



Case Study

School:

Down High School, Downpatrick

OBJECTIVE

AS AN ECO-SCHOOL WE DECIDED TO FOCUS OUR ATTENTION THIS YEAR ON WASTE AND THE REDUCTION OF LANDFILL WASTE BEING GENERATED WITHIN OUR SCHOOL. OUR AIM WAS TO REDUCE WASTE GOING TO LANDFILL BY 10%.

History

Down High School is an old building with many additional mobiles and classrooms added, housing almost 1000 pupils. It is a sprawling but bursting site and is situated in the middle of an area of social housing and municipal office buildings. It is an elevated site and overlooks the beautiful Quoile Pondage Nature Reserve wetland area.

Starting Point

In a bid to attain our Green Flag we had already started to look at the waste being generated within school and how it was being disposed of.

A group of Year 14 students followed a crisp packet from 'source' (school), to 'sink' (Drumnaconagher landfill site). They filmed the journey and interviewed council officials on site. It made interesting reading and certainly made both pupils and staff think a little more about the rubbish that they place in the bins.

We had already established a recycling system within school, where each form class was responsible for emptying their class recycling bin every Friday morning in exchange for house points. This is overseen by school house captains.



Our plans

2014/15. The new initiative.

- To liaise with school caretaker more closely and to obtain quantitative figures for waste.
- To monitor school waste. Was the correct rubbish going into the correct bins?
- To improve recycling facilities within school.
- To improve the dissemination of information to the whole school more regularly.
- To encourage and incentivise the whole school community.
- To question our waste providers on the destination of waste produced by the school.
- To survey pupil opinions by using an online survey.

Actions

Dissemination of information gathered

Before they left for study leave, the year 14 pupils decided that, based on their waste findings, they would hold an Eco Awareness Week in April, to inform and encourage change in the rest of the school.

To quantify pupil engagement they also decided to ask year 8 and 9 pupils to take part in an online



survey, one week before and one week after Eco Awareness Week.

Information is posted on the school Eco board. All new Eco News is posted on the school VLE in the Eco Hub. This is accessible to all students and staff and can be updated easily.

The school has just procured a new website, so it is also hoped to post relevant Eco news on that too.

The school was invited to an Eco-Schools cluster group meeting in Downpatrick in January 2015 to share our progress and explain our waste initiative.

Eco Awareness Week April 2015

Monday

Year 8 Litter House Competition. All competitors to meet promptly outside the Fowweather building at the start of break.

Tuesday

Anyone interested in garden design or growing plants including vegetables. Meet in the greenhouse at the start of break.

Wednesday

Years 8 and 9 are invited to an upcycling workshop in G12. You will have the opportunity to make an upcycled product. Bring your lunch with you and get there as quickly as possible.

Thursday

Year 14 pupils can plant 'a memory'. Meet at the Greenhouse 1.15pm sharp.

DHS. Eco Awareness Week.



Results of Eco Survey

The Eco survey consisted of 10 quick questions and was uploaded onto the school virtual learning environment.

The results were not only enlightening but have also provided us with a spring board from which we can identify areas of future focus.

- It was really encouraging to see that initially 96% of pupils knew that Friday is school recycling day and that after Eco week that figure had increased to 100%.
- The number of pupils who are aware that we have an Eco code has increased from 83% to 97%.
- The percentage of pupils who are aware that the school is focusing on waste this year, increased from 74% to 85%
- The percentage of pupils who know that organic waste is composted in school has risen from 68% to 95%.
- Although there still seems to be a slight problem on the number of raised beds, 80% of pupils surveyed now know that there are 5 beds, compared to 17% prior to Eco week.
- Pupil understanding of the term sustainability remains vague, but they have begun to think about it and try verbalising it in a more meaningful way.
- 67% of pupils felt that there was only a litter problem in certain areas of the school, but not overall.
- 100% of pupils surveyed knew where the Green Flag was flying.
- 72% of pupils surveyed would like more Eco House competitions next year.





Results

Pupil Incentive. Waste Audit. February 2015

Year 14 pupils worked with cleaning staff to audit waste produced by the school. They did this in two ways.

- For a one week period, the cleaners used clear plastic bin liners for general waste bins. This enabled the pupils to visually view the rubbish within the bins and monitor usage.
- Using an Eco-Schools idea, they selected 5 bins from around the school and analysed the contents. This was a messy but effective job and types/ sources of rubbish were easily identified (see table below).



Results of Pupil Waste Audits

Bin location	Paper %	Hard plastic (bottles) %	Cardboard %	Compostable %	Other recyclable %	Non-recyclable %	% of bin which could be recycled
Office	5	10		20	40	25	75
Classroom	5	40		20	10	25	75
Common room	15	25		25	10	25	75
Classroom	5	30		15		40	50
Canteen		5		5		90	10

Further investigation

The school's waste service provider is MacNabb Waste Management. The waste is collected in a mixed waste skip. In addition we have blue bins for recycling only.

Our school building supervisor provided us with the waste read outs for the school which showed we sent

zero waste to landfill in February 2015 (see table below).

Pupils decided to seek clarification from the waste service providers about the results. Year 14 put together a list of questions which are featured on page 4.

Quarterly waste reports

Quarter	Recycled %	Recovered %	Landfilled %
October 2014	75	12.5	12.5
February 2015	75	25	0



Q&A with MacNabb Waste Management

Q: Our last quarterly read out stated that 0% of our waste went to landfill. How accurate is this?

A: This is accurate because we have altered our systems and all our “residual” ie. non-recyclable commercial waste is being diverted from landfill to **Refuse Derived Fuel (RDF)**.

Refuse Derived Fuel (RDF) is produced from combustible components of municipal solid waste (MSW). The waste is shredded, dried and baled and then burned to produce electricity, thereby making good use of waste that otherwise might have ended up in landfill.

Q: What materials do you recover?

A: Your waste is either **recycled** or **recovered**. Recycled materials include cardboard, paper, tin cans etc. **RDF** is classified as being **recovered**. So all your recovered materials is everything else eg. Non-recyclable plastics, contaminated materials etc.

Q: Are these recovered materials incinerated? If so where do they get incinerated and is this used to generate electricity?

A: Yes they are incinerated at two cement plants in Ireland. The RDF is used to power the plants and substitutes some of the fossil fuels required for the process.

Q: Of the materials that are recycled, where do these materials end up? (In UK or further afield?)

A: All cardboard and paper goes to a mill in China, all plastics goes to a company in Louth for further processing. All metals are also exported via a local scrap metal dealer.

Q: What products are they used to make?

A: Generally it's like for like ie. scrap cardboard into new board, scrap paper into new paper products etc.

Q: Are there any other local companies that process recycled waste from you?

A: The main companies in Ireland we deal with are Seaforde Scrap Metals, Clearway (metals), Leinster Environmental (plastics), Eirebloc (wood), Tyrone Energy (wood) plus other smaller companies.

Q: If there is organic material in our waste, do you separate that out?

A: The organic fraction is minimal in your waste.

The results made interesting reading and after discussion on the pros and cons of incineration, the general consensus from pupils was that they would prefer any non-recoverable waste to be incinerated to provide energy rather than to be transported out of the county to an expensive landfill. They were however shocked to see that all our paper and cardboard ends up in China.

Moving Forward - Evaluation:

The Eco code is an area for work and the junior school reps have taken on that task. It obviously needs to be clearer, catchy and more applicable to everyday school life. It was encouraging that most pupils surveyed knew that our current focus was waste, but some obviously needed to be better informed. This is an area that we need to work on; wider pupil involvement and feedback.

In terms of the waste produced by school, it has been an interesting journey of discovery. Both pupils and staff have been interested in the destination of the rubbish produced and the questions which this discovery has raised.

The whole process has definitely made us, as a school, think more carefully about the choices we have and our daily actions. Pupils and staff are more likely to ask questions about waste and recycling. There is a general air of interest and greater sense of community in the school.

We want to further develop the community aspect and involve ourselves in waste/litter initiatives outside the school gates. Lots of possibilities!

It has been a positive initiative.

