

Bike Maintenance

Cascade Training Module



in partnership with



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INTRODUCTION

FORTH ENVIRONMENT LINK

A local organisation with a national impact

Forth Environment Link is a Scottish environmental charity based in the Forth Valley, working across the climate action agenda to deliver outcomes which support and promote healthy people and a healthy planet with equality for all.

As an organisation, rooted in the communities we work with, we are passionate about what we do and about making our places and community spaces better to live, work and play in.

Our Strategic Objectives

To deliver our ambition, we will focus on four main areas and our charitable activities will support:-

| | | | |
|--|--|---|--|
| Active Travel More day to day journeys on foot or by bike. | Food & Growing More local food to be grown and eaten in our communities. | Volunteering Provide meaningful volunteering opportunities for all. | Reuse & Repair Helping to increase the lifespan of our everyday items. |
|--|--|---|--|

Our Vision

To enable and support communities to live healthy and sustainable lives in a way that reduces the impact on our planet.

Our Mission

- We will put healthy people and a healthy planet at the heart of our work.
- We are community led - our projects, partnerships and priorities are shaped by and developed for the communities within which we work.
- We value the planet and each other. This underpins everything we do.
- We are enabling - what we do is practical, easy to understand and accessible to everyone.
- We are collaborative - we like to work in partnership because we believe we are stronger together.
- We love new ideas; innovation is at the heart of our work and is what pushes forward new ideas that inspire change.
- We are passionate about what we do and it shows in our work and in our team's activities.

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BIKE MAINTENANCE



Bike maintenance projects are aimed at individuals who are in the preparation, action and maintenance stage of behaviour change. The variety of bike maintenance options allows individuals to progress through the stages starting with Dr Bike in preparation, Mug o' Tea and a Spanner in action and borrowing the Hub tools in the maintenance phase of behaviour change.

What Activities are Offered?

The Hub offers 4 different bike maintenance interventions:



Mug o' Tea and a Spanner



Outreach Maintenance Classes



Dr Bike Sessions



Free Tool Use

Mug o' Tea and a Spanner courses are delivered in partnership with Recycle-a-Bike and their fully qualified cycle mechanic trainers, using their workshop facilities, including tools and maintenance stands. Each course consists of three sessions delivered over three weeks; participants are encouraged to attend all three. However, each session is booked separately allowing participants to pick which ones to attend. The sessions are free to attend with a maximum of eight participants per session, this allows participants the time to ask questions. Participants are encouraged to bring their own bikes however the sessions are designed to teach the participants how to fix potential problems not any current problems they have with their bike. Participants are encouraged to use their own bike so that they can get a practical understanding of how their particular bike works and how to maintain and fix it. A bike will be provided to the participant if they do not bring their own. The structure of the three sessions is detailed on the following page.



Session 1

M check (bike safety check)
Bike set up (seat post/seat/
bars)
Lubricate the right parts of
your bike
Fix a Puncture
Refit a chain (if it comes off
during a ride)

Session 2

Gear adjustments (clicking
and slipping when you
change gear)
Cleaning gears/ chain/
cassette
Changing chain/ cassette

Session 3

Brakes (Disc brakes, calliper
brakes and more)
How to check, adjust and
replace brake pads/blocks
for different brake types

Outreach Maintenance Classes are normally short sessions held at the Hub, in communities, schools or workplaces and focuses on roadside repair techniques. Puncture repair sessions are run in the Hub on a weekly basis at specific times where participants can drop in. Community, school and workplace sessions are normally one-off sessions organised in cooperation with the community at a time and location convenient to them. More in depth roadside repair sessions organised for employers, communities and schools are run by Recyke-a-bike mechanics, these sessions cover more than puncture repair including elements of the Mug o' Tea session content. These sessions normally last 2-3 hours and while they are free to attend, they must be booked in advance by participants.



Dr Bike is a bike maintenance service to check that bikes are safe to ride. There is no cost for this service and only basic maintenance is provided along with advice if more extensive repairs are needed. Dr Bike sessions take place at the Hub and within various other project settings such as pop-up hubs in communities, employers, schools and colleges/ universities. Stirling Active Travel Hub partners with Recyke-a-bike to deliver these sessions. Many Dr Bike sessions coincide with a pop-up hub so both a Hub staff member or volunteer and Recyke-a-bike mechanic is in attendance. Dr Bike sessions can either cover a basic check of the bikes or a slightly more in-depth check over and repair. If the mechanic is doing a basic check of the bike it is possible to cover 6-10 bikes in an hour, this covers a basic safety check and relevant maintenance advice. With the more in-depth repairing Dr Bike it is possible to do 2 bikes every hour, this includes more complicated repairs such as replacing cables.



Dr Bike is a trademark of Bike Station and permission must be sought from them to use the name.

Free Tool Use is available, the Hub has a range of bike maintenance tools available for anyone to use, including basic items such as track pumps. Individuals can call into the Hub; they will be asked if they understand how to use the tool and if unsure given some quick guidance. These tools are available anytime the hub is open. See resources for a list of hub tools.



Project Partners

- ⚙️ Recyke-a-bike
- ⚙️ Bike Station



Why Offer Bike Maintenance?

- ⚙️ The Hub regularly receives requests from people who want to learn the skills needed for basic bike maintenance, especially emergency repairs that will get them home. Arming people with the knowledge to fix common issues on the go also gives them confidence to go out on their bike as they feel prepared in case something does go awry.
- ⚙️ Through the Hub's project work it is clear that many people own bikes in various states of disrepair and that the owners do not always have the knowledge to fix them.
- ⚙️ As the Hub already had a close working relationship with Recyke-a-bike in Stirling it was possible to develop a bike maintenance programme using their facilities and skilled bike mechanics.
- ⚙️ This project supports outcomes and objectives of The Active Travel Framework (2019)
 - ⚙️ Increase the number of people choosing walking, cycling and wheeling in Scotland
 - ⚙️ Delivery of walking, cycling and wheeling is promoted and supported by a range of partners
 - ⚙️ Walking, cycling and wheeling is available to all
 - ⚙️ Better health and safer travel
 - ⚙️ Cut carbon emissions

Project Benefits

Bike maintenance sessions increase participants' knowledge of how to care for their bike and fix it should something go wrong. This makes cycling safer for those who attend and for others as it helps to ensure that the bikes are in full working order

The Mug o' Tea and a Spanner and other bike maintenance classes are designed for anyone over 16 who wishes to learn more about bike maintenance. The project's structure allows participants the option to attend the sessions that will benefit them most, as they do not have to attend all three.

The Dr Bike sessions and Hub tool drop-in are for anyone who needs a quick fix for their bike and does not have the skills or tools needed to do it themselves.

Another key beneficiary is Recyke-a-Bike who, as a local social enterprise, are paid for delivering Dr Bike and maintenance sessions. They also benefit from the increased exposure and promotion of their services and retail facilities.



Where and When Are They Held?

Mug o' Tea and a Spanner session take place at Recyke-a-bike using their purpose-built teaching area with tools, bike stands and practice bikes. Each session is two and a half hours long and normally held on Wednesday evenings from 6:30pm to 9pm. Participants are encouraged to bring their own bikes to practice on. It was decided to hold these sessions in the evening to give more individuals the chance to attend outside of normal working hours, making the sessions accessible to as many people as possible.

Outreach maintenance classes for communities are normally held within the community in an appropriate space for easy and safe demonstrations. The timing of these classes varies and depends on the availability of the community space. When these classes are held in community spaces, schools or workplaces it is important to protect surfaces that mark easily, this can be done by covering surfaces as needed. Discuss with the venue to ensure they can provide a suitable space, for example a work shop, or ensure surface coverings can be brought along to the class.

Dr Bike can take place in a variety of settings including the Hub, community pop-ups, schools, employers, colleges, and universities. There needs to be enough open space for fixing and storing bikes if the owners leave them with you, it is also useful to be easily accessible and visible to passers-by. Dr Bike sessions are often held outside, if they are held inside it is important to cover surfaces that mark easily, such as carpets, to protect them and aid clean up. This should be discussed with the venue before arriving to ensure they have an appropriate space available.

How is the Project Staffed and Facilitated?

The Mug o' Tea and a Spanner sessions and outreach bike maintenance sessions are all bookable through Eventbrite to ensure no more than 8 participants per session. Limiting each session to eight allows the mechanic time to give each participant adequate instruction. These sessions are staffed by a fully qualified cycle mechanic from Recyke-a-bike who is qualified to train others in bike maintenance and a Hub staff member. Dr Bike sessions are also staffed by Recyke-a-bike mechanics along with a Hub staff member when coupled with a Pop-Up Hub.

The bike maintenance projects run by the Hub in partnership with Recyke-a-bike are funded through Stirling Cycle Partnership, the other Hub activities are funded by the Hubs core Transport Scotland funding. Initial cost will vary depending on the facilities and equipment already available before the project starts. Example of training and equipment needed for each project is listed below.

| Mug o' Tea and a Spanner | Outreach Maintenance Classes | Dr Bike | Free Hub Tools |
|--|--|--|--|
| <p>Fully qualified cycle mechanic trainer - training costs vary, they will also need to have training for teaching others</p> <p>Workshop space</p> <p>Appropriate tools - multiple work stations/bike maintenance stands, comprehensive bike toolkit (see resources)</p> <p>Spare bikes for participants to use</p> | <p>Fully qualified cycle mechanic trainer - training costs vary, they will also need to have training for teaching others</p> <p>Tools (see resources) - preferably easily portable</p> <p>Transportation - cargo bike or van to transport equipment</p> | <p>Fully qualified cycle mechanic</p> <p>Tools (see resources) - preferably easily portable</p> <p>Transportation - cargo bike or van to transport equipment</p> | <p>Basic bike mechanic qualifications</p> <p>Tools (see resources)</p> <p>Workshop space</p> |

Project Promotion

Mug o' Tea and a Spanner sessions are mainly promoted through social media and Stirling Active Travel Hub's Eventbrite page. Posters are also placed in the Hub and flyers available at outreach events. In addition to the promotion anyone who comes into the Hub or attends one of our events has the opportunity to sign up for the sessions with their email address, they can also sign up to receive email notification of future sessions. After all of our events participants complete a survey including event sign up, this is another opportunity for individuals to indicate that they would be interested in future sessions.

Outreach events such as Dr Bike sessions are promoted through social media, flyers and posters within the hub and near the event location. These sessions are also promoted by relevant local partners.

Key Stages

- ⚙️ A skilled cycle mechanic fully qualified to train other mechanics for delivery
- ⚙️ Research the target audience to assess local needs
- ⚙️ Work with the mechanic on course content
- ⚙️ Consider course location, the space required and access
- ⚙️ Access to enough tools and bike work stands
- ⚙️ Consider course timing to allow more people to attend

Project Monitoring and Evaluation

Each participant in a Mug o' Tea and a Spanner session or outreach maintenance classes is asked to fill out a survey which gathers data on their confidence in bike maintenance skills before and after completing the session. This information is used to assess the usefulness of the intervention at different levels in the course.

For all of these interventions the number of participants is recorded. This is especially useful for the Dr Bike sessions as it allows us to identify the times and locations of highest impact.

Lessons Learned and Project Reflections

- ⚙️ The Mug o' Tea and a Spanner sessions have had a high number of people booking and then not attending, possibly due to them being free to book and attend.
- ⚙️ It may be worth considering a refundable deposit scheme for these sessions to decrease the likelihood of no-shows; however, this would increase the start-up costs.
- ⚙️ Employing a mechanic or having a strong relationship with a local mechanic is important as they will be delivering all the interventions.
- ⚙️ The mechanic you work with or employ must be fully a qualified cycle mechanic and in addition have the qualifications necessary to train others in bike maintenance.

Resources

[See Resources tab for details](#)

- ⚙ [Mug o' Tea and a Spanner Survey](#)
- ⚙ [Dr Bike Survey](#)
- ⚙ [Monitoring Form](#)
- ⚙ [Example Risk Assessment](#)
- ⚙ Hub Tool List

| Essential Tools and Equipment | Useful Tools and Equipment | Non-Essential Tools and Equipment |
|---|---|--------------------------------------|
| Track Pump Puncture Repair Kits Grease and Chain Lube Bike Cleaning Supplies | Tool Box - Hub has Bizman Studio 37 piece toolbox Toolkit - Hub has X-tools 34 piece go through socket set | Repair Stand Bike Pressure Washer |

- ⚙ Mug o' Tea Tool List - preferably one per participant

| Tool Kits for Participant use | Basic Set of Tools | Bike Specific Tools | Useful Equipment |
|--|--|---|--|
| Some example are: Chain Kit Brake Kit Puncture Repair Kit | 8, 9, 10, 13, 15mm and adjustable Spanners Allan Keys Various Screwdrivers Cable Cutter Hammer/Mallet Snip Nosed and Regular Pliers | Chain Tool Cone Spanner Bottom Bracket Tools Chain Whip Cassette Tool Freewheel Tool | Bike Work Stands Decent Track Pumps Wheel Truing Jig |



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