).

### Reasons for the increase in JR08 CCD compared to the PR04FD level

The reasons for the CCD charge being higher in JR08 than in the PR04 FD are:

- 1 Inclusion of CCD on WIP at 31/3/03.

In 2007/08, actual CCD was £8m above the FD. This variation is primarily due to depreciation on assets that were work in progress at 31/3/03. As can be seen from the PR04 FBP, NWL did not include any CCD from WIP assets at 31/3/08 (Tables B29 & B30 lines 21 & 23). This was an error resulting in an underestimation of CCD in the PR04 FBP and therefore in the PR04 FD.

We referred to this issue in our Table 33 commentary in JR08. Specific examples of large schemes commissioned since 31/3/08 (but with capex predating that date) include £36m of capex at water treatment works such as Horsley, Whittle Dene and Warkworth.

For a cross check – in the FBP Tables B7.3 and B7.5 Block F lines 21 & 23, we calculate the level of CCD from WIP to be around £9.5m pa (£7.7m water, £1.8m sewerage). This confirms to us that the £8m increase in the JR08 numbers is reasonable.

- 2 Flat base profile

The PR04 FD CCD declined by £3m over the last two years of AMP4. We believe

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this was an error and contradicts Ofwat own assumption (company guidance per B7 page 3) that, without enhancements, CCD stays flat as MNI replaces assets on a like for like basis.

**3 Higher maintenance than anticipated in AMP4**

As can be seen from the previous table, AMP4 MNI expenditure will be higher than the PR04 FD equivalent. Hence, it should be anticipated that the corresponding CCD figure should be higher than the PR04 FD CCD.

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**Tables B7.3 & B7.5 – Depreciation on Fixed Asset Additions****For both Tables:****Blocks A to C**

These blocks of data are taken from other capex tables.

**Blocks D & E – Asset lives of MNI**

This analysis of asset lives of the MNI programme was calculated on a project by project basis, then aggregated to give both the capex allocation and the weighted average life.

The weighted average asset life for MNI averages around 28 years for the Water service and 27 years for Sewerage. For the water service, this is below the total asset average, indicating a maintenance program focused on shorter life asset mixes.

The allocation rules are the same as JR08, as are the asset life assumptions. The allocation rules are consistent with the depreciation profiles set out in Block F of the Table.

**Block F – Current Cost Depreciation Charge for the Year****Line 20: CCD on Base at 31/3/08**

This line is calculated as a balancing figure for 2008/09 onwards. It assumes that base assets are replaced on a like for like basis. Thus, the totals of lines 20, 21 and 22 are equal for all years (£69.563m for water, £69.054m for sewerage).

**Line 21: CCD on Base WIP commissioned post 31/3/08**

This has been calculated for both water and sewerage. The water WIP CCD is larger as it includes WIP on schemes such as Ormesby and Layer Treatment Works.

Note that the WIP CCD peaks around 2010/11 for water, 2011/12 for sewerage as all WIP assets are commissioned, then declines from that point onwards.

**Line 22: CCD on new Base investment since 1998**

This line is taken from the Business Plan Export table in Reservoir.

**Line 23: CCD on enhancement WIP commissioned post 31/3/08**

This has been calculated for both water and sewerage. The water WIP CCD is larger as it includes WIP on schemes such as pesticides removal (GAC) at a number of water treatment works.

Note that the water WIP CCD peaks around 2014/15 as all WIP assets are commissioned, then declines from that point onwards. For sewerage, the peak is at

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2011/12.

**Line 24: Enhancements – new investment since 31/3/08**

This line is taken from the Business Plan Export table in Reservoir.

**Block G – Net Current Cost Depreciation Charge for the Year****Line 26: CCD on Base at 31/3/08**

This line is calculated as Line 20 less the amortisation of existing grants and contributions (Table B7.8).

**Line 27: CCD on Base WIP commissioned post 31/3/08**

This is the same as Line 21.

**Line 28: CCD on new Base investment since 1998**

This line is taken from the Business Plan Export table in Reservoir.

**Line 29: CCD on enhancement WIP commissioned post 31/3/08**

This is the same as Line 23.

**Line 30: Enhancements – new investment since 31/3/08**

This line is taken from the Business Plan Export table in Reservoir.

As required by the Guidance, NWL's accounting policies are as follows (taken from our Regulatory Accounts):

**(i) Tangible fixed assets**

Assets in operational use are valued at the replacement cost of their operating capability. To the extent that the regulatory regime does not allow such assets to earn a return high enough to justify that value, no adjustment is made in arriving at the replacement cost. No provision is made for the possible funding of future replacements of assets by contributions from third parties and, to the extent that some of those assets would on replacement be so funded, replacement cost again differs from value to the business. Redundant assets are valued at their recoverable amounts.

A process of continuing refinement of the Asset Management Plan (AMP), based on serviceability, will result in adjustments to the existing valuation of assets at the end of the regulatory review period. In intervening years, values are restated to take account of changes in the general level of inflation as measured by changes in the Retail Price Index (RPI) over the year.

**• Land and Buildings**

Non-specialised operational properties are valued on the basis of open market value for existing use.

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Specialised operational properties are valued at the lower of depreciated replacement cost and recoverable amount.

- **Infrastructure assets**

Mains, sewers, impounding and pumped raw water storage reservoirs, dams, sludge pipelines and sea outfalls are valued at replacement cost determined principally on the basis of data provided by the AMP.

- **Other fixed assets**

All other fixed assets are valued periodically at depreciated replacement cost.

- **Surplus land**

Surplus land is valued at recoverable amount taking into account that part of any proceeds to be passed on to customers under Condition B of the Licence.

- **Grants and contributions**

Grants and contributions are revalued to take account of changes in the general level of inflation as measured by changes in the RPI over the year.

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**Tables B7.4 & 7.6 – Depreciation on Fixed Asset Additions (Enhancements)**

These tables analyse the AMP4 and AMP5 capital programme into asset life categories. The sum of each year adds to 100%.

Optional and selective meters have an asset life of 15 years (see Table B7.9) so have been classified as 100% short life.

The asset life bands defined by the Ofwat guidance have been used in making these apportionments.

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**Table B7.7 Historic cost depreciation and amortisation**

This data is unchanged from the DBP table.

The projection of historic cost depreciation on assets existing at 31 March 2008 has been generated from the Oracle Assets register, the same system that is used to produce the depreciation charge for statutory and regulatory reporting on an annual basis. No change has been made to either asset lives or residual lives of assets. An adjustment has been made to add assets completed but not yet commissioned into the system at the end of March.

A further adjustment has been made to reflect the future depreciation impact of construction in progress at 31 March 2008, ie. capital investment incurred but where the assets are not yet ready for use in the business, as required by Ofwat's guidance. The additional annual depreciation resulting from this adjustment peaks at £10.7m in year 2010-11, before declining as short-life assets reach the end of their useful lives. The construction in progress adjustment made on HC depreciation in table B7.7 is consistent with the construction in progress adjustment made on current cost depreciation in tables B7.3 and B7.5.

Historical cost depreciation has been shown net of the amortisation of grants and contributions.

The same asset lives have been applied in the calculation of both historic cost and current cost depreciation.

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**Table B7.8 Grants and Contributions: amortisation**

The input data for this table is unchanged from the DBP table

Sections A & D – Amortisation of existing grants and contributions by service.

The projection of amortisation of grants and contributions existing at 31 March 2008 comprises two elements; the non-infrastructure element of infrastructure connection charges and all other non-infrastructure contributions.

The amortisation of the non infrastructure element of infrastructure connection charges has been projected on a consistent basis to that applied in the regulatory accounts. This is calculated outside of Oracle Assets.

The amortisation of other non infrastructure grants and contributions has been generated from the Oracle Assets system. As with depreciation above, this has been adjusted to reflect contributions received but not commissioned at 31 March 2008.

Sections B & E – Allocation of new contributions - Enhancement by service

Due to Ofwat's exclusion of the capex and contributions for new connections from the business plan, the non infrastructure part of these contributions no longer apply. Hence, as the remaining new development capex is fully infrastructure, we anticipate 100% of the contributions being classed as such also.

Sections C & F – Allocation of new contributions - Base by service

The percentage allocations of new contributions have been estimated based upon historic data reported in table 34 of the June Return, showing additions of assets from 2000/01 to 2007/08 allocated across base and enhancement by service and by average life category corresponding to Table B7.8. This is the same methodology used to allocate infrastructure connection charge income in our regulatory and statutory accounts and has been audited by our financial auditors.

Note – NWL is not forecasting any base service capex contributions beyond 2007/08, so these allocations are not relevant.



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### Table B7.9 Depreciation of assets, non-infrastructure asset lives

For the FBP, we have not changed our asset lives from those assumed in PR04 (and applied in all June Returns since then).

We have carried out a review of our asset lives and found that there is no reason to change them.

NWL has over 5,400 asset types in our fixed asset register, each with their own individually allotted asset lives. Hence, the 38 entries in this table cannot represent the full complexity of our asset life process, so should only be used for broad comparisons with the rest of the industry. They should not be used to calculate CCD, as the information is not detailed enough to do so.

#### Approach

For PR09, the approach has been to undertake a simple asset life calculation for each line item. Where there is only a small range of asset lives for a particular line, the most common asset life for that range has been selected. Where a line comprises a wide range of asset lives, a simple average has been used – no weighting has been applied.

The following sections identify the types of assets and the ranges of asset lives that have been included in the preparation of table B7.9.

### Water service

#### A Operational assets - structures

<b>Structures, intake works</b>	Life (years)
Comprises the intake structure only	92

<b>Structures, boreholes</b>	Life (years)
Comprises the borehole shaft & chamber	80

<b>Structures, water treatment works</b>	Life (years)
Comprises: -	66
BUILDINGS	
CONCRETE TANKS	
CHAMBERS	
BELOW GROUND PIPEWORK	
CONCRETE CHANNELS	

<b>Structures, pumping stations</b>	Life (years)
Comprises: -	66
BUILDINGS	
CHAMBERS	
CHANNELS	
PIPEWORK	

<b>Structures, service reservoirs</b>	Life (years)
Comprises: -	92
TANKS	
CHAMBERS	

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## PIPEWORK

<b>Structures, water towers</b>	Life (years)
Comprises: -	92
TANKS	
CHAMBERS	
PIPEWORK	

**Structures, other estimated**

Comprises: -	Life (years)
ACCESS COVER	40
ACCESS LADDER	40
ACCESS STAIRS	40
ACCESS WALKWAY	40
MISC CHAMBERS	40
EARTHWORKS	70
FENCING	30
FLOORING	40
FOOTPATH	40
GATE	30
GROUND	40 - 70
HANDRAIL	40
HARD STANDING	40
PIPES	50 - 60
ROADS	40
WALLING	60 - 70

**Water service****B Operational assets - plant and machinery****Plant and machinery, process – water**

Comprises: -	Life (years)
BLOWERS	33
GRP BUILDINGS	28
BUND	20
DOSING EQUIPMENT	15 - 20
ENCLOSURE	28
FILTER MEDIA	4 - 40
MIXERS	33 - 58
PENSTOCKS	40
PIPES	33
PLINTH	66
PUMP	20
SCREENS	33
TANKS	28
THICKENERS	38
VALVES	20

<b>Plants and machinery, pumping plant</b>	Life (years)
Comprises: -	44
PUMPS	

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Plant and machinery, other mechanical plant

Comprises: -

LIFTING EQUIPMENT

**Plant and machinery instrumentation** Life (years)

Comprises: -

15

Meters

Analysers

Switches

Sensors

Transmitters

Transducers

Monitors

Detectors

**Plant and machinery, control and automation**

Comprises: -

Life (years)

ACTUATORS

20

MAINS INCOMER

28

MOTOR CONTROL CENTRE

24

DISTRIBUTION BOARDS

24

**Plant and machinery, other**

Comprises: -

Life (years)

CABLE SERVICES

28

CABLING

20

HEATING

24

LIGHTING - EXTERNAL

15 - 24

LIGHTING - INTERNAL

24

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**Sewerage service****C Operational assets - structures**

<b>Structures, sewage treatment works</b>	Life (years)
Comprises: -	53
TANKS	
CHAMBERS	
CHANNELS	
PIPEWORK	

<b>Structures, in line pumping stations</b>	Life (years)
Comprises: -	53
TANKS	
CHAMBERS	
CHANNELS	
PIPEWORK	

<b>Structures, terminal pumping stations</b>	Life (years)
Comprises: -	53
TANKS	
CHAMBERS	
CHANNELS	
PIPEWORK	

<b>Structures, other</b>	
Comprises: -	Life (years)
ACCESS COVER	40
ACCESS LADDER	40
ACCESS STAIRS	40
ACCESS WALKWAY	40
MISC CHAMBERS	40
EARTHWORKS	70
FENCING	30
FLOORING	40
FOOTPATH	40
GATE	30
GROUNDS	40 - 70
HANDRAIL	40
HARD STANDING	40
PIPES	50 - 60
ROADS	40
WALLING	60 - 70

**Sewerage service****D Operational assets - plant and machinery**

Plant and machinery, process plant sewage	
Comprises: -	Life (years)
AERATOR	34
BLOWERS	34
BULK SOLIDS	20

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BUND	20
COMPACTOR	20
COMPRESSORS	34
CONVEYORS	20 - 34
DISTRIBUTION ARMS	34
DOSING EQUIPMENT	15 - 20
DRYERS	34
FILTER MEDIA	20
FLOW CONTROL	40 - 53
MIXERS	33 - 53
PENSTOCK	40
PIPES	20 - 34
PLINTH	40
PRESSURE VESSEL	20 - 34
PUMP	20
SCRAPERS	34
SCREENS	20 - 25
SCRUBBER	20 - 34
GRP TANK COVER	28
MECHANICAL TANKS	28 - 40
THICKENERS	34
VALVES	20

**Plant and machinery, process plant – sludge**

Comprises: -	Life (years)
AERATOR	20
BUND	20
CONVEYORS	20
DEWATERING EQUIPMENT	20
MIXERS	20
PENSTOCK	40
PIPES	40
PLINTH	53
PRESS	34
PUMP	20
SCREENS	20
TANK COVER	28
TANKS	40
THICKENERS	20
VALVE	20

**Plant and machinery, pumping plant** Life (years)

Comprises: -	20
PUMPS	

**Plant and machinery, other mechanical plant** Life (years)

Comprises: -	34
LIFTING EQUIPMENT	

**Plant and machinery, instrumentation** Life (years)

Comprises: -	15
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METERS  
 ANALYSERS  
 SWITCHES  
 SENSORS  
 TRANSMITTERS  
 TRANSDUCERS  
 MONITORS  
 DETECTORS

**Plant and machinery, control and automation**

Comprises: -	Life (years)
ACTUATOR	20
CONTROL PANEL	15
DISTRIBUTION BOARD	24
MAINS INCOMER	24
MOTOR CONTROL CENTRE	24

**Plant and machinery, other**

Comprises: -	Life (years)
AIR AND GAS EXTRACTION	34
HEATING	24
LIGHTING - PROCESS	5
SAFETY EQUIPMENT	20
LIGHTING	24

**Water and sewerage service****E Operational assets - structures****Structures, offices and laboratories** Life (years)

Comprises: -	62
BUILDING STRUCTURES	

**Structures depots and workshops** Life (years)

Comprises: -	62
BUILDING STRUCTURES	

**Structures, other - asset life**

Comprises: -	Life (years)
ACCESS COVER	40
ACCESS LADDER	40
ACCESS STAIRS	40
ACCESS WALKWAY	40
MISC CHAMBERS	40
EARTHWORKS	70
FENCING	30
FLOORING	40
FOOTPATH	40
GATE	30
GROUNDS	40 - 70
HANDRAIL	40
HARD STANDING	40

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PIPES	50 - 60
ROADS	40
WALLING	60 - 70

**Water and sewerage service****F Other tangible assets****Other tangible assets, telemetry systems**

Comprises: -	Life (years)
RADIO	8 - 15
REGIONAL TELEMETRY	4 - 15
TELEMETRY SCADA GPS	15

**Other tangible assets, computers (PC)**

Comprises: -	Life (years)
PC - DESKTOP	4
PC – HANDHELD	5
PC - LAPTOP	3
WORKS MANAGEMENT PDA	3

**Other tangible assets, computers (mainframe)**

Comprises: -	Life (years)
DATA CENTRE HARDWARE	4 - 7
TELECOMS DATA NETWORK	5
TELECOMS PRIVATE CIRCUIT	5
TELEPHONE SYSTEM	5
VOICEMAIL	7
WINDOWS SERVERS	4

**Other tangible assets, computers (software)**

Comprises: -	Life (years)
DATA CENTRE SOFTWARE	2 – 20
MODEM	4
SOFTWARE CORPORATE APPS	2 - 20
SOFTWARE DESKTOP	5 - 10
SOFTWARE INFRASTRUCTURE	4 - 20
TOKENS	3

**Other tangible assets, cars and light vehicles**

Comprises: -	Life (years)
4X4	5
VEHICLES - CAR	5
VEHICLES – CDV	5
VEHICLES - LV	7

**Other tangible assets, lorries/pick ups**

Comprises: -	Life (years)
VEHICLES - MV	7

**Other tangible assets, light mobile plant**

Comprises: -	Life (years)
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VEHICLES - TRAILER 7

**Other tangible assets, heavy mobile plant**

Comprises: - Life (years)

VEHICLES – EXCAVATORS 7

VEHICLES – HEAVY GOODS 7

VEHICLES - TANKERS 7

**Household meters** Life (years)

Comprises: - 15

REVENUE METERS

**Non-household meters** Life (years)

Comprises: - 20

DISTRICT METERS

STRATEGIC METERS

**Other tangible assets, other**

Comprises: - Life (years)

ACCESS CONTROL SYSTEM 15

AIR CONDITIONING 20

ALARM 15

CAMERA 5

CAMERA - CCTV 5 - 15

JETTY 60

KITCHEN EQUIPMENT 5 - 20

LABORATORY EQUIPMENT 7

MOBILE PHONE 3 - 7

OFFICE EQUIPMENT 4 - 5

OFFICE FURNITURE 5 - 10

PLOTTER 5

PRINTER 5

RECREATION 5 - 40

RETAIL EQUIPMENT 5

SAFETY EQUIPMENT 10 - 20

SIGNAGE 20

VIDEO CONFERENCING 5 - 10

VENDING EQUIPMENT 5

VENTILATION/AIR CONDITIONING 15



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**Tables B7.10 and B7.11 Comparison of CCD and MNI expenditure for the period 1997-98 to 2009-10****Reconciliation of Data**

The following reconciliations of data have been carried out:

**Reconciliation 1:** Line 1 equals line 2

MNI pre efficiency equals MNI post efficiency. This is because we have assumed a score of 100 in our CIS ratio.

**Note – this test does not work in the ICS due to the problems acknowledged by Ofwat in Query response FBP075.**

**Reconciliation 2:** Line 3 plus Line 8 plus Line 21 = Line 22

CCD on the 1997-98 asset base PLUS CCD on MNI expenditure on enhancements after 1<sup>st</sup> April 1998 plus CCD on enhancement at 31 March 1998 plus CCD on (all) MNI after 1<sup>st</sup> April 1998.

Although line 3 is CCD pre efficiency and line 22 is post efficiency, as NWL is assuming zero efficiency for the FBP, this reconciliation holds.

**Note – this test does not work in the ICS due to the problems acknowledged by Ofwat in Query response FBP075.**

**Reconciliation 3:** Line 22 equals Table B7.3 Line 25 plus Table B7.5 Line 25.

For all years from 2007/08 onwards, total CCD per Line 22 must equal the total of separate water / sewerage CCD from Table B7.3 & 7.5.

**Reconciliation 4:** From 1997/98 to 2007/08, all data in lines 19, 20 and 21 are consistent with past June Returns (specifically Table 33).

**Line 1: MNI Expenditure (excluding future efficiency)**

This line is taken from past June Returns (Table 35 & 36) up to 2007/08. From that point on it is taken from Tables B3.6 and B3.8 (pre efficiency).

**Line 2: total MNI for adjustment**

As NWL has chosen a 100 score in the CIS, this line is the same as line 1

**Line 3: Total CCD on the 1997-98 Asset Base**

Up to 2007/08, this line is taken from past June Returns (Table 33) with a deduction to exclude CCD on MNI on enhancements post 1998 (line 8).

From 2008/09 onwards, it is calculated as the sum of Lines 19 & 20 (CCD on assets existing at March 1998 plus CCD on MNI since then. Due to the way Line 20 has

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been calculated ('steady state like for like replacement'), this figure remains constant from 2008/09 onwards.

### Line 5: CCD on assets not replaced in period

Of the assets existing at 31/3/98, there are a significant number that still exist (unreplaced) as at 31/3/2025. These assets are clearly long life assets (asset lives of at least 30 years). The CCD on these assets is an annual **£22.765m** (as per the 2024/25 CCD on line 19). This compares to a value of over £17m pa in the PR04 FBP. It has increased because Ofwat brought forward the starting date for Broad Equivalence from 1992 to 1998 (long life assets built between these years now straddle the Broad Equivalence period).

For a correct broad equivalence calculation, the CCD on these assets must be excluded (as they have not been replaced in the BE period and hence have no associated MNI expenditure).

An analysis of these long life assets (taken from our revalued fixed asset register) reveals:

	£m CCD
Sewage Treatment works	7.2
Water treatment works	5.8
Service Reservoirs	5.1
Balancing Tanks	0.5
Buildings	0.8
CSO	0.1
Conservation	0.6
Raw PS	0.5
Sludge	0.1
SPS	1.5
Water Towers	0.2
WPS	0.3
	<u>22.8</u>

Thus, Sewage Treatment Works (£7.2m), Water Treatment Works (£5.8m) and Service Reservoirs (£5.1m) make up 80% of this value. Each of these clearly has long life assets within them. For example, Service Reservoirs typically have a 92 year life, and our asset register shows 292 were built in the period 1933 to 1998 (and hence straddle the 1998-2025 period). This is out of a total of 342 service reservoirs owned by NWL.

The Water Treatment Works CCD of £5.8m is per below:

Straddling assets CCD Location description	Water Treatment Works
Allenheads WTWS	2,567
Barsham Bores WTWS	50,588
Barsham River WTWS	200,994

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Bedingfield WTWS	21,391
Benhall WTWS	53,406
Broome WTWS	15,925
Byrness WTW	3,347
Carrshield WTW Currick Springs	2,135
Chigwell WTWS	690,093
Coldfair Green WTWS	17,187
Dagenham Well WTWS	22,335
Dalton Le Dale WTW	11,373
Darlington Broken Scar WTW	117,399
Easington WTW Thorpe Output	6,601
Eastington WTW Thorpe Output	32,922
Fontburn WTW	304,186
Fowberry WTW	13,631
Gunnerton WTW	154,694
Halesworth WTWS	9,425
Hanningfield WTWS	123,310
Hawthorn WTW	15,576
Holton WTW	23,168
Holton WTWS	7,264
Honey Hill WTW	190,394
Horsley WTW	487,084
Langford WTWS	279,974
Langham WTWS	306,289
Lartington WTW	447,037
Linford Well WTW	79,305
Lound WTWS	213,108
Lumley WTW	154,696
Mendlesham WTWS	429
Mosswood WTWS	392,528
Murton WTW	83,979
New Winning WTW	16,753
North Dalton WTW	37,528
Ormesby WTWS	248,881
Otterburn WTW	3,347
Parham WTWS	429
Peterlee WTW	35,702
Plenmeller WTW Birchtrees	20,015
Rickinghall WTWS	429
Rochester WTW	3,347
Roding Well WTWS	23,949
Saxmundham WTWS	2,803
Slaggyford WTW	2,962
Southwold WTWS	9,992
Stifford Well WTWS	46,096
Stonehaugh WTW	1,844
Stoneygate WTW	43,943
Walpole WTWS	2,266
Warkworth WTW	313,976
Whittle Dene WTW	498,406
Grand Total	<u>5,847,009</u>

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## Chapter B7-2: MEAV &amp; Depreciation

Of the £7.2m CCD on STWs, £4.7m is analysed as follows:

The Sewage Treatment Works CCD includes:

Straddling Assets CCD Location description	<b>Band 4 Sewage Treatment Works</b>
Belmont STW	98,064
Berwick Upon Tweed STW East	
Ord Farm	146,572
Bishop Auckland STW Vinovium	222,877
Cambois STW	223,394
Chester Le Street STW	124,914
Consett STW	158,992
Cramlington STW	275,935
Darlington STW Stressholme	244,274
East Tanfield STW	42,844
Hexham STW	100,003
High Grange STW Low Wadsworth	184,073
Hustledown STW	137,180
Windlestone STW	123,169
Howdon STW	1,459,050
Grand Total	3,451,341

Straddling Assets CCD Location description	<b>Tertiary STW</b>
Aycliffe STW	330,450
Crookhall STW	53,026
Edmondsley STW	3,356
Gainford STW	2,399
Garrigill STW	1,989
Longhorsley STW	29,023
Marske STW	388,140
Sadberge STW	23,208
Sedgeleth STW	292,056
Winston STW	1,754
Witton Gilbert STW	84,448
Grand Total	1,209,848

The remainder is CCD on STW's size banded 1-3.

Note 1 – as these figures are taken from the revalued asset register, we have reduced them by the 10% confidence grade adjustment as per the total GMEAV and CCD figures.

Note 2 – we have further reduced this figure pre 2008/09 to reflect the fact that the JR CCD figures were pre revaluation, so to keep the pre 08/09 adjustment on the same terms as the JR CCD, we reduced the Line 5 CCD by the revaluation uplift (9% reduction).

## Chapter B7-2: MEAV & Depreciation

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### Line 8: CCD on MNI on Enhancements (after 1997/98)

This has been derived from the MNI on enhancements post 1998 shown in Line 12. The asset lives used are consistent with the June Return Table 34 or with the other FBP tables.

We have uplifted this CCD figure by the GMEAV/CCD revaluation uplift percentage (9%) from 2008/09 onwards, although this is not a material effect.

### Line 9: Other (1) – The Revaluation Blip

As per the PR04 submission, we have included an adjustment for a ‘revaluation blip’ in the level of CCD in 1997/98. This relates to the final year of a temporary revaluation carried out in 1995/96 and wound out in 1997/98.

Extracted from the 2004 FBP (page 23, Part B7.2)

'02/3 prices	<b>94/5</b>	<b>95/6</b>	<b>96/7</b>	<b>97/8</b>	<b>98/9</b>
JR CCD	58.6	80.2	80.5	84.7	73.1
FD CCD	n/a	62.3	66.7	71.4	76.1
Difference		<b>18.1</b>	<b>13.8</b>	<b>13.3</b>	(3.0)

For PR09, it is only the 1997/98 figure that matters – with the JR98 CCD figure overstated by up to £13.3m (**£15.63m** in 07/08 prices).

This adjustment was accepted by Ofwat in PR04 and the value and reasoning is the same.

Note – given that the broad equivalence period applies to assets existing at 31/3/98 (i.e it applies from 1<sup>st</sup> April 1998 onwards), we do not understand why Ofwat does not start the calculation from 1998/99 CCD and MNI levels. The CCD and MNI for 1997/98 is not relevant for this calculation and should not be used.

### Line 12: MNI Expenditure on Enhancements (after 1997/98)

This table is derived from past June Return data showing the capex on enhancements and its associated life. We have also included MNI on very short life enhancement capex in AMP5. From this a profile of MNI replacement can be derived. The 27 year time period means that only very short and short life assets are replaced before the medium life enhancement assets start to be replaced in 2023/24 onwards.

### Line 19: CCD on Assets existing at 31 March 1998

This line is taken from past June Returns (Table 33) up to 2007/08. From 2008/09 onwards, this is taken from NWL’s fixed asset register. Note that it declines each year and that in 2024/25, the CCD figure is for assets that effectively straddle the period and hence must be removed from the comparison – via line 5.

### Line 20: CCD on MNI expenditure after 1 April 1998

This line is taken from past June Returns (Table 33) up to 2007/08. From this point,

**Chapter B7-2: MEAV & Depreciation**

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this increases by the amount that line 19 decreases – on the assumption that CCD on 1998 assets is steady state – i.e. assets are replaced on a like for like basis. Hence lines 19 & 20 add to a constant figure and are equal to Line 3.

**Line 21: CCD on Enhancement expenditure after 1<sup>st</sup> April 1998**

This line is taken from past June Returns (Table 33) up to 2007/08. From this point, it becomes a balancing figure to match the total CCD charge from Tables B7.3 & 7.5. As such, it includes the CCD on MNI on post 1998 enhancements, as instructed by Ofwat in FBP query NES FBP 007.

**Line 22: Total CCD Charge**

This equals the total CCD charge from Tables B7.3 & B7.5 (Line 25).

**Results**

Line 4 (difference between MNI and CCD on the 1997/98 asset base) shows that overall, there is a small deficit of MNI over CCD. The NPV of this excess is £22m. The deficit becomes a significant excess with an NPV of £251m once the explained differences are taken into account.

Thus, the CCD levels in the FBP pass the Broad Equivalence check by a wide margin. Indeed, were the check symmetrical, it would adjust the CCD upwards.

We estimate that a further increase in CCD of over £40m would be required to turn this excess into a deficit (and thus generate a Broad Equivalence cut).

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[For Table B7.12 Taxation – See Section B7.3]

**Tables B7.13 and 7.14 Modern Equivalent Asset Valuation**

All the Gross and Net MEA values match those quoted in the Asset Inventory Tables C3.1 and C3.3.

**APPROACH**

The following approach as been used to calculate both B7.13 and B7.14

PR09 GBV & NBV

An output file has been created for each type of location by exporting data from the new MEAV Register using the corporate data warehouse tool. An example of the Outstation warehouse report is included below.

	Asset tag	Asset name	Unit No	Asset No	Infrast
> 1	OUTS-BEAHBR-Radio Basestation Large-1-29	Radio Basestation Large	1	29	
> 2	OUTS-BHOUS4-Radio Basestation Large-1-10	Radio Basestation Large	1	10	
> 3	OUTS-BIRT10-Radio Basestation Large-1-16	Radio Basestation Large	1	16	
> 4	OUTS-BRANSE-Radio Basestation Large-1-9	Radio Basestation Large	1	9	
> 5	OUTS-CHAT4-Radio Basestation Large-1-8	Radio Basestation Large	1	8	
> 6	OUTS-DOWNH1-Radio Basestation Large-1-7	Radio Basestation Large	1	7	
> 7	OUTS-FRETO1-Radio Basestation Small-1-5	Radio Basestation Small	1	5	
> 8	OUTS-FRETO1-Radio Basestation Small-1-4	Radio Basestation Small	1	4	
> 9	OUTS-FRETO1-Radio Basestation Small-1-6	Radio Basestation Small	1	6	
> 10	OUTS-HANMSE-Radio Basestation Small-1-3	Radio Basestation Small	1	3	
> 11	OUTS-HANMSE-Radio Basestation Small-1-1	Radio Basestation Small	1	1	
> 12	OUTS-HANMSE-Radio Basestation Small-1-2	Radio Basestation Small	1	2	
> 13	OUTS-HENBR2-Radio Basestation Large-1-28	Radio Basestation Large	1	28	
> 14	OUTS-HENHBR-Radio Basestation Large-1-27	Radio Basestation Large	1	27	
> 15	OUTS-HORSL4-Radio Basestation Large-1-26	Radio Basestation Large	1	26	
> 16	OUTS-MILLH1-Radio Basestation Large-1-25	Radio Basestation Large	1	25	
> 17	OUTS-MOSSBR-Radio Basestation Large-1-24	Radio Basestation Large	1	24	
> 18	OUTS-PLENBR-Radio Basestation Large-1-23	Radio Basestation Large	1	23	
> 19	OUTS-PONTBR-Radio Basestation Large-1-22	Radio Basestation Large	1	22	
> 20	OUTS-SHATO1-Radio Basestation Small-1-20	Radio Basestation Small	1	20	
> 21	OUTS-SHATO1-Radio Basestation Small-1-21	Radio Basestation Small	1	21	
> 22	OUTS-SHATO1-Radio Basestation Small-1-19	Radio Basestation Small	1	19	
> 23	OUTS-SHEBR2-Radio Basestation Large-1-18	Radio Basestation Large	1	18	
> 24	OUTS-SHEHBR-Radio Basestation Large-1-17	Radio Basestation Large	1	17	
> 25	OUTS-SPHLBR-Radio Basestation Large-1-15	Radio Basestation Large	1	15	
> 26	OUTS-STANBR-Radio Basestation Large-1-14	Radio Basestation Large	1	14	

Each of these has then been saved onto an excel spreadsheet. The same outstation example is shown below in spreadsheet format: -

Chapter B7-2: MEAV & Depreciation

1	Loc Cla	Location na	Location description	Asset tag	Asset name	Asset cc	Unit	Asset	nfr
2	OUTS	BEAHBR	Beacon Hill Basestation Radio	OUTS-BEAHBR-Radio Basestation Large-1-29	Radio Basestation Large	BASST	1	29	N
3	OUTS	BHOUS4	Blackhouse WTW (Ladlewells)	OUTS-BHOUS4-Radio Basestation Large-1-10	Radio Basestation Large	BASST	1	10	N
4	OUTS	BIRT10	Birtley SR (Carrycoats)	OUTS-BIRT10-Radio Basestation Large-1-16	Radio Basestation Large	BASST	1	16	N
5	OUTS	BRANSE	Bran Sands STW	OUTS-BRANSE-Radio Basestation Large-1-9	Radio Basestation Large	BASST	1	9	N
6	OUTS	CHATT4	Chatton STW	OUTS-CHATT4-Radio Basestation Large-1-8	Radio Basestation Large	BASST	1	8	N
7	OUTS	DOWNH1	Downhill SR No 1	OUTS-DOWNH1-Radio Basestation Large-1-7	Radio Basestation Large	BASST	1	7	N
8	OUTS	HENBR2	Hebron Hill 2 Basestation Radio	OUTS-HENBR2-Radio Basestation Large-1-28	Radio Basestation Large	BASST	1	28	N
9	OUTS	HENHBR	Hebron Hill 1 Basestation Radio	OUTS-HENHBR-Radio Basestation Large-1-27	Radio Basestation Large	BASST	1	27	N
10	OUTS	HORSL4	Horsley WTW	OUTS-HORSL4-Radio Basestation Large-1-26	Radio Basestation Large	BASST	1	26	N
11	OUTS	MILLH1	Mill Hill SR No 1	OUTS-MILLH1-Radio Basestation Large-1-25	Radio Basestation Large	BASST	1	25	N
12	OUTS	MOSSBR	Moss Mire Basestation Radio	OUTS-MOSSBR-Radio Basestation Large-1-24	Radio Basestation Large	BASST	1	24	N
13	OUTS	PLENBR	Plenmeller Basestation Radio	OUTS-PLENBR-Radio Basestation Large-1-23	Radio Basestation Large	BASST	1	23	N
14	OUTS	PONTBR	Pontop Pike Basestation Radio	OUTS-PONTBR-Radio Basestation Large-1-22	Radio Basestation Large	BASST	1	22	N
15	OUTS	SHEBR2	Sheriff Hill 2 Basestation Radio	OUTS-SHEBR2-Radio Basestation Large-1-18	Radio Basestation Large	BASST	1	18	N
16	OUTS	SHEHBR	Sheriff Hill 1 Basestation Radio	OUTS-SHEHBR-Radio Basestation Large-1-17	Radio Basestation Large	BASST	1	17	N
17	OUTS	SPHLBR	Spring Hill Basestation Radio	OUTS-SPHLBR-Radio Basestation Large-1-15	Radio Basestation Large	BASST	1	15	N
18	OUTS	STANBR	Stanghow Basestation Radio	OUTS-STANBR-Radio Basestation Large-1-14	Radio Basestation Large	BASST	1	14	N
19	OUTS	THRN18	Thornaby Office Trenchard Avenue	OUTS-THRN18-Radio Basestation Large-1-12	Radio Basestation Large	BASST	1	12	N
20	OUTS	THRN18	Thornaby Office Trenchard Avenue	OUTS-THRN18-Radio Basestation Large-1-13	Radio Basestation Large	BASST	1	13	N
21	OUTS	TOWLBR	Tow Law Basestation Radio	OUTS-TOWLBR-Radio Basestation Large-1-11	Radio Basestation Large	BASST	1	11	N
22	OUTS	FRETO1	Fressingfield Tower	OUTS-FRETO1-Radio Basestation Small-1-4	Radio Basestation Small	BASST	1	4	N
23	OUTS	FRETO1	Fressingfield Tower	OUTS-FRETO1-Radio Basestation Small-1-6	Radio Basestation Small	BASST	1	6	N
24	OUTS	FRETO1	Fressingfield Tower	OUTS-FRETO1-Radio Basestation Small-1-5	Radio Basestation Small	BASST	1	5	N
25	OUTS	HANMSE	Hanningfield STW (Middlemead)	OUTS-HANMSE-Radio Basestation Small-1-3	Radio Basestation Small	BASST	1	3	N
26	OUTS	HANMSE	Hanningfield STW (Middlemead)	OUTS-HANMSE-Radio Basestation Small-1-2	Radio Basestation Small	BASST	1	2	N
27	OUTS	HANMSE	Hanningfield STW (Middlemead)	OUTS-HANMSE-Radio Basestation Small-1-1	Radio Basestation Small	BASST	1	1	N
28	OUTS	SHATO1	Shadingfield Tower	OUTS-SHATO1-Radio Basestation Small-1-19	Radio Basestation Small	BASST	1	19	N
29	OUTS	SHATO1	Shadingfield Tower	OUTS-SHATO1-Radio Basestation Small-1-21	Radio Basestation Small	BASST	1	21	N
30	OUTS	SHATO1	Shadingfield Tower	OUTS-SHATO1-Radio Basestation Small-1-20	Radio Basestation Small	BASST	1	20	N
31									
32									
33									
34									
35									

The Gross Book Value has been simply calculated by summing the appropriate columns on the spreadsheet as follows: -



Chapter B7-2: MEAV & Depreciation

	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
	Installation d	Pricing multipl	Guideline I	Residual I	A	Conditio	GBV	Current Yr C	Annual C	Acc CC	NBV	Trade	Asset
1	03/02/97	1	96	12	132		34,397	2,872	2,864	31,768	2,629	Instrumentation	761082
2	03/02/06	1	96	36	24		34,397	6,894	6,876	14,335	20,062	Instrumentation	761083
3	03/02/06	1	96	36	24		34,397	6,894	6,876	14,335	20,062	Instrumentation	761084
4	03/02/07	1	96	48	12		34,397	6,891	6,872	7,456	26,941	Instrumentation	761085
5	03/02/06	1	96	36	24		34,397	6,894	6,876	14,335	20,062	Instrumentation	761086
6	03/02/06	1	96	36	24		34,397	6,894	6,876	14,335	20,062	Instrumentation	761087
7	03/02/07	1	96	48	12		34,397	6,891	6,872	7,456	26,941	Instrumentation	761094
8	03/02/07	1	96	48	12		34,397	6,891	6,872	7,456	26,941	Instrumentation	761095
9	03/02/07	1	96	48	12		34,397	6,891	6,872	7,456	26,941	Instrumentation	761096
10	03/02/06	1	96	36	24		34,397	6,894	6,876	14,335	20,062	Instrumentation	761097
11	03/02/05	1	96	24	36		34,397	6,894	6,876	21,211	13,186	Instrumentation	761098
12	03/02/06	1	96	36	24		34,397	6,894	6,876	14,335	20,062	Instrumentation	761099
13	03/02/05	1	96	24	36		34,397	6,894	6,876	21,211	13,186	Instrumentation	761100
14	06/17/95	1	96	12	153		34,397	2,507	2,500	32,000	2,397	Instrumentation	761104
15	06/17/95	1	96	12	153		34,397	2,507	2,500	32,000	2,397	Instrumentation	761105
16	03/02/97	1	96	12	132		34,397	2,872	2,864	31,768	2,629	Instrumentation	761106
17	03/02/05	1	96	24	36		34,397	6,894	6,876	21,211	13,186	Instrumentation	761107
18	03/02/05	1	96	24	36		34,397	6,894	6,876	21,211	13,186	Instrumentation	761108
19	03/02/05	1	96	24	36		34,397	6,894	6,876	21,211	13,186	Instrumentation	761109
20	03/02/05	1	96	24	36		34,397	6,894	6,876	21,211	13,186	Instrumentation	761110
21	05/31/05	1	96	24	34		5,291	1,097	1,094	3,106	2,185	Instrumentation	761088
22	05/31/05	1	96	24	34		5,291	1,097	1,094	3,106	2,185	Instrumentation	761090
23	05/31/05	1	96	24	34		5,291	1,097	1,094	3,106	2,185	Instrumentation	761089
24	03/02/06	1	96	36	24		5,291	1,061	1,058	2,205	3,086	Instrumentation	761093
25	03/02/06	1	96	36	24		5,291	1,061	1,058	2,205	3,086	Instrumentation	761092
26	03/02/06	1	96	36	24		5,291	1,061	1,058	2,205	3,086	Instrumentation	761091
27	05/31/05	1	96	36	34		5,291	909	907	2,573	2,718	Instrumentation	761101
28	05/31/05	1	96	36	34		5,291	909	907	2,573	2,718	Instrumentation	761103
29	05/31/05	1	96	36	34		5,291	909	907	2,573	2,718	Instrumentation	761102
30													
31							735,559				341,272		
32													
33													
34													
35													

Where the output sheet relates to a water or sewerage asset group, the following adjustment has been applied: -

A 10% reduction has been applied to the GBV, NBV and CCD of ALL Non Infrastructure asset groups. For further information as to the adjustment please refer to the start of B7 Section 2 commentary.

In addition, for Management and General Asset groups, the costs are further apportioned between water and sewerage as follows: -

Water            65%  
 Sewerage       35%

This proportional allocation uses the same approach taken for business as usual June Return analyses.

Using the outstation example, this is shown as follows: -

	Output File	10% Red'n	Water	Sewerage
Gross Book Value	735,559	662,003	430,302	231,701
Net Book Value	341,272	307,145	199,644	107,501

This can be seen on the business plan tables as follows: -

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Water

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Y21

	N	O	P	Q	R	S	T	U	V	Y	Z	AA
	EA due to a placement	Increase in MEA due to an increase in replacement cost		Other (please specify)		Revised MEA		Confidence grade assigned to revaluation				
	Net MEA £m	Gross MEA £m	Net MEA £m	Gross MEA £m	Net MEA £m	Gross MEA £m	Net MEA £m	Gross MEA £m	Net MEA £m			
8												
9												
10												
11	-15,944	96,142	96,142	31,57	31,57	849,500	849,500					
12	-17,359					267,205	267,205					
13												
14												
15												
16						1,544	0,594					
17		1,937				14,846	4,401					
18		20,388		0,001		62,742	26,180					
19		37,397				56,886	22,933					
20		79,779				814,128	420,819					
21												
22												
23		235,423		201,546		782,629	390,598					
24		1,977		0,028		22,848	10,290					
25												
26												
27		0,934		2,455		31,007	49,028					
28		24,14		10,257		57,335						
29		10,688		9,58		79,288	38,823					
30												
31		655,516	655,516			3,925,000	3,925,000					
32		152,871	152,871			920,000	920,000					
33		3,177	3,177			98,085	98,085					
34		2584,171	2584,171			3,169,974	3,169,974					
35		63,273		5,339		207,139	113,697					
36												
37												
38												
39		25,83				87,195	44,617					
40												
41		0,356				13,208	5,296					
42						0,431	0,200					
43				-6,817		46,483	22,537					
44						34,166	19,682					
45				33,167								
46												
47												

Ready

Chapter B7-2: MEAV & Depreciation

Sewerage

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	N	O	P	Q	R	S	T	U	V	Y	Z	AA	AE
8	MEAV due to a replacement	Increase in MEAV due to an increase in replacement cost	Other (please specify)	Revised MEAV		Confidence grade assigned to revaluation							
9	Net MEAV £m	Gross MEAV £m	Net MEAV £m	Gross MEAV £m	Net MEAV £m	Gross MEAV £m	Net MEAV £m	Gross MEAV £m	Net MEAV £m				
10													
11						1,597,770	1,597,770						
12						1,835,271	1,835,271						
13		132,729				238,242	238,242						
14													
15													
16						65,644	65,644						
17		28,465				32,133	32,133						
18													
19													
20		46,617		31,002		190,274	91,310						
21		8,609		17,712		38,272	20,460						
22													
23													
24													
25													
26		3,868		2,679		10,071	4,610						
27		208,915		15,171		933,263	566,127						
28		17,897				541,643	246,379						
29													
30													
31						22,033	22,033						
32						42,982	42,982						
33													
34													
35		0.502		47.879		49.786	49.005						
36		58.806		11.624		75.291	33.870						
37													
38													
39		1.074				168.405	110.135						
40													
41													
42		19.035				46.951	24.025						
43													
44		0.963				7.112	2.851						
45				-3.656		0.232	0.107						
46		0.596				25.029	12.135						
47						0.000	0.000						

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JR08 GBV & NBV

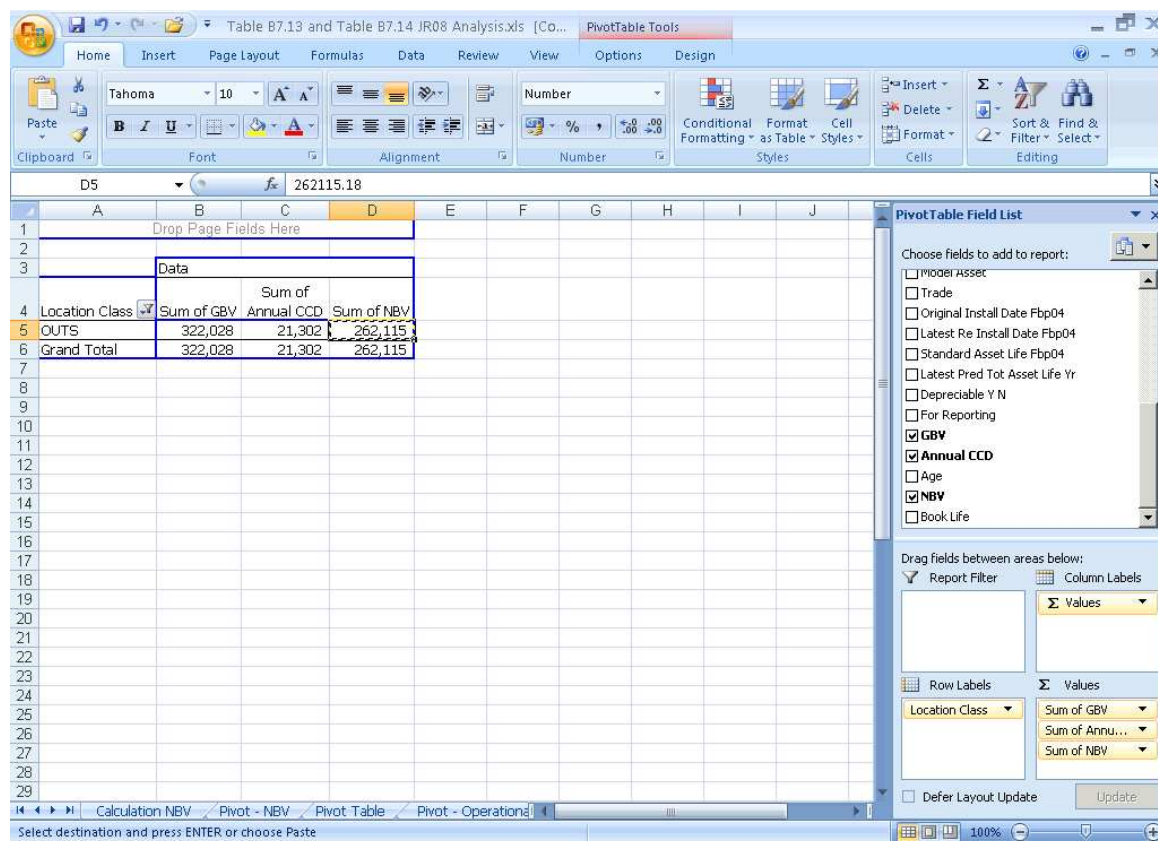
An output file has been created for each type of location by exporting data from the legacy MEAV Register using the corporate data warehouse tool. This has been saved onto a single excel spreadsheet. An example of the data from the legacy system for Outstations has been shown below: -

Asset Number	GI Location Description	Location Class	GI Location	Meav Location Gauge	Model Element	GBV	Annual CCD	Age	NBV	Book Life
17010	ME1042025 Eddy's Bridge Row Water Monitoring Station	OUTS	EDDYBR	OUTS	Health and Safety Work	3320.62	83.02	3	3011.56	40
17011	ME1042026 Eddy's Bridge Row Water Monitoring Station	OUTS	EDDYBR	OUTS	Health and Safety Work	683.55	17.24	3	637.83	40
17012	ME1063831 MGTG - unallocated assets	OUTS	000009	IS		21417.19	1427.61	1	19369.38	15
17013	ME1050802 Moss Mine Basestation Radio	OUTS	MOS3BR	OUTS	Contractual Staff Costs	356.84	23.79	3	285.47	15
17014	ME1050850 Moss Mine Basestation Radio	OUTS	MOS3BR	OUTS	Contractual Staff Costs	4562.33	304.2	3	3650.33	15
17015	ME1050803 Moss Mine Basestation Radio	OUTS	MOS3BR	OUTS	Contractual Staff Costs	3734.32	243.39	3	2997.35	15
17016	ME1050804 Moss Mine Basestation Radio	OUTS	MOS3BR	OUTS	Contractual Staff Costs	4192.31	273.49	3	3353.84	15
17017	ME1050805 Moss Mine Basestation Radio	OUTS	MOS3BR	OUTS	Contractual Staff Costs	1873.36	124.33	3	1499.17	15
17018	ME1050806 Moss Mine Basestation Radio	OUTS	MOS3BR	OUTS	Contractual Staff Costs	114.09	7.61	3	91.26	15
17019	ME1050807 Moss Mine Basestation Radio	OUTS	MOS3BR	OUTS	Radio	19778.35	1318.56	3	15822.67	15
17020	ME1050808 Moss Mine Basestation Radio	OUTS	MOS3BR	OUTS	Radio	5323.83	354.32	3	4259.07	15
17021	ME1049254 Not Applicable	OUTS	000000	OUTS	Radio	134.09	8.34	2	116.21	15
17022	ME1049263 Not Applicable	OUTS	000000	OUTS	Radio	1043.28	69.35	2	909.38	15
17023	ME1049273 Not Applicable	OUTS	000000	OUTS	Radio	40.11	2.67	2	34.77	15
17024	ME1049279 Not Applicable	OUTS	000000	OUTS	Radio	126.85	8.46	2	109.33	15
17025	ME1049297 Not Applicable	OUTS	000000	OUTS	Radio	327.6	21.84	2	283.92	15
17026	ME1049298 Not Applicable	OUTS	000000	OUTS	Radio	26.5	1.77	2	22.36	15
17027	ME1049274 Not Applicable	OUTS	000000	OUTS	Radio	327.19	21.61	2	283.57	15
17028	ME1049275 Not Applicable	OUTS	000000	OUTS	Radio	26.47	1.76	2	22.35	15
17029	ME1049276 Not Applicable	OUTS	000000	OUTS	Radio	133.85	8.32	2	116.01	15
17030	ME1049277 Not Applicable	OUTS	000000	OUTS	Radio	1047.33	69.86	2	908.21	15
17031	ME1049278 Not Applicable	OUTS	000000	OUTS	Radio	33.39	2.67	2	34.65	15
17032	ME1049291 Not Applicable	OUTS	000000	OUTS	Radio	126.7	8.45	2	109.8	15
17033	ME1049255 Not Applicable	OUTS	000000	OUTS	Radio	134.01	8.33	2	116.15	15
17034	ME1049264 Not Applicable	OUTS	000000	OUTS	Radio	1043.26	69.35	2	909.36	15
17035	ME1049280 Not Applicable	OUTS	000000	OUTS	Radio	126.85	8.46	2	109.33	15
17036	ME1049288 Not Applicable	OUTS	000000	OUTS	Radio	327.59	21.84	2	283.91	15

A pivot table has been run on the data to calculate the GBV and NBV for each asset group. This is shown as follows: -



Chapter B7-2: MEAV & Depreciation



The legacy MEAV Register does not include for any assets in work in progress at the 31<sup>st</sup> March 2008. Therefore the sum of the GBV and NBV from the MEAV Register does not balance with JR08 Table 25.

The balancing figures were calculated as follows: -

	Total
Table 25 - Water Service Operational Assets	1,746,797,763
JR08 Legacy MEAV Register – Water Service Operational Assets	<u>1,689,063,506</u>
Balance	<u>57,734,494</u>

This balance was then apportionally allocated to appropriate individual locations. This can be seen on the following spreadsheet.

Chapter B7-2: MEAV & Depreciation

Location name	Location description	JR08 MEAV	JR08 Overhead Balance Table 25	JR08 Revised Total	
13	ABBPS1	Abberton RWPS (Intake)	3,642,154	124,495	3,766,649
14	ACOMB7	Acomb WPS	112,708	3,853	116,561
15	ALDWL1	Aldeburgh Well	239,032	8,171	247,203
16	ALLD10	Allendale WPS		0	0
17	ALLD11	Allendale WPS Burn Tongues	211,890	7,243	219,133
18	ALLNH5	ALLENHEADS RESERVOIR		0	0
19	ALLERW	Allerwash WPS Booster	49,727	1,700	51,427
20	ALSTON	Alston WPS		0	0
21	ARPS1	Ardleigh RWPS (Intake)	2,228,459	76,172	2,304,631
22	AUKSDW	Aukside WPS	56,932	1,946	58,878
23	AYTONF	Ayton Frys WPS	84,558	2,890	87,448
24	BADBS1	Badingham WPS	136,083	4,652	140,735
25	BALLB	Ball Lane Borehole	509,382	17,412	526,794
26	BAMBB5	Bamburgh WPS (Castle)	45,914	1,569	47,483
27	BARN18	Barnard Castle WPS Rokeby Grange	32,083	1,097	33,180
28	BARRA2	Barrasford RWPS Swinburn	2,451,604	83,800	2,535,404
29	BAHBO1	Barsham Hall Borehole	281,068	9,607	290,675
30	BARBO1	Barsham Site Borehole No. 1	295,579	10,103	305,682
31	BARBO2	Barsham Site Borehole No. 2	292,530	9,999	302,529
32	BARPS1	Barsham TW PS No. 1	732,601	25,041	757,642
33	BARPS2	Barsham TW PS No. 2	699,480	23,909	723,389
34	BASBS1	Basildon WPS	665,171	22,737	687,908
35	BAYBRW	Baybridge WPS	156,475	5,349	161,824
36	BEACL3	Beacon Lough WPS Booster	427,821	14,624	442,445
37	BEAFRT	Beafront WPS	37,221	1,272	38,493
38	BEAUCW	Beauleerc WPS (Riding Hills)	55,563	1,899	57,462
39	BETBS1	Beccles Tower WPS	241,062	8,240	249,302
40	BEPSP1	Bedfords Park WPS	171,426	5,860	177,286
41	BEDBO1	Bedingfield Borehole No. 1	364,051	12,444	376,495
42	BEDBO2	Bedingfield Borehole No. 2	343,059	11,726	354,785
43	BEDPS1	Bedingfield TW PS	210,276	7,188	217,464
44	BEGBO1	Belaugh Grange Farm Borehole No. 1		0	0
45	BEGBO2	Belaugh Grange Farm Borehole No. 2	290,118	9,917	300,035
46	BELGNS1	Belaugh Grange Farm WPS	2,060,032	104,507	2,164,539

This process was repeated for the following areas: -

- Water Infrastructure Assets
- Water Other Tangible Assets
- Sewerage Operation Assets
- Sewerage Infrastructure Assets
- Sewerage Other Tangible Assets

The revised JR08 totals have then been included in tables B7.13 and B7.14

## Chapter B7-2: MEAV &amp; Depreciation

## Calculating the Movement between JR08 and PR09

## Gross Book Values

A comparison between JR08 and PR09 gross book values has been carried out on a location by location basis. This can be seen as follows: -

	A	B	I	J	M	N	O	P	Q
	Location name	Location description	Total PR09 MEAV	Adjusted PR09 MEAV	JR08 Revised Total	Variance	Increased MEAV	Decreased MEAV	Reason
13	ABBPS1	Abberton RWPS (Intake)	2,169,874	1,952,887	3,766,649	-1,813,762	0	-1,813,762	Reduced Revaluation
14	ACOMB7	Acomb WPS	205,249	184,724	116,561	68,164	68,164	0	Increased Revaluation
15	ALDWL1	Aldeburgh Well	227,128	204,415	247,203	-42,787	0	-42,787	Reduced Revaluation
16	ALLD10	Allendale WPS	215,419	193,877	0	193,877	193,877	0	Not Previously Included
17	ALLD11	Allendale WPS Burn Tongues	210,099	189,089	219,133	-30,044	0	-30,044	Reduced Revaluation
18	ALLNH5	ALLENHEADS RESERVOIR	187,981	169,183	0	169,183	169,183	0	Not Previously Included
19	ALLERW	Allerwash WPS Booster	215,419	193,877	51,427	142,450	142,450	0	Increased Revaluation
20	ALSTON	Alston WPS	228,105	205,295	0	205,295	205,295	0	Not Previously Included
21	ARDPS1	Ardleigh RWPS (Intake)	929,756	836,780	2,304,631	-1,467,851	0	-1,467,851	Reduced Revaluation
22	AUKSDW	Aukside WPS	165,872	149,285	58,878	90,407	90,407	0	Increased Revaluation
23	AYTONF	Ayton Frys WPS	166,020	149,418	87,448	61,970	61,970	0	Increased Revaluation
24	BADBS1	Badingham WPS	174,292	156,863	140,735	16,128	16,128	0	Increased Revaluation
25	BALLLB	Ball Lane Borehole	747,333	672,599	526,794	145,806	145,806	0	Increased Revaluation
26	BAMBB5	Bamburgh WPS (Castle)	164,872	148,385	47,483	100,902	100,902	0	Increased Revaluation
27	BARN18	Barnard Castle WPS Rokeby Grange	164,872	148,385	33,180	115,205	115,205	0	Increased Revaluation
28	BARRA2	Barrasford RWPS Swinburn	988,348	889,513	2,535,404	-1,645,891	0	-1,645,891	Reduced Revaluation
29	BARBO1	Barsham Hall Borehole	444,434	399,991	290,675	109,315	109,315	0	Increased Revaluation
30	BARBO1	Barsham Site Borehole No. 1	639,790	575,811	305,662	270,129	270,129	0	Increased Revaluation
31	BARBO2	Barsham Site Borehole No. 2	639,790	575,811	302,529	273,282	273,282	0	Increased Revaluation
32	BARPS1	Barsham TW PS No. 1	253,249	227,924	757,642	-529,718	0	-529,718	Reduced Revaluation
33	BARPS2	Barsham TW PS No. 2	239,707	215,736	723,389	-507,653	0	-507,653	Reduced Revaluation
34	BASBS1	Basildon WPS	246,828	222,145	687,908	-465,762	0	-465,762	Reduced Revaluation
35	BAYBRW	Baybridge WPS	206,249	185,624	161,824	23,801	23,801	0	Increased Revaluation
36	BEACL3	Beacon Lough WPS Booster	241,800	217,620	442,445	-224,824	0	-224,824	Reduced Revaluation
37	BEAFRT	Beafrost WPS	164,872	148,385	38,493	109,892	109,892	0	Increased Revaluation
38	BEAUCW	Beauderc WPS (Riding Hills)	164,872	148,385	57,462	90,923	90,923	0	Increased Revaluation
39	BETBS1	Beccles Tower WPS	218,796	196,917	249,302	-52,385	0	-52,385	Reduced Revaluation
40	BEPPS1	Bedfords Park WPS	208,626	187,764	177,286	10,478	10,478	0	Increased Revaluation
41	BEDBO1	Bedingfield Borehole No. 1	546,805	492,125	376,495	115,630	115,630	0	Increased Revaluation
42	BEDBO2	Bedingfield Borehole No. 2	551,820	496,388	354,785	141,853	141,853	0	Increased Revaluation
43	BEDPS1	Bedingfield TW PS	205,355	184,820	217,464	-32,644	0	-32,644	Reduced Revaluation
44	BEGBO1	Belagh Grange Farm Borehole No. 1	485,017	436,515	0	436,515	436,515	0	Not Previously Included
45	BEGBO2	Belagh Grange Farm Borehole No. 2	505,228	454,705	300,035	154,670	154,670	0	Increased Revaluation
46	BEGPS1	Belagh Grange Farm RWPS	786,900	696,138	2,164,630	-2,528,502	0	-2,528,502	Reduced Revaluation

The initial step was to reduce the PR09 MEAV GBV values by 10% for each location. This adjusted value was then directly compared to the JR08 GBV for the same site as shown by the variance calculation above. The variance calculation was then separated into two columns; one for negative variances; the other positive. Each location was then individually assessed as to the reason for each movement.

The reasons identified dropped into 3 main categories: -

### Increased GBV arising from revaluations. These have arisen as follows: -

Identifying a more complete list of component assets for previously un-mined locations.

COPI index has been applied in calculating the PR09 valuations which has resulted in an increase of anything between 0%-9% depending on the installation date of the asset.

Importing a significant number of new assets into PR09 relating to land, previously not included within the JR08 valuation.

Locations resized between PR04 and PR09



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Locations reclassified – example Sewage Treatment Works Septic Tank to Secondary Biological works which has resulted in additional assets being included for PR09

**Decreased GBV arising from revaluations. These have arisen as follows: -**

- A reduction in the level of site specifics previously included in JR08
- A reduction in unit cost
- Removal of duplicated assets previously included in the JR08 valuations
- Locations resized between PR04 and PR09
- Locations reclassified – example Water Treatment Works W3 to W2

**New Locations not included in the JR08 valuations.**

These have been shown in the column “Other” Locations written down. These relate to locations included within JR08 valuations that are no longer identified in the PR09 inventory. These locations have been included in the column “Reduction in MEA for assets not yet fully written down but no longer in use”

A pivot table was then used to calculate the sum of each reason categories. This can be seen as follows for Water Pumping Stations: -

Type New	Type	Treatment Type FINAL	Reasoning	Sum of JR08 Revised Total	Sum of Variation	Sum of Adjusted PR09 MEAV	
Water Pumping	GWS		Increased Revaluation	14,353,693	24,140,326	38,383,747	
			Not Previously Included	0	10,367,401	10,367,401	
			Reduced Revaluation	22,029,222	-13,445,676	8,583,546	
			<b>Total</b>	36,382,915	21,062,051	57,334,695	
			(blank)	Locations written down	3,267,533	-3,267,533	0
	RWP		Increased Revaluation	2,028,875	933,597	2,905,233	
			Locations written down	5,987,983	-5,983,828	3,818	
			Not Previously Included	0	2,600,810	2,512,663	
			Reduced Revaluation	93,118,082	-67,533,288	25,584,795	
			<b>Total</b>	101,134,941	-69,982,708	31,006,508	
	TWP		Locations written down	1,424,748	-1,424,748	0	
			Reduced Revaluation	145,719	-145,719	0	
			<b>(blank) Total</b>	1,570,467	-1,570,467	0	
			(blank)	Locations written down	10,906,962	-10,906,962	0
			Not Previously Included	0	727,778	727,778	
TWP Booster		Reduced Revaluation	2,734,791	-2,734,791	0		
		<b>(blank) Total</b>	13,641,753	-12,913,976	727,778		
		Increased Revaluation	9,916,204	9,510,907	19,377,881		
		Locations written down	1,181,473	-1,157,160	23,975		
		Not Previously Included	0	6,500,751	6,365,183		
TWP High Lift		Reduced Revaluation	106,757,980	-70,576,149	35,856,784		
		<b>Total</b>	117,855,657	-55,721,651	61,623,823		
		Increased Revaluation	596,146	1,178,109	1,758,365		
		Locations written down	17,091	-13,455	3,636		
		Not Previously Included	0	2,961,776	2,915,916		
<b>Total</b>	55,612,073	-43,314,734	12,258,433				
<b>Water Pumping Total</b>			56,225,309	-39,188,303	16,936,350		
			330,669,694	-162,173,703	167,629,154		

This has then been used to directly populate the columns in Tables B7.13 and B7.14



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**REVALUATION RECONCILIATION RESULTS**

The key results for each table are described in more detail in the following sections.  
Water Services

Note – references to reclassification in this section refer to NWL's own changes in asset classification as a result of better analysis of the assets.

**Group 1 - Water Resources**

Dams and impounding reservoirs

For PR09 this line no longer includes for Raw Water Balancing Tanks. These have been included within the Service Reservoir line.

New Assets

An increase of £31.57m has been made for a range of assets not previously included in the JR08 valuation. These include: -

£7.8m for Land

£7.6m for River Structures

£2.4m for Intake Structures

£21.6m for Raw Water Reservoirs

Increased MEAV

An increase of £96.14m has been made for the following adjustments: -

£34.98m for land previously not included in the JR08 valuation

£60m indexation adjustment by using COPI

Raw water aqueducts

Reduced MEAV

A reduction of £17.4m has been included as a result in the reduction in unit costs

**Group 2 - Water treatment works**

Simple Disinfection treatment works

Reduction in MEAV

A £1.76m reduction has been made to the GBV after Southwold WTWs had been reclassified to a simple works. This has in turn simplified the complexity in the on site assets, reducing the overall value.

W1 treatment works

Increase in MEAV

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An increase of £1.94m has been made to correct an under valuation of Redgrave WTW in the JR08 data.

### Decrease in MEAV

A decrease of £8.2m has been made to the W1 treatment works after the following locations were reclassified from a more complex treatment category in the JR08 valuation: -

Parham	GW2 to GW1
Rickinghall	GW2 to GW1
Holton	GW2 to GW1
Walpole	GW2 to GW1

### W2 treatment works

#### Reduction in MEAV

A reduction of £11.6m has been made to 9 GW2 locations in size bands 1 and 2. These increases have arisen from utilising actual cost information from recently completed ground water schemes and applied in the ESSL cost estimating tool.

#### Increase in MEAV

An increase of £20.4m has been made to 12 GW2 locations in size bands 1 and 2. These increases have arisen from utilising actual cost information from recently completed ground water schemes, and applied in the ESSL cost estimating tool.

Included within the £20.4m is also an increase for land at 2nr SW2 treatment works which were previously undervalued in the JR08 data. These are currently valued in JR08 as: -

Lockwood Beck WTW	£1k
Mitford WTW	£12k

### W3 treatment works

Majority of the increase/decrease due to a review of the value of the GW2 locations based on the actual cost of a number of small sites using ESSL statistical package

#### Reduction in MEAV

A reduction of £2.8m has been made to 4nr GW3 in size bands 1 and 2. These increases have arisen from utilising actual cost information from recently completed ground water and surface water schemes, and applied in the ESSL cost estimating tool.

#### Increase in MEAV

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An increase of £37.4m has been made to 2nr GW3 locations and 3nr SW3 locations in size bands 1 and 2. These increases have arisen from utilising actual cost information from recently completed ground water and surface water schemes, and applied in the ESSL cost estimating tool.

### W4 treatment works

The W4 PR09 valuation includes for £13m for the Langford recycling works.

### Increase MEAV

A total increase of £79.78m has been made to the GBV for W4 locations. The majority of this relates to the inclusion of land values of £75.7m not previously included in the JR08 valuation. These relate to a small number of sites with large areas of land located in highly desirable development areas.

### Reduction to MEAV

A reduction of £69.3m has been made to 11 W4 locations. The majority of this relates to a reduction in the amount of site specifics included in the current JR08 valuation. These deductions were identified using the cost calculations provided by the ESSL cost estimating tool.

An additional reduction in GBV £25m has been deducted after identifying a duplication of assets within the JR08 valuation.

## Group 3 - Water storage

### Service reservoirs

#### Locations Written Down

A reduction of £1.73m has been made after it was identified that 6 reservoir sites were no longer in use.

#### Reduction in MEAV

A reduction of £55.5m has been made to 43 reservoir sites. The majority of this reduction relates to the downsizing on 21 sites from size band 5 (JR08) to size band 4 (PR09).

#### Increase in MEAV

An increase of £235.4m has been made to 243 reservoir locations. An increase of £65m has been made after the addition of land values not previously included in the JR08 valuation. An increase of around 9% has been made due to the revaluation of capital in line with standard company estimating procedures.

The remaining increase has occurred following the introduction of new design and scoping models (for business as usual purposes) which have been used to clearly specify in detail the types, quantities and sizes of standard service reservoir

## Chapter B7-2: MEAV & Depreciation

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structures. The design solutions that have been used are consistent with NWL design standards and specifications, and additionally have only allowed for the minimal scope to meet health and safety requirements.

At JR08, the majority of locations were un-mined and only a simple 4 line valuation each for civil, electrical, mechanical and instrumentation had been included. This has clearly resulted in an undervaluation for JR08.

### New Locations

In increase of £201.5m has been made to include for 11 balancing tanks.

These locations were previously assumed to have been included in Dams and Impounding Reservoirs as infrastructure assets, however a number of these sites do not exist anywhere in the JR08 valuation.

As all of these locations comprise concrete tank structures, these have been classified as non-infrastructure assets.

### Water towers

#### Locations Written Down

A reduction of £0.75m has been made to remove Sherburn Hill Water Tower from the valuation.

#### Reduction in MEAV

A reduction of £5.96m has been made to 31 water tower locations. This relates to a general decrease in unit costs and the downsizing of 1 location from band 2 to a band 1.

#### Increase in MEAV

An increase of £1.98m has been made to 8 tower sites. The largest increase is for £1.9m for land at Thundersly Tower, not previously included in JR08.

## Group 4 - Pumping stations

### Intake pumping stations

#### Locations Written Down

A reduction of £7.4m has been made after writing down the GBV for a number of pumping locations no longer in use.

#### Reduction in MEAV

A reduction of £67.7m has been made on 27 pumping station. This reduction relates primarily to the revaluation of assets using the new scoping and design models. The reduction will include for the removal of site specific assets from the revaluation.

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### Increase in MEAV

An increase in of £0.9m has been made for Waveney RWPS Shipmeadows which was undervalued in JR08 (£6k)

### New Locations

An increase of £2.5m has been made for 3nr pumping station locations not previously included in JR08.

### Source pumping stations

### Locations Written Down

A reduction of £3.3m has been made for a number of borehole and well locations no longer in use.

### Reduction in MEAV

A reduction of £14.03m has been made to 17 ground water stations in bands 1, 2 & 3. This reduction relates primarily to the revaluation of assets using the new scoping and design models. The reduction has included for the removal of site specific assets from the revaluation.

A reduction included in the above has also been made on 5 sites which have been resized from band 5 to band 4 which has had a material impact on the cost.

### Increase in MEAV

An increase of £24.14m has been made to 51 ground water stations in bands 1, 2 & 3. This increase relates primarily to: -

The addition of assets using the new scoping and design models.  
£9m has been made on 8 sites that have been significantly undervalued in the JR08 valuation. Examples: -Broome Borehole No 5 £8k, Thorpe GWS Easington £320.  
Addition of £11m land not previously included in JR08

### New Locations

An increase of £10.3m has been made on 17 ground water stations not previously included in JR08. This includes for £0.5m for land.

### Booster pumping stations

### Locations Written Down

A reduction of £12.1m has been made for a large number of sites no longer in use.

### Reduction in MEAV

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A reduction of £116.6m has been made to 162 sites. This reduction relates primarily to the revaluation of assets using the new scoping and design models. The reduction has included for the removal of site specific assets from the revaluation.

**Increase in MEAV**

An increase of £10.7m has been made on 114 locations. This primarily relates to an increase in assets on band 1 locations as a result of using the new scoping and design models.

**New Locations**

An increase of £9.6m has been made for 42 locations not previously included in the JR08 valuation.

**Group 5 - Water mains****Potable mains (up to 320mm)****Decrease in MEAV**

A decrease of £1,381.8m has been made as a result of decreased unit costs.

**Potable mains (greater than 320mm)****Increase in MEAV**

An increase of £121.9m has been made as a result of increased unit costs.

**Other mains****Increase in MEAV**

An increase of £3.2m has been made as a result of increased unit costs.

**Ancillaries - customer (infrastructure)****Increase in MEAV**

An increase of £372.7m has been made as a result of a significant increase in the kilometres of pipework for PR09, previously omitted from the JR08 valuation.

**Ancillaries - customer (non-infrastructure)****Increase in MEAV****Revenue Meters**

Meters have been valued in JR08 using the PR04 cost base rate of £135/meter as the basis for the valuation. For PR09 we have calculated the average meter

## Chapter B7-2: MEAV & Depreciation

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installation cost of £215/meter. We have included £48.1m to allow for the increase in the unit cost.

### **District/Strategic Metering**

An increase of £15.2m has been made to account for changes in the unit cost of a district meter

#### New Locations

An increase of £5.3m has been made for the addition of 44 new key control point locations (£4.1m) and Leakage Equipment (£1.2m) not previously included in the JR08 valuation.

A further increase of £59.1m has been made to increase the GBV for revenue meters. At PR04, revenue meters were included as blocks of cost and this has continued to be the case through to JR08. This has resulted in a large number of assets being written out of the JR08 valuation. For PR09 an exercise was carried out to import all meters (in use) into the new MEAV Register as individual assets. Each meter was then given a unit cost based on the average meter installation cost of £215/meter. Each asset has then been depreciated over the standard life of 15 years. The installation date for each meter has been obtained from the company source systems (previously unknown for the JR08 valuation).

### **Sewerage Services**

#### **GROUP 1 - SEWERS**

##### Critical sewers

A reduction of £1.198b has been made to the GBV as a result of reduced unit costs

##### Non-critical sewers

A reduction of £539m has been made to the GBV as a result of reduced unit costs

##### Sewage pumping mains

An increase of £132.7m has been made to the GBV as a result of increased unit costs

#### **GROUP 2 - SEWER STRUCTURES**

##### Combined sewer & emergency overflows

A reduction of £53m has been made to the GBV as a result of reduced unit costs

##### Other sewer structures

In increase of £28.5m has been made primarily as additional storage tanks have been identified for PR09

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### GROUP 3 - SEWAGE PUMPING STATIONS

In-line pumping stations

Written Down Locations

A reduction of £10.4m has been made to remove 23 locations no longer in use

Reduction in MEAV

A reduction to MEAV of £74m has been made on 141 locations. This is as a result of removing site specific assets valuations by using the new scoping and design models.

Increase in MEAV

An increase to MEAV of £46.6m has been made on 400 locations.

A significant number of these sites have been re-sized from band 1 to a larger size band (from 2 to 5) as a result of improved location inventory information for PR09. The sizes of these locations were previously unknown for PR04 and as such the decision was made at the time to value using a Band 1 cost model. The sizes are now known for the majority of these locations and have been re-sized accordingly.

An increase for £5.9m in land has been made, not previously included in the JR08 valuation

New Locations

An increase of £31m has been included for 127 locations not previously included in the JR08 valuation. A large number of these relate to recently adopted locations.

Terminal pumping stations

Reduction in MEAV

A reduction to MEAV of £6.8m has been made on 16 locations. This is as a result of removing site specific assets valuations by using the new scoping and design models.

Increase in MEAV

An increase to MEAV of £8.6m has been made on 30 locations.

A large part of the increase (£4.6m) has arisen due to the revaluation of a band 5 pumping station at Cargo Fleet which was previously undervalued in JR08. In addition £1.4m has been included for land not included within the JR08 valuation



## Chapter B7-2: MEAV & Depreciation

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### New Locations

An increase of £17.7m has been included for 50 locations not previously included in the JR08 valuation. A large number of these relate to pumping stations recently re-classified from the sewage treatment asset group.

### **GROUP 4 - SEWAGE TREATMENT WORKS**

#### Primary treatment only

##### Reduction in MEAV

A reduction of £1.1m has been included in the model for 7 locations. These have previously been valued in JR08 as a secondary treatment works. For PR09 they have been re-valued as septic tanks.

##### Increase in MEAV

A increase of £3.9m has been made over 73 locations. This has arisen from an under valuation of band 1 primary treatment works in JR08.

### New Locations

An increase of £2.7m has been made for 29 locations not previously included in the JR08 valuation

#### Secondary treatment only

##### Reduction in MEAV

A reduction in MEAV of £166.3m has been made to 63 works. The majority of these are secondary biological works. This has been as a result of reducing site specific assets by using the new scoping and design tools.

##### Increase in MEAV

An increase in MEAV of £208.9m has been made to 200 locations. This increase relates primarily to: -

The addition of assets using the new scoping and design models.  
£94m has been made on 104 band 1 sites that have been significantly undervalued in the JR08 valuation.

Addition of £22m land not previously included in JR08

### New Locations

An increase of £15.2m has been made for 14 secondary biological sites not previously included in the JR08 valuation.

#### Tertiary treatment only

## Chapter B7-2: MEAV & Depreciation

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### Reduction in MEAV

A reduction of £63.5m has been made to 20 tertiary works. This is as a result of reducing site specific assets from the JR08 valuation. The main example of this is Aycliffe STW where a reduction of £15m has been made to reflect the modern equivalent solution rather than based on actual assets.

### Increase in MEAV

An increase of £17.9m has been made to 9 locations. £6.3m of the increase relates to the addition of land.

A number of tertiary treatment works are currently classified and valued in JR08 as secondary treatment only. For PR09 these have been re-valued as tertiary works. The calculation for the increase in valuation has been obtained from actual cost information on recently completed schemes.

## **GROUP 5 - SEA OUTFALLS**

### Short outfalls

A reduction of £33m has been made to the GBV as a result of reduced unit costs

### Long outfalls

A reduction of £46m has been made to the GBV as a result of reduced unit costs

## **GROUP 6 - SLUDGE TREATMENT FACILITIES**

### Liquid disposal

#### Increase in MEAV

An increase of £0.5m has been made to Berwick STC as this site was currently undervalued in JR08

#### New Locations

An increase of £48m has been included for sludge treatment centres not previously included in JR08. A small number of assets in JR08 had been incorrectly included within the sewage treatment valuation. Clarification has now been made between the assets to be included in sewage treatment and sludge treatment processes. This will avoid the potential future risk of duplicating assets within both asset groups.

### Cake disposal

#### Increase in MEAV

An increase of £56.8m has been made to 3 STC. The largest adjustment was made to Howdon STC as this site was significantly undervalued in JR08.

#### New Locations

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## Chapter B7-2: MEAV & Depreciation

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An increase of £11.6m has been included for 4 sludge treatment centres not previously included in JR08. A small number of assets in JR08 had been incorrectly included within the sewage treatment valuation. Clarification has now been made between the assets to be included in sewage treatment and sludge treatment processes. This will avoid the potential future risk of duplicating assets within both asset groups.

Other disposal

Increase in MEAV

An increase of £1m has been made to Bran Sands STC.

### **Water Group 6, Sewerage Group 7 - Management and general**

Offices and laboratories (total area)

Increase in MEAV

An increase of £25.8m on water, and £13.8m on sewerage, has been made as a result of: -

increases in the unit costs of buildings  
inclusion in PR09 of a more detailed inventory incorporating assets not previously included in JR08

Vehicles

Increase in MEAV

A slight increase has been made to reflect a minor increase in the unit cost.

Telemetry systems

Reclassification of Assets

A reduction of £6.82m water, and £3.7m sewerage, has been made as the majority of telemetry assets have now been included on the operational sites. This reduces the risk of double counting the telemetry assets at both the site and within Management & General

Computers

Reduction in MEAV

A reduction of £3.92m water and £2.2m sewerage has been made as a result of a reduction in technological unit costs

Other

New Locations

**Chapter B7-2: MEAV & Depreciation**

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An increase of £33.2m on water has been made for recreational assets (appointed recreation) on operational sites not previously included in JR08.

**RECONCILIATION OF NET BOOK VALUES**

One of the following approaches to NBV reconciliation has been taken as appropriate: -

The NBV has been apportioned relative to the split of the GBV, or

Included alongside the most appropriate GBV, or

Included in other where the movement appears to have been caused solely by the change in the installation date.

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**B7 Section 3 – Taxation**

**7.3.1 Summary**



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**7.3.3 Tax issues - commentary**



**7.3.3.1 Abolition of industrial buildings allowances**



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**7.3.3.2 Introduction of 'integral features' rules**





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**7.3.3.3 Abberton reservoir**



**7.3.3.4 Northern company headquarters / Southern call centre**



**7.3.3.5 Trunk mains cleaning**



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**7.3.3.6 Re-financing of infrastructure assets**



**7.3.3.7 Taxation of infrastructure charge income**



**7.3.3.8 Pension contributions**



**7.3.3.9 Interest deduction for tax purposes**



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**7.3.3.10 UK:UK transfer pricing**



**7.3.3.11 Deferred tax**



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7.3.4 Table B7.12



Section A : Allocation of capital expenditure for tax purposes



***Line 1 : Total capitalised expenditure including infrastructure renewals expenditure***



***Line 2-5 : Assets qualifying for capital allowances***



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(ii) Line 3 : Assets to be included in the general pool –



(iii) Line 4 : Assets qualifying for long life asset treatment –



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(iv) Line 5 : Assets qualifying for Industrial Building Allowance –



***Line 6 : Assets purchased under finance leasing***



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***Lines 7-10 : Capitalised revenue expenditure***

The approach to each of the four lines is as follows :

- (i) Line 7 : Capitalised revenue expenditure deducted in year of spend –



- (ii) Line 8 : Capitalised revenue expenditure depreciated – non-infrastructure



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(iii) Line 9 : Capitalised revenue expenditure depreciated – relating to infrastructure assets only –



(iv) Line 10 : Capitalised revenue expenditure which is not depreciated –





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***Line 11 : Other assets not qualifying for capital allowances or revenue deductions***



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***Line 12 : Grants and contributions taxable on receipt***



**Section B : Deductions for capital expenditure**

***Line 13 : Existing IBA claims (outturn)***

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***Line 14 : Depreciation charge on assets held under finance leases (outturn)***



***Line 15-16 : Depreciation on capitalised revenue expenditure (outturn)***



***Line 17 : Capitalised revenue expenditure deducted in year of spend***



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***Lines 18-19 : Average asset lives***



***Line 20 : Proportion of IRC treated as tax revenue***



**Section C : Opening position**

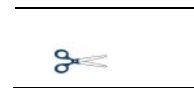
***Lines 21-23 : Closing capital allowances balances***



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***Line 24 : General provisions balance at 31 March***



***Line 25 : Appointed business brought forward losses at 31 March***



***Line 26 : Deferred revenue expenditure pool at 31 March***

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**Section D : Other Deductions / Adjustments**



***Line 27 : Net interest used in calculation of tax charge (outturn)***



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***Line 28 : Profit and loss account expenditure that is not allowable as a deduction from trading profits for tax purposes***



***Line 29 : Revenue expenditure that is not allowable as tax deductible by the Inland Revenue under any circumstances***



***Line 30 : Profit or income not subject to tax or not taxed as trading income***





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*Line 31 : Increase or decrease in the general provisions (outturn)*



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***Line 32 : Pensions – difference between P&L charge and cash payments (outturn)***



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*Line 33 : Adjustments to tax payment*



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Section E : Deferred tax

*Line 34 – Opening accelerated capital allowances*



*Line 35 – Deferred tax provision*



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7.3.5 Other matters



Chapter B7-3: Taxation

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**7.3.5.1 Agreements with HMRC**



**7.3.5.2 Group relief**



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**7.3.5.3 Tax creditor – 31 March 2008**



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**7.3.6 Notified items**



**7.3.6.1 Financial Reporting Exposure Draft 29 : Plant, property and equipment**



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7.3.6.2 Corporation Tax Reform





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