Operating a Fleet of Bicycles

Responsibilities - Information for Schools and Groups

Contents

1 Purpose of this document

This document is designed to provide information to schools and other Aberdeenshire Council establishments or services, who may be involved in buying, operating and maintaining a fleet of bicycles within any part of Aberdeenshire Council.

2 Your responsibilities as the operator of a fleet of bicycles

Cycling is an activity which comes with a level of risk. The risks vary depending on the kind of cycling you will be doing.

Bicycles require a considerable amount of ongoing care and attention, as well as regular servicing and replacement of worn parts, in order to keep them safe for use.

Aberdeenshire Council is governed by its Adventurous Activities Licence (AALS) which places strict requirements on how we ensure all the bikes in our care are kept in safe working order. These requirements must be adhered to for all bicycles, clear records must be kept of this, and they must be easily available for inspection by AALS.

Any establishments wishing to use the bikes outwith their immediate home site, must also complete an EVOLVE notification showing that not only are the arrangements in place regarding leadership and running of the activity, but that all the bikes in use meet the requirements of the AAL in terms of checking, servicing and record keeping.

More information here on the responsibilities and procedures around school off site trips of any kind [Schools and Groups - Live, Life Aberdeenshire (livelifeaberdeenshire.org.uk)]

3 Service and maintenance requirements for bike fleets

There is considerable work involved in keeping your bike fleet in good order and meeting the AAL requirements.

Live Life Outdoors provides this service for all Aberdeenshire Council establishments.

Aberdeenshire Council must be able to evidence that the correct training and procedures are in place and evidence of service records for each bike must be held on file by the LLO team to allow inspection by AALS and as part of the license conditions. If an establishment wishes to use an external bike maintenance company they must contact LLObikes@aberdeenshire.gov.uk first.

3.1 Levels and frequency of checks and services and who can undertake them

Inspection Level	Regularity	Who can do this check
Pre-use 'M' check	Immediately prior to every trip. During a trip, where the item may have been damaged (e.g. following an accident)	Anyone with a good basic knowledge of bicycle maintenance. They need not have a formal qualification although in-house training can be given
Full inspection and service	Up to twice a year depending on usage. More where the equipment receives substantial regular	Silver Velotech qualified or equivalent, as approved by Live Life Outdoors must be held to carry out these inspections.
Annual service and full inspection (one of the services mentioned above)	Annually for all bikes	This must be done by someone with a minimum of a Gold velotech qualification or equivalent as approved by Live Life Outdoors. For e-bikes: Inspection must be done by a Platinum qualified person.

More information can be found in **appendix 6** regarding servicing and record keeping.

3.2 Helmets

Careful checks should be made – and a record of these kept – of any helmets you are supplying.

Helmets should be replaced every 3 to 5 years.

Pre ride or post-accident checks should include:

- Visible signs of damage such as abrasions, cracks or dents
- Worn straps or buckles

4 Purchasing your bike fleet

In order that Aberdeenshire Council can monitor overall spend, you should inform LLO of your intention to purchase bikes. LLO has favourable rates with a couple of suppliers so there may be savings if the purchase is also made through the LLO account with those suppliers.

If you are gifted bikes eg by SUSTRANS, then please also let LLO know so that we can add them to our overall audit of bikes across Aberdeenshire Council.

As at the publishing of this document there is not a single approved contractor for the purchasing of bicycles. However, as the spend across Aberdeenshire Council on bicycles increases it will be necessary to put in place a Procurement contract.

Appendix 1 shows the sizes of bikes needed for various sizes of rider

5 Storing your bikes

You will need secure storage for your bicycles which is also weatherproof.

Bikes should be stored in such a way that each bike is directly accessible. This helps even out usage and reduces time retrieving and replacing. It also minimizes any Health and Safety issues around the handling of bikes in storage areas.

Equipment should be stored at appropriate heights in order to minimize any potential risks to those handling them. There should also be appropriate area to place out of use bikes separately from those in use.

See appendix 2 for various storage options.

6 Keeping an inventory of your bikes

A full inventory of equipment should be held by the officer responsible for the fleet. An annual stock check must be undertaken.

All bicycles and associated equipment must be labelled, numbered and recorded. For example:

Item	**Marking technique**
Bike	Frame ID sticker to be fixed at the top of the seat tube.

Wheels	Tags (made of white adhesive tape) to be attached to both front and rear wheels of the bike with a matching ID to the frame number
Bike Maintenance Tools	Marker pen or tag, as appropriate

7 Keeping your bicycles secure

As well as secure lockable storage, each bike should be equipped with a sturdy lock if it is likely to be left unattended out with the storage unit at any time.

Advice from Police Scotland on the measures you should take to protect your bikes and make them easier to retrieve following theft is here Protecting your bike - Police Scotland

8 Usage records

Full details of when a bike is used must be recorded in order to enable the following criteria to be assessed:

- are some bikes used more than others and therefore how often is maintenance required?
- Identifying responsibility for specific bikes and equipment.

Please use a Bike Usage Form to record which bikes are used on each trip.

A template Bike Usage Form is at **appendix 3**

9 Bicycle workshop and tool requirements

Live Life Outdoors have a fully equipped bicycle maintenance workshop but should you wish to have your own on site then the requirements are set out in **appendix 4.**

10 Transporting bikes

All bikes should be checked following transportation and before use.

It is the driver's responsibility to ensure that all legal vehicle requirements are fulfilled. This includes:

- Ensuring a safe and secure load
- Having all lights working and visible
- Holding the appropriate driving license to drive the vehicle (and trailer where applicable).

Wear and tear can be minimized by separating bikes with large foam or thick rubber sheets. A suitable bike trailer could also be used if transporting the bikes inside a vehicle is not a practical option.

Be aware of the need for care in lifting and handling. There is a course on ALDO which may help.

11 Pre and Post Ride checks

All bikes should be checked prior to every use in accordance with a Pre-Ride Bike Checklist. See **appendix 5** for template form.

Bikes used must be safe, fit for purpose and appropriately sized and fitted correctly.

Bikes should remain safe to use through the trip. Wherever this may be compromised, the equipment should be repaired, replaced, or removed from use.

Any repairs undertaken must be completed by a competent person i.e., a trained bike mechanic.

All bikes should be returned to their original storage location, unless they are unserviceable, whereupon they must be placed in a designated “quarantine” area.

Any bikes not in full working order on return must be noted in the relevant equipment book and have a clear indicator to others that it is unserviceable. An example of this is to rotate saddles by 180º and to attach a DO NOT USE label.

12 Cleaning and maintaining your bikes

Bikes should be kept clean. Appropriate bike cleaning facilities should be available for bikes at the end of the trip.

13 Training and Qualification requirements to deliver cycling and to maintain bikes

13.1 Maintenance

Pre ride M checks: these can be done by anyone who has received basic informal training

Servicing: this should be done by someone with a qualification of, or equivalent to, a Silver Velotech award.

Annual Inspection: this must be done by a Live Life Outdoors employee with a Gold Velotech Award. For some e-bikes this may need to be a Platinum award holder.

13.2 Led Rides

To take groups of people on public roads and recognised cycle paths, the group leader must have a Cycling Scotland “Cycle Ride Leader” qualification. This allows them to take up to 8 people. Larger groups will need more qualified leaders.

Cycle Ride Leader - Training - Our Programmes - Cycling Scotland

13.3 Bikeability

This is the national cycle training programme for school children operated by Cycling Scotland. Leaders of this programme must be qualified.

There are different levels of qualifications

Bikeability Scotland - Instructors - Course Options - Cycling Scotland

13.4 Play on Pedals

This instructor training delivered by Cycling Scotland will equip staff to plan and deliver sessions for nursery aged children. This training is not essential for playground only activities but is advised.

Play on Pedals - Training - Our Programmes - Cycling Scotland

13.5 Mountain biking

To take children mountain biking off road, leaders must be qualified as a Mountain Bike Leader with British Cycling

British Mountain Bike Leadership Awards overview (britishcycling.org.uk)

Further information on qualification can be found here'

Activity Overview: Cycling - Live, Life Aberdeenshire (livelifeaberdeenshire.org.uk)

14 Costs to have your bike fleet serviced and maintained by Live Life Outdoors

(The M check must still be done by a suitably trained member of site staff before each ride)

For full inspection and service, including collection and delivery to the Live Life Outdoors bike maintenance workshop, the cost per bike will be around £45 per bike (this must take place twice a year)

The above costs do not include any parts. These will be extra.

Please ask us for an exact quote as there may be factors we need to take in to consideration with the pricing.

(Please note prices above are from 2022 therefore are subject to change.)

15 Useful Contacts

15.1 Live Life Outdoors

Steven Barrett, Events and Outdoors Coordinator

Rachel Boal, Outdoor Activities Officer

Susi McLarty, Live Life Outdoors Team leader

Phil Thornley, Technical Advisor

Email LLOBikes@aberdeenshire.gov.uk

15.2 Other Aberdeenshire Council contacts

June Andrew, Transport Safety Education Officer

Joanna Stewart, Strategy Development Officer

15.3 Governing Bodies for Cycling and Cycling related activity

Cycling Scotland Contact us - Cycling Scotland

British (and Scottish) Cycling Contact British Cycling

SUSTRANS Contact us - Sustrans.org.uk

The Aberdeenshire Bothy (2) The Aberdeenshire Bothy | Facebook (covering some key Aberdeenshire towns)

16 Appendices

16.1 Appendix 1- Bicycle size chart

Bike sizing							
				Suggested mountain bike sizing	Suggested road bike sizing	Suggested Hybrid bike	
ft & ins	cm	ins	cm	ins	cm	cm	ins
4.10+	142+	26 - 28	66 - 71	13	46	n/a	14
5.0	147+	27 - 29	68.5 -	14	48	38	15
5.2	152.5+	27 - 29	68.5 -	15	48	41	16
5.4	162.5+	28 - 30	71 - 76	16	50	43	17
5.6	167.5+	28 - 30	71 - 76	17	52	46	18
5.8	172.5+	29 - 31	73.5 -	18	54	48	19
5.9	175+	29 - 31	73.5 -	19	56	51	20
5.10+	177.5+	30 - 32	76 - 81	20	56	53	21
6.0	183+	32 - 34	81.5 -	21	58	56	22
6.2	188+	33 - 35	84 - 89	22	60	58	23
6.4	193+	34 - 36	89 - 91.5	23	62	60	24

16.2 Appendix 2 – Storage options

16.3 Appendix 3 - Template Bike Usage Form

Bike Usage Record Form

This checklist is to be completed pre-departure by the person responsible for the hire bike fleet.

Name of establishment that operates the bikes

……..

Form completed by:

……

Date of completion of form: ……...

Bike Ref No.	Size	Pre Ride Check	Date Out	Date In
11	*17”*	*Filed*	*09/07/16*	*16/07/16*

16.4 Appendix 4 − Bicycle workshop Set up

16.4.1 The workshop area

The workshop area should have the following features:

1. Sufficient space to allow for all servicing and repair tasks to be completed efficiently and safely;

2. Ideally the area should have a non-slip, water resistant flooring fitted – waterproof floor paint is a great choice;

3. The area should be well lit (with specific task lighting, where possible) and be well ventilated;

4. There should be at least one bike stand available to allow bikes to be worked on at an appropriate height – ideally this stand will be permanently fixed to the wall or floor;

5. There should be a workbench area to allow for the small parts and components to be disassembled, cleaned and serviced;

6. There should be a tool rack which allows all tools to be easily stored and located;

7. There should be a dedicated area for spares and miscellaneous parts to be stored; and

8. There should be a clear, separate 'quarantine' area for the storage of bikes (or parts such

as wheels) requiring maintenance or verification of them being appropriate for use.

16.4.2 The Tools and Equipment

If bike servicing and repair is to be completed in-house (rather than sub-contracted to an outside company), then the following list of suggested tools and equipment will be useful:

1. *Spanners* should ideally be combination (open-ended at one end and ring at the other) with both ends the same size. The minimum size range is 8mm to 17mm in 1mm increments, although 16mm is rarely used (except for cones), and 17mm only required occasionally. A dedicated heavy duty 15mm pedal spanner should be purchased for fitting/removal of pedals;

2. *Allen keys* should be of very good quality, or they will be a sloppy fit in the socket and twist when you try to turn them. Sizes needed are 2mm to 6mm, in 1mm increments along with

8mm and 10mm for modern crank bolts and cassette freehub bodies. Ball-ended Allen keys (especially T handle shaped ones) make accessing awkward bolts much more straight forward;

3. Pliers & cable cutters suitable for cutting control cable housings. For these to be effective, the tool must be top-quality. Additionally, long-nose pliers are useful when access is restricted. For a number of uses, vice-grip pliers are important. They can be used to grip small items that are being worked on or to undo stubborn nuts;

4. *Good-quality, long-shafted screwdriver*. Please note, cross-head screws are not all made equally! Phillips screws and drivers are different to Pozi-drive screws and drivers and they are incompatible. Learn to tell the difference between Pozi and Phillips and the different sizes they come in and your screws and screwdrivers will last a lot longer;

5. *Hacksaw* To cut excess from bolts and for a variety of metal and plastic sawing jobs, a hacksaw - even of top quality - is an inexpensive purchase;

6. *Hammers* There is no need to look for top quality when buying hammers, and just two will do. For sharp blows, a medium sized “ball-peen” hammer is ideal, and when the blow should be softer, a rubber-headed hammer/mallet from a camping shop is fine;

7. *Drifts and centre punches.* For use with hammers, a range of drifts and centre punches should be acquired. These are lengths of wooden dowel, metal bar and tube of varying lengths and materials, bought or found, held in one hand to pinpoint hammer blows;

8. *Chain tool.* For splitting and re-joining chains. A high-quality dedicated chain tool is vital for completing this task. A heavy-duty workshop quality tool is expensive but will provide years of good service;

9. *Block removal tool and chain whip.* In order to remove and refit cassettes, only dedicated tools will be sufficient. These should be sufficiently robust and durable to allow for repeated use;

10. *Crank puller and bottom bracket tool.* In order to remove chainsets and bottom brackets, only dedicated tools will be sufficient. These should be sufficiently robust and durable to allow for repeated use; and

11. *Miscellaneous:*

Consider also a small pair of scissors, a box knife, plumber's pipe cutter, jeweler’s screwdriver set, a small bradawl, a large square file and a large ‘half round' file.

For cleaning threads on the inside, buy a small set of taps - M5, M6 and M8 will be enough. A tap wrench to hold them with is handy, but not essential. To use these taps to make threaded holes, you will need drills which measure 4.5mm, 5.5mm and 7mm diameter respectively.

In a permanent workshop space, tools should ideally be stored on the wall above the bench, hanging from nails or screws and arranged so that the most commonly used tools are closest to hand. An outline drawn around each tool in marker-pen speeds up bench tidying at the end of each session and quickly draws ones attention to missing tools. 'Borrowed' tools are more likely to find their way home if their absence is obvious!

The tools of a mobile workshop can be stored in a large heavy-duty plastic tool-box (with an inner tray for smaller items) to help keep things tidy.

16.4.3 Care of tools

A bike workshop is a long-term investment and for this reason it is important that you buy the best tools you can afford. Most tools require very little routine maintenance.

Keep them clean, lubricate when necessary and use them with care. Be sure to use the right tool for the job - the spanner that fits the nut exactly; the Allen key that fits the socket with no play etc.

Tools should be regularly assessed for 'fit for purpose'. Where tools have become worn or damaged, they should be replaced as soon as possible – worn/damaged tools will frequently lead to damage of the components being worked on and will increase the chance of injury to the staff undertaking any maintenance work.

16.4.4 Materials and Spares

A workshop should not only contain tools, but also cleaning fluids, lubricants, adhesives, tapes, paper towels etc. The better equipped workshop will also have a selection of the more commonly used spare parts such as cables and cable-outers, (with ferrules and end caps in matching sizes), inner tubes, brake blocks, tyres etc.

16.4.5 Lubrication

Bicycle chain lube is specially formulated to perform under the unique conditions we subject our bikes to. Water Displacers and multi-lubes just don't work as well as 'proper' chain lube.

Thick grease is essential for packing into bearings such as pedals and headsets. Good quality lithium or poly-urethane absolutely grease is best. It's important to keep the grease scrupulously clean. Metal filings, swarf, dust, grit are the enemy of bearings, so don't get any in your grease. Don't mix lubricants, as certain additives may not be compatible from brand to brand.

If a particular type of assembly compound is recommended by the manufacturer of any of your bike's parts, get some and use it.

In addition to lubes, you need a number of other materials: PVC (‘electricians') tape, thread-lock, general-purpose superglue, strips of emery cloth, metal polish, talc, puncture solution puncture patches and industrial quantities of plastic zip ties!

16.4.6 Work shop Health and Safety

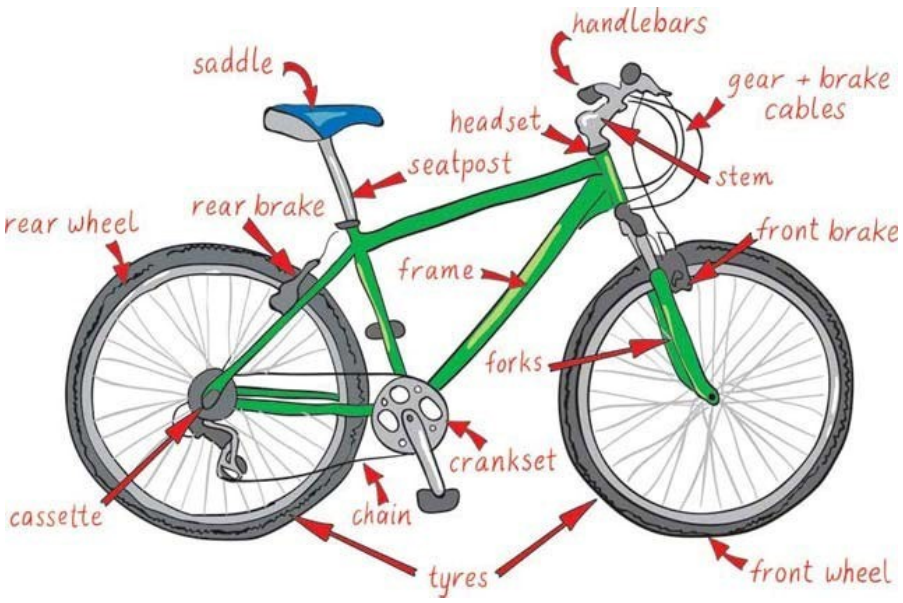
Most bike oils, lubricants and greases contain hydrocarbon-based chemicals which will dry out your skin, increase the risk of skin conditions such as eczema and can increase your risk of developing more serious conditions such as skin cancers.

It is vital therefore that all mechanics and staff who regularly undertake bike maintenance protect their skin by either using barrier cream or by wearing nitrile or latex gloves.

Scrupulous hygiene should be maintained with all staff carefully washing their hands after working on the bike fleet in order to minimize the risk of ingesting oils and chemicals when eating. An efficient low-cost solution to hand washing is to use a mixture of liquid soap and sugar granules mixed into a paste and then lubricated with clean water. The granular texture of the sugar removes all traces of oil and grease without drying out the skin.

Common sense should be applied when working on the bike fleet, with the relevant personal protective equipment (PPE) such as safety glasses being worn if work is being undertaken which might result in damage to eyes from metal filings for example.

16.5 Appendix 5 – Pre Ride Bike Checklist



Establishment……

Date of check……..

Person completing check…….

Bike number(s) checked…….

Part	Check	OK?
Wheels		
Wheel quick release/Wheel nuts	Check the quick release skewers are firmly closed or that the axle nuts are fully tightened.	

Tyre wear	Check visually that the tyres are not split or cracked and that there is tread remaining on the tyre.
Tyre pressure	Check that the tyres are inflated to the recommended pressure (written on the tyre side wall)
Hub bearings	Grip the rim and rock from side to side to feel for loose bearings; spin wheel to check for tight bearings
Rims and spokes	Check visually the rim for any defects, and spin wheel to check that it runs straight/true.
Brakes	
Brake levers	Check the angle of levers and that they can be comfortably reached. Brakes should apply pressure at 1/3 to 1/2 of travel.
Brake blocks	Check that the brake blocks are correctly positioned and are not worn beyond the wear indicators.
Brake cables	Check that the cables are not frayed or heavily corroded and that cable end caps are fitted.
Saddle	
Seat post	Check that the 'minimum insertion' marker is not visible above the seat tube; check that the seatpost is securely gripped in the frame.
Saddle	Try to rock the saddle in different directions to check that it is fitted securely; check visually that saddle is straight and level
Pedals and cranks	

Bottom bracket	Hold the cranks and rock back and for to check secure fitting.
Pedals	Check that pedals are fastened securely to the cranks.
Handlebars and headset	
Stem alignment	Hold the front wheel between knees and turn the handlebars gently to check that the handlebar stem is correctly aligned with the front wheel and tightened.
Handlebar alignment	Check that the handlebars are correctly aligned and secured at the stem
Headset bearings	Apply the brakes and rock bike back and for to feel for loose headset bearings; check that steering works freely.
Gears and transmission	
Chain	Check that chain is clean, correctly lubricated and does not easily come off the front chain wheel.
Derailleur position	Ensure that the rear derailleur is correctly adjusted and does not rub on the spokes or the frame at either end of its movement.
Peripherals	
Lights, mudguards, racks etc.	Check that any additional items and brackets are firmly secured and do not foul any moving parts

I confirm that the bicycles noted above are all safe and suitable for use following my inspection

Signed……
…..

16.6 Appendix 6 – Service Record requirements

16.6.1 The M Check – a basic pre ride check

The 'M' check starts at the front wheel quick release/nuts and runs up to the handlebars, down to the bottom bracket, up to the saddle then down to finish at the rear wheel quick release/nuts.

Everything 'passed' during the 'M' check is checked and verified including:

- Wheels are secure (quick release/wheel nuts), spokes are appropriately tensioned and rims true, round and not excessively worn (especially in the case of V-brakes);
- Bearings including hubs; headset, bottom bracket and pedals are smooth and free from wobble;
- Tyre condition, pressure and suitability;
- Brakes including pad/block condition, tightness and position; disc tightness; cable/hose

Condition; lever position.

- Handlebar grips are firmly secured and cannot rotate;
- Stem and handlebars are tight and handlebar end plugs are in place;
- Gears work and do not push the chain off or interfere with the rear wheel or cranks;
- Saddle and seatpin are tight; and
- Pedals and cranks are tight.

A video of an 'M' check can be viewed here:
http://www.youtube.com/watch?v=75Of7Wk0HqI.

16.6.2 Annual Service and inspection

A full service should be undertaken once a year on all equipment. This should be documented on the Bike Maintenance Log form.

During this service:

- The wheel components (rim, spokes, tyres, tubes) should be checked for wear and be appropriately adjusted;
- All bearings should be cleaned and greased;
- Brake and gear cables should be cleaned, degreased and lightly oiled;
- chain/chainrings/cassette tested for wear;
- suspension components (where fitted) should be cleaned, stripped, greased and re-assembled

- all other components should be carefully checked for signs of wear/damage/deformity
- other mechanical issue and remedial work completed as necessary.