



Planning



**STANDARDS FOR
BUSH FIRE HAZARD
REDUCTION WORKS IN
SEPP 14 -
COASTAL WETLANDS**

Standards for Bush Fire Hazard Reduction Works in SEPP 14 Coastal Wetlands

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Contents

1.	Introduction.....	1
2.	Principles of Bushfire Hazard Protection	1
3.	SEPP 14 - Coastal Wetlands.....	2
4.	What is a Notice?	2
5.	When do these Standards apply?	3
6.	Bush Fire Hazard Reduction Works Standards in SEPP 14 Wetlands	3
6.1	When can hazard reduction works be undertaken in SEPP 14 Wetlands.....	3
6.2	Requirement to undertake the works in SEPP 14 Wetlands	4
6.3	Prior to undertaking the works in SEPP 14 Wetlands.....	4
6.4	Vegetation in SEPP 14 Wetlands not to be disturbed.....	5
6.5	Preferred vegetation for clearing	5
6.6	Procedures when undertaking hazard reduction works	6
6.7	Avoidance of soil disturbance.....	7
6.8	Avoidance of disturbance of water channels.....	7
6.9	Dealing with the cleared material	7
6.10	Maintenance of understorey areas following clearing.....	7
7.	Procedures for issuing a Notice	8
	Step 1 – Notification of need for bush fire hazard reduction works.....	8
	Step 2 – Environmental Assessment of Hazard Reduction Works	8
	Step 3 – Notification of required bushfire hazard reduction works.....	8
APPENDIX 1	REVIEW OF ENVIRONMENTAL FACTORS	9
APPENDIX 2: DEFINITIONS	11

1. Introduction

These standards apply to private and some public land, and are for councils, government agencies and landowners undertaking critical bush fire hazard reduction works in SEPP 14 coastal wetlands. The overall purpose of the standards is to ensure the bush fire hazard reduction works in SEPP 14 coastal wetlands will have minimal environmental impact. The standards aim to protect life and property as well as maintaining wetland values.

The standards only apply where a notice has been issued by the NSW Rural Fire Service (RFS) or the Commissioner of the RFS otherwise authorises the bush fire hazard reduction works. These standards have been developed by the Rural Fires Service (RFS), Department of Environment, Climate Change and Water (DECCW) and the Department of Planning (DoP), in consultation with the Fisheries Division of the Department of Industry and Investment (I&I NSW) and the Land and Property Management Authority (LPMA).

These standards are to be reviewed jointly by the DoP and the RFS within 2 years of commencement. The review must be undertaken in consultation with DECCW, LPMA and I&I NSW. The review can occur before this time if requested by the Director General of Planning, Minister for Planning, Commissioner of RFS, or Minister for Emergency Services.

2. Principles of Bushfire Hazard Protection

Bush fire attack takes essentially five forms; ember, wind, smoke, radiant heat and flame. To effectively protect a building, strategies must be implemented that separate it from the hazard and reduce the intensity of bush fires to minimise the combined impact of ember, wind, flame and heat attack.¹

- Evidence indicates ember attacks are responsible for most bush fire related house fires. Embers can also cause spotting in advance of the bush fire.
- Strong winds will drive embers into vulnerable areas of a building, preheat and dry fuel ahead of a fire, lift roofing and extend flames along a more horizontal plane closer to building elements. As a result, firebreaks assist in hazard reduction.
- While smoke will cause minimal damage to property, it can severely affect the health of aged or disabled persons or residents susceptible to respiratory disorders.
- Radiant heat can severely impair firefighting operations, the health of residents and the integrity of building elements. Excess radiant heat can prevent emergency services personnel assisting residents.
- Flame attack will severely restrict firefighting operations, provide piloted ignition to building elements and threaten the health of residents and their capacity to evacuate the area.

Overall the intention of bush fire protection measures should be to prevent flame contact to a structure, reduce radiant heat to below the ignition thresholds for various elements of a building, to minimise the potential for wind driven embers to cause ignition and reduce the effects of smoke on residents and fire fighters. The principles of landscaping for bush fire hazard protection aim to:

- Prevent flame impingement on the dwelling
- Provide a defensible space for property protection
- Reduce fire spread
- Deflect and filter embers
- Provide shelter from radiant heat, and
- Reduce wind speed.

An Asset Protection Zone (APZ) provides an area between a bush fire hazard and the building, which is managed to minimise fuel loads, inhibit a fire path and reduce the effects of heat, flame, ember and smoke attack. The size of the APZ is based on vegetation type, slope and levels of construction. The vegetation is modified so that it does not provide a path for the transfer of fire to the building either from the ground level or through the tree canopy. The APZ should operate to reduce the radiant heat impact during a fire, and provide a relatively safe area for fire fighters and landowners to defend their property.

¹ RFS Planning for Bushfire Protection 2006

3. SEPP 14 - Coastal Wetlands

A SEPP 14 Coastal Wetland is a wetland that is included on a map contained in State Environmental Planning Policy – Coastal Wetlands. The aim of this policy is to ensure that the coastal wetlands are preserved and protected in the environmental and economic interests of the State. These mapped wetlands include the following broad community types: –

- mangroves
- sedgelands
- saltmarsh
- melaleuca forests
- casuarina forests
- brackish and freshwater swamps, and
- wet meadows.

The majority of SEPP 14 wetland vegetation communities are listed as Endangered Ecological Communities under the *Threatened Species Conservation Act 1995*. The majority of these vegetation types are able to cope with fire, with most of the flora species within these vegetation types exhibiting two main strategies for survival – either they are “seeders” or “re-sprouters”. Fire frequency, intensity and suppression may adversely affect environmental and cultural values of wetlands, depending on its characteristics. The ecological requirements for fire in wetlands range from nil for mangroves and saltmarsh to a range of years for other wetland types.²

Hazard reduction works may be required to reduce the adverse impacts of fire to human life and property.



Figure 1: RFS crews undertaking bush fire hazard reduction work

Source: RFS

4. What is a Notice?

The RFS Commissioner has the authority to order owners and managers of private and public land to conduct bush fire hazard reduction work. If a hazard exists, the RFS may issue a bush fire hazard reduction notice to the landowner or manager requesting the hazard to be mitigated. If the landowner or manager does not comply with the notice, the RFS may undertake works to remove the hazard and may impose the associated cost on the landowner/manager.

These powers are under sections 66, 70, 73 and 74E2 of the Rural Fires Act 1997 and provide for the issuing of notices for hazard reduction works when there is a bush fire threat to an asset and to carry out the required works when there is a failure to comply with a notice.

² G Schneider & S Sutherland (undated), *Fire in coastal wetlands – implications for management*. NSW Land and Property Management Authority.

5. When do these Standards apply?

Clause 48B (2) of the Infrastructure SEPP (I SEPP) provides that bush fire hazard reduction works may be undertaken within SEPP 14 wetlands without development consent:

- (a) where the land is in private ownership - only if the RFS has issued a notice to the occupant to undertake bush fire hazard reduction works within 20m of the existing specified building; or
- (b) where the land is in public ownership, - only if the RFS has provided written confirmation to the relevant public authority, to undertake bush fire hazard reduction works within 20m of the existing specified building.

A “specified building” means a room or suite of rooms occupied or used or so constructed or adapted as to be capable of being occupied, including dwelling house, secondary dwelling, dual occupancy, multi-dwelling house, residential flat building, a retirement village, attached dwelling, boarding house, group home, hostel, semi-detached dwelling, seniors housing, residential accommodation, residential care facility, educational establishment, hospital or child care centre.

The bush fire hazard reduction works:

- (1) must be on land within 20m of an existing “specified building; and
- (2) must not involve burning; and
- (3) must be undertaken in accordance with these standards.

For all other hazard reduction works in SEPP 14 wetlands, development consent is required under Part 4 of the EP&A Act. Under the provisions of SEPP 14, if the hazard reduction works include clearing of vegetation or draining or filling of land, an Environmental Impact Statement must be prepared to be submitted with the development application.

The *Bush Fire Environmental Assessment Code* does not apply in SEPP 14 wetlands.

These provisions do not apply to SEPP 14 wetlands that are also land reserved or acquired under the *National Parks and Wildlife Act 1974*.

6. Bush Fire Hazard Reduction Works Standards in SEPP 14 Wetlands

For works to be undertaken in accordance with the provision, all of the following standards are to be met.

6.1 When can hazard reduction works be undertaken in SEPP 14 Wetlands

- (a) Hazard reduction works can only be undertaken under these standards where the SEPP 14 vegetation poses a potential bush fire hazard to an existing specified building.
- (b) The “specified building” for which the bush fire hazard reduction is proposed must be:
 - (i) dwelling house, secondary dwelling, dual occupancy, multi-dwelling housing, residential flat building, a retirement village, attached dwelling, boarding house, group home, hostel, semi-detached dwelling, seniors housing, residential accommodation, residential care facility, educational establishment, hospital or child care centre.
 - (ii) must have been constructed or approved prior to the gazettal of the Infrastructure SEPP amendment (December 2010).
- (c) The total width of the asset protection zone (APZ) must be no greater than 20m from the footprint of the existing specified building.
- (d) There must be insufficient space to provide the necessary APZ outside of the SEPP 14 boundary.
- (e) The area of wetland to be used for the APZ must be minimised. The APZ must be contained on non-SEPP 14 mapped land as much as possible.

6.2 Requirement to undertake the works in SEPP 14 Wetlands

- (a) Bushfire hazard reduction works can only be undertaken by a private land owner in coastal wetlands mapped in SEPP 14, if a notice has been issued by the RFS requiring the works to be undertaken
- (b) Bushfire hazard reduction works can only be undertaken by a public authority in coastal wetlands mapped in SEPP 14, if written confirmation has been issued by the RFS requiring the works to be undertaken.
- (c) Landowners (both public and private) are responsible for the hazard reductions works nominated in the notice or written confirmation.
- (d) For private landowners, a notice must be valid on each occurrence when maintenance hazard reduction works are being undertaken.
- (e) For public authorities, a notice is not required for on-going maintenance if the works are consistent with initial notice and the REF remains valid.
- (f) Where a landowner does not undertake the works in accordance with the notice, the landowner must meet any associated costs of the RFS to undertake the works on the landowner's behalf to remove the hazard.



Figure 2: Dwelling houses adjacent to SEPP 14 wetland in Tweed LGA

6.3 Prior to undertaking the works in SEPP 14 Wetlands

- (a) The RFS or relevant public authority must notify (in writing) the relevant council, adjacent landowners and other relevant stakeholders (such as local community groups and environmental interest groups) of proposed bush fire hazard reduction works during the assessment period, and take into consideration any comments.
- (b) For private lands, the RFS must be contacted to organise for a RFS representative to be in attendance whilst hazard reduction works are undertaken to ensure works are carried out in accordance with these standards.
- (c) For public lands, arrangements must be made for a public land authority officer to be in attendance throughout the hazard reduction works to ensure works are carried out in accordance with these standards. Attendance of a public land authority officer is not required for maintenance works. However, the public authority remains responsible for ensuring that the works are undertaken in accordance with these standards.

6.4 Vegetation in SEPP 14 Wetlands not to be disturbed

- (a) No mangrove or saltmarsh vegetation is to be cleared.
- (b) The following trees must be given the highest priority for retention when undertaking hazard reduction works. These trees are to be marked with a red tag:
 - (i) Trees which are threatened species or part of a threatened population;
 - (ii) Trees with hollows;
 - (iii) Trees which are likely to be nesting trees for threatened or migratory species from the wetland or its surrounds;
 - (iv) Trees considered to be valuable for food source for threatened or migratory species; and/or
 - (v) Trees that are culturally significant or locally significant (listed on a council's significant tree register).

6.5 Preferred vegetation for clearing

- (a) Preference should be given to removing the following.
 - (i) Noxious or environmental weeds
 - (ii) Trees that have been determined to be dangerous
 - (iii) Non-native woody species
 - (iv) Trees with a diameter at breast height of less than 40cm
 - (v) Trees and shrubs less than 3m in height
 - (vi) Locally common species.



Figure 3: Nursing home at Wyong where hazard reduction works in SEPP 14 wetland have been undertaken.

Source: Wyong Shire Council

6.6 Procedures when undertaking hazard reduction works

- (a) Any trees marked with red tags are to be retained. Pruning or skirting of these trees should not impact on the values of the trees identified in section 6.4(b).
- (b) Disturbance by hazard reduction works of threatened or migratory species which frequent wetland areas or their surrounds should be avoided.
- (c) Impacts on Aboriginal cultural heritage and other heritage significance should be avoided wherever possible.
- (d) Pruning or branch removal is to be carried out in accordance with the RFS document *Standards for Asset Protection Zones, or AS 4373-1996 Pruning of amenity trees*.
- (e) Clearing must always be undertaken to the minimum extent necessary.
 - (i) *For trees:* -
 - Within 5m of an existing specified building:
 - Trees can be removed, but roots should be retained.
 - From 5-20m from an existing specified building:
 - trees can be removed to create a discontinuous canopy, but roots should be retained
 - maximum tree crown separation of 5m
 - branches should not overhang the roof of buildings
 - skirting (removal of lower branches) of trees can be undertaken to separate the canopy from the ground, and
 - skirting can be undertaken to a maximum height of 2m from the soil surface.
 - (ii) *For vegetation other than trees:*
 - Within 0-20m of an existing specified building:
 - native plants can be cleared to 10cm in height; and
 - non-native plants can be removed.
- (f) Trees and other vegetation in the vicinity of power lines and telephone lines should be managed and trimmed in accordance with the specifications in "Vegetation Safety Clearances" issued by Energy Australia (NS179, April 2002).
- (g) Combustible fencing should be removed in bushfire hazard areas with areas near fences and gates kept cleared of fuel

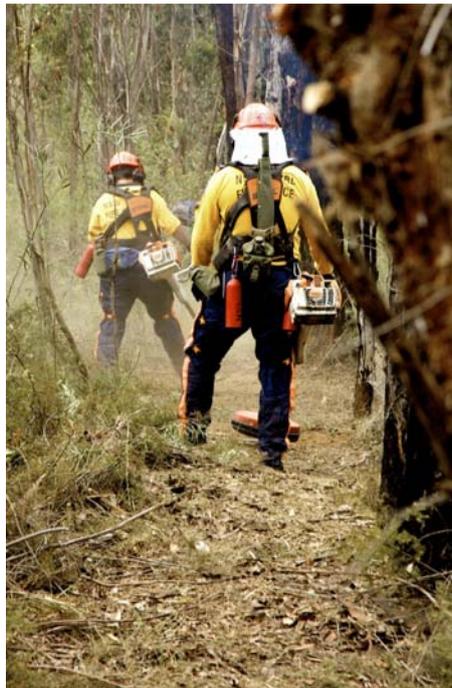


Figure 4: RFS crews undertaking hazard reduction works

Source: RFS

6.7 Avoidance of soil disturbance

- (a) All clearing shall be conducted in a manner to ensure the retention of top soil on the ground surface. Soil erosion is to be avoided. This may require distribution of some mulched vegetation over the ground surface.
- (b) Groundcover is to be maintained, minimising opportunities for weed propagules.
- (c) Placement of materials for safe access is permitted. However any unavoidable soil disturbance must be remediated as soon as practicable and no later than 2 weeks following the disturbance. This may require distribution of some mulched vegetation over the ground surface.

6.8 Avoidance of disturbance of water channels

- (a) Excavation, including the destabilising of water channels is not permitted.
- (b) Blocking fish passages should be avoided. Any unavoidable disturbance to fish passages must be remediated as soon as practicable and no later than 2 weeks following the disturbance.

6.9 Dealing with the cleared material

- (a) Pile burning or any other type of burning is not permitted.
- (b) All vegetation that has been cleared must be removed from the site, except tree trunks, which may be retained on site.
- (c) In order to maintain habitat, hollow logs should be retained in situ or relocated if they pose a fire risk.

6.10 Maintenance of understorey areas following clearing

Cleared areas should be maintained with on-going slashing of understoreys.



Figure 5: Maintenance of APZ in Wyong

Source: Wyong Shire Council

7. Procedures for issuing a Notice

Step 1 – Notification of need for bush fire hazard reduction works

Private and public landowners will be contacted by RFS to advise that hazard reduction works need to be undertaken. In some cases there may be a number of adjoining landowners notified, with a joint assessment undertaken of the bushfire hazard works to be undertaken by a number of landowners.

Step 2 – Environmental Assessment of Hazard Reduction Works

If hazard reduction works are proposed on private land, the RFS must prepare the Review of Environmental Factors (REF) to consider the likely environmental implications prior to issuing the notice. If hazard reduction works are proposed on public land, then the relevant public authority must prepare the REF. The factors listed in Part 5 of the EP&A Act and Regulation must be considered in the environmental assessment – see Appendix 1.

The RFS or relevant public authority must place an outline of the proposed hazard reduction works and assessment in the REF on its websites. They must also notify (in writing) the relevant council, adjacent landowners and other relevant stakeholders (such as local community groups and environmental interest groups) of proposed bush fire hazard reduction works during the assessment period, and take into consideration any comments.

Other approvals which may need to be obtained:

Approval may also be required under other legislation. In that case, the agency responsible for issuing the permit or licence must also consider the REF prior to determining to issue a permit or other approval. Legislation which could apply to hazard reduction works in SEPP 14 wetlands are listed in Table 1.

Table 1 - Other approvals that may be required

Permit or licence	Determining authority
<i>Fisheries Management Act 1994</i> <ul style="list-style-type: none">▪ a permit under section 199 - 200 in relation to reclamation▪ a permit under section 219 if the blocking fish passage	Industry and Investment NSW (Fisheries division)
<i>Protection of the Environment Operations Act 1997</i> <ul style="list-style-type: none">▪ an environment protection licence if risk of polluting waters	Department of Environment, Climate Change and Water
<i>Water Management Act 2000</i> <ul style="list-style-type: none">▪ a controlled activity approval under s91(2) for works on waterfront land as defined by that Act	NSW Office of Water

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) may also apply to land where the proposed hazard reduction works are to be undertaken. The *EPBC Act* requires that actions which will have or are likely to have a significant impact on matters of national environmental significance (controlled actions) are approved under the *EPBC Act*.

Step 3 – Notification of required bushfire hazard reduction works

The RFS must take into consideration the assessment in the REF when determining the scope of the bushfire hazard reduction works to be prescribed in the notice sent to the private land owner. The notice is issued to private landowners advising that the hazard reduction works will need to be undertaken, the scope of the works and the relevant timeframes. The procedures in the notice must be consistent with the *Standards for Bush Fire Hazard Reduction Works in SEPP 14 - Coastal Wetlands*.

Where the landowner is a public authority, the public authority must undertake the hazard reduction works in SEPP 14 wetlands as notified by the RFS, taking into consideration the assessment in the REF. The determination should set out the procedures and timeframes to be followed. These must be consistent with the *Standards for Bush Fire Hazard Reduction Works in SEPP 14 - Coastal Wetlands*.

APPENDIX 1 REVIEW OF ENVIRONMENTAL FACTORS

When development does not require development consent, there is an obligation on an approval authority under s111 of the *Environmental Planning and Assessment Act 1979*, to consider whether the granting of an approval or permit, is likely to significantly affect the environment.

The following table provides a list of factors that must be considered under Clause 228(2) of the *Environmental Planning and Assessment Regulation 2000*, when determining if there are likely to be significant impacts on the social, economic or biophysical environment. The likely effects associated with each factor must be considered and the likely implications taking into consideration potential measures to avoid, minimise or manage any adverse impacts.

Clause 228(2) Factors for Consideration	Likely impact	Measures to avoid, minimise or manage likely adverse impacts
a) Any environmental impact on a community? ³		
b) Any transformation of a locality?		
c) Any environmental impact on the ecosystem of the locality?		
d) Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality?		
e) Any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations?		
f) Any impact on the habitat of protected fauna (within the meaning of the <i>National Parks and Wildlife Act 1974</i>)?		
g) Any endangering of any species or animal, plant or other form of life, whether living on land, water or in the air?		
h) Any long-term effects on the environment?		
i) Any degradation of the quality of the environment?		
j) Any risk to the safety of the environment?		

³ For the purpose of this clause *community* means human community

Clause 228(2) Factors for Consideration	Likely impact	Measures to avoid, minimise or manage likely adverse impacts
k) Any reduction in the range of beneficial uses of the environment?		
l) Any pollution of the environment?		
m) Any environmental problems associated with the disposal of waste?		
n) Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply?		
o) Any cumulative environmental effects with other existing or likely future activities?		

APPENDIX 2: DEFINITIONS



Dwelling House adjacent SEPP 14 Wetlands, Toukley

Source Wyong Shire Council

Clearing	For the purpose of these standards the removal of native vegetation for bush fire hazard reduction means cutting down, lopping, thinning, mowing or slashing. It specifically does not allow for burning, ringbarking or uprooting.
Diameter at Breast Height (DBH)	The standard height (1.3 metres) above ground level at which the diameter of trees is measured.
Existing specified building	<p>Means a room or suite of rooms occupied or used or so constructed or adapted as to be capable of being occupied, including dwelling house, secondary dwelling, dual occupancy, multi-dwelling housing, residential flat building, a retirement village, attached dwelling, boarding house, group home, hostel, semi-detached dwelling, seniors housing, residential accommodation, residential care facility, educational establishment, hospital or child care centre.</p> <p>The building must have been constructed or approved prior to the gazettal of the Infrastructure SEPP amendment (December 2010).</p>
SEPP 14 wetland	Any area mapped under the State Environmental Planning Policy No. 14 – Coastal Wetlands
Tree	Perennial plant with one or more self-supporting trunks, which has a height of 3m or more, and at least one trunk with a diameter at breast height of 10cm or more, or a branch spread of 3m or more.
Vegetation	<p>Vegetation includes:</p> <ul style="list-style-type: none">▪ Trees (including any sapling or shrub, or any scrub);▪ understory plants;▪ groundcover: any type of herbaceous vegetation. Herbaceous plants include grasses, forbs, herbs and similar low-growing, non-woody plants; or▪ plants occurring in a wetland.
Threatened species	As defined in the <i>Threatened Species Conservation Act 1995</i>