



# PROJECT CHINA STONE

Attachment F Additional Information on Ecology

# PROJECT CHINA STONE

## ADDITIONAL INFORMATION ON ECOLOGY

**COMMERCIAL IN CONFIDENCE  
INFORMATION HAS BEEN REDACTED**

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14 July 2017

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## **PROJECT CHINA STONE ADDITIONAL INFORMATION ON ECOLOGY**

### **for MacMines Austasia Pty Ltd**

## **1 INTRODUCTION**

### **1.1 OVERVIEW**

This report is an attachment to the Supplement to the draft Environmental Impact Statement (draft EIS) for Project China Stone (the project). The Supplement to the draft EIS (the Supplement) is Volume 6 and should be read in conjunction with the draft EIS Volumes 1 – 5 that were publicly exhibited. Together, Volumes 1 - 6 form the revised draft EIS for the project. To the extent of any inconsistencies, the information in this attachment supersedes information in any other volume of the draft EIS.

### **1.2 PURPOSE AND SCOPE**

This attachment provides additional information in relation to habitat modelling for threatened fauna species and biodiversity offsets. This additional information has been provided in response to specific issues raised in submissions on the draft EIS, including issues raised by the Department of the Environment and Energy (DoEE), Department of Environment and Heritage Protection (EHP) and the Black-throated Finch Recovery Team.

This report was prepared in consultation with key stakeholders and the following meetings guided the preparation of this report:

- A meeting with officers from DoEE, and the Office of the Coordinator-General – OCG on 21 December 2015; and
- A meeting with officers from EHP, OCG, and the Department of Natural Resources and Mines on 10 November 2016.

This report does not address all the ecological issues raised in stakeholder submissions in relation to the draft EIS Terrestrial Ecology Report (Appendix F). Individual responses to specific ecological issues that were raised are provided in the Supplement Attachment A – Individual Responses to Submissions.

## **1.3 DOCUMENT STRUCTURE**

This report is structured as follows:

- Section 1 (this section) describes the purpose and content of the report.
- Section 2 describes proposed changes to habitat modelling for the Black-throated Finch and Squatter Pigeon and provides preliminary habitat modelling for the Yakka Skink.
- Section 3 provides further information on biodiversity offsets, including additional information about the most prospective offset property.

This document should be treated as confidential given that it contains commercial in confidence information about potential properties to be used for biodiversity offsets.

## **2 HABITAT MODELLING FOR THREATENED FAUNA SPECIES**

### **2.1 INTRODUCTION**

This section describes revised habitat modelling for the Black-throated Finch and Squatter Pigeon. It describes the reasons for revising the habitat modelling and the basis of the revised habitat definition. It also provides figures indicating the areas of revised habitat to be disturbed by project activities. Preliminary habitat modelling for the Yakka Skink is also provided in this section.

### **2.2 BLACK THROATED-FINCH**

#### **2.2.1 Introduction**

The draft EIS included a definition of Black-throated Finch habitat based on information contained in conservation advice for the species, particularly the Black-throated Finch Recovery Plan and the SPRAT profile. The definition accounted for vegetation communities listed in the Black-throated Finch Recovery Plan located within 3 km of permanent water.

Submissions from DoEE, EHP, the Black-throated Finch Recovery Team raised issues in relation to Black-throated Finch habitat modelling. These submissions indicated that the habitat definition was too restrictive because it relied on the presence of permanent water and hence did not account for seasonally available habitat in times of good rainfall. The submissions highlighted specific areas of the project site (i.e. southern and central areas) that were not mapped as habitat and indicated that these areas should be considered to be habitat, particularly given that there are records of the species from these areas.

## 2.2.2 Revised Habitat Modelling

The habitat mapping has been revised in response to the issues raised in these submissions. Although the definition used in the draft EIS captured the most significant areas of habitat, a broader, more conservative definition has been adopted for the Supplement. The revised definition of Black-throated Finch habitat is as follows:

- Grassy woodland on any Queensland regional ecosystem (RE) on Land Zone 3, 5 or 7 which is either:
  - Within 600 m of permanent water; or
  - Within 3 km of a wetland or  $\geq 3^{\text{rd}}$  order stream.

This is the definition contained in the following two recent *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) approvals:

- Approval for the South Galilee Coal Project (EPBC 2010/5496), dated July 2015; and
- Approval for the Galilee Coal and Rail Project (EPBC 2009/4737), dated December 2013.

The definition of Black-throated Finch habitat from these approvals is applicable to the project because:

- The habitat definitions in these approvals relate to general habitat features (e.g. land zones, distance to water, etc.), rather than specific locations on the South Galilee Coal Project site or Galilee Coal and Rail Project site. The habitat definitions are therefore not unique to the South Galilee Coal Project site or Galilee Coal and Rail Project site and are equally applicable to other projects in the region.
- The South Galilee Coal Project and Galilee Coal and Rail Project EPBC Act approvals were issued relatively recently (in July 2015 and December 2013, respectively).
- The South Galilee Coal Project and Galilee Coal and Rail Project are located in the same bioregion as the project.
- The South Galilee Coal Project and Galilee Coal and Rail Project are located in areas with similar broad vegetation types and habitat features as the project site.

The revised habitat modelling for the Black-throated Finch within the project site is shown on Figure 1. Based on this habitat modelling, the project site contains a total of 12,334 ha of Black-throated Finch habitat.

The revised habitat modelling has addressed key issues raised in the submissions as follows:

- The revised habitat modelling includes habitat around seasonal sources of water, not just permanent water;
- The revised habitat modelling incorporates the southern and central areas of the project site; and
- The revised habitat modelling provides a good match between mapped habitat and Black-throated Finch records. Figure 1 shows records of the Black-throated Finch within the project site. These include records from the field surveys undertaken for the project, as well from field surveys undertaken by Adani for the Carmichael Coal Mine and Rail Project (CCM&RP). As shown on Figure 1, the majority of Black-throated Finch records fall in an area mapped as Black-throated Finch habitat (using the revised habitat definition).

### 2.2.3 Project Disturbance Footprint Relative to Revised Habitat Mapping

Figure 2 shows the areas of Black-throated Finch habitat proposed to be disturbed as part of the project. This includes areas cleared for the development of the open cut mine and infrastructure, as well as areas that will be subject to subsidence due to longwall mining. Table 1 indicates the areas of Black-throated Finch habitat proposed to be disturbed, based on the revised definition of habitat. The values in this table replace the areas of habitat listed in:

- Sections 9.6.8 and 9.8 of the draft EIS;
- Sections 4.6.6, 5.2, 5.3, 5.4, 5.9, 7 and Appendices G, L, N and O of the draft EIS Terrestrial Ecology Report (Appendix F); and
- Section 3.2 of the draft EIS Biodiversity Offset Strategy (Appendix H).

**Table 1**  
**Proposed Disturbance of Revised Black-throated Finch Habitat**

Total Area in Project Site (ha)	Areas to be Cleared(ha)		Disturbance Due to Subsidence Crack Rehabilitation
	Open Cut and Mine Infrastructure	Remedial Drains	
12,334	8,499	10	15

The area of Black-throated Finch habitat potentially impacted by the project has increased as a result of the revised, more conservative habitat definition for this species. This is not due to a change in proposed project activities, but is rather due to the fact that the revised definition has increased the total area of mapped Black-throated Finch habitat within the project site. Although the amount of habitat proposed to be disturbed has increased, the key



findings of the impact assessment contained in the draft EIS Terrestrial Ecology Report (Appendix F) have not changed and the proposed management measures to mitigate potential impacts on this species have also not changed. In particular, the Assessment of Significance prepared for the Black-throated Finch concluded that the project would give rise to the permanent loss of habitat within the project site and, for this reason, has the potential to give rise to a significant, residual impact on the species. For this reason, and in keeping with the requirements of the *EPBC Act Environmental Offsets Policy 2012* (EPBC Act Environmental Offsets Policy), offsets will be required to be provided. The revised habitat mapping has not changed this conclusion. Section 3 provides further detail on proposed offsets for the Black-throated Finch.

## 2.3 SQUATTER PIGEON

### 2.3.1 Introduction

The draft EIS included a definition of Squatter Pigeon habitat based on information contained in conservation advice for the species. The definition accounted for remnant vegetation within 1 km of permanent water.

The DoEE's submission raised issues in relation to Squatter Pigeon habitat mapping. The submission indicated that the habitat definition was too restrictive and did not account for all areas of potential habitat on the project site. The submission raised the issue that the habitat definition in the draft EIS was reliant on permanent water and did not account for seasonally available water. There was a particular concern about some areas in the southern and central parts of the project site not being mapped as habitat, despite records of the species from these areas.

### 2.3.2 Revised Habitat Modelling

The habitat mapping has been revised in response to the issues raised in this submission. Although the definition used in the draft EIS captured the most significant areas of habitat (i.e. breeding habitat), a broader, more conservative definition has been adopted for the Supplement. The revised definition of Squatter Pigeon habitat is as follows:

- Grassy woodland on any Queensland RE on Land Zone 3, 5 or 7 which is either:
  - Within 1 km of permanent water; or
  - Within 1 km of a wetland or  $\geq 3^{\text{rd}}$  order stream.

This is the definition contained in the following two recent EPBC Act approvals:

- Approval for the Galilee Coal and Rail Project (EPBC 2009/4737), approved December 2013; and
- Approval for the Red Hill Mining Project (EPBC 2013/6865), approved August 2015.

Section 2.2 describes the relevance of the Black-throated Finch habitat definitions contained in the Galilee Coal and Rail Project EPBC Act approval to the project. These reasons are also relevant to the applicability of the habitat definitions for the Squatter Pigeon to the project. The fact that the Squatter Pigeon habitat definition was also used in the recently issued EPBC Act approval for the Red Hill Project indicates its broad applicability to projects in Central Queensland.

The revised habitat modelling for the Squatter Pigeon within the project site is shown on Figure 3. Based on this habitat modelling, the project site contains a total of 6,642 ha of Squatter Pigeon habitat.

The revised habitat modelling has addressed key issues raised in the submissions as follows:

- The revised habitat modelling includes habitat around seasonal sources of water, not just permanent water; and
- The revised habitat modelling provides a good match between mapped habitat and Squatter Pigeon records. Figure 3 shows records of the Squatter Pigeon within the project site and indicates that the majority of records fall within the area mapped as Squatter Pigeon habitat (using the revised habitat definition).

### **2.3.3 Project Disturbance Footprint Relative to Revised Habitat Mapping**

Figure 4 shows the areas of Squatter Pigeon habitat that will be cleared as a result of the project. This includes areas cleared for the development of the open cut mine and infrastructure, as well as areas that will be subject to subsidence due to longwall mining. Table 2 indicates the areas of Squatter Pigeon habitat proposed to be disturbed, based on the revised definition of habitat.

The values in this table replace the areas of habitat listed in:

- Sections 9.6.8 and 9.8 of the draft EIS;
- Sections 4.6.6, 5.2, 5.3, 5.4, 5.9, 7 and Appendices G, L, N and O of the draft EIS Terrestrial Ecology Report (Appendix F); and
- Section 3.2 of the draft Biodiversity Offset Strategy (Appendix H).

**Table 2**  
**Proposed Disturbance of Revised Squatter Pigeon Habitat**

Total Area in Project Site (ha)	Areas to be Cleared(ha)		Disturbance Due to Subsidence Crack Rehabilitation
	Open Cut and Mine Infrastructure	Remedial Drains	
6,642	3,476	5.7	39

The area of Squatter Pigeon habitat potentially impacted by the project has increased as a result of the revised, more conservative habitat definition for this species. This is not due to a change in proposed project activities, but is rather due to the fact that the revised definition has increased the total area of mapped Squatter Pigeon habitat within the project site. Although the amount of habitat proposed to be disturbed has increased, the key findings of the impact assessment contained in the draft EIS Terrestrial Ecology Report (Appendix F) have not changed and the proposed management measures to mitigate potential impacts on this species have also not changed. In particular, the Assessment of Significance prepared for the Squatter Pigeon concluded that the project would give rise to the permanent loss of habitat within the project site and, for this reason, has the potential to give rise to a significant, residual impact on the species. For this reason, and in keeping with the requirements of the EPBC Act Environmental Offsets Policy, offsets will be required to be provided. The revised habitat mapping has not changed this conclusion. Section 3 provides further detail on proposed offsets for the Squatter Pigeon.

## **2.4 YAKKA SKINK**

### **2.4.1 Yakka Skink Presence within Project Site**

The draft EIS Terrestrial Ecology Report (Appendix F) contains a detailed assessment of the likelihood of the Yakka Skink occurring within the project site. It explains that the species was not recorded during the draft EIS field surveys conducted for this project, nor was it recorded during field surveys conducted for the CCM&RP. The draft EIS Terrestrial Ecology Report (Appendix F) explains that the project site lacks core habitat for the species, given that it is not located with the Mulga Lands or Brigalow Belt South Bioregions. Based on these factors, the draft EIS Terrestrial Ecology Report (Appendix F) concluded that there is a low potential for the Yakka Skink to be present in the project site.

The EHP indicated in its submission on the draft EIS that EHP officers believe that the project site contains suitable habitat for the species, although the submission explained that the habitat requirements for the Yakka Skink are poorly known.

The conclusions of the draft EIS in relation to the potential presence of the Yakka Skink within the project site are valid based on publicly available information about the species. However, it is acknowledged that there is some uncertainty in relation to the distribution and

habitat requirements of this species. Given this uncertainty, the Yakka Skink has now been considered as part of the assessment of project impacts.

#### **2.4.2 Preliminary Habitat Modelling for the Yakka Skink**

Yakka Skink habitat is defined in the EPBC Act approval for the Galilee Coal and Rail Project (EPBC 2009/4737) as follows:

- Open forest or woodland on any Queensland RE on Land Zone 3, 4 (not associated with current alluvium), 5, 7, 9 or 10; and
- Supports ground cover vegetation (>30% foliage projective cover) and >30% leaf litter and fallen woody material; and
- Supports any combination of the following:
  - Abundant rock outcrops (containing crevices); or
  - Fallen logs (>30 cm diameter); and/or tree stumps; and/or animal burrows with an abundance (combined or otherwise) of >10 per 100 m x 100 m plot.

This is the only EPBC Act approval to contain a definition of Yakka Skink habitat and this definition will therefore be used to guide habitat modelling for the project. The definition is broad and would include the vast majority of remnant vegetation within the Desert Uplands Bioregion (as the definition includes all of the land zones within this bioregion). It may therefore be necessary to adjust the definition to reflect the specific characteristics of the project site. This work is proposed to be undertaken as part of future field surveys of the project site that will be completed when the Offset Management Plan is prepared. The field surveys will also identify the various microhabitat features listed in the definition (e.g. ground cover, fallen logs etc.). Given that these field surveys are still to be undertaken, the Supplement has made use of the definition as currently drafted for the purposes of assessing potential impacts (with the exception that it does not take into account the presence of microhabitat features). This is a highly conservative approach and it is anticipated that the area of mapped habitat will be significantly reduced once the field surveys have been completed.

A preliminary habitat map has been prepared for the Yakka Skink based on this approach and is provided in Figure 5. The majority of the project site is considered to be habitat based on this preliminary habitat definition.

#### **2.4.3 Potential Impacts**

Figure 6 shows the areas of preliminary Yakka Skink habitat that will be cleared as a result of the project. This includes areas cleared for the development of the open cut mine and infrastructure, as well as areas that will be subject to subsidence due to longwall mining. Table 3 indicates the areas of preliminary Yakka Skink habitat proposed to be disturbed.

Figure 6 and the areas in Table 3 are based on a preliminary assessment of habitat. These figures will need to be confirmed during field surveys, given that the availability of habitat is dependent on microhabitat features such as ground cover, rock crevices, fallen logs, etc. These features will be surveyed as part of the fieldwork to be conducted as part of the development of the Offset Management Plan. This fieldwork will also allow for any necessary adjustments to be made to the habitat definition to account for site specific features. Once this fieldwork has been completed, the revised habitat mapping will be produced for the Yakka Skink.

**Table 3  
 Proposed Disturbance Preliminary Yakka Skink Habitat**

Total Area in Project Site (ha)	Areas to be Cleared(ha)		Disturbance Due to Subsidence Crack Rehabilitation
	Open Cut and Mine Infrastructure	Remedial Drains	
20,057	10,997	12	103

Based on the preliminary habitat mapping, it is anticipated that the project will be likely to give rise to a significant impact on the Yakka Skink and offsets will therefore be provided for this species. Section 3 provides further detail on proposed offsets for the Yakka Skink.

### 3 BIODIVERSITY OFFSETS

#### 3.1 INTRODUCTION

The draft EIS contains a Biodiversity Offset Strategy (BOS) (Appendix H) for the project. This section provides a revised assessment of offsets, based on the changes to the habitat modelling described in Section 2. In particular, the habitat definitions for the Black-throated Finch and Squatter Pigeon have been revised and it is therefore necessary to apply these new definitions to the habitat mapping contained in the BOS. In addition, offsets are now proposed to be provided for the Yakka Skink and consequently it is necessary to include preliminary habitat mapping for the Yakka Skink in the BOS. Section 3.2 provides this information for [REDACTED] (Property C).

[REDACTED] (Property C) is the most prospective offset property assessed in the BOS given that:

- There are sound technical reasons for securing offsets on [REDACTED]. In particular, it [REDACTED] [REDACTED] has similar vegetation types and habitat values. There are records of the Black-throated Finch, Squatter Pigeon and Koala from [REDACTED]
- [REDACTED].

Although [REDACTED] is the most prospective offset property, the draft EIS had included information about a number of other prospective offset properties. This information was intended to

demonstrate that there are several options available for securing offsets but it was not meant to detract from the fact that [REDACTED] is the most prospective offset property. The draft EIS explained that [REDACTED] alone has sufficient vegetation to satisfy the project's offset requirements. Section 3.2 provides a revised property profile for [REDACTED] based on the revised habitat modelling. The revised property profile demonstrates that [REDACTED] will still be able to satisfy the project's offset requirements, even with the revised habitat definitions. It could be anticipated that the other potential offset properties would also be able to satisfy the offset requirements, but these properties are not discussed further, given that they are considered to be secondary offset properties.

Some minor editorial clarifications were also made to the BOS in response to submissions and these are contained in the Supplement Section 5.3 – Editorial Corrections.

### 3.2 PROPERTY C – [REDACTED]

The revised property profile included in the following sections is intended to replace the property profile contained in Section 5.5 of the draft EIS BOS (Appendix H).

#### 3.2.1 Property Overview

[REDACTED] is a [REDACTED] property [REDACTED]. This property overview describes the section of the property that is being proposed for offsets [REDACTED]. This section of the property comprises [REDACTED].

The primary land use is grazing, with several dams and Queensland Government mapped wetlands located on the property ([REDACTED]). [REDACTED] waterways traverse the property, namely [REDACTED] in the [REDACTED], [REDACTED] in the [REDACTED] and [REDACTED] and [REDACTED] in the [REDACTED], along with numerous smaller ephemeral drainage lines. No major roads or rail lines traverse the property ([REDACTED]).

The property is [REDACTED].

[REDACTED] is not covered by any production permits such as Mining Leases, Mining Lease Applications, or Petroleum Leases. However, the entire property is overlain by several Exploration Permits for Coal and Petroleum.

#### 3.2.2 Vegetation Communities

According to Queensland Government mapping, the property comprises approximately [REDACTED] of remnant vegetation. Table 4 lists the vegetation communities present within the property that are also present on the project site, as well as the equivalent broad habitat types and land zones for each Queensland RE type.

**Table 4**  
**Vegetation Communities within Property C – ■■■**

RE Number	RE Name	Land Zone	Broad Habitat Type
10.3.6	<i>Eucalyptus brownii</i> open-woodland on alluvial plains	3	Grassy open forest or woodland
10.3.6a	<i>Eucalyptus brownii</i> open-woodland on alluvial plains	3	Grassy open forest or woodland
10.3.10	<i>Corymbia dallachiana</i> and <i>C. terminalis</i> open-woodland on old alluvial plains (western)	3	Grassy open forest or woodland
10.3.11a	<i>Corymbia leichhardtii</i> woodland on alluvium in valleys	3	Grassy open forest or woodland
10.3.14	<i>Eucalyptus camaldulensis</i> and/or <i>E. coolibah</i> open-woodland along channels and on floodplains	3	Open forest or woodland
10.3.14d	<i>Eucalyptus camaldulensis</i> with or without <i>Corymbia leichhardtii</i> open-woodland along watercourses	3	Grassy open forest or woodland
10.3.15k	<i>Eucalyptus brownie</i> open-woodland in closed depressions	3	Palustrine wetland
10.3.16d	Ephemeral lakes with sparse-herbland or sparse-tussock grassland	3	Palustrine wetland
10.3.28a	<i>Eucalyptus melanophloia</i> open-woodland on sandy alluvial fans	3	Grassy open forest or woodland
10.5.1a	<i>Eucalyptus similis</i> open-woodland on sand plains	5	Grassy open forest or woodland
10.5.1c	<i>Eucalyptus similis</i> and <i>Corymbia setosa</i> low open-woodland on sand plains	5	Grassy open forest or woodland
10.5.1d	<i>Corymbia setosa</i> low open-woodland on sand plains	5	Grassy open forest or woodland
10.5.4	<i>Eucalyptus crebra</i> or <i>E. drepanophylla</i> open woodland on sand plains	5	Grassy open forest or woodland
10.5.4b	<i>Eucalyptus crebra</i> open-woodland on sand plains	5	Grassy open forest or woodland
10.5.5a	<i>Eucalyptus melanophloia</i> open-woodland on sand plains	5	Grassy open forest or woodland
10.5.10	<i>Corymbia leichhardtii</i> open-woodland on sand plains	5	Grassy open forest or woodland
10.7.2a	<i>Eucalyptus persistens</i> low open-woodland with soft spinifex on ferricrete above scarps	7	Grassy open forest or woodland
10.7.3a	<i>Acacia catenulata</i> low woodland on scarps	7	Grassy open forest or woodland
10.7.3b	<i>Acacia shirleyi</i> woodland on scarps	7	Grassy open forest or woodland
10.7.3c	<i>Corymbia lamprophylla</i> and/or <i>C. leichhardtii</i> open-woodland on ferricrete above scarps	7	Grassy open forest or woodland
10.7.4	<i>Eucalyptus persistens</i> low open-woodland on pediments below scarps	7	Grassy open forest or woodland

RE Number	RE Name	Land Zone	Broad Habitat Type
10.7.5	<i>Eucalyptus thozetiana</i> open-woodland on scarps and on pediments below scarps	7	Grassy open forest or woodland
10.7.7b	<i>Melaleuca tamariscina</i> low open-woodland on ferricrete	7	Grassy open forest or woodland
10.7.11a	<i>Eucalyptus melanophloia</i> low open-woodland on ferricrete	7	Grassy open forest or woodland
10.7.12a	<i>Eucalyptus drepanophylla</i> open-woodland on ferricrete	7	Grassy open forest or woodland
10.10.1a	<i>Acacia shirleyi</i> woodland on sandstone ranges	10	Open forest or woodland
10.10.1b	<i>Acacia catenulata</i> low woodland on sandstone ranges	10	Open forest or woodland
10.10.3	<i>Eucalyptus drepanophylla</i> open-woodland on sandstone ranges	10	Grassy open forest or woodland
10.10.4a	<i>Corymbia leichhardtii</i> open-woodland on sandstone ranges	10	Grassy open forest or woodland
10.10.4c	<i>Eucalyptus similis</i> open-woodland on sandstone ranges	10	Grassy open forest or woodland
10.10.5a	<i>Corymbia trachyphloia</i> and/or <i>C. lamprophylla</i> or <i>Eucalyptus mediocris</i> open woodland on sandstone ranges	10	Grassy open forest or woodland

### 3.2.3 Offset Potential

Table 5 outlines a conservative estimate of project offset requirements, compared with the potential fauna habitat available within [REDACTED]. The conservative estimate of project offset requirements has been determined by multiplying the project's clearing footprint by four.

**Table 5**  
**Areas of Potential Habitat for Threatened Fauna Species on Property C – [REDACTED]**

	Black-throated Finch Habitat (ha)	Squatter Pigeon Habitat (ha)	Yakka Skink Habitat (ha)	Koala Habitat (ha)
Conservative Estimate of Project Offset Requirements	33,996	13,904	43,988	12,984
Area within Offset Property	68,280	68,280	72,610	26,300

As can be seen from the areas presented in Table 5, [REDACTED] has a high offset potential, given it potentially contains ample areas of Black-throated Finch habitat, Squatter Pigeon habitat, Yakka Skink habitat and Koala habitat.



It should also be noted that the EPBC Act Protected Matters Search Tool report for this property indicates that:

- The Squatter Pigeon, or habitat for the Squatter Pigeon, is known to occur within the area;
- The Black-throated Finch, or habitat for the Black-throated Finch, is known to occur within the area;
- The Yakka Skink, or habitat for the Yakka Skink, may occur within the area; and
- The Koala, or habitat for the Koala, is known to occur from the area.

[REDACTED]

\*

\*

\*

for  
**HANSEN BAILEY**



Laura Knowles  
*Principal Environmental Scientist*



Peter Hansen  
*Director*

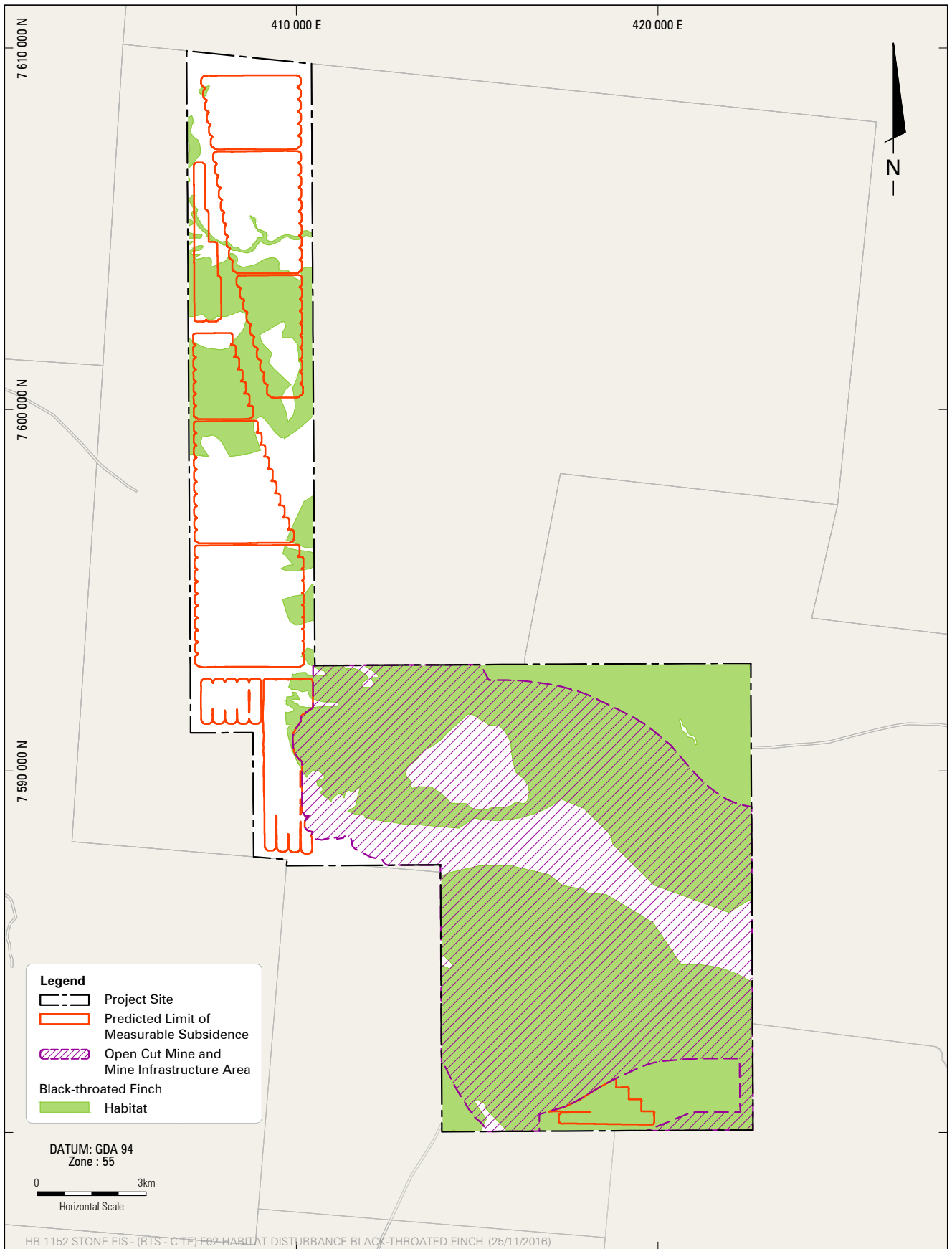
## **FIGURES**



PROJECT CHINA STONE

Black-throated Finch Habitat  
(Based on Revised Habitat Modelling)

FIGURE 1



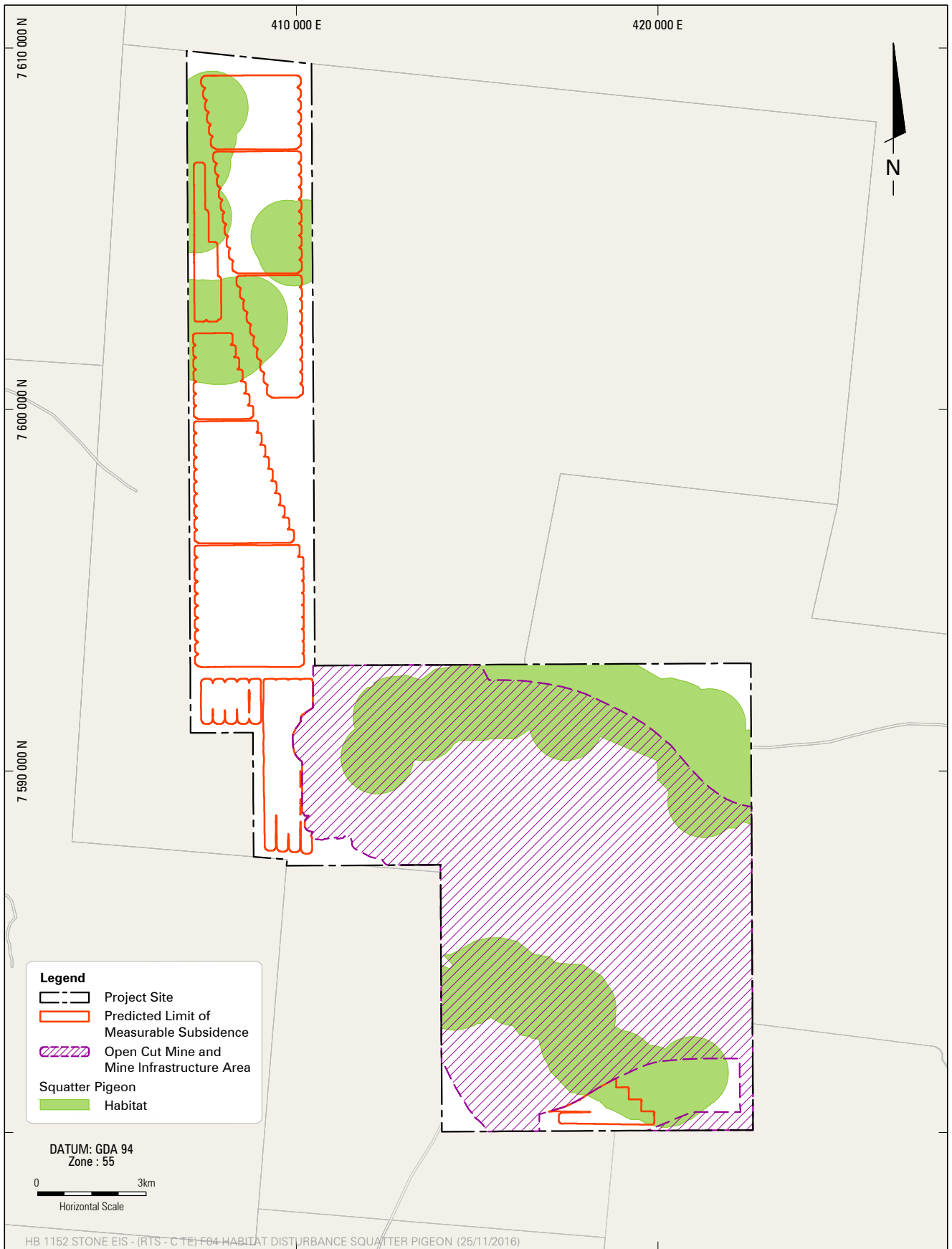
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Squatter Pigeon Habitat  
(Based on Revised Habitat Modelling)

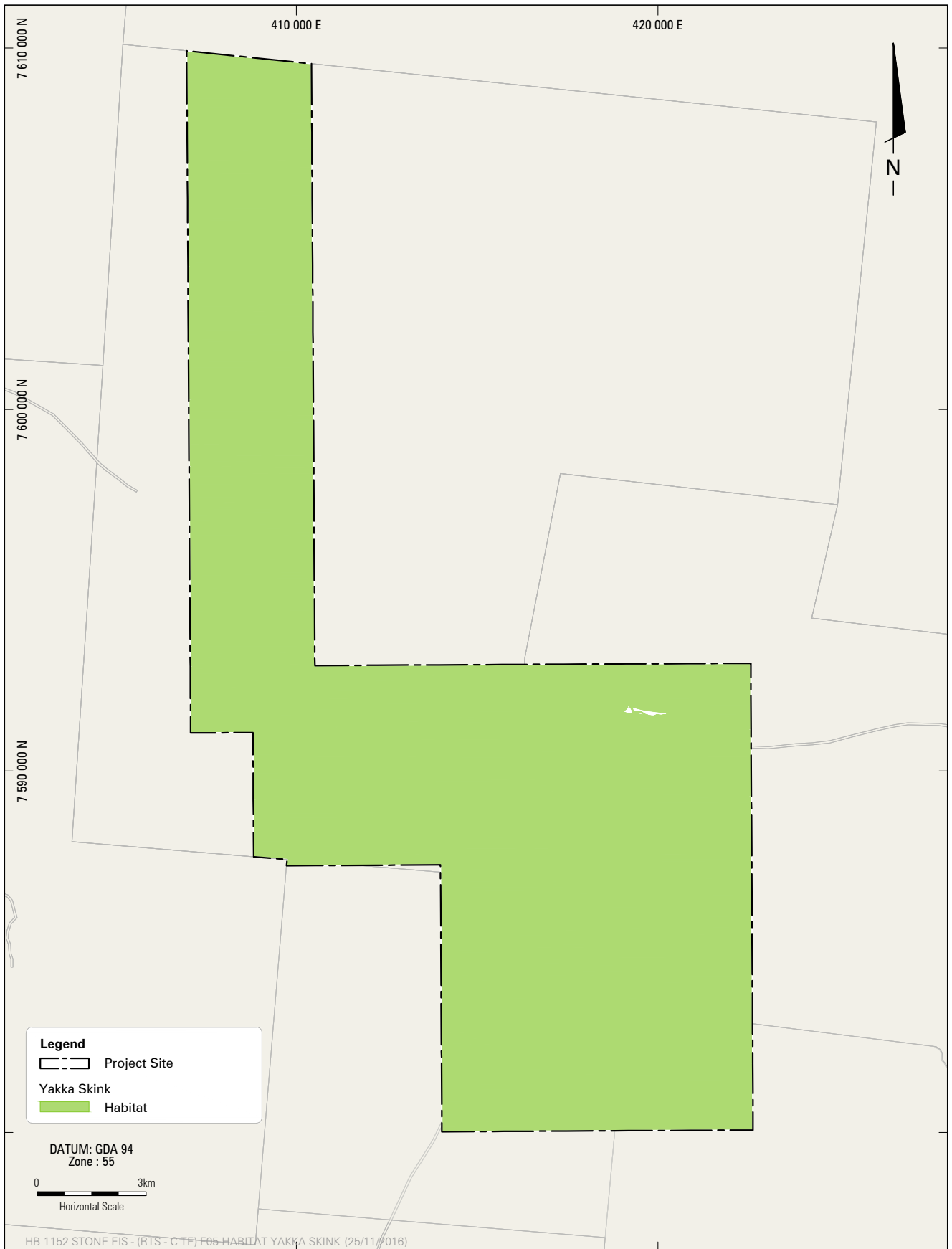
FIGURE 3



PROJECT CHINA STONE

Squatter Pigeon Habitat Disturbance  
(Based on Revised Habitat Modelling)

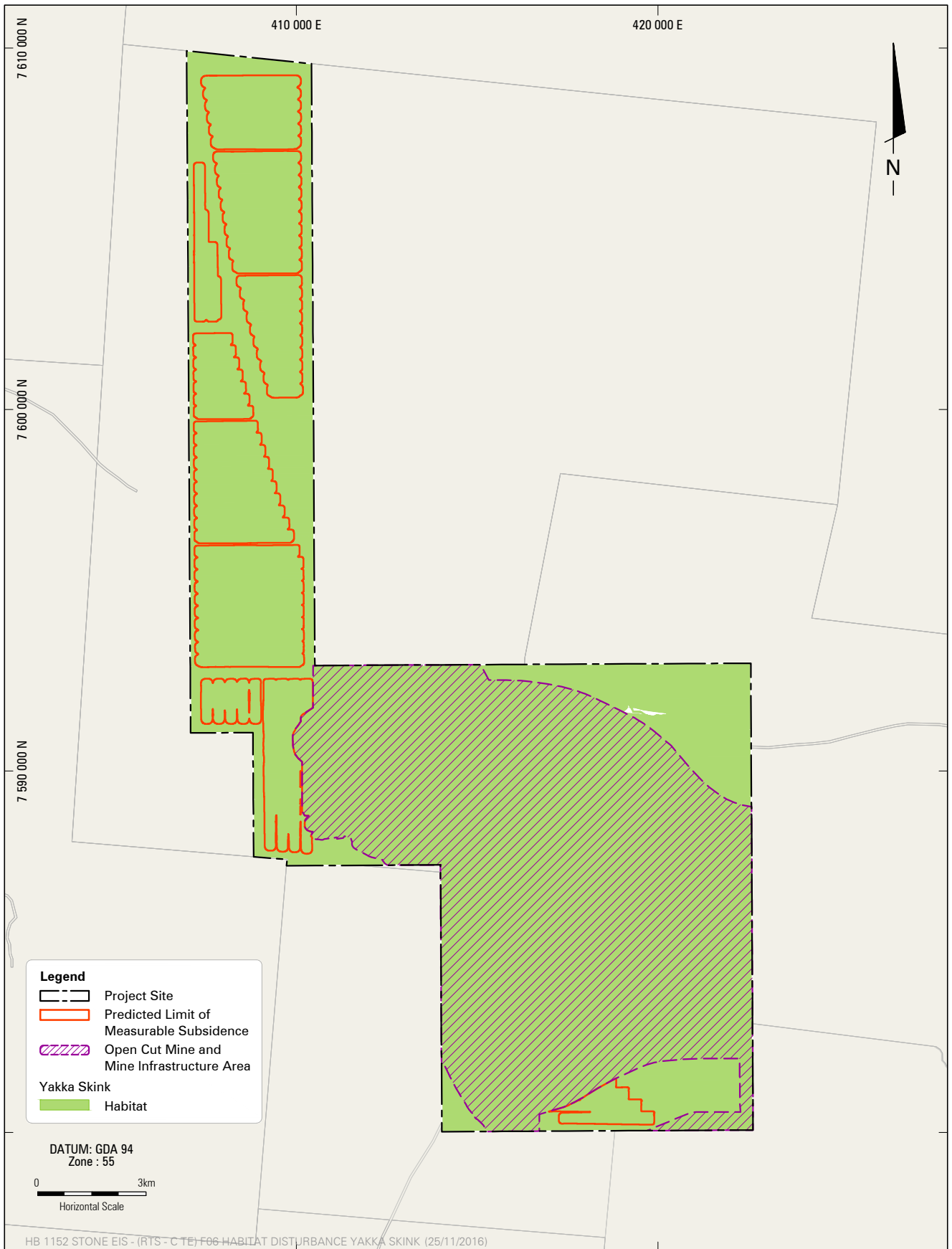
FIGURE 4



PROJECT CHINA STONE

Yakka Skink Habitat  
(Based on Preliminary Mapping)

FIGURE 5



PROJECT CHINA STONE

Yakka Skink Habitat Disturbance  
(Based on Preliminary Mapping)

FIGURE 6