

APPENDIX A: Definition of AMR Priorities & Methodology

	Electricity Meters	Gas Meters	Water Meters	Heat Meters
Priority One	Meters with an annual consumption of £300 or above	Meters defined as 'core' under the CRC definitions (currently over 73,200 kWh pa) during one or both of the previous two years	High consumption (for schools - above £5k pa) and high risk of leakage (e.g. long and complex pipe runs)	Renewable technology installations which qualify for a Renewable Heat Incentive (RHI) tariff payment
Priority Two	Meters below £300 annual spend but located on a site with other Priority 1 meters	Meters defined as 'non core' over the previous two years but located on a site with other 'core' meters	Lower consumption and high risk of leakage or very high consumption	-
Priority Three	-	Other meters with a 12 month consumption bill of £300 or above	Medium to high consumption and lower risk of leakage	Renewable technology installations which do not qualify for an RHI tariff payment but where output monitoring may be useful for research purposes
Priority Four	Meters with an annual spend below £300	Other meters with an annual consumption below £300	Lower consumption and lower risk of leakage	-
Exclusions	Meters within assets which have been or are scheduled to sold or otherwise released, existing half hourly electricity meters, zero consumption meters or specific exclusions by Housing Management.			-

Notes:

The above prioritisation definitions apply to the Schools and Corporate asset meters. Housing have set their own prioritisation definitions for their portfolio and their overall requirements are summarised in Appendix B.

APPENDIX B: Summary of Utility Meters by Portfolio & AMR Prioritisation

Utility	Total	Overall Summary				
		Priority 1	Priority 2	Priority 3	Priority 4	Excluded
Electricity Meters	1,406	355	13	-	55	983
Gas Meters	334	179	48	37	5	65
Water Meters	554	83	256	1	79	135
Heat Meters	12	12	-	-	-	-
TOTALS	2,306	629	317	38	139	1,183

Broken down as follows:

 Meters included in this proposal

Utility	Corporate Portfolio					Schools Portfolio					Housing Portfolio				
	Pr 1	Pr 2	Pr 3	Pr 4	Excl.	Pr 1	Pr 2	Pr 3	Pr 4	Excl.	Pr 1	Pr 2	Pr 3	Pr 4	Excl.
Electricity Meters	191	10	-	55	62 ^A	85	3	-	-	23 ^A	79 ^B	-	-	-	898 ^B
Gas Meters	43	8	27	5	22 ^C	111	40	10	-	13 ^C	25 ^B	-	-	-	30 ^B
Water Meters	32	200	1	75	12 ^C	51	56	-	4	1 ^C	-	-	-	-	122 ^B
Heat Meters	1	-	-	-	-	11	-	-	-	-	-	-	-	-	-
TOTALS	267	218	28	135	96	258	99	10	4	37	104	-	-	-	1,050

Notes:

- A Either half hourly meters (already with AMR), zero consumption meters or in assets either sold or soon to be released
- B Housing have used their own criteria to prioritise or exclude AMRs to meters within their assets
- C Meters in assets either sold or soon to be released

APPENDIX C: Summary of AMR & Monitoring Software Benefits

Current Situation		Benefit Expected	Anticipated Outcome	How Measured
1	Energy & water consumption data is reliant on the provision of manual meter reads across more than 2,300 meters	AMRs will reduce the reliance on physical meter reads allowing us to more accurately monitor consumption	More accurate data will allow us to focus energy efficiency measures on the worst performing assets	AMRs will not generate savings alone but will allow more targeted efforts against our worst assets resulting in consequential savings
2	Many energy and water bills are based on estimated reads leading to consumption assumptions and inaccuracies	Improved accuracy of billing	Improved budget monitoring	Greater accuracy of budget forecasts monitored by Property & Design under our Corporate Landlord model
3	Energy consumption data is only able to be analysed and reported when bills are submitted unless manual readings are taken	Improvement in bill accuracy	Early warning of changes in consumption allowing early interventions. Accurate monitoring of energy efficiency schemes	Increased accuracy of business cases ensuring best use of council financial resources targeted at solutions with the best pay back
4	Difficult if not impossible to assess our baseline consumption	Accurate calculation of our baseline consumption	Compliance with CRC requirements Auditable history of consumption and site records	Continuing CRC compliance
5	Validation of bills is undertaken by an external consultant	Automatic validation of energy and water bills	No requirement to reappoint the validation company at the end of their current contract (April 2013)	
6	Poor leak detection due to sporadic water meter reads	Early and automatic identification of leaking water pipes	Reduced leakage levels Reduced water bills	Reduction in metered bills

Current Situation		Benefit Expected	Anticipated Outcome	How Measured
7	Manual input of Display Energy Efficiency data Data unable to be shared with building managers and other interested parties	Automatic production of DEC certificates and Advisory Reports linked to the data held in the database Early warning of DECs due to expire	Improved accuracy and timing of DEC reports Reduced staff time in producing DECs Auditable history of DEC records Information available to view by building staff on-line	Continuing DEC compliance
8	Low incentive for building managers and staff to save energy and water as they have no means of assessing the success of any measures undertaken	Live data available to view by staff on site (and pupils in schools) to encourage energy & water saving measures	Consumption reductions leading to cost savings	Overall energy and water bill reduction
9	Poor consumption data available for building users	Ability for schools to introduce live energy information into the school curriculum to encourage pupils to take an active interest in energy efficiencies	Greater interest by pupils encouraging energy and water savings both at school and at home	Overall energy and water bill reduction
10	Consumption & cost data is currently held in a variety of spreadsheets and manually analysed leading to a greater potential for errors	Single, accurate database of energy and water data providing live (day plus one) information	Exporting of data direct from the central database will ensure consistency of other reporting and benchmarking requirements (e.g. NaPPMI property PIs)	Accurate and timely PI reporting including energy & water consumption including carbon emissions
11	Council working towards One Planet Council	Support for One Planet accreditation (zero carbon and water reduction themes)	Improved accuracy and reliability of data and greater confidence in the baseline data	Achievement of One Planet endorsement