# Cork County Council

# *Local Authority Prevention Network Programme*

`

## Action at Work

## Midleton Library

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# 1. INTRODUCTION

The Local Authority Prevention Network (LAPN) was developed by the Environmental Protection Agency as part of the National Waste Prevention Programme. This initiative is providing financial and technical support to Local Authorities to tackle the challenge of waste prevention in partnership with businesses, public organisations and communities in their area.

Cork County Council, in partnership with South & East Cork Area Development, was successful in receiving grant aid to develop and implement a programme to encourage businesses and public organisations to reduce their consumption of materials, water and energy. This will be achieved through education and awareness programmes and the promotion of environmentally sound practices in waste, energy and water.

Our project places a Waste Prevention Officer in East Cork, who will be working with Dr Mary Stack, Senior Executive Scientist, who is the LAPN project coordinator.

Phase 1 of the Programme ran from 01 October 2009 to December 31st 2009, which focused on public buildings within the East Cork Area, including Midleton Library. The first step was to obtain support from Management, including the County Librarian, Ms Ruth Flanagan, and Anne Walley, Midleton Library.

An office co-ordinator was assigned in consultation with Management.

| Office | Action at Work Co-Ordinator |
|---|---|
| Midleton Library | Anne Walley |

# 2. COLLECTION OF BASELINE DATA (Phase 1)

Before a Waste Action Plan could be produced, it was necessary to understand the current waste situation at Midleton Library. The following methods were used to gather baseline data:

a. Inspection of invoices for paper usage, toner usage and battery usage (*not available*)
b. Collection of energy bills
c. Waste Audit
d. Energy Audit
e. Water Usage Audit
f. MIMS Water Meter Readings for 2008/2009
g. Monthly water meter readings
h. Monthly ESB meter readings (*No access to meter*)

However, records of paper and cartridge usage are not maintained for Midleton Library. The ESB meter is not accessible due to the storage of boxes in front of the meter box.

## 2.1.    Procurement Details

Paper and toner/ink cartridges are ordered through Cork County Library Headquarters. Records for paper and cartridge usage are maintained for all County Libraries; however, records for each individual library are not maintained. Some information was retrieved from accounts through email order history; however, this information is not useful in isolation. Cork County Library Headquarters has agreed to maintain records for Midleton Library from November 2009.
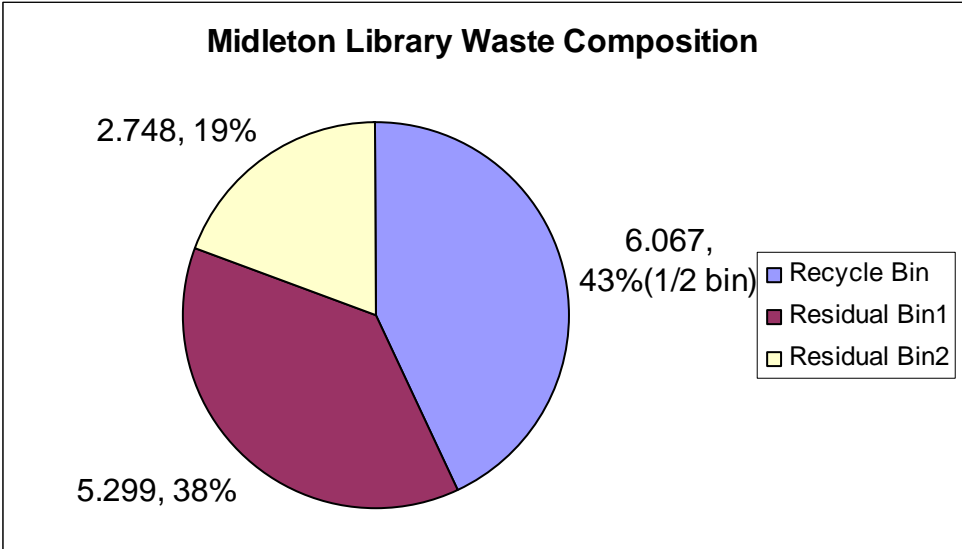
## 2.2. Waste Audit

The waste audit was conducted on 08 December 2009. The purpose of the waste audit was to build a picture of the different types, and amount of waste produced by Midleton Library. Midleton Library is serviced by Cork County Council Southern Division Waste Collection Service. The waste collection system is pay by weight. The figures below show the quantity of waste collected monthly in 2009. The residual and recycling bin are collected on a Wednesday on alternate weeks. The waste audit was carried out on a Tuesday before the recycling bin was due to be collected. Therefore, one weeks of residual waste and two weeks of recyclables were audited.  Waste in the recycling bin was loose and was sorted into different recyclable materials and weighted. The residual bin contained black plastic bags and each bag was sorted and weighted. The waste collection data for 2009 was obtained from Waste Operations..
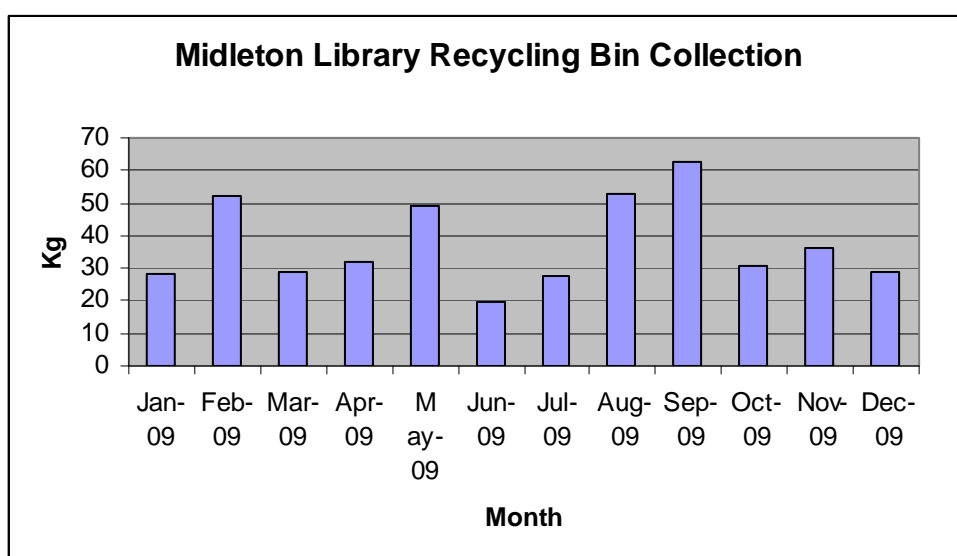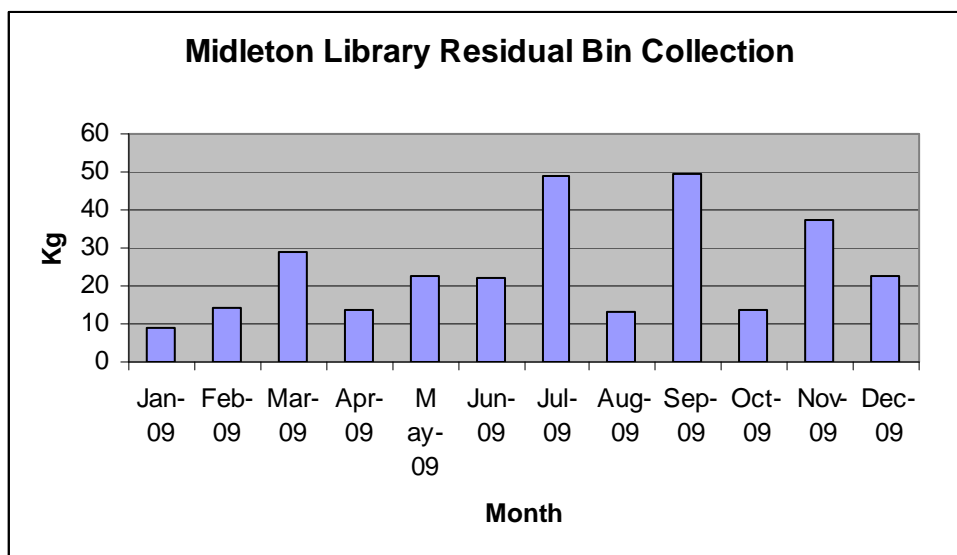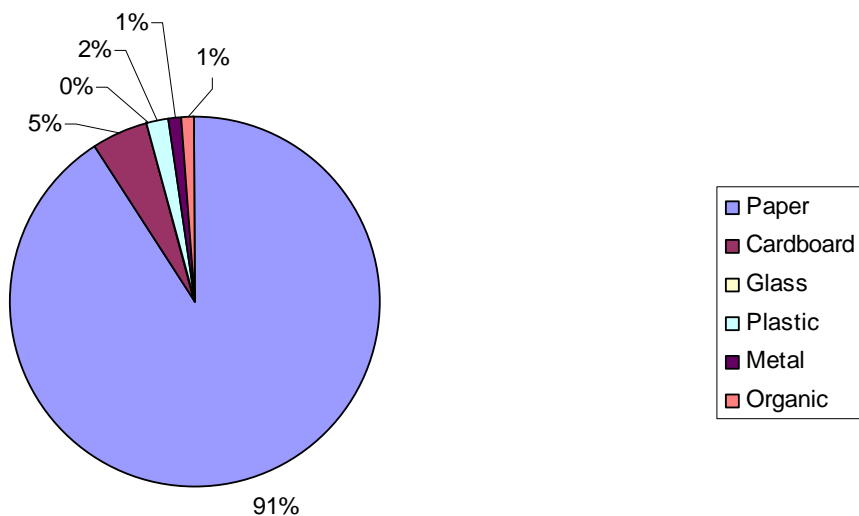
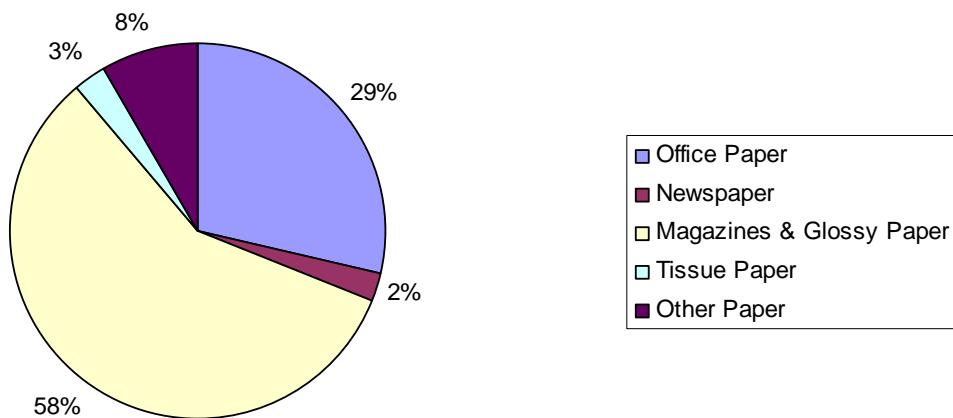The waste audit was carried out by the LAPN Waste Prevention Officer. The following observations were made:

- 5.3 Kgs of residual waste is generated each week by Midleton Library
- 12 Kgs of Recyclables is generated every two weeks by Midleton Library
- This means each person contributes up to 2.8kg of waste per week (4 staff members in the office during week of the audit)
- The bulk of this waste, at 90% in the Recycling Bin and 18% in the Residual Bin, is paper, which includes office paper, newspaper, magazines, glossy flyers/posters, tissues, and library forms, tickets and post-its.
- The recycling rate for Midleton Library is 43%
- The composition of the remaining waste is Organic (65% in the Residual Bin), Cardboard (5%) and Plastic (11% in the Residual Bin and 2% in the Recycling Bin).
- Recycling Bin contains a high proportion of paper at 91% of which 58% is magazines, glossy flyers and glossy posters. The library is a location where posters and flyers for events are circulated.
- There was little or no contamination of the recycling bin
- There is one residual bin in the canteen and an individual office bin at each desk. There is no recycling bin in the canteen.
- There a 4.5 no. staff members.
- The waste audit was carried out the day before the Recycling Bin collection. The collection weight was 29Kg, however, the audit weight was only 12Kg.

**Midleton Library Waste Composition**



Pie chart segments:
- 2.748, 19%
- 6.067, 43%(1/2 bin) — Recycle Bin
- 5.299, 38% — Residual Bin1
- Residual Bin2

## Recycling Bin Waste Composition

**Legend:**
- Paper
- Cardboard
- Glass
- Plastic
- Metal
- Organic

1%
2%
1%
0%
5%
91%

## Composition of Paper Waste (Recycling Bin)

**Legend:**
- Office Paper
- Newspaper
- Magazines & Glossy Paper
- Tissue Paper
- Other Paper

8%
3%
29%
2%
58%

**Midleton Libary Residual Bin Composition**

18%

5%

0%

11%

1%

65%

Legend:
- Paper
- Cardboard
- Glass
- Plastic
- Metal
- Organic
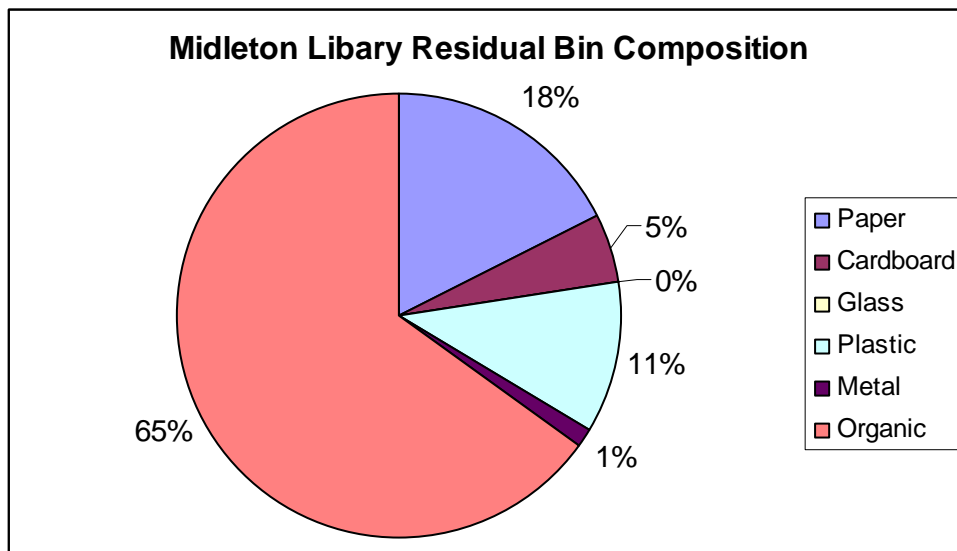
Magazines and glossy paper accounts for the largest share of the paper waste, at 58%. This is paper from posters, flyers and magazines. This paper is currently been recycled. 20% of the total waste consists of organic waste, with 3.5 Kg of food waste being generated in one week. This food waste is going to landfill for disposal.

Plastic waste consists of food/drink packaging.

## 2.3. Water Usage Audit

A Water Usage Audit was carried out at Midleton Library. A survey of all sanitary fittings was included in this audit. The following is a summary of all sanitary fittings.

| Ladies/Mens/Canteen | Toilet | Sink | Urinal | Other | Comments |
|---|---|---|---|---|---|
| **Ladies** | **1** | **1** | **0** | | **Twist taps** |
| **Canteen** | **0** | **1** | **0** | | |

All fitting were inspected and checked for leaks.

There is one water meter serving Midleton Library, which is located on the public footpath. Manual monthly meter readings have been taken since 01 October 2009. Sporadic meter readings are also recorded on the MIMS website, which monitors all non-domestic water meters in Cork County.

**Midleton Library Monthly Water Consumption**
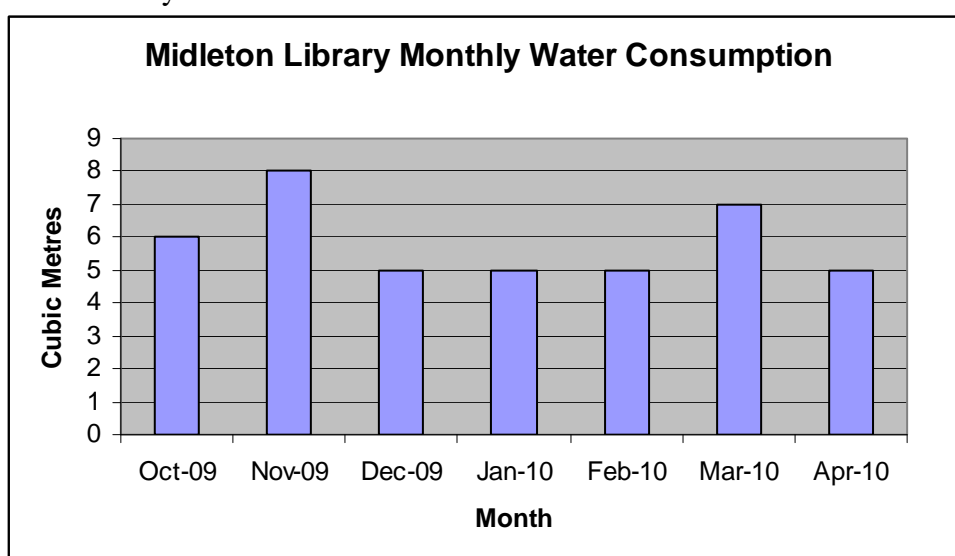


From 04/12/2008 to 03/12/2009, 77 cubic metres of water were consumed by Midleton Library. This water use equates to $17m^3$/employee/year. This water usage is very high compared with the benchmark of $4m^3$/employee/year for water use in offices. *(ref:CIRIA WII(2006), Key Performance Indicators for Water Use in Offices)*

From the manual readings taken from 01 October 2009 to 10 May 2010, the average consumption of water is 1.3cum/person/month.

## 2.4.    Energy Audit

An energy audit was carried out on 21 October 2009 by the Cork County Energy Agency. A report was prepared which includes low cost and medium cost recommendations to reduce energy consumption and associated costs. The audit concluded that there was some scope to reduce energy use at Midleton Library. A Display Energy Certificate was also prepared. See Appendix A for full report. Monthly meter readings have not been recorded as the electrical supply panel is inaccessible at the moment.

The electricity is supplied by Energia and the account is on general purpose night saver. This is the correct electricity tariff.

Electricity is the main heating source. The building is heated by three fan assisted storage heaters. The storage heaters are not under the control of a seven day time clock. One of the storage heaters has thermostatic control. A smaller storage heater provides heat for the store room. Heating for the canteen is done by electric element convection heater.

Hot water for sinks in the canteen and wash room is provided by electric under sink heaters.

Fans in the skylight provide mechanical ventilation for the library. These are controlled by switches on a control panel but are not in regular use.

The majority of the lighting in the building is 5 T8 compact fluorescent tubes with modern luminaries.

Given the age of the building, there is little that can be done to reduce heat loss through the building fabric that would not involve major building refurbishment. The windows on the façade of the building are a big source of heat loss in the building. The only option would be to replace the existing windows and frames with new frames and double glazed glass panels.

## 3. ACTION PLANS

The Action Plan for the management of waste, energy and water will provide a set of objectives and targets, and the steps to take to realise these.

The action plans will focus on reducing waste and conserving energy/water. The plan will follow a structured approach and follow the guide of Plan, Do, Check, Act and Review.

| | |
|---|---|
| Plan | Draw up action plans for waste, water and energy management |
| Do | Implement the steps outlined in the action plans |
| Check | Monitor progress |
| Act | Implement measures to rectify any failures |
| Review | Review progress and report findings/results |

Implementation of the action plan shall be the responsibility of each office coordinator. The programme coordinator will be available for assistance in the implementation of the plans and regular meetings will be held to monitor progress.

### 3.1. Waste Action Plan

| Objective | Reduce Waste Generation |
|---|---|

| PAPER TARGETS | Reduce paper use |
|---|---|
| **ACTION** | |
| | Individual desk bins should be recyclable bins by default and labelled |
| | A residual waste bin should be provided centrally and labelled |
| | A recyclable bin should be provided in the canteen and labelled |
| | Ensure all non-reusable cardboard boxes are recycled |
| | Ensure all printers and photocopiers are set to print double-sided by default |
| | Implement a policy outlining single-sided printing ONLY WHEN NECESSARY |
| | Use any remaining single-sided printed paper as note paper |
| | Discontinue the purchasing of Post-Its – use emails for communicating missed phone-calls and scrap paper and notebooks for notes. |
| | Make use of the spell check function on PC's before printing a document to minimise copies printed. |
| | Reuse scrap paper for draft printing |
| | Proof-read document before you print |
| | Research, share and store information electronically |
| | Refuse junk mail where possible |
| | Put up signs at printers and photocopiers |
| | Scan documents as standard and email if possible |
| | Set up recycling bin for cardboard |
| | Create a central place to store non confidential A4 waste paper for re use on other side and alert all members of staff to the requirement to place paper here and take it from this place for notes and trial copies etc |
| | Maintain up to date information on the Action at Work notice board including:<br>• Circulars from the Environmental Awarness Unit<br>• Graphs showing energy, waste and paper usage<br>• Other relevant environmental information |
| | Limit the amount of flyers to be left in the library. Request that posters be removed from notice board after the event?? |

| PLASTIC TARGET | Reduce Plastic Use |
|---|---|
| | Increase recycling of plastic waste |
| ACTION | Ensure all recyclable food containers are washed and recycled including Tetra Pak |

| FOOD WASTE TARGET | Increase recovery of food waste |
|---|---|
| ACTION | A separate food waste bin should be provided in the canteen and labelled |
| | Avail of Brown Bill Collection Service if and when it becomes available in the area |

| HAZARDOUS WASTE TARGET | Reduce hazardous waste |
|---|---|
| | Increase recycling of hazardous waste |
| ACTION | Provide battery collection box in office |
| | Ensure all ink and toner cartridges are collected for recycling. The following organisations accept ink and toner cartridges for recycling. Obtain injet & toner cartridge recycling box (Office Depot or organisation listed below)<br>www.ecoink.ie<br>www.recyclingappeal.ie<br>www.rehabrecycle.ie<br>www.jackandjill.ie |

### 3.2. Water Action Plan

| Objective | Reduce consumption of water |
|---|---|

| TARGET | Reduce consumption of water |
|---|---|
| ACTIONS | Insert hippo bags in toilet cisterns with a minimum capacity of 9 litres |
| | Retrofit aerators to taps to reduce water use |
| | Take monthly meter readings to monitor water consumption |

### 3.3. Energy Action Plan

The Energy Audit recommends Low Cost, Medium cost and high cost measures for Midleton Library.

| Action | Capital Cost (€) | Savings | Payback |
|---|---|---|---|
| Place a seven day timer on the under sink heater | €150 | €98.98 | 1.5 years |
| Replace all twin fluorescent light with energy efficient alternatives upon failure | €100/fitting | €5.76/annum/luminaire | n/a |
| Place seven day timer on night storage heating circuit | €300 | €274.43 | 1 year |

## 4. AWARENESS CAMPAIGN (Phase 2)

The foundation for environmental improvement is the commitment and involvement of all staff that need to understand their role in preventing pollution. Raising awareness of the relevant environmental issues, the cost of waste and energy and the part everyone in the organisation has to play, is an essential first step for a successful Action at Work waste minimisation & energy/water conservation programme.

|   | Actions |
|---|---------|
| 1 | Ensure that all staff members in each office are aware of the waste & energy/water policy changes and why they are being made. Use team meetings and emails to disseminate information. |
| 2 | Install an "Action at Work Notice Board". The Board should contain the Action Plan and figures for the current waste/energy situation, displays and post new information when available. |
| 3 | Organise a poster campaign citing specific messages and reminders regarding energy and waste issues. Place posters at printers and photocopier |
| 4 | Organise training to be carried out in-house with help from the IT Department with regards to the photocopiers and printers. |
| 5 | Email updates on the Action Plan regularly. |
| 6 | Email tips on dealing with certain waste types, both in work and at home. |