December 2019

PR19 final determinations

PR19 final determinations: Hafren Dyfrdwy final determination

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About this document

This document supports the 'Notification of the final determination of price controls for Hafren Dyfrdwy' and sets out further details about the final determination price control, service and incentive package for Hafren Dyfrdwy for 2020 to 2025. All figures in this document are in 2017-18 prices except where otherwise stated.

The final determination documentation sets out:

- the outcomes for Hafren Dyfrdwy to deliver;
- the allowed revenue that Hafren Dyfrdwy can recover from its customers; and
- how we have determined allowed revenues based on our calculation of efficient costs and the allowed return on capital.

This final determination is in accordance with our PR19 methodology (as updated), our statutory duties[1] and the Welsh Government's statement of strategic priorities and objectives for Ofwat[2]. We have also had regard to the principles of best regulatory practice, including the principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted.

Our final determination carefully considers all of the representations we received from companies and stakeholders on our draft determination and takes account of the most up-to-date information available where appropriate. Where appropriate, we explicitly set out our response to points and issues raised by respondents. Where information was provided late and we have not been able to take full account of this in the final determination, this is explicitly stated.

There are four appendices to this document on cost efficiency, outcomes performance, past delivery, allowed revenue and, where relevant, additional information. For all documents related to the Hafren Dyfrdwy final determination, please see the final determinations webpage. Where we reference other documents related to our final determinations we do not include the 'PR19 final determinations' prefix to the document title, for documents relating to our initial assessment of plans or draft determinations the full document title is referenced.

If Hafren Dyfrdwy accepts our final determination, it will be accepting that it has adequate funding to properly carry out the regulated business, including meeting its statutory and regulatory obligations, and to deliver the outcomes within its final determination.

[1] See the 'Policy summary' for more information.
[2] See 'Welsh Government priorities and our 2019 price review final determinations' for more information.

Contents

Amendment	Date
Page 6, Table 1.2 row 1 – amendment made to number of pollution incidents per 10,000km from 19.5 to 97. Page 38, Table 3.7 – amendments made to figures. • Grants and contributions before the deduction of income offset (£m) Network plus – Water amended from £4.4 million to £4.0 million, for Network plus – Wastewater amended from £0.8 million to £0.6 million. • Net allowed totex subject to cost sharing reconciliation Network plus – Water amended from £94.2 million to £94.5 million, for Network plus – Wastewater amended from £22.6 million to £22.8 million	18 May 2020

1 Summary

The water sector faces challenges of climate change, a growing population and increasing customer expectations, while improving affordability of an essential service. The 2019 price review (PR19) enables and incentivises companies to address these challenges both in 2020-25 period and longer term.

To do this the sector needs to innovate and challenge itself to deliver better performance for customers and the environment. Companies need to engage and work with customers and other companies, the supply chain and with other stakeholders.

Our PR19 methodology sets out a framework for companies to address the challenges facing the sector with a particular focus on improved service, affordability, increased resilience and greater innovation.

We published our draft determination for Hafren Dyfrdwy on 18 July 2019, based on our detailed review of the revised plans submitted to us on 1 April 2019. The company and a number of stakeholders provided representation responses on our draft determination on 30 August 2019.

Our final determination carefully considers all of the representations we received from companies and stakeholders on our draft determination and takes account of the most up-to-date information available where appropriate. We consider the changes we have made in our final determination are in line with our statutory duties.

1.1 What our final determination includes

This section sets out the overall shape of our final determination for Hafren Dyfrdwy. We cover the customer bill profile, costs, outcomes for customers, allowed revenues and our decision for Hafren Dyfrdwy, as its September 2018 business plan was categorised as significant scrutiny, on the outcome delivery incentive cap and lower cost sharing rate. More detail is provided in the following sections of this document.

Bill profile

Our final determination for Hafren Dyfrdwy will cut average bills by 3.0% in real terms in the 2020-25 period compared to the company's proposed 1.0% reduction. Table 1.1 below sets out the difference in bill profile between the company's business plan

submission in April 2019, our draft determination and the final determination. Average bills are lower than proposed by Hafren Dyfrdwy, reflecting our view of efficient costs and a reduction in the allowed return. Further details on bills are set out in section 6.

Table 1.1: Bill profile for 2020-25 before inflation

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Company plan (April resubmission)	£300	£295	£295	£296	£297	£297
Draft determination	£300	£286	£286	£286	£286	£286
Final determination	£300	£275	£284	£287	£290	£292

Costs

Our final determination allows wholesale totex of £165.6 million. This is:

- £0.7 million higher than in our draft determination and
- £3.2 million higher than stated in the company's representation on our draft determination.

Our final determination allows Hafren Dyfrdwy £15.6 million to invest in improvements to service, resilience and the environment. Key parts of this allowance are:

- £6.5 million to improve the environment by efficiently delivering its obligations as set out in the National Environment Programme (NEP);
- £2.9 million to meet lead standards;
- £2.8 million for the implementation of the Reservoirs Act 1975, the Environment Act 2016 and the Well-being of Future Generations (Wales) Act 2015; and
- £1.3 million to improve the quality of drinking water including taste, odour and colour.

The most material areas of enhancement cost challenge for Hafren Dyfrdwy include: its water programme within the NEP, water resilience programme and the implementation of the Reservoir Safety, Environment and Well-being of Future Generations Acts.

Further details on our cost allowances are set out in section 3.

Outcomes for customers

Our final determination package includes a full set of performance commitments, specifying the minimum level of service that Hafren Dyfrdwy must commit to deliver for customers and the environment under this price review. These sit alongside the company's statutory and licence requirements. Each performance commitment also has a financial or reputational incentive to hold the company to account for delivery of these commitments.

Further details of key performance commitments are set out in table 1.2 below and in section 2.

Table 1.2: Key performance commitments for Hafren Dyfrdwy

Area	Measure
Key common performance commitments	• At least 15% leakage reduction from PR14 performance commitment levels.[3] • 4.2% reduction in per capita consumption by 2024-25 • 39% reduction in pollution incidents by 2024-25 to 97[4] incidents per 10,000km of the wastewater sewer • 23% reduction in internal sewer flooding incidents by 2024-25 to 1.34 incidents per 10,000 connections • 58% reduction in water supply interruption incidents by 2024-25 to 5 minutes
Bespoke performance commitments	• 11% increase in the percentage of struggling to pay customers supported through tailored schemes by 2024-25 • 6% reduction in sewer blockages by 2024-25 • 230 lead pipes replaced. Including both communication and supply pipes consistent with Welsh Government priorities
Overall incentive package	Overall, the likely range of returns from outcome delivery incentive package in our final determination equates to a return on regulatory equity range of -2.30% (P10) to + 0.48% (P90).

Note: The calculations behind these numbers are outlined in the 'Hafren Dyfrdwy - Outcomes performance commitment appendix'.

3 Please note that the figures in the tables of the 'Hafren Dyfrdwy - Outcomes performance commitment appendix' which relate to this performance commitment reflect that it is measured on a three-year average and show a 12.4% reduction from 2019-20 baseline levels on a three-year average basis.

4 Correction made to pollution incidents and incidents per 10,000km

Allowed revenues

Our final determination sets allowances for total revenue or average revenue for each of the price controls. Table 1.3 shows the allowed revenues in the final determination across each price control. Further details on our calculation of allowed revenues are set out in section 4.

Table 1.3: Allowed revenue, 2020-25 (£ million)[1]

	Water Resources	Network plus - water	Network plus - wastewater	Bioresources	Wholesale total	Residential retail	Total[2]
Company view of allowed revenue (£m)	15.0	83.3	14.2	3.9	116.4	12.9	129.4
Final allowed revenues (£m)	12.7	84.6	13.7	3.8	114.9	13.0	127.9

[1] Note: retail revenue is the sum of the margin, retail costs, and adjustments. The bioresources and residential retail controls are average revenue controls. We have included forecast revenue (in real terms) for these controls to illustrate the total revenue across all controls.
[2] Note: Business retail allowed revenue not included in 'Total'.

As set out in the 'Allowed return on capital technical appendix', we are updating our assessment of the allowed return on capital for Hafren Dyfrdwy's final determination. The allowed return is 2.96% (on a CPIH basis, 1.96% on a RPI basis) at the appointee level. After adjustment for the retail margin, the allowed return on capital for the wholesale price controls is 2.92% (on a CPIH basis, 1.92% on a RPI basis), a reduction of 0.16 percentage points from our draft determination, reflecting our assessment of market evidence. The allowed retail margin for the household retail control remains at 1.0%, consistent with the draft determination.

Hafren Dyfrdwy's Regulatory Capital Value (RCV) growth in 2020-25 is 35.9% and 72.2% of its RCV will be indexed to CPIH in 2025.

We consider that Hafren Dyfrdwy's final determination is financeable on the basis of the notional structure, based on a reasonable allowed return on capital. The determination is sufficient to deliver its obligations and commitments to customers. Further detail on our assessment of financeability is set out in section 5.

Putting the sector in balance

We have encouraged companies to take greater account of customers' interests – and to transparently demonstrate that they are doing so in the way they finance themselves, pay dividends to their shareholders, and determine performance related executive pay. Hafren Dyfrdwy commits to meeting the expectations set out in our 'Putting the sector in balance position statement'.

The company confirmed it would implement our default gearing outperformance mechanism within its business plan. Under its actual financial structure, Hafren Dyfrdwy expects to maintain gearing below the level that would trigger sharing payments under the gearing outperformance sharing mechanism in 2020-25.

To meet our expectations, the company will need to demonstrate to stakeholders that dividends and performance related executive pay policies are substantially aligned to its performance for customers. We expect the company will need to revise its proposed base dividend yield for 2020-25 to take account of the lower allowed return in our final determination and our revised expectations for a reasonable base dividend yield that we set out in the 'Aligning risk and return technical appendix'.

In the 'Putting the sector in balance' position statement we also encouraged companies to adopt a voluntary sharing mechanism, particularly where, for example, companies outperform our cost of debt assumptions. Hafren Dyfrdwy has not proposed any voluntary sharing mechanisms, and does not propose company contributions to its social tariff or a hardship fund over 2020-25.

We provide further detail on these issues in section 7.

Outcome delivery incentive cap and lower cost sharing assessment

We are not applying an outcome delivery incentive cap or lower cost sharing rate for Hafren Dyfrdwy. Since the initial assessment of business plans, it has engaged positively and its submissions are of sufficient quality (see 'Significant scrutiny companies application of lower cost sharing rates and outcome delivery incentive cap' technical appendix for details).

1.2 Representations on the draft determination

All companies and stakeholders were invited to make representations on our fast track draft determinations by 24 May 2019 and on our slow track and significant scrutiny draft determinations by 30 August 2019. More detail about the issues raised in the representations by the company and our consideration of those issues can be found elsewhere in this document, the technical appendices and other documents published alongside our final determinations. Table 1.4 highlights the key points made by Hafren Dyfrdwy in its representation and a summary of our response to each of those points.

Table 1.4: Company representation

Key points in Hafren Dyfrdwy's representation	Summary of our response
The company argues that household retail costs are not a reasonable proxy to warrant a 40% challenge to non-household retail costs.	We are setting a business retail control for Hafren Dyfrdwy, as a Welsh water company. At draft determinations we challenged the company's apparent high costs for small businesses. For final determinations we remove the challenge on its business retail proposals, following further evidence, resulting in an additional allowance.
Hafren Dyfrdwy comments on the allowed return on capital and states that if we pursue the 37bps reduction signalled in the draft determination, this would manifest itself in a very significant way at the price control level where Moody's AICR for the water resources and water network controls would be one notch above sub investment grade. At the wholesale level it would be sub investment grade.	We use an allowed return on capital based on updated market evidence, as set out in our 'Allowed return on capital technical appendix'.
The company explains its concerns about the impact of our draft determination policy decisions on the overall outcomes package, leaving a significant risk of underperformance payment. It argues for reinstatement of a cap and collar for the outcomes package rather than a sharing mechanism.	We are including caps and collars for all companies where the vast majority of companies have caps and collars, which for this company limits the risk on the outcome delivery incentives that have greatest downside risk. We also introduce downside sharing for Hafren Dyfrdwy if total net outcome delivery incentive underperformance payments to customers are more than 3% of RoRE in any year. This should mitigate the risk to the company of excessive downside as a result of uncertainty around downside exposure due to the lack of long-term historical data and the small size of the company. Our final determinations are intended to be stretching but achievable for companies to deliver improved levels of service in 2020-25. We have taken account of evidence provided by the company as well as wider evidence to calibrate the stretch of the performance commitment for an efficient company. See section 2.

We also received representations on Hafren Dyfrdwy's draft determination from other stakeholders as shown in table 1.5, which shows a summary of our response to company-specific comments. Representations from some other stakeholders relate to all companies and are described in the relevant technical appendices. More detail about the issues raised in the representations by stakeholders can be found elsewhere in this document, the technical appendices and other documents published alongside our final determinations.

Table 1.5: Stakeholder representations

Stakeholder representations	Summary of our response
The Consumer Council for Water (CCWater) expressed concerns about the absence of a voluntary profit-sharing mechanism and a lack of a Hafren Dyfrdwy specific strategy and vision.	While the company did not propose a voluntary sharing mechanism, we apply a standard sharing mechanism for all companies, where 50% of outperformance payments that exceed 3% of return on regulatory equity (RoRE) in any year are shared with customers through bill reductions in the following year. We set out further detail of the mechanism in the 'Delivering outcomes for customers policy appendix'. We consider the strategy and vision are for the company to consider.
Natural Resources Wales states that the right outcomes are built into the draft determination and the company's ambition is being stretched in some areas.	Our final determinations are intended to be stretching but achievable for companies to deliver improved levels of service in 2020-25. We have taken account of evidence provided by the company as well as wider evidence to calibrate the stretch of the package of performance commitments for an efficient company. See section 2.
Hafren Dyfrdwy's customer challenge group explains that well-evidenced customer support had been provided for the levels in the business plan. It would be concerned if additional pressure to meet newly increased levels results in other targets getting less attention.	Our final determination sets out a package of performance commitments and outcome delivery incentives, taking into account the views of Hafren Dyfrdwy's customers amongst other factors. See section 2.

1.3 Key changes from the draft determination

Our final determination carefully considers the representations we received from companies and stakeholders on our draft determinations on 30 August 2019. It also takes account of the most up-to-date information available where appropriate. Changes to overall revenue and costs allowances are set out in table 1.6.

Table 1.6: Difference in cost and revenue allowance final to draft determination

	Draft determination	Final determination
Allowed revenues (£m, 2017-18 CPIH deflated)	125.1	127.9
Wholesale cost allowance[1] (£m, 2017-18 CPIH deflated)	164.8	165.6
Retail cost allowance (£m, nominal)	14.3	14.4
Wholesale allowed return[2] (% - CPIH basis)	3.08%	2.92%

[1] Note that we include pension deficit recovery costs in the wholesale cost allowances we present in table 1.6 above and in table 3.1 later in this document. At the draft determination we published cost allowances excluding pension deficit recovery costs. The numbers we show here as the draft determination allowances can be calculated by adding the pension deficit recovery costs from draft determination table 3.2 to draft determination table 3.1 total allowances. Our decisions on individual elements of the totex allowance are set out in section 3.
[2] The allowed retail margin for the household retail control remains at 1.0%, consistent with the draft determination.

Significant changes from the draft determination for Hafren Dyfrdwy are:

- We make changes to performance commitment levels for mains repairs that apply industry wide to ensure levels take account of historical levels of performance and the implications of leakage reduction levels for mains repairs.
- We increase the water supply interruptions 2024-25 level (making it easier to achieve) to five minutes, with an amended glidepath in the first four years taking account of wider evidence to calibrate the stretch of the performance commitment for an efficient company We reduce the outcome delivery incentive underperformance rate to be symmetrical with its outperformance rate.
- We introduce a sharing mechanism for Hafren Dyfrdwy if total net outcome delivery incentive underperformance payments to customers are more than 3% of RoRE in any year, to mitigate the risk of excessive downside from large exposure on some individual outcome delivery incentives and due to the lack of long-term historical data and the small size of the company.
- We revise our notional dividend yield to 3.00% (from 3.15% in the draft determination) and apply a dividend growth of 1.18%. This takes account of the allowed cost of equity in the final determination. For Hafren Dyfrdwy we restrict the base dividend yield to 0.00% in our notional financeability assessment due to the high level of RCV growth in the final determination.
- We expect the company will need to reduce its proposed base dividend yield for 2020-25 to take account of the lower allowed return in our final determination and our revised expectations for a reasonable base dividend yield.

- We revise Hafren Dyfrdwy's average bill profile from a large reduction upfront followed by flat real terms prices, to have a greater reduction upfront, followed by a gradually increasing real price over 2020 – 25.

2 Outcomes

Key changes from the draft determination

The key changes made to the outcomes elements of the draft determination are:

- We make changes to performance commitment levels for mains repairs that apply industry wide to ensure levels take account of historical levels of performance and the implications of leakage reduction levels for mains repairs.
- We introduce a sharing mechanism for Hafren Dyfrdwy if total net outcome delivery incentive underperformance payments to customers are more than 3% of return on regulatory equity in any year, to mitigate the risk of excessive downside from large exposure on some individual outcome delivery incentives and due to the lack of long-term historical data and the small size of the company.
- We adjust the water supply interruptions 2024-25 level to five minutes, with an amended glidepath in the first four years, taking account of wider evidence to calibrate the stretch of the performance commitment for an efficient company. We reduce the outcome delivery incentive underperformance rate to be symmetrical with its outperformance rate. In line with the company's representations, we consider that all companies should have a collar5 on water supply interruptions, set in line with our standard approach and therefore we are introducing one for this company. Together these changes provide a more balanced spread of incentives and risks on water supply interruptions
- We amend the deadband on the compliance risk index (which measures compliance with the Drinking Water Inspectorate's water quality standards) to a score of 2.00 throughout the period reducing the risk of underperformance payments in the last three years of the 2020-25 period. This allows more flexibility in performance to take into account the uncertainty created by the ban on the use of metaldehyde, which has been overturned by the High Court and also aligns with the median level of company performance.

Throughout PR19, we have been asking companies to:

- make stretching performance commitments to their customers;

[5] Collars are used to limit financial exposure to companies whilst caps are used to protect customers from large bill increases –the collar or cap multiplied by the incentive rate is the maximum underperformance or outperformance payment. Therefore, performance worse than this level (collars) or better than this level (caps) does not increase underperformance or outperformance payments respectively.

- have stronger incentives to deliver on their commitments; and
- better reflect resilience in their commitments

The outcomes framework is a key component in driving companies to focus on delivering the objectives that matter to today's customers, future customers and the environment in the 2020-25 period and beyond. Outcomes define the service package that companies should deliver for their customers and their incentives to do this.

There are two key elements of the outcomes framework: performance commitments and outcome delivery incentives. Performance commitments specify the services that customers should receive and set out in detail the levels of performance that the companies commit to achieve within the five year period from April 2020 to March 2025. Outcome delivery incentives are the reputational and financial incentives that companies have, to deliver on their performance commitments to customers. They specify the financial or reputational consequences for companies of outperformance or underperformance against each of these commitments (they are referred to as 'out' where there is a payment to the company for better than committed performance, 'under' where there is a payment to customers where there is worse than committed performance, or 'out-and-under' incentives, depending on their design).

Most outcome delivery incentives will be settled at the end of each year to bring incentive payments closer to the time of delivery of the service ('in-period' incentives) and some will be settled once at the end of the five year period ('end-of period' incentives). The outcomes framework gives companies the freedom to innovate and explore to find the most cost-effective way of delivering what matters to their customers.

Hafren Dyfrdwy is a new company comprised of parts of Severn Trent Water and Dee Valley Water, and so its PR14 performance commitments are derived from Severn Trent Water and Dee Valley Water performance commitments

Our analysis of relative performance in 2018-19 suggests that Hafren Dyfrdwy is one of the worst performers and requires improvement in multiple areas. It has not met leakage levels in PR14, has poor performance on supply interruptions, which appears to have worsened since 2012-13, and fails on its water quality contacts performance commitment.

In its September business plan the company did not provide enough high quality evidence to support its proposed performance commitments and outcome delivery incentives. We also had several material concerns with the plan, which contributed to

the company being classed as significant scrutiny. In particular the company's approach to outcome delivery incentive rates and the use of customer valuation was questionable and its rates were very low which we considered would be unlikely to incentivise the company to improve performance and therefore offer insufficient customer protection. Its proposed levels on per capita consumption and supply interruptions were not stretching.

In all its business plans and its representations on the draft determination, the company has raised issues and sought exceptions in relation to its small size and the fact that it is a new company and therefore has some limited historical data.

For outcome delivery incentive rates, the company compares itself to other companies using a different normalisation approach to us and, as a result, it proposes rates that are significantly lower than the industry average and are not adequately justified. The company considers that our methodology, in particular the normalisation approach, disproportionately affects it as a small company with a small network, leading to much higher underperformance rates. It recommends we normalise incentives on a per-household basis, rather than a per-household-per normalised unit basis. For example, under our approach, a reduction in external sewer flooding by one property affected represents a much smaller reduction in risk for a customer of a company that serves a larger number of properties than a company that serves relatively fewer which we consider to be appropriate. Therefore, at draft and final determination, we set outcome delivery incentives in light of our approach to normalisation and using our methodology which considers among other factors the company's customer research and the company's past and comparative performance. This means adjusting rates for some of Hafren Dyfrdwy's performance commitments, including leakage and internal sewer flooding (to reflect the results of the company's customer research), supply interruptions (as a result of past performance concerns) and pollution incidents (as the rate proposed is well below industry average and Severn Trent's equivalent rate).

16At final determination we also reduce the draft determination rates for sewer collapses and sewer blockages as a result of a change from using industry mean to industry median levels see 'Delivering outcomes for customers policy appendix'.

On performance commitment levels, Hafren Dyfrdwy updated some levels in its April 2019 business plan. The company included improved performance proposals on per capita consumption and adopted our proposals for supply interruptions and internal sewer flooding whilst proposing a stretching level for pollution incidents for which the company does not have the industry level due to its size. At draft determinations, we considered that there remained a gap in the bespoke performance commitments package, namely the lack of an appropriate resilience performance commitment. We

also amended all aspects of the lead pipes replaced performance commitment in line with that of Dŵr Cymru and the difference between communication and supply pipes.

Its representations to our draft determination on performance commitment levels focused on three common performance commitments.

- Water supply interruptions: the company makes representations that the 2024-25 level is unachievable and notes that most of the industry would be paying underperformance payments if the levels are retained. The company proposes that we set an alternative level and glidepath and it requests a revised underperformance payment collar in line with the rest of the industry. We increase the water supply interruptions 2024-25 level (making it easier to achieve) to five minutes, with an amended glidepath in the first four years taking account of wider evidence to calibrate the stretch of the performance commitment for an efficient company. We are also adjusting the company's outcome delivery incentive underperformance rate in line with the average reduction for all companies in our sector wide policy to make the outperformance and underperformance rates symmetrical to balance incentives and risks. We are also including a collar on this performance commitment in line with the rest of the industry as proposed by the company.

- Compliance risk index: the company considers that the measure is too new, volatile and that performance assessments are subjective. We have looked at the data on the index from 2016, 2017 and 2018 and note that the median for these years is 2.83, 2.58 and 2.09. This suggests an improving trend and that a deadband of 2.0 is appropriate. We amend the deadband on the compliance risk index to a score of 2.00 throughout the period reducing the risk of underperformance payments in the last three years of the 2020-25. This allows more flexibility in performance to take into account the uncertainty created by the ban on the use of metaldehyde being overturned by the High Court and also aligns with the median level of current company performance.

- Low pressure: the company states that our 44% improvement (from 2019-20 to 2024-25) compared to its 28% is not achievable. It claims it is inconsistent with customer preferences and the data is not comparable to other companies. The deliverability issues it has raised appear to be valid and it has exhausted all operational low pressure issues, hence the only solutions are capex heavy solutions. Consequently, we accept the company's proposals of 28% improvement.

The company proposed a new resilience performance commitment - improving reservoir resilience. We accept this performance commitment and we are adding

underperformance rates to this measure to recover costs if there is underperformance.

The company also raised issues relating to company and customer protection from caps / collars and the aggregate sharing mechanism. The company considers that we should apply an aggregate cap and collar for the company, rather than a sharing mechanism, as we removed a number of collars on performance commitments and, because it has only collected data on the new company area for nine months, it considers there is material uncertainty. We are applying underperformance collars to water supply interruptions, leakage, pollution incidents, unplanned outage and the reduction in the number of void supply points in line with wider changes to all companies. Where the vast majority of companies have caps and collars on a common performance commitment, we apply caps and collars to all companies. For this company, this limits the risk on the outcome delivery incentives that have greatest downside risk. We also introduce downside sharing for Hafren Dyfrdwy if total net outcome delivery incentive underperformance payments to customers are more than 3% of RoRE in any year. This should mitigate any remaining risk to the company of excessive downside as a result of potential downside exposure due to the lack of long-term historical data and the small size of the company.

The outcomes framework sits in the broader context of the company's statutory and licence requirements for service delivery. Independently of the outcomes framework, each company also has to ensure that it complies with its legal obligations, or risk enforcement action. If a company's performance falls below the level set for a performance commitment (irrespective of the existence of any deadband or collar), we will consider whether this is indicative of wider compliance issues to the detriment of consumers and whether enforcement action, with the potential for remedial and fining measures, is warranted.

Please see the 'Delivering outcomes for customers policy appendix' for further details on our policy decisions on cross-cutting issues such as common performance commitments and outcome delivery incentive rates.

2.1 Customer engagement

In our PR19 methodology we set out our expectations that companies should demonstrate ambition and innovation in their approach to engaging customers as they develop their business plans. This includes direct engagement with customers to develop a package of performance commitments and outcome delivery incentives.

We expected customer challenge groups to provide independent challenge to companies and independent assurance to us on: the quality of a company's customer engagement and the degree to which this is reflected in its business plan.

We continued our assessment of customer engagement evidence following each company's submission of its representations to our draft determination in August 2019. We find variability in both the quality of engagement undertaken by companies and the extent to which customers' views are reflected in company proposals.

In its September 2018 business plan, we had significant concerns with Hafren Dyfrdwy's customer engagement research in areas such as the range of techniques used, ongoing engagement with customers, and engagement with future bill payers. Further to this we found that the company did not sufficiently evidence its outcome delivery incentive package. This relates both to the quality of customer engagement research and the technique used in triangulating its customers' valuations.

In response to our initial assessment of its plan, in its April 2019 revised business plan, the company submitted additional evidence of customer support on: the affordability and acceptability of the business plan and engagement on longer term bill profiles. The research was conducted through quantitative and qualitative research with 500 customers, through either face-to-face or telephone interviews, with deliberative workshops for qualitative research on outcome delivery incentives. Whilst the research process was of acceptable quality, the findings have not been as clear, with low levels of plan acceptability (51% for North Wales, and 73% for Mid-Wales) and only 22%-39% (for North and Mid-Wales respectively) of 'just about managing' customers who find the plan affordable.

Hafren Dyfrdwy's customer challenge group submits a representation to our draft determination in which it expresses concern that additional pressure to meet the increased performance commitment levels that we propose in our draft determination, will lead to performance commitments with well evidenced customer support receiving less attention. They do however state that our draft determinations rightly challenged the company in a number of areas which the company has addressed in its business plan. Hafren Dyfrdwy presents no new customer engagement research with its August 2019 representations to our draft determination.

In its August 2019 representations to our draft determination, Hafren Dyfrdwy considers that a number of our interventions in our draft determinations are not aligned with its customers' views. In relation to its performance commitment levels, it states that low pressure, sewer blockages, help to pay when you need it and effectiveness of the affordability support are not supported by its customer

engagement evidence; in relation to outcome delivery incentives, the company states that the rates for pollution incidents, leakage and low pressure are divorced from its customer valuations. In relation to collars it argues that there is customer support for supply interruptions and in relation to outcome delivery incentive type the company states that customer evidence suggests voids should be reputational rather than financial.

In some cases, we are amending our draft determination decisions to better reflect customer preferences, such as accepting the company's proposal to reduce the underperformance rate in relation to leakage by triangulating[6] across its willingness to pay research. On pollution incidents and leakage we used the willingness to pay research in our triangulation at draft determination and the company disagrees with our approach to normalising its valuations, which is addressed above. On low pressure outcome delivery incentive rates, we consider that whilst 52% of customers support a reputational only incentives, the company also provides evidence that customers consider it an important priority, with a strong willingness to pay valuation. We consider the company's evidence to be insufficient to justify having no financial incentive to deliver a high priority performance commitment for customers. We also note that the company is currently the second worst performer in the industry based on comparative analysis on a normalised basis and that financial incentives are appropriate to drive performance improvements.

We are revising the performance commitment level for sewer blockages and help to pay when you need it, as we find the argument and supporting evidence which the company provides sufficient and convincing. We are relaxing the performance commitment levels in relation to low pressure - this decision is based on comparative analysis and assessment of company evidence on achievability of levels. We are additionally relaxing the performance commitment level in relation to effectiveness of the affordability support, because the company provides further evidence of its baseline rates.

We set out in our PR19 methodology that we expect companies to reflect their customers' preferences in the levels they propose for performance commitment levels and outcome delivery incentives. We also expected companies to challenge the level of stretch in their performance commitments against a range of approaches (for example, against comparative and historical information). In our PR19 methodology we also expected companies to use customer valuations to set outcome delivery incentive rates and noted that we would compare these valuations and rates and challenge companies where appropriate. Therefore, when making our decisions, we have taken into account several factors in setting our final

[6] Triangulation is the method used in averaging across multiple sources of research and data to set outcome delivery incentive rates.

determination outcome delivery incentive rates including the quality of customer evidence provided. Our suite of final determination documents explains the rationale for our decisions, including the evidence used to inform our decisions.

2.2 Performance commitments and outcome delivery incentives

Hafren Dyfrdwy's performance commitments and outcome delivery incentives for the 2020-25 period are listed in table 2.2 and table 2.3. The full details of these performance commitments and outcome delivery incentives are set out in the 'Hafren Dyfrdwy - Outcomes performance commitment appendix'.

The key changes we are making in the final determination are set out in table 2.1[7] below. 'Hafren Dyfrdwy – Delivering outcomes for customers final decisions' sets out our final decisions in terms of changes to our draft determination for the company's performance commitments and outcome delivery incentives, having considered stakeholder and company representations to our draft determination.

[7] Please note, table 2.1 focuses on policy changes and does not include changes made to correct errors in our draft determinations or changes made as a consequence of other amendments such as updating enhanced outcome delivery incentive rates for amendments to standard outcome delivery incentive rates using the same methodology and approach as at draft determinations.

Table 2.1: Summary of key changes to draft determinations on outcomes

Key changes
Increasing the water supply interruptions 2024-25 level (making it easier to achieve) to five minutes, with an amended glidepath in the first four years taking account of wider evidence to calibrate the stretch of the performance commitment for an efficient company. We reduce the underperformance rate to be symmetrical with its outperformance rate. We also add underperformance collars to water supply interruptions as the vast majority of companies have collars on this performance commitment. Together these changes provide a more balanced spread of incentives and risks on water supply interruptions.
Retaining the performance commitment levels for internal sewer flooding. Amending the outcome delivery incentive rates in relation to internal sewer flooding to be symmetrical with the outperformance rates to provide a balanced spread of incentives and risks.
Increasing the performance commitment levels for mains repairs by a reducing percentage, for all companies, in all years, reducing the stretch. The aim is to allow all companies the flexibility to deliver the step change in leakage reduction, allowing more flexibility in the earlier years to use proactive mains repairs to reduce leakage.
Adjusting the deadband on the compliance risk index to a score of 2.00 throughout the period reducing the risk of underperformance payments in the last three years of the 2020-25. This allows more flexibility in performance to take into account the uncertainty created by the ban on the use of metaldehyde being overturned by the High Court and also aligns with the median level of current company performance.
Reducing the underperformance rate in relation to leakage to better reflect the company's customer engagement research. We also add underperformance collars as the vast majority of companies have collars on this performance commitment.
Accepting the company's reduction in level in relation to properties at risk of low pressure as the improvement is front-loaded and is very close to our upper quartile percentage reduction of 29% by 2024-25. Reducing the low pressure underperformance rate to median rather than mean. This is as part of a methodology change covered in the 'Delivering outcomes for customers policy appendix'.
Accepting the company's reduction in level in relation to sewer blockages. We consider that the methodology of using blockages per 10,000 connections is more appropriate than blockages per 1,000 km of sewer, reflecting the root cause of blockages. Based on this new comparative analysis the company's forecast performance in 2024/25 is in line with 'good' level. Reducing the sewer blockages underperformance rate to median rather than mean. This is as part of a methodology change covered in the 'Delivering outcomes for customers policy appendix'.
Reducing the sewer collapses underperformance rate to median rather than mean. This is as part of a methodology change covered in the 'Delivering outcomes for customers policy appendix'.
Relaxing the company's level in relation to the help to pay when you need it performance commitment due to evidence that suggests fewer customers in its area are in need of affordability support.
Relaxing the company's level in relation to the effectiveness of affordability support performance commitment as the company provides convincing evidence that the level is too stretching.
Adding collars for pollution incidents and unplanned outage as part of an industry wide approach to setting collars for these performance commitments.

Table 2.2: Summary of performance commitments: common performance commitments

Name of common performance commitment	Type of outcome delivery incentive			
	Financial			Reputational
	Under	Out	In-period	
Water quality compliance (CRI) [PR19HDD_A1]	X		X	
Water supply interruptions [PR19HDD_B1]	X		X	
Leakage [PR19HDD_B2]	X		X	
Per capita consumption [PR19HDD_B3]	X		X	
Mains repairs [PR19HDD_B5]	X		X	
Unplanned outage [PR19HDD_B6]	X		X	
Risk of severe restrictions in a drought [PR19HDD_B4]				X
Priority services for customers in vulnerable circumstances [PR19HDD_H1]				X
Internal sewer flooding [PR19HDD_E1]	X	X	X	
Pollution incidents [PR19HDD_E2]	X		X	
Risk of sewer flooding in a storm [PR19HDD_E4]				X
Sewer collapses [PR19HDD_E5]	X		X	
Treatment works compliance [PR19HDD_C4]	X		X	
C-MeX: Customer measure of experience [PR19HDD_G1]	X	X	X	
D-MeX: Developer services measure of experience [PR19HDD_G2]	X	X	X	

Table 2.3: Summary of performance commitments: bespoke performance commitments

Name of bespoke performance commitment	Type of outcome delivery incentive				
	Financial				Reputational
	Under	Out	In-period	End of period	
Number of complaints about drinking water quality [PR19HDD_A2]	X	X	X		
Number of lead pipes replaced [PR19HDD_A3]	X	X	X		
Properties at risk of receiving low pressure [PR19HDD_B7]	X		X		
Length of river water quality improved [PR19HDD_C1]	X	X		X	
Hectares managed for biodiversity [PR19HDD_C2]	X	X	X		
Satisfactory sludge disposal [PR19HDD_C3]	X		X		
Inspiring our customers to use water wisely [PR19HDD_D1]					X
Sewer blockages [PR19HDD_E3]	X	X	X		
Reduction in the number of void supply points [PR19HDD_F1]	X	X	X		
Non household customer experience [PR19HDD_G3]	X	X	X		
Welsh language services [PR19HDD_G4]					X
Help to pay when you need it [PR19HDD_H2]					X
Effectiveness of the affordability support [PR19HDD_H3]					X
Priority services during an incident [PR19HDD_H4]					X
WINEP Delivery [PR19HDD_NEP01]					X
Improving reservoir resilience [PR19HDD_B8]	X		X		

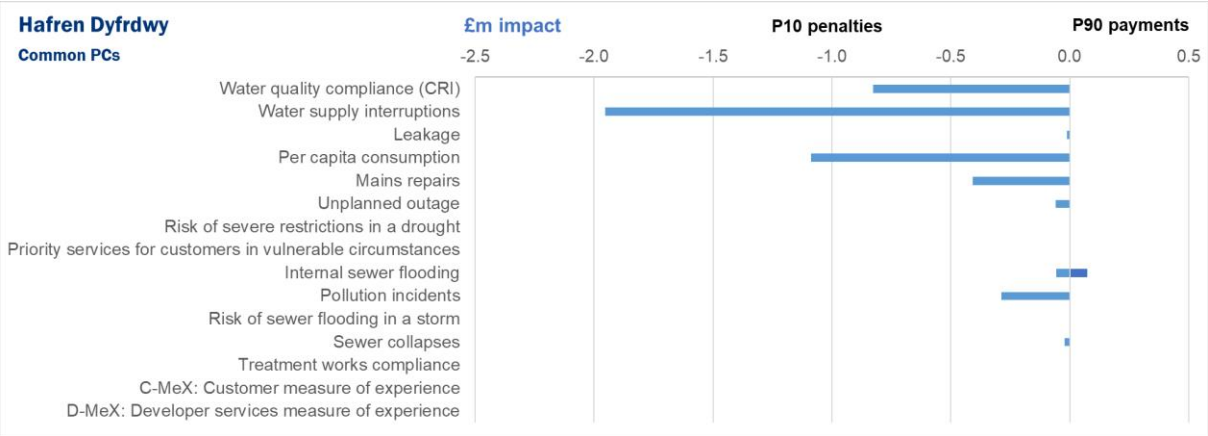
In the table above the performance commitment 'WINEP delivery' refers to delivery of the national environment programme (or NEP). This is performance commitment PR19HDD_NEP01 and full details can be found in the document 'Hafren Dyfrdwy – Outcomes performance commitment appendix'.

Figure 2.1 and figure 2.2 provide an indication of the financial value of each of Hafren Dyfrdwy's outcome delivery incentives (taking into account the impact of our final determination decisions) showing how much the company would have to return to customers if it underperformed to the P10 level and how much the company would gain if it outperformed to the P90 level. The P90 is the performance threshold at which there is only a 10% chance of outturn performance being better. The P10 is the performance threshold at which there is only a 10% chance of outturn performance being worse.

The figures cover common and bespoke commitments respectively. The estimates are based on the company's own view of the plausible bounds of performance submitted in April 2019 submission. Where we have changed service levels for performance commitments, we have amended these estimates so that the distance between the service level and estimate remains the same.

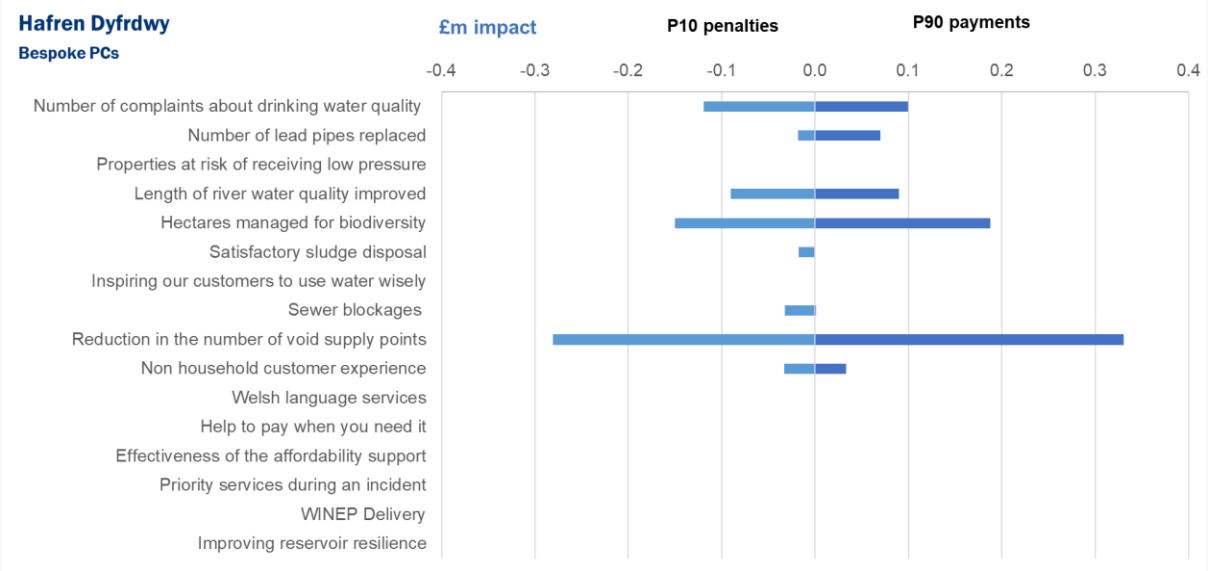
Our analysis has built on the estimates companies have provided, but there is a range of plausible estimates of what may happen in plausible worst case (P10) and plausible best case (P90). There is inherent uncertainty in forecasting these parameters and the figures presented should be seen as indicative of the likely range of financial impacts for each performance commitment.

Figure 2.1: Projected P10 underperformance payments and P90 outperformance payments for common performance commitments over 2020-25 (£ million)



Note P10 underperformance payments and P90 outperformance payments for C-Mex: Customer measure of experience and D-Mex: Developer services measure of experience are not shown in this figure but are shown in table 5.1 below.

Figure 2.2: Projected P10 underperformance payments and P90 outperformance payments for bespoke performance commitments over 2020-25 (£ million)



In the chart above the performance commitment 'WINEP delivery' refers to delivery of the national environment programme (or NEP). This is performance commitment PR19HDD_NEP01 and full details can be found in the document 'Hafren Dyfrdwy – Outcomes performance commitment appendix'.

Table 2.4 provides an indication of the financial value of the overall package at the upper and lower extreme levels of performance (expressed as a percentage point impacts on RoRE (return on regulatory equity)) and the overall impact of our final determination decisions. Further information on how we have calculated these values is set out in the 'Delivering outcomes for customers policy appendix'.

Table 2.4: Impact of draft determination and final determination decisions on RoRE range

	Draft determination		Final determination	
	% of 5 year regulatory equity		% of 5 year regulatory equity	
	P10	P90	P10	P90
Hafren Dyfrdwy	-2.07	+0.30	-2.30	+0.48

The figures in the above tables are estimates. In the PR19 methodology we said that we expect companies to propose approaches to protect customers in case their outcome delivery incentive payments turn out to be much higher than expected. We asked companies, in our initial assessment of business plans 'PR19 initial assessment of plans: Delivering outcomes for customers policy appendix', to put in

place additional protections for customers where we considered protections were not adequate.

We are applying caps and collars to financially material and/or highly uncertain performance commitments and allowing caps and collars on other performance commitments where company proposals are supported by high quality customer engagement. Where, through these reasons, the vast majority of companies have caps and collars on a common performance commitment, we apply caps and collars to all companies.

We are applying a standard sharing mechanism for all companies, where 50% of outperformance payments that exceed 3% of return on regulatory equity (RoRE) in any year are shared with customers through bill reductions in the following year. We set out further detail of the mechanism in the 'Delivering outcomes for customers policy appendix'. We also introduce downside sharing for Hafren Dyfrdwy if total net outcome delivery incentive underperformance payments to customers are more than 3% of RoRE in any year. This should mitigate the risk to the company of excessive downside outcome delivery incentives due to the lack of long-term historical data and the small size of the company.

In our PR19 methodology, we decided to replace the existing service incentive mechanism (SIM) with two new common performance commitments to incentivise companies to provide an excellent experience for residential customers (our customer measure of experience, or C-MeX) and developer services customers (our developer services measure of experience, or D-MeX). C-MeX and D-MeX will operate from April 2020 and incentivise companies to improve their performance relative to other water companies and the wider economy.

We set out further details on how C-MeX and D-MeX will operate in the 2020-25 period, including any changes from draft determinations, in the 'Customer measure of experience (C-MeX) and developer services measure of experience (D-MeX) policy appendix'.

2.3 Delivering a framework for resilience in the round

Resilience is one of our four themes for PR19. We set out our expectations for water companies' business plans in our final methodology. Overall, Hafren Dyfrdwy's September 2018 business plan falls significantly short of demonstrating that the company has applied an integrated resilience framework that will deliver resilience in the round. It does however provide some evidence that the company has considered

operational, financial and corporate risks. It also includes evidence of collaborating with external stakeholders on catchment management and biodiversity schemes.

We recognise that it may take some time for companies to fully understand best practice approaches to resilience in the round and implementing a systems-based approach to resilience. In our initial assessment of business plans, we set Hafren Dyfrdwy an action (HDD.LR.A2) to develop a resilience action plan which demonstrates that it has a framework in place to deliver resilience in the round, and to submit this to us by 22 August 2019. We expected the resilience action plan to build upon the feedback that we provided following our initial assessment of the business plan.

Hafren Dyfrdwy's resilience action plan falls short of our expectations in many areas. In particular, we are concerned that:

- the company does not provide a line of sight between gaps in maturity identified, risks to resilience, planned mitigations and its package of outcomes. We expect the resilience action plan to demonstrate how systems will be developed to provide a clear link between risks to resilience, maturity improvements and mitigations and the ability to deliver its package of outcomes;
- the company does not provide sufficient evidence on its approach to systems thinking and how it will map and analyse system interdependencies in practice. We expect the company to provide details on how it will practically identify relevant systems, map interactions and use these to assess risk and develop mitigations; and
- the company does not provide sufficient detail, on resource requirements, specific timescales and accountability for delivery, to provide confidence that the action plan will be delivered. We expect the resilience action plan to provide sufficient detail to demonstrate a robust path to its implementation, including clear governance and accountable owners for actions.

Overall, Hafren Dyfrdwy, along with the sector, has further work to do to implement a fully integrated resilience framework. The company should continue to work with the sector, with Ofwat, and across sectors to incorporate best practice and address the concerns highlighted about its resilience framework above. Ofwat plans to engage the sector through its strategy to encourage further joint development of resilience approaches to accelerate best practice through the industry. We also may consider the progress companies have made as part of assessing company business plans in the 2024 price review.

3 Cost allowances

Key changes from the draft determination

- Our final determination allowance for Hafren Dyfrdwy is £165.6 million for the wholesale services. This compares with £164.8 million at draft determination. In retail, our final determination allowance is £14.4 million, compared with £14.3 million at draft determination.
- Our base allowance is affected by a number of changes we have made since draft determinations:
  - we include company outturn data from 2018-19 in our econometric models;
  - we exclude non-section 185 diversions costs (i.e., diversions other than those required by section 185 of the Water Industry Act 1991) from our econometric models and allow companies to recover related income outside the price control, from the relevant transport authority;
  - we strengthen the catch-up challenge applied to wholesale modelled base costs. We use the fourth placed company in wholesale water and the third placed company in wholesale wastewater as an efficiency benchmark, rather than the upper quartile company at draft determinations;
  - we reduce the frontier shift challenge from 1.5% per year to 1.1% per year, but we extend to all wholesale base costs.
- We accept the company's proposed tariffs in business retail.

Throughout price review 2019 we set out that we expect companies to demonstrate an increase in cost efficiency. In our final determinations, we set a cost-outcomes package that provides a strong incentive for companies to invest and operate efficiently and at the same time deliver a marked improvement in their level of performance, particularly on outcomes that matter to customers and the environment. Our cost-outcomes package is demanding but achievable. It will incentivise companies to innovate, which will pave the way for a more efficient, higher performing sector, with a more meaningful, trusted relationship with customers.

In its representation to draft determinations Hafren Dyfrdwy submits a business plan that is efficient in wholesale base costs and in residential retail. In business retail, we allow the full amount requested by Hafren Dyfrdwy after reviewing the additional evidence the company provides in its representation. We challenge Hafren Dyfrdwy's proposed enhancement costs to ensure customers pay only for efficient costs. Our allowance for Hafren Dyfrdwy is 1.8% higher than at draft determination.

Our approach to setting total expenditure (totex) allowances is detailed in our publication 'Securing cost efficiency technical appendix'. In addition to challenging companies to be more efficient we have also, where appropriate, set safeguards to protect customers if specific investments are not delivered as planned.

In the 'Hafren Dyfrdwy – Cost efficiency final determination appendix' we provide more detailed information on our cost challenge for enhancement expenditure, our allowance for cost adjustment claims and transitional expenditure and our unit cost adjustments related to uncertain schemes in the NEP.

3.1 Allowed expenditure for wholesale services

Table 3.1 shows total expenditure (totex) allowances by year and by wholesale price control for the period 2020-25. We phase our allowed totex over 2020-25 using the company business plan totex profile.

Table 3.1: Totex[1] by year for wholesale controls, 2020-25 (£ million, 2017-18 CPIH deflated prices)

	2020-21	2021-22	2022-23	2023-24	2024-25	Total	Company August 2019 - total
Water Resources	6.2	6.0	4.4	4.2	4.4	25.2	25.2
Water network plus	22.7	22.5	23.0	22.6	22.5	113.4	111.6
Wastewater network plus	4.1	4.5	4.6	5.7	4.2	23.1	21.9
Bioresources[2]	0.7	0.8	0.8	0.8	0.8	3.8	3.6
Total	**33.8**	**33.7**	**32.8**	**33.3**	**31.9**	**165.6**	**162.3**

[1] Totex includes all costs. This includes pension deficit recovery costs, third party costs, operating lease adjustments, allowances related to the development of strategic regional water resource solutions and costs that are assumed to be recovered through grants and contributions.
[2] The bioresources control is an average revenue control. The totex allowance in our draft determination is based on a forecast level of tonnes of dry solids.

Table 3.2 sets out the components of our totex allowance. The main components are base and enhancement costs. Base expenditure refers to routine, year on year costs, which companies incur in the normal running of their business to operate, maintain and incrementally improve service to customers. Enhancement expenditure

refers to investment for the purpose of enhancing the capacity or quality of service beyond base level.

Our base costs for wholesale water include operating costs (excluding enhancement opex) and maintenance costs. In wholesale water, base costs also include costs associated with the connection of new developments (i.e., new developments and new connection costs) and costs for addressing low pressure. In wastewater, base costs include new connections and growth, growth at sewage treatment works and costs to reduce flooding to properties that were previously assessed as enhancement expenditure.

We adjust allowed costs to reflect a change in the accounting treatment of leases as discussed in the 'Securing cost efficiency technical appendix'. The company proposed no adjustment in its business plan.

Our draft determination allowance included all revenues and costs in relation to diversions. This approach was criticised by companies who said that it did not take into account forecast step changes in diversions costs for some companies as a result of large infrastructure projects such as High Speed 2 (HS2). Following our draft determinations consultation, we exclude revenue relating to diversions other than those required by section 185 of the Water Industry Act 1991 ('non-section 185 diversions').

Non-section 185 diversions costs are included in table 3.2. Companies will be able to recover most of the non-section 185 diversions costs directly, usually from transport authorities, outside of the price control. This is in addition to our total revenue allowance.

Table 3.2: Wholesale price control - a breakdown of totex, 2020-25 (£ million, 2017-18 CPIH deflated prices)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Base expenditure	11.0	99.8	21.4	3.8	136.0
Enhancement expenditure	7.2	5.8	2.6	-	15.6
Operating lease adjustment	-	-	-	-	-
Gross allowed totex for calculation of cost sharing rates	**18.2**	**105.6**	**24.0**	**3.8**	**151.6**
Strategic regional water resources solutions and other cash items	-	-	-	-	-
Third party costs	7.1	8.5	-	-	15.6
Non-section 185 diversions	-	0.4	0.0	-	0.5
Ex-ante cost sharing adjustment	-0.1	-2.2	-0.9	-	-3.2
Gross totex	**25.2**	**112.4**	**23.1**	**3.8**	**164.6**
Grants and contributions after adjustment for income offset[1]	-	2.8	0.8	-	3.6
Net totex for (pay as you go) PAYG calculation	**25.2**	**109.6**	**22.4**	**3.8**	**161.0**
Pensions deficit recovery costs[2]	0.0	1.0	-	-	1.0
Total	**25.2**	**110.6**	**22.4**	**3.8**	**162.0**

[1] Includes price control and non-price control grants and contributions.
[2] We are displaying pension deficit recovery costs separately as they are not included in the calculation for PAYG (see section 4).

Movement in allowed wholesale expenditure between draft and final determinations

Table 3.3 compares our totex allowance at final determination to our allowance at draft determination. The table only includes base and enhancement expenditure.

That is, it excludes pension deficit recovery costs, third party costs, and costs for strategic regional water resources development where relevant.

Following the change in approach to non-section 185 diversions costs discussed above, for final determinations, our allowance also excludes non-section 185 diversions costs of the amount stated against these cost in table 3.2. Our draft determinations allowance does not exclude these costs.

Table 3.3 also provides the company's requested costs in its April 2019 submission, and its revised requested costs in August 2019, in response to our draft determinations for slow-track companies. Table 3.4 provides further detail.

Table 3.3: Totex by service, 2020-25 (£ million, 2017-18 CPIH deflated prices)

Price Control	Company April 2019	Company August 2019	Draft determination allowance	Final determination allowance
Wholesale water	119.8	119.3	121.3	123.8
Wholesale wastewater	25.5	25.5	28.0	27.9
Total	**145.3**	**144.8**	**149.4**	**151.6**

Table 3.4: Totex by type of cost, 2020-25 (£ million, 2017-18 CPIH deflated prices)

	Draft determination allowance	Final determination allowance
Base expenditure	133.6	136.0
Enhancement	15.8	15.6
- Environmental obligations (NEP)	6.6	6.5
- Supply-demand balance enhancement	0.8	0.8
- Resilience enhancement	0.5	0.5
- Other enhancement (including reservoir safety and biodiversity)	7.9	7.8

3.2 Wholesale base expenditure

Table 3.5 shows a comparison between the company's requested and our allowed base expenditure.

Table 3.5: Base expenditure, 2020-25 (£ million, 2017-18 CPIH deflated prices)

Price Control	Company August 2019	Final determination allowance
Water Resources	7.5	11.0
Water Network plus	94.0	99.8
Wastewater Network plus	19.2	21.4
Bioresources	3.6	3.8
Total	**124.2**	**136.0**

Note company business plan base costs exclude enhancement opex.

For final determination, we retain our approach of including growth related expenditure in our base econometric models. We have also made an adjustment depending on whether the company operates in an area with a relatively high or low forecast of population growth, relative to the historical average for the sector. This follows representations made at draft determinations that the models did not adequately compensate for companies with a high growth forecast. We also consider that the models overcompensate for companies that operate in an area with a low growth forecast. We consider that using the symmetrical adjustment approach set out in our PR19 methodology best accommodates for these factors.

3.3 Enhancement expenditure

For wholesale enhancement expenditure we challenge the scope of work, the evidence provided to support solution options and the efficient delivery of programmes. We cost benchmark with the rest of the industry where we can.

Table 3.6 summarises our allowances for enhancement expenditure.

Table 3.6: Enhancement expenditure, 2020-25 (£ million, 2017-18 CPIH deflated prices)

Price Control	Company August 2019	Final determination allowance
Water Resources	10.5	7.2
Water Network plus	7.4	5.8
Wastewater Network plus	2.7	2.6
Bioresources	0.0	-
Total	**20.6**	**15.6**

Our final determination allows Hafren Dyfrdwy £15.6 million to invest in improvements to service, resilience and the environment. Key parts of this allowance are:

- £6.5 million to improve the environment by efficiently delivering its obligations as set out in the National environment programme (NEP);
- £2.9 million to meet lead standards;
- £2.8 million for the implementation of the Reservoirs Act 1975, the Environment Act 2016 and the Well-being of Future Generations (Wales) Act 2015; and
- £1.3 million to improve the quality of drinking water including taste, odour and colour.

Below we discuss key areas of our determination on enhancement cost proposals. Our document 'Hafren Dyfrdwy - Cost efficiency final determination appendix' sets out in more detail the cost allowances by investment area for each price control, and we give full reasoning in our published cost assessment models (enhancement feeder models and cost claims feeder models).

Resilience

Hafren Dyfrdwy asks for £1.65 million for water resilience enhancement investment. We accept £0.5 million that is part of the reservoir safety cost adjustment claim. We reject the remaining £1.15 million as there is no explanation for this expenditure. It appears that the expenditure has been incorrectly included for the cost adjustment claim named 'Supply Resilience', which the company withdraws in its April 2019 revised business plan.

Environmental obligations (NEP)

Hafren Dyfrdwy asked for £5.1 million for NEP costs. We challenge the company's proposals and allow £3.9 million. For the programme to meet the Eels (England and Wales) 2009 regulations, we find insufficient evidence that the company considered a range of options before selecting those it proposes and we apply a 20% challenge to costs. Our assessment has not changed from draft determination.

Reservoir safety

Hafren Dyfrdwy requests £3.9 million to improve reservoir safety. The request is to address the more stringent requirements of the amendments to Reservoirs Act 1975, introduced by the Flood and Water Management Act 2010, which are being enacted in Wales by Natural Resources Wales quicker than in England. The company provides evidence to support its selected programme, and external technical

assurance. However, there is limited evidence that its costs are efficient and we allow £2.8 million for this claim, unchanged from its draft determination. Hafren Dyfrdwy is well funded to improve its reservoir safety – it is getting more than it requests for the water resource price control.

Well-being of Future Generations (Wales) Act 2015

Hafren Dyfrdwy requests £1.1 million to enhance biodiversity through the Environment (Wales) Act 2016 and its responsibility to contribute to wider well-being goals in Wales[8]. The company does not provide sufficient and convincing evidence of the need for investment under the Well-being of Future Generations (Wales) Act 2015, and we allow £0.6 million for this expenditure, as at draft determinations.

3.4 Cost sharing

In the water resources, water network plus and the wastewater network plus controls we have a cost sharing arrangement. In these controls, when a company overruns its totex allowance, the additional cost incurred above our allowance will be shared between its investors and customers. When a company spends less than its totex allowance, it will share the benefits with customers.

For the draft determinations we calculated each company's cost sharing rates based on the ratio of the company's view of costs in its September 2018 business plan relative to our view of efficient costs. For the final determinations, we calculate the company's view of costs based on a 50% weight on the company's final cost proposals in its August 2019 representation to the draft determination and 50% weight on the September 2018 business plan. We explain our approach to calculating cost sharing rates in the 'Securing cost efficiency technical appendix'.

We confirm in 'Significant scrutiny application of lower cost sharing rates and outcome delivery incentive cap' technical appendix that we are not applying a lower cost sharing rate for Hafren Dyfrdwy. Since the initial assessment of business plans, it has engaged positively and its submissions are of sufficient quality.

Table 3.7 sets out the cost sharing rates for PR19 and net totex that is subject to cost sharing at the end of the 2020-25 period. We calculate cost sharing rates based on totex gross of grants and contributions (but after making adjustments for operating leases and excluding costs of strategic regional water resources development costs, third party costs and pension deficit recovery costs). At the end

[8] The total request is of £4.2 and £1.8 million. We assess £0.5 and £0.7 million costs separately because they are allocated to resilience and making ecological improvements at abstractions.

of the 2020-25 period, we will apply cost sharing to totex net of grants and contributions.

For final determination we introduce an uncertainty mechanism for business rates and abstraction charges. Under the uncertainty mechanism these costs are subject to different cost sharing rates. We discuss the uncertainty mechanism in section 4.4.5. Our allowance for business rates and abstraction charges costs are excluded from table 3.7.

Hafren Dyfrdwy's September 2018 business plan was assessed as requiring significant scrutiny at the initial assessment of plans. In our PR19 methodology we set out that for companies whose plans are assessed to need significant scrutiny, we will set a reduced cost sharing rate of 75% for underperformance and 25% for outperformance. When we published our view of costs at the initial assessment of plans we said we would decide at the final determination whether to apply a reduced cost sharing rate, or calculate the rates based on our approach for slow track companies, to reflect whether the company had engaged positively to address our concerns with the plan over the remainder of the price review process. We are not applying a lower cost sharing rate for Hafren Dyfrdwy. Since the initial assessment of business plans, it has engaged positively and its submissions are of sufficient quality (see 'Significant scrutiny application of lower cost sharing rates and outcome delivery incentive cap' technical appendix for details).

Table 3.7: Cost sharing rates for 2020-25 and totex for end-of-period reconciliation

	Water resources	Network plus - water	Network plus - wastewater
Totex for cost sharing rates – September 2018 business plan (£m)	18.0	100.5	21.8
Totex for cost sharing rates – August 2019 (£m)	18.0	101.4	21.9
Weighted company view of totex for cost sharing rates (£m)	18.0	100.9	21.8
Gross allowed totex for cost sharing rates (£m)	18.2	105.6	24.0
Cost sharing ratio	0.96		0.91
Cost sharing rate – outperformance	54%		59%
Cost sharing rate – underperformance	50%		50%
Grants and contributions before the deduction of income offset (£m) [9]	-	4.0	0.6
Abstraction charges and business rates (£m)	3.0	7.0	0.6
Net allowed totex subject to cost sharing reconciliation (£m) [10]	15.2	94.5	22.8

3.5 Allowed expenditure in residential retail

Table 3.8 sets out our total expenditure allowance for residential retail. Our allowance does not include any of our allowed pension deficit recovery costs. These costs have been wholly allocated to wholesale controls.

Based on our benchmarking analysis, we assess Hafren Dyfrdwy's residential retail costs for 2020-25 as efficient. Our overall approach rewards efficient business plans. As a consequence, Hafren Dyfrdwy receives an allowance that is higher than it requests in its business plan.

[9] Amendment made to Grants and contributions before the deduction of income offset (£m) Network plus – water and Network plus – wastewater.
[10] Amendment made to Net allowed totex subject to cost sharing allocation (£m) Network plus – water and Network plus – wastewater.

Table 3.8: Expenditure, residential retail, 2020-25 (£ million, nominal)

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Residential retail	2.8	2.9	2.9	2.9	3.0	14.4
Company view	2.9	2.9	2.7	2.5	2.5	13.5

Note the residential retail control is an average revenue control. Allowed cost and the associated allowed revenue is based on a forecast of the number of customers. There will be an end-of-period true up based on the actual number of connected households.

3.6 Business retail

At draft determination we concluded that Hafren Dyfrdwy had not provided evidence to support its high costs reported for small business retail customers (consuming less than five megalitres per year of water and wastewater) and applied an efficiency challenge to its proposed cost.

Hafren Dyfrdwy provides convincing evidence in its response to the draft determination to demonstrate that the proposed tariff for small business retail customers is efficient. For final determination, we accept Hafren Dyfrdwy's cost proposals for all customer bands in the business retail control. We set out the allowed costs and retail margins in section 4.

3.7 Direct procurement for customers

We set out in our PR19 methodology that we expect company business plans to consider direct procurement for customers where this is likely to deliver the greatest value for customers. Direct procurement for customers promotes innovation and resilience by allowing new participants to bring fresh ideas and approaches to the delivery of key projects. Companies are to consider direct procurement for customers for discrete, large-scale enhancement projects expected to cost over £100 million, based on whole-life totex.

Hafren Dyfrdwy's business plan does not identify any schemes that are suitable for direct procurement for customers.

We expect any major schemes which may arise due to significant changes to Hafren Dyfrdwy's business plan to be reviewed against the direct procurement for customers criteria, as detailed in the PR19 methodology. If the criteria are met, we expect Hafren Dyfrdwy to undertake further work to review detailed costs and commitments to ensure delivery is via the most efficient route, and to assess delivery

via direct procurement for customers, to ensure that customers receive the best value.

4 Calculation of allowed revenue

Key changes from the draft determination

The key changes we are making to the calculation of allowed revenue in the draft determination are:

- We allow £127.9 million of revenue across all price controls for Hafren Dyfrdwy in the final determination, compared to £125.1 million in the draft determination and £129.4 million in the company's April 2019 revised business plan.
- The allowed return on capital for the wholesale price controls is 2.92% (on a CPIH basis, 1.92% on a RPI basis), a reduction of 0.16 percentage points from our draft determination, based on our assessment of market evidence. The allowed retail margin for the household retail control remains at 1.0%, consistent with the draft determination.
- Consistent with the draft determination, we make a technical intervention to PAYG rates to maintain Hafren Dyfrdwy's approach and take account of our view of the mix of operating and capital expenditure. We also revise our approach to determining this mix to take better account of the nature of our interventions to cost allowances.
- Allowed revenue includes Hafren Dyfrdwy's contribution to the innovation competition.
- We revise our approach to calculating grants and contributions.
- We reflect Hafren Dyfrdwy's latest information on its actual performance in 2018-19 and expected performance in 2019-20 from its 15 July submission.
- We are increasing revenue by £0.1 million from the reconciliation of the business retail service incentive mechanism.
- Our final determination includes finalised scores for 2018-19 in the residential retail service incentive mechanism. This reduces revenue by £0.3 million compared to the draft determination.

This section sets out the calculation of allowed revenue for each of the price controls, based on our assessment of efficient costs. We set out in section 4.1 the components of allowed revenue for each of the price controls. We then set out information relevant to the calculation of the components of that allowed revenue in sections 4.2 and 4.4.

4.1 Allowed revenue

We calculate revenue separately for each of the wholesale controls and for the residential retail control. We set out the calculation of five year revenues for each of these controls in this section.

4.1.1 Wholesale controls

For the wholesale controls (that is water resources, water network plus, wastewater network plus and bioresources), allowed revenue is calculated based on the following elements, not all elements are applicable to all wholesale controls as set out in table 4.1.

- Pay as you go (PAYG) – this reflects the allocation of our efficient totex baseline to costs that are recovered from revenue in 2020-25. The proportion of totex not recovered from PAYG is added to the regulatory capital value (RCV) which is recovered over a longer period of time.
- Allowed return on capital – this is calculated based on our assessment of the allowed return on capital multiplied by the average RCV for each year.
- RCV run-off – this reflects the amount of RCV that is amortised from the RCV in the period of the price control.
- PR14 reconciliations – this reflects the application of out/underperformance payments from PR14 through revenue adjustments in 2020-25.
- Corporation tax allowance – this is estimated from projected corporation tax rates, profit forecasts and assumed levels of tax relief contained in our financial model for the draft determination.
- Grants and contributions – this represents revenue that we expect to be received from developers in respect of work undertaken by companies to service new developments. It includes income from connection charges, infrastructure charges and s185 diversion recharges. The total grants and contributions amount deducted from totex may not agree to this amount, as we only include grants and contributions income relating to the price control (and some income is outside the price control).
- Non-price control income – income from charges excluded from the price controls. For example, this includes bulk supplies, standpipes, unmeasured cattle troughs, and other services. In a change from our draft determination, we also now include diversions recharges which are in respect of the New Roads and Street Works act 1991 activities and other non-setion 185 diversions. We deduct the forecast income from these charges from the allowed revenue, because costs relating to these charges are included in the calculation of allowed revenue.

- Innovation competition – this represents the additional revenue that the company will collect from its customers for the purpose of a collectively funded innovation competition for the period 2020-25. The amount each company's customers will contribute will be proportionate to individual company revenue at draft determinations. We expect the revenue collected from customers to be ring-fenced and administered so that it will not be used for purposes other than the innovation competition.
- Revenue re-profiling – this reflects the change in revenue in 2017-18 prices as a result of adjustments made to annual revenues to smooth the final bill profile consistent with customer preferences. The financial model calculates revenue adjustments on a net present value (NPV) neutral basis.

We set out the calculation of the allowed revenue for Hafren Dyfrdwy's wholesale controls in table 4.1. We summarise the total of the build up of allowed revenue as five year totals, however our financial model calculates the allowed revenue on an annual basis for the purposes of our draft determination. We state the allowed revenue for each price control on an annual basis in section 6.

We explain how we calculate PAYG, RCV run-off and the allowed return on capital in section 4.2, the revenue adjustments for PR14 reconciliations in section 4.3, and other elements of allowed revenue in section 4.4.

Table 4.1: Calculation of allowed revenue (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total – Final determination	Total – Draft determination
Pay as you go	17.8	79.1	10.6	3.8	111.3	109.5
RCV run-off	17.0	8.4	1.3	0.0	26.7	26.6
Allowed return on capital	6.4	3.5	0.8	0.0	10.7	11.5
Revenue adjustments for PR14 reconciliations	0.0	0.9	0.9	0.0	1.8	1.2
Fast track reward	0.0	0.0	0.0	0.0	0.0	0.0
Tax	0.0	0.0	0.0	0.0	0.0	0.0
Grants and contributions after adjustment for income offset (price control)	0.0	2.5	0.6	0.0	3.0	2.3
Deduct non-price control income	-28.5	-10.1	-0.5	0.0	-39.2	-39.7
Innovation competition	0.0	0.4	0.1	0.0	0.5	0.0
Revenue re-profiling	0.0	0.0	0.0	0.0	0.0	-0.1
Final allowed revenues	**12.7**	**84.**6	13.7	**3.**8	**114.**9	**111.3**

We set out the calculation of allowed revenue for each wholesale control on an annual basis in the 'Hafren Dyfrdwy - Allowed revenue appendix' in tables 1.1 to table 1.4.

In our new strategy for regulating water and wastewater companies in England and Wales, we highlight that innovation is crucial for meeting the challenges the sector faces.

The adoption of innovative approaches is key to delivering long-term resilience and great customer service at an affordable price, and the sector will need to step up and increase innovation in order meet the strategic challenges it faces in a cost-effective and sustainable way. We also want to see companies work more effectively together and with their supply chain to better tackle these challenges.

Our outcomes and total expenditure approach facilitate this innovation, by giving companies the flexibility and freedom to adopt innovative means of delivering services. We are promoting innovation by setting Hafren Dyfrdwy stretching outcome performance commitments. Our outcome delivery incentives approach means that companies have to return money to customers where they fall short, but it also gives companies the opportunity to earn additional financial payments if they successfully improve performance and deliver for customers above and beyond the level expected of most companies. This encourages companies to look for innovative ways of delivering better services to customers and improving the environment.

However, as well as our existing package of measures which encourages companies to innovate individually, we have been considering how we can stimulate innovation more widely in the sector and encourage collaborative innovation initiatives.

In our new strategy consultation[11], we explored options for customer-funded interventions designed to drive innovation to benefit customers in the longer-term. Having reviewed the responses to the consultation, we are publishing our decision in 'Driving Transformational Innovation in the Water Sector' alongside the PR19 final determinations, confirming that we are making up to £200 million available for innovation activities for the period 2020-25 through the introduction of an innovation competition. We will work together with companies and other stakeholders in the sector to set up a competition which will effectively drive innovation in the sector to the benefit of customers across England and Wales.

4.1.2 Residential retail control

For the residential retail control, allowed revenue is calculated as:

- Retail cost to serve – this reflects our efficient view of costs per customer for the retail business.

[11] Ofwat's emerging strategy: Driving transformational innovation in the sector.

- Net margin on wholesale and retail activities – this is calculated based on the wholesale revenue applicable to residential retail customers, plus the retail cost to serve, with a net margin applied. Net margins are calculated excluding any adjustments to residential retail (see table 4.2 below) – the full calculation is set out in our financial models.
- Our methodology set out an early view of the retail margin that applies for the retail price controls. This was used by Hafren Dyfrdwy in its business plan and is unchanged in our final determinations.

Allowed revenue for the residential retail control is set on a nominal basis. We present the make-up of the allowed revenue in nominal prices in table 4.2.

Table 4.2: Retail margins, 2020-25 (nominal price base)

	Draft determination	Final determination
Total wholesale revenue - nominal (£m)	120.0	123.9
Proportion of wholesale revenue allocated to residential (%)	65.3%	65.1%
Residential retail costs (£m)	14.3	14.4
Total retail costs (£m)	**92.7**	**95.1**
Residential retail net margin (%)	1.0%	1.0%
Residential retail net margin (£m)	**0.9**	**1.0**
Residential retail adjustments (£m)[1]	-0.1	-1.0
Residential retail revenue (£m)[2]	**15.2**	**14.4**

[1] Residential retail adjustments for the PR14 residential retail service incentive mechanism and residential retail revenue reconciliations are set out in table 4.13. The figures in table 4.2 are in nominal prices, and the figures in 4.13 are in 2017-18 FYA CPIH deflated prices. The difference between the two tables is due to the difference in price bases.
[2] Residential retail revenue is the sum of the net margin, retail costs, and adjustments. Company view may not sum as this may include other adjustments.

We set out the calculation of residential retail revenue on an annual basis in the 'Hafren Dyfrdwy - Allowed revenue appendix' in table 1.5.

4.1.3 Business retail control

The business retail control allows an average revenue for each customer type. For companies operating wholly or mainly in Wales, we use a ‘net margin’ approach for customers using less than 50Ml of water per year and all wastewater customers (customer group 1) and a gross margin approach for customers using at least 50Ml of water per year (customer group 2).

For each customer type in customer group 1, the allowed revenue is based on:

- the allowed retail cost to serve – this is the allowed retail costs for the customer type divided by the number of customers; and
- a net margin, calculated as a percentage on the allowed retail cost to serve and the wholesale charge for that customer group.

The allowed average retail cost per customer and the net margin for each customer type is set out in table 4.3. The allowed average retail costs per customer include an adjustment for the reconciliation of the business retail service incentive mechanism for 2015-20, which is discussed further in table 4.13. The business retail service incentive mechanism only applies to customer group 1.

Table 4.3: Business customer group 1, allowed average retail cost components and allowed net margins (£, nominal prices)

Customer type	Units	2020-21	2021-22	2022-23	2023-24	2024-25
Water: unmeasured and 0-5 Ml/a	Average Retail Costs	49.97	50.81	50.67	51.89	52.56
	Net margin (%)	1.15%	1.15%	1.15%	1.15%	1.15%
Water: 5-50 Ml/a	Average Retail Costs	173.20	177.35	178.89	184.45	187.97
	Net margin (%)	0.61%	0.61%	0.61%	0.61%	0.61%
Waste Water: Unmeasured and 0-5 Ml/a	Average Retail Costs	45.36	45.60	44.49	45.08	45.09
	Net margin (%)	1.13%	1.13%	1.13%	1.13%	1.13%
Waste Water: 5-50 Ml/a	Average Retail Costs	183.50	188.19	192.69	199.48	203.84
	Net margin (%)	0.68%	0.68%	0.68%	0.69%	0.69%
Waste Water: 50+ Ml/a	Average Retail Costs	59.57	60.83	61.69	63.25	64.20
	Net margin (%)	0.77%	0.78%	0.78%	0.78%	0.78%

Note allowed average retail costs include an allowance for costs, and an adjustment for the business retail service incentive mechanism reconciliation.

For each customer type in customer group 2, the allowed revenue is based on an allowed gross margin. Rather than setting a retail cost per customer and a net margin, this approach simply sets a gross margin as a percentage of the wholesale charge for the customer group (with this gross margin expected to cover retail costs to serve too). We first took this approach at PR16 as a simplification for the largest customers, allowing companies to set several different tariffs for customers that fall into these consumption bands while meeting the overall gross margin cap. The gross margin is set out in table 4.4.

In our PR19 methodology we said we would retain the supplementary cap for customer group 2 that we introduced at PR16. The purpose of this cap was to avoid undue price disturbance at the opening of the business retail market and it prevented the average retail revenue in each tariff band increasing by more than 1% of customers' overall bill each year. We decide not to retain the supplementary cap, because retaining it would maintain a regulatory burden, yet:

- for high usage customers we have seen signs of effective competition developing in the market and these customers have high awareness of market opening and relatively high levels of engagement in the market; and
- any potential benefit of the supplementary cap in terms of price stability is much reduced.

This is consistent with our review of the Retail Exit Code where we decided to remove regulatory protections for higher usage customers and also remove the supplementary cap.

Table 4.4: Business customer group 2 and allowed gross margins (%)

Customer type	2020-21	2021-22	2022-23	2023-24	2024-25
Water, >50ml/a	3.30%	3.30%	3.30%	3.30%	3.30%

4.2 Cost recovery now and in the long term for the wholesale controls

Our totex cost allowances are sufficient to meet an efficient company's operating and capital expenditure. Companies recover this expenditure either in period from current customers using PAYG or add it to the RCV and recover from future generations of customers using the RCV run-off rates. Consistent with our methodology, we assess how each company's choice of PAYG and RCV run-off rates reflect the levels of proposed expenditure, bill profiles, affordability and customer views relevant to the short and the long term.

To determine the allowed revenue, the PAYG rate is applied to the totex allowance for each wholesale control for each year of the price control. The proportion of the totex allowance that is not recovered in PAYG is added to the RCV and recovered from customers in future periods. For the final determinations we revise our approach to the calculation of PAYG rates to better reflect the source of changes we make to costs claimed by companies as a result of our totex cost assessment. Our revised approach follows a process of further consultation with companies following the submission of representations on the draft determination. We explain our revised approach in 'Securing cost efficiency technical appendix'.

In this section we set out our approach to calculating the PAYG rates, the RCV to which the allowed return on capital is applied and the RCV run-off rates.

4.2.1 PAYG in allowed revenue

We calculate total PAYG totex for each year of each wholesale price control based on the totex allowance for each year multiplied by the relevant PAYG rate for that year. To this we add allowed pension deficit recovery costs to derive total PAYG revenue.

We summarise in table 4.5 the average PAYG rates across 2020-25 for each wholesale control, and the calculation of total PAYG revenue. The PAYG rates shown in the table are a weighted average across the five years 2020-25, the annual PAYG revenue and PAYG rates for each wholesale control are shown in the 'Hafren Dyfrdwy - Allowed revenue appendix', Tables 2.1 to 2.4.

To PAYG totex we add the allowed costs for pension deficit recovery set out in table 3.2 to derive the total amount to be recovered in 2020-25 for each price control.

Table 4.5: PAYG allowances for each wholesale control (5 year)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Totex allowance (£m)	25.2	109.6	22.4	3.8	161.0
Final determination PAYG rate (%)	70.5%	71.3%	47.2%	100.0%	68.5%
Pay as you go totex (£m)	17.8	78.1	10.6	3.8	110.3
Pension deficit recovery cost (£m)	0.0	1.0	-	-	1.0
Total pay as you go (£m)	**17.8**	**79.**1	**10.**6	**3.**8	**111.**3

Table 4.6: PAYG rates for each wholesale control (5 year)

	Water resources	Water network plus	Wastewater network plus	Bioresources
Original company plan (%)	65.4%	69.1%	54.7%	100.0%
Draft determination (%)	66.7%	69.9%	47.4%	100.0%
Final determination (%)	70.5%	71.3%	47.2%	100.0%

In the draft determination, we applied Hafren Dyfrdwy's approach to PAYG rates of recovering in each year an amount equivalent to operating costs plus infrastructure renewal costs. We applied a technical intervention to amend the PAYG rates proposed in the April business plan to reflect our view of the mix of operating and capital expenditure. Hafren Dyfrdwy's April business plan included an adjustment to PAYG rates to move allowed revenue from wastewater to water controls to assist affordability and balance bills across water and wastewater bills taking account of commitments made at the time of the border variation (NAV). In the draft determination, we applied a further technical intervention to amend this adjustment to more closely match the wastewater bill as proposed in the April business plan.

Hafren Dyfrdwy does not make any representations in relation to our approach to PAYG rates and we apply the same approach for the final determination.

Taking account of company representations, we have revised our approach to the calculation of the mix of operating and capital expenditure following our totex interventions.

In order to calculate the mix of operating and capital expenditure we follow the approach set out in 'Securing cost efficiency technical appendix'. We set out how we apply the technical intervention in the 'Aligning risk and return technical appendix' and we have published our calculation of the PAYG rates for each company alongside our determinations.

For our final determination we apply the same approach for the draft determination and we align PAYG rates to our view of the mix of operating and capital expenditure for our totex allowances. We also apply the specific technical intervention to the adjustment to water and wastewater bills.

The movements in PAYG rates between the company plan, the draft determination and final determination reflect the differences in the mix of operating and capital expenditure in our totex allowance. We set out our financeability assessment in section 5.2.

4.2.2 Opening RCV adjustments

As part of the business plan Hafren Dyfrdwy proposed allocations of the RCV for both water resources and bioresources price controls based on Ofwat guidance. We are allocating the company's RCV between the existing wholesale controls and these new controls in accordance with the proportions proposed by Hafren Dyfrdwy. Hafren Dyfrdwy has no bioresources assets as all sludge is exported to neighbouring companies for treatment and disposal. As such it has a zero bioresources RCV.

We make reconciliation adjustments ('midnight adjustments') related to the company's performance against incentive mechanisms from previous price reviews and for land sales in order to determine the opening RCV for the period of the PR19 controls. We also adjust the RCV upwards to reflect a change in the accounting treatment of leases, which causes some assets formerly recognised as operating leases to be recognised on the company's Balance sheet. In doing so, we follow the approach set out in IN 18/09 Guidance for reporting operating leases in PR19 business plans. The company proposed no adjustments in its business plan.

Table 4.7: Opening RCV, 1 April 2020 (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources
RCV – 31 March 2020	73.2		1.8	
% of RCV allocated by control	80.26%	19.74%	100.00%	0.00%
RCV – 31 March 2020	58.7	14.4	1.8	-
Midnight adjustments to RCV	-2.6	-0.6	-1.2	N/A
Midnight adjustments relating to operating leases	-	-	-	-
Opening RCV – 1 April 2020	**56.2**	**13.8**	**0.7**	**-**

4.2.3 Allowed return on capital

Companies are allowed a return on the RCV, equal to the allowed return on capital.

Hafren Dyfrdwy business plan incorporates the early view allowed return on capital for the wholesale price controls of 3.30% - CPIH deflated (2.30% - RPI deflated) that we state in the PR19 methodology. The allowed return on capital for the wholesale price controls in our final determinations is 2.92% – CPIH deflated (1.92% – RPI deflated). We set out the basis for the allowed return on capital in our 'Allowed return on capital technical appendix'.

The PR19 methodology confirmed we are transitioning to CPIH as our primary inflation index from 2020. At 1 April 2020, we will index 50% of RCV to RPI; the rest, including totex that is added to the RCV, will be indexed to CPIH. Table 4.8 and table 4.9 set out the opening and closing balance for each component of RCV as of 1 April 2020 and 1 April 2025 respectively.

The PR19 methodology confirms our protection of the value of the RCV as at 31 March 2020 across each of the wholesale price controls. This applies to the RCV that is defined as 'RPI inflated RCV' and 'CPIH inflated RCV' in tables 4.8 and 4.9; this RCV is run-off (or amortised) over time. Totex that is added to the RCV from 1 April 2020 is stated as 'post 2020 investment'.

In determining the 'Allowed return on capital' revenue building block, we apply the relevant deflated allowed return on capital to the average RCV for the year for each component (RPI inflated, CPIH inflated and post 2020 investment). This results in an allowed return on capital for each wholesale control over the period 2020-25 as set out in table 4.10.

Table 4.8: Opening RCV by wholesale control for each component of RCV, 1 April 2020 (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
RPI inflated RCV	28.1	6.9	0.3	-	**35.3**
CPIH inflated RCV	28.1	6.9	0.3	-	**35.3**
Other adjustments	-	-	-	-	**-**
Total RCV	**56.2**	**13.8**	**0.7**	**-**	**70.6**

Table 4.9: Closing RCV by wholesale control for each component of RCV, 31 March 2025 (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
RPI inflated RCV	21.2	5.2	0.3	-	26.7
CPIH inflated RCV	20.3	5.0	0.3	-	25.5
Post 2020 investment	6.2	26.9	10.7	-	43.7
Other adjustments	-	-	-	-	-
Total RCV	**47.7**	**37.1**	**11.2**	**-**	**96.0**

Table 4.10: Allowed return on capital by wholesale control for each component of RCV, 2020-25 (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
RPI inflated RCV	2.4	0.6	0.0	-	3.0
CPIH inflated RCV	3.5	0.9	0.0	-	4.4
Post 2020 investment	0.6	2.0	0.8	-	3.3
Other adjustments	-	-	-	-	-
Allowed return on capital	**6.4**	**3.5**	**0.8**	**-**	**10.7**
Company April 2019 – return on capital	7.6	4.1	0.7	-	12.5

Note allowed return on capital is calculated by multiplying the annual average RCV for each element of RCV (RPI inflated, CPIH inflated and post 2020 investment) by the wholesale WACC for each control. The allowed return on capital for each year of the price control for each wholesale control is shown in the 'Hafren Dyfrdwy - Allowed revenue appendix' in tables and 4.1 to 4.3.

4.2.4 RCV run-off

RCV run-off is the proportion of the RCV which is recovered in the 2020-25 period. Companies are able to propose different run-off rates for RPI inflated and CPIH inflated RCV and also, for the water resources and bioresources controls, for post 1 April 2020 investment. Table 4.11 sets out the resultant RCV run-off revenue for each component of RCV for each wholesale control.

Table 4.11: RCV run-off on the RCV (5 year) (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
CPIH inflated RCV	7.8	1.9	0.1	0.0	9.8
RPI inflated RCV	8.0	2.0	0.1	0.0	10.0
Post 2020 investment	1.2	4.5	1.1	0.0	6.9
Total RCV run-off	**17.0**	**8.4**	**1.3**	**0.0**	**26.7**

Note total RCV run-off is calculated by multiplying the opening RCV by the relevant RCV run-off rate for each element of RCV (RPI inflated, CPIH inflated and post 2020 investment) by the RCV run-off rate for each control (50% of run-off is applied to post 2020 investment in the year of additions).

In the draft determination, we intervened to align RCV run-off rates for the wastewater network plus control in Hafren Dyfrdwy's to be consistent with the company's original business plan – which was on average 1.9% lower than the April plan.

For the draft determination, for the wholesale controls excluding wastewater network plus we applied Hafren Dyfrdwy's RCV run-off rates which are initially based on the depreciation rate for each wholesale control. This looks at historical rates for assets that were transferred to the company at the time of the border variation[12] due to the mismatch between the value of the assets and the RCV transferred at that time. The company applies a reduction to RCV run-off rates to maintain affordability and the commitments made regarding bills at the time of the border variation. In its representations, Hafren Dyfrdwy confirms its approach to RCV run-off rates and we

[12] 'Variation of Severn Trent Water Limited's (Severn Trent Water) appointment to include the Chester Site and variation of Dee Valley Water Limited's (Dee Valley Water) appointment to include the Powys site', March 2018

therefore continue to apply the company's RCV run-off rates for the final determination.

Table 4.12 sets out the average RCV run-off rates across 2020-25 for each wholesale control proposed in the company's business plan and for our draft and final determinations.

Table 4.12: RCV run-off rates for each wholesale control (5 year)

	Water resources	Water network plus	Wastewater network plus	Bioresources
Company April 2019 (%)	6.30%	6.30%	4.30%	N/A
Draft determination (%)	6.30%	6.30%	3.22%	N/A
Final determination (%)	6.30%	6.30%	4.30%	N/A

Note RCV run-off (%) reflects the average of the rates applied to the CPIH and RPI inflated RCV components across the 5 years 2020-25.

The annual rates for each wholesale control are set out in the 'Hafren Dyfrdwy - Allowed revenue appendix' in table 5.1 to table 5.3.

4.3 PR14 reconciliations

In PR14, we set mechanisms to incentivise companies to do the right thing for their customers. These financial incentives cover cost efficiency, outcomes performance, revenue forecasting (wholesale and retail), customer service (the service incentive mechanisms), water trading and land sales. It is important to reconcile the financial impacts of these mechanisms in PR19 to ensure that customers only pay for the service the company delivers.

We are also applying adjustments to reflect performance in the final year of the 2010 to 2015 period, which could not be fully taken into account in PR14, and the inflation correction to the RCV from the capital expenditure incentive scheme (CIS). These adjustments apply to the RCV (the 'midnight adjustment') and revenue for the 2020-25 period. These adjustments are made in line with the 'PR14 reconciliation rulebook'.

We are publishing models for each of these reconciliations, and for the overall RCV and revenue adjustments on our website. 'Hafren Dyfrdwy - Accounting for past

delivery final decisions' provides a detailed explanation of all policy interventions we are making in the models. Table 4.13 summarises our interventions. Table 4.14 sets out the resulting adjustments to revenue and the RCV. The 'Hafren Dyfrdwy - Accounting for past delivery appendix' sets out how these adjustments are allocated across controls and how the RCV adjustment feeds into the midnight adjustments to RCV set out in table 4.7.

The 'Accounting for past delivery technical appendix' sets our further details on our reconciliation of PR14 incentives, the residential and business retail service incentive mechanisms and our deliverability assessment.

For outcome delivery incentives, the information we use to reflect performance in 2019-20 is based on the company's latest expectations. Final figures for 2019-20 will not be able to be taken into account in PR19. We set out in the 'PR14 reconciliation rulebook' that we plan to complete the reconciliation for 2019-20 outcome delivery incentives at PR24 for 2025-30 so that we use final information.

However, most outcome delivery incentives for the 2020-25 period are in period and will have been reconciled before this date. In light of this we consider it would be more appropriate to complete this reconciliation in the autumn of 2020 and apply any change to bills for 2021-22 as part of the new in-period process. We are designating all of the financial PR14 performance commitments as being in-period for this purpose. Any adjustment between the 2019-20 forecast and actual figures should be modest and we do not expect a significant impact on bills. If, contrary to expectations the bill impact is more significant, we expect companies to take measures to smooth the impact for their customers. The new PR19 mechanism to share benefits with customers from unexpected high outcome delivery incentive payments in a year will not apply to PR14 outcome delivery incentives. Instead the PR14 protection that caps the impact across the five years 2015-20 will apply.

The above applies equally to the company's 2015-20 in period outcome delivery incentives and we use forecast information for 2019-20 to reconcile these outcome delivery incentives. For the avoidance of doubt, no application is required in 2019 for in period determinations.

Table 4.13: Reconciliation of PR14 incentives, interventions (2017-18 prices, unless otherwise stated)

Incentive	Intervention(s)
Outcome delivery incentives	We are intervening to include a revenue adjustment of - £0.0294 million in 2016-17 and - £0.006 million in 2017-18 (2012-13 prices) for underperformance payments for performance commitment B2 (sustainable economic level of leakage). For 2016-17 this is to reflect changes to its reported actual leakage performance in 2016-17 and for 2017-18, to ensure the full amount of the 2017-18 underperformance payment is included. We are also intervening to include a RCV adjustment of - £0.003 million (2012-13 prices) for an underperformance payment for performance commitment W-A3 (asset stewardship - number of sites with coliform failures (WTWs)) in 2017-18. This is 0.58%[13] of the - £0.4630 million underperformance payment accrued by Severn Trent Water. Following engagement with Hafren Dyfrdwy, we are intervening to include an outperformance payment of £0.004 million (2012-13 prices) in 2019-20 for 'Net performance payment / (penalty) applied to revenue for in-period outcome delivery incentive adjustments ~ Water resources' and 'Net performance payment / (penalty) applied to revenue for in-period outcome delivery incentive adjustments ~ Water network plus' to reflect changes in allocation between price controls by the company. Overall, our minor interventions reduce the water RCV adjustment at the end of the period from £0.000 million to - £0.003 million and reduce the water revenue adjustment at the end of the 2015-20 period from - £0.494 million to - £0.517 million.
Residential retail revenue	We are intervening to round the company's modification factor figures to 2 decimal places to ensure consistency with the 'PR14 reconciliation rulebook'. We are also including updated weighted average modification factors for allowed retail service revenue per unmeasured and measured water customers in 2018-19 and 2019-20. We are doing this because the PR14 modification factors were different for Severn Trent Water and Dee Valley Water unmeasured and measured water customers and it is appropriate to use a weighted average for the merged company. Our approach calculates a weighted average modification factor using the correct PR14 final determination modification factors for customers affected by the border variation. Overall, our minor interventions do not change the total residential retail revenue payment at the end of the 2015-20 period which remains at - £0.532 million.
Wholesale revenue forecasting incentive mechanism	No interventions required.
Totex	We area intervening to change the water and sewerage 'Final menu choice' and 'Implied menu choice' figures to take account of the adjusted baseline menu figures provided by the company for 2018-19 and 2019-20 following the boundary variation involving the Chester and Powys sites.

[13] Allocations of Severn Trent Water wholesale water rewards and penalties for 1 April 2015 to 30 June 2018 to Hafren Dyfrdwy are set out in table 11 of 'Consultation under section 13 of the Water Industry Act 1991 on proposed modification of Severn Trent Water Limited's (Severn Trent Water) licence to include the Powys Site and proposed modification of Dee Valley Water Limited's (Dee Valley Water) licence to include the Chester site' published 23 March 2018.

Incentive	Intervention(s)
	Our interventions change the total RCV adjustments at the end of the period from - £2.723 million (- £1.716 million for water, - £1.006 million for wastewater) to - £2.727 million (- £1.712 million for water, - £1.014 million for wastewater). For revenue, our interventions change the total revenue adjustments at the end of the period from - £0.764 million (- £0.759 million for water, - £0.004 million for wastewater) to - £0.841 million (- £0.761 million for water, - £0.080 million for wastewater).
Land sales	No interventions required.
Residential retail service incentive mechanism	We are intervening to set Hafren Dyfrdwy's residential retail service incentive mechanism adjustment to -2.34% of residential retail revenue to reflect its performance from 2015-16 to 2018-19. This equates to -£0.281 million in total revenue over the period. This reduces revenue relative to the company's estimate of the mechanism's impact and is driven by updating our analysis to take account of companies' finalised scores for 2018-19.
Business retail service incentive mechanism	We are intervening to set Hafren Dyfrdwy's business retail service incentive mechanism adjustment to: £2.69 per 'Water: Unmeasured and 0-5 Ml/a' customer £9.54 per 'Water: 5-50 Ml/a' customer £0.0 per 'Water: 50+ Ml/a' customer £2.37 per 'Waste Water: Unmeasured and 0-5 Ml/a' customer £10.23 per 'Waste Water: 5-50 Ml/a' customer £3.27 per 'Waste Water: 50+ Ml/a' customer This reflects the company's performance relative to other business retailers from 2015-16 to 2018-19. Using the company's forecasts for business retail customer numbers this equates to £0.096 million. This is 5.53% of business retail revenue for water customers using less than 50Ml a year and wastewater customers over the period, multiplied by Hafren Dyfrdwy's 69.15% of the incentive payment. The company did not estimate the impact of the mechanism in its business plan.
PR09 blind year adjustments	No interventions required.

Table 4.14: Reconciliation of PR14 incentives, 2020-25 (£ million, 2017-18)

Incentive	RCV adjustments		Revenue adjustments	
	Company view[1]	Ofwat view[1]	Company view[1]	Ofwat view[1]
Outcome delivery incentives	-0.1	-0.1	0.0	0.0
Residential retail revenue	N/A	N/A	-0.5	-0.5
Wholesale revenue forecasting incentive mechanism	N/A	N/A	2.5	2.5
Totex	-2.7	-2.7	-0.8	-0.8
Land sales	-0.1	-0.1	N/A	N/A
Residential retail service incentive mechanism	N/A	N/A	0.0	-0.3
Business retail service incentive mechanism	N/A	N/A	N/A	0.1
PR09 blind year adjustments[2]	-1.5	-1.5	0.0	0.0
Water trading	N/A	N/A	0.0	0.0
Other adjustments	0.0	0.0	0.0	0.0
Total	-4.4	-4.4	1.3	1.0
Total post profiling[3]	N/A	N/A	1.3	1.0

[1] The company view is based on data from the 15 July 2019 company submissions. It does not reflect impacts of the subsequent representations. The Ofwat view is based on the 15 July 2019 company submissions and takes account of representations and any interventions we are making.
[2] PR09 blind year adjustments includes the CIS RCV inflation correction. We show these separately in 'Hafren Dyfrdwy - Accounting for past delivery appendix'.
[3] Total post profiling is the total revenue over the period, taking account of the time value of money and the company's choices of how it wishes to apply revenue adjustments either in the first year or spread over a number of years.

4.4 Other allowed revenue

Other components of allowed revenue are:

- The fast track reward, where applicable;

- Corporation tax allowance – this is estimated from projected corporation tax rates, profit forecasts and assumed levels of tax relief contained in our financial model for the final determination.
- Grants and contributions – this represents revenue that we expect to be received from developers in respect of work undertaken by companies to service new developments.
- Non-price control income – this forecast income is deducted from the total allowed revenues, as this revenue is not recovered from the charges covered by the price control – but is expected to cover some of the costs included in the calculation of the price control.

Table 4.15: Calculation of other allowed revenue (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Fast track reward	0.0	0.0	0.0	0.0	**0.0**
Tax	0.0	0.0	0.0	0.0	**0.0**
Grants and contributions (price control)	0.0	2.5	0.6	0.0	**3.0**
Deduct non-price control income	-28.5	-10.1	-0.5	0.0	**-39.2**

4.4.1 Taxation

We calculate a tax allowance reflecting the corporation tax that the company expects to pay in 2020-25. We calculate the tax allowance using our financial model based on the projected taxable profits of the appointed business and the current and enacted UK corporation tax rates and associated reliefs and allowances as at 30 September 2019. Any future changes to tax rates and allowances will be taken account of in the tax reconciliation model, further details are set out in the 'Aligning risk and return: technical appendix'.

Hafren Dyfrdwy provided information in data tables relevant to the calculation of the expected tax charge. Hafren Dyfrdwy expects to generate tax losses over the period 2020-25, which will be surrendered to the group, with payment received at full value. Our PR19 methodology allows us to capture the full value of the tax losses surrendered and deduct them from the tax allowance. This ensures that customers

do not lose out as a result of losses being transferred out of the company that could otherwise be offset against tax liabilities in the future.

Consistent with the draft determination we adjust the revenue requirement (post financeability) in the final determination for the company to reflect the payment received from the group for tax losses surrendered. The value of the adjustment is set out in the adjustments log of the published financial model for Hafren Dyfrdwy. This will ensure customers benefit from the tax losses in the period they are generated. This is reflected in 'non price control income' (section 4.3.3).

Table 4.16: Tax (£ million) – Breakdown by price control

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Tax	0.0	0.0	0.0	0.0	0.0

4.4.2 Grants and contributions

Companies receive grants and contributions from developers towards company expenditure to:

- reinforce the network as a consequence of new properties being connected;
- connect a new property (e.g. the meter and connection pipe);
- provide new water mains or public sewers (i.e. requisitions); and
- move an existing main or sewer or other apparatus at the request of a third-party (i.e. diversions).

Grants and contributions (price control)

Grants and contributions before the deduction of income offset allowances (i.e. 'gross' grants and contributions) are used to calculate net totex for cost sharing and within the developer services reconciliation adjustment, as explained in 'Our approach to regulating developer services'.

Grants and contributions after the deduction of income offset allowances (i.e. 'net' grants and contributions) are used to calculate net totex for use in the financial modelling. This ensures that income offset allowances, that are funded by existing customers rather than developers, are captured within net totex that is used to calculate pay-as-you-go revenue and RCV additions. Developer services costs that

are funded by developers are excluded from net totex, and are instead treated as grants and contributions within the financial model (as shown in tables 3.2 and 4.1).

Our approach to calculating 'gross' and 'net' grants and contributions is outlined in 'Cost efficiency technical appendix'. The main difference from draft determinations is that we no longer estimate a cost recovery rate for each company. The starting point for each calculation is 'gross' grants and contributions reported in companies' business plans. To arrive at 'net' grants and contributions we deduct company-specific income offset allowances rather than assume a common recovery rate for all companies. We also apply the modelled base cost efficiency challenge to grants and contributions to ensure alignment between grants and contributions and cost assessment.

Table 4.17 below shows our assumed amounts of 'gross' grants and contributions (price control) that is used to calculate net totex for cost sharing.

Table 4.17: Grants and contributions before the deduction of income offset allowances (£ million)

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Grants & contributions (before deduction of income offset allowances)	0.0	4.0	0.6	0.0	4.6

Table 4.18 below shows our assumed amounts of 'net' grants and contributions (price control) that is captured within net totex that is used to calculate pay-as-you-go revenue and RCV additions.

Table 4.18: Grants and contributions after the deduction of income offset allowances (price control) (£ million) – breakdown by price control and category

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Grants & contributions (price control)	0.0	2.5	0.6	0.0	3.0

Grants and contributions (non-price control)

For final determinations, we set non-section 185 diversions income outside of the price control, as explained in 'Our approach to regulating developer services'.

Table 4.19 below shows our assumed amounts of grants and contributions (non-price control) that are made up of non-section 185 diversions income.

Table 4.19: Grants and contributions (non-price control) (£ million) – breakdown by price control and category

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Grants & contributions (non-price control)	0.0	0.4	0.2	0.0	0.6

4.4.3 Non-price control income

Non-price control income is income from the excluded charges defined in licence condition B. For example, it includes bulk supplies, standpipes, unmeasured cattle troughs, and other services. For the final determination we confirm that diversions which are not requested under section 185 of the Water Industry Act 1991, for example, works under the New Roads and Street Works Act 1991 or those associated with High Speed 2, are also excluded from the price control. These are capital contributions and so do not get shown in tables 4.1 and 4.20.

This is deducted from the total allowed revenues, as this revenue is not recovered from the charges covered by the price control – but is expected to cover some of the costs included in the calculation of the price control. We have reviewed the company forecast of 'non-price control income' and use this in the final determination.

Table 4.20: Non-price control income (£ million) – Breakdown by price control

	Water resources	Water network plus	Wastewater network plus	Bioresources	Total
Non-price control income	-28.5	-10.1	-0.5	0.0	-39.2

Note negative numbers represent a deduction from the allowed revenue.

4.4.4 Uncertainty mechanisms

Given the range of risk mitigation measures included in price controls, the PR19 methodology said that final determinations would only include bespoke uncertainty mechanisms where robust and compelling evidence was presented for that item. Hafren Dyfrdwy does not propose any uncertainty mechanisms.

We are including a PR24 reconciliation mechanism for business rates in our final determination for Hafren Dyfrdwy along with all other companies because:

- There is uncertainty about business rates costs because the Valuation Office Agency (VOA) will be carrying out revaluation exercises during 2020-25, and increases (or decreases) in cost levels could be material.
- Companies can only exercise limited control over cost levels by engaging with the VOA and, possibly, by considering the business rate implications of asset development choices.

The cost variance to the company's PR19 cost allowance will be subject to a 75 (customer share):25 (company share) symmetrical sharing rate in the totex reconciliation at PR24. This means that the company will still be incentivised to incur costs efficiently, whilst receiving appropriate protection against material cost increases. Conversely, customers will receive a benefit if outturn costs are lower than the allowance levels we have set.

5 Risk analysis and financeability

Key changes from the draft determination

The key changes made to the risk analysis and financeability elements of the draft determination are:

- For the final determination, we apply our view of a sector risk range for totex, C-Mex, D-Mex and financing costs (including embedded debt) as part of our assessment of risk ranges for our final determination. We also apply updated views on risk ranges for outcome delivery incentives, determined under our Outcomes Framework.
- We revise our notional dividend yield to 3.00% (from 3.15% in the draft determination) and apply a dividend growth of 1.18%. This takes account of the allowed cost of equity in the final determination. For Hafren Dyfrdwy we restrict the base dividend yield to 0.00% in our notional financeability assessment due to the high level of RCV growth in the final determination.
- We revise our approach to pension deficit recovery costs in our financial modelling of the notional company to match cash out flow for pensions deficit recovery costs to the allowed funding.

We consider the final determination is financeable on the basis of the notional capital structure.

Hafren Dyfrdwy is responsible for ensuring it delivers its obligations and commitments in the context of its choice of capital and financing structure. We will closely monitor changes in levels of the company's gearing and other key financial metrics during 2020-25.

In this section we discuss the possible range of returns for the notional financial structure. In section 5.1 we present the risk ranges of our final determinations for Hafren Dyfrdwy. We comment also on the financeability of the final determination and any adjustments that we have made to the bill profile in section 5.2. We comment on the financial resilience of the actual capital structure in section 5.3.

5.1 Risk analysis

The PR19 methodology set out that we expect companies to demonstrate a clear understanding of financial risk to the delivery of their business plans and to explain and demonstrate how they manage and mitigate that risk. It required companies to use return on regulatory equity (RoRE) analysis to assess the impact of upside and downside risk on the basis of their notional capital structures based on a prescribed suite of scenarios using the company's assessment of P10/P90 confidence limit values[14].

RoRE is calculated as the return on equity for the equity portion of the RCV based on our notional gearing assumption. A company's base RoRE is aligned with our allowed real post-tax cost of equity, but it can differ between companies because the blended real cost of equity will vary according to the proportion of the RCV (and notional regulatory equity) that is indexed to RPI or CPIH[15]. The proportion of RCV (and notional regulatory equity) that is linked to RPI or CPIH varies between companies according to factors that include the size of the investment programme, the proportion of totex that is capitalised and RCV run-off rates.

In addition, base RoRE includes the margin for the retail price control. While the retail margin is 1% on retail and wholesale costs for all companies, it varies between companies when measured against regulatory equity.

Table 5.1 and figure 5.1 sets out the annual average risk ranges for Hafren Dyfrdwy in our final determination. The risk ranges show the plausible range of company returns based on Hafren Dyfrdwy's RCV and cost data for 2020-25, the allowed equity return and a notional gearing level of 60%. The final determination ranges reflect our approaches to the assessment of risk ranges for outcome delivery incentives and our approach to apply a common approach to the assessment of risk ranges for totex and financing costs for the sector. We introduce downside sharing for Hafren Dyfrdwy if total net outcome delivery incentive underperformance payments to customers are more than 3% of RoRE in any year. This should mitigate the risk to the company of excessive downside as a result of uncertainty around downside exposure due to the lack of long-term historical data and the small size of the company.

Our PR19 methodology aims to increase the strength of financial incentives to better align the incentives placed on companies with the interests of customers. Our

14 P90 is the performance threshold at which there is only a 10% chance of outturn performance being better. P10 is the performance threshold at which there is only a 10% chance of outturn performance being worse.
15 RPI is the retail price index; CPIH is the consumer price index including owner-occupiers' housing costs; both are published by the Office for National Statistics.

determinations aim to be stretching to encourage companies to deliver further efficiencies and better levels of service to customers. The incentives we put in place incentivise companies to outperform the cost allowances and performance commitments set in our determinations, our incentive mechanisms also aim to protect customer interests where companies underperform.

Hafren Dyfrdwy has a significant scope to earn upside from outperformance as well as the risk of lower returns from underperformance with modest negative skew overall to its overall risk range, driven primarily by outcome delivery incentives. Our view is that an efficient company should be able to achieve the base return on the notional structure. The onus is on companies to manage the risk and effect of any downside scenarios while maintaining financial resilience.

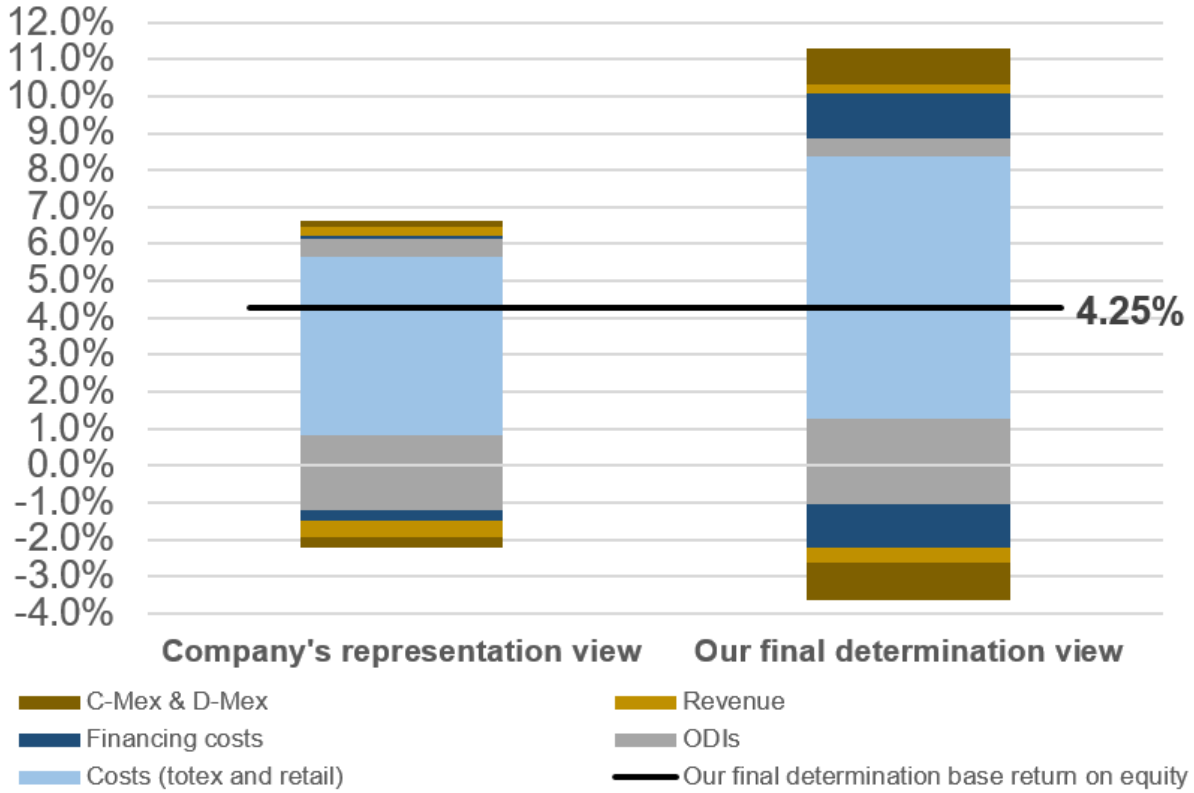
We asked companies to update their risk ranges in their representations. We state those risk ranges in table 5.1 against the cost allowances and base return on regulatory equity in our final determinations. These risk ranges are not fully comparable with our final determination ranges as they take account of company views of the cost efficiency and outcome delivery incentive stretch in our draft determinations which we revise for the final determinations.

Table 5.1: Hafren Dyfrdwy final determination risk ranges

	Range implied in company representation		Final determination ranges	
Base RoRE	-		4.25%	
Risk ranges	**Lower bound**	**Upper bound**	**Lower bound**	**Upper bound**
Totex	-2.96%	1.00%	-2.62%	3.73%
Outcome delivery incentives	-2.06%	0.48%	-2.30%	0.48%
Financing costs	-0.28%	0.09%	-1.16%	1.23%
Retail costs	-0.45%	0.40%	-0.38%	0.38%
C-MeX and D-MeX	-0.31%	0.15%	-1.26%	1.09%
Revenues (includes Retail)	-0.43%	0.24%	-0.43%	0.24%
Total	**-6.49%**	**2.37%**	**-8.14%**	**7.15%**

Note we calculate the company's range based on the resubmitted ranges the company states in its representation that are in monetary terms. As we have calculated the ranges in the financial model used for the final determination we have not stated the company's view of the base equity return.

Figure 5.1: Company representation and final determination RoRE ranges for Hafren Dyfrdwy



Note representation view is based on Ofwat's calculation of the RoRE ranges for the company using the final determination financial model and is based on the company submission that accompanied its representation. To facilitate comparison with our final determination, we present the risk range around the base allowed return on equity for Hafren Dyfrdwy's final determination.

The final determination risk range reflects the following interventions that we make for all companies:

- The totex range is our assessment of the plausible range based on evidence of the historic sector performance and taking account of the company's cost sharing rates that apply in its final determination.
- The financing cost risk range is based on our assessment of the range for a notional water company including both embedded and new debt.
- The outcome delivery incentive risk range has been determined under our Outcomes Framework as set out in table 2.4.
- The C-MeX risk range is calculated as 12% upside and 12% downside of Residential Retail Revenue, reflecting the cap and collar limits for this incentive.
- The D-Mex risk range is calculated as 6% upside and 12% downside of developer services revenue, reflecting the cap and collar limits for this incentive

We set out further details on the issues above in the 'Aligning risk and return technical appendix'.

5.2 Financeability

Companies in the water sector must make significant investment both to maintain and deliver required enhancements to the asset base. Therefore it is important that companies are able to access finance on reasonable terms if they are to meet their obligations and commitments to customers. In recent price review periods, almost all of the new investment in this sector has been funded by debt and retained earnings, however, there may be a requirement for direct equity investment where there is a very significant investment requirement, to ensure companies maintain good credit quality.

We must set our determinations in the manner which we consider best calculated to satisfy our duties. Our financeability assessment considers whether the allowed revenues, relative to efficient costs, are sufficient for an efficient company to finance its investment on reasonable terms and to deliver its activities in the long term, while protecting the interests of existing and future customers. In carrying out our financeability assessment, we assume that an efficient company is able to deliver a level of performance that is consistent with our efficient cost allowances.

Our financeability assessment assumes there is no out/underperformance with respect to the levels of service provided to customers. Our approach protects the interests of customers as it ensures companies and their investors bear the consequences of inefficiency and underperformance in delivery of their obligations and commitments to customers.

We carry out our financeability assessment on the basis of the notional capital structure that underpins our allowed return on capital as companies are entitled to determine the financial structure appropriate for their circumstances, provided they bear the associated risks. For example, if a company's choice of financing structure results in it incurring higher debt costs than reflected in our view of efficient allowed returns, the company will bear this cost. The approach is consistent with meeting all of our regulatory duties and with the approach we and other regulators have taken in previous reviews.

Our PR19 methodology requires companies to provide Board assurance that the business plan is financeable on both the notional and their actual capital structures and requires companies to provide evidence to support these statements, including

evidence supporting the target credit rating and that this is supported by the financial ratios that underpin the plan.

In its April business plan, Hafren Dyfrdwy's Board provided assurance that, based on the assumptions in its business plan, both notional and actual capital structures remain financeable in the long term, and that key financial ratios are at a level that retain sufficient headroom to maintain an investment grade credit rating ensuring that resilience and customers' interests are maintained in the short and long term. The company states that its plan targets a credit rating of Baa1 on a notional basis.

Subsequently, we asked companies to provide additional Board assurance, in their representation to our draft determination, that they will remain financeable, taking account of the reasonably foreseeable range of plausible outcomes of their final determination including evidence of further downward pressure on the allowed return. Companies also took account of these issues in the risk analysis presented in section 5.1.

In its representation to our draft determination, Hafren Dyfrdwy's Board concludes that the draft determination is financeable for the actual and notional structure at the appointee level. It states the draft determination supports the target to maintain a Baa1 (Moody's) and BBB+ (S&P) credit rating through 2020-25.

We have carefully considered the representations made by Hafren Dyfrdwy. We have considered this in the context that the allowed return which is based on market data is lower than our draft determination and the basis on which the company provided assurance about the financeability of its plan. However we are satisfied that the market data supports our view that allowed returns are sufficient to reward investors for the risks they face in a sector that already benefits from significant risk protections[16]. We set out the revisions we are making to our performance commitments and cost allowances elsewhere in this document. We consider the revenues allowed in our final determination, which reflect our assessment of efficient allowed costs, are sufficient for Hafren Dyfrdwy to meet its obligations and commitments to customers on the basis of the notional structure. We comment on the financial resilience of the actual structure in section 5.3.

Our financeability assessment uses a suite of financial metrics based on those used in the financial markets and by the credit rating agencies. The key financial ratios are primarily cash flow measures of a company's earnings, leverage and ability to

[16] These protections include appointments that confer effective monopolies for specified geographic regions; our commitment to remunerate efficient investment in the RCV as at 31 March 2020; price limit reopeners; inflation indexation; totex cost sharing; allowances for special cost factor claims; outcome delivery incentives; and reconciliation mechanisms for wholesale revenue, the cost of new debt and tax.

service its debt interest and principal repayments. We provide further detail of the key ratios in the 'Aligning risk and return technical appendix'.

RCV growth in Hafren Dyfrdwy's final determination exceeds 10%. Therefore consistent with our policy approach set out in the 'Aligning risk and return technical appendix' we consider it is appropriate for equity to contribute to the funding of this growth. In our financeability assessment we restrict the base dividend yield to maintain around the gearing level of 60% in 2025, consistent with the gearing level that underpins the calculation of our allowed return. The very high RCV growth of 35.9% means we apply a dividend yield of 0.00%. With nil dividends for the notional company, gearing remains above the notional level so we have considered the need for direct equity injections. However, we consider there is sufficient headroom in financial ratios excluding further equity.

In table 5.2 we set out some of the financial ratios provided by the company in its business plan, and in our draft and final determinations.

While we assess our final determination to be financeable overall on the basis of the notional financial structure, we note that certain key financial ratios for the wastewater network plus and bioresources controls are very weak. This is consistent with the draft determination and the achievement of the commitments resulting from the Hafren Dyfrdwy border variation process where the company accepts that it is acceptable for controls to have weak financial ratios, provided the appointee is financeable.

Our in the round assessment of notional financeability is made on the basis of the financial ratios from our financial model. It takes account of the evidence that the company provides regarding the levels and thresholds of the financial ratios that underpinned its assurance statement on the notional financeability in its business plan (also stated in table 5.2). We note that the Board assurance statement that accompanied the company's representations was made in the context of the draft determination. Our assessment of notional financeability for the final determination is made in the context of changes made in our final determination. We consider that Hafren Dyfrdwy's final determination is financeable based on the allowed revenues which include a reasonable allowed return on capital. The final determination is sufficient to ensure it will be in a position to deliver its obligations and commitments to customers.

Table 5.2: Ofwat calculation of key financial ratios – notional structure before reconciliation adjustments (5 year average)

	Business plan	Draft determinations	Final determinations
Gearing	63.20%	64.29%	61.47%
Interest cover	4.64	4.57	4.87
Adjusted cash interest cover ratio (ACICR)	1.71	1.74	1.72
Funds from operations (FFO)/Net debt	12.20%	11.99%	12.34%
Dividend cover	-2.15	-2.63	0.00
Retained cash flow (RCF)/Net debt	10.89%	10.30%	12.34%
Return on capital employed (RoCE)	0.58%	0.15%	0.09%

The basis of the calculation of the ratios is set out in the PR19 methodology.
Net debt represents borrowings less cash and excludes any pension deficit liabilities.
FFO is cash flow from operational activities and excludes movements in working capital.
Cash interest excludes the indexation of index-linked debt.
Hafren Dyfrdwy's financial ratios in its April business plan tables for the notional company take account of reconciliation adjustments. We set out in the table the ratios excluding these adjustments consistent with our assessment of notional financeability. We verified the recalculation of the ratios with the company.

We set out the average PAYG and RCV run-off rates along with the RCV growth over 2020 to 2025 for Hafren Dyfrdwy in table 5.3. RCV growth for the final determination is lower than in the company's April plan and in the draft determination. Overall, changes to allowed expenditure, the revised approach to determining the mix of operating and capital expenditure means less expenditure is added to RCV. We are not amending Hafren Dyfrdwy's s RCV run-off rates from the April revised plan in our final determination.

Table 5.3: PAYG rates, RCV run-off and growth

	PAYG	RCV run-off	RCV growth
Company April 2019	67.2%	6.19%	38.08%
Draft determinations	67.3%	6.10%	39.43%
Final determinations	68.5%	6.16%	35.93%

The PAYG and RCV run-off rates are averages across five years and across all wholesale controls. We set out the changes we make to PAYG and RCV run-off rates along with the five year average for each control in section 4.2 and annual PAYG and RCV run-off rates in the 'Hafren Dyfrdwy - Allowed revenue appendix'. Changes to totex allowances and PAYG rates for individual controls can result in small changes to the average RCV run-off rates presented in the table above.

In assessing the financeability of the notional company, we consider the headroom available in the final determination to allow the company to continue to meet its annual interest costs. We estimate 5 year headroom of £5 million above an adjusted cash interest cover of 1.0 times, providing some headroom to our totex downside of £6 million and outcome delivery incentives downside of £2 million calculated as 1% return on regulatory equity. We note however that Hafren Dyfrdwy is a low starting RCV and is efficient against our cost assessment and so our high level analysis suggests the downside risk is overstated for the company. We set out further detail in relation to our approach to assessing headroom within final determinations in the 'Aligning risk and return technical appendix'.

5.3 Financial resilience

It is the responsibility of each company to choose and manage its financial structure to maintain financial resilience in the long term. A company's financial resilience can be impacted by its financing choices, for example, where a company chooses a structure with a high level of gearing, this can reduce available headroom to withstand cost shocks. Interest costs, levels of dividends paid and company performance in delivering obligations and commitments to customers can also impact on financial resilience.

Hafren Dyfrdwy is responsible for the financeability of the company and the maintenance of long-term financial resilience under its actual structure. We comment further on the financial resilience of Hafren Dyfrdwy's actual structure in figure 5.2.

Figure 5.2: Financial resilience of Hafren Dyfrdwy's actual financial structure

Hafren Dyfrdwy reported gearing of 66.5% at 31 March 2019. In its business plan it proposes gearing of 61.4% at 31 March 2021 and 63.1% at 31 March 2025. The company received an equity injection and restructured its borrowings in 2019 to reduce interest costs and is aiming to maintain gearing close to the notional capital structure during 2020-25.

The company is not required to procure a formal credit rating under the terms of its licence, instead the company is required to certify, in the opinion of the Board, its key financial ratios are consistent with an issuer credit rating which is an investment grade rating, the company has confirmed that it is continuing to target financial ratios that are consistent with an investment grade credit rating.

The Board provided assurance that the company is financially resilient under its plan. It has provided further assurance that the company is financially resilient following the draft determination in the

context of its representation, including considering the impact of a potential 37bps cost of capital reduction on the company's financial position.

As stated in section 5.2 we consider the company to be financeable on the notional basis and there is a need for companies to ensure that that they are also financially resilient under their actual structures.

However, we have not accepted all of the company's representations and the allowed return is lower in the final determination reflecting market expectations on the cost of finance.

It is the company's responsibility to maintain its financial resilience under its actual financial structure and as set out in section 7, the company will need to reduce its base dividend yield for 2020-25 in the context of the allowed return and our final determination.

We will closely monitor changes in levels of the company's gearing, other key financial metrics and the certificates that it provides to us in relation to whether it can maintain financial ratios which are consistent with an investment grade credit rating during 2020-25 to test that that its financial resilience is being maintained.

In its future reporting, we expect the company to explain clearly in its long-term viability statement how the Board has identified and assessed the potential risks to its financial resilience and the mitigating actions it is taking to address those risks. Hafren Dyfrdwy has committed to assess its financial resilience beyond 2025 in its next long-term viability statement.

6 Affordability and bill profile

Key changes from the draft determination

The key changes made to the affordability elements of the draft determination are:

- We revise Hafren Dyfrdwy's average bill profile from a large reduction upfront followed by flat real terms prices, to have a greater reduction upfront, followed by a gradually increasing real price over 2020-25.

6.1 Bill profile

Hafren Dyfrdwy proposes an average bill profile with a 1% decrease. Our bill profile contains a reduction of 3.0% over 2020-25.

Hafren Dyfrdwy's representation expresses concern about the effect of its draft determination bill profile, and states it could lead to a bill shock beyond 2025 primarily driven by the significant RCV growth over the period. To minimise the impact of bill increases on customers, the company wants to move revenue back from the first year until later in the 2020-25 period. In the interest of customers, who benefit from and prefer consistent and predictable bills, we accept this request.

The effect of this bill smoothing is that the company's average bill profile changes from an upfront reduction followed by flat real prices as per draft determinations, to an upfront reduction followed by price increases at final determinations.

Table 6.1: Bills in real terms

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Company April 2019	£300	£295	£295	£296	£297	£297
Draft determinations	£300	£286	£286	£286	£286	£286
Final determinations – before reprofiling	£300	£284	£284	£282	£282	£295
Final determinations	£300	£275	£284	£287	£290	£292

Throughout the price control we have put a strong emphasis on companies planning for the long term, both in terms of their goals and their bills. Following actions we set out at initial assessment of business plans, nine companies including Hafren Dyfrdwy undertook additional customer testing on their long-term bill profiles with several making adjustments as a result. We expect companies to continue to pay attention to this issue, taking customer views into account and planning in a way that ensures they control costs into the future.

6.2 Help for customers who are struggling to pay

Our draft determination for Hafren Dyfrdwy will deliver a real terms reduction to the average bill between 2020 and 2025.

In addition, Hafren Dyfrdwy commits to:

- increase its social tariff cross subsidy to £3.50 for water and wastewater customers and £1.75 for water only customers, as supported by its research;
- trial new payment methods and introduce them if they are beneficial to customers; and
- roll out a new payment matching scheme.

Hafren Dyfrdwy has three bespoke performance commitments on affordability and vulnerability, which will require it to:

- Ensure a high proportion of customers who sometimes or always struggle to pay their bill are helped by its affordability schemes;
- Track and increase the number of customers who continue to pay their bills after they complete affordability schemes; and
- Ensure that customers get the support they require in a service outage.

Companies will be reporting their performance against the Priority Services Register (PSR) common performance commitment and their bespoke affordability and vulnerability performance commitments to us and their customers on an annual basis during the price control period. In addition, companies put forward in their business plans further measures for addressing affordability and vulnerability issues. We expect companies to report periodically to their customers on their progress in addressing affordability and vulnerability concerns. We will also be considering how we will scrutinise and report on companies' progress in this important area, including working with other stakeholders in the water sector and beyond.

6.3 Total revenue allowances and k factors

Table 6.2 summarises the allowed revenue for each control. This is expressed in a 2017-18 CPIH price base so that this can be compared with the rest of this document.

Table 6.2: Allowed revenue by year (£ million, 2017-18 prices)

	2020-21	2021-22	2022-23	2023-24	2024-25	Total
Water resources	3.2	3.0	2.2	2.1	2.2	12.7
Water network plus	15.9	16.6	17.2	17.6	17.4	84.6
Wastewater network plus	2.5	2.6	2.8	2.9	3.0	13.7
Bioresources	0.7	0.8	0.8	0.8	0.8	3.8
Residential retail	2.7	2.6	2.6	2.6	2.6	13.0
Total	**24.9**	**25.6**	**25.6**	**25.9**	**25.9**	**127.9**

The water resources, water network plus and wastewater network plus controls are in the form of a percentage limit (inflation plus or minus a number that we determine for each year of the control (the 'K' factor)) on the change in allowed revenue (R) from the previous charging year (t-1). This is based broadly on the formula:

$$R_t = R_{t-1} \times \left[1 + \frac{CPIH_t + K_t}{100}\right]$$

Table 6.3 sets out the K factors in each year for each of these three controls. For the first year, we have set a 'base' revenue which will be used as the starting revenue for calculating 2020-21 allowed revenues.

Table 6.3: Base Revenue and K factors by charging year (2017-18 prices)

	Base (£m)	2020-21	2021-22	2022-23	2023-24	2024-25
Water resources	3.2	0.00%	-5.24%	-26.84%	-3.91%	1.45%
Water network plus	15.9	0.00%	4.42%	3.49%	2.30%	-0.96%
Wastewater network plus	2.5	0.00%	1.50%	8.14%	3.95%	6.18%

In addition to these controls, we have set a modified average revenue control for bioresources. We recognise that a proportion of bioresources costs are fixed, so we

allow for this in setting the average revenue control. The revenue control ensures that where sludge production varies the incremental change in revenues that arises is aligned to incremental costs. The 'modified average revenue' control includes a revenue adjustment factor, which applies if there are differences between the forecast and measured quantities of sludge.

The split between bioresources fixed and variable costs proposed by Hafren Dyfrdwy appears proportionate given the small scale of the company's bioresources operations and as such we have not intervened. Therefore, we apply the revenue share of the bioresources allowance to remunerate variable costs implied by the company's business plan submission to our view of the total bioresources revenue allowance as set out in table 6.4 below.

The modified average revenue in each year is calculated by a formula that we set out in the 'Notification of the PR19 draft determination of Price Controls for Hafren Dyfrdwy', which includes some components set now in this determination and some components which relate to out-turn performance (such as the actual volume of sludge in future years).

Table 6.4: Bioresources control

	2020-21	2021-22	2022-23	2023-24	2024-25	2020-25
Unadjusted revenue (£m)	0.8	0.8	0.8	0.8	0.8	3.8
Forecast volume of sludge (TDS)	665	672	679	685	692	3,394
Variable revenue (£/TDS)	N/A	N/A	N/A	N/A	N/A	823.9

7 Putting the sector in balance

Key points

- Hafren Dyfrdwy reported gearing of 66.5% as at 31 March 2019. The company forecasts that its level of gearing (61.4% by 2021 and 63.1% by 2025) will remain well below the level that triggers sharing of financing gains with customers on account of high gearing as set out in the 'Aligning risk and return technical appendix'.
- We are updating the gearing outperformance sharing mechanism to introduce a glidepath to the gearing level that the triggers sharing payments as set out in the 'Aligning risk and return technical appendix'.
- Consistent with the lower allowed return on equity in our final determination, we are revising our calculation of the dividend yield as a guide to the reasonable base dividend yield in the absence of out/underperformance in 2020-25. We set out that the acceptable level of base dividend yield can be expected to vary depending on the scale of a company's RCV growth in 2020-25 and future investment needs.
- We expect the company will need to reduce its proposed base dividend yield for 2020-25 to take account of the lower allowed return in our final determination and our revised expectations for a reasonable base dividend yield that we set out in the 'Aligning risk and return technical appendix'.
- On executive pay, Hafren Dyfrdwy falls short of the 60% alignment to delivery for customers we identify as current good practice. We retain our expectation of the company that it will ensure its dividend and performance related pay policies demonstrate substantial alignment with the customer interest, underpinned by stretching performance targets throughout 2020-25.

In July 2018 we published our 'Putting the sector in balance: position statement'. The position statement sets out the steps we expect companies to take to demonstrate they strike the right balance between the interests of customers and their investors. In summary, we expect that:

- company dividend policies for actual financial structures and performance related executive pay policies show appropriate alignment between returns to owners and executives and what is delivered for customers[17];

[17] We explain more fully our expectations in the 'Aligning risk and return technical appendix' that accompanies this draft determination.

- companies with high levels of gearing share financing gains from high gearing with customers; and
- companies provide assurance and supporting evidence to demonstrate their long-term financial resilience and management of financial risks for the actual financial structure, taking account of their future investment needs.

We also encourage companies to adopt voluntary sharing mechanisms, particularly where, for example, companies outperform our cost of debt assumptions.

In our final determinations, we have amended our gearing outperformance sharing mechanism to contain a glidepath. We explain this in the final determination 'Aligning risk and return: technical appendix'.

Our assessment of Hafren Dyfrdwy's proposals is in table 7.1. We comment on the financial resilience of Hafren Dyfrdwy in section 5.2.

Table 7.1: Our assessment of Hafren Dyfrdwy's proposals to balance the interests of customers

Our assessment of the company's proposals to balance the interests of customers
Gearing outperformance benefit sharing mechanism The company has confirmed it would implement our default gearing outperformance mechanism within its business plan, though the company forecasts that its gearing level through 2020-25 will remain well below the threshold that triggers the mechanism.
Voluntary sharing mechanisms Hafren Dyfrdwy has not proposed any voluntary sharing mechanisms, and does not propose company contributions to its social tariff or a hardship fund over 2020-25.
Dividend policy for 2020-25 Hafren Dyfrdwy confirms that it is committed to meet the expectations on dividend policy as set out in our 'Putting the sector in balance' position statement. In doing so its April business plan indicated a base dividend yield of around 4.5% over 2020-25. We expect the company will need to revise its proposed base dividend yield for 2020-25 to take account of the lower allowed return in our final determination and our revised expectations for a reasonable base dividend yield that we set out in the 'Aligning risk and return technical appendix'. The company's dividend policy refers to all the areas included in the 'Putting the Sector in balance' position statement (out/underperformance & benefit sharing, employee interest & pension obligations, actual capital structure, need for future investment and financial resilience). The company confirms that when considering the dividend, the Board will have regard to its performance across its obligations and outcome delivery incentives. Targets are set based on forecast upper quartile performance, linked to the standards of performance set in the final determination. It has detailed the specific obligations and commitments to customers that will be considered. It confirms that dividends can be increased or lowered from the base depending on the

Our assessment of the company's proposals to balance the interests of customers
actual performance of the company and explains how performance delivery will impact on dividends paid. The company commits that its annual performance report will explain how the dividends it proposes are consistent with its dividend policy. The company will also explain any change to its policy and the judgements the Board has made in making that change. Consistent with the lower allowed cost of equity in our final determination, we have revised our calculation of the dividend yield that we consider to be reasonable for assessing the base dividend for water companies in 2020-25. We consider the acceptable level of base dividend yield is up to 4% but this can be expected to vary depending on the scale of a company's RCV growth and future investment needs. We set out further details in 'Aligning risk and return: technical appendix'. We expect Hafren Dyfrdwy to be transparent when explaining its dividend policy and reporting on dividends paid over 2020-25, to demonstrate how it has delivered on the commitments in relation to its dividend policy and to ensure it meets the expectations we set out in 'Putting the sector in balance' as updated in the final determination 'Aligning risk and return: technical appendix'.
Performance related executive pay policy for 2020-25 In our 'Aligning risk and return technical appendix' we identify that 60% alignment to delivery for customers is current good practice among the companies that we regulate. Based on our calculations, Hafren Dyfrdwy's measures that are directly aligned to customer delivery falls short of good practice, and therefore consider that there is scope for it to improve this position. We expect Hafren Dyfrdwy's policy on performance related executive pay to demonstrate a substantial alignment to the delivery of service for customers throughout 2020-25. Hafren Dyfrdwy confirms its commitment to aligning to the expectations of our 'Putting the sector in balance: position statement'. The company states that as part of the Severn Trent Group of companies it is part of a unified remuneration structure, in which the executive performance related pay consists of: • Annual bonus based on 51% customer & environment and 49% profit before interest and tax. • The performance commitments to be included with the bonus scheme will be finalised once the final determinations has been received. The company states that the remuneration framework is designed to deliver stretching performance, and will follow a defined process annually. For AMP7 this process will start once the final determination is published and the performance commitment targets are known and accepted. In setting annual targets, the remuneration committee will consider a range of factors including the targets, the level of historical performance and comparative performance within the sector. The company sets out the remuneration committee approves the awards before any payment is made, and has the discretion not to award a payment should it believe there is a reason not to do so. The company has told us it proposes not to apply a long-term incentive plan in its policy for 2020-25, as it states that the design of the scheme is more suited to FSTE 100 companies rather than small companies like Hafren Dyfrdwy. We expect the company to demonstrate how the policy it adopts and the application of the policy ensures the incentives placed on executives are consistent with incentivising delivery for customers in both the short and the long term. Hafren Dyfrdwy states it will continue to publish full details of targets, achievement against them and performance narrative in the directors' remuneration report. It sets out it is committed to engage with shareholders regarding any proposed changes to the design or performance metrics. We understand that the policy will apply at the group level, taking account of Hafren Dyfrdwy's position within the group. The company has confirmed that Hafren Dyfrdwy customers would only contribute to any bonus payments if performance targets for Hafren Dyfrdwy are met and has confirmed that the remuneration committee has full discretion not to award a payment. We expect

Our assessment of the company's proposals to balance the interests of customers
the company to demonstrate how the policy and its implementation maintains alignment with the service delivered to the customers of Hafren Dyfrdwy. We expect the company's remuneration committee to ensure there is on-going rigorous challenge as to how the policies are applied and to ensure that only truly stretching performance is rewarded. In so doing, we expect it to be equipped with the appropriate powers to carry this out, including for example, the use of withholding periods, clawback arrangements and underpin / gateway arrangements. We expect Hafren Dyfrdwy to be transparent when explaining and reporting against its performance related executive pay policy in 2020-25, to ensure it meets the expectations we set out in 'Putting the sector in balance' as updated in the final determination 'Aligning risk and return: technical appendix'.

Ofwat (The Water Services Regulation Authority) is a non-ministerial government department. We regulate the water sector in England and Wales.

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