Living Waters- Bay of Islands Health and Safety Policy & Plan



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Chair for Living Waters Bay of Islands

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Introduction and policy

Living Waters-BOI (LW) (part of Bay of Islands Maritime Park Inc.) is committed to providing a safe work environment for contractors and volunteers. Except where contractors have their own health and safety plans covering activities that are being performed as part of our restoration projects, we provide our plan to contractors to endorse. Volunteers are briefed on health and safety matters as appropriate at working bees. They can also view our plan.

All contractors are encouraged to adopt safe practices while working on LW projects through:

- 1. Providing confirmation that they have read and adopted the practices set out in the Living Waters health and safety plan OR that they have their own health and safety plan that covers them while they are working on a particular project
- 2. Using appropriate equipment and wearing appropriate clothing
- 3. Ensuring that any accidents are reported to the Living Waters project manager (or their deputy) as soon as possible
- 4. Fit and able to complete the work they are tasked with

Volunteers generally work on a limited range of tasks and are briefed on health and safety and specific tasks as required at working bees. Individuals are matched with tasks taking into account their fitness/ any medical issues, their clothing and footwear; experience including the use of specific tools and their skills. Volunteers are generally supervised with extra guidance/ training provided as required. Several highly skilled volunteers undertake a wider range of tasks including herbicide spraying in preparation for planting days. These volunteers have had appropriate training and are experienced at these tasks. Any accidents to the volunteers are to be reported to the project manager (or their deputy).

Health & Safety Plan for Contractors

Contractors working on Living Waters Projects may have their own health and safety plans. Those contractors will be bound by those health and safety plans. Other contractors are to follow the health and safety procedures in Table 1.

Table 1: Health and safety procedures for contractors without their own health & safety plan

Category	Risk detail	Avoidance and Mitigation measures		
Machinery	Chipper operators may be injured by improper use	Where the chipper is not owned by contractor, proper instruction is to be provided by the hirer on how to safely use, maintain and transport the chipper, hazards associated with using the chipper and how to mitigate those hazards All chipper operators are to use proper safety clothing, eyewear, ear protection and safety footwear		
Machinery	Steel blade or other part breaking loose in a chipper while in use.	The wearing of effective eye protection will be mandatory for anyone operating a chipper. Ear protection is also required. Before using a chipper the contractor should check that the anvil bolts are properly wired (or an effective equivalent) to prevent a bed knife from slipping into the path of another blade		
Machinery	Poor use of a chainsaw when felling weed trees may injure members of the public. The highest risk situations are where trees have a heavy lean and/or are on steep slopes above tracks or other areas used by the public	All potentially at-risk tracks and access ways are to be closed while felling is taking place. Associated measures include: signs at all relevant entrances or at each end of the area subject to tree felling; people on site to stop walkers during felling operations; and general notification via local information centres, community Facebook pages, google groups and other local communication systems as appropriate. All contractors using a chainsaw are to follow good chainsaw practice as summarised in Appendix 2. They are also referred to or given the full Department of Labour guidelines for chainsaw use. All contractors using chainsaws should be appropriately trained/ certified.		
Machinery	Poor chainsaw practices while felling weed trees can cause injury to the operator (including from tree falls in unintended directions), as well as hearing loss and vibration disease	All contractors using a chainsaw are to follow good chainsaw practice as summarised in Appendix 2. Contractors are referred to or given the full Department of Labour guidelines for chainsaw use. They are required to have proper safety clothing, eyewear, ear protection and safety footwear. All contractors using chainsaws should be appropriately trained/ certified.		

Category	Risk detail	Avoidance and Mitigation measures		
Machinery	Killing tall pest pines by drilling and poisoning, may lead to operator injury if the drill is improperly used	If the contractor is not using their own equipment they are to be properly trained before they use the drill.		
Fire risk associated	The use of machinery in very dry conditions may lead to a fire. If there is stored fuel on site	Avoid using machinery when conditions are extremely dry, especially in hot weather after noon.		
with the use of machinery	associated with the use of larger machinery this may increase the risk that the fire could become large. This could threaten ecological values,	Have a fire extinguisher on site during dry conditions, especially if there is extra fuel on site (In practice we would not want anyone operating larger machinery in these		
Herbicide use	human life and property Herbicides are used to control a number of weed species. Contractors may spill herbicides onto themselves or others or use herbicides incorrectly	conditions and would not issue contracts for these activities at these times) All herbicide is labelled and used according to best practice guidelines for each herbicide and the weed species being targeted. Living Waters holds data sheets for the herbicides Those spraying herbicide are to have appropriate certification Those involved in spraying are to use proper protective clothing, masks and protective eyewear. They are required to clean the equipment in a responsible way (e.g. away from natural waterways) after use. Herbicides are stored securely in a locked shed when they are not being used		
Wasp and bee stings	Bees and wasps can swarm around flowering weeds such as ginger and wasps can be associated with some structures. People sensitive to wasp and bee stings may have a serious reaction if stung.	Contractors will be informed about the potential risk and asked to carry appropriate medication if they know they respond badly to wasp and/or bee stings		
Physical activity- lifting and moving material	Removing felled trees, pest vines and other pest plants off site, including to stockpiles for biosecure disposal can be physically demanding. Contractors could injure themselves dragging heavy material and/or may trip or become tangled in vines	Contractors should be fit and able to perform the tasks required.		
Animal pest control	Resetting traps and setting out selected baits for pest animal control purposes could lead to injury	Most of the animal control activities are led by other organisations (e.g. Russell Landcare Trust). Only experienced contractors will be used. They will		

Category	Risk detail	Avoidance and Mitigation measures	
activities	to the operator	be required to follow Department of Conservation best practice, including	
		using appropriate signage, when undertaking pest animal control activities	

Health and Safety Plan for Volunteers

Most volunteers perform only a limited range of activities. These are:

- 1. Planting
- 2. Releasing planting
- 3. Removing pest plants excluding the use of chainsaws
- 4. Using paste or paint on herbicides (excludes spraying)
- 5. Shifting plant material

Table 2 sets out the risks and avoidance and mitigation measures for those activities. Table 3 sets out the risks and avoidance and mitigation measures for specific manual activities undertaken only by trained volunteers.

Table 2: Health and safety procedures for general volunteers

Category	Risk detail	Avoidance and Mitigation measures
Planting	Volunteers could injure themselves with sharp	Volunteers will be given a health and safety briefing prior to them starting
	spades. They could slip/fall on steep ground. They	planting
	could injure themselves with unaccustomed	Those who are less fit/have disabilities will be assigned planting tasks on
	physical effort	easier slopes
Releasing	Volunteers could injure themselves with niwashis	New volunteers will be trained in the safe use of niwashis or similar
plantings	or other sharp tools used for releasing around	Volunteers should use appropriate footwear and clothing as well as gloves
	plantings	
Removing	Volunteers could injure themselves trying to	This excludes the use of chainsaws, but includes pruning saws.
pest plants	remove larger pest plants	Volunteers should be fit and able to perform these tasks. Those who are
		less fit or have disabilities will not be asked to perform this activity or asked
		to remove species that are smaller/ easier to remove

Category	Risk detail	Avoidance and Mitigation measures
Paste or paint -on herbicide use	Paste or paint-on herbicides are used to control a number of pest plant species. Volunteers could spill the small amount they have to use Others, especially children, could access and consume herbicides if they are not securely stored	Only paste on or paint-on herbicides (e.g. Vigilant) is used by standard volunteers. The base containers of herbicide are labelled and used according to best practice guidelines for each herbicide and the weed species being targeted. Living Waters holds data sheets for the herbicides. Herbicides are to be stored securely in a locked shed when they are not being used.
Physical activity- lifting and moving materials	Removing pest vines and other pest plants off site, including to stockpiles for biosecure disposal can be physically demanding. Volunteers could injure themselves dragging heavy material and/or may trip or become tangled in vines	Volunteers should be fit and able to perform these tasks. Those who are less fit or have disabilities will not be asked/ allowed to perform this activity except for small amounts of plant pest material
Wasp and bee stings	People sensitive to wasp and bee stings may have a serious reaction if stung	All known wasp nests will be properly destroyed using best practice for the species of wasp Volunteers will be informed about the potential risk and asked to carry appropriate medication if they know they respond badly to wasp and/or bee stings The volunteer co-ordinator/ leader will carry antihistamines and painkillers

Table 3: Health and safety procedures for trained volunteers for specific manual activities

This covers the following additional activities:

- 1. Using small chippers (for branches less than 100mm diameter)
- 2. Using chainsaws to remove wind falls and small weed trees
- 3. Killing tall pest trees, including pines, by drilling and poisoning
- 4. Spraying areas for planting and for controlling those pest plants that can be controlled safely using this method (without collateral damage to native species)

Category	Risk detail	Avoidance and Mitigation measures
Machinery-	Volunteers would only use small mobile chippers	Volunteers would only use small mobile chippers capable of processing
only using	capable of processing branches to 100mm	branches to 100mm diameter Larger chippers will only be used by
small chippers	diameter. They could be injured by improper use	contractors.
under 100mm		Ensure that the hirer provides proper instruction on how to safely use,
diameter		maintain and transport the chipper, hazards and how to mitigate those
		hazards
		Ensure that all chipper operators are fully informed about how to safely
		operate the chipper
		Ensure all chipper operators use proper safety clothing, eyewear, earwear
		and footwear
Machinery	Steel blade or other part could break loose in a	Before hiring a chipper we will ask the hire company to check that the anvil
	chipper while in use	bolts are properly wired (or an effective equivalent) to prevent a bed knife
		from slipping into the path of another blade
		Ensure all chipper operators use proper safety clothing, eyewear, earwear
		and footwear
Machinery	This covers clearing fallen material and the	Volunteers would only use chainsaws to clear fallen material and remove
	removal of small weed trees. Poor chainsaw	small weed trees (smaller than 6m tall or 150mm diameter)
	practices can cause injury to the operator	Only experienced chainsaw users who have their own chainsaw are to use
	(including from unintended directions for tree	chainsaws. They are to follow good chainsaw practice as summarised in
	falls), as well as hearing loss and vibration disease	Appendix 1.
Machinery	Killing tall pest trees, especially pines, by drilling	All drill users are to be properly trained before they use the drill.
	and poisoning, may lead to operator injury if the	
	drill is improperly used	
Herbicide use	Herbicides are used to control a number of pest	All herbicide is labelled and used according to best practice guidelines for
	plant species.	each herbicide and the weed species being targeted. Living Waters holds
	Volunteers may spill herbicides onto themselves or	data sheets for the herbicides
	others or use herbicides incorrectly	Those involved in spraying are to use proper protective clothing, gloves,
	Others, especially children, could access and	masks and protective eyewear. They are required to clean the equipment in
	consume herbicides if they are not securely stored	a responsible way (e.g. away from natural waterways) after use.
		Those spraying herbicide are to have appropriate certification or be
		supervised by a co-ordinator with a GrowSafe Certificate

Category	Risk detail	Avoidance and Mitigation measures	
		Herbicides are to be stored securely in a locked shed when they are not	
		being used	

Risk assessments

Health and safety guidance from the Ministry of Business, Innovation and Employment emphasises the need to assess the risks of the various proposed and potential activities, develop a plan to avoid or mitigate those risks and then reassess the residual risk once the avoidance and mitigation measures have been adopted or implemented.

Table 4 contains a Risk Rating Table used to assess the likelihood and consequence of injury or harm for potential activities occurring as part of an ecological restoration programme. As detailed in Tables 1, 2 and 3 different activities are carried out by contractors and volunteers. In addition not all activities apply to all projects. In particular tree felling is not common and is typically carried out by contractors, often with their own health and safety plan.

Table 5 contains an assessment of the risks of potential or proposed activities in the absence of an avoidance or mitigation strategy. The proposed mitigation and avoidance measures are set out in Tables 1, 2 and 3. Table 6 contains a revised assessed of residual risk for different potential risk following the implementation of the avoidance and mitigation measures.

Table 4: Risk Rating Table

Consequences of injury or harm to health				
Likelihood of injury or harm to health	Insignificant no injuries	Moderate first aid and/or medical treatment	Major extensive injuries	Catastrophic fatalities
Very likely	High	Extreme	Extreme	Extreme
Likely	Moderate	High	Extreme	Extreme
Moderate	Low	High	Extreme	Extreme
Unlikely	Low	Moderate	High	Extreme
Highly unlikely (rare)	Low	Moderate	High	High

Extreme = immediate action needed

Source: http://www.business.govt.nz/worksafe/tools-resources/safe-use-of-machinery-toolkit/assess-risk-rating-table (accessed 31 March 2016)

Table 5: Risk likelihood, consequence and risk rating WITHOUT avoidance and mitigation measures specified in Tables 1, 2 and 3

Risk detail	Likelihood	Consequence	Risk without mitigation
Contractors			
Chipper operators may be	Moderate	Major/ catastrophic	Extreme

Risk detail	Likelihood	Consequence	Risk without mitigation
injured by improper use			
Steel blade or other part	Unlikely	Major	Extreme
breaking loose in a chipper			
while in use.			
Poor use of a chainsaw when	Moderate	Major/ catastrophic	Extreme
felling weed trees may injure			
members of the public. The			
highest risk situations are			
where trees have a heavy			
lean and/or are on steep			
slopes above tracks or other			
areas used by the public			
Poor chainsaw practices	Moderate	Major	Extreme
while felling weed trees can			
cause injury to the operator,			
as well as hearing loss and			
vibration disease			
Killing tall pest pines by	Unlikely	Moderate	Moderate
drilling and poisoning, may			
lead to operator injury if the			
drill is improperly used			_
The use of machinery in very	Moderate	Major	Extreme
dry conditions may lead to a			
fire. If there is stored fuel on			
site associated with the use			
of larger machinery this may			
increase the risk that the fire			
could become large. This			
could threaten ecological			
values, human life and			
property Herbicides are used to	Unlikely	Moderate	Moderate
control a number of weed	Offlikely	Moderate	iviouerate
species.			
Contractors may spill			
herbicides onto themselves			
or others or use herbicides			
incorrectly			
Bees and wasps can swarm	Moderate	Moderate	High
around flowering weeds such			
as ginger and wasps can be			
associated with some			
structures. People sensitive			
to wasp and bee stings may			
have a serious reaction if			
stung.			
Removing felled trees, pest	Low	Moderate	Moderate

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Risk detail	Likelihood	Consequence	Risk without mitigation
bee stings may have a serious reaction if stung			3
Trained volunteers for			
specific manual activities			
Volunteers would only use small mobile chippers capable of processing branches to 100mm diameter. They could be injured by improper use	Moderate	Moderate	High
Steel blade or other part could break loose in a chipper while in use	Unlikely	Moderate	High
This covers clearing fallen material and the removal of small weed trees. Poor chainsaw practices can cause injury to the operator (including from unintended directions for tree falls), as well as hearing loss and vibration disease	Moderate	Moderate	High
Killing tall pest trees, especially pines, by drilling and poisoning, may lead to operator injury if the drill is improperly used	Unlikely	Moderate	Moderate
Herbicides are used to control a number of pest plant species. Volunteers may spill herbicides onto themselves or others or use herbicides incorrectly Others, especially children, could access and consume herbicides if they are not securely stored	Moderate	Moderate	High

Revised residual risk assessment following the adoption of avoidance and mitigation measures

Table 6 sets out the residual risk assessment following the adoption of avoidance and mitigation measures in Table 3.

Table 6: Residual risk likelihood, consequence and risk rating with avoidance and mitigation measures specified in Tables 1, 2 and 3

Risk detail	Revised likelihood with avoidance and mitigation	Revised consequence with avoidance and mitigation	Residual risk once avoidance and mitigation
	measures in Tables 1,2 & 3	measures in Table 1,2 & 3	measures implemented
Contractors			
Chipper operators may be injured by improper use	Highly unlikely	Insignificant	Low
Steel blade or other part breaking loose in a chipper while in use.	Highly unlikely	Insignificant	Low
Poor use of a chainsaw when felling weed trees may injure members of the public. The highest risk situations are where trees have a heavy lean and/or are on steep slopes above tracks or other areas used by the public	Highly unlikely	Insignificant	Low
Poor chainsaw practices while felling weed trees can cause injury to the operator, as well as hearing loss and vibration disease	Unlikely	Insignificant	Low
Killing tall pest pines by drilling and poisoning, may lead to operator injury if the drill is improperly used	Highly unlikely	Insignificant	Low
The use of machinery in very dry conditions may lead to a fire. If there is stored fuel on site associated with the use of larger machinery this may increase the risk that the fire could become large. This could threaten ecological values, human life and	Highly unlikely	Insignificant	Low

Risk detail	Revised likelihood with avoidance and mitigation measures in Tables 1,2 & 3	Revised consequence with avoidance and mitigation measures in Table 1,2 & 3	Residual risk once avoidance and mitigation measures implemented
property			
Herbicides are used to control a number of weed species.	Highly unlikely	Insignificant	Low
Contractors may spill herbicides onto			
themselves or others or use herbicides			
incorrectly			
Bees and wasps can swarm around	Unlikely	Insignificant	Low
flowering weeds such as ginger and wasps			
can be associated with some structures.			
People sensitive to wasp and bee stings may			
have a serious reaction if stung.			
Removing felled trees, pest vines and other	Highly unlikely	Insignificant	Low
pest plants off site, including to stockpiles			
for biosecure disposal can be physically			
demanding. Contractors could injure			
themselves dragging heavy material and/or			
may trip or become tangled in vines			
Resetting traps and setting out selected	Highly unlikely	Insignificant	Low
baits for pest animal control purposes could			
lead to injury to the operator			
Volunteers			
Volunteers could injure themselves with	Highly unlikely	Insignificant	Low
sharp spades. They could slip/fall on steep			
ground. They could injure themselves with			
unaccustomed physical effort			
Volunteers could injure themselves with	Unlikely	Insignificant	Low
niwashis or other sharp tools used for			
releasing around plantings			

Risk detail	Revised likelihood with avoidance and mitigation measures in Tables 1,2 & 3	Revised consequence with avoidance and mitigation measures in Table 1,2 & 3	Residual risk once avoidance and mitigation measures implemented
Volunteers could injure themselves trying to remove larger pest plants	Highly unlikely	Insignificant	Low
Paste or paint-on herbicides are used to control a number of pest plant species. Volunteers could spill the small amount they have to use Others, especially children, could access and consume herbicides if they are not securely stored	Highly unlikely	Insignificant	Low
Removing pest vines and other pest plants off site, including to stockpiles for biosecure disposal can be physically demanding. Volunteers could injure themselves dragging heavy material and/or may trip or become tangled in vines	Highly unlikely	Insignificant	Low
People sensitive to wasp and bee stings may have a serious reaction if stung	Highly unlikely	Insignificant	Low
Trained volunteers for specific manual activities			
Volunteers would only use small mobile chippers capable of processing branches to 100mm diameter. They could be injured by improper use	Highly unlikely	Insignificant	Low
Steel blade or other part could break loose in a chipper while in use	Highly unlikely	Insignificant	Low
This covers clearing fallen material and the removal of small weed trees. Poor chainsaw practices can cause injury to the operator (including from unintended directions for	Unlikely	Insignificant	Low

Risk detail	Revised likelihood with avoidance and mitigation measures in Tables 1,2 & 3	Revised consequence with avoidance and mitigation measures in Table 1,2 & 3	Residual risk once avoidance and mitigation measures implemented
tree falls), as well as hearing loss and vibration disease			
Killing tall pest trees, especially pines, by drilling and poisoning, may lead to operator injury if the drill is improperly used	Highly unlikely	Insignificant	Low
Herbicides are used to control a number of pest plant species. Volunteers may spill herbicides onto themselves or others or use herbicides incorrectly Others, especially children, could access and consume herbicides if they are not securely stored	Highly unlikely	Insignificant	Low

Training, supervision and monitoring of workers

All contractors are briefed by the project co-ordinator (or their deputy). This typically takes place on site. Where contractors do not have their own health and safety plan the contractors are sent a copy of this plan and are required to confirm that they have read and understood it. The project co-ordinator usually visits the site periodically while the work is taking place to monitor progress and address any issues -including those relating to health and safety.

Where contractors without their own health and safety work plan and volunteers working in a small team outside of the main work areas for a particular project they should report their planned route and activities with an estimated exit time to the project co-ordinator or their deputy. At the end of the work day they should report that they have exited the site.

For general working bees volunteers are briefed by the project co-ordinator (or their deputy) prior to beginning work. These working bees typically address pest plant removal, planting native plants and releasing plantings. The briefings include instructions on health and safety matters. The project co-ordinator (or their deputy) attends general working bees, and checks that health and safety requirements are being addressed. Volunteers with identified manual skills undertaking activities listed in Table 3 will be informed about the specific health and safety requirements relating to those tasks. They will either be sent a copy of this plan in advance and/or briefed on site.

What other PCBUs will you be working with and how will you consult, cooperate with and coordinate activities with them

We are not a PCBU (person conducting a business or undertaking) because we do not have employees. We only employ project-specific contractors and so according to Worksafe we are not classed as a PCBU (http://www.worksafe.govt.nz/worksafe/hswa/understanding-hswa/pcbu-and-the-primary-duty-of-care/who-or-what-is-a-pcbu). The other organisations that we work with — Russell Landcare Trust, and the Bay of Islands Walkways and Walking Trust are also not PCBUs. Regardless of this we work together and collaborate on health and safety matters.

Welfare facilities

We only employ short term task specific contractors and with our very limited budget can't afford to provide specific welfare facilities. If necessary such facilities are available through Russell Medical Centre, Russell Ambulance Service and the Russell St Johns support services..

Emergency procedures and protocols

If there is an accident or medical incident during a community working bee the project co-ordinator (or deputy) would lead the response. This would include calling for assistance and administering first aid as appropriate and required. Living Waters will compile a list of those with first aid certificates and encourage those with relapsed certificates to update their certification. A first aid kit is taken to all volunteer events

Local emergency contact information

Each project co-ordinator will compile a list of emergency contact details.

For projects on the Russell Peninsular the contact details are:

Russell Medical Centre 09 4037690;

Russell Ambulance Station 09 403 7795

The nearest hospital is Bay of Islands Hospital, 1 Hospital Road, Kawakawa, ph 09 404 0280.

For projects on the south of the Russell Peninsular the nearest available defibrillator is in Okiato (Bernie, 23 Okiato Point Road 09 4037877 or 0272 909 546; with alternative contacts of Paul 0275 038070, Ros 403 7390 or 021 403739, or Val 403 8480 or 021 474641. Further defibrillator contacts in the Russell area can be found on http://www.russellcivildefence.org/contacts.html

Incident reporting, investigation and response procedures

A register of health and safety incidents will be kept. All incidents will be investigated to determine the reasons for the incident. If appropriate, health and safety procedures will be reviewed to minimise the risks of a similar incident occurring again. As required any serious incidents will be reported to Worksafe New Zealand (MBIE).

Reviewing health and safety procedures/ systems

The health and safety procedures will be reviewed on an annual basis with an earlier review following any serious incident.

Appendix 1: Good practice guidelines for users of chainsaws

Chainsaw guidelines

Check the work area for hazards

- Check there are no people or animals in work area
- Don't work in adverse weather
- Also ensure you are well balanced when using a chainsaw
- Shut off the chainsaw before carrying it. Carry it by the front handles with the bar to the rear
- Be careful moving on steep/ uneven ground
- When felling trees make sure that you have an escape route planned and cleared to the side and rear
- Make sure other people are at least two tree lengths away

Get assistance with felling trees on steep slopes/ unstable ground and/or a lean

Dos and don'ts of chainsaws

- DO not operate a chain saw above shoulder height, unless it is a pole-saw
- Have someone within calling distance
- Never operate a chainsaw under the influence of alcohol or drugs
- Never use a chainsaw when tired
- Match the size of the chainsaw to the tree being cut
- Never operate a damaged or improperly adjusted chainsaw
- Except for fine-tuning the carburettor never adjust chainsaw parts while the motor is running
- Always turn off the chainsaw when handling the chain, guide bar or sprocket

Safety equipment

- Boots with steel toecaps and firm ankle support, and securely tied laces
- Safety helmet to protect from falling objects and to minimise the risk to the faceback from a kickback
- Earmuffs rated class 5
- Leg protection-chainsaw operator's safety trousers
- Use eye protection if dusty or there may be flying debris
- First aid kit with at least 2 large sterile wound dressings
- Wedges for directional tree felling or to hold cuts open (plus a mallet to drive in wedges)

Checks before using a chainsaw

- Check chain break is working
- Check lubrication system is working and that the chain is properly lubricated
- Check that the throttle control lockout, throttle control trigger and on/off switch are operating properly
- Check that the chain is sharpened and tensioned to the manufacturer's instructions
- Check that the chain stops moving when the throttle control trigger is released
- Check all external fittings are secure
- Check that the high tension lead does not show signs of wear, especially where it passes through the body of the chainsaw

Refuelling the chainsaw

As petrol (especially vapour) can be easily ignited by a spark or even a hot surface when refuelling then is a risk of being burnt and/or a fire starting. The following procedures are recommended

- Stop the motor
- Place the chainsaw on clear ground
- Fill oil tank first to allow the chainsaw to cool
- Do not spill fuel onto hot motor components and wipe any spilt fuel
- Move at least 3m from fuelling site before restarting the chainsaw

Chains

- A constant supply of oil to the chainsaw guide bar is essential.
- Regularly check the chain oil system is working
- Loose chains can affect depth gauge effectiveness and result in greater kickback potential and may cause the chain to jump of the guide bar
- Chains should be
 - o Well oiled
 - o Correctly tensioned before each use or after refuelling. Never tension right after cutting
 - o Sharp with correct cutter angles and correct depth gauge height

Source: Department of Labour, November 2011 (update) A guide to safety with chainsaws. Department of Labour.