CASE NO. 1046/2/4/04: ALBION WATER LIMITED V WATER SERVICES REGULATION AUTHORITY (FORMERLY THE DIRECTOR GENERAL OF WATER SERVICES) (DŴR CYMRU/SHOTTON PAPER)

POINTS OF DISPUTE IN RELATION TO THE FINAL REPORT

Please refer to the Final Report for an explanation of the terminology/definitions used within this Schedule.

Heading 1: The specific components of cost which should not have been included or should have been but were not included in the costs calculation in the Final Report							
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4.	*1(c)*	*[5.64, 7.147, T16]*	"the Authority has decided to include the Ashgrove-specific cost of the back-up supply in the "AAC-plus" model" [5.64]		**Costs of a "back-up supply" should not be included in an AAC analysis.** (a) The purpose of an AAC analysis is to allocate the total costs of the firm. The effect of the Authority's approach is to permit double recovery. (b) The inclusion of an additional figure for a "back-up supply" falsifies the contemporary documentary record, which makes it clear that the FAP was a "firm price" that Dŵr Cymru intended to publish as "the	The Authority set out its reasons on inclusion of the back-up supply in the Final Report: see §§5.37-5.72. The Authority maintains the reasoning set out in those paragraphs. The Tribunal required the Authority to undertake the "*calculation of the costs reasonably attributable to the service of transportation and partial treatment of water, generally, and through the Ashgrove system in particular*". In the Authority's view, the back-up supply is an integral part of the Ashgrove system and the costs are therefore *"reasonably attributable"* to it. The back-up supply to Shotton is used as both a back-up (i.e. replacement) and a top-up (i.e. supplement) to the non-potable water supply through the Ashgrove system:	

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					Dŵr Cymru Common Carriage prices. The price is based on whole company average prices and is therefore not particular to the Ashgrove application." [CMC Bundle, 47/228]. Albion-specific costs generally, and the costs of a "back-up" supply in particular, were therefore clearly excluded by Dŵr Cymru from the FAP. (c) The contemporary record in respect of the FAP is consistent with the evidence initially provided by Dŵr Cymru as to its policy prior to the Draft Assessment: see letter of 5 March 2007 [A28], point 8: "The First Access Price did not include any allowance for [the "standby" service of up to 8 Ml/d]". (d) Dŵr Cymru appears to have altered its stance at	see Table 4 of the Final Report. This back-up supply is used regularly by Albion (60 requests over 5 years, averaging around 1 request per month, see §6.98 of the Final Report)) and it apparently supports the robust functioning of the Ashgrove system: see §§6.83-6.94 for a fuller discussion of how the back-up supply operates. Regulatory mechanisms would stop Dŵr Cymru from making a double-recovery of the cost of the back-up supply as an offsetting change would have been made at the 2004 Periodic Review. As to the separate issue as to whether the cost of the back up-supply was included in the FAP this is uncertain: see §5.61 of the Final Report. The Authority considered it reasonable to assume that the costs of the back-up supply were implicitly included in the FAP in 2000/2001 for the reasons set out at §5.62 of the Final Report. The Authority maintains that reasoning.	

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					the prompting of the Authority, once the significance of the issue for the outcome of the Authority's investigation became apparent: see Authority letter to Dŵr Cymru of 14 May 2007 ("the Authority's illustrative costing of the back-up supply … represents a sizeable proportion of the total cost of the system in the methodologies" [B11]); and Dŵr Cymru's lengthy response of 15 May 2007 [B14, p. 5] which states, contrary to the contemporary evidence, that the FAP was an "indicative" price and that it was "clearly right" to assume that a "back-up" supply would have been included. This is obviously false and self-serving evidence that is inconsistent with the contemporary evidence and is to be		

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					disregarded.		
		5.66	"The Authority has not included the cost of the back-up supply in its LRIC methodology. However, when setting an access price based on LRIC it might be sensible to add on the cost of back-up supply to ensure full cost recovery…."	In the context of a test for excessive pricing it cannot be correct to exclude from the assessment of cost one component of the service which would have been provided. As the Authority says in the same paragraph "*Dr Marshall recognised the need for a mark-up on LRMC-based prices to ensure full cost recovery in her first report*". In addition, the costs of the back-up service were included in the Authority's other two methodologies. On the Authority's own calculations this would have added 4.4 pence per m^3 to the assessment of costs under the LRIC methodology.		The Authority acknowledged the case for including the cost of the back-up supply in the LRIC methodology. However, it explained that it had adopted the textbook LRIC approach, which excludes all costs that are not truly incremental: see §§8.1 and 8.126 of the Final Report. LRIC "plus" methodologies are typically used to ensure that a company's average accounting costs are fully recovered when LRIC estimates are below AAC estimates. In this particular case, the "plus" is not required in the LRIC methodology as the LRIC estimate is broadly comparable to the AAC-plus estimate.	
		5.72	Table 2	See comments below in relation to paragraphs 5.79		See comments in response to §5.79 below.	

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				and 6.79.			
		5.79	"The Authority considers that there is uncertainty about whether a connection would have been required in 2000/01….The Authority's view is that connection charges should not be included as a cost underlying the FAP as in practice if such charges had been payable they would most probably have been made as a one-off upfront charge rather than as part of the FAP."	Dŵr Cymru disputes that there is uncertainty as to whether a connection would have been required. See for example, Dŵr Cymru's letter of 23 May 2007: "….Albion repeats its assertion that there was no need for any *"…physical alteration to the supply system or its control mechanisms…"*…..As we have noted, Dŵr Cymru had not made a decision to relinquish any of its rights under the agreement, contrary to what Albion Water asserted at the meeting on 19th February. Further, the evidence shows that it was reluctant to do so, and also that Albion was aware of this at the time (Notice of Appeal – 12.132).		The Authority's position is fully set out in the Final Report and it has nothing to add (see §§5.73-5.79).	

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				This means that, had Albion Water obtained 22 Ml/d from United Utilities or elsewhere (and noting that United Utilities confirmed that this could be supplied in addition to the 36 Ml/d contracted to Dŵr Cymru), that water could not be abstracted through the three Dŵr Cymru pumps, and thereby flow straight to the point of connection between the two undertakers' mains. As a consequence, Albion would either have had to have built its own pumping facility, or negotiated with United Utilities to use part of theirs. Either way, a connection to deliver Albion's water into the pipe that transports water from Heronbridge to Ashgrove would have been required, and it therefore cannot be said that there would have been no need for *"…physical alteration to the supply system or its control*			

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				mechanisms…"." Even accepting any residual uncertainty, however, in the context of a test for excessive pricing any uncertainty should have been resolved in Dŵr Cymru's favour and the costs should have been included. There is no evidence that any separate "up-front" charge was being contemplated. In the presence of doubt, therefore, the Authority should have included an estimate of connection costs in its calculations. Dŵr Cymru estimated that the connection would have cost £75,000 up-front, plus annual opex of £2,000 per annum, equivalent to approximately 0.2p per m^3.			

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		6.28	"The Authority did however state that when setting an access price based on the LRIC methodology it would seem sensible to add on the cost of the back-up supply to ensure full cost recovery (see transcript page 3, lines 3 to 13)."	Dŵr Cymru agrees with the view expressed by the Authority in this paragraph, but notes that it was not implemented. The results from the LRIC methodology, presented at paragraph 8.126, do not include the cost of the back-up service. Moreover, when the Authority refers to the results of its LRIC methodology it does so without further qualification.		See comments in response to §5.66 above.	
		6.79	"…the Authority's view in Section 5 is that on balance in 2000/01 Dŵr Cymru could have included an allowance for Albion-specific costs in the FAP, but any costs beyond a reasonable level could have been charged for separately. Dŵr Cymru suggests such costs could be up to £100,000 per year based on the evidence presented in the second witness statement of	Whether or not the actual extent of customer services provided to Albion (and consequently the relevant charge) would have turned out lower as a result of a subsequent negotiation is not relevant to the Referred Work. What matters is the costs that it was reasonable for Dŵr Cymru to attribute to the common carriage service to which the FAP applied. Indeed, even if it had been		See comments in response to §5.79 above. The Authority maintains its view that the more likely scenario was that following further negotiations, the common carriage arrangements would have tightly prescribed the common carriage customer services Albion was entitled to and that any service beyond that would have been charged for separately.	

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			Christopher Alun Jones. That would amount to a cost of about 1.6p/m^3. The Authority considers that it is unlikely that Albion would have accepted such a charge as part of the FAP and that a more likely outcome, following further negotiations, would have been that the common carriage arrangements would tightly prescribe[d] [sic] common carriage customer services Albion was entitled to and that any service beyond that would have been charged for separately."	*Dŵr Cymru's* expectation at the time (as opposed to the Authority's *ex post* view) that the extent of the service to be provided would have been subject to negotiation, that could not have justified the exclusion of these costs at the outset of the negotiation process. Consequently, the Authority was in error in excluding the £100,000 per annum cost that Dŵr Cymru estimates it would have incurred in dealing with Albion Water. This is equivalent to approximately 1.5p per m^3.			
5.	*1(c)*	*6.101-6.105*	This simple provisional cost calculation illustrates how expensive such large-scale potable back-up supply services are. This is not surprising as Dŵr Cymru effectively has to		**Any costs associated with the surplus capacity present on both the Alwen and Bretton systems is already captured in potable tariffs. Any attempt to**	In relation to the cost of the back-up supply, the AAC-plus methodology does not permit double recovery (as claimed by Albion). It is a means of allocating costs for a given service to a given customer class. Regulatory mechanisms would stop Dŵr Cymru from making a	

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			keep 8Ml/d of potable capacity on permanent "stand-by"		**levy an additional "back-up" supply charge would lead to over-recovery.** (a) Both of the potable systems that could provide the Shotton Paper site with a potable back-up supply (Bretton and Alwen) were designed and constructed well before Shotton Paper existed. (b) The surplus capacity on these systems (and on all such systems) was intended to meet future growth in demand and is referred to as "headroom". To the extent that this "headroom" results in costs to Dŵr Cymru, those costs are fully recovered through the normal potable tariff setting mechanism. (c) Where supplies are reserved for a specific customer, those volumes	double-recovery of the cost of the back-up supply as an offsetting change would have been made at the 2004 Periodic Review. The cost of the back-up supply was quantified under the LRIC and AAC-plus methodologies. Under the LRIC methodology, the incremental cost of the back-up supply service was assumed to be negligible (see Table 17 of the Final Report). The cost of the back-up supply was therefore wholly excluded from the LRIC methodology. As to the quantification of the costs of the back-up supply on an accounting basis, for the AAC-plus and LAC methodologies, the Authority disagrees with the comments of both parties for the reasons set out below: • First the accounting cost (whether it be regional average or local) of the back-up supply service is not zero (i.e. it is not a marginal cost), as Albion	

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					are no longer available as "headroom" and are therefore identifiable within Dŵr Cymru's water resources statements submitted to both Ofwat and the Environment Agency. There is no evidence that the back-up potable supplies for Shotton Paper have ever been identified within Dŵr Cymru's water resources submissions as a reserved supply. d) In effect, Dŵr Cymru has plenty of surplus water available on both systems, at marginal cost and has made significant opportunity profits whenever that water has been provided to Shotton Paper.	suggests. • Second, contrary to Dŵr Cymru's observation, the potential interruptability of the back-up supply service does not appear to support a weighting factor of 90% as suggested by Dŵr Cymru (which implies that there are dedicated potable resource/treatment assets waiting to supply Albion on request). Whilst so far as the Authority is aware, the back-up supply has been reliable it is still one of the first supplies to be cut when supply-demand (or other) constraints arise (for example, the Authority understands that Dŵr Cymru refused to supply the service on at least one occasion between 1999 and 2004). The Authority therefore considers that Albion does not benefit from a set of dedicated water resource/water treatment assets. In this sense, the Authority considers that Dŵr Cymru is using its headroom as a means	

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						to provide water resources and water treatment for the back-up supply service to Albion. One possible way to place an economic value of this back-up service is to assume that only the capital costs associated with providing Dŵr Cymru's headroom on resources/treatment should be included in estimating the back-up supply cost. Traditionally target headroom in the water industry has been set at around 15%. This is why the Authority selected this figure as the illustrative weight to be applied to water resource and water treatment capital costs for the back-up supply. The Authority estimates that the operational headroom on Dŵr Cymru's water resource assets is currently around 10% (14% in the Alwen-Dee zone), whilst the headroom on its water treatment assets was around 25% in 2000-01. Hence, the Authority is currently not minded to change the illustrative weight of 15% used in the Final Report.	

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2.	*1(a)(ii)*	*[7.43]*	Dŵr Cymru's proposed operating cost weight of 20.8% is based [in part on the "important assumption"] that sludge disposal costs between potable and non-potable treatment are equivalent and can be ignored. 7.44 … [T]hese disposal costs (sewer disposal or on-site storage) are typically not included in the regulatory accounts. For example, Dŵr Cymru acknowledges *"in practice there is no re-charge across from the wastewater business to the water business"*. However, the Authority notes that this implies that all treated water supply costs (including partial water treatment costs) may be understated as water treatment sludge disposal costs […] may not		**Sludge disposal costs are not in practice charged to water customers and should not have been included in the AAC methodology.** (a) The Authority recognises that Dŵr Cymru's accounts do not recognise any costs associated with disposal to sewer. In effect, any such costs will be allocated to sewerage bills and reflect a cross subsidy for water customers from sewerage customers. (b) It follows that any attempt to allocate sludge disposal costs to a common carriage access price will inevitably result in over recovery and price discrimination, unless all sewerage and water tariffs are revised to allocate sludge disposal costs to	Three points are raised by the parties' responses in relation to sludge disposal:- <u>(1) Sludge disposal costs were not included in the AAC-plus methodology in the Final Report</u> Water treatment sludge sewer disposal costs are included in the sewerage service regulatory accounts. As a result, potentially *"attributable"* sludge sewer disposal costs are excluded from the AAC-plus methodology, which only uses the water service regulatory accounts as the primary input for the cost allocation exercise: see §7.44 of the Final Report. Albion is therefore incorrect to state that sludge sewer disposal costs *"have been included in the AAC methodology"* (see Albion's comment in relation to §7.43). <u>(2) Whether sludge disposal costs should be included in any of the methodologies</u> Dŵr Cymru has argued that, for the purposes of an excessive pricing test, full sludge disposal costs should have been included in the AAC-plus methodology.	

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			be fully charged to water service regulatory accounts and hence may not be fully included in the AAC-plus methodology."		water customers. In effect, Dŵr Cymru will recover these costs both from its sewerage and its non-potable water customers, and non-potable water customers will be subjected to a charge that is not levied on other water customers. (c) Such an outcome would constitute unlawful discrimination both by the Authority and by Dŵr Cymru, contrary to UK and EC administrative law and sections 18 and 60 of the Competition Act 1998.	The Authority was asked to investigate "*the costs reasonably attributable to the service of the transportation and partial treatment of water by Dŵr Cymru*". The Authority's view is that both sludge processing and sludge disposal costs are clearly *"attributable"* to *"the partial treatment of water by Dŵr Cymru, generally and through the Ashgrove system in particular".* On a regional average cost basis there is a case for including the cost of sludge disposal in the AAC-plus methodology through a separate supplemental accounting charge. This is a real production cost that is currently not included in the water service regulatory accounts and is therefore not included in the AAC-plus methodology results. However, this supplemental charge should relate only to the sludge disposal and not sludge processing (thickening and dewatering) or initial transportation (via the dedicated sludge pump/main at Ashgrove), which are already accounted for via the water treatment cost weighting factors.	

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						Albion has argued (on undue preference/discrimination grounds) against including any sludge disposal costs (in either the AAC-plus or the LAC methodologies), despite previously agreeing to the contrary: see §5.27 of Final Report. In the Authority's view, it would not be unduly discriminatory to investigate a more cost-reflective access charge. The Authority therefore considers that sludge disposal costs should be included under the AAC-plus methodology but accepts that this modification may have then necessitated a small adjustment to retail tariffs. <u>(3) What is a fair estimate of the attributable cost of sludge disposal?</u> The supplemental sludge disposal cost would not be "*at least 1.4 p/m^3*", as suggested by Dŵr Cymru (see Dŵr Cymru's response to §7.147 under Heading 1), since sludge processing costs are already included in the AAC-plus methodology, so only sludge disposal costs need be added. The	

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						regional average cost of sludge disposal for the non-potable customer class would have been the weighted average of the sludge disposal to sewer (at Ashgrove) and sludge disposal to an onsite landfill (at Court farm). The cost of disposing of sludge to an onsite disposal facility is more difficult to estimate than the sewer disposal option. One could adopt some form of market price for commercial land-filling as a form of shadow cost. For illustrative purposes, assuming that the landfill price was some £50-£100 per m^3 and a concentration factor of 5000 (200 post thickening and 25 post dewatering) was achieved (via clarification/thickening and dewatering) then a sludge disposal cost of around 0.1-0.2 p/ m^3 could be applicable for onsite sludge disposal. Given the uncertainty surrounding onsite sludge disposal costs (for example, the extent to which certain onsite sludge disposal costs, such as employee costs, are already embedded in the water service accounts), the Authority has decided to assume that the supplemental onsite sludge disposal costs for non-potable	

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						water treatment at the Court Farm site are effectively zero (i.e. these sludge disposal costs are already included in the water service accounts). Any supplemental regional average cost for sludge sewer disposal in the AAC-plus methodology would therefore then only relate to the Ashgrove site. This supplemental regional average cost would equate to 0.3 p/m^3 (1.2 p/m^3 (see comments in response to §§8.71 and 9.34 below) multiplied by 25%, the proportion of non potable water treated at the Ashgrove WTW).	
		7.52	"In the AAC-plus methodology, (by applying a 0% weight) the Authority has therefore excluded all pumping costs. Under a common carriage arrangement Albion would purchase the complete pumping function directly from United Utilities."	The Authority is wrong to exclude distribution pumping from the AAC-plus assessment. By its own admission *"….three systems (S4, S5 and S6), including the largest system, apparently also provide "distribution" pumping…."* (paragraph 7.3); and *"… the Authority accepts that the access price for the Ashgrove system should*		The Authority recognises that the *"transportation"* pumping function is split into two further sub-functions: water resource pumping and water distribution pumping. Under the proposed access arrangement, Albion is effectively seeking to by-pass Dŵr Cymru's water <u>resource</u> pumping assets (i.e. its 52 non-potable source/intake pumping stations) by purchasing this particular pumping sub-function directly from United Utilities.	

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				exclude all pumping costs with the possible exception of booster pumps…." (paragraph 7.60). The Authority also recognises "*the considerable pumping there is on non-potable systems. Over 65 pumps are directly attributable to the 10 non-potable systems…*" (paragraph 7.60). On its own logic, irrespective of the fact that there is no distribution pumping on the Ashgrove system, the Authority should have used a non-zero weight for distribution pumping for non-potable customers as a class. Dŵr Cymru estimates that the Authority's results are under-stated by 2.8p per m^3 as a result of this omission.		However, Dŵr Cymru has 13 non-potable water distribution pumps, most notably on systems S4, S5 and S6. Under the AAC-plus methodology (which is based on regional average costs), the Authority accepts that non-potable water distribution pumping assets could be included as reasonably attributable *"transportation"* costs under the access arrangements proposed by Albion. For example, if a new entrant wanted to replicate the proposed access arrangements for S10 on either S4, S5, or S6, Dŵr Cymru would have had to give access to the associated water distribution pumping assets on these systems (under any proposed regional access price). So on a regional average cost basis, the Authority accepts that there is a strong case for including the costs associated with non-potable water distribution pumping. However, there is still no case for including any of the costs of water resource pumping, which forms the majority of the pumping on these non-potable systems.	

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						As to the calculation of the cost associated with non-potable water distribution pumping, the Authority does not consider that a 100% weight should automatically be applied to the water distribution pumping function. It is evident from Table 6 of the Final Report that water distribution pumping on non-potable systems is not as extensive as on potable systems. To evaluate the impact of including water distribution pumping, the Authority has assumed a uniform cost weighting factor of 55% in the AAC-plus methodology. This uniform weight yields a gross MEAV output for distribution pumping of £5.5 m. This is comparable to that estimated by Dŵr Cymru (see Table 15 of the Final Report, £2.8m) when this company figure is adjusted upwards to include associated missing pump houses, telemetry and pumping infrastructure. The inclusion of distribution pumping costs would accordingly add around 2.0 p/m^3 to the 19.3 p/m^3 AAC-plus calculation in the Final Report (based on an 8% cost of capital).	

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		7.54	"It is then possible, on a case-by-case basis, to decide whether pumping...is required…."	See comments relating to paragraph 7.52 above.		See comments in response to §7.52 above.	
		7.94	"…all distribution pumping costs are wholly excluded from the AAC-plus model results."	See comments relating to 7.52 above.		See comments in response to §7.52 above.	
7.	*1(e)*	*[7.121-7.129, T15]*	*"Table [15] provides an important cross-check on the weights used in the AAC-plus model as the model itself estimates the MEAV of the assets that serve the non-potable class"*		**The Tribunal should disregard this part of the Final Report in the absence of a clear explanation from the Authority of its relevance and meaning.** (a) [7.121.-7.129] manifest in an extreme form the general lack of explanation of the assumptions and calculations on which the Report is based.	The Authority does not accept that this section "*manifest[s] in an extreme form the general lack of explanation of the assumptions and calculations on which the Final Report is based*". This section clearly explains how the Authority endeavoured to cross check the internal workings of the AAC-plus model. However, in order to provide Albion with further assistance, the Authority has re-explained how the AAC-plus model was cross-checked (see Annex 1 to the Authority's response). The Authority's position is fully explained	

[1] Albion has already expressed concerns about the accuracy and/or apportionment of Dŵr Cymru's estimated MEAVs for non-potable assets, believing them to be overstated.

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					(b) The comparison that the Authority apparently draws between Table 15 and the "weights used in the AAC-plus model" is not stated in the Final Report and is entirely obscure. Albion has therefore sought an explanation of the Authority's approach. (c) The figures that the Authority apparently compares with these figures was only subsequently revealed in correspondence dated 26 October 2007 and 16 November 2007. From this correspondence, it	at §7.128 of the Final Report. No gross MEAV estimate for water storage has been prepared by the Authority.	

[2] The comparative figures suggested by OFWAT are not identified within the Final Report but can now be tabulated as follows:

Assets	*Dŵr Cymru MEAV*	*Ofwat MEAV*	*Reference*
Raw water aqueducts	£13.2m	£43m	Ofwat letter 26/10/07
NP treatment works (Ashgrove and Court Farm)	£9.2m	£18m	Ofwat letter 26/10/07
NP bulk mains (note >600mm and 300-600mm, excluding stranded assets	£34.5m	£61m	Ofwat letter 26/10/07
Service reservoirs	£7.4m	£19m	Ofwat letter 16/11/07
TOTAL	£64.3m	£141m	

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					appears that the Authority in fact used very substantially higher MEAV values, both individually and collectively, than those indicated in [T15][1]. It therefore remains obscure how the Authority purports to derive support from these figures.[2] (d) This part of the Final Report should therefore be disregarded as wholly unintelligible in the absence of a clear explanation of its origins and meaning.		
		7.127	"The Authority has removed the non-potable distribution assets that were stranded in 2000-01 from the MEAV cross-check."	It is not clear what justification there can be for excluding stranded assets from the analysis, especially in view of the fact that the AAC-plus methodology omits from costs any contribution to the partially- and un-funded universal service obligations that Dŵr Cymru has to carry out. The policy implication of these methodological		Whether stranded assets should be included in the customer class asset base depends on the extent to which these stranding risks are included in the customer class cost of capital. Given that "*the Authority has not included an uplift to allow for the risk of asset stranding in the cost of capital used in the Final Report*" (see §6.64), these stranded assets should be included in the AAC-plus and LAC	

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				decisions would be that potable (mainly domestic) customers should not only take full responsibility for universal service obligation costs, but that they should also under-write risky non-potable activities as well. This is not the approach adopted in tariff setting, and is not tenable as an appropriate approach in the present context. The correct approach is that all costs that cannot be attributed to a particular class of customer should be fairly shared between all classes of customer. If, as here, the Authority explicitly fails to allocate certain cost categories, the implication is that these will by default be loaded (unjustifiably) onto potable (mainly domestic) customers.		methodologies through a supplemental charge. This would reflect regulatory practice that efficiently incurred investments continue to be remunerated at the appropriate cost of capital. The Authority did not allow for any stranded costs in either accounting methodology – AAC-plus or LAC. This is an error in the Final Report. As to the calculation of the stranded asset costs, the Authority has estimated that the gross MEAV of known stranded non-potable distribution assets is at least £15m (see Annex 1 to the Authority's response, noting that two stranded pumps on S6 remain to be valued and other unknown stranded assets may be present). However, some of these stranded investments were grant funded and should therefore not be included in any supplemental charge calculation. Assuming, for illustrative purposes that around £5m has been post-1989 grant funded (e.g. contribution to LG non-potable main), the Authority has assumed that the stranded assets to be remunerated in both the AAC-plus and LAC methodologies falls to around	

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						£10m. Including these stranded non-potable asset costs would increase the AAC plus/LAC methodology results by around 0.2p/m^3 (if these assets continue to be remunerated at the customer class cost of capital). The Authority recognises that there has possibly also been some other more limited asset stranding on the 10 non-potable systems that is not accounted for in the provisional £10m estimate. For example, the sludge main from Ashgrove WTW (that is no longer used to transport the sludge to local receiving waters) is effectively stranded. However, given the time constraints in preparing this response, it has been assumed that these other stranded asset costs are less significant, amounting to less than 0.1 p/m^3.	
		7.147	**Dŵr Cymru** - "Results of the AAC-plus methodology" [see Tables 16 and 16A in the Report] **Albion (1)** - **Services Dŵr Cymru would need to**	The results for the AAC-plus methodology are incomplete because they do not include the costs of the transfer, treatment, and disposal of sludge from the Ashgrove treatment works. These	**1) Site specific functional requirements were not included in the FAP and should not be included in an AAC analysis of non-potable costs**	Regarding Dŵr Cymru's comments, see comments in response to §7.43 above. Regarding Albion's comments, see §1.2.1 of the Final Report for the exact terms of reference.	

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			provide to Albion under a common carriage arrangement in 2000/01 which in the Authority's view were covered by the FAP Transportation from Heronbridge to Ashgrove WTW Partial Treatment, at Ashgrove WTW Sludge management, disposal via sludge main to Chester STW Water distribution, from Ashgrove WTW to Shotton Paper site Water storage via rented Corus lagoons Operational control, including computer facilities at Bretton WTW	costs are excluded by the Authority from the cost allocation analysis on which the AAC-plus methodology is on the basis that they are incurred and accounted for as part of Dŵr Cymru's wastewater business. Nonetheless, for the purposes of the Referred Work, since it is agreed that the costs of transfer, treatment and transportation of sludge are incurred as part of the treatment function at Ashgrove they should have been included in the AAC-plus based assessment of costs. Dŵr Cymru notes that the LRIC and LAC methodologies produce estimates for the cost of sludge management of 1.9p and 1.4p per m^3 respectively. An adjustment to the figures presented in tables 16 and 16a of at least 1.4p per m^3	(a) inclusion of such site specific costs falsifies the contemporary record, which makes it clear that the FAP was based on treatment and bulk distribution costs: "DCC's clean water service is segmented into: resource, treatment, bulk distribution, local distribution and customer service. The services requested by AW are treatment to a non-potable standard (as present) and bulk distribution." [CMC Bundle, 47/224] (b) The inclusion of such costs is not consistent with the use of the AAC methodology to indicate the prices of non-potable common carriage services "generally", contrary to the indication of the Authority at the CMC on 23 October 2007:	As regards Albion's point (a), in the Referred Work, the Authority was ordered to investigate the costs reasonably attributable to the service of the transportation and partial treatment of water by Dŵr Cymru, generally and through the Ashgrove system in particular. The Tribunal's comments in its judgments required the Authority to investigate costs at a greater level of granularity that had been done in the pure AAC methodology Dŵr Cymru used to calculate the FAP (see §§6.8-6.11 of the Final Report). As a result of its investigation, the Authority identified several site-specific costs which needed to be included in the more disaggregated AAC-plus methodology. As regards Albion's point (c), including common carriage services does not lead to double recovery. Common carriage services are additional services required by setting up a common carriage arrangement; they are not included in the revenues used in the AAC-plus methodology as they are costs that do not exist unless common carriage takes place. To be clear, the AAC-plus	

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			The 8Ml/day potable back-up supply Common carriage services to Albion **Albion (2) -** *The rationale for inclusion of an additional figure for common carriage services is at [5.67-5.96] passim*	should therefore have been made if the results are to be used for the purposes of an excessive pricing test.	"In answering your question about where have we answered the question generally as opposed to locally, my understanding is we adopted the AAC plus methodology to answer general and the LRIC and the LAC methodologies to look at it on a local costs' basis", transcript, p. 5, ll. 10-12. (c) Such inclusion is inconsistent with an AAC approach as a matter of principle, which is based on "top down" allocation of whole company average costs. (d) In addition to these general criticisms, there is specific objection to inclusion of sludge management, back-up supply; common carriage costs; scientific services, some elements of general	methodology does not include any retail costs so there is no duplication between common carriage and retail services. Albion is correct that common carriage services costs would not be included in a bulk supply or retail price as those arrangements do not require common carriage services. As regards Albion's point (d), the logic of the AAC-plus approach is that the attributable cost of the back-up supply which was previously allocated across all other customers is now allocated to the Shotton Paper supply. This is in line with the Tribunal's wish to for the Authority to develop more local-cost-reflective methodologies in the Referred Work. To avoid double-recovery by Dŵr Cymru of the cost of the back-up supply, an offsetting change would have been made at the 2004 Periodic Review As regards Albion's comment that Dŵr Cymru originally used a "pure" AAC methodology which did not include site-specific costs, please see comments in response to Albion's point (a) above. Specifically on the back-up supply, a	

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					and support services, and doubtful debts: see below **2) The common carriage services costs should not be included in an AAC analysis.** (a) The purpose of an AAC analysis is to allocate the total costs of the firm. The effect of the Authority's approach is to permit double recovery. It also represents an additional charge that would not be included in either a bulk supply or retail price, notwithstanding the fact that the Authority recognises that (i) [5.22] retail services "are not part of the common carriage service Dŵr Cymru would provide to Albion"; and (ii) [7.98-99 and 7.105] the Authority has included a substantially increased "customer interface" cost with non-potable customers	summary of the Authority's reasoning for including it is set out at §§5.61-5.63 of the Final Report. For the record, the Authority did not prompt Dŵr Cymru as Albion suggests. As regards Albion's point (2)(b), the Authority is not countenancing price discrimination; it is stating (at §5.96 of the Final Report) that in the context of an excessive pricing test, different considerations can apply from those which apply in regulatory tariff setting.	

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					that would not be borne by Dŵr Cymru in the context of a common carriage arrangement. (b) As the Authority recognises at [5.96], its approach in this and other respects is inconsistent with the general regulatory approach applicable to Dŵr Cymru's other customers. As such, the Authority's approach impliedly countenances price discrimination and is itself discriminatory.		
6.	*I(d)(iii)*	*7.148*	Bad and doubtful debts (0.7p/m^3)		**As with sludge disposal costs, these costs are fully recovered from potable customers so that it is double recovery for Dŵr Cymru to include this sum (equating to £50,000 per year) in its non-potable tariff.** In any event, debt recovery	The Authority's position is fully set out in the Final Report and it has nothing to add (see §§7.20-7.27).	

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					relates overwhelmingly, if not exclusively, to individual consumers and it is unreasonable to allocate those costs to Albion, whose conduct is regulated by the Authority under the terms of its inset appointment.		
		8.37/8	"Dŵr Cymru has also argued that *"given the function that the lagoons perform, they are, strictly speaking, already too small in the sense that they do not provide as much protection to the Ashgrove treatment process from the fluctuations in Shotton Paper's demand as would be ideal. On a "like-for-like" basis, therefore, the safer assumption is that additional storage would strictly be required for any increment"* (letter dated 25 May 2007). In contrast,	Whether or not the arguments are difficult to judge, the correct answer cannot be zero. Investment is required, either in more storage at the customer end or in flow control at the source. This is acknowledged by the Authority at paragraph 8.79. The fact that any variable speed pumps would have been installed at Heronbridge (and would therefore most likely be owned and operated by United Utilities) is irrelevant. Under the LRIC methodology it is necessary		The Authority noted that further engineering investigation would be needed to resolve this issue. The Authority accepts that there may have been some need for some additional storage capacity, if the absolute variance in demand remained the same as the demand increased under the proposed increments, in order to protect the treatment works from sudden flow variations. However, for the purpose of the Final Report, the Authority is satisfied that any additional storage capacity could have been provided at a very low incremental cost, and can therefore be safely ignored at the smaller demand increments adopted in the Final Report.	

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			Albion *"observe that the addition of further fixed speed pumps to the system would increase the flexibility to match supply to demand and reduce the volume of "overflow" needed. Obviously were one or more of these pumps to be variable speed, the requirement for an "overflow" could be very substantially, if not wholly, avoided"* (letter dated 30 May 2007). Without further engineering investigation beyond that already undertaken, the arguments are difficult to judge. On reflection (assuming the demand profile remains unchanged and noting the presence of the pumps under the expansion) the Authority confirms its decision in the Draft Assessment to exclude	to capture the costs for which the increment is causally responsible: whether the Authority accepts Dŵr Cymru's argument or Albion's some costs would have to be incurred, so the Authority was wrong to use a figure of zero for water storage under this methodology. In any event, the Authority ought not to have found the arguments difficult to judge. It is well aware (e.g. from the witness statement of Lynnette Cross, paragraph 12), which Albion did not seek to contest at trial, that the treatment process at the works requires that flows be steady, and increased or reduced only gradually. Variable speed pumps at source would be no substitute for more storage at the customer end in circumstances where Shotton			

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			incremental water storage (i.e. flow balancing) costs from the LRIC "expansion" option (until demand reaches 45 Ml/d, i.e. an increment of almost 100%). In addition, it appears that the onsite storage at Shotton is substantial enough to negate the need for top-up supplies at smaller demand increments."	Paper's demands change significantly and suddenly.			
		8.41	"Pumping station infrastructure costs (e.g. power connections, road access, etc) have been excluded."	There is no justification for excluding from the Authority's estimates costs which would inevitably form part of the hypothetical expansion project.		The proposed pumping stations would be located at the Ashgrove WTW and it was assumed that no additional infrastructure (beyond the associated pump house) costs would be required: see §8.57 of the Final Report. The Authority's position is fully set out in the Final Report and it has nothing to add (see §§8.39-8.41).	
9.	*3(a)(v)-(vi)*	*[9.34]*	"Based on these assumptions the equivalent sludge disposal cost would have been		**The costs of sludge disposal should not be included in the LAC**	In contrast to the AAC-plus methodology, the LAC methodology is essentially a hybrid approach that seeks "*to identify local costs wherever possible*": see	

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			around 1.0p/m^3 in 2000-01"		**analysis** (a) As stated at [2] above, the costs of sludge disposal are not in practice charged to water customers. The Authority's inclusion of "around 1.0p/m^3" in the LAC methodology is therefore discriminatory and unacceptable. (b) In addition, such costs were clearly not included in the FAP, which was based on Dŵr Cymru's regulatory accounts, which would not have included any provision for sludge disposal.	§§6.34-6.36 of the Final Report. The Authority therefore maintains its view that sludge sewer disposal costs should be included in the LAC methodology. Also, at page 56, lines 24-25 of the transcript of the tri-partite meeting to discuss the Draft Assessment held on 18 May 2007, Albion stated that sludge disposal *"should be costed as a trade effluent charge".* The extent to which these costs were "*clearly not included in the FAP*" is irrelevant to the first question posed by the Tribunal. This question focused on an investigation of "*the costs reasonably attributable to the service of transportation and partial treatment of water*". As regards Albion's point (a), see the comments in response to Albion's point (a) on §7.147 above.	
		9.56	"Common costs consist of the following items: rates; doubtful debts; scientific	Dŵr Cymru believes that the Authority has omitted to mention the most important,		The Authority accepts that for completeness it could have included *"unfunded and partially-funded legal*	

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			services; regulatory services; management and general services; and general and support expenditure."	and difficult to estimate, component of common costs, namely the costs of the partially- and un-funded obligations which Dŵr Cymru is required to carry out as a water undertaker. This is acknowledged by the Authority elsewhere (e.g. at paragraph 5.111). As a result of this important omission, the results of the assessment of cost arrived at by means of the LAC approach are incomplete, and cannot therefore provide the basis for any finding in relation to excessive pricing.		*obligations"* in the list of common costs in §9.56 of the Final Report. The Authority acknowledges at §5.111 that there is more scope for *"errors of exclusion"* in the LAC methodology. That is one of the reasons why the Authority considers the AAC-plus methodology to be the main methodology in the Final Report. Dŵr Cymru has not provided information to the Authority on what it considers its unfunded and partially-funded legal obligations to be, nor given an estimate of the costs associated with them or an idea of the appropriate means of allocating such costs across customers. In any event, it is not clear to the Authority why costs associated with unfunded and partially-funded legal obligations are not effectively included in the common cost categories *"regulatory services"*, *"management and general services"* or *"general and support expenditure"* in the LAC model. It is also not clear that costs associated with unfunded and partially-funded legal obligations should be recovered by	

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						means of a mark-up on the access price to an entrant.	
8.	*3*		The LAC model includes the back-up supply because it is an Ashgrove-specific service which, based on the analysis above, it is reasonable to assume was included in the FAP		The costs of "back-up" supply should not be included in the LAC analysis (a) For the reasons given above in relation to the AAC methodology, it is clear that the FAP was not based on "Ashgrove-specific" costs. (b) Until the Draft Assessment, Dŵr Cymru maintained that the costs of a "back-up" supply would have been negotiated separately from the FAP. Inclusion of an additional sum in respect of the "back-up" supply distorts any comparison with the FAP, which was based on the overall costs of treatment and bulk distribution rather	See comments in response to Albion's point (a) on §7.147 above. The Authority agrees that Dŵr Cymru's original FAP calculation was not based on Ashgrove-specific costs but the Tribunal asked to the Authority investigate the costs reasonably attributable to the service of the transportation and partial treatment of water by Dŵr Cymru, generally and through the Ashgrove system in particular. At §45 of the Refusal Judgment, the Tribunal stated "*if a "top-down" approach is used, the costs in question should be capable of being verified*". A summary of the Authority's reasoning for including the back-up supply is set out at §§5.61-5.63 of the Final Report.	

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					than any specific requirements of Albion: "The price is based on whole company average prices and is therefore not particular to the Ashgrove application." [CMC Bundle, 47/228].		
10.	*3(d)(ii)*	[T19]	Doubtful debts		As under the AAC-plus methodology, recovery of this sum would represent double recovery for Dŵr Cymru and should be excluded. In LAC terms it would appear that there is no incidence of doubtful debt relating to customers served by the Ashgrove	See comments in response to §7.148 above. The fact that there has been "*no incident of doubtful debt relating to customers served by the Ashgrove system*" is irrelevant to the allocation of this company cost item. Many customers (household and non-household) can claim the same defence. However, this cost is a forward-looking risk based	

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					system.	business cost and all customers should generally contribute to it.	
11.	*3(d)(iii)*	[T19]	Scientific services		Recovery of this sum would represent double recovery for Dŵr Cymru, as all scientific services costs are captured within the Ashgrove cost centre. This sum should therefore be excluded.	This cost envelope is wider than just onsite sampling/monitoring costs: see §§7.116-7.120 of the Final Report. Accordingly, not all attributable scientific service costs are included in the Ashgrove cost centre.	
12.	*3(d)(vi)*	[T19]	"Includes insurance cost of 0.3p/m³. Note, also includes a management on-cost for Corus lagoons."		There is no basis for inclusion of either of these additional sums. There is no justification for inclusion of the unquantified sum for "management on-cost for Corus lagoons", which is already captured within the system operating costs. The additional insurance cost of 0.3p/m3 (equivalent to £20,000 per year), is wholly unparticularised.	This cost envelope relates to a management overhead. Insurance and lagoon management costs were provided by way of examples of the sorts of services which fall within this cost envelope. These specific costs (in p/m^3) are illustrative and did not form part of the calculation of this cost envelope.	

Heading 2: Arithmetical errors allegedly committed by the respondent in the Final Report[3]							
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13.	*1-3*	*[7-9]*	*[passim]*		**Despite its length, the Final Report does not set out the detailed workings, calculations and assumptions on which its results are based. As such, it is impossible to determine whether or not these workings, calculations and assumptions are sound. This could be readily rectified by disclosure by the Authority of its workings, which must presumably exist. It would be most convenient for the Tribunal and the parties if that were provided in accordance with Table 1 attached to this schedule, which sets out the relevant categories in a consistent and**	The Authority disputes Albion's claim that the Authority has not provided enough information to the parties. This issue is addressed in §§33-40 of the overview of the Authority's response. Albion uses the LRIC methodology (point (d)) to support this claim, arguing that "*there is no explanation of the remaining 9p/m^3*" (§8.123). The Authority confirms that the "remaining" costs are the associated incremental operating costs. This is evident from the preceding detailed discussion of these incremental operating costs: see §§8.58-8.77 of the Final Report.	

[3] As discussed at the CMC hearing (see transcript, page 6, line 4, to page 7, line 12), Albion has attempted to classify its points in a clear and useful way: under this heading, it has included errors of quantification, including instances where the lack of any detailed calculations have made it impossible for Albion to reproduce the figures that appear in the Final Report.

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					systematic way. (a) The following specific points appear to Albion to be the most significant but are made without prejudice to its general submission that the Final Report is radically defective in failing to provide the detailed workings, calculations and assumptions on which its results are based. (b) In making this general submission, Albion would respectfully remind the Tribunal that each 1p/m^3 represents an annual cost of approximately £70,000 or approximately £500,000 since the start of 2001, so that even the smallest of the individual findings that underlie the various methodologies, a cost of 0.1p/m^3, represents an annual cost of £7,000 or about £50,000 since the		

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					start of 2001. As such, each of the conclusions of the report should be supported by a specific calculation to indicate how it has been derived if it is to be accepted by the Tribunal as valid. (c) There is no reason why this should not be done for each specific calculation in the Final Report. Presumably, the relevant calculations exist so that it is simply a matter of putting them in a convenient format and providing them to the Tribunal and the parties. Albion respectfully submits that the headings in its Table 1 would offer the most convenient format for all concerned. (d) Without prejudice to this general submissions, Albion notes that the position in relation to LRIC		

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					is particularly striking: (i) [8.123] states that 65% of the 9.3p/m^3 for water treatment and sludge disposal reflects capital charges for the hypothetical addition of new clarifiers, which equates to 6.05p/m^3 or over £400,000 per year or over £3 million since the start of 2001. (ii) Likewise, [8.123] states that 50% of the 9.9p/m^3 for bulk distribution relates to capital charges for the hypothetical addition of new pumps, which equates to 4.95p/m^3 or about £350,000 per year or about £2.5 million pounds since the start of 2001. (iii) There is no explanation at all of the remaining 9p/m^3, which equates to over £600,000 per year or over £4 million since the		

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					start of 2001. Albion submits that it is simply unacceptable for the Authority to make commercial findings of this magnitude without providing any specific justification or quantification of how these very large sums have been calculated.		
14.	*1-3*	*[6.42-6.68]*	*"6.66 … the Authority has used an estimate of the disaggregated cost of capital of 11.1% in the LAC and LRIC models and 8.0% in the AAC-plus model …* *6.67 … The Authority does not use a disaggregated cost of capital in a regulatory context and has no plans to do so at present.*		**The Authority's decision to use a disaggregated cost of capital is wrong in principle and unlawful. Its results are therefore systematically inflated and wrong. In the absence of the detailed workings and calculations on which the conclusions of the Final Report are based, it is unnecessarily difficult, if**	The Authority's reasoning for using a disaggregated cost of capital is explained at §§6.42-6.68 of the Final Report. The Authority does not consider its approach to be wrong in principle or unlawful for the reasons set out in those paragraphs. The Authority has therefore not recalculated the methodologies using Dŵr Cymru's regulated rate of return.	

[4] See [B/47], letter from Authority dated 5 June 2007, p. 2: "no contemporaneous evidence has been presented to the Authority to suggest that the AAC methodology Dŵr Cymru used to calculate the First Access Price used a different cost of capital because that methodology used Dŵr Cymru's actual return on its business".

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			6.68 The Authority also notes that if it used a higher cost of capital on industrial customers in a regulatory context the Authority would need to reduce the allowed cost of capital on the rest of the appointed water company's business and adjust retail prices for industrial and domestic customers as a result. This did not occur in practice in 2000/01."		**not impossible, for the Tribunal or Albion to assess the precise significance of this error of principle. The Authority should therefore produce revised figures based on the regulated rate of return applicable at the time of the FAP.** (a) The cost of capital used by Dŵr Cymru in the FAP was the actual return on its water supply business. This implies that a weighting of 1.00 should have been used in the AAC plus methodology. By contrast, for the AAC-plus methodology, the Authority uses a cost of capital of 8.0%, implying a cost of capital weighting of: 8.0/3.7 = 2.16. For the LAC and LRIC methodologies, the cost of capital was 11.07%,	During the Referred Work, Albion made the same point about the Authority using a disaggregated cost of capital which Albion stated that the Authority would not use in a regulatory context; the Authority's response is contained in §6.62 of the Final Report. The Authority does not consider its approach to the cost of capital was contrary to the approach of the Tribunal. As explained at §6.49 of the Final Report, the Tribunal gave no specific guidance to the Authority on what cost of capital should be used in the Final Report. The Authority has addressed Albion's point about the FAP originally being calculated on a "pure" AAC basis – see comments in response to §7.147 above. With regard to point (g), it is not clear what access prices Albion is referring to. However, any margins which Dŵr Cymru has recently offered to Albion or Aquavitae are irrelevant to the Final Report because any such margins	

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					implying a weighting of: 11.07/3.7 = 2.99. (b) An approach that is consistent with its own tariff setting rules would require the Authority to apply Dŵr Cymru's actual return on its water supply business (i.e. 3.7% of RCV) for the calculation of reasonably attributable profit. The Authority does not follow this approach in the Final Report but chooses to use a disaggregated cost of capital that it would not use in a regulatory context. (c) Both under UK public law and pursuant to section 60 of the Competition Act 1998, the Authority is bound by the principles of non-discrimination and rationality. It is contrary to those principles (i) to treat Dŵr Cymru differently from other regulated water	would have been offered under the Costs Principle (section 66E of the WIA91.	

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					companies in respect of the regulated cost of capital; and (ii) to treat supplies to Dŵr Cymru's non-potable customers differently from its supplies to other customers. (d) The approach of the Authority is contrary to the approach of the Tribunal at paragraphs 584 to 598 of its judgment of 6 October 2006, [2006] CAT 23, [2007] UKCLR 22. In particular, the Tribunal stated at paragraphs 590 and 591: "on its regulated water business, Dŵr Cymru is allowed to earn a rate of return deemed compatible with its financing requirements but taking into account its position as a monopoly supplier. In our view there is no reason why a common carriage		

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					charge should be calculated any differently … it has never, as far as we know, been suggested that Dŵr Cymru is entitled … to earn a higher rate of return in respect of assets used to supply some customers rather than others". The Authority did not seek permission to appeal against this judgment and has prepared the Final Report pursuant to the direction of the Tribunal – as such, it should follow the guidance of the Tribunal in the preparation of the Final Report. (e) The Authority recognises the fallacy in its approach in paragraph [6.68] and the fact that this approach permits Dŵr Cymru over-recovery from non-potable supplies both absolutely and as against		

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					the remainder of its business. In absolute terms, the last sentence of [6.68] recognises that Dŵr Cymru was not in fact subject to tighter regulation in respect of its other business in 2000/01. In any event, given the regional average approach adopted by the Authority and Dŵr Cymru, it would have represented unlawful discrimination against non-potable customers for a disaggregated cost of capital to have been used. (f) The FAP was not in fact calculated on the basis of a disaggregated rate of return[4] and there is no basis for the Authority to permit Dŵr Cymru this additional return on its non-potable business. The level of excessive pricing should be judged by reference to a realistic		

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					estimate of costs, including a rate of return based on existing regulation, which reflects the unique position of Dŵr Cymru as a monopoly water company benefiting from the use of major fixed assets inherited from the UK state at a very substantially discounted value. (g) It is a further obvious defect of the Final Report that such figures have not been produced even as a sensitivity analysis, to indicate the significance of the issue for the purposes of the second issue. Given the zero margins that the Authority apparently persists in allowing Dŵr Cymru to offer to wholesale customers such as Albion and Aquavitae, the level of return permitted by the Authority to Dŵr Cymru in respect of its regulated		

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					treatment and distribution business is highly material to this issue, whether on the standard regulated approach or on the exceptional disaggregated approach adopted in the Final Report.		
15.	*1-3*	*See previous entry*	*See previous entry* *Cf Figure 2 and [7.130-133]*		**Even if, contrary to the previous submission, a disaggregated cost of capital is appropriate, the basis for the figure used is unsound, in that it is based on an erroneous time period and is contrary to the published policy of the Authority in relation to stranded assets at the time of the FAP.** (a) The principal basis for an additional 3.0% for cost of capital was an assessment of the relative volatility of non-potable as against potable demand in	Albion suggests that the volatility analysis is invalid because it relates to the period 1995/96 to 2005/06, part of which post-dates the date the FAP was offered (in fact Europe Economics also used data for 2006/07). The Authority used data from the annual regulatory (June) returns the water companies supply to it. The non-potable data series appeared to have a structural break in it between 1994/95 and 1995/96 (with a fall of 43% between the years) coinciding with a new category in the June returns being introduced. This structural break meant the Authority only had 12 years of data and it considered it was better for Europe Economics to use all 12 data points rather than only those pre-dating 2000/01 to ensure its results were	

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					the period 1995/96 to 2005/06.: see the Europe Economics report at [B/47. p. 5, paras. 1.17-1.23] (b) Similarly, [7.130-7.132] relies on a decline in non-potable demand in the period 2000/01 to 2003/04 as the basis for an "income risk" weighting factor at "step 4" of its AAC plus methodology, on the basis that "investors would … look to the past to inform their investment decisions". (c) These time periods are clearly irrelevant to the position as it would have appeared to Dŵr Cymru in January to February 2001. For that purpose, the relevant period is of course the period prior to that date. (d) It appears from Table 2 to the Europe Economics report [B/47, p. 5] that there	based on a reasonably sized dataset. In addition, Albion has not cited a source for its non-potable supplies index for Dŵr Cymru from 1974-75 to 2000-01, but the data for 1995/96 to 2000/01 is inconsistent with the Authority's data from June Returns (out by more than 15% in 1996/97 based on 2000/01 = 100). As such, the Authority has doubts about the reliability of Albion's data. Albion states that it is inconsistent with MD163 for the Authority to take account of stranded assets in the setting of common carriage charges. As stated in §6.54, the Authority did not include an uplift on the cost of capital to reflect asset stranding. However, the Authority has reconsidered its position since the Final Report and considers stranded assets should be included in the asset base in the methodologies (see comment on §7.127 above). This is not inconsistent with MD163 as stranded assets continued to be remunerated through the regulatory capital value at the 2004 Periodic	

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					was no material difference in the volatility of potable and non-potable water during the period 1995/96-2000/01 (potable water demand declined from 3,545 to 3,228, a reduction of about 9%, whereas non-potable water fluctuated between 268 and 242, a spread of about 9.7% but with a decline of only about 5.8% between the start and end dates. It was only after the relevant period that there was a marked decline in non-potable demand. (e) Viewed over a longer period (25 years to 2000/01), non-potable demand appears to have grown or remained buoyant (see Annex F) (f) In addition to this obvious error of analysis in both the Europe Economics report and the Final Report,	Review.	

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					it was contrary to the Authority's stated policy in 2001 for any account to be taken of the possibility of stranded assets in the setting of common carriage charges. MD163 on "Pricing issues for common carriage", published on 30 June 2000, states at section 5: "Stranded assets have not proved to be a significant barrier to competition in other industries. Ofwat expects that they should not be a barrier in the water industry either. … As part of each Review, the Director will need to consider whether to continue to remunerate stranded assets through the regulatory capital value."		
16.	*1(a)(ii) and (iii)*	*[7.147, T16a]*	an operating cost weight of 15% and a capital cost		**The Authority should use, at a maximum, the weighting figure of 15.2%**	The Authority does not consider itself bound to use any previous calculation provided by Dŵr Cymru, particularly	

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		[7.39-7.46, 7.154-166]	weight of 27%		**for non-potable treatment costs proposed by Dŵr Cymru itself for its New Tariff in 2003.** (a) [7.38] recognises that the Tribunal indicated at paragraph 317 of the 6 October 2006 judgment that it was "sceptical" of the suggestion that "the figure of 3.2p/m3 may have been an underestimate" on the basis that this figure was "based on work that Dŵr Cymru itself put forward to justify the New Tariff". (b) The contemporary evidence indicates that Dŵr Cymru was aware that the 30% weighting used in the FAP was vulnerable to challenge by Albion [CMC Bundle 47/225] (c) The basis for the	when a uniform water treatment cost weight of 30% was originally used to derive the FAP and the Director had expressed some reservations about the company proposed uniform cost weight reduction to 15.2% during the development of the New Tariff in 2003 (and its subsequent use in the Decision in 2004). The revised water treatment cost weighting factor (for capital maintenance, (~25%) and profit attribution (~34%)), when combined with the cost weight for operating costs (~23%) in the Final Report, will result in an average water treatment cost weight of around 30%, similar to that used to develop the FAP. Albion has suggested that 11.2% is the correct water treatment cost weighting factor: see letter from Albion to the Authority dated 23 November 2007. If this uniform cost weight were used in the AAC-plus methodology it would result in a direct operating cost of less	

[5] Dŵr Cymru's "draft report" appears in the Final Report as an appendix to section 7 ([7.149] – [7.166]).

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					amended figures now adopted by the Authority is a "draft report" apparently sent to the Authority by Dŵr Cymru dated 5 March 2007[5] containing ex post rationalisations for a higher figure, based on work apparently done after the date of the Decision and certainly long after the calculation of the FAP. (d) Given the history of this case, with continual changes of position by Dŵr Cymru as to the underlying facts, Albion submits that there is insufficient reason for the Tribunal to take a different approach from that adopted in the Decision and the 6 October 2006 judgment, based on work done by Dŵr Cymru itself in the period leading up to the Decision, for the specific purpose of establishing a tariff for the industrial	0.9 p/m³ (i.e. more than 30% less than from the Ashgrove WTW cost centre information) and a gross MEAV model output similar to that of Ashgrove WTW alone (i.e. the Court Farm gross MEAV would essentially be wholly excluded from the non-potable asset base). This weighting factor cannot therefore be sensibly used in the AAC-plus methodology.	

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					supply of non-potable water.		
17.	*1(a)(i)*	*[T15, 16a]*			**The capital costs for raw water aqueducts are impossibly high and are unsoundly based on a MEAV approximately 3 times the figure claimed by Dŵr Cymru itself.** (a) Dŵr Cymru apparently stated [T15] that the MEAV of raw water aqueducts serving its non-potable customers was £13.2m. (b) However, it now appears from an exchange of correspondence between Albion and the Authority [CMC bundle, 73/ 285, responding to [CMC bundle 66] that the Authority in fact used a figure for MEAV of £43m on the basis that "the cross-check MEAV estimates provided by Dŵr	There are alternative ways of estimating the gross MEAV of the raw water aqueducts and there are alternative approaches to allocating these costs of this function between non potable customers (see Annex 1 to the Authority's response for a more detailed technical discussion of this issue). The Authority accepts that one could follow Dŵr Cymru's approach (which appears to be supported by Albion) of weighting the gross MEAV by volumetric throughput. This approach would lead to a reduction in the raw water aqueduct gross MEAV from £43m to £27m. However, one could also allocate these raw water aqueduct costs solely to those non-potable customers that benefit from water treatment. If these two changes are implemented, the unit raw water aqueduct cost remains unchanged.	

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					Cymru (in Table 15) require further adjustment". (c) The 300% "further adjustment" made by the Authority is apparently "justified" by a short passage in a letter from the Authority to Dŵr Cymru dated 1 June 2007 [B/45, p. 5, point 16]: "Can Dŵr Cymru also comment on the alternative approach of resizing the main (using same design velocity) to supply just the non-potable customers and estimate the equivalent raw water aqueduct on this basis. The resulting raw water aqueduct MEAV of around £40m is then between the two figures presented in Table 13". (d) There is no evidence to suggest that this adjustment was "required"		

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					by Dŵr Cymru or by the facts of the case. It was a unilateral decision of the Authority. The effect of this unilateral "adjustment" by the Authority is to alter the proportion of the value of the relevant Dŵr Cymru raw water aqueducts, accounted for by non-potable supplies, from 26% (13.2/50.7) to 78.8% (40/50.7), (e) There is no suggestion that the original figure proposed by Dŵr Cymru was actually understated or that it was calculated in an inconsistent way (indeed it is clearly an overestimate because it omits consideration of the volumes supplied to the large Sluvad potable treatment works). When the Authority refers to the figure of £40m being "between" the two figures, it		

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					appears to be saying no more than that it does not intend to operate on the basis that (contrary to the facts) the entirety of Dŵr Cymru's identified raw water aqueducts is accounted for by its non-potable business, but only 78.8%. (f) Moreover, the justification for this unilateral suggestion by the Authority "resizing the main (using the same design velocity" appears to be a form of "stand alone" calculation of the kind that was rejected as totally artificial and irrelevant in the judgment of 6 October 2006 in respect of the Ashgrove system as a whole. It is also a "stand-alone" calculation based on a misunderstanding of the systems it seek to model. The result for system S6		

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					appears to create a "stand-alone" cost for three separate sources and three separate pipelines, rather than the single source and pipeline relating to the non-potable supply. (g) It is notable that, in this respect at least, it appears that the Authority has deliberately departed from the "important cross check" to which it refers at [7.126]. Rather than using the figures provided by Dŵr Cymru at [T15] as a "cross check", the Authority has multiplied them by three on a spurious basis. (h) Finally, as with the other calculations apparently underlying the Final Report, no details are provided of how this extraordinarily high and unrealistic figure has been obtained or the assumptions on which it is		

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					based. (i) The figure for capital costs of raw water aqueducts at [T16a] should therefore be struck out from the calculation of the AAC plus figure. (j) It is notable that this obvious inflation of the AAC plus methodology has only emerged because the Authority felt obliged to disclose its underlying methodology in response to a specific calculation – Albion respectfully submits that this provides a further vivid illustration of why the Authority should provide a fully worked set of calculations so that the Tribunal can see the basis on which the results set out in the Final Report have been attained.		
18.	*1(a)(ii)*	*[7.147,*			**The AAC results for both**	Albion has drawn the Authority's	

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	and (iii)	*T16a]*			**capital and operating costs are impossibly high and appear to contain an error of principle or arithmetic in relation to the capital and operating costs of the Court Farm works.** (a) As the Tribunal is aware, there are only two non-potable treatment works operated by Dŵr Cymru; Ashgrove and Court Farm. Court Farm is a much larger treatment works of which only part is devoted to the treatment of non-potable water. It thus appears that the Court Farm works should enjoy substantial economies of scale and synergies arising from costs shared between the potable and non-potable works. (b) However, the results of the AAC plus methodology	attention to a possible discrepancy in the calculation of water treatment costs between the AAC-plus methodology (5.3p/m^3 in the Final Report) and the LAC methodology (4.4p/m^3 in the Final report). This apparent discrepancy is important as it cannot be easily explained by simple technical differences. Indeed, as Albion points out (despite the additional complexities of Court Farm), with the associated economies of scale, the AAC-plus water treatment cost might be expected to be below the equivalent LAC water treatment cost (see Albion's response to §7.147 point (a) under Heading 2). The LAC methodology was used by the Authority as a supplementary cross-check (in addition to the gross MEAV estimates of the non-potable customer class) to the preferred AAC-plus methodology: see §§6.30 and 6.32 of the Final Report. The Authority has therefore reviewed the water treatment costs in both the AAC-plus and LAC methodologies (see Annex 2 to the	

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					confound this expectation when compared to the results of the LAC methodology. Whereas the LAC figures for Ashgrove in isolation are respectively 1.8p/m^3 (capital costs [T20, 9.31]) and 1.2p/m^3 (operating costs [T20, 9.31]), the equivalent AAC plus figures are respectively 3.5p/m^3 and 1.8p/m^3. (c) The capacity of Court Farm is approximately 70% of the total capacity of Dŵr Cymru's non-potable water treatment and approximately 59% of throughput [7.158, fnn. 32 and 33]. (d) Given the LAC figures for Ashgrove, in order to achieve AAC plus figures of the magnitude contained in the Final Report, it would be necessary for the capital	Authority's response) to identify possible reasons for the discrepancy identified by Albion. First, the capital cost used in the LAC methodology may be understated. This could be increased to around £4.6m, an increase of around 10% on the Authority's gross MEAV estimate for the Final Report. This increase in the capital cost of the Ashgrove WTW would translate to an increase of 0.2p/m^3 in the LAC methodology unit capital cost for water treatment. Second, it may be appropriate to accept a "throughput" based profit attribution cost weight of 33.6% (identical to that originally proposed by Dŵr Cymru, but significantly less than the 40.3% weight used in the Final Report), but only on condition that this "throughput" based weight will have to shift over time as the relative potable: non-potable load factors change. For example, by 2003-04, the throughput weight will have risen above the capacity weight (see §7.159 of the Final Report for this effect where the throughput weight is actually	

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					costs for Court Farm to be of the order of 4.4p/m^3 and the operating costs to be of the order of 2.1p/m^3, a cost increase, compared to Ashgrove, of 2.4 times for capital costs and 1.8 times for operating costs. (e) In the absence of detailed workings, it is again impossible to tell how the Authority has reached these improbably high figures. However, it appears inevitable that there is either a clear error or an unwarranted assumption about the capital and operating costs of Court Farm.	above the capacity weight). This change in the profit attribution cost weighting factor (from 40.3% to 33.6%) would reduce the 19.3p/m^3 AAC-plus cost estimate by 0.6p/m^3. Third, it may also be appropriate to accept an adjustment to the profit attribution weight to account for differential capital maintenance costs. This adjustment could be based on differential asset lives (between potable and non-potable treatment works) and could be around 75%. This change in the capital maintenance cost weighting factor (from 40.3% to 75% of 33.6% i.e. 25%) would reduce the 19.3p/m^3 AAC-plus cost estimate by a further 0.6p/m^3.	
19.	*1(a)(viii)*	*Table 16a, page 127* *Table 15, page*	Water storage capital costs 1.0p/m^3 Service reservoir MEAV £7.4m		**It appears that the Authority has used an impossibly high figure for the capital value of service reservoirs serving non-potable customers**	Dŵr Cymru provided a gross MEAV estimate for just 3 non-potable systems of £7.4m: see Table 15 of the Final Report. Following a request from Albion, the Authority confirmed that the gross MEAV model output "*of water storage if provided on all 10 non-*	

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		121			(a) Albion's attempts to check the Authority's AAC-plus methodology, suggested that Ofwat would have had to assume a capital value for non-potable service reservoirs of approximately £19.5m to produce the result given in the Final Report. This contrasts with Dŵr Cymru's evidence of £7.4m. (b) In response to a request for clarification of this point, the Authority wrote on 16 November 2007; "Based on the cost weighting factors adopted in the Final Report the AAC-plus model provides an intermediate output for the gross MEA value of water storage (if provided on all 10 non-potable systems) of around £19 million."	*potable systems*" would be "*around £19m*" (letter from the Authority to Albion dated 16 November 2007).This was similar to the gross MEAV estimate actually provided by Albion (£19.5m), despite its continuing claim of not being able to duplicate the workings of the AAC-plus methodology. Albion claims "*the Authority offers no explanation as to why it considered it necessary to inflate Dŵr Cymru's evidence by a factor of almost three*". However, Albion is incorrectly comparing two completely different gross MEAV estimates: one is a bottom-up estimate for just three non-potable systems (S5, S7 and S8) and one is a model output that assumes water storage is provided for all ten non-potable systems. It is possible to adjust the AAC-plus model workings to produce a gross MEAV output for the three systems for which Dŵr Cymru has provided a gross MEAV estimate (namely S5, S7 and S8). The model's gross MEAV output for water storage is then £3.6m (rather	

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					(c) The Authority offers no explanation as to why it considered it necessary to inflate Dŵr Cymru's evidence by a factor of almost three. It should also be noted that the contemporaneous evidence shows Dŵr Cymru considered the MEAV of the Corus lagoons (on the Ashgrove system) to be £1.8m (Enclosures to the notice of appeal, Tab 9, page 25)	than £19m), less than 50% of that gross MEAV estimate (£7.4m) provided by Dŵr Cymru. If only 3 non-potable systems are modelled for the water storage function, the resulting unit cost is similar to that included in the Final Report (1.0p/m^3, assuming an 8% cost of capital). Hence the Authority currently sees no reason to change the 20% cost weighting factor assumed in Table 13 of the Final Report.	
		8.29	The engineers' capital cost estimate for water treatment can be split into two elements: the treatment works infrastructure (£22K per Ml/d) and the treatment works itself (£96K per Ml/d). The engineers cost estimate of £96K per Ml/d for the treatment works itself corresponds to the unit standard cost for	Whilst acknowledging that 20% is an approximation, Dŵr Cymru notes that the correct figure (22 divided by 96) gives 23%, which is the figure that should have been used for the site specific inflator.		The Authority has revisited this calculation (see comments in response to §7.39 above) and accepts that a greater capital cost site-specific inflator may be appropriate for the water treatment works. Based on the evidence from Mott MacDonald, it may be appropriate to increase this site-specific inflator for water treatment from 20% to 30%.	

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			partial water treatment. However, it is evident that associated infrastructure costs will add a further 20% to the standard unit cost. These missing infrastructure costs are therefore accounted for by a site specific inflator of 20%.				
		8.126	"Results of the LRIC model…" [See Table 17 in the Final Report]	Dŵr Cymru is concerned that, for part of the calculations that support the LRIC results, the Authority has not properly allowed for the difference between capacity and throughput. Specifically, for certain components of the LRIC calculation, capital costs are described in terms of £s per Ml/d: see paragraphs 8.29 for water treatment, 8.33 for sludge, and 8.41 for pumping. In order to translate £s per Ml/d of capacity into p per m^3 of		The Authority can confirm that it did allow for the difference between capacity and throughput. These issues were discussed under capacity considerations: see §§8.105-8.112 of the Final Report. The Authority assumed a customer peaking factor of 1.2: see §§8.105 and 8.110 of the Final Report. However, this information (along with some other LRIC methodology engineering assumptions) should have also been included in §8.9 of the Final Report. This paragraph should therefore read: *"The key LRIC model inputs are: the (opportunity) cost of capital (11.1%), the capital cost inflators for site-specific*	

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				consumption, it is necessary to know the ratio of capacity to consumption, i.e. the "peaking factor", and to make the necessary adjustment. For example, if an asset costs 20p per m^3 of capacity, and the peaking factor is 1.25, then the relevant cost for pricing purposes is 25p per m^3. Had the Authority made such necessary adjustments, Dŵr Cymru believes that they would have been described in the Final Report, especially as regards the choice of peaking factor. The omission of any such reference therefore suggests that the Authority did not make such adjustments, and therefore that part of the LRIC results relate to p per m^3 of capacity, not throughput, and are therefore under-		*inflators (20%, but potentially 30% for water treatment), the capital cost adjustment for expansion rather than new build (e.g. incremental water treatment costs are reduced by 35% as a result of existing support infrastructure and buildings), the volume increment (20%), the average volume delivered (24 Ml/d) at the current maximum capacity (32 Ml/d for treatment works, 30 Ml/d for the gravity main), and the daily customer peaking factor (1.2). Other important inputs include the nature of the water storage provided (residence time and tank construction, LRIC results assume no incremental investment required), the pipe roughness (of a new, 0.15 mm, and the existing 20 mm, pipe), the leakage level (of a new, 5% and existing steel pipe, 10%) and the sludge flow estimate (0.5%).”*	

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				stated. Finally, Dŵr Cymru observes that it is possible that the same mistake has been made in the context of the capital costs components of the LAC calculations.			
20.	*2(a), 3(a)*	*[8.53, 9.24, 9.44]* *Cf. [7.12-7.14]*	The [LAC] depreciation charge on raw water aqueducts is calculated by the local asset value depreciated over 120 years. The [LAC] infrastructure renewals charge on the distribution main is calculated over 120 years. For infrastructure, [LRIC] asset lives have been estimated at 120 years (for the various mains).		**It appears that the Authority has incorrectly calculated the IRC figure for non-potable mains in both the LRIC and LAC methodologies. It appears from Tables 10 and 11 of the Final Report that the figures should be based on an asset life of 180 not 120 years.** (a) It appears from Tables 11 and 12 to the Final Report that the IRC for Dŵr Cymru's mains have been	The Infrastructure Renewals Charge (IRC) will fluctuate over time. There is no reason why the implied asset life calculated in any given year from information provided as part of the AAC-plus methodology should equate to the actual asset life assumed in the LAC methodology. That is why an industry average, which partly averages out periodic company fluctuations in the IRC, is a more suitable cross check for the LAC methodology (see §8.53 of the Final Report for the reference to this particular cross-check). This is an area where there is no need for absolute consistency between the AAC-plus and	

[6] E.g. over 600mm: MEAV 537m - IRC 3.0m: 3x180 = 540m; 301-600mm: MEAV 613 – IRC 3.4: 3.4x180 = 620; 151-300mm: MEAV 513m – IRC 2.8m: 2.8x180 = 540; 0-150mm: MEAV 1730m – IRC 9.5m: 9.5x180 = 1710.

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					calculated on the basis of an asset life of 180 years. The MEAV for the various mains diameters in Table 11 divided by 180 equals the IRC stated in Table 10).[6] That calculation confirms that all mains are assumed to have a useful life of 180 years and the annual IRC is therefore the appropriate MEAV divided by 180. (b) In its LAC and LRIC methodologies, by contrast, the Authority ignores the actual asset lives used by Dŵr Cymru and applies lives that are two-thirds of that figure. The effect on the calculated IRC is to inflate the result by 50% with no apparent objective justification.	LAC methodologies.	
21.	*1(a)(viii)*	[7.63, 7.71]	"primary service reservoirs would account for 48% by MEAV of our service		**The weighting calculation for storage costs at [7.71] contains an arithmetical**	The arithmetical error identified by Albion at §7.71 of the Final Report is incorrect. The Authority acknowledges	

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			reservoirs (and water towers) in the PR99 Asset Inventory" "… the Authority has reduced the non-potable capital cost weighting factors for water storage by 60% … In addition, the lower residence time … supports a 30% reduction of this weight. The authority has therefore used a weight of 20% (i.e. 42% of 48% in the AAC-plus model)."		**error.** Reducing a figure by 60% (to 40% of the original) then by 30% leads to a total reduction of 72% (to 28% of the original) rather than 58% (to 42% of the original). The weighting should therefore be 28% of 48%, approximately 15%.	that this comment largely stems from poor drafting in the Final Report. The sentence should read "*the Authority has reduced the non-potable capital cost weighting factors for water storage by **applying** 60%*". However, this should have been ascertainable from the preceding technical discussion and the explanation of how the 20% cost weight had been derived (i.e. 42% of 48%, where 42% is determined by taking 70% of 60%).	
22.	*3(a)((iii)*	[T20, 9.31]			**The Final Report wrongly uses gross MEAVs rather than MEAVs net of depreciation, contrary to its regulatory guidelines. As such, the MEAV for the Ashgrove treatment works is substantially overstated.**	Albion now appears to suggest the Authority should have adopted a different capital valuation basis within the LAC methodology, using net MEAVs. The Authority did consider a form of net MEAV for capital valuation purposes - the Modified Original Cost (MOC) - as an alternative to the Modified Acquisition Cost (MAC)	

[7] The witness statement of Ms Cross (at page 8, paragraph 23(ii)) supports the view that this lack of investment significantly predated 1990.
[8] Technically, any difference between infrastructure renewals charge and expenditure will affect the RCV but Albion is not proposing to address this matter.

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					(a) Despite Albion's severe misgivings about the methodology employed by the Authority, it is prepared to accept a *gross* MEAV of £3,646,000 for the Ashgrove works. However, Albion notes that the *gross* MEAV for Ashgrove is more than 10% greater than the estimate in Jones 2 (£3.28m) and almost twice the figure (£1.9m) used in the Decision (page 102). However, the Final Report contains an error of analysis that is also contrary to its regulatory guidelines in failing to use a net rather than gross asset value for Ashgrove. (b) Given the nature of the assets concerned and the lack of investment in the plant over recent years, Albion considers that the effect of this will be very substantially to overstate	approach finally adopted in the Final Report. This was described in §9.8 of the Draft Assessment, which was sent to the parties on 3 May 2007. However, the Authority cannot recollect any support for this alternative MOC approach to capital valuation from Albion or indeed any previous suggestion that net MEAVs should have been used within the LAC methodology (apart from a brief reference during the tri-partite meeting held on 18 May 2007 to discuss the Draft Assessment where it stated that depreciation *"may have a bearing on this concern that's been expressed about how one assesses the value of the asset")*. Furthermore the MAC approach is similar to that adopted by the Tribunal in Main Judgment. Unless requested by the Tribunal, the Authority will not be commenting in detail on any more of Albion's methodologies as part of this case.	

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					the net MEAV for Ashgrove and thus again to lead to a substantial overvalue of the related heads of cost. (c) [9.30] states that "The depreciation charge on the partial treatment works is calculated over 20 years for its mechanical components, 60 years for its civil components and 10 years for its electrical components." (d) The first statement of Mr Jones [CJ4] gives the following information: "Water treatment works. Value of element (% of gross MEAV) Short (6-15yrs) 10% Medium (16-30yrs)		

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					45% Long (50+yrs) 45%" (e) Applying the above approach, it is common ground that the Ashgrove treatment plant is approximately 50 years old and, by Dŵr Cymru's own admission, has had no significant investment since at least 1990[7]. This suggests that all electrical and most mechanical and civil components will be almost fully depreciated. (f) It is apparent from [CJ4] to Mr Jones First Statement that there is little difference between the gross and net MEAVs for Dŵr Cymru's <u>potable</u> treatment works. This is entirely consistent with the investment in those works, counter-balancing depreciation.		

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					(g) By contrast, it is clear that there has been no counterbalancing investment in non-potable treatment works: see the letter from Dŵr Cymru to the Tribunal of 20 March 2006, page 11: "Between 1990 and 2004, Dŵr Cymru spent in the region of £500 million upgrading its potable treatment works. During this time, no equivalent upgrades were made to its non-potable works". It is therefore reasonable to assume that the <u>net</u> asset values of non-potable treatment works will have depreciated significantly over that period. (h) Although the position is not clearly stated in [9.6-9.11] and [T18], Albion understands that the		

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					Authority's three methodologies all use gross Modern Equivalent Asset Values (MEAVs) for the calculation and allocation of operating profit: see in particular [7.12-7.13], [T11]. There is certainly no suggestion in [T18] that net MEAVs have been calculated. (i) This is contrary to the Authority's established process for setting price limits, which (as RD 08/03 makes clear) uses a capital value adjusted for current cost depreciation: "One of the elements we consider in assessing the revenues that companies' need is a return on the capital invested in the business. The value of the capital base of each company for the purposes of setting price limits is the		

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					RCV. Capital expenditure to enhance and maintain the network which is assumed in setting price limits is added to the RCV. […] *Current cost depreciation (based on the MEA value of the assets) which is assumed in setting price limits is deducted from the RCV each year*." (Emphasis added.) (j) For infrastructure assets there is no depreciation of these assets and therefore gross MEAV equals net MEAV.[8] However, for assets such as water treatment works, the difference between gross and net MEAV may be significant: see above. (k) There is thus a further substantial inflation of the MEAVs used for the		

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					calculation of the LAC costs of the Ashgrove system, resulting from failure to use net as against gross MEAVs for this purpose. (l) Albion believes this to be another significant defect in the Final Report. It therefore invites the Authority to recalculate its LAC result on the basis of net MEAVs, failing which it will submit its best estimate of the correct result in its submissions for the hearing of this matter.		
23.	*3(a)(vii)*	[Table 18, 9.36-9.44]	"Treated water main: [(1) Mott Macdonald MEAV estimate] £10,365,000; [(2) The Authority's MEAV estimate] 9,669,000; [(3) Reason for any major differences] The Authority uses a 20% uplift on Dŵr Cymru's standard cost		**The MEAV estimate for the treated water main is far too high, being based on a number of unrealistic assumptions and inconsistent with other evidence available to the Authority and the relevant guidance of the**	Albion has criticised the Authority's estimate of the gross MEAV of the treated water main at Ashgrove. The Authority rejects this criticism and responds in detail in Annex 3 to the Authority's response. To summarise: • First, the Tribunal has accepted Albion's	

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		[9.41]	base. Mott MacDonald uses a higher unit cost". The cost engineers have estimated that the unit (700mm diameter) pipe laying cost for the raw water aqueduct and the non-potable distribution main were £651 per metre and £658 per metre respectively in 2000/01. These unit costs are comparable to both the A550 project unit cost of £615 per metre and the unit MEAV cost (for 620-720mm) of £677 per metre that was used by Dŵr Cymru to develop its		**Authority.** (a) The MEAV estimates by Mott MacDonald and the Authority are approximately double those contained in the Decision [Annex I, Table 1], which estimated the likely cost of such a pipeline as £4,590,000. (b) These estimates are also approximately 25% higher than the evidence submitted by Dŵr Cymru to the Tribunal for the purposes of the June 2006 hearing. In his second witness statement, Mr Christopher Jones (finance	arguments that this is a relatively high cost system (see §§137-142 of the Further Judgment and §§196-211 of Albion's Notice of Appeal) and has set aside Annex 1 of the Decision. The Authority did not appeal this aspect of the Further Judgment; • Secondly, to ensure gross MEAV comparability, it is important that the gross MEAV of the treated water main is based on a company unit cost and the Authority has relied on an uplifted company standard unit cost (that assumes a	

9 The Flint Public Record Office also has the diary of the engineer responsible for supervising the construction of the Ashgrove pipeline. On several occasions he records his concerns about the high water table over large sections of the route. This would have a profound impact on deep tranches, with a significantly increased risk of trench collapse.

10 Albion has identified research that indicates that trench costs increase proportionately to the square of the depth (i.e. four-fold, when trench depth is increased from 1 metre to 2 metres and nine-fold from 1 metre to 3 metres). Albion has been unable to find examples of costings based on greater depths (as such depths are so unusual) but this research suggests that a 4-5 metre excavation would cost four to six times that of a 2 metre trench. (http://www.vannetinorden.com/documents/urban_water_management_in_cold_climate.pdf)

11 Compare Jones 3, para. 31, footnote 10, where he notes that the crossings of the A550 and the River Dee require 8 additional valves to deal with the duplication of the pipelines at these crossing points. It is clear from a map of the relevant area that the A550 is a dual carriageway and that the project involved the creation of two sections of pipeline under the road, accounting for approximately half of the overall length of up to1300m, and also a number of discrete pipelines under an intersecting dual carriageway as part of a major roadbuilding project.

12 The LG main apparently crosses under the M4, together with crossings of several railways, rivers, canals and A roads, so that it could not be said to be significantly more straightforward than the Ashgrove main.

13 This description of the non-potable main is erroneous. The pipeline, as far as the customer's premises, appears to be entirely 700mm cement-lined ductile iron.

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		[8.44]	company MEAV estimate in 1997/8. In the standard costs for main laying, the pipe depth is restricted to 900mm […]. Changes in these other "engineering" factors can increase main installation costs […] by more than 400%		director of Dŵr Cymru) claimed that the 1997/8 replacement cost of the Ashgrove main would be £7.979m (Annex 2, paragraph 6) for 16.507km. This is equivalent to £483.37 per metre. (c) It is clear from the Mott MacDonald report provided to Albion on 6 June 2007, 12 days before the Final Report, that the cost estimate for the treated water main was based on (i) pipeline lengths, diameters and surface types contained in the Authority's LRIC/LAC model; and (ii) a pipeline depth "assumed awaiting confirmation of depth from DCW": [B/48], notes. (d) It is further clear from the Cost Estimate Details attached to the report that the assumed pipeline depth	pipe depth of 900mm to the crown); • Thirdly, the cost engineers relied on modern engineering practice (of laying pipes in agricultural land) in selecting the lower depth of around 4-5m. The Authority believes that allowing for a more modest 10% management on-cost and the difficult ground conditions (high water table and contaminated land) will more than offset any cost reduction in decreasing the assumed pipe depth. In addition, another engineering report, the Bechtel report, also supports the gross MEAV estimate of £9.7m adopted by the Authority; • Fourthly, the LG main project cost of £15.0m (provided by Dŵr Cymru) appears to support the	

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					was "4-5m deep". This assumption is entirely unrealistic and invalidates the MEAV estimates of Mott MacDonald and, presumably, the Authority: (i) Within 1 week Albion was able to notify the Authority of this error by reference to the records in the Flint public record office, showing "a minimum "as built" depth of 5'6" (1.65m) from surface level to pipe invert (bottom) with an average of around 6'6" (2m)[9]". Copies of these plans were provided to the Authority on 23 July. It does not appear that Dŵr Cymru has disputed this evidence or "confirmed" the 4-5m depth assumption used by Mott MacDonald. (ii) There is no evidence that the Ashgrove pipeline or any replacement for	Authority's assumption that the gross MEAV of the treated water main is around £9.7m; and • Finally, at one stage in this case, Albion apparently supported a gross MEAV estimate of the treated water main of £9.7m. The Authority's estimate of the gross MEAV of the treated water main is therefore maintained at £9.7m.	

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					such a pipeline would have involved a 4-5 metre excavation. That would be deep enough to bury a double-decker bus and would incur huge costs associated with specialist excavators, trench reinforcement, dewatering and associated health and safety issues plus materials handling and reinstatement.[10] (iii) The "assumed" depth is inconsistent not only with the facts but with the regulatory guidance of the authority. RD 22/03, Annex 2, headed "Specifications of standards cost used in the analysis" states as follows: "General specification for mains laying: New water mains laid in normal site conditions at a depth of cover to the main of 900mm to the crown of the		

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					pipe." [8.44] of the Final Report itself recognises the significance of depth to the costs of pipelaying. (iv) Any cost estimate based on an excavation depth of 4-5 metres is therefore of no value as a cross check for a pipeline laid in a shallow trench with none of those issues. (e) As a further "cross check" to this very high figure, the Authority relied on information about the "A550 project", relating to work undertaken in 1995, when around 1,000 metres of the Ashgrove main (alongside/under the A550 road) was replaced at an apparent cost of £514,000, which the Authority equates to "around £615 per metre at 2000/01 prices" [9.40]. Albion considers that this is another very questionable		

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					"cross check": (i) Visual inspection of Dŵr Cymru's AIS database indicates that the A550 project was particularly complex, appeared to involve significantly more than 1,000 metres of pipeline and has no value as a proxy for the MEAV of a 16 km pipeline running largely through fields.[11] (ii) the uplift for inflation of approximately 20% appears to have no basis and is again contrary to the terms of RD 22/03, which states as follows: "Since the 1994 and 1999 reviews, companies have reported lower levels of capital investment than assumed in their price limits and significantly lower than was included in their business plans. …		

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					The analysis suggested that capital unit costs were around 10% lower for the water service … in 1998 compared to 1994. … For a selection of standard costs, we have compared capital unit costs for 2003 with the previously submitted costs for 1998, using a consistent price base and based on similar specifications. The analysis suggests that overall unit costs are around 15% lower for the water service … across the industry as a whole in 2003 compared with 1998." (iii) Overall therefore, the Authority appears to have undertaken no investigation of the validity of this project as a cross-check for the costs associated with the laying of the pipeline as a whole and to have applied		

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					a highly implausible inflation uplift that is inconsistent with its own guidelines. (f) As indicated to the Tribunal at the CMC on 23 October 2007, the Authority is aware that there is a much more direct comparator available to it, in the form of an actual length of pipeline with markedly similar characteristics laid by Dŵr Cymru in 1997, shortly before the period relevant to this case, the "LG main": (i) The LG main was built in 1997 and is a very close match for the Ashgrove main (both 700mm diameter and similar lengths).[12] (ii) Dŵr Cymru does not appear to have provided cost details of the LG main		

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					to the Authority until April 2007. It would appear that the Authority has taken no steps to investigate this highly relevant asset since becoming aware of its existence. Despite Albion's efforts to uncover contemporaneous cost evidence, the Authority has made no moves to acknowledge the importance of this pipeline. (iii) It appears from the letter from Dŵr Cymru dated 4 April 2007 [A68] that the LG main is classified by Dŵr Cymru as two system S6 "stranded" mains with a combined MEAV of just over £6m: 700mm 9.1km MEAV £3.698m 500mm 9.1km MEAV £2.453m[13]		

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					(iv) Albion has now obtained evidence from the Welsh Assembly Government pursuant to the Freedom of Information Act 2001 which is consistent with the above evidence and indicates a cost of potable and non-potable water mains for the LG site at a cost of some £7.14m. (v) The LG project included 3,752 metres of potable pipeline and, apparently, an associated service reservoir. Applying a discount of £2.8m to take account of these features, it appears that the costs of the non-potable pipeline would have been of the order of £4.4m. (vi) The contemporaneous comparative evidence thus indicates construction costs of £243 per metre for the		

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					closely analogous LG main in 1997. This contrasts with Mr Jones' 2006 evidence of £483.37 per metre; Ofwat's further escalation of Dŵr Cymru's, apparently unsubstantiated, costs to £541 per metre; and Mott MacDonald's estimate of £658 per metre. (g) In the light of all the above evidence, it would appear that Dŵr Cymru must be well aware that its actual "as laid" costs for non-potable mains were significantly lower than its claimed unit costs as stated in the second witness statement of Mr Jones. (h) The Authority's decision to further inflate Dŵr Cymru's unit costs and to ignore contemporaneous evidence of much lower costs has yet to be explained, although the		

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					discrepancy appears to be largely if not wholly explained by (i) a highly unrealistic depth assumption used by Mott MacDonald and the Authority; and (ii) reliance on (and artificial inflation of) an inappropriate cross check rather than an obviously more appropriate comparator of which both the Authority and Dŵr Cymru are aware. (i) Overall, therefore, Albion believes that the Authority's Final Report cost for the Ashgrove main (£9.669m) is overstated by more than double. A figure of £4.6m is consistent with the LG evidence and with the 4-year investigation that led to the value in the original Decision (£4.59m, page 101).		
24.	*1(d)(iv)*	[7.13]	Local authority rates are		**The approach to the**	Company rates are based on company	

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	3(d)(i)	Table 19, page 173	allocated by the income risk weighted [gross] MEAV. <u>LAC Allocation Basis</u> Rates as a proportion of attributable profit		**calculation of rates is inconsistent with the contemporary documents and with normal regulatory practice** (a) The detailed workings underlying the FAP indicate that rates were calculated by reference to MEAV: [Enclosures to NOA Tab 9, p37]. (b) The same approach was adopted by Dŵr Cymru for the purposes of its LIT justification: [Enclosures to Reply, D33]. (c) The approach of the Authority, weighting rates by reference to the return on capital, thus artificially inflates the levels of rates imposed on non-potable customers and on Albion in particular. It is thus discriminatory and unlawful for the reasons set out	profits (associated with immovable assets). It is therefore reasonable to allocate this company cost on the profit attributable to individual customer classes.	

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					above.		

Heading 3: Methodological errors and errors of economic assessment allegedly committed by the Respondent in the Final Report							
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		5.111	"Dŵr Cymru points out that the costs of unfunded and partially-funded legal obligations need to be included in the LAC for Dŵr Cymru to recover the revenue it needs to cover its costs. The Authority recognises that in a LAC approach there is more scope for "errors of exclusion". Dŵr Cymru recognises the difficulty of quantifying and allocating the costs of unfunded and partially-funded legal obligations. In the time available for the Referred	The Authority acknowledges that the application of the LAC methodology is incomplete because of the (inevitable) exclusion of certain costs. The logical consequence is that the LAC results can, at best, only be regarded as a *lower bound*, or *incomplete estimate* of costs. The Authority is in error, therefore, in concluding instead that the results can be used as a "cross-check". A cross-check is an alternative way of arriving at a cost estimate,		The Authority's preferred methodology is AAC-plus (as stated in §1.11 of the Final Report and elsewhere). The Authority regards the LAC calculation as a *"cross-check"* on that preferred methodology but has clearly set out the weaknesses of the LAC methodology in various parts of the Final Report (for example, §§1.11, 5.111 and 9.2-9.5). There is more scope for *"errors of exclusion"* in the LAC methodology and the Tribunal should take this into account when assessing the results of the methodologies. In practice, the LAC methodology has been of most use in cross-	

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			Work, given all the other issues the Authority has had to investigate, the Authority has not had time to make what it would consider a sufficiently robust estimate of an allowance for a share of these costs. That is one of the reasons why the Authority is using the LAC methodology as a cross-check on the main "AAC-plus" methodology.	with no presumption as to whether it is biased upwards or downwards, whereas the exclusions to which the Authority refers are asymmetrically biased downwards.		checking/informing specific cost elements of the main AAC-plus methodology, e.g. operational control (see §7.105), water treatment operating (see §7.164) and capital costs (see Annex 2 to the Authority's response).	
		5.112	"The costs of unfunded and partially-funded legal obligations should not be included in a pure LRIC model, although when setting an access price based on LRIC it might be sensible to add on such costs to ensure full cost recovery. Dr Marshall recognised the need for a mark-up on LRMC-based prices to	The Authority's error is to fail to draw the logical and correct conclusion that the LRIC results presented in the final report are *incomplete*, that "an access price based on LRIC" would therefore be somewhat higher, and thus that the results should be regarded as an *under-estimate*, falling well below an appropriate test for		See comments in response to §5.66 above.	

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			ensure full cost recovery in her first report".	excessive pricing.			
		6.17	"Dŵr Cymru considered that the Authority's AAC-plus methodology had modified AAC in such a way that it systematically produces results that are under-estimates of average costs:….this is addressed in Section 7 below."	Dŵr Cymru maintains that the Authority has not yet addressed this methodological concern, which applies when the AAC methodology is being applied in more detail to one part of the water supply business (whether a single customer or a customer class) than the remainder. Dŵr Cymru's concerns in respect of this issue were set out in a letter to the Authority on 11 May 2007: "Our initial evaluation of the "AAC-plus" approach suggests that Ofwat have modified it in such a way that it will systematically produce results that are under-estimates of		The Authority disagrees with Dŵr Cymru's comments:- • Firstly, making adjustments to the capital cost weighting factors to make the modelling results more cost-reflective for the non-potable customer class will automatically make the results more cost-reflective for the remaining potable customer classes; • Secondly, the Authority explicitly asked Dŵr Cymru for equivalent cost weighting factor adjustments for the potable customer classes (see question 15 of the letter from the Authority to Dŵr Cymru dated 1 June 2007). Dŵr Cymru responded that this was an "*extensive research exercise, way*	

[14] Purely for the purposes of illustration, the fact that the source-works are owned and operated by United Utilities is ignored in this example.

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				average costs. To illustrate the point, we replicate in full one of the questions that Ofwat asked in its separate (regulatory) information request of 2 March. The question is about a slightly different point, but the same answer applies. "Question: *we understand that it might be possible to refine the new tariff model to look at individual customers on an AAC basis. Can you clarify our understanding? If it is possible to provide such cost granularity, we would like to look at the Ashgrove system on such an AAC basis.* Answer: *the way the model has been constructed, it may appear possible to use it to allocate costs to*		*beyond the timescale of the Referred Work*"; and • Thirdly, the fact that some potable systems may have no raw water aqueducts, no service reservoirs, no bulk distribution mains, and/or no distribution pumping did not persuade the Authority that applying the bottom-up gross MEAV estimate cross-check (on the non-potable customer class) somehow loaded unwarranted costs onto the potable customer classes. In the Authority's view, applying this gross MEAV cross-check (on the non-potable customer class) actually ensures that each broad customer class (potable and non-potable) only picks up the capital costs of the assets from which they actually benefit. As regards the Authority's position on partially-funded and unfunded obligations, see comments in	

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				individual customers, but in fact this would produce flawed results. We can explain this as follows. *The model contains spare columns that, in principle, allow the user to expand the number of customer classes. It might appear to be sensible to input the cost characteristics of a single customer as a customer class, apply the relevant weighting factors, and use the results to guide pricing. However, this will always understate results for the reasons that were touched upon in Chris Jones' third witness statement (paragraph 101).* *To illustrate the point, suppose the model were to be used to attempt to allocate costs to Shotton Paper. Consider, in particular, the three sub-*		response to §9.56 above.	

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				functions of water resources, abstraction pumping, raw water storage, and raw water transfer.[14] *On the system that serves Shotton Paper there is abstraction pumping and raw water transfer, but no raw water storage. It might appear sensible, therefore, to input a weight of 100% for the first two, and 0% for the third. However, this would be quite wrong.* *In order to explore why, it is necessary to think about all the other water supply systems in Dŵr Cymru's area. Some have abstraction pumping and storage (but no raw water transfer): some have storage and raw water transfer (but no abstraction pumping): some have all three: some have just one. Under the average cost*			

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				accounting approach, barring "intrinsic" differences in service, all customer classes are contributing towards the costs of all three sub-functions. And, since the three sub-functions are each present on some systems but not the others, the costs of each are being spread across customers whose system does happen to have that sub-function and those whose system does not. *So, coming back to the example of Shotton Paper, when the weight of 100% is being input into the model to denote the fact that the customer is served by a system that has abstraction pumping and raw water transfer, this is not allocating to that customer a full share, as it were, of the costs of those*			

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				sub-functions, because other customers, elsewhere in the model, are making the same contribution to those sub-functions even though those sub-functions are not present on their water supply systems. *To put the point another way, if Shotton Paper is created as a single customer in the model, and weights of 100% are used for two of the water resources sub-functions and 0% is used for raw water storage, the accounting cross-subsidies that are inherent within the average cost allocation approach are being unwound, but only in one direction. Those that operate against Shotton Paper (i.e. its subsidy of the raw water storage sub-function, even though this*			

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				is not present on its supply system) are being unwound, whilst those that operate in its favour (i.e the payment by other customers towards the abstraction pumping and raw water transfer on Shotton Paper's supply system) are not. *In effect, therefore, if the model is produced to examine the costs to be allocated to a single customer, it will always provide an answer that is too low."* According to the draft assessment (paragraph 6.6) the "AAC-plus" approach involves "*moving through layers of `granularity*'", such that the "*adapted version…..reflects a greater level of granularity of costs concerned with*			

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				common carriage" (paragraph 6.7). It is precisely the use of a greater level of granularity for one part of the business (whether a single customer, as in the example given in response to the question above, or a single customer class) that leads to the systematic under-statement of the costs properly allocated to that customer or class, because "allowances" are being made one way in favour of the particular customer or customer class that is under the spotlight, but not the other. Consequently, the statement at the end of paragraph 6.10 – *"it therefore produces an estimate of the access price which is consistent with Dŵr Cymru's other prices and which in that respect is fair"* – may not			

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				be true." The consequence of this feature of the AAC-plus methodology is that the resulting estimates of cost will always be under-estimates, and can therefore only prove that a price is not excessive, not that one is. Further, Dŵr Cymru has a second fundamental concern with the AAC-plus methodology: in seeking to modify top down assumptions in order to meet bottom-up "cross-checks" the methodology ensures that none of the costs of the partially- and un-funded obligations to which Dŵr Cymru is subject are allocated to the non-potable large user class. As acknowledged by the Authority in paragraph 5.111, these			

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				costs have not been quantified. Dŵr Cymru's "pure-AAC" approach ensures that they are shared fairly between different customer classes, but the Authority's AAC-plus approach seeks, by implication, specifically to exclude them from costs by varying weighting factors in such a way that the top-down allocations broadly match "bottom-up" information for the non-potable customer class and no more. Unless, therefore, the position is taken that this customer class should make no contribution to that element of common costs, the results from the AAC-plus analysis cannot be relied on as the basis for a finding that a price was excessive.			

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27	*2.*	*8.* *[6.18-6.29]*	*Passim* "In order for LRIC to produce plausible results for charging purposes there needs to be some form of capital investment. The Authority recognised this in Report C attached to MD170 dated 8 May 2001 where it stated "[T]he forward looking approach [to estimating LRMC] in such a case [where a company has spare capacity] may require the company to estimate the demand increment required to cause a company to undertake additional investment" [[6.29].		**The LRIC methodology used by the Authority does not reflect regulatory best practice or a realistic approach to the assessment of incremental costs.** (a) Contrary to the Authority's general commitment to regional average costs, the Final Report does not attempt to produce any estimate of LRIC for non-potable water generally. In addition, the Authority has thus failed to respond to the request of the Tribunal for an indication of the costs of supply to non-potable customers "generally". Given the significant surplus capacity enjoyed by Dŵr Cymru, Albion thinks that these costs are likely to	Throughout the Referred Work, Albion opposed the use of the LRIC methodology, for example page 3 of its letter dated 16 February 2007. However, Albion now submits that the Authority should have applied the LRIC methodology, albeit on a regional basis so as to provide the Tribunal with "*an indication of the costs of supply to non-potable customers generally*". Developing such a general LRIC for the non-potable customer class (i.e. 10 discrete systems), as now suggested by Albion, would be an extremely difficult task and would have required longer than the 6 months allowed by the Tribunal for the conduct of the Referred Work. The economic value of such a *"general"* LRIC calculation (especially for long-term price signalling purposes on 10 discrete systems) would also be highly questionable as each discrete system will require different price signals to ensure	

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					be very low. No explanation has been provided by the Authority as to why it has provided no estimate of such costs. (b) [6.29] quotes from Report C attached to MD170, page 48, which appears under the heading "Lumpy investment" The relevant paragraph reads as follows: "It is not desirable for prices to follow a discontinuous path as they will lead to inconsistency between short-term and long-term messages to customers. In order to counter this, companies have instead either based LRMC on the next representative scheme (even if that	demand increments can be met. Albion also submits that "*the Authority has failed to respond to the request of the Tribunal*" for a general cost assessment. To clarify, the AAC-plus methodology (when the Ashgrove-specific back-up supply costs are removed) provides an estimate of "*the costs reasonably attributable to the service of the transportation and partial treatment of water by Dŵr Cymru generally*", whilst the LRIC/LAC methodologies provides the same, but only for "*the Ashgrove system in particular*". At the same time as proposing a general LRIC, Albion "*questions the value of an LRIC analysis*". The Authority has explained the value of the LRIC analysis in the Final Report: see §§6.21, 6.29, 8.4, and 8.5. The Authority has provided a more detailed summary of the LRIC methodology results (see §37 of the overview of the Authority's response). The Authority maintains its general	

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					scheme is some way in the future), or companies have calculated an average LRMC based on a weighting of various schemes to be implemented over a forecast period ranging from 10 - 25 years. The only exception are companies which have so much spare capacity due to investment in the past that no expenditure is required to meet forecast growth for the entire 25 year planning horizon. Ofwat believes that in such a case it may be appropriate for companies to provide two estimates based on the two alternative approaches: (a) include the costs associated with the recent expansion of capacity, or (b) use a	support for the LRIC methodology, albeit as a *"cross-check against the main AAC-plus methodology"* (§6.18 of the Final Report), recognising that the results *"need to be used with caution"* (§6.26 of the Final Report). The Authority has never argued that the LRIC methodology is a *"cross-check of the costs actually incurred by Dŵr Cymru in providing its treatment and distribution service to Albion."* The LRIC methodology will provide one possible measure of the competitive price, a key benchmark in testing for excessive pricing. Albion states that "*its business proposal...included the provision of water efficiency services that could reasonably have been anticipated to lead to a "decrement of throughput*, *as has in fact been the case in practice".* The Authority does not agree with this statement (see Figure 3 in the Final Report and the discussion at §8.99 for an explanation of Shotton demand between 2000-01	

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					strictly forward looking approach. The forward looking approach in such a case may require the company to estimate the demand increment required to cause a company to undertake additional investment". The Authority appears to consider the "exception" to be the realistic scenario for present purposes and appears to discount the "historical" approach (a) and to adopt a "strictly forward looking approach". (c) Albion notes that the above passage does not mandate such an approach and questions the value of an LRIC analysis in the present situation. In this respect, there is a further relevant document attached to	and 2005-06).	

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					MD170, a paper by Professor Turvey, which concludes as follows: "In either case, the term LRMC is used to signify the cost effect of a change which involves some alteration in the amount or timing of future investment. SRMC, on the other hand, takes capacity as given, so relates only to changes in operating costs, for example when the transport of additional water requires only additional pumping costs. Clearly, a SRMC can be estimated for any year, given information about the capacity that will then be available, whereas LRMC can be estimated only for a year or years in the future for which construction is not		

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					already firmly committed. There has been some discussion as to which of them is relevant for the optimal pricing of measured consumption. The choice should depend upon whether it is short-term or longer-lasting reactions to price that are considered more important. *When excess capacity is expected to exist over the period under investigation, only SRMC is relevant* (except in a case where a decrement would allow some scrapping of capacity.)" (Italics added.) The italicised wording confirms that the approach to LRIC adopted in the Final Report is not relevant to a realistic appraisal of costs in the present case,		

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					where the hypothesis of projected capital investment is wholly implausible over the projected lifetime of the common carriage agreement, which was not projected on the basis of any increase in demand. (d) This is also consistent with the approach indicated by MD 163, which indicated that the Authority would take a realistic rather than hypothetical approach to costs analysis: "OFWAT will consider cost information on the basis of *whether entry will result in an increment, substitution or decrement of throughput via the network*. Cost information and access prices should be		

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					appropriate to the length of the agreement, with prices indexed appropriately to allow for inflation" (emphasis added). The italicised wording indicates that the Authority would consider the question of whether a proposed common carriage arrangement would alter the throughput and left open the possibility that it would lead to no increase or even a reduction in demand. That is highly material to the present case, where Albion's business proposal was based on "substitution" for Dŵr Cymru in supplying Shotton and included the provision of water efficiency services that could reasonably have been anticipated to		

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					lead to a "decrement of throughput", as has in fact been the case in practice. However, this realistic approach was not followed by the Authority in its LRIC analysis. (e) Although section 8 of the Final Report sets out a number of general considerations that the Authority has taken into account in developing its LRIC methodology, the results of that methodology are very shortly stated at [8.123] and appear to turn very substantially on two highly unrealistic assumptions: (i) a demand increment of 20%; and (ii) the installation of additional clarifiers and distribution pumps at significant capital cost (apparently		

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					6.045p/m^3 and 4.95p/m^3, over half of the total figure, equating in total to some £770,000 per year in capital charges or over £5 million in the period since the start of 2001). Each of these assumptions is highly suspect and cumulatively quite incredible. (f) The first assumption can be seen from Figure 4 to produce the highest local LRIC of any hypothetical demand increase between 0 and 50%, by maximising capital costs at the lowest level of supply. It is based on highly unrealistic assumptions that do not reflect any contemporary evidence of the actual intentions of Dŵr Cymru or its customers. It is clear from Figure 4 that, on the		

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					Authority's own assumptions, at realistic levels of increase (0-10%) LRIC would have been close to the increased marginal costs of additional supply through the Ashgrove system. For example, at an increment of 10%, the LRIC figure would have been approximately 2.5p/m^3.[15] (g) The second assumption is related to the first but does not appear to reflect any contemporary or subsequent commercial evidence that investment in additional clarifiers or pumps has ever been considered necessary or appropriate at any projected level of demand. As such,		

[15] By way of sensitivity analysis, it appears from Figure 4 that the Authority's LRIC figures for increments of 30% and 40% would be approximately 17p/m3 and 15.5p/m3.

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					similarly to the "stand alone" calculations prepared by the Authority and Dŵr Cymru for the purposes of the hearing in June 2006, it appears that this is an artificial construct that is of no value as a "cross check" of the costs actually incurred by Dŵr Cymru in providing its treatment and distribution service to Albion.[16] (h) The basis for the remainder of the increase in LRIC, equating to 9p/m^3 or over £600,000 per year, over £4m since the start of 2001, is largely if not wholly unexplained. As with the other methodologies, the Authority has failed to provide its detailed		

[16] Compare paragraph 573 of the 6 October 2006 judgment: "These calculations were not what the Tribunal was looking for, and in our view have little relevance to the determination of the issues in the present case." By analogy, although the facts are different, Albion thinks it equally unlikely that the Tribunal was anticipating that the capital costs of additional clarifiers, which might theoretically be required if demand on the Ashgrove system were to increase by 20%, would be proposed as a relevant guide to the actual costs incurred by Dŵr Cymru in 2000/01.

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					workings so that it is impossible to determine the correctness of the results set out in Table 17: (i) the capital charges of 11p/m^3 are stated but unexplained at [8.123]; and (ii) the remaining figures (3.295p/m^3 for treatment and sludge management, 4.95p/m^3 for bulk distribution and 0.8p/m^3 for "operational control") are wholly unparticularised.		
		6.25	Dŵr Cymru has raised the point on several occasions that the Authority should use its LRIC estimate as a lower bound on a price and that standalone costs should be used as an upper bound. Dŵr Cymru emphasised LRIC should be regarded as a floor above which an actual price should be set as	The Authority makes two errors. First, it does not address the point that standalone cost, as an "upper bound", should have been taken into account, whether or not it was re-examined as part of the Referred Work. Second, Authority seems (although it is not completely clear) to derive		With regard to standalone costs, the Authority noted the Tribunal's view at §12.72 of the Final Report: "[…] Using the MEA value of the Ashgrove system would appear to amount to carrying out another standalone cost calculation of the Ashgrove system, an approach which the Tribunal says "*in our view [has] little relevance to the determination of the issues in the present case*" (§573 of the Main Judgment)" (italics in the original).	

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			distinct from a level sufficiently above which a price might be regarded as excessive…. The Authority notes that in this Final Report the LRIC estimate is higher than the AAC-plus and LAC estimates and as a result has not proven to be a lower bound in the Referred Work.	from the observation that the LRIC result produces figures that are higher than the LAC and AAC-plus the conclusion that Dŵr Cymru's conceptual position on pricing cannot be correct. In fact, the correct position is as follows: First, since LRIC, AAC-plus and LAC are conceptually distinct approaches there is no reason why, for example, the estimated value for LRIC need be below that for AAC-plus. The Authority appears to have confused: • the fact that the Authority's *estimation* of the LRIC was not *in practice* the lowest estimate of relevant *costs*; with		As explained in §1.11 of the Final Report, the Authority has used LRIC as a cross-check on its main AAC-plus methodology. The Authority chose an increment of 20% for the reasons set out in §§8.120-8.122 of the Final Report, one of which being that it provides for capital investment which is important given the long-term nature of the water industry. The Authority used specific assumptions to calculate LRIC in the context of a cross-check for excessive pricing. If the Authority was using LRIC as a test for predation it might use different assumptions. See comments in response to §5.66 (LRIC excludes certain costs), §5.111 (LAC excludes certain costs) and §§7.52, 7.127 and 7.147 (AAC-plus excludes certain costs) above.	

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				• the fact that *methodologically*, a *price* lower than the best estimate of LRIC would risk being predatory and thus the Authority's estimate of LRIC costs must set the absolute lower bound for judging what price may reasonably be charged by an undertaking in Dŵr Cymru's position. Secondly, Ofwat's results for LAC and AAC-plus are incomplete and/or biased downwards. Ofwat has acknowledged that its LAC results are incomplete (see comment on paragraph 5.111), and there are several respects in which its AAC-plus results are incomplete and biased downwards, such as the use of a subsidised rate of			

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				return (see summary at paragraph 7.147 below). Indeed, Dŵr Cymru's characterisation of LRIC as a "lower bound" methodology is widely-established as a sound principle for pricing. Incremental cost methodologies such as LRIC are generally considered an appropriate benchmark when identifying predatory pricing, where the object is to identify a plausible "floor" for the relevant price. For example, the Telecommunications Notice suggests that, in the field of telecommunications, a standard for predatory pricing based on LRIC costs might be the most suitable (paragraphs 113-115). This is reflected in OFT 417 on the application			

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				of the Competition Act 1998 in the telecommunications sector, where it is stated that prices below LRIC will be presumed to be predatory (paragraph 7.15).			
		6.39 (and elsewhere)	"The Authority explained….that the LAC model is based on the…MEAVs of the Ashgrove system. The MEAV estimate is multiplied by the ratio between the MEAV and Regulatory Capital Value…12% to allow for the capital value discount at privatisation.	The Authority acknowledges that the measure of capital used in its LAC approach is subsidised by a factor of 88% because of the influence of the post-privatisation regulatory regime, and in particular the suppression of price levels. It fails, however, to make explicit that a methodology that bases its assessment of costs on components that reflect a subsidy cannot be used, without modification, for the purposes of a test for excessive pricing.		The 88% "subsidy" factor Dŵr Cymru is referring to, is the adjustment the Authority made to the MEAV of the Ashgrove system to allow for the capital value discount at privatisation (as explained in §6.39 of the Final Report). The AAC-plus methodology in the Final Report and the AAC methodology originally used by Dŵr Cymru to calculate the FAP both used the Regulatory Capital Value of Dŵr Cymru (which is 12% of the MEAV of Dŵr Cymru's business). Using the MEAV of the Ashgrove system as the basis for the LAC model would amount to repeating the standalone cost calculation the Authority prepared for the 2006 hearing. The Authority has set out its reasons above for not carrying out another standalone cost calculation in the	

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						Final Report.	
		6.43/6.44	"In the determinations a cost of capital ….of 4.75% has been assumed…. The 4.75% real, post-tax cost of capital is equivalent to 6.8% on a real pre-tax basis."	The Authority overlooks the fact that the allowed cost of capital used in the determinations also included an "embedded debt premium" and a "financeability uplift". This is acknowledged in paragraph 6.65, but it is observed that the Authority did not have time to take these comments into account. Dŵr Cymru had reminded the Authority that the embedded debt premium for the company was 0.32%, and also estimated the financeability uplift to be in the region of 0.1-0.3%, giving a total post-tax cost of capital of up to 5.4%, equivalent to 7.7%		Dŵr Cymru is correct that in the Final Determinations the Authority allowed for an *"embedded debt premium"* and a *"financeability uplift"* for Dŵr Cymru to finance the cost of existing fixed rate debt which could not be refinanced without equivalent costs. However, the premium and uplift addressed the historic legacy of debt built up in financing large investments in the water infrastructure and primarily the potable water infrastructure. For this reason, the Authority considers it would not be appropriate to increase Dŵr Cymru's disaggregated cost of capital for serving industrial, non-potable water to reflect the embedded debt premium or financeability uplift.	

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				pre-tax. At paragraph 6.65 the Authority acknowledges that the above points were made, but that there was insufficient time to address them within the Tribunal's deadline. Clearly, on receipt of this document, it is incumbent upon the Authority to address these points.			
		6.53	"[The Europe Economics] method produces a result that the cost of capital for water supply to industrial, non-potable customers would be 3.0 percentage points higher than for water supply as a whole".	As Dŵr Cymru pointed out in its letter of 8 June 2007, Europe Economics had inadvertently omitted the flows to Shotton Paper from its analysis of volatility. Dŵr Cymru also queried why the volatility in the flows experienced by Anglian Water and United Utilities was relevant. It is quite possible that in different parts of the country the mix of non-potable customers would		Dŵr Cymru is correct that the June Return data used in Europe Economics' analysis excludes Shotton Paper's volumes for part of the time period, as Shotton Paper's volumes are defined as a bulk supply to Albion rather than a non-potable supply from the start of Albion's inset in 1999. However, including Shotton Paper's volumes in the dataset for Dŵr Cymru, Anglian Water and United Utilities combined, has only a minor effect on the volatility measure. The Authority considers that Europe	

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				show different risk characteristics, which would be priced into the cost of capital by the market. Indeed, at paragraph 6.13 of the Final Report the Authority suggests that "*the supply arrangements for the non-potable customer class in Wales are unique. No other customer class in England or Wales is supplied via a series of discrete water supply systems.*" A "blended" rate of return would not, therefore, be as relevant as one that relates specifically to Dŵr Cymru. If these points had been addressed, Europe Economics' results (paragraphs 1.20 – 1.23 of its report) would have been as follows (its figures are in brackets);		Economics was correct to use data for Dŵr Cymru, Anglian Water and United Utilities combined; Europe Economics explained its reasoning at §1.17 of its report "*Ideally we would use a total industry measure of the potable and non-potable supply, such that company specific shocks would be somewhat smoothed out*." Whilst theoretically Dŵr Cymru is correct that only volumes delivered for Dŵr Cymru should be used in the volatility analysis, the Authority is reluctant to change from Europe Economics' analysis. This is because the small size of the datasets available (only 12 observations) means the data could be distorted by company-specific shocks not reflecting the longer-term risk of supplying non-potable water.	

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				• the standard deviation of the series for non-potable supplies made by Dŵr Cymru, including those to Shotton Paper, would have been 7.0 (4.6); • the standard deviation of the series for water supplies on the whole made by Dŵr Cymru would have been 1.6 (1.6); • this would have given a figure for $\beta_{industrial}$ of 1.7 (1.1); and • a post-tax cost of capital uplift of 5.5% (3.0%).			
		6.54	"The Authority considers that there might be an element of double-counting between the risk of asset stranding and the	It is not possible for double-counting to have occurred in the Europe Economics analysis. It is well-established that the		To take account of asset stranding, the Authority has included stranded assets in the capital base for the methodologies – see comments in response to §7.127 above. As a	

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			increased risk of serving industrial, non-potable customers. This is because some of the volatility in non-potable supplies arises from non-potable water users going out of business. Furthermore, including an uplift for the risk of asset stranding might lead to double-counting with the inclusion of a charge for doubtful debts in the AAC-plus and LAC methodologies. For this reason the Authority is not minded to include a separate uplift on the cost of capital to reflect compensation for the risk of asset stranding."	CAPM framework, which Europe Economics employs for the purposes of its analysis, *only* reflects systematic risks and *not* asymmetric risks. Indeed, the Authority is incorrect in stating that *"some of the volatility in non-potable supplies arises from non-potable water users going out of business"*. The asymmetric risk associated with users going out of business is specifically and necessarily removed from Europe Economics' analysis of demand volatility, as described in its report: *"Second, as we are interested in volatility rather than gradual movements of the series, we removed a (falling) linear trend from the data that would otherwise lead to an over-statement of the*		result, there is no need to include an uplift on the cost of capital for asset stranding.	

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				standard deviation." To the extent that the risk of asset stranding, the asymmetric risk, is reflected in the falling trend, Europe Economics had already removed it for the purposes of estimating the effect of systematic risk. If, as is common ground, there are asymmetric risks that need to be taken into account then they must be quantified separately and added to the cost of capital calculations. For those purposes, Dŵr Cymru believes that the Europe Economics' estimate of 0.8% as the appropriate uplift for asymmetric risk (which the Authority excluded from its assessment of the cost of capital) is itself an under-estimate, and that an			

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				estimate of at least 2.4% is likely to be more accurate. This was explained in Dŵr Cymru's letter of 8 June 2007 commenting on the Europe Economics report, as follows: *"We believe that the result, 0.8%, is an under-estimate, because it only covers the risk to a water company of stranded assets arising because of corporate failure. There are many other reasons why an asset might be stranded, whilst the customer remains solvent. An A-rated oil company, for example, might decide to re-locate refining capacity abroad, for reasons to do with the changing configuration of world markets. To the water company the asset is stranded (wholly or partially), even though the*			

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				risk is of no concern to bond markets and is not priced into credit ratings. Similarly, technological or product changes can and do bring about significant changes in water use as a by-product of corporate success, not failure. *Consequently, the 0.8% result can only represent a portion of the specific risk of asset stranding. Given time, there are various ways that EE might model the other risks such as re-location and product/technological change risks, but it does not seem likely that this could be undertaken in the time available. From our own perspective, however, we would say that:*			

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				• *none of our non-potable assets are stranded because of bankruptcy;* • *we do have assets that are stranded because of re-location (of oil refining capacity); and* • *we do have assets that have become partially (and, indeed, largely) stranded because of product/technological changes implemented by the customer.* *This would suggest that the effects of the second and the third are each at least as great as the first,*			

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				i.e. at least 0.8%. Overall, this implies that 2.4% would represent a floor for the estimate of the total effect of the specific risk of asset stranding." As a consequence of this error, the Authority under-estimates the pre-tax cost of capital by 3.4%.			
		6.55	"…the Authority is using a disaggregated pre-tax cost of capital for serving industrial, non-potable customers of 11.1%..."	As a consequence of the errors set out above, the Authority's estimate of the cost of capital is too low: • its figure for the post-tax allowed cost of capital at PR99 should read 5.4%, not 4.75% (see 6.43/44 above); • the uplift for systematic risks should have been		This is a summary of Dŵr Cymru's comments on §§6.43, 6.53 and 6.54 which are set out above. Overall, the Authority does not consider it should change its estimate of the disaggregated pre-tax cost of capital for serving industrial non-potable customers from 11.1%.	

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				5.5%, not 3.0% (see 6.53 above); • the uplift for non-systematic (asymmetric) risks should have been 2.4%, not zero, giving a total adjustment for the increased risks associated with industrial non-potable supplies, post-tax, of 7.9% (see 6.54 above); • as a consequence of which, the post-tax cost of capital used in the Referred Work should have been 13.3%, giving a pre-tax rate of return of 19.0%. It should be noted that this figure, derived on the basis of a more rigorous methodology, is not out of line with			

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				earlier estimates of the appropriate rate of return for non-potable supplies referred to in this case, e.g. Jones 2 (15-20%) and Albion itself (>20%).			
		6.56	"For the AAC-plus model the Authority is using a disaggregated pre-tax cost of capital for serving industrial, non-potable customers of 8.0% in the Final Report."	Having established in paragraph 6.55 that the cost of capital for industrial non-potable customers is 11.1% (on its own analysis) there is no justification for using a *subsidised* cost of capital in one of the Authority's three methodologies. Alternatively, if the figure of 8.0% (on the Authority's analysis) is to be used, then it should be explicit that as this is a subsidised figure, the result of the AAC-plus methodology cannot be used to prove that a price is excessive, because the assessment		The Authority considers that it is still appropriate to use the 8.0% disaggregated cost of capital in the AAC-plus methodology. The Authority stands by its reasoning in the Final Report that it should use Dŵr Cymru's actual return on its water supply business in 2000/01, real, pre-tax of 3.7% as the starting point for its analysis. The Authority acknowledges that Dŵr Cymru's return of 3.7% was low in 2000/01 but Dŵr Cymru has provided no convincing explanation as to why the 3.7% figure is *"subsidised"* or distorted. The Authority notes that throughout the 5-year period 2000-01 to 2004-05, Dŵr Cymru's return on its business was significantly below the industry average. This suggests the 2000-01 return was not an	

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				of costs has been artificially suppressed.		exceptional number. The Authority does acknowledge a difficulty with its approach of using Dŵr Cymru's actual return rather than the regulated cost of capital as the starting point in the AAC-plus model. The Tribunal might want to take into account that if Dŵr Cymru's actual return was above the cost of capital (which was not the case in 2000/01) the Authority's reasoning would allow an appointed water company to recover more than the regulated cost of capital from the common carriage entrant.	
		6.60	"The Authority notes that Europe Economics specifically chose an aggregate data series so that *"company specific shocks would be somewhat smoothed out"."*	See comments under paragraph 6.53 above. Since the purpose of the exercise is to capture volatility, Dŵr Cymru disputes the desirability in any event of "smoothing out company shocks". It is precisely these characteristics that the exercise is designed to measure.		See comments in response to §6.53 above.	

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		6.61	"Dŵr Cymru also pointed out that the data Europe Economics used for non-potable water delivered probably excluded the data for Shotton Paper which was classified as a "bulk export" from May 1999 onwards. There has not been time before the Tribunal's deadline to recalculate the data using Shotton Paper's volumes after May 1999. However, using an aggregate non-potable water delivered figure for Anglian, Dŵr Cymru and United Utilities will have reduced the effect of this exclusion on the results."	See comments under 6.53 above.		See comments in response to §6.53 above.	
		6.64	"In response, Albion referred to the Authority's statement in MD163 that: *"[S]tranded assets have not proved to be a significant barrier to competition in other*	The Authority's reasoning for ignoring the risks of stranding is flawed. It is certainly true that asset stranding should not be a barrier to the extension of competition but that is not		See comments in response to §6.54 above. Dŵr Cymru has misunderstood §6.64 of the Final Report. On reflection, the Authority's drafting of this paragraph is slightly ambiguous. In this	

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			industries. [The Authority] expects that they should not be a barrier in the water industry either." Albion argued that risk of stranding is *"part and parcel of business activity"* and that *"businesses should have an economic incentive to minimise the impact of stranding of assets"*. Albion therefore said *"[I] agree with the [Authority] assessment that no separate allowance need be made in relation to stranded assets*" (letter of 12 June 2007, page 2). The Authority has not included an uplift to allow for the risk of asset stranding in the cost of capital used in the Final Report for the reasons given above."	the issue in this context. What is relevant is whether the capital markets price differently in respect of businesses where stranding is a real possibility as opposed to situations where it is not. All the theory and evidence indicates that they do. Further, the Authority's acceptance of Albion's arguments here – to the effect that the prospect of asset stranding has no effect on the cost of capital – contradict those of the Authority at paragraph 6.54, where the effect is acknowledged, albeit that there it is claimed that there might be "double-counting" if asset stranding is allowed for separately.		paragraph, the Authority was explaining Albion's comments on stranded assets. The Authority did not express a view on whether it agreed with Albion's arguments; the intention was to state that, <u>in any case,</u> the Authority had not included an uplift in the cost of capital for asset stranding for the reasons set out at §6.54 of the Final Report.	
		6.104	"On the likely attributable	Although the Authority		See comments in response to	

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			capital cost for resources and potable water treatment, the Authority considered in the Draft Assessment that for this back-up supply (to a discrete non-potable supply) the system diversity benefits appear to be negligible. The Authority assumed, for illustrative purposes, that 15% of potable treatment capital costs and 15% of resource capital costs were attributable to the back-up supply. On these assumptions the resource availability cost would be around 2p/m^3. Dŵr Cymru challenged this 15% figure as being "*very low*" and suggested the figure should be "*substantially in excess of 50%, and possibly as high as 95%*" and that the figure for resource availability should be in	decided not to change its assumption of 15%, it does not explain why, and in particular it does not address either of the parties' comments. As to Albion's comments, it should have been clear to the Authority that even if there were headroom on the Bretton system it is not clear how that would make any difference to an average cost calculation (since "top-down" begins with the costs you have, whether or not your systems do or do not have headroom at the time, and divides them in a fair way between customers). The Authority did not address Dŵr Cymru's point, which was that the 15% weighting factor used in the draft assessment implied a level of reliability		§§6.101-6.105 above.	

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			the region of 10-12p/m^3. On the other hand, Albion has argued that there is considerable headroom on the Bretton system which should be taken in account when valuing water that is surplus to current and anticipated ordinary potable water demand requirements. Following the parties' comments, the Authority is not minded to change its assumption of 15%."	far lower than the subsequent correspondence proved to be the case (as acknowledged by the Authority in paragraphs 6.98 – 6.100). There is no reason, therefore (other than, perhaps, pressure of time) why the Authority should not have adjusted its figure accordingly, in order to be consistent with its conclusions. Dŵr Cymru considers that the level of reliability implies that a weighting factor of around 90% would be appropriate. This would give a revised cost for the back-up service equivalent to approximately 8-9p per m^3 of non-potable water.			
26	*1.*	7	*Passim*		**The AAC plus methodology does not**	No formal methodological guidance was issued by the Tribunal. However,	

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.					**reflect either contemporary practice, the contemporary evidence or the guidance of the Tribunal. It is hard to see any honest and lawful explanation for this.** (a) The "AAC plus" methodology is apparently a "bespoke" methodology that has been conceived by the Authority purely for the purposes of its Final Report: see [6.9]. It does not appear to reflect either the regulatory practice of the Authority or the established approach of any other regulator. The Final Report repeatedly stresses that its	the Tribunal did provide a number of helpful clarifying statements in its Refusal Judgment: see §§6.10, 6.11, 6.30, 6.31, and 6.33 of the Final Report. The AAC-plus methodology generally follows contemporary regulatory practice, although to a greater level of granularity than is usually necessary (because Albion is looking for access to a particular sub-set of Dŵr Cymru's assets and the Tribunal wanted more detail on the nature of the costs included in any AAC estimate).The only possible exception to this statement is the use of a disaggregated cost of capital. The need for this is largely a result of the unique supply conditions associated with the non-potable customer class: see §7.2 of the Final Report. In this case, the Authority's view is that the AAC-plus methodology offers	

[17] This improbable result was achieved by deducting an artificially deflated treatment cost based on an artificially constructed "average cost" from the LIT potable tariff, itself derived from the higher standard potable tariff, thereby inflating the non-potable bulk distribution figure ultimately derived above that for potable bulk distribution derived from a conventional methodology: see Schedules B and G to the FAP justification ultimately provided to Albion under cover of a letter dated 20 February 2001 [NOA/9/35, 40].

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					conclusions are not to be taken as binding the Authority in relation to its general regulatory role: e.g. at [6.67] in respect of costs of capital. (b) Although the "AAC plus" methodology seeks to achieve a "greater degree of granularity of the costs associated with common carriage" ([6.9]), it achieves that objective only by a complex process of allocation that contains an obvious risk of errors and double counting. In this respect at least, it is no improvement and arguably less reliable than the original AAC calculations undertaken by Dŵr Cymru in 2001, which were, to a greater	substantial improvements on the AAC-original methodology. It shows clearly where the functional costs lie. The Authority acknowledges that the AAC-plus methodology involves difficult weighting decisions by the Authority. Unfortunately, this is normal practice in tariff setting. Albion has queried why the Authority has not considered various documents in its Final Report, particularly the Dan Elliot witness statement and the LCE papers (which Albion erroneously refers to as Board papers). In the Authority's opinion, these documents provide no incremental insight into the two fundamental questions that were posed by the Tribunal as part of the Referred Work – namely "*the calculation of the costs reasonably attributable" to* the service being provided and *"in the light of **those** costs",* whether the FAP was an unfair price.	

[18] Albion is not in a position to judge which of these two figures was more accurate. Given the history of this case, Albion considers that it is entirely credible that the earlier, lower figure, whose standard regulatory origins are stated, is the more reliable of the two figures, notwithstanding the fact that it was subsequently described as "indicative".

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					extent, based on standard methodologies used by the industry at that time. (c) In this respect, the results of the AAC plus methodology must be viewed with considerable caution, in the light of the following guidance at paragraph 470 of the judgment of 6 October 2006: "any such "top-down" approach needs to be subject to appropriate verification. That, in our view, is especially so where, as here, the calculation involves a very long chain of allocations which starts with Dŵr Cymru's average revenue per customer raised from over 1.4 million almost entirely potable	As regards Albion's point (a), see the comments in response to §7.147 above. As regards Albion's point (h), it is not clear what evidence Albion is referring to here and therefore what the Authority is accused of failing to refer to. As regards Albion's point (m), Albion appears to be picking figures from different methodologies (the 2001 FAP and the 2003 New Tariff) without paying attention to the internal consistency of its produced number. As regards Albion's point (o), as explained in the Authority's letter to the Tribunal dated 3 December 2007, the Authority considers that Dŵr Cymru's letter dated 17 March 2003 is of limited relevance to the current proceedings as it is about calculations underlying the new Dŵr Cymru non-potable tariff in	

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					customers, and then seeks to derive, from that average revenue figure, the cost of serving about 10 or 12 large industrial non-potable customers, which cost is then used as a proxy for the cost of serving only one non-potable customer". (d) The allocation process used in the AAC plus methodology is very substantially longer and more complex than the calculation at paragraphs 257 to 307 of the Decision. The AAC plus methodology is in fact the aggregation of at least 20 micro-allocations, none of which is clearly explained in the Final Report and each of which involves difficult weighting decisions by the Authority.	2003. It is therefore neither contemporaneous with the 2001 FAP negotiations; nor is it relevant to the latest calculations provided by the Authority in the Final Report. With respect to Daniel Mark Elliot's witness statement, the Authority considers it deals with issues relating to the New Tariff, such as whether there should have been a higher top band (> 5,000 Ml/year) for large non-potable users such as Shotton and Corus Llanwern, which are not relevant to the Final Report. Furthermore, whilst Daniel Mark Elliot's witness statement makes criticism of the New Tariff, it does not provide evidence on what the correct price/costs should be. There is also circularity in Albion citing Daniel Mark Elliot's witness statement as independent evidence to support its case when the witness statement refers to the Tribunal's Interim Judgment to support its case. Further, at the time of the Final Report, Dŵr	

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					(e) In addition, given the failure of the Authority to disclose the detailed workings on which the numerous individual results comprised in the AAC plus methodology are based, it has proved impossible for Albion to verify whether the assumptions and calculations on which those results are based are reasonable and/or correct even as a matter of arithmetic. (f) Moreover, the Final Report, like the Decision, suffers from a fundamental defect in failing to take into account the contemporary evidence that has been apparently available to the Authority since the response of Dŵr Cymru to the section 26 notice served by the	Cymru had declined to disclose the witness statement to Albion (which effectively prevented the Authority from relying on it) and had also indicated that it disagreed with the report's findings. As regards Albion's point (q) (second "q" on page 57 of Albion's comments), with regard to the "LCE paper", the Authority did not exclude it from consideration in the Final Report; the Authority had not located the LCE paper at the time of the Final Report. As soon as the Authority was aware of the LCE paper, it contacted Dŵr Cymru for its views on confidentiality and then disclosed the LCE document to Albion. It is not clear to the Authority how Albion supports its assertions (i), (ii) and (iii) on the basis of the LCE document; but it is also not clear exactly what *"those documents"* refer to.	

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					Authority on 29 June 2001: see paragraph 73 of the Decision. (g) In particular, it is now clear that the entire debate before the Tribunal at the 2005 and 2006 hearings in respect of the justification of a figure of 16p/m^3 for the bulk distribution of potable and non-potable water was based on a premise known to be false by both the Authority and Dŵr Cymru. It is clear that the actual figure for bulk distribution of *potable* water derived by Dŵr Cymru by a conventional AAC analysis was substantially lower, either 11.1p/m^3 or 12.79p/m^3: see below. Thus, even if the arguments of the Authority at paragraph 300-302 of the Decision		

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					(to the effect that the costs of the bulk distribution of potable and non-potable water were the same) had been accepted by the Tribunal, it would inevitably have followed that the 16p/m^3 for bulk distribution of non-potable water was substantially too high – there was no finding in the Decision, and it has never been suggested by Dŵr Cymru, that the bulk distribution costs for non-potable water could be substantially *higher than* those for potable water – and the Tribunal in fact accepted Albion's submissions that there were good reasons to believe that they were substantially lower, both in general and for the Ashgrove system in particular: see section XI of the judgment of 6		

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					October 2006. (h) The contemporary evidence now makes it clear that the figures for treatment and distribution contained in the FAP were a highly unorthodox amalgam of various different figures and that a quite different and substantially lower figure, for bulk distribution in particular, was calculated by Dŵr Cymru in January and February 2001 but concealed from both the Authority and Albion at the time. The Authority has offered no explanation for its failure to refer to this evidence either at paragraph 72 of the Decision or at [3.14-3.15]. (i) The evidence now available to Albion indicates that two entirely		

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					orthodox AAC calculations were in fact undertaken by Dŵr Cymru in January and February 2001, the results of which are summarised at Appendix I to the paper presented to the Board on which the FAP was based [CMC Bundle, 41/208]. (j) The basis for the original "indicative" figure produced for the purposes of the January 2001 meeting is further evidenced in the Board paper [CMC Bundle 47/225], which confirms that this was derived from Dŵr Cymru's current scheme of charges, the 1998 LIT submission and a further table prepared in 1999/2000, giving a figure for treatment of 8.84p/m^3 and 11.1p/m^3 for bulk distribution. The		

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					8.84p/m^3 figure for treatment was based on the 30% figure used in the FAP, whereas the 11.1p/m^3 reflected the allocations between distribution and resources/treatment and between bulk and local distribution used in the Dŵr Cymru LIT as a proportion of the standard potable tariff. The total figure was 19.94p/m^3 but it was recognised that the 30% figure for treatment "will come under increasing pressure from AW". (k) The basis for the subsequent AAC calculation were the revised costs figures set out in Appendix I to the paper presented to the Board in February 2001 on which the FAP was ultimately based. That		

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					calculation was again an orthodox allocation of resource, treatment and distribution costs derived from the standard potable tariff: see [CMC Bundle, 41/208]. The result of that calculation was a potable bulk distribution cost of 12.79p/m^3 and a non-potable treatment cost of 8.22p/m^3, giving a total figure of 21.02p/m^3. (l) If the 15.2% figure used by Dŵr Cymru for the purposes of its New Tariff, considered by the Tribunal at paragraph 317 of the judgment of 6 October 2006, were substituted for the 30% figure used in the above calculations, treatment costs of, respectively, 4.48p/m^3 and 4.17p/m^3 would have been produced, giving total figures of, respectively,		

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					15.58p/m^3 and 16.69p/m^3. Those figures would have reflected (i) the contemporary evidence; (ii) Dŵr Cymru's actual practice; and (iii) a conventional AAC methodology, much more closely than the AAC plus methodology used by the Authority in its Final Report. (m) Moreover, if that conventional AAC methodology (including the 15.2% figure derived from the 2003 New Tariff) had been applied to the "average price" figure of 73.3p/m^3 used by Dŵr Cymru as its starting point for the FAP, then figures of 13.64p/m^3 and 14.61p/m^3 would have been achieved. Again, those figures would have reflected both the contemporary evidence		

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					and actual methodology used much more closely than the AAC plus methodology used by the Authority in its Final Report. (n) These points are of course without prejudice to the points advanced by Albion and considered by the Tribunal in section XI of the 6 October 2006 judgment as to why non-potable bulk distribution costs should be substantially discounted from those for potable bulk distribution. (o) In this respect, Albion adopts the powerful and authoritative expert evidence of Dan Elliott, which sets out a series of reasons to believe that a very substantially lower figure is appropriate for the supply of water via		

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					the Ashgrove system. In addition, paragraph 64 of Mr Elliott's evidence indicates that, in a letter dated 17 March 2003, Dŵr Cymru indicated that the costs of its distribution assets for non-potable water equated to a figure of 7.86p/m^3, less than half of the 16p/m^3 on which the FAP was based. (p) Albion further notes that the current position again tends to confirm that the bulk distribution figure of 16p/m^3 on which the Decision was based is obviously too high. In its letter to Albion in respect of the bulk supply price of 13 November 2007, Dŵr Cymru indicates that a "pure" AAC analysis gives a figure for bulk distribution of 9.9p/m^3.		

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					(q) By contrast to the two conventional AAC calculations that Dŵr Cymru undertook in January and February 2001, the hybrid methodology used in the FAP appears to have no basis in conventional regulatory tariff setting, as the Authority partially recognised at paragraphs 284-286 of the Decision. The effect of this unorthodox mixing of methodologies was in practice substantially and artificially to inflate the bulk distribution costs for both potable and non-potable water to 16p/m^3,[17] approximately 44% above the actual figure for potable bulk distribution (11.1p/m^3) originally calculated by Dŵr Cymru for the purposes of the January 2001 "indicative" price,		

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					and approximately 25% above the figure calculated by Dŵr Cymru for potable bulk distribution (12.79p/m^3) at the time which the FAP itself was calculated.[18] (p) This difference equates to approximately £250,000-£350,000 per year, or about £2 million over the period since the beginning of 2001, regardless of all the other points made in this response. It is clear from the contemporary documents that Dŵr Cymru was well aware of the commercial implications of this inflated price for Albion's proposal: "The level of the prices means that Albion Water's Common Carriage application is		

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					not economic. It is therefore expected that Albion Water will challenge the prices with OFWAT" LCE paper, para. 5.5 [CMC bundle, 39/188]. (q) The Authority has offered no explanation of why this highly material evidence was excluded from consideration in both the Decision and the Final Report. These documents are of direct relevance to both aspects of the case on abuse. They make it clear that Dŵr Cymru deliberately chose to adopt this unorthodox and artificial pricing approach in the knowledge that it would (i) inflate bulk distribution costs above the level indicated by a conventional AAC costs analysis that was		

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					available to it; (ii) thereby preclude competition from Albion; and (iii) inevitably lead to a competition law complaint to the Authority. (p) Likewise, Dŵr Cymru has offered no explanation of why the "Appendix 1" to the letter to Albion dated 20 February 2001 [NOA/9/33] in fact omitted the key contemporary document (also headed Appendix 1) on which Schedules A-G [NOA/9/34-40] were based. That document, which sets out Dŵr Cymru's actual workings at the time, was ultimately produced only on 21 September 2007 [CMC bundle/39/197; 41/208]. (p) Albion invites the Tribunal to take this		

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					important contemporary evidence into account in assessing the results of the Final Report and the credibility of the stance of the Authority and Dŵr Cymru more generally.		
25.	*1-3*	*[7-9]*	*Passim*		**The findings of the Final Report are not binding on the Tribunal whatever the legal approach that is applied.** (a) Albion submits that the terms of paragraph 281 of the judgment of 18 December 2006, [2006] CAT 33, [2007] CompAR 328, are clear and unequivocal and reflect the terms of Schedule 8 to the Competition Act 1998: "The Tribunal will then determine the matter under para. 3(2)(e) of the	The Final Report is not a supplementary pleading by the Authority; it is the result of an investigation the Tribunal ordered the Authority to carry out. There is no justification for Albion's claim that *"the Authority has displayed real or apparent bias in favour of Dŵr Cymru"*. The Authority's approach to the Water Supply Licensing (WSL) regime and its regulatory functions is irrelevant to the Final Report. In any case, the Authority does not accept Albion's description of its approach to the WSL regime and its regulatory functions.	

[19] The Chief Executive, of the Authority immediately issued a press release headed "Ofwat rejects criticism from House of Lords": http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/content/pn4107 .

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					1998 Act". The jurisdiction of the Tribunal is a merits jurisdiction and, the decision of the Authority having been set aside, it is for the Tribunal now to determine the issue of excessive pricing on the basis of the further information now available to it but without being in any sense bound by findings of fact or law made by the Authority. (b) In any event, even applying the "judicial review" approach espoused by Dŵr Cymru at the CMC on 23 October 2007 (contrary to the express wording of paragraph 3(1) of Schedule 8 to the Competition Act 1998), it is clear that the results of the Final Report could not be accepted as valid or binding on the Tribunal.	The House of Lords Select Committee report is irrelevant to the Final Report.	

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					Treating such findings as binding would infringe a number of basic principles of English administrative law, notably the principle that no one can be the judge in his own cause and the rules against actual or apparent bias. (c) On the first point, as the respondent to this appeal, the Authority is clearly unable to make binding findings of fact or law in respect of this appeal. In effect, the Final Report is a supplementary pleading by the Authority, produced pursuant to the direction of the Tribunal, and should be treated as such. (d) Likewise, there are numerous instances where the Authority has		

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					displayed real or apparent bias in favour of Dŵr Cymru, including examples identified by the Tribunal in its earlier judgments and in the preparation of this Report: e.g. (i) the persistent and misleading failure to refer to the highly material contemporary evidence in relation to the FAP, both in the Decision [paragraph 72] and the Final Report [3.14-3.15]: see below; and (ii) treatment of the "back-up" supply issue at the Draft Assessment and Final Report stage: see above; and (iii) the 300% "adjustment" made unilaterally by the Authority to increase the MEAV used for the AAC plus methodology in respect of raw water aqueducts above the		

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					figure proposed by Dŵr Cymru itself: see above. (e) Moreover, the Tribunal is aware, from the expert evidence of Dr Marshall, the witness evidence of Mr Hope and the submissions of Aquavitae at the CMC on 23 October 2007, which Albion adopts and endorses, that the Authority has followed an obstinately perverse approach to the issues considered by the Tribunal in relation to the implementation of the amended water regime, with the apparent object and effect of thwarting any effective retail competition to the incumbent water companies: (i) This approach is contrary not only to that		

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					regime but also to the common objective of the sectoral specific legislation and the Competition Act 1998, of introducing effective competition in the supply of water services in the United Kingdom. (ii) Despite the facts that (a) this case was accepted by the Authority as a test case on the issues addressed by the Tribunal - so that it refused to investigate other cases pending the outcome of this case; and (b) it has not sought to appeal against the findings of the Tribunal; the Authority has persistently refused to take account of the adverse outcome of the case in the conduct of its regulatory functions.		

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					(iii) This was the subject of (appropriately understated but) specific adverse comment by the House of Lords Select Committee: "It seems to us unwise of Ofwat to claim that it need take no account of the general comments made by the CAT on its access regime. Ofwat should examine critically whether it could not find a more constructive approach to implementing the CAT's findings." (iv) This further public pressure has not apparently altered the Authority's stubborn refusal to accept the unchallenged (and plainly correct) legal findings of the Tribunal. On the contrary, the Authority has apparently decided		

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					that it will refuse to take any notice of the Select Committee as well.[19]		
		7.13	"Operating profit…is allocated by gross MEAV weighted by the income risk factor…"	See paragraph 6.56 above. Dŵr Cymru considers that since the AAC-plus methodology uses a subsidised rate of return, notwithstanding the application of the income risk factor, it cannot be used as the basis for a positive finding of excessive pricing.		See comments in response to §6.56 above.	
		7.30	"There are a number of areas where the Authority has changed the initial cost allocation assumptions used by Dŵr Cymru…"	See comment in relation to paragraph 6.17 above. Dŵr Cymru considers that changing the cost allocation assumptions as described by the Authority leads to results that are biased downwards.		See comments in response to §6.17 above.	
		7.42	"These missing capital costs will add over 20% to the unit standard cost and the associated	If the "missing" capital costs add "over 20%" then an up-lift of just 20% will understate the weight used		Dŵr Cymru has requested the Authority to present its best estimate of the capital cost uplift.	

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			capital cost weight. The Authority has therefore increased the capital cost weight by 20% to 40.3%."	for treatment capital costs and lead to incomplete results. The Authority should up-lift the capital cost weight by its "best estimate" of the effect of the missing items.		When infrastructure costs and management *"on costs"* are excluded, the cost engineers have estimated that the capital costs of the Ashgrove WTW were around £96K per Ml/d for water treatment and around £13K per Ml/d for sludge management in 2000-01: see §§8.29 and 8.33 of the Final Report. When infrastructure costs (20%) and management *"on costs"* (10%) are included, the associated unit cost for Ashgrove increases to £144K per Ml/d, some 40% above that assumed by Dŵr Cymru in its draft report on this matter (see §§7.149-7.166 of the Final Report). This unit cost equates to a gross MEAV of around £4.6m. However, the unit cost for the AAC-plus methodology needs to be based on the average of both the Court Farm and Ashgrove WTW. When economies of scale (see §8.26 of the Final Report) and the additional cost of treatment at Court Farm (e.g. sludge dewatering, additional dosing facilities and chlorination) are	

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						accounted for, the average non-potable water treatment unit cost (in 2000-01) falls to around £137K per Ml/d. The average potable water treatment unit cost will also fall slightly from £318K per Ml/d to £305K per Ml/d when it is rebased to 2000-01, as the gross MEAV of water treatment falls from £476m (in 2003-04) to £458m (in 2000-01). This adjustment assumes that the potable treatment capacity remains relatively constant (between 2000-01 and 2003-04), at around 1500 Ml/d. This then equates to a *"capacity"* based capital cost weighting factor for water treatment in 2000-01 of around 45% (£137 per Ml/d divided by £305 per Ml/d), some 34% above the *"average"* capital cost weight of 33.6% proposed by Dŵr Cymru. A profit attribution cost weighting factor of around 45% appears to be robust, especially when considering the additional complexity of the larger	

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						non-potable treatment works at Court Farm (chlorination, sludge dewatering etc.), but noting that allowance also has to made for the associated economies of scale associated with this same larger works (see §8.26 of the Final Report). The difference in average works capacity (between the potable and non-potable customer classes) may explain why a 45% capital cost weighting factor is lower than one would normally expect when simply considering the proportion of costs that would be excluded from a typical potable water treatment works when only partial treatment is required (i.e. 50-55%, see §8.27 of the Final Report). However, as discussed in Annex 2 to the Authority's response, the capital cost weighting factor to be applied in the AAC-plus methodology may be better based on *"throughput"* rather than *"capacity"*. When this alternative approach is used, the potential uplift reduces from 34% to 0%, as the load factor adjustment in 2000-01 was effectively –34%.	

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		7.45	"The Authority considers that the operating costs associated with chlorination and (particularly) sludge dewatering will add over 10% to the assumed average non-potable operating cost of 1.13 p/m^3. The Authority has therefore increased the operating cost weight by 10% to 22.9%.	If the additional operating costs add "over 10%" then an up-lift of just 10% will understate the weight used for treatment operating costs and lead to incomplete results. The Authority should up-lift the operating cost weight by its "best estimate" of the effect of the missing items.		The Authority confirms that its best estimate of the uplift of Dŵr Cymru's operating cost weighting factors is 10%. This uplift is required to account for the additional operating costs (chemicals, repairs and maintenance, power and manpower) at Court Farm.	
		7.86	"In addition, some account needs to be taken of the fact that bulk non-potable mains (>600mm) appear to be smaller, on average than their bulk potable equivalents…..On this basis, a weighting factor of 50% (£664 per metre divided by £1262 per metre) for bulk (>600mm) potable mains would be appropriate.	The basis for the Authority's assertion that bulk non-potable mains are on average smaller than their bulk potable equivalents so as to justify a weighting factor of 50% is unclear. It is estimated that, if anything, non-potable >600mm mains are on average some 8% smaller than their potable equivalents, which would not appear to justify a		The Authority notes that a small change in average pipe diameter can have a major impact on the unit MEAV cost of laying a large diameter main: see the table in Annex 1 to the Authority's response. A cost weighting factor of 50% yields a gross MEAV model output for the non-potable class for > 600 mm mains of around £49m, close to the gross MEAV estimate of the Authority. The Authority maintains its use of its	

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				weighting factor of 50%.		gross MEAV estimate as a cross-check on the cost weights being applied. This will ensure an appropriate attribution of Dŵr Cymru's gross MEAV for bulk distribution to the non-potable class. This cross-check is important as the Authority has applied a disaggregated cost of capital to those assets allocated to the non-potable customer class.	
		7.126	"Despite these substantial caveats, with appropriate adjustments….Table 13 (sic) provides an important cross-check on the weights used in the AAC-plus model as the model itself estimates the MEAV of the assets that service the non-potable class."	The Authority has not properly taken account of the caveats which inevitably accompanied the provision of the information on which the "cross-check" has been based. In particular, given the limited amount of time available, a number of simplifying assumptions were made, all of which systematically produce under-estimates of MEAVs. For example, it was assumed that no non-potable mains were laid in urban areas, and also that all raw water mains were		The Authority has "*properly taken appropriate account of the caveats*". The Authority had to do this "*unilaterally*" since Dŵr Cymru failed to provide a second gross MEAV estimate as the Authority had originally requested at question 4.12 in its letter dated 12 March 2007 to Dŵr Cymru.	

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				laid exclusively in rural areas, both of which assumptions are known to be untrue. As a measure of the extent to which the MEAV figures in table 15 are under-estimates, that part of the figures that relates to the Ashgrove mains is just £8.0m (in 2000-01 prices) compared with the Authority's own estimate, and that of Mott MacDonald, both of which exceed £10m: further, as noted above, those estimates themselves exclude important costs, such as the added expense associated with laying mains in contaminated land. Accordingly, to the extent that the incomplete information presented in Table 15 is used as a cross-check (a use which Dŵr Cymru in any event disputes, given its			

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				concerns with the downward bias that the AAC-plus methodology introduces) an uplift of at least 25% should have been applied.			
		7.143	"…the Authority proposes… to use a differential cost of capital of 8.0%..."	As noted in relation to paragraph 6.56 above, there is no justification for using a subsidised cost of capital for the assessment of cost in the context of an excessive pricing test. Further, as confirmed by the Authority in its letter to Dŵr Cymru of 9 November 2007, this generates a rate of return on assets of just 0.9%, which is substantially below what would be regarded as a fair market rate of return.		As regards the use of a *"subsidised"* cost of capital for the AAC-plus model, see comments in response to §6.56 above. The Authority can confirm that using a cost of capital of 8.0% in the AAC-plus methodology is equivalent to an average rate of return on the MEAV of the assets allocated to the non-potable customer class in the AAC-plus methodology of 0.9% as stated in the Authority's letter to Dŵr Cymru dated 9 November 2007.	
		7.144	"In 2000-01 this cost of capital would have equated to an income weight of 2.2. This	Even on the basis of the Authority's use of a subsidised cost of capital (see comments relating to		As regards the cost of capital, see comments in response to §§6.43, 6.53 and 6.54 above.	

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			income weight has therefore been applied in the AAC-plus model"	paragraph 6.56 above), Dŵr Cymru estimates that correcting for the factors summarised in relation to paragraph 6.55 above would generate an "income weight" of 4.0 (based on the calculation presented in the table in paragraph 6.56, but substituting 7.9% (5.5% for systematic risk and 2.4% for non-systematic risk) for Ofwat's figure of 3.0) which would add 2.8p per m^3 to the Authority's AAC-plus results.		The effect of using 11.1% instead of 8% in the AAC-plus methodology is to increase the income weight to 3.0.	
		7.147	"Results of the AAC-plus methodology" [See Tables 16 and 16a of the Final Report]	Dŵr Cymru believes that the Authority's AAC-plus results are under-estimates for the following reasons: • by its very nature, the application of the AAC-plus approach and in particular the use of a greater degree of granularity for just one		See comments in response to §7.147 above.	

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				customer class will produce cost estimates that are biased downwards. Without applying the same level of granularity for all other customer classes, it is not possible to quantify the degree of this bias; • the Authority, on its own logic (and that of Europe Economics, its expert advisers) should have used a higher cost of capital of 19.0%, not the 11.1% it actually employed (see comments relating to paragraphs 6.53 to 6.55 above). Even employing the Authority's own methodology, making this correction would add 2.8p per m^3 to the AAC-plus results (see comments relating to			

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				paragraph 7.144 above); • in any event, the Authority should not have used a subsidised figure for the cost of capital for the purposes of the AAC-plus methodology (see paragraph 6.56 above); • the cost of connection, estimated to be equivalent to some 0.2p per m^3, has been omitted (see comments relating to paragraph 5.79 above); • the cost of distribution pumping, estimated to be equivalent to 2.8p per m^3, has been erroneously omitted (see comments relating to paragraph			

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				7.52); • the cost of sludge management, estimated to be equivalent to at least 1.4p per m^3, has been erroneously omitted (see comments relating to paragraph 7.147 in the heading 1 commentary); • the cost of the back-up service has been under-stated by around 4.0p per m^3 (see comments relating to paragraph 6.104 above). • In sum, the Authority's AAC-plus results are **under-stated by at least 11.2p per m^3**, even allowing for its decision to employ a subsidised cost of capital for the			

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				purposes of this methodology.			
		8.71	"….this implies an average raw water turbidity removal of around 50%."	The actual average rate of turbidity removal by the Ashgrove treatment works is 86.5%. Dŵr Cymru believes that the Authority was aware of this, and should therefore not have been satisfied with assumptions that implied a removal rate of just 50%. Indeed, the Authority does observe that its figures are questionable in paragraph 8.74: *"This calculation is also supported by the recent spot sludge sample (4,430 mg/l) provided by Dŵr Cymru (although it is noted that the sludge flows are now higher than assumed for 2000-01, implying that the Authority's suspended solids concentration assumption is a potential*		The cost of disposing sludge to the sewer was discussed as part of the LRIC methodology: see §§8.67-8.74 of the Final Report. The Authority estimated that, when disposed of to sewer, sludge disposal costs at the Ashgrove site were around 1.0p/m^3 in 2000-01. However, there remains some uncertainty in this cost estimate, as was recognised in the Final Report: see §8.74. In commenting on §§8.71 and 9.34, Dŵr Cymru has now stated that the average turbidity removal at the Ashgrove WTW is 86.5%. The floc carry over from the clarifier would then be around 5 mg/l (in line with normal clarification operations: see §8.71 of the Final Report) and the theoretical sludge solids concentration, at a sludge flow of 0.5%, would increase by around 1,000 mg/l (5 mg/l divided by 0.5%), from 5,000 mg/l to 6,000 mg/l.	

Heading 3: Methodological errors and errors of economic assessment allegedly committed by the Respondent in the Final Report

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				under-estimate). For the purpose of the Referred Work, the Authority believes the above assumptions are reasonable working estimates." Clearly the assumptions are not "reasonable working estimates", because they imply a rate of turbidity removal, 50%, which is far lower than the actual level achieved. Accordingly, Dŵr Cymru believes that the Authority's estimates for sludge disposal should be revised upwards by 73% (1-83.5/50), the equivalent of approximately 0.7p per m^3.		Given that a lower sludge flow rate was assumed in the Final Report (reduced from 1% to 0.5%) this upward adjustment to the sludge concentration is considered reasonable. This would then increase sludge disposal costs by around $0.2p/m^3$ (and not $0.7p/m^3$ as claimed by Dŵr Cymru), from $1.0p/m^3$ to $1.2p/m^3$. If this amendment is made, both the LAC and LRIC final cost estimates are increased by $0.2p/m^3$.	
		8.126	"Results of the LRIC model" [See Table 17 in the Final Report]	The Authority's LRIC results are under-estimates for the following reasons: • the Authority has not		As regards the comment that the Authority has not made suitable adjustments to the LRIC results for pricing purposes, see comments in response to §5.66 above.	

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				made the necessary adjustments that it acknowledges would be required in order for the results to be used for pricing purposes (see comments relating to paragraph 5.112 above); • the Authority, on its own logic (and that of Europe Economics, its expert advisers) should have used a higher cost of capital of 19.0%, not the 11.1% it actually employed (see comments relating to paragraphs 6.53 to 6.55 above). Dŵr Cymru estimates that this adjustment would add 7.8p per m^3 to the Authority's assessment of costs; • in particular, on the Authority's own logic, it		As regards the cost of capital, see comments in response to §§6.43, 6.53 and 6.54 above. As regards connection costs, see comments in response to §5.79 above.	

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		§ no	Disputed text	Dŵr Cymru's points of dispute	Albion's points of dispute	The Authority's response	Blank
				would be necessary to allow for the costs of the back-up service, at 4.4p per m^3 (see comments relating to paragraphs 5.66 and 6.28 above), or 8-9.0p per m^3 if the reliability of the service is properly allowed for (see comments relating to paragraph 6.104 above); • the cost of water storage, likely to be at least 1.3p per m^3 (the Authority's LAC estimate) has been erroneously omitted (see comments relating to paragraphs 8.37 and 8.38 above); • pumping station infrastructure costs, for which no estimate has been provided, have been erroneously			

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Heading 3: Methodological errors and errors of economic assessment allegedly committed by the Respondent in the Final Report							
				omitted (see comment relating to paragraph 8.41 above); • the cost of connection, estimated to be equivalent to some 0.2p per m^3, has been omitted (see comments relating to paragraph 5.79 above); • the Authority may have failed to make an adjustment for peaking factors in calculating the p per m^3 equivalent of capital costs. It is not possible to quantify what the effect of this may have been; and • the cost of sludge management should be at least 0.7p per m^3 higher to reflect the actual sludge loads produced by the			

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				Ashgrove works (see comments in relation to paragraph 8.71 above); In sum, the Authority's LRIC results are **under-stated by at least 18.0p per m^3**. This figure would be higher if full account were taken of the need to mark-up LRIC estimates to achieve full cost recovery for pricing purposes.			
28.	*3.*	*9.*	*Passim*		**The cumulative errors of inclusion and quantification set out under headings 1 and 2 above invalidate the results of the LAC methodology set out in the Final Report.** Albion does not object to the LAC methodology in itself. However, its	The Authority's preferred methodology is AAC-plus (as stated in §1.11 of the Final Report). The Authority regards the LAC calculation as a "cross-check" on that preferred methodology but has clearly stated the weaknesses of the LAC methodology in various parts of the Final Report (e.g. §§1.11, 5.111, 9.2 to 9.5). The Authority has dealt with Albion's	

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					results are systematically flawed. Summarising points made earlier in this response: (a) the MEAVs used in the Final Report are systematically and substantially inflated; (b) the use of a disaggregated cost of capital is unjustified in principle and the basis for the actual figure used is clearly flawed; and (c) a number of individual items, sludge management, back up supply, common carriage costs, scientific services, doubtful debts, and those parts of general costs relating to insurance and management on-costs for the lagoons, should be excluded in any event.	specific criticisms of the LAC methodology – see comments in response to §§9.56 and 5.111 above.	

Heading 3: Methodological errors and errors of economic assessment allegedly committed by the Respondent in the Final Report						
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		9.8	"The MAC for the Ashgrove system has been calculated by applying the ratio between MEAV and RCV at company level for water supply for Dŵr Cymru (12%) to allow for the capital value discount at privatisation".	Since the MAC, the measure of capital used for the LAC methodology, is derived from RCV which is itself a subsidised measure of capital, the results of the LAC methodology cannot be used for the purposes of an excessive pricing test. Any finding that a price exceeds a LAC-based assessment of cost can only support a conclusion that the price may be out of line with other, regulated, prices (and may therefore attract regulatory action on discrimination grounds) not that it may be excessive from the perspective of the Chapter II prohibition. Therefore, whilst the LAC methodology produces results which may be regarded as informative in a general context, it cannot be used for the purposes		The Authority has commented on the LAC methodology at §§9.56 and 5.111 above. The Authority has clearly stated the weaknesses of the LAC methodology in various parts of the Final Report (e.g. §§1.11, 5.111, 9.2 to 9.5) and regards the LAC calculation as a "cross-check" on its preferred methodology of AAC-plus. The Authority acknowledges that using the MAC capital base leads to a lower result than using an MEAV capital base.	

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				of a test of excessive pricing. For that to be the case it would have to be modified so as to remove the artificial discount from the measure of capital value that it uses. This, in effect, would bring it close to the methodologies used by Dŵr Cymru and the Authority in 2006 to support estimates of the standalone cost of the Ashgrove system. Table 18 shows that the value of the capital value subsidy is between £12.8m and £14.6m, depending on whether the Authority's estimates or those of the expert engineers are used. Even using the Authority's erroneously low estimate of the cost of capital of 11.1% (see paragraph 6.55 above), this is equivalent to between 21.7p and 24.6p per m^3. Further, of that			

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				subsidy, between £4.0m and £4.9m relates to non-infrastructure assets: assuming an average asset life of 40 years, this will add at least £0.1m per annum to depreciation costs, equivalent to 1.7p – 2.0p per m^3. In total, therefore the effect of the capital value subsidy is to suppress the results of the LAC methodology by 23.4p – 26.6p per m^3.			
		9.11	"Table 18 below summarises the asset costs estimated by Mott MacDonald (excluding the 17% On Cost), the MEAVs used by the Authority….	The expert engineers employed by the Authority were specifically selected because they are regarded as one of the leading companies in infrastructure project costing. Given the choice between the Authority's own desk-top estimates, and the figures produced by the engineers, Dŵr Cymru believes that the latter estimates should		The Authority engaged Mott MacDonald to provide an independent engineering estimate of the gross MEAV of the Ashgrove system. The results are summarised in Table 18 of the Final Report. Dŵr Cymru has commented that "*given the choice between the Authority's own desk-top estimates and the figures produced by the engineers, Dŵr Cymru believes that the latter estimates should have been*	

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				have been used, especially in view of the fact that the LAC methodology is being applied for the purposes of a test for excessive pricing. Further, no reason is given for the exclusion of the 17% on-cost, which is a very real component of the cost of providing capital assets in the water industry, and which would have increased the total figure in the first column of the table to £19.1m, over 30% higher than the Authority's own estimate.		*used*". The Authority accepts that greater weight could have been given to the engineers' estimate of the water treatment gross MEAV. However, given the concerns raised by Albion (see §9.36-9.44 above), the Authority continues to prefer to use the desk-top gross MEAV estimate for the treated water main. For the two key assets (the partial treatment works and the treated water main) the engineers' actual estimated cost (£4.8m and £12.1m respectively) is 17% above that actually quoted in the Final Report (£4.1m and £10.4m respectively). This is because the Authority excluded the 17% *"water company asset development on cost"* identified by Mott MacDonald. Dŵr Cymru has questioned the exclusion of the *"on cost"* proposed by Mott MacDonald claiming it "*is a very real component of the cost of providing capital assets in the water industry*". The Authority excluded this	

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						17% *"on cost"* as it was considered too high and the Authority had insufficient time to consider an appropriate level. In this particular case the *"on cost"* will relate to: project supervision, contractors' costs and other overhead costs such as land compensation and contingencies. Standard costs are already inclusive of all design, supervision, management, company overheads, risk contingency and incentive costs but exclusive of compensation payments. Taking into account Dŵr Cymru's representations on this point, the Authority considers that 10% could be regarded as an appropriate project *"on cost"*. If this amendment were made, Mott MacDonald's actual cost estimates would fall to £4.5m for partial water treatment (excluding the associated sludge main) and £11.4m for the treated water main. The Authority's desk-top estimate for partial water treatment (including sludge processing) is around £4.1m. Given the generic nature of the	

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						standard cost estimate (see §8.27 of the Final Report) it may be appropriate to adopt the revised engineers' estimate of £4.5m (rising to £4.6m when the sludge main is included) as this is based on a site-specific cost investigation. Replacement of the treated water main standard cost with the engineers' cost estimate is complicated by the pipe depth issue: see comments in response to §§9.36-9.44 above.	
		9.15	"In response to Dŵr Cymru's point the Authority notes that in a regulatory context the Authority allows appointed water companies to earn a return on their RCV rather than their MEAV to reflect the capital value discount at privatisation"	Dŵr Cymru does not disagree with the Authority's point, but it fails to address the fact that since all regulated prices in the water sector are, effectively, subsidised, the (artificially suppressed) regulatory price benchmark cannot be used as the basis for a test of excessive pricing.		See comments in response to §9.8 above.	

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		9.34	"Based on these assumptions the equivalent sludge disposal cost would have been around 1.0p/m^3 in 2000-01."	See comments made in relation to paragraph 8.71 above. The Authority has under-estimated the total sludge load that is discharged from the Ashgrove treatment works in both the LRIC and LAC methodologies.		See comments in response to §8.71 above.	
		9.61	"Results of the LAC methodology" [See Table 20 in the Final Report]	The Authority's LAC results are under-estimates for the following reasons: • the Authority has used a measure of capital value that reflects an 88% subsidy, as a consequence of which the results cannot be used for the purposes of a test for excessive pricing (see comments in relation to 6.39 and 9.8 above). If that subsidy is reversed, the results of the LAC methodology would be		Dŵr Cymru's comments on the capital value have been addressed at §9.8; on the engineering on-cost at §9.11; on cost of capital at §§6.43, 6.53, 6.54; on cost of connection at §5.79; Albion-specific customers services at §6.79; on partially and unfunded universal service obligations at §9.56; on the cost of the back-up supply at §5.66 and on sludge management at §7.147.	

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				at least 23p per m^3 higher, yielding overall results in excess of 40p per m^3, substantially in excess of the FAP; • in any event, the Authority should have taken more account of the estimates of the expert engineers, including the 17% on-cost that they believe should be properly allowed for in estimates of capital costs (see comments in relation to paragraph 9.11 above); • the Authority, on its own logic (and that of Europe Economics, its expert advisers) should have used a higher cost of capital of 19.0%, not the 11.1% it actually employed			

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				(see comments relating to paragraphs 6.53 to 6.55 above). This would add 2.0p per m^3 to the Authority's assessment of costs, even on the basis of the heavily subsidised measure of capital value; • the cost of connection, estimated to be equivalent to some 0.2p per m^3, has been omitted (see comments relating to paragraph 5.79 above); • the cost of Albion-specific customer services, equivalent to 1.5p per m^3, has been omitted (see comments relating to paragraph 6.79 above);			

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				• by the Authority's own admission (see paragraph 5.111) costs associated with partially- and un-funded universal service obligations have been omitted. These have not been quantified (see comments relating to paragraph 9.56 above); • the cost of the back-up service has been under-stated by approximately 4.0p per m^3 (see comments relating to paragraph 6.104 above); • the cost of sludge management should be at least 0.7p per m^3 higher to reflect the actual sludge loads produced by the			

Heading 3: Methodological errors and errors of economic assessment allegedly committed by the Respondent in the Final Report							
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				Ashgrove works (see comments in relation to paragraphs 8.71 and 9.34 above); In sum, the Authority's LAC results are **under-stated by at least 8.4p per m^3** in respect of omitted items or items that have been wrongly estimated, and by around 30p per m^3 if the principal shortcoming of this methodology, its use of a subsidised measure of capital value, is addressed.			

Dŵr Cymru's other observations on the Final Report							
		§ no	**Disputed text**	**Dŵr Cymru's points of dispute**		**The Authority's response**	**Blank**
		1.18	"Based on those figures, the Authority has	Even without consideration of Dŵr Cymru's points of		See comments in response to §6.25 above.	

Dŵr Cymru's other observations on the Final Report							
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			concluded that the FAP is excessive since it exceeds the costs attributable to the relevant services by a material extent."	dispute under headings 1 2 and 3 above, Dŵr Cymru does not believe this conclusion is soundly based. First, the Authority has implicitly had regard to the difference between its estimates of LAC and AAC-plus in determining that the excess over costs is material. However, for the reasons explained in paragraphs 14-15 of the submissions accompanying this schedule, having calculated a figure for LRIC in excess of LAC and AAC-plus, and since LRIC is an absolute lower bound for any pricing by Dŵr Cymru, the Authority should have focussed only on the difference between LRIC and FAP. Second, so far as the LRIC methodology is concerned,		Dŵr Cymru's comments on each of the methodologies being underestimates are dealt with above, for example, at §5.66 (LRIC), §5.111 (LAC) and §§7.52, 7.127 and 7.147 (AAC-plus).	

Dŵr Cymru's other observations on the Final Report							
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				paragraph 8.126 lists 8 categories of costs which are evidently incurred in the provision of the service but are not taken account of in the calculation. Also, at paragraph 5.112 the Authority also recognises that it omits the costs of unfunded and partially-funded legal obligations. As the Authority noted and as is generally recognised (including by Dr Marshall) LRMC-based prices require a mark-up to ensure full cost recovery (see paragraph 5.66 of the Final Report). Third, without prejudice to the first point above, so far as the LAC methodology is concerned, the Authority acknowledges the fact that this methodology would make no allowance for certain common costs and that, given the time constraints it was unable to			

Dŵr Cymru's other observations on the Final Report							
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				consider what a sufficiently robust estimate would be. This was one of the reasons the LAC methodology was considered even by the Authority only as a cross-check on the main AAC-plus methodology (see paragraph 5.111). Further, the considerations summarised above against paragraph 7.147 for the AAC-plus methodology, paragraph 8.126 for the LRIC methodology and paragraph 9.61 for the LAC methodology, make it clear that all of the methodologies are biased as a test for excessive pricing because they all produce results which do not include all the items of cost that they should, and are therefore incomplete.			
		1.22	"The Authority has considered various non-	The Authority is wrong to conclude that there are no		The Authority stands by its view in the Final Report that there are no relevant	

Dŵr Cymru's other observations on the Final Report							
		§ no	**Disputed text**	**Dŵr Cymru's points of dispute**		**The Authority's response**	**Blank**
			cost related factors and has concluded that there are no relevant externalities in this case. As such, the Authority's view is that the costs reasonably attributable to the relevant services represent the "*economic value*" of those services in this particular case, in accordance with the implicit approach of the Commission in its decision in *Deutsche Post.*"	relevant externalities in the present case: see further the observations on paragraphs 12.77, 12.83 and 12.88 below. (Insofar as the Authority relies on *Deutsche Post* as authority for the proposition that it should take the cost of providing the service as representing the economic value of the service, that proposition is plainly not correct: it is clear from subsequent cases such as *Scandlines* and *AttheRaces* that "economic value" cannot and should not be equated with cost).		externalities in this case. At §12.72 of the Final Report, the Authority states that is has sympathy with the Commission's point in *Scandlines* (§§221, 232 and 233), that in general the economic value of a product cannot simply be determined by adding a pre-determined profit margin to the costs incurred in providing that product. The Authority considered various non-cost related factors and concluded that there were no relevant externalities in this case. As such, the Authority's view is that the costs reasonably attributable to the relevant services represent the "*economic value*" of those services in this particular case, in accordance with the implicit approach of the Commission in its decision in *Deutsche Post*. The Authority considers that neither *Scandlines* nor *Attheraces* excludes the possibility, in such circumstances, of the cost being found to represent the economic value of the service being provided. See comments in response to	

Dŵr Cymru's other observations on the Final Report							
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						§§12.77 and 12.83 below.	
		4.25	"In *Deutsche Post*, the Commission found the tariff charged by Deutsche Post bore no "*sufficient or reasonable relationship to the real costs or to the real value of the service provided*", having regard to the following: (i) adopting a cautious approach, the price exceeded the economic value of the service by at least 25%, and if an alternative benchmark were used, the price exceeded the economic value of the service by 43%; (ii) Deutsche Post was a monopolist and (iii) the peculiarities of postal services (at paragraphs 166 to 177). Consequently, Deutsche	See observations on paragraph 1.22 above.		See comments in response to §1.22 above.	

Dŵr Cymru's other observations on the Final Report							
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			Post's pricing exploited customers excessively and was therefore an unfair selling price within the meaning of Article 82. In that case, the Commission appears to have used the cost of providing the service as representative of its economic value."				
		7.4	"…the asset intensity of each non-potable system is relatively similar, ranging from £0.5m to £1.5m per Ml/d in 2000-01."	The Authority's observation is capable of forming the basis of a further comparator establishing that the FAP was not unfair. The Authority has observed that the delivery structure for non-potable water costs in the region of £0.5-1.5m per Ml/d to build. Using even the Authority's subsidised rate of return of 11.1%, and assuming an average asset life of 100 years, this is equivalent to £55 – 166k per annum, or a charge of 15-46p per m^3, with a mid-point		See comments in response to §1.22 above.	

Dŵr Cymru's other observations on the Final Report							
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				of 30p per m^3. As a generic *benchmark*, therefore, and ignoring all the other costs (opex etc) this rule of thumb strongly suggests that 23.2p per m^3 for "common carriage through a non-potable delivery system" is not unreasonable.			
		11.6	"The Authority considers that in the circumstances of this case, an excess of 16% (using the lowest of the figures produced by the three methodologies, i.e. the LRIC cross-check) cannot be dismissed as immaterial….The Authority concludes that even on the basis of the LRIC result alone, the excess is material and, in view of the results produced in particular	The conclusion is not soundly based. The Authority's own analysis acknowledges that there are elements which are appropriate to include, but nevertheless could not be captured in the LRIC calculation within the time constraints of the Authority's work. Notably, at paragraph 8.126 the Authority records that the following are excluded from the calculation, as they were not considered to be truly incremental costs in the		As regards the exclusion of non-incremental costs from LRIC, see comments in response to §5.66 above. *"Unfunded and partially-funded legal obligations"* are not incremental costs and therefore should not be included in the LRIC results.	

Dŵr Cymru's other observations on the Final Report							
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			by the AAC–plus methodology in this case, is sufficient to conclude that the FAP is "excessive"."	circumstances: • accommodation or buildings costs; • general infrastructure costs at Ashgrove WTW (e.g. existing roads, fencing, power connections, standby generators all suffice) for either clarifier expansion or pump installation; • additional investment in sludge transport (sludge main or sludge pumps suffice); • incremental flow management costs and additional investment/expenditure in water storage (existing Corus lagoons suffice);			

Dŵr Cymru's other observations on the Final Report							
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				• additional pumping investment at Heronbridge (not part of common carriage system); • fixed back-up supply costs (except for top up water actually supplied in the short run); • general business costs – doubtful debts, general expenditure and scientific services excluded; and • common carriage service costs • Nevertheless, some mark-up to a LRIC price would be necessary to ensure full cost recovery, including for these costs. In the time available, the Authority did not seek to calculate			

Dŵr Cymru's other observations on the Final Report							
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				such a mark-up. • In addition, at 5.112, the Authority acknowledges that the costs of unfunded and partially-funded legal obligations should be added on to a LRIC access price to ensure full cost recovery. However, as noted at paragraph 5.111 in relation to the LAC cost calculation, in the time available the Authority did not calculate an appropriate value for these costs. • Further, as summarised in the earlier observations on paragraph 8.126, on the Authority's own logic, the cost of capital used in the calculation is understated and the cost of the back-up			

Dŵr Cymru's other observations on the Final Report							
		§ no	**Disputed text**	**Dŵr Cymru's points of dispute**		**The Authority's response**	**Blank**
				service is erroneously excluded. There are also a number of further errors and omissions which suggest that the results of the LRIC methodology are significantly understated. • Given these exclusions, the relevance of some of which are accepted by the Authority, the price produced by the LRIC methodology should be considered incomplete and as such, the relevant excess over cost (if any) must be below (and could well be significantly below) 16%. In these circumstances, the excess identified by the Authority cannot be considered "material".			

Dŵr Cymru's other observations on the Final Report							
		§ no	**Disputed text**	**Dŵr Cymru's points of dispute**		**The Authority's response**	**Blank**
				• Further and in any event, the Authority was wrong in the circumstances to rely on the wider gap produced by the AAC-plus analysis for the reasons given above in relation to paragraph 1.18 of the Report.			
		12.22	"the Authority's view is that the above prices [*Dŵr Cymru's retail prices to other customers between 2000/1 and 2005/6*] cannot be easily compared to the FAP other than by using, in this case, an AAC-plus model of all Dŵr Cymru's costs."	• Dŵr Cymru disputes this conclusion for the reasons summarised by the Authority at paragraph 12.22 of the Final Report: • "(a) Retail prices do not need to be adjusted to a high level of precision for the purposes of this assessment in order to be used as a comparator for access prices.		See comments in response to §12.23 below.	

Dŵr Cymru's other observations on the Final Report							
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				• (b) It is likely to be most helpful to look at a wide variety of comparators, which may give a general sense of the economic value of the price offered, rather than merely to consider a small number of the closest comparators. • (c) Whilst there are important methodological differences between the derivation of the FAP and the derivation of retail prices for non-potable supply, Dŵr Cymru considers that the Authority is in a good position to be able to make informed adjustments to one or other price for the purposes of the			

Dŵr Cymru's other observations on the Final Report							
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				second limb of United Brands. • (d) It is relevant to look not only at non- potable prices charged in 2001, but also at prices charged subsequently – say in the following 5 year period." • In relation to these points, see further observations on paragraphs 12.23-12.28 below.			
		12.23	"On points (a), (b) and (c) it would be possible to calculate rough access prices by taking the special agreement prices or the partially-treated water tariff and deducting the estimated cost of the water resource and any	The Authority is presuming that any comparators must meet "the degree of accuracy the Tribunal has indicated that it requires" in respect of the estimation of Dŵr Cymru's own costs. However, in so doing, the Authority is erroneously importing a standard of		The Authority stands by its views on comparators expressed in the Final Report. The main points being that: the Tribunal has required a certain degree of accuracy in this case (§12.23); and the compared products do not have to be perfectly comparable but calculating rough access prices from the comparators suggested would, in the Authority's	

Dŵr Cymru's other observations on the Final Report							
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			retailing costs. However, these estimates would be imprecise due to cost differences underlying the different retail prices and differences between the water resources costs that would be deducted. Given the difficulties encountered by all the parties in identifying the correct deduction from the SBSA [Second Bulk Supply Agreement] price, to reach an appropriate access price and the degree of accuracy the Tribunal has indicated that it requires the Authority's view is that it would not be appropriate to derive comparator access prices by making rough adjustments to other retail prices Dŵr Cymru charges in this particular	accuracy that was not intended to apply to a review of comparators under the *United Brands* test and for which there is no basis under the relevant case law. The Tribunal made a number of comments on the validity of comparators used for the Second Bulk Supply Agreement price in the context of its criticism of the use of the ECPR methodology for the calculation of costs under stage 1 of the *United Brands* test. Even if it is assumed that these comments establish a standard for accuracy in that context, this cannot be read across to an evaluation under stage 2 of *United Brands*, where it is inevitable that a review of less direct evidence is necessary in order to assess "unfairness" as compared with the evidence necessary to establish the		opinion, have been too imprecise to be worthwhile or meaningful (§12.25) Despite this, the Authority presented information on comparators in some detail (Tables 22, 23 and 24 in the Final Report) in case the Tribunal wishes to take a different view to the Authority. With regard to *Napp*, that case is distinguishable from the present case. The OFT's analysis of excessive pricing in *Napp* is set out at §§203-222 of its decision. The OFT found that Napp's prices of sustained release morphine tablets and capsules to the community were considerably higher than those of its competitors (§207). The OFT also found Napp's prices to the community were considerably higher than the prices it charged to hospitals and for export (§217). Therefore, the OFT compared Napp's actual retail price in the community sector with actual retail prices charged by its competitors in the same market, and actual retail prices	

Dŵr Cymru's other observations on the Final Report							
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			case."	cost of the product or service in question. To require the same standard of accuracy for stage 2 of *United Brands* as for stage 1 would negate the need for stage 2 – if a similar standard of accuracy were achievable, the comparators could themselves be used as a valid methodology to assess costs. For example, in *Napp* the Tribunal accepted that it was legitimate to rely on a comparison of prices between the hospital segment and the export segment even though it was accepted that in the export segment Napp faced lower risks as a contract manufacturer and did not carry marketing and promotional costs (§395 of the judgment). In that case, the OFT did not conduct a detailed analysis of the cost		charged by Napp in competitive markets. In the present case the suggested comparators are not as reliable as those in *Napp*. A comparison of the FAP with Dŵr Cymru's retail prices involves comparing an access price with a retail price which the OFT did not do in *Napp*. A comparison of the FAP with indicative access prices proposed by other water companies in 2002 is a comparison with indicative prices that were never charged and which related to different markets; the OFT only used actual prices which had been charged as comparators in *Napp*. A comparison of the FAP with the prices charged by other undertakers for non-potable water again involves comparing an access price with a retail price and additionally looking at prices in different markets; not something the OFT did in *Napp*. A comparison of the FAP with the prices charged in the wider market for non-potable supply again involves comparing an access price with a retail price; not something	

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				differences underlying the different prices to these segments. It would be possible and appropriate to carry out an analysis to the level of accuracy accepted by the Tribunal in *Napp.*		the OFT did in *Napp*.	
		12.25	"The Authority accepts that the compared products do not have to be perfectly comparable to be of use in an excessive pricing test. However, the Authority still considers that calculating rough access prices from the special agreement prices or the partially-treated water tariff would be too imprecise for the reasons given above and given the degree of accuracy required by the Tribunal	See observations on paragraph 12.23 above.		See comments in response to §12.23 above.	

Dŵr Cymru's other observations on the Final Report							
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			in this case."				
		12.27	The Authority would like to clarify that it has not used the AAC-plus methodology as part of its assessment of the second stage of the *United Brands* test, but the Authority notes that the AAC-plus methodology might provide a more precise comparator than those comparators suggested by Dŵr Cymru.	The Authority's comments demonstrate a misunderstanding of the purpose of the second stage of *United Brands*. To use the AAC-plus methodology both for stage 1 and stage 2 of the *United Brands* test would result in meaningless duplication. The AAC-plus methodology is being used to compare the FAP with averaged costs for such a service. Stage 2 of the *United Brands* test requires the Authority to cast its net more widely and consider how the FAP compares with prices achieved in comparable circumstances. The Authority's approach amounts to stating that looking at the actual costs of a service is more precise than looking at comparators – whilst this is true, it misunderstands what is		The Authority has not used the results of the AAC-plus methodology in its assessment of the second stage of the *United Brands* test as stated in §12.27 and as Dŵr Cymru appears to accept. The Authority then goes on to reject the comparators proposed by Albion and Dŵr Cymru in this case. The confusion seems to have arisen because the Authority has mentioned that the AAC-plus methodology effectively compares the FAP to Dŵr Cymru's other retail prices (e.g. in §12.26 of the Final Report). However, the Authority did not mean to imply it was using the AAC-plus methodology in the second stage – to clarify, it did not do this. The fundamental disagreement between Dŵr Cymru and the Authority appears to be that the Authority has rejected all the comparators and externalities proposed by Dŵr Cymru for stage 2.	

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				required under the two stage *United Brands* test.			
		12.28	"However, looking at Dŵr Cymru's retail prices over several years does not change the Authority's view that it would not be appropriate to derive comparator access prices by making rough adjustments to other Dŵr Cymru retail prices in this particular case."	See observations on paragraph 12.23 above.		See comments in response to §12.23 above.	
		12.32	"There are several reasons why the 2002 indicative access prices are not easy to compare to the FAP…. the 2002 indicative access prices were not challenged with respect to their cost-reflective basis by the Authority or new entrants."	The indicative access prices are the most direct comparison for the FAP as they were offered at a similar time, in similar circumstances and within the same regulatory context as the FAP. A comparison of the FAP with those prices shows the FAP to reside at the low end of prices proposed by other		The Authority stands by its view in the Final Report on the 2002 indicative access prices. The Authority is not presuming that the 2002 indicative access prices are unfair but does not consider them to be good comparators as they were not challenged with respect to the their cost-reflective basis. The Authority notes that in *Napp* the OFT only used actual prices charged by competitors in the same market as comparators,	

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				companies and as such confirms the FAP was a fair price. To exclude consideration of the indicative access prices of other companies as valid comparators on the basis that they were not challenged is to make a presumption that such prices must themselves be regarded as potentially unfair and as such reverses the burden of proof with respect to Dŵr Cymru as well as raising an unwarranted presumption as to the fairness of access prices proposed by all other water undertakers.		rather than indicative prices relating to different regions.	
		12.34	A second reason why the 2002 indicative access prices are not suitable comparators is that they relate to different appointed water companies.… It	The Authority is wrong to conclude that detailed modelling to allow for differences in undertakers' costs would be necessary for the purposes of a comparison under stage 2 of		In *Napp,* the OFT used prices charged by competitors in the <u>same</u> market (the community sector) as comparators; for this reason the prices did not need adjusting for cost differences between regions. Furthermore, cost differences	

Dŵr Cymru's other observations on the Final Report							
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			would involve detailed modelling to allow for differences between appointed water companies' non-potable costs underlying their access charges. In its letter of 30 March, Dŵr Cymru states that "the different costs structures of different undertakers should not be a barrier to considering indicative access prices as a relevant comparator for the [FAP]." However, the Authority's view is that the different cost structures invalidate these comparators (more detail on this point is given under (3) below) in this case."	the *United Brands* test. For example, the OFT's Decision in *Napp* contains a comparison of Napp's prices with those of its competitors, which was upheld as legitimate by the Tribunal. Although it cannot reasonably be assumed that the costs of all of the pharmaceutical companies concerned were equivalent, the OFT made no attempt to make adjustments for such differences in its comparison. In *Scandlines*, while the Commission acknowledged the difficulties of comparing the charges imposed by different ports, it nevertheless drew up a comparison of the official tariffs published by several European ports and was able to conclude "*on the basis of this comparison, there is no evidence that the prices charged by HHAB to*		between regions are likely to be more significant in the water industry than other industries due to the high proportion of water industry costs relating to water availability; water quality in the environment; and water transportation which are all affected by regional geographic factors. With regard to *Scandlines*, as Dŵr Cymru states, the European Commission acknowledged the difficulties of comparing the charges imposed by different ports. For example, at §169 the European Commission stated "*It may be possible in the abstract, as Scandlines suggests, to make a comparison between different figures representing prices of products or services. The problem is to assure that the comparison is valid and that the result of the comparison is meaningful. It must be ensured that the figures which are compared are really comparable. The conditions under which such a comparison is made are therefore of the utmost importance.*" The Authority considers	

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				the ferry operators at Helsingborg would stand out…" (paragraph 206). A similar conclusion is warranted in this case on the basis of a comparison of the FAP and the indicative access prices of other undertakers.		its approach is consistent with the European Commission's decision in *Scandlines*. As explained in the comments in response to §§12.23 and 12.45 above, no meaningful comparison can be drawn between the FAP and the comparators proposed by the parties in this particular case.	
		12.35	"Third, most of the 2002 indicative access prices relate to potable bulk supply distribution. In its letter of 30 March 2007, Dŵr Cymru conceded that *"[t]o the extent that some indicative access prices relate to potable water, it would be for the Authority to determine the extent to which, if at all, the comparison is invalidated in such instances*." Adjusting the 2002 indicative	As summarised at paragraph 7.30, the Authority addressed the differences between potable and non-potable bulk distribution in its AAC-plus methodology by decreasing the weights for non-potable distribution and storage and removing all pumping costs. Dŵr Cymru disagrees with a number of these adjustments for the reasons set out above. However, for the purposes of a comparison under stage 2 of the *United Brands* test, it		The Authority stands by its statement in §12.35 that *"[A]djusting the 2002 indicative potable access prices to non-potable access prices would be a further complication making the comparison more difficult."*	

Dŵr Cymru's other observations on the Final Report							
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			potable access prices to non-potable access prices would be a further complication making the comparison more difficult."	would be a straightforward matter to read across these adjustments to the prices of other water companies and infer non-potable access prices from the potable access prices quoted.			
		12.36	"Given the three reasons set out above, the Authority's view in the Draft Assessment was that the 2002 indicative access prices cannot be easily compared to the FAP and that adjusting the indicative access prices would not produce reliable comparators."	See observations on paragraphs 12.32-12.35 above.		See comments in response to §§12.32, 12.34 and 12.35 above.	
		12.38	"The Authority is instead pointing out that the 2002 indicative access prices were not used in practice, nor challenged by the Authority or new entrants with respect to	The Authority's conclusion that unchallenged indicative access prices are less useful as a comparator than prices offered and accepted in a competitive market is not a valid basis for its		The Authority accepts there is a limited availability of market comparators in this case. However, the Authority and Dŵr Cymru differ in that the Authority considers no meaningful comparison can be drawn between the FAP and the	

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			their cost-reflective basis and are therefore less useful as comparators than prices actually offered and accepted in a competitive market."	refusal to have regard to such relevant information. First, even if the prices would have been of greater relevance had they been more thoroughly tested in a market, in the circumstances of this case and the limitations on the availability of such market comparators, the access prices of other undertakers provide a valuable point of comparison. The Authority's rejection of a valid comparator, on the basis of an ideal set of comparators that do not exist in this case, is unwarranted. The Authority should have used the best available relevant information. Second, the Authority would be wrong to assume (as it implicitly appears to do) that the comparators themselves are unreflective of costs and		comparators proposed by Albion and Dŵr Cymru (§12.53), whereas Dŵr Cymru considers the comparators are valid and the Authority should use them as a point of reference. With regard to the reversal of the burden of proof, see comments in response to §12.32 above. The Authority does not agree with Dŵr Cymru's view that by not presuming the 2002 indicative access prices are cost-reflective, the Authority considers its comparative competition regime for the water industry to be ineffective. The Authority considers its comparative competition regime in the water industry has been very effective in driving efficiency gains since 1989, which have been passed on to consumers at Periodic Reviews. The Authority reiterates it reasoning in §12.32 of the Final Report; the 2002 indicative access prices were overtaken by the work on the Water Bill and the new common carriage regime; as a result, the derivation of	

Dŵr Cymru's other observations on the Final Report							
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				therefore excessive themselves. This is tantamount to a presumption that such potential comparators are excessive and abusive. Such a presumption is unwarranted and amounts to a reversal of the burden of proof with regard to Dŵr Cymru. It also implies that comparative regime for competition in the water industry is considered by the Authority to be ineffective. See also observations on paragraph 12.32.		the 2002 access prices were not challenged by the Authority with respect to their cost-reflectiveness. This is in contrast to appointed water companies' retail tariffs which are scrutinised in the annual review of charges schemes.	
		12.39	"Second, the Authority has explained that it would involve detailed modelling to allow for the differences between appointed water companies' non-potable costs underlying their access charges in this	See the observations on paragraph 12.34 as regards the lack of need for detailed modelling. As regards the second sentence, the Authority misdirects its rebuttal of Dŵr Cymru's point. It is the Authority's implicit assumption that		See comments in response to §§12.34 and 12.38 above.	

Dŵr Cymru's other observations on the Final Report							
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			case. This point does not imply the Authority's comparative competition regime is ineffective as the Authority *has already* developed detailed econometric models over a number of years to compare appointed water companies' overall performance for regulatory purposes based on detailed regulatory returns (more detail is provided under (3) below)."	comparator indicative access prices are excessive which implies that the comparative competition regime is ineffective – not the absence of detailed econometric models in this instance.			
		12.44	"Dŵr Cymru suggested in its letter of 30 March 2007 that the Authority would have sufficient understanding from its regulatory work on the details of other undertakers' cost structures to form a view on whether an inferred "distribution and	The Authority is setting too high a standard for such a comparison. See observations in relation to paragraphs 12.23 and 12.34 above. In any event, the fact that the Second Bulk Supply Agreement price was below what Shotton Paper would have paid in 2000/01 under the standard		The Authority agrees that the FAP is below the four appointed water companies' non-potable tariffs in 2000/01 (which do not include Dŵr Cymru). Nonetheless, the Authority stands by its view in §§12.44 and 12.45, in particular that *"a straight read-across between water prices in different appointed water company areas cannot be made because there are many legitimate reasons for cost*	

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			treatment" element of the prices would be closer to the FAP or to Albion's view. However, a straight read-across between water prices in different appointed water company areas cannot be made because there are many legitimate reasons for cost differences between appointed water company regions (as mentioned under (2) above)."	tariffs in any of the other four other appointed water company regions is prima facie evidence that the level of the related FAP does not stand out as unfair by comparison. It would therefore not be possible to conclude that the price was unfair without further examination.		*differences between appointed water company regions".*	
		12.45	"The Authority's view is that the non-potable tariff prices that Shotton Paper would have paid in other appointed companies' area cannot easily be used as comparators for the FAP as those prices cannot be easily adjusted for the relevant cost differences. The	Again, see observations in relation to paragraphs 12.23 and 12.34. For the purposes of this exercise, it is not necessary to adjust comparators to the level of accuracy the Authority posits. Further, the fact that the Authority considers that adjustments cannot be		As regards the level of accuracy, see comments in response to §12.23 above. The Authority accepts that it is not absolved of investigating a meaningful comparator. The Authority accepts that the comparators suggested by Dŵr Cymru could be adjusted, but with considerable difficulty and the difficult adjustments required would diminish	

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			Authority's comparative efficiency models do not look at non-potable water, do not look at individual supply systems and compare efficiency rather than tariffs or access prices. The Authority therefore does not have an existing model which it could use to compare non-potable tariffs between appointed companies."	made easily in order to investigate a comparator (which for the reasons set out above, Dŵr Cymru does not accept) does not absolve it of the obligation to do so were it to contemplate a finding that the FAP was unfair.		their value. By way of an example, using Thames Water's 2002 indicative access price for bulk potable water transportation would require the following adjustments to make it a meaningful comparator: (1) assess Thames' methodology underlying the indicative access price (if it still exists) and make any adjustments if the Authority does not think it is cost-reflective; (2) take the Step 1 indicative access price and adjust it for differences between Thames Water and Dŵr Cymru's area which would require some modelling based on differences between the two companies' potable costs (the modelling would be different for each appointed water company being compared); (3) adjust the bulk potable distribution cost into a theoretical bulk non-potable distribution cost (as Thames Water does not have a non-potable supply); (4) deflate the Step 3 figure to 2000-01 prices; and (5) unless the Step 4 figure was adjusted further by adding on a theoretical estimate of non-	

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						potable treatment costs in Thames' region, it would only act as a comparator for the bulk non-potable distribution component of the FAP. Each of these steps would be difficult to carry out and the extent of adjustments and assumptions required would undermine the relevance of the results as true comparators.	
		12.46	A second complication in comparing other companies' non-potable tariff prices with the FAP is that it would be a comparison of retail prices with an access price. What other companies' non-potable tariff prices were provides only limited information in respect of what access price they would have offered (in effect the tariff represents the ceiling on	See observations on paragraph 12.23, 12.34 and 12.44 above. In this case, the FAP is clearly well below the ceiling suggested by other companies' non-potable tariff prices. This is evidence that the FAP does not stand out as unfair by comparison with the tariffs of other companies. It would therefore not be possible to conclude that the		See comments in response to §12.44 above.	

Dŵr Cymru's other observations on the Final Report							
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			any plausible access price in most circumstances). It would be possible to estimate access prices from other companies' non-potable tariffs but these estimates would be imprecise for the reasons given under point (1) above.	price was unfair without further examination.			
		12.48	The Authority's view is that the non-potable tariff prices that Shotton Paper would have paid in other appointed water companies' area cannot be used as comparators for the FAP in this particular case as those prices cannot be adjusted for the relevant cost differences or for the fact that they are retail prices rather than access prices without great difficulty.	See observations on paragraph 12.45 above.		See comments in response to §12.45 above.	

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		12.52	The Authority's view is that private and self-supply prices would not be meaningful comparators for the FAP in this particular case.	For the reasons outlined above in relation to retail prices and prices of other undertakers, Dŵr Cymru considers that private and self supply systems can also be used as meaningful comparators. Indeed, private and self-supply systems could form a very helpful comparator as they would indicate prices for dedicated systems, similar to Ashgrove, that exist outside of the regulated sector. It would not be open to conclude that the FAP was unfair without proper examination of this comparator. The Authority has carried out no analysis to establish the extent to which such prices could be meaningful comparators and as such could not conclude that the FAP was unfair without further investigation.		See comments in response to §§12.49-12.52 above.	

Dŵr Cymru's other observations on the Final Report							
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		12.53	For the reasons set out above, the Authority concludes that no meaningful comparison can be drawn between the FAP and the comparators proposed by Albion and Dŵr Cymru in this particular case. Therefore there is insufficient evidence to conclude that the FAP is unfair by reference to comparators.	See observations above. While the Authority correctly concludes that there is insufficient basis to conclude that the FAP is unfair by reference to comparators, Dŵr Cymru believes that on the basis of the evidence before the Authority, it must be presumed that the FAP was in fact a fair price.		The Authority disagrees with Dŵr Cymru that it must be presumed that the FAP was a fair price on the basis of comparators. The Authority's conclusion is that "*no meaningful comparison can be drawn between the FAP and the comparators proposed by Albion and Dŵr Cymru in this particular case.*" The Authority's view is that in this case, the comparators provide no evidence either way; but as the question to be answered is whether the FAP is unfair, the Authority is correct to conclude *"there is insufficient evidence to conclude that the FAP is unfair by reference to comparators."*	
		12.72	"Using the MEA value of the Ashgrove system would appear to amount to carrying out another standalone cost calculation of the Ashgrove system, an approach which the	The Authority is wrong to conclude that the Tribunal's rejection of standalone cost as relevant to stage 1 of the *United Brands* test (which is all that was under consideration in the Main Judgment) should also		Dŵr Cymru raises the point again that a standalone cost calculation should be the upper bound on a price, above which a price can be presumed to be excessive and states that the Authority should have addressed this point. The Tribunal rejected Dŵr Cymru and the Authority's respective	

Dŵr Cymru's other observations on the Final Report							
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			Tribunal says "*in our view [has] little relevance to the determination of the issues in the present case*" (paragraph 573 of the Main Judgment). "	mean that this is irrelevant to stage 2 of *United Brands*. Indeed, it is clear from *Scandlines* that while the Commission used historical costs for its stage 1 calculations (as in that case, no better data was available), it recognised that MEA valuations are relevant at stage 2, even if they cannot be quantified. See paragraph 223: "..*a company that sets its prices on the basis of depreciated historical costs may – depending on how the production costs of the relevant assets have developed over the years – well find itself in a position that its return does not (i.e. no longer) allow it to finance future capital expenditures for the replacement of existing assets*". (As explained in the		standalone cost calculations at §573 of the Main Judgment stating "[*T]hese calculations were not what the Tribunal was looking for, and in our view have little relevance to the determination of the issues in the present case.*" The Tribunal also rejected the Authority and Dŵr Cymru's respective submissions on standalone costs at §§567 to 577 of the Main Judgment. The Tribunal did not refer a standalone cost calculation to the Authority under Rule 19(2)(j) of the Tribunal's Rules and the Tribunal's judgment clearly implied it did want the Authority to carry out another standalone cost calculation. For this reason, the Authority considers it was correct in not addressing the standalone cost point in the Final Report.	

Dŵr Cymru’s other observations on the Final Report							
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				submissions accompanying this schedule at paragraph 5, Dŵr Cymru in any event challenges the Tribunal’s initial view in the present case that MEA has little relevance to the determination of issues (in respect of stage 1 of the United Brands test)).			
		12.77	“The Authority has explained in Section 6B1 why it considers that in this case using an estimate of Dŵr Cymru's disaggregated cost of capital for serving industrial, non-potable customers is appropriate rather than the higher cost of capital proposed by Dŵr Cymru above. More details are given in Section 6B1.”	See observations on paragraphs 6.43-6.64 above, regarding the appropriate rate of return. However, even if the Authority’s estimate of the rate of return were appropriate for the purposes of stage 1 of the *United Brands* test, for the purposes of assessing fairness overall it is appropriate and necessary to consider the range of comparable and relevant rates of return set out in the second witness statement of		See comments in response to §12.72 above.	

Dŵr Cymru's other observations on the Final Report							
		§ no	**Disputed text**	**Dŵr Cymru's points of dispute**		**The Authority's response**	**Blank**
				Christopher Jones.			
		12.83	"In its letter of 16 May 2007, Dŵr Cymru stated that "[*T]he fact that the Authority has now – in 2007 – disaggregated the AAC methodology more than it has done in the past and than would be usual in regulatory practice and has used the LRIC and LAC models to examine the local costs is not a reason to reject the framework of economic regulation existing at the time the FAP was set as a factor in determining the economic value of the access services in 2001. The views of the specialist regulator at the time must plainly be relevant to the economic value attributable to the access services at that time*" (pages 7-8). The	The Authority's conclusion ignores the fact that the basis for its view in the Decision that an AAC access price in 2000/01 for the Ashgrove system should have been 19.2p/m^3 has not survived the analysis in the Final Report. The major adjustment made by the Authority in the Decision was to the assumption that the treatment of non-potable water should be 15.2% not 30% of the unit cost for potable treatment (see paragraph 304 of the Decision). However, at paragraph 7.40 of the Final Report the Authority accepts that the 15.2% figure previously used was erroneous and should be revised. It concludes that the capital cost weight should be 40.3% and the operating cost weight should		Dŵr Cymru is correct that the Authority's work in the Final Report would change its view of the "pure" AAC methodology used by Dŵr Cymru to calculate the FAP in 2000/01. The Authority has not recalculated a "pure" AAC price. The effect of some of the work in the Final Report would increase the "pure" AAC price (e.g. higher treatment costs) and the effect of other parts of the Final Report work would decrease the "pure" AAC price (e.g. lower bulk distribution costs). The AAC-plus methodology is, in the Authority's opinion, a balanced cost allocation envelope. It is not appropriate to identify individual cost elements (such as the Authority's approach to water treatment costs) and adjust other historic (and less granular) methodologies accordingly. Producing yet another result (22.3p/m^3) from another methodology (a hybrid of AAC-plus for water treatment and the original "pure" AAC	

Dŵr Cymru's other observations on the Final Report							
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			Authority accepts this point but notes that in the Decision the Authority found that the correct AAC access price in 2000/01 for the Ashgrove system should have been 19.2p/m^3. As a result using a "pure" AAC approach rather than an "AAC-plus" approach might well have no practical effect in this particular case."	be 22.9% (then adjusted to take into account the volume of non-potable water that is treated). On the basis of the Authority's best view, assuming that at the relevant time 59% of treatment costs were accounted for by operating costs, the *correct* AAC price should have been 22.3 pence per m^3 i.e. only 4% less than the FAP, which plainly cannot be excessive by comparison. Further, other undertakers, following the same guidelines existing at the time, produced indicative access prices that were in line with or were substantially higher than the FAP, again confirming that the FAP cannot be considered unfair.		for bulk distribution) is not accepted as appropriate or reliable. With regard to the indicative access prices produced by other appointed water companies, see the comments in response to §§12.32, 12.38 and 12.45 above.	
		12.88	"The Authority has considered whether	For the reasons set out above, the Authority is		See comments in response to §1.22	

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			there are relevant non-cost related factors, or "externalities", in this case, and has concluded that there are none."	wrong to conclude that there are no relevant externalities in this case. The level of sunk costs, comparator rates of return and the application of the regulatory guidance prevailing at the time of the FAP are all relevant externalities which establish that the FAP was not unfair in itself.		above.	
		12.93	"The Authority considers it is possible that a degree of excess of 25% could show that the FAP is unfair of itself, so that Dŵr Cymru was making use of the opportunities arising out of its dominant position in such a way as to reap trading benefits which it would not have reaped if there had been normal or sufficiently effective competition, within the meaning of paragraph 249 of *United Brands*.	See observations on paragraph 1.18. First, on the basis of the estimates derived by the Authority, the only relevant figure for comparison is the difference between LRIC and the FAP, because LRIC constitutes the absolute pricing floor for Dŵr Cymru compatible with competition law.		See comments in response to §§1.18 and 11.6 above.	

Dŵr Cymru's other observations on the Final Report							
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			However, an excess of 25% is the highest of the results produced by the three calculations used by the Authority. The Authority takes account of the fact that on the main AAC-plus methodology, the excess is 20%. It also notes that on the cross-check which produces the highest figure, namely LRIC, the excess is much lower at 16%."	Second, as the Authority's Final Report acknowledges, the figure for LRIC is an underestimate of true costs. Third, even if LAC and AAC-plus were relevant, both methodologies fail to capture all the relevant costs and as such the excesses of 25% and 20% must be considered to be overestimates of the actual excess of price (if any) over cost.			
		13.2	"As to the first limb of the test, the Authority has concluded that the FAP is excessive. The Authority considers that an excess of at least 16% is material, particularly having regard to the practical implications of that	See observations on paragraph 1.18 and 11.6 above.		See comments in response to §§1.18 and 11.6 above.	

Dŵr Cymru's other observations on the Final Report							
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			excess on the amount that would have been paid by Albion for the services in question."				
		13.3	"As to the FAP being unfair by reference to comparators, the Authority's view is that the large number of material differences between the FAP and available comparators make it difficult for meaningful comparisons to be made with individual prices charged for the supply of water (whether potable or non-potable) by Dŵr Cymru or others."	See observations on paragraphs 12.22-12.53 above.		See comments in response to §§12.23-12.53 above.	
		13.4	"As to the FAP being unfair in itself, there is very little guidance on what is meant by the	See observations on paragraphs 1.22 and 12.72 – 12.88 above.		See comments in response to §§1.22, 12.72, 12.77 and 12.83 above.	

Dŵr Cymru's other observations on the Final Report							
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			concept of a price being "unfair in itself". The Authority has considered whether there are any relevant factors which affect the determination of the "economic value" of the relevant services in this case. The Authority's view is that there are no relevant non-cost related factors in this case. The Authority's view is that the costs reasonably attributable to the relevant services represent the "economic value" of those services, in accordance with the implicit approach of the Commission in its decision in *Deutsche Post*[20]."				
		13.6	"The Authority considers that an excess of 25%	See observations on		See comments in response to §§1.18	

[20] *AG – Interception of cross-border mail* OJ 2001 L331/40 (comparison of domestic and international tariffs where costs difficult to ascertain).

Dŵr Cymru's other observations on the Final Report							
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			could well indicate that the FAP is unfair in itself. However, an excess of 25% is the highest of the results produced [by] the [sic] three calculations used by the Authority. The Authority takes account of the fact that on the main AAC-plus methodology, the excess is 20% and that on the cross-check which produces the highest figure, namely LRIC, the excess is lower at 16%."	paragraph 12.93 above.		and 11.6 above.	