IN THE COMPETITION APPEAL TRIBUNAL

Case No. 1046/2/4/04

Victoria House,
Bloomsbury Place,
London WC1A 2EB

1st June 2006

Before:
SIR CHRISTOPHER BELLAMY
(The President)

THE HONOURABLE ANTONY LEWIS
PROFESSOR JOHN PICKERING

Sitting as a Tribunal in England and Wales

BETWEEN:

ALBION WATER LIMITED — Appellant

Supported by

AQUAVITAE (UK) LIMITED — Intervener

-v-

WATER SERVICES REGULATION AUTHORITY — Respondent
(Formerly The Director General of Water Services)

Supported by

DWR CYMRU CYFYNGEDIG
and
UNITED UTILITIES WATER PLC — Interveners

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HEARING DAY THREE

APPEARANCES

Mr. Rhodri Thompson QC and Mr. John O'Flaherty, instructed by Albion Water Limited appeared on behalf of the Appellant.

Mr. Michael O'Reilly (instructed by McKinnells, Lincoln) appeared on behalf of Aquavitae (UK) Limited.

Mr. Rupert Anderson QC and Miss Valentina Sloane (instructed by the Head of Legal Services, Water Services Regulation Authority) appeared on behalf of the Respondent.

Mr. Christopher Vajda QC and Mr. Meredith Pickford (instructed by Wilmer Cutler Pickering Hale and Dorr LLP) appeared on behalf of Dŵr Cymru Cyfyngedic.

Mr. Fergus Randolph (instructed by the Group Legal Manager, United Utilities) appeared on behalf of United Utilities.

THE PRESIDENT: Yes, good morning. I think we asked for some figures yesterday, I do not know if anything is in progress. If it is in progress it might be useful if we had them before we hear Mr. Jones. Is there any forecast as to how long the figues would take – the end of today, perhaps, if possible?

MR. VAJDA: Certainly before Monday morning when the Tribunal would resume, tomorrow lunch time, something like that. If we limit ourselves to 1 o'clock tomorrow?

THE PRESIDENT: Yes.

MR. VAJDA: We have not forgotten.

THE PRESIDENT: Yes, now I think next on the agenda is Mr. Jones.

Mr. CHRISTOPHER JONES ,Called

Examined by Mr. VAJDA:

THE PRESIDENT: Do sit down, Mr. Jones, good morning. Thank you for all your help in preparing these extensive witness statements explaining everything to us. A. Thank you

THE PRESIDENT: Yes, Mr. Vajda.

MR. VAJDA: Do you have copies of your witness statements? A. Yes, I do.

Q You prepared three witness statements? A. I have, yes.

THE PRESIDENT: I think it is four now, is it not? A. Only three.

Q I am sorry, I am running ahead of myself. A. Yes. (Laughter)

MR. VAJDA: You are tempting fate, Sir.

THE PRESIDENT: No, do not read anything whatever into that, no indication at all.

MR. VAJDA: Mr. Jones, I want to ask you one or two questions. First of all, I just want to ask you a few questions about the topic "Financial Information". Can you tell the Tribunal what you produce in the form of management accounts, and perhaps in order to assist the Tribunal, and you Mr. Jones, if I could ask everybody to go to an exhibit to your second witness statement. If I have the reference right it is CJM.

THE PRESIDENT: We ought to have the witness formally identified at some point, Mr. Vajda.

MR. VAJDA: Well shall we do that now before I forget? Could you go to the end of your first witness statement, which is one which was sworn on 20th February 2006? A. Yes.

Q Is that your signature? A. It is.

Q You then produced a second statement which, in fact, is also the 20th February, that is an 11 page statement, and then you make a statement of truth at para.31, is that your signature there? A. Yes, it is.

Q Then you produce a third statement, which is a little longer, and I think at p.23. Is that your signature? A. Yes, it is.

Q Does everybody have CJM? A. Yes.
THE PRESIDENT: Sorry, that is to the second one?
MR. VAJDA: To the second one, yes. (To the witness) Could you explain to the Tribunal what this document is and what it is seeking to do? A. Basically, this is a print out from our management accounting system a particular costs' centre for a particular operation manager, in this case Gary Austin, who is responsible for the Ashgrove Water Treatment Works' costs centre. This is information I believe for the expenditure during the year 2000/2001, and the date on it actually is just the date that it was printed out, which is why it says 2006. What this does is it would enable Mr. Austin and, indeed, the people that he reports to, to monitor his expenditure on items within his control, for example, power, labour costs, chemicals, etc. during the course of the year against a budget, and also against historical information so that both he and his managers can assess the efficiency with which the plant is being operated. So the idea is to capture here all the costs within the control of a particular manager or part of the business.
Q Now, are there any elements of capital here in this? A. There would not be an element of capital cost … capital value or a return on capital, because those are not items that the operational cost manager ----
THE PRESIDENT: Your management accounts do not pick up that sort of information? A. Exactly. It would confuse the picture if there were those big numbers there as well.
Q We have gathered that, I think.
MR. VAJDA: Now, you also then produce I think what are called June returns, are you not, to OFWAT? A. Yes, that is correct, each water company has to produce a June return each year.
Q Each year, yes. And I think that is dealt with, just so the Tribunal knows, at para.13 of his first statement.
THE PRESIDENT: Yes.
MR. VAJDA: (To the witness) You also produce, I think, what is called a "Five Year Plan", is that right, to OFWAT? If we just go to perhaps your first witness statement, para.14, to see if I have understood this correctly? A. Yes.
Q OFWAT actually produces every five years a periodic review and you provide what is called a business plan to OFWAT? A. That's correct, each five years OFWAT carry out what is generally referred to as a period review, a price review, and for that they ask all companies to produce extensive information which runs to several volumes in the format of a business plan, the contents and format of which they prescribe.

Q Now, can you tell the Tribunal how OFWAT go about determining what your revenue is going to be for the next five year period? A. Well, basically from the information that they collect they assess what they think will be the revenue requirement for the business over each of the next five years to carry out all its regulated activities. They assess that revenue requirement as being the sum of four, what are generally termed, building blocks, and the building blocks are the necessary operating costs; the necessary capital depreciation or maintenance costs; allowance for tax; and then the return on capital. The sum of those building blocks gives you the revenue requirement for the whole regulated business.
THE PRESIDENT: Which is water and sewage together, is it, or are there separate requirements for water and for sewage? A. Generally it is formally carried out as a review of the whole regulated activities, but within that OFWAT do carry out separate analysis, on the one hand for water and for sewerage because, for example, in Welsh Water's case, some people are our customers for both services; some people are our customers only for one. So, you end up with a single price cap coming out of the review, but then a sort of indicative split between water and waste water so that we know how the charges for the two services are intended to move.
Q This comes out in a document of some kind? A. That's correct, yes.
Q Copies of which are on their way to us presumably? That is what we asked for, I think, just to see how it works.
MR. VAJDA: Yes.
THE PRESIDENT: Well, the price cap is what? The cap on the customers who are in the tariff basket? A. That's correct. Perhaps just to explain, you have a total revenue requirement for the regulated activities, and clearly some of those regulated activities that the majority are within the tariff basket; some are outside the tariff basket. So, what OFWAT needs to do is a forecast of what they think will be the revenue from non-tariff basket activities – for example, supplies to large customers of the tariff basket threshold. So, they forecast that revenue, deduct it from the total revenue requirement, and that gives you the revenue requirement from the tariff basket customers. Then, they work out the K Factor which is the allowed change in prices which will mean that the preceding year's revenue when the K Factor is applied will give you their revenue requirement for the tariff basket part of the regulated activities. So, there is a process of going from the total revenue requirement, deducting the non-tariff basket forecast, to give you the forecast revenue requirement from the tariff basket.

Q We have not got one of these documents handy, have we, Mr. Vajda? Has the Authority got one?
MR. ANDERSON: There is not one in court at the moment, but I believe one could be found in the course of today
THE PRESIDENT: I think that would be helpful because it is important that we understand all this.
MR. VAJDA: I am sorry that we have not got one today.
THE PRESIDENT: The only thing that is going through my mind, Mr. Jones, is that I think I will be easier if we look at the documents. You have explained it to us in terms of a revenue requirement, and I had always understood it – so far – in terms of the revenue that you are allowed, as it were. A. It is an expectation of how much revenue the regulator ---- Well, it is the revenue that the regulator feels we will require to enable us to finance the functions of the regulated business.
Q But it is the revenue that he is prepared to allow you, as it were. A. It is, but it is not a revenue that we are guaranteed, if I can put it that way, because you take the revenue requirement, the expectation, and turn that into a K Factor for each of the five years which will be the change in prices which, if everything goes according to forecast, would produce that revenue requirement. If things change during the five years, then you might get more or less revenue than the expected revenue requirement. So, the formal determination is the price gap.
MR. VAJDA: Sir, I have just been informed that we can get a copy of the document within about half an hour.
THE PRESIDENT: That is probably helpful. It will all unfold in the due course of time.
MR. VAJDA: (To the witness): Can I ask you this: what would happen if the revenue from outside the basket fell below that which had been forecast by OFWAT? A. Well, I think it is important to differentiate there what would happen during the price review period that you are talking about -----
Q Well, take it in two stages. First of all, just look at it ---- If we say the price for 2000-2005 ---- Let us assume there was a reduction in revenue, say, in 2001, within that five year period ---- If you could tell the Tribunal what would then happen? A. Basically, because the price cap has been fixed, in normal circumstances if the non-tariff basket revenue varied – for example, went down – then the company would lose revenue as a consequence.

THE PRESIDENT: Thus you were able to save some costs presumably? A. Yes, that's correct. You would lose the net revenue. In extreme circumstances, if that net revenue reduction was sufficiently substantial, then the water company can go back to the regulator and ask for an interim determination of the price control during the period to offset whatever factor, if it is outside the control of the management of the company.

MR. VAJDA: Are you aware if that has ever happened – that somebody has come back within five years? A. It's happened on a number of occasions with respect to different circumstances.

Q Has it happened to your business? A. It has in 2001, but not due to changes of non-tariff basket revenue. I think in 2003 Northumbrian Water, for example, did go back to OFWAT and successfully ask for a change to the price cap because there had been a substantial reduction in the volume of water they were supplying, in particular to large industrial customers.

Q Can we then move on to what would happen --- We looked, I think, at within the five year period with an interim adjustment. Let us assume that there is no interim adjustment within the five year period. We then go to the next price review. Can you tell us what happens at the next price review? A. Well, at the next price review ---- Basically, I mean, if I can assume that all else is equal, what the regulator would find would be that the net revenue from the non-tariff basket part of the business would be lower because there had been the reduction during the previous period. So, there would be less net revenue coming from the non-tariff basket part of the business. So, for any given revenue requirement that would have to be made up from within the tariff basket part of the business. So, it would be reflected ultimately, in this case, in a higher K Factor which would enable prices to be increased to the tariff basket customers.

Q Just tell us who the tariff basket customers are who would place the ---- A. Well it is all consumers of water below the threshold, 250 megalitres, so basically it is the bulk of domestic and commercial customers.

Q Now, you understand the dispute between Albion and Dŵr Cymru as to the access price. Now, assume that Albion is correct and the access price should be 4p and not 23p that would mean a reduction in the access price of 19p per m^3? A. Yes.

Q Would you make any costs' savings as a result of supplying Albion at a cost price of 4p? A. I don't think there would be any material change in our cost shifting from the current arrangement to a common carriage arrangement.

Q So would it be right that you would be losing revenue of about 19p m^3 on supplies to Albion? A. Yes, that would be more or less the outcome.
THE PRESIDENT: And how much is that in cash, Mr Vajda?
MR. VAJDA: I would like to take up the Decision, if I may, para.66. Could somebody help the witness where he can find …do you have a copy **there**? A. Is **this** what I want?
Q Yes, that is right. If you go to para.66. It looks from that that under the supply agreement with Shotton Albion must supply an average of 18 megalitres ----
THE PRESIDENT: Per day.
MR. VAJDA: Per day, yes. So if one then multiplies that by 365 one gets the annual volume, is that right? A. Yes.
Q By my arithmetic that comes to 6,570 megalitres per year. Would it be correct then to take 19p, because that is the loss of revenue, and multiply that by the figure of 6,750 and by my arithmetic that comes out at a figure of £1.25 million? A. I think that is nearly right, you would need to take the 18 megalitres a day, multiply it by 365 as you have done, and then multiply it by 1000 to convert from megalitres to cubic metres.
Q Yes, I apologise. A. Then if you multiplied that by 19p you would get – do you want me to check
Q Am I basically in the right ball park?
THE PRESIDENT: Mr. Vajda, this is a very slow way of bringing out things that can be done on backs of envelopes very quickly I would have thought.
MR. VAJDA: What would the impact be ----
THE PRESIDENT: What is the financial impact ----
MR. VAJDA: Yes, on the rest of your customers of the loss of revenue of 1.25 million?
THE PRESIDENT: Well, what is the figure, first of all, Mr. Jones? Do you know, offhand what the figure is? We do try in this Tribunal to do everything in writing first so that we do not spend hours trying to extract non-contentious information through a witness in the witness box. It adds to costs enormously. A. Yes, it would be £1.25 million which, if that were the net revenue loss and that were recovered across the tariff basket customers at the following review, we have approximately that many water supply customers £1.25 million, so it would be about £1 per customer per year.
MR. VAJDA: Am I right that your total revenue from the non-tariff basket is about £15 million a year? A. Yes, it varies from year to year but that is generally about right.
Q And if one takes an 83 per cent. reduction, that would come to a figure of £12.5 million loss of revenue? A. Yes.

Q And that would have to be borne by other customers? A. Similarly following the next price review if you have a loss of that size that would be, therefore about £10 per tariff basket customer per year.

Q Thank you. Can we now pass on to the valuation of assets and what I would like to do now is to take you to your third witness statement at para.9. I think you are aware that there is a dispute as to how one should value the treatment works – there is a dispute both about the main treatment, but I am just going to concentrate on the treatment works at the moment. Can you tell the Tribunal how you think it should be valued and why? A. Well it depends clearly for what purpose? For the purpose, for example, of assessing the stand-alone costs then I think the correct value would be a modern equivalent asset value, which is effectively the cost of replicating the asset in using the most efficient method.

MR. THOMPSON: I am sorry, Mr. President, really this is dealt with in detail in Mr. Jones's second statement. I do wonder what on earth form of examination-in-chief this is.

THE PRESIDENT: I am not sure where we are going at the moment, Mr. Vajda, but our normal procedure is to cross-examine on the witness statements in the expectation that the witness statement covered all these things. There may be some points that have arisen in the course of the last two days that you want to bring out which is perfectly fair.

MR. VAJDA: This is a point that has arisen. In my experience in Tribunals up and down this country it is of assistance on issues – here we have a disputed issue as to how this asset is to be valued. Is it to be valued on a CCV basis, or is it to be valued on an MEA basis? I am doing this as quickly as I can, but this is a critical issue ----

THE PRESIDENT: I do not think it is particularly disputed. The only dispute is whether the CCV figures are misleading if you look at it on an MEA comparison. We have not got an MEA comparison yet in order to see whether that makes any difference.

MR. VAJDA: With respect, we have got an MEA comparison and that is what slightly is alarming me if the Tribunal has not appreciated that there is an MEA figure here.

THE PRESIDENT: The point that I thought we were going to address yesterday, which I do not think we did address, but I am very happy to be put right, is if, as Dŵr Cymru did at the time which was to compare potable and non-potable using CCV in both cases?

MR. VAJDA: Yes.

THE PRESIDENT: The question is whether, if you compared potable with MEA with non-potable MEA you would get a different proportion and, if so, to what extent. That is the question.

MR. VAJDA: Yes, but there is another question here which is if one is looking at a stand-alone basis, which is something that the Tribunal asked the parties to do, and plainly the Tribunal considered this to be relevant. The Tribunal says, and this is an area that I will address when I come to submissions that the exercise Dŵr Cymru did – there is an issue which I fully appreciate I will have to deal with, whether or not, if you like, building a new pipe is the right analysis in this case – that is a question of law, but there is another issue here, which I explored with Dr. Bryan, an issue which is in dispute which is, assuming that the stand-alone basis is correct, what is the correct figure to take.
THE PRESIDENT: I do not think that issue is in dispute, we are on MEA values.
MR. VAJDA: Then if Mr. Thompson gets up and says ----
THE PRESIDENT: He says on his calculation the CCV value, which is the only document your clients have produced, is a bit lower than the MEA value, but not significantly.
MR. VAJDA: Well it is not a bit low, it is 1.4.
THE PRESIDENT: All right, well that is a point that you can explore, but we have all these points in our head, there is no need to spend hours and hours dragging them out ----
MR. VAJDA: I am not spending hours and hours, I am putting ----
THE PRESIDENT: This Tribunal runs quite differently from other Tribunals, otherwise you would never get through the work.
MR. VAJDA: Well, I said I was going to be 45 minutes, I was planning to stay within 45 minutes, and I would be very grateful if the Tribunal gives me a little latitude so I finish by 11.15.
THE PRESIDENT: Okay, well let us press on.
MR. VAJDA: Yes. (To the witness) Could you please explain to the Tribunal why MEA is appropriate and CCV is not appropriate in your view? A. Well simply the MEA because it is a cost to replicate the system in an efficient manner has to be a forward looking and by definition a hypothetical costing exercise. CCV is basically the rolled forward historic asset value, rolled forward at RPI, so the two are quite different concepts.
PROFESSOR PICKERING: Sorry, the inflation adjustment that you use is RPI rather than something that reflects the inflation in costs relating to the construction of plant, is it? A. That is correct.
Q And presumably under CCV then if expenditure is incurred more than once on the same part of the system then that would be counted more than once? A. Yes, that is correct.
Q Thank you.

MR. VAJDA: Can I now take you to annex 2 to your second witness statement, and p.3. What I want to ask you about is the unit cost that you took for the pipe – we are moving from the treatment works to the pipe.

THE PRESIDENT: Yes.

MR. VAJDA: You took as your basic figure, as I see it, £408.62? A. That is correct, yes.

Q I do not know whether you were in court when you heard that Dr. Bryan said that our costs, the Dŵr Cymru costs that were used were higher than the Offmark benchmark costs. Is that right? A. I was not in court at that stage, but yes, when we put this calculation together we were well aware of the fact that the benchmark costs in the costs' base report, which is an OFWAT document that forms part of the price review were higher than the benchmark that OFWAT subsequently used. However, for two reasons I felt these were the correct costs to use for the MEA exercise. First, because if Welsh Water had been carrying out this MEA exercise in, say, 2000 these were the values that it would have used, because these are based on what was its experience at the time of efficient cost to provide mains laying in our particular circumstances. The second reason is that the cost base report, I think is clear, is a quite different exercise to the MEA. The cost base report is an exercise in which you have certain – if I can put it this way – perfect conditions in which to carry out hypothetical capital projects, and then OFWAT uses the company's costings for those perfect conditions projects to compare and try and draw lessons about relative efficiency. In the case of an MEA analysis clearly what you are trying to get is what it would cost to actually build these assets in the real world conditions, and there would be quite significant differences between the costs in an idealised cost base report and the costs of actually carrying out this work on the ground. For example, in the case of the Ashgrove main in reality, but not captured base you would have to deal with things like getting easements through land, possibly land purchase, areas of development. There would be significant crossings involved, a major trunk road, a major river, a major railway line, things like contaminated ground conditions as you move through former industrial sites. So in the round we felt that the unit costs that we had in 2000 would be a good predictor of what it would have cost to deliver that scheme at that time.

Q Can I just ask you about the additional costs? There you have a figure of 229.56 for rural and urban 276.39, where do those figures come from? A. Those also come from the cost base report.

Q Yes and then the last two figures 500 for stream river crossing, 600 for a railway crossing, where do those come from? A. Those are number we use purely for this exercise. I think

I have said in para.5 that those estimates are considered to be very conservative in practice. A major river crossing, for example, can cost easily £0.5 million, £1 million, in addition to the standard cost base report.
THE PRESIDENT: Forgive me, Mr. Jones. The rural suburban – that is taken from the OFWAT benchmark; is that right? A. That's taken from our cost base report.
Q Your cost base report. A. Yes.
MR. VAJDA: Can I now ask you one question on the transcript of the first day? Page 58 of Day One at lines 22 to 24. Can I ask you, Mr. Jones, and the Tribunal, to read that to yourselves. That is Dr. Bryan's evidence, just to remind you, Mr. Jones. First of all, he says, "If there is any other sort of company operating out of ----" We are looking here at rates of return. "That is a matter for bankers." Would you agree with that? A. Yes. I mean, effectively, if an organisation was to try and carry out a commercial project of the nature that we are talking about here, they would have to raise the money from the capital markets, be that bankers or other sources, and they would ultimately determine what rate of return they would require to finance that project, based on the risks of that particular project.
Q Then he says, "I wouldn't be surprised if the range of figures was between 6 and 15 to 20 percent." Would you be able to tell the Tribunal as to where you think it would come in that range? A. I think it is difficult to be specific. I mean, at Welsh Water clearly we carry out our investments within the regulatory system. So, our rate of return is not really relevant to what it would cost to carry out a stand-alone exercise of this sort. Perhaps the best sort of comparator for myself would be the fact that I have regular meetings with each of the three credit-rating agencies each year – an annual review meeting. From that, I know that one of the first questions that I'm always asked in each of these meetings is, "What is our current exposure to large industrial customers? How is that changing? What markets are they in? What proportion of our revenue is coming from those higher risk customers as against the low risk generality of our customers. So, it clearly is one of the major issues for credit rating agencies in looking at our cost of capital. So, based on that, if that was the only type of business you were investing in, I would have thought, yes, a sort of range of 15 to 20 percent would be a reasonable estimate based on the sort of comparators that I have to hand.
Q Thank you. Now, I come to the last question I want to ask you. This is on your second witness statement at Annex 1. If you could read Footnote 7 to yourself, please? (Pause whilst read): The question that I want to ask you is: what did you mean by 'certain elements of distribution costs not applying to large non-potable customers'? A.

Basically, if you consider the distribution service, it can be split into two parts. There is the local distribution service, the small pipes, and the substantial network. The bulk distribution service is clearly non-potable customers, who only take advantage of the bulk distribution network. That is the basis on which our tariffs are set.
Q That, sir, completes my questions.

Cross-examined by Mr. THOMPSON

Q Good morning, Mr. Jones. A. Good morning.
Q I do not know whether you were here on the first day, but there was a question that arose in the cross-examination of Dr. Bryan about the comparison between potable and non-potable treatment costs, and some questions were asked. Were you here then? A. Yes, I was.
Q As a result of that, there was a fax sent to Dr. Bryan and an e-mail that I sent in reply. I have copies, and I think it may be helpful just to hand that up because I assume that that has been put to you as the witness coming forward for Dwr Cymru. It would be helpful to clarify that now.
THE PRESIDENT: This is on the treatment works, is it?
MR. THOMPSON: Yes. A. I don't think I have seen this.
MR. VAJDA: It has not come before Mr. Jones. It actually came without instructions …. Mr. Jones. A. The Finance Director.
THE PRESIDENT: What we have seen so far I think is a letter asking for Albion to agree some facts about the other treatment works that was used as a comparator. I do not think I have seen anything in reply.
MR. VAJDA: It is all fairly elementary stuff, sir.
THE PRESIDENT: Can we just go on and see how we get on, Mr. Vajda, and see how we get on, and then we will sort it out if we cannot make progress. If the witness does not know, he will tell us and we will find some convenient way of establishing what the facts are.
MR. THOMPSON: (Documents handed)
THE PRESIDENT: We have the letter, and this is now the reply, is it?
MR. THOMPSON: It is a fairly impromptu reply from myself, but I think it gives the context for what I want to ask. You have not seen this before, Mr. Jones? A. I am afraid not.
Q It would probably be helpful if you would just read through the two documents. (Pause whilst read): There are two points of clarification that I raised in my e-mail, the first one in relation to the new information about the potable treatment works, and the other one about the CCCV value which is related to the point that Professor Pickering asked you a moment

ago – where the Tribunal also asked for clarification. So, can we take the first point first? I think it will help you to have our skeleton argument for the last hearing, and the document referred to – SL11. Can that be provided to the witness? (Handed) If you go to the back of the bundle, we have Annex 5. Within that there are some documents numbered SA. If you go through to SA10 ---- Are you familiar with this document? A. I have seen this document, yes.

Q As we understand it, what it is is a comparison between a number of potable treatment works and Ashgrove, which one finds above the double line on SA11, and a single potable treatment works which one finds under the double line, compared to, apparently, a single non-potable treatment works which one also finds below the line. Is that your understanding as well? A. I have got to say, I'm not quite sure whether that's right or not. Certainly I think I'm with you up until the list of potable works and then Ashgrove. Below that there are then two separate works – one potable, one non-potable. I'm not sure ---- Yes, actually I think that's right. Yes, I'm ----

THE PRESIDENT: If you feel, later, that it is not right, come back and tell us. We will quite understand.

MR. THOMPSON: What I understand is --- We did not know it was Ashgrove in 2005, but that has been confirmed – that the third item on that page, SA11, is Ashgrove. That corresponds to the volumes. The letter we have just been looking at, as I understand it, tells us that the fifth item is a part of a larger treatment works which has two potable streams and one non-potable stream. That is what I understand from the letter. A. Yes, sir. That appears to be what the letter is saying, yes.

Q We have looked in your first witness statement at para. 37 and you describe, at pp.10 to 12 of your statement, the ten non-potable systems that Dwr Cymru has. A. Yes.

Q All of those, apart from, I think, Systems 6 and 10, are in fact raw water which does not undergo any treatment. System 10 we are familiar with – Ashgrove. We know about the treatment that that undergoes. The only other one is System 6 which is, I think, as you say, north of Newport. That comprises what seems to be a large system with part of its treatment process, as you say, delivered to a large steel plant, S6, on the fringes of Newport. So, is that the comparator that was used, as you understand it? A. Yes. As I understand it, S6 is the works referred to in the letter.

Q It does not sound like you are going to have the answer to this, but ---- Do you know how costs were allocated within that large treatment works between the potable and non-potable? Do you know that? A. No, I'm afraid I don't.

Q In relation to the comparator that we find, the potable treatment works, it appears to us that the volumes are far too small to be the other part of the treatment works. Do you know what comparator was used for the purposes of this exercise? A. No, I'm afraid I don't know that either.

THE PRESIDENT: When you say 'the volumes' ----- The volumes are far too small from what point of view? To include the non-potable? A. There's a bit of a jump, but our understanding is – and, again, I am grateful to Dr. Bryan for his heroic industry – that when you look at SL11 the bottom item between the double lines with a capacity of between 35 and 70 (if you see those figures), that corresponds to the non-potable bit of Air System 6, as we understand it, that we understand it the volumes of the upper bid do not correspond at all to the rest of S6, which I think is one of the largest potable treatment works in Wales? Is that right that S6 is a very large treatment works? A. S6 is a large treatment works, yes.

Q So would you think 60:130 was its capacity, or would it be substantially larger? A. I am afraid I do not think I know the answer to that.

THE PRESIDENT: I am sorry, Mr. Thompson, can you just give me those figures again?

MR. THOMPSON: If we are looking at SA11, we are now told in effect that the works with the figures 24.8 and 26.9 against it, the second one, that is a large non-potable works. We are now told that that is part of the treatment works system S6.

THE PRESIDENT: Yes.

MR. THOMPSON: I think in effect that is what it must be. We do not know how the costs are allocated for this purpose between one part of the treatment works and the other, so we do not know what those numbers represent, and Mr. Jones does not know what t hey were compared with or why.

MR. VAJDA: No doubt if the Tribunal wants to see those …

THE PRESIDENT: Well it might be worth trying to clear it up, Mr. Vajda in some convenient way.

MR. THOMPSON: If we then look at the second query in my email I think this is something squarely within your expertise, because you gave evidence about it at para.9 of your third witness statement, and in fact you berated Dr. Bryan for his approach, so if we turn that up, you say that "The CCV in broad terms represent the accumulated capital expenditure on the asset in question adjusted for inflation." That is right, is it? A. That's correct.

Q We were told yesterday in cross-examination of Dr. Bryan that the source for the figure of, I think it is 1.449 as appears in the table we have just been looking at in fact, the CCV for Ashgrove, was derived from some figures which are in this bundle in the appendix, which you will find at tab CAJ 1 and the first document there is a letter dated 1st March 2006, do you see that? A. Yes.

Q If you turn through to the end of that letter, you will find another letter dated 20th April 2000, and then behind that you will find some tables which you have to turn on their side? A. Yes.

Q We were told yesterday, I think, or maybe on Tuesday that the relevant figures are p.3 of the fax, which is not very easy to read, but presumably you know what they mean. They set out some numbers for Ashgrove WTW, and you will see some dates set against them. Do you see that? A. Yes.

Q "1st October 1989, 328,000-odd, 1st October 1990, 242,000-odd. Then I think it is 1957, the 1st April 1957, 160,000-odd, and then some other figures for 1990, 1999, 2000 and 1999. Then there is a total figure of 825, and then there appears to be some form of depreciation of 513, and then another figure it is difficult to read what it is, but it seems to be 312, which is the balance. What I am not clear is how you derive your figure of 1.449 from any of these numbers or what sort of calculation has been carried out. Have you calculated, for example, by reference to 1957 and, if so, is it by reference to 160 or £111,000, or some other number. Do you know how your figure is actually worked out? A. Perhaps I can explain. The tables that you are referring to here in the three of them, the asset register items, those are tables that were produced effectively on 1st March 2006 in response to the question from Albion Water to see what examples of the asset register items relevant to the Ashgrove Water Treatment Works, so that is set of information that was printed from the system in 2006.

The exercise you are referring to, the one we have just looked at – I think it is called SA11 in the other information – that is an exercise from several years before that. I think it was 2002, something like that. So that exercise was not carried out on the basis of these print-outs.

Q I find that difficult to understand because all the dates here run between 1957 and 2nd January 2000, so it does not look like much has been done from a capital point of view since then, so it would be simply a matter of the arithmetic would be different if you were running it, say, to the 1st January 2003, rather than 1st April 2006. A. Yes, but the point I am making is just to be clear that it is not actually these tables **here** that were used for the calculation of the 1.449. It would have been tables printed out at the time, and an exercise was carried out, as I understand it by an engineering consultant at that time to calculate the CCV values from the works following this sort of method. I think I refer in the evidence, in broad terms, to what that consultant would have done is to take relevant items from the asset register for the works and then inflate them, I presume at RPI, to give you the current cost value.

Q We need to be a little bit careful here, Mr. Jones, because this was put to our witness as the basis for the CCV and so if that is all wrong then you, as the Finance Director, need to be a little bit careful about what the right answer is.

MR. VAJDA: If Mr. Thompson wants to put something he should put accurately and take the witness to what I said in the transcript, because I was cross-examining – 825 came in Dr. Bryan's evidence and I was putting questions to him, and then Professor Pickering put questions to me and I said "Quite honestly, I am not the witness", so if Mr. Thompson wants to put something to this witness please take him to the transcript.

MR. THOMPSON: Well all I am seeking for is a clarification of what this document means and whether it is, in fact, the basis for the CCV, and if it is not what exactly your evidence your evidence in para.9 of your third witness statement refers to. Can we go in stages. Are you saying that the seven items identified here between 1957 and 2000 would be different from the seven items that would have been present there in 2003, or are those the right items? A. What I can say is that the process, as I understand it, the engineering consultant followed was one of going to the asset register, selecting the correct asset register items, which might have been those seven – it probably would have been more because there may well have been other items relevant to Ashgrove Water Treatment Works that are captured under generic asset register items, for example, for North East Wales, he would have taken what he considered to be the correct asset register items for expenditure on the Ashgrove Water Treatment Works, and then inflated them o give you the CCV value. The point that I was making in para.9 in my witness statement is simply this, that that sort of approach – I do not know the detail of how exactly it was done, but I do know the approach was one of taking historic cost asset register items and inflating them at RPI to give you a current cost value, that sort of approach is, if I can put it this way, a backward looking approach of bringing things forward to today's prices. That is a very different approach from a modern equivalent asset value exercise in which you are looking forward to see what would be the efficient cost today of replicating an asset.

Q I understand that point, and we have heard quite a lot about it. I am just trying to get to what your evidence is about the CCV. If we go on to para.11 of your statement, you say "Notably, and unusually, however, that expenditure did not include the original creation of the asset, because the asset had been built by the North West Water Authority." Now, presumably you investigated the matter to ensure that that was actually correct? A. Yes, that is correct, yes.

Q So when we go back to this table, what are these figures for 1957, 1990, 1989, we seem to be at the time of privatisation. Are they capital expenditure on the treatment works, or are they the cost of acquisition of the asset? A. They are expenditure on the asset with various dates. The one item that is slightly different is the third one on the table, the Ashgrove Water Treatment Works debt, which would have been the asset created on our asset register in, I believe, 1986 when North West Water Authority transferred the Ashgrove System to Welsh Water Authority and, as a part of that agreement, a sum of debt, which I think was around £160,000, was transferred to the Welsh Water Authority, so an asset would have been created on the system at that stage.

Q That was not capital expenditure on the system, that was just acquiring it? You took over the debt? A. Welsh Water Authority took over the debt as a part of the agreement with North West Water Authority.

Q That was not an investment in the asset? A. No.

Q What about these figures of 328 and 242, from what we saw the asset looks like it is in exactly the same condition as it was in 1950 with a bit of wear and tear. Are you suggesting that there were major investment sin 1989 or 1990? A. That is my understanding, yes. Obviously I was not with Welsh Water at that stage, but I think from memory in a different witness statement, that from Lynette Cross, a colleague of mine, there is an explanation there of capital works that have been carried out at Ashgrove since we took it on in 1986. I am afraid I do not remember the details, but things like new fencing, new mechanical electrical equipment, etc., expenditure that was carried out at that stage to bring the works up to what we considered to be an appropriate design performance.

Q So your evidence is that you spent £240,000 building a fence, and 328 on the electric works, that it was capital investment, it was not some of transfer?

THE PRESIDENT: There is quite a lot in Lynette Cross's witness statement about Ashgrove, so we could cross-check some of this.

MR. THOMPSON: Indeed. A. I mean I know no more, I am afraid, than what is in Lynette Cross's statement.

THE PRESIDENT: What is in there may not be in your direct knowledge. You were not with the company at the time? A. No, I was not.

MR. THOMPSON: I think I will pass on. I think that is probably as far as we can take it in terms of clarification.

THE PRESIDENT: Do you mind if I just ask one supplementary on it?
MR. THOMPSON: Not at all, Sir.
THE PRESIDENT: Mr. Jones, the Ashgrove new debt looks like the debt that was transferred, as you rightly say in, I think, 1986 when you acquired the asset. The question in my mind is whether that figure of £160,000 would have been included in the exercise that your engineer did in arriving at the CCV and, if so, whether he would have started form 1987 or whether he would have started from 1986? A. It is a fair question. I am afraid I have not seen the exercise so I do not know the answer.
THE PRESIDENT: I see, thank you. Yes?
MR. THOMPSON: Can we look at the position in relation to the treatment works and, in particular, a passage in your first statement about the purpose of the works. It is paras. 80 and following. You will recall this is about the question of what the purpose is and whether it is in fact, essentially to stop the 15 kms, or 16 kms of pipe flowing down a fairly shallow gradient to Shotton silting up? Do you remember that issue? A. Yes.
Q Because that is essentially Dr. Bryan's understanding of the position, and you have put it to two of your engineers, Mr. Davies and Dr. Masters, who found the suggestion "novel and absurd", that is your evidence, is it not? A. That is correct.
Q I would just like to explore that with you. It is correct, is it not, that there is no water quality assured to Shotton Paper or to Albion in relation to this water – is that not correct? A. That is correct. The agreement we have ---- I believe with both customers, in separate agreements obviously, both state that the water we will provide will be (from memory) Dee water which has been subject to a process of chemical coagulation. So, it describes the process that we will go through to deliver water to them rather than specific quality parameters. That is the requirement on us.
Q There is no quality control ----
THE PRESIDENT: You have no quality obligation as such. A. No, but we have an obligation to provide water that has been subject to treatment.
THE PRESIDENT: -- to treat it chemically. A. Yes.
MR. THOMPSON: It would be a problem both for you and for Albion if the pipeline did silt up, would it not? A. Well, it would require regular maintenance to ensure that it did not silt up.
Q Dwr Cymru would not carry out this work for nothing, would it?
THE PRESIDENT: When you say 'the work', you mean ----?
MR. THOMPSON: The treatment work. A. Sorry. Which treatment work?

Q The treatment work conducted at Ashgrove. A. Well, that is part of the costs of the water treatment service that we then recover from our customers through our tariffs.
Q What do you understand the purpose of Ashgrove to be? You have said that you think Dr. Bryan's suggestion is absurd. You have agreed that there is no quality assurance. So, what is the purpose of the Ashgrove treatment works? A. Well, as I understand it, we have an agreement, a contract with our customers to provide water that has been subject to chemical coagulation. Therefore we have a treatment works that provides chemical coagulation.
Q But there is no functional purpose that you can point to other than preventing siltation; is that right? A. No. The purpose from our point of view is to enable us to meet out contractual obligation to our customers.
Q But from a functional point of view, you cannot point to anything else. A. That is our function – to provide a service to our customers.
Q Indeed. You criticise Dr. Bryan for inconsistency in relation to a letter which you exhibit at the end of your witness statement. It is a letter dated 30 April, 2001. A. Can you just remind me which tab I am looking at?
Q It is at the very end of the witness statement. It is in fact CJ17. It came to me separately as a document, appended to a letter. But, I put it at the back of the bundle.
THE PRESIDENT: I am not sure that we have got CJ17, unless it is in the second volume. (After a pause): Yes, we have CJ17. It is right at the back of the big volume, Mr. Jones. 2001. "Dear Dave ----"
MR. THOMPSON: It is addressed to the Commercial Manager at Dwr Cymru. It may be worth reading through it. (Pause whilst read): The point you make in your witness statement, if we turn back to paras. 87 and 88, is a somewhat ironic reference to Dr. Bryan's technical expertise (which you may, or may not, be in a good position to judge), but you then say, "It doesn't seem likely that Albion would have overlooked any threat of siltation in the Ashgrove main which could have resulted from locating a treatment works at the Shotton Paper end of the pipeline, if such a threat indeed existed". Now, do you think that is a fair criticism, having re-read the letter? A. My understanding of the letter is that Albion Water at that stage were proposing effectively not to continue with the Ashgrove water treatment works, which is obviously at the start of the Ashgrove main, and instead, I presume, taking that out of commission, and instead building a treatment works at the customer end of the main. So, therefore, the water would have had to have flown through the main without any treatment before it went through the main. Therefore, if there were a

danger that the pipeline would silt up, then that suggestion would have left the main open to the risk of siltation.

Q So, you maintain the criticism. But, when you look at the letter, Dr. Bryan is making two points, is he not: (1) that the Ashgrove main is in very poor condition ---- He is making that point and that complaint. A. Well, he has made that point. It is not one that I think our engineering ---- my engineering colleagues would agree with.

Q He makes a second point: that "-- to maximise the efficiency and security of the system, Albion Water would wish to purchase the existing Heronbridge/Ashgrove/Sealand pipeline from Dwr Cymru with a view to carrying out a complete structural renovation, plus the introduction of booster pumps if necessary". So, the suggestion is to completely refurbish the line and include booster pumps, if necessary. That is the proposal, is it not?

THE PRESIDENT: Are you suggesting that means pumping it through rather than using gravity?

MR. THOMPSON: All I am saying – and I put it to Mr. Jones so that he understands the point – is that there is no inconsistency in saying, "You need to worry about siltation, given the current state of the pipeline. If you refurbished it and had booster pumps, that would be a better system". There is no inconsistency in that, is there? A. I'm afraid I don't think I can answer the second part of that. I mean, refurbishing the pipeline itself would leave you, as I understand it, just as exposed to siltation over the long term. Presumably you would expect that asset to then be used for a long period in which siltation might occur. As to whether booster pumping would be an alternative way of preventing siltation - I don't think I'm qualified to respond to that.

Q No, indeed. But, that is the point Dr. Bryan is making, is it not? A. If that is the point that Dr. Bryan was making in the letter, then that is the point he was making in the letter.

Q Indeed. We can both read the letter. But, you cannot judge whether it is correct or not. A. On that technical point, no.

Q Can we now look at the characteristics of potable and non-potable water? You will recall that that is an issue, and that there is an issue about location. Would you agree with me that it is common ground that there is a difference in price between urban and non-urban pipelines? The MEA values of urban and non-urban pipelines reflecting differences in construction cost. You have made that point yourself. A. Yes.

Q I think in your witness statement you say that it could be as much as almost 100 percent, and there might be another 10 percent in some circumstances. That is your first witness statement at para. 52. (After a pause): A. Yes.

Q So, there could be over double on this evidence – almost twice as high, plus a further 5 to 15 ---- A. I think there are two separate points actually. I think it is that the urban ----
Q If we start in stages ---- A. The point that is being made here is that rural suburban highway as against grassland, and then urban highway versus suburban highway. So, if you take the urban highway as against grassland, then you would get a figure of ----
Q Something over 100 percent. A. Yes.
Q Yes. So, you accept so far, so good. Presumably – as I think you have illustrated yourself in relation to Ashgrove, and one might also take, for example, the centre of Cardiff – those figures might go even higher if there were particular difficulties relating to particular parts of the network. Would you accept that? A. Yes. I mean, local specific circumstances – as I was explaining before, can have a significant impact on the cost of laying pipes in practice.
Q Yes. If we now go to your third witness statement at para. 21, we have looked at these maps (possibly in your absence) ---- These are the maps appended to your statement. A. The big maps.
Q I do not think we need to get them out. The conclusions you reach – and you explain how – are that 78.8 percent is in rural for non-potable mains, and 60.5 percent for potable. As I understand it, if we turn that round, you are saying that just under 40 percent of potable mains are in urban areas, and just over 20 percent of non-potable. Is that your evidence? A. Yes.
Q So, there is twice as much potable in urban areas, on your evidence, as non-potable; is that right? A. If you do the calculation that way round, then, yes.
Q Well, that is the relevant one in terms of looking at the possible difference. You have said that the urban is twice as expensive, or more, as the rural; is that right? A. That's correct, but I think the point is also made here that obviously the potable distribution network, as you can see from the maps that you referred to a second ago ---- Perhaps I can just explain how we have done this exercise, just to make sure that is understood ----
Q That was my next question. Certainly.
MR. VAJDA: It might help to look at the map.
THE PRESIDENT: It would help. Let us have a look at the maps. A. The exercise we have carried out on the maps ---- We have not actually carried it out on the maps – it was carried out on our digital information system, on computer. One of our technicians basically went through the process of ---- for each of the large potable mains and the non-potable mains, clicking on points where, for example, the main leaves an urban area,

clicking again at a point when it enters an urban area ---- So, the difference between the two being what the Ordnance Survey classify as rural. Then, the computer can automatically calculate what is the difference between those two points. So, we have gone through the network to come up with those figures of the urban rural sort of nature of the two systems. I think the point I wanted to bring out was that clearly, as is well-understood, the potable bulk distribution network serves two purposes. It serves the large potable customers, and it also provides the water into the local distribution network for the general population, etc. The reason it is in one network is clearly because of economies of scale – it means that it is cheaper to have the large potable customer network incorporated within the overall large potable network at a cheaper solution than having two separate systems. So, that is why it is one conjunctive system. As a consequence of that, you will have a large number of large potable distribution mains – Swansea would be a good case in point. You can see, for example, in Swansea that there are a large number of blue lines going through Swansea which are providing water to the city of Swansea – the domestic customer base – but there are actually no large potable customers in Swansea.

There is no scientific, explicit way of doing this, but clearly that figure of 60 percent of the potable network being in rural areas ---- If you looked at the parts that are relevant to the large potable customers, then there would be no need to include, for example, the network in Swansea, the network in Cardiff, where again there are no large potable customers, and that would lead you to a figure which would clearly be significantly higher than 60 per cent. It would probably bring the two percentages roughly into balance.

MR. THOMPSON: Just to be clear, your evidence is that, for example, looking at Swansea, all the little lines in Swansea have been individually mapped, and counted as urban? A. Yes.

Q You have not simply done the routes between the treatment works and the major potable works and looked at those? A. No, my understanding it is the whole of the network shown on the map.

Q I must confess we find it a slightly surprising outcome, given the maps as they appear, and if one compares A7 S7, for example, to the position in relation to Swansea, but if that is the position then so be it.

PROFESSOR PICKERING: May I just interject? I wonder, Mr. Jones, whether you can tell us either now, or perhaps later on, what the definition is of “urban” in relation to the production of this information? A. That is a question I am afraid beyond my technical scope. What I know is that this classification, the grey and the yellow, if I can put it like that, is the Ordinance Survey's published way of differentiating urban from rural. I am afraid I do not know any more than that.

Q I do not know if you were here when Dr. Bryan was commenting yesterday, but he was implying that even a very small hamlet appeared to be classified as urban. It obviously is very important, is it not, that when an exercise is carried out that we do understand what the terms mean that are critical to the analysis? A. Absolutely, I mean these are the terms used by Ordinance Survey and again just to be clear the exercise was not carried out on paper like this, it was carried out on the computer system ----

Q I understand that. A. So it is possible, I must confess I am speculating here, but you might find a dot on the map **here**, the print-out might look larger, simply so that you can see it on the computer system. It is digitally mapped, so the right parameter and the right location would be exactly captured on the computer system.

Q But the implication is that more things are being counted as "urban" than any of us, looking at a particular settlement would class as urban. A. I have no reason to doubt the Ordinance Survey.

THE PRESIDENT: We might need to know what the definition is.

MR. VAJDA: I think to assist Professor Pickering, what Mr. Jones, said, and we looked at this before and were told that it comes from the Ordinance Survey ---

THE PRESIDENT: Yes.

MR. VAJDA: -- and what we will obviously get the Ordinance Survey ----

THE PRESIDENT: That will be kind and then we will at least know what we are talking about.

MR. THOMPSON: Before we leave this point, you will recall that your main point of difference that you recognise was between rural and semi-urban. Did you attempt to conduct any equivalent analysis as to whether or not the 100 per cent. for semi-urban might give a different outcome or not? A. I am sorry, I am not sure I recognise the term "semi-urban".

Q If you recall you said it could be almost 100 per cent. difference for semi-urban, and then another 5 to 15 per cent. for sub-urban. A. Could you remind me which reference?

Q If we go back to your first statement, you distinguish para.52 between rural/suburban, and rural grassland, and say that the difference in cost is almost twice as much, then I was simply asking whether you have done any comparable exercise to that level of detail for what is potentially quite an important distinction given when you say it is almost double the costs? A. No, the exercise that we have carried out is the one that we have described using the urban/rural split. I think strictly what I am saying in para.52 there is rural

suburban highway, and then urban highway, so that I think is a point of detail not to overlook there.
Q So I think the answer is "no", I am grateful. A. We carried out the exercise that we have explained to you.
THE PRESIDENT: Are you moving to another topic, Mr. Thompson?
MR. THOMPSON: I am.
THE PRESIDENT: Shall we just rise for five minutes. Mr. Jones, you heard the rules yesterday. Please do not talk to anyone about the case.
(Short break)
THE PRESIDENT: Yes, Mr. Thompson?
MR. THOMPSON: Mr. Jones, can we move now to the vexed question of complexity and integrity where you have given some evidence in your third witness statement, para.46. The relatively high level in potable distribution has been to meet special standards in relation to drinking water quality. That is the gist of your evidence, is it not? A. That is correct.
Q And presumably, having made that investment you have to maintain assets at that level or else the investment would be pointless. A. Yes, that is correct.
Q Those investments are not applicable to raw or non-potable distribution; that is correct, is it not? A. The bulk of that investment is in the local distribution ----
Q The question was: it is not applicable to raw and non-potable. A. That's correct.
Q Your point is that the main bulk of that expenditure has been at the local distribution – not at the bulk. Indeed, I think you say that there is no evidence that you are aware of of investment I the bulk. That is your point, is it not? A. That's correct.
Q In terms of complexity, would you accept that the urban network is much more complex to construct and maintain than a single pipeline? Would you accept that? Think it is implicit in our discussion this morning about the centre of Cardiff, but would you accept that? A. Well, as we have discussed, the construction costs - the laying of the mains – depends on the situation and the location where you are laying them. So, for example, an urban location would be more expensive than a rural one.
Q Yes. I think you make a comparison to a motorway and signage, and you say that the signs are relatively cheap. But, I am making a different point. I mean, if you compared a motorway that was passing through a town with a large number of bridges, junctions, tunnels ---- things that were being overcome ---- That would be much more complicated and expensive than an old stretch of dual carriageway passing through farmland, would it

not? It would be much more expensive. A. Well, it would depend on the circumstances of the particular mains.

Q It was just an analogy. If you had a motorway with lots of junctions, bridges and tunnels, that would be more expensive than a flat level of motorway going along farmland, would it not? A. I'm not an expert on motorways. I mean, certainly in terms of pipe networks, if you have a single bulk distribution pipe going to a large potable customer across rural terrain, that would be cheaper to lay than the costs of laying, for example, part of the bulk potable distribution network in, say, the middle of Cardiff.

Q Yes, with lots of junctions on either side. Supposing it was the same length – then we would have to go over bridges, under bridges, through tunnels and with lots of junctions on either side. That would be more expensive than just a single pipe going through a field, would it not? A. If you compare the two pipes, yes, I think that is right. But, actually looking at the overall cost, it is cheaper ---- There are economies of scale in providing the bulk distribution service to the large potable customers through the conjunctive use system that is a cheaper option than providing a dedicated additional pipe -----

Q The point is that it is cheaper to do just one of those things than to do both of them. A. It's cheaper to do the two together than to do the two separately.

Q Exactly. So, although one is much more expensive than the other, if you did both of them that would be even more expensive. A. Yes.

Q Can we now look at Condition E and discrimination? I do not know whether this issue has come to your attention, but there is an issue about what I think is 'WSHNONPOT8' I think it is. I do not know what the jargon ---- A. Welsh non-potable, I think, is how we interpret it.

Q Anyway, it is no. 8, whatever the correct way of referring to it is. That appears in some correspondence which was appended to our second skeleton argument. Are you familiar with that correspondence, Mr. Jones? A. No, I don't think I am.

Q Can that be provided? (Handed) You should have access to a fax dated 29 May, 2006 from Dr. Bryan to Mr. Aitken (of the Tribunal). A. A fax dated 16 May? Is that the one you are referring to?

Q It should be 29 April. It was appended to our reply skeleton. (After a pause): I am sorry. For some reason it has printed out maybe the date I printed it out. I am sorry. It is 16 May. You are quite correct. A. So, it is the fax of 16 May ----

Q -- addressed to Mr. Aitken. If you turn through, you will see on p.2, under the hearing 'Dwr Cymru's latest entries on the special agreements register' ---- Have you seen any of this before? A. No, I am afraid I haven't.

Q It refers to a particular system – System 8 ---- or, in fact, Customer 8. Are you familiar with who that is?

MR. VAJDA: I am not aware this point has been pleaded.

THE PRESIDENT: Let us go on for the moment, Mr. Vajda, and if this turns out not to be relevant, we will see. The fact that another customer, apparently in the same class is on a significantly lower price cannot be said, at this stage, to be irrelevant to the case that is being advanced.

MR. VAJDA: No, but I have made my point about pleadings. We just cannot have a situation where we just range round without any pleadings.

MR. THOMPSON: There is reference to your witness statement. It is probably if you read it through if you have not see it before – under the heading 'Dwr Cymru's latest entries on the special agreements register'.

THE PRESIDENT: You could tell him what the point is, Mr. Thompson. The point is that this customer apparently has quite a low price.

MR. THOMPSON: Yes. The point appears under the quotation with WSH Non-Pot 8 there. There is reference to an agreement in 1982 to run for twenty-five years and terminate in 2007. Termination date has now been extended to 2017. Below that it appears from your first witness statement that there are two customers using the relevant volumes by reference to System 3. It appears from the latest register entries that those must be no. 4 and no. 8, and that you received revenue of £266,000-odd from one customer, and only £38,000 from the other (no. 8), and no other customers fit the published volumes. Then there is reference to your description of System 3, which presumably you stand by. The point is a simple point: that Customer 8 appears to be being charged at a rate equivalent to less than 5p per metre cubed, whereas Customer 4 appears to be being charged at a price just over 30pence per metre cubed, whereas the description that you give appears to be virtually identical for the two supplies. We raised this matter with the Tribunal because it seemed to be relevant to the issues identified in the interim Judgment. The answer we got on 25 May, 2006 is at the back of the file ----- A. Is this the letter of 15 May?

Q I had it as a fax, but in fact it is a letter to Mr. Dhanowa. Dwr Cymru knows the contents of Albion Water's letter of 16 May, and in particular the suggestion that the agreement has recently been extended for ten years. In fact the inference that Albion Water has drawn is incorrect. The duration of the agreement was extended by ten years in 1998. So, that is the explanation we have had so far. But, to our way of thinking, that is not a very full explanation of why the price appears to be six times for one customer than for the other in relation to precisely the same service. That was the question where I would be grateful for your assistance. A. I am afraid I do not think I can assist you very far with that. I don't know what the prices under the two agreements are. By their nature, some of these agreements are historical, and they have specific terms. I think it would be wrong for me to speculate on either what are the prices, or might be the reasons for the differences. I am afraid I just do not know.

THE PRESIDENT: Is it not difficult for us to go too much into the prices of other non-potable customers in the context of this particular case? We can note that there is a non-potable customer who has a very low price, but we do not know why at the moment.

MR. THOMPSON: No. I am surprised that the Finance Director of Dwr Cymru does not know why, but if that is the position, then, I agree. We cannot take it any further with this witness.

THE PRESIDENT: That seems to be the position.

MR. THOMPSON: We can obviously make submissions about how Condition E would operate in such a situation. (To the witness): You will recall that in relation to the Ashgrove system there are two customers – Shotton Paper and Corus. Is it fair to say that Corus is less than satisfied that its non-potable rate is compatible with Condition E? Would that be fair?

MR. VAJDA: I am sorry. I do not ----

THE PRESIDENT: Just a minute, Mr. Vajda. Again, Mr. Thompson, I am not sure we can really go into what Corus' view of all this is.

MR. THOMPSON: There was evidence a year ago that there was litigation between ---

THE PRESIDENT: We know there was litigation. We have no details of the litigation.

MR. THOMPSON: (To the witness): Let us move to something which certainly is within your knowledge. Am I right from the answers you gave to Mr. Vajda this morning that the essential basis for charging your customers is a combination of estimates going forwards, based to a large degree on regulatory capital value and regulated rates of return; is that correct? A. Those are two key constituents in how OFWAT goes about calculating the price cap.

Q I think it must follow from that that it would be a breach of Condition E to charge one customer on a completely different basis; is that not right? A. I don't think you can draw that inference. I mean, Condition E, as I understand it, talks about there not being undue discrimination between classes of customers. It is an issue for the regulator as to whether a particular constitutes undue discrimination.

Q But, if the general prices were based on regulatory capital value, and regulated rates of return, if you operated on a completely different capital basis and a completely different rate of return to one customer, that would be blatant discrimination, would it not? A. I think it depends on the circumstances. I don't think you can draw a general inference.

Q For example, if instead of taking regulatory capital values you looked at the cost of a greenfield construction of a brand new plant, that would be completely inconsistent with the general basis on which pricing is based, would it not? A. Well, the general basis on which OFWAT sets the price cap and therefore indirectly the level of tariffs is based, as I said earlier, on regulatory capital value and the regulatory return on that. That ensures that because, for our tariffs, as you know, we take a regional average cost approach, so we take that revenue requirement and basically seek to divide that fairly between different classes of customer so that each customer class is making a reasonable fair contribution to that same regulatory assessed cost of capital.

Q Exactly. I do not want to cut you off, but I think from that answer it follows that it would be completely unfair to pick one customer and charge them on the basis of a greenfield MEA. A. Well, that would be a different approach. Certainly, whether the result was unfair would be a matter of circumstance.

MR. VAJDA: I hesitate to interrupt, but as I understand it, the point is that it is unfair to be taking one approach than the other. Well, if it is effectively the stand-alone approach, the question needs to be properly formulated so that the witness can answer.

MR. THOMPSON: I will formulate the question in due course, Mr. Vajda. Do not worry.

MR. VAJDA: It needs to be formulated in a way that is fair to the witness.

MR. THOMPSON: If we took a rate of return which was two or three times the rate of return permitted and applied it to one customer, that would be unfair, would it not? A. It certainly would be a very different approach.

Q Can we turn to para. 28 of your second witness statement? You come up there with a figure of 32.4p for the stand-alone costs of the Ashgrove system; is that right? A. That's correct.

Q And 25.6 percent of that is based on a greenfield MEA and a commercial rate of return, is it not? A. That's correct.

Q So, it forms no basis for assisting the Tribunal in what is a fair price for this service, does it? A. Well, it serves the purpose for which we set it out in the witness statement – which is clearly assessing the stand-alone cost of the system. That is what this calculation is supposed to do. That is something quite different from the method by which we actually set the price to our customers – for example, Albion Water – or any other customer that comes from our regional average cost approach, which, as you have said, ensures that everybody is contributing to the same regulatory assessed required return on capital.

Q Yes. Can I ask you another question about the comparison of the potable and non-potable distribution? I think it is going to be most helpful to get your first witness statement out again, where you describe the systems. It is paras. 37 and 38, and then you have got some very helpful maps which are CJ6 and CJ8, I think. Paragraph 37 describes the individual systems, one after another, for non-potable distribution. Then, para. 38 describes in more general terms the conjunctive use systems for potable. That is correct, is it not? A. Yes.

Q Then, para. 40 – you describe the potable system in slightly more detail, and you point out that W1 to 5 are all in the Newport and Cardiff conjunctive use system. That is right, is it not? A. Yes.

Q W7 to 9 are all in the Swansea and Bridgend conjunctive use system. Then W6 and W11 ---- W10 has got lost somewhere. W6 seems to be a pipeline going into the middle of Hereford; is that right? A. W6, yes.

Q Presumably that is Hereford General Hospital, or something of that kind. W11 is rather out on a limb. It is a pipeline across Anglesea, which, as far as I can see, seems to be going to a nuclear power station; is that right? A. I think it would be wrong of me to confirm that.

Q I only looked at it on the map, and that is what I said.

THE PRESIDENT: It does not matter in particular what the identity of the customer is. There is a large customer in Anglesea who has a pipeline.

MR. THOMPSON: I am grateful. If we look, for example, at W1, which if one looks at CJ8 ---- One finds a map where W1 to W5 are set out. You have also got the sources, A1 to 4, and the treatment works, B1 to 4, I think, also set out; is that right? A. Yes.

Q In particular, B2, for example, and B3 are quite close to Newport. A. Yes.

Q What I would like to explore with you is, if, for example, W1 said, “What am I paying for in relation to distribution?” you could give them an answer, could you not? You would say., “Raw water distribution from, say, A3 to B3 ----“ In the sense it is conjunctive, it is A1 to 4 to B1 to 4. That is what they are paying for for raw water distribution, are they not? A. They are paying for the raw water transfer service, yes.

Q “And I am paying another 16p, what is that for”? Would your answer be “Well, Cardiff and Newport, it is a complex system, and it is fair you should pay your share”, you get a discount for bulk distribution but we think 16p is a fair price for all that”. Would that be the sort of answer you could give? A. Well our tariff for any of the large customers comes from our standard large industrial tariff, that comes from our regional average cost approach, so we take the overall cost of the service, in this case bulk distribution, and all customers are charged the same tariff on that basis.

Q Exactly, there is 2p for raw water distribution and 16p for potable, and one can see it is a pretty complicated system, and there may be a bit of a cross-subsidy, but you take the rough with the smooth, you can see an answer, can you not? A. I do not incidentally recognise the 2p number, but basically all customers are being charged for the same service, in this case, the bulk distribution of potable water.

MR. VAJDA: I hesitate to interrupt again, but the 2p came from Mr. Thompson putting a question again, in fairness as if to say that is our figure. It is not a figure that is accepted by my clients.

THE PRESIDENT: It had not been put in issue. What was put in issue was the calculation that you derived from it, but the 2p itself was not put in issue, as far as I know.

MR. THOMPSON: Yes. I obviously had anticipated you were somewhat closer to the case than perhaps you are, but both the Authority and Dŵr Cymru have noted the 2p estimate – it is 2.2p I think – made by Dr. Bryan, and have not sought to challenge it as a regional average figure – and it was put to Dr. Bryan without dispute yesterday, so I have been assuming that that that is common ground, that the regional average price for all water is in that area. A. What we have is a regional average price for the water resources and treatment service, and that is a different thing.

Q Let us look at the position of the non-potable customer, which you find at CJ6. The first ones that come up are the Cardiff ones, and I think probably the point can be made by reference to them as well as any. You will recall that, for example, A2 to S2, which is the easiest to see, is a pipeline – do you have that, Mr. Jones? A. Yes.

Q Is a pipeline carrying raw water from the edge of Cardiff to a steel works, I think it is – anyway to an industrial customer – down by the coast? A. Yes.

Q If S2 said “What am I paying for?”, on the face of it the only answer you could give would be “raw water distribution”, is it not? A. No, they are paying – if they are taking raw water then they are paying for water resources’ function, and then ----

Q As far as distribution is concerned? A. As far as distribution they are paying the non-potable bulk distribution service.
Q I know what they are paying, but what are they getting? A. They are getting the distribution of service, the distribution of water from the source, A2, to the point of the customer which is S2.
Q That is right, and that is raw water distribution in fact, is not? A. No, it is non-potable bulk distribution.
Q Let us just be clear. If you go back to your witness statement and what they are getting, you describe it at para.37. You say on p.11: "System 2 draws water from a borehole located in a suburb of Cardiff and transports it some 19 kms through urban, semi-urban and rural landscape, crossing a major dual carriageway to customer S2, a power station located close to the coast to the west of Barry. The supply system is comprised predominantly of 250 ml pipes." So there is no treatment involved, is there? A. That is correct.
Q So it is, in fact, a 250 mm. raw water distribution pipe? A. It is a 250 mm non-potable distribution pipe.
Q You can call it that but what it is actually doing is carrying raw water is it not? A. Well, it is a matter of terminology.
Q No, no, it is not a matter of terminology. The water in it is raw, is it not? A. It is also non-potable.
Q Yes, I think you know what I am saying, Mr. Jones – we can play about – it is carrying raw water from one place to another, is it not? A. It is a distribution activity, yes, that is correct.
Q And it is raw water? A. The water is untreated, it is raw, yes.
Q Yes. So if they then said "Well that is all right, I have got the raw water distribution bit, that is 2p, but funnily enough on my bill it says 16p as well. What is that for?"? A. That is for the distribution service that they are receiving, the taking of the water from the source, distributing it to the location of the customer.
Q What is that beyond the raw water distribution? What non-potable distribution do they get beyond the raw? A. Well it is the distribution of the water of the quality they require to their site, that is a distribution activity.
Q But it seems to vanish to a … point. Is it from one side of the steelworks' door to the other, or what? A. No, it is from the source, A2, to the client, S2.
Q If we now look at the only two where there is any treatment, System S6 and Ashgrove, it is on the same page, System S6, and I think we all know the facts of Ashgrove. If customer

S6, who you describe again at para.37 – again it is a large steel plant, and there were some errors, I think, in the figures. In your statement it says 16 kms but in a letter dated 19th April, which we can look at if you like, that was corrected to 8.3? A. Yes.

Q So there, were customer 6 to say "Well what am I getting?" the answer would come back, would it not, "I think 55 kms of raw water distribution and 8 kms of non-potable". Is that not right? A. What they are getting is they are getting the water resources function and the bulk non-potable distribution service.

Q And they are paying 2p, I think, on an assumption for the 55 kms of raw water, and 16p for the 8 kms of non-potable. Is that right? A. No, not quite. The 2p is, I think, your inference. What they are paying for, as I understand it, the water resources function, which is not split into various sub elements.

Q Well they are paying for resources and they are paying for the treatment, obviously if the get it, but in terms of distribution they are getting raw water distribution of about 55 kms, and non-potable of perhaps 8? A. Well they are getting the raw water service, that is getting the raw water to the place for treatment and then they get the distribution of that from the place of treatment to the site where they require the water.

Q If Mr. 6 said "Why should I pay eight times as much for the carriage of the water 8 kms from the treatment works as I do for carriage of the same water untreated five times as far?" what would your answer be? How do you explain that? A. They are two different services. The distribution service is calculated to give a price for the provision of the bulk distribution service, so they are paying for that. There is also water resources service which t hey are paying for. The fact that the water might come from one source or another, clearly large amounts of water are coming through those sources for other customers as well.

Q Can I now turn to a different issue, para. 94 of your third witness statement? It starts at p.19 of the statement, and you say that Dr. Bryan appears to have misunderstood the purpose of your second witness statement, and the stand-alone cost calculation you presented. Then at "a)" you describe what the purpose of this is:

> "It is possible to define and measure the 'standalone' costs of providing a water supply, a term generally used to denote the cost of replicating the service in question. This is a hypothetical exercise and, on the basis that it does not allow for economies of scale and scope to be taken into account, could lead to an over-recovery of revenue if all customers were charged on this basis."

That is, as it were, the other way around from the point we were discussing earlier, is it not, that you could not do this generally, or you would have huge over-recovery. That is the position, is it not? A. Yes, this stand-alone basis is not the basis on which we set our ----
THE PRESIDENT: It is not a charging basis? A. It is not a charging basis.
Q No, you made that clear. A. Crucially, on a stand-alone basis a customer would face a charge for its own cost of capital. So if it was a high risk customer they would be paying a high capital element by being part of the overall system they are facing a much lower cost of capital; to that extent I guess you could say there was a cross subsidy from the low cost customers to the high risk customer, and that is a benefit they get from being part of the old regulated water business as compared to being a stand-alone customer.
Q Yes, this is not a new point, this is a point I think you made in 2001. If you turn to CAJ-1 and turn through, you will come to a letter from Dŵr Cymru to Julie Griffiths, dated 10th August 2001? A. Sorry, could you take me through that again?
Q It is towards the back – I do not have the pagination, unfortunately. A. Just let me see if I have this right, it is a letter of 10th August, 2001?
Q That is right. If you turn over the page you will see two bullet points in the middle. You say: "… when proposing prices, Dŵr Cymru has regard to the established economic principles that determine acceptable upper and lower bounds. These economic tests can be summarised as follows:" Then the "upper bound" –

> "… to avoid being considered excessive, prices should not exceed the stand-alone costs of supply, i.e. the cost of replicating the service in question. Since the replacement costs of Dŵr Cymru's assets substantially exceeds Regulatory Capital Value on which OFWAT allows the company to earn a rate of return, the stand-alone costs would be significantly higher than those based on the whole company average cost allocation methodology;"

That is the point, is it not? A. Yes.
Q What it means is it is not a useful cross-check because it is not attempting the issue which is before the Tribunal, it is attempting something quite different. Is that not right? A. Well it is useful for the purposes that are set out there. One way of looking at it is by looking at the difference between the stand-alone cost that you would pay if you were being treated as an individual customer in a commercial business, as against the price that you are paying through our regional average cost approach including the benefit, therefore, of the low risk cost of capital that we can deliver to our customers because we serve that whole customer

base including the low risk customers, that means there is a significant benefit to customers ---

THE PRESIDENT: Yes, which you say has an advantage to them? A. That is right, and if that outweighs other factors then they will opt to be served by the public water supply system in some cases. There are many industrial customers in Wales, there are probably 10 industrial customers in Wales that carry out their own treatment and provide their own water resources for every one that we supply, and in those circumstances the site specific local costs that they can tap into by going directly outweigh the benefit of that financing advantage so quite properly they find a different route, so it is about finding the most economic way to supply industrial customers, in this case Wales.

MR. THOMPSON: But you are recognising there Dŵr Cymru is recognising that that is out of line with the approach adopted by the Authority and does not take account of the economies of scale, so that is something that you were well aware of back in 2001, is it not? A. That is right, we would not advocate that as a method for us to set our tariffs for a regulated water business, t hat is correct.

Q But you did, or there is effectively a form of cross-check in your second witness statement, that was the whole point of it? A. Well we put forward information on the stand-alone cost of providing a service to the Shotton Paper and the other Shotton customer on a stand alone basis, i.e. if it was not being supplied by the public water supply service, so that is a different question, yes.

Q You are quite open about it at para.95, that it was not intended to be an exercise of the kind that Dr. Bryan clearly envisaged having read the interim Judgment. A. So this is para.95 of?

Q Of your third witness statement. If we then look at the other methodologies that you refer to after para.94 there is the short run incremental costs and you make the point that if you simply looked at that, that would lead to under recovery because it would not cover the fixed costs and that is a point which the Tribunal had well in mind in its interim Judgment. I do not think one needs to turn that up. Then you thirdly refer to the approach that was used in this case – top-down average costs, do you not? A. Yes, that is the basis on which we do charge our customers.

Q Yes, but you would accept, and we have seen it in relation to non-potable treatment and potable bulk distribution that you need to look at the facts even for the purposes of that exercise, it is not enough simply to allocate the costs. You also do some allocation of distribution costs between, for example, your non-potable and potable by different approaches, do you not, looking at the actual facts? A. Well we have, in order to set our tariffs, clearly we have to use appropriate facts to get from the total revenue requirement that we discussed earlier, which is, you know, effectively what OFWAT believe we need to finance the functions of the overall business. You then need to take appropriate information into account in dividing that into then what is the fair and appropriate tariff for individual services. So water resources being one, treatment being a second, distribution being a third and then we make a further, for the large customers we make a further distinction between the tariff for the distribution service to reflect the very substantial difference between the local distribution service which applies to the domestic and smaller customers, and the bulk distribution service which is the only bit that is relevant to the large customers.

Q Yes, so it is not a pure calculation, you make some differentiations at that sort of level and, in particular, between bulk and local distribution and potable and non-potable treatment. That is right is it not? A. Tat is correct, yes.

Q Then over the page, you refer to a fourth methodology, para.99. You say: It is theoretically possible to seek to calculate prices using a fourth "hybrid" approach, that combines elements of site-specific costs with regional cost allocations. The approach presented by Dr. Bryan in Annex d, supported by Annex A, is essentially the creation of a bespoke hybrid" and you then say that it takes the lowest cost approach to each element in favour of the service provided to Albion, and you say for that reason it fails the two crucial tests. But in itself that methodology is perfectly legitimate, is it not? A. It is not the methodology that we would advocate in part because if you start from, if I can put it this way, from bottom up, from particular costs and make choices around those, unless you do that right across the board you have no way of knowing that that will come back to the overall regulatory requirement, the overall revenue requirement as set by the regulatory system, which covers joint costs, the fair return on the overall capital in the company. So we would not advocate that approach partly because, you know, there are so many different judgments that could be formed there – a large potable customer might advocate quite different judgments to a large non-potable customer potable customer, or somebody representing the customers of the local distribution network might advocate quite different assumptions to somebody representing purely a bulk distribution customer. So, our view is that the right and the best way to approach this is to start from the regulatory determined overall revenue requirement and then ensure that is allocated down fairly so that everybody is getting both the advantage of that low cost, low risk cost of capital, and also bearing a fair share of the common costs ---- you know, in their various forms.

MR. THOMPSON: You must be aware that you could perfectly respectably allocate actual costs, including fixed and common costs in relation to particular activities. You could do that, could you not? That is something that is done in other industries. A. You can approach that. Many people could approach that and come up with very many different calculations. My experience in the water sector is that it is generally taken the other way round – that you start from working out what is a required revenue in total, and then look at how … (overspeaking) … distribute that.

Q I know that is how it is done. You could then add some form of proportionate mark-up to cover the costs of the system or universal obligations, could you not? That is a perfectly feasible thing to do, is it not? A. Again, if people looked at that, they could come up with, I am sure, a number of different ways of doing that?

Q With the benefit of hindsight, do you know accept that something along those lines was what the Tribunal had in mind when it asked for a stand-alone figure?

MR. VAJDA: This is really getting into areas of law.

THE PRESIDENT: I am not sure it is going to be a helpful question, because they have produced what they have produced. Whether it is what we wanted, or not, is another matter. It is what we have got.

MR. THOMPSON: You are the Finance Director. Perhaps I can ask you this: Why has Dwr Cymru not attempted such an exercise? A. Because we think it is in the best interests of our customers for us to carry out the regional average cost approach that ensures that the regulatory assessed revenue requirement is recovered fairly across our customers; that everybody gets the benefit of that low risk cost of capital, and it is an open and objective process. So, we think it is in the best interests of our customers as a whole.

Q Would you accept that there might be another reason which is that it would inevitably show a massive contribution from non-potable distribution to the general costs of the network? Would you not accept that? A. No, I wouldn't.

Q The last question I would like to ask you about is the question that Mr. Vajda put to you about the impact of any decision that there was massive overcharging here. You would accept that looking backwards, the implication would be that Albion had been being overcharged by over £1 million per year – a single customer. Would you accept that? A. If you accepted the premise then ----

Q That is the premise that Mr. Vajda put to you. A. Yes, as a hypothetical premise.

Q Would you also accept that Dwr Cymru has very substantial reserves? A. I'm not sure I see the relevance of that, but, I mean, the reserves that Welsh Water has are effectively reserves held on behalf of our customers. They are for their benefit. We are a 'not for profit' company, so the reserves are there for the benefit of our customers.

Q The third question: would it inevitably be the case that if you were found to have massively overcharged one of your customers, that the water authority/the regulatory authority would necessarily permit you to transfer that overcharging to the generality of customers? Do you think that would be a strong case for you to make?

MR. VAJDA: Again, that is really a matter for the regulator.

THE PRESIDENT: It was suggested to the witness that from Dwr Cymru's point of view the suggestion would be that they pass any loss back to the household customers.

MR. VAJDA: Well, he can certainly give a view, but ----

THE PRESIDENT: The suggestion was that that was what the company would do, or have to do.

MR. THOMPSON: As I understood it, the implication of the question was that the Authority would say, "Jolly good!" A. No. Clearly, the Authority would have to speak for itself on that. We have been charging in line with, to date, the supply price between ourselves and Albion Water – one that the regulator, you know, is well aware of; has considered is not discriminatory in any way. If a judgment were to be taken that a completely basis of charging should be introduced, and therefore a very different price, and that is the situation going forward, then it seems to me that there is no ---- I can't see why the Authority would make a suggestion that it was improper for us to charge according to the regulatory approved tariffs in the past simply because, you know, we had moved to a completely different form of charging going forward. Hence, the net revenue loss would be, in the normal course, I would have thought, recoverable following periodic reviews. But, clearly, I cannot speak on behalf of the authority.

MR. THOMPSON: Those are my questions, Mr. President.

THE PRESIDENT: Mr. Jones, I wonder if I could explore a little bits of that last ---- I think we are understanding, and you have explained very clearly and very helpfully the company's general philosophy, averaging out across customers; everybody gets the benefit, so you say, of the low regulatory return, and that is what you think is the fair way of doing it. Am I right in supposing that that approach, on the whole at least, means that you do not really look at local costs of particular customers, i.e. you do not go customer by customer and say, "What does it cost us to serve this customer?" A. That is correct.

Q In general – and just correct me if I have got it wrong – does it imply that you do not need for that system to look very closely at the costs of particular aspects of the overall service that you are providing, if I can put it that way – i.e. to break out the cost of the pipeline system from the cost of the retail activities, from the cost of the water resource end of the business? Or, is that something that you do? A. The way we break the costs down for tariff purposes is as I described – it is between the services: the water resources service, water treatment, distribution split between bulk and non-bulk distribution. We do have to split our costs down, for example, for regulatory reporting reasons into other subjective categories, but, as a business, our prime focus, as I explained at the start is to split our costs down, reflecting our management structure so that we have the information there to run the business efficiently, and bear down on costs.

Q You do not, for example, have a retail end to which you then allocate overheads and common costs or fixed costs, or anything of that sort? A. No.

Q And do you have a water resource and treatment sort of business to which you allocate overheads and that sort of thing? A. No. It is part of the regulatory reporting. The June return, for example, that we split costs down for that regulatory reporting purposes between water resources and treatment, and water distribution.

Q Yes. But, it is split down in that way, but how does that feed through into the pricing decisions? A. Then we use that information as part of the information we use when deciding how to take the overall revenue requirement for the whole water service and split it between, for example, the water resources and treatment and water distribution, and then from water resources and treatment down to treatment and water resources.

Q What I am trying to get at, but we will come back to it after lunch, I think ---- What I would like to get a general feel for is how closely your prices do reflect costs of particular kinds. We can perhaps come back to discuss that topic after lunch. That would be very helpful.

MR. VAJDA: We have managed, with the assistance of the Tribunal, to get the document that you, sir, asked for.

THE PRESIDENT: If you have got it, then we can have a quick look at it over the adjournment.

MR. VAJDA: It is here, and I am particularly concerned that the Tribunal understands what is going on. So, if the Tribunal wants to ask Mr. Jones ----

THE PRESIDENT: We will do our best to absorb it and see how we get on. Thank you very much indeed for getting it for us.

(<u>Adjourned for a short time</u>)

THE PRESIDENT: Mr. Jones, I have not got many points because you have been very helpful in your evidence. I wonder if we could just glance at your second witness statement at Annex 2. I am on p.3 where you are doing a calculation of the MEA value of the main in

2000/2001. You remember the calculation, I am sure. What we have gathered is that over a relevant period the costs of constructing these mains, or the unit costs has been falling really quite markedly, which is interesting. In this calculation, shown on that page, you have uplifted the unit cost by an inflation factor. A. That is right.

Q Can you just go over that for us, and, in particular, the question of whether it would have been known in 2001 whether the costs of laying were falling ---- whether the trend was a falling trend. A. Perhaps to take the inflation factor first, that is simply because the numbers here – the costs base report numbers ---- OFWAT always carries out the price review exercise on a real terms basis, and chooses a price year in which all values will be expressed, and 1997/98 was a base year for that review. So, the numbers are expressed at the RPI of 1997/97. We therefore inflated that to 2000/2001 to reflect the movement in general construction prices between 1997/88 and 2000/2001. That would actually have been happening to construction prices on the ground, for example, in mains laying in that period, I don’t think at the time we would necessarily have known that. We would have been able perhaps to observe movements in our own particular contracts. I think that is probably as far as I can go on that.

Q I suppose the underlying point that we are trying to get a feel for is, how far particular prices and the particular customers reflect costs trends. In this particular example we seem to have at least one major costs driver declining in cost, but looking at the papers there does not seem to be any particularly obvious relationship between that trend and the prices the customers are actually paying. I just wondered if you could help us a little around that topic. A. I think that is right. Because OFWAT sets price reviews on a five yearly basis, clearly OFWAT would have taken judgments in 1999 when they were setting the prices for the 2000/2005 period as to what cost trends they expected. Those would be reflected in prices during that period, and then at 2004 they would have taken new evidence on what costs were and expected of future costs trends, and that would be reflected in prices during the next five years. I guess it’s a sort of a trade-off between overall the five yearly nature of the system. It is well –regarded because it gives strong incentives to companies to drive down costs during that five year period. That has been a huge success of the system. What it does mean is that costs prices and costs only sort of catch up each five year period.

Q When they catch up at the five year period they do it on the global, regional basis that you have described to us, rather than on an individual basis. A. Yes.

Q I am just trying to work out the implications of that. If you have got, for example, a potential new customer – let us say, he has come into South Wales as an inward investment, or something of that kind – and he comes along and says, for example, “Well, I’ve got two local authorities who’ve each offered me very good terms to set up in their area”. One of them says it would be a situation where, from your point of view the customer would be relatively cheap to supply because he is close to a source, or it is a rural area, or something (that site, I mean), and the other site would be more expensive. From your point of view, you would simply say, “Well, that’s the tariff price, and we don’t differentiate according to our own cost of supplying that particular customer. So, we are indifferent to where you put your new factory, or whatever it is”. Would that be right? A. Yes, I think by and large that is correct.

Q By and large. A. I think it is important to recognise, again, that the public water supply system is only one supply option that industrial water customers have. There are many more water customers who will find an alternative supplier using their own source – on site treatment or whatever. So, in the circumstances in which there is a cheaper location, they are not in any way obligated to come to us. They will find an alternative company to provide that for them.

Q Just as a matter of interest, does that worry you at all – that there are so many people who apparently are self-supplying rather than plugging into the public system? A. No, I don’t think so. One of the things we offer, because of our extensive low risk customer base, is the ability to raise finance cheaply. That is, you know, an efficiency that the public water supplier brings. But, ultimately we are there to make sure that water supply to customers happens on the most economic basis for the community as a whole. So, if because of local specific circumstances there is a cheaper alternative, then that is in everybody’s interests that they should follow that option. It avoids the need for investment in the public supply system which would, in those terms, be uneconomic.

Q Just as another generalisation, is it, in general, in your interest and the company’s interests, effectively to supply as much water as possible in the sense of the more throughput you have, the more revenue you get and the lower the unit cost. Would that be a fair inference? Certainly as far as the bottom line is concerned? A. Perhaps if I could just talk through how that works.

Q Talk us through it because we need to get a feel for this. A. Again, OFWAT, for example, will have set tariffs, and a price cap, for example, for 2000. If there is higher demand then than expected during that period between 2000 and 2005, that will drive higher revenues to the company, and the net revenue, in our case, would give us higher profits, and, in our case, the ability hopefully to dividend more money back to our customers because we are, unusually, a 'not for profit' company. But, at the next five year review, the regulator would take account of the now higher demand and, all else equal, therefore the unit rate would be reduced at the next review because you have now got a wider ----

Q I see. So, it might have a back-handed effect at the next review. You might find yourself not being able to get as much as you otherwise would because of what happened in the meantime. A. Yes. What OFWAT do is to set up a revenue requirement, you know, expected revenue requirement which will enable the business to finance its functions. It is the revenue that they are ultimately seeking to get right, not the prices. So if you have more demand then the prices will adjust down accordingly, and vice versa.

Q But that is at then next five year stage? A. That is correct, yes.

Q So the review process in that regard might have – I am just trying to think it through aloud – might have a slightly curious effect. On the one hand you might want to increase your output because that gives you, at least immediately, more revenue and makes your assets work harder, but you say that might backfire at the next review because he will see that you are able to earn the revenue that he thinks you need and therefore your price limits, other things being equal, might not be as generous as they otherwise would be? A. I do not think I would describe that as backfiring, it is a process by which ----

Q No, it is the way the system works. A. It will bring you back to your fair rate of return on your capital each five years and that really is the beauty of the system. You are incentivised to expand demand or to cut your costs crucially between five years but then each five y ears prices adjust to bring them into line with the new circumstances.

Q Yes. Could I just, on that, and this is I think more or less the only other self-contained topic I wanted to ask you about, look at briefly at the issue of water efficiency and water management services. You may remember at the time of the introduction of the large industrial tariff, there was a letter that went to OFWAT at the end of I think 1998, saying that Dŵr Cymru were going to include in its price certain water management services and efficiency audits, and something of that kind – that may well have been before your time, is that right? A. No, I was with Welsh Water.

Q You were with Welsh Water? A. Yes.

Q We are assuming, unless the contrary is asserted that that was what the company's intention was at the time, and part of the justification for part of the large industrial tariff. Is that a correct assumption? A. Yes, I think that is right. The large industrial tariff was an option that we were making available at that time to our potable customers, and we wanted to give them the incentive to switch over on to that tariff because we thought that would be in their interests, so one of the things we included was that we would also make water efficiency services available to them, if they wanted that. I think that is generally something that happened for a period of a couple of years and then probably following the next price review my understanding is that the level and nature of the water efficiency audit service that we have provided switched over to be largely a passive one in terms of information being available through the website and so on.

Q It is found, I think, in the Authority's skeleton argument very much I think along the lines you have just mentioned. The effect of the 1999 review was to put a squeeze on certain activities, effectively? A. Yes there was a very significant price reduction in 1999 reflecting the improved cost efficiency of the sector, and in order to be able to deliver an acceptable level of profitability with those reduce prices a number of services we had to look at providing more efficiently.

Q The water efficiency services, according to the Authority skeleton seem to have been a casualty of that particular period? A. I think that is right, certainly the nature changed to become very much a reactive web based one as I understand it.

THE PRESIDENT: Thank you. I do not know if my colleagues have any questions.

PROFESSOR PICKERING: Mr. Jones, may I ask one or two questions and I will try and be brief. First, can I ask you what the general assumption is about returns to scale that you make in relation to incremental activities? Are there increasing returns to scale or are they decreasing? A. I think generally in the water industry there would be economies of scale, so that it is cheaper per unit to provide water from a large works than a small works, for example. That is certainly something that I think the Authority takes into account, for example, when trying to compare the relative efficiency of a large plant as against a small plant.

Q What about increments to the network as a whole? A. To the extent that there is capacity in the network, then if you can add further customers, further demand to the network then the marginal cost of that is going to be low as compared to the average cost of having made the network available in the first place.

Q But your answer to the President about the ten companies that do not buy your water but self-supply, for every one that you supply, these are industrial customers, you indicated that everyone gained by the fact that they were self-supplying? A. That is right, what I had in mind by that was people using water for industrial process purposes, probably would not be requiring potable water, for example, in which case you are looking at economies of scale from the overall potable network, but the cost perhaps of making a dedicated industrial water stream available to them, in which case it may be cheaper for them to relocate in a position where they can do that themselves or through an alternative supplier at less cost.

Q Or it may well be cheaper for them to do so but I would have thought that what that is doing is depriving you of the contribution that they would otherwise have made to your common costs? A. I think it is a choice for them. If our tariffs are at a fair level then if they come and join our system, as it were, then they will be making contribution to our common cost, as you say, and that is good from our point of view, but we want to get the right economic answer so if it is cheaper for them to go separately or through a different supplier then so be it.

Q I see. Another question which is perhaps one that we have not touched on, if I remember rightly Welsh Water outsources quite a lot of the activities so they are provided to it by United Utilities? A. Amongst other people, yes.

Q Right, okay. Is there anything that we ought to think about in terms of the implications of that for discussion about pricing? Why do you do that? Is it for efficiency purposes? A. Yes, that is a key strategy that we followed, certainly since Glas Cymru took over Welsh Water. Glas Cymru, as you know, is a not for profit company. We have been very mindful that we think there are financing advantages in that, but clearly we also want to get the most efficient operation of our assets so the strategy we followed is to go through a competitive market outsourcing approach. What we do is we make available a parcel of services to be provided to us, put that on to the open market through European Union process and that has been very successful in that a large number of companies have bid to provide that service to us and that has enabled us to drive our costs down.

Q And in terms of your returns, and the numbers that have gone into the calculations to which this case relates then they are the prices that you are paying to your supplier of services? A. Yes, that is right.

Q Could I just ask, and there may be a ready pointer that you might give in answer to my general question, but the Ashgrove system is a system that is currently shared between two users, Corus and Albion acquiring on behalf of Shotton, can you just remind me or point me to anywhere in your witness statements where you actually show how the Corus dimension of this is handled, and presumably taken out of the calculations as they then relate to Shotton? A. Well I think probably that is most relevant to my second witness statement in which we are looking at the stand-alone cost for Shotton Paper. What we did there, there are a number of hypotheses you could make about what it the supply option, this will be the most appropriate one to make in the circumstance was to replicate the existing system with

the two customers on the system and then divide the costs on essentially a volumetric basis between the two customers being supplied by the system, so it is close to replication of the existing arrangements.
Q And you are satisfied that what you have done actually allows us to identify specifically those parts of the Ashgrove system costs that would be properly attributable to Shotton Paper? A. Yes.
Q I think this is my final question you will be glad to know – no, I have two more, sorry! If at any time Shotton Paper were to bypass the Ashgrove system, and that is hypothetical, I know, but just to check, the implication of that for Corus would be that Corus would then be picking up the consequences of Shotton going to supply us in some other way. Is that right? A. I do not think, actually that is right, because, the price to Corus is based on our regional average cost approach, the standard price for non-potable customers, and therefore their price would not change simply because another customer had, in this case, effectively exited, and I think that is an important point because if you do have very small classes of customer – perhaps, say, a class of customers of two people served by the same system, then one unfortunate implication of that is that your bill could change dramatically depending on somebody else's activities.
Q So they would pay something, but it would be simply in proportion to their share of the total business that Welsh Water were being responsible for across the board? A. Yes.
Q My last question, and I promise you this is, where in your capex schedule looking forward would you have any significant expenditure scheduled for the Ashgrove system? A. That will depend on circumstances, we basically apply the same risk based approached to all our mains, and Ashgrove, like any other, will be surveyed, regular maintenance will be carried out and it will be a job for our engineers to determine what a necessary maintenance – the approach with Ashgrove as with our other large bulk mains is to effectively carry a sort of pro-active approach and protect the integrity of the asset so that the service is not at high risk, because it is clearly an important service with no obvious back up.
Q How far ahead are you actually planning specific capital expenditures? A. Our specific capital plans tie into the regulatory system, so they go five years forward but our methodologies and longer terms of capital planning that goes into that same approach would go probably out another five years and the modelling is intended to look at replacement routines for assets over the long term.
Q Would I be right in inferring that as you have not responded directly that, so far as you can recall, there is no specific significant planning for any work on the Ashgrove system, and it

would only be at the moment, over the next 10 years if your engineers on their regular reviews were to come up and say "The risk has increased considerably we had better do something." A. I am not aware of any particular projects that are planned for the system, though I cannot guarantee that there are none.

PROFESSOR PICKERING: Thank you very much, Mr. Jones.

THE PRESIDENT: Mr. Jones, I am sorry, I have got one more question I ought to have put earlier. It is on the issue of costs again. In your various tariffs, apparently encouraged by the Director, you have made efforts to get more reflective of costs by thinking about various items of costs. This case is about non-potable systems, and non-potable systems. Non-potable systems seem to have the characteristic, on the whole, of being rather separate systems, and not linked in in a conjunctive way with the kinds of systems you have down in South Wales there. How difficult in your view would it be to take the work that has been done so far one step further, as it were, and just work out what the costs are of supplying individually these self-contained non-potable customers? One could presumably work out, as we have seen in terms of Ashgrove, the operating costs. You then need to make some allowance for capital or rate of return, and some allowance for common costs which could possibly be done on some formula basis to arrive at some idea of how much it was costing you to serve these individual customers. I know it would be quite different from the way you do it at the moment, but would it be intrinsically difficult to do if you wanted to do it? A. I think the trouble ---- the difficulty we would have would be that as you broke down into that further level of detail, there would then need to be a raft of assumptions about how to deal with common costs, for example, and so on. It would be quite difficult to find an approach to that which was, you know, universally acceptable because clearly different types of customers would have different interests in that process. I think one difficulty would be: how do you actually come up with an objective way of doing that that customers would accept? I mean, the cost of capital, for example, might be a good case in point there. If you were breaking the system down in that way, would it still be appropriate to provide ---- to charge people at a single cost of capital across the whole network.

Q Why would it not? A. Well, it depends on what the purpose of the exercise is.

Q You could work out what the cost of capital was, or what the permitted regulatory return was, and on some per unit basis simply allocate it among everybody. A. I think it would really depend on what the sort of class is, if I can put it that way. With the example we have just had, if you have tariffs broken down into very small classes, that can lead to quite considerable volatility – you know, if somebody's demand goes up or goes down, that

could impact on the other members of the class, and if those classes were being treated separately, then that might impact on the degree to which it was reasonable to allocate the same rate of return as between the low risk customers on the one side and higher risk customers on the other. It is really a question of: where would you stop in this? If you said, "Well, we're going to dis-aggregate down locally on the basis of operating costs, for example, would it then also be ----"
Q Yes, I follow the points you are making. To some extent there is a sort of dis-aggregation – or there always was historically a sort of dis-aggregation – with the customers on special agreements. A. Well, special agreements are effectively ----
Q And you will want to get them on to the tariff. A. Exactly.
Q But, in historical terms they were rather sort of bespoke arrangements. A. They were, and some of them date back a long way, and they were put in place for a variety of reasons quite a long time ago.
Q Thank you. Do you want to come back on that, Mr. Thompson?
MR. THOMPSON: I do not think so.
MR. RANDOLPH: Sir, I hesitate to get to my feet, especially because of what you said to Mr. Vajda in terms of cross-examination, and because of what I said to you earlier about the fact that I would not be cross-examining. There was one point that arose out of an answer from Mr. Jones to Professor Pickering which touched on an issue which impacts potentially on my client.
THE PRESIDENT: Why do you not put it.
MR. RANDLOLPH: Thank you.

<u>Cross-examined by Mr. RANDOLPH</u>

Q I think it was the first or second answer you gave to Professor Pickering with regard to the way in which you dealt with stand-alone costs. If you could possibly turn to your second witness statement at paras. 17 and 18 ---- Do you have that? A. Yes, I do.
Q You can see there that you deal with how you set out to estimate the stand-alone costs, and the fact that that task may, or may not, entail the recreation of the existing system, and the fact that Dwr Cymru did not possess enough information for you to draw definitive conclusions on what would be the least cost method ---- So, for the purposes of that exercise conducted by you for the purpose of this witness statement, you assumed that the

correct approach would be the replication. That was Option A. Yes? That is what you say.
A. Yes. That's correct. I was just checking that it was Option A.
Q I am glad we are on the same wavelength. Then you carry on throughout the rest of the witness statement to deal with Option A. Then you come to the costs right at the back, at para.28. You come to a final cost of some 32.4 pence per cubic metre. That is Option A.
A. Yes, indeed.
Q Okay. But, before you get there – and this is the point that you raised when you were dealing with Professor Pickering's question – you said that it was important to note that there were at least three alternative options to Option A, i.e. there were three alternative options to the replication. A. Yes.
Q Yes. The first one deals with the possibility that involves my client, which is why I am asking this question. Did you discuss the viability of this option with anybody at United Utilities before you put this forward as an option? A. No.
Q No. Have you conducted a feasibility exercise with regard to Option B? A. No.
Q Do you know whether it would be feasible? A. I think we have said it is possible. I would not want to go any further than that. I do not know. I cannot say for certain whether it is feasible or not.
Q On what basis do you say that it would be possible, given the fact that you did not conduct a feasibility exercise? A. Excuse me. Yes, I say in here that it may be possible.
Q Yes. So, it may be possible, but that is just your thought – not backed up with any evidence or objective ---- A. Certainly we have not investigated whether or not it would be possible in any detail.
Q I am very grateful. Thank you so much.
THE PRESIDENT: Mr. Vajda, any re-examination?
MR. VAJDA: No, thank you.
THE PRESIDENT: Thank you very much indeed, Mr. Jones, both for your evidence and for the work that has gone into your witness statement.

(The witness withdrew)

PROFESSOR CHRISTOPHER MARK ARMSTRONG, Called

Examined by Mr. ANDERSON

Q Professor Armstrong, could I ask you to give to the Tribunal your name and address, and current position? A. Yes. I am Christopher Mark Armstrong. I am Professor of Economics at University College London, Gower Street, London..

Q Have you prepared two reports for the benefit of the Tribunal in this case? A. I have.
Q One of them dated March 2006? A. Yes, that's correct.
Q The other dated May 2006. A. That's correct.
Q You have been made aware of your duties to the Tribunal as an expert witness, and you say you have complied with those duties in the preparation of those two reports. A. I have.
Q You are aware that you are still subject to that duty in the answers that you give this afternoon. A. I am aware.
Q I just want to ask you a few questions of clarification about your report, and then ask you one or two questions on Dr. Marshall's second report which I think was produced after both your reports and which you have not yet had an opportunity to comment on them. But, before I do that, could I just ask you to explain to the Tribunal ----- Can I just confirm: do you have copies of both your reports and both Dr. Marshall's reports with you? A. I do.
Q You provided a CV at the back of your first report with a very impressive list of publications. I wonder if you could just explain in very general terms a little about your experience and expertise in the field of ECPR? A. Well, I have written a number of papers about access pricing in general. I wouldn't say I've written a paper about ECPR on its own. This would probably be the first one – my first expert report on that subject. I have written a number of papers over the years with a variety of co-authors, and in those papers I've looked at when ECPR is a good policy; when it is not, and that kind of thing. So, I would say my expertise is more in the general area of access pricing rather than narrowly focused on ECPR. I have also worked with regulators and competition authorities on applications of margin squeeze, and that kind of thing, which I think of as a very related topic.
Q Could I just ask you to turn to your first report? In particular, turn to p.2 – part of a section headed 'The aims of regulation competition policy'. Towards the bottom of the page there is a paragraph beginning, "Leaving aside considerations of dynamic efficiency for the moment, regulators of network industries can be said to have two broad objectives: allocative efficiency (in economic terms, goods and services most efficiently delivered to consumers when prices are equal to marginal costs) and productive efficiency ----" which you then to on to describe. You then say, "The important question is whether competition or regulation is the superior method with which to achieve these aims. Competition can force prices close to marginal costs and it can spur firms to operate efficiently to meet their rivals' prices. Clearly, there is no clear-cut answer to this question -----" and so on. You

then say towards the bottom of p.3, "The ECPR is the access pricing policy which ensures that the second aim, productive efficiency, is achieved even if the former aim, allocative efficiency, has not been fully achieved". I wonder if you could explain a little how it is that ECPR assists in the second aim, productive efficiency?

THE PRESIDENT: I think it would be very helpful for us, actually, Professor Armstrong, if you would just treat us as if we were a student class for the moment. Just go back one step, and just explain the senses in this report in which you are using the terms 'dynamic efficiency', 'allocative efficiency' and 'productive efficiency'. A. Well, dynamic efficiency was normally meant to represent the long run benefits of competition ----

Q The process, as I understand it. A. The process of R&D, product innovation ---- That kind of thing. Allocative efficiency is obtained when you have prices close to cost ---- the actual cost of supply. Productive efficiency is when the particular pattern of supply is produced in the most efficient manner – whether it is Firm A, Firm B, or a combination of the two.

Q In that sense, is productive efficiency an aspect of allocative efficiency? A. No. No. No. For a given cost, however you manage to achieve it ---- for a given marginal cost of supply, ideally you would like price close to marginal cost - that marginal cost, in order to achieve allocative efficiency. But, the actual implementation of a particular cost depends on how well you have managed to achieve productive efficiency. So, if you have not done that very well, you will have a high cost of supply, and even if price is close to that high marginal cost, you will have allocative efficiency but you will not have productive efficiency.

Q Right. That will do. A. You gave a longer list of efficiencies earlier on.

Q Earlier on I think the other concepts that crept in were the concept of 'efficient entry' and the concept of the 'efficient firm'. There was also reference from time to time in the papers to 'static efficiency' or 'static equilibrium efficiency analysis'. A. Well, I guess static efficiency is anything that's not dynamic efficiency. That would be my guess. It's not a phrase I use very much. Do you want me to go through the other one?

THE PRESIDENT: Why not? Just so that we all know roughly what we are talking about. A. No, no, it is a good question. So the efficient firm, this is going to be something that I guess we may come back on in the two expert topics, an efficient firm would probably be the firm that starting from scratch, if you like, for a given pattern of output has the lower cost than another firm. So that would be starting from a Greenfield site, which firm is the best one to supply a particular output.

Q Would it include the idea of the firm that was closest to cost in some sense or other, that was able to produce whatever unit it is at lowest cost? A. Just say that bit again? The firm that?
Q Was able to produce its unit at a lower overall cost, or the lowest overall cost, a lower cost? A. Yes, suppose it is a single product firm so you could have a good measure of unit cost, then the firm with the lowest unit cost for a particular level of demand would be the efficient firm. Efficient entry I would say would be that you have a particular firm in there, in the market already and it may have some costs and, given that firm's existence is it efficient to have this firm B coming into the market.
Q Efficient in what sense? A. In the sense that the overall costs of supplying go down.
Q In the sense of when you say "The overall costs of supplying" you mean? A. Adding up the total costs of these two firms.
Q Right. How, using efficiency in that sense, how do you build in, or do you build in, the perceived benefits – or sometimes perceived benefits of customer choice, the dynamic effect of having more than one firm, etc. etc., or is it purely looking at the costs of the two? A. Yes, these concepts are most useful when you have firms supplying fairly supplying fairly substitutable products, you can sort of add up their costs. If you have firms offering very differentiated products, then you have extra effects coming in which are related in a way more to allocative efficiency and perhaps dynamic efficiency as well. That is opening another area. We have a different range of products, the efficient range of products would be another aspect of efficiency which I have not touched on at all in my report.
Q No, very well.
PROFESSOR PICKERING: There is just one other onset of efficiency that is referred to in the expert report and that is efficient competition. Would you like to say something about that and whether you believe that there can be inefficient competition? A. Oh yes. Efficient competition is a broad synonym for efficient entry in this context, so it is competition that would reduce overall costs.
Q The time period in this, are we talking short run, or long run? A. One would not want to take too short a run on any of these things, so it would be a matter of judgment about the particular thing. The second part of your question?
Q I was just postulating whether you felt there could be inefficient competition if there was a condition of efficient competition? A. Yes, there are things like cream skimming entry would normally be regarded as inefficient competition, where there is a big margin, a high cost firm comes in and takes advantage, that will be inefficient competition.

Q To whom is it inefficient? A. Well efficiency is not ‘to’ anyone I would say.
THE PRESIDENT: So by what yardstick do you say it is inefficient? A. Because the total costs of production go up.
Q Just to help us along a little, Professor Armstrong. If we take what would be an analogy, if we take the former monopoly position in the airline industry, for example. At a certain stage, probably within the living memory of most of us, there have been new carriers who have come in, we have had entry – I will avoid the word ‘efficient’ for the moment – the general effect of that entry, let us assume for argument’s sake, has actually – even though you are incurring the cost now of two carriers instead of one – the general effect of that entry has been to put pressure on the costs of the incumbents so that they have become in a lay sense more efficient. Is that sort of concept included in the sense of efficient entry in the way that you are using that term? A. Yes, so you are talking about a situation where the incumbent was not regulated?
Q Yes. A. It was not regulated, it could set what prices it liked, and an entrant coming in would have a whole series of beneficial effects.
Q Well there is a bit of … there, put it that way, for whatever reason, because market forces have not worked ---- A. There is inefficiency, that is a bit of … if you like, and that is going to be mitigated by competition and as you say there will be an extra spur to ----
Q So in answering the question whether or not total costs have increased as a result of entry you look at not just the fact you have two suppliers now instead of one, but in the sense the consequences of the dynamic effect is pressure on costs? A. Yes.
PROFESSOR PICKERING: Just one other question on this particular point. You have said that ‘cream skimming’ or ‘cherry-picking’ is inefficient competition? A. Can be.
Q Can be, where does that leave hit and run competition, which is the implication of contestable markets on which no doubt you are going to comment later, and I will not get you into that, but is that also potentially inefficient? A. No, if you ever saw it it would be a very efficient form of competition. It would be a highly disciplinarian form of competition for the incumbent firm. It could not have any monopoly rents in its tariff at all.
THE PRESIDENT: Because it might get a hit? A. It would get hit for a microsecond and then this firm would leave if necessary. So it is a very implausible model of competitive interaction, I would say.
PROFESSOR PICKERING: Could not cherry-picking be a form of hit and run? A. Cherry picking is normally a result of a regulatory imposed price structure on the incumbent, so that the incumbent does not have much chance to respond to entry when it takes place. So

you do not need this ultra-fast entry and exit for this to be profitable. He can just stay in there for as long as he likes.

THE PRESIDENT: Sorry, Mr. Anderson.

MR. ANDERSON: Not at all, it has been very helpful and educative for me as well. A. I have forgotten your question now, Mr. Anderson. (Laughter)

Q That was just a question arising out of something I think was raised on the first day when I was not here about the different terms, the ways in which efficiency can be used. I wonder if you could though just explain this to the Tribunal. Is there a difference and, if so, what is it, between realising or measuring, or promoting efficiency and I am thinking particularly of productive efficiency as between markets such as the water industry that are regulated and more competitive markets, markets that are not regulated, or do not need to be regulated in the way that industries where at least some aspects of the distribution chain have natural monopolies? A. Well the basic problem with industries like water where there is a big part of it which is a natural monopoly segment, by definition that means that equal marginal cost will not cover the firm's overall costs, that is a feature we have seen throughout this case and whenever prices are far removed from marginal costs you have to take care whenever you have entry into the market to make sure that entrants do not take advantage of these large margins. Whereas in another industry like airlines, which does not really have such obvious natural monopoly conditions, you would expect competition just to make prices correspond to costs at some level.

THE PRESIDENT: It was thought to be a natural monopoly for many years, airlines, but it turned out it was not in the end? A. Was it thought to be it?

Q Well, let us not start with airlines, they tended to have ---- A. Yes, there are lots of artificial monopolies in history.

Q Let us not go into it, we have quite enough to sort out without discussing other industries.

MR. ANDERSON: Could you just explain to the Tribunal in just a couple of sentences, if that is possible, I know it is what most of your report is directed to, why it is that you say ECPR assists in promoting the second aim, that is productive efficiency? A. Well it assists only in this class of model or in the class of cases where you have extensive fixed costs so that prices, fixed costs, cross subsidies, other requirements ----

THE PRESIDENT: I am just making a list of the things that you are telling me – fixed costs, cross subsidies? A. Yes, and fixed costs could include things way outside the business like obligations to clean up the environment and area and that kind of thing. So these have to be all funded by priced cost margins. In that situation the ECPR is the margin of the two entrants which induces efficient entry.

MR. ANDERSON: Those are the sorts of characteristics that you are setting out in the first paragraph on p.4 of your report, is that right, on the relationship between retail prices and access prices? A. That is exactly right.

Q Towards the bottom of that page you say: " If the incumbent's retail prices are required to diverge from its costs for whatever reason, a policy of granting access to the incumbent's essential inputs at marginal cost is unlikely to be socially desirable." Can you explain why you say that? A. Sir, this is the idea that the incumbent is forced by its regulator to set a particular pattern of retail prices. Okay, so there is no particular issue about allocative efficiency or anything like that going on, so what we are left with is productive efficiency. If you set the access price equal to cost when the retail price does not equal the associated cost, there will be the wrong margin for entrants to play off. So you could in a variety of ways. It could be if the incumbents required to make a loss making service, for it may be supplied to rural customers or something like that.

THE PRESIDENT: That is the case where retail price is below cost? A. When it is below cost?

Q Yes. A. Then if you have an access price equal to the associated cost for that service then you can have almost no chance of getting any entry into that market because you have the retail price below cost and the access price equal to cost. You would have to be – to use the phrase used – "super efficient" to be able to compete in that scenario. So you would have a lack of efficient entry in that scenario. On the other hand if there is a positive price cost margin so that it is a profitable service, either because of cross subsidy, so it is the urban supply or because the price cross margin is being used to fund these other fixed costs elsewhere in the business, then if you have access equal to cost, and a significant price cost margin at the retail level you have scope for entry even when the entrant has a higher retail cost than the incumbent firm. So that has a direct efficiency cost.

Q Yes. A. And it has a funding issue for the incumbent as well, which is a separate point, which is that the incumbent had a shortfall on its contributions to its fixed costs, or to its cross-subsidies elsewhere and it will need to find that from elsewhere.

Q And those are really the two points you are making on p.5? A. They are the three points, I suppose.

Q Three points you are making on p.5? A. Yes. And the final point you might want to bear in mind which I come to later in the report, is that when you do have access prices equal to cost and price cost margins, is that the incumbent will have a very serious incentive to disadvantage the entrant by non-price means, delaying access, or that kind of thing because it directly encumbers profits. But, that would be a fourth problem with having access prices equal to costs when retail prices diverge from costs.

Q You encapsulate at the bottom of p.8 after a couple of pages of detailed analysis that ECPR is the answer to the following question. "For a given regulated retail price charged by the incumbent, which need not be close to marginal cost, which access price ensures product efficiency, so entry occurs when the entrant has lower costs than the incumbent, but not when the supply by the entrant results in higher industry costs. The ECPR is thus designed to encourage efficient entry and discourage inefficient entry." Now, a point that has been made in, for example, Albion's most recent reply is about the question of fixed costs, the argument, as I understand it, being that an entrant is always disadvantaged under ECPR since it must fund out of the margin two sets of fixed costs – its own and the incumbent's as the incumbent is only seeking to recover from its retail activities its own fixed costs. Can you help the Tribunal on that concept? A. Yes. This is a second key point in this whole debate. I wrote this in March, and it has now become clear that this is a key fault line between the two sides in this case. I am sure this will be my longest answer.

THE PRESIDENT: Take your time, Professor. Take as long as you like. A. I think there are three aspects to fixed costs in this question. If I just list them, and then I will go through them. The first one is what you might call overall fixed costs of the incumbent firm. That would be, for instance, environmental obligations and that kind of thing. So, that is one aspect of fixed costs which I will talk about. In a sense, I have already talked about that one. The second issue is when the incumbent has fixed costs in the competitive segment – or more potentially competitive segment - and where those fixed costs are avoided in the event of the entry taking place. So, that would be, in this context, if Welsh Water had fixed costs associated with supplying Shotton and those fixed costs were just avoided ----

Q If it no longer supplied Shotton. A. So, that would be Case 2. So, that is fixed costs which are avoided. The third one is where the incumbent has fixed costs in the competitive segment, but entry isn't so widespread that those fixed costs are avoided. So, it carries on bearing those fixed costs, even though entry takes place in that segment. For instance, there will be a series of markets and there is entry in one or two of them.

So, the first one, which is just the case where the overall fixed costs of the firm are not linked to the competitive segment. In a way, the ECPR works very well in this context. If there was no entry, the end consumers would be contributing to these fixed costs by price

costs margins on the services they consume. If there is entry, there is no reason why the entrant should not also contribute to these fixed costs. So, that seems a very clear-cut case. The second case is also fairly clear-cut. If there is entry and that causes these fixed costs to be avoided by the incumbent, the ECPR formula in its general form still applies – which is price minus avoided costs. Okay? So, I do not know how much detail you want -----
Q We can understand that, I think. A. That is still a clear-cut case. The difficult case is the third one where there are fixed costs incurred by the incumbent in the competitive segment but entry does not cause those costs to be avoided. So you will eventually have two lots of fixed costs.
Q Not yet, as it were. A. Yes, that's right.
Q It is a problem we are going to have to grapple with. A. And how big the relevant market is.
Q You tell us what you went to tell us about it. A. This is where there is a distinction between efficient entry and supply by an efficient firm. Okay? So, we have got an incumbent in there supplying the market. It has incurred fixed costs. The ECPR would suggest that the access price should equal the incumbent's price minus its avoided costs which now do not include the incumbent's fixed cost. That is the formula which generates efficient entry. Okay? You still have efficient entry. It sounds unfair – it is not a word economists like to use, but it sounds unfair. But, you do have a first mover advantage by the incumbent here. You do not want to have two lots of these fixed costs being incurred unless the entrant is very efficient. So, the fixed cost of his entry is outweighed by its very low marginal cost, for instance. So, it might be that the entrant is more efficient from a sort of starting from fresh approach compared to the incumbent, but it still should not come into the market.
Q The question I have got in my mind – but I will come back to it later is – how do you ever get to a position on this line where you can have sufficient entry, and the benefit of customer choice and competition that may arise, on a sufficient scale that you do avoid the fixed costs because the thing seems to be blocked at the outset – or could be? A. Your argument would say that the entrant would have to take over the whole ----
Q If you are looking at it, as we seem to be in this case ---- If you are looking at it on a customer-by-customer basis, every time a new entrant takes one customer, probably the effect on the fixed costs of the incumbent is rather slight, and probably negligible. But, nonetheless, if that were to build up, then other benefits, including avoidance of fixed costs by the incumbent could, in time, flow. Assume that that situation is B, and the first one to

come in is A, how do you get from A to B? A. Let us take a hypothetical case where the incumbent needed a person to manage retail customers. Supposing there was some system like that, so that there is a lumpy asset. Then if you did treat it customer by customer you would have this strange position where the first nine entrants ---- or the entrants that served the first nine customers would have a rather high access charge, and then the tenth one which would cause this lump to be avoided would then get a rather low one. I am not sure if it has any particular theoretical merit, but it certainly has a very horrible practical aspect to it. So, I think most people in that situation would suggest spreading that fixed cost over the avoided ----- So, you would have an average incremental cost ----

Q You would take an average. A. We'd take an average incremental cost in the retail sector. That is what I would do in that situation. That is not a strict ECPR, but we will hear whether that is an important adjustment to the ECPR, or not ----

Q But, a practical solution to a practical problem. A. That is what I would do. It would also have the benefit of making the ECPR - the slightly adjusted ECPR - look very like the margin squeeze test.

Q Thank you.

MR. ANDERSON: Another point that arises in which there is a difference between you and Dr. Marshall I think may be more of a difference in emphasis of fundamental principle – that is the question of the traditional criticism of ECPR being preservation of monopoly rents ---- profits. Now, you say – and correct me if I am not getting it quite right – that essentially ECPR has no role to play in the regulating of monopoly rents because that is concerned with the regulation of retail prices with which access pricing is not concerned. Dr. Marshall's position is, I think, twofold. Firstly, she agrees with that as a matter of theory, but says it is a technical distinction, and that in her words ECPR ---- the thrust of what she says is that ECPR perpetuates the need for price regulation and is therefore undesirable from that point of view. Do you have any observations you could share with the Tribunal on that difference of emphasis between the two of you? A. I will try not to go on too long. This is a sort of long-running issue in ECPR debate. In my opinion, the early exponents of the ECPR which are quoted in Dr. Marshall's reports do not get this right particularly. I do not see why you need price equal to the competitive level in the retail market for the ECPR to be a useful policy instrument. In fact, I think it is almost the opposite way round. It is precisely when prices are very different from the underlying marginal costs that the ECPR is a useful policy tool.

MR. THOMPSON: Again, you can correct us if we are wrong, because we are very much in your hands ---- I was under the impression that the original theoretical reasoning for Professor Baumol and his colleagues was that this kind of rule most nearly reproduces what would happen in a competitive market. Therefore, if you want to get as near as you can to what would happen in a competitive market, this would be the rule to go for. So, at a theoretical level, that was the genesis of the idea. That is certainly the idea that the Privy Council seemed to pick up in the New Zealand case. Whether they got hold of the right end of the stick or not, I do not know. A. That might be the intellectual history of it, but I do not think that is relevant for what we are talking about in this case.

Q If I have understood your evidence, your position is that you take the retail price as a given – whatever it happens to be – and you do not worry about whether it is a competitive price, or its relationship with what would happen in a competitive market. You simply take that as your starting point, and then you effectively deduct the avoided costs that result from the entry. A. That's exactly right. I would contend that it makes absolutely no sense to talk about the competitive price for most parts of the water industry. It just doesn't make any sense.

Q Well, it has always seemed to me at least that the whole Baumol argument, starting with the analogy of the competitive market, faced the problem that the circumstances in which you seek to apply the rule are almost always circumstances in which there is not a competitive market. A. That's right. That is exactly right.

Q The question is whether that actually completely undermines the theoretical justification for the rule – or whether, as you contend, the rule can stand quite independently of that theoretical justification as a perfectly good rule in itself. A. I would certainly argue the latter.

Q I follow that.

MR. ANDERSON: To what extent is the role then of price regulation relevant to the justification for ECPR that you are advancing? A. Roughly speaking, there are at least two objectives – two important objectives. One is allocative efficiency, as I have said – trying to bring price down to whatever the … cost is, and the other is productive efficiency. The ECPR is targeted at the second one entirely, just as is margin squeeze regulation in my opinion. It does not do anything about controlling retail prices. It does not control market power in that segment – just as the margin squeeze test does not control the retail prices. So, to get maximum efficiency, to get both allocative and productive efficiency, you will need some other instrument to bring prices down to cost. We have got the right firms in there by the ECPR, and retail price regulation is the way of tackling the second objective, which is allocative efficiency. It is possible we will hear, I am sure, that competition will perform that role as well, but that is another way of getting allocative efficiency.

THE PRESIDENT: In practical terms, in most cases where ECPR is applicable, you will need price regulation somewhere in the system if you want to get the maximum benefits of what you are trying to achieve, which is both allocative and productive. A. Or, if you do not have price regulation in there, then there is no mechanism for controlling that aspect of the problem.

MR. ANDERSON: Would it then be fair to say that if , as a matter of policy, a government has decided upon vertical integration and an absence of price competition, that price regulation is playing the substitute of competition for pursuing the aim of allocative efficiency. ECPR you would then advocate as being a way of achieving the second aim of productive efficiency. A. That's right. I didn't like the phrase 'decided against price competition'. I am not sure that has happened ----

Q You can disagree with anything I say.

THE PRESIDENT: It might be making a bit of an assumption there. A. The whole point is to get competition in.

Q That is why we have got a case at all. Somebody thinks it is a good idea that there should be some competition. A. In some industries it is perfectly possible that you could, if you like, strip out the monopoly parts of the market, and, say, set the access price to that, equal to cost or average cost, or something like that. That would be the vertical separation option. Then you just have full-blown competition at the retail level. That would mean that you did not need price regulation at the retail level. Then, that is not an ECPR kind of framework. But, in other industries – and I think we have to remain agnostic about the water industry at this point – full-blown competition is not going to be enough to constrain retail prices. In that case, you need retail price regulation and then we are squarely in what I would argue is the ECPR territory.

MR. ANDERSON: Can you explain to the Tribunal on another topic in which there may be a slight difference of view between you and Dr. Marshall – that is the relationship between ECPR and barriers to entry? Dr. Marshall's view appears to be that ECPR in itself gives rise to barriers to entry. Your view seems to be that they are separate issues. Can you explain that for the benefit of the Tribunal? A. Are you talking ----- I found something on pp.7 and 8 of the second Marshall report.

MR. ANDERSON: It is in the second report. I am concentrating on that. You have really addressed her first report in your second. A. I understand.
THE PRESIDENT: There is something here at pp.7 and 8 of the second Marshall report? A. Indeed, and over into p.9 as well – the first paragraph.
THE PRESIDENT: Yes. A. This is something that has come up in the two experts' interactions.
Q Yes, quite. A. There is a sentence in the middle of p.8 of the second Marshall Report which says "I consider it preferable for the Regulator to identify and remove barriers to entry as far as possible and to be vigilant in ensuring that the incumbent does not raise new barriers." That I could not agree with anything more on that particular point. There is possibly a slight implication that I am happy to tolerate that artificially raised barriers to entry by the incumbent, and then disallow them to be passed on to the entrant in the ECPR formula. I would never go along with such a policy, so my philosophy, if that is not too grand a word, is roughly speaking that entry barriers should be tackled directly and there should not be indirect ways of trying to assist entry.
Q Trying to obstruct or trying to assist? A. No, there are entry barriers around, clearly, things like in telecoms – number portability, all of that kind of stuff, and I am always keen on directly addressing these entry barriers, by regulatory policy. That is almost the most important thing for a regulator to do when he is embarking on a competition strategy. But I would tackle them directly and not indirectly by means of subsidised access prices, or as I suggested later high retail prices imposed on the incumbent.
Q Would it be a possible comment, say, if you tackle entry barrier properly then the competition problem will solve itself? A. So the ECPR in that case would be the right policy. This struck me this morning, so going back a bit – in telecoms we had a very bold attempt at entry assistance, Mercury was the one entrant allowed into compete against BT. It faced a myriad of entry barriers. It had a long delayed process of getting access to BT's network. Its customers had to dial an extra 26 digits, or something like that to use its telephones.
Q And it did not really work? A. But it was given very generous access terms, so I would argue that that is not the way to do it. You should tackle things like delayed interconnection, that is a terrible thing – and other things. So that would be my approach to these things, which is why I sound a bit lukewarm about using access prices to subsidise entry once you have tackled these other ----

Q Yes, I do not think anyone at the moment is suggesting there should be a subsidy? A. No, but below access price is below the ECPR I would call a subsidy in this context.
Q I see, right. A. Because otherwise it is the efficient outcome.
THE PRESIDENT: I do not know how long you are going to be, Mr. Anderson, we might take our afternoon break at some point.
MR. ANDERSON: I will be 15 minutes.
THE PRESIDENT: Well I think if you do not mind we will rise and come back in five minutes.
(Short break)
MR. ANDERSON: Can I just ask you to turn to p.4 of Dr. Marshall's second report, Professor? You will see at the bottom of p.4, there is a couple of sentences beginning:

> "Against this perfect contestability benchmark without appropriate overall retail price regulation any productive efficiency gained in the competitive segment from the application of ECPR could be offset by inefficiency and mis-allegation of resources in the bottleneck facility, hence the need for efficient price regulation according to most proponents of ECPR."

Is that a statement that you agree with?
THE PRESIDENT: Take your time, Professor. A. I think this is about efficiency in the bottleneck facility, so I guess this is saying that the ECPR will lead to inefficiency in the monopolised segment, I think that is my reading of it.
MR. ANDERSON: On the basis of that reading of it? A. Yes. I am not sure I would agree with that, that the access price is equal to the retail price minus the avoided costs. It does not say anything about the actual costs in the bottleneck segment, okay, so that means it is a bit like a pure price cap form of regulation. Any cost saving that the incumbent makes in the bottleneck segment is kept by it because it is not passed on to competitors and therefore I would say that the ECPR would give good efficiency incentives to the incumbent where, for instance a cost plus kind of approach to access pricing would give you possibly a bad incentive for your costs of providing access because they just have to be passed on directly to your competitors.
THE PRESIDENT: But your line of reasoning is not the original line that Baumol and Willig were following, i.e. that there is a contestability standard and if you have got that that is a benchmark and that assuming that you have also got retail price regulation then ECPR gives you the productive efficiency gain. If you have not got those things what you might perhaps gain through productive efficiency is lost elsewhere in the system because of inefficiency

and mis-allocation in the bottleneck. That was their original argument as I understand it. A. Inefficiency in a bottleneck?

Q Well inefficiency and mis-allocation of resources will happen unless you, as it were, supplement ECPR by making two other assumptions. One is that you have a contestable market and the other is that you have some price regulation – as I understood the original theory, but I may have misunderstood it so I am in everybody's hands to put me right on that. A. Well I do not see how retail price regulation has an impact particularly on efficiency incentives on the bottleneck segment, but I would be on shaky ground – it maybe something that we can ask Dr. Marshall. But I stand by my point which is that ECPR does give good incentives for efficient resource allocation in the bottleneck facility.

Q Yes, but if I have understood it, you get to that point by a route that is not exactly the same as the original route by which Professor Baumol got there? A. Well it is a divorce between the price that the incumbent can charge for access and its costs. That is the thing that gives you good efficiency incentives, and that is what happens with ECPR, but it does not happen with a cost plus form of access price regulation.

Q Well we will come back to that? A. Sure.

MR. ANDERSON: One of the points you made in your original response to Dr. Marshall's first report was that she had not come up with an alternative pricing model to ECPR. She had directed criticisms at the appropriateness of ECPR, and then if we turn to p.15 of Dr. Marshall's second report:

> "Professor Armstrong asks what I would recommend if the Regulator chooses not to adopt the cost based pricing rule I have proposed. The answer is that given the very significant entry barriers already facing would be competitors in the water industry in England and Wales I consider access charges based on LRMC would be preferable to ECPR."

Do you have any observations you would like to make on that basis – long run marginal cost basis as being a preferable substitute to the efficient cost pricing rule? A. No, I am happy to admit that I agree with a lot of what Dr. Marshall says. It is probably apparent in this rather polarised exchanged that we have had.

THE PRESIDENT: No, well it is very helpful for the Tribunal to know where there is agreement. A. But this is one place where there would be a disagreement. So this paragraph that has just been read out, where it is admitted that the regulated prices are different from costs. That is what she says, the regulator chooses not to adopt the cost base pricing principle. In that case she would recommend pricing based on marginal cost of access rather than the ECPR and the argument is that because of all the other entry barriers that are out there you want a subsidy from the ECPR level in order to help the entrant overcome those still existing entry barriers that have not been able to have been tackled directly. So that is the argument and, as I have already said, if I was the regulator I would do my best to make sure that those entry barriers had been tackled directly, in which case this argument does not ---- If you can do that, this argument does not hold. But, also, it seems a bit ad hoc, this regulation – the idea that the difference between the ECPR and marginal cost is somehow comparable to the entry barriers that the entrant faces ---- I cannot see any reason why that is something that you could argue. Why not have a policy that says something like 'half the ECPR'? ---- That will be another subsidy. Why not offer it for free? There is no economic logic for why you would have long-run marginal costs as the basis for access pricing in this context, I would say.

THE PRESIDENT: Yes. We will come back to that later, I am sure. But, no economic logic for LRMC. A. In this context where prices differ from cost.

MR. ANDERSON: I would like now, if I could, to ask you a couple of questions about the relationship between ECPR and margin squeeze which is a topic Dr. Marshall addresses on p.17, two-thirds of the way down the page after quoting the definition from the European Commission. This is the definition quoted by you: "Even on this definition, there are doubts about whether ECPR would pass a price squeeze test, because if the avoided costs calculation does not cover the fixed costs associated with economies of scale for the downstream operations, then the incumbent's downstream operation will be making losses". Can you help the Tribunal with your views on whether you agree with that, or disagree, or ---- any other observations? A. I do not know if the phrase even on this definition ---- I mean, this is a fairly standard definition, I think. I do not necessarily agree with that hint, but other than that I probably would agree with that. It relates to my earlier point about the case when the fixed costs are not entirely eliminated ----

THE PRESIDENT: So, you would have to average them across, making allowance for the fixed costs. A. That would bring the ECPR in its pure form directly in line with this definition of a margin squeeze that has been quoted. So, I have no idea what the difference is between those two policies. One would hope that given that it is a competitive market we are trying to set up, there are not vast amounts of fixed costs floating around here. Well, I would certainly agree with what Dr. Marshall says, and this is a point made in a paper by Paul Grout, which has been floating around in these discussions as well.

MR. ANDERSON: Over the page, at p.18, Dr. Marshall makes the point that you quote a section in which you omit the middle sentence that she set out between the two that you do quote. The missing sentence is, "In such a situation, alternative carriers normally complain that their margins are being squeezed because this spread is too narrow for them to compete with the incumbent". She then says your next sentence – the sentence that you quoted – "Provided access and retail services are strictly comparable, a situation where a margin squeeze occurs when the incumbent's price of access combined with his downstream costs are high, then his corresponding retail price". She says that the last sentence does not make sense without the middle sentence, and that it immediately places a question mark over whether ECPR would pass this margin squeeze test. So, do you have any observation you would like to make on what she is saying there?

THE PRESIDENT: You need to read down to the bottom of the page, and probably just over the page, to the end of the paragraph. A. Again, there is a slight hint that I have been selective in my quotations. I would just argue that the omitted sentence is irrelevant for the point I was trying to make. There is a margin squeeze. A small margin obviously in that situation – and in many other situations where there is not a margin squeeze – entrants complain their margins are too low. So, I just ignored that sentence, and I do not agree that the next sentence does not make any sense without that second omitted sentence. I do not see that why there is a big deal being made at this point. Since we are here, I do not quite understand why this places a question mark over the ECPR. This is the bottom paragraph on p.18 and turning over the page. Apparently it is something to do with the fact that the incumbent does not have to compete for custom and it makes it a not strictly comparable service, or something like that.

Q I think what is being said - and as I have tried to understand it – is that the incumbent is, in a sense ---- because the incumbent is, in a sense, indemnified by the entrant, and because whatever happens the incumbent remains financially insulated from the effect of market forces, that that situation is not the situation facing the typical entrant who has to earn a rate of return, and survive in the market place like anyone would in a competitive market. A. But I don't see why it makes the ECPR fail the margin squeeze test. The same point could be made about the margin squeeze test, I would have thought, which, if the incumbent sets the margin equal to this level, it is indifferent about whether entry or exit takes place or not ----- That is not the direct question, so maybe I should -----

MR. ANDERSON: Further down, just following on p.19, "Professor Armstrong goes on to say that if the incumbent incurs an extra cost when it sells the input to a third party compared to when it supplies itself with the input, there is a debate about whether or not those extra costs should be included in the calculation of the relevant margin". She says there is no debate at all, and that it is clear that the costs should be excluded from the access charge, and therefore by implication should be included in the calculation of the relevant margin if they are charged to competitors. Do you have any observation on what Dr. Marshall says there?

A. Well, I don't feel too strongly. I don't know how important these extra costs really are in practice. This is the idea that it is more costly for an incumbent to sell the access product to a third party than it is to supply itself. The debate is whether those extra costs should be passed on to the entrant or absorbed by the incumbent. The ECPR logic would tell you that they should be passed on to the entrant because that is the way that it guarantees when entry is efficient, because those extra costs are real. Assume we have dealt with any difficulty about artificially raised barriers to entry by the incumbent. These are actual costs incurred. The ECPR would suggest these costs should be passed on to the entrant to give it the correct price signal about whether to come into the market, or not, whereas the margin squeeze test would probably say that they should be absorbed by the incumbent. In fact, it is a very similar point to this one about the fixed costs of the incumbent, and whether they should be passed on or not. It is the same flavour ---- the same flavour to it. If the question is about whether there is a debate or not, I guess I am happy to accept there is a debate. I am not sure. The case which this paper refers to is a Dutch telecom case where the Dutch telecom regulator (this is from memory) agreed to pass on a fraction of these costs to the entrant which suggested to my mind that he was not sure whether they should be passed on or not ---- That is what that case was about. I am happy to concede. I do not feel strongly about that particular point.

Q Finally, and without asking you now to read it, because I know you have, there is a debate in the next few pages of Dr. Marshall's report on the relationship between ECPR and predatory pricing. Are there any observations ---- You can glance through it by all means.

A. No. No. I remember. This is some five/six pages, I think, from p.21 onwards. I guess I didn't see where predation really came into this argument. So, I was not sure why this very long discussion was included. I do not know if predation is part of this case. I am not that familiar with the details of the case, but my impression about margin squeeze cases is that they are by no means necessarily predatory in nature. It is perfectly possible for an incumbent to set a low margin **ad infinitum** with the intent not to exclude, but just to extract as much as it can from a highly efficient entrant. So, I do not think there is any connection between margin squeeze tests and predatory pricing in this context. That is all I want to say on that.

Q Thank you, Professor Armstrong.

THE PRESIDENT: There may be some questions on behalf of the Appellants.

Cross-examined by Mr. THOMPSON

Q Professor Armstrong, I hope that they are questions where we can reach a degree of consensus, as has been debated already in some of your answers today – the relationship between … for example, and the ECPR. I would like to take you by reference to your report, if I may, first of all in your first report at p.3 ---- You give a broad overview of the issues, and you make the same point, I think, twice. You say towards the top of the page, "An important point is the promotion of competitive pressure in one layer of the production process cannot be expected to have a significant impact on incentives for productivity gains in the monopolised layer", and then further down you say, "It is unrealistic to expect that the promotion of competition in one layer can be used to shake up the incumbent's operations in the monopolised layers". You say that as a sort of Olympian statement, but I am just wondering what sort of status you think that statement has – whether it is a question of fact, or self-evident, or what you are actually saying about that. A. Well, yes, I do not want to sound Olympian. It is only one point, as you are right to point out. I guess it was just a subjective, but close to common-sense, point of view that given that the incumbent is regulated it has ---- It is adequately regulated. It has got strong incentives to reduce its costs in the monopolised layer already. The competition is not there to show new ways of producing in the monopolised layer, or anything like that that competition normally brings into things. So, I do not see where the feedback is from competition in one layer to productivity gains in the other layer.

Q I think you will be aware that there have been various statements. We looked with Mr. Hope yesterday – I think you were here – at the views of the CCCWG as an eminent persons' group. There were also the views of DEFRA expressed about the benefits of competition. Do you think these assertions are consistent with those views? A. They talked about the benefit of competition to productivity gains in the monopolised layer, did they?

THE PRESIDENT: I think you had better put what it is they have said, and see whether Professor Armstrong agrees.

MR. THOMPSON: I do not know if Mr. Hope's statement can be handed up. A. I do not know my way round these files very well.

THE PRESIDENT: You are not expected to. You are simply here to help us. (Handed) At p.5 we have a quote from the CCCWG view. This is Mr. Hope's statement. It says, 'The witness statement of Paul Andrew Hope' on the front. A. Yes, I understand how it works. What page? Sorry.

Q If you turn to p.5, there is a reference towards the top, para. 15, the last italicised paragraph ----- "The accounting costs on the LRMC approach … lower access prices than ECPR making entry more likely. In some cases such entry might result in a temporary increase in total costs. New entrants, however, could bring …. approaches to service delivery, reducing costs over time. Moreover, the threat of new entry creates an additional and continuing incentive for incumbent companies to reduce their costs". You are saying there is no inconsistency with your view there. A. Well, my reading of that is that it is talking about head-to-head competition being productivity gain.

Q I understand that. The other passage I was thinking of was the quotation from the DEFRA paper at paras. 28 and 29. The first sentence, I think, is referred to in the interim judgment. "I anticipate the references to benefits to customers through keener prices, better services and improved efficiencies -----" Your point is that you would accept that in general, but not necessarily between the downstream and the upstream market. A. My sense is that you cannot get around the fact that you have got a monopoly there, with all the inefficiencies that come with that. Competition elsewhere does not help that.

Q Would you accept that it is really a question of fact whether a particular industry's downstream competition might stimulate upstream efficiency, or do you think it is just out of the question? A. No, I don't think it s out of the question. I just don't think it is very ---- I think I said ---- I say it cannot be expected to have significant impact on incentives. So, it is not out of the question.

Q If there were particular forms of upstream inefficiency - and there are some examples in the papers, for example, a quarter of the water produced leaking away – do you think a dynamic entry at the downstream level might increase incentives by a vertical distributor to become more efficient? A. I guess I can't see why particularly.

Q The second point I would like to put to you is at p.4. I think it is something that was touched on by Mr. Anderson ---- A. Of my paper?

Q Your paper. I am sorry. We have finished with Mr. Hope. You say at the top of the page that ECPR is intended to encourage efficient entry and to discourage inefficient entry;

likewise, your general conclusion at p.15 ---- You argued that ECPR is appropriate when the main goal is to ensure efficient entry into the industry, and then subject to a number of conditions. Just going back to p.4, and the first question of encouraging efficient entry ---- We have looked at the concerns of the CCCWG. Would you accept that in general ECPR is the highest access price of the normal options that are put on the table - normally, it generates the highest access price? A. If retail price is below cost, obviously it will be below the cost-based access pricing system. Retail prices are above cost. It will be above cost based access pricing.
Q In general, in practice, it seems to work out that it is almost always the highest. Would you accept that? A. I'm not sure I would go along with that. I would need a bit more evidence. It is at the upper end. That would be my ----
Q So, to that extent, you could not say it encouraged any sort of entry – efficient or otherwise – because it tends to discourage it because it is the highest price. A. I do not know the difference between making entry profitable and ---- If you have got an entrant who is efficient, it will find it profitable to enter. It does not do more than that.
Q But if you raised the access price, normally that would discourage entry, efficient or otherwise, would it not? A. It would not discourage efficient entry, no? Why would it? Efficient entry by definition is entry that is profitable under the ECPR.
Q Presumably it is less profitable if you are paying a higher price? A. That is true.
Q To that extent it would discourage you? A. It would reduce their profits, yes.
Q Make it less attractive? A. Yes.
Q That is what I mean by "discourage" . A. But an efficient entrant would find it profitable to enter.
Q Yes, but you said that is the main aim of it and I am simply saying that insofar as it generates a higher access price it discourages all entry – inefficient or efficient? A. It raises the threshold of entry to include only the efficient firms.
Q The second point is a point that was debated with the Tribunal and with Mr. Anderson, that if there are significant fixed costs then it will deter efficient entry, will it not? A. Sorry, just tell me where we are here?
Q I am still on your assertion that it will encourage efficient entry, and I am simply putting to you that if there are significant fixed costs of entry then the effect of ECPR or indeed fixed costs of the incumbent ----
THE PRESIDENT: Which is it? Where are we in this paper at the moment?
MR. THOMPSON: At the top of p.4, as to whether or not it will encourage efficient entry.

THE PRESIDENT: Right. And the proposition about fixed costs is relating to the entrant's costs or the incumbent's costs?

MR. THOMPSON: I think it is the double costs' point.

THE PRESIDENT: The double costs' point, right.

MR. THOMPSON: Insofar as the entrant has significant fixed costs and must also bear significant fixed costs which are not discounted by ECPR, then it will deter entry, even if that entry would be efficient, will it not? A. No, the ECPR would allow profitable entry. If the fixed costs are large that would suggest that industry supply is unlikely to be best done by this entrant coming into the market, so it is efficient entry. Efficient entry is allowed and inefficient entry is discouraged and you are right to say that substantial fixed costs on the part of the entrant will make it less likely that entry is efficient.

Q The entrant might yet be more efficient than the incumbent, but would still be deterred, or is that not right? A. This is what I was talking about, the difference between efficient entry and efficient firms.

Q So when you say it will encourage efficient entry what you mean is that it will encourage, or it will not discourage entry that leads to overall improvements in efficiency? A. That is right, that is what I mean by efficient entry.

Q But if the entrant is more efficient he may still be discouraged if the effect of fixed costs is to increase the overall costs? A. Definitely.

THE PRESIDENT: It may discourage an efficient entrant but you take that on the chin because if ECPR is not observed, the entry of this efficient entrant is, in fact, inefficient? A. Suppose Welsh Water is not the most efficient company out there ----

Q Purely hypothetically! A. Purely hypothetically – there is another one out there, we would not suggest that other firm would construct a whole new network just because it was so-called the more efficient firm, given that the network is already in there. It would be efficient just to keep ---

Q I think what we are interested in is not another firm that is running a network because, by definition, there is a network monopoly, but another firm that can do things in sectors that are capable of seeing some competition better than Dŵr Cymru can, or in a way that would put pressure on the incumbent's costs, and how easy it is for an entrant to get into the potentially competitive sectors that we are interested in.

MR. THOMPSON: The third possibility, supposing entry takes place, is it not still the position that the entrant will be bearing these double fixed costs so that competition between the entrant and the incumbent will be skewed in favour of the incumbent, or is that a matter that

is indifferent to you? A. There is not obviously competition going on in this – we have a regulated incumbent here. An entrant sees the retail prices, decides to come in, I would not call that competition exactly, 'entry' you call it.
Q The hyper-efficient firm, notwithstanding these double fixed costs that it is bearing, enters and all I am putting to you is that he enters, as it were, carrying a pack on his back and, to that extent, competition is skewed between the incumbent and the hyper-efficient entrant. Would you accept that? A. No, I always think of competition being skewed meaning that there is productive inefficiency, that is what I think when competition is skewed that is what happens when the ----
Q So you do not regard it as unfair for one competitor to effectively pay the other competitor's costs? A. It is contributing to these fixed costs that I have talked about, things like environmental obligations. It is like saying 'Why should one customer not be obliged to contribute to these fixed costs?' It is another customer.
Q Well I am not sure that a competitor is necessarily in the same position as a customer, but ---- A. Well the ECPR logic is that it is another customer and should contribute to the fixed costs in the same way that customers do.
Q Yes, I agree that we are concerned with the ECPR logic and, indeed, what might be in, as it were, the pack that has to be borne, and we will come to that in a moment. The next point, can we look at p.7, and this is your very helpful model which I think, so far as it goes, is an elegant statement of ECPR, which I think, as I understand it, Dr. Marshall is happy to accept, indeed adopt, and no doubt would be an excellent thing for a textbook – maybe it is in one, I do not know – but the point I am concerned with is at the bottom of the page. It is our old friend "Fixed costs", because in the formula you have the downstream costs multiplied by the quantity and price, is that right? A. Yes.
Q And then you add on "F"? A. Yes.
Q Which is the fixed costs. So we come back to this question, if "F" is a big number, and as I understand it, you include in "F" not only formal fixed costs, but also barriers to entry, then there will be quite a substantial burden implied here, is that not right? A. That is true. If you remember I talked about these three kinds of fixed costs, and the second one was where the incumbents did have a fixed cost in this market, which was avoided if there was entry into this market. If you adjusted the equation to take account of that, which is not in there, as you probably spotted, then it would make it that there would be another "F" on the right hand side of that equation1.
Q For your purposes those are avoided ---- A. Avoided, yes

Q --- for the purpose of ECPRs they fall away. A. It would reduce the ECPR charge if you had those fixed costs in there.
Q Or treat it as avoided costs because the definition of ECPR is avoided? A. Yes, that is right but if both firms have these fixed costs then there is a much more symmetric competition between the two firms.
Q But if there are substantial fixed costs, and also substantial barriers to entry which you equate to fixed costs, I think, then that could be a very substantial impediment to entry, is that right? A. Well remember that I would try and tackle the barriers to entry directly, so there would be the residual barriers to entry included in that, so I am essentially thinking of normal fixed costs, fixed costs are normally a big barrier to entry.
Q You will appreciate that Dr. Marshall raises the point that the ECPR itself generates significant barriers to entry in terms of the need for negotiation, perpetual regulation, monitoring of avoided costs, etc., things of that kind. I do not know whether you accept that or not. If you do accept it, then they would feed into the "F" as well, is that right? A. Can I do not accept that?
Q Yes, certainly.
THE PRESIDENT: You are fully entitled, absolutely.
MR. THOMPSON: You do not accept the ECPR involves such ---- A. The thing is you gave a list of delays to negotiations ----
THE PRESIDENT: Charges for calculating what the excess charge is going to be, that sort of thing? A. I do not think that is associated with ECPR particularly. I think of that as any kind of negotiated access price.
MR. THOMPSON: I agree they are negotiated but supposing there were, as it were, a tariff and you knew what it was going to be and you simply rang up an said "I want to access" and they say "Well that will be 15p" then that would be quicker, would it not? A. Yes.
Q Than the exercise we have had over the last 10 years? A. I have never thought of there being a significant difference between cost based access pricing and ECPR in this context, but if there is then it would be an extra thing against it.
Q And that would potentially go into the "F" in your formula? A. There is a lot of chain of hypotheticals going on here.
Q Yes. But it follows, and I think you say it yourself, that if the "F" figure is significant, then the entrant will need to be substantially more efficient than the incumbent for entry to be profitable, that is right, is it not? A. I do not think I say that, do I?

Q If you look at p.14 I think you are making a different point but I think in fact that is the substance of what you say at p.14, in the middle paragraph? A. Well, no, I say dramatically lower marginal costs. Efficiency is combination of fixed and marginal costs.
Q I am sorry: "If the entrant has significant fixed costs of entry he will have to have dramatically lower marginal costs than the incumbent if it is to be efficient to have this entry." A. Yes.
Q Now, I think you take that, as it were, as a virtue, but viewed from the perspective of dynamic efficiency or, indeed, the entrant, it is not a virtue? A. I am not sure why you think the balance between fixed and marginal costs is so important at this point. It is the overall costs which are important.
THE PRESIDENT: If that sentence read: "The entrant would have to have dramatically lower costs than the incumbent …" A. Marginal costs, yes.
Q But I thought you said it was the overall costs? A. It has two things. In these simple little models it has two things. It has marginal costs and it has fixed costs.
Q This is the entrant? A. The entrant. If the fixed costs are big for entry to be efficient it would have to have rather low marginal costs to make the total cost smaller than the incumbent's. It is the "some" that matters. It is not that the firm has to be much more efficient to enter if it has fixed costs, it is the same principle going through it all.
MR. THOMPSON: The point is if there are significant barriers to entry, because they are included in the "F", the entrant will have to have what do you call it – 'dramatically lower marginal costs' if it is to be efficient and from the entrant's point of view profitable to enter. Is that right? A. To the extent that the barriers to entry are not tackled directly.
Q Another aspect of this relative to the question of dynamic efficiency is an issue of product innovation comes up both in your report and Dr. Marshall's. Would you accept that product innovation, as a form of dynamic efficiency can itself be expensive and therefore costly for an entrant, even if it would lead to efficiencies in the long term. Would you accept that? A. Sure, yes.
Q So another possible impact would be to, as it were, hamper product innovation because it would be completely unaffordable on this basis. Is that not right? A. It will be profitable later but not early?
Q Yes. A. Well I am sure these entrants could all discount quite happily and borrow if they need to. I do not see why the flow of income is so important at this point.
Q Yes, so you are relaxed about that? In theory it is a problem, but you think they would simply go to their bank? A. Yes.

Q I see the time, Sir, I am not sure how long you want to go on?
THE PRESIDENT: How long do you anticipate being, Mr. Thompson?
MR. THOMPSON: More than five minutes, Sir. I am not sure how long you want to sit.
THE PRESIDENT: More than 15 minutes? We are rather in your hands, because I do not think we are going to finish Professor Armstrong today.
MR. THOMPSON: Well that is really the question. Do you want to stop at a particular time?
THE PRESIDENT: Time for drawing stumps is a bit of a moving feast, but it is generally between quarter past and half past depending where we are on any particular day. Is there any prospect of finishing this witness today as between you and Mr. O'Reilly and any re-examination there may be?
MR. THOMPSON: We might finish by 5 I should think, but I do not know whether the Tribunal has any further questions.
THE PRESIDENT: I think we probably do, actually – or we might do, depending on how the cross-examination goes.
MR. THOMPSON: Shall I keep going for a bit and see if I can finish my ----
THE PRESIDENT: I suggest we carry on until about half past four and have another look.
MR. ANDERSON: I wonder whether we could just inquire from Professor Armstrong whether he is availability for Monday has changed since he said he was available both on Thursday and Monday?
THE PRESIDENT: Yes, how are you placed on Monday, Professor Armstrong? A. Because it has been so long since I hve been to my office (Laughter)
Q Y you have no idea what has happened in the meantime. A. I have something on Monday, but presumably at the worst it would be over by lunch?
Q I think so, yes. A. I am at your disposal but if it is finished by lunch then I can re-arrange.
Q That is very kind of you. Yes, let us press on for the time being, Mr. Thompson.
MR. THOMPSON: Yes. The next topic I had was the question of ECPR as a partial rule, you remember ---- A. Yes.
Q -- you said that, for that purpose and I do it with some nervousness, I have a very simple little table which I would like to hand up, which I hope will focus the debate. (Document handed to the Tribunal and to the witness) You will recall at p.9 you start on the criticisms of the ECPR with the fact that it is what might be termed only a partial rule and by a partial rule you mean that the incumbent's retail prices are taken as being already determined when the access prices are chosen. If I can just put some points to you and see if you can

agree with them. ECPR focuses on the downstream avoided costs – I think I put 'avoidable' which may be wrong, but I think we know what we are talking about? A. Yes.
Q It does not focus on either the downstream fixed costs or the upstream costs at all. You would accept that? A. The ECPR is this?
Q Yes. A. When you say it does not focus on the downstream fixed costs what do you mean?
Q It does not take any account of downstream fixed costs unless, as you say, they can be avoided, in which case they shift across into the avoidable camp. A. Yes.
Q Whereas Chapter II, as I see it, has essentially all four boxes on the go. There could be excessive pricing in the upstream market either in relation to fixed or avoidable costs, it is simply the whole lot and margin squeeze does not relate purely to avoidable costs, but looks at the whole lot too. Would you agree with that? A. Not particularly, no. I would say it relates to the avoidable costs of the incumbent.
Q But we have looked at the tests and I thought you did accept that there is an issue as between ECPR and margin squeeze, precisely in relation to the fixed costs? A. You are talking about these extra costs of supply to a third party, that kind of thing, is that what you were thinking of?
Q Well what I am thinking about is that the classical test for a margin squeeze is whether the upstream incumbent could trade at the margin and that would include covering ---- A. Yes, okay, yes I accepted that earlier on.
Q whereas ECPR is not focused on that question, it is simply focused on the avoidable or avoided costs and so to that extent there is a fault line between the two of them, that is my little box. A. Okay.
Q To that extent you would agree and you think there needs to be an adjustment to ECPR if it is to be consistent with ----- A. In these cases where there are significant fixed costs in the retail sector, yes.
Q As a theory I think it would apply even if the fixed costs were only upon you, would they not? A. In theory, ECPR does not cover the fixed costs. It is a question of how much it is.
Q I put in the bracket about predation because as I understand the case law on predation, which you will recall, I suspect, from cases such as AXA (which I suspect has come across your radar at some point), there is a presumption of predation below available costs in the case law. Then it is an open question between available and total costs. So, ECPR coincides with the borderline between assumed predation and non-predation ---- not assumed

predation on the downstream market. That is correct, is it not? I do not understand how you get predation into the ECPR type situation. The test is similar, I agree.

Q If you imagine the incumbent present on the downstream market ----- A. … (overspeaking) … integrated incumbent ---- and therefore offering its prices at the ECPR price, as I understand it, if there is any mis-allocation there, and so the avoided costs are understated, then the incumbent the vertically integrated incumbent – will in fact be competing at a predatory price. A. It is nothing to do with trying to drive out the entry. It is not a predatory problem.

Q I am just putting to you that on the law, the price that it would be competing at on the downstream market would in fact be a presumptively predatory price. That is correct, is it not? A. The test is related, yes.

Q So, the effect of all this is that the ECPR does not cast any light on whether or not there is excessive pricing on the upstream market. That is correct, is it not? A. On the monopolised market? No, I certainly wouldn't agree with that. How does that come from these various things?

Q I thought you agreed earlier -----

THE PRESIDENT: Which is the upstream market that we are referring to here?

MR. THOMPSON: The monopolised market. As I understand it – and as I think you have said on a number of occasions, ECPR simply regulates the margin between the retail price, whatever it is, and the access price, whatever it is. A. That's right. That's right.

Q But, so far as ECPR is concerned, they could be any number – high or low. A. Oh, yes – just like the margin squeeze test, that's right.

Q So ECPR gives you no bead on whether or not the monopoly price upstream … or not, does it? A. I don't know what the law is about what excessive pricing would be in that context. A. Well, it is a relationship between the price on the upstream market and the economic value of what is done, which normally equates to costs. So, ECPR casts no light on that question, does it? A. No. That's right. I agree with that.

THE PRESIDENT: Sorry, Mr. Thompson. What market are you referring to as the upstream market here?

MR. THOMPSON: The monopolised market.

THE PRESIDENT: i.e.?

MR. THOMPSON: Well, we are at the level of theory here, but the monopolised market ---- the network ---- the distribution network. (To the witness): I do not think it makes any difference if you put another ECPR box above. I think it simply complicates -----

THE PRESIDENT: I see. So, it does not tell you whether the price charged to the network is excessive or not, because ----
MR. THOMPSON: It simply takes whatever that is ----
THE PRESIDENT: -- as a given.
MR. THOMPSON: Or, rather, generates that simply as the margin. (To the witness): The other feature is that if one is to monitor excessive pricing which is part of Chapter 2, then you need regulation directly of that – or, at least application of Chapter 2 directly, do you not? A. This is straying outside my area. There is a big tension here.
Q I think it is a question of fact. A. Maybe say it again then. Say it again.,
Q Since ECPR does not do that job, then it has to be regulated either by competition law or by direct regulation. That is correct, is it not? A. (After a pause): This is to prevent abuse of entrants, is it? … (overspeaking) … at the margin.
Q It merely flows from the fact of you calling ECPR a partial rule. I am simply trying to spell out what we agree about. A. No, it doesn't control the retail price.
Q It does not control the monopoly price of the network. A. No. It is designed to control the margin, yes. That is why you need retail price regulation on top of that.
Q Indeed. Also, it requires intensive regulation of the avoidable box to ensure that the ECPR margin does not shrink away. That is right, is it not? A. A costs shifting type of thing?
Q Indeed. A. Yes.
Q So, it needs close scrutiny as the bottom right-hand box to ensure that ECPR does not become too small by mis-allocation of the avoidable costs. A. Yes, just like the margin squeeze test.
Q I have got one more topic which I think could be conveniently taken? If you look at your second report, p.2, towards the top of the page you say this: "Identifying cross-subsidies and passing these through to access charges is precisely what the ECPR does". Now, I have no problem with the second half of that sentence, but I am interested in the first. We agree that cross-subsidies are passed through to access charges, but is it right to say that they are identified? A. Yes. A cross-subsidy at the price/cost margin – the margin between price and marginal cost.
Q But how are they identified? A. You are worried about the profit element rather than -----
Q We can go back to my box and see what might go into the upstream box, consistently with ECPR. Would you accept, for example, that costs inefficiencies on the upstream market

would also be passed through? A. No. It is price minus avoided costs so that inefficiencies in the upstream bit are not passed through.
Q Yes. But, if the price includes, for example, costs inefficiencies on an upstream market, they would be passed through, would they not? A. Remember, it is the price. That is all. I don't know how the price is determined.
Q Exactly. Also, fixed costs inefficiencies on the downstream market. They would be passed through as well, would they not? A. Fixed cost inefficiencies?
Q Yes. Supposing the incumbent was in fact inefficient on the downstream market, ECPR would say, "Well, never mind" and would just pass them through, would it not? A. Yes, it would pass those on.
Q Costs mis-allocations between fixed and avoidable costs. They would be passed through too, would they not?
Q Costs mis-allocations between fixed and avoidable costs – they would be passed through too. A. Yes. Just like in costs based access pricing, it would, yes.
Q Costs mis-allocations between up and downstream markets would be passed through as well, would they not? A. Exactly the same.
Q And monopoly rents in relation to fixed costs on the downstream market would be passed through. A. Monopoly rents ---- Just say what you mean by that exactly.
Q Supposing the retail price includes a monopoly rent in relation to the fixed costs. A. Monopoly rent means what? Just so I know ----
Q I think you know what a monopoly rent is. A. No. In this segment is it price above marginal cost?
Q It is over-charging of whatever client, but based on the fact that you are a monopoly. That is crudely it. A. If you have got price cost margins that cover fixed costs, does that count as a monopoly rent, or not – just so I know? Or, is the overall profit excessive?
Q All I am saying is that if there are excessive prices deriving from the monopoly – which I think is probably a crude layman's understanding of what a monopoly rent is – they would be passed through, would they not? A. It is a big vague, but ----
Q And monopoly rents on the upstream market generally would be passed through. A. You mean cost inefficiencies?
Q Whatever. All those things, however defined, would be passed through, would they not? A. However defined -----
Q Inefficiencies and overcharging of all kinds are passed through. A. Well, remember, the regulator is controlling the price.

Q But as far as ECPR is concerned. A. The regulator's price is passed on to the entrant, that is right.
THE PRESIDENT: You look to the regulator to make sure that what one can loosely call monopoly prices do not happen. A. That is their job, yes.
Q That is their job – not the job of ECPR. A. It can't do that.
Q It cannot do that.
MR. THOMPSON: As I understand it, the principle virtue, and the one you identify here, is that it identifies cross-subsidies and passed them through, but … he does not identify them at all. It simply lumps them in with what might be a series of gross inefficiencies and overcharges as far as ECPR is concerned. That is true, is it not? A. There are a whole lot of ---- No, I wouldn't agree with that.
Q How does ECPR help you to identify the cross-subsidy as against monopoly rent or the gross inefficiency?
THE PRESIDENT: What was the sense in which you used the word 'identifying'? A. I guess I was being too simple-minded. I guess I was thinking that the cross-subsidy was to do with where one service has a price above cost; one has a service at a price below cost; and those margins are exactly the thing that adjust the price of access in the ECPR formula. So, they are passed on in that sense.
Q How does ECPR help you identify whether there is a cross-subsidy and which service is subsidising another service? Or does it? A. I suppose regulated policy says that all customers of a certain class should have the same price, for example. If local costs vary there is cross-subsidy from those various groups, and those are the things which adjust the cost based access pricing into the ECPR formula. So, it passes on those cross-subsidies. That is the sense in which I meant it. Maybe it was not very ----
Q We understand.
MR. THOMPSON: I think those are my questions, sir, unless there is anything else.
THE PRESIDENT: Have we got a reasonable chance of getting through Professor Armstrong by lunch on Monday? What do you think, Mr. O'Reilly?
REI: I will have just one or two questions – no more than ten minutes.
MR. VAJDA: I have two questions – two minutes.
MR. ANDERSON: That is at the moment only three questions. It seems a bit unfair to have him come back and re-arrange Monday morning if there are only a total of three questions left to put to him – unless, of course, the Tribunal has questions.
THE PRESIDENT: I was not sure if Mr. Thompson had finished his questions.

MR. THOMPSON: I have finished my questions for Professor Armstrong.

MR. ANDERSON: It may be the Tribunal has some questions they would wish to think about and put to him on Monday.

THE PRESIDENT: I think from the Tribunal's point of view. Point of view, it would be better for Professor Armstrong to come back on Monday because we would like to have a look at today's transcript and see what remains, if anything, if that is all right with you, but I think you can reasonably be assured to get away before lunch on Monday if that is all right. How are we getting on generally with the length of this case, if I may inquire?

MR. THOMPSON: By my estimation we are at the end of day 3.

THE PRESIDENT: Yes, that far I had got, I think. (Laughter).

MR. THOMPSON: We have done very much the bulk of the evidence. We will clearly finish the evidence on Monday.

THE PRESIDENT: Yes, I hope we can.

MR. THOMPSON: I would have thought that two days for submissions was sufficient, it may even be more than we need, but I am only speaking for myself.

THE PRESIDENT: So that is Tuesday and Wednesday, which is effectively 6th and 7th. Yes, does everyone share that view, roughly speaking? What is your position, Mr. Anderson, because we have not heard from you yet?

MR. ANDERSON: I have not done my opening (Laughter). I am including my opening as part of my closing, most of which I have written down -----

THE PRESIDENT: Yes, well we have a lot in writing now.

MR. ANDERSON: So what I would propose to be doing is merely augmenting what is rather generously called a 'skeleton' argument although it runs to 250 pages with what has arisen out of the last three days. So I would not expect that I would need more than half a day or so for that.

THE PRESIDENT: And you, Mr. Vajda?

MR. VAJDA: I am the same.

THE PRESIDENT: Half a day each.

MR. VAJDA: Yes, and I can proceed on the skeleton … and then deal with some points that have arisen in the course of the hearing, yes.

THE PRESIDENT: So it sounds as if two days is going to do it all right.

MR. VAJDA: I apologise, I keep on forgetting to switch this on and that means I cannot be on the transcript – which may not be a bad thing!

THE PRESIDENT: No, they have a magic way of retrieving the situation if people do not switch the mics. on apparently.

MR. THOMPSON: I do not know whether you want to give any guidance as to order of speeches. I have obviously made a short opening and I do not know whether you want me to go first again or whether I should simply have one go at the end to deal with whatever has arisen. I do not particularly commit to having my first go – I think in some ways it might just be easier for me to go at the end.

THE PRESIDENT: Well we have not had the full case yet of the Director and Dŵr Cymru and I am slightly inclined to think we ought to have that next.

MR. ANDERSON: Well provided I get an opportunity to respond to anything that was not included in his short opening in the light of what has arisen over the last three days I do not mind what order we go in, but he is the Appellant, and I would very much oppose the prospect of him having the last word, not having said anything as the Appellant in the light of all the evidence. So my firm view I that Mr. Thompson should go first, and then in the order that was originally envisaged, because the idea of the openings was simply to place the evidence in context and then he would present his case in the light of the evidence, we would respond as Respondents with the Interveners appearing after whichever party they intervened in support of, and then the Appellant having the final word. So that is what I would urge upon the Tribunal as still the appropriate course. We have put out a very full skeleton argument, it is not as if he will be taken by surprise at anything that is included in our case.

THE PRESIDENT: No, I simply wanted to make sure that we did not leave your shout until too late in the proceedings, in an effort to help you really to see whether you wanted to go any earlier than would probably normally be the case.

MR. ANDERSON: I am happy to go in the order that was originally envisaged.

THE PRESIDENT: Right, I think we will probably stick to that, Mr. Thompson.

MR. THOMPSON: So I will go first and if necessary briefly last.

THE PRESIDENT: There probably is a Reply, is there not, but let us proceed for the moment on that basis. So it is you, Mr. O'Reilly, Mr. Anderson, Mr. Vajda and Mr. Randolph in that order.

MR. THOMPSON: I do not know whether it would be possible to say that we will start that clean in Tuesday because there obviously may be developments on Monday and I think there will be plenty of time if we do it on that basis. Is that acceptable?

THE PRESIDENT: I think it unlikely that we are going to start before Tuesday, because we have still got Dr. Marshall to finish, and that will go at least the other side of lunch, and it is probably a good idea to regroup on the latter part of Monday afternoon if we still have some time, rather than start the speeches on Monday afternoon.

MR. THOMPSON: That would be my preference.

THE PRESIDENT: So we will start on Tuesday. But if we do that we have to get through everything in a day. Is that going to be feasible?

MR. THOMPSON: No, two days, Sir. I do not anticipate being more than half a day at the outside.

THE PRESIDENT: Okay, Tuesday and Wednesday.

MR. ANDERSON: Could I urge that maybe the Tribunal left that question open to see how much time we do have on Monday, because I do not believe I am going to be very long with Dr. Marshall – I am not sure about my colleagues, but I think there is a good chance we may finish both the experts by lunch time on Monday.

THE PRESIDENT: Well let us see where we are, so we can all reflect and see catch up, but let us see where we are

MR. O'REILLY: Sir, just on a very personal note, on Wednesday morning next I have a very long standing engagement at 10 o'clock in the Royal Courts of Justice which is scheduled for 20 minutes, so I am hoping I will be back for 10.30. If I am not can somebody sit in my place?

THE PRESIDENT: I am sure they can, yes, Mr. O'Reilly. Very well we will say 10.30 on Monday. Thank you very much.

(Adjourned until 10.30 a.m. on Monday, 5th June 2006)