



Big strides towards a smaller footprint

Environmental Sustainability Strategy

April 2011

Version Control table	
Version number	2
Date current version produced	April 2011
Due date for next review	January 2012
Authors:	<p>Ian Gallagher Head of Property Maintenance 0191 2787728 ian.gallagher@yhn.org.uk</p> <p>David Langhorne, Head of Assets & Programming 0191 2787701 david.langhorne@yhn.org.uk</p>
Contact for further information	<p>David Langhorne, Head of Assets & Programming 0191 2787701 david.langhorne@yhn.org.uk</p>

Foreword



I am very pleased to introduce Your Homes Newcastle's Environmental Sustainability Strategy. The strategy provides information about our approach to environmental issues, and identifies what we are aiming to achieve. We recognise the increasing importance of environmental issues, and believe that we can play a key role at a local and regional level in promoting environmental sustainability, using the earth's resources wisely in a cost effective way.

John Lee, Chief Executive

This document brings together all of the good things we have completed so far, and describes what we plan to do in the future using a more structured approach. In the strategy we describe what we want to do in this area for our customers, for our staff, and in relation to the buildings and other properties we manage. We also set out how we are going to achieve our aims, and some of the milestones that will help us monitor our progress. In addition we explain how we will work in partnership with Newcastle City Council, who have recently published their draft Climate Change Strategy.

Since 2004 YHN has made great strides towards achieving its mission to become the best housing provider in the north east. Environmental sustainability should underpin everything we do and for the last three years it has been identified as a key theme in our annual Delivery Plan. Some of the big things we have already done to help the environment are:

- Installed high efficiency central heating boilers, cavity and loft insulation and double glazed windows to homes through our Modern Homes Programme.
- Built 42 properties to level three and four of the Code for Sustainable Homes.
- Installed heat meters and controls to properties with communal heating systems.

We want to build on this good work and prioritise the environmental aspects of everything we do. The approach we are taking will help us to improve the day-to-day impacts that we all have alongside large scale, high profile projects. Together we can make a difference.

1. Introduction

Our Environmental Sustainability Strategy sets out our vision to be a regional leader on environmental sustainability and demonstrates our commitment to reducing the environmental impact of our business activities and providing good quality, energy efficient homes for our tenants.

Global research has shown that at least 50% of all carbon emissions come from buildings. We manage 29,000 homes on behalf of Newcastle City Council (NCC) and have 15 offices and a number of other workplaces. Through a strategic approach to asset management and capital investment as well as culture and behaviours, we can reduce the environmental impact of our business as well as achieving better value for money for YHN and our customers.

The Lord Mayor of Newcastle signed the Covenant of Lord Mayors which has committed Newcastle to reducing carbon emissions in excess of 20% by 2020 against 1990 levels. We are committed to reducing our environmental impact in line with the covenant and contributing towards achieving the objectives of NCC's Citywide Climate Change Strategy (appendix two). A reduction in our carbon footprint will also contribute towards the International Kyoto commitment to reduce greenhouse gas emissions by at least 80% against 1990 levels by 2050.

We have developed a range of environmental initiatives and improvements over a number of years. This strategy brings together previous work and good practice in a strategic approach to environmental sustainability. Through the strategy action plan we will integrate and embed environmental sustainability into our business activities throughout the organisation.

1.1 Scope of strategy

This document sets out our strategic approach to sustainably reducing the environmental impact of our business from 2011 – 2013.

The document outlines how we will achieve our vision through working with our staff, tenants, leaseholders, contract partners and NCC.

1.2 Purpose of the strategy

This strategy has four key purposes:

- To outline why achieving environmental sustainability is important and how it contributes towards achieving our strategic objectives
- To demonstrate how our activities are aligned with the local and national environmental sustainability agenda

- To set out our strategic priorities
- To outline our action plan detailing how we will meet our strategic priorities.

The document outlines how our environmental sustainability strategy will impact on the organisation both internally and externally:

- Our internal impact reviews our business activities and the carbon footprint of workplaces, transport and staff.
- Our external impact includes the housing stock we manage and our role as a social landlord within Newcastle.

1.3 Links with our organisational mission and strategic objectives

Our mission is to be the best housing provider in the north east. We intend to achieve this by investing in:

- Support and care to communities
- Three star excellent services
- A quality workforce
- Refurbishing and building homes.

These objectives determine how our priorities are set, and how performance across the organisation is measured. All of our performance targets contribute towards achieving one or more of the strategic objectives.

The environmental sustainability strategy contributes to achieving all of our strategic objectives.

1.4 Our core values

In November 2009, following consultation with staff, YHN Board and customers, our new core values were agreed. They are:

- **Accountability** – acting openly and taking responsibility
- **Integrity** – acting fairly and honestly
- **Passion** – working positively with enthusiasm
- **Respect** – treating everyone with care and professionalism
- **Forward thinking** – proactively seeking improvements and solutions

Our core values are at the heart of the business, and are the principles and standards that influence the way we work and behave.

Work that contributes to environmental sustainability particularly helps us to demonstrate a commitment to being a forward thinking organisation.

This is an area of business where we are proactively seeking improvements and solutions.

2. Our Environmental Sustainability Strategic Vision

2.1 Our vision

Our environmental sustainability strategic vision is to ensure that we are the most environmentally friendly housing organisation in the north east. However, we recognise that until now other providers have progressed more quickly than YHN in this area. On completion of the appended action plan we will have reduced the impact of our business activities and worked with our tenants and stakeholders to change behaviours. Therefore we will be well placed to move forwards to achieving our vision.

Our business activities will be sustainable through ensuring that:

- The homes we manage meet, and are maintained to, the decent homes standard and are energy efficient
- We reduce fuel poverty
- We minimise our carbon emissions
- We incorporate the highest possible level of environmentally friendly design standards into all our future new build properties
- We retrofit appropriate technologies to the properties and offices we manage
- We educate our staff and customers about the importance of environmental sustainability and involve them in achieving it.

3. Background

We were set up in 2004 to manage homes and housing-related services on behalf of Newcastle City Council, and we now also manage our own properties. To do this we employ a large number of staff who are based at a range of offices and other locations across the city.

3.1 Council homes

We manage in excess of 29,000 council homes, 17 properties on behalf of Leazes Homes and approximately 1,500 leasehold properties.

The housing portfolio we manage equates to 25% of Newcastle's overall housing stock, and 80% of social housing in the city.

The housing stock which we manage is a mixture of traditional and non-traditional, low, mid and high rise properties. A breakdown of the property types and sizes is attached in appendix seven. We also manage district heating and group heating schemes which provide energy to over 4,000 homes.

Our strategy identifies ways in which we address environmental issues in relation to these properties, and also how we work with council and other tenants to address issues such as fuel poverty.

3.2 Our staff

We employ nearly 900 staff to provide services to our tenants and other customers.

Promoting environmentally friendly behaviour and practices among our staff will contribute to our strategic objective to provide a quality workforce. In addition, our staff, and the way they operate and behave, contribute to our overall carbon footprint.

Making staff aware of environmental issues, and changing behaviour where this is beneficial, are an integral part of our Environmental Strategy and action plan.

3.3 Building Management

About 300 of our staff are based at YHN House, our headquarters. We also operate from the following premises:

- 11 Community Housing Offices and three Customer Service Centres
- 20 Concierge Lodges
- NFS (Newcastle Furniture Service) office and /furniture warehouse

- Your Choice Homes office
- 26 Sheltered Housing Schemes.

We are responsible for maintaining all of these buildings. A key part of our strategy is aimed at ensuring that all these buildings are environmentally friendly.

3.4 Building upon previous environmental sustainability achievements

Achieving environmental sustainability has always been important to us. In previous years we have:

- Made 21,100 homes decent through our Modern Homes programme
- Installed energy efficient heating systems into 14,000 homes
- Installed high efficiency double glazed windows into 17,600 homes
- Insulated lofts and/or cavity walls in 12,000 homes
- Built 42 new properties to levels three or four of the Code for Sustainable Homes
- Installed a biomass (wood pellet burning) heating system to feed 120 homes at Queens Court
- Installed a biomass heating system to supply more than 500 homes at Riverside Dene
- Promoted environmentally friendly issues through a 'team brief' for staff and appointing re-cycling champions at all our offices
- Included environmental issues as a key theme within our business and financial planning process
- Benchmarked and learned from expert partners
- Re-cycled metal, cardboard, wood and beds through our furniture service to reduce landfill waste
- Sent our HGV drivers on SAFED safe and fuel efficient driving courses
- Leased fuel efficient vehicles for our transport fleet.

We want to develop some of these achievements further, and also introduce many new environmental initiatives. We will do this through actions and targets to achieve our environmental priorities explained in Section 5 of this strategy.

4. Context

4.1 National drivers and legislation

There are a number of key national and local drivers that have informed the development of this strategy, a summary of which is provided in the tables below.

National drivers
<p>Code for Sustainable Homes (Communities and Local Government 2008)</p> <p>The Code for Sustainable Homes is the national standard for the sustainable design and construction of new homes. It aims to reduce carbon emissions and create homes that are more sustainable.</p> <p>The code measures the sustainability of a new home against nine categories of sustainable design, rating the 'whole home' as a complete package. The code uses a one to six star rating system to communicate the overall sustainability performance of a new home. It sets minimum standards for energy and water use at each level and, within England, replaces the EcoHomes scheme, developed by the Building Research Establishment (BRE).</p>
<p>The Homes and Communities Agency</p> <p>The Homes and Communities Agency (HCA) is the national housing and regeneration delivery agency for England and was set up to create thriving communities and affordable homes. It is responsible for the delivery of the Decent Homes Standard and almost all of England's affordable homes. The agency provides a clear specification for all new build properties to ensure they positively contribute towards the national agenda for environmental sustainability.</p>
<p>Decent Homes Standard</p> <p>In July 2000 the government released the green paper 'Quality and Choice: A Decent Home for All'. The paper set out the target for all social rented homes to meet the decent homes standard. According to the government a decent home is one which is 'wind and weather tight, warm and has modern facilities'.</p> <p>The standard outlines that all homes must provide a minimal level of warmth. In addition to ensuring thermal comfort for all homes, this criterion considers the issues of energy efficiency in order to maximise</p>

energy usage and minimise running costs. So properties need to have both efficient heating and effective insulation. Therefore addressing the environmental efficiency of our homes is key to meeting this standard.

CRC Energy Efficiency Scheme (Environment Agency 2010)

The [CRC Energy Efficiency Scheme](#) (formerly known as the Carbon Reduction Commitment) is the UK's mandatory climate change and energy saving scheme. The scheme started in April 2010 and is administered by the Environment Agency. It is central to the UK's strategy for improving energy efficiency and reducing carbon dioxide (CO₂) emissions, as set out in the Climate Change Act 2008. It has been designed to raise awareness in large organisations, especially at senior level, and encourage changes in behaviour and infrastructure.

Warmer Homes, Greener Homes: A Strategy for Household Energy Management (Communities and Local Government/Department of Energy and Climate Change 2010)

The [Household Energy Management Strategy](#) is about aligning the national interest of tackling climate change and limiting our dependence on foreign energy with everyone's personal financial interest in saving money. It sets out plans for a wholesale transformation of how energy is used in our homes, and is designed to make it easier for people to take action.

Under this strategy, by 2020 up to seven million homes would receive eco-upgrades, including improvements such as solid wall insulation or renewable energy generating technologies.

The strategy paves the way for Pay As You Save green finance. It also signals a move to a new, transparent and stretching obligation on energy companies and an emphasis on partnership working with local authorities in delivery.

4.2 Local drivers

Our strategy is closely linked to our 2009-14 business strategy as well as the following wider strategies:

Regional and local drivers
<p style="text-align: center;">Covenant of Mayors (2008)</p> <p>In 2009 NCC signed up to the Covenant of Mayors to demonstrate its commitment to reducing the city's overall environmental impact.</p> <p>The covenant represents more than 126 million citizens across 41 countries. Since its launch in 2008, the initiative has grown to include more than 1800 towns and cities. Together these signatories are working towards a cleaner and greener future for their citizens.</p> <p>The European Union (EU) is leading the global fight against climate change, and has made it a top priority. Its ambitious targets are spelt out in the EU Climate Action and Energy Package, which commits Member States to reduce their CO₂ emissions by at least 20% by 2020. Signatories of the Covenant of Mayors contribute to these policy objectives through a formal commitment to go beyond this target through the implementation of their Sustainable Energy Action Plan. Our Environmental Sustainability Strategy has been developed to support and contribute towards Newcastle City Council's action plan.</p>
<p style="text-align: center;">NCC's Climate Change Strategy: Helping Planet Earth</p> <p>NCC's Climate Change Strategy sets out the strategic vision for the city council. It is a bold plan to cut the city's carbon emissions by a third.</p> <p>YHN's Environmental Sustainability Strategy complements the strategy, with a particular emphasis on reducing the carbon footprint of the housing stock which we manage.</p>
<p style="text-align: center;">Newcastle Partnership's Sustainable Communities Strategy</p> <p>The Newcastle Partnerships Sustainable Communities Strategy is an over-arching partnership agreement which identifies strategic priorities for Newcastle. These priorities include making and maintaining homes that people want.</p>

YHN Delivery Plan

Our [Annual Delivery Plan](#) explains how we provide our services. It is also an opportunity for us to say what we have achieved over the previous year and what we intend to achieve during the current year.

The plan outlines our commitment to protecting the environment and tackling global warming, and refers to the initiatives which will enable us to do this. Our Environmental Sustainability Strategy will drive forward these initiatives.

YHN Repairs and Maintenance Strategy

Our [Repairs and Maintenance Strategy](#) sets out our approach to repairs and maintenance and details how the delivery of the service contributes towards achieving our strategic objectives. It sets out our repairs and maintenance strategic vision:

‘To do the right repair, first time at the right quality and cost’

YHN Asset Management Strategy

Our [Asset Management Strategy](#) sets out how asset management contributes towards our strategic objectives. It sets out our priorities for the physical care and improvement of the housing stock and surrounding environment.

YHN Procurement Strategy

Our [Procurement Strategy](#) sets the vision and strategic aims which direct and govern all of our procurement activities. We developed our Procurement Strategy to ensure that an effective and consistent approach to procurement is taken across the organisation whilst ensuring sustainability, efficiency and value for money. Our Procurement Strategy outlines our commitment to sustainable procurement and ensures that environmental issues are considered at all stages of the procurement process. In conjunction with this strategy, the Procurement Strategy will ensure “green procurement” reducing the environmental impact of all procurements.

5. Our Environmental Sustainability Priorities

In order to achieve our environmental sustainability vision, we have identified three overarching priorities:

Priority 1 – Achieve a 6% reduction in our carbon footprint by 2013 against a 2005 baseline

Priority 2 – To reduce the environmental impact of the housing stock we manage and build

Priority 3 – To inform and encourage behavioural change by our tenants and staff

To ensure that these priorities are delivered an action plan has been developed which is included as appendix one. The plan has been developed from benchmark data, Tenant Services Authority guidance, NCC's Climate Change Strategy and feedback from tenants and leaseholders. It outlines the actions to be carried out over the next two years and the officers responsible for their delivery.

This strategy represents a challenging vision for the organisation. To achieve the improvements detailed in the action plan it is proposed that we appoint an Environmental Project Manager who will be responsible for the delivery of the action plan and ongoing development of the strategy.

To ensure that we are able to deliver the projects which we have identified throughout the strategy and within our action plan, our budgets will also need to be identified and approved.

To ensure that the strategy action plan is delivered effectively and on schedule we will report to the Customer & Service Delivery Committee twice a year. The report will include:

- Expenditure on projects and current budgetary position
- Progress against the action plan
- Carbon reductions against target
- Reduction in energy usage and energy costs,

5.1 Priority 1 – Achieve a 6% reduction in our carbon footprint by 2013 against a 2005 baseline

We are committed to a 34% reduction in carbon emissions by 2020 and an 80% reduction in carbon emissions by 2050 against a 1990 baseline, in line with the Climate Change Act 2008.

In line with Newcastle City Council's Climate Change Strategy we have assumed that between 1990 and 2005 there has been a 14% reduction in carbon emissions, primarily due to a reduction of the carbon intensity of grid-supplied electricity because of the reduction in the use of coal-fired power stations. Our target is to achieve a 20% reduction in carbon emissions by 2020 against a 2005 baseline.

5.1.1 Calculation of carbon dioxide emissions and overall carbon footprint

We recognise the importance of accurately measuring and reporting on our carbon dioxide (CO₂) emissions and subsequent carbon footprint.

We hold detailed consumption information from 2005 onwards for all of the sites which we manage. Further detail of our overall energy usage and associated CO₂ emissions are included in appendix three.

We have established our baseline (2005) and current (2010) positions, and have calculated our CO₂ emissions and carbon footprint.

For the purpose of this strategy, and to allow comparison with NCC's Climate Change Strategy and information provided by the Department of Energy and Climate Change (DECC), we will use CO₂ emissions as a standard unit of measure throughout this strategy document.

5.1.2 Organisational CO₂ and carbon emissions 2005 and 2010

Our target is to reduce our CO₂ emissions by 20% by 2010 against a 2005 baseline.

Our 2005 baseline position for gas, electricity and water usage was as follows:

- 24,544 tonnes CO₂
- This equates to 6,694 tonnes of carbon.

We do not have emission data for our vehicle fleet in 2005.

Our 2010 CO₂ emissions for gas, electricity and water usage was as follows:

- 23,049 tonnes CO₂
- This equates to 6,286 tonnes of carbon.

In addition to our energy usage we were able to calculate the CO₂ emissions from our transport fleet.

Our 2010 transport emissions were:

- 29 tonnes CO₂
- This equates to 8 tonnes of carbon.

To allow accurate comparison of our CO₂ emissions over the last five years it has been assumed that our transport usage and vehicle emissions have remained consistent over that period.

Our revised CO₂ emissions are:

2005 – 24,573 tonnes CO₂ – Appendix four

2010 – 23,078 tonnes CO₂ – Appendix five

5.1.3 CO₂ emission target for our office buildings

To ensure that we achieve a 20% reduction in emissions by 2020 we have set a corporate target to reduce emissions by 2% per annum from 2010 until 2020 against a 2005 baseline.

Our target exceeds those set in the Climate Change Act, but recognises the importance for us to minimise the environmental impact of our business activities and reduce our CO₂ emissions, and our determination to be the most environmentally friendly housing organisation in the north east.

For the duration of this strategy this represents a 6% reduction in CO₂ emissions.

We need to take ownership of our environmental impact and aim to reduce our emissions through investment and behavioural change.

5.1.4 Benchmarking and monitoring

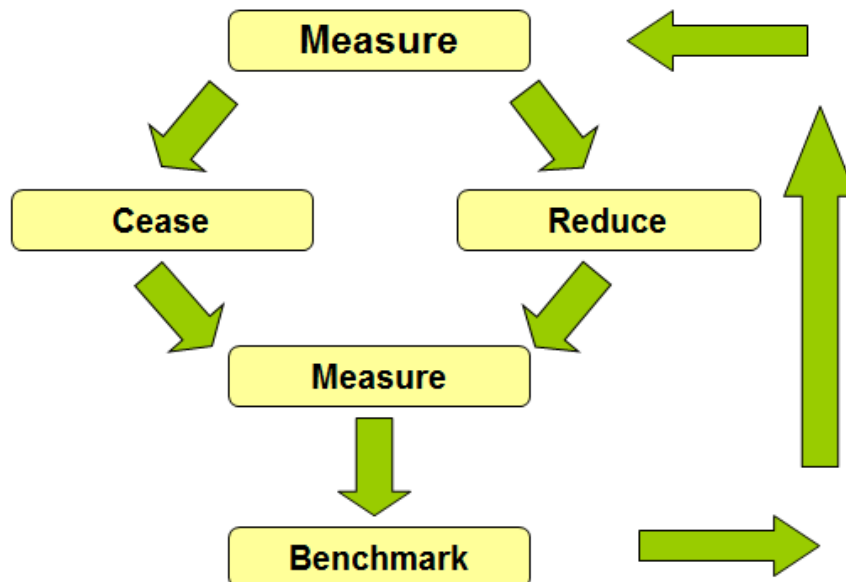
Although we have set targets based upon NCC's Climate Change Strategy we also want to compare our energy usage against that of other similar organisations.

We will benchmark our CO₂ emissions against other organisations by:

- Entering into the Sustainable Homes For Tomorrow (SHIFT) assessment
- Establishing a local working group of other ALMO's and similar organisations

To ensure that the environmental impact of our business activities is minimised we will continually measure, benchmark and review our CO₂ emissions.

We intend to challenge and change behaviours to avoid and/or reduce energy consumption throughout our business activities.



Once CO₂ emissions have been minimised through avoidance and reduction it is possible for public bodies to use carbon offsetting. This allows organisations to offset CO₂ emissions which cannot be eliminated or reduced any further. Currently through our participation in the CRC Energy Efficiency Scheme any offsetting would be managed by the City Council as opposed to YHN.

As an organisation we do however recognise the importance of carbon management and reduction. It is our intention to use offsetting as part of our strategy to show our commitment to minimising our environmental impact. When identifying potential offsetting projects we will work with [Carbon Footprint](#) to ensure that we use Certified Emission Reduction schemes.

We propose to reduce carbon usage throughout the organisation before we carry out any offsetting.

5.1.5 CO₂ Variances

To ensure that we achieve our 6% reduction in CO₂ emissions by 2013 it is important that we understand the variances in our CO₂ emissions over the last five years.

The usage data collected from utility company information has allowed us to categorise our consumption into five key areas:-

- Office accommodation
- District and Group Heating
- Communal Areas and Landlord Supplies
- Sheltered Accommodation
- Community Centres.

The graphs included in appendix six highlight the variances in energy usage over the five year period:

Electricity

Our electricity consumption has increased in all areas, the most significant rise being in lighting and service provision in communal areas. Further analysis has highlighted that, in part, this is due to more accurate accounting and increased metering.

We have identified areas of energy usage where we need to improve and reduce our consumption, and our reliance on grid supplied electricity. Further details are provided in section 5.1.6.

Gas

Our gas consumption has reduced in most areas over the last five years. Our highest gas usage and greatest impact on our CO₂ emissions is from the district and group heating schemes which we manage.

Natural gas is a finite resource so we have an obligation to minimise and optimise usage. We are currently installing heat meters into all properties which are part of district and group heating schemes. Further detail is provided in section 5.1.7.

Water

Our water consumption has remained relatively consistent over the last five years, so we want to monitor and reduce water usage. Emissions from water consumption currently equate to less than 0.5% of our total CO₂ emissions.

Through our Modern Homes Programme and any office refurbishments, we install water saving sanitary ware. The installation of new sanitary ware is responsible for the 8% reduction in water usage in our Sheltered Housing Schemes over the last five years.

Transport

We have a fleet of 38 vehicles and the CO₂ emissions from the vehicle fleet equates to 0.01% of our total emissions.

Our vehicles are fitted with trackers which allow us to look at the routes being taken, and all of our staff who travel outside the area are provided with satellite navigation to ensure that vehicle fuel and their time are effectively used. All of our vehicles use bio-diesel to further reduce CO₂ emissions.

Our staff use their own vehicles to travel between sites during the day and at present we cannot accurately report the CO₂ emissions generated by their vehicles. In an attempt to reduce the emissions from our staff's vehicles we have leased two tax band A (less than 100gCO₂/km) pool vehicles. The vehicles will be based at our head office in South Gosforth.

To reduce mileage travelled by our staff in their own vehicles we have staff based in Community Housing Offices throughout the city, although some of our staff, including our Housing and Anti-Social Behaviour Enforcement Team (HASBET), Investment Delivery team, and Technical Services Team are still based within our head office.

We have also bought into the regional agenda to install charging outlets throughout the North East; we are installing outlets at our head office and at one of our Community Housing Offices.

5.1.6 Grid supplies electricity consumption

Through the installation of energy-saving measures we can reduce the amount of electricity we use. In the action plan we propose to install energy saving measures at our offices.

Analysis of our energy usage shows:

- Office accommodation – 17.8%
- District and Group Heating – 20.2%
- Communal Areas and Landlord Supplies – 44%
- Sheltered Accommodation – 17.6%
- Community Centres – 0.4%

We are working with NCC's energy centre to audit our offices and identify where we can introduce energy-saving devices or replace installed equipment.

Some of our current initiatives include:

- Replacement of T12 and T8 fluorescent light fittings with energy saving T5's
- Installation of motion detection on lights so that they automatically switch off when areas are unoccupied

- Installation of automatic timers to switch off printers, photocopiers and portable appliances outside normal working hours
- Improved control of instant water heaters.

In addition to improvements to reduce our consumption our reliance on grid supplied electricity needs to reduce. We will assess the feasibility of installing photovoltaic (PV) solar panels which will allow us to generate electricity, and use internally, or export to the grid.

We will benchmark fuel bills for all of our offices and set individual electricity reduction targets according to property type and usage.

5.1.7 Natural gas usage

During the 2009/10 financial year almost 83% of our CO₂ emissions were from our gas consumption.

A breakdown of our gas usage by area is detailed below:

- Office accommodation – 1.4%
- District and Group Heating – 89%
- Communal Areas and Landlord Supplies – 0.1%
- Sheltered Accommodation – 9%
- Community Centre's – 0.5%

We currently consume a considerable amount of gas (almost 89 million kWh) on our district and group heating schemes. Almost 4000 of the properties we manage are provided with heating and hot water from communal networks.

To reduce our reliance on natural gas we have installed biomass (wood burning) boilers into two separate schemes:-

- Riverside Dene – biomass network to supply in excess of 500 properties
- Queens Court – biomass boiler to supply 120 properties.

Priority two in the strategy provides further details on our plans to convert non-traditional electrically heated properties to gas or biomass fired communal heating systems.

To minimise our gas consumption in our offices we have replaced our building management system (BMS) at our head office and plan to connect our outlying offices to the system. This will allow us to control heating and cooling in properties, and ensure that over heating or cooling does not occur and ensure that heating and/or cooling systems don't operate whilst offices are unoccupied.

To ensure that we have fuel efficient appliances installed in all of the properties we manage we have a planned replacement programme. As boilers are replaced we install SEDBUK (Seasonal Efficiency of Domestic Boilers in the UK) 'A' rated appliances wherever practicable.

5.1.8 Alternative technologies

There are emerging technologies which can provide efficient sources of heating and cooling. We are continually investigating and analysing these technologies to assess the most appropriate solution for a particular application.

We have recently installed an air source heat pump into our furniture service warehouse; the heat pump will convert one unit of electricity into two and a half to three units of heat.

Although there is no one size fits all application we will benchmark with other organisations and implement best practice solutions.

Some of the technologies currently being assessed or trialled are as follows:

- Air source heat pumps
- Ground source heat pumps
- Solar thermal collectors (produce hot water)
- Solar photovoltaic panels (generate electricity)
- Smart central heating controls
- Smart lighting controls
- Low energy lighting (T5 lamps).

As new technologies emerge we will work with NCC and our framework partners to trial and assess the potential impact.

We have identified our priority initiatives and divided them into two categories:

- High energy consumption areas; schemes which consume large amounts of energy and have a significant contribution to our carbon footprint. Schemes within this category may require substantial capital investment, and will be prioritised through our priority investment calculator (PIC) process
- 'Quick wins'; schemes which have a payback period of less than five years and have an immediate impact on our customers, staff, or the organisation

Further details of the schemes which we intend to deliver are attached in the Strategy Action Plan (appendix one).

5.1.9 Solar Photovoltaic panels

Due to the introduction of feed in tariffs (FiT's) it has become cost effective to install solar photovoltaic (PV) panels onto the roof of properties. PV panels generate electricity from sunlight. They work best when installed on south, south east or south west facing properties, and at an angle of approximately 45°.

We are currently working with NCC and our framework partners to identify suitable PV locations, including individual properties, mid and high rise buildings and flat roofed properties with large footprints.

When we install PV panels into domestic properties the electricity generated is used by the tenant any excess electricity is exported to the grid.

In non-traditional properties including those with a large footprint and high rise properties, we will use the generated electricity to feed our communal supplies which account for 44% of our CO₂ emissions from electricity.

We have set a target to install PV panels to at least 1000 properties between 2010 and 2013. The installation of the panels on individual properties helps to reduce the tenant's expenditure on energy and helps to reduce the number of tenants living in fuel poverty.

5.1.10 Green procurement

Green procurement is the selection of products and services that minimise environmental impacts. We will utilise YHN's purchasing power to promote productive use of resources and materials. This involves integrating environmental considerations into all stages of the purchasing process from avoiding unnecessary purchases and identifying greener products, to the specifications you use for contracts and whole life costing.

Green procurement is no longer limited to recycled paper but covers most areas of business activity including construction, furniture, IT equipment and transport. By making informed choices about the products we buy, we will make a real difference to the environment.

Green products are made or operate in a way that:

- Uses fewer natural resources
- Contains fewer hazardous or toxic materials
- Has a longer life span
- Consumes less energy or water in production or use
- Can be reused or recycled on disposal
- Generates less waste, for example be made from recycled materials, use less packaging or be recycled by the supplier.

The principle of green procurement will be supported within YHN's Procurement Strategy.

5.2 Priority 2 – To reduce our environmental impact of the housing stock we manage and build

We are the largest social landlord in Newcastle upon Tyne, we manage 29,000 homes on behalf of Newcastle City Council, this equates to 80% of the social housing stock within the city.

Our tenants are billed directly for energy usage (with the exception of properties supplied by district and group heating networks).

Although there are limitations associated with individual domestic properties we are keen to trial technologies and measure the success of each element.

To assist us in assessing the potential impact of technologies we have accessed dedicated funding and have worked with NCC to convert two domestic properties into exemplar eco friendly homes. We are installing multiple energy saving measures into each property to assess which ones are cost effective and could be installed on a larger scale:

- External insulation
- Triple glazed windows
- Solar porch
- Mechanical ventilation with heat recovery
- Solar thermal hot water
- Low energy lighting.

5.2.1 Modern Homes Programme

We have improved the condition of the housing stock we manage through our Modern Homes Programme. Over recent years we have:

- Installed over 14,000 high efficiency combination boilers
- Installed and upgraded cavity wall insulation into almost 12,000 homes in partnership with Warmzone
- Installed double glazed windows into 17,600 properties
- Installed water saving sanitary ware as standard throughout the programme
- Used sustainable building material in repair and modern homes work, and continued to monitor contractor recycling performance
- Increased the average SAP (standard assessment procedure) rating for our properties from 57 in March 2005 to 70.26 in quarter two of 2010-11 against a year end target of 71.

Through our Modern Homes Programme we mainly complete internal and external packages separately to ensure that all tenants can see some work carried out to their homes without having to wait until the end of the programme.

We have made more than of 21,000 properties decent, and have completed 16,000 internal packages and 18,000 external packages.

Announcements from central government relating to the future funding of decent homes are being evaluated to understand the impact on our programme, including its end date.

5.2.2 Stock Improvement

In addition to the work we've carried out through our Modern Homes Programme we have:

- Installed heat meters and controls into district and group heating schemes as part of a three year rolling programme, to allow our tenants and leaseholders to control and monitor their heat usage
- 'Fuel switched' 290 properties from electric night storage to high efficiency gas central heating systems to provide affordable and controllable heating
- Replaced inefficient boilers in some of our Sheltered Housing Schemes
- Installed high efficiency insulation into post war pre-fabricated Tarran bungalows which made the properties affordable to heat and comfortable to live in.

To ensure that our housing stock continues to meet decency beyond 2012, we have developed a 30 year plan which prioritises items which require replacement.

Whenever we replace heating appliances or sanitary ware we will install energy efficient items which help to reduce CO₂ emissions and reduce energy bills for our tenants.

We are currently reviewing the heating systems within some of the properties we manage and have proposed the following improvement schemes:

- Install a communal heating system to supply 175 properties within two high-rise, non-traditional hard to heat properties at Molineux Court and Grafton House, Heaton
- Install a communal heating system into 81 two storey non-traditional properties which are currently electrically heated at Naworth Drive, Westerhope.

5.2.3 New build properties

We have embarked on a programme to build new homes for our tenants.

We have built 42 bungalows which meet level three or four of the Code for Sustainable Homes. Through our new build programme we aim to achieve the highest level possible within the available financial resources.

As we build more properties we include technologies to reduce the environmental impact of the properties, and to reduce the CO₂ emissions.

We have integrated the following technologies into our properties:

- Solar thermal water heating
- Enhanced insulation
- Rain water harvesting
- High efficiency heating appliances

Through our SHIFT assessment and through regional and national benchmarking we will identify and implement best practice from other organisations.

We will continue to strive to build new properties to the highest affordable level of the Code for Sustainable Homes.

5.2.5 District Heating

We supply heating and hot water to 4,000 properties through district and group heating schemes. Although the schemes have high gas usage they do provide a reliable, if not cost-effective, source of warmth.

Some of the systems we maintain were installed during the 1970s when energy costs were low. The Byker district heating scheme which supplies 1800 properties, was provided with heat from burnt refuse, so heat costs were negligible. During the 1990s the system at Byker was converted to run on natural gas due to concerns over the incineration of refuse within a residential area.

In 2010 our District and Group Heating Schemes consumed almost 90 MWh of gas; this is the equivalent of heating 6,000 two bedroom homes with an average gas consumption of 15,000 kWh per annum. The gas consumed on district and group heating schemes equated to 89% of all gas used by YHN.

Our district and group heating schemes currently have an annual deficit of almost £500,000, therefore it is imperative that we work with our tenants and leaseholders, reduce overall energy consumption, make the systems more energy efficient and controllable, and ultimately ensure that they are self-financing.

Communal heating systems lack control, so we have a three year programme to install control and heat meters into all homes which are supplied from district or group heating boilers.

The heat meters will allow tenants and leaseholders to be billed for their individual usage, instead of the current system of charging a fixed tariff. This should lead to a reduction in heat demand and gas usage, as there is a financial incentive for people to control their heating.

The boilers used to provide heat to the communal systems need to be energy efficient and reduce gas usage to compensate for reducing heat demands (through modulation).

We are working with partner organisations to ensure that we invest in updated plant where necessary, and investigate the potential of carbon neutral and low carbon (i.e. combined heat and power) solutions.

We have installed biomass boilers into two of our communal schemes, over 600 properties are heated from the biomass, which will lead to a reduction in our CO₂ emissions in the future.

In partnership with NCC and Northumbria University we have carried out combustion trials on bio-diesel which contains no fossil fuel, and is manufactured from non-edible rapeseed oil.

Due to the scale and annual carbon footprint of our district heating scheme (more than 10,000 tonnes of CO₂ per annum) it is proposed that we investigate potential saving from our largest scheme at Byker. Further detail is provided in the action plan (appendix one).

5.2.6 Fuel poverty

The environmental efficiency improvements which we make to the housing stock have a direct impact on the people living in those properties and helps to reduce the number of tenants who live in fuel poverty.

Fuel poverty is defined as energy expenditure in excess of 10% of the household income.

We do not know how many of our tenants currently live in fuel poverty. We intend to contact all of our tenants and leaseholders in writing and offer support in reducing their energy bills (detailed in 5.3.1). Through this process we will collate demographic and property data to allow us to target specific community groups and/or property types.

Some of our non-traditional housing stock was electrically heated, poorly insulated and hard to heat. We have invested in additional insulation through our modern homes programme and we will continue to identify sites which are suitable for 'fuel switching'.

Through the conversion of properties from electric heating to gas we are able to reduce fuel bills, thereby reducing the number of tenants in fuel poverty. However to date we have only carried out conversions to approximately 450 properties. In order to maximise the impact of fuel

switching we need to continue to convert properties and reduce our reliance on electric night storage heating where funding can be identified.

NCC's energy centre also provides assistance to tenants who are in fuel poverty due to fuel debt, have incorrectly installed meters or who have inherited energy debt from previous tenants.

Our advice and support service works with the energy centre to identify tenants who cannot afford to pay energy bills. We see this service as an invaluable part of our role as a social landlord, and we intend to allocate additional resources to assist more tenants with energy related issues.

5.2.7 Recycling

We have an obligation to, ensure that where possible, we recycle to reduce the environmental impact of virgin or exhaustible materials being sourced or manufactured.

We have divided recycling into three categories:

- Facilities for tenants and leaseholders
- Facilities for staff
- Targets for our partners and suppliers.

We will ensure that all tenants and leaseholders have access to recycling facilities. We are aware that some properties, including mid and high rise, currently have no recycling facilities.

To ensure that staff are able to recycle we will provide recycling facilities in all of our offices and work locations and monitor performance where possible.

Our partners and suppliers will be given specific recycling targets which will include minimising the amount of construction waste going to landfill, and ensuring that furniture and possessions left in empty properties is recycled in the most appropriate method, including reuse where applicable.

5.2.8 Warmer Homes, Greener Homes

The government's Warmer Homes, Greener Homes Strategy sets out plans to reduce carbon emissions in the housing sector.

The strategy is about aligning the national interest of tackling climate change and limiting our dependence on foreign energy with everyone's personal financial interest in saving money, and sets out a wholesale transformation of how energy is used in our homes. It is designed to make it easier for people to take action, removing the deterrent of upfront costs and reducing the hassle of the move to greener living.

The strategy aims to have installed loft and cavity wall insulation into all homes by 2015 where it is practical to do so.

Under this strategy, by 2020 up to seven million homes would receive eco-upgrades, including improvements such as solid wall insulation or renewable energy generating technologies. The strategy paves the way for 'Pay As You Save' green finance. It also signals a move to a new, transparent and stretching obligation on energy companies and an emphasis on partnership working with local authorities in delivery.

We will continue to assess the information being provided by the government and understand the impact that this initiative could have for YHN and the homes which we manage.

5.3 Priority 3 – To inform and encourage behavioural change by our tenants and staff

Priority one and two of this strategy set out our aim to make improvements to the homes and offices which we manage, and reduce our CO₂ emissions by 6% in three years.

To enable us to become the most environmentally friendly housing organisation in the North East we also need to work with staff and tenants to raise awareness and change behaviours.

Our aim isn't to limit the choices people can make, it is to allow people to make more informed choices and understand the environmental impact of the decisions they make.

5.3.1 Support for tenants

We see ourselves as far more than a social housing provider. We understand that we have a corporate responsibility to support tenants and assist in all aspect of their tenancies, including understanding, avoiding and reducing energy usage and their CO₂ emissions.

We currently offer limited support to tenants with regard to energy efficiency but intend to develop and provide useful energy saving information and advice.

We see our Environmental Strategy as a tool to support tenants throughout their tenancy. At sign up energy saving information will be provided as part of the new tenancy pack.

We will provide fuel poverty awareness and offer home visits if people feel their homes are hard to heat, or energy bills are excessively high.

We will work with energy suppliers and the Property Maintenance team to identify any technical issues which can lead to tenants being over charged (i.e. electric night storage heating connected to a 24 hour meter rather than an off peak one).

Our staff are in contact with tenants and leaseholders on a daily basis. We will ensure that staff are able to refer any energy related issues through to a central point of contact who will be able to provide advice and support. The method of referral and point of contact will be determined through our action plan.

We will make resources available for tenants, providing simple do's and don'ts and frequently asked questions to raise awareness.

To allow tenants to take ownership of their CO₂ emissions we will provide a free energy monitor loan service. The energy monitors provide real time usage data and allow householders to identify high usage household appliances, and the impact of appliances remaining on standby whilst not in use.

We will review the services that we offer to tenants, and work with the Energy Savings Trust to provide campaign and awareness raising material.

5.3.2 Support for staff

As well as supporting our tenants and changing behaviours we will work with staff to raise awareness of energy usage and provide tools which can be used in and out of the workplace.

There will be consistency between initiatives for staff and tenants, as behavioural change needs to be based on subconscious choices and actions which can apply at home or at work.

Our aim is to create a 'carbon culture' at YHN. To enable us to do this we will work with both new and existing staff. All new starters will receive information on environmental sustainability and the reduction of CO₂ emissions as part of their starter pack.

For existing staff we will launch an awareness campaign at team brief (a six weekly themed meeting attended by all managers). The team brief session will be used to make staff question their current levels of awareness, assess whether they are aware of their own carbon footprint and what they can do to minimise it.

Through our business and financial planning process staff were asked to submit energy saving suggestions. One of the suggestions from staff was the provision of low emission pool cars which has now been implemented. The process showed that staff have a good level of awareness and want to reduce their CO₂ emissions.

We will make energy usage and environmental impact information available to all staff as an online resource, supported by an e-learning portal.

To provide additional 'hands on' support eco champions will be appointed throughout the organisation. They will be empowered to challenge poor behaviour and provide assistance and support to staff within their office.

Our aim is to achieve a carbon culture with a switch off philosophy, where staff will understand environmental issues and take ownership of their own work and home environments.

5.3.3 Case studies

It is nationally recognised that behavioural change is a fundamental aspect of achieving the UK's Kyoto commitment to reduce CO₂ emissions by 80% by 2050 against a 1990 baseline.

The target relies in part on people taking ownership of energy and understanding that the majority of energy we use still comes from finite carbon based products (i.e. natural gas, coal and oil).

Other technologies (i.e. nuclear) have embedded carbon through the construction and storage process and present long term storage issues for waste materials.

The Department for Energy and Climate Change began a trial in 2008 to change behaviours within their London head office.

They installed 'smart' meters throughout the building; the meters provide real time data on energy usage which is linked to the IT network.

Staff are able to view energy usage online at any time and the data is updated every five seconds.

The DECC report that staff have questioned why energy usage peaks during the day at certain times (i.e. early morning as the building is heated or cooled), and what they can do to minimise it.

Staff are also able to view energy usage for other sites, cross reference energy usage and interpret differing trends.

We will assess the success of schemes operated by other companies and regional partners to assess the overall impact of the schemes and adopt best practice.

6. Equality and diversity

Our customers, staff and partners have diverse backgrounds, circumstances and needs. They are all ages, disabled and non-disabled, of different races and ethnic backgrounds, heterosexual, lesbian, gay and bisexual, and from faith and non-faith backgrounds.

Our Equality Policy and Corporate Equality Plan (CEP) outline our vision, aims and targets in regards to equality and diversity. They also outline our responsibilities:

- As an employer
- In providing services to our customers
- In working with other organisations
- To involve communities
- As a procurer of services and contracts.

Our commitment to equality goes beyond our legal duties and our policy outlines the need to address equality of opportunity through avoiding direct and indirect discrimination, making sure that all areas of YHN are involved in meeting this objective.

Equality and diversity and environmental sustainability are two key cross-cutting themes identified in our delivery plan. Equality and diversity issues have been considered as part of the development of our Environmental Sustainability Strategy through carrying out an equality impact needs assessment (EINA). This has helped to identify any implications of introducing the policy with regard to race, gender, disability, faith, sexual orientation and age to identify where there may be unmet needs or potentially discriminatory outcomes.

The recommendations and actions identified within the EINA are detailed under item 3.6 in appendix one. Many of the physical improvement measures within the action plan are property specific and therefore detach from the specific needs of the tenant (for example only able to install PV panels on south facing roofs). However, a key priority is to inform and encourage behavioural change across all tenants considering their specific needs in terms of equality and diversity.

Activities have been focused around fuel poverty and bring those residents energy bills to more affordable levels across the City. For example, we will look to invest in additional measures in non-traditional housing such as Norwegian timber frames. The strategy looks to identifying and implement new technologies that reduce fuel poverty for our customers.

Diversity issues will also be considered as part of the process in progressing many of the actions in our action plan.

7. Impact of the Strategy

This strategy will have a positive impact upon reducing the environmental impact of our business. Specifically it will have the following impact upon our customers, our staff and the organisation.

7.1 For our customers

- Staff will be knowledgeable about environmental issues and capable of providing high quality advice
- Customers will have access to free energy efficiency advice and energy assessments through our partnership with Newcastle City Council's energy centre
- Current and new customers will have access to excellent information and documentation about environmental issues which is accessible to all

- Homes will be well managed and will meet, and be maintained to, the Modern Homes standard as a minimum
- Homes will be warmer and more energy efficient and fuel costs reduced
- The environment in which our customers live will be high quality and sustainable
- Energy costs will be reduced through a 'whole house' approach to energy efficient home improvements.

7.2 For our staff

- Staff will have an increased awareness about environmental issues which will provide benefits both at work and at home
- The appointment of local energy champions will provide job enrichment and empowerment
- All staff will have access to energy efficiency advice
- YHN workplaces will become more environmentally friendly.

7.3 For the organisation

- A targeted approach to energy improvements in office accommodation will reduce energy costs
- The modern homes programme and energy efficiency schemes will result in an improved stock portfolio
- Partnering opportunities with third parties will provide additional capital funding for environmental projects
- Customer satisfaction with property standards and services will be improved
- Savings on fuel costs will help with the overall financial viability of the organisation.

8. Implementation and Monitoring of the Strategy

8.1 Implementation

The Environmental Sustainability Strategy will be communicated as widely as possible. Some of the ways in which we will do this are to:

- Agree a corporate target of an ongoing reduction in environmental impact

- Make managers aware of the strategy and confirming any specific areas of work or actions in the action plan for which they are responsible
- Make all of our staff aware of the new strategy through Team Brief and other communication channels such as the staff intranet
- Making our customers aware of the new strategy, through our website, providing a copy in our Community Housing Offices and including information in 'Homes and People', our quarterly newsletter to customers, and in other publications
- Work with external agencies to reduce energy bills and the environmental impact of our tenants and leaseholders
- Engaging partners including relevant City Council staff in discussions about the strategy and action plan.

8.2 Monitoring

Planned reporting arrangements for the Environmental Sustainability Strategy are as follows:

- Reports on progress to YHN Programme Board on a monthly basis. The board is chaired by the YHN Chief Executive and is subject to external scrutiny
- Update reports to YHN Customer and Service Delivery Committee every six months.

9. Responsibility for the strategy

The Head of Assets and Programming has overall responsibility for ensuring that this strategy is delivered to the timescales outlined within the action plan.

Delivery of the strategy is the joint responsibility of three teams:-

- Assets and Programming
- Investment Delivery
- Property Maintenance

The Assets and Programming team will be responsible for monitoring and reporting progress and co-ordinating the involvement of the other services.

A strategy development project group has been established to implement the action plan and monitor progress. The strategy action

group consists of key staff from the organisation, including our energy champions.

10. Review

The strategy and action plan will be reviewed by the strategy development project group on a bi-annual basis to ensure that it continues to develop and evolve in line with national and local drivers.

Best practice from benchmarking organisations, and future legislation requirements will be reviewed and implemented, (where appropriate), by the group. Interim amendments will be made as necessary.

11. Appendices

1. Environmental Sustainability Action Plan
2. Newcastle City Council's Climate Change Declaration
3. Energy Usage, Carbon Dioxide Emissions and Carbon Footprint
4. 2005 Baseline Carbon Dioxide Emissions
5. 2010 Carbon Dioxide Emissions
6. Energy Usage Comparison
7. YHN Property Types and Sizes

Appendix one - Action Plan



PRIORITY ONE - Achieve a 6% reduction in carbon footprint by 2013 against a 2005 baseline

Key Deliverable 1.1 - Energy audit of YHN offices

ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 1.1.1	Complete an energy audit in partnership with NCC energy centre to 6 of YHN's offices and identify improvements to reduce energy usage by 2%	July 2011	Detailed reports containing recommendations are provided for implementation. Satellite offices are able to operate more efficiently.	Environmental Sustainability Co-ordinator
ESS 1.1.2	Produce an environmental report for each energy audit on YHN's offices in 2011/12	March 2011	Detailed reports containing recommendations are provided for implementation. Satellite offices are able to operate more efficiently.	Environmental Sustainability Co-ordinator
ESS 1.1.3	Report to Programme Board to agree implementation, timescales and funding opportunities in August 2011	August 2011	Energy audit recommendations can be implemented with external funding accessed where possible.	Environmental Sustainability Co-ordinator

Key Deliverable 1.2 - Participate in The Sustainable Homes Index For Tomorrow (SHIFT) assessment

ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
----------------	--------------------------	----------------	----------	----------------

ESS 1.2.1	Assess the benefits and the costs associated with SHIFT membership	April 2011	Understanding our environmental impacts, benchmark performance against peers and continuously improve with a recognised process and peer learning.	Head of Assets & Programming
ESS 1.2.2	Upon Programme Board approval complete a growth bid to join SHIFT	May 2011	Understanding our environmental impacts, benchmark performance against peers and continuously improve with a recognised process and peer learning.	Head of Assets & Programming
Key Deliverable 1.3 - Procure web based metering portal				
ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 1.3.1	Identify and assess current web based metering portal providers by July 2011	July 2011	Smarter utilisation of information to enable focused support and advice leading to behavioural change.	Assets & Information Manager
ESS 1.3.2	If approved complete procurement of a service provider by August 2011	August 2011	System procured within the financial guidance and regulations in place.	Assets & Information Manager
ESS 1.3.3	Implement system and identify high usage and high impact suppliers for performance monitoring	August 2011	Smarter utilisation of information to enable focused support and advice leading to behavioural change.	Environmental Sustainability Co-ordinator
Key Deliverable 1.4 - Installation of 'smart' meters				
ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility

ESS 1.4.1	Complete an exercise to identify high consumption sites.	August 2011	Focused advice and guidance given to the highest impact sites allowing for greater carbon reduction earlier.	Environmental Sustainability Co-ordinator
ESS 1.4.2	Complete the site specific assessment for the implementation of smart meters.	August 2011	Appropriate smarter metering solutions are installed dependant upon a variety of site specific requirements.	Technical Services Manager
ESS 1.4.3	Complete the procurement of a meter supplier, and/or installer	August 2011	System procured within the financial guidance and regulations in place.	Technical Services Manager
ESS 1.4.4	Install 'smart' meters in appropriate locations	August 2011	Improve management information allowing for concentrated efforts to reduced the energy usage in the most inefficient areas	Technical Services Manager

Key Deliverable 1.5 - Benchmark and publicise current and projected carbon footprint

ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 1.5.1	Calculate, report and publish our total carbon footprint	March 2012	Accurate and up to date reporting mechanisms in place enabling clear assessment against carbon reduction	Environmental Sustainability Co-ordinator
ESS 1.5.2	Complete a benchmark exercise on carbon footprint of other similar organisations	March 2012	A clear appreciation of our own performance against peers will be assessed allowing for focused improvement activity	Environmental Sustainability Co-ordinator

Key Deliverable 1.6 - Identify sources of grant and match funding

ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 1.6.1	Secure four funding streams per annum or funding to the value of £50k	March 2012	External funding maximised to ensure maximum benefit for customers	Environmental Sustainability Co-ordinator
Key Deliverable 1.7 - Establish or buy into regional forum to discuss environmental agenda				
ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 1.7.1	Identify and evaluate networking and learning opportunities during 2011/12	.March 2012	Consolidated review of learning across multiple officers.. Most appropriate and beneficial networking and learning opportunities are exploited	Environmental Sustainability Co-ordinator
ESS 1.7.2	Feed best practice and funding opportunities into strategy action plan	March 2012	Co-ordinated approach to funding and best practice	Environmental Sustainability Co-ordinator
Key Deliverable 1.8 - Embed green procurement across YHN				
ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 1.8.1	Align environmental sustainability strategy aspirations with the procurement strategy	July 2011	All tendered goods and services will be procured in the most environmentally friendly way possible	Head of Procurement
ESS 1.8.2	Implement changes to tender policies	Aug 2011	All tendered goods and services will be procured in the most environmentally friendly way possible	Head of Procurement

PRIORITY TWO - To reduce the environmental impact of the housing stock we manage and build

Key Deliverable 2.1 - Upgrade lighting in YHN House

ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 2.1.1	Complete an assessment of current lighting in our buildings	Sept 2012	Most appropriate solution for YHN House is identified	Technical Services Manager
ESS 2.1.2	Complete procurement of an electrical contractor or equipment	Oct 2011	Scheme procured inline with YHN procurement strategy ensuring value for money and green purchasing	Technical Services Manager
ESS 2.1.3	Complete exercise to measure our reduction in energy usage	Dec 2011	Reduced carbon for YHN House and lower energy bills. Improved energy performance certificate rating	Environmental Sustainability Co-ordinator

Key Deliverable 2.2 - Upgrade controls in YHN House

ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 2.2.1	Complete and assessment of equipment which is not effectively controlled (i.e. instantaneous water heaters, photocopiers, printers)	Sept 2011	Most appropriate solution for YHN House is identified	Technical Services Manager
ESS 2.2.2	Complete procurement of service providers and/or equipment	Oct 2011	Scheme procured inline with YHN procurement strategy ensuring value for money and green purchasing	Technical Services Manager

ESS 2.2.3	Implement control solutions	Dec 2011	Improved controls solution for YHN House improving comfort of staff and reducing carbon	Technical Services Manager
Key Deliverable 2.3 - Provide sustainable and effective district heating systems				
ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 2.3.1	Establish working group	June 2011	Reduce energy consumption by 2% year on year across all district and group heating schemes	Technical Services Manager
ESS 2.3.2	Produce a report on progress to YHN Management team	August 2011	Reduce energy consumption by 2% year on year across all district and group heating schemes	Environmental Sustainability Co-ordinator
Key Deliverable 2.4 - Implementation of emerging technologies				
ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 2.4.1	Deliver project matrix in conjunction with the Climate Change Delivery Group.	March 2012	Co-ordinate approach to carbon reduction with NCC.	Head of Assets & Programming
ESS 2.4.2	Present schemes to Investment Executive to see if they are financially viable and/or ground	March 2012	Innovative approach to financing undertaken to facilitate the implementation of emerging technologies	Head of Assets & Programming
Key Deliverable 2.5 - Agree partnership working on environmental issues with NCC				
ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility

ESS 2.5.1	Produce report on recommendations and present to Customer & Service Delivery committee	Sept 2011	YHN and NCC contributing towards joint targets for carbon reduction	Environmental Sustainability Co-ordinator
Key Deliverable 2.6 - Heat Metering				
ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 2.6.1	Complete installation of meters into properties and link to Switch2	Dec 2011	Flats can be individually metered and charged the appropriate amount in relation to there energy consumption. This will encourage tenants to be more energy efficient	Technical Services Manager
ESS 2.6.2	Complete analysis of data from Switch2 and identify any inefficient boilers by August 2012	Aug-12	Focused investment dealing with the most inefficient boilers	Technical Services Manager
Key Deliverable 2.7 - Install solar PV panels into 1000 properties				
ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 2.7.1	Complete installation of PV panels into 1,000 properties	Dec 2013	It is expected that this target with be exceeded. This will lead to reduced carbon, reduced fuel poverty and reduced costs to YHN.	Head of Assets & Programming
ESS 2.7.2	Complete analysis of housing stock and identify suitable properties for PV panels	Dec 2013 COMPLETE	Only appropriate stock able to return the maximum energy gain at the lowest cost are in scope.	Assets & Information Manager
ESS 2.7.3	Assess feasibility of installing solar PV through the modern homes framework	Dec 2011	Co-ordinated approach to PV installations reducing disruption to tenants.	Technical Services Manager

ESS 2.7.4	Complete procurement of PV supplier by December 2013	May 2011	£3m contract secured with a competent partner.	Technical Services Manager
-----------	------------------------------------------------------	----------	------------------------------------------------	----------------------------

Key Deliverable 2.8 - Improve and monitor recycling performance of tenants, leaseholders, staff, contract partners and suppliers

ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 2.8.1	Undertaken exercise to identify properties which do not have recycling facilities (i.e. mid and high rise)	Dec 2013	Understanding of asset related barriers to recycling	Environmental Sustainability Co-ordinator
ESS 2.8.2	Trial recycling systems for tenants and leaseholders in partnership with NCC	Dec 2013	Asset related barriers to recycling are eradicated.	Environmental Sustainability Co-ordinator
ESS 2.8.3	Benchmark recycling performance with other ALMO's and local authorities	Dec 2013	Best practice is followed and recycling opportunities are maximised	Environmental Sustainability Co-ordinator
ESS 2.8.4	Establish recycling targets for partners and suppliers	Dec 2013	YHN are at the forefront of recycling in terms of contract management.	Technical Services Manager
ESS 2.8.5	Establish alternative methods of empty property clearance, assessing whether furniture can be re-used	Dec 2013	Reduced landfill and more efficient use of furniture.	Head of Housing Management

PRIORITY THREE - To inform and encourage behavioural change by our tenants and staff

Key Deliverable 3.1 - Engage with staff and encourage carbon footprint ownership

ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 3.1.1	Report carbon footprint quarterly to all YHN staff, by location, and by floor (where data is available) identifying targets.	Mar-12	Identify baseline carbon footprint for the organisation. An understanding of localised carbon use will be regularly report. Lord Mayors Covenant target to reduce by carbon by 20% will be monitored.	Environmental Sustainability Co-ordinator
ESS 3.1.2	Set staff individual and collective targets (overall target to link to 20% reduction)	Mar-12	All YHN staff actively contribute towards reducing carbon use. Staff are engaged and have a sense of ownership of the agenda.	Environmental Sustainability Co-ordinator
Key Deliverable 3.2 - All tenants to receive energy information at sign up				
ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 3.2.1	Consult staff and tenants on energy information to be included in sign up packs	Oct 2011	Staff and tenants have been fully consulted to ensure the information provided is useful and has the most impact possible.	Tenant Involvement Officer
ESS 3.2.2	Provide all new tenants with energy information at sign up	Nov 2011	Tenants have the knowledge and ability to operate within their homes in the most energy efficient way.	Head of Tenancy Services
Key Deliverable 3.3 - Provide a readily accessible resource for tenants and leaseholders				
ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 3.3.1	Identify and prepare resource and media options	Oct 2011	Information given to tenants is appropriate and effective.	Environmental Sustainability Co-ordinator

ESS 3.3.2	Establish online resource for tenants and leaseholders on YHN's website	Nov 2011	Information will be readily accessible in a variety of ways.	Environmental Sustainability Co-ordinator
ESS 3.3.3	Assess current and potential methods of communicating information along with cost appraisals.	Nov 2011	Information will be readily accessible in a variety of ways.	Environmental Sustainability Co-ordinator
ESS 3.3.4	Produce environmental sustainability information	Nov 2011	Information given to tenants is appropriate, effective and readily accessible.	Environmental Sustainability Co-ordinator

Key Deliverable 3.4 - Promote awareness of fuel poverty to tenants and leaseholders

ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 3.4.1	Attendance at 100% of TARA's every 12 months	Mar-12	Energy efficiency remains high on the agenda for tenants.	Head of Investment Delivery
ESS 3.4.3	Draft fuel poverty and prevention information	Mar-12	Consistent and up to date advice is available to roll out across customers.	Head of Investment Delivery
ESS 3.4.4	Identify housing stock which is known to be expensive and/or hard to heat (i.e. all electric high rise properties)	01/03/2011 COMPLETE	Prioritise fuel poverty 'hot spots'. Understand areas of priority.	Head of Assets & Programming
ESS 3.4.65	Officers to commence 121 energy support home visits	Mar-12	Home visits across the stock will increase significantly initially focussed on priority areas.	Head of Investment Delivery

Key Deliverable 3.5 - Review and increase 'energy efficiency' homes visits

ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
-----------------------	---------------------------------	-----------------------	-----------------	-----------------------

ESS 3.5.1	Carry out 125 homes visits per year using NCC Energy Centre SLA	Mar 2012	A contribution towards the total number of homes visited is made.	Environmental Sustainability Co-ordinator
ESS 3.5.2	Review current service level agreement with the Energy Centre	Mar 2012	The SLA and targets are appropriate for this strategies priorities.	Head of Assets & Programming
ESS 3.5.3	Officers to commence 121 energy support home visits	Mar 2012	Introduce bespoke 'in-house' energy home visits at an increased quantity.	Head of Investment Delivery
ESS 3.5.4	Assess impact of service improvement through outcomes and levels of customer satisfaction	Mar 2012	Demonstrates that activities are making a positive contribution to reducing fuel poverty and reducing the use of carbon.	Head of Investment Delivery

Key Deliverable 3.6 - Address diversity issues raised through the EINA

ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 3.6.1	Appoint officer to deliver the actions within the Environment Sustainability Strategy	July 2011	A key member of staff will be appointed to take responsibility for the delivery of many of the target within this action plan.	Head of Assets & Programming
ESS 3.6.2	Upgrade housing stock where funding is available	Dec-13	Homes are improved to increase their energy efficiency as part of routine maintenance and planned investment.	Head of Assets & Programming
ESS 3.6.3	Energy and demographic audit to be undertaken for housebound/less mobile tenants/dependents	Dec-11	Vulnerable tenants are taken in to account when undertaking any retrofit investment rather than just the property type.	Environmental Sustainability Co-ordinator

ESS 3.6.4	Monitor the impact of installing 1000 solar PV systems	Dec-13	Retrofit measures are undertaken and their ongoing benefits are understood.	Head of Assets & Programming
Key Deliverable 3.7 - Consider partner agencies that could support us in the delivery of tenant awareness and information				
ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 3.7.1	Detail and contact all organisations who can provide advice and/or resources	Mar-12	In house resources are enhanced where appropriate.	Head of Investment Delivery
ESS 3.7.2	Identify key partner organisations e.g. Energy Savings Trust, Business in the Community, Northumbrian Water	Mar-12	YHN have clear and appropriate partners removing the confusion caused by the current market saturation.	Environmental Sustainability Co-ordinator
ESS 3.7.6	Agree an appropriate mechanism for the organisation and resources to engage with staff and tenants	Mar-12	In house resources are enhanced and supported where necessary.	Head of Investment Delivery
Key Deliverable 3.8 - Provide free energy monitor service for staff, tenants and leaseholders				
ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 3.8.1	Loan energy monitors to 80 staff per year	Mar-13	Monitors piloted by staff. Staff awareness increased before rolling technology out to customers.	Environmental Sustainability Co-ordinator
ESS 3.8.2	Issue 150 energy monitors per year to tenants.	Mar-13	Customers can monitor their own usage real-time giving the information required to help reduce their bills and usage. Demonstrable carbon savings will be evidenced.	Head of Investment Delivery

ESS 3.8.3	Issue 50 energy monitors per year to leaseholders.	Mar-13	Customers can monitor their own usage real-time giving the information required to help reduce their bills and usage. Demonstrable carbon savings will be evidenced.	Leasehold Service Manager
ESS 3.8.4	Identify external partners to assess funding and supply energy monitors	Jul-11	Market tested, using leaders in the field, for best technology at lowest cost (if not free).	Environmental Sustainability Co-ordinator
ESS 3.8.5	Produce energy monitor crib sheet, and environmental sustainability tenant pack	Mar-12	Monitors are used effectively within each application.	Head of Investment Delivery
ESS 3.8.6	Measure success of units through customer feedback and satisfaction	Mar-12	Use of energy monitors deliver real carbon reductions and financial savings to staff and customers.	Head of Investment Delivery
ESS 3.8.7	Provide update report of Customer & Service Delivery Committee	Apr-12	Committee continue to monitor performance against action plan ensuring delivery.	Environmental Sustainability Co-ordinator

Key Deliverable 3.9 - Work with tenants Federation

ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 3.9.1	Utilise the Tenants Fed to increase YHN's ability to influence tenants' behaviour.	Jun-12	A wide range of agencies are utilised to increase coverage.	Head of Investment Delivery
ESS 3.9.5	Identify other community groups or forums where additional consultation can be undertaken	Jun-12	A wide range of agencies are utilised to increase coverage.	Head of Investment Delivery

Key Deliverable 3.10 - Provide sustained communications staff and encourage staff to interact

ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 3.10.1	Engage communications team to identify appropriate methods to communicate with staff	Oct 2011	Effective methods of interaction are selected.	Environmental Sustainability Co-ordinator
ESS 3.10.2	Plan communication strategy for environmental sustainability	Oct 2011	Effective methods of interaction are selected.	Environmental Sustainability Co-ordinator
ESS 3.10.3	Confirm team brief date with communications team	Aug-11	Spreads the message across the whole organisation in a facilitated and consistent way.	Environmental Sustainability Co-ordinator
ESS 3.10.4	Present Environmental Sustainability Team Brief	Mar 2012	Spreads the message across the whole organisation in a facilitated and consistent way.	Head of Assets & Programming

Key Deliverable 3.11 - Encourage and support behavioural change throughout the organisation

ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 3.11.1	Appoint 12 staff champions throughout the organisation	Aug-11	A greater buy in to the strategies priorities. Continual advice and monitoring of staffs behaviour.	Environmental Sustainability Co-ordinator
ESS 3.11.2	Agree terms of reference and reporting structure	Oct 2011	Officers understand their roles and embrace their responsibilities. Staff can refer to them for advice.	Environmental Sustainability Co-ordinator
ESS 3.11.3	Champions produce comprehensive plan to include incentives	Mar 2012	Staff are encouraged to improve behavioural change with incentives.	Environmental Sustainability Co-ordinator

Key Deliverable 3.12 - Create easily accessible online tool

ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 3.12.1	Review and improve intranet information for staff	Oct-11	Useful on-line resource that is actively utilised by staff. The resource will also provide advice on how to operate more efficiently at home in addition to work.	Environmental Sustainability Co-ordinator
ESS 3.12.2	Establish online resource for tenants and leaseholders on YHN's website	Nov 2011	Information will be readily accessible in a variety of ways.	Environmental Sustainability Co-ordinator

Key Deliverable 3.13 - Provide learning resource for staff

ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 3.13.1	80% of staff to complete Environmental Sustainability awareness learning	Mar-13	Consistent awareness and understanding of responsibilities across most staff.	Environmental Sustainability Co-ordinator
ESS 3.13.2	Assess suitable learning resources	Feb-12	Staff are trained in the most effective way possible that demonstrates value for money.	Environmental Sustainability Co-ordinator
ESS 3.13.3	Present report to YHN's management team	Mar-12	Options are scrutinised and decisions ratified.	Environmental Sustainability Co-ordinator
ESS 3.13.4	Report outcomes to Customer & Service Delivery committee	Apr-12	Committee also have the opportunity to influence the option taken forward.	Environmental Sustainability Co-ordinator

Key Deliverable 3.14 - Promote environmentally friendly staff initiatives

ID Code Source	Description of Milestone	Milestone Date	Outcomes	Responsibility
ESS 3.14.1	Run six staff initiatives per year	Mar-13	Staff feel bought in to delivering YHN's targets and have the ability to influence how they are achieved.	Environmental Sustainability Co-ordinator
ESS 3.14.2	Identify schemes being run by third party organisations (i.e. Energy Savings Trust, Business in the Community)	Mar-12	Initiatives are informed by those agencies that are at the forefront of energy efficiency.	Environmental Sustainability Co-ordinator

Appendix 2 – The Newcastle Climate Change Declaration

Newcastle City Council resolves to reaffirm its commitment to tackle climate change and work with residents and partners to reduce the city's carbon emissions by 34% (from 1990 levels) by 2020. We aim to provide significant employment opportunities for Newcastle's residents, reduce energy bills and boost the local economy.

As a Council we will provide leadership by:

- Reducing our own carbon emissions from our buildings, services, transport fleet and staff travel.
 - Meeting 20% of our electricity demands by low carbon energy sources by 2020
 - Facilitating new ways of working which avoid the need to bring a private car to work and encourage more of our staff to cycle and walk to work
 - Using low carbon technologies across our fleet of vehicles
 - Giving all our children the opportunity to learn about the causes and impacts of climate change and encourage them to take positive action to reduce carbon emissions and help create sustainable local communities
 - Seeking to reduce domestic waste by 15% and increasing domestic waste recycling to 55% by 2020
 - Ensuring all new Council homes are built to the zero carbon standard from 2016
 - Ensuring that the Council's housing stock has adequate heating and insulation and supporting our residents to reduce their energy use.
- We are fortunate to have leading-edge universities, strong private sector partners and national leaders in delivery of sustainability projects as partners. We will strongly encourage the interaction between academic research, business developments, and public service delivery. With partners, we will also aim to:
- Ensure that every home that can benefit from cavity and loft insulation has been treated by 2015
 - Deliver low carbon energy solutions across the city including community based energy schemes, solid wall insulation and renewable energy generation.
 - Support the city's businesses in reducing their carbon emissions by 34% by 2020
 - Do all we can to support "green collar" jobs in sectors like marine and offshore technology
 - Develop the Science Central site as the focal point for applied research and practice by the public and private sectors across the whole sustainability field

- Eradicate fuel poverty as far as is practicable by 2016 by both improving energy efficiency and increasing household incomes
- Support work with the residents to reduce their energy consumption by 10% through behavioural change and other low cost measures
- Support the development and introduction of electric vehicles across the North East, including the expansion of charging points powered by renewable energy where practicable
- Promote lower carbon methods of travel, aiming for a 4% reduction in fuel use through walking, cycling and better use of public transport by 2020
- Stimulate and encourage the production and consumption of locally grown products and services.

Appendix 3 – Energy Usage, Carbon Dioxide Emissions and Carbon Footprint

To enable us to establish our baseline position we identified energy usage as follows:

Gas – kWh

Electricity – kWh

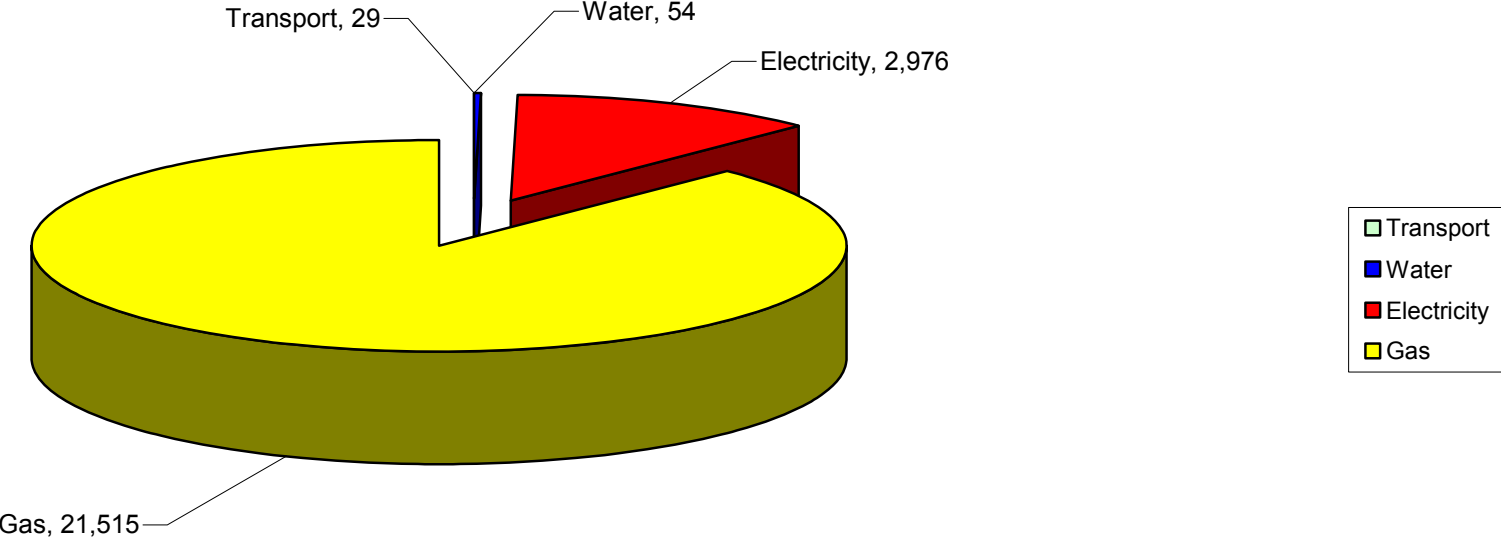
Water - m³

2004/05	Electricity	Gas	Water
Annual Usage *	6,318,925	113,008,970	55,099
Carbon Intensity (kg/kWh) & kg/m ³ **	0.548	0.191	1
kgCO ₂	3,462,770.90	21,584,713.27	55,099.00
Total CO ₂ emissions (kg)		25,102,583	
Total CO ₂ emissions (tonnes)		25,103	
Total carbon emissions (tonnes)		6,846	
2009/10	Electricity	Gas	Water
Annual Usage *	8,066,201	100,135,281.29	53211.43
Carbon Intensity (kg/kWh) & kg/m ³ **	0.52	0.191	1
kgCO ₂	4,194,424.74	19,125,838.73	53,211.43
Total CO ₂ emissions (kg)		23,373,475	
Total CO ₂ emissions (tonnes)		23,373	
Total carbon emissions (tonnes)		6,375	

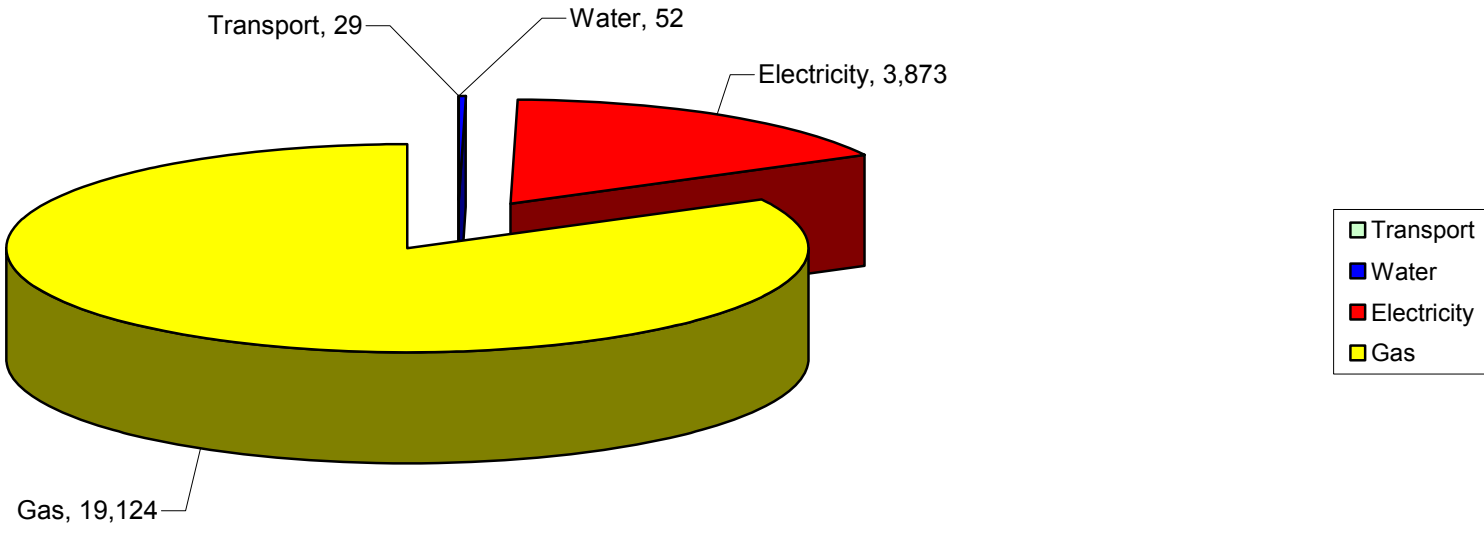
* Annual usage in kWh (electricity and gas), m³ (water)

** Carbon intensities were sourced from the Market Transformation Programme
BNXS01 <http://efficient-products.defra.gov.uk/spm/download/document/id/785>

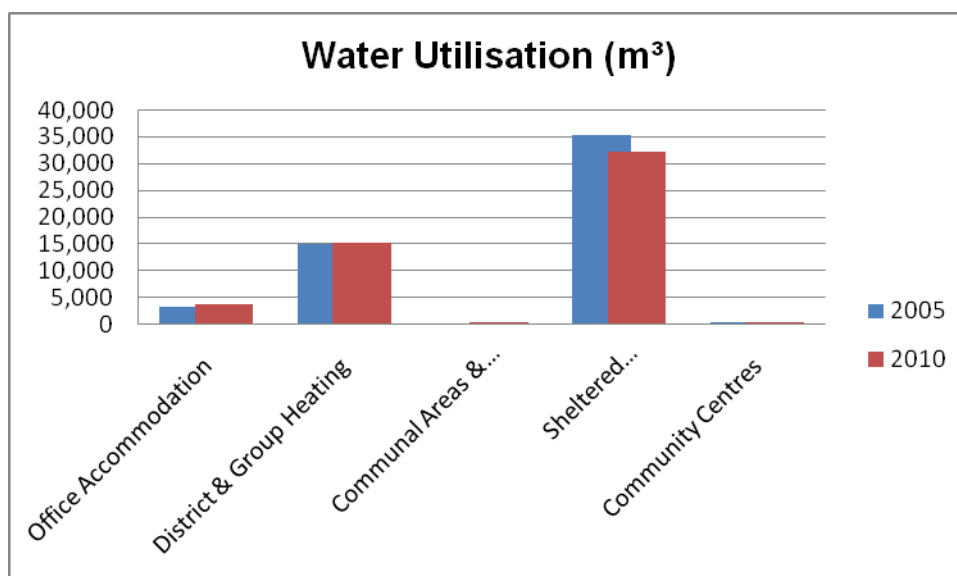
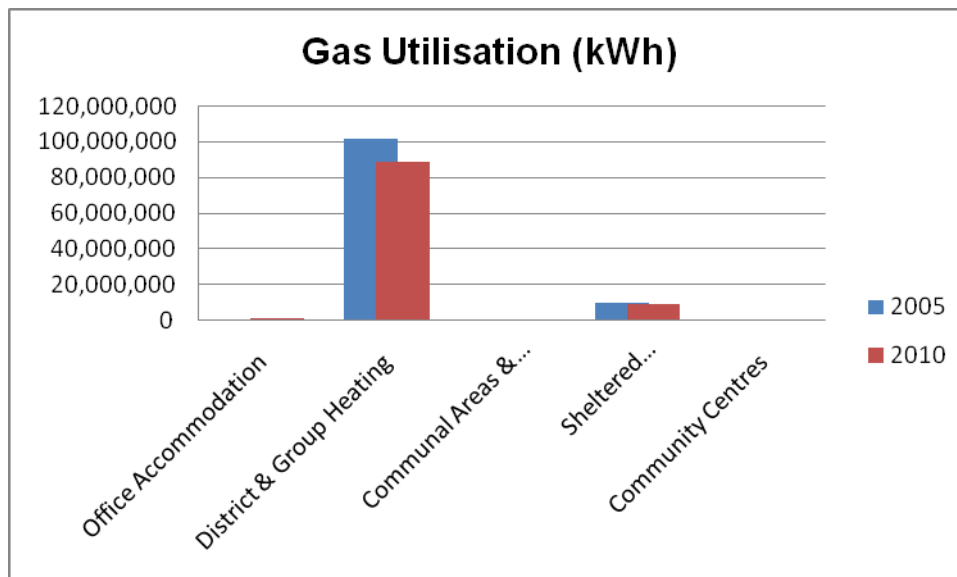
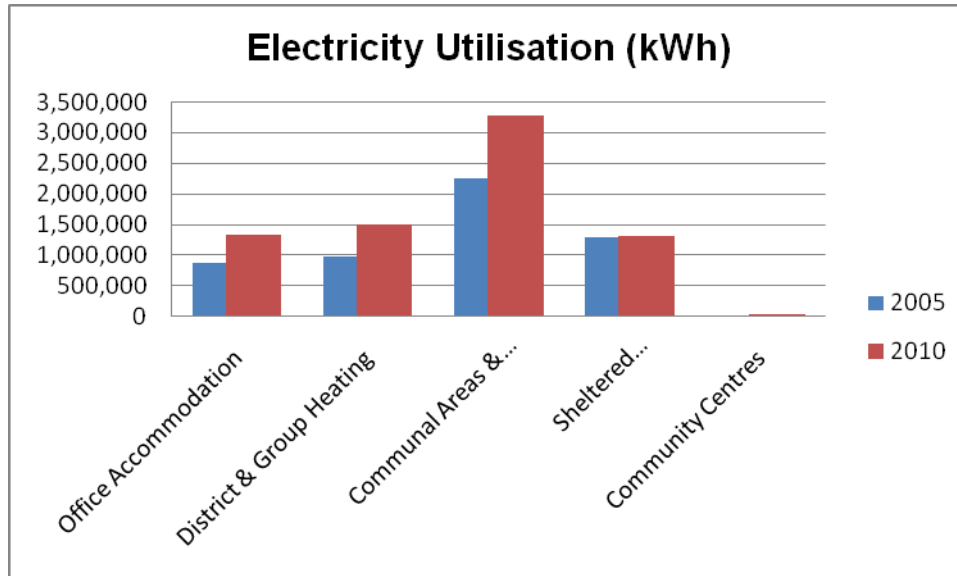
Appendix 4 - 2005 Baseline Carbon Dioxide Emissions (tonnes CO2)



Appendix 5 - 2010 Carbon Dioxide Emissions (tonnes CO2)



Appendix 6 – Energy usage comparison



Appendix 7 – YHN Property Types & Sizes

Rented accommodation

Property type	Bedsit	1 Bed	2 Bed	3 Bed	4 Bed & above	Total
Acquired Properties	2	280	453	455	33	1223
Multi-storey properties	23	1414	2958	115	0	4510
Non-Traditional built properties	4	190	693	1221	75	2183
Sheltered Accommodation	318	510	39	18	0	885
Traditional built properties	59	3286	7,113	9,507	627	20592
	406	5680	11256	11316	735	29393

Leasehold accommodation

Property type	Property subtype	Total
Bedsit	Mid Rise (3 to 5 Storeys)	4
Bungalow		4
Flat	High Rise (6 Storeys and over)	77
Flat	Low Rise (Up to 2 Storeys)	950
Flat	Mid Rise (3 to 5 Storeys)	292
Leasehold House		18
Maisonette	High Rise (6 Storeys and over)	15
Maisonette	Low Rise (Up to 2 Storeys)	9
Maisonette	Mid Rise (3 to 5 Storeys)	93
	Total leaseholders	1,462

All information correct as of 31 March 2010