



NEWSTAN COLLIERY AND NORTHERN COAL SERVICES

BUSHFIRE MANAGEMENT PLAN

N-BMP-001



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1 PURPOSE

The purpose of this management plan is to appropriately manage the risk of fire to protect life and property while providing the necessary protection of the significant ecological features of the area.

The objectives of the plan are:

- Protection of life and property in and immediately surrounding the lease area;
- Management of combustible fuel levels on the lease;
- Provision of access to the lease area through a network of roads and trails to facilitate all fire and fuel mitigation works;
- Minimisation of the potential for the spread of bushfires into, within and from the lease area;
- Prescription of appropriate fire regimes in order to protect and enhance biodiversity of the lease area; and
- Suppression of unplanned (wild) fire within the lease area.

2 SCOPE

The scope of this plan includes all surface facilities associated with the Newstan Colliery and Northern Coal Services, Awaba Colliery, and the Awaba Haul Road.

3 DEVELOPMENT CONSENT CONDITIONS

This plan is a requirement of the Newstan Colliery Development Consent (DA73-11-98 MOD7).

The conditions within the Newstan Colliery Development Consent (DA73-11-98 MOD7) that are applicable to this management plan are listed in Table 1 below.

Table 1 – Development Consent Conditions

Condition Requirement		Section Discussed
3.2d	The applicant shall also prepare the following management plans... Bushfire management plan	This Plan
3.2e	The management plans are to be revised/updated at least every 5 years or as directed by the Director-general in consultation with the relevant governmental agencies. They will reflect changing environmental requirements or changes in technology/operational practices. Changes shall be made and approved in the same manner as the initial environmental management plan. The plans shall also be made publicly available at LMCC within two weeks of approval of the relevant government authority.	Section 9
3.8a	Provide adequate fire protection works on the sites of surface works in accordance with the Coal Mine Regulation Act 1982;	Sections 6 and 7
3.8b	Prior to commencement of construction of surface facilities/works prepare a bushfire management plan for all its holdings contained in the DA, particularly the southern waste emplacements are to the satisfaction of the LMCC.	This Plan

4 RELATED DOCUMENTATION

- Newstan and Northern Coal Services Emergency Management System NCS-PLN-014
- Northern Coal Services Bushfire Assessment (Kleinfelder, 2014)
- Planning for Bushfire Protection 2006 (RFS (NSW), 2006).

5 RESPONSIBILITY

All fire management activities will be undertaken in accordance with the provisions of the *Rural Fires Act 1997*.

Under the *Rural Fires Act 1997* owners and occupiers of land, including holders of mining leases, have a duty to take steps to prevent bushfires, which may include undertaking hazard reduction activities. A hazard reduction certificate is required prior to undertaking any mechanical or fire related hazard reduction activities. In the event that the Rural Fire Service (RFS) or an adjoining land manager identifies a significant fire risk within the Northern Operation Area, Centennial will complete a fuel load assessment and if applicable, and assess the feasibility of completing fuel load reduction burning in consultation with the RFS. The NSW Rural Fire Service (RFS) has the responsibility for undertaking fire suppression activities, hazard management activities and other functions relative to emergency management, within its areas of operation.

Supervisors responsible for works shall comply with the requirements detailed in this Bush Fire Management Plan.

The Fire Officer is responsible for the inspection and maintenance of fire equipment. A time-based work order system has been established to inspect fire equipment.

The Environment and Community Coordinator for Newstan is responsible for the document control of this plan.

6 FIRE THREAT AND HAZARD

During the summer period a number of legal requirements are in place to protect from bushfire. A Statutory Bush Fire Danger Period applies from the 1st October to the 31st March (under the Bushfires Act 1949), unless the District Bushfire Management Committee advises otherwise.

A Total Fire Ban (Toban) may be declared by the NSW Rural Fire Service at any time.

The Forests NSW Regional Manager can declare a Forest Fire Threat Period when additional fire restrictions are required within State forest. These include Colour Code Red notification where mandatory stand down conditions apply.

The bushfire hazard is assessed through the identification of vegetation, slope and potential ignition sources.

On Very High (or greater) Fire Danger Days, the Fire Officer or delegate should be well informed of current fire activity by monitoring local media and regularly checking for updates on the RFS website or Information Line.

6.1 Vegetation

Kleinfelder (2014) determined that the predominant vegetation surrounding the three Study Areas (i.e. Newstan Colliery Surface Site, Cooranbong Entry Site and Hawkmount Quarry) to be "Open Dry Sclerophyll Shrubby Forest", with an estimated fuel loading is up to 35 tonnes per hectare. The vegetation surrounding the private haul roads within the Project Application Area is also considered Open Dry Sclerophyll Shrubby Forest. The fire thresholds for Open Dry Sclerophyll Shrubby Forest, being the upper and lower time limits or range of fire intervals recommended to support ecologically sustainable fire management, are a minimum of seven years and a maximum of 30 years (NPWS 2004, cited in Kleinfelder 2014). Rehabilitated areas to the west of the Newstan Colliery Surface Site have large non-vegetated patches and low to sparse revegetated patches.

6.2 Slopes and Terrain

The Newstan Colliery and Northern Coal Services is located within a valley which is surrounded by diverse landforms, including the Watagan Mountain range to the west and Lake Macquarie to the east. The topography within and around the operation generally consists of rolling low hills with short side slopes and numerous closely spaced drainage lines. Slope gradients are generally 10 to 25 percent and local relief is between 20 metres and 110 metres AHD.

Existing infrastructure within and around the Newstan Colliery Surface Site eliminates effective slopes to the south, east and south-west of the Project Application Area. The slopes around the rail loop are upslope to the west, 7.5 degrees downslope to the north and downslope to flat to the north-west (Kleinfelder 2014).

7 BUSHFIRE RISK MANAGEMENT

The primary bushfire risks identified by Kleinfelder (2014) for the Project are:

- Danger caused to lives and/or damage to property from radiant heat, flame, smoke and embers;
- Stalling of production and/or damage to infrastructure assets, financially impacting Northern Coal Services and local and regional commercial operations; and
- Negative impact to fauna and flora, including threatened species.

7.1 Ignition Sources

The following are considered by Kleinfelder (2014) to be the most likely sources of ignition:

- Construction/operation and associated activities - the most common risk of ignition will be sparks generated from hot works and plant/equipment used in construction activities, for example exhausts and sparks of vehicles, maintenance works such as hot

work and landscape management. Actions of site personnel and malfunctioning equipment and motors may also result in fire ignition.

- External sources - bushfire may enter the Project Application Area from adjoining properties and transport corridors. Any local or neighbouring hazard reduction operations are also a potential ignition source, particularly under conditions of hot, dry summer winds (legal burning off in rural areas is mainly undertaken in autumn through to spring). Arson is also a potential ignition source, however is likely to be limited to the main road areas.
- Electricity transmission lines - under hot and windy conditions, electricity transmission lines may sag, come in contact with each other and arc. This can generate sparks that have the potential to cause fire.
- Lightning - lightning strikes are a common cause of fire ignition. The potential for lightning strike is not predictable, however if the conditions are suitable (dry vegetation, hot and windy) the risk is significant.

7.2 Reducing Loads and Maintaining Access

The existing access provisions to the Newstan Colliery Surface Site, which consist of Miller Road and Newstan-Eraring Private Haul Road, are considered suitable for evacuation and access purposes (Kleinfelder 2014).

Newstan Colliery and Northern Coal Services will mitigate the risk of bush fire through the maintenance of trails and roads, asset protection zones and suitable fuel loadings. Specifically:

- Fire trails and boundary tracks will be maintained to an appropriate standard to allow water tanker access
- Asset protection zones (APZ) will be established and maintained around the Pit Top infrastructure, and along the boundaries of the property as required under the NSW Rural Fire Services document Planning for Bushfire Protection 2006 (RFS (NSW), 2006).
- Dam's at the Ventilation Shaft No.3 and the Pit Top site will be maintained for the provision of water for fire fighting.

Monitoring of APZs in the mining lease areas and fuel levels in offset areas will take place annually, for the period of management for the site by Centennial or a suitably qualified contractor engaged by the Environmental Coordinator. Fire management works will be reassessed based on the outcomes of the first five years of monitoring APZs.

The RFS will be responsible for deciding the requirement and frequency for prescribed burns within the Northern Coal Logistics boundary.

Kleinfelder (2014) concludes that the extensive bushfire setbacks to existing infrastructure at the Newstan Colliery Surface Site, along with the provision of other bushfire treatments (landscape management, suitable access and water supplies), will assist in the protection of life. Kleinfelder (2014) further concludes that the risk of a local bushfire adversely impacting persons on site is low.

7.3 Bushfire Response

The site has five on-site water tanks, with a total maximum volume of 0.8 million litres that can be used in the event of a fire emergency (Kleinfelder 2014). The water supply is reticulated around the site, with hydrants sign-posted and spaced at desirable intervals. Fit-for-purpose trailer-mounted diesel powered pumps are available on site in case of an emergency.

Fire hydrants, connections and hoses have been installed at various locations around the Pit Top. Fire hydrants are identified by reflective signage. An inspection, coordinated by the Newstan Fire Officer, ensures all equipment is properly maintained.

Fire fighting systems at the Pit Top uses a combination of mine and potable water. In the event of a bush fire the sprays can be utilised to dampen surfaces and minimise the likelihood of ignition of the ROM coal stockpile.

The following plant and equipment will be maintained in a serviceable condition to ensure it is immediately available:

- Qube water cart
- Fire hoses
- Fire hydrants
- Fire substations
- Main fire station
- Trailer-mounted diesel pumps

7.4 Fire Training

The Fire and Explosion Management Plan (HSMS-HMP-FE) details the requirement for site fire teams.

Fire fighting teams shall also be trained in the relevant parts of the emergency response procedure.

7.5 Biodiversity Management

Bushfire management will be consistent with the RFS Bushfire Environmental Assessment Code and the Rules and Notes for the Implementation of the Threatened Species Hazard Reduction List which outlines species specific conditions relating to the use of fire and mechanical forms of hazard reduction.

Fuel reduction will be undertaken where appropriate by slashing or crash grazing in high risk areas without damaging woodland regeneration in adjacent areas.

Bushfire management will facilitate the exclusion of fire (where possible) from regeneration and revegetation areas to allow young plants to mature to a stage where they are able to withstand bushfire and regenerate naturally following such a bushfire event (generally 15 years of age however dependent on the success of plant establishment and the vegetation community present).

Bushfire management controls will consider the locations of known records of threatened species (particularly orchids) and threatened ecological communities and attempt to exclude fire from these areas to ensure persistence of these ecological features following the event. Low intensity controlled burns in consultation with the RFS may need to be considered to facilitate natural regeneration from the soil seed bank if natural recruitment levels are not sufficient in Centennial's Offset and regeneration areas.

Existing APZs and land management activities associated with bushfire mitigation are expected to mitigate any direct impacts to identified threatened flora and fauna and archaeological sites within the Northern Coal Services study area.

8 BUSHFIRE INCIDENT MANAGEMENT

In the event of a fire at Newstan Colliery and Northern Coal Services alert the emergency two-way channel 1 and the control room (555 or 4956 0252) then contact 000 to report the fire in accordance with emergency declaration protocols outlined in the Newstan Colliery and Northern Coal Services Emergency Management Plan.

Evacuations will be undertaken in accordance with the Bushfire Emergency Procedure within the Newstan Colliery and Northern Coal Services Emergency Management Plan if required.

A Trigger Action Response Plan (TARP) has been developed for the situation where a bushfire is on or approaching the operation and outlines procedures to follow with regards to notification to the RFS, evacuation and when to stay on the premises:

1. ASSESS THE FIRE

- Check direction of advance and potential hazard to NCS site and notify NCS Manager & Staff.

2. ORGANISE FIRE FIGHTING EQUIPMENT

- Installed red fire depots around NCS perimeter.

3. ORGANISE WATER TRUCKS

- Wet down bush land around NCS perimeter.

4. INSTALL DIESEL FIRE PUMPS

- Install fire pumps at Surface Water Tanks and Bywash Dam to pressurize fire lines in case of power loss.

5. ORGANISE EVACUATION

- Pre-warn Office employees of fire and possibility of requirement to evacuate site.

6. FIGHT THE FIRE IF IT IS SAFE TO DO SO

- Do not put yourself at risk... Evacuate the area if there is a potential for injury.
- If safe to do so protect major assets. Assess the risk of injury constantly.

7. MONITOR THE FIRE

- The fire is to be monitored after it is extinguished for possible re-ignition.

8. INSPECT FIRE AFFECTED AREA

- Inspect fire affected areas for hazards prior to allowing general access (Inspection by NCS / Newstan Manager or his representative).

9 REVIEW

9.1 Time based

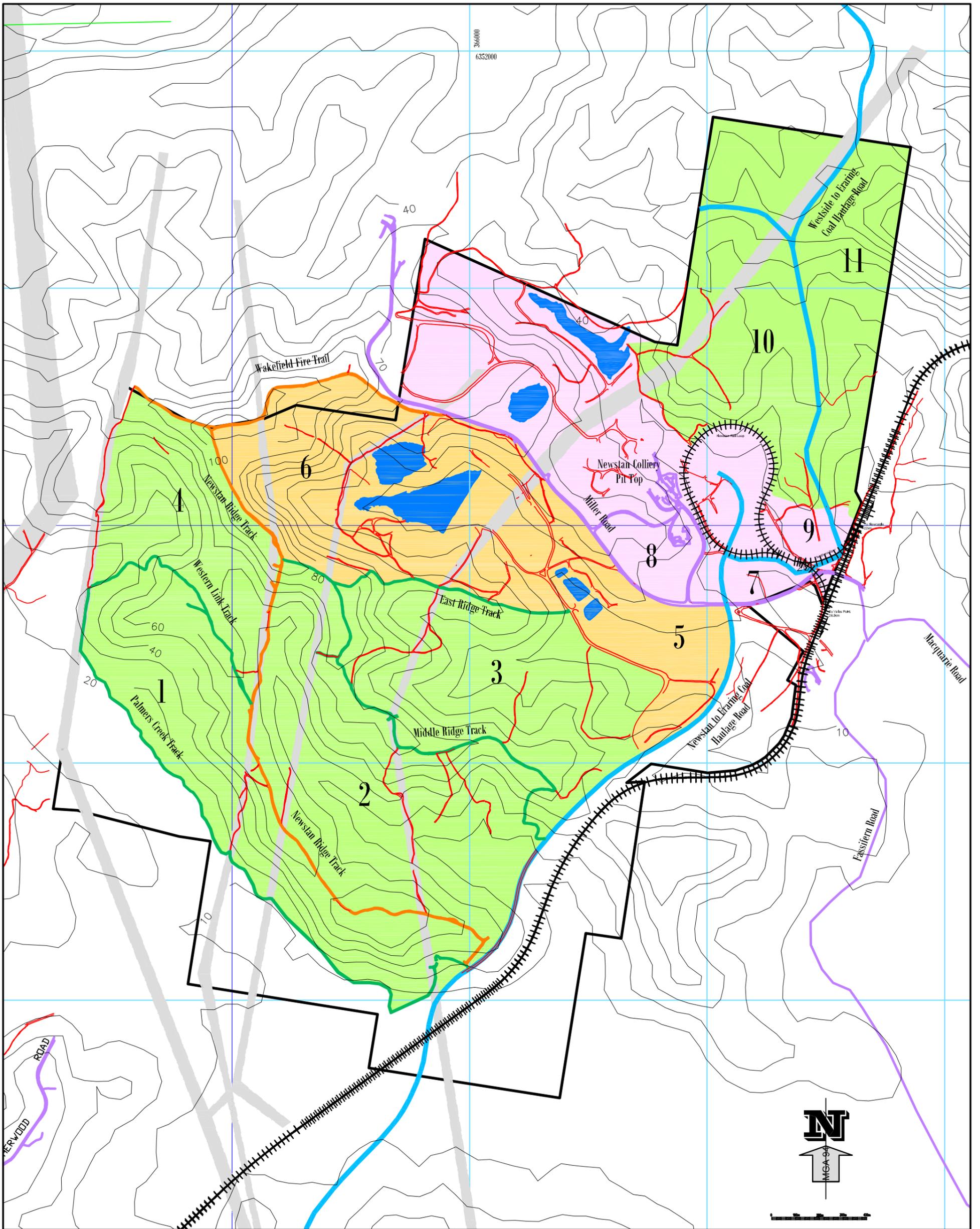
The Newstan Colliery Bushfire Management Plan is required to be reviewed every 5 years by the Environmental Coordinator or as directed by the Manager Northern Coal Services, to assess the Plans effectiveness and to remain in compliance with development consent conditions.

9.2 Event Based

Events which may trigger a review of the Bushfire Management Plan include:

- As directed by the Secretary of the Department of Planning and Environment (in consultation with other governmental agencies)
- Bushfire on the colliery lease
- Modification/improvement to the system
- RFS Guidelines or codes of practice applied to the mine.

APPENDIX 1 – Newstan Bushfire Management Plan NS2577



LEGEND

- Newstan Controlled Land
- Contour 10m Interval
- Main Northern Rail Line
- Fire Trail- Essential
- Fire Trail- Important
- Other Tracks
- Water Catchments
- Asset Protection Zone
- Strategic Fire Advantage Zone
- Land Management Zone
- Powerline Easement
- Zone Areas

Centennial Newstan Pty Ltd (ACN 101 508 865)

**NEWSTAN COLLIERY
Surface Plan**



**Centennial
Newstan**

TITLE:
Newstan Bushfire Management Plan

DRAWN: A.FIELD	REV:	All Distances are in metres unless otherwise shown.	A3
DATE: 16/09/2009	FILE: Plot File NS2577.PDF		
CHECKED:	SCALE:		
APPROVED:	1 : 15000	NS2577	