

Bicycle recycling projects

– a how to guide for schools



Key facts

- Two thirds of discarded bikes can be repaired or refurbished
- Bicycle recycling fits all 3 categories of the waste hierarchy; Reduce, Reuse, Recycle
- A typical workshop for eight people should be a minimum of 70m sq
- A basic tool kit for 8 mechanics will cost approximately £3,000
- 66% of children own bicycles

Introduction

Setting up a school bicycle recycling scheme is a fun and sustainable way to engage young people at your school with active travel and learning useful business and life skills. Cycling to school is a great way for young people at secondary school to get the recommended hour of daily physical activity. For many families the cost of a new bike prevents them getting active. A recycling scheme provides refurbished bikes at a low cost, gives the young people an opportunity to develop useful skills and does its bit for the environment.

This guide is for your secondary school if you are considering setting up a bicycle recycling project. It covers the main things to consider before and during set up and points you in the direction of who to approach for additional support.

Things to consider:

- Keen and enthusiastic member of staff or volunteer
- Dedicated time either at lunchtime or after school
- Someone with a mechanical qualification or opportunity to train an adult in these skills
- Plenty of community cycle donations
- Good record keeping

Things to look into;

- Product liability insurance
- Retail consent for building

You could set up the project as a social enterprise and get pupils studying enterprise to write a business plan and perhaps manage the accounts. It is advisable to start small by refurbishing a few bikes and training up a small number of pupils.

This guide covers;

- Recycling
- Organising yourselves and raising funding
- Setting up the workshop
- Sourcing bicycles
- Record keeping
- Selling bicycles
- Summary

It has case study examples from schools around Scotland that have successfully set up their own bicycle recycling projects.

Why recycle?

There are a large number of bicycles lying around un-used that could easily be put back on the road. Nearly three million new bicycles are sold every year in the UK and there are estimated to be 27 million bikes in the country. Ultimately most of these bicycles will end up being thrown away. Two thirds of discarded bikes can be repaired or refurbished, making them ideal for a reuse/recycling project.

The waste hierarchy - Reduce, Reuse, Recycle.

Bicycle recycling fits into all three categories of activities in the waste hierarchy;

Reduce – enabling people to fix their bikes instead of throwing them away

Reuse – repairing and refurbishing discarded bikes, reusing old parts

Recycle – most of the component parts can be recycled
Running a bicycle recycling project fulfils numerous objectives for a school;

- Practical and business/enterprise skills development and training
- Recycling, waste management and environmental impact
- Increasing access to and facilitating physical activity
- Learning about the social enterprise model
- Links to Eco-schools Transport topic

Alness Academy in Highland have set up a bicycle recycling social enterprise where unclaimed bikes from the police are donated and renovated by the pupils. After the pupils have renovated the bikes they sell them on to pupils, staff and local community usually for £5 to £10. Setting up the recycling enterprise has involved some business skills – initiating a bank account and learning how to record their income and expenditure. Two senior pupils have recently passed their two-day Weldtech Silver Mechanic course and they will help giving all new first years a basic bike-maintenance course. In addition two of the senior pupils visit a primary school to maintain children's bikes and inspire new budding cyclists. The repairs and servicing are done over lunchtime and after school and any profits made fund trips away.

Setting up

Organising yourselves and raising funding

Establishing a steering group

An efficient steering group or management committee is vital, particularly at the start of a project where they will play a key role in the day to day running of the project. As the project develops the role of the steering group should evolve to become more strategic and less managerial. Young people can take ownership for the day to day running of the project but it is essential they are supported by an adult.

Fundraising

As already mentioned local businesses may sponsor the project. Another way to raise funds is to organise sponsored events like rides or races. Some charitable funders may have funds that could support a bicycle recycling project. See Esmee Fairburn Foundation, Big Lottery, FirstPort, Scotland UnLtd, Youth Scotland and Sustrans. For other potential sources of funding see Sustrans information sheet for schools on finding funding.

Community councils may have funding for projects within their community area and this could be a source of revenue for a school bicycle recycling project.

Writing a business plan

This can help give the project a structure and focus as well as demonstrate to others that the project is a serious undertaking with defined objectives.

What to put in it? – Suggested section titles; introduction, the product, current financial position, funding requirement, management and personnel, market, competition, route to market, market potential, financial projections, SWOT analysis, conclusion.

Who can help? – The Enterprise Officer or School Business Manager can assist drafting the business plan.

Bicycle-recycling projects around Scotland

Some of these projects may support similar school-based projects or be providers of the bike maintenance training required.

Edinburgh	www.thebikestation.org.uk/repair
Stirling	www.recyke-a-bike.co.uk
Aberdeen	www.becycle.org.uk
Glasgow	www.commonwheel.org.uk and www.bikestation.org.uk/glasgow
Fife	www.fifebikeworks.org.uk
Inverness	www.mp33.org.uk/bbcp.html

There may be local schemes in your area, Google bicycle recycling in your area.

This section looks at:

Setting up the workshop

Mechanical skills

Bringing in bicycle maintenance expertise is an essential aspect for the success of your school's recycling project. Ideally a member of staff/school travel champion and some pupils could become qualified bicycle mechanics by taking a training course. Weldtech is the industry standard and most widely recognised bike mechanic qualification. For local providers Google "Weldtech bicycle mechanic".

Having qualified mechanics as part of your recycling project has an impact on your insurance and how you sell or distribute your bikes. For safety all bikes should be checked by someone with a mechanic qualification. The mechanics can roll out training for adults and young people.



Premises

You will need to identify space for a workshop. The location and size of your bike workshop will be limited by the space that the school has available. The workshop should be somewhere people can easily bring bikes and with vehicular access for example for removing scrap would be desirable.

It is important to have somewhere large enough for initial set-up but with room to expand. A typical workshop for eight people should be a minimum of 70m sq. ensure that there is enough space for storage of bikes;

- 60m sq for 100 closely stacked donated bikes
- 16m sq for 80 fully dismantled bikes for scrapping
- 50m sq for 30 refurbished bikes on display

Liaise with the planning department of your local authority to determine the types of consent you will require for the premises. Selling bikes will require retail consent, assembling and storing bikes will require different consent from welding. Good ventilation is important for premises for when aerosol lubricants are being used.

For schools without space in the buildings; a shipping container could be converted (these cost approximately £1200-£3500, plus cost of transport and preparation of the land for the container). Sometimes planning permission is required even if the building is a temporary structure, for advice liaise with the Planning Department of your council.

Tools



At a minimum the workshop should have a basic set of tools per mechanic with a core tool kit of more specialised equipment for shared use. A good set of tools to start with will maximise efficiency of the project and more specialist equipment will allow recycling of bikes with particular problems that would otherwise be scrapped. It is advisable to buy high quality tools that are relevant to the bikes you expect to receive – the bikes will be old or lower end.

A basic toolkit for eight mechanics will cost approx £3,000.

For purchase of new bike parts it would be worth having an account set up with a supplier, many offer online ordering and free delivery.



Practical delivery

Sourcing bicycles

For a successful recycling project it is imperative that you ensure a steady supply of old bikes. Bikes tend to be better quality if you can collect them. Use a van or a cargo bike to transport them, and make sure your school is well known locally as somewhere people can bring unwanted bicycles.

Individual donations will be your most important source of bikes. Recycling is high up the public agenda and bikes are the kind of thing that people are reluctant to throw away and are willing to bring to a recycling project. Make sure you let people know what is happening to the bikes – that they are going to a “good home”.

Articles in the local press will result in small peaks in donations so make sure you follow a strategy of regularly appearing in as many media as possible. Free local newspapers and community newsletters are good for letting people know about the project and that they can contribute their old bikes, and you could also tell them about bike sales.

Council amenity or recycling centres

Many local authorities have recycling centres that aim to sort and recycle as much waste as possible for reuse and recycling. Find out from your local authority what facilities they have and what happens to bicycles that are discarded.

Note that if you are storing bikes that have come from a waste stream this may require a waste licence or an exemption certificate, contact SEPA; <http://www.sepa.org.uk/>

Trade waste

Establish a good relationship with your local bikes shop. Bike shops dispose of old parts and bikes on a regular basis. Many of the parts and bikes they discard are still usable, contact them and see if they are willing to give you their bike waste. This could help which could facilitate joint press work and publicity.

Police

Contact your local police station to find out what happens to bikes recovered by the police. In some areas these are auctioned off but the police may be willing to donate to a good cause.

Charity shops

Charity shops regularly receive bikes but many do not sell them for various reasons including safety concerns. Find out if they are willing to pass the bikes they get on to you for refurbishing.

Other sources

- Auction houses, if bikes don't sell they may donate to you
- Voluntary organisations, e.g. the Scouts, that collect, sell and scrap bikes may donate the unsold ones
- Train, bus stations and universities and FE colleges occasionally have clear outs of abandoned bikes

Record keeping

In order to monitor the success of the project it is important to have a thorough recording system for logging bikes from when they arrive to when they leave the project;

- Devise a simple way of logging bikes as they arrive, e.g. a number attached to the frame
- Log the number, make, type, colour, date received and where it came from (e.g. domestic waste, trade waste, police etc)





Selling bicycles

It is important to have a range of type, size and price at each sale so you may wish to wait until the team have a good selection of bikes before organising a sale. Have a school sale to pupils and if there are enough bikes you could consider selling to the local community.

Remember customers have statutory rights when making purchases so clearly set out your terms and conditions. If in doubt consult your local Trading Standards officer; <http://www.tradingstandards.gov.uk/advice/index.cfm>

Once the bikes are refurbished you will want to advertise the bicycles that are for sale, at the school there are various methods of advertising;

- Photo on school notice board
- Set the bikes up outside the canteen
- Bulletin
- Word of mouth
- School website
- Websites such as Gumtree, E-Bay
- Local websites

Price

It is important to work out a consistent pricing mechanism that takes into account the time spent on each bike, the cost of new parts and overheads, as well as other factors such as the type of bike. Keeping a record of bikes sold provides pupils with training in book keeping and record keeping.

Insurance

Product liability insurance will be required as you will be distributing bikes either for sale or for free or both. In addition, to cover cycle training and receiving the public in your workshop you will need public liability insurance. Contact your local Council for Voluntary Organisations for advice on insurance; <http://www.scvo.org.uk/>

Bicycle Scrapping

Not all bikes that come to the project can be refurbished, for those where this is impractical they could be used for recycling parts and if not they will have to be scrapped. Spare parts could also be sold to raise additional income. Check with local scrap dealers and local authority to see where scrap can be taken and what materials can be recycled.

Sponsorship and Funding

Local businesses especially bicycle-related businesses may be willing to sponsor the school's workshop in return for advertising. Alternatively, the local community council may be interested in supporting your school's project financially.





Further support

More School Travel support from Sustrans

The School Travel team in Sustrans have an array of resources including inspiring case studies and useful information sheets. Visit the website and be inspired to take action.

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Ask the experts

What doesn't work so well?

- Trying to do this with no space
- When supply exceeds demand – be brutal and get rid of excess or bad bikes

About Sustrans

Sustrans is the charity that's enabling people to travel by foot, bike or public transport for more of the journeys we make every day.

It's time we all began making smarter travel choices. Make your move and support Sustrans today. www.sustrans.org.uk

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What you wished you had known when you started

- Retirees make the best volunteers
- If you are going to take police bikes, go along and be choosy! Don't just take scrap
- Target community donations – you'll get better quality bikes
- Use partners – consider 'Council-led' collection scheme
- Buy high quality tools – e.g. Park Tools, Pro Tools
- Buy the tools that are relevant to the bikes you expect to receive – these will be old or lower end
- Brakes – unless you are expert and you have lots of time, assume brake blocks and cable will need changing
- If on 1st look it's terrible – scrap it! Don't waste your time

What have been the main challenges? How have you overcome them?

- Staffing – overcome by training up dedicated volunteers (good volunteers will probably leave)
- Bike supply can be a problem – it takes time to build up the relationships

Top Tips

- Sell your scrap (to the local scrap man/woman)
- Parts- Re-use where possible, re-new when needed
- If the bike looks like Junk, it is junk!
- Stock up on small parts (end ferriels, cable inners and outers, brake blocks, tyres etc)
- Don't keep too many spares – the same bits wear out first on each bike
- University security can be another source of bikes