

May 2011

Science Central project gets planning go-ahead

A significant step has been made towards realising the vision for Science Central, the 24-acre central Newcastle site which will have science and sustainability at its heart.

Newcastle City Council has approved the outline planning application for the project, submitted by NewcastleGateshead city development company, 1NG, for the former Scottish and Newcastle brewery site.

The masterplan vision is for a mixed-use scheme encompassing business, research, residential, retail and leisure accommodation. The long-term plan includes a phased approach to generating an estimated £255m private-sector investment over a 15-20 year lifespan and a projected creation of up to 1,900 net additional jobs.

Professor Chris Brink, Vice-Chancellor, Newcastle University said: "The site will be a highly visible presence reinforcing our vision to further develop Newcastle as a city of science. It will be a hub where we will continue to tackle big societal challenges such as sustainability.

"We have already invested in building a new Business School on the Science Central complex where staff and students will be based from this summer. We envisage the ten storey building becoming a well-known landmark for the city and University.

"Further investment in the site will see the relocation of some of the University's activities in sustainability research. Initial drilling of a 2,000 metre geothermal borehole to harness geothermal energy from deep underground is an exciting first step in this project."

Development is progressing well on the complex with the University's new ten-storey Business School where staff and students will be based from this summer, and the completion of a 160-bed hotel due this summer. Construction work on the Gateway building is due to start early 2012.

The decision was welcomed by 1NG, Science City and the chief executive of Newcastle City Council.



Newcastle University Women's International Group

Find out more: <http://www.societies.ncl.ac.uk/uwig/>



Moorbank Botanical Gardens Open Days Biofuels Breakthrough Concrete Under Fire Seminar



The garden and glasshouses are open to the public under the National Garden Scheme (NGS). There will be plants and old Sankey crock pots for sale and tea and coffee may also be purchased. Guided tours are available together with a self-guided trail outside, including a wildlife hedge, flower meadow, pond and bog garden, all with interpretation. The newly planted Desert House is now open and worth a visit!

The next open day is 18 May
Wednesday evening at 5 - 8pm

Entry costs £3.00

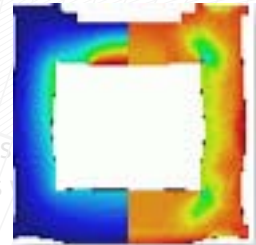


A consortium comprising the Head of School, Mike Green, a Team from the University of Kwa-Zulu Natal in Durban, and the South African fuels giant SASOL, has made a significant breakthrough in the production of bio-fuels.

Until now, it has only been possible to produce the two commercially viable biofuels from different crops. Thus Bio-ethanol has been produced from maize or sugar cane, and biodiesel from palm or soya bean oil. The net result is that land that is desperately needed to grow food crops is continually under pressure to produce fuel.

Glycerol is an unwanted by product of biodiesel production which distorts the economics of the process and necessitates research to try and identify useful application. The consortium has now demonstrated that glycerol can be hydrogenated to the second bio-fuel, ethanol. "For the first time" says Mike "We now have the opportunity to produce both fuels (ethanol and biodiesel) from a single crop and whilst the economic models still have to be worked through and the selectivities fully optimised, the potential benefits are obvious".

A paper describing the work has just been accepted for publication in the flagship journal, Green Chemistry.



On 23 March academics and engineers gathered at the Institute of Structural Engineers in London for the Concrete under Fire seminar on high temperature effects on concrete. spring 2011 CeG PhD away weekend

The event was co-organised and chaired by Colin Davie and was held under the banner of the NAFEMS organisation. Talks relating to both fire and nuclear applications were given by academics and practicing engineers from across the UK and Europe. The aim of the seminar was to provide insight for numerical modellers into current practice in design and analysis as well as the current forefront of research in the area, including that carried out in CeG.

Following the recent events in Japan and the Fukushima nuclear plant, the seminar stimulated intensive discussion after the talks with the panel of expert speakers debating numerous issues with the audience.

Nicola Lazenby talks about The Volunteering Programme at the Centre for Physical Recreation & Sport: <http://www.ncl.ac.uk/sport/news/item/nicola-lazenby-talks-about-the-volunteering-programme>



Spring 2011 Civil Engineering & Geosciences PhD away weekend



The Spring 2011 CeG PhD Away Weekend took place on 26 and 27 March 2011 at the picturesque Low

Gillerthwaite Field Centre in the Lake District. Attendees enjoyed a weekend of unseasonably warm weather, exploring the Cumbrian countryside around Ennerdale Water.

The event brought together students from 5 groups across CeG for a weekend of activities aimed at improving the dialogue between researchers in different disciplines. Building on the success of previous PhD away trips, the event provided an opportunity for researchers to share their experiences, discuss their research in an informal setting and meet colleagues based in other parts of the school. The trip also facilitated the further integration of CeG home, EU and international students.

The trip was organised by Alex Colman (Postgraduate Researcher in Structural Engineering) with the industrial scale catering operation ably coordinated by Alex Nicholson (Postgraduate Researcher in Water). The visit would not have been possible without kind support from CeG research groups, and it is hoped that many successful future events will follow.

Plugging in to the future of electric transport

Newcastle University is leading the way in future transport by taking part in the biggest trial of electric cars in Europe.

Forty-nine cars are being tracked by academics from the school of Civil Engineering and Geosciences (CEG).

Logging and analysing key data, their research will be crucial for the future development of this technology.

Phil Blythe, Professor of Transport at Newcastle University, explained: "Although there are a number of trials going on across the UK, here in the North East we are the only trial where there is a significant electric vehicle charging infrastructure in place so we can actually measure the real behaviour of drivers – where they are charging their cars, how they are using them etc.

"It's also the only study which is using production electric vehicles rather than trial vehicles. These are cars which people can actually buy and drive away today. All our data will be passed back to companies, who can use it to improve their vehicles."

Last week Nissan launched its new Leaf vehicle, one of eight different manufacturers which have vehicles in the trial.

Another, Cramlington-based Avid, has loaned HR Director Vervan Johnson a Cue-V electric car to test.

She has been driving it for the past couple of weeks and said: "It has been running very well so far.

"It was a bit strange when I first started to drive it. It's silent and there are no vibrations, which was a little weird, but once you get used to it it's great."

Currently there are 130 charging points across the North East for electric vehicles but there are plans for more and eventually there will be 1200 across the region.

Electric vehicles are an economic option, as well as being good for the environment. For the price of a £2 charge they can travel around 90 miles-equivalent to £11 of petrol.

Nick Gianfreda, of Avid vehicles, said: "People have a lot of misconceptions about electric cars, about them being slow and with poor acceleration, but that is not the case. They can get decent top speeds and they are cheap to run too."





International Student Barometer

Newcastle University has recently taken part in the latest International Student Barometer survey. The survey, which is undertaken by i-graduate, is completed by 203 institutions across the world, including 15 in the Russell Group, and is the largest of its type in the world, with over 100,000 students rating the facilities at their own institution.

Notable achievements include the University's Career Service being placed eighth in the world, the level of IT support and the registration process ranked in the top ten in the country. Efforts to make the University greener are also paying off, with the eco-friendly attitude of the campus being rated as top in the Russell Group and fifth in the UK as a whole. Many other areas showed improvements highlighting that staff continue to make significant efforts across the institution to ensure the students gain the best experience whilst at Newcastle.

Japanese conferences relocated to Newcastle

Two major professional conferences, 32nd International Conference on Application and Theory of Petri Nets (Petri Nets 2011) and 11th International Conference on Applications of Concurrency to Systems Design (ACSD 2011) have been relocated to Newcastle as a result of the recent tragic events in Japan. The conferences and co-located workshops and tutorials will be held during 20-24th June 2011. The event is organised by the School of Computing Science, and also involves members of staff in the School of Electrical, Electronic and Computer Engineering. Both conferences were held in Newcastle in 2001 and were a big international success.

Ministerial visit to borehole site

Energy Minister Chris Huhne has visited the site of the borehole in the centre of Newcastle which could hold the key to future low carbon emissions energy.

The Secretary of State for Energy and Climate Change witnessed the pioneering work being carried out on the site of the old Scottish and Newcastle Brewery where Newcastle University scientists are leading the project to find hot water, which can then be used to generate electricity and provide heating for buildings.

Work on the site started last month as part of the University's vision to be at the forefront of creating a more sustainable society. Engineers attempting to drill down 2km have so far gone to about 250m and the work is on schedule and budget.

This vision is embodied by Newcastle University's current campaign 'Enough, For All, Forever' which aims to showcase what has been, and will be, achieved by the University working in partnership to transform NewcastleGateshead into a living, urban laboratory for sustainability.

After his visit, Chris Huhne MP, said: "This is a great project and could provide a source of renewable energy across the UK. In my constituency in Eastleigh we are close to a similar scheme in Southampton so I know there is great potential if this works successfully."

Funded by the Newcastle Science City Partnership and the Department of Energy and Climate Change (DECC), the £900,000 project is being led by Professor Paul Younger, Director of the University's Newcastle Institute for Research on Sustainability, and involve experts from both Newcastle and Durham universities.

