

Native Vegetation Clearing Permit Application: Merolia Road Realignment E38/1642 Laverton Gold Project

15 October 2012



**Level 30, St Martin's Tower
44 St Georges Terrace, Perth, WA, 6000
Subiaco WA 6008
Australia
Telephone (08) 9215 7888
Facsimile: (08) 9215 7889**

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Appendix B: Level 1 Terrestrial Fauna Report of the West Laverton Area

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Appendix D: Aboriginal Heritage Survey and Clearance Report: Tenements in the Lake Carey, Laverton Region and Burtville Regions

ACRONYMS

AER	Annual environmental report
BOM	Bureau of Meteorology
CSZ	Chatterbox shear zone
DEC	Department of Environment and Conservation
DMP	Department of Minerals and Petroleum
EMP	Environmental Management Plan
LGP	Laverton Gold Project
NVCP	Native Vegetation Clearing Permit
pH	Measure of acidity
PEC	Priority Ecological Community
ROM	Run of mine stockpile
TEC	Threatened Ecological Community

1. INTRODUCTION

The *Environmental Protection Act 1986* and *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* require land clearing related to mining activities to be approved by the Department of Environment and Conservation (DEC). This Assessment of Clearing Principles report provides existing ecological information and an assessment of the 10 Land Clearing Principles as outlined in Schedule 5 of the *Environmental Protection Act 1986* together with environmental impact management measures for the Burtville project area.

Focus Minerals (Laverton) Limited, formerly Crescent Gold Limited is located 250 kilometres north-east of Kalgoorlie, Western Australia (Figure 1). Their extensive tenement package includes exploration tenement E38/1642.

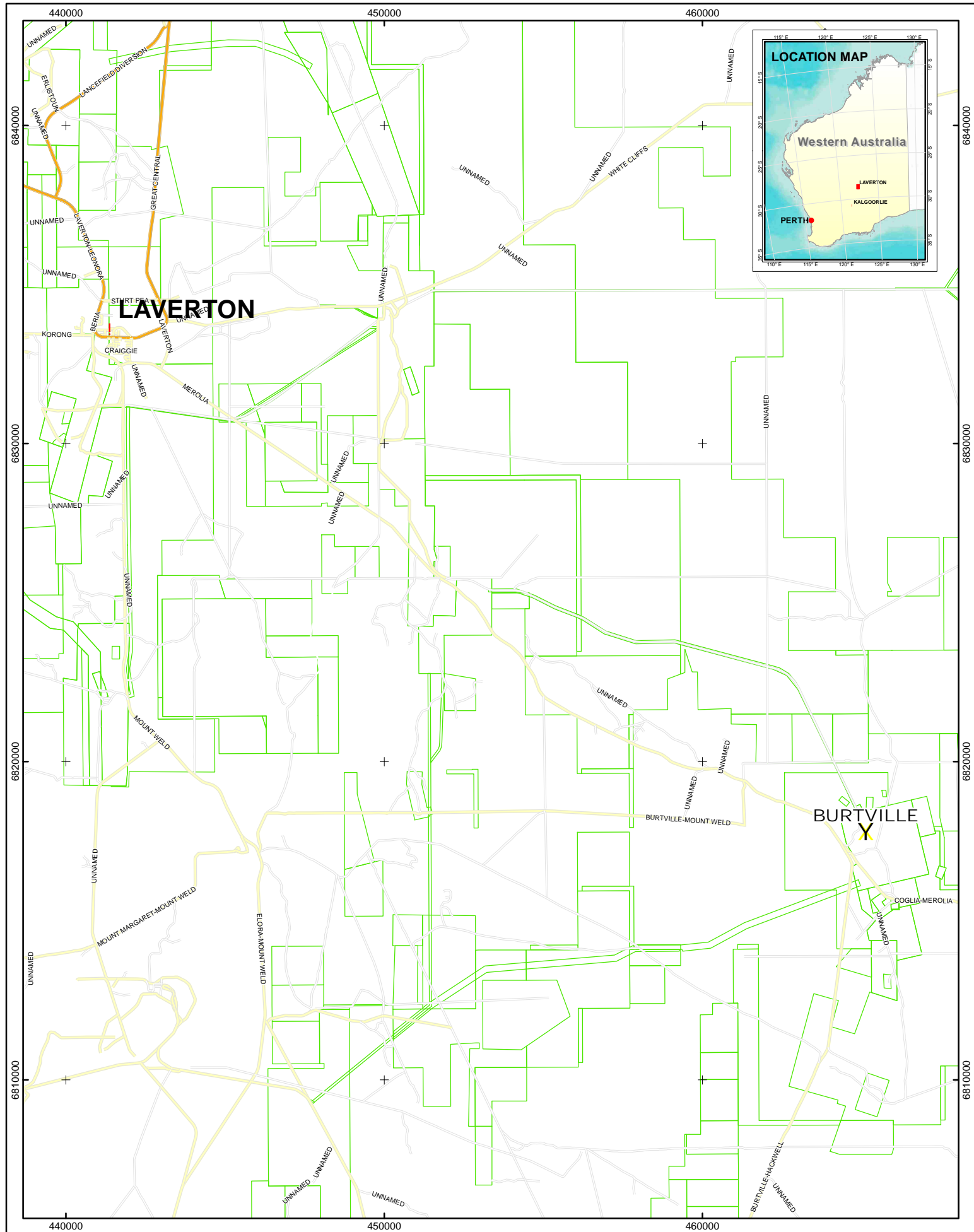
This purpose permit application is for the clearing of 20 ha of native vegetation on E38/1642. Focus is proposing to realign approximately 4 km of Merolia Road in this tenement.

In accordance with Part V Division 2 of the *Environmental Protection Act 1986*, Focus hereby refers the proposed works to the DEC in an application for a Native Vegetation Clearing Permit (NVCP).

The following information is provided in this document to support this NVCP application:

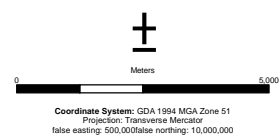
- a description of the works to be carried out;
- other associated approvals required;
- information on flora and fauna;
- an assessment against the ten clearing principles; and,
- information on Indigenous heritage in the area of the proposed clearing.

Upon completion of construction of the new section of Merolia Road, all responsibility associated with the road will reside with the Shire of Laverton.



Legend

- ! Laverton
- X Crescent Deposit
- LIVE, Crescent Gold Tenements
- Main Roads
- Local Roads
- Track



Crescent Gold Limited	
LAVERTON GOLD PROJECT LOCATION MAP OF BURVILLE	
FIGURE 1	
GIS: H.TRAN ORIGIN: D.PAHL	DATE: 17/11/2011 SCALE: 1:150,000

3. Objectives

Focus wish to develop the Burtville deposit on mining tenement M38/261. This requires the realignment of a portion of Morolia public road on tenement E38/1642, due to the fact that this road currently falls within the exclusion zone.

This document outlines Focus's commitment to managing the impacts of land clearing on the flora and fauna. It supports Focus's NVCP (Purpose Permit) application for proposed mining activities on E38/1642, related to the development of the Burtville mine project through the relocation of Merolia Road to run outside of the exclusion zone.

Information is provided to enable DEC to assess the impacts of the proposed activity on each of the 10 Land Clearing Principles described within Schedule 5 of the *Environmental Protection Act 1984*.

The document provides information on the potential impacts of land clearing on the areas subject to the application together with management actions and strategies to minimise these impacts.

4. Background

4.1 History

Focus Minerals (Laverton) Limited has operated under its current name since July 2012. The company has previously operated under the names of Crescent Gold Limited, Apollo Gold Mining Limited and Focus Technologies. In March 2003 Apollo acquired a number of tenements including the Barnicoat Gold Plant from Sons of Gwalia. In early 2007 Crescent recommissioned the Gold Plant and commenced operations processing ore from the Sickie mine. In July 2008 Crescent temporarily suspended mining at Laverton allowing Crescent to implement a broader development strategy to advance a number of the company's deposits and identify a more efficient way of processing the ore.

During 2009 Crescent entered into an ore purchase agreement with Barrick to process ore through their nearby Granny Smith Gold Plant. As a result of this shift in strategy Crescent's existing Barnicoat Gold Plant is currently under care and maintenance. Crescent recommenced mining operations in August 2009.

In November 2009 Crescent acquired a number of new tenements, adding ten deposits to its resource base. These are Apollo, Aurora, Calypso, Crown Jewel, Eclipse, Elation, Emerald, Liberty, Odyssey and Summit. These deposits, along with the more isolated Burtville, Fish and Lord Byron deposits, will be the focus of Crescent for the next few years.

4.2 Location

The Focus Mineral (Laverton) project is located approximately 250 kilometres north-east of Kalgoorlie, Western Australia. The Burtville deposit lies approximately 29 kilometres (km) south-east of the Laverton town site on Mining Lease M38/261. This site is approximately 25 km by haul road from the Barrick Granny Smith gold plant where ore will be processed.

The proposed re-alignment of Merolia Road (Figure 2) to be realigned will cross Exploration Lease E38/1642 which sits to the west of Burtville.

4.3 Tenure

The ground of the proposed NVCP area is held under Exploration Lease E38/1642 by Focus Minerals (Laverton) Limited.

4.4 Environmental setting

Laverton's climate is arid with high summer temperatures and low annual rainfall. Average daily maximum temperature ranges from 18.3 degrees Celsius in June to upwards of 35.5 degrees Celsius in January. Average daily minimum temperature ranges from 5.7 degrees Celsius in July to 21.4 degrees Celsius in January (Bureau of Meteorology (BoM), 2010). Rainfall is unreliable with higher rainfall occurring in the summer months. The average annual rainfall for Laverton is 278.2 mm. The mean number of rainfall days over a 14 year period is 34.7 days per year. (BoM, 2010)

The proposed Merolia road realignment is located within Beard's Laverton Region which is characterised by gently undulating terrain of low relief, with prominent hills consisting of greenstone outcrops (Beard, 1974). There are several ephemeral drainage lines but no permanent rivers, creeks or lakes within the proposed project area. The Laverton Region sits within the Murchison Biogeographic Region (subregion: Eastern Murchison) close to the boundary of the Great Victoria Desert Biogeographic Region which is characterised by Cowan (2001) by:

"its internal drainage and extensive areas of elevated red desert sand plains with minimal dune development. Salt lake systems associated with the occluded Paleodrainage system. Broad plains of red-brown soils and breakaway complexes as well as red sand plains."

Cowan (2001) also states that vegetation is dominated by Mulga Woodlands which are often rich in ephemerals; hummock grasslands, saltbush shrublands and Halosarcia shrublands.

The basement geology in the Laverton region is reasonably well exposed. Some areas are poorly exposed, deeply weathered and extensively covered by Tertiary laterite, deep lateritic soils and relatively recent sediments and alluvium that are Permian to Quaternary in age. The Laverton Tectonic Zone comprises a greenstone belt bound by the Laverton Dome to the north-west, the Kingella Dome to the south-east and by the Mt Celia and Mt Varden-Burtville fault zones trending north-north-west (Craig, 2005).

The Burtville deposit comprises dolerite and felsic volcanic sediments intruded by a discrete granodiorite plug with dimensions of two km by one km. A sand plain comprising several sheets of windblown sands with limonitic pisoliths at depth formerly covered the weathered and fresh rock materials of the current open pit (MBS Environmental, 2011).

The Burtville Mine Project occurs within sand plains (with some gravel plains, mesas and salt lakes) on granitic rocks of the Yilgarn Craton (Eastern Goldfields Superterrane). Regionally, the area is predominated by red sandy earths and some red deep sands, red brown hardpan shallow loams and calcareous loamy earths (MBS Environmental, 2011). The dominant soil types of the project site are likely to comprise of red sand with ferruginous gravel and/or shallow red earth with a stony mantle on rocks associated with the greenstone domain (MBS Environmental, 2011).

4.5 Existing Operations

The Burtville deposit has been mined historically and there is an existing open pit and waste landform in the north western corner. There are however no other existing facilities in the immediate Burtville Project area. Focus however do have facilities at other locations including support facilities such as refuel, workshop, offices and ablution which, in addition to new facilities, may be utilised during mining at the proposed Burtville Mine.

The existing road network in the area is sufficient for the transport of ore from Burtville to the Barrick Granny Smith gold plant, and for the movement of staff between Focus Minerals' other sites and the Burtville Mine. Currently Focus has no existing facilities or structures located on E38/1642.

4.6 Associated Approvals

A Mining Proposal for the proposed Burtville Gold Mine on the adjacent Mining Lease M38/261 was granted on 23 August 2012. An Amendment to further development the Burtville Gold Mine was submitted to the DMP -on 04 October 2012 for assessment.

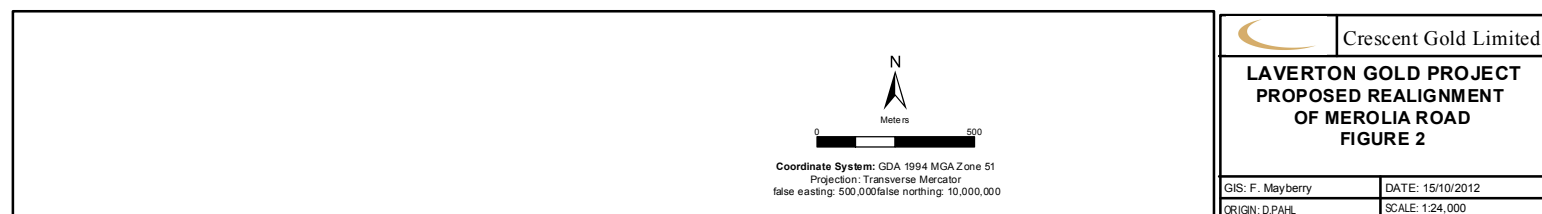
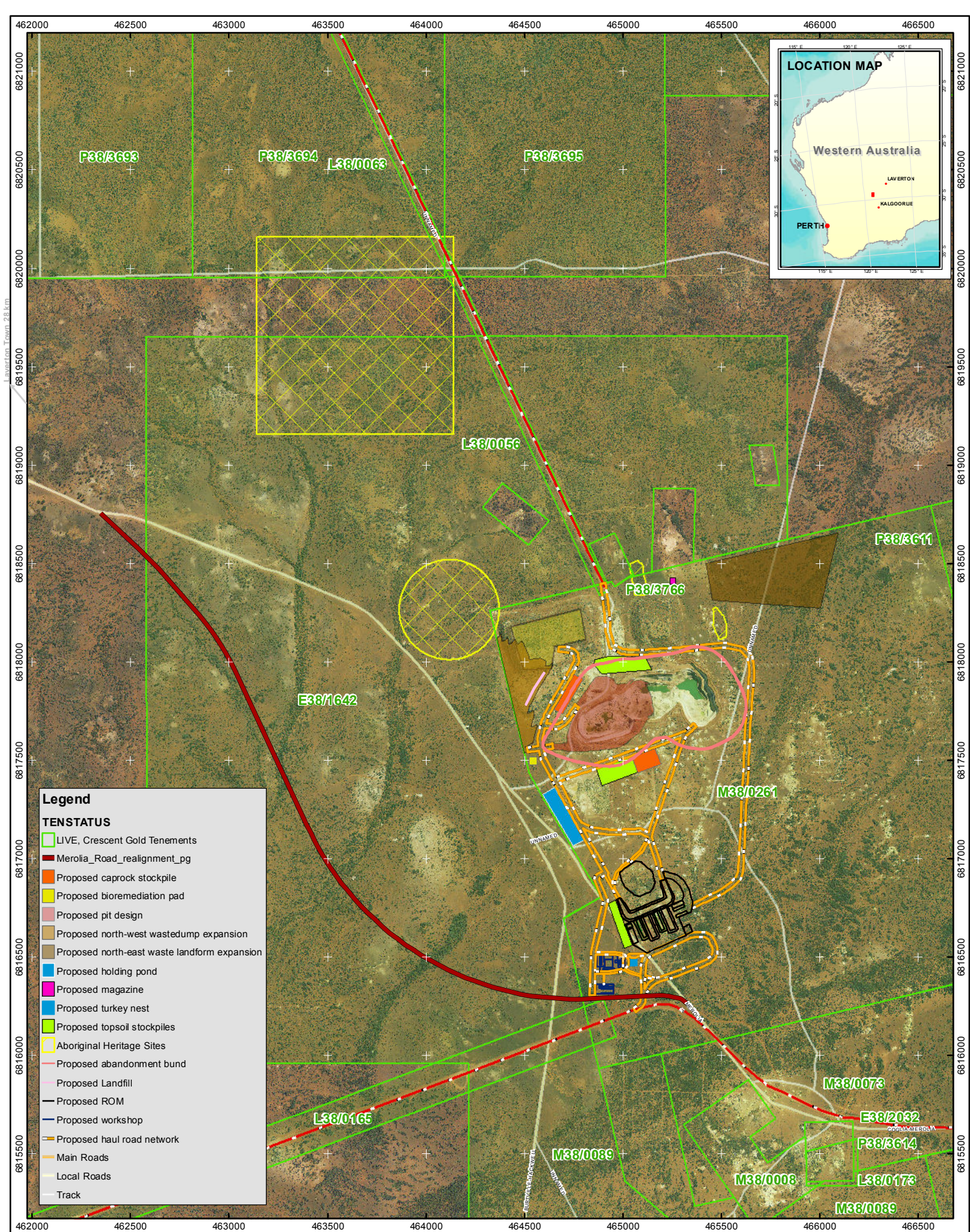
5. Proposed Land Clearing

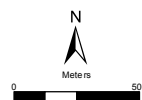
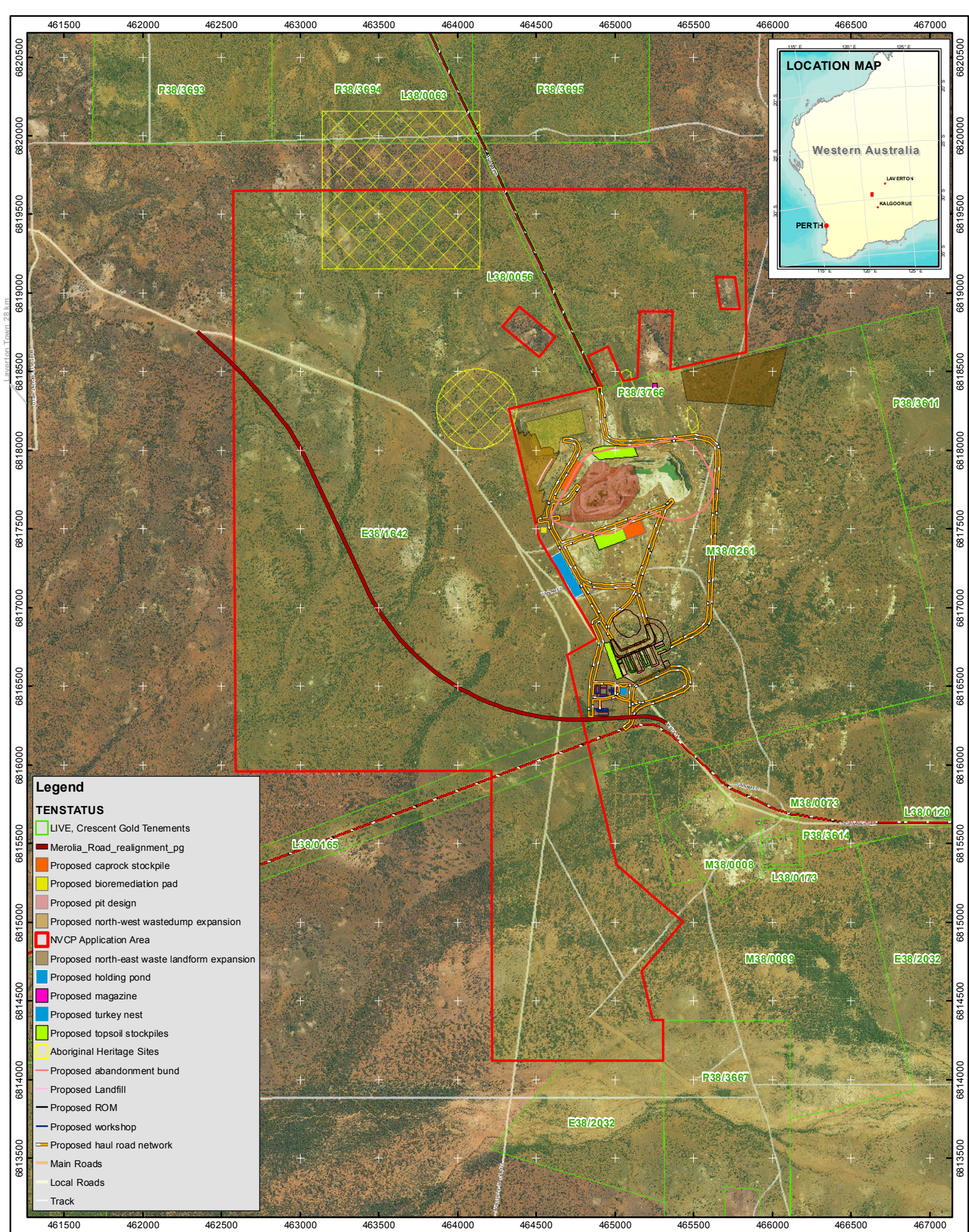
Focus is seeking permission to clear land within tenement E38/1642 for the continued development of the Burtville mine project. The Purpose Permit application applies to 20 ha (within the indicated clearing boundary), as shown in Figure 3 and presented in **Error! Reference source not found..**

The realignment of the Merolia Road will involve the construction of a new section of road approximately 4.0 km in length and is expected to disturb approximately 12 ha of native vegetation (Table 1). Since this road will remain a permanent feature and revert back to the shire upon completion no rehabilitation is applicable (Figure 2).

Table 1: Approximate disturbances for the Merolia road realignment.

Infrastructure type	Native vegetation (ha)	Total (ha)
Tenement E38/1642		
Merolia Road	12	12
Grand total	12	12





Coordinate System: GDA 1994 MGA Zone 51
 Projection: Transverse Mercator
 false easting: 500,000 false northing: 10,000,000

Crescent Gold Limited

LAVERTON GOLD PROJECT
NVCP APPLICATION AREA
FIGURE 3

GIS: F. Mayberry DATE: 15/10/2012
 ORIGIN: D.PAHL SCALE: 1:30,000