



## Resource Rehabilitation Showcase

This worksheet will help guide your journey through the Resource Rehabilitation Showcase as you learn about options for rehabilitating mine sites after resource extraction. Rehabilitation means restoring the area to a useful purpose. This may involve re-creating the original environment or allowing a new land use. The Resource Rehabilitation Showcase is available online at:

[https://vantageinteractive.com.au/UNSW/MERE/virtual\\_tour/ResourceRehabilitationShowcase/](https://vantageinteractive.com.au/UNSW/MERE/virtual_tour/ResourceRehabilitationShowcase/).

You can do the sections in any order. The subheadings below are those used in the Showcase.

## Rehabilitation to Thick Vegetation: open-pit coal mine

**Video:** *Before, during and after a coal mine* (11:35)

This video has little navigation stops that are boxes below the time bar. There is an information box for each on the lower right side of the screen to show you where you are in the life of mine.

### Start of video

What does a mining company have to assess before mining? \_\_\_\_\_

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What is progressive rehabilitation? \_\_\_\_\_

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What is done with the topsoil? \_\_\_\_\_

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### End of video (8:14 onward)

What options may be considered for final land use at this site? \_\_\_\_\_

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What is the usual source for soil and seeds used in rehabilitation? \_\_\_\_\_

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How does the Resources Regulator make sure mines are being rehabilitated? \_\_\_\_\_

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Why are dead trees placed in rehabilitated areas? \_\_\_\_\_

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Why might rehabilitated land be in better condition than the surrounding land? \_\_\_\_\_

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**Video:** *Rehabilitation success at the Westside mine (2:00)*

You can use your mouse to look around in the 360-degree video.

Why was bushland picked as the final rehabilitated land use at Westside? \_\_\_\_\_

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What is used as evidence to determine that rehabilitation is successful? \_\_\_\_\_

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**Video:** *See the rehabilitated Westside mine from the air (2:34)*

At 0.10, the view is labelled with years of rehab and native bushland. What do you observe about the different areas? \_\_\_\_\_

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The Resources Regulator has officially signed off on the rehabilitation of Westside mine (e.g., judged that it is complete). What evidence do you see to support this completion? \_\_\_\_\_

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## Rehabilitation to Pumped Hydro Power: open-pit gold mine

**Video:** *What can you do with a big hole in the ground?* (1:36)

What are the advantages to the community from this project? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Video:** *How the Kidston Pumped Hydro Project works* (1:27)

Why is the Kidston site well suited to pumped hydro? \_\_\_\_\_  
\_\_\_\_\_

What is the solar capacity at Kidston? \_\_\_\_\_

Explain how the grid is used. \_\_\_\_\_  
\_\_\_\_\_

## Rehabilitation to Coastal Vegetation: sand mining for silica

What was done before mining to assist rehabilitation? \_\_\_\_\_  
\_\_\_\_\_

What protections happen during mining that aid final rehabilitation? \_\_\_\_\_  
\_\_\_\_\_

How does the mine work with the local community to support rehabilitation? \_\_\_\_\_  
\_\_\_\_\_

What trends do you see during the progressive rehabilitation photos? \_\_\_\_\_  
\_\_\_\_\_

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## Rehabilitation to Artificial Reef: offshore petroleum drilling

**Video:** *What happens after the rig is finished?* (2:28)

What has been done with the old oil rig? \_\_\_\_\_

What do you see around the sub-sea pipelines? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

What would be the environmental effect of removing the underwater pipelines? \_\_\_\_\_

\_\_\_\_\_

## Working in Sensitive Environments: Ranger Uranium Mine

**Video:** *How do they manage the risks?* (6:46)

What are the major challenges associated with the mine site? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

How much time is set aside for rehabilitation? \_\_\_\_\_

\_\_\_\_\_

What is the aim after rehabilitation? \_\_\_\_\_

\_\_\_\_\_

What is the most critical risk and how is it managed? \_\_\_\_\_

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Why is there a supervising scientist near Ranger? \_\_\_\_\_

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Outline some of the impacts that the mine must manage. \_\_\_\_\_

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### Rehabilitation to Farmland: onshore drilling for coal seam gas

**Video:** *How a gas well works from start to finish* (3:15) – **start at 2:40**

Outline how the coal seam can be used after methane removal \_\_\_\_\_

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How is the drilled hole rehabilitated? \_\_\_\_\_

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### Working with Traditional Owners: Weipa bauxite mine

**Video:** *Inclusion and diversity at the Weipa Bauxite mine* (4:31) – **start at 3:15**

What is the purpose of the agreements with traditional owners? \_\_\_\_\_

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How does the mine rehabilitate pits when they are done? \_\_\_\_\_

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**Video:** *Revegetating the Rehe Pit* (4:55)

Outline the rehabilitation method for this small pit. \_\_\_\_\_

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Why was backfilling chosen as a method of rehabilitation? \_\_\_\_\_

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Explain how traditional owners are involved in the process. \_\_\_\_\_

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Why were logs placed on the site? \_\_\_\_\_

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## Final questions

1. Which type of mining has the largest surface footprint? \_\_\_\_\_

2. Give examples of the options for mine site rehabilitation. Must the area be returned to native vegetation? \_\_\_\_\_

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3. Analyse the way that mine location affects environmental management during mining and choices for rehabilitation afterwards. \_\_\_\_\_

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