

## Larne Borough Council

4/12



### Key Points



Larne Borough Council - emphasis on sustainability.

Carried out monitoring operation on Waste, Water and Carbon Footprint.

Tree planting and annual sustainability magazine providing advice and awareness.

Actions aimed at mitigation can also have adaptation consequences.

Larne BC is in a strong position to be resilient -detailed knowledge of assets and consumption.

This case study is mostly concerned with the extensive in-house monitoring that Larne Borough Council has carried out in order to understand and improve its environmental performance. It sits within the flooding and water categories in the Northern Ireland Adaptation Programme.

Larne Borough Council believes that local authorities are in a leading position to help the government meet its climate change targets. Through its activities and behaviour, it wants to demonstrate best practice in CO2 reductions to residents and local businesses.

In order to do this it decided to begin a process of monitoring its own environmental performance. This would provide a baseline for the Council to assess its environmental leadership. Although the Council was focused on mitigation in terms of the monitoring, its actions also have consequences for adaptation in Larne which this study will explain.

In addition, the Council has undertaken adaptation in the form of tree-planting in local schools and parks. It also publishes a yearly magazine sent to every Council resident, called 'Sustainable Living' which contains articles from Council officers and local businesses. Its purpose is to help householders understand how they can make small lifestyle changes to live more sustainably and how this will benefit their community, economy and environment. Examples of the content include information about shopping locally, using public transport and using less energy.



## Objectives

To monitor the in-house environmental performance of Larne Borough Council in order to reduce CO<sub>2</sub> emissions, landfill waste and water consumption rates. This project, alongside planting trees and publishing its sustainability magazine are smaller parts of Larne Borough Council's wider aim to be as sustainable as possible in all of its operations.

## Implementation

The Council began to calculate its own performance on issues such as energy use, water consumption and waste in 2008. It has since published five years of data showing the work that the Council has done in each of these areas over that time. The most recent figures are for the period 2012 to 2013.

### Waste

Internal Council waste generated per employee has shown small reductions in the past two years, but the amount diverted from landfill has increased vastly from 48% to 59%. The council is one of the most efficient in NI in terms of waste reduction. In 2011 it had a recycling rate of 51%, surpassing its 50% 2012 target.

Three initiatives had the greatest impact on increasing this rate:

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Introduction of a kerbside glass collection service to 5000 residents in the Borough in April 2011 to divert glass from landfill

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New Household Recycling Centre in the South of the Borough to divert waste from landfill

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Reprocessing residual household waste collected at HRCs to divert from landfill

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These waste reductions have been developed through investment in infrastructure, such as the new recycling centre and additional collections. The council worked hard to co-ordinate refuse and recycling collection, educate and train staff and local people and carry out maintenance operations on council grounds.

### Water

Water consumption has dramatically risen, showing a 36% increase from 2012 to 2013. This came after 3 years of small reductions in usage, largely as a result of better record-keeping and despite reduction measures being put in place. However, the council is still working to meet its objective of a 5% decrease per year and water savings have been made in the leisure centre by reducing the pool depth.

### Carbon Footprint

The overall carbon footprint (tonnes CO<sub>2</sub>) has decreased by 6% over the last year, from 1771 (2011/12) to 1669 in 2012/13.

Energy use per employee has decreased by 3% over the past year, to 1099, or 5.64 tonnes per employee. Over the past four years this has decreased by 30%, far exceeding the Council's objective of a 2% decrease in carbon emissions year on year for five years.

Fuel consumption has decreased by 10%, to 562 carbon equivalent tonnes over the past year. There has been a 14% decrease over the last four years. Measures taken to create this reduction include in-vehicle monitoring to improve driving standards and efficiency and daily route maps to cancel out unnecessary journeys.

This reduction in carbon footprint is largely due to the 10% reduction in fuel consumption and a number of energy efficiency measures in the Leisure Centre and other council sites.



## Climate Adaptation

Larne Borough Council focused on mitigation, but their monitoring operation has had some consequences for adaptation.

**Waste** - There are some clear adaptation benefits to the recycling work that Larne Borough Council has undertaken.

In the event of a flood, waste on the street can cause severe problems by blocking drains, thereby slowing the removal of water from the area or contaminating people's homes. Regular collection of waste and investment in the waste infrastructure helps reduce the threat of such an event occurring.

The vast volume of waste being sent to landfill is also being addressed. The heavy rainfall projected in the Northern Ireland Adaptation Programme could flood a landfill site and leak toxins or chemicals into the ground and surrounding watercourses. In the case of high winds, waste can blow off the landfill to the immediate surrounding area. This is a public health hazard. By promoting recycling and reducing waste to landfill, Larne Council is helping to reduce this threat.

**Water** - Although the water data shows a steep increase in usage, Larne BC has taken the first step to becoming resilient in periods of low rainfall, by monitoring and knowing the Council's water needs and uses. This will help it budget water should there ever be a shortage.

**Carbon Footprint** - The council has had to adapt its operations to the threat of further global warming and the climate change policy which has accompanied it. These efficiencies are also being created in order to adapt to rising energy prices around the world. In terms of transport, the smart travel routes and vehicle monitoring may also help them become more resilient to flooding. The travel routes could be amended to allow for some operations to continue in case of normal routes becoming flooded.

Although not a part of the monitoring project, in 2012/13 the council involved local schools in planting 914 trees in Carnfunnock Country Park, Antiville Playing Fields, Larne Grammar School Grounds and Glynn Park. Trees are an excellent natural flood defence.

Sustainable Living Magazine, produced yearly by the council, provides tips for living sustainably. Disseminating adaptation ideas through mediums like magazines is an important way to inform a large audience about ideas like shopping locally or public transport use.

## Lessons learned

The first and most important lesson is that Larne Borough Council now has a strong monitoring operation in progress. Adaptation to climate change and extreme weather requires an initial monitoring operation to gather the data necessary to review the entire system for vulnerabilities and subsequently to identify solutions.

Another lesson is that mitigation can sometimes have consequences for 'adaptation readiness.' Tree planting is a good example of both a mitigation and adaptation measure. If the system is well monitored and vulnerabilities or areas for improvement are identified, in the long term a joint approach of mitigation and adaptation may be required. A more efficient council vehicle is only useful if it has a 'smart system' to avoid impassable areas in snow or flooding.



Wild Flowers, Carnfunnock Park



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