

PR19 customer engagement – Phase 1

Summary of information sources and triangulation

Final

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1. About this document

Overview

This document sets out the key findings from Phase 1 of DCWW's PR19 customer engagement programme.

One of the principal objectives of Phase 1 (and the focus of this document) is to understand which **areas of service customers see as priorities for improvement**. This will help us to shape our business plan, by identifying which service areas we need to measure as performance commitments, and to indicate where we could potentially focus investments to improve service. The results also help to steer our customer engagement efforts in Phases 2 and 3.

Phase 1 separately explores customer views on bill expectations and affordability, and attitudes regarding longer term investment. This scope of this work is more targeted, and is still ongoing. The results of this work will be addressed separately and taken into consideration in our business plan, in accordance with the customer engagement framework.

Version 1 of this document was prepared in [April 2017](#) using the latest available information, and in line with the approach set out in the DCWW PR19 Customer Engagement Framework. However, we expect that the key findings and conclusions will be kept under review and may need to be updated if new information is revealed which materially changes our conclusions on areas of service customer see as priorities for improvement (or on important topics of interest). In particular, there are a number of areas where the dataset will evolve over time – we plan to review and update these areas periodically.

In preparing this document, we drew on a breadth of data and information in line with the approach set out in the DCWW Customer Engagement Framework. This includes information sourced directly from DCWW customers, as well as broader industry and comparative information. The specific information/data sources in each category are described in detail later in this document.

2. Assessment of customer priorities

Our assessment of customer priorities is based on Phase 1 of the research programme and a range of wider evidence. The fold-out table on pages 8-9 summarises this assessment, and incorporates the following information:

- the **areas of service** that customers may potentially prioritise (or not)
- the types of **information sources** we reviewed
- an indication of the **level of customer priorities** against each potential area of service, as evident within each (individual) information source
- an **overall assessment** of the strength of customer priorities against each potential area of service based on the triangulation of multiple information sources

These are explained in more detail below.

Areas of service

In identifying the areas of service that customers might *potentially* find important, these have been drawn from multiple sources. We started by cataloguing an extensive list of customer priorities currently being reported across the industry (e.g. the full list of AMP6 Performance Commitments across the industry) and added to this list where the research revealed categories not currently being reported. Overall, we assessed 94 potential areas of service, across 28 types of categories.

Information sources

We considered the evidence from a range of information sources – these sources are broadly characterised as historical performance data, continuous engagement, qualitative primary research, and secondary research:

Information type	Information source
Historic Performance Data	<ul style="list-style-type: none">• DCWW PR14 research• AMP6 Performance 15/16 - PC• AMP6 Performance 15/16 - Other metrics• AMP6 Performance 15/16 - Comparative• AMP6 PC Coverage - # of WASCs• AMP6 PC Coverage - # of WOCs
Continuous Engagement	<ul style="list-style-type: none">• NHH Survey• Rant and Rave• Trust Tracker• Written Complaints• Phone Contacts• Phone Complaints• RoV Consultations
Qualitative Primary Research	<ul style="list-style-type: none">• PR19 Primary qualitative research• Performance Measures research
Other industry Research (secondary research)	<ul style="list-style-type: none">• CC Water research

Determining the level of customer priorities

We assessed the level (strength) of customer priorities across the areas of service, considering each information/data source separately. We used a simple **Red Amber Green** (RAG) rating for this assessment. **Red** indicates a higher customer priority and **Green** indicates a lower customer priority. For some sources

where further differentiation in the level of priority is warranted (for example because it is possible to identify an upper quartile or lower quartile indicator) this is indicated by **darker Red** and **lighter Green** ratings¹.

The way in which the level of priority is determined differs across the various types of information/data sources. The box below sets out illustrative examples of how we have assessed the level of customer priority against the information sources.

Illustrative examples for three information sources:

- *Example 1 - Performance against AMP6 PCs:* Where DCWW is underperforming against AMP6 targets, this potentially indicates there is some opportunity for service improvement. Therefore, underperformance against AMP6 commitments is assessed as **Red**.
- *Example 2 - Complaints and contacts:* Service areas that are subject to high levels of complaints or customer contacts are areas where customers may be experiencing poor service and may wish to prioritise improvements. Service areas with a high numbers of customer contacts are assessed as **Red**. On its own, this assessment should be treated with caution because there are particular areas that are more likely to be subject to contacts and complaints because of the way in which they affect customers directly (such as service interruptions, as opposed to environmental or resilience areas, for example) – this is taken into account in the overall assessment (triangulation) approach.
- *Example 3 - Qualitative primary research on how customers prioritise various potential measures of service:* Phase 1 of our primary research for PR19 has covered a number of topics. We can infer information from the results of this research pertaining to customer priorities for service improvements. Where customers report a specific high priority area, this is assessed as **Red**. One particular piece of research asked customers specifically about their priorities for service, and from this we can draw conclusions much more directly about their preferences. Hence this piece of research has been separated out and given a higher weighting in the overall assessment (triangulation) approach.

In some cases the RAG assessment is undertaken only at a general category level. This is because the level of detail across varies different information sources. Some sources (e.g. PR19 qualitative research) identify customers' priorities at a *specific commitment/area* level, and some at a *category* level. In both cases, a Red score indicates that the category or area is a high priority to customers.

Overall assessment - approach to triangulation

The overall assessment of customer priorities is a combination of the individual RAG assessment and a view on the relative weighting of each source. The weighting is based on the triangulation principles set out in the Customer Engagement Framework. While this does not remove the need for judgement, we consider that this provides a more transparent and rigorous basis for identifying priority service areas².

Triangulation principles:

1. *More weight should be placed on data/information which is **consistent with other sources** – e.g. where there is an established regulatory or industry consensus/view, less weight should be placed on 'outliers' (unless there strong evidence of local nuances).*
2. *Most weight should be placed on data/information that is **fit for purpose** (collected using a methodology which has been designed appropriately for eliciting customer priorities/preferences) – e.g. where the methodology has enabled customers to explicitly identify their priorities as opposed to where we have needed to infer customer priorities.*
3. *More weight should be placed on data/information which is **more robust and reliable** (statistically significant, consistent/repeatable/stable, and intuitive / coherent). Data/information which is less reliable will still be considered, though only for context or as corroborating evidence.*
4. *More weight should be placed on **more recent data/information**, except where there is reason to suggest recent evidence is less reliable (or where a longer-time series is required).*
5. *When considering **comparative information**, more weight should be placed on data/information from closer comparators (companies with similar demographics, issues/challenges, etc)*

¹ For ease of comparison, a score is assigned based on the RAG. Each information source has a maximum "score" of 10. Scores are assigned between 0 and 10 based on the RAG rating (for example: PR14 research - 3 possible assignments R/ A/ G have a score of 10/ 5/ 0 respectively. Where there are 5 possible assignments (DR/R/A/G/LG) the corresponding scores are 10/ 7.5/ 5/ 2.5/ 0.

² As for the RAG assessment, for ease of comparison a score is assigned to each overall source based on the weighting. Each source has a maximum score of 3. "Limited" = 2, "Some" = 2.5, and "Significant" = 3.

A summary of the overall assessment approach (including triangulation) is set out below. For further detail see Appendix 1.

Source	Description	RAG	Weighting
PR14 research	Indicates customer priority service areas per research performed by DCWW ahead of PR14	R – High Priority A – Medium Priority G – Low Priority	Some
AMP6 Performance 15/16 - PC	Indicates recent DCWW performance against AMP6 PCs – 2015/16 (Ofwat data)	DR – Sig behind target R – Behind Target A – On target G – Ahead of target LG – Sig ahead target	Significant
AMP6 Performance 15/16 - Other metrics	Indicates recent DCWW performance against other measures outside AMP6 PCs (e.g. tracked through DCWW monthly management reports)	DR – Sig behind target R – Behind Target A – On target G – Ahead of target LG – Sig ahead target	Some
AMP6 Performance 15/16 - Comparative	Indicates recent DCWW performance against AMP6 PCs relative to the industry – 2015/16 (Ofwat data)	DR – Bottom Quartile R – Behind Average A – Average G – Ahead of Average LG – Upper Quartile	Some
AMP6 PC Coverage - # of WASCs	Indicates the extent to which there is consistency / commonality in the focus areas of other companies' AMP6 PCs (WASCs)	R – Priority >6 WASCs A – Priority 4-6 WASCs G – Priority 1-3 WASCs	Some
AMP6 PC Coverage - # of WOCs	Indicates the extent to which there is consistency / commonality in the focus areas of other companies' AMP6 PCs (WOCs)	R – Priority >5 WOCs A – Priority 3-5 WOCs G – Priority 1-2 WOCs	Limited
NHH Survey	Indicates Non-Household customer views on service areas in which DCWW could potentially improve	R – >250 respondents A – 25-250 respondents G – <25 respondents	Some
Rant and Rave	Indicates whether customers who have experienced various service issues would recommend DCWW – (Sept 15 – April 17)	R – Low NPS + High contacts A – Low NPS + Med contacts G – High NPS + Low contacts	Limited
Trust Tracker	Indicates the importance of various service attributes and the level of trust customers have in DCWW to deliver against these attributes.	R – High importance + low trust A – High importance + Med trust G – Med importance + Med trust LG – Low importance	Limited
Written Complaints	Indicates the number of written complaints against service areas – cumulative data (Jan 14 – Apr 17)	R – > 1,500 complaints A – 200 – 1500 complaints G – <200 complaints	Some*
Phone Contacts	Indicates the number of phone contacts against service areas – cumulative data (Jan 15 – Mar 17)	R – >100,000 contacts A – 10,000 – 100,000 contacts G – <10,000 contacts	Some*
Phone Complaints	Indicates the number of phone complaints against service areas – cumulative data (Jan 15 – Mar 17)	R – >1,000 complaints A – 100-1,000 complaints G – <100 complaints	Some*
RoV consultations	Indicates the areas where customers would prefer to reinvest or return excess value to customers	R – 1 – 2 ranked A – 3 – 4 ranked G – 5 – 6 ranked	Some
PR19 Primary qualitative research	Indicates broad customer priorities (generally at a category level) based on recent research into specific topics of interest – <i>resilience, customer service, WRMP, worst served customers, etc.</i>	R – Consistent high priority A – Occasionally high priority G – Rarely indicates high priority	Significant
Performance Measures	Indicates the relevance to the customer of various potential AMP7 performance measures	R – Highly relevant A – Mainly relevant G – Benefit not evident	Some
CC Water research (2015/16)	Indicates (general) attitudes of customers towards a range of specific topics , across multiple pieces of research – <i>including: water and sewerage service, etc</i>	R – Consistent high priority A – Occasionally high priority G – Rarely indicates high priority	Some

* Note 1: While complaints and contacts data might otherwise attract a "significant" weighting, these are included in the assessment at "some" weight. Due to the similarity of data sources they have been downgraded so as to not collectively skew the triangulation.

The assessment is presented in the table below, with the far right columns summarising the overall result for; specific areas of focus, for PR19 categories, and overall categories – as for the individual assessments, the highest priority areas overall are highlighted in Red.



Summary of customer priorities

Category	Area of focus	DCWW existing commitment	Ofwat Horizontal PR19	DCWW AMP6 Research & Performance			Comparative assessment			DCWW Continuous engagement						Industry Research CC Water research (2015/16)	PR19 Research		PR19 Research Category Ranking	Category Average	Category Ranking	Sub Category Total	Focus Area Score	Focus Area Rank		
				PR14 research	AMP6 Performance 15/16 - PC	AMP6 Performance 15/16 - Other metrics	AMP6 Performance 15/16 - Comparative	AMP6 PC Coverage - # of WASCs	AMP6 PC Coverage - # of WOCs	NHH Survey	Rant and Rave	Trust Tracker	Written Complaints	Phone Contacts	Phone Complaints		RoV consultations	PR19 Primary qualitative research							Performance Measures	
Affordability concerns	Value for money			S			Upper Quartile	7	4						NS								161.75	81.75	8	
	Affordability	✓		S	On Target			5	2					S	S	NS							171.5	91.5	7	
	Customer Relationship Management system							2	1						NS								99.5	7	56	
	Bill Fairness							1	1						NS								109.5	29.5	35	
	Engagement with debt/ bad debt			S				3	2						NS								169	69	12	
	Support for customers struggling to pay	✓		S	Ahead of Target			1	1					S	S								154.5	49.5	24	
	Billing contacts			NS					1	2						NS							151.5	19	45	
Water quality compliance	Mean Zonal Compliance	✓	✓	NS	Behind Target		Second Quartile	9	8														173.5	73.5	10	
	Bespoke water compliance metric			S				2															105	30	32	
	Schemes/ programs delivered			NS					2														104	4	63	
	Water quality contacts - Volume	✓		S	Behind Target		Third Quartile	8	8					S	S								174.75	149.75	1	
Supply interruptions	Supply Interruption Time	✓	✓	S	Significantly Ahead of Target		Bottom Quartile	10						NS	NS								170	75	9	
	Large interruptions			NS					1						NS	NS							122	2	82	
	Unplanned interruptions			NS					1						NS	NS							122	2	82	
	Number of incidents over 12h			NS		Behind Target			1						NS	NS							140.75	20.75	42	
Sewer flooding/collapses etc	Internal Flooding	✓	✓	NS	Significantly Ahead of Target		Upper Quartile	9						S	S								143.75	63.75	16	
	External Flooding			NS			Bottom Quartile	6						S	S								175	95	6	
	Repeat Flooding			NS				1															107.5	27.5	38	
	Sewer collapses/ blockages			NS		Behind Target		2															138.75	58.75	17	
	Risk of sewer flooding/ collapses			NS				2															110	30	32	
	Number of schemes delivered - SF			NS				1															107.5	2.5	65	
Leakage	Leakage Volume	✓	✓	S	Ahead of Target		Bottom Quartile	10	8					NS	NS								191	123.5	2	
	Time taken to fix			NS				3	1					NS	NS								117	22	41	
	Free repair to leaks outside homes			NS				1							NS	NS							70	2.5	65	
Water pressure	Number of low pressure properties			S		Ahead of Target	Second Quartile	5	1					S	S								113.25	113.25	3	
Metering	Meters installed			NS				1	1						NS	NS							119.5	29.5	35	
	Metered bill/ supply			NS				1	1						NS	NS							107	29.5	35	
Community/partnerships	Time spent supporting			NS					1							NS							92	2	82	
	Number of solutions/ partnerships			NS				2								NS							95	5	59	
Water consumption	Water Consumption - Volume		✓	S			Third Quartile	5	6														23	93	9	
Pollution incidents	Category 3 - pollution incidents	✓	✓	S	Significantly Ahead of Target		Upper Quartile	9	1						NS									105.75	55.75	19
	Category 1 & 2 - pollution incidents		✓	NS		Ahead of Target		6	1						NS									98.25	23.25	40
	Category 4			NS				2							NS								80	5	59	
	Performance assessment			NS				1							NS									77.5	2.5	65
Security of supply	Security of Supply index			NS				4	3															96	16	49
	Volume of water			NS					2															69	4	63
Customer satisfaction (exc. bills)	Customer Satisfaction	✓		S	Ahead of Target		Second Quartile	9	6															119.5	104.5	5
	Issue resolution 1st time/ on time			NS				4						6	S									92.5	40	30
	Number of complaints			S		Behind Target		1	1															75.75	48.25	25
	Accessibility of communications							1																55	15	50
	Customer experience program							1																30	2.5	65
	Service Incentive Mechanism	✓	✓	NS	Behind Target		Third Quartile	10	8															132.25	107.25	4
Customer education/awareness	Customer Sentiment Index																							40	0	
	Number of customers aware			NS				1																92.5	27.5	38
	Number of people/ children engaged with			NS				2	1															97	32	31
	Number of employee days			NS					1															92	2	82
Specific customer groups*	Recreational Facilities Index																							0	0	
	Number of customers who have received poor service	✓		S	Significantly Ahead of Target			1							S									92.5	65	15
	Odour - Complaints/ No. people affected			S		Ahead of Target		3						S	S									86.25	71.25	11
Asset health - wastewater	Vulnerable Customers																							30	0	
	Wastewater - Asset health indicator (infra & non infra)	✓		S	On Target			6																70	55	20
	Number of sewer blockages					Ahead of Target		1						S	S									68.75	53.75	22
	Number of sewer collapses & mains bursts		✓			Behind Target		1																61.25	46.25	27

3. Key findings and conclusions

This section sets out the key findings from the assessment/triangulation of customers' priorities. The objective is to identify a list of areas that **customers see as a priority for future improvement**. Following further customer engagement in Phases 2 and 3, these **may** form the basis for the performance commitments, or Measures of Service (MoS), in our PR19 business plan.

In determining which specific areas should be included in the MoS, there are three additional considerations:

1. In some cases, the evidence indicates that while categories are high priority to customers, the evidence is less conclusive for specific areas within these overall categories. Further investigation into these categories is required to clarify customer priorities.
2. In some cases there is a high degree of overlap between the concepts covered by the various service areas. For the purposes of assessment, these are captured separately, however further investigation in these areas is required to confirm whether two or more areas should be amalgamated into a single commitment/measure.
3. We expect Ofwat will set a number of mandatory areas of focus for all companies for AMP7 (this will become clearer after Ofwat publishes its PR19 Methodology Statement in July 2017). If confirmed, these should be included in the DCWW MoS, irrespective of the DCWW-specific evidence.

Given these additional considerations, we present the key findings and conclusions first at a category level, and then for specific areas of focus (where possible).

Key priorities – categories

The outcome from triangulation at a *category-level* is summarised in the RAG table below. The table also compares the triangulated outcome with the outcome from our specific PR19 customer research programme. The arrows indicate where our customer research suggests a much higher or lower priority (i.e. change in RAG rating). Interestingly, the lowest and highest priority issues identified in our PR19 customer research is broadly consistent with the wider evidence. Where there are differences, these mostly relate categories where we have specifically asked for customer views (rather than being spontaneously identified).

Category		Category		Category	
Affordability concerns		Security of Supply	↑	Water resources and abstraction	
Supply interruptions (moved up one place)		Customer Satisfaction (moved up by 4 places)**	↑	Sustainability/ innovation	↑
Water Quality (moved down one place)		Specific customer groups	↑	Sludge	
Sewer flooding/collapses		Asset health - wastewater		Waste disposal	
Leakage	↓	Environmental	↓	SEMD	
Water Pressure	↓↓	Customer awareness (moved down 4 places)	↑	Biodiversity/SSSIs	
Metering*		Resilience		Catchment Management	
Community/ partnerships	↓	Energy/ emissions	↓	Health & Safety	
Water consumption	↓↓	Supply restrictions	↓		
Pollution incidents	↓	Asset health - water	↑		

Note: ↑ indicates a higher priority compared with the triangulated view, ↓ indicates a lower priority compared with the triangulated view.

More arrows indicates a bigger difference.

* Metering concerns are interlinked with affordability. ** After update in Aug 2017 no category changes were affected by changes to data apart from customer satisfaction which moved up in importance by 5 places.

Key priorities – specific areas of focus

The key findings regarding potential areas of focus *within categories* are set out in the tables below, split between the (likely) mandatory areas of focus for all companies, and other potential areas of focus. Where it is not possible to identify a specific area of focus within a category, these are marked with “C” and are colour coded to reflect the priority at a category level (as per the table above).

Potential mandatory areas of focus (Ofwat)	Rank	Summary of findings
Leakage Volume	2	<ul style="list-style-type: none"> These areas are likely to be covered by mandatory performance commitments at PR19 These areas are also fully supported by customer research and are amongst the top priority areas These areas should remain <u>key priorities</u> in shaping the AMP7 business plan, independent of the result of Ofwat's PR19 methodology statement
Service Incentive Mechanism	4	
Supply Interruption Time	9	
Mean Zonal Compliance	10	
Water Consumption - Volume	14	
Internal Flooding	16	
Category 3 - pollution incidents	19	
Number of sewer collapses & mains bursts	27	<ul style="list-style-type: none"> These areas are also likely to be covered by mandatory performance commitments at PR19. However, there is not as much evidence they are the highest priority for DCWW customers These areas may require further consideration to validate that they are a priority for customers, depending on Ofwat's final methodology statement These areas are <u>potentially</u> key priorities for the AMP7 business plan, but this should be reviewed in Phase 2 after the final methodology statement is published
Water Mains Bursts	32	
Category 1 & 2 - pollution incidents	40	
Resilience	C	
Abstraction Incentive Mechanism	54	

Note: C indicates assessment at a category level – no individual ranking

Non-mandatory areas of focus	Rank	Summary of findings
Water quality contacts - Volume	1	<ul style="list-style-type: none"> These areas are not likely to be covered by mandatory performance commitments at PR19 However, these areas are fully supported by customer research as being “high priority” These commitments appear in the top 20 priority areas (or top category, as ranked during the triangulation process In some cases there are overlaps in the concepts presented in the various service areas – e.g. “affordability” and “value for money” cover similar ground, likewise “number of people affected by odour” is likely to be similar to “number of customers receiving poor service” (and there are likely to be other elements of poor service that could be amalgamated) For areas where customer priorities are based on categories and not specific areas (marked with an asterisk *) evidence on the specific area of priority is less conclusive. Further research is required to determine the area of focus These areas should be considered as <u>key priorities</u> for the AMP7 business plan, subject to review of overlaps between areas of service.
Number of low pressure properties	3	
Affordability	7	
Customer Satisfaction	5	
External Flooding	6	
Value for money	8	
Odour - Complaints/ No. people affected	11	
Support for customers struggling to pay	24	
Engagement with debt/ bad debt	12	
Discharge - Regulatory compliance	13	
Number of customers who have received poor service	15	
Sewer collapses/ blockages	17	
Water - Asset health indicator (infra & non infra)	18	
Metering	C	
Community/ Partnerships*	C	
Security of Supply*	C	
Wastewater - Asset health indicator (infra & non infra)	20	
Bathing water compliance/ excellence	20	
Number of sewer blockages	22	
Energy from renewables	23	
Issue resolution 1st time/ on time	30	
Number of complaints	25	
km of river improved	26	
Carbon emissions	28	

<i>Non-mandatory areas of focus</i>	Rank	Summary of findings
Frequency of supply restrictions	29	
Number of people/ children engaged with	31	
Risk of sewer flooding/ collapses	32	
Bespoke water compliance metric	32	
Bill Fairness	35	
Meters installed	35	
Metered bill/ supply	35	
Level of customer Awareness (No. of customers aware)	38	
Repeat Flooding	38	
Adapting to climate change**	47	

Notes: C indicates assessment at a category level – no individual ranking

**Adapting to climate change (Rainscape) is included here for reference, as this was a key priority for DCWW

Mapping customer priorities to (draft) measures of service

The table below compares the outcome from the triangulation process to DCWW's current **draft** Measures of Service, highlighting the areas where further investigation may be required.

<i>Potential areas of focus</i>	Rank	Ofwat		Further investigation	Comment
		Mandate	Draft MOS		
Water quality contacts - Volume	1		✓		
Leakage Volume	2	✓	✓		
Number of low pressure properties	3			☒	MoS anticipates this will be measured in "No. of customers who have received poor service"
SIM	4	✓			
Customer Satisfaction	5		✓		
External flooding	6		✓		
Affordability	7		✓	✓	Potential duplication of "Value for Money".
Value for money	8		✓		
Supply Interruption Time	9	✓	✓		
Mean Zonal Compliance	10	✓	✓		
Odour - Complaints/ No. people affected	11			☒	MoS anticipates this will be measured in "No. of customers who have received poor service"
Engagement with debt/ bad debt	12		✓		
Discharge - Regulatory compliance	13		✓		
Water Consumption - Volume	14	✓	✓		
Number of customers who have received poor service	15		✓	☒	MoS anticipates this will reflect a number of areas of poor service, e.g. odour, low pressure
Internal Flooding	16	✓	✓		
Sewer collapses/ blockages	17			☒	Duplication of "Number of sewer collapses & mains bursts".
Water - Asset health indicator (infra & non infra)	19		✓		
Category 3 - pollution incidents	19	✓	✓		
Community/ Partnerships	C			✓	High scoring <i>category</i> , no associated draft MOS further investigation needed
Metering	C			✓	Customers' interest in metering appears to focus on the ability to reduce bills through use of metering. May overlap with affordability.
Security of Supply	C			✓	High scoring <i>category</i> , no associated draft MOS further investigation needed
Wastewater - Asset health indicator (infra & non infra)	20		✓		
Bathing water compliance/ excellence	20			✓	High scoring focus area, not currently included in draft MOS, further investigation required to confirm DCWW approach.
Number of sewer blockages	22				Duplication of "Number of sewer collapses & mains bursts". Included here for completeness only.
Energy from renewables	23		✓		
Support for customers struggling to pay	24				

<i>Potential areas of focus</i>	Ofwat			<i>Further investigation</i>	<i>Comment</i>
	<i>Rank</i>	<i>Mandate</i>	<i>Draft MOS</i>		
<i>Number of complaints</i>	25		✓		
<i>km of river improved</i>	26		✓		
<i>Number of sewer collapses & mains bursts</i>	27	✓	✓		
<i>Carbon emissions</i>	28			✓	Confirm this is adequately covered by "% of energy generated from renewables"
<i>Frequency of supply restrictions</i>	29			✓	High scoring focus area, not currently included in draft MOS, further investigation to confirm
<i>Issue resolution 1st time/ on time</i>	30		✓		
<i>Number of people/ children engaged with</i>	31			✓	High scoring focus area, not currently included in draft MOS, further investigation needed to confirm
<i>Water Mains Bursts</i>	32	✓	✓		
<i>Risk of sewer flooding/ collapses</i>	32			☒	Duplication of "Number of sewer collapses & mains bursts"
<i>Bespoke water compliance metric</i>	32			☒	Duplication of "Mean Zonal Compliance"
<i>Bill Fairness</i>	35			✓	High scoring area, not currently included in draft MOS - further investigation needed
<i>Meters installed</i>	35			✓	High scoring area, not currently included in draft MOS - further investigation needed
<i>Metered bill/ supply</i>	35			✓	High scoring area, not currently included in draft MOS - further investigation needed
<i>Level of customer Awareness (No. of customers aware)</i>	38			✓	High scoring area, not currently included in draft MOS - further investigation needed
<i>Repeat Flooding</i>	38			✓	High scoring area, not currently included in draft MOS - further investigation needed
<i>Category 1 & 2 - pollution incidents</i>	40	✓	✓		
<i>Resilience</i>	C	✓	✓		Category included by Ofwat as a mandatory focus area, specific commitment TBC
<i>Adapting to Climate Change (Rainscape)</i>	47		✓	✓	Low scoring area but currently included within draft MOS - further investigation needed
<i>Abstraction Incentive Mechanism</i>	54	✓	✓		Ofwat mandatory focus area
<i>Recreational facilities index</i>	C		✓	✓	Further investigation to confirm
<i>Customer sentiment index</i>	C		✓	✓	Further investigation to confirm

4. Key segmental findings

The table below highlights some of the key themes from our research, split between different customer segments. We will consider the differentiation in customer views further as part of the next steps.

Segment	Service area or topic	Specific findings
Household customers	Community/ partnerships	<ul style="list-style-type: none"> Reported prioritising investment in community projects to conserve water
	Leakage	<ul style="list-style-type: none"> Reported concern over leakage volume in relation to the impact on cost and the impact on the environment Reported expectations of reduced service time, citing 24 hours as the time in which they would expect inspection
	Metering	<ul style="list-style-type: none"> Consistently reported beliefs that metering would increase their bill
	Sewer flooding/ collapses	<ul style="list-style-type: none"> Reported sewer flooding as a high priority area with significant personal implications
	Water quality compliance	<ul style="list-style-type: none"> Discoloured water reported as a high priority area that affects household customers daily and incurs personal expense
	Vulnerable customers	<ul style="list-style-type: none"> Reported low awareness of options available
	Business customers	Billing, debt, affordability, value for money
Customer satisfaction		<ul style="list-style-type: none"> Account managed customers reported higher expectations of suppliers in relation to customer service and reported drawing on best practice from other sectors
Energy/ emissions		<ul style="list-style-type: none"> Business customers demonstrated a stronger interest in renewable energy than household customers
Environmental		<ul style="list-style-type: none"> Business customers demonstrated a heightened awareness of accountability of DCWW in environmental impact Recognised the value in surface water management
Leakage		<ul style="list-style-type: none"> Account managed customers requested access to leak detection services (including for a fee)
Metering		<ul style="list-style-type: none"> Account managed customers consistently requested better ways to manage their usage, but many exhibited low understanding of how metering works
Resilience		<ul style="list-style-type: none"> Reported high understanding of risk and placed greater priority on future planning than household customers
Sewer flooding/ collapses		<ul style="list-style-type: none"> Considered a high priority, and reported lower tolerance due to consequences for business operations Reported expectations of compensation
Vulnerable customers		<ul style="list-style-type: none"> Reported low awareness of options available
Vulnerable customers		Billing, debt, affordability, VFM
	Environmental	<ul style="list-style-type: none"> Vulnerable customers reported a range of attitudes to environmental measures – those who struggled to pay their bill supported environmental schemes but would be willing to pay less for improvements
	Metering	<ul style="list-style-type: none"> Low understanding/ nervousness reported among vulnerable customers, particularly those with large families of increased cost
	Supply interruptions	<ul style="list-style-type: none"> Reported as a high priority, requiring special provisions for vulnerable customers
	Water quality compliance	<ul style="list-style-type: none"> Reported as a high priority, requiring special provisions for vulnerable customers and compensation in the instance of service failure
	Vulnerable customers	<ul style="list-style-type: none"> Low awareness of services available. Those registered believed they received good additional consideration on treatment as a result
Future customers	Customer education/ awareness	<ul style="list-style-type: none"> Future customers had a low understanding but expressed a strong desire to understand how Welsh Water operates in relation to the environment Customers reported low understanding of water provision
	Customer satisfaction	<ul style="list-style-type: none"> Future customers reported high service expectations set based on cross-sector experiences, particularly retail, referencing tracking of deliveries, transparency in relation to appointments, proactive updates via channel of choice specifically Requested use of "relevant" communication channels, particularly the use of television and social media rather than print channels to engage with Welsh Water

- Informed future customers responded positively to environmental measures and reported eagerness to understand how DCWW supports the environment in greater detail
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Definitions:

- Business customers: These are specifically customers who are private businesses, so does not encompass all non-household customers (which would include local authorities, charities etc)
- Vulnerable customers: These customers are segmented under 4 groups affected by vulnerability in different ways.
 - Crisis - Customers calling due to an emergency e.g. insurance claims, death in the family.
 - Capability - Customers who will need extra support e.g. dementia or stroke patients
 - Connectivity – Customers who lack connectivity e.g. Customers who don't have access to the internet
 - Circumstance - Where we have caused a customer to become vulnerable through an operational issue e.g. flooded their home.
- Future customers: These are young people in the age range (18-29) who are not yet bill payers.

5. Next steps

There are a number of important 'next steps' we plan to take in order to develop our business plan proposals in light of the findings from Phase 1.

1. **Further investigation/consideration:** There are a number of areas where we will undertake further work to develop a deeper understanding of customer views (and the wider context) in order to shape our business plan proposals/responses; for example:
 - Further investigation on specific topics such as the nature and extent of assistance for vulnerable customers, and the scope for DCWW to participate in community partnerships
 - Research on affordability and bills
 - Research on longer term customer priorities (and whether there is any need for additional longer-term Measures of Service, for example to support Welsh Water 2050)
 - Further investigation on regional customer priorities/issues
2. **Further data validation:** Where new or updated data/information is available over time, we will keep the findings from Phase 1 under review. At a minimum, we will refresh the assessment if there is materially different information available from the following sources:
 - Complaints and contacts data (to be reviewed quarterly)
 - SIM data
 - Ofwat methodology statement (which may contain different information on the areas of focus for all companies)
3. **Customer valuations:** As part of Phase 2 of the PR19 customer engagement programme, we plan to undertake research and analysis to understand the value customers place on relevant service priorities. This will focus on areas of service which have emerged as highest priorities from Phase 1 (and not areas of service which Phase 1 has revealed to be low priority for customers). For example, this will encompass:
 - Willingness to Pay (WTP) research – to obtain customer values for use in Cost Benefit Analysis
 - Performance targets research - to obtain qualitative and quantitative data on how much customers are willing to pay for improvement/deterioration across the draft Measures of Service
 - Alternative valuations – as we have done in Phase 1, we will draw on a breadth of sources to 'triangulate' a final view on the value that customers place on various service improvements

More generally, as a business we will need to develop:

- Our strategic response to the views and priorities expressed by different groups of customers, and
- Business plan proposals that align with customer views and priorities (though noting that in many cases our proposals will take into account a much wider range of factors, such as costs).

Appendix 1: Explanation of information sources and triangulation

The table below sets out the approach we have used to assessing the strength of customer priorities evident within each data source, and the weight we have attached to each data source as part of the triangulation process.

Table: Summary of information sources and triangulation

#	Title	Description/source	Interpretation of customer priorities	Triangulation comments
1	Historical Performance			
1.1	PR14 Research	Indicates the priority service areas per DCWW PR14 research	<p>PR14 research provides an indication of the service priorities for DCWW customers, <i>at the start of PR14</i>.</p> <p>Red: Research (or Ofwat) indicates a high priority area for customers (AMP6 PC) Amber: Research indicates a medium priority area for customers Green: Research indicates a low priority area for customers</p>	<p>Some weight should be placed on this evidence:</p> <ol style="list-style-type: none"> 1. <i>Consistent – to be assessed across individual service areas</i> 2. Fit for purpose – this information was collected ahead of PR14 using a methodology designed to assess relative service priorities 3. Robust/reliable – this information was robust/reliable at a point in time 4. Recent – this information is <u>not recent</u>, as it was collected ahead of PR14 5. Closer comparators – n/a for this source
1.1A	DCWW Performance – AMP6 PCs	Indicates how DCWW is performing against AMP6 PCs – 2015/16 Ofwat data	<p>Where DCWW is underperforming against AMP6 PCs, this indicates there is more opportunity for service improvement.</p> <p>Dark red: Significantly behind target Red: Behind target Amber: On target Green: Ahead of target Light Green: Significantly ahead of target</p>	<p>Significant weight should be placed on this evidence:</p> <ol style="list-style-type: none"> 1. <i>Consistent – to be assessed across individual service areas</i> 2. Fit for purpose – this information is a useful indicator though does not directly relate to service priorities (e.g. outperformance does not directly translate to a low service priority) 3. Robust/reliable – this information is robust/reliable (reported externally) 4. Recent – this information is recent (2015/16) 5. Closer comparators – n/a for this source <p>[Note: cross check 14/15 data before finalising assessment]</p>

#	Title	Description/source	Interpretation of customer priorities	Triangulation comments
1.1B	DCWW Performance - Other	Indicates how DCWW is performing against AMP6 PCs – other metrics (e.g. MMR)	Where DCWW is underperforming against its performance metrics, this indicates there is more opportunity for service improvement. Dark red: Significantly behind target Red: Behind target Amber: On target Green: Ahead of target Light Green: Significantly ahead of target	Some weight should be placed on this evidence: 1. <i>Consistent – to be assessed across individual service areas</i> 2. <i>Fit for purpose</i> – this information is a useful indicator but does not directly relate to service priorities (e.g. outperformance does not directly translate to a low service priority) 3. <i>Robust/reliable</i> – this information is robust/reliable, though only 1 year of performance data is available 4. <i>Recent</i> – this information is recent (2015/16) 5. <i>Closer comparators</i> – n/a for this source
1.2	AMP6 Comparative Performance (PCs)	Indicates how DCWW is performing against AMP6 PCs relative to industry – 2015/16 Ofwat data	Where DCWW is underperforming against peers in the industry (15/16) this indicates there is more opportunity for service improvements. Dark red: Bottom quartile Red: Behind average Amber: Average Green: Above Average Light Green: Upper Quartile	Some weight should be placed on this evidence: 1. <i>Consistent – to be assessed across individual service areas</i> 2. <i>Fit for purpose</i> – this information is a useful indicator but does not directly relate to service priorities 3. <i>Robust/reliable</i> – information is robust/reliable, though only 1 year of performance data is available 4. <i>Recent</i> – information is recent (2015/16) 5. <i>Closer comparators</i> – n/a for this source
1.3A	Performance Commitment coverage - WASCs	Indicates the degree to which there is consistency in AMP6 PCs across the industry (i.e. degree to which customers of other WASCs are aligned on service priorities)	Where a high number of WASCs have similar areas of focus in their AMP6 PCs, it is more likely that customers across the industry consider those areas of focus to be important. Red: Priority for > 6 WASCs Amber: Priority for 4-6 WASCs Green: Priority for 1-3 WASCs	Some weight should be placed on this evidence: 1. <i>Consistent – to be assessed across individual service areas</i> 2. <i>Fit for purpose</i> – this information is a useful indicator of service priorities across the industry, but does not directly relate to DCWW customers 3. <i>Robust/reliable</i> – information is robust/reliable (covers all WASCs) 4. <i>Recent</i> – information is recent (2015/16) 5. <i>Closer comparators</i> – Greater weight is placed on service priorities of other WASCs rather than WOCs (see below)
1.3B	Performance Commitment coverage - WOCs	Indicates the degree to which there is consistency in AMP6 PCs across the industry (i.e. degree to which customers of WOCs are aligned on service priorities)	Where a high number of WASCs have similar areas of focus in their AMP6 PCs, it is more likely that customers across the industry consider those areas of focus to be important. Red: Priority for > 5 WOCs Amber: Priority for 3-5 WOCs Green: Priority for 2 WOCs	Limited weight should be placed on this evidence: 1. <i>Consistent – to be assessed across individual service areas</i> 2. <i>Fit for purpose</i> – this information is a useful indicator of service priorities across the industry, but does not directly relate to DCWW customers 3. <i>Robust/reliable</i> – information is robust/reliable (covers all WASCs) 4. <i>Recent</i> – information is recent (2015/16) 5. <i>Closer comparators</i> – Less weight should be placed on service priorities for other WOCs rather than WASCs (see above)
2	DCWW Continuous Engagement			

#	Title	Description/source	Interpretation of customer priorities	Triangulation comments
2.1	Trust Tracker	Indicates the importance of various service attributes and the level of trust customers have in DCWW to deliver the service	Where customers indicate a service is important, but have lower trust in DCWW to deliver the service, this indicates more opportunity for improvement Red: High importance, low-medium trust Amber: Med-high importance, medium trust Light green: Medium importance, medium-high trust Green: Low importance	Limited weight should be placed on this evidence: 1. <i>Consistent – to be assessed across individual service areas</i> 2. <i>Fit for purpose</i> – this information is a useful indicator of relative importance/trust, but is not a direct indicator of customer priorities 3. <i>Robust/reliable</i> – information is robust but collected over a small sample (3 waves of 750 customers) 4. <i>Recent</i> – information is recent 5. <i>Closer comparators</i> – n/a
2.2	Rant and Rave	Indicates whether customers who have experienced various service issues would recommend DCWW (using a combination of number of contacts and NPS)	A poor net promoter score and a high number of contacts related to a service area indicates more opportunity for improvement. Red: Negative NPS score and a high number of contacts Amber: Low NPS score and a medium-high number of contacts Green: High NPS score or very low number of contacts	Limited weight should be placed on this evidence: 1. <i>Consistent – to be assessed across individual service areas</i> 2. <i>Fit for purpose</i> – this information is a useful indicator of customer perception of (current) service levels, but relates only to customers that have experienced service issues 3. <i>Robust/reliable</i> – information has been collected over 2.5 years 4. <i>Recent</i> – information is recent (Sept 15 - April 17) 5. <i>Closer comparators</i> – n/a
2.3	Written* Complaints	Indicates the number of complaints against service areas –cumulative data (Jan 14 – Apr 17)	A high number of complaints in any particular service area indicates more opportunity for service improvement. Red: >1500 complaints Amber: 200-1500 complaints Green: <200 complaints	Significant weight should be placed on this evidence: 1. <i>Consistent – to be assessed across individual service areas</i> 2. <i>Fit for purpose</i> – this information is a useful indicator of customer perception of (current) service levels 3. <i>Robust/reliable</i> – information has been collected over 3 years, however accuracy of cause codes is under investigation. 4. <i>Recent</i> – information is recent (2014-17) 5. <i>Closer comparators</i> – n/a
2.4	Phone* contacts	Indicates the number of contacts against service areas –cumulative data (Jan 15 – Mar 17)	A high number of contacts in any particular service area indicates more opportunity for service improvement. Red: >100,000 contacts Amber: 10,000-100,000 complaints Green: <10,000 complaints	Significant weight should be placed on this evidence: 1. <i>Consistent – to be assessed across individual service areas</i> 2. <i>Fit for purpose</i> – this information is a useful indicator of customer perception of (current) service levels 3. <i>Robust/reliable</i> – information has been collected over 3 years, however accuracy of cause codes is under investigation. 4. <i>Recent</i> – information is recent (2015-17) <i>Closer comparators</i> – n/a
2.5	Phone* Complaints	Indicates the number of complaints against service areas –cumulative data (Jan 15 – Mar 17)	A high number of complaints in any particular service area indicates more opportunity for service improvement.	Significant weight should be placed on this evidence: 1. <i>Consistent – to be assessed across individual service areas</i> 2. <i>Fit for purpose</i> – this information is a useful indicator of customer perception of (current) service levels 3. <i>Robust/reliable</i> – information has been collected over 3 years, however accuracy of cause codes is under investigation. 4. <i>Recent</i> – information is recent (2015-17)

#	Title	Description/source	Interpretation of customer priorities	Triangulation comments
			<p>Red: >1,000 complaints Amber: 100-1,000 complaints Green: <100 complaints</p>	Closer comparators – n/a
2.6	Return of Value	Indicates the areas where customers would prefer to reinvest or return excess value to customers (earned during AMP6)	<p>Where an investment option is selected by customers as the best option for DCWW to choose, this indicates more opportunity for service improvement.</p> <p>Red: 1-2 highest ranked options (of 6) Amber: 3-4 highest ranked options (of 6) Green: 5-6 highest ranked options (of 6)</p>	<p>Some weight should be placed on this evidence:</p> <ol style="list-style-type: none"> 1. <i>Consistent – to be assessed across individual service areas</i> 2. Fit for purpose – this information was collected to assess customer preferences across options a range of investment options (simulating a real world problem) 3. Robust/reliable – statistical analysis of Return of Value consultations 4. Recent – information is recent (collected for PR19) 5. Closer comparators – n/a
2.7	NHH Survey	Indicates NHH customer views on the services areas in which DCWW can improve	<p>Where more respondents consider that DCWW should improve in a particular area, this indicates more opportunity for service improvement</p> <p>Red: Selected as an area of improvement by >250 respondents Amber: Selected as an area of improvement by 25-200 respondents Green: Selected as an area of improvement by <25 respondents</p>	<p>Some weight should be placed on this evidence:</p> <ol style="list-style-type: none"> 1. <i>Consistent – to be assessed across individual service areas</i> 2. <i>Fit for purpose</i> – this information is a useful indicator of where NHH customers see the areas for improvement 3. <i>Robust/reliable</i> – information is reliable, with a sample of 1500 NHH customers (but doesn't cover HH customers) 4. <i>Recent</i> – information is recent 5. <i>Closer comparators</i> – n/a
2.8	SIM	TBD	TBD	TBD
2.9	Social Media	TBD	TBD	TBD
3	Primary Research			
3.1	PR19 Primary Qualitative Research (Specific topics)	<i>Indicates customer priorities based on research into specific topics of interest – resilience, customer service, WRMP, worst served customers, environment etc.</i>	<p>Where customers report placing a high priority on a service area or category of area, this indicates there should be continued focus, and/or there is more opportunity for service improvement.</p> <p>Red: Research consistently indicates a high priority area for customers Amber: Research occasionally indicates a high priority area for customers Green: Research rarely indicates a high priority area for customers</p>	<p>Significant weight should be placed on this evidence:</p> <ol style="list-style-type: none"> 1. <i>Consistent</i> – provides a view across multiple pieces of research on the areas or categories which are consistently high priority for customers (note: consistency against wider sources to be assessed as part of triangulation) 2. Fit for purpose – this information was collected specifically for PR19 using a methodology designed to gauge customer views on specific topics 3. Robust/reliable – individual studies are qualitative and partial, but collectively provide a view on the recurring/consistent areas of high priority 4. Recent – information is recent (collected for PR19) 5. Closer comparators – n/a

#	Title	Description/source	Interpretation of customer priorities	Triangulation comments
3.2	Performance measures	<i>Indicates the relevance to the customer of various potential AMP7 performance measures</i>	Where a particular service measure is rated as highly relevant to DCWW customer promises, this indicates more opportunity for service improvement. Red: Highly relevant / clear customer benefit Amber: Relevant, but specific measure not aligned to customer benefit Green: Customer benefit not evident	Some weight should be placed on this evidence: 1. <i>Consistent – to be assessed across individual service areas</i> 2. Fit for purpose – this information was collected specifically for PR19 using a methodology designed to test relevance of service attributes 3. Robust/reliable – information is qualitative 4. Recent – information is recent (collected for PR19) 5. Closer comparators – n/a
4	Industry research			
4.1	CCW Research	<i>Indicates (general) attitudes of customers towards a range of specific topics, across multiple pieces of research – including; water and sewerage service, leakages, tap water, customer service, affordability, business customer views</i>	Where customers place high importance on a service area, this indicates there should be continued focus in this area, and/or there is more opportunity for service improvement. Red: Research consistently indicates a high priority area for customers Amber: Research occasionally indicates a high priority area for customers Green: Research rarely indicates a high priority area for customers	Some weight should be placed on this evidence: 1. <i>Consistent – to be assessed across individual service areas</i> 2. Fit for purpose – this information was collected specifically for PR19 using a methodology designed to gauge customer views on specific topics 3. Robust/reliable – information is qualitative and partial 4. Recent – information is recent (collected for PR19) 5. Closer comparators – n/a

* Note: While complaints and contacts data might individually attract a “significant” weighting, these are included in the triangulation calculation at “some” weight. Due to the similarity of the data sources and the duplicity of their results they have been downgraded so that they don’t collectively skew the triangulation outcome.

Appendix 2: Assessment of PR19-specific customer research

The summary table (on pages 8-9) presents the results of the PR19 customer research programme as a combined assessment. This amalgamates a number of separate research activities, and judgements have been required in order to produce the assessment. To provide greater transparency, the table below sets out the individual assessment for each separate research activity.

Category	Consolidated PR19 Primary qualitative research	PR19 Qualitative Research							Rank
		Resilience	Overarching priorities	WTP Qual	Worst Served	WRMP Qual	Environment	Customer Services	
Affordability concerns	Red	Yellow	Red	Red	Red	Grey	Grey	Red	1
Security of supply	Red	Red	Red	Red	Yellow	Yellow	Grey	Grey	2
Supply interruptions	Red	Red	Red	Red	Yellow	Grey	Grey	Green	3
Specific Customer Groups	Red	Grey	Red	Grey	Red	Grey	Grey	Red	4
Sewer flooding/collapses etc	Red	Red	Grey	Red	Red	Grey	Grey	Grey	4
Customer satisfaction (exc. bills)	Yellow	Grey	Yellow	Grey	Red	Grey	Grey	Yellow	6
Asset health - water	Yellow	Yellow	Yellow	Yellow	Yellow	Grey	Grey	Grey	6
Customer education/awareness	Yellow	Yellow	Red	Grey	Green	Yellow	Grey	Green	6
Energy/emissions	Yellow	Grey	Red	Grey	Grey	Grey	Red	Grey	6
Environmental	Yellow	Grey	Grey	Red	Grey	Grey	Red	Grey	6

Category	Consolidated PR19 Primary qualitative research	PR19 Qualitative Research							Rank
		Resilience	Overarching priorities	WTP Qual	Worst Served	WRMP Qual	Environment	Customer Services	
Water quality compliance		Red	Grey	Red	Green	Grey	Grey	Grey	6
Metering		Grey	Grey	Grey	Grey	Red	Grey	Red	6
Asset health - wastewater		Yellow	Yellow	Yellow	Grey	Grey	Grey	Green	13
Pollution incidents		Grey	Grey	Red	Grey	Grey	Yellow	Grey	13
Resilience		Red	Yellow	Grey	Grey	Grey	Grey	Grey	13
Sustainability/innovation		Yellow	Yellow	Grey	Grey	Green	Yellow	Grey	13
Community/partnerships		Yellow	Grey	Grey	Grey	Grey	Yellow	Grey	18
Leakage		Grey	Grey	Grey	Grey	Yellow	Grey	Yellow	18
Water consumption		Grey	Grey	Grey	Grey	Red	Grey	Grey	18
Biodiversity/SSSIs		Green	Grey	Grey	Grey	Grey	Yellow	Grey	20
Catchment management		Green	Grey	Grey	Grey	Grey	Yellow	Grey	20
Water pressure		Grey	Grey	Green	Green	Grey	Grey	Yellow	20
Health & safety		Grey	Grey	Grey	Grey	Grey	Grey	Grey	23
SEMD		Grey	Grey	Grey	Grey	Grey	Grey	Grey	23
Sludge		Grey	Grey	Grey	Grey	Grey	Grey	Grey	23
Supply restrictions		Green	Grey	Green	Grey	Green	Grey	Grey	23
Waste disposal		Grey	Grey	Grey	Grey	Grey	Grey	Grey	23
Water resources/ abstraction		Green	Grey	Grey	Grey	Green	Green	Grey	23

