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# Test time for planners

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**T**HE construction crews have already moved into the Cruddas Park site on the West End of Newcastle. Very shortly, university researchers will be joining them.

The high-rises built in the 1960s were part of then council leader T Dan Smith's "city in the sky" concept. But the Riverside Dene project which replaces them will feature massively increased energy efficiency and a biomass heating system.

It will also be a test site for a major European research programme worth nearly €4m, which aims to provide urban planners with a wider knowledge of which carbon reduction and sustainability measures perform best in different situations.

The Semantic Technologies for Carbon Reduction in Urban Planning project - which we'll call SEMANCO for short - is led by Barcelona's Fundacio Privada Universitat i Tecnologia, and will be funded through the European Commission's FP7 Cooperation programme. It features nine European partners, including the University of Teesside and the Newcastle-based energy efficiency charity National Energy Action.

Teesside University's Dr Tracey Crosbie said: "We create a lot of tools at the universities, and quite often they're not used before they don't fit with the problems of architects.

"What we're trying to do is ask what information they require and what the problems are, take the existing data and fill in the gaps with our software tools.

"With somewhere like Riverside Dene, we'll model the buildings in the area and look at the outcome of different interventions. What we want to do is to be able to give planners an idea of the different economic costs. So if you were a social housing provider, we could say it would cost this much to replace the double glazing and save you this much, or you could put in solar panels for domestic hot water. It's about giving people options and information."

Riverside Dene has been selected as it gives the research team a chance to advise on an ongoing project while



also looking at the effects of various carbon reduction actions on existing buildings. Dr Crosbie argues the EU carbon reduction targets cannot be reached by building environmentally friendly new buildings alone, and that it's necessary to tackle the older homes in some way as well.

The project will also look at case studies in Spain and Denmark, and will use software and data modelling methods to look at the effects of variables such as heating and glazing. Dr Crosbie and Professor Nashwan Dawood from the university's Centre for Construction Innovation and Research hope the project will be able to give planners of exactly which approach is most suited to which project, and also

**HIGH RISES** Professor Nashwan Dawood and Dr Tracey Crosbie from Teesside University's Centre for Construction Innovation and Research will be using Newcastle's Riverside Dene as a testbed for a European research project into carbon reduction

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to reduce fuel poverty by building the most efficient home for the person living in it.

Professor Dawood said: "We started the project in September and it's going to go for three years.

"The idea is to develop these semantic technologies so we can collect data and make this data understandable. There's lots of interesting information and knowledge out there, and the emphasis is really on how we can bring it all together. For example, Denmark are leading in sustainable heating but in the UK we don't understand as much how it works."

Dr Crosbie said it was important to understand the habits of the type of person living in a house for it to be

really sustainable. She said: "It's not just about energy performance; it's about the social performance of a place.

"For example, one of the issues with zero carbon homes is that a lot of the warmth is created by the electronic gadgets in the property and people moving around. That works for a large family with a computer and tumble dryer, but it may not be warm enough if you've got an elderly couple living there. Improving the performance of properties makes them cheaper to heat, and reduces the proportion of income they need to spend on it. Of course there need to be behavioural changes, but we need to meet people halfway."

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