



STEP Inc

Community-based Environmental Conservation since 1978

The STEP Method of Selective Hand Clearing

STEP has been in the forefront of the development of bushfire hazard reduction methods in urban areas and in the past has published advice to members.

Council has primary responsibility for fire control and carries this out by control burning and by maintaining fire breaks by mowing, slashing and trittering. STEP supports all of Council's work done in accordance with the [State Environment Planning Policy 19](#) Plan of Management.

The enormous bushland perimeter means, however, that not all areas will be attended to every year. One year after hazard reduction work has been carried out by Council, bushland will always support a fire under hot windy conditions and it is therefore both prudent and responsible for homeowners to contribute to the reduction of fuel so as to minimise risk.

Selective hand clearing has great advantages in that it allows determination of the type and quantity of material to be removed and allows for sensitive species, or areas of habitat, to be retained. It is also the only way of continuously maintaining reduced fuel loads without degrading bushland or diminishing biodiversity. There is no loss of wildlife, no bare soil to encourage weeds and erosion, no dominance of natives by colonising grasses which are highly flammable and minimal loss of aesthetic appeal. The STEP Method gives protection at all times.

QUALIFICATIONS REQUIRED

Ideally selective hand clearing should be carried out by, or under the direct supervision of, a person with at least the National Trust bush regeneration course. This course is very easy to do and we strongly recommend it. Ryde TAFE offers a more extensive and valuable course. If you don't have someone with training it is advisable to have your site assessed by a qualified person who can advise on a strategy for your particular situation.

The ideal way in which selective hand clearing could be carried out is in conjunction with the Bushcare program. Council supports resident bush regeneration groups under this program and there are many operating in Ku-ring-gai, Hornsby and elsewhere. Call your local council for more details.

SITE ASSESSMENT

The widths of the firebreaks and the quantity of material required to be removed depends on the size of the adjoining reserve, aspect, slope, presence of important wildlife habitat, nearness of houses to the bush, density and structure of the vegetation, occurrence of rare plant species and the existence of large rock shelves or boulders or other natural boundaries such as wet gullies. The site assessment will result in a specific plan for each area.

WEEDS AND NATIVES

1. Removal of Weeds

Weeds are a source of fuel which can be completely removed but can spread further into bushland if hazard reduction work gives them access to sunlight and soil with diminished leaf litter cover. Minimal disturbance methods must be used if the weed problem is not to be increased. On no account should the soil be dug up and any soil left exposed through weed removal should be restored to its original configuration and covered with leaf litter.

Some weeds should be hand pulled, some should be poisoned through spraying or direct application of herbicide to foliage and some should be cut or sawn and the stumps poisoned. Weedy sites in areas with poor regeneration prognosis should be mown where possible to control them permanently but great care should be taken that the mowing does not intrude progressively into good bushland.

2. Removal of Natives

The removal of living natives will be an essential component of any hazard reduction program. It is essential that the site assessment consider just what natives should be removed and in what quantity. Obviously those plants to be removed are those which are not so rare and which are more fire prone. For instance *Persoonia levis* (broad leaf Geebung) will be retained in preference to Casuarinas.

CLEARING BY ZONES

The objective of the STEP Method is to progressively remove fuel. At the property boundary almost all understorey fuel is removed in a band and from that band progressively less fuel is removed until the normal hazard reduced zone gives way to untouched bushland.

1. Zone 1

This typically consists of a 6 metre wide strip immediately adjacent to property boundaries. It is cleared (with exceptions as warranted) by hand of vegetation, both living and dead, except for the bottom 5 cm of leaf litter. Zone 1 allows ready access for firefighters and should be maintained at all times. Where it is heavily weed infested it should be mown where terrain allows. In narrow reserves or where fire danger is low, Zone 1 is all that may be required.

2. Zone 2

This typically consists of a strip 24 metres wide which is maintained as native bushland with the understorey cleared as described. All suspended dead vegetation is brought to ground level and then all dead material of less than 2.5 cm diameter is removed except for the bottom 5 cm of leaf litter.

Where there is really dense native understorey it is necessary to carefully thin out the plants by hand. This starts with total removal in Zone 1 with the quantity removed progressively decreasing until the end of Zone 2 is reached. Plants will be removed preferentially in accordance with the site assessment.

All material in excess of the 5 cm of leaf litter should be removed from the site or, with Council permission, burnt in heaps.

TOOLS

Normal bush regeneration tools are ideal and these may be augmented as required by rake hoes (McLeod tools), bush saws, long handled loppers etc. Herbicides should be biodegradable, e.g. glyphosate.

TIMING AND FOLLOW-UP

Hazard reduction should, if possible, be carried out in winter and autumn. Maintenance after the initial clearing will be far easier and less demanding of time. Good bushland should only need to be treated once a year but weedy areas will need more frequent attention. In well maintained zones it may be that regular maintenance will preclude the need to remove material from the site as it can be broken or cut up into small particles and left to form part of the litter.

No work will be required in any year that the area is control burnt but after a burn qualified regenerators should hand weed to prevent weeds being advantaged by the presence of light and nutrients.

APPLICATION

Selective hand clearing was devised for use in small urban areas where fires are detected early, where there is a mains water supply and where fire brigades can gain ready access. It is not suitable for large tracts of bushland Such as the Blue Mountains.

IN SUMMARY

- Take responsibility for your own house.
- Use selective hand clearing in addition to Council measures.
- Do so only after advice from a trained bush regenerator and inform Council.

STEP offers this advice in the same spirit in which many authorities are asking residents to be responsible for their own properties. It is not meant to replace that which may be received or obtained from Council or other authorities or to imply that no other measures need be taken.

The behaviour of bushfires is unpredictable and is still being studied. It remains true, however, that reduced fuel means that fires will be less intense and more easily fought and we encourage members to manage their own properties accordingly. Complete safety cannot be achieved.

HISTORY

The STEP Method was developed by STEP members in the early 1980s and has been published in various forms. This summary draws heavily upon the paper given by Helen Petersen to the Urban Bushland Management Symposium at Willoughby Municipal Council on 26 March 1983.

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