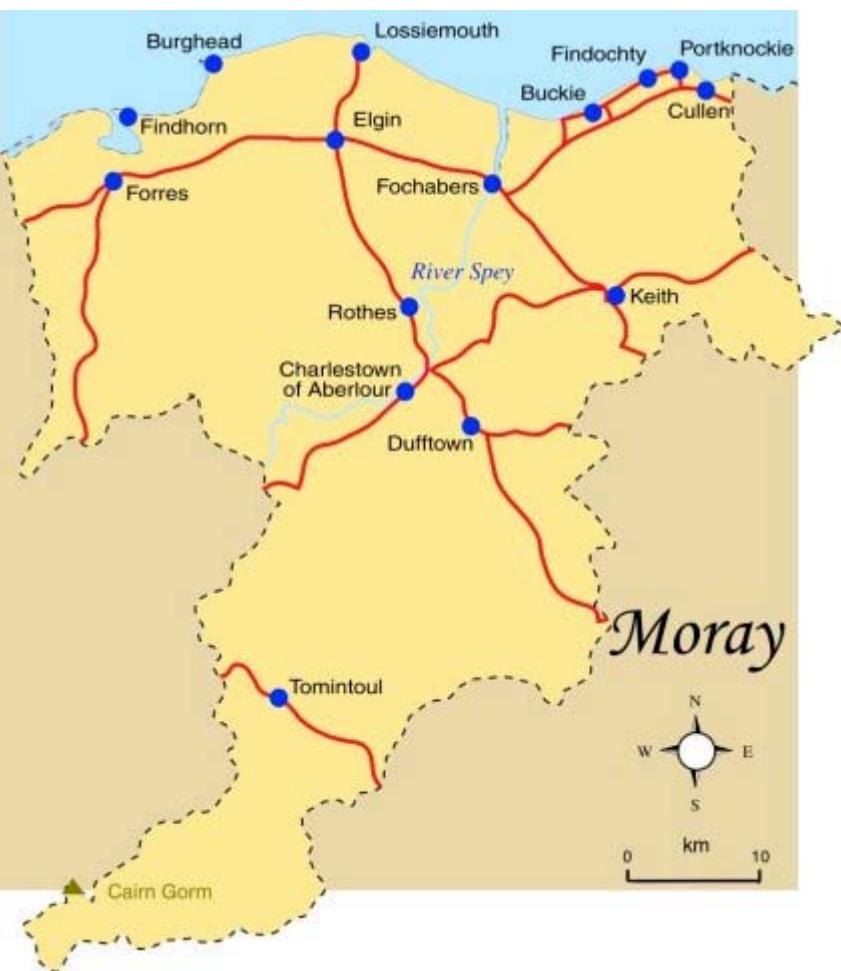


THE MORAY COUNCIL

DELIVERING A GREENER SCOTLAND



© The Gazetteer for Scotland, 1995-2007  
Used with permission from The Gazetteer for Scotland at  
<http://www.geo.ed.ac.uk/scotgaz/>

# STRATEGIC ASSESSMENT 2007/08

## **Contents**

Introduction	p.3
A Profile of Moray	p.4
Key Greener Themes	
1. Protecting and Enhancing the Environment	
1.1 Environmental Education and Community Engagement	p.9
1.2 Natural and Built Environment	p.12
1.3 Local Environments	p.13
2. Environmental Impact	
2.1 Energy and Climate Change	p.14
2.2 Pollution	p.22
2.3 Transportation	p.23
2.4 Waste Minimisation and Resource use	p.25
Appendix 1 – What is the council already doing?	p.29
Appendix 2 – What next?	p.30
References	p.31

## **Introduction**

This is the first strategic assessment for the Greener Strategic Group undertaken by the Moray Council. It will inform a wider process designed to support strategic decision-making in relation to managing risks, setting priorities and allocating resources. The aim is to help the Greener Strategic Group to achieve not only its own outcomes and objectives but also those set by the Moray Council administration and the Scottish Government, ultimately making Moray a safe, clean, pleasant and sustainable environment to live in.

The information and analysis contained within this report will be most effective when combined with the knowledge and local expertise that exists within the Greener Strategic group and across partner agencies. The result will provide a firm foundation for developing future strategies.

The assessment is divided into 2 main categories in line with the Scottish Government Outcomes. Within these the assessment is divided into 7 main categories in line with the “Environmental Strategy for Moray” and to ensure a wide range of Environmental issues are considered. They are:

- Environmental Education and Community Engagement
- Natural and Built Environments
- Local Environments
- Energy and Climate Change
- Pollution
- Transportation
- Waste Minimisation and Resource Use

For each of the 7 categories, the current position is described along with any emerging trends and future considerations. Recommendations are included for consideration only.

The most recent available data is used and where possible this has been sourced independently to provide an unbiased picture.

## A Profile of Moray

Moray is the 8<sup>th</sup> largest Council area in Scotland, covering an area of 2238 square kilometres [1], from the Cairngorm Mountains in the south to the coast of the Moray Firth in the north. However, in terms of its population, it ranks 25<sup>th</sup> out of 32 with a population of just 86750 [1]. The area is mostly rural comprising 70% open countryside and a further 25% woodland [2]. The average population density is low at just 39 people per square kilometre [1]. However, approximately 57% of the population live in the 5 main towns of Elgin, Forres, Buckie, Lossiemouth and Keith [3], where the population density is approximately 2500 people per square kilometre [4].

Overall, Moray is one of the least deprived areas in Scotland, as defined by the Scottish Index of Multiple Deprivation (SIMD), having no data zones in the 15% most deprived in Scotland and just 2 in the 20% most deprived areas, both of which are in Elgin. This represents just 1.7% of Moray's data zones, the lowest in Scotland with the exception of the three island groups. By comparison, Aberdeenshire has 8 data zones in the 20% most deprived and Angus has 9, representing 2.7% and 6.3% of their data zones respectively. However, the rural nature of Moray means that 27.6% of its data zones are within the 15% most access deprived in Scotland, due to the financial cost, time and inconvenience of travelling to basic services. This compares with 42.5% of data zones in Aberdeenshire and 26.1% in Angus [5].

### Prosperity

The average gross weekly wage in Moray is the lowest in Scotland, at £377.30. The comparator authorities of Angus and Aberdeenshire are ranked 11<sup>th</sup> and 7<sup>th</sup> in Scotland respectively (the highest wage ranking 1<sup>st</sup>), with average gross weekly wages of £447.50 and £473.10 [6]. The SIMD states that 9.3% of Moray is income deprived, compared with 11.5% in Angus and 7.4% in Aberdeenshire [5]. There are no compelling differences between the 3 authorities in terms of the division of those in employment by occupation or industry [6].

The working age population accounts for approximately 61% of the total population of Moray and around 82% of the working-age population are economically active. This represents around 50% of the total population. 78% of the working-age population are in employment, 9% of whom are self-employed. Almost ¾ of employee jobs are in the service industry, a further 15% are in manufacturing and 7% are in construction. 9% of employee jobs are tourism-related but this includes jobs that are also part of the services industry [6].

Of the working-age population that is economically inactive, almost 75% report not wanting a job. In May 2007, 1,130 or 17% of key benefit claimants were claiming job seekers allowance as their main benefit. However, the most common main benefit is incapacity benefit, claimed by 3,500 or 53% of key benefit claimants [6].

There are no compelling differences between Moray, Angus and Aberdeenshire in relation to economic activity or inactivity. However, although the SIMD identifies no data zones in Moray that are in the 15% most employment deprived, 4.9% of Angus' and 2% of Aberdeenshire's data zones are in the 15% most employment deprived [5].

## **Health**

Moray's general health is very similar to Angus and Aberdeenshire, with 93% of the population reporting good or fairly good health and just 7% reporting not good health, compared with 92% and 8% respectively for Angus and 93% and 7% for Aberdeenshire [7]. The percentage of the population that has a limiting long-term illness is also very similar to both Angus and Aberdeenshire, representing around 1/6 of the total population in all 3 authorities [7].

The relationship between health and tenure indicates that 88% of occupants of social rented accommodation report good or fairly good health compared with 94% of occupants of owned or privately rented/rent free accommodation. This is reflected in the incidence of limiting long-term illness, which is 10% higher for occupants of social rented accommodation, at 24%, than for occupants of owned or privately rented/rent free accommodation. The spread across age groups is comparable, with 65-84yr olds representing the largest proportion of each tenure type having a long-term illness. The picture is very similar in both Aberdeenshire and Angus [7].

The standardised death rate in Moray is slightly higher at 10.5 per 1,000 population than in Angus and Aberdeenshire, both of whose death rates are 9.4 per 1,000 population [8]. The main cause of death in Moray, in both genders, is diseases of the circulatory system, which accounted for approximately 1/3 of all deaths in 2006. The next most common cause of death is cancer, which accounted for around ¼ of all deaths in 2006. Angus and Aberdeenshire show a similar split [8]. The SIMD identifies just 1 data zone, 0.9% of the total in Moray that is within the 15% most health deprived; this is in Elgin. This compares with 1.7% of data zones in Aberdeenshire and 1.4% in Angus [5].

Mid-2006 population estimates suggest that 19% of the population of Moray is aged under 16yrs, 61% is of working age and 20% is of pensionable age. This translates as 16052 under 16s, 52952 of working age and 17746 of pensionable age [1]. 2006-based population projections, suggest that the under 16 population will reduce by 9% by 2011, the working age population will increase by 1% but the pensionable population will increase by 10% [9]. This would mean 2011 population numbers of 14607 under 16s, 53482 of working age and 19521 of pensionable age. These changes will mean that the proportion of the population that is of pensionable age will increase by around 2% from approximately 20% to nearly 22%. These proportions are similar in both Angus and Aberdeenshire, with no compelling differences. In all 3 authorities, around 63% of the pensionable age group is female.

## **Education**

In Moray in 2006 there were 7133 primary school pupils and 5890 secondary school pupils, an overall drop of around 2% since 2003 (comprising a 4% drop in primary pupils & a 2% rise in secondary pupils). The number of pupils from ethnic minority groups has increased from 171 in 2004 to 197 in 2006. Aberdeenshire has seen a similar reduction in pupil numbers but Angus has seen virtually no change. Both Aberdeenshire and Angus have seen similar percentage increases in numbers of ethnic minority pupils [10]. There are 2 data zones in Moray, 1.7% of the total, that are within the 15% most education deprived in Scotland, both of which are in Elgin. This compares with 5 data zones in Aberdeenshire, 1.7% of their total, and 8 in Angus, representing 5.6% of their total [5].

In primary schools, absence figures for 2004/05 to 2006/07 are very consistent, accounting for around 4.5% of half days, of which an average of 14% is unauthorised. In 2004/05, truancy accounted for 43% of unauthorised absence; this fell to 17% in 2006/07. Putting these figures in perspective, truancy accounted for 7% of total absence in 2004/05, falling to 2% in 2006/07. These figures are comparable with both Angus and Aberdeenshire except that the reduction that has been seen in Moray's truancy rate is not replicated in Angus [11].

In secondary schools, the absence rate has risen slightly, from 7.6% of half days in 2004/05 to 9.2% in 2006/07. Of this, the proportion of unauthorised absence has increased from 22% to 29%, although this fell from 32% in 2005/06. In 2004/05, truancy accounted for 59% of unauthorised absence, falling to 38% in 2005/06 and then rising to 44% in 2006/07. Despite this fluctuation, truancy has consistently accounted for around 13% of total absence in each of the last 3 years. Moray's total and unauthorised absence rates are comparable to both Angus and Aberdeenshire. However, in both of these authorities truancy accounts for a higher proportion of unauthorised absence than in Moray, at around 72%. In Aberdeenshire truancy accounts for about the same proportion of total absence as in Moray but in Angus, it accounts for around twice the proportion of total absence [11].

Between 2003/04 and 2005/06, the rate of exclusions in Moray's primary schools has remained fairly constant at 12 per 1000 pupils. This is similar to Angus but slightly higher than Aberdeenshire, although this difference reduced over the period. In Moray's secondary schools, the rate has increased slightly from 59 per 1000 pupils in 2003/04 to 67 per 1000 in 2005/06, although this is lower than in 2004/05. In 2005/06, Moray's rate was similar to both Angus and Aberdeenshire following a fall in Angus and a rise in Aberdeenshire. The vast majority of exclusions were temporary, with only around 6 pupils being removed from the register in each of the last 3 years, which represents about 1% of total exclusions. This is higher than Angus, which has had no pupils removed from the register and better than Aberdeenshire where pupils removed from the register represent approximately 2% of total exclusions [12].

Of 1072 school leavers in Moray in 2006/07, 85% went on to further/higher education, training or employment, 12% were unemployed but seeking employment and the remainder were either unemployed and not seeking employment or their destination was unknown. Numbers in all categories have remained fairly consistent for the last 3 years. Both Aberdeenshire and Angus have slightly higher proportions going into further/higher education, training or employment, at around 90% each, although the split is slightly different to Moray, with more going into further education and less into employment. Slightly less than in Moray were unemployed but seeking employment or training, while about the same proportion as Moray was unemployed and not seeking employment or training [13].

## Housing

The total number of dwellings in Moray in 2006 was 40,728, a rise of 3% since 2003. There have been similar rises in Aberdeenshire and Angus. The ratio of dwellings to total population is the same in all 3 areas at 1:2 [10]. In Moray, approximately 63% of the population live in owner-occupied accommodation, which is slightly lower than both Aberdeenshire and Angus at 74% and 68% respectively. In contrast, Moray has the highest percentage of people both renting from the Council and renting privately at 17%

and 11% respectively. Moray has a similar proportion of the population living in lone parent families as both Aberdeenshire and Angus, at 8%, and a similar proportion of people living alone, at 12%. Nearly half of those living alone in all 3 authorities are aged 65 and over [7].

Despite a 100% rise in the mean house sale price in Moray, from £58,584 in 2001 to £117,417 in 2006, the number of house sales rose by 17%, from 1,899 to 2,215. The mean house sale prices in Aberdeenshire and Angus also rose, by 88% and 93% respectively, while house sales rose by 23% and 26% respectively. The median house sale price in Moray nearly doubled, from £47,000 in 2001 to £93,000 in 2006 and similar increases were seen in both Aberdeenshire and Angus. The median price being lower than the mean price is reflective of the large proportion of band A-C dwellings in Moray, approximately 70%. In Angus, approximately 65% of dwellings are band A-C but in Aberdeenshire, the proportion is much lower at approximately 45%. Correspondingly, the proportion of dwellings in bands F-H is small in Moray and Angus, at approximately 5% and 7% respectively, while in Aberdeenshire, the proportion is higher at nearly 20%. Between 2003 and 2006 in all 3 authorities, the proportion of dwellings in bands A-C fell slightly, while the proportion of dwellings in bands F-H rose slightly [10].

There are no data zones in Moray that are within the 15% most housing deprived in Scotland and this is the same for both Angus and Aberdeenshire. However, 4 of Moray's data zones are within the 20% most housing deprived in Scotland, 2 in Elgin, 1 in Forres and 1 in Lossiemouth, whereas neither Angus nor Aberdeenshire have any data zones within the 20% most housing deprived [5].

### **Recorded crime in Moray**

In Moray in 2006/07 the total number of crimes recorded increased by 4% from 2005/06 compared with a 7% decrease in Aberdeenshire and a 3% rise in Angus. In Scotland the number of crimes recorded in 2006/07 increased by less than 0.5% from 2005/06. The rate of crimes in Moray in 2006/07 was higher at 680 per 10,000 population than in both Aberdeenshire and Angus, at 446 and 558 per 10,000 population respectively. However, Moray was better than Scotland in this regard, where the rate was 819 per 10,000 population. The total number of crimes recorded in each of the last 10 years shows a slightly increasing trend in Moray, as it does in Aberdeenshire. In contrast, Angus shows a slightly reducing trend, as does Scotland as a whole [14].

The percentage of crimes cleared up in Moray fell by 2% to 41% in 2006/07, compared with a 7% rise to 42% in Aberdeenshire and a 1% rise to 61% in Angus. The percentage of crimes cleared up for Scotland as a whole also rose, by 1% to 47%. The trend in Moray over the last 10 years is virtually level compared with a slightly reducing trend in Aberdeenshire and a slightly increasing trend in Angus and Scotland as a whole [14].

Within Moray there are 12 data zones in the 15% most crime deprived, representing 10.3% of data zones in Moray. This is worse than both Aberdeenshire and Angus, who have 4% and 7.7% respectively of their data zones within the 20% most crime deprived [5].

Overall for 2006/07, Moray was ranked 18<sup>th</sup> out of 32 local authority areas in Scotland for total recorded crimes per 10,000 population (where 1 has the highest rate and 32 the lowest). Moray's highest ranking of 12<sup>th</sup> was for the crime category crimes of dishonesty,

while their lowest ranking was for non-sexual crimes of violence for which they ranked 27<sup>th</sup> out of 32. Compared with Aberdeenshire, Moray's ranking was equal or worse in all crime categories and compared with Angus, Moray's ranking was better in 2 categories, equal in 1 and worse in 2. In all crime categories, Moray's ranking was better than or equal to Scotland's.

### **Moray Environment**

Much of the natural environment of Moray is of national importance – the Spey, the Moray Firth and the Cairngorms. There are protective designations for scenery, habitats and ecologically rich areas. Moray is also one of the most forested areas in Scotland (28% of land under forestry, Scotland total is 15%). These can conflict with development pressures, the resolution for which is set out in the policies and proposals of the Moray Development Plan, which are underpinned by sustainable principles [15].

The Council has signed the Scottish Local Authority Climate Declaration [16]. The declaration links the council in common purpose with other authorities in Scotland along with the Scottish Government. The declaration is supportive of wider national, European and international initiative to address climate change. Locally, reducing carbon emission and identifying and adapting services to address the anticipated impact of climate change have been identified as areas for first action.

Moray has suffered from damaging floods over the last tens years, with significant disruption caused to residents and businesses in the area. There is currently commitment to providing alleviation schemes in Elgin, Rothes, Lhanbryde and Forres. The Council, in partnership with other agencies, are also acting on a number of 'sustainable, energy-saving' or 'green' initiatives designed to raise awareness and foster lower impacts.

Moray has a high dependency on car travel, with Moray having one of the highest rates of car ownership per household in Scotland. Road traffic (freight and car travel) has increased by 19% over the last 10 years, above the national average of 16%. However, Moray has a higher number of its workforce walking (17%) to work or cycling (6%) to work compared to the national averages (13% and 2% respectively).

The amount of municipal waste produced in Moray has increased (4%) over the last 3 years, although the proportion going to landfill has dropped and the amount being recycled has increased. Moray has reduced the amount of waste being landfilled by 13% since 2005/06, and has increased the amount of waste recycled by 48.5% over the same period. Moray met their 2008 recycling target, set by the Scottish Government, by March 2006 and continue to exceed future recycling targets set for the area.

## **Key Greener Themes**

The Greener Community Planning theme replaces the previous theme “Protecting and enhancing the environment”. The Scottish Government’s strategic objective in terms of Greener is to “improve Scotland’s natural and built environment and the sustainable use and enjoyment of it” [17]. In order to deliver this objective, the Moray Council has extended the remit of this community planning theme and intends to focus on 2 national outcomes: 12) we value and enjoy our built and natural environment and protect it and enhance it for future generations, and 14) we reduce the local and global environmental impact of our consumption and production.

The former Moray Environmental Forum (MEF) was formed in July 2004 to lead on the theme protecting and enhancing the environment. Its membership includes both local and national agencies with an interest in or links with the environment and related issues. Local members include The Moray Council, RAF Kinloss, The Findhorn Foundation and MVSO, while national members include Friends of the Earth, SEPA, Scottish Natural Heritage and Scottish Water. To help the MEF fulfil their role, it developed an Environmental Strategy for Moray, identifying 7 main areas for action and the various activities, projects and programmes undertaken in relation to each area.

### **1) Protecting and Enhancing our Environment**

#### **1.1 Environmental Education and Community Engagement**

The choices and decisions made every day, by the largest organisations down to individuals, have an impact on the environment around us. Environmental Education and Community Engagement are essential to both the implementation of Moray’s Environmental Strategy [18] and the success of any proposed environmental improvement. Increasing people’s understanding of environmental issues and the consequences of their actions will help to encourage more environmentally friendly behaviours and participation in positive action. If people are aware of the environmental issues that relate to their lives and how their actions may affect these issues, they are better able to make informed choices that will have a lower environmental impact.

In order to gain an indication of the levels of awareness and understanding of environmental issues in Moray, the Moray Community Planning Partnership (MCPP) commissioned a survey in April and May 2007, concerning environmental issues, to be completed by the Citizens’ Panel [19]. The survey consisted of a variety of questions looking at 6 areas: a) environmental issues and climate change; b) the impact of environmental issues on your life; c) i) roles and actions around environmental issues; ii) energy use; iii) visiting the countryside; and iv) Natural Heritage.

a) Promisingly, the vast majority of respondents indicated that the environment and environmental issues were important to them personally. Over half of respondents were very concerned globally, while less (1/3) were very concerned with environmental issues at a more local level. Despite the higher level of global concern, local issues such as recycling, maintaining the quality of towns and villages and protecting the local natural environment were the most important issues to respondents. Larger scale issues such as

pollution, use of natural resources and climate change were considered less important. Educating people about environmental issues was considered important by 66% of respondents.

Respondents indicated different levels of awareness of various environmental phrases, the most understood being "climate change". "Natural heritage" was also fairly well understood, but the terms "eco-footprint", "biodiversity" and "whole life cycle" were less familiar.

- b) The main changes that respondents had made to their lifestyles over the 12 months prior to the survey were relatively minor, such as saving energy by switching off household appliances, reusing shopping bags and using energy-saving light bulbs. However, there remained a substantial proportion of respondents who reported having made more significant changes to their lifestyles as a result of environmental concerns. For example, changes in transport use were mentioned by more than half of respondents; walking/cycling instead of using a car was mentioned by 55%, and using public transport instead of a car for work or other journeys by 36%. In addition, a substantial proportion of respondents had chosen more energy efficient appliances and/or composted their kitchen waste (57% and 44% respectively).
- c) Despite only  $\frac{1}{4}$  of respondents citing more action by the then Scottish Executive as important for tackling environmental issues, making it the lowest ranking of the 9 suggested measures, 86% felt that they should take a lead or at least significant role in tackling these issues, second only to the UK Government.

By far the most effective methods of disseminating environmental information to the public were deemed to be education/awareness-raising in schools and publication in the local press, mentioned by 87% and 83% of respondents respectively. Local newspapers were identified as the single most effective method of communication, being placed 1<sup>st</sup> by 35% of respondents.

A major initiative focusing on the education and involvement of children and young people in environmental issues is the Eco Schools Programme. This is "*an international project designed to encourage whole school action for the environment. It is a recognised award scheme, rewarding and accrediting schools that have made a commitment to continuously improving their environmental performance*".

To date, a total of 46 schools have been awarded a bronze award, 26 have received a silver award and 4 have received the Green Flag award, 3 primary – Cabrach, Applegrove and St Thomas RC – and 1 secondary, Forres Academy. Cabrach Primary has recently received its 2<sup>nd</sup> Green Flag award, confirming that it has maintained and extended its environmental programme during the 2 years since the initial Green Flag award. Once a school has been awarded 4 Green Flags, it receives permanent Green Flag status.

Moray's schools have undertaken a wide variety of projects as part of the Eco Schools scheme. Litter duties, recycling schemes, composting, energy saving, travel plans encouraging pupils to walk or cycle to school, tree planting, participation in the Rag Bag Recycling scheme and an initiative called Salmon to School where the pupils look after salmon eggs until they hatch, when they are returned to a local river.

In 2005, the Moray Sustainability Forum produced the "Sustainability Handbook for Moray", which was a simple guide to the complexities of sustainable development and advice on what individuals can do if they are interested in or concerned about the issues raised. Sustainable development must be embedded in all planning and decision-making processes in Moray and it is the intention to produce guidance for developers on reducing energy requirements in new developments and sustainable construction techniques.

Moray Bio-Energy Centre is a Social Enterprise, recently set up to provide educational and research facilities in the production of renewable energy, using locally sourced products from Farm and Forestry for Community groups, as well as assisting in reducing fuel poverty.

The Waste Education Officer attends various community events through the year to raise awareness of environmental issues. The major annual environment event in Moray is the Moray Environment Festival which was first held in the Elgin Town Hall in 2007, attracting a large attendance of over 600 people. [20] The festival, organised by Moray Council, targeted businesses and residents throughout the area. Experts were on hand to pass on tips, including ways to cut energy bills and how children could become involved in protecting the environment. The Waste Education Officer also hosts workshops and talks throughout the year at various venues including schools, fetes, galas, libraries, Community Councils, Tenant Forums, Youth groups and agricultural shows.

The Rural Environmental Action Project (REAP) is a local sustainable development charity based in Keith. The group administer the Moray Community Grants Programme on behalf of HIE Moray. During 2007/08 funds were approved for 15 Community Projects including 6 environment-related projects. These include feasibility studies for Strathbogie and Cabrach trails; a footpath development between Keith and Huntly; Moray Wildlife on the Move; and photovoltaic panels for the roof of the Moray Arts Centre.

### Summary & Emerging Trends

- The environment and related issues are important to the vast majority of respondents, at all levels from locally to globally.
- More public concern is considered the second most important action for tackling environmental issues.
- The majority of respondents did consider how their lifestyle impacted on the environment and believed that they should be taking action and that there was plenty they could do.
- The most effective methods of communicating environmental information were felt to be education/awareness-raising in schools and publication in the local press.
- 100% of Moray's schools are now registered on the Eco Schools programme
- Support for community groups is provided by REAP, HIE Moray and the SDRC

### Future Considerations

- How to raise the profile of Climate Change, Carbon Management and Sustainable Development amongst community planning partners and Moray's communities
- What are the most important issues and actions to promote through community engagement
- How to identify and support grass roots concerns and activities
- Identify and implement initiatives that result in behavioural change

## **1.2 Natural and Built Environments**

Moray has a high quality environment, recognised by international, national and local designations. These can conflict with development pressures, the resolution for which is set out in the policies and proposals of the Moray Development Plan, which are underpinned by sustainable principles.

Moray's natural and built heritage includes 2,681 archaeological sites, 79 schedule(d) monuments, 1665 listed buildings, 17 conservation areas, 7 historical gardens and designed landscapes (1.4% of Moray area), 1 local nature reserve, the Speyside Way Long distance route , 2 Ramsar sites, 39 sites of special scientific interest (SSSI) (9.8% of Moray area), 10 special areas of conservation and 4 special protection areas. Also significant to Moray is the Cairngorm National Park, of which 17% is located within the Moray boundary and plays an important role in the Moray environment. [21]

The quality of Moray's natural heritage has been recognised at the European level through the designation of the Cairngorm's National Park, the Special Protection Areas, and Special Areas of Conservation. Moray contains 39 sites of Special Scientific Interest which are sites of key nature conservations and wildlife importance. Moray also contains a number of Areas of Great Landscape Value and the Cairngorms National Scenic Area.

The Cairngorm Mountain National Scenic Area is one of 40 in Scotland [22] which are nationally important areas of outstanding natural beauty and the Cairngorms represents one of Scotland' best examples of mountains and lochs landscapes. The Cairngorms National Park became operational in September 2003 and is Scotland's second National Park and the largest in Britain [23].

As well as the Cairngorms other areas of important natural environment include the Spey and the Moray Firth. Rich in semi-natural habitats, Moray includes part of the Cairngorms National Park and the Moray Firth's rich marine ecosystem. There is an impressive diversity of often iconic species, such as capercaillie and wildcat, and habitats such as threatened peat bog. Though dominated by intensive farming and forestry, the lowlands host much nature-based recreation, renowned geological sites, and the largely undeveloped coast. Further inland the mix of moorland, river straths, farming, forestry and tourism make semi-natural habitats and landscape critical to the local economy. [21]

Sporting estates carry challenges such as managing for red deer and birds of prey, and the benefits of diversified native woodland and plantation management are increasing. Moray gives locals and visitors exceptional opportunities to enjoy the natural heritage. However there is great potential for increasing countryside access and education, especially in the less-frequented uplands. [21]

Moray is one of most forested areas in Scotland (28% of land under forestry, Scotland total is 15%). Moray Forest District manages Forestry Commission Scotland forests from Culbin in the west through to Aultmore by Keith in the east and southwards down to Glenfiddich and around Grantown – an area of around 23,000 hectares of land [24].

The Moray Council has one of the highest concentrations of Listed Buildings in Scotland. At April 2007 Moray had 1665 listed buildings and 17 conservation areas. Collectively, this heritage contributes greatly to the Moray character and provides a sense of place. The

educational, tourist and recreational value of this heritage is undoubtedly and the quality of life is greatly enhanced by it. [15]

The conservation, enhancement and promotion of Moray's built heritage is therefore important. In particular, this will mean safeguarding listed buildings, ancient monuments, archaeology and designed landscapes and to retaining buildings, townscapes and artefacts which are part of Moray's character and identity.

As part of this process it will be important to maintain a programme of improvement schemes in partnership with other funding bodies to tackle the worst areas in Moray's built environment which are in need of enhancement, giving particular attention to community regeneration.

### **Local Environments**

From the Citizens Panel survey in 2007 [19] there was a public perception of poor standards in litter, and dog fouling controls. The public perception is not borne out by the national cleanliness indicator in which Moray was top from 2004 to 2006 and remains in the top quartile. There was a drop in scores during 2006/07 however levels in 2007/08 are back to previous standards, although the ranking will not be available until December 2008.

Under the Litter Code of Practice and the Local Environmental Audit Management System (LEAMS), the Council has a statutory duty to keep roads, footpaths and public open spaces free from litter and must conform to the standards and response times set therein. The LEAMS allows for direct comparison with other authorities with Moray being ranked 6<sup>th</sup> equal with six other authorities in 2006/07. [25]

Communities take great pride in the presentation of their villages and it is a great tourist attraction. Forres and Duffus won the Silver Gilt award in 2007 in the Britain in bloom awards. Duffus was also awarded the Environmental Quality Award.

The council serve Tree Preservation Orders (TPOs) on potentially vulnerable trees which are of significant amenity value to the community as a whole, or trees of significant biodiversity value. Currently there are 31 TPOs in place, which are reviewed and served on a continual basis.

There is a shortage of sports and leisure facilities within Moray, particularly football pitches and the Council will address this issue over the lifetime of the agreement. Currently there are 73 football pitches, 13 hockey and 6 rugby fields in Moray (most of which are within school grounds).

### **Summary & Emerging Trends**

- There is continuing pressure from the development or other changes on Moray's high quality environment
- The environment is a significant factor in attracting people to live or visit Moray

### **Future Considerations**

- How the Partnership will maintain and enhance the natural and built environment

## **2) Environmental Impact**

### **2.1 Energy and Climate Change**

The Scottish Climate Change Bill is intended to provide a long-term framework for future action in Scotland. The Bill seeks to create mandatory climate change targets to reduce Scotland's emissions by 80% by 2050 and will create new legislation to do so. [26]

The Council signed the Scottish Local Authority Climate Change Declaration in January 2007 and in doing so committed to provide a Climate Change Action Plan to achieve significant reductions in greenhouse gas emissions. Furthermore identify and prepare adaption plans for services to address the anticipated impacts of climate change. The preparation of the plan is ongoing with community planning considering the most efficient means for delivery of forthcoming actions and outcomes.

Moray has extensive forestry coverage, which acts as a 'carbon sink' and gives potential for a biomass market. The community plan partners are acting on a number of 'sustainable, energy-saving' or 'green' initiatives designed to raise awareness and foster lower impacts. For instance:

- accommodated windfarms in conformity with national policy guidelines in its Development Plans and direct developments to appropriate sites through wind energy.
- a Development Plan, which promotes sustainable development, practice, and requires developers to demonstrate carbon emission reductions in development.

There has been and continues to be significant investment in renewable energy technology, in particular onshore wind energy, to meet the Scottish Government's renewable energy targets. Currently Moray hosts three operational wind farms (Paul's Hill, Cairn Uish and Findhorn) and with several proposed wind farms in the planning and application stages. The issues faced by The Moray Council are to balance the positive benefits of renewable energy against the possible negative impacts upon the landscape, ecology and amenity value of the local area.

Buckie High School were due to have solar PV panels fitted during the summer break to become the first council building to have any renewable generation capacity.

The Council have completed a successful trial converting two vehicles, one being an 18 ton kerbside lorry, to run on cooking oil from Moray Schools. This has proved financially viable as well as environmentally friendly. School kitchens in Moray use around 200 litres of cooking oil every month and the waste was previously taken south by tanker for reprocessing along with oil from schools and restaurants throughout the north and northeast. The council are now taking a waste product and using it to power council vehicles and are also able to use recycled parts for the vehicle conversion systems. Staff using the vehicles have reported that performance is unaffected while early results have demonstrated that fuel consumption is on par with diesel. Future plans to convert further fleet vehicles would help to reduce the CO<sub>2</sub> emissions from the council vehicles which was estimated to have been over 3.5 million (kg) of CO<sub>2</sub> during 2007. [27]

In 2004 11.5% (13.2% in 2005) of the electricity generated in Scotland came from renewable sources (total of figures for hydroelectric (natural flow) and "other renewables"

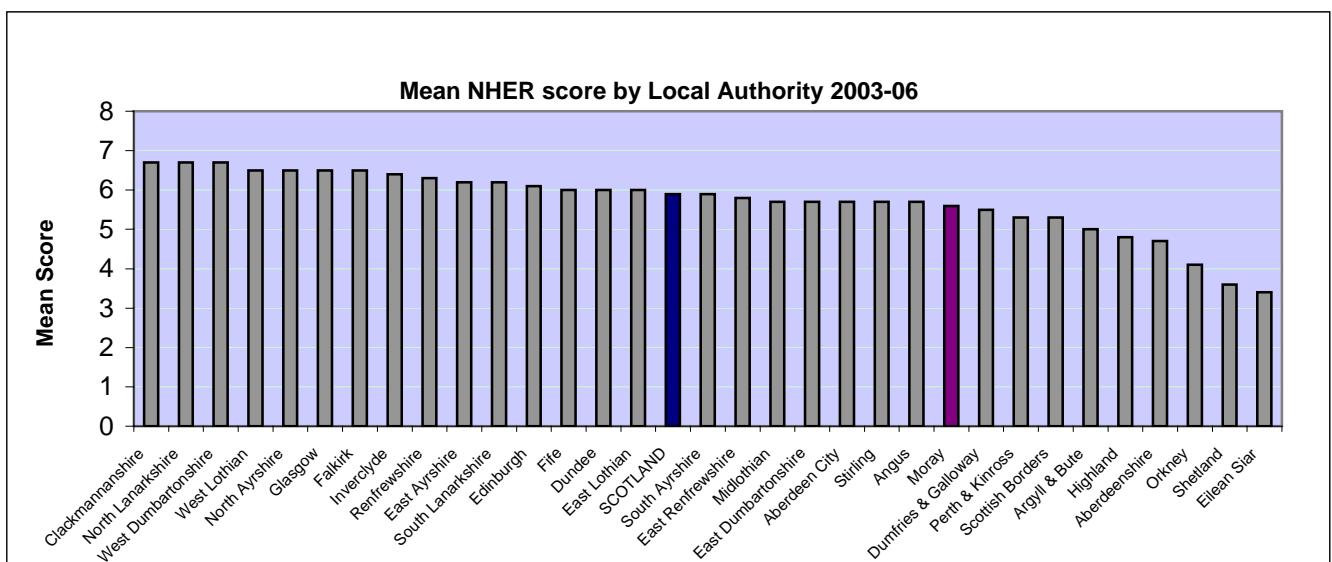
(wind, wave, solar & thermal) as a percentage of total generated) [28] with the percentage generated by other renewables (wind, wave, solar & thermal) increasing from 0.6% in 2000 to 2.6% in 2004 and 3.8% in 2005. [28] As part of the Climate Change Programme the Scottish Executive has set a target that 18% of electricity generated in Scotland by 2010 should be from renewable sources rising to 40% by 2020 [26]. The Scottish Government requires local authorities to develop strategies which will achieve an improvement in energy efficiency in housing by 2010. By 2001 The Moray Council had achieved an improvement of 8% with a target of 30%. Achievement by 2005 was 16.89%.

### Efficient Energy use in the Home

In global terms, Scotland is a high energy consumer and demand is growing. In the 10 years to 2002 the demand has risen by 9% [29] and the Scottish House Conditions Survey (2006) shows that Scotland's housing exhibits poor or moderate levels of thermal efficiency and high levels of fuel consumption [30].

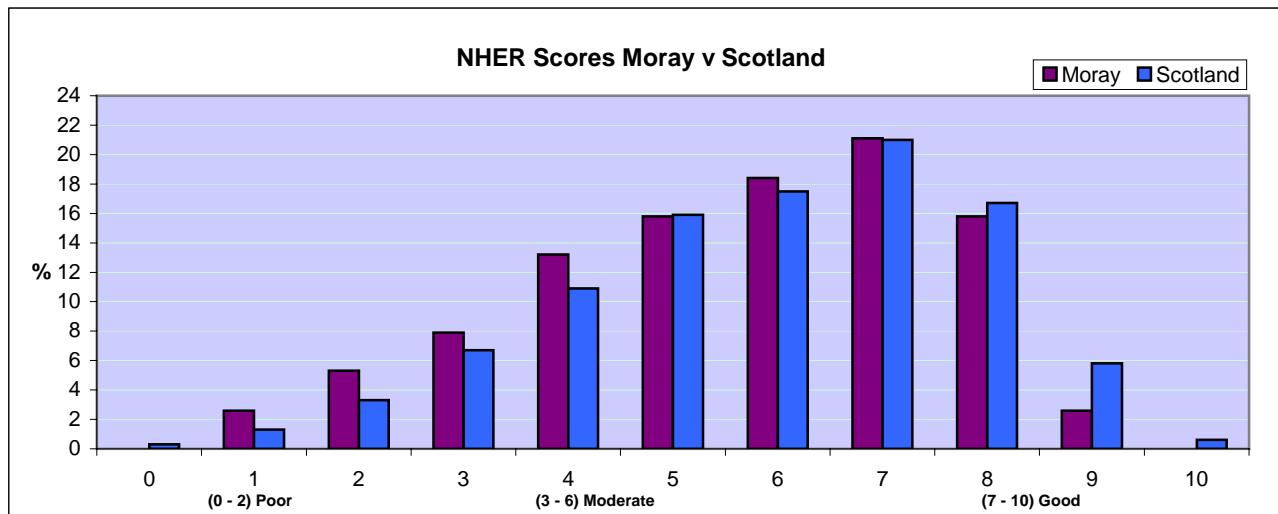
One of the main tools used to measure energy efficiency in the home is the National Home Energy Rating (NHER). The NHER is the most commonly used in Scotland as it considers all energy use and allows for regional and geographical variations. The Scottish Household Condition Survey uses the NHER to rate dwellings on a scale of 0 (poor) to 10 (excellent) based on total energy costs per square metre of floor area.

Over the period 2003 to 2006 Moray lagged behind the Scotland average in the NHER scale with a mean rating of 5.6 compared to the national average of 5.9. This placed Moray as 23<sup>rd</sup> out of the 32 local authorities on energy efficiency in the home. The NHER rating chart below shows where Moray are in comparison with the other Scottish local authorities and the Scottish average. The rating incorporates all the housing stock in Moray, both social and private housing [30].



Breaking down the NHER scores further Moray has a greater number of houses in the moderate (3 – 6) range with 55% compared to a national average of 51%. However Moray has a higher level of houses in the poor energy rating with almost 8% against the national figure around 5%, and Moray performs below the national average of houses classed as

having good energy efficiency with just under 40% compared to the national average of 44%.



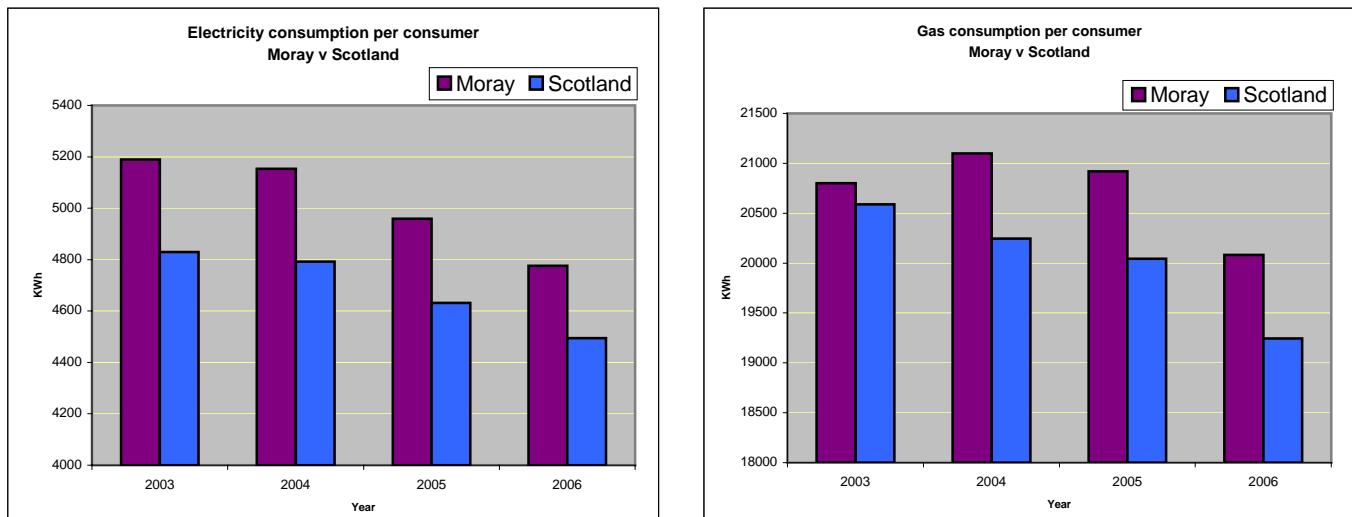
Further analysis of the NHER data shows that there is a marked difference in the energy efficiency of social and private sector housing stock in Moray. The council housing stock actually has an average NHER rating of 6.7, well above the overall rating of 5.6 [31]. The high NHER rating has been achieved through programmes of insulation, draughtproofing, heating replacements and other related efficiency measures which have been installed through the Moray Care & Repair scheme, operated by Castlehill Housing Association in partnership with the council.

It is further evident from the table below that the major contributor to the housing energy reductions is the councils' own stock, where Capital and Planned maintenance Programmes have realised direct reductions of over 42% in energy use, and 44% in CO<sub>2</sub> emissions since 1997. Other residential sectors have also shown improvements over the period, however it is clear that less progress has been made due in the main to other sectors requirement to self fund the installation of energy saving measures. There has been an overall reduction in energy use of 20.58%, 3.42% below the agreed target of 24% set with the Scottish Executive [32].

TENURE / LANDLORD	YEAR	NUMBER OF HOUSES	ENERGY USE	CO2 EMISSIONS
Owner Occupier	2007	22,539	2,417,076	167,539
	1997	22,539	2,905,008	203,353
		<b>Reduction %</b>	<b>16.79</b>	<b>17.61</b>
Local Authority	2007	8,582	451,362	33,479
	1997	8,582	786,965	60,704
		<b>Reduction %</b>	<b>42.64</b>	<b>44.84</b>
Private Rented	2007	2,771	400,678	32,365
	1997	2,771	440,290	35,799
		<b>Reduction %</b>	<b>8.99</b>	<b>9.59</b>
Other	2007	1,664	139,883	10,704
	1997	1,664	149,064	11,472
		<b>Reduction %</b>	<b>6.15</b>	<b>6.69</b>

Moray has a relatively high level of energy consumption for domestic use compared to other Scottish local authorities. In 2006 Moray was the 10<sup>th</sup> biggest consumer of gas for sales per consumer in Scotland, and the 12<sup>th</sup> largest consumer of electricity for sales per consumer during the same period.

While the level of gas consumption in Moray has decreased by 3.5% from 2003 to 2006, compared to a national reduction of 6.5%, Moray consumption continues to remain above the national average by over 4% since 2004. In 2006 Moray used around 20,081 KWh gas per consumer, 4.3% above the national figure of 19,245 KWh [33].



The domestic consumption of electricity reflects similarly with gas consumption, with Moray residents consuming above the national average. Moray has consumed on average between 6 to 7.5% above the Scottish average since 2003, although Moray has reduced consumption by 8% from 2003 to 2006 compared to a 7% reduction nationally. In 2006 Moray used around 4,776 KWh of electricity per consumer, 6.3% above the national figure of 4,494 KWh [33].

Part of the Moray Citizens' Panel questionnaire on 'Protecting the Environment' [9] asked for residents views about the impact of individuals' energy use in the home. Fewer than 1 in 10 respondents indicated that they had undertaken an "energy audit" on their home (9%). The majority of those who had carried out audits found the exercise worthwhile. Although more than half of respondents indicated that they knew at least "a little" about what an energy audit involved (57%) there remained nearly 1 in 3 who had never heard of an energy audit.

47% of respondents indicated they had installed one or more energy saving measures in their home in the last 12 months. The most common energy saving measures in the home was the installation of:-

- a) additional loft insulation (48%)
- b) more energy efficient heating system/boiler (47%)
- c) double glazing (46%) (section 5.7)

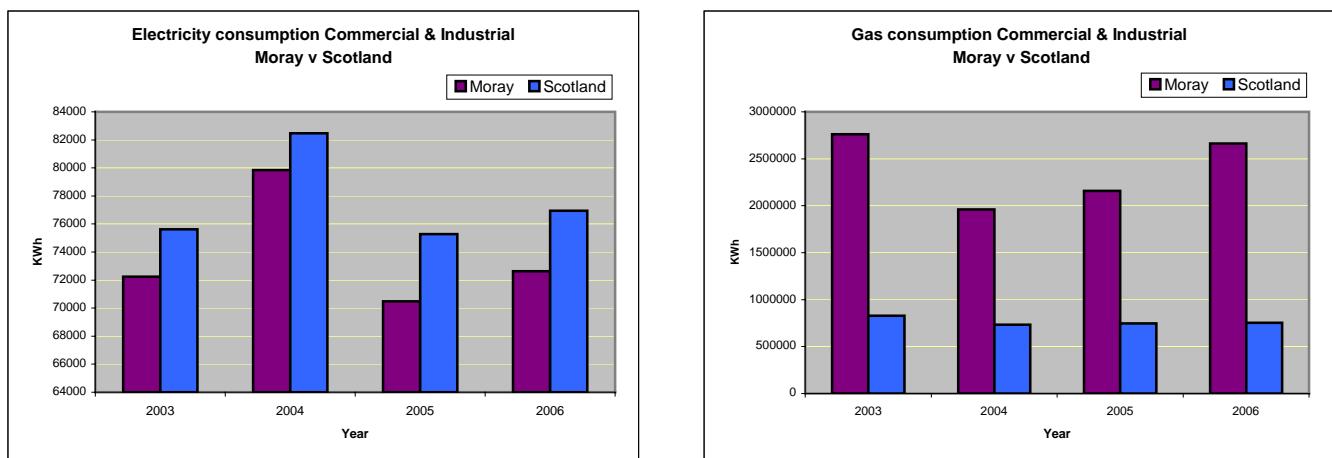
The only other measures mentioned by a substantial number of respondents were cavity wall insulation (14%) and water conservation (7%).

The key motivating factor for installing energy saving measures was to reduce home energy costs. 96% of respondents regarded reducing energy costs as either very important (83%) or fairly important (13%). Only 28% of respondents noted environmental concerns as a very important reason to install energy saving measures, while 51% regarded it as a fairly important reason. 18% of respondents actually saw environmental concerns as fairly unimportant or 'not important at all' when considering energy saving measures.

The major barrier to installing energy saving measures was the likely cost of introducing the measures. 87% (net rating) of respondents regard cost as the biggest barrier. A lack of awareness of grants or help available to install energy saving measures was also identified as an important barrier (+65% net rating), as was grants not being available or respondents not being eligible for assistance (55%). Clearly those are significant issues in light of respondents rating the cost of introducing measures as the most important barrier. A lack of awareness of the measures available was also identified as a significant barrier, with a net rating of +58% [19].

## Efficient Energy use in the workplace

Energy consumption by the commercial and industrial sector within Moray shows a significant variation between gas and electricity use. Commercial and industrial businesses throughout Scotland use a considerably greater proportion of gas than electricity, this is particularly evident in Moray.



It is evident that the Moray commercial and industrial sector is heavily reliant on gas to power its operations. By 2006 Moray was the biggest user of gas (sales per consumer) out of all Scottish local authorities with an average consumption of 2,663,630 KWh, just under 100,000 KWh more than North Ayrshire (2<sup>nd</sup> highest gas consumer) and over 250% greater than the Scottish average of 752,127 KWh [33]. The exceptional reason for the significantly high gas consumption rate could be linked to the large number of whisky distilleries located in Moray. Gas is the main power source for the 52 distilleries in Speyside.

The Moray Council have set in place various energy saving measures throughout council buildings in a bid to meet its 'Carbon Reduction Commitment' in cutting carbon emissions and reducing energy costs. The council have introduced a number of energy saving measures aided by funding through the Central Energy Efficiency Fund (CEEF) and the Spend to Save fund. Since September 2005 almost £200,000 has been spent on projects, with anticipated efficiency savings of £60,000 per annum through the new measures. A further £300,000 has been earmarked for future council projects that will yield further cost savings and reduce carbon emissions. Projects vary in size from timer controllers on drinks machines to the installation of Building Energy Management Systems at the large sites [32].

Under the Carbon Reduction Commitment the council are required to report on the electricity consumption for buildings where half-hourly electricity meters are required. If the council meets or exceeds the consumption threshold of 6,000 MWh (of electricity), it will be required to report on the total energy use emissions, except transport (i.e. all electricity, gas, other fuels). Therefore there is an incentive to have an energy consumption that is below 6,000 MWh threshold. If the Council were to exceed the target at the end of 2008 there may be significant financial repercussions for the council [32].

81% of respondents to the Citizen Panel acknowledged that their employers had in place measures for paper recycling, while 68% found their employers promoted energy saving through switching off lights, monitors, pc's etc.

Respondents who indicated that their employer monitored energy use (32%) were the most likely to give their employer a positive overall energy efficiency rating. In particular, more than three quarters of these gave a positive rating (77%), compared to fewer than half of those reporting that their employer recycles paper [19].

### **Flood alleviation**

Moray has been subjected to a series of major flooding incidents since local government re-organisation in 1996. Major damage has occurred in the communities of Elgin, Lhanbryde, Forres and Rothes. Our communities live with the threat of flooding and the viability of major businesses continues to be at risk until major flood alleviation schemes are constructed. The construction of flood alleviation schemes is the Council's highest priority and assistance from government is required to ensure that funding is available to construct schemes at the earliest opportunity. The Council have sought assurances from government that funding will be provided for flood alleviation schemes and that flooding legislation will be simplified. Even with this funding the schemes will impact heavily on all services provided by the Council given its drain on the capital and revenue programmes.

It is estimated that by 2100 winters will be up to 30% wetter in some places, while summers will be up to 50% drier. In the nearer future it is predicted that by 2020 winters along the east coast will be up to 10% wetter than present. Such precipitation changes will have several implications for Scotland and Moray in particular, affecting water resources, causing further flooding and drought risks, and habitat destruction [34].

Damaging floods in 1997 and 2002 have necessitated expensive Flood Schemes in Elgin, Forres, Rothes and Lhanbryde. In 1997 floods in Moray caused, 1200 people to be evacuated from 400 homes in Elgin area. The damage cost to the Council directly was calculated at more than £3.5m. In April 2000 flood damage cost a further £600,000. In 2002 flooding caused £3.2m damage to council properties. The losses to business and industry over the same period came to tens of millions of pounds, and the flooding risk continues to threaten the viability of many businesses in the Moray area.

Flood alleviation schemes are essential to prevent or deal with future high water levels. The council have put in place Flood Alleviation Schemes (FASs) for the main communities affected by flooding.

The following schemes have been identified as priority, current progress is also shown:

- Lhanbryde FAS is complete and operational
- Elgin FAS due to commence construction Mid 2010 with completion due Mid 2013
- Forres (Burn of Mosset) FAS is under construction and for completion by October 2009
- Forres (Findhorn & Pilmuir) FAS due to commence construction February 2009
- Rothes FAS due to have construction complete by December 2010.

Good progress has been made on the Forres (Burn of Mosset) and Rothes schemes, with construction underway. However both the Elgin and Forres (River Findhorn and Pilmuir)

schemes have attracted objections at the planning and Flood Prevention Order stage. This will most likely lead to delays in construction starts.

There is a shortage of available land and premises for business start-ups, and for businesses displaced by FASs.

### Summary & Emerging Trends

- Energy consumption and carbon emissions are major issues in Moray's Climate Change concerns
- NHER rating suggests Moray has a significant number of houses with poor or moderate thermal efficiency and energy costs, particular in the private sector
- Whilst more emphasise is being placed on energy reduction, there is sometimes a lack of awareness of the opportunities to achieve this, or what assistance and support is available
- Biggest barrier to people investing in installing energy saving measures in the home is the cost
- There are increasing numbers of examples of good practice and projects dealing with the use of energy or scarce natural resources
- Flood Alleviation Schemes are in progress or are planned but can have delays on implementation
- Potential of financial repercussions if the Council does not meet Carbon Reduction Commitment (at half-hourly sites)

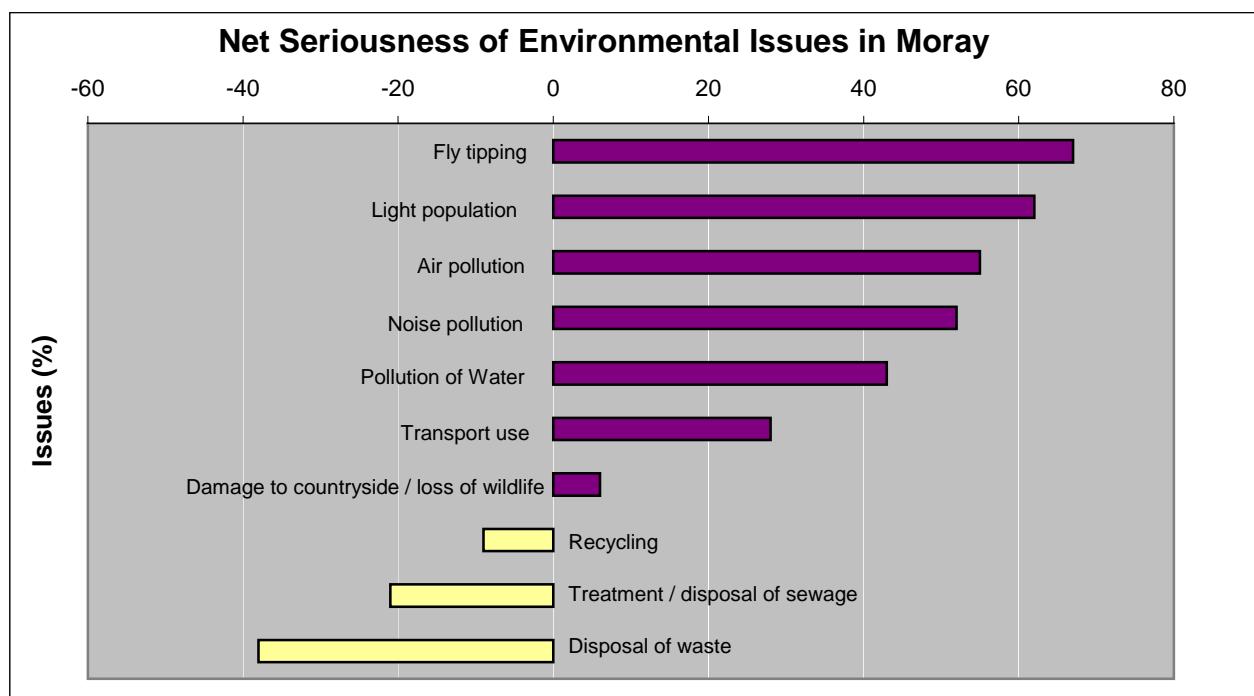
### Future Considerations

- Threat of flooding and shortage of land for businesses displaced
- How to increase awareness of and achieve reductions in energy and resource consumption

## **2.2 Pollution**

The Citizen's Panel responses showed that the impact of fly tipping, disposal of household waste, treatment and disposal of sewage and recycling were identified as serious problems by all areas. However, there were notable area variations in views of noise pollution, air pollution and pollution of water. Respondents from the Lossiemouth area were the only group to see noise and air pollution as a serious problem. These respondents, together with those from the Buckie area were also most likely to see water pollution as a serious problem.

Panel members and 2002 survey respondents were very similar in their views that treatment/disposal of waste and damage to the countryside were serious problems. Panel members were much less likely than 2002 survey respondents to see air and water pollution to be a serious problem, being 50% less likely to mention air pollution and 17% less likely to mention water pollution as problems [19].



(figure 5 Citizen Panel May 2007)

### **Summary & Emerging Trends**

- Citizen Panel responses show that various aspects of 'pollution' continue to cause concern

### **Future Considerations**

- How to deal with pollution through raising awareness, education and advise, or regulatory processes

## **2.3 Transportation**

### **Sustainable Transport**

Transport infrastructure in Moray requires to be developed in order to facilitate the movement of goods and people to and from Moray. Moray has a high rate of car dependency and therefore it is a priority for residents to be able to get to their destinations. The higher rate of car dependency may be linked to the ‘rural’ nature of Moray, with the area classified as mainly ‘accessible rural’ or ‘remote rural’, where the level of ‘everyday’ drivers is 53% and 49% respectively, compared to 33% for ‘large urban areas’.

Moray has a significantly higher availability of cars per household than the national average with only 18% of households in Moray having no car compared to 32% in Scotland. During 2005/06 61% of the Moray workforce took their car to work, 6% below the national average of 67% [35]. According to the last Census 2001 in Moray the majority of people (53%) travelling to work or study, travelled less than 5 km. Of the 53% who travel less than 5 km to work, 44% of those actually travel less than 2 km. 13% of people travelling to work or study travelled over 20 km.

From 2004 to 2007 vehicles in the Moray area have travelled an average total of over 718 million vehicle kilometres per year. During 2007 it is estimated that council staff travelling to work by car clocked up nearly 4.5 million km, which equates to 937,000 (kg) of CO<sub>2</sub> emissions.

As an alternative to car use, rail and bus services can be accessed though they are limited. There are typically 10 through trains in each direction on weekdays. In 2002/03 there were 325,876 rail journeys made to and from ScotRail stations in Moray, increasing to 405,082 rail journeys in 2006/07. Moray is served by an hourly bus service between Inverness and Aberdeen that connects communities along the A96. There is also an hourly service linking Inverness and Aberdeen along the Moray coast.

The Moray Citizen Panel Survey on Travel and Transport (May 2006) identified the main barriers to using public transport was the ‘infrequency of local bus services’ and ‘the lack of appropriate services’. They also noted that for 2 in 5 respondents having a car for their work was important due to unsuitable public transport for the hours of their work [36].

Moray has a high number of people travelling to work by bicycle or walking compared to the Scottish average. The Scottish Household Survey (2005/06) found that 17% of the Moray workforce walk to work compared to the national average of 13%, while 6% cycle to work compared to only 2% nationally. The higher proportion of Moray workforce using these active modes of travel is encouraging and with an estimated 44% of workers living within 2km of their workplace these numbers could be increased [37]. Initiatives to promote active transport and reduce car usage could be encouraged through increased bicycle storage facilities, improved cycle paths and walking routes, showering facilities within council buildings etc.

Freight movements to and from Moray involve road, rail and sea. The volume of lorries using key roads is adding to the pressure of almost 24,000 vehicles a day heading into Elgin on the A96 from the east and over 16,000 from the west. A further 9,800 journey in from the north and 6,200 from the south [38]. Traffic volumes are 10% higher during the peak summer holiday season. Over the past ten years road traffic has grown by almost

19%. This is greater than both the Scottish average (16%) and that for the two neighbouring authorities.

Currently 83% of Moray Schools (45 Primary and Secondary) are 'engaged in travel planning process', 15% with 'completed' travel plans. A survey in February 2007 of schools in Moray showed that on average 56% of pupils walk or cycle to school with the balance being transported by bus and car.

The use of buses and rail travel may appear low compared to the Central Belt and other more urbanised parts of Scotland. Despite the fact that Moray is a rural, peripheral area with a relatively high car ownership rate, by necessity, it is encouraging that numbers of rail and bus passengers are increasing steadily year by year.

### Summary & Emerging Trends

- Moray is a rural area and depends on road travel for business
- Increasing costs of private and business transport require consideration of alternatives
- Carbon emissions from vehicles is a significant factor in Moray's eco-footprint
- Moray has far more people using bicycles and walking to work than the national average

### Future Considerations

- How to encourage shifts from the use of cars and lorries to more suitable forms of transport, providing viable alternatives
- Increase the opportunity for more active travel with further initiatives and incentives for workers and the public

## **2.4 Waste Minimisation and Resource Use**

### **Waste Management & Recycling**

The National Waste Plan sets out the direction in which local authorities should manage their waste in accordance with the Waste Hierarchy and its basic principles.

In Scotland 7.32 million tonnes of waste were landfilled in 2005 and Biodegradable Municipal Waste (BMW) accounted for 1.54 million tonnes (21%) of this total. BMW items such as paper and card, textiles, food and garden waste decompose and release the greenhouse gases methane and carbon dioxide. The EU Landfill Directive (1999/31/EC) requires a reduction in the amount of BMW sent to landfill. The target for the amount of BMW sent to landfill is 1.32 million tonnes by 2010 falling to 880,000 tonnes by 2013 and 620,000 tonnes by 2020.

The Scottish Executive set targets for all Local Authorities for the recycling and composting of municipal solid waste as follows: 25% by the end of 2006, 30% by 2008, 40% by 2010 and 52% by 2020. In 2005-6 24.4% of all waste collected by or on behalf of local authorities in Scotland was recycled. Moray achieved the Scottish Executive target for 2008 during 2005/06 with an actual figure of 30.9%, which was 7% up from the previous year, placing Moray in the top quartile across Scottish authorities (8<sup>th</sup>). The Council's ability to achieve a higher recycling percentage in future will rely on the availability of additional funding.

In Moray, during 2005-6 a total of 3.848 million refuse collections dealt with almost 62,000 tonnes of combined household and commercial waste (municipal solid waste). The 1.7 million recyclable collections, together with the material collected at the 7 recycling centres and 60 recycling points, ensured that 18,995 tonnes of waste was recycled rather than buried in 2005/06. Each household in Moray produced, an average of 1.19 tonnes of waste and of the 76% of households offered a kerbside collection, an average of 112 kg was recycled. This compares with the Scottish average of 71% households offered kerbside collections with an average of 123kg recycled per household.

The Moray Council's Kerbside collection, of green waste and dry recyclables including bottles, cans and paper, was introduced in September 2004 to households in Forres and Kinloss. The service spread to Elgin, Keith, Buckie and other settlements with over 500 households by March 2006 and in August 2006, the Council approved an extension of the service to Mosstodloch and Portgordon with further extensions of the service as resources allow.

The Scottish Executive has set targets under the EU Landfill Directive through its Landfill Allowance Scheme (Scotland) Regulations to divert biodegradable municipal solid waste (BMW) from landfill. Each local authority has been given a reducing allowance which they may landfill each year and to date these targets have been met and surpassed. The target for Moray for 2007/08 was 27395 tonnes with the actual amount being landfilled was 21290 tonnes.

Final disposal of waste residues that cannot be reused or recycled will continue to be disposed of at the Council's landfill site at Nether Dallachy. Recent work has been carried out at the landfill site to harness electricity from the gases produced through the decomposition of household waste. A complex series of pipes and manifolds buried deep

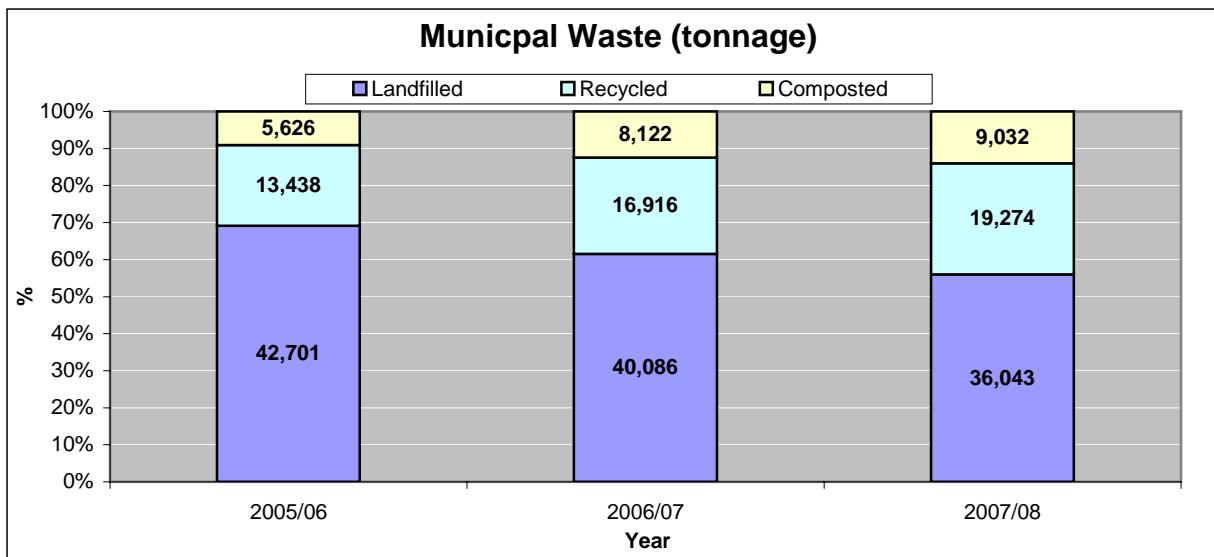
at the Nether Dallachy site are able to extract and convert the otherwise damaging gases (CO<sub>2</sub>) into electricity with the capacity to power 1,300 homes in the moray area.

The percentage of households participating in Home composting has seen an increase in Moray since the introduction of the promotional campaign in 2005/06 and currently stands at 15%. Waste Resources Action Programme (WRAP) is now responsible for the promotion and sale of composters across Scotland.

### **Recycling & Landfill**

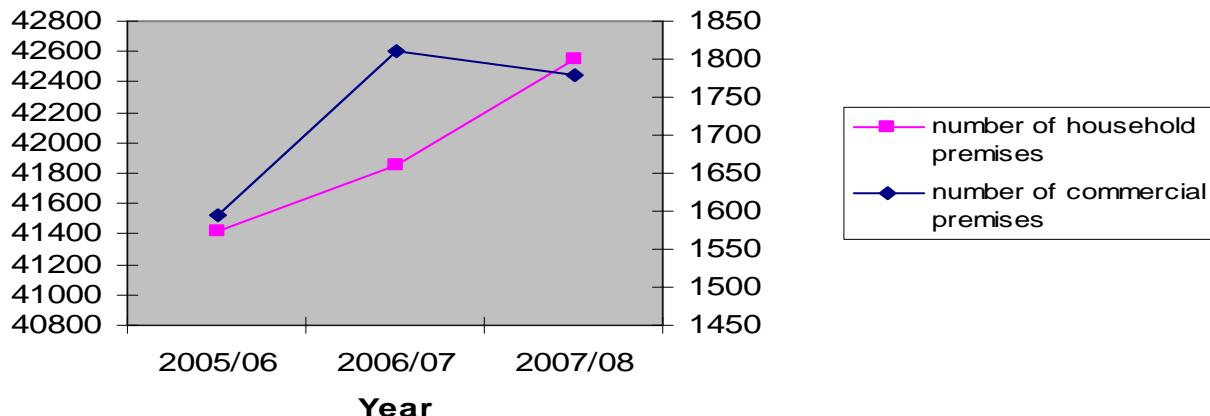
Landfill rates are lower than national average, and recycling rates higher. In 2007/08 the tonnage of municipal waste collected was 64,349. 56% of this total was then landfilled as opposed to 69.1% in 2005/06. Over the last three years there has been a rise in the proportion of municipal waste recycled from 30.9% in 2005/06 to 44% in 2007/08. There has been an overall volume increase in recycled waste of 48.5%, with recycling increasing by 43.4% (13,438 to 19,274 ton) and composting by 60.5% (5,626 to 9,032 ton).

Waste Collected	2005/06	2006/07	2007/08	%Change
Total tonnage of waste	61,765	65,124	64,349	+ 4%
Recycled tonnage (Composted and Recycled)	19,064	25,038	28,306	+ 48.5%
Landfilled tonnage	42,701	40,086	36,043	- 15.6%
Total biodegradable waste landfilled	26,224	23,554	21,290	- 9.4%
Recycling	30.9%	38.5%	44%	+13.1%



The actual volume of waste in Moray has increased by 4% from 2005/06 to 2007/08, although there was a slight drop over the last year of 1.2%. The number of household and commercial premises will have a direct bearing on the amount of waste. Over the past three years there has been a steady increase in the number of household premises (2.7%) and an overall increasing trend in the number of commercial premises (11.5%). The aim is to try to negate the increase in waste arisings due to new house build and keep waste arisings to the baseline figure.

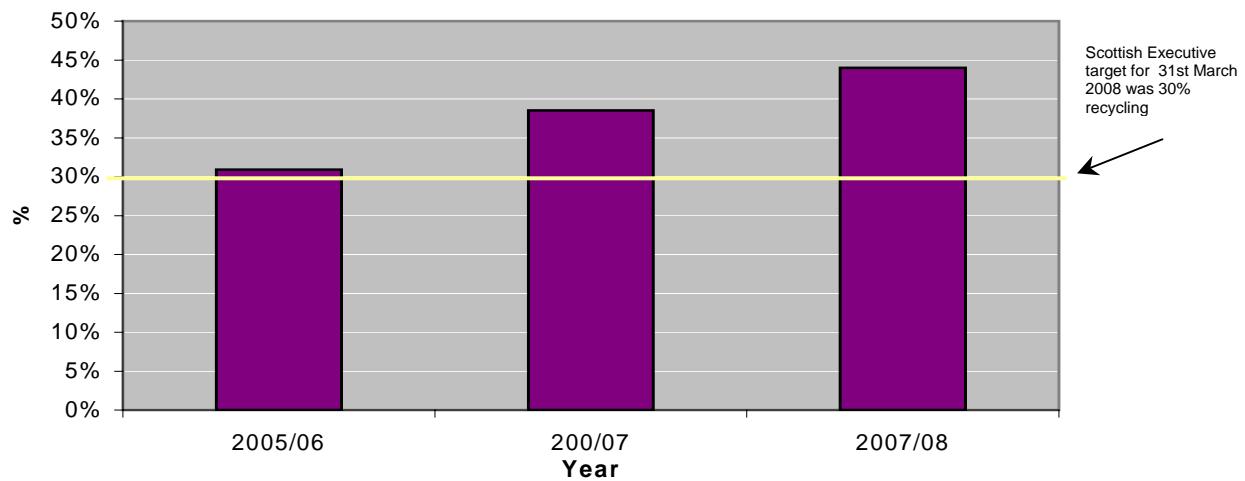
### Number of Properties 2005/06 to 2007/08



Moray has met the Scottish Government targets for reducing the amount of Biodegradable waste put to landfill. The target for 2009/10 for Moray is set at a maximum of 25,437t, Moray has already surpassed the target with 21,290t biodegradable waste being landfilled in 2007/08. Moray has already exceeded the 2009/10 target by 16.3%.

The 30% recycling target set by the Scottish Government to be achieved by March 2008 was in fact achieved in March 2006 by Moray. Since then steady progress has been achieved and the current recycling rate is 44%.

### % of Waste Recycled (Composted and Recycled)



### Summary & Emerging Trends

- Increasing levels of waste created in Moray
- Moray continuing to meet and exceed Scottish Government recycling targets
- Further restrictions from the Scottish Government on the disposal of waste
- Increasing environmental pressures

### Future Considerations

- How to reduce the creation of waste
- How to encourage residents to recycle more
- How to reduce reliance on landfill
- How to meet Government targets

## **Appendix 1**

### **What is the Council already doing?**

The Council signed the Climate Change Declaration on 31 January 2007 (Appendix A) and in doing so made a commitment to reduce greenhouse gas emissions. Part of that commitment requires the Council to produce, and publicly declare, a Climate Change Action Plan, which ties together all current and future activities; provides a coherent framework for the reduction of greenhouse gas emissions; and presents a more unified and consistent method for measuring and reporting outcomes.

The Council already has a number of initiatives in place making progress towards reducing greenhouse gas emissions.

- The Waste strategy and waste minimisation programme through extensive kerbside recycling
- Appointment of an Energy Officer to promote comprehensive energy management within the Council.
- Pilot scheme to raise awareness of energy efficiency throughout the Council
- “Green Electricity” – at present the Council’s major electricity contract provides green electricity.
- Investigations into the use of biodiesel, biofuels and biomass fuel sources
- Preparation of a Renewables Strategy
- Eco-Schools Programme
- Preparation of green travel plans for schools and Elgin HQ
- Pilot Schemes for the use of renewables under the Home Energy Conservation Act achieving a reduction in fuel poverty, energy use and CO2 emissions
- Participation in the latest round of the local authorities Carbon Management Programme

## **Appendix 2**

### **What next?**

The first step in reducing emissions is to prepare and implement a Carbon Management Plan. At present the Carbon Trust is running a Local Authority Carbon Management Programme which provides technical and change management support and helps Councils to realise carbon emissions savings. Moray Council has been accepted into the Programme and work will begin in May 2008 for a 10-month period followed by plan implementation. The aim is to reduce emissions under the direct control of Councils, whether caused by energy use in buildings, street lighting, landfill waste or vehicle fleet. In producing this plan 5 of the 7 objectives within the Climate Change Declaration are met and therefore it forms an integral component of the Climate Change Action Plan.

### **Regional Partnership Agreement with Aberdeenshire and Aberdeen City**

The Council has been invited to participate in a regional climate change partnership with Aberdeenshire Council and Aberdeen City (other bodies include NHS Grampian, Aberdeen University, Robert Gorton's University, SNH, Maculae Institute). An officer has attended an initial meeting on behalf of the Council. The partnership is intended to be voluntary with no one member being able to exert influence over other organisations. The partnership agreement format will be based on the Edinburgh Partnership Agreement.

The basis for the group is that by combining larger organisations and drawing on shared resources, emission reductions may be possible. The overarching aim is to make the region carbon neutral by 2030. Climate change will have impacts at a regional level and instead of working in isolation authorities can work together to find solutions. It is worth noting that both Aberdeenshire and Aberdeen City are some way ahead of Moray in terms of the Climate Change Agenda. Both authorities have completed the Local Authorities Carbon Management Programme. Aberdeen City was ahead of most Local Authorities and produced a Climate Change Action Plan in 2002. The Council can therefore benefit from their expertise to date.

## References

- 1) General Register Office for Scotland: Mid-2006 Population Estimates Scotland.
- 2) [www.elginscotland.org/elgin-moray-scotland/about-elgin](http://www.elginscotland.org/elgin-moray-scotland/about-elgin)
- 3) General Register Office for Scotland: Mid-2004 Population Estimates for Settlements in Scotland.
- 4) General Register Office for Scotland: Scottish Settlements Urban and Rural Areas in Scotland.
- 5) Scottish Index of Multiple Deprivation 2006: General Report
- 6) NOMIS Labour Market Profile, Moray. [www.nomisweb.co.uk/reports](http://www.nomisweb.co.uk/reports)
- 7) Census 2001 at [www.scrol.gov.uk/scrol/browser](http://www.scrol.gov.uk/scrol/browser)
- 8) General Register Office for Scotland: Vital Events Reference Tables, 2006.
- 9) General Register Office for Scotland: 2006-based Population Projections for Scottish Areas.
- 10) Scottish Neighbourhood Statistics. [www.sns.gov.uk](http://www.sns.gov.uk)
- 11) Scottish Government statistics publications: Attendance and Absence in Scottish Schools 2004/05, 2005/06 and 2006/07.
- 12) Scottish Government statistics publications: Exclusions from Schools, 2003/04 to 20005/06
- 13) Scottish Government School Leavers Destination Report, December 2006. [www.scotland.gov.uk/Publications/2006/12](http://www.scotland.gov.uk/Publications/2006/12)
- 14) Scottish Government Recorded Crime Statistics. [www.scotland.gov.uk/Topics/Statistics/Browse/Crime-Justice/PubRecordedCrime](http://www.scotland.gov.uk/Topics/Statistics/Browse/Crime-Justice/PubRecordedCrime)
- 15) Moray Corporate Development Plan 2004 – 2007. [www.moray.gov.uk/moray\\_standard/page\\_41074.html](http://www.moray.gov.uk/moray_standard/page_41074.html)
- 16) Scotland's Climate Change Declaration. [www.sustainable-scotland.net/climatechange/](http://www.sustainable-scotland.net/climatechange/)
- 17) Scotland Performs. [www.scotland.gov.uk/About/ScotPerforms](http://www.scotland.gov.uk/About/ScotPerforms)
- 18) Environmental Strategy for Moray. April 2007
- 19) Moray Citizens' Panel, Survey: Protecting and Enhancing the Environment June 07
- 20) 'Environment festival draws the crowds'. Northern Scot 06/04/2007

- 21) Scottish Natural Heritage in Moray. [www.snh.org.uk](http://www.snh.org.uk)
- 22) [www.snh.org.uk](http://www.snh.org.uk)
- 23) Cairngorms National Park Authority. [www.cairngorms.co.uk](http://www.cairngorms.co.uk)
- 24) [www.moray.gov.uk](http://www.moray.gov.uk)
- 25) Audit Scotland Statutory Performance Indicators. [www.audit-scotland.gov.uk](http://www.audit-scotland.gov.uk)
- 26) Changing Our Ways: Scotland's Climate Change Programme. [www.scotland.gov.uk](http://www.scotland.gov.uk)
- 27) 'Council staff engineer recycling initiative'. [www.moray.gov.uk/moray\\_news\\_56798](http://www.moray.gov.uk/moray_news_56798)
- 28) Key Scottish Environment Statistics 2007. Scottish Executive
- 29) Scottish Energy Study Summary Report 2006. Scottish Executive
- 30) Scottish House Conditions Survey 2006/07.  
[www.scotland.gov.uk/Topics/statistics/SHCS](http://www.scotland.gov.uk/Topics/statistics/SHCS)
- 31) 'Home Energy Conservation Act 1995 Submission of fifth progress report April 2005 to March 2007'. Policy Committee 05/03/2008
- 32) 'Carbon Reduction Commitment'. Policy and Resources Committee 05/08/2008
- 33) Distribution of LA energy consumption.  
[www.berr.gov.uk/energy/statistics/regional/index.html](http://www.berr.gov.uk/energy/statistics/regional/index.html) 2007
- 34) Key Climate Projections for Scotland: SNIFFER. [www.sniffer.org.uk](http://www.sniffer.org.uk)
- 35) Cars Per Household. [www.scotland.gov.uk/Resource/Doc/933?0054681.xls](http://www.scotland.gov.uk/Resource/Doc/933?0054681.xls)
- 36) Moray Citizens' Panel, Survey 2: Travel and Transport May 2006
- 37) Scottish Household Survey. [www.scotland.gov.uk/Topics/Statistics](http://www.scotland.gov.uk/Topics/Statistics)
- 38) 'Mounting traffic levels spark gridlock fears' – Northern Scot 20/06/08