

Edinburgh Councillor blogs – Councillor Jim Orr on sustainability

✘ *by SNP Councillor Jim Orr who represents the Southside/Newington Ward. Councillor Orr is the Vice-Convenor of Transport and Environment and is the council spokesperson on cycling. He is just back from a trip to Copenhagen to find out about sustainability in cities. He is also the council's sustainability champion.*

On Thursday evening we attended a reception hosted by the Confederation of Danish Industry. The message from all the Danish speakers was that the changes we would see to Copenhagen are all driven by three interlinked objectives: sustainability, livability and growth. Copenhagen also has simple targets, for example, for mobility modes to be equally shared between bike, public transport and car at 1/3 each.



Commissioner Connie
Hedegaard

On Friday morning we started with a keynote address from Connie Hedegaard, the European Commissioner for Climate Change. She spoke passionately about the devastating impact of climate change worldwide (such as the severe floods in Bangkok and, most recently, Manila) and of many sustainability projects around Europe designed to instil resilience to climate change and energy efficiency. She stressed the need for innovation around renewables, waste handling, recycling and efficiency. The event was hosted by State of Green, an agency which promotes Danish solutions to climate change.

For the rest of the morning we toured the ARC waste and

incineration plant and then a district cooling scheme. The ARC plant is located near the docks and feeds a District Heating (DH) scheme. These plants are low on emissions but still much closer to town centres than is common in Scotland. In Copenhagen DH schemes are always built as close to the end users as possible for obvious efficiency reasons. By 2017 an ambitious 80m high recycling/energy from waste plant is planned to be up and running at a cost of 3.8 billion kroner (around £345m).



Copenhagen Recycling Centre

The objective is for this to be an attractive city feature and, for example, the slope could be used for skiing or walking. Of further interest is that the design resulted from not just a tender exercise but an architectural competition. This approach was also used to select the new national playhouse theatre (see below). Denmark structures their tax regime so that high taxes are levied on the least desirable option (landfill), less taxes on incineration and zero on recycling. Interestingly, waste is stored during the summer months for incineration in winter when the district heating demands are greater. On district heating in Scotland, [here is a link](#) to the Ministerial Foreword of the Scottish Government's District Heating Action Plan published in June 2013.

The district cooling scheme we visited uses sea water to cool a circuit of water pumped round local businesses in Copenhagen. This means that individual air conditioning systems are not needed and so reduces energy and maintenance costs for businesses. The plant also operates in winter when server and production facilities still need to be cooled. If not near the sea, ground water can also be used as a coolant for such systems.



Royal Danish Playhouse



Playhouse architects

We were given lunch at, and a tour of, a fantastic addition to Copenhagen's waterfront, the new Royal Danish Playhouse Theatre. Energy efficient features include storage of heat collected from lighting used during performances and air conditioning by natural air circulation. There is also a beautiful, circular grotto-like main auditorium made of dark brown bricks which seats 650. See main photo and of architect Henrik Schmidt and technical consultant Soren Nylin.

We then went on a boat trip followed by a lecture on the city's climate change plan from Jorgen Abildgaard, the Project Director for the 2025 Carbon Neutral strategy for the City of Copenhagen. The three objectives were repeated from the previous night: quality of life, growth and sustainability. Jorgen's plans are particularly interesting as we in Edinburgh have similar ambitions and are on this journey. For example, encouraging cycling is not seen in isolation but as part of the transformation of the city into a sustainability role model, along with investment in public transport.

From what I saw, the City of Copenhagen is effective at planning transport links (rail, road and bike) into development plans well in advance, such as with the Orestad area (see below). Also the Danes are currently planning on increasing their hydrocarbon taxes to improve the nationwide rail infrastructure. Copenhagen has many similar challenges to Edinburgh such as understanding how buildings in private ownership can be made more efficient. Jorgen told us that his plans were supported by all but one of the city's 55 elected members which shows the level of consensus. These plans also include more wind turbines around the city.



Low energy prefabricated housing complex

In the afternoon we visited a small housing scheme of wooden homes. Demand for these came from the need to supply housing available for rent for £450 per month for key workers such as teachers and nurses. Again, the firm (ONV) had to win a competition to supply the units and they were found to be extremely comfortable and they had created an attractive community. The houses are prefabricated in Estonia, where there is plenty of wood and good carpenters. The homes have to meet the same high insulation standards which are ever-increasing. Our guide was the architect Soren Rasmussen and his buildings can be seen here on this [website](#) and by clicking [here](#).

We then visited the HQ of the Danish sustainability firm Ramboll (they do lots of things such as build DH schemes and also work on turbine constructions and even hospitals). Of note was the fact that it is employee-owned and controlled. A lean city, without wasting resources is how they see Copenhagen's future and they want their HQ to be part of that. Cost effective decisions include the costs of CO2 and sulphur and nitrogen emissions. Solutions are sought which are best for society and the city and often, they say, the answer is the same solution.



8 house development

Last tour of the trip was of a housing complex in the Orestad area called "8 House" because it is designed in a figure of 8. The flats are built of concrete with aluminium cladding. One of the many interesting features was a public walkway around the entire complex – such openness is typical of Denmark. Also, 1% of the block was used for common space in accordance

with national regulations. Located right on the edge of the city adjacent to parkland, the transport links to the centre are excellent. These homes are heated by district heating of course.

After this I left for the airport with lots of ideas to pursue back home in Edinburgh.