Greater Paraburdoo Iron Ore Hub Proposal (Assessment No. 2189)

Interim comments on Response to Submissions – Comments from the Department of Mines, Industry Regulation and Safety (DMIRS).

Table 1: Department of Mines, Industry Regulation and Safety Comments

Item	Topic	DWER Comment	Rio Tinto Response
RTS 41 and 42	Waste characterisation	It is noted that Rio Tinto have provided further information in the form of reports and internal memos to support the information in the Mine Closure Plans for Eastern Range, Western Range and Paraburdoo, and the conclusions presented in the Environmental Review Document (ERD) regarding chemical and physical waste characterisation. The additional information provided covers the shortcomings noted in DMIRS' previous comments such as details of methodologies and sampling locations for geochemical test work. The information provided regarding physical properties of waste materials is comparatively brief. Extrapolating results of physical properties from other sites in the Pilbara has its limitations and future revisions of the Mine Closure Plan (MCP) should refine the understanding of physical properties to be more site specific to the sites in the Greater Paraburdoo area. Furthermore, having the waste characterisation information spread across many reports and internal memos has made the information disjointed, impeding the understanding of the adequacy and robustness of the data, and the implications of the waste characterisation of materials for closure. DMIRS recommends that further revisions of the MCPs should attempt to present such important information in a more coherent manner.	**Noted.** The Proponent acknowledges that information regarding physical properties of waste material is brief relative to detail provided around geochemical data. A strategic project to sample and test additional rock types across Rio Tinto Iron Ore Pilbara operations is currently underway to address the identified limitations. Preliminary findings relevant to Paraburdoo-specific rock types will be available in the Channar Mine Closure Plan (MCP) due for submission to DMIRS in December 2021. Furthermore, the results from the strategic project will be available to support the next update to the Western Range, Paraburdoo and Eastern Range MCPs. The Proponent's MCP template has been refined in accordance with the DMIRS' 2020 *Statutory Guidelines for Mine Closure Plans*. The revised template presents waste characterisation data in an improved and more consolidated manner to support the closure strategies proposed for implementation. Future iterations of MCPs will utilise the updated template.

Appendix 23	Progressive Rehabilitation Summary	The Progressive Rehabilitation Summary (PRS) provides a deeper insight into the research and rehabilitation activities that Rio Tinto has undertaken in the Greater Paraburdoo area. The PRS covers Rio Tinto's approach to progressive rehabilitation; the research and development being undertaken; the monitoring programme; and provides examples of different areas and levels of rehabilitation undertaken. DMIRS has previously asked for this information to be included in Rio Tinto's Annual Environmental Reports. Rio Tinto describe their approach to rehabilitation as undertaking on-ground rehabilitation work, research and development and considering closure outcomes upfront in operational planning. Rio Tinto has standard procedures for rehabilitation, and these are reviewed to incorporate lessons learnt and advances in industry standards. The areas of research on alternative growth media, eco-engineering solutions (e.g., seed enhancement and seeding practices) and acceptable rates of erosion capture are some of the key areas that can have an instrumental influence on the success of rehabilitation projects. With regard to the scale of rehabilitation, it appears that for the Greater Paraburdoo region, there will be an area of 5,300 hectares (ha) disturbed during the mining phase (1,500 ha + 2,900 ha + 900 ha). Mine voids will comprise 1,823 ha, leaving an area of 3,477 ha to be rehabilitated. So far Rio Tinto report that 275 ha have been rehabilitated which represents 7.9% of the area to be rehabilitated once the area is no longer required for mining purposes. It is not known whether "rehabilitated" means that completion criteria have been met, or whether rehabilitation works have been undertaken and the site is still being monitored to evaluate the trajectory towards meeting completion criteria. The high-level overview of the monitoring programme provided some background to the approach taken with early-stage monitoring results for the low, moderate, and high impact examples described in Section 5 considered useful. Monitoring appears to have occurred from 2015 only with some examples not showing positive trends. Establishment of self-sustaining ecosystems takes many years, particularly in challenging environments such as the Pilbara, hence the need to commence rehabilitation as early in the mine life as is possible to allow the time needed for rehabilitation to occur. Ongoing reporting of the progression of monitoring of all areas under rehabilitation and the associated interpretation of results in future Annual Environmental Reports will be important for the ongoing evaluation of rehabilitation occurring at Rio Tinto's mining operations. Whilst Rio Tinto has experienced variable success in their rehabilitation efforts in the past, it is encouraging to see that the company is "taking stock" and making the necessary improvements in their iron ore operations in the Greater Paraburdoo region. It appears that Rio Tinto are changing practices to incorporate better quality control; undertaking research to be better informed for decision making; ensuring rehabilitation is progressive during the life of the mine rather than leaving rehabilitation to the post-mining stage; and sharing monitoring results. These changes not only make good business sense but will also lead to better environmental outcomes by enabling learning opportunities to continuously improve.	**The Proponent thanks DMIRS for their comments on the progressive Rehabilitation Summary.** The Proponent will ensure that the definition of "rehabilitated" is clarified based on the scenario being addressed in subsequent versions of the Progressive Rehabilitation Summary. The Proponent documents ongoing rehabilitation progress in internal rehabilitation completion reports and an annual rehabilitation monitoring program (the program). The objective of the program is to evaluate successional development of the rehabilitation and thereby provide feedback for the improvement of rehabilitation techniques, and to help assess progress towards long term rehabilitation goals. The progression of rehabilitation is reported externally in accordance with individual Project approval requirements. For existing Projects, (e.g. Paraburdoo and Eastern Range) rehabilitation progress is reported in the Triennial Environment Report (TER) for the *Iron Ore (Hamersley Range) Agreement Act 1963* (WA) (Hamersley Range State Agreement), as well as in updates to respective MCPs (in accordance with DMIRS requirements). The Proponent will consider ongoing reporting of the progression of monitoring of all areas under rehabilitation and the associated interpretation of results in future Annual Environmental Reports. Rehabilitation for the Proposal will be reported within the Annual Environmental Report if required.