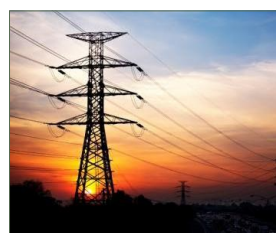


Water & Sewerage Services Price Control 2015-21

Draft Determination – Annex E
Overall Performance Assessment
July 2014



Contents page

Water and Sewerage Services Price Control 2015-21

Draft Determination – Annex E – Overall Performance Assessment

| | |
|--|----------|
| 1.0 Overall Performance Assessment | 1 |
| 1.1. Purpose of the Overall Performance Assessment (OPA) | 1 |
| 1.2. Localised OPA | 1 |
| 1.3. Limitations of the analysis | 2 |
| 2.0 Company Proposals | 4 |
| 2.1. Historic company performance | 4 |
| 2.2. NI Water proposals | 4 |
| 3.0 Utility Regulator Views | 6 |
| 3.1. Opinions on proposals | 6 |
| 3.2. Areas of divergence | 6 |
| 3.3. Proposed scores | 10 |

1.0 Overall Performance Assessment

1.1. Purpose of the Overall Performance Assessment (OPA)

- 1.1.1 The OPA is a system of assessment that takes raw data on water services, sewerage services, customer service and environmental compliance, and scores the company on a scale of 0-50 points based on their performance.¹
- 1.1.2 This score out of 50 is then 'weighted' using information on consumers' views, to give a final OPA score. Achievement is published annually in the Utility Regulator's (UR) Cost and Performance Report. NI Water's performance is compared with relative England and Wales scores as well as their historic achievement.
- 1.1.3 The latest OPA score for NI Water is based on 2012-13 data where the company scored 198 out of a possible 304 points. This score compares with a target of 181 for NI Water and the England and Wales average of 290² for the same eleven measures.
- 1.1.4 NI Water has made considerable improvements to its service performance levels in recent years with its OPA score more than doubling since 2007-08.

1.2. Localised OPA

- 1.2.1 The UR uses a conventional OPA model – i.e. one which closely mirrors the Ofwat OPA. The weights, ranges and calculations are exactly the same as the model used by Ofwat to assess water and sewerage companies in England and Wales.
- 1.2.2 By retaining the conventional OPA model the UR ensures that NI Water can be benchmarked against the performance of companies in England and Wales. A consistent bank of local past scores is also maintained and can be used to analyse NI Water's improvement from baseline.
- 1.2.3 Whilst the methodology is the same, amendments have been made to reflect local circumstances.
- 1.2.4 The Ofwat OPA includes 17 elements across a range of measures. The current UR OPA only comprises 11 of these. Some measures were initially excluded due to absent, unavailable or poor quality base data.
- 1.2.5 Current measures included and excluded consist of the following:

¹ Further details can be found in the UR's OPA Methodology document.

² Ofwat discontinued their OPA scoring exercise of the E&W industry after 2009-10. We use the 2009-10 year, "frozen in time" as the benchmark for comparing with NI Water. At the present, given the continued existence of a disparity of scores between NI Water across the rest of the industry we retain the OPA for benchmark comparison.

Table 1.1 – Components of the current localised OPA model

| Measure assessed in England and Wales | Used by NIAUR | Reason for initial exclusion |
|--|---------------|-----------------------------------|
| Properties at risk of low pressure | ✓ | N/A |
| Properties subject to unplanned interruptions | ✓ | N/A |
| Population with hosepipe restrictions | ✓ | N/A |
| Drinking water quality | ✓ | N/A |
| Sewer flooding (hydraulic incapacity) | ✗ | Data not complete / robust |
| Sewer flooding (other causes) | ✗ | Data not complete / robust |
| Properties at risk of sewer flooding | ✗ | DG5 register not complete/ robust |
| Customer service (combined contact score) | ✓ | N/A |
| Customer service (assessed score) | ✗ | Data not requested |
| Category 1 & 2 pollution incidents (sewerage) | ✓ | N/A |
| Category 3 pollution incidents (sewerage) | ✓ | N/A |
| Category 1 pollution incidents (water) | ✓ | N/A |
| Wastewater treatment works in breach of consents | ✓ | N/A |
| Sewage sludge disposal | ✓ | N/A |
| Leakage assessment | ✓ | N/A |
| Security of supply - performance against target | ✗ | Data not complete / robust |
| Security of supply - absolute performance | ✗ | Data not complete / robust |

1.2.6 It was envisaged that the OPA would expand as data quality in the additional measures improved. During the period since 2007-08 NI Water has enhanced data quality.

1.2.7 However, in order to ensure continuity with the previously published OPA figures, the UR has applied targets solely to the 11 measure OPA for PC15.

1.3. Limitations of the analysis

1.3.1 NI Water has raised a number of concerns about using the OPA as a relative benchmarking tool. The company cites lack of comparability as the main problem. In particular, the following issues have been highlighted in PC15:

- a) Drinking Water Quality – The company argues that they are not funded to target the same level of compliance as England and Wales.
- b) Unplanned Interruptions – NI Water has a comparable level of bursts as other water companies. The issue is that their long mains length per property results in more unplanned interruptions and unfair comparisons.

- c) Customer Contact – The absence of domestic billing results in NI Water customer scores being based on a much more pro-active non-domestic consumer base.
- 1.3.2 The UR recognises that, like any benchmarking, comparisons will not be perfect. A particular issue to note is that of scoring. As OPA scoring only occurs within a specified range, this can result in misinterpreted results.
- 1.3.3 For instance, scoring for drinking water compliance occurs between the 100% to 98.4% range. If Company A scores 50 for drinking water compliance and Company B scores 25, this does not mean Company B has 50% less compliance. It simply reflects performance against the range. This should be remembered when considering performance.
- 1.3.4 Similarly, if Company C evidences 99.1% drinking water compliance it will score OPA points between a minimum and maximum range. Company D by comparison might only achieve 98.3% compliance and hence will score at the minimum of the OPA range for this measure.
- 1.3.5 With respect to the comparability issues raised, the UR agrees that some differences exist. However, this does not invalidate the entire analysis. Merit is still seen in making comparisons with other companies.
- 1.3.6 Addressing the individual points:
- a) Drinking Water Quality - Whilst drinking water funding is an issue, comparison of the level of service achieved is still valid. The UR does not expect NI Water at the present time to have the same OPA score as others. It is however important to know the scale of the existing gap.
 - b) Unplanned Interruptions - There is acceptance that unplanned interruption OPA scores are likely to be lower for NI Water due to their network length. Further work may be required to establish what the relative performance should be given NI Water's circumstance.
 - c) Customer Contact - The profile of customer contacts will be different in Northern Ireland. The UR does not consider this a reason to invalidate comparisons. Levels of service provided should be the same, whether domestic or non-domestic. Scores should not be detrimentally impacted by non-domestic contacts.
- 1.3.7 It is recognised that OPA is an imperfect tool. However, the UR still considers the OPA a valuable method of simplifying and comparing levels of service between companies. This is especially the case when regulating a monopoly supplier in the interests of incentivising competitive style behaviours in the interests of consumers.

2.0 Company Proposals

2.1. Historic company performance

2.1.1 Since inception, NI Water has been on an improving trajectory of service level performance. The company faced a significant gap which it has endeavoured to reduce.

2.1.2 Historic improvements are illustrated in the table below:

Table 2.1 – Historic OPA performance of NI Water

| | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 |
|-------------------------------------|---------|---------|---------|---------|---------|---------|
| NI Water Historic OPA Scores | 98 | 103 | 121 | 131 | 184 | 198 |

2.1.3 The company has improved significantly across a variety of service areas. Main areas of improvement include low pressure, drinking water quality and customer contacts.

2.2. NI Water proposals

2.2.1 The company does not set overall OPA scores; rather, the scores are built up from the forecast individual KPI components. Targeted scores for the six years of PC15 are below and represent the aggregation of normalised and weighted targets for the individual OPA component measures.

Table 2.2 – NI Water proposed OPA scores for PC15

| | PC13 Targets ³ | | PC15 Forecasts | | | | | |
|--|---------------------------|---------|----------------|---------|---------|---------|---------|---------|
| | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
| NI Water PC15 Business Plan Forecasts | 202 | 215 | 211 | 215 | 217 | 227 | 230 | 231 |

2.2.2 Early indications are that the company is ahead of schedule so far in PC13. Based on *targeted* 2014-15 performance, NI Water is proposing a further 16 point rise in the OPA across PC15.

2.2.3 It is clear that these forecasts represent a less dramatic improvement than what NI Water has achieved historically. However NI Water point to structural reasons why improvements in the overall OPA score would flatten out and plateau.

2.2.4 Broken down by component, score projections for PC15 are shown in the table below:

³ The PC13 targets as set by the UR. According to preliminary NI Water analysis of recent outturn data, the 2013-14 OPA target is set to be exceeded by the company.

Table 2.3 – NI Water proposed OPA improvements by individual measure

| Measure | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 | Max score |
|---|------------|------------|------------|------------|------------|------------|------------|
| Risk of low pressure | 29 | 30 | 31 | 33 | 34 | 35 | 38 |
| Unplanned interruptions | 26 | 27 | 27 | 27 | 28 | 28 | 38 |
| Hosepipe restrictions | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| Customer contact | 34 | 34 | 35 | 35 | 35 | 35 | 38 |
| Drinking water quality | 29 | 29 | 29 | 29 | 29 | 29 | 50 |
| Sewage sludge disposal | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| Leakage assessment | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| Water pollution incidents (H&M) | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| Sewerage pollution incidents (H&M) | 3 | 3 | 3 | 3 | 3 | 3 | 25 |
| Sewerage pollution incidents (Low) | 6 | 6 | 6 | 6 | 7 | 7 | 13 |
| Sewage treatment works consent compliance | 32 | 34 | 34 | 42 | 42 | 42 | 50 |
| Total | 211 | 215 | 217 | 227 | 230 | 231 | 304 |

- 2.2.5 It can be seen from the table above that sewage treatment works consent compliance is the area where NI Water are forecasting to gain the largest individual improvement in OPA score. There are also expected to be improvements in the OPA scores for unplanned interruptions and risk of low pressure over the six years of PC15.
- 2.2.6 According to NI Water projections, at the end of PC15 NI Water will be either close to, or at the maximum scoring range for a number of OPA measures - including risk of low pressure, customer contacts, hosepipe restrictions, sewage sludge disposal, leakage assessment and high & medium water pollution incidents.
- 2.2.7 However, despite some improvement, NI Water are still forecasting a material gap on a number of OPA measures by 2020-21 to what was achieved by their comparator companies in England and Wales. Scope for improvement would still remain on risk of low pressure, unplanned interruptions, customer contact, drinking water quality, low pollution incidents and high & medium pollution incidents.

3.0 Utility Regulator Views

3.1. Opinions on proposals

- 3.1.1 NI Water has significantly improved its service performance over the last number of years. This improvement in service has been reflected in the OPA score more than doubling from 98 in 2007-08 to 198 in 2012-13.
- 3.1.2 Going forward, the key concern of the UR is that NI Water continues to deliver continuing service improvements. The company must also ensure that it operates within the limitations of allowed public expenditure.
- 3.1.3 Based on NI Water's performance so far, and on the performance of Scottish Water, it is our strong expectation that NI Water's OPA score can and will improve over the PC15 period, even where we have proposed a robust and reasonable efficiency challenge.
- 3.1.4 NI Water's projected OPA scores as set out in its business plan are considered by the UR mainly to be reasonable estimates of NI Water's improvement capability. However, on a few specific service areas, the UR considers that NI Water have been overly conservative in their projections.
- 3.1.5 For the draft determination the UR has undertaken its own assessment of an appropriate and challenging OPA target. Like NI Water, this approach has been cautious, recognising that as NI Water closes the gap with what was achieved by companies in England and Wales, the scope for further rapid improvement diminishes somewhat.
- 3.1.6 The UR has also been mindful that it is difficult to forecast with complete certainty the magnitude of individual service improvements, especially given year-on-year variability on some measures. As a company it seeks to continually improve its service levels. However, while there may be some natural fluctuation in the data, the general overall trend should be one of service improvement.
- 3.1.7 It is for these reasons, that the UR has taken a cautious approach to estimating the degree to which NI Water can improve its OPA score over the six years of PC15.

3.2. Areas of divergence

- 3.2.1 Given that NI Water has been set a PC13 OPA target of 215 for 2014-15, the proposals by NI Water seem quite modest given that they encompass a slight fall in the OPA score over the start of PC15 and then an increase to 231 at the end of PC15.
- 3.2.2 However, as NI Water are either at or are set to approach the maximum scoring range on a number of OPA measures, any substantial increase in the OPA score can only come from areas such as drinking water quality and sewage pollution incidents where their scores remain relatively low.
- 3.2.3 Forecasting with certainty how much the company can realistically improve on these measures in each of the six years of PC15 is difficult. The UR has therefore taken a cautious view of what can be achieved. The onus is on the company to outperform these

targets and more substantively close the service gap with companies in England and Wales than what has been assumed in the business plan.

- 3.2.4 For the draft determination the UR has kept forecasts for 9 of the 11 measures the same as NI Water submitted in its business plan. For the remaining 2 of the 11 measures the UR has identified some scope for more rapid progress on closing the service gap than NI Water. These estimates include some additional progress on customer contact and low sewage pollution incidents from what NI Water has forecast in their PC15 business plan.
- 3.2.5 It is important to note that these assumptions on OPA performance do not necessarily mean a specific OPA target set by the UR on each respective OPA measure, but rather represents our expectation of what is achievable in the total OPA score.
- 3.2.6 If the company has a challenging year on customer contact for example, the company can still reach the overall OPA target by performing better than originally forecast in the remaining 10 OPA measures.

Customer contact

- 3.2.7 The UR notes the significant progress made by NI Water on the customer contact measure. This resulted in the company increasing their OPA score on customer contact from 23 in 2009-10 to 33 points in 2012-13.
- 3.2.8 Over PC15 the company are predicting to increase its customer contact score from 34 points at the start of PC15, to 35 points by 2017-18 and then maintain this level to 2020-21.
- 3.2.9 It is the UR's view that this forecast appears somewhat conservative. Given that the methodology on customer contact does not require the company to be at the maximum scoring range for all of the four areas assessed to achieve the maximum score, achieving the maximum score of 38 by 2020-21 is a reasonable expectation.⁴
- 3.2.10 In a hypothetical example, if NI Water were to maintain its 2012-13 customer contact metrics constant throughout PC15, but improve the proportion of bills based on a meter reading element from its forecast 99.0% to around 99.5% it would achieve maximum points on the overall measure. It was the case that England and Wales companies were able to achieve around this level for metered bills, averaging 99.61% during the 2000-05 price control and 99.79% in the 2009-10 year.⁵ It should be stressed that this is only a hypothetical example of what NI Water could achieve and the company could achieve the maximum score by improving all aspects of customer service.
- 3.2.11 In addition, more generally speaking, it was the case that in 2009-10 six out of the ten water and sewerage companies scored the maximum 38 points for customer contact with three others only marginally behind on 37 points.
- 3.2.12 Taking all these factors into consideration, the UR therefore believes an OPA score of 38 should be achievable by NI Water on this measure by 2020-21.

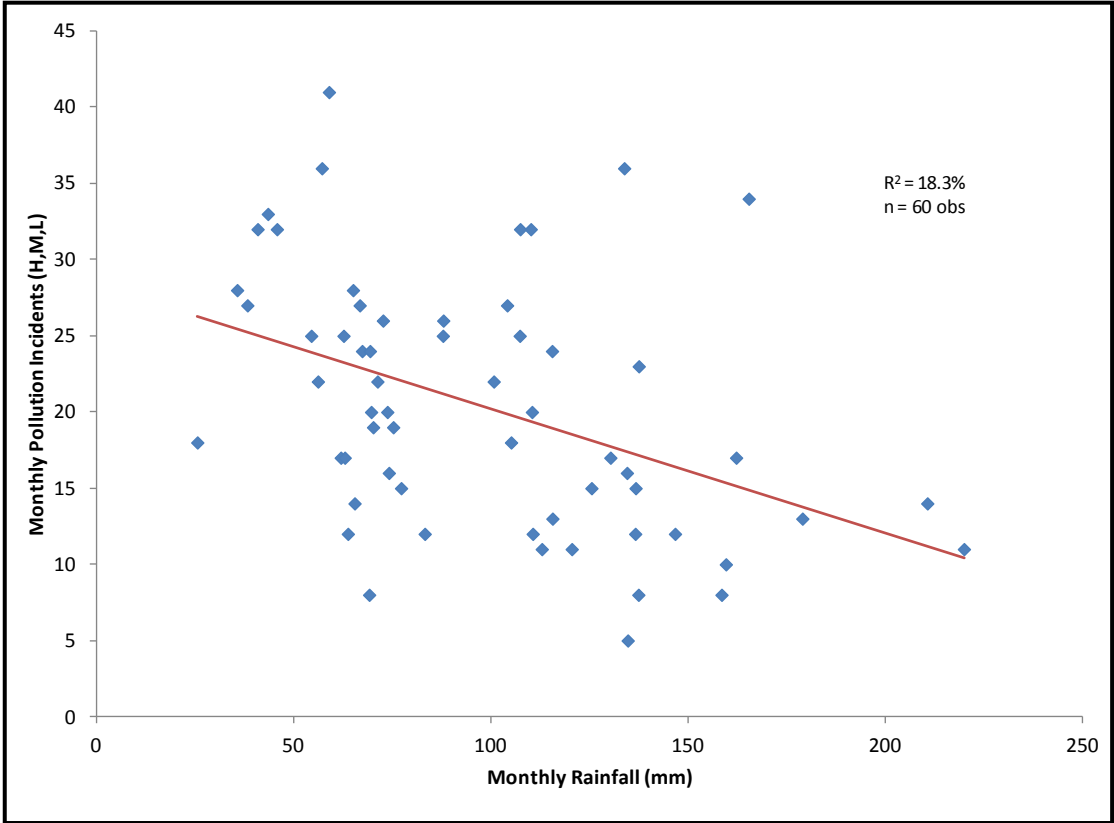
⁴ Company only need a combined score of 180 out of 200 to score maximum points on the customer service individual measure.

⁵ Taken from "Service and delivery – performance of the water and sewerage companies in England and Wales 2009-10" by Ofwat. http://www.ofwat.gov.uk/regulating/reporting/rpt_los_2009-10.pdf

Pollution incidents

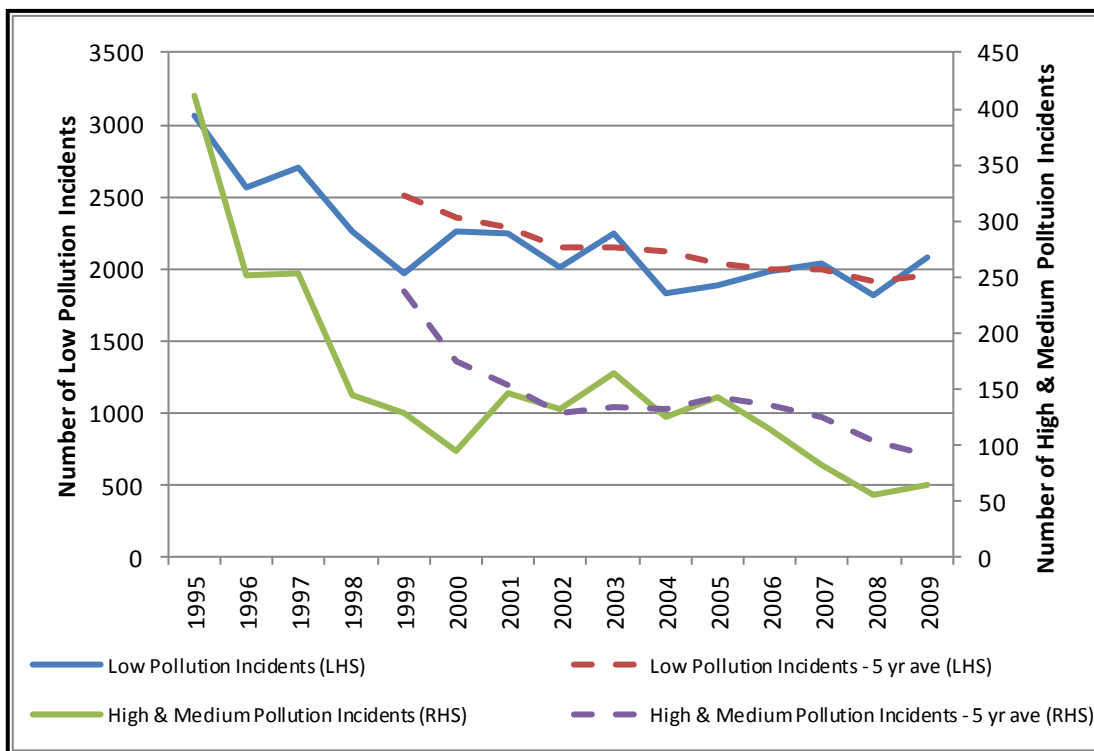
- 3.2.13 As NI Water are at the maximum of the scoring range for high & medium water pollution incidents, there is no scope for the company to improve on this measure. However, on both high & medium and low sewage pollution incidents, there is substantial scope for improvement, with potential to increase the OPA by 28 points from its 2012-13 levels on these two measures alone.
- 3.2.14 By 2020-21, NI Water are forecasting to stay around the same level as is currently the case in terms of OPA score for sewerage pollution incidents. The company also caution against expecting year-on-year improvement, stating that a degree of improvement on these measures partly depends on factors outside their control – namely rainfall levels.
- 3.2.15 During the six years of PC15 the company are not forecasting to enter into the scoring range for high and medium sewage pollution incidents. This means that the company are expected to score the minimum 3 points for that particular measure (out of a possible 25).
- 3.2.16 While the company are around the middle of the scoring range for low sewage pollution incidents, NI Water are not projecting increases above the score of 7 (out of a possible 13), achieved in 2012-13. The company have stated that as this score was achieved in a wet year, it is not representative of true underlying performance.
- 3.2.17 The UR performed its own examination of the relationship between rainfall levels and pollution incidents, undertaking a statistical analysis of the data provided by NI Water. Although the data only goes back five years, it seems apparent that there is an inverse relationship between rainfall and pollution incidents.

Figure 3.1 – Relationship between rainfall and pollution incidents



- 3.2.18 While both the model and the coefficient are significant, it is apparent that with a low R² value that there are a number of other variables which must also account for the level of pollution incidents. It is clear that some of these would be within company control.
- 3.2.19 The UR also examined the correlation between pollution incidents and a lag of monthly rainfall. However, this only improved the model slightly.
- 3.2.20 It is also the case that certain individual company circumstances would dictate the impact of rainfall, which may not have the impact the model would predict. For example, recent very heavy rain in England and Wales has been blamed for some pollution incidents over the last one or two years.
- 3.2.21 Rainfall may explain some of the year-on-year variability of the data but with it is clear from looking at England and Wales data that companies have been successful in reducing the frequency of sewage pollution incidents (high & medium in particular). Figure 3.2 below charts the historic experience of the industry in England Wales with respect to low and high & medium category incidents.⁶

Figure 3.2 – Historic performance of the England & Wales companies on sewage related pollution incidents



- 3.2.22 Based on our estimations of what is achievable on this measure, the UR takes a less pessimistic view and forecasts a reasonable but challenging assumption of 9 out of a possible 13 OPA points for low sewage pollution incidents by 2020-21. To achieve this would mean a reduction to around 120 low category pollution incidents by the end of PC15 from a level of 163 in 2012.

⁶ Taken from “Service and delivery – performance of the water and sewerage companies in England and Wales 2009-10” by Ofwat. http://www.ofwat.gov.uk/regulating/reporting/rpt_los_2009-10.pdf

- 3.2.23 If NI Water were to significantly improve its record of high & medium sewage pollution incidents, to around 12 incidents a year it would enter the scoring range and subsequent annual improvement on this level would significantly close the overall service gap with those companies in England and Wales.
- 3.2.24 However, the UR recognises the uncertainty associated with calculating the exact timing of when NI Water could enter the scoring range for this measure and so has not forecast improvements on this measure. Notwithstanding, high & medium sewage pollution incidents is an area where further progress should be targeted by NI Water over PC15.

3.3. Proposed scores

- 3.3.1 For the draft determination the UR has kept 9 of the 11 measures the same as NI Water submitted in its business plan. For the remaining 2 measures the UR has identified scope for more rapid progress on closing the service gap than NI Water has assumed in its business plan.
- 3.3.2 By adding an extra 3 OPA points for the customer contact measure and an extra 2 OPA points for the low sewage pollution incidents measure, the UR believes an end of PC15 OPA target of 236 is appropriate for the company.
- 3.3.3 While the 2020-21 overall OPA figure of 236 is only 5 points higher than NI Water had forecast, the UR believes this is still quite demanding.
- 3.3.4 In addition, the UR would not agree with NI Water’s quite pessimistic projections for the first three years of PC15, namely where the forecast is for a relatively flat OPA profile for these years, with its 2017-18 OPA score only marginally above the end of PC13 target from three years previous.
- 3.3.5 Also, by having a projected OPA score of 211 in 2015-16, the company are in effect expecting consumers to accept a reduction in overall service levels. The UR believes this is detrimental to consumers and has therefore set a more realistic target in this draft determination.
- 3.3.6 The UR has therefore interpolated a high level and gradual, year-on-year linear increase in the OPA from its PC13 OPA target of 215 in 2014-15, to its end of PC15 OPA target of 236 in 2020-21. The company will therefore need to increase its OPA score by around 3 to 5 points per year to achieve the UR’s target. Our final annual OPA targets based on this high-level analysis is shown in the table below, while the graph on the next page shows these targets in the context of what has historically been achieved by the company.

Table 3.1 – Draft determination targeted OPA scores for PC15

| | PC13 Targets | | PC15 DD Targets | | | | | |
|------------------------------------|--------------|---------|-----------------|---------|---------|---------|---------|---------|
| | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
| UR PC15 draft determination | 202 | 215 | 218 | 221 | 224 | 227 | 232 | 236 |

Figure 3.3 – Targeted improvements to NI Water’s OPA scores in PC15

