

Gunnedah Mining Precinct

The NSW Status Report project is an initiative by the Land and Water Commissioner in response to community concerns about monitoring and impacts from coal mining and coal seam gas projects. The reports bring together data from multiple sources (both government and industry). The aim of the report is to help readers understand the long-term trends.

All enquiries about this report should be directed to the NSW Land and Water Commissioner:

commissioner@landandwater.nsw.gov.au or
(02) 6391 3429.

Only data reported as raw figures on company websites has been displayed. For more information on company data visit:

- **Whitehaven Coal Handling Preparation Plant**
- **Sunnyside Coal Mine**
- **Brickworks Paddock Mine**
- **Gunnedah Colliery**

www.whitehavencoal.com.au

- **Curlewis Colliery**

www.bloomcoll.com.au

For more information on licensing, project approvals and NSW Government data visit:

NSW Department of Planning and Environment

www.planning.nsw.gov.au

Division of Resources and Geoscience

www.resourcesandenergy.nsw.gov.au

NSW Environment Protection Authority

www.epa.nsw.gov.au

NSW DPI Water

www.dpi.nsw.gov.au

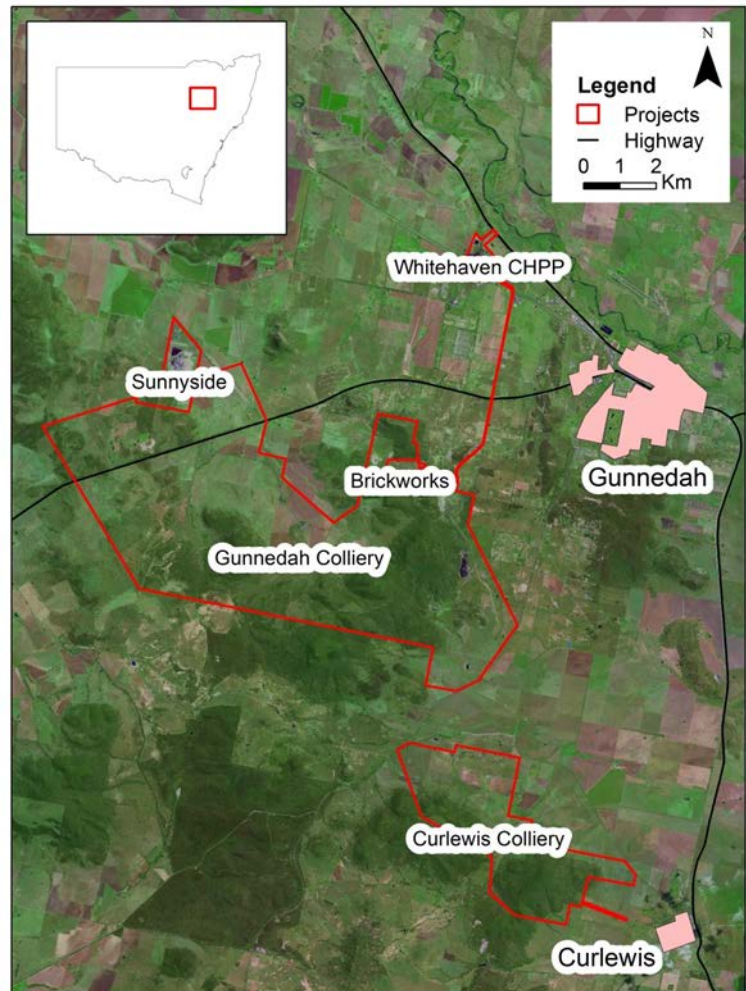


Figure 1. Map of Gunnedah Mining Precinct

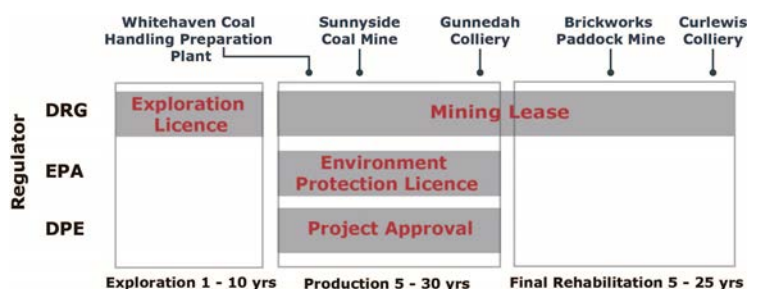


Figure 2. Indicative timeline for Gunnedah Mining Precinct

Projects

Table 1. General data on Whitehaven Coal Handling Preparation Plant

Item	Data
Type	Coal Handling and Preparation Plant (CHPP)
Rate of extraction limit	Processing up to 3 Mtpa run of mine coal Dispatch up to 4.1 Mtpa coal
Operator	Whitehaven Coal Limited
Commenced	1980s
Local or state government approval	State
Project approval	2002–22 (DA0079.2002—current), three modifications
Current applications for planning approval	0
Rights to mine	The area is not covered by a current mining lease
Environment Protection Licence	EPL3637 and EPL1863 (from 2000 and 2001 with various licence variations)
Water licences	Licensed to take and monitor surface water and groundwater
Native vegetation approval	-
Other	Previously named Whitehaven Siding, Vickery Coal Loader and Gunnedah Colliery Rail Loop. The CHPP receives coal from Tarrawonga, Rocglen and Sunnyside Mines via road. Once the coal is processed it is transported off site via rail.

Table 2. General data on Sunnyside Coal Mine

Item	Data
Type	Open-cut coal mine
Rate of extraction limit	1 million tonnes of coal per year
Operator	Whitehaven Coal Limited
Commenced	2008 Care and maintenance (2012—current)
Local or state government approval	State
Project approval	2008–20 (06_0308—current), two modifications
Current applications for planning approval	0
Rights to mine	ML1624
Environment Protection Licence	EPL12957 (from 2008 with nine licence variations) One current application seeking variation
Water licences	Licensed to take and monitor surface water and groundwater
Native vegetation approval	-

Table 3. General data on Curlewis Colliery

Item	Data
Type	Underground coal mine
Rate of extraction limit	
Operator	Curlewis Coal and Coke Pty Limited
Commenced	1890 Care and maintenance (1998 – current)
Local or state government approval	Local and state
Project approval	-
Current applications for planning approval	0
Rights to mine	CCL711
Environment Protection Licence	-
Water licences	-
Native vegetation approval	-

Table 4. General data on Gunnedah Colliery

Item	Data
Type	Underground and open cut coal mine
Rate of extraction limit	
Operator	Whitehaven Coal Limited
Commenced	1895 Care and maintenance (2000—current)
Local or state government approval	Local and state
Project approval	DA0079.2002, transport of rejects to Gunnedah Colliery from Whitehaven CHPP
Current applications for planning approval	0
Rights to mine	CCL701, MPL162
Environment Protection Licence	EPL1863 (from 2001 with five licence variations)
Water licences	-
Native vegetation approval	-

Table 5. General data Brickworks Paddock Mine

Item	Data
Type	Open-cut coal mine
Rate of extraction limit	0.5 million tonnes of coal per year
Operator	Whitehaven Coal Limited
Commenced	1996 Care and maintenance (2000—current)
Local or state government approval	Local and state
Project approval	1996 (DA96033), open-cut mining 2001 (DA550138), disposal of coal washery rejects, 1 modifications
Current applications for planning approval	0
Rights to mine	ML1680
Environment Protection Licence	EPL1863 (from 2001 with five licence variations)
Water licences	-
Native vegetation approval	-

Dust

Predicted dust impacts

- Project approvals are based on predicted dust impacts. Once operational, projects must monitor dust to demonstrate actual air quality levels. PM10 is dust in the air that is 10 micrometres or less in diameter.

Dust monitoring

- PM10 dust can be monitored using a high-volume air sampler (HVAS) or tapered element oscillating microbalance (TEOM).
- Monitoring results represent dust generation from all activities in the region including mining, agriculture, utilisation of unsealed roads and regional events such as dust storms and bushfires.

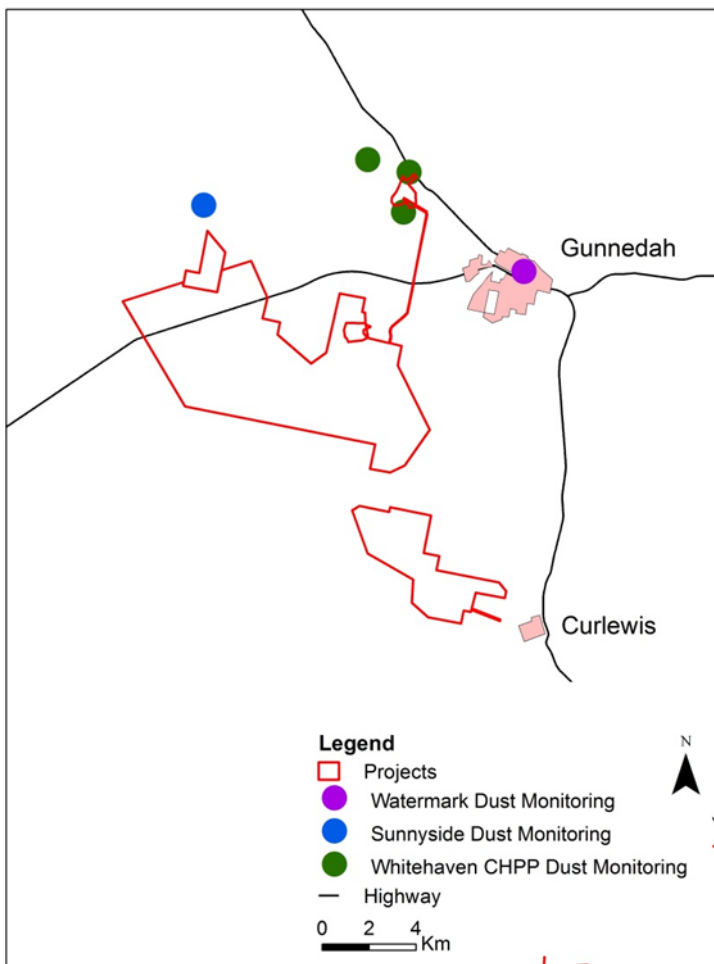


Figure 3. Dust monitoring locations

Dust levels

Australian air quality standards are detailed in the [National Environment Protection \(Ambient Air Quality\) Measure](#) (NEPM). The NEPM requires the NSW Government to monitor air quality and this helps to identify potential air quality problems.

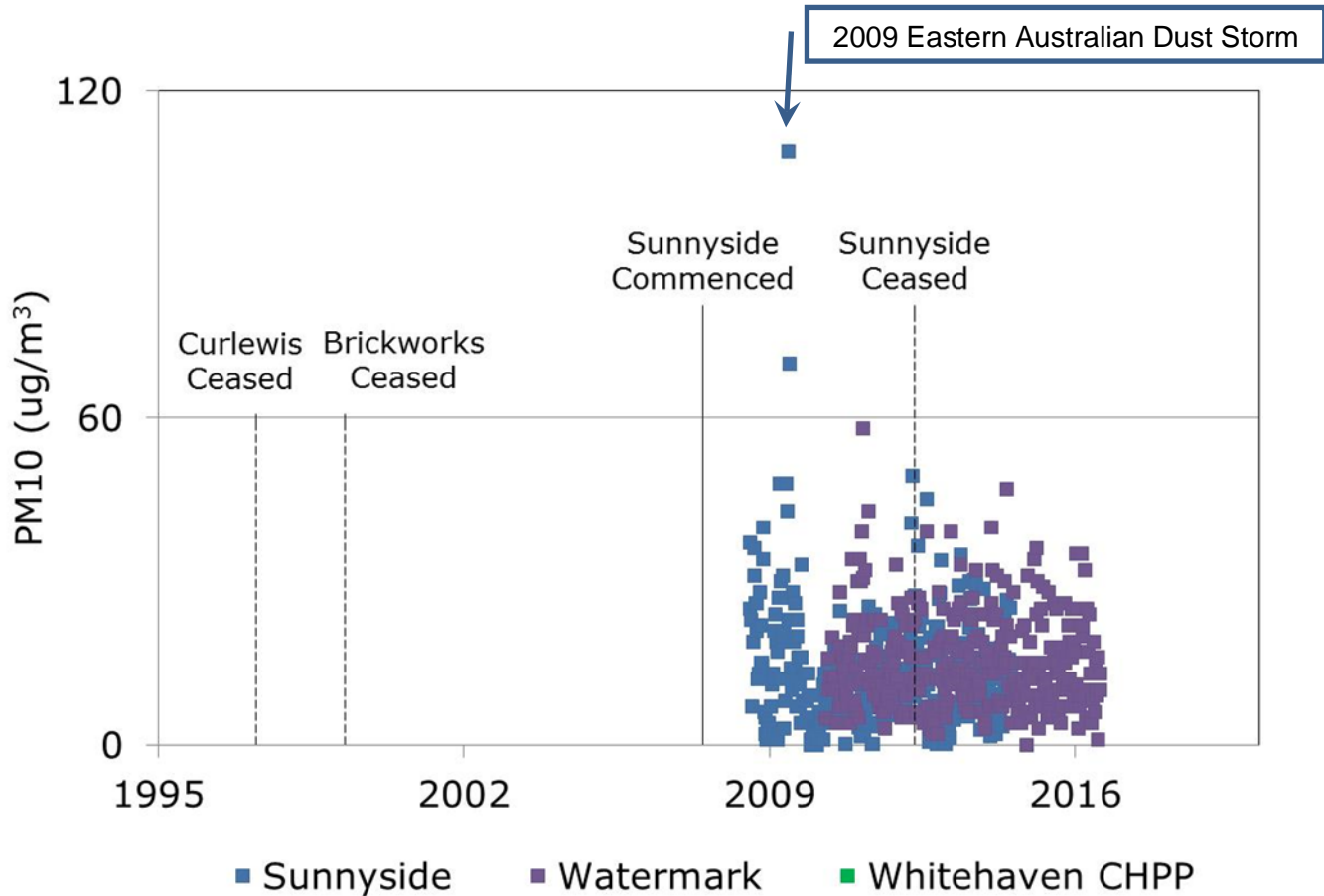


Figure 4. Dust levels from 1995 to 2017

Notes:

- Only raw data used.
- Each dot is the total dust for that day at that monitoring site.

Noise

Predicted noise impacts

- Noise from operations may sometimes be audible at nearby residences.
- Project approvals and environment protection licences set noise limits and these apply at private residences.

Noise monitoring

- Some operations carry out both attended and unattended (continuous real-time) monitoring for noise.
- Attended monitoring results are used to determine compliance with limits as the contribution noise from the operation can be determined with the level of certainty necessary.
- Noise results often need to be analysed to establish the contribution the project has made to the total noise recorded at that site.
- Weather affects noise propagation and must be monitored in conjunction with noise.

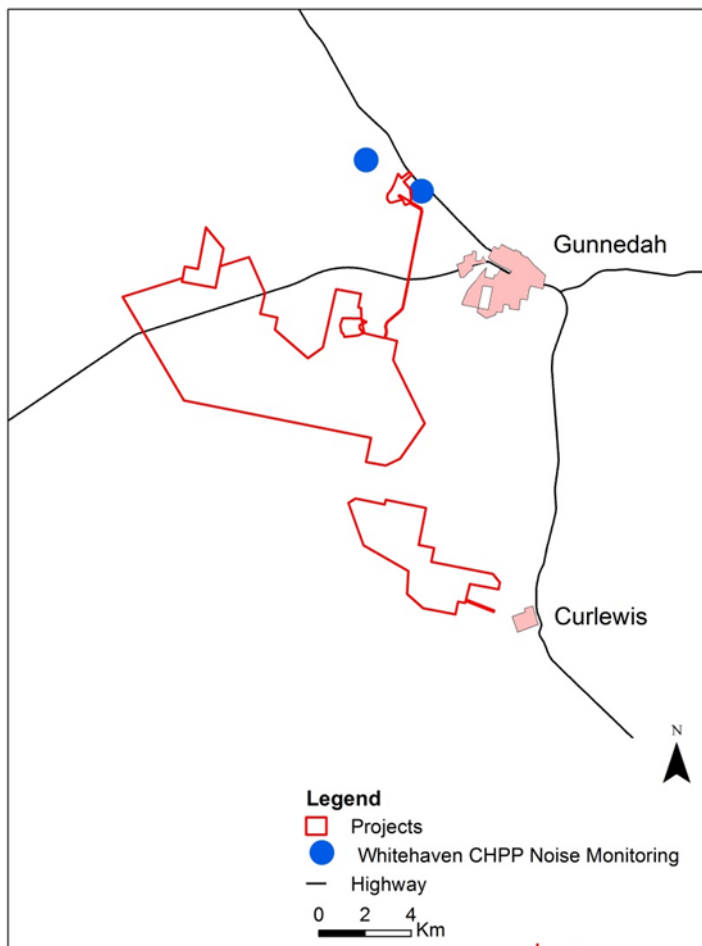


Figure 5. Noise monitoring locations

Noise levels from projects

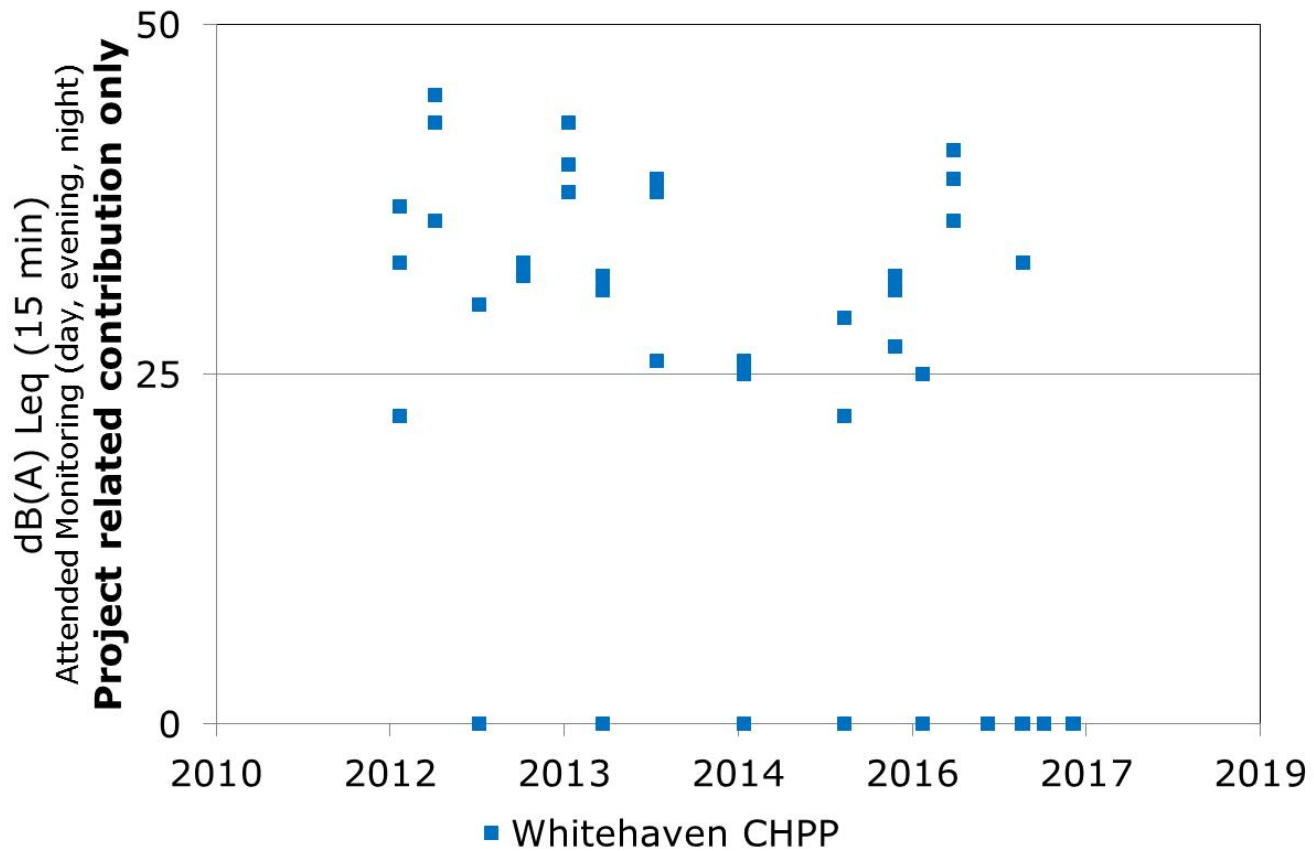


Figure 6. Noise levels from 2004 to 2017

Notes:

- The [NSW Industrial Noise Policy](#) is aimed at assessing noise from industrial noise sources. The NSW Government uses this policy when setting statutory limits.
- Each dot is a noise monitoring sampling event.

Water

Water licensing

- Water licences are required before water is taken from either off-site surface water sources (for example, active pumping from a river) or groundwater sources (for example, groundwater seeping into open cut voids).
- Water management is undertaken in accordance with approved water management plans and the project approval.
- Water is used on site for dust suppression, mining operations and construction.
- Environment Protection Licence conditions are required to be met prior to discharging any water from the site into the surrounding environment.

Water monitoring

- Projects are required to have a network of water bores to monitor impacts from projects.
- The NSW Government monitors surface water and groundwater in the North West

region of NSW.

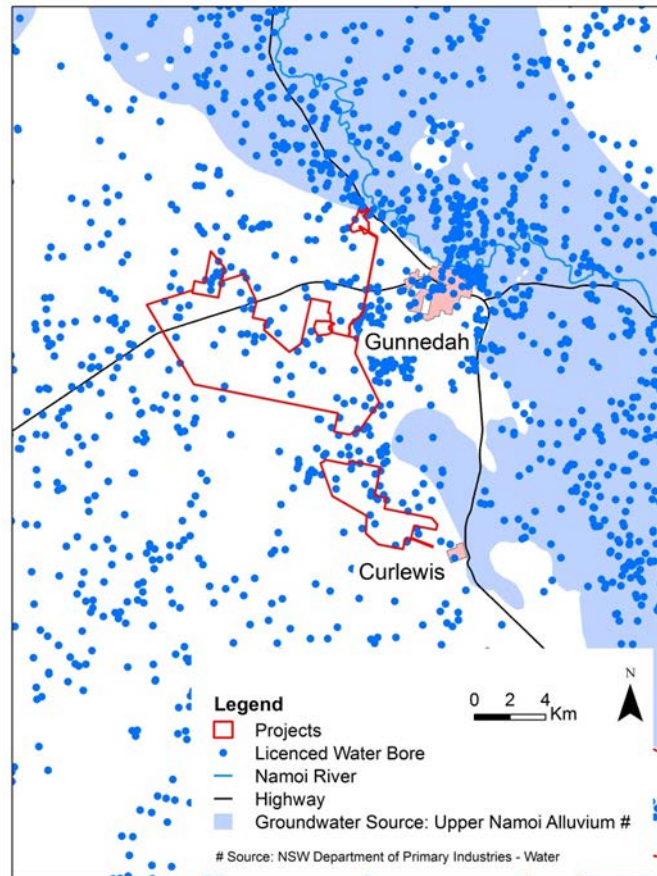
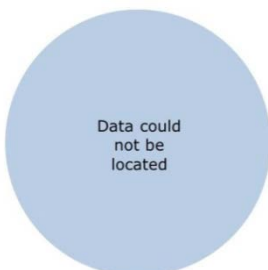


Figure 7. Licenced water bore locations

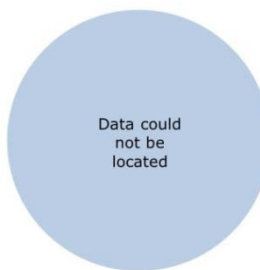
Whitehaven CHPP 2015 - 2016



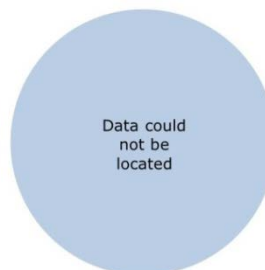
Sunnyside 2015 - 2016



Brickworks 2015 - 2016



Gunnedah Colliery 2015 - 2016



Curlewis Colliery 2015 - 2016

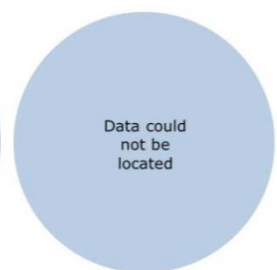


Figure 8. Licenced entitlement for each project

Company monitoring of groundwater levels

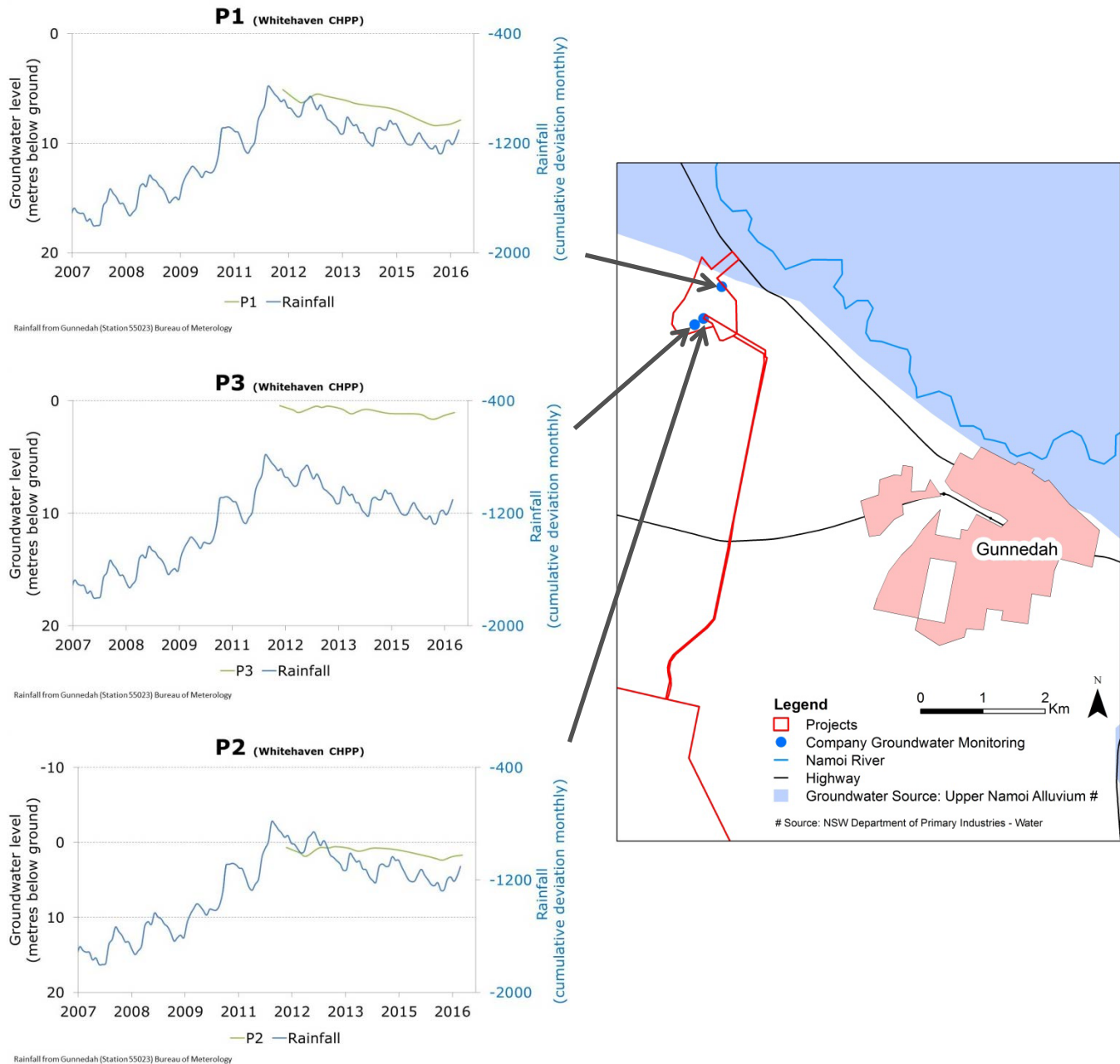


Figure 9. Three examples of company groundwater monitoring

Notes:

- This document only includes a few examples for groundwater monitoring sites.
- Visit company websites for more information on groundwater monitoring.

Company monitoring of groundwater levels

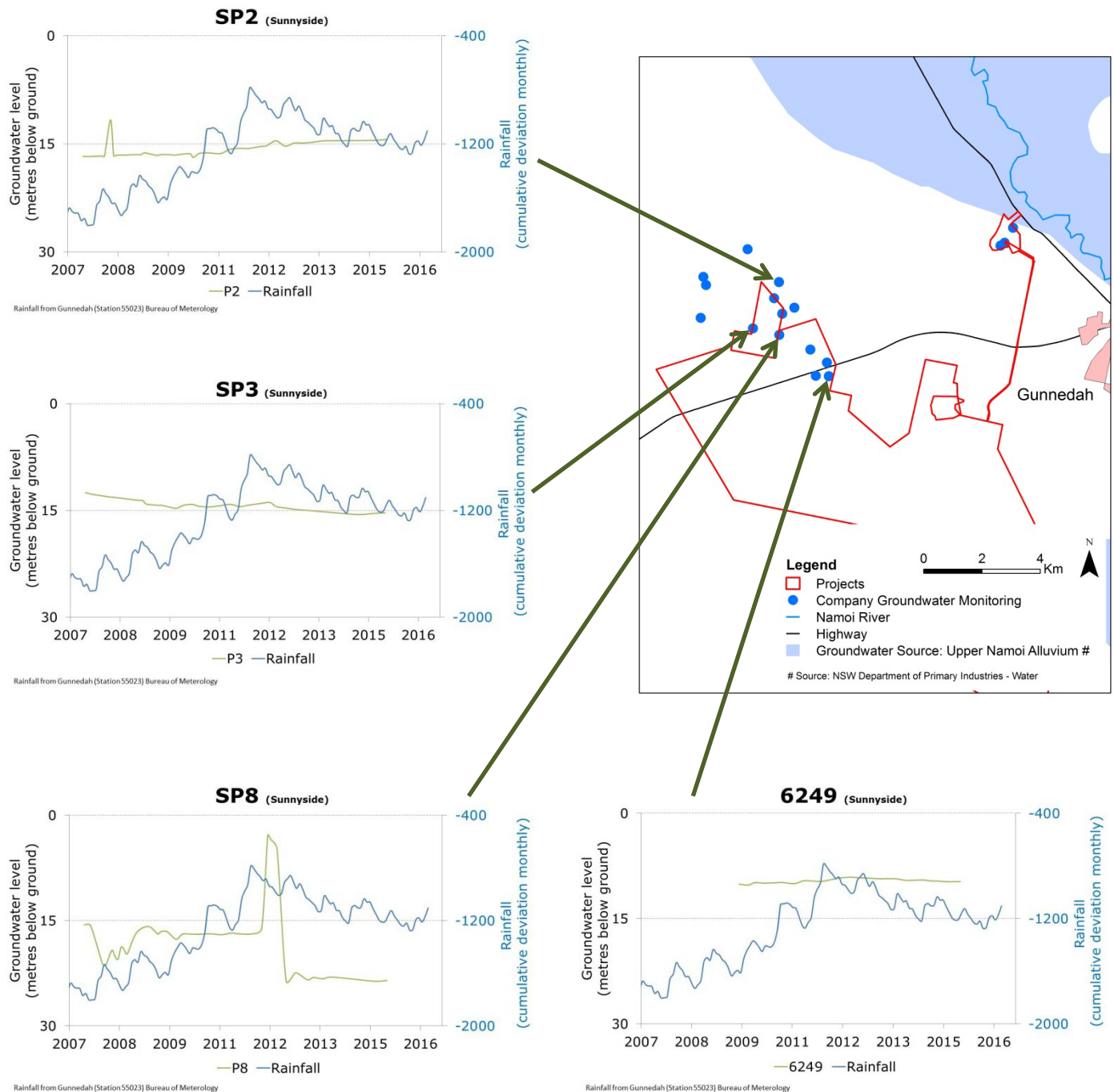


Figure 10. Four examples of company groundwater monitoring

NSW Government monitoring of groundwater levels

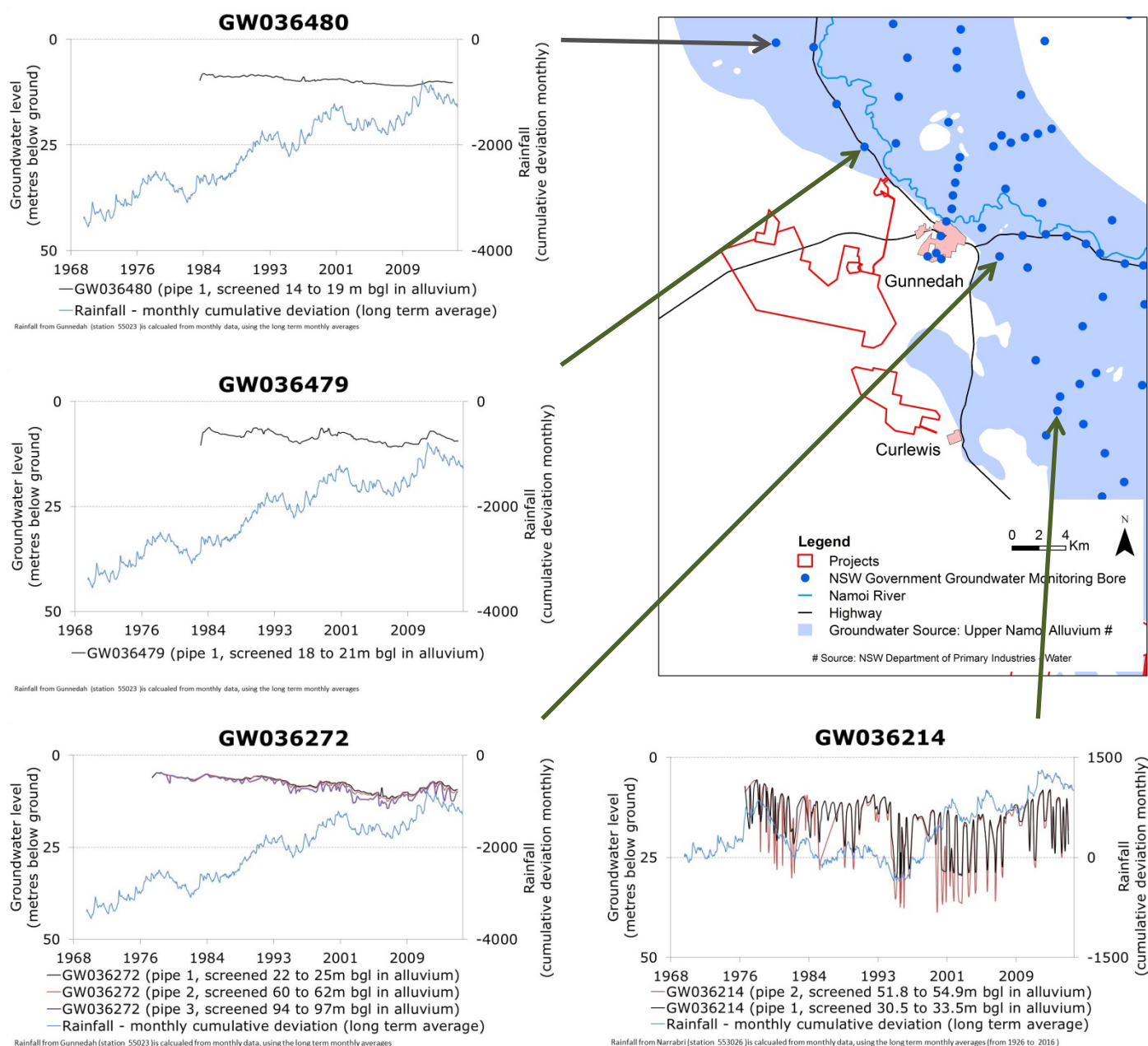


Figure 11. Four examples of NSW Government groundwater monitoring

NSW Groundwater Baseline Project

The Groundwater Baseline Project gathers data on water rights, licencing and use across the Gunnedah region. For more detailed information, visit www.industry.nsw.gov.au and search for 'Land and Water Commissioner'.

Rehabilitation

Rehabilitation requirement

- Project approvals are based on rehabilitation outcomes described within the project approval application.
- Rehabilitation activities are required to be progressively carried out during the life of a project.

Rehabilitation security

- A rehabilitation security is held against every project. The NSW Government can use the security to carry out rehabilitation activities if required. The security estimate is regularly reviewed.

	Whitehaven CHPP	Sunnyside	Brickworks	Gunnedah Colliery	Curlewis Colliery
Rehabilitation security held	N/A	\$7,810,000	\$500,000	\$2,938,000	\$131,000
Type of security (Cash or Bond)		Bank Guarantee Bond	Bank Guarantee Bond	Bank Guarantee Bond	Bank Guarantee Bond
Last reviewed		Oct 2016	Aug 2012	Oct 2011	Nov 2010

Table 6. Rehabilitation details for each project

Notes:

- Whitehaven CHPP is operational.
- Sunnyside Coal Mine, Brickworks Coal Mine, Gunnedah Colliery and Curlewis Colliery are in care and maintenance.

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