



# **SUPPORTING INFORMATION**

## **FOR THE**

# **USE OF CHAINSAWS POLICY**

**Authorised by:** John Newton - Operations Director

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**Version:** 1

# Version Control

Version	Change Detail	Who by	Date
1	This is the initial version of the Trust's Supporting Information for the Use of Chainsaws document. It must be read in its entirety and in conjunction with the Use of Chainsaws policy document.	John Newton	May 2017

# Cotswold Canals Trust

## Use of Chainsaws - supporting information

This document supports the Cotswold Canals Trust's **Policy – Use of Chainsaws** within the Cotswold Canals Trust (herein known as 'Trust') with its overriding consideration that all project and other canal work must be safe, legal, fit for purpose and cost-efficient.

It covers the following aspects relevant to the use of chainsaws, which are not specific policy items but provides more detail behind the Policy:

1. Training requirements and certification of saw users
2. Detail provision of Personal Protective Equipment (PPE)
3. Initial saw purchase requirements, replacement of parts and servicing equipment for saws and use of specialists for full saw rebuilds
4. Reimbursement for fuel and oil used
5. Other Health and Safety requirements and considerations for use of chainsaws within the Trust's typical and more-specific work
6. Logging of hours worked by trained saw users

Its provisions take into consideration the depth and detail of training given to the Trust's saw users and advice from regular and well-experienced saw users within the Trust.

### **1. Training requirements and chainsaw user certification**

**This document (along with the Policy) should be read by any potential new chainsaw user and their Team Leader, before accepting their nomination for training.**

**Before any training is provided, as the management of the provided equipment, the required training and ongoing retraining are significant factors in the Trust's affairs, all new chainsaw users, prior to setting up their training, must sign a contract with the Trust, to provide 100 minimum hours of work within the 3 years following the training, for the Trust with their saw.**

**Section 6 of this policy describes the system to be used for logging this commitment.**

**The saw user's Team Leader has discretion over the hours logged, if there are extenuating circumstances limiting those hours eg; preponderance of other Trust work type, illness etc.**

These committed hours must be logged by the saw user at each use of their saw for the Trust in a logbook provided by the Trust, to keep an accurate log of all such hours. This log will be used to both ensure trained users are providing the hours they committed to and to assess the real worth of both the training given and the total volunteer hours given, compared with hiring in such expertise.

All chainsaw users within the Trust must first be trained and certified to have passed the course/s relevant to their use of saws within the Trust's work. The relevant courses are:

- City & Guilds NPTC Level 2 Award in Chainsaw Maintenance and Cross Cutting (201&202, was CS30) – independent assessment or Lantra Awards ITA certification – Integrated training & assessment - Felling Small Trees up to 200mm diameter.. this is Trainer User Category 150a in the trust connect system
- Felling Small Trees up to 380 mm including Takedown of Hung-up Trees using Hand Tools. Independently assessed by City & Guilds NPTC – now 203 (was CS31). Category 150b in Trust Connect system.
- Felling Trees over 380mm diameter (was CS32). Category 150c in the Trust's Connect system.

The Trust has few trained/certified tree climbers for 'dismantling' awkward trees at height. It relies mainly on the use of the IWA Waterways Recovery Group (WRG) – Forestry team or outside contractors for such work.

A minimum qualification of CS30 (saw maintenance and cross-cutting stems on the ground) is required for all users.

Two main national training bodies provide the certification, through the chosen local training provider. These are LANTRA and NPTC. After successful completion of a course, the certifying body will send a certificate. The trained saw user must then request a photo identification card with the relevant passed courses printed on it. This card should be carried by the user during work with the saw, such that, if questioned by a member of the public, they can prove their certification as a valid saw user in the public domain.

Issued PASS certificates are logged by the Trust within their CONNECT training/volunteer system. As refresher training dates come up, these are flagged in the Trust's CONNECT volunteer logging system and refresher training is then organised at the Trust's cost.

On the basis that all the Trust's chainsaw operatives are required by the Trust to become re-certified every 5 years, the approximate costs to the Trust, per annum, based on a total pool of 12 chainsaw operatives, and an average need to recertify half to CS30 and CS31 standard and two to CS32 standard, are as follows (information for budgeting purposes):

Refresher training to CS30 and CS31 standard – 2 days at £75 per day per operative. 12 operatives = £1,800

Refresher training to CS32 standard – 2 days at £75 per day per operative. 2 operatives = £300

Total cost per 5 years = £2,100. Therefore the cost per year for budgeting purposes = £420

## **2. Provision of Personal Protective Equipment (PPE) at the Trust's cost**

The Personal Protective Equipment at Work Regulations, 1992, regulation 4, states that 'every employer shall ensure that suitable personal protective equipment is provided to their employees who may be exposed to a risk to their health or safety while at work'. Section 9 of the Act makes it clear that under no circumstances should there be any charge to an employee requiring PPE equipment, and that the employer should provide all the necessary equipment for free. The PPE has to be suitable to the task and replaced if it becomes defective.

PPE requirements for use of chainsaws, taken from a Government HSE website are:

Note – any 'working at height' (climbing) recommendations have been removed.

✓ Items marked with a tick are essential PPE provisions for all users.

Safety helmet	BS EN 397 BS EN 14052	✓ ✓	Helmets to BS EN 397 or BS EN 14052 are only recommended for ground work.
Hearing protection	BS EN 352-1 BS EN 352-2 BS EN 352-3	✓ ✓ ✓	
Eye protection mesh visor	BS EN 1731	✓	Consider the need for eye and face protection from flying debris created by the chainsaw and other hazards such as branches. Also consider hazards caused by reduced quality vision when wearing the protection.
Safety glasses or goggles	BS EN 166	✓	Consider the need for eye protection from flying debris created by the chainsaw and other hazards such as branches.
Gloves	BS EN 381-7	✓	Suitable gloves for the task and subject to the operator's risk assessment. Consider the need for protection from cuts from the chainsaw, thorny material and cold/wet conditions. Where chainsaw protection is required this should be to BS EN 381-7
Leg and groin	BS EN 381-	✓	

protection	5		
Chainsaw boots	BS EN ISO 17249	✓	Protective boots with good grip and protective guarding at front vamp and instep.
Gaiters	BS EN 381-9		For occasional users working on even ground where there is little risk of tripping or snagging on undergrowth or brash, worn in combination with steel toe-capped safety boots.
Outer clothing			Should be non-snag.
High visibility clothing			To be used only where justified by risk assessment.

The Trust policy regarding PPE provision is therefore as follows:

The Trust will commit to any new user a sum of **£320 excl VAT** (at March 2017 prices and discounts as shown in **Appendix 1**) to cover the purchase of the following PPE items.

1. Helmet with built-in visor and hearing protection, to BS EN397
2. Protective gloves to BS EN381-7
3. Trousers with braces to BS EN381-5. Suitable for saws to 24 m/s chain speed. Class 'A' trousers.
4. Protective rubber boots to BS EN ISO17249. Steel toe cap.

From quotes obtained, the Trust's preferred provider of this equipment is:

Handy Garden Machinery Ltd, Hobley Drive, Swindon, SN3 4NS. Telephone 01793 721615. Email: sales@handygardenmachinery.co.uk

#### Replacement of damaged or worn out PPE

The Team Leader in charge of the respective saw user, on receipt of evidence from the user that certain PPE is beyond further use, will authorise the user to purchase new item/s as required, to the specified type shown in the above list and the detail list shown in **Appendix 1**.

#### Other required equipment for safe working:

Within the training courses, it is clearly stated that a chainsaw operator should have available to him personally, whilst operating a chainsaw, the following items:

1. A chainsaw belt to hold operational tools to aid the chainsaw work
2. A First Aid kit located close to the operator

3. Tongs for handling cut timber
4. A Cant Hook felling lever

In addition, the Trust's work depots will also hold in stock the following items:

1. Spare chainsaw (required by the saw user to remove a trapped saw, if no other saw user is present at site)
2. 18 inch bar and two chains

The Trust will hold these items within each of its work depots, in a secure location to be logged out by the chainsaw user/s as and when required in their work.

### **3. Initial saw purchase requirements, replacement of parts, servicing equipment for saws and use of specialists for full saw rebuild**

Especially with chainsaws, where the risk of damaged or badly worn equipment is high, users must look after their equipment. This includes keeping saws clean and sharp, with the regular maintenance taught within the CS training given and also keeping PPE and any support equipment clean, tidy and inspected on a regular basis.

It has been suggested that the Trust should establish a 'pool' of chainsaws at its depots, to be maintained by depot workers on behalf of the users – this would be quite contrary to the above requirement, would place an undue extra burden on the Trust's depots and is also contrary to what is taught heavily in the CS courses about regular maintenance by the saw user. The old adage 'A workman's tools are sacrosanct' is particularly applicable here.

It must be borne in mind that a minimum of two chainsaws are required for all felling operations, according to the training, in order that a second saw can be used by a sole operator (never working on their own) to free a trapped saw bar. It is Trust policy that a Trust-depot-based saw will be used as this second saw, unless more than one operator is on the job – which is more than often the case. This saw must also be cleaned and maintained by the operator, if used.

The Trust will provide the following equipment to all users (as shown in **Appendix 1**):

1. Chainsaw – type: Husqvarna 555 with 15 inch guide bar and 2 chains. Bar length depends on user's preference and/or type of work they intend/are required to carry out normally for the Trust. It should be noted that a maximum 15" bar is a necessity to carry out the training courses (old CS30, 31 and 32) but may be considered a little short to carry out cross-cutting on medium-sized and certainly large trees. If an operative wishes to use a longer bar, they can withdraw an 18 inch bar and chains from their nearest depot. The choice of a 15" bar is made on the basis that new users are probably inexperienced and cannot be expected to handle a larger saw with adequate confidence and safety.
2. Combined dispenser for petrol & chain oil.
3. Maintenance tools set including pack of 10 saw files (to suit chain type), file guide, bar cleaner, 8" fine-cut flat file, cleaning brush.

4. A second saw from the nearest Trust depot, as a back-up saw to free a trapped saw, if a single saw operator is required on a particular job (applies to all saw users unless they own multiple saws).

All equipment provided remains the property of the Trust.

*Note: New users shall be encouraged by the Trust/their Team Leaders to provide their own local bench and vice to aid correct and regular saw maintenance. In addition, they should be encouraged to provide a small air compressor with hand gun as an ideal tool to help keep their saw/s clean on a regular basis, on their own premises (larger woodland projects can last over several days and the ability to fully maintain one's own saw at home is a definite advantage, as the nearest Trust depot will not necessarily be close by). The Trust's work depots, however, can also provide this equipment.*

#### Replacement parts

The saw user may purchase against the Trust account the following items, on receipt by their Trust Team Leader of evidence of worn out or significantly damaged parts:

For the saw: chain, bar, spark plug, air filter, pull cord, other damaged items, set of further chain files or bar file.

The user will make out an Expense Claim for such items and send this, along with the invoice for the parts to the Trust Administrator.

#### Significantly damaged saws, saws requiring a full service

In the unlikely event of a saw becoming unusable, chainsaw users must make use of specialist chainsaw services where a full service (significant strip down, clean and service, replacing any damaged parts, as opposed to regular maintenance such as cleaning or changing of spark plugs, air filter, chain sprockets, chain or bar).

Local services can be provided by the following:

1. Western end of canal

1. Andrew White (Husqvarna saw specialist but can service other makes) –Tel: 01453-824158
2. Nailsworth Garden Machinery Tel: 01453-834787

2. Eastern end of canal

Handy Garden Machinery Ltd, Hogley Drive, Swindon, SN3 4NS. Telephone 01793 721615

#### **4. Reimbursement for fuel and oil used**

The saw user will have regular need to replenish petrol (with 2-stroke oil added) and chain oil for use with their saw.



Purchases of these fluids should be monitored and sanctioned by the user's Team Leader. If the saw user does not have easy access to their nearest Trust depot, they may purchase the required fluids and provide an Expense Claim along with the invoice for the fluids to the Trust Administrator, spelling out on which project they were used.

## **5. Other Health and Safety requirements and considerations for use of chainsaws within the Trust's typical work**

In general, the CS courses and refreshers provided to saw users by the Trust will spell out the main requirements and procedures to be used for safe and effective working in tree and scrub work within the Trust's domain. As with all training, the content has limitations and cannot cover all specific environment requirements and hazards seen within the Trust's areas of work. These invariably include working in, on or by water, cutting trees and brush in densely overgrown areas along the canal, with many trip hazards from trailing and multi-rooted thorn growths, badger holes etc. This environment is significantly different and more hazardous than that in a relatively flat, evenly-planted forest area which is often chosen for the CS course training.

Whilst the felling of significant sized and many trees in a discrete area (example – Trust volunteers at Capels Mill near Stroud in preparation for contractors installing the concrete channel through the waste tip) has significant hazards (large, heavy trees, multiple saw users in proximity, vehicle/trailer extraction etc.), a typical overgrown canal site can be argued to have higher risk and is not well covered by typical CS training, unlike the multiple felling example. Ultimately, there is no replacement for experience in the typical environment.

Therefore, individual, task-specific risk assessments must be carried out to cover these hazards and their mitigation, with a detailed Method Statement describing specific, intended methods to be used. Training and refreshing of the operatives in both of these is critical to a safe and effective result.

The use of additional eye protection (as suggested may be required in the Government HSE PPE list in section 2) should be a consideration within the Area Specific Risk Assessment. It is certainly true that wearing of a standard mesh visor can give a false impression of face security to the user and protective glasses in addition could certainly be useful in areas of high bramble or similar growth, where visors are often lifted by interaction with the surrounding growth.

### **Working on towpaths and in the public domain**

The Trust's work regularly involves working with chainsaws in the vicinity of the public. Warning signs should be erected at both sides of the work area, ideally pertaining to work with chainsaws or tree felling. If at all possible, a dedicated banksman should be allocated within the work team to control pedestrians and saw work should be stopped to let them by, as appropriate. Hazard tape may be appropriate if the area is large enough to be cordoned off.

### **Working on steep banks**

The Trust is obliged to maintain certain areas along the canal where the banks are steep eg; Coates portal – King's Reach. This work often involves the cutting of small diameter undergrowth and some larger trees on steep slopes and the areas are often inter-grown with brambles, creating a significant trip hazard.

Our saw users are allowed to work on such slopes as long as an area-specific risk assessment and method statement (RAMS) has been carried out. The safe system of work requires the use of harnesses with 2 lines. One must be a safety line with a recognised safety harness, attached above the saw user to a firm fixing eg; a large enough tree or fence. The chain saw is not to be started until the operator is in place and ready to start work.

Particular attention should be paid in planning the RAMS to ground and local scrub conditions and regular communication with other workers on the slope and the RAMS should be regularly reviewed to keep it fully applicable and up to date. Weather conditions will affect work on slopes more than flatter areas so these must also be taken into consideration.

#### Communication

The saw user must have available to him a means of communication with colleagues, additional to their voice. This should be a whistle to draw attention where necessary, or a mobile phone to communicate directly with a colleague out of earshot. In any event, a mobile phone must be available to the work group to permit communication in the event of an emergency in accordance with the RAMS.

#### Hand Arm Vibration Syndrome (HAVS)

Use of equipment creating significant vibration must under HSE law have a limit specified for its usage during any single event (shift or day).

For chainsaws this has been designated as 2 hours 28 minutes per working day (reference 'HAVS Exposure Limits - using the Exposure value points system' within the Canal and River Trust - Health & Safety Away Day session in Autumn 2016). This time refers to the actual usage time of the saw in normal working mode (Trigger Time), not just carrying it with the engine running.

To equate the 2 hours 28 minutes to a measured percentage of working time against saw running time, a controlled measure of the time taken ('active saw' and 'saw waiting') to fell and cross-cut a substantial tree was recorded. This resulted in the felling process having an 'active saw' time of 60% and a 'saw waiting' time of 40% of the total saw running time. During the cross-cutting process the 'active saw' time increased to 75% with the 'saw waiting' time reduced to 25%.

Using the maximum heavy usage rate of 75% of total saw running time, the designated 2 hours 28 minutes of vibration time equates to a saw usage shift time of 3 hours 17 minutes (2 hours 28 minutes / 0.75), after which the vibration limit will be exceeded. The work time of 3 hours 17 minutes can normally be taken as a realistic time limit for our usage on any duty and must be adhered to in order to reduce the risk of HAVS injury. The hours recording system will cover our logging of HAVS hours and will also be used to audit adherence to this time limit per session per user on chainsaw work.

Working in excess of this shift time will be at the saw users' own discretion and risk, and only done where it is clear the nature of the chainsaw work during the shift has resulted in the 'active saw' time percentage being below the measured 75%.

## **6. Record of hours worked**

These records are used to both check committed hours against cost of training and equipment provided by the Trust and to compare with sub-contracted costs for similar work.

Each trained saw user will carry a small logbook, provided by the Trust in which he/she will write the relevant information pertinent to each session of work carried out for the Trust.

The front page will also carry the Certification details for the user - Review (refresher course) date, Competence level/s (201-203 & CS32)

Further pages will carry the Record of Experience – Date of any saw work carried out, Location, Work Hours, Team leader name, Signature of saw user, Signature of team leader.

Team Leaders will be responsible for keeping a check on hours worked by their saw user/s and flagging in appropriate time to both the saw user and to Trust Council any concerns with lack of hours worked against the commitment given at the time of training.

Policy and Supporting Information drafted by A Jones and J Maxted with input from D Pagett, P Williams, R Hallam (CCT Team leaders with significant experience in Trust work with chainsaws), J Thomas and J Newton.

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## APPENDIX 1 - List of suppliers of saw, ancillary equipment and PPE with chosen suppliers

Quotation - Chainsaw & related safety /usage equipment - for Cotswold Canals Trust (CCT), Stroud, Glos									
Item	Spec	Price ex VAT (VE = VAT exempt)					Recommended supplier		
		Supplier:	Honey Bros.	Safety Supply Co.	Safety Shack	Sevenside Safety	FR Jones	Handy Garden Machinery, Swindon	Nailsworth Garden Machinery
<b>A</b>	<b>One each per trained user</b>								
1	Chainsaw -Husqvarna 555	15 inch bar	412.50				412.50	S 412.50	S 412.50
2	Spare 15 inch chain							S 25.00 (est)	S 27.00
3	Chain files to suit saw	Pack of 10	11.60					S 7.80	S 13.00
4	Helmet w/visor, ear muffs	EN397 or EN14052	27.68 HB31CE	19.85 PW980F	14.99 (VE)	12.75 XS/FHELM		P 41.25 Husq Functional Forest	P 45.00 #
5	Chainsaw gloves	EN381-7 Min. 20m/s	12.50 ARB101	10.75 OR91305	14.99	7.49 XS/CSG10 Class 0		P 24.50 Husqvarna Tech 20	P 29.58 Husqvarna Tech 20
6	Safety boots w/ankle protection EITHER	ISO 17249 Min.24m/s	119.95 (VE) BO	55.95 CO-WM	54.99 (VE) 28	90.00 X/TRE1207.42		62.12 Husq Functional 24 rubber	85.43 Husq. Func'l.25 rubber
	OR							P 145.00 Husq Tech 24 Leather	P 177.08 Husq Tech 24 Leather
7	Trouser EITHER	EN 381-5 Min 24m/s	60.94 HVN351	69.75 OR29543	41.66	63.38 Husq. Cla		P 95.00 Husq Tech 24 trouser	P 115.00 Husq Tech 24 trouser
7A	OR	EN 381-5 Min 20m/s			42.90	49.50 Z/RWT001		73.00 Husq Classic	90.00
	Chaps EITHER							59.17 Rockwood Chaps braces	
	OR							68.12 Husqvarna	
8	Combi can -petrol/oil - 5/1,5-2,5L		25.31 HVN101	27.45 HK-OH6377 Harkie 6L/3	20.00 Z/70108			S 13.83 Rockwood	S 34.00
9	First aid kit	Average, decent quality content	19.00 AID005	3.35 CM-30FTK	12.00	21.91 QM/701650 Active Oran		P 13.13 Husq First Aid kit	P 17.00
	<b>Cost of saw + equipment (S)</b>							S 459.13 (Excl VAT)	S 486.50 (Excl VAT)
	<b>Maximum cost of essential PPE (P)</b>							P 318.88 (Excl VAT)	P 383.66 (Excl VAT)
<b>B</b>	<b>Shared items (workshop-based storage)</b>								
1	Breaking bar with cant hook	80cm long or similar	37.50 HB355					37.50 Husq 5868969-01	51.00
2	Timber tongs	20cm log capacity	17.66 HB37 20cm.					17.66 Husq 5743875-01	24.00
3	High lift wedges		19.48 WDG002/001					8.44 Husq 5056947-04	11.00 24cm.
4	8" fine cut flat file		2.15 SHARP120					14.10 WP70531 (pack 12)	15.00 (my est.)
		<b>Total price</b>						<b>77.70</b>	
<b>C</b>	<b>Delivery</b>								
1	Delivery on above (free if possible)	To CCT Western Depot, Eastington, Glos GL10 3RT (by canal) or to Alex Farm						FREE	PICK UP LOCAL
	<b>Recommendations for purchasing:</b>								
	1 We buy all items for new users from Handy Garden Machinery, Swindon								
Note 1	It is not considered sensible to go for odd, somewhat cheaper PPE items from the other PPE-only suppliers, as the items quoted by Handy GM are known, recognised forestry equipment of good quality								
Note 2	It is probable that both these suppliers can carry out required significant overhauls of the saws for us when required (we limit the suppliers to two local ones, one for each end, (east & west) and open accounts as necessary to get all supplies and overhauls done.								
Note 3	New users may have a preference on the type of trouser (chaps or with braces) and type of boot (deep rubber boots for light wading or shorter, traditional fell-type boots but with good ankle protection and still reasonable use in shallow wet areas). These can be reasonably accommodated within the prices quoted (but orders would then be specific against personal choice).								

## **APPENDIX 2 - Task Specification for the Lead Chainsaw Operative**

In support of the Trust's chainsaw operators' policy and its 'supporting information' document, which stipulates that the Trust will have a 'Lead Chainsaw Operative' to control the regular tasks that are required to help keep the use of chainsaws within the Trust under proper control, the following tasks are those which this named person must carry out:

1. Ensure (with help from the supervisor of the Trust's Connect volunteer management system) that Connect lists the current trained chainsaw users within the Trust and the dates for their re-training. This list must include for insurance reasons already-externally-trained chainsaw users who are willing to operate their chainsaw as a volunteer for the Trust.
2. Should a new chainsaw operative have their own chainsaw and PPE to use on the Trust's chainsaw work, ensure that all items of equipment meet the minimum technical specifications.
3. With knowledge of the Trust's future years' tree maintenance and felling requirements (around August each year for the coming Winter work season), determine if the Trust has sufficient current, trained chainsaw users to cover that work. If not, determine how many extra people require training and advise Trust Council.
4. Liaise with the Trust's training organiser to get any new required chainsaw users trained in good time.
5. Ensure any newly trained chainsaw user has their name, qualification/s and retraining date added to the Trust's Connect system.
6. Ensure all current and any new chainsaw users and their Team Leaders have read and understood the Trust's chainsaw use policy and supporting information document, and all chainsaw users are issued with an hours logging book to maintain their work hours record.
7. Carry out an audit annually to check that listed chainsaw users are logging sufficient hours to meet the agreed commitment of 100 minimum hours within 3 years of their initial training.
8. Ensure that a review of the Trust's chainsaw usage policy and supporting document takes place in May every two years.