

Research Briefing: Impacts of the proposed Carmichael Coal Mine Project on the Black-throated Finch (Southern)

Introduction

In addition to contributing to global warming, the Carmichael coal mine will have a large negative impact on Australian biodiversity, particularly on the Black-throated Finch (Southern) (*Poephila cincta* ssp. *cincta*) (BTFS).



Figure 1

A representative specimen of the black-throated finch (southern) Note the white rump distinctive of the southern subspecies.

Description of the Black-throated Finch (Southern)

There are two subspecies of Black-throated Finch: The southern Black-throated Finch and the northern Black-throated Finch. Of these only the southern Black-throated Finch is listed as endangered¹. The southern Black-throated Finch is distinguished from the northern subspecies by its white rump².

Decline of the finch

Since the early 1980s the range of the Black-throated Finch has declined by approximately 80% at the species level. The majority of this decline has occurred in the range of the southern subspecies³. The southern Black-throated Finch's range once extended from the town of Inverell NSW through eastern Queensland to Cairns in the north⁴ (Fig 2).

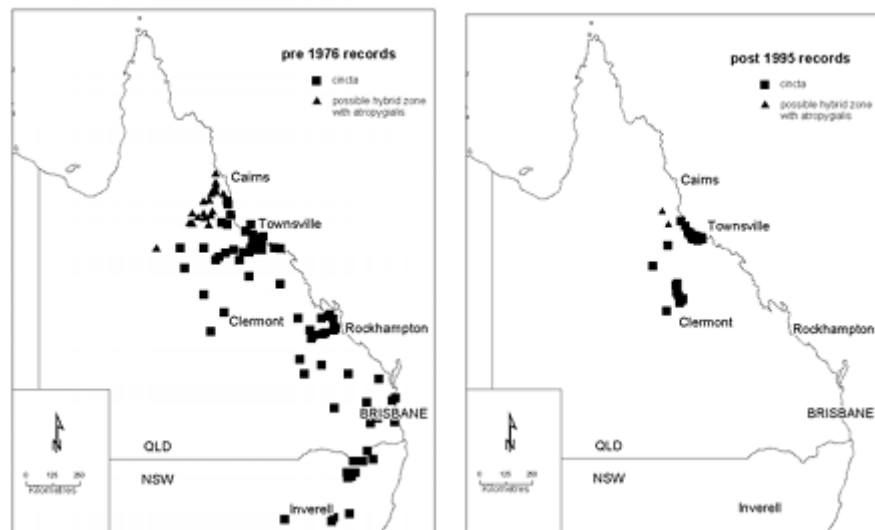


Figure 2

1976 distribution of the BTFS (left) compared to its and 1995 distribution (right)

The subspecies is now extinct at most sites south of the Burdekin River. It is confined to very few remaining 'pockets' of suitable habitat⁵. The total population of BTFS is estimated at less than 10 000⁶ and its population decline is continuing⁷.

The largest known population is near Townsville and consists of no more than 600 birds. Poorly known sub-populations of the species in central Queensland are likely to consist of no more than 400 mature individuals each.⁸

Threats to the finch

Relevant threats to the Black-throated Finch (southern) include⁹:

- Clearance and fragmentation of woodlands, river habitat and wattle shrublands;
- Degradation of habitat by domestic livestock;
- Invasion of habitat by exotic weeds, including exotic grasses.

Conservation status of the finch

The BTFS is listed as 'Endangered' under the federal *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), the *New South Wales Threatened Species Conservation Act 1995* (TSC Act) and the *Queensland Nature Conservation Act 1992* (NC Act).

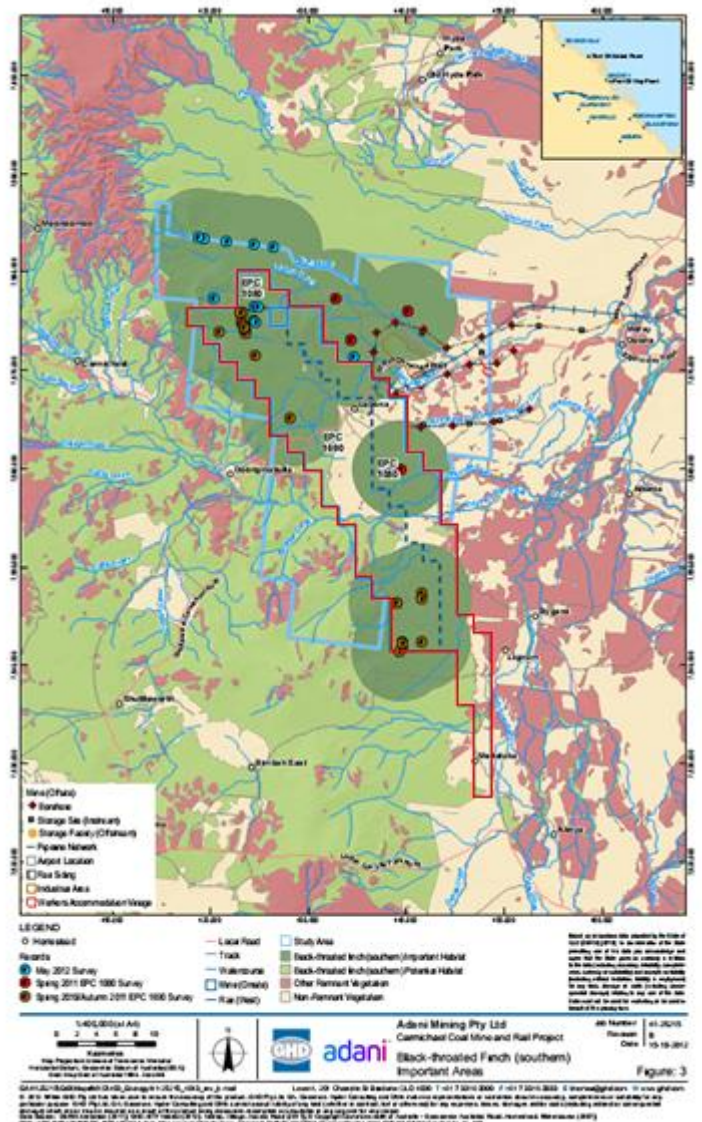
The Finch and the Adani Carmichael Coal Mine Project

As part of the environmental impact assessment (EIS) process and Supplementary EIS for the proposed Carmichael mine GHD Pty Ltd (GHD) conducted surveys for the BTFS in 2011, 2012 and May 2013. These surveys identified large numbers of the Black-throated Finch (southern) on the proposed mine site¹⁰.

IN 2012 GHD ecologists sighted the bird 89 times on the mine site in 3 days. In 2013, a total of 208 black-throated finches were recorded from all surveys, and another 68 were photographed by camera traps. The birds were seen in flocks of 30 to 40 individuals and three nest sites were located¹¹.

The map at right shows the proposed Carmichael mine, potential and important BTFS habitat taken from GHD Finch Report (2012) :

- Potential habitat: Habitat which has the right vegetation to support the finch (bright green)
- Important habitat: habitat within five km of post-1995 sightings of BTFS (dark green)¹⁴
- The mine site (bright red outline)



How significant is the Onsite Finch Population?

The Black Throated Finch (southern) population found on the site of the proposed Carmichael mine appears to be substantial and significant. According to CSIRO's "The Action Plan for Australian Birds 2010"¹⁵ The largest known subpopulation, the Townsville subpopulation, consists of no more than 600 birds and poorly known subpopulations of the species in central Queensland are likely to consist of no more than 400

mature individuals each¹⁶. The onsite population is likely to form one of those poorly documented subpopulations. Given that there is no data on how many of these central QLD subpopulations exist, the Carmichael subpopulation may be of key significance to the entire BTFS population.

¹ Department of Environment, Water, Heritage and the Arts (2009) Significant impact guidelines for the endangered black-throated finch (southern) (*Poephila cincta cincta*)
<http://www.environment.gov.au/system/files/resources/41e7e5a7-bd14-45ed-8ef3-8b856d1af50a/files/black-throated-finch.pdf>

² Department of Environment, Water, Heritage and the Arts (2009) Significant impact guidelines for the endangered black-throated finch (southern) (*Poephila cincta cincta*)

³ SEWPaC (2012). *Poephila cincta cincta* in Species Profile and Threats Database. Accessed Tue, 18 Dec 2012 via http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=64447

⁴ Black Throated Finch Recovery Team, Department of Environment and Climate Change (NSW) and Queensland Parks and Wildlife Service (BTF Recovery Team) (2007). National Recovery Plan for the Black-throated finch Southern Subspecies *Poephila cincta cincta*. Report to the Department of Environment and Water Resources, Canberra. Department of Environment and Climate Change (NSW), Hurstville and Queensland Parks and Wildlife Service, Brisbane.

⁵ SEWPaC (2012). *Poephila cincta cincta* in Species Profile and Threats Database. Accessed Tue, 18 Dec 2012 via http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=64447

⁶ Garnett, S.G., Szabo, J., and Dutson, G. (2011) 'The Action Plan for Australian Birds 2010' (CSIRO Publishing: Collingwood)

⁷ SEWPaC (2012). *Poephila cincta cincta* in Species Profile and Threats Database. Accessed Tue, 18 Dec 2012 via http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=64447

⁸ GHD (2012) Adani Carmichael Coal Mine Project EIS Appendix N1 Terrestrial Ecology Report

note secondary reference used due to not being able to access:

- Garnett, S.G., Szabo, J., and Dutson, G. (2011) 'The Action Plan for Australian Birds 2010' (CSIRO Publishing: Collingwood)

At time of compiling this report

⁹ SEWPaC (2012). *Poephila cincta cincta* in Species Profile and Threats Database. Accessed Tue, 18 Dec 2012 via http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=64447

¹⁰ GHD (2013) Report for Black-throated Finch On-site Monitoring Survey 1

¹¹ GHD (2013) Report for Black-throated Finch On-site Monitoring Survey 1, Table 4.

¹⁴ Department of Environment, Water, Heritage and the Arts (2009) Significant impact guidelines for the endangered black-throated finch (southern) (*Poephila cincta cincta*)

¹⁵ Garnett, S.G., Szabo, J., and Dutson, G. (2011) 'The Action Plan for Australian Birds 2010' (CSIRO Publishing: Collingwood)

¹⁶ Garnett, S.G., Szabo, J., and Dutson, G. (2011) 'The Action Plan for Australian Birds 2010' (CSIRO Publishing: Collingwood)