Whitehaven has investigated various mine plan options and layouts during the development of its preferred mine plan for the Maules Creek Coal Project.

The final mine plan has been developed to minimise potential environmental and social impacts while maximising resource recovery, operational efficiency and compliance with the objects of the Environment Planning and Assessment Act 1979 (EP&A Act) and all relevant planning instruments.

Whitehaven explored all possibilities of sharing infrastructure with adjacent mining operations. As a result, a section of the rail spur which will connect the Maules Creek site to the existing Werris Creek to Mungindi Rail Line, will be codeveloped with Boggabri Coal.

The Coal Resources were estimated by JB Mining Services (JBMS) and the Joint Ore Reserves Committee (JORC) reserves were estimated by Minarco MineConsult using the most recent exploration data. Whitehaven is continually updated the coal reserves with exploration data as it becomes available.

The mine plan was reviewed by JBMS and it is considered to be technically achievable and viable.

The Project Mine Plan was subject to a review by the NSW Planning Assessment Commission who commissioned Emeritus Professor Jim Galvin to make comment on. The NSW Planning Assessment Commission Review Report confirmed that Emeritus Professor Jim Galvin’s report concluded “the mine layout is generally appropriate (and indicates that the mine layout has the flexibility to accommodate any necessary modifications to safeguard environmental values, through the environmental and mining operational management plans).”
Investigation of various mine plans has enabled Whitehaven to confirm that mining of the coal resource can only feasibly occur by adopting open cut mining methods. Conceptual mine planning for an underground mine indicated that underground mining would be uneconomical and would extract only 9.5% of the coal reserves proposed to be extracted by open cut methods.

The NSW Planning Assessment Commission Review Report concluded that "The Commission does not consider there are sufficient grounds to require the proponent to further consider the underground mining option for the currently proposed mining area".

The Maules Creek Coal Project will recover all 15 open cut minable coal seams in the mining sequence, which will maximise the recovery of coal within the existing mining tenements.

The use of modern mining equipment and technologies for the Project will enable mining of the 15 seams to occur safely and efficiently.

Whitehaven has modified its initial mine plans to avoid disturbing more than 100 hectares of the White Box - Yellow Box - Blakely’s Red Gum Woodland and Derived Grassland (Box Gum Woodland) which is listed as a Critically Endangered Ecological Community (CEEC) under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

The Northern Overburden Emplacement Area (OEA) has been designed in light of the following considerations, among others:
- To minimise property acquisitions and disturbances;
- To avoid disturbance to prime agricultural land;
- To minimise disturbance of sensitive vegetation communities;
- To minimise the sterilisation of lower strip ratio coal;
- To provide adequate stand-off from Back Creek to enable appropriate water management; and
- To allow sufficient room for safe and efficient operation of the mining equipment fleet.