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Application for Funding Support

In connection with

Communal Rainwater Harvesting and Communal Greywater Recycling

Synopsis and Proposal

As our Scoping Document is currently in a state of flux, and awaiting input from a number of sources, we are providing this brief synopsis and proposal.

There is a clear need for water efficiency in the UK, supported by the Government's strategy "Future Water". Rainwater harvesting and greywater harvesting have an important role to play in water efficiency, but while this technology may become mandated on a local basis, it is not currently anticipated that it will become universally mandated.

That said, from 2016, affordable housing involving public funding or public land will be required to meet levels 5 and 6 of the Code for Sustainable Homes. The water efficiency element at these levels is only expected to be deliverable with rainwater harvesting and/or greywater harvesting.

This unfortunately sends out a mixed message to housing developers, who will only generally do the minimum of what the law requires.

Housing developers are also concerned about:

1. The impact of homebuyer attitudes to this technology on saleability
2. The high cost of installation and inability to sell the extra cost to homebuyers
3. Lack of certainty about adoption

It has been reported that the extra cost of building a new home to Code level 6 will be between £19k and £47k. As this is such a huge increase, we have actively been looking for ways of mitigating this increase. We came up with the concept that collected non-potable water could be sold to householders, thereby creating a revenue stream which can in turn cover the maintenance cost, and contribute significantly towards the capital cost of the technology.

We eventually determined the need for a research project to show how the delivery of this technology, with chargeable non-potable water, could work to address concerns 1 – 3 above.

In recent weeks, we have connected with a PhD thesis which also confirms that there are significant stumbling blocks to the widespread take-up of this technology.

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Progress report

We have assembled a consultant team to carry out the necessary research, and the team met in April at Waterwise. In July, we subsequently launched draft 3 of our Scoping Document, and this has now been issued to just under 100 companies and organisations.

Our approach invited technical contribution and sponsorship.

We imagine that this technology could be delivered as a package on a design, fund, install and operate basis, making it an off-the-shelf-solution for housing developers. On this basis, the list of people approached includes:

- Two banks
- Water companies in areas of water stress
- Several national housebuilders
- Relevant trade organisations
- Civil engineering contractors with experience in water and PFI projects
- Consultants associated with Eco-Towns (where water-neutral is the target)
- Greywater specialists
- Rainwater harvesting specialists
- Relevant product manufacturers
- Utility infrastructure companies with experience in water
- Several Universities with water specialism (including one in Australia)
- Several District Councils (individuals who have an interest in water strategy)
- Relevant Government Agencies

So far, I have only heard back from about one third of those contacted, either due to lack of interest or annual leave. We are actively chasing up the remaining people, which incidentally includes our MP, Caroline Spelman (the Environment Secretary).

Of those who have responded:

- The majority believe our research would be most interesting and useful.
- Only one company (a water company who plan to build a reservoir) are specifically against the technology; and to them, the concept of charging for non-potable water is not relevant.
- Including yourselves, there are so far 13 companies / organisations willing to consider part-funding the exercise, including 5 water companies in total.

We remain hopeful that we can assemble a large enough funding team to spread the load as thinly as possible. We consider that it is fair to have a sliding scale of funding appropriate to company size.

It is assumed that the Government will be willing to match fund the exercise, but this is not yet confirmed or in any way certain. There are some other funding streams potentially available later in 2010.

The Research Output

We aim to produce three key documents:

1. A report to government on the costed alternative methods of providing practical CRH and/or CGR systems, based on charging for non-potable water. The report would also:

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- Detail the results of attitudinal surveys (consumers, housebuilders, water companies and infrastructure providers)
 - establish thresholds for alternative technical solutions to suit a variety of rainfall and flooding scenarios
 - identify exit routes (adoption methods).
2. A report to government on the regulatory changes needed to facilitate the technology and charging method, detailing the consultations made and the responses received thereto.
 3. A guide to help housing developers in the selection of site-specific CRH and/or CGR solutions, and Operational Vehicles (OVs) for adoption. The guide would include paid entry directories of kit providers, OVs, etc, to help developers get started, and to assist in funding publication of this document.

As part of the study, we will consider retrofit implications (as relevant to Eco-Towns), as well as lifecycle costs and embedded carbon.

The Consultant Team

Our original team included an engineering consultancy, a cost consultant and Waterwise.

We are now convinced that we should include in the team a University with a water management specialism. We also believe that fiscal management of the research should be undertaken by the University concerned, and that they may be able to tap into funding avenues not available to ourselves. Unfortunately, the key contact is currently on leave, and this element has yet to be explored.

There are some other specialists who need to be involved, and the full list is now:

- Hasker Architects
- Davis Langdon (cost consultancy)
- Arup (engineering)
- Waterwise
- A University (to be confirmed)
- Ipsos MORI (for consumer surveys)
- Another attitudinal surveyor (to be confirmed: for other / non-consumer surveys)
- A solicitor (to be confirmed; for legal input; model adoption agreements, etc)
- A graphic designer (to be confirmed; for design of the publications)

Research Budget

The total research budget for the above team, including contingency and VAT stands at £549,000, but please note that at this stage this includes a provisional figure of £40k for the University's involvement.

Bruce Hayball
Consultant

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