

Appendix H

Policy and Guidance used to inform the Iron Valley Below Water Table Proposal

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This Appendix details the specific policy and guidelines as stated in the Environmental Scoping Guideline for the Iron Valley Below Water issued 5 July 2016, and explains how the policy is relevant to the proposal and how the proposal has considered the policy. The table has been categorised into the key environmental factors as they appear in the environmental review document.

Table 24 Policy and Guidance

Applicable policy	Considerations	Rationale in meeting policy
Development of the API-A Environmental review document		
Environmental Assessment Guideline for Defining the Key Characteristics of a Proposal (EAG 1) (EPA 2012).	This EAG is relevant to the preparation of the key characteristics table included in the BWT ER document.	The proposal has incorporated the level of detail identified within the guidance and applied it to Section 1.2 of the ER, but also Table 2, Table 3 and Table 4
Environmental Assessment Guideline for Preparation of an API – Category A Environmental Review Document (EAG14a) (EPA 2015).	This EAG addresses the preparation of an ER document for an API-A level of assessment. The entire guidance is relevant to the BWT proposal.	This API-A ER document has applied all aspects of the guidance in its preparation, which is guided by the suggested table of contents included in the guidance.
Environmental Assessment Guideline for Environmental principles, factors and objectives (EAG 8) (EPA 2015b).	The relevance of EAG8 to the BWT proposal focusses on the definitions of the environmental factors that are relevant to the proposal. The EAG8 also provides the EPA's framework for environmental principles, factors, objectives and guidance.	The proposal has applied the guidance in the following way: The environmental principles of the <i>Environmental Protection Act 1986</i> are assessed in section 7.0 of the ER The relevant key environmental factors for the BWT proposal have been taken from those provided in section 3 of the guidance. These outline the objectives required for each factor and by doing so provide the scope of the assessment. As described in Section 4 the onus is on the proponent to demonstrate through the EIA documentation that the proposal is consistent with the principles and can meet the objective for each relevant environmental factor. This is acknowledged and is included throughout Section 5 of this ER.
Environmental Assessment Guideline	This guidance describes how the EPA considers assessments and derives decisions, on the likely significance of impacts of a	The ER has acknowledged the framework under which proposals are assessed. This is applied throughout the preparation of the document and the derivation of the

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for Application of a significance framework in the environmental impact assessment process (EAG9) (EPA 2013b)	proposal using a risk based approach. This guideline is applicable to the approach of the impact assessment and the preparation of the studies and final documentation.	impacts for each of the key environmental factors applicable to BWT. Section 5 of the guidance has been applied in full <ul style="list-style-type: none"> a. BCP has engaged with the OEPA in pre-referral discussions b. BCP submitted a near complete referral as part of the S38 process, complete with technical studies based on pre-referral discussions c. Scope is limited to those key environmental factors d. Tables have been provided which set out the potential impacts and management measures for each aspect affecting the key factor, and e. Section 8.2 shows pictorially how the framework has been applied to the BWT proposal.
Cumulative environmental impacts of development in the Pilbara region (EPA 2014) Section 16e of EP Act 1986	The guidance provides information on the importance of future looking strategies which cover cumulative impacts within the Pilbara. The relevance to the BWT proposal relates to the activities of vegetation clearing, pit lakes and aquifer dewatering and discharge to surface and impacts to aquatic ecosystems including GDVs.	The EIA for BWT examined cumulative impacts associated with the water environment. The study modelled a number of scenarios as directed through consultation with the DoW and OEPA, and focussed on upstream mine water discharges from RTIO's Yandicoogina Pockets and Billiards Expansion Proposal identified as a reasonably foreseeable project at the time of preparation. The combined effects of both the BWT and the RTIO expansion are discussed in terms of water quantity, and the secondary effects on flora and vegetation and fauna habitat in Appendix B1, Appendix C1 and Appendix D1,D2 and section 5.3, 5.5, 5.6 of the ER. Cumulative impacts from vegetation clearing were not assessed because the extent of the clearing, while minor, is covered by offsets related to the Pilbara offset fund, which also features as part of this guidance. Additionally, pit lakes were not assessed cumulatively for the BWT proposal. Two of the four pits will be backfilled because they were identified as hydrogeological sinks. The remaining two pits will not be backfilled as they are identified as sitting within a groundwater gradient, making them through flow lakes, therefore unlikely to develop into contaminating sources.
EPA policy guidelines for hydrological processes Position Statement 4 (environmental protection of wetlands)	The guidance provided by PS4 is relevant to the BWT proposal given the presence of WWC adjacent to the project tenement, which falls under the definition of Wetlands in the guidance. PS4 outlines the EPA principles for the environmental protection of Wetlands. The principles applied by PS4 are in Section 4 of the guidance. These include those of ecological sustainable	Weeli Wolli Creek is the defined wetland adjacent to the BWT project area. It is a modified system as described in the ER due to the various upstream mining developments that contribute to the surface water through dewatering discharge. The assessment includes a discussion in Appendix C1 (GDV and Riparian Vegetation) and section 5.5 as well as Appendix B1 and Section 5.3 and 5.4 about the relative modifications to the vegetation upstream that is a consequence of

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<p>(EPA 2014b)</p>	<p>development (Principles of Environmental Protection which are applied to the project in section 7.0 of the ER document. The other relevant principles applied to BWT are:</p> <ul style="list-style-type: none"> a. Protect the environmental values and functions of wetlands in Western Australia; b. Protect, sustain and, where possible, restore the biological diversity of wetland habitats in Western Australia; c. Protect the environmental quality of the wetland ecosystems of Western Australia through sound management in accordance with the concept of "wise use" in the Ramsar Convention, and ecologically sustainable development principles, regardless of land use or activity d. Have as an aspirational goal no net loss of wetland values and functions. e. Ecological sustainable development f. Wise use concept g. Ecosystem management approach h. Intergenerational equity, and i. Precautionary principle 	<p>additional water to the Marillana and WWC system. These consequences may result in flourishing as well as decline of vegetation associated with the River and is already evident upstream from BWT.</p> <ul style="list-style-type: none"> a. The assessment for BWT has identified GDV and riparian vegetation function and the habitat which it supports as its key values which are extensively found in the Marillana creek and WWC systems. The project has included stepped discharge changes, minimisation of dewatering effects through responsive recharge as well as proposed quality and quantity trigger values which would be developed and applied as part of the Part V assessment. These mitigation and management features are included in Table 9 of the ER. b. As per a. above, the progressive return of WWC to an ephemeral creek system is predicted as the water regimes return to pre-proposal conditions. c. The measures to mitigate and manage the change on WWC as part of the BWT meet the Wise use concept of the guidance, which is to use the wetland for human use while maintaining the ecological function of the wetland. d. A return of the key environmental values is an expected outcome from this assessment. e. As per b. above f. As per c above g. As part of the proposal, monitoring will be included for water quality of discharge as well as within WWC (including SSTVs for the WWC receiving environment). Water quantity of discharge, groundwater level changes over time, periodic and ongoing GDV health assessments based on current techniques but with expanded scope). These will be implemented to monitor the ecosystem function of WWC. h. Assessed as part of section 7.0 of this ER. The monitoring and mitigation proposed in the ER are designed to maintain the principle of Inter-generational equity, through the recovery of the ecosystem function as water levels from the BWT and others further upstream return to pre-proposal states. i. Assessed as part of section 7.0 of this ER, the precautionary principle is applied to the scope of the baseline studies, and the conservative extent of the management measures. This is to ensure that where gaps in scientific knowledge may exist, the management measures adequately cover the broader extent of the potential impact.

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<p>EPA Report 1484, Environmental and Water assessments relating to mining and mining-related activities in the Fortescue Marsh management area (EPA 2013)</p>	<p>The guidance provided by Report 1484 applies to the Fortescue Marsh Management area and is zoned according to the environmental values in that area. The BWT project sits on the fringe of the Management Zone 2b (Poonda Plain) approximately 40km to the south of the marsh.</p> <p>The relevance of the guidance to this environmental factor (Hydrological processes is included in the management objectives relating to management area 2b Poonda plains:</p> <ul style="list-style-type: none"> a. Maintain the natural flow regime at the boundary between Northern Flank and Marsh zones b. Maintain the natural flow regime of tributaries entering the marsh, and c. Protect the hydrological and ecological integrity of major tributaries entering the marsh. <p>Relevant strategies to the 2b management zone include:</p> <ul style="list-style-type: none"> a. Excess water should be managed in accordance with the Department of Water’s Pilbara Water in Mining Guideline 	<p>The assessment on hydrological processes impacts from the BWT proposal are provided in Section 5.3 of the ER document, supported by Appendix B1 technical studies completed by AQ2. Consultation with the DoW throughout the project is included in Table 5 of the ER document, outlining the potential areas of concern and actions taken regarding impacts to water.</p> <p>With specific reference to the EPA Report 1484, the following is BCPs rationale for meeting the intent of the guidance and the points highlighted in the adjacent column for hydrological processes management objectives.</p> <ul style="list-style-type: none"> a. Maintenance of the natural flow regime at the boundary between Northern Flank and Marsh zones is not applicable to the geographic location and extent of changes likely to occur as a result of the BWT proposal. b. As outlined in Section 5.3 of the ER document, the BWT proposal sits within a catchment which represents 1.6% of the Weeli Wolli catchment. The design of the project has allowed for an exclusion zone between southern WRLs to facilitate the movement of water to WWC during high rainfall events. Water captured by the pits during operation will be pumped and discharge to WWC as part of the dewatering exercise. Following closure, the site will not represent a significant portion of the WWC catchment and will not significantly intercept surface or groundwater flows. This is considered not to affect the flow regime of tributaries entering the marsh, and c. The proposal has dewatering and discharge impacts on the hydrological and ecological values in the vicinity of the mine during the 10 year mine life. The conclusions reached by the modelling, which was reviewed by DoW as part of the consultation process, found that the surface water was likely to return to pre-proposal conditions within two years of ceasing dewatering pumping, while the groundwater would take approximately 10 years to return. The flora and vegetation studies into the effects on GDV and riparian vegetation found that given the extent of GDV and riparian vegetation in the WWC and Marillana creek systems, natural recovery was expected. <p>Management strategies considered relevant</p> <ul style="list-style-type: none"> a. These DoW guidelines have been applied in the management and mitigation measures presented in the ER. These are elaborated on within the Mining proposal and will be refined to inform the discharge licence and dewatering permits for the project.

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	<p>(2009).</p> <ul style="list-style-type: none"> b. Apply an independent peer review of hydrological models to support water and environmental assessments. The review should be consistent with National Water Commission’s Australian Groundwater Modelling Guidelines (2012). c. Ensure that any change to the rate and timing of seasonal discharges to the tributaries do not significantly alter their hydrological and ecological integrity. d. Avoid locating infrastructure on or in close proximity to major Marsh tributaries. e. Ensure that groundwater drawdown does not lead to the loss of riparian vegetation (such as Coolibah) along major tributaries. f. Undertake research to determine the extent of cumulative hydrological impacts on the Marsh 	<ul style="list-style-type: none"> b. DoW reviewed the groundwater numerical model as part of the consultation process c. Discharge will be continuous via a three different discharge points. The rates will fluctuate over time dependent on the mine plan, but not exceed the 17GL/annum predicted. d. The tenement and infrastructure is small in scale. The disturbance footprint lies outside the 1:100 ARI for WWC, and surface water infrastructure is designed to enable recharge to groundwater or through flow to WWC from the rangelands to the west of the site. e. The drawdown associated with the BWT proposal will be ameliorated by the recharge along the East Fault which links to WWC, as well as the groundwater mounding provided by the discharge locations. The study on riparian vegetation has demonstrated that some adverse impacts to riparian vegetation and GDVs as well as areas that may flourish given the availability of water were likely as a result of the project, but the extent of the vegetation on the WWC and Marillana creek systems indicated that system recovery was likely, and f. A cumulative impact assessment is included in the ER as part of the hydrogeological studies, the findings of which are included in the flora and vegetation section (5.5) as well as the terrestrial and aquatic fauna sections (5.6) of the document. This cumulative impact assessment includes the scenarios of RTIO’s Yandicoogina Pockets and Billiards Expansion Proposal. Given the distance between BWT proposal and Yandicoogina, the main influence was additional discharge and the presence of surface water in WWC adjacent to the Iron Valley tenement.
<p>EPA policy guidelines for hydrological processes Position Statement 4 (environmental protection of wetlands) (EPA 2004b)</p>	<p>The guidance provided by PS4 is relevant to the BWT proposal given the presence of WWC adjacent to the project tenement, which falls under the definition of Wetlands in the guidance. PS4 outlines the EPA principles for the environmental protection of Wetlands. The principles applied by PS4 are in Section 4 of the guidance. These include those of ecological sustainable development (Principles of Environmental Protection which are applied to the project in section 7.0 of the ER document. The other relevant principles applied to BWT are:</p> <ul style="list-style-type: none"> a. Protect the environmental values and functions of wetlands 	<p>Weeli Wolli Creek is the defined wetland adjacent to the BWT project area. It is a modified system as described in the ER due to the various upstream mining developments that contribute to the surface water through dewatering discharge. The assessment includes a discussion in Appendix C1 (GDV, Riparian Vegetation and aquatic fauna) and section 5.5 as well as Appendix B1 and Section 5.3 and 5.4 about the relative modifications to the vegetation upstream that is a consequence of additional water to the Marillana and WWC system. These consequences may result in flourishing as well as decline of vegetation associated with the River and is already evident upstream from BWT.</p> <ul style="list-style-type: none"> a. The assessment for BWT has identified GDV and riparian vegetation function

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	<p>in Western Australia;</p> <ul style="list-style-type: none"> b. Protect, sustain and, where possible, restore the biological diversity of wetland habitats in Western Australia; c. Protect the environmental quality of the wetland ecosystems of Western Australia through sound management in accordance with the concept of "wise use" in the Ramsar Convention, and ecologically sustainable development principles, regardless of land use or activity d. Have as an aspirational goal no net loss of wetland values and functions. e. Ecological sustainable development f. Wise use concept g. Ecosystem management approach h. Intergenerational equity, and i. Precautionary principle 	<p>and the habitat which it supports as its key values which are extensively found in the Marillana creek and WWC systems. The project has included stepped discharge changes, minimisation of dewatering effects through responsive recharge as well as proposed quality and quantity trigger values which would be developed and applied as part of the Part V assessment. These mitigation and management features are included in Table 9 of the ER.</p> <ul style="list-style-type: none"> b. As per a. above, the progressive return of WWC to an ephemeral creek system is predicted as the water regimes return to pre-proposal conditions. c. The measures to mitigate and manage the change on WWC as part of the BWT meet the Wise use concept of the guidance, which is to use the wetland for human use while maintaining the ecological function of the wetland. d. A return of the key environmental values is an expected outcome from this assessment. e. As per b. above f. As per c above g. As part of the proposal, monitoring will be included for water quality of discharge as well as within WWC (including SSTVs for the WWC receiving environment). Water quantity of discharge, groundwater level changes over time, periodic and ongoing GDV health assessments based on current techniques but with expanded scope). These will be implemented to monitor the ecosystem function of WWC. h. Assessed as part of section 7.0 of this ER. The monitoring and mitigation proposed in the ER are designed to maintain the principle of Inter-generational equity, through the recovery of the ecosystem function as water levels from the BWT and others further upstream return to pre-proposal states. i. Assessed as part of section 7.0 of this ER, the precautionary principle is applied to the scope of the baseline studies, and the conservative extent of the management measures. This is to ensure that where gaps in scientific knowledge may exist, the management measures adequately cover the broader extent of the potential impact.
<p>Guidance statement 51 – Terrestrial flora and vegetation surveys for EIA in WA (EPA 2004)</p>	<p>Guidance statement 51 provides guidance and information on expected standards and protocols for terrestrial flora and vegetation surveys conducted for environmental impact assessment in Western Australia. It is relevant to the BWT proposal as it provides guidance on</p>	<p>The baseline flora surveys for AWT are used to inform the BWT proposal. The AWT has been approved as were the methods of surveying for that project. The follow up work for flora included desktop surveys and application of the baseline to the areas which require clearing within the development envelope. The new survey work undertaken for flora was for riparian and groundwater dependent vegetation</p>

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	<ul style="list-style-type: none"> a. The quality and quantity of information that should be derived from these surveys as well as consequent data analysis, interpretation and reporting. b. Determining which level is suitable for a particular project based on the bioregion as well as the scale and nature of potential project impacts. c. Two key overarching aspects of survey: <ul style="list-style-type: none"> i. Planning and design of flora and vegetation surveys ii. Presentation and reporting. 	<p>undertaken by Astron botanists. The protocols detailed in this guide have been applied to all AWT and BWT flora and vegetation survey work. The guidelines have been applied to the project as follows</p> <ul style="list-style-type: none"> a. Field surveys were coordinated and led by botanists with considerable experience in conducting flora and vegetation surveys in the Pilbara region. Specimen identification was conducted by trained and experienced personnel and augmented by specialist taxonomists where necessary. Limitations of the survey have been identified in the relevant technical report as well as Section 4.0 of the ER b. The studies include a Level 2 flora and vegetation survey across the entire iron Valley Mining tenement and 17 hectares of Exploration Lease in accordance with requirements of a Level 2 survey (Appendix 2 of GS51). This survey was supplemented by a Groundwater Dependent Ecosystem Investigation undertaken in the expected area of groundwater drawdown associated with BWT mining. c. <ul style="list-style-type: none"> i. Section 3.2.4 of GS51, field surveys were undertaken in two seasons following peak rainfall. One field survey was undertaken during the main flowering season for the survey area (April, during the summer wet season) and another in a different season (August, during the winter dry). Sampling intensity was considered appropriate for the size and topographical variation of the survey area. ii. The results of these surveys have been used to inform the impact assessment for terrestrial flora and vegetation contained in Section 5.5 of the ER. Survey reports have been prepared in accordance with guidance contained in sections 3.3.2 to 3.3.9 of GS51 and are included as Appendix C2 of the ER.
<p>Technical Guide – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA 2015)</p>	<p>This Technical Guide allows for adequate data to be collected relating to flora and vegetation obtained for environmental impact assessment and is therefore relevant. The relevant aspects of the Technical Guide are:</p> <ul style="list-style-type: none"> a. Preparation for survey, including licensing requirements b. Levels of survey c. Survey design d. Sampling techniques 	<p>The flora and vegetation surveys undertaken for the ER pre-date this Technical Guide, however, the intent of the policy as well as many of the specific requirements have been met in the following ways:</p> <ul style="list-style-type: none"> a. In accordance with Section 2.0 of the Technical Guide, the Level 2 field surveys were coordinated and led by botanists with knowledge and experience in flora and vegetation surveys in the Pilbara Region. All required collection licenses and land access permissions were in place at the time of survey. b. A Level 2 flora and vegetation survey was undertaken in accordance with

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	<ul style="list-style-type: none"> e. Specimen collection and identification f. Vegetation classification and description g. Mapping h. Reporting. 	<p>Section 3.3 of the Technical Guide.</p> <ul style="list-style-type: none"> c. Survey design incorporated key advice contained within Section 4.0 of the Technical Guide. Survey intensity was 1 quadrat/15 ha, which was considered likely to have comprehensively represented all discrete units of vegetation, topography and soil type present. The primary survey was undertaken during the optimal survey time for the area, following peak summer rainfall in April. Methodology is described in the flora and vegetation technical report appended in Appendix C2. d. A combination of quadrats, relevés and opportunistic sampling techniques were used during the surveys, consistent with recommendations of Section 5.0 of the Technical Guide. e. Where required, plant specimens were collected and later identified by experienced botanists and taxonomists in accordance with requirements of Section 6.0 of the Technical Guide. f. Vegetation of the survey area was classified using the NVIS information hierarchy consistent with the requirements of Section 7.3 of the Technical Guide. g. Mapping of vegetation values was undertaken and relevant maps have been included in both the ER document and technical reports provided in Appendix C2. h. In accordance with the guidance contained in Section 9.0 of the Technical Guide, the survey reports contained in Appendix C2 contain the relevant information to meet the objectives of the surveys including information on methodology, results, discussion and conclusions.
<p>Position Statement 2 – Environmental protection of native vegetation in WA (EPA 2000)</p>	<p>The relevance of PS2 to the Iron Valley BWT proposal relates to the principles of native vegetation clearing as the EPA focusses on these principles, related objectives and actions as set out in the National Strategy for the Conservation of Australia’s Biological Diversity. The principles that are relevant to this proposal are set out in Section 4.3 of PS2.</p> <ul style="list-style-type: none"> a. A comparison of development scenarios, or options, to evaluate protection of biodiversity at the species and ecosystem levels, and demonstration that all reasonable steps have been taken to avoid disturbing native vegetation. 	<p>The assessment detailed in Section 5.5 and Appendix C2 demonstrate that clearing required in relation to the BWT proposal is environmentally acceptable because:</p> <ul style="list-style-type: none"> a. The project design has undergone a number of iterations through the impact assessment process. The disturbance area has been limited to an additional 314 ha. The project design has been able to limit its additional clearing by maximising the operations within the already approved AWT clearing area. Additional considerations now included in the design that have reduced the required clearing are: <ul style="list-style-type: none"> i. The design provides for an exclusion zone corridor to retain habitat along the southern watercourse allowing for water and fauna flow between the

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	<ul style="list-style-type: none"> b. No known species of plant or animal is caused to become extinct as a consequence of the development and the risks to threatened species are considered to be acceptable. c. No association or community of indigenous plants or animals ceases to exist as a result of the project. d. There would be an expectation that a proposal would demonstrate that the vegetation removal would not compromise any vegetation type by taking it below the “threshold level” of 30% of the pre-clearing extent of the vegetation type (see Section 3). e. Where a proposal would result in a reduction below the 30% level, the EPA would expect alternative mechanisms to be put forward to address the protection of biodiversity. f. There is comprehensive, adequate and secure representation of scarce or endangered habitats within the project area and/or in areas which are biologically comparable to the project area, protected in secure reserves. g. If the project area is large (and what is meant by large will vary depending on where in the State) the project area itself should include a comprehensive and adequate network of conservation areas and linking corridors whose integrity and biodiversity is secure and protected. h. The on-site and off-site impacts of the project are identified and the proponent demonstrates that these impacts can be managed. 	<ul style="list-style-type: none"> ii. The landfill and tailings cells will be integrated into the WRLs maximising available space and minimising clearing. b. No TECs, PECs, or Threatened flora species will be affected by the Proposal as none have been recorded within the defined Proposal area. c. All vegetation associations are known to exist outside the clearing area d. No clearing as part of the BWT proposal exceeds the 30% threshold level e. As per d. above f. No scarce or endangered habitats occur within the proposed clearing area g. Even though the clearing of 314 ha for the BWT proposal is not considered large in the Pilbara region of WA an access habitat corridor has been incorporated into the design, linking WWC to the elevated topography to the west. The clearing of 314 ha of good to excellent vegetation is incorporated into the offsets package as described in section 5.9 of the ER document. h. The current design and its effects on clearing of vegetation are considered adequate to manage onsite and offsite vegetation impacts, as described in Table 13 and Section 5.5.
<p>Position statement 3 – Terrestrial biological surveys as an element of biodiversity protection (EPA 2002)</p>	<p>The relevance of PS3 to the Iron Valley BWT proposal relates to the biodiversity protection as well as the requirements for terrestrial biological surveys EIA in WA. The overarching principles which form the basis of the EPAs expectations when assessments are being undertaken are outlined in Section 3 of PS3, the ones relevant to the BWT proposal include:</p> <ul style="list-style-type: none"> a. The EPA expects proponents to demonstrate in their proposals that all reasonable measures have been undertaken to avoid impacts on biodiversity. Where some 	<p>The assessment detailed in Section 5.5 and Appendix C2 demonstrate that the studies undertaken meet the overarching principles of PS3 as follows:</p> <ul style="list-style-type: none"> a. There are no TECs, PECs or threatened flora species to be adversely affected by the proposal. Vegetation complexes are known to exist outside the project areas identified for clearing. The areas of good to excellent vegetation that will be lost is the practical minimum to enable the mine to function. Minimum impacts on flora and vegetation has been included in the project design by inclusion of integrated TSF within WRLs, design of an exclusion zone / habitat corridor and backfilling pits. Offsets are proposed for good to excellent

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	<p>impact cannot be avoided, the proponent must demonstrate that the impact will not result in unacceptable loss.</p> <p>b. Information gathered for EIA must meet State, national, and international agreements, legislation and policy in regard to biodiversity conservation</p> <p>c. The EPA requires that the quality of information and scope of field surveys meets the standards, requirements and protocols as determined and published by the EPA.</p> <p>d. The EPA will use the Interim Biogeographic Regionalisation of Australia (IBRA) as the largest unit for EIA decision-making in relation to the conservation of biodiversity.</p> <p>e. The EPA expects proponents to ensure that terrestrial biological surveys provide sufficient information to address both biodiversity conservation and ecological function values within the context of the type of proposal being considered and the relevant EPA objectives for protection of the environment.</p> <p>f. The EPA expects that terrestrial biological surveys will be made publicly available and will contribute to the bank of data available for the particular region, to aid the overall biodiversity understanding and assessment by facilitating transfer into State biological databases.</p>	<p>vegetation that cannot be avoided. Offsite impacts to Riparian and groundwater dependent vegetation has been assessed. These impacts have been mitigated through positioning of the dewater discharge locations and planning of the pumping schedule for the pits in the mine plan. Some impact to these indicator species is inevitable, however recovery is predicted. BCP considers that these features integrated into the BWT proposal will not lead to unacceptable loss.</p> <p>b. The policies regarding monitoring and survey techniques and the protection of biodiversity have been adhered to, as per the entries in this table, and the content of Appendix C2.</p> <p>c. The flora and vegetation assessment covers desktop elements and database searches followed up with onsite field surveys to establish existence of priority flora and communities relevant to the BWT proposal covering the mining tenement area. Additionally, GDV and riparian vegetation was risk assessed based on the existing extent of this vegetation and the predicted drawdown, mounding and surface water presence that is likely to result from the BWT proposal. The flora and vegetation investigations were undertaken by professional botanists. See Appendix C1, C2.</p> <p>d. IBRA has been used as the basis for impact assessment, in line with the requirements of the sensitivity of the Pilbara IBRA region as shown in Table 1 of PS3.</p> <p>e. The flora and vegetation assessment Appendix C2, covers priority species and ecological function as a measure of vegetation complexes/communities. These are then used by the vertebrate fauna studies to determine the impact on specific species included in the survey. The outcomes of the assessment are applied to the EPA objective for flora and vegetation Table 13 of the ER document).</p> <p>f. The biological survey data will be made publically available as part of this approvals process.</p>
<p>EPA Report 1484, Environmental and</p>	<p>The Poonda Plain zone 2b of the Fortescue Marsh Management area includes Sand dune communities as the environmental</p>	<p>The ER found that there were no Sand Dune Communities present within the flora and vegetation study area for the proposal. Additionally, no TECs, PECs or</p>

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Water assessments relating to mining and mining-related activities in the Fortescue Marsh management area (EPA 2013)	value related to flora and vegetation.	threatened flora species were recorded within the defined proposal area.
Guidance statement 20 – sampling of short range endemic invertebrate fauna for EIA in WA (EPA 2009)	<p>Guidance is provided on information and survey requirements in relation to short range endemic fauna, and how results should be analysed for environmental impact assessment purposes, outlined in section 3 of the guidance.</p> <p>The relevance of the guidance to the proposal is as follows:</p> <ol style="list-style-type: none"> a. Application of the guidance to assessments <ol style="list-style-type: none"> i. The need to consider SRE ii. Achieving desired outcomes b. Approaches to survey design c. Sampling considerations <ol style="list-style-type: none"> i. When to sample ii. How to sample d. Preservation and lodgement of specimens e. Specimen identification and analysis f. Reporting standards 	<p>Short range endemic species have been studied for the Iron Valley Project, both for the entire tenement level 2 survey for AWT as well as a follow up data base search and DNA analysis for BWT. The AWT study resulted in a potential SRE being identified only within the proposed disturbance area. The area was not cleared for AWT. During the BWT assessment DNA testing confirmed the species not to be short range endemic. This is outlined in section 5.6 of the ER and the original technical reports provided in Appendix D3.</p> <p>The guidance has been applied as follows:</p> <ol style="list-style-type: none"> a. <ol style="list-style-type: none"> i. Clearing of native vegetation was the key to considering SREs at Iron Valley ii the inconclusive nature of the species identified in an area requiring clearing prompted the use of DNA analysis b. discussions were undertaken with DPaW regarding the survey design c. <ol style="list-style-type: none"> i Limitation; study was conducted just outside the ideal season, however, this was discussed with DPaW and returned positive sampling results in AWT. ii The sampling was undertaken through targeted pitfall traps. d. Specimens were lodged to the WA museum e. Juvenile species from site survey could not conclusively identified, leading to DNA analysis for confirmation f. Reporting incorporated the required content as set out in section 3.6 of the guidance.
Guidance statement 56 – terrestrial fauna surveys for EIA in WA (EPA 2004c)	<p>This guidance statement is relevant to BWT proposal because it covers the general standards and a common framework for terrestrial fauna and fauna assemblages for EIA in WA, such as the quality and quantity of information derived from these surveys, and the consequent analysis, interpretation and reporting.</p> <p>The guidance (section 3) specifically relates in the following</p>	<p>The baseline fauna surveys for AWT are used to inform the BWT proposal. The AWT has been approved as were the methods of surveying for that project. The follow up work for fauna included desktop surveys for SRE, vertebrate fauna, with the new sampling activity relating to aquatic systems of WWC and a baseline survey carried out by WRM consultants and Subterranean fauna. The results of these surveys form the basis and assessment of section 5.6 of the ER and are found in Appendix D1, D2, D3 and D4.</p>

Applicable policy	Considerations	Rationale in meeting policy
	areas: a. Planning and design of fauna and faunal assemblage surveys including levels and extent of survey, survey design and intensity b. Presentation and reporting including limitations of the survey and data analysis	a. The surveys were undertaken for the entire tenement for AWT with a desk top extrapolation of habitats to the vicinity of WWC for BWT. The studies were undertaken during appropriate seasons by trained professional ecologists and were done in consultation of DPaW expectations. The species identified were surveyed during the appropriate season, and reference to flora and vegetation and thus faunal assemblages and land systems (providing representation outside of the project area) is a key part of the reporting. b. Presentation of the reports and their limitations are included in Appendix and outlined in Section 4 of the ER.
Technical guide on terrestrial vertebrate surveys for EIA (EPA 2010)	This guide is specific to terrestrial vertebrate fauna. It provides advice on fauna sampling techniques and methodologies for different regions of the State and the analysis interpretation and reporting requirements for EIA. It is therefore relevant to the BWT proposal. The relevant aspects of the Technical Guide are: a. Preparation for survey, including licensing requirements b. Levels of survey c. Sampling techniques d. Survey design e. analysis f. Reporting.	The baseline fauna surveys for AWT are used to inform the BWT proposal. The AWT has been approved as were the methods of surveying for that project. The follow up work for fauna included desktop surveys for SRE, vertebrate fauna, with the new sampling activity relating to aquatic systems of WWC and a baseline survey carried out by WRM consultants and Subterranean fauna. The protocols detailed in this guide have been applied to all AWT and BWT fauna survey work. The results of these surveys for the basis and assessment of section 5.6 of the ER and are found in Appendix D1, D2, D3 and D4. Specifically, the following aspects of the guidance have been applied to the proposal. a. Where necessary, additional surveys usually targeted surveys have been undertaken to confirm currency of previous findings. Each of the studies were undertaken by trained, licenced, professional ecologists, experienced for the task. Survey areas and protocols were discussed with DPaW for adequacy and robustness. b. Levels and extent of surveys were based on outstanding information following preliminary desktop assessments. These formed the scope and level of the field work. This has been in accordance with Guidance statement 56 as referenced in the technical guide. c. Relevant sampling techniques appropriate to the fauna species of interest were used, with specific relevance to timing and duration. Where timing deviated from the preferred timing, this has been identified as a limitation of the study d. As per a. above e. Assessment of data veracity and effectiveness has been included in the technical reports, with limitations stated where they necessary.

Applicable policy	Considerations	Rationale in meeting policy
<p>Position statement 3 – Terrestrial biological surveys as an element of biodiversity protection (EPA 2002)</p>	<p>The relevance of PS3 to the Iron Valley BWT proposal relates to the biodiversity protection as well as the requirements for terrestrial biological surveys EIA in WA. The overarching principles which form the basis of the EPAs expectations when assessments are being undertaken are outlined in Section 3 of PS3, the ones relevant to the BWT proposal include:</p> <ul style="list-style-type: none"> a. The EPA expects proponents to demonstrate in their proposals that all reasonable measures have been undertaken to avoid impacts on biodiversity. Where some impact cannot be avoided, the proponent must demonstrate that the impact will not result in unacceptable loss. b. Information gathered for EIA must meet State, national, and international agreements, legislation and policy in regard to biodiversity conservation c. The EPA requires that the quality of information and scope of field surveys meets the standards, requirements and protocols as determined and published by the EPA. d. The EPA will use the Interim Biogeographic Regionalisation of Australia (IBRA) as the largest unit for EIA decision-making in relation to the conservation of biodiversity. e. The EPA expects proponents to ensure that terrestrial biological surveys provide sufficient information to address both biodiversity conservation and ecological function values within the context of the type of proposal being considered and the relevant EPA objectives for protection of the environment. f. The EPA expects that terrestrial biological surveys will be made publicly available and will contribute to the bank of data available for the particular region, to aid the overall biodiversity understanding and assessment by facilitating transfer into State biological databases. 	<ul style="list-style-type: none"> f. The reporting has been focussed on the outcomes of the fauna being studied, with an intent to apply the findings to the BWT design, with the intention of mitigating and managing significant impacts. <p>The assessment detailed in Section 5.6 and Appendix D1, D2, D3 and D4 demonstrate that the studies undertaken meet the overarching principles of PS3 as follows:</p> <ul style="list-style-type: none"> a. With respect to vertebrate fauna, the proposal has incorporated minimised clearing of habitat and the provision of an exclusion zone corridor linking the western elevated area to WWC as well as stepped pumping throughout the project life. With regards to aquatic fauna discharge limits and quantity criteria will be applied to the licence under Part V environmental approvals, but these will be subject to site specific trigger values which will take into account ecological values and conditions featured in WWC. See Table 14. b. The policies regarding monitoring and survey techniques and the protection of biodiversity have been adhered to, as per the entries in this table, and the content of Appendix D1, D2, D3 and D4. c. The fauna assessments included in Appendix D1, D2, and D3 (vertebrate fauna, aquatic fauna, Short Range Endemic assessment covers desktop elements and database searches followed up with onsite field surveys to establish existence of priority fauna relevant to the BWT proposal covering the mining tenement area. Where necessary, targeted surveys or additional DNA analysis was undertaken to validate the survey findings. The fauna investigations were undertaken by professional ecologists each making reference to EPA policy within the report. See Table 6 and Appendix D. d. The surveys undertaken for fauna reflect the sensitivity of the Pilbara IBRA region as indicated in table 1 of PS3. e. The fauna studies were applied to the habitat assessment derived through the flora and vegetation assessments to determine the impact on specific species included in the survey. The outcomes of the assessment are applied to the EPA objective for fauna (Table 14 of the ER document). f. The fauna survey data will be made publically available as part of this approvals process.

Applicable policy	Considerations	Rationale in meeting policy
<p>EPA Report 1484, Environmental and Water assessments relating to mining and mining-related activities in the Fortescue Marsh management area (EPA 2013)</p>	<p>Management objective: Protect species of conservation significance and their habitat. The Poonda Plain zone 2b of the Fortescue Marsh Management area includes species of conservation significance including:</p> <ul style="list-style-type: none"> - Australian Bustard (<i>Ardeotis australis</i>) - Bush Stone curlew (<i>Burhinus grallarius</i>) - Ghost Bat (<i>Macroderma gigas</i>) - Western Pebble-mound Mouse, Ngadji (<i>Pseudomys chapmani</i>) - Mulgara (<i>Dasyercus cristicauda</i>) - EPBC - <i>Themeda</i> sp. Hamersley Station (M.E. Trudgen 11431). <p>The management strategies proposed for protection of species of conservation significance includes:</p> <ol style="list-style-type: none"> a. Protect species of conservation significance and their habitat b. Manage surface discharge of excess water to riparian communities and restrict to episodic (campaign) discharges. c. Minimise clearing of native vegetation. d. Minimise disturbance to habitats supporting conservation significant species. e. Excess water should be re-injected in accordance with the <i>Department of Water's Pilbara Water in Mining Guideline (2009)</i>. f. Apply an independent peer review of hydrological models to support water and environmental assessments. The review should be consistent with <i>National Water Commission's Australian Groundwater Modelling Guidelines (2012)</i>. g. Undertake surveys to identify and map distributions of conservation significant species 	<p>The assessment terrestrial fauna impacts from the BWT proposal are provided in Section 5.6 of the ER document, supported by Appendix E technical studies completed by Bamford Consulting Ecologists and WRM (aquatic fauna). Consultation with the DPaW throughout the project is included in Table 5 of the ER document, outlining the potential areas of concern and actions taken regarding impacts to fauna.</p> <p>With specific reference to the EPA Report 1484, the following is BCPs rationale for meeting the intent of the guidance and the points highlighted in the adjacent column for species of conservation significance.</p> <p>Of the species listed in the guidance, the Australian Bustard (<i>Ardeotis australis</i>) and the Western Pebble-mound Mouse, Ngadji (<i>Pseudomys chapmani</i>) were recorded during the fauna studies for the Iron valley project. The conservation of these species present on site has been incorporated into the project design, consistent with the Fortescue Marsh Management strategies.</p> <ol style="list-style-type: none"> a. The project design incorporates a clearing exclusion zone as well as progressive rehabilitation throughout the mine life. The exclusion zone along the southern creek line which will enable fauna passage between WWC and the rocky elevated areas to the west of the development envelope. Clearance of habitat for Australian Bustard is <3.82%, while the Western Pebble Mouse <0.7%. b. The mine plan proposes continuous discharge which will be variable across the life of the project, but stop start campaign discharge is not planned. c. See a. above. d. See a. above. e. A water disposal options assessment was conducted as part of the hydrogeology assessment for the project (Appendix B1). This concluded that the suitable solution for iron valley was discharge to WWC. The East Fault provides a direct link back to the underlying aquifer, facilitating the recharge and offsetting the effects of dewatering. Re-injection was ruled out as part of this options assessment. f. DoW reviewed the groundwater numerical model as part of the consultation process g. Bamford consulting ecologists undertook the relevant surveys for conservation significant species for the area within the tenement boundary. A desk top

Applicable policy	Considerations	Rationale in meeting policy
	<p>Environmental Value: Northern Quoll Management strategies</p> <ol style="list-style-type: none"> a. Minimise disturbance to Northern Quoll habitat. b. Avoid (where possible) and minimise clearing of areas of native vegetation where critical habitat has been identified. c. Undertake targeted surveys to identify and map distributions of the Northern Quoll. d. Undertake feral predator control measures. <p>Environmental Value: Bilby</p> <p>Environmental Value – Aquatic invertebrates - Management objective : enhance understanding of aquatic invertebrates Management strategies</p> <ol style="list-style-type: none"> a. Undertake targeted surveys to document macroinvertebrates within claypans b. Limit surface discharge of excess water, especially in vicinity of claypan habitats. 	<p>extrapolation was applied to the WWC riparian vegetation which is included in Section 5.6 of the ER.</p> <p>Northern Quoll</p> <ol style="list-style-type: none"> a. The northern Quoll was not recorded as part of repeated surveys and found only very infrequently in the general area, although suitable habitat exists. Expected reduction in habitat is 1.2%. The reduced clearing is subject to the exclusion zone included in the project design. b. See a. above. c. Surveys were undertaken on the entire tenement and no Quolls were recorded. Multiple surveys in the surrounding area have only identified Quolls on a very infrequent basis. Appendix D1 d. Feral animal control measures are being incorporated into current AWT operations, and will be continued as the mine extends below water table. <p>Bilby</p> <p>The Bilby was not recorded as part of the survey and is not known to exist in the vicinity of the project.</p> <p>Aquatic invertebrates</p> <ul style="list-style-type: none"> - The aquatic invertebrates study undertaken by WRM and located within Appendix D has focussed on the ecosystem within WWC. <ol style="list-style-type: none"> a. No claypans are present or affected near the site or through discharge from the BWT proposal. b. Surface water discharge from the BWT proposal will be limited to 17GL/annum. Modification of the process throughput will ensure that this discharge is not exceeded. The pumping will be stepped throughout the project to minimise impacts through reduction of water availability at the point of ceasing the project discharge to WWC.
<p>EAG 12 – consideration of subterranean fauna in environmental impact</p>	<p>This EAG provides guidance on the level of information and survey required in relation to subterranean fauna, and how results should be analysed for environmental impact assessment</p>	<p>The assessment of potential impacts to subterranean fauna from implementation of the proposal is detailed in Section 5.7 of the ER with the technical study included in Appendix D. The proposal considered all elements of the guidance as part of the</p>

Applicable policy	Considerations	Rationale in meeting policy
assessment in WA (EPA 2013c)	<p>purposes.</p> <p>The level and amount of survey necessary to inform the assessment process is governed by the likely presence of habitat supporting fauna and the likely degree of impacts. The relevance of the guidance to the proposal is as follows:</p> <ol style="list-style-type: none"> Determining the presence of subterranean fauna habitat Identifying impacts and their likely significance Determining an appropriate level of survey Survey design, including sampling, use of genetics, use of surrogates Specimen vouchering and lodgement, and Interpretation and reporting. 	<p>subterranean fauna investigations as Iron Valley, and the survey was undertaken by professional specialists from Bennelongia.</p> <ol style="list-style-type: none"> Examination of the geology and hydrogeology revealed the likely presence of stygofauna and troglotauna at Iron Valley. The significance of the potential impacts were reflected by the extent dewatering required and the extent of expanded and new pits proposed for the BWT as well as the likelihood of finding subterranean fauna due to the geology and hydrogeology present in the area. Level 2 Targeted surveying was conducted both within the project footprint and of the aquifer outside the footprint. Individual techniques and surveys designed specifically for each of stygofauna and troglotauna in locations within and outside the project footprint. The survey was conducted in accordance with the most contemporary techniques and standards. The survey design investigated the presence of species in areas of suitable habitat within and outside the impact zone. The use of surrogates was consistent with the guidance. Specimen vouchering and lodgement was carried out as part of the assessment Survey reports were prepared with section 6 of the Guidance and are included in Appendix D and summarised in Section 5.7 of the ER document.
Draft Guidance statement 54a – sampling methods and survey considerations for subterranean fauna in WA (EPA 2007)	<p>This draft guidance statement serves as a technical appendix to guidance statement 54. Guidance Statement 54 has been withdrawn, but this guidance statement should still be used to provide information on sampling techniques.</p> <p>The guidance statement outlines the EPA's position in relation to what are acceptable sampling efforts and methodologies for subterranean fauna. A framework is provided determining whether an area is likely to have significant subterranean faunal values.</p>	<p>The assessment of potential impacts to subterranean fauna from implementation of the proposal is detailed in Section 5.7 of the ER with the technical study included in Appendix D. The technical appendix has been prepared by professional specialists, which have worked extensively in the Pilbara region and in the vicinity of WWC. The subterranean fauna study has adhered to the following key aspects of the guidance.</p> <ol style="list-style-type: none"> Section 3.4 and 3.6 of the guidance has informed the planning and preparation of the study to be in accordance with section 3.11 Sampling methodology is consistent with section 3.7 and 3.8 of the guidance. Sample sorting and identification has been applied consistent with the guidelines 3.13 and 3.14 have been applied in the derivation of the conclusions and preparing the report.

Applicable policy	Considerations	Rationale in meeting policy
EPA Report 1484, Environmental and Water assessments relating to mining and mining-related activities in the Fortescue Marsh management area (EPA 2013)	<p>The Fortescue Marsh Management zone, Zone 2b encompasses the BWT proposal and therefore is considered as part of the relevant policy. The following outlines the management objective and strategies pertaining to subterranean fauna.</p> <ul style="list-style-type: none"> - Management objective: enhance understanding of local subterranean species <p>Strategies</p> <ul style="list-style-type: none"> a. Enhance survey effort to document presence and richness of subterranean fauna. b. Develop a Fortescue Marsh Management area Subterranean fauna theme within NatureMap 	<ul style="list-style-type: none"> - The subterranean fauna assessment is described in Section 5.7 and shows the positive distribution of species found within the sampling activities for AWT as well as the targeted survey within and outside the proposed pit areas, which provides an understanding of local subterranean species, but also how the hydrogeology affects the populations located nearby. <ul style="list-style-type: none"> a. Richness and data is recorded and presented in Appendix D and summarised in Section 5.7 of the ER. b. The sharing of data and its inclusion into NatureMap is currently being considered by BCP.
Guidelines for preparing mine closure plans (EPA/DMP 2015)	<p>The aim of this guideline is to ensure that, for every mine in WA, a planning process is in place so that the mine can be closed, decommissioned and rehabilitated to meet DMA and EPAs objectives for rehabilitation and closure. The guideline includes provisions for the consideration of surface water management and groundwater management.</p>	<p>An approved Mine closure plan was submitted as part of the AWT in 2012. It is now due for its 3-year update. It has been updated as part of this new approval and is proposed to be submitted to the DMP with the revised mining proposal document. These guidelines have informed the features discussed in the Rehabilitation and decommissioning section of the ER. In particular, the ER identifies the project's closure objectives, and the key risks which to be managed. These relate to the new features of the BWT and include:</p> <ul style="list-style-type: none"> a. Presence of a TSF b. Modified surface water drainage infrastructure c. Presence of two pit lakes d. The extension and development of new pits. <p>The mine closure guidelines have been applied closely to the development of the updated Mine Closure Plan.</p>
Guidance for the assessment of environmental factors – No. 6 - Rehabilitation of terrestrial ecosystems (EPA 2006)	<p>This guidance promotes the use of completion criteria and definitions for the rehabilitation of natural ecosystems. The relevant sections to this ER are included within section 3.1.1, EIA and rehabilitation planning stages as follows:</p> <ul style="list-style-type: none"> a. Adequate baseline studies are undertaken b. Understanding of the consequences of rehabilitation failing or impacts occurring c. Acknowledging the consequences of permanent changes to landforms, soils and hydrology 	<p>The ER document in Section 5.8 covers the impacts and risks relevant to rehabilitation and decommissioning of the project. The following outlines how the ER document covers the elements of the guidance.</p> <ul style="list-style-type: none"> a. Flora, vegetation, fauna and water related baseline studies which assist in setting objectives and closure criteria for the different domains as well as setting analogue sites for ongoing revegetation trials. Sections 5.5, 5.6. b. The main risks identified through the Risk assessment are incorporated in the impact assessment Table 24. c. Presence of elevated landforms integrated with TSFs are included in Table 23

Applicable policy	Considerations	Rationale in meeting policy
	<ul style="list-style-type: none"> d. Predicting the degree of long term changes to biotic components of ecosystems e. Inclusion of information about the diversity of plants and their capacity to recruit from seeds f. Setting rehabilitation objectives g. Setting completion criteria h. Implementing an effective communication strategy 	<p>as are how the surface water infrastructure will be dealt with at closure.</p> <ul style="list-style-type: none"> d. Section 5.5 particularly relating to likely changes to riparian vegetation and GDV. e. Species lists appropriate for rehabilitation will be developed up into the rehabilitation trials proposed as part of the mine closure plan. f. The setting of objectives and criteria, the study trials that will be performed and the performance criteria that need to be met to ensure successful rehabilitation and closure of the site have been included in the update to the Site Mine Closure Plan. g. As per f. above h. Included in site mine closure plan.
Environmental Protection Bulletin No. 19 – EPA Involvement in Mine Closure (EPA 2015e)	<p>The guidance outlines the different roles of the DMP and EPA in terms of assessing mine closure. The relevance to the BWT ER document is:</p> <p>The EPA will assess mine closure in the context of the integrating environmental factor; Rehabilitation and Decommissioning. Governed by the objective of ensuring that premises are decommissioned and rehabilitated in an ecologically sustainable manner.</p>	<p>The BWT proposal has Rehabilitation and Decommissioning included as a key environmental factor within the ER document. 2016 also represents the first year that the Iron Valley project is required to update its Mine Closure Plan since the AWT proposal was approved. This guidance has been applied to BWT by updating the mine closure plan to incorporate BWT components. The Section 5.8 of the ER identifies the key features of the project which may impact the environment as part of rehabilitation and decommissioning, and identifies management and mitigation to minimise the potential impacts.</p>
Cumulative environmental impacts of development in the Pilbara Region, Advice of the EPA to the Minister for Environment under Section 16(e) of the Environmental Protection Act 1986, (EPA August 2014)	<p>The guidance provides information on the importance of future looking strategies which cover cumulative impacts within the Pilbara. The relevance to rehabilitation and decommissioning in the BWT proposal relates to the effectiveness of vegetation clearing and the potential for successful rehabilitation.</p>	<p>Cumulatively, the BWT project does not assess the effects of vegetation clearing, because the offsets, through the Pilbara offsets fund is the appropriate mechanism to deal with the loss of good to excellent native vegetation (Section 5.10 of ER document). The BWT proposal commits to progressive rehabilitation and the steps required that can lead to successful rehabilitation, such as conservation of topsoil, running analogue trials, collecting seeds managing soil erosion through effective surface water management and infrastructure. These details are included in the existing mine closure plan which has been updated as part of its 3-year cycle and to be submitted with the Mining Proposal as part of the approvals under the Mining Act.</p>
WA environmental offsets policy (EPA 2011)	<p>The bulleting provides a framework for the consistent application of environmental offsets to protect and conserve environmental and biodiversity values. Specific relevance of the policy to the BWT proposal relates to:</p>	<ul style="list-style-type: none"> a. The offsets being applied to BWT relate only to the clearing of 314 ha of good to excellent quality native vegetation. The project has applied the mitigation hierarchy of avoid, minimise, rehabilitate and offset. The clearing footprint has been avoided and minimised through various mechanisms and provisions, pit

Applicable policy	Considerations	Rationale in meeting policy
	<ul style="list-style-type: none"> a. Environmental offsets will only be considered after avoidance and mitigation options have been pursued b. Environmental offsets will be cost-effective, as well as relevant and proportionate to the significance of the environmental value being impacted c. Environmental offsets will be based on sound environmental information and knowledge d. Environmental offsets will be focused on longer term strategic outcomes. 	<ul style="list-style-type: none"> backfilling, progressive rehabilitation, exclusion zone provision, integrated TSF and landfill in WRLs (Section 5.10 of ER). b. The mechanism for this is for the proponent to pay the applied rate for the unavoidable clearing. This is consistent with the approach applied to the AWT assessment. This similar approach has been confirmed in the consultation with the OEPA as part of this proposal. c. As b. above d. As b. above.
WA Environmental offsets guidelines (EPA 2014b)	The guidelines clarify the determination and application of environmental offsets in WA. Relevance to the BWT proposal is the reference to funds such as the Pilbara offsets fund.	The WA offsets guidelines indicate that a fund may be a suitable way of reconciling offsets strategically to overcome land use tenure issues. Much of the guidance is not applicable given the nature of the offset for BWT.
Environmental Protection Bulletin No.1 – Environmental Offsets (EPA 2014c)	<p>The bulletin clarifies how the EPA will consider offsets through the EIA process. The relevant aspects of the bulletin to the BWT proposal are:</p> <ul style="list-style-type: none"> a. Application of the mitigation hierarchy b. Offsets should be communicated early <p>Describe the potential impacts, mitigation hierarchy and residual impacts and analyse how it is still significant.</p>	<p>Offsets are discussed within section 5.9 of the ER document. The BWT proposal is seeking an offset for the unavoidable clearing of 314 ha of good to excellent quality native vegetation. This will be exercised through the Pilbara offsets fund.</p> <ul style="list-style-type: none"> a. The project has applied the mitigation hierarchy of avoid, minimise, rehabilitate and offset. The clearing footprint has been avoided and minimised through various mechanisms and provisions, pit backfilling, progressive rehabilitation, exclusion zone provision, integrated TSF and landfill in WRLs. b. Offsets were discussed as part of OEPA consultation and the offsets are consistent with the approach to the AWT approved project c. Clearing of good to excellent vegetation is a trigger for offsets regardless of quantity. This is the only environmental factor requiring offset and was identified early in the consultation with the OEPA.
Guidance Statement No. 41 – Assessment of Aboriginal heritage, April 2004 (EPA 2004d)	The guidance gives consideration to Aboriginal heritage matters to the extent that they may be affected by the impacts of the proposal on the physical or biological surroundings. The guidelines are relevant to the BWT proposal as there is expected to be several instances of disturbance to aboriginal heritage registered sites, which will be addressed and have been	The Aboriginal heritage landscape at Iron Valley is characterised by artefact scatters across the valley floor and several rock shelters in the breakaways along the Western boundary of the tenement. BCI has applied the guidance in Guidance Statement No. 41 (GS41) to “undertake a competent analysis of and report on the likelihood of the presence of matters of heritage significance to Aboriginal People. BCP has done this (included in Section 5.8 of this ER) by:

Applicable policy	Considerations	Rationale in meeting policy
	<p>addressed with the DIA and the Niyaparli People. The relevance of the guidelines applies specifically to Section 3.2 of the guidance “Actions which may be pertinent to the factor of Aboriginal heritage”:</p> <ul style="list-style-type: none"> a. Consult with staff of the DIA and review any site records (desk-top review) in accordance with the AH Act b. Undertake an Aboriginal heritage survey (if it is noted from a desk-top review that an adequate survey has not been undertaken for an area to be developed) which should include both consultation with appropriate Aboriginal people, which may include an anthropological survey, and, if necessary, an archaeological survey. c. Inform the relevant Aboriginal people about details of the proposed development, including potential environmental impacts. d. Consult with relevant Aboriginal people to enable them to make known to the proponent their concerns in regard to environmental impacts as they affect heritage matters. e. Demonstrate that any concerns raised by Aboriginal people have been adequately considered by the proponent in its management of environmental impacts, and any changes as a result of this process are made known to the relevant Aboriginal people. 	<ul style="list-style-type: none"> a. Consulting with the DAA and completing a desktop review of tenements M47/1439 and L47/757 for identified aboriginal heritage sites – this resulted in the identification of a rock shelter site (site ID: DAA7030). This is consistent with page 5 of the GS41 “Actions which may be pertinent to the factor of Aboriginal heritage”. b. Completing on-site archaeological and ethnographic surveys across the tenements to identify all other heritage places relevant to the Niyaparli People. This resulted in the identification of all other heritage places across the tenements. This is also consistent with page 5 of the GS41 “Actions which may be pertinent to the factor of Aboriginal heritage”. c. Met with the Niyaparli People to discuss the proposed project and the impacts to the environment and aboriginal places identified across the site. BCI continue to meet with the Niyaparli People every six months to discuss the project and ongoing heritage management with the project. Every second meeting is held on site so the Niyaparli People can see first-hand the heritage management practices and controls in place across the site. In addition, BCI have been able to take into account the concerns of the Niyaparli and modify the project design where possible. This is evidenced by the preservation of IOHRS13-05 which was originally in the mine pit footprint. This is consistent with page 5 of the GS41 “Actions which may be pertinent to the factor of Aboriginal heritage”. BCI has a strong relationship with the Niyaparli and continue to work with the Niyaparli to ensure all persons on site understand the cultural heritage of the project area. Members of the Niyaparli also participate in environmental monitoring associated with the current operations. In addition, BCI are continuing to work with Mineral Resources Pty Ltd to provide contracting opportunities to the Niyaparli People d. As per c above e. As per c above