



**Dispute referred under section 99 and Section 30A Water
Industry Act 1991**

**Requisition of off-site sewerage infrastructure for the
Brecon View Park development in Merthyr Tydfil**

Barratt Homes vs. Dŵr Cymru Welsh Water

Final Determination

January 2014

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1. Introduction

A. The purpose of this document

- 1.1 This determination concerns a dispute referred to the Water Services Regulation Authority (“**Ofwat**”) by Barratt Homes South Wales (“**Barratt Homes**”) under Section 99 and section 30A of the Water Industry Act 1991 (“**the Act**”) on 10 March 2009.
- 1.2 The dispute is between Barratt Homes and Dŵr Cymru Welsh Water (“**Dŵr Cymru**”) (together “**the Parties**”) as to the amount required to be paid in pursuance of an undertaking required by Dŵr Cymru, under Section 99(1)(a) of the Act. This undertaking was in connection with the provision of a public sewer requisitioned (“**the Sewer**”) for the Brecon View Park housing development in Merthyr Tydfil (“**the Site**”).
- 1.3 Barratt Homes has paid £1,177,915.15 as security to Dŵr Cymru in connection with the undertaking. Dŵr Cymru has now calculated the final amount it requires from Barratt Homes based on the actual costs it has incurred. Barratt Homes disputes that this final amount is at a level permitted pursuant to the Act on grounds that:
- the works undertaken were not necessary for the purposes of providing sewerage services to the Site and therefore the requirement to pay the amount requested by Dŵr Cymru is not reasonable; and
 - Barratt Homes should only pay for the costs reasonably incurred in providing the public sewer to serve the Site and not for costs associated with any additional capacity that is provided beyond the requirements of their requisition.
- 1.4 In addition Barratt Homes disputes Dŵr Cymru’s recovery of infrastructure charges under condition C of its licence, which it argues amounts to double recovery of costs.

- 1.5 Our investigation into the dispute between Barratt Homes and Dŵr Cymru has considered:
- a. Whether works were necessary to provide sewerage services to the Site and therefore whether Dŵr Cymru was permitted, under the Act, to require an undertaking and security from Barratt Homes; and
 - b. subject to point (a), whether the amount now required to be paid by Barratt Homes to Dŵr Cymru in pursuance of the undertaking is permitted under the Act and whether Dŵr Cymru is entitled to recover infrastructure charges in addition to that amount.
- 1.6 We issued a “**Stage 1 draft determination**” dealing with point ‘a’ above (whether works were necessary) to the Parties on 29th March 2012. We then issued a “**Stage 2 draft determination**” in respect of point ‘b’ above to the Parties on 8th November 2012. We also issued a “**draft determination appendix**” to the parties on 27th September 2013. The purpose of this was to add further detail to our Stage 2 draft determination on the final amounts to be paid and refunded in this case. The Parties responded to all of the draft determination documents we have issued in this case and we have now fully considered all of the information received from and representations made by the Parties, in order to issue this final determination document.
- 1.7 It should also be noted that in preparing this determination we have not sought to respond explicitly to every point made by the parties in the significant volume of documents and correspondence received. Nor do we seek in this document to summarise or deal explicitly with each individual point made by the parties. This determination refers only to the facts and information that we have considered are relevant to enable us to reach a decision based upon the provisions of the Act and our duties and to demonstrate the rationale for our decision.

B. Overview of our final determination

- 1.8 In reaching our decision we have considered whether there was reasonable evidence available to Dŵr Cymru to justify that works were necessary to provide drainage to the Site in accordance with section 98(1) of the Act. We consider that the onus is on sewerage undertakers to demonstrate that the works they are proposing to carry out or have carried out already are supported by robust and reliable evidence.
- 1.9 Our conclusion, as set out in detail in this determination, is that Dŵr Cymru has provided robust evidence to demonstrate that work was necessary. However, we consider that only 85% of the total costs incurred by Dŵr Cymru in providing the Sewer can be considered as costs reasonably incurred in meeting the requirements of the requisition. Therefore it is only these costs that Dŵr Cymru is entitled to recover from Barratt Homes pursuant to Section 99(1)(a) of the Act. This percentage is based on our view that the Sewer has more capacity than that which was necessary to provide sewerage services to the Site. We have therefore calculated the notional cost difference between the smallest size sewer that we believe could reasonably have been provided to meet the requirements of the Site and the actual sewer that was provided by Dŵr Cymru.
- 1.10 As a result of this apportionment, we determine that the actual costs reasonably incurred in meeting the requirements of the requisition total £958,574.40 (i.e. 85% of the total cost incurred of £1,127,734.59). Re-calculating the final amount now payable by Barratt Homes (in line with section 99(2) of the Act) to reflect this cost, we determine that the requisition charge which Barratt Homes should pay is £828,747.34. Details of our calculation are set out in Appendix 1 to this determination.
- 1.11 On the facts of this determination, our view is that interest is payable on Barratt Homes' security deposit, calculated in accordance with section 99(4) of the Act. Interest is payable on the amount of each instalment received by Dŵr Cymru from Barratt Homes, starting with the first instalment received in 2004. Interest should be paid for the period for which each security instalment was held by Dŵr Cymru until the Sewer was provided. In addition interest should be paid on the refund due for the period from the Sewer being provided until Dŵr Cymru has paid this refund. In calculating any interest due, Dŵr Cymru should apply interest rate(s) in accordance with [Ofwat's information notice on interest rates](#). The amount of any interest payable is for the Courts to determine, if Barratt Homes and Dŵr Cymru are unable to agree this amount.

1.12 Finally we have determined that in accordance with condition C of its licence and section 146 of the Act, Dŵr Cymru is entitled to recover sewerage infrastructure charges from Barratt Homes in addition to the amount required to be paid in pursuance of the undertaking described above. The costs the two charges are intended to recover should be distinct and we would expect Dŵr Cymru to ensure that there is no double recovery of costs.

2. The Legal Framework

2.1 Under the Act, where an owner or occupier of a premises requires drainage to its premises for domestic purposes, it can decide to either:

- (i) provide the infrastructure itself and have it adopted by the incumbent sewerage undertaker at an agreed date (self-lay), pursuant to Section 104 of the Act; or
- (ii) requisition the infrastructure, so that the sewerage undertaker provides the infrastructure required, pursuant to Section 98 of the Act.

2.2 In this case, the public sewer outside of the boundary of the site (off-site) was requisitioned by Barratt Homes, pursuant to Section 98 and the dispute which Ofwat has been requested to determine in this instance relates only to this requisitioned Sewer. As such this section focuses on the legal framework for requisitions and does not consider the self-lay provisions.

A. Requisitions

2.3 Under Section 98(2) of the Act, an owner or occupier of premises may request that a sewerage undertaker provides a public sewer to provide drainage to the premises. Under section 98(1) of the Act, subject to certain conditions being fulfilled¹ the sewerage undertaker is under a duty to provide the public sewer. For there to be a duty on the sewerage undertaker the public sewer must only be used for domestic purposes, as set out in section 98(5) of the Act. A request to provide a public sewer is referred to as a “**requisition**”.

2.4 In certain circumstances the works required to provide drainage to a site will involve enlarging the public sewer already in place as opposed to providing a completely new public sewer. In both scenarios a requisition can be used to have the required infrastructure provided to enable drainage to the site.

B. Requisition Charge

2.5 Section 99(2) of the Act provides that a sewerage undertaker can recover a contribution from the owner or occupier of the premises towards the costs that the sewerage undertaker reasonably incurs in providing a requisitioned public sewer.

¹ As set out in section 99 of the Act

2.6 As set out in section 99(2)(a) and Section 100A of the Act, this “**requisition charge**” is calculated by reference to the annual borrowing costs of a loan of the amount that would be required to cover the costs incurred in providing the public sewer and to the estimated revenue in respect of the drainage charges that would be payable (by sewerage customers) over each of the 12 years following provision of the public sewer. Where the estimated drainage charges payable exceeds the borrowing costs that would be incurred in providing the public sewer, the owner or occupier of the premises will not be required to make any payment. Where the borrowing costs exceed the drainage charges that would be payable, the sewerage undertaker is entitled to require the owner or occupier of the premises to pay the difference to the sewerage undertaker. This is called the “**relevant deficit**”.

2.7 The owner or occupier of the premises can choose to pay the requisition charge to the sewerage undertaker by either:

- a. paying the relevant deficit for each of the 12 years following provision of the public sewer; or
- b. paying a single lump sum payment combining these annual amounts, which is referred to as the discounted aggregate deficit (the “**DAD**” or “**statutory commuted sum**”) and would be payable following provision of the public sewer.

2.8 The requisition charge can only be requested once the public sewer has been provided. Prior to the provision of the public sewer, the sewerage undertaker is entitled, under Section 99(1)(b) of the Act, to request security from the owner or occupier of the premises.

2.9 Where any amount has been deposited by the owner or occupier of the premises with a sewerage undertaker as security, section 99(4) of the Act provides that the sewerage undertaker is required to pay interest to that person for the time this money is held as security. Interest rates should be applied in accordance with [Ofwat’s information notice on interest rates](#) and its [appendix 1](#).

C. Costs that may be included in calculating the requisition charge

2.10 Section 100(2) of the Act sets out the costs that a sewerage company may include in calculating the requisition charge. They are the “**costs reasonably incurred**” in providing the sewer.

2.11 In order to calculate the requisition charge for providing a water main, section 100(4) of the Act states that the costs reasonably incurred shall include:

- a. **Î Ĥ Y'Wĉghg'f YUgcbUV'm]bW ff YX'jb'df c j]X]b['gi W' cĤ Yf'di V']WgYk Yf g 'UbX'gi W' di a d]b['ghU]cbg'Ug'h]g'bYWWggUf mĤc'df c j]XY'jb' WĉbgYei YbW'cZĤ Y'df c j]g]cb'cZĤ Y'bYk 'gYk Yf'ĭ/'UbX'**
- b. **"gi W' df cdcf h]cb'f]ZUbnĤUg]g'f YUgcbUV'Y'cZĤ Y'Wĉghg'f YUgcbUV'mi]bW ff YX'jb'df c j]X]b['Ubmgi W' UXX]h]cbU'WUdUW]m]b'Ub'YUf']Yf' di V']WgYk Yf'Ug'ZJ'g'hc'VY'i gYX'jb'WĉbgYei YbW'cZĤ Y'df c j]g]cb'cZ Ĥ Y'bYk 'gYk Yf'ĭ"**

2.12 Section 100(2) of the Act specifically provides that costs incurred in the provision of additional capacity beyond that required by the requisition are not to be included in the costs reasonably incurred when calculating the requisition charge:

Î Ĥ Y'Ubbi U'Vcffck]b['Wĉghg'cZU'cUb'cZĤ Y'Ua ci bhfYei]f YX'Zĉf'Ĥ Y' df c j]g]cb'cZU'di V']WgYk Yf]g'h'Y'U [f Y[UĤ'Ua ci bhk \]W'k ci 'X'ZJ' Ĥc'VY'dU]X'jb'UbninYUf'VmĤ UmĤcZdUma Ybhg'cZ]bhYf Ygh'UbX'f YdUma Ybhg' cZUd]ĤU']ZUb'Ua ci bhYei U'hc'gc'a i W'cZĤ Y'Wĉghg'f YUgcbUV'mi]bW ff YX'jb'df c j]X]b['Ĥ UhgYk Yf'Ug'k Yf'Y'bc]bW ff YX'jb'Ĥ Y'df c j]g]cb' cZUXX]h]cbU'WUdUW]m]m' UX'VYYb'Vcffck YXĀ ĭ'

2.13 This is expanded on in section 100(6) of the Act, which states:

Î 5 bmf YZyf YbW'jb'Ĥ]g'gYW]cb'hc'Ĥ Y'df c j]g]cb'cZUXX]h]cbU'WUdUW]m]b' U'di V']WgYk Yf'df c j]XYX'jb'di fgi UbW'cZU'fYei]f Ya Ybĥi bXYf'Ubmĭ YbUW'a Ybh]g'U'f YZYf YbW'hc'gi W'k cf_g'WUf]YX'ci hcf'cĤ Yf'Ĥ]b[g' XcbY'jb'WĉbbYW]cb'k]Ĥ 'Ĥ Y'df c j]g]cb'cZĤ UhgYk Yf'Ug'Uf'Y'WUf]YX'ci Ĥi cf'XcbY'Zĉf'Ĥ Y'di fdcgY'cZYbUV'jb['Ĥ UhgYk Yf'hc'VY'i gYX'Zĉf'Ĥ Y' di fdcgYg'jb'UXX]h]cb'hc'Ĥ cgY'Zĉf'k \]W']h]g'bYWWggUf mĤc'df c j]XY'Ĥ Y' gYk Yf'jb'cf XYf'hc'Wĉa d'mĤ]Ĥ 'Ĥ Y'fYei]f Ya Ybĥi'"

2.14 Whilst the Act distinguishes in this way between costs reasonably incurred to provide the sewer requisitioned under section 98 of the Act and those incurred to provide additional capacity beyond this, it does not set out specifically how the total costs of providing the sewer should be apportioned between the requisition and the additional capacity. The Act only requires that “so much of the costs reasonably incurred” are included in the requisition charge calculation. There are two main approaches to apportioning the costs of the requisitioned works from the total costs incurred by the water undertaker in carrying out works which provide for greater than necessary capacity:

- a. A notional costs approach, which estimates the costs that would have been incurred had the water undertaker only provided infrastructure necessary to fulfil the requirements of the requisition and nothing more. Where additional capacity has been provided in the actual works provided, this counter-factual approach can only use a design-based estimate of the costs that would have been incurred rather than the actual final costs of the scheme as built.
- b. An approach based on the percentage of the total capacity of the actual infrastructure provided that is used to fulfil the requirements of the requisition. This as-built approach uses the actual, final costs incurred in providing the infrastructure. It uses technical modelling to determine and apply the percentage of the total capacity provided that is needed to fulfil the specific requirements of the requisition.

D. Disputes

- 2.15 Under section 99(6) of the Act, where a dispute arises between a sewerage undertaker and any other person as to
- a. the undertakings or security required by the sewerage company; or
 - b. the amount required to be paid in pursuance of any such undertaking.
- 2.16 Either party to the dispute may refer it to us for determination under Section 99(6) of the Act.

E. Infrastructure Charges

- 2.17 Under section 146 of the Act water and sewerage undertakers are entitled to raise infrastructure charges when connecting premises to a water supply or public sewer of premises for the first time. The Act's provision for raising an infrastructure charge is separate and independent of the provisions related to providing and charging for a sewer requisition in sections 98-100 of the Act. The methods for calculating the amount of infrastructure charges a water and sewerage company can recover per property are set out in Condition C of the relevant water or sewerage undertaker's Instrument of Appointment.

2.18 Infrastructure charges were originally established to help enable water and sewerage companies to invest in general network improvements required to meet increasing demand from new customers. As such it does not relate directly to the actual costs of a specific scheme of improvement or reinforcement works, but rather becomes a source of funding for such works as and when the need for them arises. In this way infrastructure charges are distinct from requisition charges applied under section 100 of the Act, which directly link to works needed to provide a specific sewer, both in terms of the sewer itself and other works required in consequence of providing that sewer.

3. Factual background

A. The Parties

(i) Dŵr Cymru

3.1 Dŵr Cymru is appointed under the Act to provide water and sewerage services to more than three million people in Wales and some adjoining areas of England, including substantial parts of Hereford and Worcester.

(ii) Barratt Homes

3.2 Barratt Homes is one of the largest homebuilders in the UK. The area of Merthyr Tydfil, in which the Site falls, is within the South Wales division of the company.

B. The Site

3.3 Heolgerrig is a village in Merthyr Tydfil, South Wales. The Site comprises approximately 10 acres of land and is located at Brecon View Park, off Winchfawr Road in Heolgerrig in Merthyr Tydfil.

3.4 Focus Property Services Ltd (“**Focus**”) was the original owner of the Site and initially approached Dŵr Cymru regarding the discharge of foul sewerage from a proposed development at the Site. Barratt Homes acquired the Site from Focus in November 2004.

3.5 Outline planning permission for a residential development on the Site was approved by Merthyr Tydfil County Borough Council on 30 September 2004. Full planning permission was given to Barratt Homes on 22 March 2006 to develop land north and south of Winchfawr Road, Heolgerrig.

3.6 The development at the Site comprises 115 housing units.

C. The requisition

(i) Dŵr Cymru’s investigations and discussions with Barratt Homes

3.7 Barratt Homes contacted Dŵr Cymru on 9th December 2003 to enquire about works required before it purchased the Site.

- 3.8 On 9th January 2004 Dŵr Cymru wrote to Barratt Homes and highlighted that based on the estimated foul sewage flows from the proposed development at the Site, it was unlikely that there would be sufficient capacity in its existing sewerage system to accommodate the estimated additional flows. Dŵr Cymru added that a hydraulic model would be required to determine the connection point to the existing sewerage system and/or any improvement work required.
- 3.9 Barratt Homes paid £30,639.30 to Dŵr Cymru for hydraulic modelling in December 2004.
- 3.10 In April 2005, Dŵr Cymru produced an "Investigation and Hydraulic Impact Assessment Report" to investigate the impact on the local sewerage network of a 140² dwelling development proposed by Barratt Homes for the Site.
- 3.11 The investigation used an existing verified model of the whole of the Merthyr Tydfil catchment. Since the existing model was not sufficiently detailed in the area of the Site to allow full consideration of the potential impact of the proposed development, a number of surveys were undertaken as part of the investigation to improve the model. The enhanced and reverified model was constructed to undertake an analysis of the impact of the Site on the combined sewer overflows (CSOs) and pumping stations within the catchment.
- 3.12 The surveys carried out as part of the modelling included looking at the condition of manholes and limited CCTV at the lower end of the catchment to determine the condition of the existing sewer. Rainfall was also measured using two gauges set up on the roof of the nearby Heolgerrig Primary School.
- 3.13 The investigation report concluded that the catchment was particularly sensitive to any increase in flows. It confirmed that the catchment had locations of known historic flooding downstream of the proposed development at the Site which had been confirmed by the enhanced hydraulic model. The results of the modelling set out in the investigation report showed that, without infrastructure works to deal with the additional flows, the proposed development would increase downstream flooding.

² This figure was based on information supplied by Barratt Homes at the time.

- 3.14 Based on the results of the modelling the report provided three options to enable the connection of the proposed development to Dŵr Cymru's existing sewerage system:
1. Option 1: To build a new sewer serving only the Site to connect into Dŵr Cymru's existing public sewer at a point where the network had sufficient capacity to receive additional flows. This was identified as being approximately 1230m from the Site.
 2. Option 2: To increase the capacity of the existing public sewer to allow a connection. This would require increasing the size of the existing combined sewer in Hoelgerrig for a total length of approximately 919m.
 3. Option 3: The removal of highway drainage from the existing combined sewerage system (to free up capacity) accompanied with some work to increase the size of the existing sewer.
- 3.15 On 17 October 2005 Barratt Homes confirmed that it wished to proceed with a sewer requisition and requested Dŵr Cymru to advise on the necessary stages and costs of each stage of the requisition.
- 3.16 On 1 December 2005, Barratt Homes confirmed option 2 (see paragraph 3.14 above) as the most practical solution and added that it wanted to take advantage of the "commuted sum" arrangement.
- 3.17 In 2006 Barratt Homes made a series of payments to Dŵr Cymru for the investigation and outline design stages of the requisition. This included a payment of £45,104.29 to pay for the investigation and outline design stages of the requisition, £40,679.24 in respect of further investigative works associated with the requisition and £36,661.88 for remaining investigations and completion of detailed design.
- 3.18 During the Spring and Summer of 2006, Dŵr Cymru, carried out investigative work relating to option 2 described in paragraph 3.14 above. The findings were outlined in a "Peer Review Report" which was provided by Dŵr Cymru in October 2006. This report recommended that increasing the size of the entire existing sewer length was not possible but that a combination of options 1 and 2 above (increasing the size of certain sections of the existing sewer complemented by sections of a new sewer) would offer a difficult but viable solution. In the conclusion and recommendation section of the Peer Review Report Dŵr Cymru considered that this new option would 'offer the most likely cost effective capital scheme.'

- 3.19 Over the course of 2006 and 2007 there was a dispute between Barratt Homes and Dŵr Cymru over a connection from the Site to the Dŵr Cymru public sewer under section 106 (Right to communicate with public sewers) of the Act. No progress was made on the sewer requisition.
- 3.20 On 26 February 2007 Dŵr Cymru issued a formal offer letter to Barratt Homes which included an estimated sewer requisition scheme cost figure of £1,250,547.00. In this letter Dŵr Cymru stated that it had assessed the cost of the scheme against the projected foul sewerage income of the properties on the Site as required under the Act. It then confirmed that a “Commutated sum contribution” or a “Guarantee agreement” would be required from Barratt Homes. Under the Commuted sum option Barratt Homes would pay £1,177,914.76, with Dŵr Cymru calculating the final commuted sum within 6 months of the construction completion date. Under the Guarantee agreement option Barratt Homes would pay Dŵr Cymru an annual income of £149,161.53 for a period of 12 years and a bond of £1,789,938.36 for the 12 year period (which would be cancelled at the end of the period).
- 3.21 Barratt Homes wrote to Dŵr Cymru on 25 July 2007 saying that it accepted that a contribution was required to improve the sewerage system but it was concerned about the costs of the proposed works. Barratt Homes offered to pay £425,000 to fund the commencement of the proposed works whilst dialogue continued on the matter.
- 3.22 On 2 August 2007 Dŵr Cymru replied to the various points raised by Barratt Homes in its letter of 25 July 2007. It acknowledged that Barratt Homes was prepared to make an immediate payment of £425,000 but added that the scheme could not progress until the requisition offer had been accepted and Barratt Homes had paid a one off capital contribution in full or completed a requisition agreement together with a security bond as per Dŵr Cymru’s offer letter of 26 February 2007.
- 3.23 On 16 August 2007 Dŵr Cymru confirmed that it would extend the acceptance period for its offers in relation to the sewer requisition at the site. Dŵr Cymru stated that the commuted sum for the requisition had been calculated on the basis of the current development on the Site consisting of 115 houses.
- 3.24 After a period of further discussion and exchanges of correspondence between the parties in relation to the requisition, on 20 August 2007 Barratt Homes confirmed acceptance of the commuted sum option.

3.25 The table below shows the amounts paid by Barratt Homes to Dŵr Cymru in connection with the requisition (this includes the amounts referred to in paragraph 3.17 above).

Table 1 – Amounts paid by Barratt Homes

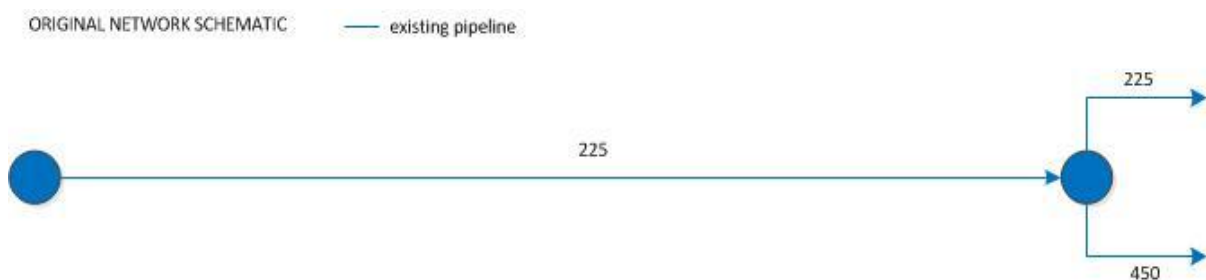
Cheque date	Amount	Purpose
10th December 2004	£30,639.30	Payment for hydraulic modelling and associated surveys
5th January 2006	£45,104.29	Payments for scheme design costs
2nd June 2006	£40,679.24	
24th November 2006	£36,661.88	
12th October 2007	274,830.44	Payments towards remaining estimated commuted sum contribution
2nd January 2008	£150,000	
1st February 2008	£150,000	
3rd March 2008	£150,000	
7th April 2008	£150,000	
30th May 2008	£150,000	
Total	£1,177,915.15	Total security paid

(ii) Actual works and costs incurred

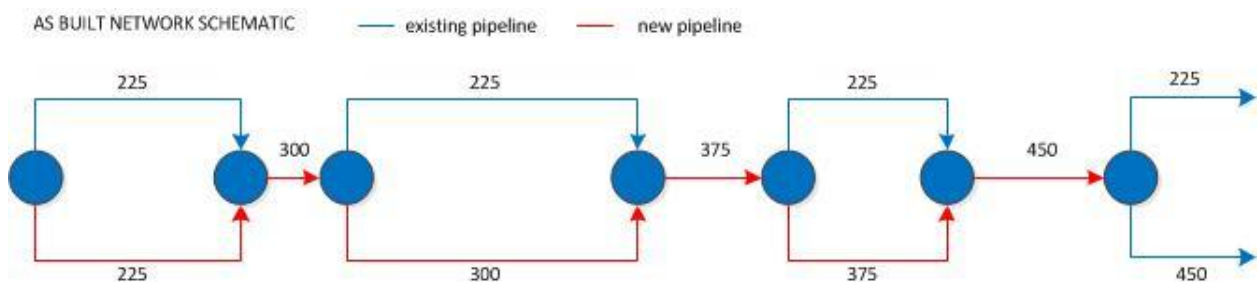
3.26 Requisition works commenced by Dŵr Cymru on 21st January 2008 and the works were completed on 14th November 2008. The scope of the works involved upgrading Dŵr Cymru's sewerage network to provide sufficient additional capacity to service the drainage requirements of the Site. This was

in line with the option recommended in Dŵr Cymru's Peer Review Report dated October 2006.

3.27 The work carried out by Dŵr Cymru involved increasing the size of certain sections of its existing sewer complemented by sections of new sewer. This is illustrated in the diagrams below which show the size of the sewer before and after work was carried out. The illustration below (labelled Original Network Schematic) shows that the sewer prior to the requisition was a constant diameter of 225mm until the penultimate manhole where it was duplicated with a 450mm diameter pipe.



3.28 The illustration below (labelled As Built Network Schematic) shows the increase in sewer capacity following the requisition. The sewer pipe increases in capacity along its length, starting with a duplicate pipe of 225mm up to a 450mm diameter pipe at the bottom end.



3.29 Dŵr Cymru has confirmed that the total costs it incurred in providing the Sewer were £1,127,734.59

3.30 The total sewerage infrastructure charges paid by Barratt Homes to Dŵr Cymru were £32,083.

D. The request for a determination

- 3.31 On 18 December 2008 an agent acting on behalf of Barratt Homes wrote to Dŵr Cymru. In this letter the agent suggested that Dŵr Cymru had not followed the requirements of the Act in the way it had charged Barratt Homes for the sewer.
- 3.32 On 22 December 2008 Dŵr Cymru replied to Barratt Homes' agent stating that if Barratt Homes wanted to pursue the case it needed to do so directly with it.
- 3.33 On 10 March 2009 Barratt Homes submitted to Ofwat a request for a determination on the validity and costs associated with the sewer requisition works carried out by Dŵr Cymru. The material grounds of dispute upon which Barratt Homes' request was made related to the need for works, the level of the requisition charge, and hence the undertakings requested.
- 3.34 Following Barratt Homes' determination request, correspondence was exchanged between ourselves and both parties in relation to our jurisdiction in this matter.
- 3.35 On 16 November 2009 Barratt Homes wrote to us saying that it wished us to proceed to a determination of this matter on the basis that it was not capable of resolution between the parties.
- 3.36 On 2 December 2009 Dŵr Cymru confirmed that that the matter was not capable of resolution between the parties themselves and that it therefore agreed to Ofwat reviewing the costs paid by Barratt Homes in accordance with the Act.
- 3.37 On the basis of the above we consider that there is sufficient evidence of a dispute between Dŵr Cymru and Barratt Homes and we therefore consider that we have jurisdiction to consider this dispute under Section 99(6) of the Act.

E. Our investigation

- 3.38 During our investigation into this matter we have sought and gathered a considerable amount of information from both parties.

- 3.39 As part of our investigation we also commissioned an independent engineering consultant in 2010 to assess the work carried out by Dŵr Cymru and to provide advice to us on:
- a. whether there was a need to reinforce the network as a result of Barratt Homes' development;
 - b. whether the work carried out by Dŵr Cymru was an appropriate means of providing the network reinforcement required;
 - c. whether the scheme undertaken was the most appropriate/least cost option.
 - d. the reasonable costs of the network reinforcement work; and
 - e. the reasonable proportion of the reinforcement work undertaken that can be attributed to Barratt Homes' development, and the costs of that proportion.
- 3.40 The independent consultant considered the information provided by both parties. In addition meetings were held with both parties. Both parties were also given the opportunity to provide comments on the consultants' final report.

F. Our Stage 1 draft determination – were the works necessary

- 3.41 We issued a Stage 1 draft determination in respect of this dispute to the Parties on 29th March 2012. In this we concluded that Dŵr Cymru had strong and reliable evidence to justify the works it carried out and for us to conclude that works were necessary as a result of the development on the Site. In particular Dŵr Cymru's modelling showed that for a 1 in 30 year storm event there was not enough capacity in its existing system to accommodate the additional flows from the Site. We provided the Parties with the opportunity to make written representations on the draft determination and to submit comments on each other's representations. Both parties responded to our Stage 1 draft determination on 19th April 2012. Whilst Dŵr Cymru agreed with our conclusion, Barratt Homes disagreed because it believed the inputs used by Dŵr Cymru as part of its modelling were flawed.
- 3.42 We have set out the representations we received in detail and our response to these in setting out our final determination in section 4 of this document.

G. Our Stage 2 draft determination – amount payable by Barratt Homes

3.43 We issued a Stage 2 draft determination to the parties on 8th November 2012 and concluded that:

- a. there was no evidence to suggest that the total costs incurred by Dŵr Cymru were not reasonable;
- b. Dŵr Cymru had provided a public sewer that has more capacity than that needed to take foul flows from the Site alone. As a result we apportioned the costs reasonably incurred between the capacity required in respect of the drainage of the development at the Site and "additional capacity" beyond this (as defined at Section 100(6) of the Act). This was calculated on the basis of the notional cost difference between the minimum size sewer pipes that we considered could have been provided against the actual size sewer pipes that were provided. This calculation showed that 85% of the total costs incurred by Dŵr Cymru could be attributed to the Site;
- c. we had no evidence that infrastructure charges had been recovered by Dŵr Cymru and thus we were unable to consider whether there had been any double recovery of costs in this case; and
- d. the amount already paid by Barratt Homes under the terms of the requisition was a deposit by way of security to ensure payment of the full amount due when the works had been completed. Therefore under section 99(4) of the Act interest was payable by Dŵr Cymru for the amount held as security and this should be calculated in accordance with [Ofwat's information notice on interest rates](#).

3.44 Barratt Homes responded to our Stage 2 draft determination on 29th November 2012 and Dŵr Cymru responded on 13th December 2012. Barratt Homes accepted our main conclusion on costs attributable to the Site, however, Dŵr Cymru disagreed as it believed that it had not oversized the Sewer and argued that Barratt Homes was responsible for 100% of the costs.

3.45 We have set out the representations we received in detail and our response to these in setting out our final determination in section 4 of this document.

H. Our information requests following representations from the Parties

3.46 Following the representations received from the parties on our Stage 2 draft determination, we sought further information from Dŵr Cymru on 14th January 2013 relating to the arguments it had put forward about the costs attributable to Barratt Homes in this case. Dŵr Cymru responded to this request for further information on 22nd February 2013. In order to clarify the amounts already paid in this case and to understand Dŵr Cymru's requisition charge calculations, we wrote to Dŵr Cymru again on 18th April 2013 and then on 25th April 2013. The company provided a response on 2nd August 2013 and a further response on 19th September 2013.

I. Our draft determination appendix

3.47 We issued a draft determination appendix to the parties on 27th September 2013 as a follow up to our Stage 2 draft determination. As part of this we used the conclusions in our Stage 2 draft determination to determine that the final amount payable by Barratt Homes in this case (i.e. the final requisition charge) should be £828,747.34 and thus the refund now owing to Barratt Homes (excluding any interest payable) should be £349,167.81 (calculated by deducting the final requisition charge from the total security which had been paid by Barratt Homes to Dŵr Cymru (£1,177,915.15)).

3.48 In our draft determination appendix we also concluded that interest was payable by Dŵr Cymru to Barratt Homes for the full amount held as security, starting from the date Barratt Homes had first made a payment to Dŵr Cymru. We added that the amount of any interest payable is for the Courts to determine, if Barratt Homes and Dŵr Cymru are unable to agree this amount.

3.49 Both parties provided representations on our draft determination appendix. Barratt Homes responded on 11th October 2013. Dŵr Cymru responded on 25th October 2013. Barratt Homes said that we needed to set out the amount of interest payable – even if this was only our opinion of the calculation. Dŵr Cymru disagreed with the conclusions we had reached in relation to interest payments and set out its view on how the provisions of the Act should apply in this case.

3.50 We have set out the representations we received in detail and our response to these in setting out our final determination in section 4 of this document.

4. Our final determination

A. Summary

4.1 We have carefully considered the representations submitted by both Barratt Homes and Dŵr Cymru in response to all three of the draft determination documents we have issued. This section sets out our response to the representations made on our draft determinations and our findings and determinations on the following key issues in this case, these being:

- i) whether works were necessary to provide sewerage services to the Site (see section B below);
- ii) the proportion of the costs reasonably incurred that should be attributed to the Site and hence included in the requisition charge calculation, having regard to Section 100(2) of the Act which requires that the person requisitioning works is responsible for "costs reasonably incurred [...]" but **is not** responsible for "additional capacity" (see section C below);
- iii) the interest payable by Dŵr Cymru, pursuant to Section 99(4) of the Act, on the security it had recovered from Barratt Homes in respect of the requisitioned works (see section D below); and
- iv) the infrastructure charges recoverable for the Site under section 146 of the Act (see section E below);

B. Were works necessary

(i) Barratt Homes' view

4.2 Barratt Homes disagreed with the conclusions in our Stage 1 draft determination in which we considered whether works were necessary to provide sewerage services to the Site and thus whether Dŵr Cymru was entitled to recover the costs it reasonably incurred in carrying out those works. In its representations Barratt Homes argued:

- that Dŵr Cymru's modelling was flawed as it was based on 1 in 30 year storm events and flow information which does not reflect the actual flow discharges from the Site into the public sewer. It added that using 1 in 5 year storm events is more appropriate for assessing the capacity of an existing sewerage network to receive foul flows from a proposed development;

- that only rainfall events gave rise to sewer flooding and not the flows from Barratt Homes' development and therefore it would have been more appropriate for Dŵr Cymru to initiate a scheme to deal with removing surface water from the sewer instead rather than the work it actually carried out; and
- that Barratt Homes' development was used as a trigger to correct existing defects in the public sewerage system at the full expense of Barratt Homes which was not lawful.

(ii) Dŵr Cymru's view

4.3 Dŵr Cymru agreed with the conclusion in our Stage 1 draft determination that they had strong and reliable evidence to justify that the works it carried out were necessary as a result of the Site's development.

(iii) Determined approach

4.4 We have carefully considered the representations submitted by Barratt Homes in response to our Stage 1 draft determination.

4.5 The modelling used by Dŵr Cymru to assess the impact of the development on the existing sewerage system was based on 1 in 30 year storm events. These are used to test whether a sewerage network has sufficient capacity to ensure that there is no increase in flooding risk as a result of a rainfall event that occurs once in 30 years. Barratt Homes has argued that the modelling should have been carried out on the basis of more frequent, lesser rainfall events (e.g. 1 in 5 year) since these are more typical and lead to more realistic outcomes for developers. Barratt Homes also added that the flows used in the model are in excess of the actual flows discharging from the Site.

4.6 We are satisfied that it was reasonable and compliant with the Act for Dŵr Cymru to base its hydraulic model upon the information it did. Sewerage infrastructure has to be resilient and provide customers with protection from flooding from relatively rare, but high impact, events. Providing this buffer inherently means that there will be more capacity than routinely required during other relatively minor impact events. Whilst the inputs used to carry out modelling may vary between companies and individual sites we believe it was reasonable for Dŵr Cymru's to have used 1 in 30 year events for the purpose of its modelling.

- 4.7 In response to whether the actual flow discharges from the Site are less than the flows that were used in the model, our view (based on advice from the independent consultant we commissioned – see paragraph 3.39) is that whether the additional flows from the Site were minimal or not, if the sewer pipe was not capable of taking any additional flows from the development then work to increase the pipe size would have been required.
- 4.8 In response to Barratt Homes' argument that only rainfall events gave rise to additional flooding and that a scheme to remove surface water should have been considered, our view is that the use of an analysis ignoring either foul or surface water would not have been a rational approach (as the public sewer was a combined sewer, i.e. able to take both foul and surface water flows).
- 4.9 Based on the information provided to us we have concluded that the existing sewerage system was not able to take additional flows from the Site without an increased risk of flooding and would therefore have needed to be reinforced. We consider that Dŵr Cymru had robust evidence to justify the carrying out of works and is entitled to recover the costs it reasonably incurred to serve the Site from Barratt Homes.

C. Costs attributable to the Site

(i) Barratt Homes' view

- 4.10 Barratt Homes has challenged the final cost for the work as being in excess of the costs reasonably incurred in providing the relevant sewer. In its response to our Stage 2 draft determination it stated that it was prepared to accept the conclusions reached by us in the draft determination if Dŵr Cymru accepted the same. However, it noted that it was inconceivable that the works carried out did not provide significant benefit to Dŵr Cymru's sewerage system and to confirm this it would be essential to understand whether or not a significant reduction of sewer flooding events has occurred following the sewer requisition.

ii) Dŵr Cymru's view

4.11 Dŵr Cymru disagreed with the main conclusion in our Stage 2 draft determination that only 85% of the costs it had incurred in completing the works could be attributed to the Site. It said that:

- in its view the costs incurred in providing the requisitioned sewer are 100% attributable to Barratt Homes and that the agreement with Barratt Homes in relation to this scheme was a commercial agreement outside of the provisions of the Act;
- it delivered a scheme using standard pipe sizes to maintain the sewerage system's performance following the connection of the development and did not deliver an oversized solution. It added that the 'inherent headroom' in the sewer was only available due to the use of standard pipe sizes;
- using non-standard pipe sizes (so that system performance was neither improved or worsened) would be substantially more expensive to the developer and result in potentially long delivery timescales therefore affecting the commencement and progress of the development;
- a number of options were presented to Barratt Homes which included a stand-alone sewer, an upsizing option (the option chosen for delivery) and a highway run-off removal scheme. The upsizing option was chosen by Barratt Homes who were anxious for work to commence on site in Spring 2006;
- if a stand-alone sewer solution was deliverable and chosen by Barratt Homes then it is unlikely a dispute would have arisen. It added that given it would have procured such a scheme in the same manner as the upsizing option which was delivered, the determination would have most likely concluded that the costs incurred for the stand-alone scheme would be reasonable and fully attributable to Barratt Homes;

- the approach to apportioning costs applied in the Stage 2 draft determination lacked an appreciation of basic hydraulics and the determination was being approached from a cost consideration perspective as opposed to a technical / operational perspective. To demonstrate this it stated that it had undertaken an assessment which showed that the predicted flood volume 'pre-development' would be 9,953m³ increasing by 46% to 14,521 m³ 'post development' based on the pipe sizes used to apportion costs in the Stage 2 draft determination. According to Dŵr Cymru this substantiated its position that the scheme delivered was the minimum required to ensure that the existing flooding situation was not exacerbated;
- it would not be fair or reasonable to base conclusions on hindsight (i.e. whether the solution installed has improved the system's performance) as you can only use the tools available (e.g. hydraulic modelling) when assessing/designing a scheme. In addition it said that the flooding incidents which occurred prior to 2008 were mainly categorized as highway flooding, which would not necessarily be reported; and
- our conclusion on cost apportionment will drive future delivery of such schemes against the interest of all parties and incentivise the use of stand-alone solutions which will in most cases result in substantial cost escalation.

4.12 In response to our information request Dŵr Cymru said (in a letter to us dated 2nd August 2013) that:

- in its opinion the only costs that it is obliged to include within the requisition charge calculation are those that were incurred following the receipt by Dŵr Cymru of a valid requisition notice (under section 98 of the Water Industry Act 1991). It added that it undertook hydraulic modelling and associated surveys prior to Barratt Homes serving a section 98 Notice and therefore the costs associated with that work (£28,615.90) should be excluded from the total scheme costs and not considered part of this determination; and

- the security paid by Barratt Homes should exclude a payment of £30,369.30³ made by Barratt Homes for hydraulic modelling and associated surveys, because this amount was paid before Barratt Homes served a formal requisition notice.

4.13 In response to our draft determination appendix Dŵr Cymru said:

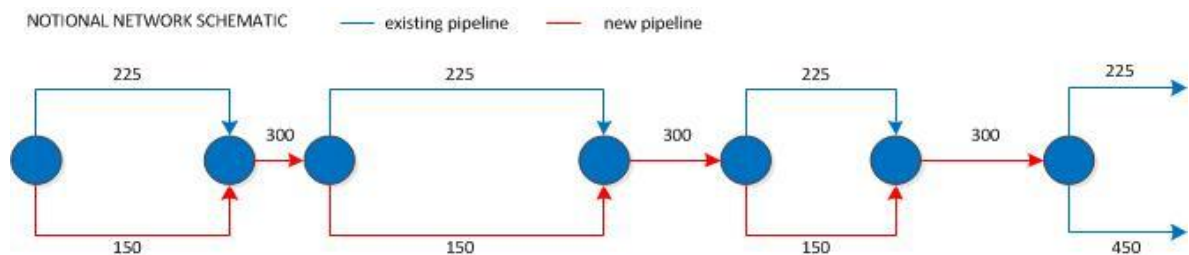
- that we had previously set out our view that 85% of the costs of the requisition could be reclaimed by Dŵr Cymru, notwithstanding that our draft determinations had found that the works were necessary and the costs incurred were reasonably incurred;
- the approach it was advocating (to recover 100% of its costs on the basis it had maintained the performance of the sewer through the requisition) was supported by our determination in another sewer requisition case under section 99 of the Act ([Taylor Wimpey UK Limited vs. Southern Water Services Limited](#)); and
- that we had not responded to the reasoning it had set out to support its opinion that the costs associated with work undertaken before a requisition has been properly requested under section 98 of the Act should not form part of the final requisition charge calculation. It argued that as a matter of law the costs incurred in carrying out such initial work should not be part of the requisition as the conditions to enable the requisition have not been met at that stage.

(iii) **Determined approach**

4.14 We have assessed the total costs of the work incurred by Dŵr Cymru in this case (£1,127,734.59). We note that the costs were in line with the information Dŵr Cymru provided to us during the price setting process in 2009 (known as 'PR09'). During this process we assessed Dŵr Cymru as having the efficiency of an average performing company for sewers laid in an urban highway. This view was formed on the basis of comparing Dŵr Cymru's PR09 sewer laying standard costs for 225mm, 300mm and 450mm diameter sewers with the median. On this basis and given that work to construct the sewer was procured by Dŵr Cymru using a competitive tender process, we have concluded that there is no evidence to suggest that that total costs incurred by Dŵr Cymru were not reasonable.

³ We understand that the payment of £30,369.30 for hydraulic modelling and associated surveys made by Barratt Homes differs from the actual cost of that work (£28,615.90) as it was based on estimated costs and included VAT.

- 4.15 However, based on advice provided by the independent engineering consultant we commissioned, we consider that the capacity provided in the Sewer is considerably more than that which would be required to take the flows from the Site.
- 4.16 The works have led to an increase in capacity of the sewerage system of up to 300% at the bottom end of the sewer whereas the development only required around a 5% increase in capacity, based on the amount of flow entering the Sewer from the Site. The minimum extra capacity that our consultant considered Dŵr Cymru could have provided (based on available pipe sizes along with the projected flows from the development at the Site), would have been a 300mm sewer where upsizing the existing sewer and to provide a 150mm sewer where laying a duplicate sewer pipe. This is illustrated in the diagram below (paragraphs 3.27 and 3.28 of this document show what the Sewer was like before and after the requisition).



- 4.17 For us to determine the final requisition charge, we must set out the costs reasonably incurred that we believe should be included in the calculation. This requires us to reach a conclusion on the proportion of the costs reasonably incurred attributable to the Site and hence reach a conclusion on how the total costs reasonably incurred should be apportioned between the Site and the additional capacity provided.
- 4.18 Based on the specific facts of this case we have concluded that the most appropriate, rational and reasonable method to apportion costs between the capacity required to drain the Site and "additional capacity" (as defined at Section 100(6) of the Act) is on the basis of the notional cost difference between the minimum size sewer pipes that could have been provided against the actual size sewer pipes that were provided. This will ensure that the costs recovered from Barratt Homes reflect the costs reasonably incurred in providing the Sewer and exclude those costs that are attributable to additional capacity.

- 4.19 We consider that apportioning costs on the basis of percentage capacity required would have resulted in Barratt Homes paying a disproportionately small amount of the costs incurred for the Sewer that was provided in response to a requisition to take additional flows from the Site. This is because although the amount of flow from the development is only a small proportion of the total flow conveyed by the Sewer, Dŵr Cymru and Barratt Homes agreed that a mixture of upsizing the existing network and laying a duplicate pipe was the most appropriate method to provide the required increase in capacity. Apportioning costs based on the percentage of the capacity provided that is used by the Site would mean that Dŵr Cymru would have to bear the vast majority of the costs of constructing the Sewer even though it was only constructed following a requisition by Barratt Homes. We estimate that under a percentage capacity approach Barratt Homes could have been required to pay only 5% of the costs incurred by Dŵr Cymru.
- 4.20 To calculate the notional cost difference we used the standard cost figures for laying different diameter sewer pipes as supplied to us by Dŵr Cymru for the PR09 cost base. For example the cost of laying a 150mm diameter sewer is (on average) 92% of the cost of laying a 225mm diameter sewer. To find the average cost of the capacity that could have been provided and thus which should be attributed to Barratt Homes, we have multiplied the proportion of the costs attributable to the Site (see last column in table 2 below) by the proportion of the length of sewer pipe (see second column in table 2 below) in respect of each section of the Sewer. Our calculations are presented in table 2 below.

Table 2 – Calculation of costs attributable to the Site

Length of sewer (m)	Proportion of length	New (as built) sewer size (mm)	Minimum sewer size that we consider could have been provided (mm)	Cost of the reinforcement that can be apportioned to the Site
140	17%	225	150	92%
23	3%	300	300	100%
251	30%	300	150	82%
131	16%	375	300	92%
127	15%	375	150	75%
155	19%	450	300	85%
Weighted average				85%

- 4.21 We have calculated the weighted average of the different sections of the Sewer to be 85%. Based on this calculation our conclusion is that 85%⁴ of the total cost incurred by Dŵr Cymru can be attributed to the requirements of the Site and so are payable by Barratt Homes.
- 4.22 As a result of this apportionment, we determine that the actual costs reasonably incurred in meeting the requirements of the requisition total £958,574.40 (i.e. 85% of the total cost incurred of £1,127,734.59). We have used this cost figure to recalculate the final amount now payable by Barratt Homes (in line with section 99(2) of the Act). We determine that the final requisition charge which Barratt Homes should pay is £828,747.34. Details of our calculation are set out in Appendix 1 to this determination. On the basis that Barratt Homes have paid security of £1,177,915.15, this results in a refund of £349,167.81 being due to Barratt Homes.
- 4.23 Barratt Homes has argued that it is inconceivable that the works carried out did not provide significant benefit to Dŵr Cymru's sewerage system. Whilst it is difficult to quantify the actual benefit Dŵr Cymru has received from the requisitioned sewer without further modelling, we note that there is additional capacity available in the Sewer to serve a further 200 houses and that no flooding incidents had been reported to Dŵr Cymru since the sewer was constructed. This supports our view that the Sewer has capacity over and above that which was necessary to just provide sewerage services to the Site. Whilst we recognise that not all sewer flooding events are reported we do not consider that Dŵr Cymru has provided sufficient evidence to counter our view on the costs attributable to Barratt Homes' development in this case.
- 4.24 Dŵr Cymru has argued that the costs incurred in providing the requisitioned sewer are 100% attributable to Barratt Homes and that the agreement with Barratt Homes in relation to this scheme was a commercial agreement outside of the provisions of the Act. We have previously exchanged correspondence with Dŵr Cymru on the issue of the commercial agreement. In a letter to Dŵr Cymru dated 13th November 2009 we said that, on the basis of the correspondence that had been provided to us by the parties, we considered the agreement between Barratt Homes and Dŵr Cymru was made under the provisions of the Act and was thus within our jurisdiction. In its letter dated 2nd December 2009, Dŵr Cymru acknowledged that the agreement it finally entered into with Barratt Homes adopted elements of the statutory framework and it agreed to us reviewing the amount of costs paid by Barratt Homes in accordance with the Act. We do not consider that Dŵr Cymru has

⁴ Rounded down to the nearest whole number

provided sufficient evidence to suggest that this matter does not fall within our jurisdiction. As it previously agreed to us determining this matter under the Act, we do not consider it is appropriate for it to now suggest that this matter was anything other than a requisition which was carried out under the terms of the Act.

- 4.25 Dŵr Cymru has argued that it delivered a scheme using standard pipe sizes to maintain the sewerage systems performance both pre and post the development connecting and did not deliver an oversized solution. It added that the 'inherent headroom' in the sewer was only available due to the use of nominal pipe sizes (which Barratt Homes were advised of in a letter dated 2 August 2007). Whilst we acknowledge that Barratt Homes may have been told of the additional capacity available in the sewer prior to the requisition, this does not negate the requirement for Dŵr Cymru to ensure that the costs it included in the final requisition charge were the costs attributable to the Site (i.e. costs reasonably incurred) and not those costs attributable to the significant additional capacity in the sewer. Our view is that it is inappropriate given the provisions of Section 100 of the Act for developers to be liable for requisitioned sewers that provide capacity considerably in excess of the requirements of the Site. We accept that in some cases there will be a small amount of inherent headroom that cannot be avoided and this may be as a consequence of using standard pipe sizes. However we have not been provided with sufficiently robust evidence to counter our view that the large amount of headroom in this case could have been avoided through the use of smaller standard pipe sizes available. Our engineering consultant was of the view that there is considerably more capacity in the lower end of the system than would be expected to take the flows from the development alone and as such considered that Dŵr Cymru has addressed wider capacity issues with this scheme. We consider the onus is on Dŵr Cymru to show why it was necessary to use to pipe sizes it did purely to address the development needs of this scheme and provide evidence to us. In the absence of such information we have relied on the expert judgement of our engineering consultant.
- 4.26 Dŵr Cymru has said that using non-standard pipe sizes would be substantially more expensive to the developer and potentially result in longer delivery timescales. We accept Dŵr Cymru's arguments here, which is why we have suggested that smaller, standard size pipe sizes could have been used by the company to provide the requisitioned sewer.
- 4.27 Dŵr Cymru has argued that a number of options were presented to Barratt Homes, who chose the 'upsizing option'. Whilst we are aware that Barratt Homes was presented with alternative options we do not consider that this

means that Barratt Homes should now pay for costs which are not attributable to its site. It is Dŵr Cymru's responsibility to ensure that it includes costs reasonably incurred in meeting the requirements of the requisition in its calculations.

- 4.28 Dŵr Cymru has said that if a stand-alone sewer solution was chosen by Barratt Homes then our determination would have most likely concluded that the costs incurred would be reasonable and fully attributable to Barratt Homes. Dŵr Cymru has also said that our conclusion on cost apportionment will incentivise the use of 'stand-alone' solutions which will in most cases result in substantial cost escalation.
- 4.29 In response to Dŵr Cymru's claims that our decision could incentivise stand-alone schemes our view is that in such cases we would expect companies to have explained to a developer why such a solution is considered to be the most cost effective option and whether alternative solutions are possible. Where a company does elect to upgrade its existing assets (as this is cheaper to do) it should explain to the developer why it is upsizing by the amount it is (e.g. using a 300mm pipe as opposed to a 225mm pipe) so it is clear how much of the total capacity provided by the upsizing is attributable to the new development and how much for other purposes such as existing customers or future further development. In this case we have focussed on the scheme that was selected and on the proportion of the costs of this scheme that were attributable to Barratt Homes' development.
- 4.30 Dŵr Cymru has stated that it would not be fair or reasonable to base our conclusions on hindsight. Dŵr Cymru has also stated that our determination is being approached from a cost consideration perspective as opposed to a technical and operational perspective. According to Dŵr Cymru, the scheme delivered was the minimum required to ensure that the flooding situation was not exacerbated. It added that using the notional pipe sizes set out in our draft determination would have made flooding much worse. It was in response to this point that we sought further information from Dŵr Cymru about the actual level of (predicted) flooding based on the actual sewer constructed. Dŵr Cymru has said that it is reluctant to expose itself to the further costs that would arise as a result of needing to undertaken further modelling to obtain this information.
- 4.31 We therefore consider that in the absence of robust evidence to support Dŵr Cymru's arguments, our approach to cost apportionment is the most appropriate option in this case and reflects the advice provided by our independent engineering consultant. The consultant we commissioned was not convinced by Dŵr Cymru's claims and was instead of the view that the

Sewer as constructed included additional capacity within the system, which Dŵr Cymru will benefit from. Dŵr Cymru has not provided us with sufficient evidence to show why the addition of the small flows from the development should have occasioned such a large increase in capacity, particularly in the lower parts of the Sewer. Having considered the provisions of the Act and the arguments made by Dŵr Cymru, we consider that a notional costs approach to the apportionment of costs is legally justifiable and the most appropriate method to use in these circumstances. There are no specific provisions in section 100 of the Act setting out how apportionment must be calculated where additional capacity is provided. The requirement is to ensure that only those “costs reasonably incurred” are recovered.

- 4.32 Dŵr Cymru has noted that we concluded that only 85% of the costs of the requisition could be recovered by Dŵr Cymru, notwithstanding our related conclusion that works were necessary and the overall costs incurred were reasonable. It is important to clarify that the purpose of considering the necessity of the works was to ensure that the Dŵr Cymru was justified in carrying out works and for us to then consider what proportion of the costs of that work should be recovered from Barratt Homes for the requisition. In addition, in our Stage 2 draft determination we concluded that the total costs incurred in completing the works by Dŵr Cymru were reasonable but that only 85% of those costs could be recovered from Barratt Homes, using a notional costs approach. It is important to consider these two steps together, as jointly they were used to reach our conclusion on costs reasonably incurred.
- 4.33 Dŵr Cymru has suggested that its arguments for recovering 100% of the costs in this case from Barratt Homes are supported by our determination made under section 99 and 30A of the Act in relation to [Taylor Wimpey UK Limited vs. Southern Water Services Limited](#) (published in October 2013). In that case we concluded that the majority of the costs were reasonably incurred in order to meet the requisition’s requirements, but that the upgrading of a 57m section of pipework resulted in the requirements of the requisition being exceeded and hence was unnecessary. Therefore we determined that Southern Water was not able to recover 100% of its costs. In order to make this decision we considered the predicted flooding prior to the requisition works and predicted flooding after the requisition works. Whilst we have not made a detailed comparison of flooding before and after the requisition in this case, we did seek further information from Dŵr Cymru about predicted flooding after the work it had carried out. Dŵr Cymru said it was reluctant to incur the costs associated with providing us with such information.
- 4.34 We consider our determinations are consistent in applying the general principle that where infrastructure is provided that has greater capacity than

that requisitioned by the owner or occupier of the premises to supply a new development, only the costs which are attributable to the requirements of the new development should be allocated to the calculation of the requisition charge.

- 4.35 In its response to our draft determination appendix Dŵr Cymru did not consider that we had responded to its arguments around excluding costs associated with preliminary works from the total scheme costs and thus the final requisition charge calculation. Our view is that in general the onus is on water and sewerage undertakers to make it clear to customers (which include developers) the purpose of any charges that are levied and whether those charges will or will not be included as part of the total costs of requisition work and therefore as part of the requisition charge. In this case Dŵr Cymru recovered costs from Barratt Homes associated with preliminary work to assess potential options for providing drainage services to the Barratt Homes development. Dŵr Cymru initially included these costs in their calculation of the requisition charge and their quote to Barratt Homes and have only recently decided that these costs should be excluded from consideration in this determination.
- 4.36 We recognise that water and sewerage undertakers will often need to undertake preliminary investigations to establish the requirements for a requisition scheme and the options relating to this. In this case we have determined that the costs associated with hydraulic modelling and associated surveys should form part of the costs reasonably incurred and included as part of the requisition charge calculation on the basis that they were originally included in both by Dŵr Cymru and were not presented as being a separate charge (rather as part of the full requisition works) to the developer. Equally, we consider that the payments made by Barratt Homes associated with hydraulic modelling and associated surveys are part of the total security paid by Barratt Homes and should be used in the calculation to decide the amount of refund owing to Barratt Homes in this case.

D. Interest payable

(i) Barratt Homes' view

- 4.37 In its response to our Stage 2 draft determination Barratt Homes stated that section 99(4) of the Act requires a company to pay interest on sums that have been paid to the company by way of security. It added that firstly interest needs to be added to any refunds, calculated from the date the monies were paid to Dŵr Cymru to the date when they were refunded to Barratt Homes. Secondly, interest needs to be added to the monies that have been held on

deposit as the final requisition charge. Barratt Homes considers this should be calculated from the date the monies were paid to Dŵr Cymru to the date when the works carried out by Dŵr Cymru under the requisition were commissioned and available for use by Barratt Homes.

- 4.38 In its response to our Stage 2 draft determination Barratt Homes stated in order to avoid any further dispute Ofwat should set out transparently in its final determination a clear financial statement of the refunds due and basis on which interest should be calculated. In response to our draft determination appendix Barratt Homes asked us to set out in our determination the amount of interest that should be paid.

(ii) Dŵr Cymru's view

- 4.39 In its response to our Stage 2 draft determination Dŵr Cymru stated that the appropriate level of interest would be payable on the amount of excess security held (calculated in line with the relevant Ofwat guidance) rounded to the nearest 50p to the date that the final account was carried out and the actual requisition charge was calculated but in terms of whole 3 month periods.
- 4.40 In its response to our information request Dŵr Cymru said (in a letter dated 2nd August 2013) that the application of interest payable on the security paid in this case should only be payable from the point at which compliance with section 99 of the Water Industry Act 1991 was achieved to the point when the sewer was provided. In this case Dŵr Cymru has argued that section 99 compliance was achieved on 10th June 2008 (the date that the last instalment of security was received) with the sewer being provided on 14th November 2008. Dŵr Cymru therefore suggested that it was not required to pay any interest on security before this date.
- 4.41 In response to our draft determination appendix Dŵr Cymru said that we had not provided any reasoning or basis for our assertion that interest should be payable on the full amount of the security paid by Barratt Homes, starting from the date it had first received a payment from Barratt Homes. Dŵr Cymru noted that without prejudice to its position in respect of the statutory scheme for the payment of interest (described in the paragraph above), it was willing to pay interest on the amount of each instalment from the date received on the same basis as in section 99(4) of the Act.

(iii) Determined approach

- 4.42 Under section 99(4) of the Act, interest must be paid on any sums that have been deposited with a sewerage undertaker as security in relation to the provision of a public sewer to be used for drainage for domestic purposes (pursuant to section 98(1) of the Act). Security is money that a person requisitioning the works may be required to pay in advance of work being done. Section 99 of the Act provides that the undertaker shall pay interest “on every sum of 50p so deposited for every three months during which it remains in the hands of the undertaker” at rates approved or determined by us.
- 4.43 Our view is that interest is payable on Barratt Homes' security deposit, calculated in accordance with section 99(4) of the Act. In calculating any interest due, Dŵr Cymru should apply interest rate(s) in accordance with [Ofwat's information notice on interest rates](#). The amount of any interest payable is for the Courts to determine, if Barratt Homes and Dŵr Cymru are unable to agree this amount. Ofwat's information notice anticipates the approach we think a Court is likely to take in determining the amount of interest payable in this case.
- 4.44 Dŵr Cymru has argued that we have not provided any reasoning or basis for our assertion that interest should be payable on the full amount of the security paid by Barratt Homes. Dŵr Cymru argue that the statutory provisions regarding the payment of interest (section 99(4)) provide for interest on the full amount of security deposited and that otherwise there would be a possibility of a developer paying part of the security sum and asserting that the conditions under section 99 of the Act had been met.
- 4.45 We note that in this case security payments were made in instalments by Barratt Homes to Dŵr Cymru. In this case we do not consider it is reasonable for Dŵr Cymru not to pay any interest from the date it received the earlier security instalments made by Barratt Homes, as the Act (section 99(4)) is very clear that interest is payable as soon as "sums have been deposited". In this case we consider that all of the instalments made were sums which had been deposited with Dŵr Cymru as security and on which interest is payable. We consider Dŵr Cymru should pay interest on the amount of each instalment made by Barratt Homes from the date each instalment was received by Dŵr Cymru as security, starting with the first instalment made in 2004, to the point at which the sewer was provided. In addition interest should be paid on the £349,167.81 refund due to Barratt Homes for the period from the Sewer being provided until Dŵr Cymru pay this refund.

E. Infrastructure Charges

(i) Barratt Homes' view

4.46 In its response to our Stage 2 draft determination Barratt Homes stated that the sewerage infrastructure charges it had paid in relation to the development should be refunded with interest. It added that this refund should be made on the basis that the levying of sewerage infrastructure charges on the development in addition to the requisition charge amounted to double recovery.

(ii) Dŵr Cymru's view

4.47 Dŵr Cymru has argued that infrastructure charges are completely distinct from sewer requisition costs in the relevant legislation and thus it is able to recover both charges in full.

(iii) Determined approach

4.48 As set out in paragraph 2.17 above the Act's provision under section 146 for raising an infrastructure charge is separate and independent of the provisions related to providing and charging for a sewer requisition under sections 98-100 of the Act. As such water and sewerage companies are entitled to levy both charges where a sewer requisition is resulting in the connection of premises to the network for the first time.

4.49 As set out in section 2.18, infrastructure charges were originally established to help enable water and sewerage companies to invest in general network improvements required to meet increasing demand from new customers. The infrastructure charge is a flat-rate, indexed figure recoverable against each domestic premises connected to the water supply and/or public sewer network for the first time. This figure originally sought to reflect the average cost of a new connection over time. As such it does not relate directly to the actual costs of a specific scheme of improvement or reinforcement works, but rather becomes a source of funding for such works as and when the need for them arises. In this way infrastructure charges are distinct from requisition charges applied under section 100 of the Act, which directly link to works needed to provide a specific sewer, both in terms of the sewer itself and wider works required in consequence of providing that sewer.

4.50 We therefore consider that Dŵr Cymru is entitled to recover infrastructure charges for the Site under section 146 of the Act in addition to the requisition charge applied under section 100. We would however only expect

infrastructure charges to be levied in addition to the requisition charge where they are being used to fund wider local network improvements beyond those works and hence costs already directly attributed to the sewer requisition for this Site. We are of the view that only infrastructure specifically provided to supply a site should be included in the requisition charge. In this case we believe that the costs of the infrastructure specifically required to supply the new connections on the Site are being recovered through the requisition charge levied by Dŵr Cymru. We would not expect any infrastructure charges levied for this Site to be contributing to these same investment costs. The costs the two charges are intended to recover should be distinct and we would expect Dŵr Cymru to ensure that there is no double recovery of costs.

F. Conclusion

- 4.51 We have carefully considered the representations received by the parties in this case on the various issues in dispute.
- 4.52 Our conclusion is that Dŵr Cymru has provided robust evidence to demonstrate that works were necessary in order to ensure the sewerage network could meet the additional flows from the Site. As such it was entitled to request security and an undertaking in connection with that requisition.
- 4.53 However we consider that only 85% of the total costs incurred by Dŵr Cymru in providing the works can be considered as costs reasonably incurred to provide the sewerage services required by the Site. This figure is based on the notional cost difference between providing a smaller capacity sewer (in our view the smallest sized sewer that could reasonably have been provided to meet the requirements of the Site whilst still maintaining the performance of the sewerage system) and the actual sewer that was constructed by Dŵr Cymru. This reflects our view that, following the requisitioned works, the Sewer has more capacity than that needed to provide the additional sewerage services required by the Site alone.
- 4.54 Dŵr Cymru has held security from Barratt Homes amounting to £1,177,915.15. This exceeds our recalculated amount of the requisition charge (£828,747.34). Therefore we determine that Dŵr Cymru owes Barratt Homes a refund of £349,167.81, plus interest accrued. In line with section 99(4) of the Act, Dŵr Cymru also owes Barratt Homes interest for the periods of time money was held as security for the requisitioned works. Both of these payments should be made to Barratt Homes within 10 working days of the date of this determination, which Dŵr Cymru has previously agreed to in correspondence dated 13th August 2013.

4.55 Finally we have concluded that in accordance with condition C of its licence (Infrastructure charges) Dŵr Cymru is entitled to recover sewerage infrastructure charges from Barratt Homes in addition to the requisition charge payable by Barratt Homes.

APPENDIX 1 - Requisition charge calculation for Brecon View Park determination (based on Dŵr Cymru - sewer requisition model)

Discount Rates

Interest Rate for borrowing	6.00%
Discount rate	6.00%
Long term annual inflation	2.40%

	£'s
Project Costs	958,574.40
Final project costs	958,574.40

Calculation of Commuted Capital Sum

Site Name/Reference: Winch Fawr Road HeolGerrig Merthyr Tydfil
Developer: Barratt Homes

Year	Projected Future Revenue	Annual Borrowing Costs	(Projected) Relevant Deficit
1	3,144.09	114,335.91	111,191.82
2	13,787.81	114,335.91	100,548.10
3	15,526.28	114,335.91	98,809.63
4	16,291.96	114,335.91	98,043.95
5	16,682.97	114,335.91	97,652.94
6	17,083.36	114,335.91	97,252.55
7	17,493.36	114,335.91	96,842.55
8	17,913.20	114,335.91	96,422.71
9	18,343.12	114,335.91	95,992.79
10	18,783.35	114,335.91	95,552.56
11	19,234.15	114,335.91	95,101.76
12	19,695.77	114,335.91	94,640.14
	193,979.41	1,372,030.88	1,178,051.48

Developer: Barratt Homes

Year	(Projected) Relevant Deficit	Discount Rate	Statutory Commuted Sum
1	£111,191.82	0.94340	£104,897.94
2	£100,548.10	0.89000	£89,487.45
3	£98,809.63	0.83962	£82,962.47
4	£98,043.95	0.79209	£77,659.99
5	£97,652.94	0.74726	£72,971.96
6	£97,252.55	0.70496	£68,559.21
7	£96,842.55	0.66506	£64,405.83
8	£96,422.71	0.62741	£60,496.80
9	£95,992.79	0.59190	£56,817.99
10	£95,552.56	0.55839	£53,356.05
11	£95,101.76	0.52679	£50,098.42
12	£94,640.14	0.49697	£47,033.25
	£1,178,051.48		£828,747.34

Calculation of Commuted Capital Sum

Year	Year End Occupancy	Billed Equivalent	Volumetric Income per Household	Fixed Charges Income (all)	Projected Future Revenue	Adjust for Sewer Type	Projected Future Revenue	Annual Borrowing Costs	Relevant Deficit	Discount Rate	Statutory Commuted Sum
1	106.0	25.3	£152.90	£113.98	£3,986.62	78.9%	£3,144.09	-£114,335.91	-£111,191.82	0.94340	-£104,897.94
2	115.0	103.5	£164.36	£476.77	£17,482.58	78.9%	£13,787.81	-£114,335.91	-£100,548.10	0.89000	-£89,487.45
3	115.0	109.9	£174.39	£518.65	£19,686.92	78.9%	£15,526.28	-£114,335.91	-£98,809.63	0.83962	-£82,962.47
4	115.0	109.9	£183.11	£531.10	£20,657.78	78.9%	£16,291.96	-£114,335.91	-£98,043.95	0.79209	-£77,659.99
5	115.0	109.9	£187.50	£543.85	£21,153.57	78.9%	£16,682.97	-£114,335.91	-£97,652.94	0.74726	-£72,971.96
6	115.0	109.9	£192.00	£556.90	£21,661.25	78.9%	£17,083.36	-£114,335.91	-£97,252.55	0.70496	-£68,559.21
7	115.0	109.9	£196.61	£570.27	£22,181.12	78.9%	£17,493.36	-£114,335.91	-£96,842.55	0.66506	-£64,405.83
8	115.0	109.9	£201.33	£583.95	£22,713.47	78.9%	£17,913.20	-£114,335.91	-£96,422.71	0.62741	-£60,496.80
9	115.0	109.9	£206.16	£597.97	£23,258.59	78.9%	£18,343.12	-£114,335.91	-£95,992.79	0.59190	-£56,817.99
10	115.0	109.9	£211.11	£612.32	£23,816.80	78.9%	£18,783.35	-£114,335.91	-£95,552.56	0.55839	-£53,356.05
11	115.0	109.9	£216.18	£627.01	£24,388.40	78.9%	£19,234.15	-£114,335.91	-£95,101.76	0.52679	-£50,098.42
12	115.0	109.9	£221.36	£642.06	£24,973.72	78.9%	£19,695.77	-£114,335.91	-£94,640.14	0.49697	-£47,033.25
					£245,960.82		£193,979.41	-£1,372,030.88	-£1,178,051.48		-£828,747.34