

FINDINGS AND INITIATIVES DRAWN FROM RECENT EVENTS ON CLIMATE CHANGE

A number of events have prompted ideas for further progress on developing a sustainable Nottingham and mitigating and adapting to Climate Change. For each event, the ideas, their objective and source of the idea are listed. They are presented for the Council to note but not necessarily agree.

Initiatives drawn from recent events on Climate Change

Currently, most progress is planned to be made on: -

- a) working with business to boost their competitive advantage through environmental initiatives;
- b) supporting the work of Science City in developing enviro-technologies for future jobs, products and services;
- c) exploring sites for wind turbines;
- d) launching an expanded pledge campaign later this year;
- e) setting more demanding planning targets in the new Local Development Framework;
- f) making homes more energy efficient, using the “40% House” criteria to measure progress;
- g) highlighting the public health issue of heatwave;
- h) adopting Eco-Management Audit Scheme (EMAS) as the Council’s environmental management system;
- i) encouraging partnerships to help primary schools adopt the Eco-Management and Audit Scheme (EMAS);

Ideas drawn from recent events on Climate Change

1. ‘Towards a future with zero CO₂ emissions’ – ICLEI European Local Government Conference in Stockholm. Nottingham City Council was represented by Councillor Alan Clark; 15th – 17th May 2006

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- 1.1. make **high level commitment** and give **charismatic leadership** to make more effective progress; Rocky Anderson, Mayor of Salt Lake City, Nicky Gavron, Deputy Mayor of London and Viviann Gunnarsson, Vice Mayor of Stockholm;
- 1.2. **adopt radical policies** (eg. congestion charging); radical policies have more impact; radical polices bring about awareness and behavioural change, rather than the other way round; Nicky Gavron, Deputy Mayor of London;
- 1.3. commit to growing **decentralised energy supply**; London has made that commitment; Nicky Gavron, Deputy Mayor of London;
- 1.4. commit to become **fossil fuel free by 2020**; Sweden has made that commitment; Swedish Environment Minister Lena Sommestad;
- 1.5. extract **heat from main sewers** to supply energy; Oslo City Council;
- 1.6. compare cities' CO₂ emissions per capita; Oslo has brought their CO₂/capita down to 4 tonnes/person; (Nottingham's is about 7); Oslo City Council;
- 1.7. encourage drivers to run vehicles at the **correct tyre pressures**; Stockholm has run a successful campaign about correct vehicle tyre pressures to reduce emissions from excessive fuel consumption; Stockholm City Council;
- 1.8. monitor greenhouse gas emissions and publish the results using tools such as the new web based Harmonized Emissions Analysis Tool (HEAT) tool for greenhouse gas **emissions monitoring** by local government that enables potential **worldwide reporting**; ICLEI;

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- 1.9. set minimum tariffs for selling energy back to the grid; a new German law has created an effective incentive to invest in the technology; competition to install the most solar energy is encouraged by the **German Solar League**;
- 1.10. sell shares to local people to help fund new local energy generation schemes; **Danish windpower project**;
- 1.11. record energy and emissions characteristics of individual properties; **GIS based carbon monitoring software** is available to do this; Oxford Brookes University;
- 1.12. communicate energy performance of buildings; campaigns such as the **DISPLAY campaign** have been simple but effective; Energy Cities network;
- 1.13. campaign to prevent urban sprawl, by encouraging residents to move within the city, rather than outside; '**Hannover means Home**' campaign; Hannover City Council;
2. DEFRA awards £379,000 from the new **Climate Challenge Fund** - June 2006
Funding awarded to the Nottinghamshire and Derbyshire Local Authorities' Energy Partnership for a '**Climate Heroes**' project which will target all residents of the two counties (through the 19 local authorities) and seek their commitment through a pledging scheme;
3. **LGA Conference** - 4th – 7th July 2006
Speeches by David Miliband (Environment Secretary) and Ian Pearson (Climate Change Minister) emphasise **local government's role** in tackling climate change. David Cameron also highlights climate change;
4. **Green Champions Network** - 5th July 2006
Launch of Nottingham City Council's Green Champions network with Acting Chief Executive Adrienne Roberts

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5. Nottingham City Council's **Regeneration, Infrastructure and Sustainability Panel Meeting** - 11th July 2006
Portfolio Holder provides full response to the **Climate Change Scrutiny Review**. The response to the Review is detailed in full in Appendix C to the report.

6. **ICLEI North American Sustainability Congress** in Chicago, for US, Canadian and Mexican Local Government - 12th – 14th July 2006 220 participants from 86 councils, some from the south-eastern United States at the invitation of the Foreign and Commonwealth Office; Councillor Michael Edwards represented Nottingham City Council.
 - 6.1. **convey messages** to great effect using Flash cartoons; exceptional cartoons have been developed by young people in a competition run by Citizens for Global Solutions; surf - <http://www.globalsolutions.org/index.htm>; may be useful for the Nottingham Declaration to run such a competition;
 - 6.2. significant reduction of CO₂ emissions from the building stock can be achieved through carefully targeted design of new buildings, retrofitting and demolition of the worst stock, by the year 2030 surf <http://www.Architecture2030.org/>; Ed Mazria, University of New Mexico;
 - 6.3. national standards should be set requiring **car manufacturers** to ensure car engines can be adapted to be petrol/diesel – electric hybrid (essentially using braking to charge up batteries to reduce amount of fuel used); surf www.pluginpartners.org;
 - 6.4. there are significant **commercial benefits** of going green, in terms of cost savings, opportunity for new jobs, products and services and preparing earlier for the inevitable obligation to convert; Rockefeller Institute;
 - 6.5. new **energy saving devices** (e.g. new computer processors) will help to reduce energy consumption;

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- 6.6. **roof gardens** (and window boxes) can be used, for a combination of beauty, reducing building cooling costs and possibly for cropping bio-mass; used to particular effect in Chicago; Chicago City Council;
- 6.7. capture **storm water** off bigger buildings for different distribution systems or for feeding into the river; used to particular effect in Chicago; Chicago City Council;
- 6.8. a number of North American cities have made significant progress on climate protection, including **Toronto** and **Portland (Oregon)**;
- 7. Angela Smith MP, DCLG Minister launches the **Nottingham Declaration Action Pack** in Westminster - 18th July 2006; surf www.nottinghamdeclaration.org.uk
- 8. **Off Grid Wind Supply seminar** University of Nottingham – School of Electronic and Electrical Engineering is developing third generation wind turbines - 20th July 2006
- 8.1. explore potential sites for **wind turbines** within the City of Nottingham, beyond the 5MW turbine planned as part of the Meadows O-zone;
- 8.2. support local innovation by testing an enclosed **horizontal axis wind turbine** on the roof of Severns House;
- 9. Nottingham Energy Partnership present findings from their work on the feasibility of rolling out **biofuels** and **renewable energy** to a meeting of Greater Nottingham Health and Environment Partnership - 21st July 2006
- 10. **High Level / Low Carbon sustainability Study Tour** to Nottingham University, Leicester, London, Sutton and Woking with 20 members, officers and partners - 24 - 25th July 2006
- 10.1. consider the use of LEDs for **low energy lighting** beyond existing uses for traffic lights; School of the Built Environment, University of Nottingham;

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- 10.2. to make progress on the sustainable design of new buildings and refurbishment, **professional development** should be arranged for development control officers; and for architects, surveyors and other professions; some awareness for clients might also be useful; School of the Built Environment, University of Nottingham;
- 10.3. drive higher energy standards for new buildings through the planning system by a new 10% (or more) **renewable energy requirement** (achievable within 2 years); pump-priming funds for public sector buildings are likely to be required to help offset the higher initial capital costs, but will be recouped from lower revenue costs;
- 10.4. the Nottingham Declaration Development Group, along with the University of Nottingham could drive a similar **Declaration for Universities** (with references beyond operation of the organisations to the content of relevant courses) and potentially a **Declaration for Health Trusts** in the NHS;
- 10.5. following Leicester's success in gaining **EMAS in schools** (Eco-Management and Audit Scheme accreditation for some 50 schools) through the support of Groundwork Leicester and Leicestershire, a similar approach should be explored at a 3 cities or 6 counties level (mindful that some of the gains achieved in Leicester may have already been achieved in Nottingham in different ways) in conjunction with Groundwork and Leicester City Council
- 10.6. the Environment Agency are looking to support and promote a city that seeks to become the first **visibly low carbon city**; and that they would be pleased if Nottingham volunteered; Environment Agency;
- 10.7. London Borough of Brent offer a **Council tax discount** for low energy rated properties; the Lyons Inquiry should be asked to assess whether discounts could be offered for this and for direct payment methods, and that the council tax base be adjusted to reflect this; Greater London Authority;

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- 10.8. the Greater London Authority's list of concerns with respect to **climate change adaptation** should be reviewed;
 - 10.8.1. on **flooding concerns**, with particular attention to pluvial flooding and groundwater flooding;
 - 10.8.2. on **heat concerns**, to reduce solar heat gain in buildings:
 - 10.8.3. use **plants** for shading and thermal insulation (roof gardens)
 - 10.8.4. use **traditional low energy techniques** from hotter climates to keep cool (shutters, shading, blinds, etc.) and closed windows during the day;
 - 10.8.5. inform people about the public health risks of heatwaves; the importance of getting **respite from heat during the night**, by being at or below 19°C; ensure our offices and staff are better informed and equipped to deal with high temperatures; identify where the **heat island** effect is most likely to cause problems and what action can be taken accordingly;
 - 10.8.6. on **air quality concerns**, where poor outdoors air quality is much less of a problem than London, the focus be more on increasing awareness of air quality and ventilation inside houses;
- 10.9. London's environment would be much better if **economic development** and jobs were more equitably shared around the country;
- 10.10. acknowledgement of **Nottingham's reputation** on sustainability and climate change by the Leader of the London Borough of Sutton
- 10.11. the success of pledge campaigns in Sutton and Manchester should be considered for the Notts / Derbys 'Climate Heroes' project; London Borough of Sutton;

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- 10.12. the **Bedzed** development be noted for achieving some social mix and being an exemplar of sustainable design, but that concerns about cost, CHP failure and use of grey water be noted; London Borough of Sutton;
- 10.13. **new waste technologies** should be considered for their value in pre-treating waste before incineration with energy recovery or landfill; bio-mechanical treatments are now beginning to be used in Leicester, Sutton and South Shropshire and can reduce very large volumes down into usable products (compost, refuse derived fuel, metals, etc.) and even further using anaerobic digestion (which can even yield bio-mass and/or bio-fuel); London Borough of Sutton;
- 10.14. explore the cost implications of matching LB Sutton's current performance of **30% recycling rate** from domestic waste; London Borough of Sutton;
- 10.15. a fuller understanding of the **progress of the private sector** on sustainable development issues and technologies should be quickly established;
- 10.16. the **financing mechanisms** used by Woking Borough Council to build sustainable energy installations should be reviewed; Woking Borough Council;
- 10.17. ways of using locally generated renewable energy to power Nottingham's proposed **street lighting** should be considered; Woking Borough Council;
11. Preview of Al Gore's climate film "**An Inconvenient Truth**" presented by Environment Secretary, David Miliband; Councillor Edwards attends; 27th July 2006
12. Further discussions with the UK Business Council on Sustainable Development, WindSupply and Beacon Energy at **Tony Marmont's renewable energy demonstration farm** - 1st August 2006

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13. Follow up meeting to Sustainability Tour with **Service Directors** - 3rd August 2006
Generates further ideas: **water boreholes** could be utilised for a range of non-potable uses, including **chilled beam technology** (a more sustainable version of air conditioning, which could be a new local opportunity); one or two older houses could be eco-renovated as **healthy, safe and warm** demonstration homes; **portable energy consumption monitors** could be secured in large numbers and promoted as a way of saving money on bills;
14. **The O-zone Project** proposed for the Meadows (a zero carbon zone) gets through to the next stage of the Lottery's Living Landmarks grant programme and £250,000 awarded for further development work – 8th August 2006
15. Councillor Edwards' presentation to **Green Champions** - 10th August 2006
Key discussion items included:-
- 15.1 need to manage **heat build up** in offices during summer better;
 - 15.2 need to develop more strategic approach to Asset Management to ensure **sustainable office practice** is systematic rather than relying on good intentions;
 - 15.3 setting **sustainable standards in new school buildings** is doubly important for the educational benefits;
 - 15.4 vehicle fleet is growing due to operational requirements, but need to improve **travel planning** accordingly;
16. **National Energy Action** conference at the Jubilee campus, University of Nottingham; Councillor Michael Edwards represented Nottingham City Council. - 5th September 2006
- 16.1. progress on improving domestic building energy efficiency can be modelled against Oxford University/Environment Change Institute's "**40% House**" model;

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17. Further meeting with UK Business Council on Sustainable Development and Wind Supply about developing **renewable energy potential** in Nottingham - 18th September 2006
18. Opening of "**An Inconvenient Truth**" in Nottingham, with panel of local and regional decision makers responding to the first showing 22nd September 2006 raises the following points:
 - 18.1. Nottingham City Council should embrace the **Merton Rule** on planning permission (and if possible, exceed it); and that progress in practice should be faster than determined by the timescales to agree the new Local Development Framework;
 - 18.2. **other European countries** have made faster progress on the development and local generation of renewable energy, through minimum tariffs tougher planning standards and helping the creation of local energy supply companies; Alan Simpson MP;
 - 18.3. **symbolic green measures** for the Council House should be adopted, such as a solar panel array (though listed building status may prevent this);
 - 18.4. the **capture of carbon dioxide** at the point of creation, such as at Ratcliffe-on-Soar power station, and its storage underground would reduce the impact of electricity generation and may be able to generate other fuels (for instance methane released from pumping CO₂ in otherwise unusable coal seams); prompted by interview with research student;
19. Visit to the **anaerobic digester** in South Shropshire by Councillor Michael Edwards; 23rd September 2006
 - 19.1. collection of 15,000 tonnes of food waste from Nottingham's domestic and commercial waste could be anaerobically digested to produce gas to generate electricity to power 1,000 homes, produce compost and produce heat that could supply a small district heating scheme; Greenfinch Ltd.

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20. **Inclusion, ICT & the Environment** - Digital Challenge Programme; presentation of some ICT projects that have helped the environment; 26th Sept, 2006

21. Climate change discussion with the board of **Nottingham Development Enterprise**, Councillor Michael Edwards, 28th September, 2006;