

Wedge-tailed Eagle Management Plan for the second Proposed Extension (2015) at the Hazell Bros Long Hill Quarry

This plan was drafted by Nick Mooney (wildlife biologist) for Hazell Bros Group Pty Ltd.

The place

The established quarry which it is proposed to extend is situated on the north-western side of a domed hill crest. Four nests of the endangered Tasmanian wedge-tailed eagle *Aquila audax fleayi* are known from the immediate vicinity (Fig 1.).



Figure 1. The current (June 2015) Long Hill quarry. Purple dots are wedge-tailed eagle nests (DPIPWE numbers 1539, 507 and 144) as on the Natural Values Atlas (NVA) and the white dot is a new nest not shown on the NVA, nominated as # 144a.

The proposed quarry extension is to the northwest to a maximum of 220m while retaining road access to the east which has existed for many years. No new roading is proposed. (Fig 2.).

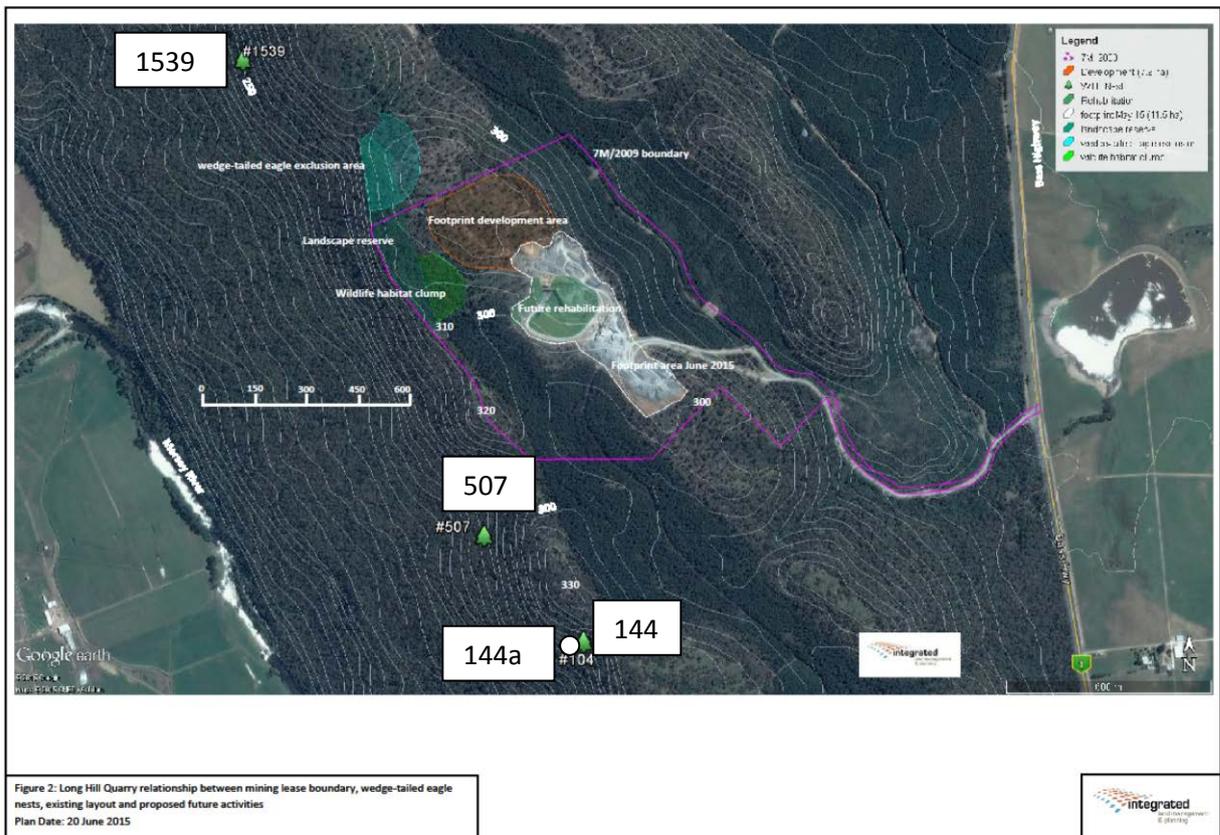


Figure 2. The footprint of the proposed extension. Green triangles are wedge-tailed eagle nests (DPIPWE numbers 1539, 507 and 144) as on the Natural Values Atlas (NVA), the white dot is a new nest not shown on the NVA (nominated as # 144a).

The eagles

Four nest sites of the Tasmanian wedge-tailed eagle *Aquila audax fleayi* (from here on referred to as WTE) are recorded within 1.5 km of the proposed quarry boundaries along a northwest-southeast line along the western slope of the Long Hill ridge. All are highly likely alternative nests for the same pair, a common phenomena for the species (Mooney 2005). Hence, only one of the nests is used for breeding per year although some courting and ‘prospecting’ activity may occur at other nests early in breeding.

With the proposed extension, the northern nest (ref # 1539) would be about 780m distant. At finding nearly a decade ago it was apparently then old and disused and has not been maintained or used for breeding in the 4 years it has been checked (Table 1., DPIPWE

records, NJM records). A check on 28/7/15 found the nest derelict and sagging, even more degraded than its last check in 2010.

The middle nest (ref # 507), about 700m from the quarry boundary was reported many years ago and has been used once in the two years it has been checked (see Table 1, DPIPWE records). At the 2010 check it had gone and no replacement **has been found in searches in 2010 and 2015** (NJM).

The southern nest (ref # 144) is 920m from the quarry boundary and has been active most years checked (Table 1, DPIPWE records, NJM records). It is a secure nest that is productive most years it is checked. An inspection on 28/7/15 found the nest had been maintained.

In 2014 a new nest was found about 60m west of 144 and although reported to DPIPWE no nest number has been assigned (I nominate # 144a for use in this discussion). This nest was active in 2014 and at an inspection on 28/7/15 is prepared (lined) for breeding.

The vicinity of all nests and in between was checked for other nests on 28/7/15 (NJM).

Earlier nest checks have been irregular and inconsistent and have been variously done by DPIPWE for species monitoring, or Forestry Tasmania for operational logging purposes. Since 2010 NJM has carried out systematic nest checks either for Hazell Bros (2010) or simply to have a constant record. Being the 'primary' nest, nest 144 is usually checked first and if no breeding activity is occurring there, the other nests sites are checked. Since 144a can be seen from the same place as can 144 the same pattern applies.

Table 1. Records of breeding activity at WTE nests in the Long Hill WTE territory

Year checked	Nest	Result
1992	144	active
1993	507	active
1994	144	active
2000	144	active
2002	144, 507	144 active
2003	144	active
2005	144	not active
2006	144, 1539	144 active
2007	1539	not active
2010	144	successful

2011	144	successful
2012	144	successful
2013	144, 1539	active, failed
2014	144a	successful
2015 (July)	1539., 144, 144a	144a prepared

Clearly breeding regularly occurs in the territory.

The potential problem

Although there are no specific conservation recommendations to protect WTE from quarry activities the precautionary principal can be applied. Thus, the more potentially disturbing quarry activities can legitimately be encompassed in directions about high levels of disturbance in forestry operations that the author developed (eg Mooney and Holdsworth 1991, Mooney 1996, Mooney 1997, Mooney 2000) and which have been applied by the Forest Practices Authority through the Forest Practices Code. That is, heavy disturbance should not be within 500m of any active WTE nest (where an egg(s) and/or chick(s) is present) and 1000m if that nest is in line-of-site of the activity.

Exceptions have been allowed by the Forest Practices Authority in forestry where it is not clear if an activity will constitute heavy disturbance (eg occasional traffic not stopping). In the case being considered, most quarry activities are very similar to road and forestry works already accepted as disturbance under rules for operating distances from nests. However monitoring of nesting eagles at Long Hill in 2010 found blasting had little or no impact on nesting eagles at about 900m away and not in line of site (Mooney 2010). At least blasting is no worse than many forestry activities.

The key seems to be whether, *from the eagles' points of view*, established disturbance is directed at them or is incidental, the latter being far less harmful but there is a limit. Once past its onset, booms and bangs are apparently usually judged as incidental whereas activity such as people focusing on nests or getting very close to a nest for extended periods (cf passing) is viewed (by eagles) quite differently.

The proposed quarry activities involve no novel activities and the new activities will be further away from the key nest(s). In light of recent breeding success at those nests, success in parallel to the recent (2010+) expansion at the quarry, it is hard to see how the eagles will be impacted by the proposed activities as long as the security of the key nest(s) is maintained.

A proper application of the precautionary principal of course involves collecting information on impacts so at a minimum, monitoring of the Long Hill WTEs' nesting success should continue.

Eagle Monitoring Activities and Timetable

The three nest sites and their vicinity have already been checked for nests in 2015 (on 28/7/15 by NJM). I propose a further check in late October 2015 once the eagles should be well established (well into incubation) and another in late December when success can be judged.

Reporting: Results of monitoring will be forwarded in writing to Hazell Bros immediately they are to hand as will a brief summarising report at the end of breeding.

Bibliography

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