

# OLYMPIC DAM EXPANSION EIS

## OVERVIEW

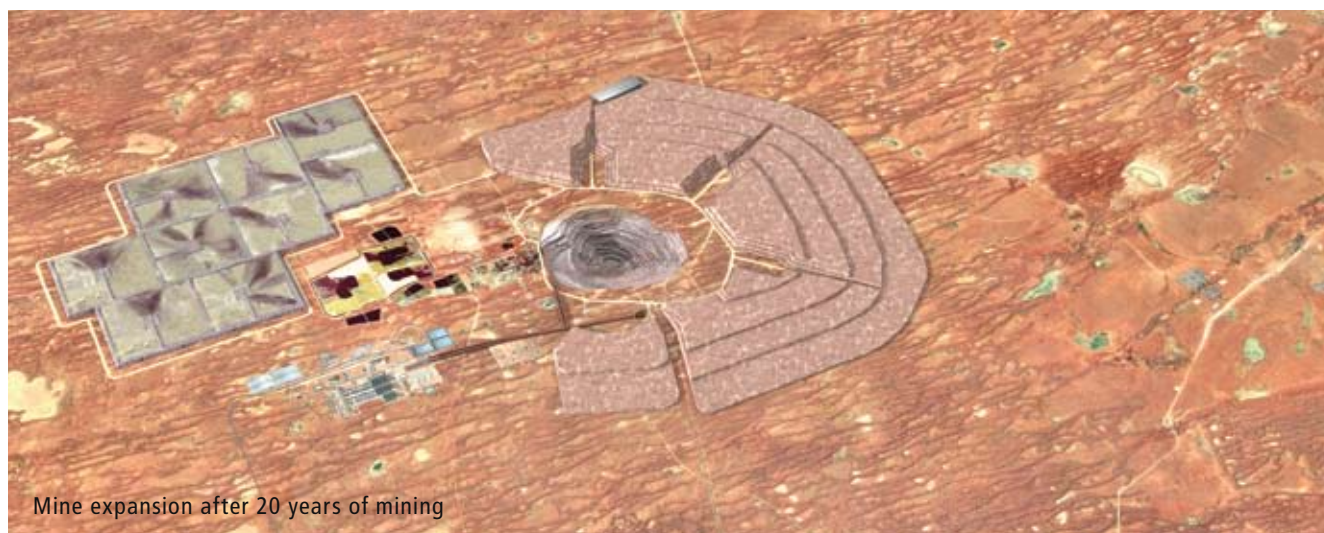
BHP Billiton is seeking the approval of the Australian, South Australian and Northern Territory governments for a significant expansion of its existing mining and processing operation at Olympic Dam in northern South Australia.

Located 560 km north of Adelaide, Olympic Dam is a multi-mineral ore body. It is the world's fourth largest known remaining copper and gold deposit and the largest known uranium deposit. It also contains significant quantities of silver.

The proposed expansion would be a progressive development, requiring construction activity over a period of 11 years. The project schedule ultimately will depend on the timing and nature of government approvals and the final investment decision of the BHP Billiton Board.

### The expansion

The proposed expansion is centred on the creation of a new open pit mine that would operate simultaneously with the existing underground mine and lift ore production six-fold to the levels shown below. The existing smelter would be expanded and new concentrator and hydrometallurgical plants would be built to process the additional ore, and generate additional concentrate for transport.



### Production summary

Production measure	Existing operation <sup>1</sup>	Proposed expansion	Combined operations
Quantity of ore recovered (million tonnes per annum)	12	60	72
Copper concentrate (tonnes per annum)	600,000	1,800,000	2,400,000
Refined copper (tonnes per annum)	235,000	515,000 <sup>2</sup>	750,000 <sup>2</sup>
Uranium oxide (tonnes per annum)	4,500	14,500 <sup>2</sup>	19,000 <sup>2</sup>
Gold bullion (ounces per annum)	100,000	700,000 <sup>2</sup>	800,000 <sup>2</sup>
Silver bullion (ounces per annum)	800,000	2,100,000 <sup>2</sup>	2,900,000 <sup>2</sup>

<sup>1</sup> Nameplate design capacity. (Nameplate capacity refers to the maximum continuous capacity of the Olympic Dam operation within specific ore grade and composition parameters, measured in tonnes of refined product.)

<sup>2</sup> Includes on-site and overseas production.

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Point Lowly, north of Whyalla, is the preferred location for the desalination plant

## Infrastructure

The major items of infrastructure required to support the expansion of mining and minerals processing would include:

- a 280 megalitre per day (ML/d) coastal desalination plant at Point Lowly on Upper Spencer Gulf (to supply 200 ML/d of additional water via a 320 km pipeline connection to Olympic Dam and with the potential to supply 80 ML/d for the South Australian Government to replace River Murray water to Upper Spencer Gulf and Eyre Peninsula regions)
- either an additional 270 km electricity transmission line from Port Augusta to Olympic Dam, or a gas pipeline from Moomba and a new gas-fired power station at Olympic Dam, or a hybrid solution that is a combination of these two supply methods
- a 105 km rail line to connect Olympic Dam to the national rail network near Pimba, to move product and supplies predominantly by rail instead of road
- a new airport to replace the existing airport at Olympic Dam. The new airport would handle aircraft such as the Boeing 737-800 or A320 and would support both day and night flights
- a landing facility 12 km south of Port Augusta to unload equipment from barges, and an access corridor to a pre-assembly yard on the north-western outskirts of Port Augusta
- additional port facilities in South Australia at Outer Harbor and in the Northern Territory at the Port of Darwin to import supplies and export product
- a new accommodation village for workers (named Hiltaba Village)
- expansion of the Roxby Downs township, 14 km south of the mine, where most of Olympic Dam's operational workforce would continue to live.

## The Draft Environmental Impact Statement

The proposed expansion is a large and complex project.

A detailed and technical Draft Environmental Impact Statement (Draft EIS) has been prepared to comply with the guidelines set by the three governments, and to explain the impacts and benefits of the proposed actions. The Draft EIS informs decision-makers and stakeholders about the need for the project, potential environmental, social, cultural and economic issues arising in the construction and operation phases and at closure, and how these issues would be managed. The impact assessment used to develop the Draft EIS focused on the consequence of an activity and the management measures that would reduce its impact, or where relevant, maximise its benefit.



Roxby Downs main street

As it is difficult to make predictions about markets and technologies over the very long term, BHP Billiton has set the timeframe for the assessments in the Draft EIS at 40 years. However, the size of the mineral resource suggests that mining could continue well beyond that time, in which case further environmental approvals would be required.

In preparing the Draft EIS, BHP Billiton has consulted widely and taken account of the views of stakeholders potentially affected by the proposal and others with a broader interest in the project's implications.

A new airport would replace the existing airport at Olympic Dam Village

