

TITLE OF REPORT: Reducing Carbon Emissions - progress update

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Summary

This report presents a progress report on initiatives to reduce carbon emissions within Gateshead Council, and the borough as a whole. Issues and challenges for further investigation are also suggested.

OSC is requested to note the progress made, and consider proposals for issues to be investigated further.

Background

The Sustainable Communities Place OSC has agreed that it receive annual progress reports on reducing carbon emissions, following on from its consideration of a carbon reduction case study within its work 2010-11 programme.

In Gateshead's Community Strategy, Vision 2030, Gateshead has targets to reduce energy and carbon emissions. The Gateshead Strategic Partnership has also adopted a Climate Change Strategy in March 2010, to deliver these targets, and the Council Plan 2012-2017 identifies "Reducing Carbon Emissions" as one of Gateshead's Strategic Needs, to be addressed through the Green Gateshead Strategic Intervention.

The Council also has its own Carbon Management Plan, adopted in March 2009, which is aiming to cut Council carbon emissions by 35%.

The Council has also made several public declarations on its aspirations to tackle climate change and reduce carbon emissions, as follows:

Nottingham Declaration on Climate Change
Eurocities Declaration on Climate Change
EU Covenant of Mayors

Previously, the OSC agreed that more needs to be done to achieve the above ambitious carbon emissions targets, and has reviewed this as case study in January 2011, and received progress report in April 2012, April 2013, April 2014, June 2015 and Sept 2016.

3 Reducing Carbon Emissions

The Energy Services Team within Communities and Environment group lead the Council's strategy for reducing carbon emissions, and co-ordinating programmes of carbon reduction initiatives. For clarity, the topic of reducing carbon emissions is split into two areas; Council carbon emissions, and community carbon emissions.

3.1 Reducing Council Carbon Emissions

Current position up to 2016/17

The Council's Carbon Management Plan was adopted in March 2009 and had a target of reducing Council carbon emissions by 35% by the end of 2016.

As of March 2017, actual greenhouse gas emissions from Gateshead Council operations fell again by almost 10%, and are now 35% lower than in 2007/8, meaning that Gateshead Council has achieved its target. Weather-corrected emissions are 34% lower - but with the further savings that are planned for 2017/18, we are confident both actual and weather corrected emissions will reduce further next year.

Approximately 7.5% of the reduction was due to actual energy consumption reducing. The further 2.5% was due to the carbon content of UK electricity continuing to fall as the amount of renewable electricity generation increases nationally.

In terms of energy consumption across all buildings and streetlights, the Council is using 27% less energy, than in 2007/8.

Notable progress is as follows

- Building energy consumption overall is now 23% lower than in 2007/8, with notable changes as follows:
 - Continued investment in energy efficiency, particular at leisure centre sites.
 - The first full year of operation of 2.2MW of solar PV panels across 34 sites.
- Streetlight consumption now stands at 59% less than in 2007/8, showing the significant effect of the continued streetlight upgrade works to date
- Fleet transport emissions have reduced further, now 27% less than in 2007/8.
- Landfill gas emissions have dropped significantly during 2016/17 and are now at 51% of 2007/8 levels, as a result of improved gas capture and flaring at a number of sites.

The financial benefit of the above is clear, with the reduced energy consumption over the past 9 years now avoiding £2.6m of increased energy costs on its combined annual energy bill to the Council, Schools and Gateshead Housing Company, which for the first time brings the Council's energy bill below what it was paying in 2007/8.

What has been achieved in 2016/17?

SALIX invest to save Fund

2016/17 project delivery focused on the completion of specific works in Gateshead Leisure Centre and the coordination of energy efficiency works with the District Energy Scheme. Projects included:

- Almost all lighting at Gateshead Leisure Centre is now LED, with a more consistent appearance. External bulkhead emergency lights no longer operate 24 hours
 - BMS optimization; bypass water boosters making them redundant; replace all heating pumps with Variable Speed Drive on demand led philosophy
- Priors Court, Warwick Court, Gateshead College, - BMS optimisation with Variable Speed Drive on demand led philosophy
- Sage Gateshead - BMS optimisation with Variable Speed Drive on demand led philosophy and HWS PHE conversion to full BMS control
- Civic Centre - BMS optimisation with Variable Speed Drive on demand led philosophy to zone heating pumps

Projects have been commissioned with some design works commenced in 2016/17 for:

- LED Lighting, BMS optimization, water tank bypass, H & V to sports hall at Gateshead International Stadium
- LED Streetlighting to South Shore Road + various Parks, Belisha beacons & crossings, Gateshead Millennium Bridge spotlights to LED
- Leam Lane MPB - LED lighting and various mechanical services works

In addition, energy efficiency works at schools and academies were completed:

- Interest-free loans have also been secured to progress energy efficiency works in 2016/17 at Bensham Grove Nursery.
- The Council completed further energy efficiency works and £500k asbestos removal for Joseph Swan Academy.

Projects commissioned to date will be saving the Council and schools

- Ca. £600k per annum
- Over 3400 tonnes of CO₂ per annum (which accounts for more than one third of all the reductions in carbon emissions to date)

Streetlighting upgrade

Between April 2016 and April 2017 an additional 989 residential street lighting columns were fitted with more efficient LED lanterns, completing the current phase of streetlight upgrades.

- 1200 main road lights, on strategically selected roads are switched off at midnight and switched back on at 5.30am each morning.
- 20,700 residential LED lanterns dimmed, switching on at 50% power, then reducing to 25% power from midnight until 5.30am, then back to 50% power.

Overall, the streetlighting upgrade has so far achieved the following

- A 59% reduction in electricity consumption, equivalent to at least £1m per annum in electricity costs at current rates (not including reduce maintenance costs, and inflation of electricity rates)
- Over 5,700 tonnes of CO2 per annum (equal to 12% cut in Council carbon emissions)

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Council transport

The Council Travel Plan (CTP) website is operational and provides easy access to information about public transport, staff discounts for public transport season tickets, corporate metro and bus passes, cycle loan or purchase, Co-wheels pool car information, etc - see www.travelsmartergateshead.co.uk. Two electric bikes (plus storage and charging facilities) (and 2 normal bikes) for staff business use are now available.

There are now 21 Co-wheels pool cars operating from the Civic Centre, with 2 at Shearlegs Road. This includes 3 electric cars. The pool cars are provided to reduce dependency by employees on use of private cars or additional purchase of a car purely for work purposes.

Future work and challenges

Ongoing work and challenges are as follows:

- Energy efficiency works in schools continue to be offered, but take up by schools is challenging, and availability of interest free loan finance is reducing, particularly for academies.
- Energy efficiency projects are focusing increasingly on LED lighting replacements, and it's expected that the pipeline of projects will continue for several years across operational buildings.
- 2017/18 will see further work on progressing connections of more Council buildings to the Town Centre District Energy scheme, in particular for Park Road, Shearlegs Road, Gateshead Leisure Centre, Central Library and Prince Consort Road.
- The Council had allocated up to £11m to invest in solar PV on Council buildings, schools and Council homes. However, new installations were halted from September 2015, due to the government issuing consultation regarding the future of Solar FITs. From January 2016, Feed in Tariffs were significantly reduced, making the case for installing solar PV less viable, and the weakening strength of the pound in recent months has increased the cost of some components. Whilst the Council is exploring potential further solar PV installations, installation costs need to come down considerably, before these become viable again

3.2. Reducing Community Carbon Emissions

Current position

We can report on 2 years progress of carbon emissions, having revised the timing of this report. Gateshead's carbon emissions fell again into 2015, by 3%, now standing at 33% less than in 2005.

The main cause of this decrease was significant reductions in both domestic emissions (3%) and employers emissions (5%) - this reduction happened despite winters being some 10% colder than previous years, and suggests weather corrected emissions will have reduced further.

Carbon emissions from traffic also continues to fall, and has dropped by 4.5% in 2015. This drop is the same as the drop in traffic volumes, suggesting that the no improvement in vehicle and fuel efficiency was seen in 2016.

What has been achieved in 2016/17?

Energy efficiency in homes:

The Council continued to working in partnership with Warm up North to deliver the following energy efficiency measures:

- Works to install External Wall Insulation to 213 Gateshead Council properties in Leam Lane and Heworth Grange were completed July 2016. Cost of this scheme £1.7m, with £180k grant funding supplied by British Gas.
- Improvements to 144 homes across 3 high rise blocks - Beacon, Lough and Fell Court - including new windows, External Wall Insulation and new roof covering. The scheme commenced May 2016 and was completed June 2017. Cost of this scheme £2.3m, with £445k grant funding provided by British Gas.
- In the Private Sector 155 surveys were undertaken, resulting in 52 SEDBUK A rated boilers being installed and 8 properties being fitted with loft insulation. In addition 11 properties received a SEDBUK A rated boiler under the Central Heating Fund Scheme.

Outside of Warm up North, the Council and the Gateshead Housing Company (TGHC) remains committed to improving energy efficiency across the social housing stock. During 2016/17, the following progressed:

- 143 boilers were renewed with modern A rated appliances, this improved the average SAP rating of the properties by 7.7 points.
- 161 homes had their single glazed timber windows replaced with modern efficient UPVC double glazed units, this improve the average SAP rating of the properties by 3.4 points.
- The Council secured a £4.5m ERDF grant to fund new district heat and power schemes to 621 high rise homes, in the Gateshead HEIGHTs scheme (High-rise Energy Infrastructure for Gateshead Housing Tenants). Detailed design of this scheme commenced in Jan 2017, alongside plans to replace windows / facades at those blocks as well.

- New District Heating substations have been installed at 4 locations in Gateshead, this will serve 384 residential flats with low carbon heating from the newly created Gateshead District Energy Scheme.

In terms of performance, as of March 2017, 56% of all homes in Gateshead now exceed the recommended energy efficiency rating (SAP = 65), compared to only 14% in 2003. Over 34,000 homes have been improved into the highest energy efficiency band.

District Energy Scheme

- Through 2016/17, the Council continued construction of the Gateshead Town Centre District Energy Network. From October 2016, the private wire network was commissioned, and 4 customers were connected - Sage Gateshead, BALTIC, Gateshead College and the Civic Centre. In March 2017, the Gateshead Energy Centre was completed, and formally opened by the Energy Minister, Jesse Norman MP. Work to complete the district heating network continued, which was delayed by the need to divert a water main on Gateshead High St, but is due for completion in Autumn 2017, when the network will become fully operational.
- Other Progress since then includes:
 - In April 2016, Gateshead Energy Company was awarded the contract to operate the network for 40 years, and commenced trading in October 2016, when the first electrical customer was connected.
 - The Council has secured £0.9m of ERDF grant funding to extend the district energy network to the Gateshead Leisure Centre area. This will use a new type of plastic district heating pipe, which will be the first such installation in the UK.
 - Contractors have also been commissioned to start feasibility studies on District Energy schemes for the Metrocentre and Team Valley, which will be carried out from June 2016.

Transport

The Government supported 'Go Smarter To Work' initiative continued to promote sustainable travel promotion in the workplace. The initiative is focussed on the A1 corridor, including Team Valley, Metro Centre and central Newcastle/Gateshead, with Sustainable Travel Transition Year (STTY) funding. The NECA has not been successful in receiving further funding for Go Smarter from government so a legacy plan has been put in place this includes web material and the Go Smarter Business Network.

Separate funds (NSRI) have been secured to deliver the Schools Go Smarter programme in Gateshead. The profile of sustainable and active travel is much higher in schools as a result of the complementary initiatives, and cycling levels in many primary schools have risen markedly.

Local Transport Plan and other funding, continues to be used to give priority to promoting alternatives to the car. This includes a range of measures to improve the attractiveness of public transport, cycling and walking across Gateshead.

The Council successfully bid for an Air Quality Grant from DEFRA for the period 2016/17. This project will run until March 2018 and will introduce a range of measures aimed at reducing nitrogen dioxide in the town centre Air Quality Management area but which will have benefits to the wider area and also to CO2 levels. The measures are: the introductions of 4 electric vans to the Council fleet; replacing diesels vans; the introduction of 4 ultra low emission (2 x hybrid and 2 x electric) Co-wheel car club cars in the Saltwell/Low Fell areas; additional support for Schools Go Smarter; a review of taxi licensing policy designed to improve emissions levels; an additional stretch of cycle lane on Durham Road and real time monitoring of air quality and traffic signals.

Future work and challenges

- High-cost home energy efficiency measures, like solid wall insulation, still remains challenging to deliver for private and social housing, as the funding from the Energy Company Obligation (ECO) has been further reduced, making this measure unviable for social landlords or homeowners. Lower cost alternatives are being explored, through Warm up North.
- The challenge going forward is to seek more innovative ways to tackle the hard-to-heat property types - tower blocks, and solid wall housing - which still require gap-funding. Funding bids have been successful for tower block schemes, but it remains to be seen if these schemes can ever be delivered without grant support.
- It remains challenging for the Council to require new developments to reach energy standards higher than building regulations. In addition, in March 2015, the government scrapped the Code for Sustainable Homes, preferring to use Building Regulations to enforce the move to more sustainable housing.
- But opportunities remain still, and with the start of operation of the town centre District Energy Scheme, and approval of extensions to the network, which will further reduce carbon emissions whilst providing cost savings to private, public and domestic customers.
- The opportunity to deliver, and potentially expand, other energy schemes, at Team Valley, Metrocentre, and incorporating new battery storage technologies, continues to be explored, which offer opportunities to continue to reduce carbon emissions, save energy costs, whilst generating income for the Council, and attracting new businesses and sustainable housing to Gateshead, boosting economic and housing growth.

4. Recommendations

- OSC are requested to note and provide comments on the current position, progress made so far, and future work and challenges.
- OSC to receive a report at a future meeting on progress with those items identified

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