



## Title of Proposal - Saracen Gold- Carosue Dam Aerodrome

# Section 1 - Summary of your proposed action

Provide a summary of your proposed action, including any consultations undertaken.

## 1.1 Project Industry Type

Mining

## 1.2 Provide a detailed description of the proposed action, including all proposed activities.

The Carouse Dam Project is located approximately 120km north east of Kalgoorlie in the Pinjin area of the Eastern Goldfields. Saracen Gold Mines Pty Ltd (Saracen) is a wholly owned subsidiary of ASX listed company Saracen Mineral Holdings Limited. Saracen purchased the Carosue Dam Project from St Barbara Mines Ltd in 2006 and recommenced mining and processing in December 2009 after a six month refurbishment of facilities.

Carosue Dam is a 24hr, 7 day a week operation, site personnel work rotational rosters on either a Fly In Fly Out (FIFO) or Drive In Drive Out (DIDO) basis from Kalgoorlie. All personnel and contractors access the Carosue Dam Operations via the Yarri Road and a 60km private access road (both dirt). In the six years of operations at Carosue Dam, there have been a high number of road accidents attributed to driving on unsealed roads. Vehicle related incidents rank as the highest principle risk, with the potential to result in single or multiple fatalities. To significantly reduce the volume of traffic commuting to the mine site, Saracen intends to construct an aerodrome at Carosue Dam which will accommodate a direct charter service from Perth.

The proposed aerodrome will be located 3km west of the Carosue Process Plant and 2.8km north of Carosue Dam Village on miscellaneous lease L28/54 with associated borrow pits on L28/42. The underlying tenure is pastoral lease (Pinjin) and Vacant Crown Land (VCL).

Construction of the aerodrome facility will include a 3,000m (l) x 500m (w) cleared footprint (CASA requirement), a 2300m (l) x 30m (w) all weather landing strip (sealed coat), check-in terminal, ablutions, refuelling infrastructure, carpark and access roads.

The project has been referred under the EPBC Act 1999 as the development will involve the removal of two known Mallee Fowl (*Leipoa Ocellata*) mounds (or nests) from the development footprint. The mounds are not currently active. It is Saracen's intention to gain development approval in advance of the next nesting season (September to January/February) to prevent any impacts to individuals of this species.

## 1.3 What is the extent and location of your proposed action? Use the polygon tool on the map below to mark the location of your proposed action.

Area	Point	Latitude	Longitude
Carosue Dam	1	-30.158538951357	122.33694180809



Area	Point	Latitude	Longitude
Aerodrome			
Carosue Dam	2	-30.164624190569	122.34234914146
Aerodrome			
Carosue Dam	3	-30.182951848613	122.31702908836
Aerodrome			
Carosue Dam	4	-30.176496746581	122.31084927879
Aerodrome			
Carosue Dam	5	-30.158464738804	122.33702763878
Aerodrome			
Carosue Dam	6	-30.158538951357	122.33694180809
Aerodrome			

**1.5 Provide a brief physical description of the property on which the proposed action will take place and the location of the proposed action (e.g. proximity to major towns, or for off-shore actions, shortest distance to mainland).**

The proposed aerodrome will be located 3km west of the Carosue Process Plant and 2.8km north of Carosue Dam Village on miscellaneous lease L28/54 with associated borrow pits on L28/42. Carosue Dam is located approximately 110km north east of Kalgoorlie-Boulder in the Goldfields region of Western Australia. The nearest residents to Carosue Dam are located at Pinjin Station, located 37km East of the project site. The underlying tenure is pastoral lease (Pinjin) and Vacant Crown Land (VCL).

**1.6 What is the size of the development footprint or work area?**

195ha

**1.7 Is the proposed action a street address or lot?**

Lot

**1.7.2 Describe the lot number and title.**Miscellaneous Leases L28/54 and L28/42

**1.8 Primary Jurisdiction.**

Western Australia

**1.9 Has the person proposing to take the action received any Australian Government grant funding to undertake this project?**

No



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**1.10 Is the proposed action subject to local government planning approval?**

No

**1.11 Provide an estimated start and estimated end date for the proposed action.**

Start date 07/2017

End date 08/2017

**1.12 Provide details of the context, planning framework and State and/or Local government requirements.**

Construction of the aerodrome requires State approval for a Vegetation clearing permit under section 51E of the Environmental Protection Act 1986, as well as development approval under the Mining Act 1978. During a survey of the proposed aerodrome footprint for the Vulnerable (EPBC / Wildlife Conservation Act 1950) Mallee Fowl (*Leipoa Ocellata*), Saracen located two inactive Mallee Fowl mounds. The aerodrome facility therefore requires referral under the EPBC Act as the proposal will impact on these mounds.

**1.13 Describe any public consultation that has been, is being or will be undertaken, including with Indigenous stakeholders.**

Saracen has completed extensive consultation with the affected stakeholders from Pinjin Station. Records of this consultation can be provided on request.

Saracen has pegged the underlying tenement and is currently awaiting state Department of Mines and Petroleum Approval for the Licence.

Saracen will submit a Mining Proposal application to the Department of Mines and Petroleum (WA) under the Mining Act 1978 once tenure has been granted.

Saracen will also submit a Clearing Permit Application for the proposed clearing area on grant of the licence.

**1.14 Describe any environmental impact assessments that have been or will be carried out under Commonwealth, State or Territory legislation including relevant impacts of the project.**

A Level 1 Vegetation Survey and Rare Flora Search was carried out over the proposed clearing footprint in September 2016. During the site inspection no Threatened Flora, Priority Flora or EPBC Act listed species were recorded.

Comprehensive Archaeological and Ethnographic surveys were carried out in the Carosue Dam area prior to the construction of the Processing Plant, tailings storage facility and associated pits



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(Karari and Whirling Dervish). Surveys were submitted to the Department of Aboriginal Affairs and are registered on the Aboriginal Heritage Inquiry System.

A search of the Department of Aboriginal Affairs – Aboriginal Heritage Inquiry System returned no registered sites in the Aerodrome Project area.

**1.15 Is this action part of a staged development (or a component of a larger project)?**

No

**1.16 Is the proposed action related to other actions or proposals in the region?**

No



## Section 2 - Matters of National Environmental Significance

Describe the affected area and the likely impacts of the proposal, emphasising the relevant matters protected by the EPBC Act. Refer to relevant maps as appropriate. The [interactive map tool](#) can help determine whether matters of national environmental significance or other matters protected by the EPBC Act are likely to occur in your area of interest. Consideration of likely impacts should include both direct and indirect impacts.

Your assessment of likely impacts should consider whether a bioregional plan is relevant to your proposal. The following resources can assist you in your assessment of likely impacts:

- [Profiles of relevant species/communities](#) (where available), that will assist in the identification of whether there is likely to be a significant impact on them if the proposal proceeds;
- [Significant Impact Guidelines 1.1 – Matters of National Environmental Significance](#);
- [Significant Impact Guideline 1.2 – Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies](#).

**2.1 Is the proposed action likely to impact on the values of any World Heritage properties?**

No

**2.2 Is the proposed action likely to impact on the values of any National Heritage places?**

No

**2.3 Is the proposed action likely to impact on the ecological character of a Ramsar wetland?**

No

**2.4 Is the proposed action likely to impact on the members of any listed threatened species (except a conservation dependent species) or any threatened ecological community, or their habitat?**

No

**2.5 Is the proposed action likely to impact on the members of any listed migratory species, or their habitat?**

Yes



### 2.5.1 Impact table

Species	Impact
Rainbow Bee Eater ( <i>Merops ornatus</i> )- Listed as a Migratory Bird under the EPBC Act 1999.	The rainbow bee-eater occurs in un-forested areas in southern Australia during summer then migrate north during the winter into northern Australia. The rainbow bee-eater is found across the better-watered parts of Western Australia. It prefers lightly wooded habitats, preferably on sandy soils near water. Rainbow Bee-eaters are scarce to very common across their range depending on suitable habitat conditions. Rainbow bee-eaters have been observed on multiple occasions in other surveys in the region and were located by Coffey Environments during a 2011 Fauna survey of the Mt Pleasant to Carosue Dam Transmission Line Corridor. Given the small area of disturbance in relation to the regional habitat that this species prefers, it is highly unlikely that this species will be significantly affected by this proposal.
Mallee Fowl ( <i>Leipoa Ocellata</i> )- Listed as a Migratory Bird under the EPBC Act 1999.	Malleefowl have been found in mallee regions of southern Australia from approximately the 26 parallel of latitude southwards. Malleefowl only occur in fragmented patches due to clearing of habitat for agriculture, fire, competition with herbivores, and predation. Sightings of Malee Fowl are frequent around the project area by Carosue Dam employees and contractors. Two (currently inactive) mounds will be destroyed as part of this proposal.
Great Egret ( <i>Ardea alba</i> )- Listed as a Migratory Bird under the EPBC Act 1999.	Hérons and egrets all depend, to some extent upon surface water for foraging. The largest of the Australian egrets, the Great Egret is a large, elegant, white wader dependent upon floodwaters, rivers, shallow wetlands and intertidal mudflats. This species is found in areas with permanent water and in the lakes of the Goldfields. Due to its reliance upon sources of surface water, the great egret is unlikely to be seen within the project area and would only be considered an occasional visitor when nearby waterbodies contain significant levels of water.
Fork-tailed swift ( <i>Apus pacificus</i> )	Fork-tailed swifts occur over inland plains but sometimes above foothills or in coastal areas



Species	Impact
	over dry or open habitats, including riparian woodland and tea-tree swamps, low scrub, heathland or saltmarsh. It is common in the Kimberley, uncommon to moderately common near northwest, west and southeast coasts and rare to scarce elsewhere. Usually flocks (up to 2000) occur when changed weather conditions (e.g., storms and cyclones) occur. The Fork-tailed Swift may be an occasional visitor to the project area. However, the proposed mining and infrastructure developments are unlikely to significantly impact on this species as it will move away to other areas if it is disturbed.

**2.5.2 Do you consider this impact to be significant?**

No

**2.6 Is the proposed action to be undertaken in a marine environment (outside Commonwealth marine areas)?**

No

**2.7 Is the proposed action likely to impact on any part of the environment in the Commonwealth land?**

No

**2.8 Is the proposed action taking place in the Great Barrier Reef Marine Park?**

No

**2.9 Will there be any impact on a water resource related to coal / gas / mining?**

No

**2.10 Is the proposed action a nuclear action?**

No

**2.11 Is the proposed action to be taken by the Commonwealth agency?**

No



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**2.12 Is the proposed action to be undertaken in a Commonwealth Heritage Place Overseas?**

No

**2.13 Is the proposed action likely to impact on any part of the environment in the Commonwealth marine area?**

No





## Section 3 - Description of the project area

Provide a description of the project area and the affected area, including information about the following features (where relevant to the project area and/or affected area, and to the extent not otherwise addressed in Section 2).

### 3.1 Describe the flora and fauna relevant to the project area.

In September 2016, Saracen commissioned Paul Armstrong and Associates to undertake a Level 1 vegetation survey incorporating searches for Threatened Flora (TF) and Priority Flora (PF) in the Carosue Dam Airstrip Project area (Carosue Dam). The survey covered Miscellaneous Lease L28/54, which is to be impacted by the proposed Airstrip Project (Attached). The area extends approximately 3.8km south-west to north-east and is approximately 800m wide. A 315ha survey area was assessed to supplement this application.

Prior to the fieldwork a desktop study was undertaken to discern the likely vegetation assemblages and potential for Threatened Ecological Communities (TEC's) and rare flora. Beard (1990) previously mapped the vegetation assemblage of the Carosue Dam area within the Austin Botanical District (Eremaean Region). Carosue Dam sits in the south-east portion, within the Barlee sub-region with the Laverton sub-region to the north, South-West interzone to the south and the Great Victoria Desert to the east. Beard et al. (2013) mapped the vegetation of Western Australia at a scale of 1:3,000,000. Carosue Dam is mapped as one vegetation type and within one kilometre of another. Mulga and associated species (Vegetation Type 8) is the common feature with other wattle (*Acacia* spp.), cypress pine (*Callitris* spp.), casuarina (*Allocasuarina* spp.) (Vegetation Type 9) also prominent within the region. Both of these vegetation assemblages are common and widespread in Western Australia.

A search on the Department of Parks and Wildlife (DPaW) Threatened Flora (TF) database was undertaken for the area within the general vicinity of the proposed Carosue Dam airstrip (DPaW ref: 06-0916). No Threatened Flora and 22 Priority Flora (PF) taxa identified within the search area. *Thryptomene eremaea* (P2) had previously been located 8km east north-east of the Project area.

In addition to the TF/PF search, DPaW's Threatened Ecological Community (TEC) databased was examined (DPaW ref: 07092016). No TEC's have been recorded within the affected area, with 19 occurrences of the eight Priority Ecological Communities (PEC) identified in the region. The PECs which have been recorded within 100km of the proposed Carosue Dam airstrip include; Emu Landsystem P3 (6 occurrences), Mount Belches *Acacia quadrimarginea* and *Ptilotus obovatus* (banded ironstone formation) P3, Mount Linden Range vegetation complex (banded ironstone formation) P3 and Yellow sandplain vegetation of the Great Victorian Desert with diverse vertebrate fauna P3. The closest of these fall within the Austin Landsystem areas, located 48km to the west and a further two 72km to the south-west.

The field survey was undertaken over four days (24th – 27th September, 2016), which



corresponded with early-mid spring to maximise the potential for identification of ephemerals. Survey transects were walked on foot with vegetation descriptions recorded. The structure of each plant community was described using Muir's Classification (1977), a widely accepted methodology within the state of Western Australia. In total fourteen different vegetation associations were observed within the survey area. These included; Woodlands, *Eucalyptus lesoufeii* Low Woodland, *Eucalyptus oleosa* Tree Mallee, *Eucalyptus salubris* over *Atriplex* Low Woodland, *Eucalyptus salubris* with scrub Woodland, *Eucalyptus transcontinentalis* Low Woodland, *Eucalyptus yilgarnensis* Tree Mallee, Burnt Tree Mallee (adjacent to the survey area, included in the search as an opportunity to identify fire ephemerals), Tall Shrublands, Drainage Line Thicket, Laterite Scree, Scrub Mixed Heath, Mulga Scrub, Mulga with other *Acacia* Scrub Low Shrublands, *Atriplex* and *Frankenia* Dwarf Scrub and Rehab Scrub.

Based on an assessment of the satellite imagery and field work, Armstrong (2016) broke down the survey area into respective vegetative communities, depicted in Table 3 (see attached Report).

The dominant stratum recorded was Mulga Scrub, which occupies 41.6% or 211.6ha of the survey area. This assemblage is characterised by *Acacia aneura* generally growing to 2-5m; over Low Heath to Dwarf Scrub to Open Dwarf Scrub variously dominated by *Eremophila forrestii* subsp. *Forrestii*; over Hummock Grass to Open Hummock Grass dominated by *Triodia tomentosa*.

In total, 110 native plant taxa within 24 families were identified within the survey envelope, no invasive weed species were noted. Majority of the species identified were typical of the area, being common and widespread. There were no TF, PF or Flora protected under the EPBC Act recorded during the survey. One species collected was considered to be an Other Significant Flora. Believed to be of the *Eremophila* sp., the sample obtained for identification was inadequate (sterile). The specimen was shown to several experts on identifying flora from the Murchison Bioregion, including an expert on this genus, Andrew Brown, all of which could not adequately identify it, but suspected that it may be a new taxa.

To confirm the identification of a new species a supplementary survey was commissioned by Saracen. The aim of the second survey, again undertaken by Paul Armstrong and Associates, was to collect more material of the *Eremophila* sp., to allow for identification and to record more populations to increase the distribution of the taxa.

The targeted *Eremophila* sp. survey was conducted between the 21st and 26th of November 2016 (Attached). Prior to undertaking the field work the original specimen was inspected for familiarisation. Starting at known locations from the first survey, a more extensive survey of the immediate area was conducted (in approximately 70m x 50m sections). From these locations the search was expanded to areas considered to be of suitable habitat, *Eucalyptus oleosa* Mallee with Mulga. The last two days were spent searching for the *Eremophila* sp at a regional scale.

On return to Perth several cuttings/pressings were processed at the DPaW herbarium. Once available for handling within the reference herbarium, the samples were again inspected by the expert on *Eremophila*, Andrew Brown. With more adequate material, flowers and fruits, the



*Eremophila* sp was determined to be *Eremophila gilesii* subsp. *variabilis*. This taxa is considered to relatively common and widespread in the Murchison Bioregion. Populations identified in the Carosue Dam Airstrip survey extend the previous known distribution by approximately 90km to the south-east. In addition the regional survey recorded plants 70km to the west south-west of the proposed airstrip. These extend the previously recorded distribution 105km to the south.

Armstrong (2016) outlines the following recommendations for clearing activity associated with the Carouse Dam Airstrip:

Where practical, use existing roads or tracks for the various access roads required; Any viable seed should be collected and returned to the site during rehabilitation operations or nearby areas to be rehabilitated; Topsoil, branches and other vegetation debris should be stockpiled and returned directly to the disturbed areas during rehabilitation operations; and Before any vehicles enter the project area they should be thoroughly washed down to remove any soil that could possibly contain weed seeds or other plant fragments.

A copy of the Airstrip Flora Survey Report and Addendum Report is attached.

An assessment of vertebrate fauna of the Carosue Dam and Safari Bore area was conducted for Sons of Gwalia in 2002. The assessment comprised a field survey and desktop review. The study concluded that vertebrate fauna is likely to be typical of a brad area of the Eastern Goldfields. That is, moderately rich in reptiles and birds (Metcalf and Bamford, 2002). However, less common types of habitat are likely to increase biodiversity at a local scale. These include:

Breakaways, rock outcrops and rocky hills may harbour isolated populations of sedentary species.

Drainage lines often provide dense vegetation utilised by a variety of bird species and may act as refuge areas during dry periods.

After heavy rainfall events, salt lakes may be used as breeding sites for a variety of migratory and non-migratory wader species, and other waterbird species.

There are nine species of birds, four mammals and one reptile listed as Threatened Species under the EPBC 1999 Act or protected under Western Australian legislation that are likely to occur within the area covered by all Saracen tenements. Four bird species and one crustacean were identified within the Department of Conservation and Land Management Threatened Fauna database as having been collected within or near Saracen tenements over the past 100 years (Holm, 2006).

No protected or threatened bird species have been recorded within Birds Australia database of sightings within Saracen leases or the wider region (Holm, 2006). There have been a few recent sightings of *Falco peregrinus* (peregrine falcon), schedule 4 protected fauna and *Charadrius rubricollis* (hooded plover), priority 1 fauna in the south Laverton area.

There have been many confirmed sightings of *Leipoa ocellata* (Mallee Fowl) in the Carosue Dam area. A survey of the access road corridor conducted for Saracen by Biologica (2010)



located a recently active Mallee Fowl mound (<5 years old) (4.5km) and foot prints (4.0km west of the Carosue Dam Project area). A survey for the expansion of the Karari open pit (Coffey, 2010) pit located Mallee Fowl footprints (~0.5km south of the current Karari Pit). Several possible inactive mounds were located during the survey, however the area is considered unsuitable habitat (open with little leaf litter) for Mallee Fowl nests (Coffey, 2010). There have been several Mallee Fowl sightings on the Camp Access road <1km from the Proposed Aerodrome.

### **3.2 Describe the hydrology relevant to the project area (including water flows).**

The terrain of the north-eastern Goldfields is generally flat to gently undulating, relatively low lying and covered mainly by thin superficial soils and occasionally by low hills of bedrock. It is traversed in an east-south-easterly direction by broad saline paleodrainages of which the closest to the Carosue Dam Project area is Lake Rebecca, lies approximately 13km north-east of the proposed Aerodrome. The lake receives surface drainage from the surrounding country and very occasionally fills. Please see the attached surface water investigation report for further details.

### **3.3 Describe the soil and vegetation characteristics relevant to the project area.**

The proposed aerodrome sits within the Moriarty (Mor) and Kirgella (Kir) landsystems of Pringle et al., 1994. Moriarty (Mor) landsystems typically include low greenstone rises supporting chenopod shrublands with patchy eucalypt overstoreys, whilst Kirgella (Kir) landsystems are comprised of gentle undulations with sandplains, granite outcrops and calcrete veneers.

The soils of the Carosue Dam area vary between land systems and, often to a lesser degree, between landscape units. Brown loamy soils over calcrete with ironstone gravel are common on drainage flats and level to gently sloping alluvial plains of the Moriarty and Kirgella land systems. Occasional variations of these soils include brown loamy clays over calcrete and shallow (less than 60 centimetres) calcareous red earths with calcrete rubble.

### **3.4 Describe any outstanding natural features and/or any other important or unique values relevant to the project area.**



Not Applicable

### **3.5 Describe the status of native vegetation relevant to the project area.**

Native vegetation is in mostly excellent condition. Please see the reports attached in Section 3.1.1 for detailed status of native vegetation. A Vegetation Clearing Permit will be applied for through the Department of Mines and Petroleum (DMP) under section 51E of the Environmental Protection Act 1986 to permit the clearing of native vegetation.

### **3.6 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area.**

There are no watercourses or creek lines of note in the vicinity of the "Target Area" and runoff from the approximately 6.4 km<sup>2</sup> catchment to the north of the CDO Access Road appears to report in a generally south-easterly direction towards Lake Rebecca (some 15 km to the southwest) by sheetwash. The ground surface over the "Target Area" is of low-relief with typical ground elevations ranging from about 388 mAHD at the eastern and western limits of the area to about 400 mAHD at the centre of the i.e. natural ground slopes of about 0.75% to 1%.

### **3.7 Describe the current condition of the environment relevant to the project area.**

Please see section 3.1.1 for current environmental conditions of flora in the project area. Native vegetation is mostly in excellent condition and there is no significant soil erosion. There have been sightings of wild dogs and goats in the vicinity of the project area. Weed species are minimal, however there is a known population of Tobacco Weed (*Nicotiana glauca*) located south of the Carosue Dam Tailings Storage Facility (TSF) some 4km to the north east of the project location.

### **3.8 Describe any Commonwealth Heritage Places or other places recognised as having heritage values relevant to the project area.**

Not Applicable

### **3.9 Describe any Indigenous heritage values relevant to the project area.**

Archaeological and Ethnographic surveys were carried out in the Carosue Dam area in December 1998 and August 1999 by Pacmin, prior to the construction of the processing plant and TSF and mining of the Karari open pit (Tamora, 1999). The Archaeological survey located twenty five isolated finds including one backed blade of crystal quartz, quartz and crystal quartz artefact and five artefacts manufactured of other types of fine-grained cryptocrystalline lithic material. None of these artefacts were located in the project area footprint.



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A search of the Department of Aboriginal Affairs online heritage search tool revealed that there are no heritage values relevant to the project area.

**3.10 Describe the tenure of the action area (e.g. freehold, leasehold) relevant to the project area.**

The Aerodrome will be located on Miscellaneous Licence L28/54, with associated borrow pits on Miscellaneous licence L28/42. The underlying tenure is pastoral lease (Pinjin Station) and Vacant Crown Land (VCL).

**3.11 Describe any existing or any proposed uses relevant to the project area.**

The current use of the project area is pastoral grazing.



## **Section 4 - Measures to avoid or reduce impacts**

Provide a description of measures that will be implemented to avoid, reduce, manage or offset any relevant impacts of the action. Include, if appropriate, any relevant reports or technical advice relating to the feasibility and effectiveness of the proposed measures.

Examples of relevant measures to avoid or reduce impacts may include the timing of works, avoidance of important habitat, specific design measures, or adoption of specific work practices.

### **4.1 Describe the measures you will undertake to avoid or reduce impact from your proposed action.**

Only the area absolutely necessary for project development will be disturbed, this will be ascertained by adequate planning prior to project implementation. Clearing will be conducted in accordance with the Saracen Clearing Management Work Instruction (SG-EN-WI-2005). Earthworks will be planned and managed closely to minimise erosion. Existing tracks and roads will be used wherever possible for access to Project infrastructure.

To ensure that vegetation clearing will be controlled and monitored: No clearing will occur without a site clearing permit authorised by the site Environmental Representative and Department Manager.

The area to be cleared will be surveyed and pegs installed prior to commencement of clearing to ensure only the approved area is cleared.

The area to be cleared will be surveyed and pegs installed prior to commencement of clearing to ensure only the approved area is cleared.

### **4.2 For matters protected by the EPBC Act that may be affected by the proposed action, describe the proposed environmental outcomes to be achieved.**

The two Mallee Fowl mounds that are currently in the project development area will be destroyed, however, no individuals will be harmed. The nesting season runs between September and January/February each year, therefore if the mounds can be removed prior to September, this will ensure that there is no risk of affecting any individuals.



## **Section 5 – Conclusion on the likelihood of significant impacts**

A checkbox tick identifies each of the matters of National Environmental Significance you identified in section 2 of this application as likely to be a significant impact.

Review the matters you have identified below. If a matter ticked below has been incorrectly identified you will need to return to Section 2 to edit.

### **5.1.1 World Heritage Properties**

No

### **5.1.2 National Heritage Places**

No

### **5.1.3 Wetlands of International Importance (declared Ramsar Wetlands)**

No

### **5.1.4 Listed threatened species or any threatened ecological community**

No

### **5.1.5 Listed migratory species**

No

### **5.1.6 Commonwealth marine environment**

No

### **5.1.7 Protection of the environment from actions involving Commonwealth land**

No

### **5.1.8 Great Barrier Reef Marine Park**

No

### **5.1.9 A water resource, in relation to coal/gas/mining**

No





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#### **5.1.10 Protection of the environment from nuclear actions**

No

#### **5.1.11 Protection of the environment from Commonwealth actions**

No

#### **5.1.12 Commonwealth Heritage places overseas**

No

**5.2 If no significant matters are identified, provide the key reasons why you think the proposed action is not likely to have a significant impact on a matter protected under the EPBC Act and therefore not a controlled action.**

Saracen are proposing to complete the disturbance well in advance of the known nesting period to prevent any Mallee Fowl from utilising the mounds. A 2012 Flora and vegetation survey revealed extensive suitable Mallee Fowl habitat to the west of the project area (Pers. Comm. Alec Holm, November 2012), allowing individuals to create alternative nests/mounds. The impact of this project is deemed to be low.



## **Section 6 – Environmental record of the person proposing to take the action**

Provide details of any proceedings under Commonwealth, State or Territory law against the person proposing to take the action that pertain to the protection of the environment or the conservation and sustainable use of natural resources.

### **6.1 Does the person taking the action have a satisfactory record of responsible environmental management? Please explain in further detail.**

Saracen commenced operation in 2006. Since this time Saracen have maintained high environmental standards in line with current best practice guidelines and have maintained compliance with Local, state and Federal legislation. Audits by the State Departments of Mines and Petroleum and Department of environment Regulation have not revealed any major environmental issues and all minor issues raised have been rectified in a timely fashion. Saracen has stringent Policies, Procedures and Management Plans to ensure that matters of environmental significance are safeguarded and managed professionally.

### **6.2 Provide details of any past or present proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against either (a) the person proposing to take the action or, (b) if a permit has been applied for in relation to the action – the person making the application.**

Not Applicable

### **6.3 Will the action be taken in accordance with the corporation's environmental policy and planning framework?**

Yes

#### **6.3.1 If the person taking the action is a corporation, please provide details of the corporation's environmental policy and planning framework.**

Please see the attached Saracen Gold Mines Environmental Policy and Clearing Management Work Instruction. All Saracen Environmental Management System documentation can be provided on request.

### **6.4 Has the person taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?**



No



## Section 7 – Information sources

You are required to provide the references used in preparing the referral including the reliability of the source.

### 7.1 List references used in preparing the referral (please provide the reference source reliability and any uncertainties of source).

Reference Source	Reliability	Uncertainties
Coffey Environments, 2010; Level 1 Vertebrate Fauna Survey For the Carosue Dam Project Saracen Gold. Report Prepared for Saracen Gold Mines Pty Ltd.	Excellent	None
Armstrong, P. & Associates. 2016a. Vegetation Survey and Rare Flora Search of the Carosue Dam Airstrip Project. Report Prepared for Saracen Gold Mines Pty Ltd.	Excellent	None
Armstrong, P. & Associates. 2016b. Vegetation Survey and Rare Flora Search of the Carosue Dam Airstrip Project: Addendum, Unidentified Eremophila. Report Prepared for Saracen Gold Mines Pty Ltd.	Excellent	None
Holm A. & Associates. 2011. Environmental Impact Assessment: Proposed Airstrip for Saracen Gold Mines. Report for Saracen Gold Mines Pty Ltd, Perth, Western Australia.	Excellent	None
Internal Memorandum- CDO Aerodrome Mallee Fowl Targeted Survey, 15 March 2017.	Excellent	None
Metcalf, B. and Bamford, M. 2002. Vertebrate fauna of the proposed Carosue Dam – Safari haul road. Report for Sons of Gwalia Ltd, Perth, Western Australia.	Excellent	None



Reference Source	Reliability	Uncertainties
Tamora, 1999; Report of an Ethnographic Survey for Aboriginal Heritage at Lease 28/272 (Khartoum) Proposed Infrastructure sites: Luvironza, Whirling Dervish and Karari and the proposed mill site and TSF site. Report for PacMin Mining Corporations Limited, Submitted to the Department of Indigenous Affairs Report Id 104331.	Excellent	None
Carrick Consulting, 2016. Proposed Airfield Surface Water Management Technical Memorandum. Report for Saracen Gold Mines Pty Ltd, Perth, Western Australia.	Excellent	None
Coffey, 2011. Level 1 Fauna Survey, Mt Pleasant to Carosue Dam Transmission Line Corridor. Report for Saracen Gold Mines Pty Ltd, Perth, Western Australia.	Excellent	None



## Section 8 – Proposed alternatives

You are required to complete this section if you have any feasible alternatives to taking the proposed action (including not taking the action) that were considered but not proposed.

### 8.0 Provide a description of the feasible alternative?

Saracen has attempted to amend the location and layout of the aerodrome, however this is not possible due to CASA requirements (which require no obstacles within the flight path of air traffic) and tenure boundary restraints. Saracen has considered not building the aerodrome, however the safety risk to employees having to drive in and out of site on a continual basis on an unsealed road is perceived as being too great.

### 8.1 Select the relevant alternatives related to your proposed action.

#### 8.27 Do you have another alternative?

No



## Section 9 – Contacts, signatures and declarations

Where applicable, you must provide the contact details of each of the following entities: Person Proposing the Action; Proposed Designated Proponent and; Person Preparing the Referral. You will also be required to provide signed declarations from each of the identified entities.

### 9.0 Is the person proposing to take the action an Organisation or an Individual?

Organisation

#### 9.2 Organisation

##### 9.2.1 Job Title

Environmental Coordinator

##### 9.2.2 First Name

Robert

##### 9.2.3 Last Name

Mills

##### 9.2.4 E-mail

rmills@saracen.com.au

##### 9.2.5 Postal Address

P.O Box 2563  
PERTH WA 6001  
Australia

##### 9.2.6 ABN/ACN

ACN

116649122 - SARACEN GOLD MINES PTY LIMITED

##### 9.2.7 Organisation Telephone

0862299500



## 9.2.8 Organisation E-mail

rmills@saracen.com.au

## 9.2.9 I qualify for exemption from fees under section 520(4C)(e)(v) of the EPBC Act because I am:

Not applicable

## Small Business Declaration

I have read the Department of the Environment and Energy's guidance in the online form concerning the definition of a small a business entity and confirm that I qualify for a small business exemption.

Signature:..... Date: .....

## 9.2.9.2 I would like to apply for a waiver of full or partial fees under Schedule 1, 5.21A of the EPBC Regulations

No

## 9.2.9.3 Under sub regulation 5.21A(5), you must include information about the applicant (if not you) the grounds on which the waiver is sought and the reasons why it should be made

## Person proposing the action - Declaration

I, PAUL BRENNAN, declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf of or for the benefit of any other person or entity.

Signature: P. Brennan Date: 21/4/17

Paul BRENNAN, General Manager  
Saracen Gold Mines, Acting on  
behalf of Robert MILLS. P.B.

I, \_\_\_\_\_, the person proposing the action, consent to the designation of \_\_\_\_\_ as the proponent of the purposes of the action describe in this EPBC Act Referral.

Signature:..... Date: .....

## 9.3 Is the Proposed Designated Proponent an Organisation or Individual?





Organisation

## 9.5 Organisation

### 9.5.1 Job Title

Environmental Coordinator

### 9.5.2 First Name

Robert

### 9.5.3 Last Name

Mills

### 9.5.4 E-mail

rmills@saracen.com.au

### 9.5.5 Postal Address

P.O Box 2563  
PERTH WA 6001  
Australia

### 9.5.6 ABN/ACN

ACN

116649122 - SARACEN GOLD MINES PTY LIMITED

### 9.5.7 Organisation Telephone

08 62299500

### 9.5.8 Organisation E-mail

rmills@saracen.com.au

## Proposed designated proponent - Declaration

I, \_\_\_\_\_, the proposed designated proponent, consent to the designation of myself as the proponent for the purposes of the action described in this EPBC Act Referral.



Signature:..... Date: .....

## 9.6 Is the Referring Party an Organisation or Individual?

Individual

## 9.7 Individual

### 9.7.1 Job Title

Environmental Coordinator

### 9.7.2 First Name

Robert

### 9.7.3 Last Name

Mills

### 9.7.4 E-mail

rmills@saracen.com.au

Paul KENWAN, General Manager  
Saracen Gold Mines, Acting on behalf  
of Robert MILLS P.O.

## Referring Party - Declaration

I, PAUL KENWAN, I declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence.

Signature: P. Kenwan Date: 21/4/17



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## Appendix A - Attachments

The following attachments have been supplied with this EPBC Act Referral:

1. aerodrome\_layout\_and\_mallee\_fowl\_mound\_locations.jpg
2. carosue\_dam\_airstrip\_l1\_report\_2016-11-06part\_b.pdf
3. carosue\_dam\_airstrip\_l1\_report\_2016-11-06part\_c.pdf
4. carosue\_dam\_airstrip\_l1\_report\_2016-11-06part\_d.pdf
5. carosue\_dam\_airstrip\_l1\_report\_2016-11-06part\_e.pdf
6. carosue\_dam\_airstrip\_l1\_report\_2016-11-06parta.pdf
7. carosue\_dam\_l1\_addendum\_9\_december\_2016.pdf
8. cdo-fig\_airstrip\_geological\_map\_mar17.jpg
9. cdo\_airstrip\_landsystem.jpg
10. j1512m03\_carosuedamairfieldsitevisitfinal\_compressed.pdf
11. malleefowl\_factsheet.pdf
12. sg-en-wi-2005\_clearing\_management\_work\_instruction.pdf
13. sgm-bs-en-po-0002\_environmental\_policy\_signed\_2013.pdf
14. sgm-mem-carosue\_dam\_aerodrome\_malleefowl\_survey\_15\_mar\_17.pdf