

Cycle Maintenance Guidance Notes

Recognising and developing skills and experience

Updated June 2024

1. About

This document has been prepared by Cycling Scotland to support individuals, communities and organisations to identify the most appropriate cycle maintenance support for their needs.

It is intended to remove barriers to cycling, by reinforcing the role of existing experience and qualifications, as well as highlighting the range of opportunities available.

2. Background

Cycling Scotland receives many requests for funding and advice to support individuals to undertake maintenance training for different purposes.

Whilst there are several national providers and training schemes, there is no 'default' scheme, and this document is intended to provide an overview of what is available, including a summary of what Cycling Scotland's own training courses should enable individuals to do.

The level of skills and experience required will typically be defined by the community or organisation's operating procedures. These can recognise evidenced experience as well as formal certification.

Performing routine servicing and maintenance to keep a bike in good shape can be learned quickly and with confidence. Some processes are more complicated than others and it's important to understand what is within and beyond your level of confidence and skill. With the introduction of hydraulic braking, electronic gears, and ebike / pedal assist technology certain manufacturers also provide training solutions bespoke to their products.

Investing the time and money into a training course can be very worthwhile to boost your own skills and confidence, and also to develop and support your organisation or community to perform a range of repairs and servicing that would otherwise need contracted to another provider.

3. Existing provision

Table 3.1

Descriptors of the main maintenance training award providers (by alphabetical order)

<u>City and Guilds</u>	City and Guilds provide courses to meet their objective to protect and promote the standard of technical education, and their courses include Cycle Mechanics. Progressive courses at Entry Level 3, Level 1 and Level 2 all carry NVQ accreditation
<u>Cycling UK</u>	Cycling UK, along with British Cycling, is one of the two largest membership organisations in the country. Cycling UK runs a 2-day advanced maintenance course aimed at individuals maintaining and repairing their own bikes
<u>Cycle Systems Academy</u>	Cycle Systems is a commercial provider of cycle maintenance training, that specialises in supporting social enterprises. They offer a progressive range of courses, including online options and professional diplomas, and also promote a membership programme.
<u>Cyclewise</u>	Cyclewise Training is a commercial provider with a range of in-house training products in cycle mechanics from beginners to advanced and ebike courses delivered by Cytech Qualified tutors. They also offer custom training to meet specific requirements – rather than specific credit-rated courses.
<u>Cytech</u>	Cytech is an internationally recognised training accreditation scheme developed by the Association of Cycle Traders. Cytech includes a progressive range of 4 programmes for professionals, an apprenticeship programme, plus a ‘home mechanic’ course for the public
<u>One Education</u>	One Education provide a broad range of online learning courses, including a self-study bicycle maintenance course with test paper that links to a certificate endorsed by the Quality Licence Scheme. The course covers inspection and maintenance of all parts of a bike, from punctures to headsets.
<u>SQA Awards</u>	The Scottish Qualifications Authority (SQA) promote two SCQF accredited programmes for delivery in school setting. The level 1 and level 2 awards detail a range of outcomes on cycle safety checks and cycle maintenance, that must be met by candidates to achieve certification. The <u>level 3 award</u> is specific to cycle maintenance, including less frequent and specialised maintenance.
<u>Velotech</u>	Velotech is a commercial provider of cycle mechanic training and associated activities, offering a progressive range of courses from Foundation level 1,2,3 awards, through to Bronze, Silver, Gold and Professional awards. Velotech state that their courses are recognised with the Vocationally Relevant Qualification (VRQ) framework
<u>Park Tool School</u>	Park Tool School is a product of Park Tools, delivered by local retailers. Designed as a ‘hands-on maintenance and repair clinic’ with content derived from Park Tool’s ‘Big Blue Book of Bicycle Repair’. Content extends to full bicycle rebuild.
<u>Other bespoke training providers</u>	Across Scotland there is a wide range of training outlets, including cycle shops, social enterprises, charities and communities that run cycle maintenance training classes, delivered by competent and experienced mechanics. Whilst most don’t carry formal qualification, they provide practical hands-on experience to support people build skills and confidence to service and repair bikes. A selection of providers can be found in section 7

Most cycle training qualifications in coaching, instruction and leadership include training in cycle safety checks, basic servicing and trailside repair.

Table 3.2

Matrix of existing leadership, instruction and coaching qualifications that enable participants to perform some elements of cycle maintenance

Activity:	Cycling Scotland certificates	British Cycling Awards	Relevant external awards
<p>Perform safety checks on own bike</p> <p><i>e.g. perform an M check¹, adjust saddle and handlebar height, use cable adjusters on brakes and gears, check tyre pressure, assess wheel for trueness</i></p>	<ul style="list-style-type: none"> • Bikeability Level 2 and 3 • Essential Cycling Skills • Bikeability Scotland Instructor (BSI) • Cycle Ride Leader 	<ul style="list-style-type: none"> • Level 1 Award in Coaching Cycling • Level 1 Ride Leadership Award 	<ul style="list-style-type: none"> • Velotech Foundation 3 or Bronze • Cytech Home Mechanic
<p>Perform basic maintenance on own bike</p> <p><i>e.g. fix a puncture, clean and oil a chain, replace worn brake pads, replace a chain²</i></p>	<ul style="list-style-type: none"> • Essential Cycling Skills • BSI Bike Set Up CPD • Cycle Trainer 	<ul style="list-style-type: none"> • Fundamentals of MTB Leadership • Level 2 MTB Leadership award 	<ul style="list-style-type: none"> • Velotech Bronze and above • Cytech Home Mechanic • City & Guilds – level 1
<p>Perform safety checks on fleet bikes</p> <p><i>e.g. perform an M check, note faults, adjust saddle and handlebar height, use cable adjusters on brakes and gears, check tyre pressure, identify parts that may need replaced</i></p>	<ul style="list-style-type: none"> • Cycle Trainer • BSI Bike Set Up CPD • Cycle Ride Leader 	<ul style="list-style-type: none"> • Level 1 Ride Leadership Award 	<ul style="list-style-type: none"> • Velotech Bronze and above • Cytech Technical one or Home Mechanic • City & Guilds – level 1
<p>Perform basic maintenance on fleet bikes</p> <p><i>e.g. undertake basic repairs to make bikes roadworthy: fix a puncture, clean and oil a chain, replace worn</i></p>	<ul style="list-style-type: none"> • Cycle Trainer • BSI Bike Set Up CPD 		<ul style="list-style-type: none"> • Velotech Silver and above • Cytech Home Mechanic or Technical 2 • City & Guilds – level 2

¹ An M-Check is a simple, routine safety check: [see Sustrans' M-Check fact sheet](#)

² See Cycling UK's [Simple bike maintenance guides](#)

<i>brake pads, replace a chain, adjust gears, pump tyres, check and adjust accessible bearings</i>			
<p>Teach others to perform safety checks on their own bikes</p> <p><i>e.g. support others to undertake safety checks themselves and explain what it entails – drawing on extensive knowledge of a wide variety of cycles</i></p>	<ul style="list-style-type: none"> • Bikeability Scotland Instructor (BSI) • Cycle Trainer • BSI Bike Set Up CPD 		<ul style="list-style-type: none"> • Velotech Silver and above • Cytech Technical 2 • City & Guilds – level 2
<p>Teach others to perform maintenance on fleet bikes</p> <p><i>e.g. ability to explain basic and more complex maintenance services to others, ability to guide and help them gain understanding and skills to perform maintenance themselves</i></p>			<ul style="list-style-type: none"> • Velotech Professional (formally 'Platinum') • Cytech Technical 2
<p>Lead maintenance activity, including Dr Bike sessions*</p>			<ul style="list-style-type: none"> • Velotech Professional (formally 'Platinum') • Cytech Technical 2

***About Dr Bike**

Dr Bike services are typically delivered by skilled mechanics at a set time and venue, such as a school or workplace, with the aim of performing simple repairs to return a bike to road-worthy use. Time is generally limited at a Dr Bike session, as mechanics will usually have a lot of bikes to see in an allotted time. In addition to diagnosing the problem, Dr Bike would typically expect to perform basic surgical procedures, such as puncture repair, cable replacement or brake adjustment on site. Bikes experiencing more complicated symptoms may, such as component replacement, may require a prescription, or in the case of hub or bottom bracket adjustment, referral to a specialist surgeon / competent mechanic with more time available.

Dr Bike sessions present different challenges to Fleet Management, where the bikes are either familiar to the mechanic, or similar in specification. At a Dr Bike session members of the public will present a huge range of makes and type of cycle.

Case study: Shetland Islands Council's Bikeability Coordinator

Shetland's Road Safety Officer is the designated Bikeability Scotland coordinator with responsibility for delivering Bikeability Scotland cycle training opportunities across the local authority.

What was their need?

The Bikeability Scotland coordinator wanted to provide training opportunities for staff and volunteers to perform cycle safety checks on children's own, and fleet bikes.

What training did they choose?

As a qualified Cycle Trainer, the coordinator was able to deliver Cycling Scotland's Bike Set Up CPD module to staff and volunteers to perform bike set up and maintenance checks within the operating guidelines of the local authority. This had limits on certain repairs include cable replacements, which required referral to professional mechanics.

Case Study: Morgan Academy

Morgan Academy is a secondary school, and they participate in Bikeability Scotland sessions in school, and they are a current CF Secondary School and they have received funding to support cycling in the school.

What was their need?

The school wanted to provide bike maintenance in the school curriculum and opportunities for the pupils not engaging in the curriculum to gain a recognised qualification and experience that they can use now and once they leave school. Working with local retailers to provide in store experience. The school has a built a bike recycling project linking in with the local community and feeder primary schools. Repairing and servicing bikes and placing them back into the school for pupils and into the community.

What training did they choose?

Velotech for teachers who can deliver the SQA awards to pupils within the school curriculum.

4. Recognising existing experience

Many employers and providers prefer staff and volunteers to have a qualification as evidence of knowledge and skills. However, existing experience and competence can be equally valued, without the time and financial investment in a formal training course.

Across the cycle industry there are a large number of professionals operating with decades of experience who have learned their skills on the job rather than through accredited qualifications.

This experience can be recognised in a variety of ways, such as CV record of past employment, or by peer-review in a workshop to provide an opportunity for a potential staff member or volunteer to demonstrate their experience.

Many cycle enthusiasts, including club members, will have extensive experience maintaining, servicing and even building their own bikes. Therefore, they will be very confident in minor adjustments to components and roadside repairs like fixing punctures. However, they don't have the same level of experience across

different bikes, so while fixing a hybrid may be straightforward, adjusting an ebike or hydraulic disc brakes might be outside their confidence zone, so matching experience to the tasks is important.

Case study: Ayr Burners Cycling

Ayr Burners Cycling is a community development group affiliated with Cycling UK and Scottish Cycling.

What was their need?

During the pandemic they were invited by a local hotelier to use the grounds to deliver free cycle servicing to local residents who had returned to cycling but were experiencing difficulties accessing mechanic's services.

What training did they choose?

The group identified members who were already confident and experienced at servicing cycles. This included members with previous experience of the cycle trade, ride leaders, and those who regularly built and serviced their own bikes. A simple registration form was used and the landlord provided insurance for the session. Ayr Burners used a grant to procure consumable parts including cables, brake pads and innertubes from local cycle retailers, who all had waiting lists at the time.

5. Guidance on operating procedures

Any organisation involved in the inspection, maintenance or repair of cycles should have robust operating procedures in place. These protect clients, staff and the organisation, and are also useful in setting expectations.

Relevant procedures are likely to be influenced by wider organisation procedures including:

- Health and safety policy
- Public and professional insurance
- Safeguarding policies, particularly if working with young people or vulnerable adults.

Regardless of their proven experience, qualifications or skills, volunteers and staff must be aware of, and operate within the stated limits of the organisation's existing operating procedures.

Communities and organisations that do not currently have processes in place may benefit from insurance through membership bodies such as [Cycling UK](#).

It is also important to maintain a record of activity. This might detail routine tasks, such as the frequency of a cleaning and inspection routine, but also a record of when faults are logged and addressed.

Typical forms may include:

- Cycle loan forms – detailing date cycle was loaned, returned, and any faults indicated on its return
- Servicing form – detailing work carried out, and parts fitted, and who signed off the work
- Servicing schedule – detailing how frequently cycles should be serviced and when consumable parts such as chains, brake blocks and tyres should be replaced.

On all Cycling Scotland courses, participants complete a [pre-course bike check](#) using a simple template that can be adapted for managing a fleet of bikes, recording faults, or repairs. To support staff and volunteers, it can be useful to have a peer-review sign off process, with two people confirming a fault has been remedied.

There are also a range of [professional service providers](#) that provide suites of templates and software to support bike fleet operators

Case Study: Dundee and Angus Active Travel Hub

The Dundee and Angus Active Travel Hubs are part of a social enterprise dedicated to supporting cycling and active travel, to encourage people to lead healthier lives and reduce short car journeys.

What was their need?

Provision of accredited mechanics courses for staff and project volunteers and provision of Dr Bikes in community and bike maintenance skills sessions for members of the public.

What training did they choose?

Velotech for staff and volunteers.

6. Known Course providers (not exhaustive):

The table below provides a non-exhaustive list of known providers that provide classes in maintenance training.

Location	Organisation	City & Guilds	Cytech	Velotech	Bespoke
Aberdeen	Edinburgh Bicycle Coop.				X
Aberdeen	Adventure Aberdeen			X	
Angus	Angus Cycle Hub				X
Dundee	Ancrum Outdoor Centre			X	X
Dundee	Dundee Cycle Hub			X	X
East Ayrshire	The Cycle Station				X
Edinburgh	Edinburgh Bicycle Coop.				X
Edinburgh	The Bike Station			X	
Fife	Bikeworks				X
Glasgow	Bike For Good	X	X		X
Glasgow	Glasgow Bike Hive				X
Glasgow	Veloworld				X
Glasgow	Cycleform Bike shop			X	
Glasgow	Camglen Bike Town				X
Highland	Glenmore Lodge			X	
Moray	Outfit Moray				X
North Ayrshire	Trinity Active Travel Hub				X
Perth & Kinross	The Bike Station				X
Shetland	Shetland Bicycle Project			X	
Stirling	Recyke-A-Bike	X			X

Many local bike shops can also offer tailored classes for groups. If you are involved in a community group or organisation it may be worth approaching your local shop to arrange bespoke training directly.

Case study: Spartans Community Football Association

Spartans Community Football Association is a community group with the ambition to help young people develop skills.

What was their need?

Spartans wanted to access training to support young people develop skills and confidence to look after their fleet of bikes

What training did they choose?

Spartans successfully applied for funding to work with their local bike shop to run 40 classes for staff and young people

Case study: Northern Corridor Community Volunteers

Northern Corridor Community Volunteers is a community group, which provides access to a bike hire scheme and bike maintenance services to the residents.

What was their need?

Northern Corridor Community Volunteers needed support to pursue the delivery of Dr bike sessions in the community to enable the residents to access affordable bike maintenance checks and minor repairs.

What training did they choose?

Northern Corridor Community Volunteers successfully applied for funding and is pursuing a fruitful collaboration with another local community group, who has the necessary certification and expertise to deliver the Dr Bike sessions.

Case Study: Urban Fox

Urban Fox is a community organisation with access to a fleet of bikes including ebikes.

What was their need?

Urban Fox needed to upskill more volunteers to help manage the fleet, repair a range of faults and carry out repairs on different bikes

What training did they choose?

Through Cycling Scotland's Cycling Friendly Communities programme, Urban Fox received funding for 3 of 6 volunteers to complete Velotech Silver level training (at a cost of £350/pers.)

Cycle maintenance – matrix of existing courses

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