

Species	Location	% HDM impacted total % (low to canopy burnt) n/a - no HDM in region 0% - no impact in FMA	% HDM Impacted by High Severity >80% Canopy Scorch	Risk Assessment	Habitat Requirements	Threats from timber harvesting	(a) is the threat of serious or irreversible damage to the environment negligible?	Code or policy requirements	(b) is the threat of serious or irreversible damage to the environment able to be addressed by adaptive management?	VF Adaptive management prescription	(c) is the measure proposed to be implemented proportionate to the threat?
Broad-toothed Rat	Statewide	10.9%	7.4%	Low	Tall open forests and Woodlands Dense and moist ground layer of grasses, sedges, herbs and heaths Dense ground cover, cooler climate, significant annual rainfall, a plentiful food supply and adequate vegetative cover. -Preferred habitats include alpine and subalpine heathlands, grassland adjacent to boulder outcrops, swamps, sedgelands, coastal grassy or shrubby dunes, and sometimes forests with grassy understoreies. -Habitat suitability is largely determined by the availability of cover and grasses -Proximity to drainage lines supports habitat requirements	Habitat loss and fragmentation Some forestry activities reduce habitat suitability and resource abundance, and increase predation risks	No - Timber harvesting could impact Habitat	No	Yes	Gaps and corridors method to provide unharvested corridors providing connectivity. All green patches to be retained. Rocky outcrops prioritised for retention areas.	Yes
	NE	17.3%	12.0%	Low							
	CG	1.2%	0.9%	Low							
Dargo Galaxias	Statewide	14.3%	5.9%	Med	Specialised - Riparian -The taxon is confined to freshwater and considered not to undertake diadromous migrations -small cool, clear, alpine creek, flowing through a grassy plain, consisting predominantly of riffles and pools. Little shading except that provided by grasses. During winter the catchment is often covered by snow. The substrate consisted predominantly of bedrock with some loose boulders, with smaller amounts of pebble, gravel, sand and clay, overlain in backwaters by silt. Instream cover was provided by rock and by bank and vegetation (alpine grasses) overhang, and pools averaged 0.5 m in depth (Raadik 2014).	Timber harvesting potential for increased sedimentation The Dargo Galaxias has a restricted range (AOO <10km2, EOO <100km2), and occurs at only one location. There has been an estimated decline of up to 90% in the number of mature individuals over the past 3 generation period. A continuing decline is estimated in the area, extent and/or quality of habitat and in the number of mature individuals based on deterioration in habitat from ongoing dry conditions and sedimentation impacts.	No - Timber harvesting listed as a potential threat and could impact Habitat	No	Yes	Any harvesting planned upstream of Dargo Galaxias population to involve DELWP specialist to ensure population is appropriately managed.	Yes
	NE	0.0%	0.0%	Low							
	CG	5.0%	0.5%	Low							
Giant Burrowing Frog	Statewide	40.5%	20.8%	Med	Eucalypt forest of various types	Drivers of declines of this species are not well understood, and likely include clearing for agriculture, logging, altered fire regimes, grazing by introduced livestock and deer, and elevated predation levels from foxes and cats.	n/a - HDM does not overlap FMA	n/a	n/a		
	NE	n/a	n/a	Low							
	CG	0.0%	0.0%	Low	-Dependent on areas with native vegetation (Penman et al. 2004). -wide range of forest communities including montane sclerophyll woodland, montane riparian woodland, as well as wet and dry sclerophyll forest -Tadpoles fairly sedentary and slow moving. Found in bottom of small pools, live amongst leaf litter sediment. Dark body colour provides camouflage	The taxon's microhabitat is likely highly sensitive to such threats, and, as breeding habitat appears to be both very small and highly localised (Bilney 2015).	No - Timber harvesting listed as a potential threat and could impact Habitat	Where verified records of Giant Burrowing Frog are located on first-order streams or sites away from streams, protect approximately 50 ha (preferably the entire sub catchment unit) in SPZ. Where verified records of Giant Burrowing Frog are located on second or higher order streams, establish a SPZ of 100m width each side of the stream for 1 km. Avoid new roading in the SPZ.	Yes	Extended conservative stream buffers provide habitat. All known detections are protected. Any new detections will be protected in line with the Code and DELWP specialist advice.	Yes
Glossy Black-Cockatoo	Statewide	43.9%	24.6%	Med		Vegetation clearing and fragmentation, loss and lack of suitable HBTs with large hollows, Fire including high severity and repeat fires resulting in loss of suitable HBTs: Habitat damage or loss from Timber Harvesting, and loss of Allocasuarina spp as food sources	No - Timber harvesting could impact Habitat and Feed trees		Yes	No harvesting of any she-oak stands. Retaining all green patches. Only harvesting fire killed Ash stands. Retain all green/live trees where safe to do so. Retain all dead large hollow bearing trees where safe to do so.	Yes
	NE	67.6%	33.3%	High	Specialised - Eucalypt forest or woodland containing a high density of their main food source, the Black She-oak (Allocasuarina littoralis) - mature, sparsely distributed She-oak trees that are between 2 m and 10 m tall - large hollow-bearing trees (HBTs) for breeding						
	CG	0.0%	0.0%	Low							
Greater Glider	Statewide	17.9%	10.0%	Low		Timber harvesting (direct mortality, loss of HBTs, habitat fragmentation and increasing risk of extinction for small isolated populations).	No - Timber harvesting could impact Habitat and Feed trees		Yes	Retain all green patches. Retain all dead hollow bearing trees where safe to do so. These provide current and future hollow bearing trees. Retain all dead large hollow bearing trees where safe to do so. Gaps and corridors harvesting method retains forest structure and provides connectivity. Timber recovery harvesting fire killed Ash, where no foliage remains as these areas have burnt at the highest severities, therefore not providing current habitat for GG.	Yes
	NE	20.4%	10.9%	Low	Ash / wet forest (incl. those dominated by Mountain Ash, Alpine Ash or Shining Gum) Mixed-species eucalypt forests (e.g. foothill forest) - Hollow-bearing trees (HBTs), multiple large hollows for denning & shelter, canopy connectivity and canopy cover						
	CG	1.6%	1.2%	Low							
Masked Owl	Statewide	11.0%	6.3%	Low	inhabits a wide variety of lowland forests and woodlands that provide mature trees with hollows suitable for nesting and roosting, and nearby open areas for foraging. Dominant habitat is wet eucalypts forest. Records indicate it seems to prefer ecotones b/w closed forest and open forest and woodland. - hollow-bearing trees (HBTs), large hollows for nesting & shelter, roost sites	Vegetation clearing and fragmentation, loss and lack of suitable HBTs with large hollows. Timber harvesting (direct mortality, loss of HBTs and loss of habitat for prey, habitat fragmentation and increasing risk of local extinction).	No - Timber harvesting could impact Habitat: HBT's and prey species	Fixed: -Establish and maintain MOMA Detection: -Establish a SPZ of 3 ha and a SMZ of 250/300m radius (or equivalent linear area) over each verified nesting and roosting site utilised recently and frequently and located outside a Masked Owl Management Area, unless already protected. Protect hollow bearing trees	Yes	Retain all green patches. Retain all live/green trees where safe to do so. These provide current and future hollow bearing trees. Retain dead large hollow bearing trees where safe to do so. Gaps and corridors retains forest structure and provides connectivity.	Yes
	NE	16.6%	5.4%	Low							
	CG	0.0%	0.0%	Low							
Powerful Owl	Statewide	7.2%	4.2%	Low	Hollow-bearing trees (HBTs), large hollows for nesting & shelter, roost sites More open understorey (difficult to hunt in dense shrub and understorey)	Vegetation clearing and fragmentation, loss and lack of suitable HBTs with large hollows, lack of prey density including	No - Timber harvesting could impact Habitat: HBT's and prey species	Fixed: - Identify and maintain Powerful Owl Management Areas (POMA) Detection: -Establish a SPZ of 3 ha and a SMZ of 250/300m radius (or equivalent linear area) around each verified nesting and roosting site utilised recently and frequently and located outside a Powerful Owl Management Area, unless already protected. Protect all trees within a 100m radius of the nest tree from timber harvesting. Exclude harvesting and burning activities during breeding season.	Yes	General: Protection, retention and recruitment of HBT's (Type 1, 2 and 3) Maintain connectivity through coupes. Focus retention on HCV's within gross coupe area. Maintain/inject uneven aged stand characteristics into gross coupe area.	Yes
	NE	12.3%	6.3%	Low							
	CG	1.1%	1.0%	Low	Throughout its range, the Powerful Owl generally favours dense gullies for roosting and breeding sites. It prefers older forests where large tree hollows provide nesting sites and arboreal prey items are plentiful	Timber harvesting (direct mortality, loss of HBTs and loss of habitat for prey, habitat fragmentation and increasing risk of local extinction).					
Spotted Tree Frog	Statewide	10.1%	5.9%	Low		Disturbance which may result in changes to the physical or biotic habitat in, and adjacent to, streams include: roading; timber harvesting; eductor dredging; human recreational disturbance; weed invasion; predation by exotic animals (including introduced fish); impoundments; herbicides; inappropriate fire regimes; and grazing. Important concerns include: changes in flow rates, which may affect the viability of eggs or the survivorship of tadpoles; increases in sediment levels, which may affect the availability of egg-deposition sites or the survivorship of tadpoles; and predation of tadpoles by introduced fish, which may reduce or preclude recruitment to the adult population.	No - Timber harvesting could impact Habitat		Yes	Retain all green patches. Retain all live/green trees where safe to do so. These provide current and future hollow bearing trees. Retain dead large hollow bearing trees where safe to do so. Gaps and corridors retains forest structure and provides connectivity.	Yes
	NE	8.2%	3.5%	Low	Eucalypt forest Mountain streams with rock, low disturbance to catchment. Tadpoles are bottom-dwellers, frequent backwaters and streamside pools connected or segregated from the main stream. Rely on camouflage for protection, remain stationary among leaf litter or sediment when disturbed.						
	CG	31.0%	26.6%	Med	-Mountain streams with rock, low disturbance to catchment - associated with loose rock substrates, rocky banks and rapids - Eggs are deposited in a gelatinous mass in narrow spaces beneath large in-stream boulders, usually in 10-30 cm of flowing or still water.						
Sooty Owl	Statewide	26.1%	13.9%	Low		Disturbances resulting in continual thinning of forest and disturbance to forest structure and age resulting in decreased recruitment of large HBTs Timber harvesting (direct mortality, loss of HBTs and loss of habitat for prey, habitat fragmentation and increasing risk of local extinction).	No - Timber harvesting could impact Habitat: HBT's and prey species	Fixed: - Identify and maintain a target of Sooty Owl Management Areas (SOMA) Detection: - Establish a SMZ of 250m radius over each verified nesting and roosting site utilised recently and frequently and located outside a Sooty Owl Management Area, unless already protected. In these cases, habitat for foraging is already provided in areas excluded from timber harvesting by general prescription including wildlife corridors, steep areas and unmerchantable areas and areas protected for other management purposes. Exclude timber harvesting, road construction and other activities likely to disturb breeding activity during the breeding season. Protect all trees within a 100 m radius of the nest tree from timber harvesting	Yes	Retain all green patches. Retain all unburnt trees where safe to do so. These provide current and future hollow bearing trees. Retain all dead large hollow bearing trees where safe to do so. Gaps and corridors harvesting method retains forest structure and provides connectivity. Further preferred habitat protection by applying conservative stream buffers and rainforest buffers.	Yes
	NE	17.4%	7.1%	Low	Occurs in closed forests (rainforests), tall open-forests and some open forests across a range of Ecological Vegetation Classes (EVCs). Dominant habitat is wet eucalypts forest, mainly wet Mountain Grey Gum gullies, rainforest and Mountain Ash forest in large areas of continuous forest.						
	CG	3.3%	2.4%	Low	-hollow-bearing trees (HBTs), large hollows for nesting & shelter, roost sites						

Smoky Mouse	Statewide	12.9%	7.0%	Low	It occurs in a range of habitats including heathy woodlands, coastal heathlands, subalpine heathlands, subalpine woodlands, dry Eucalypt forests (especially on ridge tops with heathy understoreys) and fern gullies in wet forests (Menkhorst 1995; Ford et al. 2003) The preferred habitat for Smoky Mouse (and the abundance of its food resources) is affected by fire: too frequent fire will eliminate the heathy species whose seeds are a critical component of the diet, and also reduce the abundance of underground fungi, and long fire-free intervals may cause senescence in heathland plants.	Habitat fragmentation due to fire and timber harvesting listed as a major threat. Some forestry activities reduce habitat suitability and resource abundance, and increase predation risks	No - Timber harvesting could impact Habitat	Differs between FMA's: 100ha SPZ over each verified record incorporating the detection site wherever possible Conduct a site inspection and detailed planning in consultation with DELWP. Prepare a SMZ plan prior to timber harvesting or road construction commencement, incorporating any relevant information from studies of the species	Yes	Retain all green patches. Retain all unburnt trees where safe to do so. These areas provide current habitat. Gaps and corridors harvesting method retains forest structure and provides connectivity. The harvesting debris Timber recovery harvesting operations, limbs and logs, will replace fallen logs and debris that were burnt during the fires, providing future ground cover and habitat elements.	Yes
	NE	40.1%	14.7%	Low							
	CG	0.0%	0.0%	Low							
	TB	0.0%	0.0%	Low							
Yellow-bellied Glider	Statewide	17.2%	10.2%	Low	Eucalypt forest or woodland Found at altitudes over 700 m. Preferred habitats are productive, tall open sclerophyll forests where mature trees provide shelter and nesting hollows and year round food resources are available from a mixture of eucalypt species. - Hollow bearing trees (HBTs) - variety of suitable flowering trees with overlapping blossoming periods. Critical elements of habitat include sap-site trees, winter flowering eucalypts, mature trees suitable for den sites and a mosaic of different forest types	Elevated mortality, habitat degradation, loss of HBTs from fire and timber harvesting. Timber harvesting (direct mortality, loss of HBTs, habitat fragmentation Clearing of habitat.	No - Timber harvesting could impact HBT's and feed trees.	No	Yes	Retain all green patches. Retain all unburnt trees where safe to do so. These provide current and future hollow bearing trees. Retain all dead large hollow bearing trees where safe to do so. Gaps and corridors harvesting method retains forest structure and provides connectivity. Timber recovery harvesting fire killed Ash, where no foliage remains as these areas have burnt at the highest severities, therefore not providing current habitat for YBG.	Yes
	NE	22.2%	13.3%	Low							
	CG	2.2%	1.7%	Low							
	TB	35.5%	20.9%	Low							

This risk assessment will be updated as VicForests considers timber recovery operations in other FMA and as new information becomes available.