Head Office

7 Rheola Street
West Perth
WA 6005 Australia
Tel: +61 8 9429 4888
Fax: +61 8 9226 3388

中钢澳洲中西矿业公司
SINOSTEEL MIDWEST CORPORATION LIMITED

Sinosteel Midwest Corporation Limited
ABN 91 009 224 800

Weld Range Iron Ore Project

Fire Management Plan

Document Number WR15-0001-EV-PLN-004

December 2011

REV	DESCRIPTION	ORIGINATOR	REVIEWED	APPROVED	DATE
A	Issued as Final	Ian Findlay	Mike Wood	Wayne Ennor	13 Dec 2011

TABLE OF CONTENTS

FIGURES

1.0 TERMS AND ABBREVIATIONS GLOSSARY

Abbreviation	Meaning
ANZECC	Australian and New Zealand Environment and Conservation Council
bgl	below ground level
BIF	banded iron formation
DEC	Department of Environment and Conservation
DMP	Department of Mines and Petroleum
DoW	Department of Water
DRET	Department of Resources Energy and Tourism (Commonwealth)
EC	Electrical Conductivity
EMP	Environmental Management Plan
EPA	Environmental Protection Authority
GDE	Groundwater Dependant Ecosystems
GLpa	Gigalitre per annum
ha	hectare
IBRA	Interim Biogeographic Regionalisation of Australia
mRL	meters Reduced Level (relative to the Australian Height Datum)
OEPA	Office of the Environmental Protection Authority
SMC	Sinosteel Midwest Corporation Limited
TDS	Total Dissolved Solids
TSF	Tailings Storage Facility
uS/cm	microSiemens per centimetre
SRK	SRK Consulting (Australasia) Pty Ltd

2.0 INTRODUCTION

Western Australia's economy is heavily dependent on mineral resource projects and its future growth and development rely on the continued viability of resource development projects. The Weld Range Iron Ore Project will provide financial and social benefits for the area through employment, infrastructure and flow-on effects to the non-mining sector.

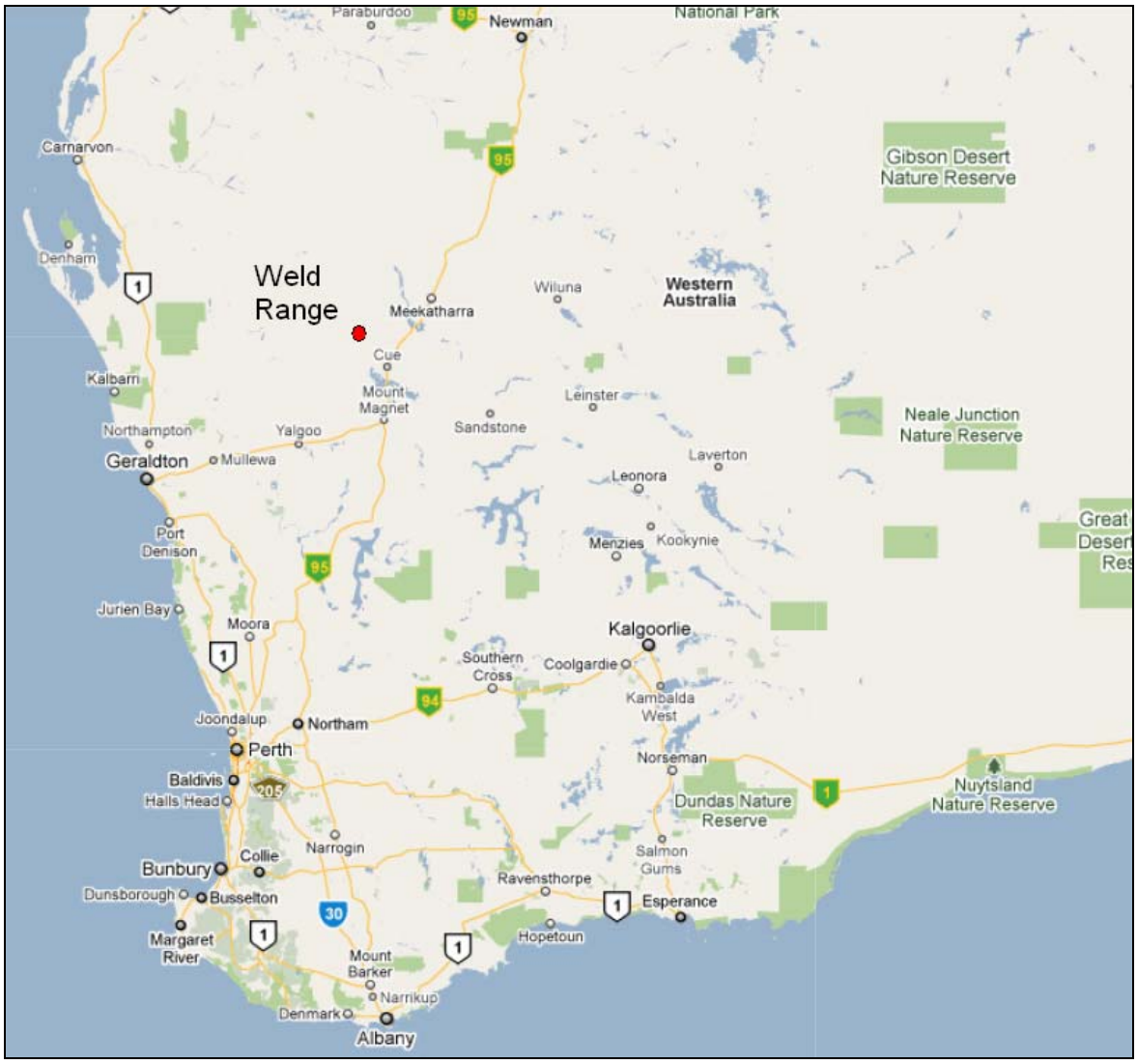


Figure 2.1 Location Map

Sinosteel Midwest Corporation Ltd (SMC) is an incorporated entity set up to conduct mineral exploration, engineering, environmental and economic studies into the feasibility to mine Weld Range 60km NW of Cue.

The Weld Range Iron Ore Project (the Project) is a direct shipping iron ore project with high grade outcrops over a 60 km strike length. SMC is targeting to export 15 million tonnes per annum (Mtpa) of iron ore over a 15 year period, however, this Management Plan covers the first 11 years of planned operations. To implement this project, major infrastructure will be designed, installed and constructed immediately, with production scheduled for 2014, and decommissioning in 2024.

There are a number of significant environmental impacts expected as a result of this Project, as described in Section 7 of the **Public Environmental Review** (PER) document. As a result, Environmental Management Plans for the significant factors have been developed as a primary method of controlling, managing and monitoring these known and expected environmental impacts. The management plans are elements of the Project's **Environmental Management System** (EMS) that will be used to achieve the environmental objectives, targets and commitments of the Project and the application of mitigation measures described in the PER.

It is a primary objective that all environmental impacts during operation of the Project are avoided or minimised as far as reasonably practicable; consistent with the principles of environmental protection. Environmental impacts will also be evident during construction of the Project infrastructure and the objectives and management practices within these plans will also apply to these construction activities.

Full management plans have been developed for impacts that represent the more significant aspects of the Project, including:

- Fire Management Plan
- Rare Flora Management Plan
- Surface Water Management Plan
- Ground Water Management Plan
- Spider Management Plan
- Dust Management Plan
- Acid Mine Drainage Management Plan

Compliance with commitments outlines in this document will be internally audited by SMC and subject to external audits by the relevant regulatory agencies, including the Department of Environment and Conservation (DEC) and the Department of Mines and Petroleum (DMP).

This **Fire Management Plan** (the Plan) and subsequent Actions Plans will be developed and implemented in consultation with the Department of Environment and Conservation (DEC) and FESA.

3.0 LEGISLATIVE REQUIREMENTS

SMC will, as a minimum, meet all relevant regulatory requirements in managing groundwater – during the construction and operation of the Weld Range Project. The key Western Australian legislation to which SMC will have regard in its management of Fire includes:

WA State Legislation

- *Bush Fires Act 1954 and Regulations*
- *Conservation and Land Management Act 1984*
- *Environmental Protection Act 1986*
- *Wildlife Conservation Act 1950*

Commonwealth Legislation

Environmental Protection & Biodiversity Conservation Act 1999 and Regulations 2000

4.0 AIMS, OBJECTIVE AND SCOPE

This plan is prepared as a requirement under the Weld Range Environmental Plan 2010, the object of which is to minimise and, where possible, eliminate any adverse environmental impacts associated with construction and operation of the Project. Each management plan within the EMP describes the objectives for managing the individual environmental aspect.

The **Aim** of this (Fire Management) Plan is to –

- minimise the risk of bush fires; and
- reduce the adverse impacts of bush fires on life, property and the environment.

The **Objectives** of this Plan are to:

- reduce the operations vulnerability to bush fires by improving its preparedness;
- manage fuel to reduce the rate of spread and intensity of bush fires to protect assets, whilst minimising environmental/ecological impacts;
- effectively contain fires with the potential to cause damage to life, property or the environment;
- prevent or reduce the chance of human caused bush fire ignitions that cause damage to life, property and the environment; and
- use planned and applied fire, where appropriate, to assist in the containment or control of introduced weed species.

The **Scope** of the Plan includes:

- the Plan will generally address bushfire or wild fire management at the Weld Range mine site and is not intended to address structural fire risks associated with built infrastructure such as fires in kitchen areas or initiated by electrical malfunction;
- the Plan will be implemented within the Weld Range mine site, including all mining leases held by Sinosteel Midwest Corporation;
- the Plan will align itself with the DEC's Regional Plan for the Murchison and employ the DEC and Shire of Cue's general approach to reducing the occurrence and severity of bushfires;
- all mine personnel and visitors to the mine will be subject to the requirements and instructions within the Plan;
- the Plan will be enacted only with the approval of the EPA, DEC; and the Shire of Cue;

- the Plan will become an attachment to, and sit within, the Mine's Emergency Management Plan.

4.1 Specific Fire Related Objectives

Weld Range Iron Ore Project - Objective 15 – BUSHFIRE CONTROL

Environmental Objective: To prevent mining and exploration related bushfires. In particular:

- Potential Impacts
- Loss and damage to terrestrial flora and fauna from bushfire.
- Loss and damage to human property and infrastructure due to bushfires.
- Danger to human life resulting from bushfire and smoke inhalation.
- Damage to heritage values within Wilgie Mia Indigenous Reserve
- Environmental Fire Management Strategy
- Protection of human life will be top priority.
- No fires will be allowed on the mine site.
- Personnel will be made aware of environmental bush fire prevention and emergency response procedures through site induction training.

An Emergency Response Team, trained in fire management, will be established to ensure:

- Fire safety inspections of infrastructure will be periodically undertaken.
- Vehicles will carry fire fighting equipment complying with the relevant standards and staff will be trained in the use of this equipment.
- Fire fighting equipment will be located at campsite, worksites, and at powered equipment such as generators and pumps.
- An adequate firebreak will be constructed and maintained around the accommodation village.
- Fuel reduced buffers will be established and maintained where necessary around key assets.
- Diesel powered vehicles will be used on site, unleaded fuel vehicles fitted with catalytic converters will be avoided in order to reduce the chance of fire and maintained to reduce the possibility of hot vehicle components igniting vegetation.
- Prescribed burning or other approved methods of hazard reduction will be used to create low fuel buffer zones around key assets within the mine site in which wild fires may be contained. These zones will be created with the use of natural and other boundaries (land

clearing, roads) where possible. Pre-approved open edged burning may be undertaken when weather and fuel moisture conditions are suitable.

- Non burning hazard reduction practises will be used when soil baring will or may cause or exacerbate wind or water erosion of surface soil.
- Monitoring.
- Housekeeping inspections and routine maintenance of fire fighting equipment will be undertaken.
- Appropriate procedures for -
  - hydrocarbons management;
  - hot works; and
  - fire safety in general;

will be reinforced in induction training and toolbox safety meetings.

- All equipment that may cause fires will be inspected and potential fire hazards addressed.
- Pre-start checks will be recorded on the appropriate daily inspection form.
- Performance Indicators / Criteria
- Housekeeping inspections are undertaken as scheduled.
- Fire fighting equipment present at stipulated locations on site.
- Details of bushfire frequency and previous bushfire details kept as a current record on site.

Reporting Bushfire frequency and details will be recorded and maintained on site on a **Hazard and Incident Register**.

5.0 EXISTING ENVIRONMENT

5.1 Bioregions and Major Physiographic Units

The Interim Biogeographic Regionalisation for Australia (IBRA) categorises the Australian continent into regions of similar geology, landform, vegetation, fauna and climate (IBRA, 2000). The Weld Range lies within the Western Murchison sub region of the Murchison Biogeographic Region, which lie within the Eremaean botanical province or the arid zone of Western Australia, as illustrated below in Figure 5.1

Figure 5.1 Western Murchison Subregions and Surrounds. MUR1 – Eastern Murchison, MUR2 Western Murchison (Based on IBRA Version 6.1 Thackway and Cresswell 1995)

The Western Murchison subregion comprises predominately Mulga (Acacia aneura) low woodlands, with an understorey often rich in ephemerals (usually with hummock grasses). The substrate consists primarily of outcrop and fine textured Quaternary alluvial and eluvial surfaces (extensive hardpan wash plains that dominate and characterise the subregion) mantling granitic and greenstone strata. Where occluded drainage features occur, vegetation is dominated by saltbush shrub lands on calcareous soils and Halosarcia low shrub lands on saline alluvia. The Western Murchison subregion contains the headwaters of the Murchison and Wooramel Rivers, which drain the subregion westwards to the coast.

5.2 Heritage Status

Western Australia has an abundant cultural and natural heritage that enriches our lives and helps shape our individual and collective identities. Aboriginal heritage places include Aboriginal sites and objects within the meaning of the Aboriginal Heritage Act 1972, and historic heritage places. Heritage places range in size from whole regions or landscapes to features or buildings that have natural and/or cultural heritage significance for the present community as well as for future generations.

There has been a number of ethnographic and archaeological surveys conducted over the proposed mining tenement and indigenous sites of heritage value identified. These will not be impacted on by mining operations or protection strategies proposed within this FMP.

5.3 Climate

5.3.1 Climate and Meteorology

Meteorological data has been recorded at the Bureau of Meteorology (BOM) weather station at Meekatharra airport.

5.3.2 Climate

Weld Range is located in the Midwest Region of WA, approximately 80 km west south west of Meekatharra. The region experiences hot, dry summers and mild winters. A high pressure band or subtropical ridge dominates the weather pattern throughout the year. During the warmer months, a low pressure trough is located to the south, resulting in southerly and south easterly winds. Occasional cold fronts bring little rain to the region whereas tropical cloud bands bring the most rains during the winter months.

5.3.3 Temperature

Mean maximum temperatures range from 38.2°C in January to 19°C in July. Mean minimum temperatures range from 24.3°C in January to 7.4°C in July. Very hot summers and mild winters are representative of the region (Figure 5.2).

5.3.4 Rainfall

The late summer and early winter months (February and June) provide the most rainfall over the year (Figure 5.2). The total annual rainfall in this region is very low (less than 250 mm per annum).

September is the driest month of the year, receiving on average less than 5 mm of rainfall over the entire month.

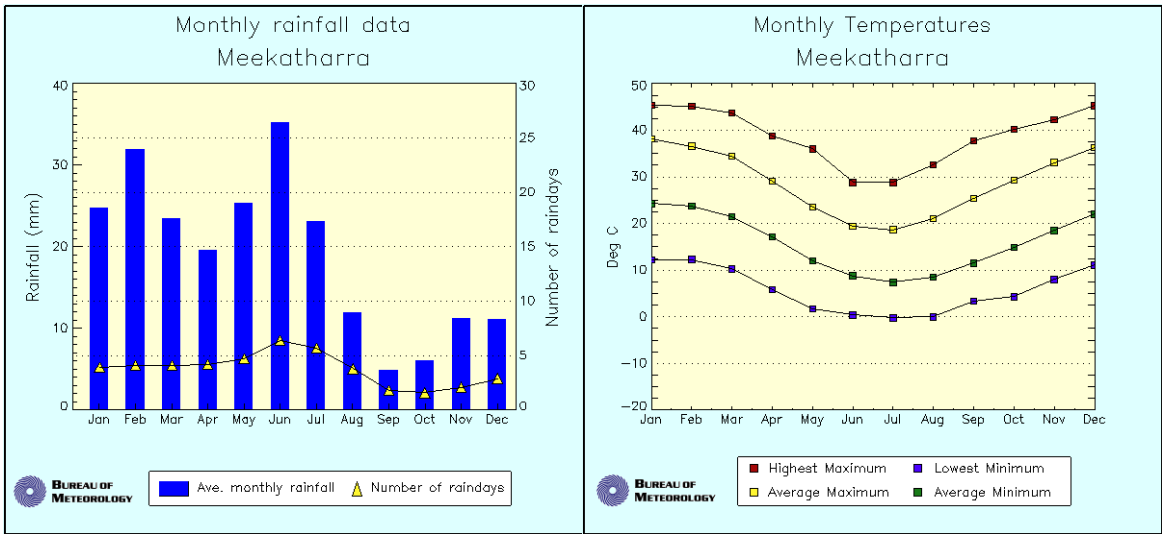


Figure 5.2 Summary of Climatic Data for Meekatharra Airport (BOM, 2009)

5.3.5 Relative Humidity

The morning (9 am) mean relative humidity is consistently higher than the afternoon (3 pm) mean. On average, humidity increases to between 41% and 63% in the winter months and decreases to between 16% and 28% in the summer months. This low humidity can increase the potential for higher particulate emissions from mining activities.

5.3.6 Winds

The long term wind recordings at Meekatharra indicate the following:

- for January to March, eastern and south eastern winds are predominant;
- for April to June, the main winds are from the east;
- for July to September, the winds are primarily from the east or south; and
- for October to December, the wind pattern is similar to July to September but the wind speed is generally higher.

The overall wind speed rages between 2 m/s and 5 m/s. The frequency of wind speeds between 5 m/s and 10 m/s reduces gradually to the point that very few hours have an hourly average wind speed greater than 10 m/s.

5.4 Topography and Landforms

The topography of the area is dominated by the Weld Range - a long band of steep ridges that run southwest to northeast and extend over a distance of more than 60 km. The Project tenements are

situated within these ridges. The elevation ranges from approximately 460 Mrl TO 730 Mrl. The slope angles in the area of the Weld Range vary from less than 5% to greater than 90%. Away from the ridges the topography is very flat.

There are some clearly delineated drainage channels within Weld Range itself, however the land to the north has only a few well defined channels and is characterised by numerous mud flats and sand pans. There is a significant salt pan in a depression immediately north of the Madoonga tenement. The available topographic data indicates a minimum elevation of 482.7m AHD (Average Height Datum) in this salt pan.

5.5 Vegetation and Flora

See Figure 16.2 Primary Vegetation Types.

The vegetation within the mining tenement is dominant Mulga with approximately 70% of the area ground cover free and the remaining 30% has mixed annual grasses with areas of saltbush and mixed scrub species to 50cm high.

There are a number of priority flora within the tenement but the impact on plant species cannot be determined currently until the actual disturbance sites area are surveyed.

Mulga and Mulga communities are an ecologically and culturally important tree species with many values, including:

- Conservation: Mulga plays an important role in nutrient capture and hydrology, which is a vital function in arid ecosystems. Mulga provides unique habitat for many flora and fauna species. Mulga is particularly important habitat for many bird species, provides woody forage for native herbivores and may be important as refugia from summer heat and from fire for many species.
- Cultural value: Mulga is a very important species for the indigenous people of central Australia as it provides food, wood for utensils, weapons and shelter in the hot summer months. The biota associate with Mulga such as honey ants, kangaroos and lerps are also highly valued by indigenous people (Williams 2001).
- Economic value: Pastoralism is the most common agricultural land-use on Mulga communities and is an important area for meat and wool production. The stands of Mulga provide stock shade and rest areas and a palatable, abundant and widespread fodder shrub during periods of drought.

- Intrinsic value: Mulga and Spinifex habitats together characterise a large part of central Australia. The isolation of most Mulga communities adds to the intrinsic value of these vegetation types.
- Recreation and tourism: Recreational opportunities that mulga woodlands provide include bird watching, walking, plant identification and appreciation of the natural environment.

The disappearance of mulga usually goes hand in hand with a spread of grasses, thereby leading to increased termite activity and this may result in greater erosion during dry times. Furthermore, disappearing Mulga decreases nitrogen levels in the ground, depriving other valuable desert plants of food. This is due to a symbiotic relationship between acacias and a nitrogen binding bacteria called Rhizobium. Naturally, Mulgas normally long life plays a strong part in a staple provision of nitrogen.

Figure 5.3 Vegetation Structures within the Mining Tenement

5.6 Vegetation and Flora of Conservation Significance

See Table 17.1 - Taxa of Conservation Significance Recorded at Weld Range.

5.7 Weeds

Introduced Flora Species

The Australian Weed Strategy (2007) defines a weed as “a plant which has, or has the potential to have, a detrimental effect on economic, social or conservation values”. Weeds that have proliferated in bushland without direct human intervention or assistance are also referred to as naturalized alien species.

Declared Weeds

Weeds that are, or have the potential to become, a threat to agriculture may be formally declared under the Agriculture and Related Resources Protection Act 1976 (ARRP Act). Declared Plants under this Act are listed with Standard Control Codes that outline the requirements for control. Five Priority groupings exist (P1, P2, P3, P4 or P5), and more than one Priority may be placed on a weed species. Weeds may also be prioritised differently in different agricultural regions. Eighty three Declared Plants are listed as occurring in the Murchison region of Western Australia under the ARRP Act.

A search was conducted of the Department of Agriculture and Food‘s list of Declared Plants (weeds), under the Agriculture and Related Resources Protection Act 1976, and 83 Declared Plants are listed as occurring in the Murchison Region of Western Australia.

No Declared Plants (weeds) were recorded during the Weld Range survey.

Fire, applied at the appropriate time during the seeding cycle, may be used to assist in the management or control or containment of weed species.

5.8 Terrestrial Fauna

Vertebrate Fauna

A total of 29 native and eight introduced mammal, 156 bird, 88 reptile and five frog species have the potential to occur in the area around the evaporation pond site. However, based on the size and fauna habitats present within the proposed evaporation pond, only a proportion of these species will occur within the evaporation pond area.

Two species of conservation significance have previously been recorded within the proposed evaporation pond site; Long-tailed Dunnart (Sminthopsis longicaudata) and a skink (Lerista eupoda), both of which were recorded within the proposed access track to the evaporation pond. In addition to these, an additional six species have been recorded within the vicinity of theevaporation pond and have the potential to occur within this area: Bush Stone-curlew (Burhinus grallarius), Malleefowl (Leipoa ocellata), Peregrine Falcon (Falco peregrinus), Slender-billed Thornbill (Acanthiza iredalei iredalei), Australian Bustard (Ardeotis austral is), and Rainbow Bee-eater (Merops ornatus).

Invertebrate Fauna

In 2007, ecologia identified a number of species that are short-range endemics including two mygalomorph spiders (Cethegus 'fugax complex' and the Shield-back Spider Idiosoma nigrum – a schedule 1 species under the Wildlife Conservation Act), one snail species (Pleuroxia sp.) and a millipede (Antichiropus sp. 'Weld Range'). These four species have all been recorded through the evaporation pond site.

A dedicated Idiosoma nigrum Conservation Management Plan will be developed and implemented prior to clearing and construction, to reduce impact on the population at Weld Range during construction, development and active mining.

It is unlikely that any fire management activities proposed will directly impact on these populations because -

They are located in various the sites within the project boundaries, (of the 1708 burrows detected, 32.7% were found on slope-foot-plain, 30.5% occurred on the plain, 26.7% occurred on slopes, 9.49% occurred on hilltop-slope-foot and less than 1% occurred on the hilltops).

Their burrowing habit affords excellent protection from short term heat generation from even unplanned wildfires. Most vegetation consists of dry grasses and dry or partially dry vegetative material which will burn and combust rapidly, resulting in an exposure time of <5 minutes. This is insufficient time for heat generated to penetrate into the subsoil layer where I nigrum reside.

A total of 76 ha was surveyed for Idiosoma nigrum and on all occasions Idiosoma nigrum burrows were found within the boundaries of drainage lines and underneath Acacia vegetation. With the exception of the Weld Range North area, which has north- south orientation, all burrows were found on the southern side of the range.

5.9 Fauna of Conservation Significance

See Figure 16.5 - Location of Fauna of Conservation Significance

During the two Level 2 and Level 1 ecologia fauna surveys, 17 native and six introduced species of mammal, 80 bird species, 44 reptile species and one amphibian species were recorded in the project area (ecologia, 2009e).

Of these, five species of conservation significance were recorded on site:

- Long-tailed Dunnart (Sminthopsis longicaudata) (DEC Priority 3);
- Peregrine Falcon (Falco peregrinus) (WCA Schedule 4);
- Bush Stone-curlew (Burhinus grallarius) (DEC Priority 4);
- Slender-billed Thornbill (Acanthiza iredalei) (EPBC Act Vulnerable); and
- A fossorial skink (Lerista eupoda) (DEC Priority 1).

A further two conservation significant species, the Rainbow Bee-eater and the Australian Bustard, were not recorded but were considered highly likely to utilise the project area on occasion.

Impact of fire on these species

A very limited amount of prescribed fire is planned or proposed to be used either annually, or for the period of the planned iron ore extraction operation. Should this become necessary, detailed planning, including a comprehensive Prescribed Burning Prescription with all the necessary approvals, and subsequent implementation of the burn, will be strictly observed. Such a prescription will rigidly adhere to the Environmental Objectives below. Given this scenario, negligible impact from this type of fire source on all forms of local fauna is expected.

Note the requirements and approvals listed in the **Annual Prescribed Burning Annual Planner** in the index of this plan

Environmental Objectives

- Maintain the abundance, diversity, geographic distribution and productivity of fauna at species and ecosystem levels through the avoidance or management of adverse impacts and improvement in knowledge.
- Protect Specially Protected (Threatened) fauna consistent with the provisions of the Wildlife Conservation Act 1950.
- Protect other fauna species of particular conservation significance (e.g. range extensions).
- Protect migratory fauna attracted to the evaporation ponds surface water supply

6.0 LOCAL FIRE HISTORY

Fire history over the last decade has been closely aligned to the annual rainfall across the area and both the season and quantity have a very marked influence on annual growth and the subsequent fire frequency when the annual grasses cure. There is a marked increase in vegetation and subsequent fire frequency and intensity when both annual winter and summer rainfall is recorded across the region.

The last time rainfall was recorded in both seasons was 2000, and that was a severe fire year, as was 2006, 2007 and 2008, in each of these years only summer rainfall was recorded but well above average values.

In the past three years there has been low rainfall recorded for both winter and summer with a corresponding low incident of unplanned fires.

7.0 IMPACTS FROM FIRE

7.1 Impacts to People

This Plan is primarily aimed at ensuring people, wherever they are located on the lease area, are protected from the dangers of wild fire. In the event of a bush fire, the site's Crisis and Emergency Management procedure would be enacted.

The response could involve the entire compliment of personnel on the Weld Range mine site including the Registered Manager and the site's Emergency Response Team.

There will need to be dialogue with representatives of the Aboriginal People who have links to the areas adjacent to Weld Range, and with Station Owners and managers to ensure there are no adverse impacts on the land managers of the area from the proposed fire management strategies contained in this FMP.

7.2 Impacts to Infrastructure

The strategies recommended in this FMP will protect infrastructure from unplanned fire events and also provide a safe secure working environment for the occupants of the mining operation.

The impacts of fire on infrastructure will depend heavily on the annual area rainfall, in years when rain is abundant there will be a corresponding increase in both ground fuels of annual and perennial grasses as well as an increased flush of growth on native vegetation across the region, with a corresponding increase in the potential for unplanned wildfires.

Figure 7.1 Well Established Buffers Support Dwellings with Sealed Eaves and Roof Cover with non- combustible Stumpage and Access ways

Figure 7.2 Well Maintained Vegetation free Buffers assure Safety and Protection of Employees and Infrastructure

The implementation of fire management strategies will need to be scheduled to correspond with the variations in climatic conditions that produce the annual ground cover growth that can, and will carry fire within the mining tenement. Management of the vegetation within the proposed protection buffers may not be required annually depending on annual rainfall and subsequent growth response.

7.2.1 Key Physical Assets

The key physical assets located at the Weld Range operation that this Fire Management Plan aims to protect are:

- Accommodation Village
- SMC Administration Centre
- Workshop
- Crushing Plant
- Bore Pumps/Pipelines
- Radio and Phone facilities
- Airstrip and building
- Heavy Equipment compounds
- Explosives magazine and Dyno Yard
- Railway depot
- Central Storage Warehouse

7.3 Impacts to Biodiversity

Fire was present in the Western Australian environment long before the presence of humans. It is an integral component of ecosystems and has helped shape the diversity of plants and animals. Plants now found in WA possess fire adaptations such as fire-induced flowering or smoke-induced germination, which illustrates the long association of many species with fire.

However the mosaic pattern in which naturally-occurring fires burnt the landscape, and the vegetation patterns within landscape, has radically changed since European settlement.

The area surrounding Weld Range has a history of pastoral activities and that along with changing weather patterns associated with climate change has had an adverse impact on biodiversity within this region. The reduction in diversity of vegetation species that previously created ground cover has modified the impact of fire and the frequency of severe fire events.

It is therefore very important that the proposed fire management strategies are couched in a framework that enhances the protection of existing biodiversity within the lease area and wherever possible enhances the listed biota frequency by protecting known occurrences from unplanned wildfire events.

- Fire will only be introduced to comparatively small areas of the lease area, and only for specific needs for adjacent infrastructure, equipment, human life fire protection, and or weed management or environmental purposes.
- Detailed burn prescriptions will be prepared and approved in advance of any burning required. Such prescriptions will consider the impact on biodiversity values and avoid any areas where negative outcomes may result from any such burn.
- Alternate measures to minimise fire threat, in the form of machine slashing and hand tools will be used where burning is not appropriate (mulga regeneration etc.).
- Chemical or herbicide will not be used without specific prior approval of the Environmental Manager.
- Plan to provide and maintain biological diversity and to favour habitat for specific flora or fauna where this does not compromise other species, or protection needs.
- Assist with research into fire ecology and behaviour in Goldfields ecosystems.
- Detailed records will be maintained on areas impacted by burning or wildfire.

8.0 FIRE MANAGEMENT MEASURES

8.1 Fire Prevention

There will always be unplanned fire events within the terrain associated with Weld Range as there are a number of thunderstorms that develop and cross the area and many have little or no rain associated with their activity, therefore when sufficient ground fuels are present some fires will result.

There will also be potential for accidental ignitions from the use of mining equipment and blasting activities.

A strong fire awareness within the workforce is an essential requirement to ensure the number of accidental ignitions are minimal, although impossible to entirely eliminate because of the machinery involved in the industry and the constant potential for a mechanical failure that can result in a fire.

Toolbox meetings should highlight the potential of unplanned fire events especially when track machines are moving from site to site in extreme weather conditions and the possibility of turning tracks creating a spark. In these situations a light fire appliance accompanying these machine activities is strongly recommended.

The proposed building site modifications to create both vegetation free areas close to structures supported by modification to the density of standing growth to a depth of fifty metres on flat terrain, and one hundred meters on slopes will ensure any unplanned fire event that impacts on the site can be safely managed.

At all building sites that are to accommodate people it is strongly recommended to have sufficient static water supplies via live reels equipped with 19mm nylex fire hose to cover the compound dwellings. All food preparation areas are to have the correct fire extinguishers and wool fire blankets available for deployment.

Primary fire mitigation measures will include –

- Induction training.
- Plant and equipment availability and checks.
- Hazard reduction zones.
- Onsite reporting procedures - SMC Employees/staff
- Response procedures (SMC/shire/brigades).
- Recording of incidents. Annual reports.
- Investigation of incidents.

- Outcomes of incident investigation.

8.2 Fire Containment Strategy

The area of the mining tenement has an estimated ground grass coverage of 30%, with many open grass free areas that carry well-spaced individual and clumped mulga trees.

The open broken up nature of the vegetation cover can be successfully incorporated into the fire containment strategies for the current and future assets planned within the mining lease area.

Figure 8.1 Examples of Typical Vegetation within the Lease Area

A vegetation modified buffer with a minimum width of fifty metres will be required to protect dwellings and infrastructure constructed on the flat areas within the current Beebyn site.

All buildings within this area will require the establishment of a vegetation free minimum buffer width of thirty metres adjacent to the structures to ensure there is no possible flame contact even under extreme fire weather conditions.

Within the additional twenty metres of the proposed 50 metre buffer will need to have all ground cover vegetation removed and the Mulga trees thinned where heavy clumped concentrations exist. Proposed for two reasons, remove ability for fire to travel through crown leaf fuels, and to facilitate future ground cover management by spraying, low intensity burning or machine slashing annual growth).

Where buildings are constructed on slopes or on top of Weld Range, then these sites will require a fifty metre vegetation free zone supported by an additional fifty metre low fuel area to provide a safe environment for employees from any unplanned fire events.

Wherever possible the buildings will require closed eaves and non-flammable footings and walkways to reduce any fire risk from ember attack, especially those dwellings that will provide accommodation for employees, and there will also be a need to provide static live reel 19mm fire hoses available to protect the sites.

Figure 8.2 Fire Resistant Building Access Supported by Vegetation Free Buffers

The magazine building will need to be constructed to withstand ember attack and always have the exterior free from flammable materials.

There will need to be **Standard Operating Procedures** established to ensure safe successful response actions are implemented and priorities followed and understood.

Well trained fire response teams with well-maintained equipment will be an integral part of successful fire management for the Weld Range operation.

Good housekeeping that is evident with the current infrastructure will be an important key element going forward for these strategies to work successfully.

8.3 Fire Breaks and Access Tracks

See Table - Annual Action Planner - Fire Management - Fire Suppression

Fire breaks will be established around the Project area in liaison with the Fire and Emergency Services Authority (FESA) and Fire Officers from the Cue Shire, and guidance from the local landowners. Firebreaks will be engineered and constructed to managing surface flows (i.e. culverts) to reduce the potential for water caused erosion. Such firebreaks will be designed and used to both assist with any fire suppression activity, and to provide a boundary within which any necessary and preapproved hazard reduction operations will occur.

The vegetation within the fuel modified buffer areas will need to be checked annually to see if any work is required to manage the ground cover if rain has germinated annual growth, and where possible any growth should be sprayed before seed set, this action over time will reduce the need for annual maintenance. (Environmental approval will be required to use approved herbicides).

All firebreaks and roads, including haul roads, will be named and clearly signposted accordingly, especially at intersections. Such information will be recorded on the General Information Plan.

To minimise dust nuisance, these firebreaks will be signposted – No Access, Fire use Only.

8.4 Prescribed Burns/Hazard Reduction

Some prescribed burning may be necessary to afford fire protection for life and assets.

Other forms of hazard reduction such as slashing may be practised where appropriate to avoid/minimise potential damage to young mulga regeneration and dust control.

No broad scale strategic burning of annual grasses is recommended. Prescribed burns may be used within the zones to achieve approved environmental management objectives. Because of the broken nature of the cover it will be difficult to get a clean result until weather conditions are such that control may become an issue.

Where fuels have built to a level within tracked cells that constitutes a hazard under summer weather conditions, these areas are to be mosaic burnt under mild spring conditions with ignitions in the afternoon on a falling hazard.

If the residual vegetation from clearing building and construction sites or future mining areas is to be burnt, then this activity should be scheduled for times of the year when escapes are unlikely. A trafficable fire break >5m wide shall be installed and maintained around identified key physical assets. Flammable materials and vegetation is to be cleared within five metres of any building. Heavy accumulations of combustible material (grass leaves, branches, logs, etc.) within any key physical asset are to be minimised.

Regular inspections are to be conducted to ensure that all fire fighting equipment is maintained and operating correctly. The outcome of these inspections will be recorded and stored.

Fuel reduction prescribed burning will be considered as a tool to meet environmental management requirements, for example, weed reduction. Any area to be burnt will have a comprehensive burn prescription form completed. Each prescription will be endorsed by the SMC Environmental Manager prior to implementation. Each burn will be managed by a qualified prescribed burn practitioner, using members of the Emergency Response Team (for training purposes).

Approved burns will normally be conducted when grasses are suitably dry, with a permit to burn from the local shire, late in the day, on a falling (fire) hazard, and with suitable weather conditions.

Local indigenous persons may be involved in fire management planning and on ground operations.

The attached Annual Prescribed Burn Action Planner will be used to plan all aspects of the burning process (See Table 17.2).

See Table 17.2 - Annual Action Planner - Fire Management - Prescribed Burning Proposals

Information as to the timing, frequency, objectives, intensity, etc., of each proposed prescribed burn to meet ecological and biodiversity objectives and achieve agreed outcomes, will be approved by Environmental Manager SMC.

Prescribed burns will:

- have approved prescriptions;
- have clear, specific and measureable objectives;
- be conducted by trained staff;
- only be conducted when adequate and appropriate equipment is available;
- only be conducted when ground fuel and weather conditions are suitable;
- be correctly mopped up and certified as safe by the Incident Controller; and
- have post burn monitoring (for flora, fauna, and weed status).

8.5 Fire Exclusion Zones

No Fire Exclusion Zones are planned. Fire will not be introduced into most of the lease area. Planned fire will only be introduced (only if necessary) into asset protection zones, such as village, airstrip, processing plant, ROM, or in high risk areas such as the rail line corridor.

The Indigenous Heritage site(s) that include the ochre mine area will be treated as fire exclusion zones unless or until an agreement is established with the Traditional Owners who currently manage these areas, including any fire management requirements.

9.0 EMERGENCY PROCEDURES

SMC will develop **Standard Operating Procedures** (SOPs) for managing fire and other emergencies. These SOPs will be reviewed annually and approved/signed senior management. Such an SOP will include the requirement for an Incident Controller, or Deputy Incident Controller to be on site at all times, and who will assume command and manage the incident using AIIMS principles. The Incident Controller will be fully conversant with the principles of the AIIMS Emergency Management System, which is the appropriate system for all agencies in WA and Australia.

Any (SOP) will need to clearly nominate roles to be filled, identify communications to be used, the emergency equipment that is to respond and procedures to ensure the safety of suppression personnel and the employees not involved with the incident.

Depending on the size of the fire, values at threat, and other factors, the local Chief Bushfire Fire Control Officer may assume control, as may FESA if that is appropriate.

- This Fire Management Plan and Action Plans will be developed as part of the **Mine Safety Management Plan**, using established **Crisis and Emergency Management** principles, and in cooperation with the WA Occupation Health and Safety Department at Weld Range.
- A detailed **General Information Plan** based on an aerial photo will be produced. This will indicate the location of key assets (Village, Roads, Treatment Plants, Admin centres, workshops, Emergency Refuges, Airstrip, Water Points, Cyclone shelters etc.). All roads (including temporary roads) will be named and shown on this map. These maps will be updated as required, at not less than 6 monthly intervals. All personnel will be issued a copy of the updated plan to ensure that they are familiar with key points shown. The detail in this plan will be covered in induction and regular training sessions.
- All personnel will be made aware of environmental bush fire prevention and emergency response procedures through site induction training.
- A number of **Emergency Muster Points** are to be established across the site, at least one for every work group or station. These sites will be designed and constructed to afford maximum protection for all personnel who may need to shelter within them. They will be clearly shown on the and clearly signposted.
- The Village and Cyclone shelter will receive priority for fire fighting and fire prevention measures.
- The need for **Emergency Fire Refuges** is to be considered and implemented if deemed necessary.

- In a bushfire related emergency personnel will move to their Emergency Muster Points as instructed in the **Crisis and Emergency Management Standard Operating Procedure** (SOP). The need for deployment of “Emergency Fire Refuges” will be determined and communicated by the Incident Controller to personnel at the muster points if required.
- **The Emergency Response Team** will be trained and resourced to address fire incidents of all dimensions using National Fire Training modules. This training will also include aircraft fire suppression. A detailed Fire Training and Fire Exercise recording system will be established and maintained. It will list the purpose, nature, and all details of each event held, including the names of all personnel attending, and the outcome of the event. This will be the responsibility of the Personnel Manager.
- The Mine Site’s emergency response capability for a bush fire scenario will be rehearsed biannually. All key personnel must complete at least one training exercise per year.
- All incidents involving fire are reported using the 02.13 FM02 Incident Notification & Investigation form as per the SMC Standards. All incidents are investigated and the results reported to the Mine Manager. A Fire Incident database will be used to specifically record incidences of fire, both wild fire and prescribed, and record significant actions and incidents related to fire at Weld Range.
- All unplanned and unapproved incidents involving fire are to be registered and investigated. CFCO at the Shire of Cue will be advised of any significant fire incident.
- In a bushfire related emergency personnel will move to their Emergency Muster Points as instructed in the Crisis and Emergency Management Standard Operating Procedure (SOP). The location of “Emergency Fire Refuges” will be determined and communicated by the Incident Controller to personnel at the muster points if required.
- All incidents involving fire are reported using the 02.13 FM02 Incident Notification & Investigation form as per the MGI Standards. All incidents are investigated and the results reported to the Mine Manager. A Fire Incident database will be used to specifically record incidences of fire, both wild fire and prescribed, and record significant actions and incidents related to fire at Weld Range.
- Only trained and accredited ERT members will be authorised to combat, or attempt to combat environmental fires. Those trained and qualified may also combat aircraft , structural, or equipment/vehicle fires.
- Where access tracks pass through heavy vegetation especially on the slopes of Weld Range signage is to be installed instructing drivers not to drive above any fire activity and place themselves into what is referred to as "The Deadman Zone".

9.1 Small fires

Small grass fires may be controlled through 'first attack' response. This first attack response is to be undertaken by the ERT under the guidance of the Incident Controller. Attack is limited to hose and hand tool attack, with no vehicles or machinery to be used off road unless directly supervised by the Environmental Officer, or someone authorised to manage the incident.

9.2 Large fires

Significant bush fires are not to be combated by SMC. Any large, or potentially large fire is to be reported to the local Authority (Shire of Cue 99 638 600) or FESA 000.

Once a significant bush fire has taken hold, all efforts are to be placed on protecting people by removing them from danger. Minimisation of damage to the environment from significant bush fires is only to be achieved by prior, planned fuel reduction burns.

After the fire, the ERT will coordinate the mop up and the Incident Controller will provide a final status report to the Registered Manager, SMC's Head Office and CFCO Sire of Cue.

In the event of a bushfire, the site's Crisis and Emergency Management Standard Operating Procedure (CEMSOP) would be enacted. The following steps constitute the CEMSOP:

- Raising the alarm: SMC operates 24 hours a day and seven days a week. Should a bushfire start there is a very good chance that it would be seen and reported early;
- Personnel involved: The response could involve the entire compliment of personnel on the Weld Range mine site including the Registered Manager and the site's ERT;
- Emergency Muster Points: personnel will move to their Emergency Muster Points as instructed in the CEMSOP. These Emergency Muster Points are not necessarily the final 'fire refuges' for personnel in the event of a large bushfire. They are the place where Incident Controllers can most effectively communicate and manage the movement of personnel to the fire refuge if that movement is required, or in fact possible. Emergency Muster Points will be clearly marked with large signs, and kept open and free of material which may reduce the area available or make parking difficult. The current approved Emergency Muster Points are:
    - Cyclone Shelter;
    - SMC Admin Offices;

It is important to note that these muster points will change with changes to the mining operation.

- Emergency Fire Refuges: the need for deployment of Emergency Fire Refuges will be determined and communicated by the Incident Controller to personnel at the muster points if required. The emergency Fire Refuges will be identified for each work group at the mine site and communicated by the Incident Controller. Likely Fire Refuge locations will be reviewed each year as the mine site evolves and changes layout, and all personnel advised. Selected and approved Refuges will be clearly signposted. Current sites eligible as Fire Refuges include:
    - Admin Office;
    - Cyclone Shelter.

- The Village and Cyclone shelter will receive priority for fire fighting and fire prevention measures;
- A significant bushfire is one which has been determined by the Incident Controller as uncontrollable, and is a threat to fire fighters and members of the ERT who will then be moved to safety;
- Once a significant bush fire has taken hold, all efforts are to be placed on protecting people by removing them from danger;
- After the fire, the ERT will coordinate the mop up and the Incident Controller will report a final status to the Registered Manager, SMC Head Office and CFCO at the Shire of Cue;
- The CEMSOP is to be reviewed every three years and signed off by the General Manager or Operations Manager of Weld Range Operations.

In addition to this:

- All vehicles and infrastructure will be equipped with appropriate fire protection and prevention equipment;
- Regular inspections are to be conducted to ensure that all fire fighting equipment is maintained and operating correctly;
- SMC induction (both general and visitors) will include instruction on actions to be undertaken during a wildfire and the location of Emergency Muster Points; and
- Every accommodation room and infrastructure building on site will have instructions on actions to be undertaken during a wildfire and the location of Emergency Muster Points.

See Table - Annual Action Planner - Fire Management - Fire Suppression

10.0 TRAINING

10.1 Fire Fighter Training

There will always be potential for the mining operation to start an unplanned fire, and it is important that the mining operation has the ability to respond to any internal and external fire threats quickly with trained fire crews or teams able to confidently extinguish any such events while they are small and easy to manage.

There are eight employees currently on site who have had Fire Awareness Training and SWFS recommend that this knowledge be built on by providing people who will be used as the fire suppression resource participate in additional training, "Fire Appreciation and Suppression", from the National Modules, which will provide information on what to expect fire will do under differing weather and fuel scenarios. (South West Fire Services are able to provide fire training using Nationally Accredited material presented by Certificate Four qualified trainers and assessors who have extensive fire management experience).

- An emergency management team will be established to manage incidents as they arise. Emergency management training, particularly relating to environmental fire events, will be undertaken, so that the team can respond in a timely, effectively, and safe fashion for all personnel involved. (Fire crew members to be issued carry bags in which to store their personal protection equipment so as to be ready to respond to any incident immediately).
- All fire crew members will be trained to
  - Minimum basic fire fighter (FESA) standard or DEC Level 1 Fire Fighter using National Fire Training modules.
  - Emergency fire crew to also undertake structural fire suppression training (as bushfire is likely to threaten structures/fuel supplies).
  - Training to also include aircraft fire suppression. Those trained and qualified may also combat aircraft, structural, or equipment/vehicle fires.

- In the event of a fire occurring, this gives them the necessary skills to evaluate and if appropriate, attempt to suppress any fire in a safe manner, without risk to themselves, others, or their equipment. The selection of such a team, and such training should be undertaken prior to the construction phase beginning, and refresher training during the projects operational phase (annually or biannually).

- A register will be established, recording the name of the ERT member, training received, copy of certificate of competency, details of incidents attended, and training exercises undertaken. Additional training will be conducted for new members as they are incorporated into the team.
- PPE register
- Site induction register
- Employee Training and competency record
- Incident/ near miss/ hazard report register

11.0 EQUIPMENT

All mobile plant (equipment and light vehicles) will be fitted with spark containment devices which are compliant with the appropriate Australian Standards.

11.1 Current equipment onsite

The mine site currently has a well-equipped Toyota ute with tank, pump and live reel with a high quality nozzle that is very suitable for the vegetation and terrain associated with Weld Range. A well-equipped fire trailer supports this unit with PPE and additional fire equipment.

There are also large water ferry tankers available on site currently used to manage dust that would be ideal to supply water to small mobile 4 x 4 units.

The terrain and vegetation within the mine tenement requires compact mobile units to avoid tyre damage and the topography makes the use of trailers and large fire appliances impractical.

There would be benefits in providing Fire Suppression Foam for the light 4 x 4 units as this would extend the water coverage by a factor of three in grass fire situations.

The terrain will not allow vehicles to access the complete boundary of fires that are on the range slopes. Where the live reel fails to reach the complete perimeter suppression can be successful in grass fuels using a pack spray, therefore it is recommended each fire response vehicle has at least one available to cover these situations.

Proposed and recommended equipment onsite:

- 1 x 4x4 light vehicle with purpose built 600L water tank and foam production unit. Primarily for fast fire attack (initial response).
- 1 x heavy duty 4x4 Rapid Intervention Vehicle (RIV) with 2,000L water tank and foam production unit. Primary uses are for aircraft, village, and workshop fire protection. Place the new Airport Fire Tender/Rapid Intervention Vehicle at a covered structure at or very near the airstrip for rapid response.
- 3 x heavy vehicle water tankers (30,000 - 40,000L), non-fire fighting, not suitable for use off road. Can be used for backup mobile water supplies for light and medium/heavy fire units.
- Stationary fire fighting hoses plumbed to the water supply at all major infrastructure locations and fed from storage tanks and booster pumps.

- All emergency vehicles will be fitted with appropriate radio communications equipment, and if not operated on a regular basis will be inspected and tested weekly. The RIV and initial response vehicles will also be fitted with protective blankets for fire fighting personnel.
- Check that all fittings/couplings on fire units and large water trucks are compatible (including rapid filling of fire units from Large Water trucks). It is especially important that the fittings of large Water trucks are compatible as the latter will be used to quickly refill the RIV during aircraft accidents, structural fires, or other emergencies.
- Examine the use of additives for fire unit water tanks to aid in fire suppression activities. These will include foams and retardants. Such additives, if used will need to comply with necessary chemical approvals.

Extensive cleaning is required for all pumping equipment and nozzles when additives are used on fire suppression or training exercises as these products are corrosive to alloys.

12.0 WATER SUPPLIES

There are significant underground water supplies within the project boundaries. Dewatering will be required for to allow for the safe and efficient extraction and production of the mineral resource and waste material. Surplus water produced during this extraction operation will produce significant quantities of this resource, and provide adequate amounts for any fire management requirements.

A number of static storage and quick fill sites for this purpose are already established, all in reasonable proximity to key infrastructure such as the Village, ROM, Power supply station and airstrip. Additional standpipes are to be established, their positions yet to be determined.

The fire water requirements will be supplied via the process water tanks and pumps at Beebyn and Madoonga and the potable water tanks and pumps at the village. Stand-by diesel driven pumps at each location will supply a minimum of four hour fire fighting water in the event of a power outage.

Water services across Weld Range will need to have protection from any fire event, especially those that are polythene pipe laid on the surface and are key supplies for fire suppression.

All water pickup points are to be clearly signposted with large reflective signs.

13.0 ENVIRONMENTAL MONITORING AND MANAGEMENT

SMC will implement three types of monitoring to check on the effectiveness of its Fire management:

- Monitor environmental conditions, particularly rainfall, which might cause Goldfields' vegetation to be at increased fire risk, and arrange an appropriate capacity to respond.
- Maintain records of prescribed burning and wildfire.
- Monitoring the effectiveness of fire management strategies.

Operational monitoring will be carried out and as dictated by operational requirements.

13.1 Performance Assessment

SMC will assess its performance in relation to fire management through the following key indicators:

- No unplanned man-made fire events emanating from mining or exploration operations relating to the project.
- Any unplanned fire suppressed with minimal or acceptable levels of damage to the environment.
- Any damage resulting from any fire suppression activities to be rehabilitated to an acceptable standard within 6 months of that activity.
- Planned fire contained to the areas that have been approved for such activity.
- Planned fire implemented within acceptable and predetermined standards.
- No unplanned damage to non-target flora, including immature regeneration.
- Assisting with ecological research on fire ecology, biological indicators and habitat requirements of fauna and vegetation communities
- Incorporating new technology or knowledge, in particular knowledge of negative impacts of fire regimes on biodiversity values into fire regimes within the site

14.0 REVIEW AND REVISION

This Plan will be reviewed annually, in conjunction with a field inspection to update onsite information in June, by this Plans authors.

Such inspection will verify past fire activity, review plan objectives and standards, map any unplanned fire on the mining leases, review existing burn prescriptions or compile any new prescriptions required, and check all fire equipment. Present a report to management on the outcomes and actions of such an inspection, and recommendations for any issues that require resolution.

This FMP will be reviewed by 30 March each year, and signed by the registered Mine Manager.

15.0 REFERENCES

- Sinosteel Midwest Corporation – Public Environmental Review – Sept 2010
- Ecologia – Weld Range Iron Ore Project, Environmental Management Plan, 2010
- Towards a Biodiversity Conservation Strategy for Western Australia State of the Environment report Western Australia draft 2006

Disclaimer

This Fire Management Plan has been prepared by John Evans and Kevin White, of South West Fire Service, using material sourced by, or provided by Sinosteel Midwest Corporation, (both verbal and written), and several other sources. It is, at the time of preparation, complete and correct to the best of my knowledge. The actions and standards recommended in this Fire Management Plan are the minimum required to provide some degree of protection from wildfires for the protection of environmental and other assets, and human life. It should not be construed to assure total bush fire and safety protection. People visiting or working at this facility must recognize that this is a recognized bush fire prone area and bushfires will inevitably occur. Furthermore, the consultant has no control over future or any actions, or lack of them, by the current or future operators, contractors or visitors. Consequently, the consultant will not be liable for any loss or other consequences, except as required by law, for any outcome or action resulting from statements, standards, or recommendations in this review.

This Plan prepared by:

John Evans and Kevin White

South West Fire Services

1 Norman Road

Busselton, 6280

0427 121 122

jevo@westnet.com.au

7 February 2011

Restrictions on Use

This report has been prepared specifically for Sinosteel Midwest Corporation Limited (SMC) – Weld Range Iron Ore Project by South West Fire Services. Neither the report nor its contents may be

referred to or quoted in any statement, study, report, application, prospectus, loan, or other agreement document, without the express approval of Sinosteel Midwest Corporation Limited.

Reproduction

Reproduction of this report in whole or in part by electronic, mechanical or chemical means, including photocopying, recording or by any information storage and retrieval system, in any language, is strictly prohibited without the express approval of Sinosteel Midwest Corporation Limited.

Copyright

South West Fire Services retains the copyright for the material used in this report.

16.0 LIST OF FIGURES

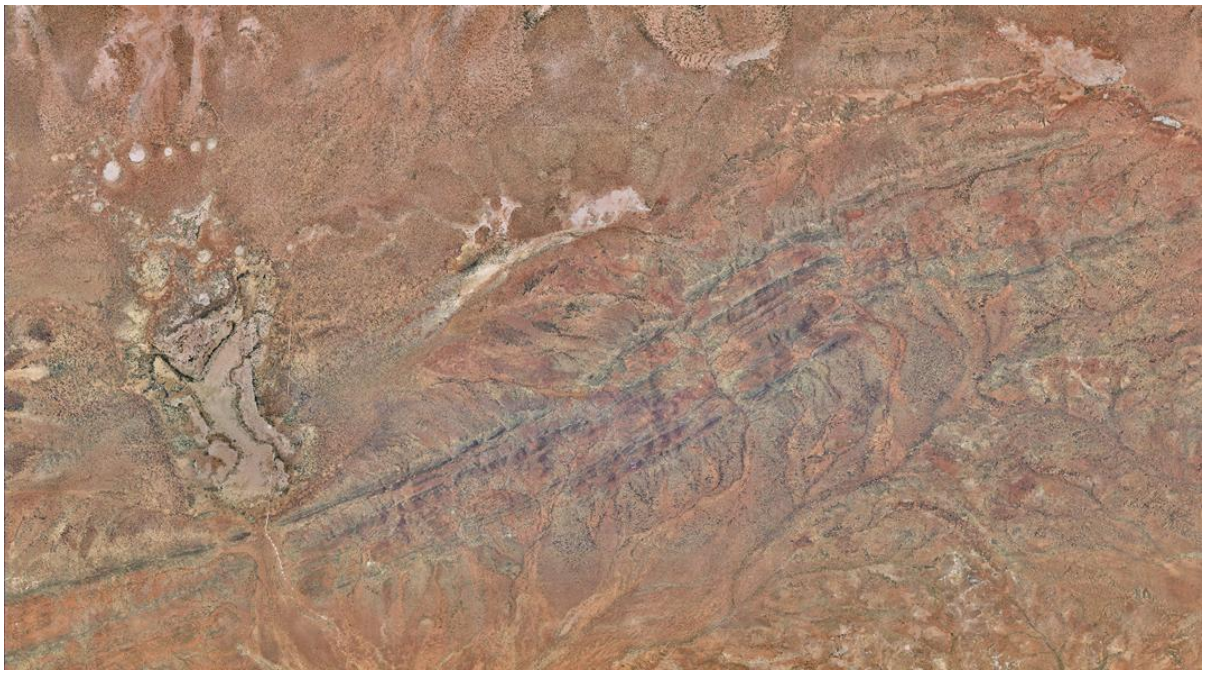


Figure 16.1 Satellite Image Weld Range

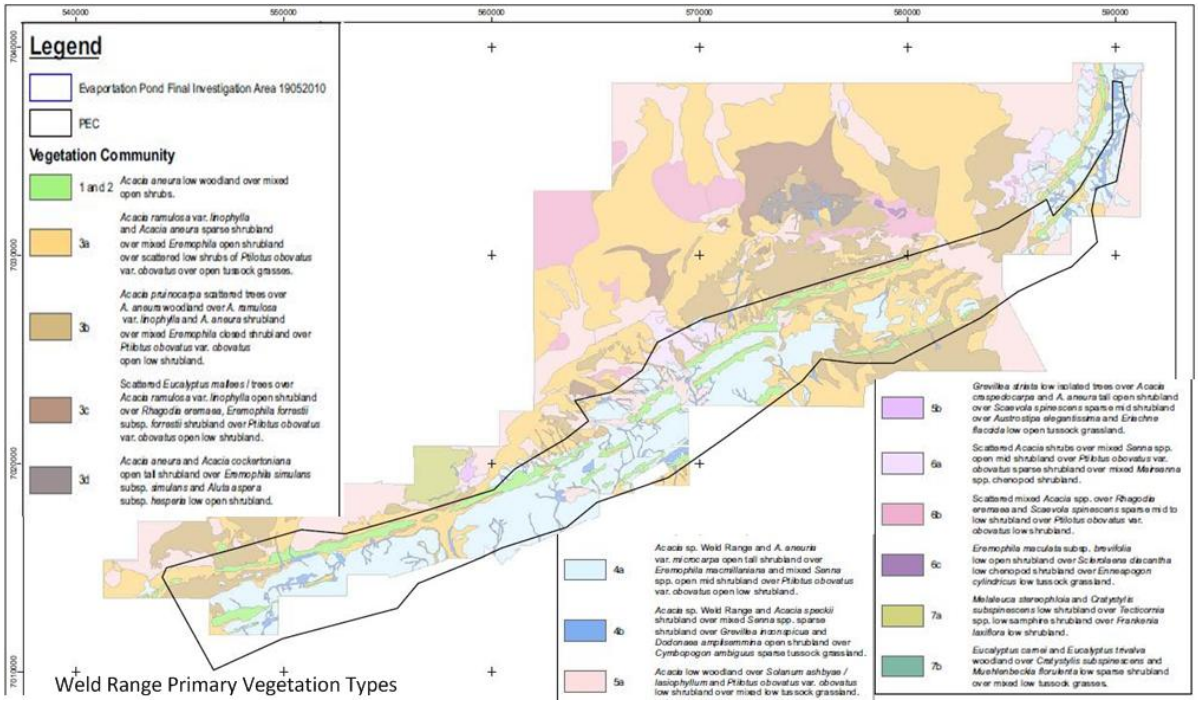


Figure 16.2 Primary Vegetation Types

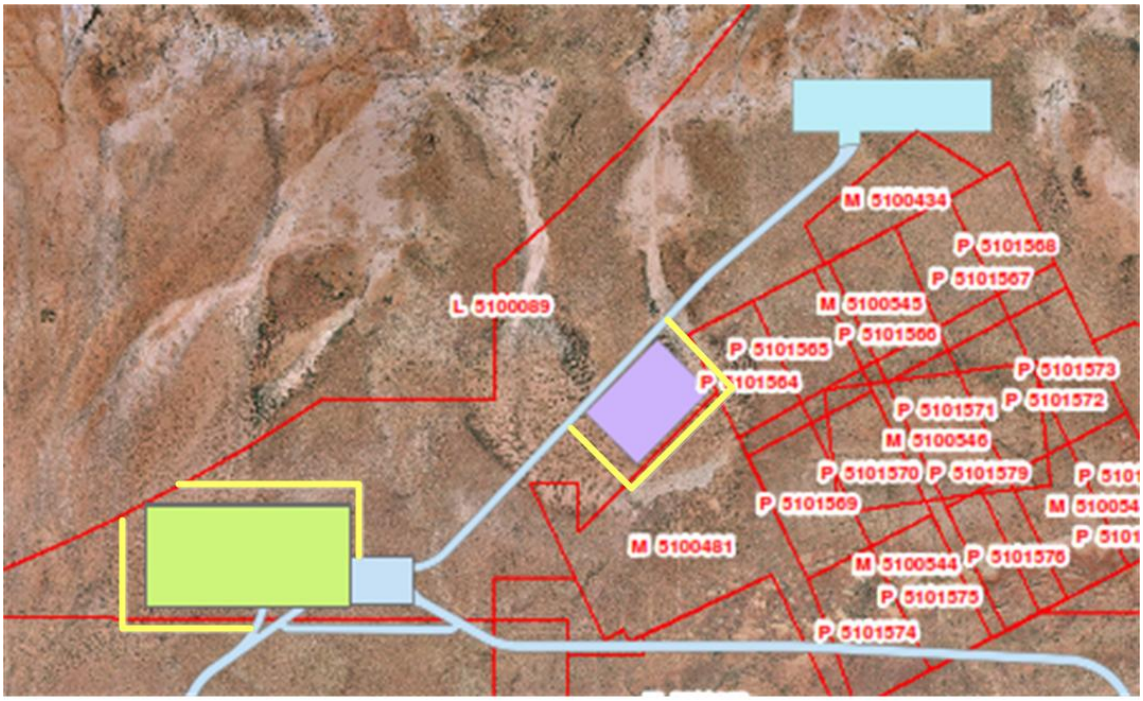


Figure 16.3 Proposed Firebreaks

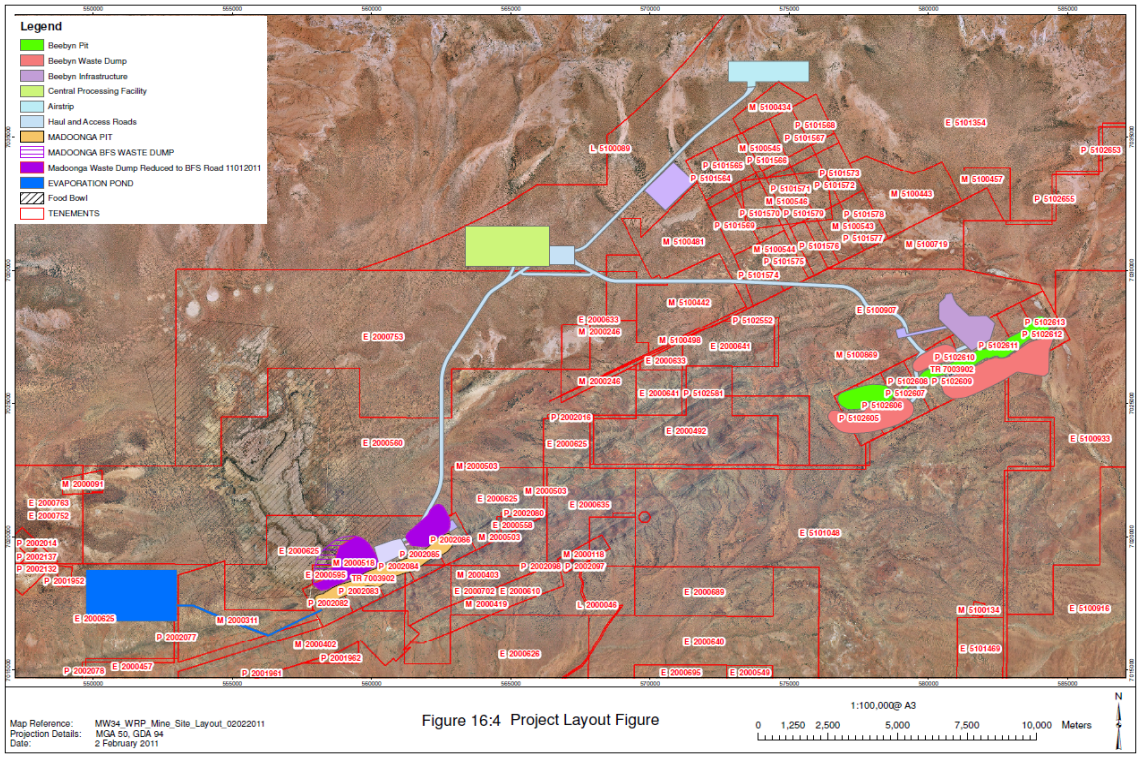
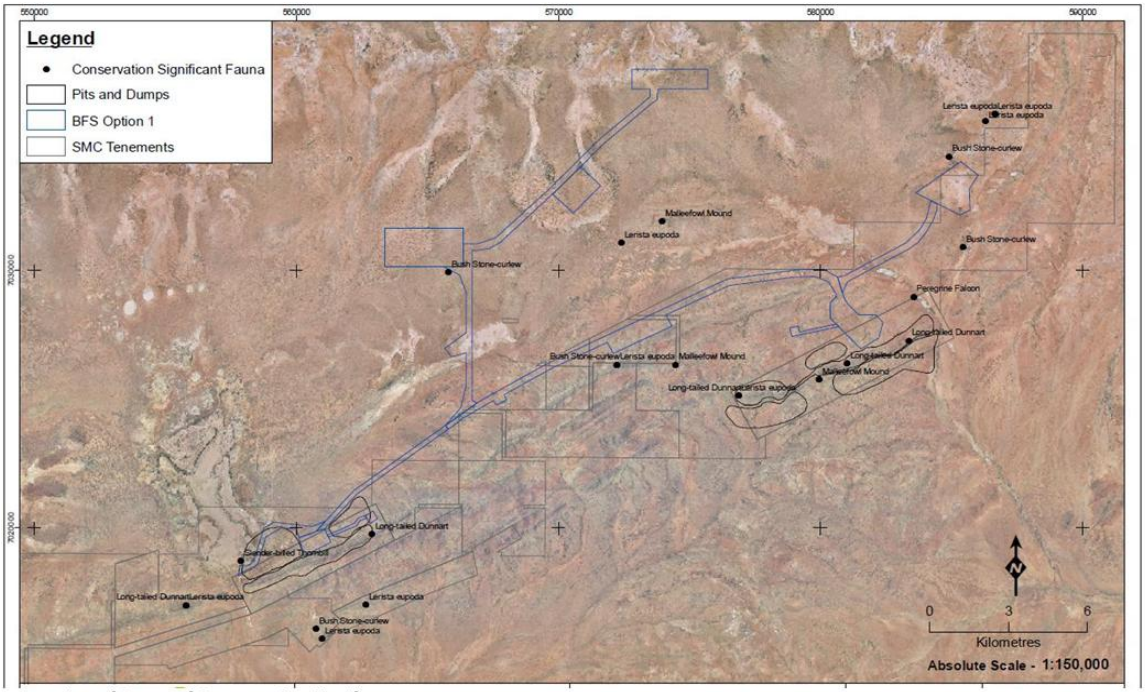


Figure 16.4 Project Layout Figure



Location of Fauna of Conservation Significance

Figure 16.5 Location of Fauna of Conservation Significance

17.0 LIST OF TABLES

Table 17.1 Taxa of Conservation Significance Recorded at Weld Range.

Table 4.6 –Taxa of Conservation Significance Recorded by the DEC and *ecologia* at Weld Range

Taxon	Conserv. Status	Origin of record(s) at Weld Range	
		ecologia	DEC Database
Beyeria lapidicola (formerly sp. Murchison)	P1	✓	✓
Eremophila rhegos	P1		✓
Euphorbia sarcostemmoides	P1	✓	
Goodenia lyrata	P1	✓	
Sauropus sp. Woolgorong (M. Officer s.n. 10/8/94)	P1	✓	✓
Stenanthemum patens	P1	✓	✓
Indigofera gilesii subsp. gilesii ms	P3	✓	
Acacia ?burrowsiana	P3	✓	✓
Acacia speckii	P3	✓	✓
Calytrix erosipetala	P3	✓	
Dodonaea amplisemina	P3	✓	✓
Eremophila arachnoides subsp. *arachnoides*	P3	✓	
Grevillea stenostachya	P3	✓	✓
Hemigenia tysonii	P3	✓	
Homalocalyx echinulatus	P3	✓	✓
Micromyrtus placoides	P3	✓	✓
Mirbelia ?stipitata	P3	✓	
Phyllanthus baeckeoides	P3		✓
Prostanthera ferricola	P3	✓	✓
Prostanthera petrophila	P3	✓	✓
Ptilotus beardii	P3	✓	✓
Ptilotus luteolus	P3	✓	
Tecticornia cymbiformis	P3	✓	
Verticordia jamiesonii	P3	✓	✓
Baeckea sp. Melita Station (H. Pringle 2738)	P4	✓	✓
Goodenia berringbinensis	P4	✓	
Grevillea inconspicua	P4	✓	✓

Table 17.2 Annual Action Planner - Fire Management - Prescribed Burning Proposals

Issue	Action	When	Who	Comments	Complete by (date)
Plan next burn/s	Consult Fire Management Plan	15 May	Conservation or Planning Officer	Protection of Village complex and constructed assets top priority. Select burns and submit to Environmental Supt for endorsement. Detail burn proposals, with map, including location, preparation, lighting method, timing, objectives etc.	1 June*
Burn approval	Endorse burn/s	1 June	Environment-al Supt	Stipulate any conditions necessary including Heritage site protection and flora and fauna management requirements.	15 June*
Burn prescript-ion	Begin initial work on prescriptions.	15 June	Conservation Officer	Initial compilation of (FESA) burn prescription form. Check especially any preparation required so this can be submitted into works programme (once management approval granted).	30 June*

Issue	Action	When	Who	Comments	Complete by (date)
Seek Shire approval	Forward details to Shire Cue	30 June	Fire Control Officer	Include map details of proposed burn location, preparation, lighting, timing, objectives etc.	15* August
Burn approval	Endorse burn/s	15 Aug	District Fire Control Officer	DFCO may stipulate additional conditions for each burn.	30* August
Receive burn approval from Cue Shire	Forward to Env. Supt for comment if additional conditions imposed	1 Sep	Conservation Officer	Env Supt to be aware of approval or additional conditions required. Env. Supt to accept changes (if any), and discuss with DFCO if necessary	1 Sep* *Timing May change seasonally
Check burning staff	Staff may need training or refresher training	1 Sep	Conservation Officer	Arrange refresher or initial prescribed burning training for selected staff. Training to be done by suitably accredited person.	When staff available

Issue	Action	When	Who	Comments	Complete by (date)
Burn prescription	Complete prescription for approved cells	1 Sep	Conservation Officer	Complete burn prescriptions incorporating any conditions required by DFCO or Environ Supt.	7 Sept
Burn preparation	Plan for preparation of approved cells	1 Sep	Conservation Officer	All approved necessary preparation to be completed before the 1 September. Conservation Officer to supervise. THESE TIMETABLES WILL BE DETERMINED BY SEASONAL VARIATIONS	1 Sep
Burn arrangements	Make arrangements for burn.	DOB	Conservation Officer	The day before the proposed burn, arrange for fire crew to be made available (for the following day). Ensure all preparatory work completed, personnel and equipment will be available, and all issues sorted. Advise all staff of intention to conduct prescribed burn.	DOB

Issue	Action	When	Who	Comments	Complete by (date)
Day of burn	Manage burn	DOB	Conservation Officer	Manage the burn. Ensure that all final approvals granted, weather forecast suitable, all staff and DFCO notified, preburn inspection and briefing done. No issues outstanding. If all OK, complete crew briefing, commence burn, using lighting strategies in prescription. Supervision by experienced/qualified person (Ops Officer).	DOB
Burn security	Ensure burn is secure	DOB	Conservation Officer	Ensure that any unburnt pockets near any edge are ignited and burnt out. Ensure all trees, logs etc. on boundary are mopped up to prevent an escape of the burn.	DOB
Burn patrol	Ensure burn is secure	DOB	Conservation Officer	Ensure burn boundaries are checked frequently in the day/s after the burn to check for any item which may cause or allow the burn to escape. **DOCUMENT ACHIEVEMENTS & ANY ACTION ITEMS**	DOB
Burn	Assess burn		Conservation	Inspect and assess the burn against the burn objectives.	

Issue	Action	When	Who	Comments	Complete by (date)
assessment			Officer	Complete FESA form. Submit to Env. Supt for comment, with comments for any possible improvements in process. Forward copy to Shire of Cue for reference.	
Record	Store completed forms		Conservation Officer	Store records for future reference.	

Table: Annual Action Planner - Fire Management - Fire Suppression

Issue	Action	When	Who	Comments	Complete by (date)
Fire suppression crew training	Ensure that all nominated personnel are trained for bush fire suppression.	1 Aug	Conservation or Planning Officer, Safety Officer and Mine Manager.	A suitable number of personnel to be selected, trained and assessed for non-structural (bush) fire suppression activities. Sufficient numbers to cover multiple shifts. Maintain record of training given.	1 Dec and Ongoing
Fire suppression crew training	Consider training personnel in structural and aircraft fires suppression.	1 Aug	As above	Consider training a suitable number of personnel to be selected, trained and assessed for structural and aircraft fire suppression activities. Sufficient numbers to cover multiple work (A+B) shifts. Maintain record of training given.	As above
Fire suppression crew training	Use fire crew during prescribed burning operations.		As above	Use prescribed burning ops as an opportunity to train fire crews.	Ongoing

Issue	Action	When	Who	Comments	Complete by (date)
Fire suppression crew training	Regular drills.		As above	Conduct mock fire suppression drills at regular (monthly) intervals.	Monthly
Fire Equipment	Ensure that adequate numbers and type of (bush) fire suppression equipment is available.	1 Aug	As above	Review fire equipment requirements annually, and implement recommendations. Consider in conjunction with structural and airstrip protection requirements. Ensure suitable protective clothing etc. is provided.	Annually
Fire Equipment	Ensure that fire suppression equipment is maintained and tested.		As above	Suitably trained and qualified person to be responsible for testing and maintenance of fire equipment. To be tested and run monthly. All ancillary equipment and fittings (plus standpipe) to be recorded and checked also. Standpipe accessibility and	Monthly
Fire Incident	Conduct debriefing		As above	Determine improvements in procedures, avoid possible	Ongoing

Issue	Action	When	Who	Comments	Complete by (date)
				risks to fire crew, equipment problems or otherwise.	