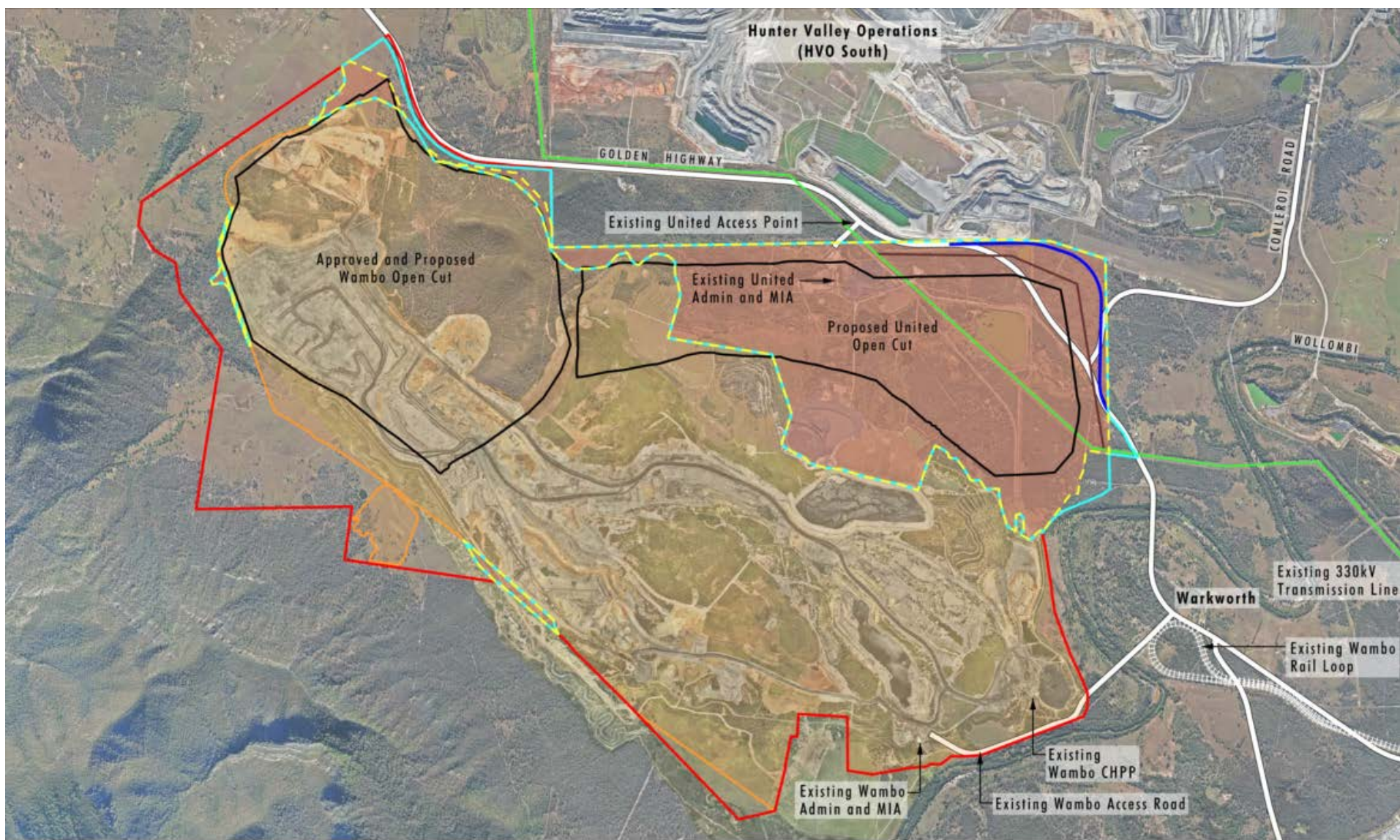




IPC Public Meeting

United Wambo Open Cut Coal Mine Project

Brownfields development - Formation of JV maximises resource recovery by removing constraints and utilising existing infrastructure in an area that has been mined since 1969



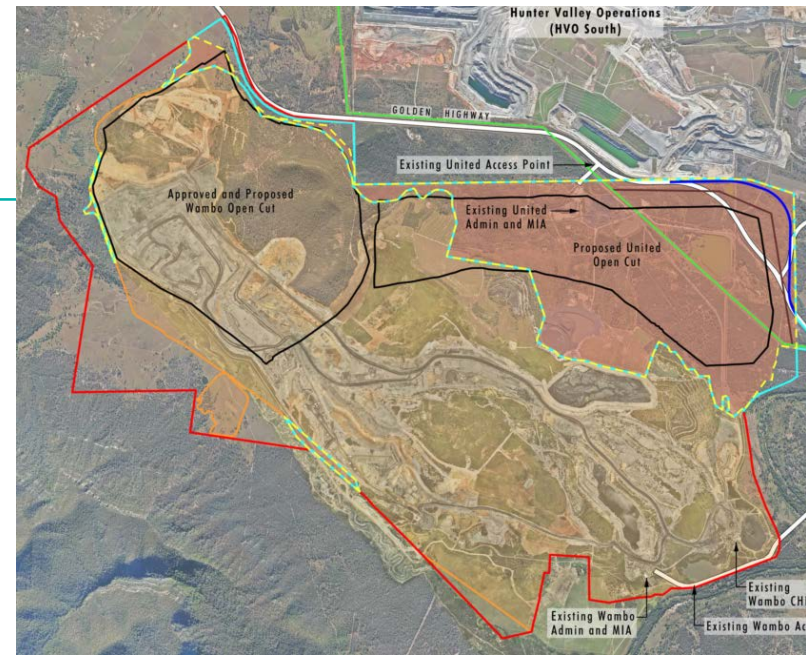
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- **Brownfields extension providing significant benefit for minimal additional disturbance**
 - recovering an additional **150M ROMt**,
 - generating additional royalties estimated of **\$820 million** (\$370 million present value)
 - increased economic activity in NSW equal to \$2.1billion Gross Regional Product and \$3 billion Gross State Product –expressed in present value terms
 - **Doubling employment** - Continued employment for **250 Wambo employees**, plus creating **250 additional mining jobs** and a **120 construction jobs** during peak construction
 - **Our consultation programme** has played an important role in shaping the mine design with changes being made along the way - **extensive consultation undertaken**

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- Minimised disturbance footprint by utilising the existing Wambo infrastructure with **no increase in approved annual throughput** of Coal Prep Plant and rail loop
 - By combining these two sites we can implement a single contiguous undulating final landform more in keeping with natural topography
 - Additional economic benefits delivered whilst keeping the number of final voids to the **same number as already approved – two (2)**
 - *'The Department is satisfied that the benefits of the Project outweigh its residual costs and considers that the Project is in the public interest, subject to strict conditions of consent'*

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- Project Disturbance Area reduced by **40.8 ha** including **22.6 ha** CEEC
 - Continued to expand the Biodiversity Offset Package with recent addition
 - **South Wambo Offset - 264 ha** providing a potential **194 ha** of CEEC – 2,483 credits
 - Final landform design refined to provide **greater detail on micro relief** which incorporates drainage lines more consistent with natural topography
 - Detailed mine planning conducted for the **economic and environmental cost of filling final voids**, inclusive of material movement, rehabilitation, drainage infrastructure, employee costs and overheads
 - **Additional commitments have been made in response to the recommendations made by the IPC** – which have been incorporated into the draft consent conditions

Biodiversity Offset Strategy

- **Brownfields Extension** – Total Project Area is **3,032 ha**, Additional Disturbance of **673 ha**, of which **146 ha** has already been impacted by mining activities at United
- **17%** of the Total Project Area (**527 ha**) will be disturbed
 - include **247 ha** of Central Hunter Valley Eucalypt Forest and Woodland CEEC
- Progressive retirement of credits in **three stages**, Stage 1 accounts for 80% of total offsets
- Secured **100%** of the offsets for **Stage 1** (first 7 years of mining)
- Stage 1 offset consist of a combination of five land based offsets, mine rehabilitation and contributions to the Biodiversity Offset Fund
 - Total offsets of 2,393 ha, including 1,136 ha of CEEC - CEEC offset at a ratio of **4.6 : 1**
- The new **South Wambo Offset** property will be used for CEEC offsets in Stage 2 and will meet **97%** of our **Stage 2 CEEC** requirements



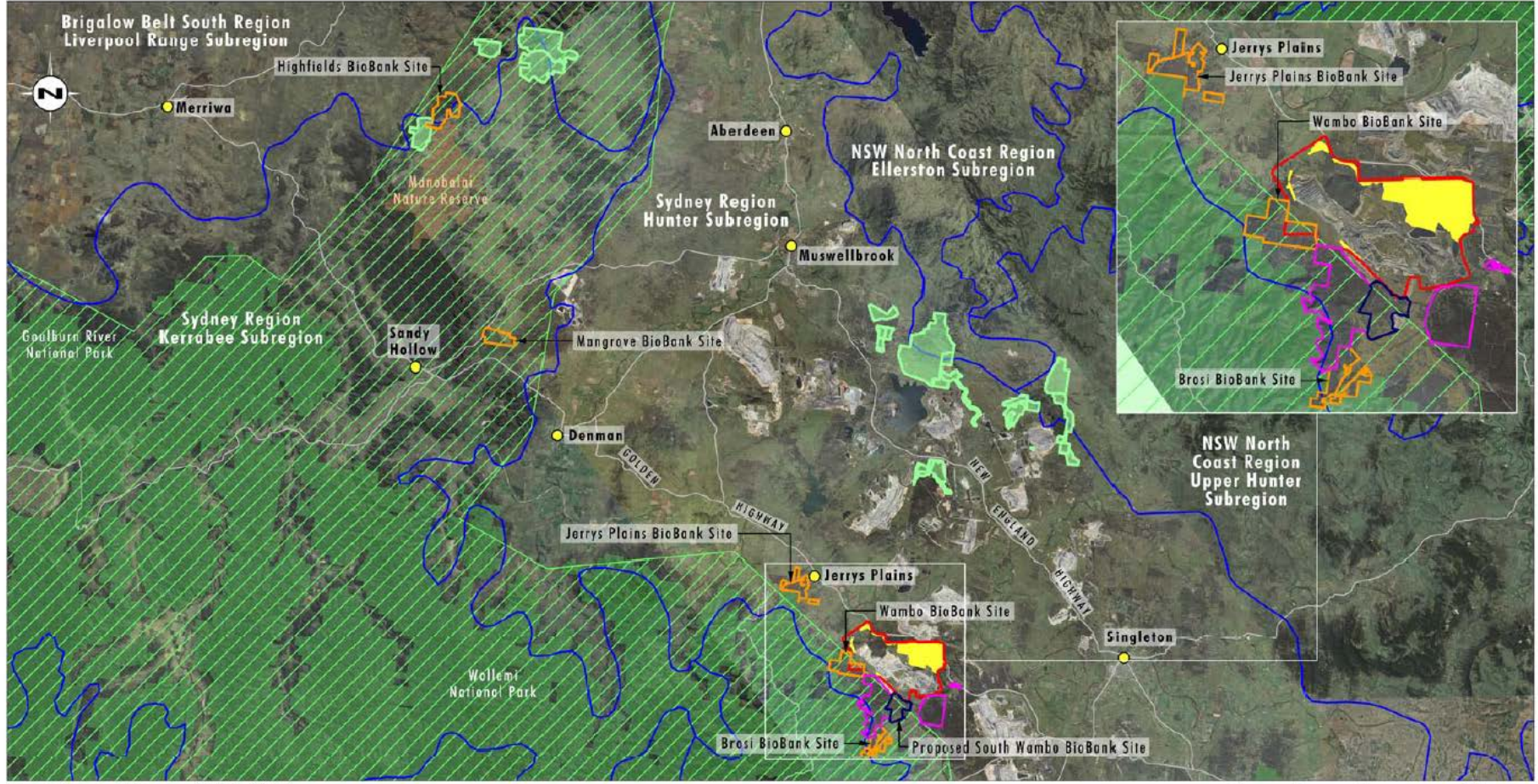


Image Source: Glencore (2008, 2013)
 Data Source: Glencore (2016), Department of Lands (2013)



- Legend**
- ▭ Development Site
 - ▭ Biobank Sites
 - ▭ Conceptual Additional Disturbance Area
 - ▭ Great Eastern Ranges Corridor Initiative
 - ▭ Nature Reserve
 - ▭ National Park
 - ▭ IBRA V7 Region/Subregion
 - ▭ Other Glencore Offsets
 - ▭ Wambo Remnant Woodland Enhancement Program Areas
 - ▭ Proposed South Wambo BioBank Site

Location of Proposed Biodiversity Offset Sites

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- Two final voids **already approved** at Wambo, Project proposes to maintain two final voids - similar size but different location
- Approx. 150Mbcm of material needed, to fill voids, economic cost of eliminating final voids - **\$777 million**
- **\$7 million per ha**; 400 times the cost of buying similar land
- Voids would no longer act as a saline groundwater sink, filling the voids would result in a **12% increase** in salinity in Wollombi Brook

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- Coal has a significant role to play in the energy supply mix alongside renewables well into the future

International Energy Agency - New Policies Scenario which reflects the pledges made under the Paris Agreement

- Global primary energy demand expands by over 25% between now and 2040,
 - without improvements in energy efficiency, the rise could be twice as large
- Continued demand for coal is strong - the fleet of coal fired power stations in Asia is relatively young with a typical life of 50 years plus there is another 81 Giga Watts of coal fired power under construction in South East Asia
- Coal's share of the energy mix declines in percentage terms however in volume terms it will remain exactly the same as it is today - **as existing mines retire brownfield expansions like our project will be required to meet the demand for coal through to 2040 and beyond**

Aspect	Environmental Assessment Requirements	
Land and Soils	Agricultural Land Classification (NSW Agriculture) Gateway - BSAL Assessment Site Verification Certificate received	✓
Air Quality	Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW (EPA) Assessment of National Environment Protection Measure (NEPM) and Environment Protection Authority (EPA) criteria Independent Peer Review DPE Independent Review	✓
Noise	Industrial Noise Policy (Assessment) Noise Policy for Industry (Compare); NSW Road Noise Policy; Rail Infrastructure Noise Guideline Voluntary Land Acquisition and Mitigation Policy (2014 and 2018) Independent Peer Review	✓
Blasting	Technical basis for guidelines to minimize annoyance due to blasting overpressure and ground vibration ANZECC Guidelines	✓

Aspect	Environmental Assessment Requirements	
Biodiversity	Initially under the Upper Hunter Strategic Assessment (UHSA) Interim Policy, changed to Framework for Biodiversity Assessment (FBA) during the RTS Phase	✓
Surface water and Groundwater	NSW Aquifer Interference Policy Information Guidelines for Independent Expert Scientific Committee Hunter River Salinity Trading Scheme ANZECC Guidelines, EPA and DECC Guidelines, Water Sharing Plans, Bluebook Independent Peer Review (Groundwater)	✓
Heritage	The Burra Charter Draft Guidelines Aboriginal Cultural Heritage Consultation Requirements OEH Policies	✓
Economics	NSW Government Guidelines for Economic Appraisal (NSW Treasury 2007) Guidelines for the economic assessment of mining and coal seam gas proposals (NSW Government 2015) Independent Peer Review DPE Independent Review	✓

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- **Brownfields extension providing significant benefit for minimal additional disturbance**
 - Recovering an additional **150M** ROMt from just 17% additional disturbance from the Project Area
 - Doubling the size of the mining workforce – Continued employment for **250** existing Wambo employees, adding another 250 mining jobs and **120** construction jobs
 - Minimises its disturbance footprint by utilisation of the existing Wambo infrastructure
 - Improved final landform incorporating an undulating landscape that is sympathetic with the surrounding topography with **the same number of final voids as already approved**
 - Project is predicted to generate **significant economic benefits** within the NSW contributing \$3 billion to the Gross State Product and generating \$820 million in Government royalties
 - ***The Department of Planning recommends approval of the Project***



END