



Approval

Christmas Creek Water Management Scheme, East Pilbara, WA (EPBC2010/5706)

This decision is made under sections 130(1) and 133 of the *Environment Protection and Biodiversity Conservation Act 1999*.

Proposed action

| | |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| person to whom the approval is granted | Fortescue Metals Group Ltd |
| proponent's ABN | 57 002 594 872 |
| proposed action | The proposed action is the construction and operation of the Christmas Creek Water Management Scheme, which involves increasing the dewatering limits at the Christmas Creek Iron Ore Mine (Christmas Creek), East Pilbara, Western Australia, to 50 gegalitres per annum, as described in the referral and assessment documentation [EPBC 2010/5706]. |

Approval decision

Controlling Provision

Listed threatened species and communities (sections 18 & 18A)

Decision

Approved

Listed migratory species (sections 20 & 20A)

Approved

conditions of approval

This approval is subject to the conditions specified below.

expiry date of approval

This approval has effect until 1 September 2016.

Decision-maker

name and position

Michelle Wicks
Assistant Secretary
Environment Assessment Branch

signature

date of decision

11 / 8 / 2011

Conditions of Approval

General

1. Within 10 days after the commencement of the action, the person taking the action must advise the Department in writing of the actual date of commencement.
2. The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the plans required by this approval, and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.
3. By 30 June of each year after the commencement of the action, the person taking the action must publish a report on their website addressing compliance with the conditions of this approval over the previous 12 months, including implementation of any management plans as specified in the conditions. Non-compliance with any of the conditions of this approval must be reported to the Department at the same time as the compliance report is published.
4. Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.
5. If the person taking the action wishes to carry out any activity otherwise than in accordance with the plans, as specified in the conditions, the person taking the action must submit to the department for the Minister's written approval a revised version of that plan. The varied activity shall not commence until the Minister has approved the varied plan in writing. The Minister will not approve a varied plan, unless the revised plan would result in an equivalent or improved environmental outcome over time. If the Minister approves the revised plan that plan must be implemented in place of the plan originally approved.
6. If the Minister believes that it is necessary or convenient for the better protection of EPBC Act listed threatened and migratory species to do so, the Minister may request that the person taking the action make specified revisions to the plans specified in the conditions and submit the revised plan for the Minister's written approval. The person taking the action must comply with any such request. The revised approved plan must be implemented. Unless the Minister has approved the revised plan then the person taking the action must continue to implement the plan originally approved, as specified in the conditions.
7. If, at any time after 5 years from the date of this approval, the person taking the action has not substantially commenced the action, then the person taking the action must not substantially commence the action without the written agreement of the Minister.
8. Unless otherwise agreed to in writing by the Minister, the person taking the action must publish all plans referred to in these conditions of approval on their website. Each plan must be published on the website within 30 calendar days of being approved.

Environmental Conditions

9. The person taking the action may undertake dewatering activities, known as the Christmas Creek Water Management Scheme, up to a maximum rate of 50 gegalitres per annum and for a period of not more than 5 years from the date of commencement of dewatering activities.

10. The person taking the action must not clear more than 100 hectares outside of the ground disturbance footprint as described in EPBC Act referral 2004/1897. Clearing must only be undertaken for the purpose of dewatering and re-injection infrastructure.

Groundwater Mounding

11. The person taking the action must manage the injection of surplus water to ensure that mounding of the groundwater level within impact zones, but outside the exclusion area, does not result in groundwater levels rising to within (or less than) 2 metres of the surface (the impact zone trigger level).

To verify the impact zone trigger level, the person taking the action must undertake baseline monitoring prior to the commencement of the action at locations determined in consultation with the Western Australian Department of Water and the Western Australian Department of Environment and Conservation (WA DEC). Ground water levels must then be monitored at these locations on a monthly basis at a minimum. The results of groundwater monitoring must be submitted to the Minister and be made publicly available on the proponent's website by 30 June of each year.

In the event that the monitoring indicates that the impact zone trigger level has been exceeded, the person taking the action must:

- a. Report such findings to the department within 7 days of the exceedance being identified;
- b. Provide written advice to the department, within 21 days of the exceedance being identified, stating:
 - i. the direct cause of the exceedance; and
 - ii. actions and associated timelines proposed to remediate the groundwater levels.
- c. If actions cannot be undertaken to address the exceedance or there is a loss of EPBC Act listed threatened species habitat, then an offset, for approval by the Minister, must be provided within 3 months of the identification of the exceedance. The offset must be for the long term protection of habitat that maximises the potential for the conservation of EPBC Act listed threatened fauna species including the Greater Bilby (*Macrotis lagotis*), Night Parrot (*Pezoporus occidentalis*), and Mulgara (*Dasyercus cristicaudata*), at a ratio of 7 hectares for every 1 hectare impacted by the exceedance. The approved offset must be implemented. The operation of the action cannot continue beyond 4 months of an exceedance being identified, unless the offset has been approved.

Fortescue Marsh

12. The person taking the action must manage the injection of surplus water to groundwater levels to ensure that it does not rise more than 1.5 metres at locations MB1 and 1 metre at MB2, MB3 and MB4 (depicted at Figure 1) from the baseline groundwater levels (the Fortescue Marsh groundwater trigger level).

To verify the Fortescue Marsh groundwater trigger level, the person taking the action must undertake baseline monitoring prior to the commencement of the action at MB1, MB2, MB3 and MB4 having regard to seasonal variation. Ground water levels must then be monitored at these locations on a monthly basis at a minimum. The results of groundwater monitoring must be submitted to the Minister and be made publicly available on the proponent's website by 30 June of each year.

In the event that monitoring indicates that the Fortescue Marsh groundwater trigger level has been exceeded, the person taking the action shall:

- a. Report such findings to the department within 7 days of the exceedance being identified;
- b. Provide written advice to the department, within 21 days of the exceedance being identified, stating:

- i. the direct cause of the exceedance; and
 - ii. actions and associated timelines proposed to remediate the groundwater levels.
- c. If actions cannot be undertaken to address the exceedance or there is a loss of EPBC Act listed threatened species habitat, then an offset, for approval by the Minister, must be provided within 3 months of the identification of the exceedance. The offset must be for the long term protection of habitat that maximises the potential for the conservation of EPBC Act listed threatened fauna species including the Greater Bilby (*Macrotis lagotis*), Night Parrot (*Pezoporus occidentalis*), and Mulgara (*Dasycercus cristicaudata*), at a ratio of 7 hectares for every 1 hectare impacted by the exceedance. The approved offset must be implemented. The operation of the action cannot continue beyond 4 months of an exceedance being identified, unless the offset has been approved.

Vegetation Health Monitoring and Management Plan

13. The person taking the action must prepare a Vegetation Health Monitoring and Management Plan, for the approval of the Minister, that when implemented maximises the ongoing protection and long term conservation of habitat that supports EPBC Act listed threatened fauna species. The Plan must be developed by an appropriately qualified expert, approved by the Minister, and in consultation with WA DEC. The Plan must address, but is not limited to, the following:
- a. Measures to ensure there is no adverse impact on native vegetation communities attributable to the project outside the predicted impact areas;
 - b. Identification of plant species and habitat characteristics and limits of acceptable change in health and/ or condition of these to be used as the basis for monitoring;
 - c. Locations for predicted impact and reference monitoring sites (outside the predicted impact areas) for baseline and ongoing monitoring, with sites selected based on scientific rationale and to the satisfaction of the Minister;
 - d. Define the collection and timeframes of baseline monitoring for vegetation health, species composition and habitat characteristics at both predicted impact and reference monitoring sites and groundwater levels and ground water quality at agreed sites in proximity to the vegetation monitoring sites;
 - e. Specifications for the monitoring program for vegetation health, species composition and habitat characteristics, including trigger levels for additional management actions to prevent further impacts and ensure compliance;
 - f. Reporting on milestones and compliance with this plan; and
 - g. Results of the monitoring program and compliance with the plan must be published on the company's website.

In the event that the monitoring indicates that the triggers defined as part of condition 13b have been exceeded, the person taking the action shall:

- h. Report such findings to the department within 7 days of the exceedance being identified;
- i. Provide written advice to the department, within 21 days of the exceedance being identified, stating:
 - i. the direct cause of the exceedance; and
 - ii. actions and associated timelines proposed to remediate the groundwater levels.
- j. If actions cannot be undertaken to address the exceedance or there is a loss of EPBC Act listed threatened species habitat, then an offset, for approval by the Minister, must be provided within 3 months of the identification of the exceedance. The offset must be for the long term protection of habitat that maximises the potential for the conservation of EPBC Act listed threatened fauna species including the Greater Bilby (*Macrotis lagotis*), Night Parrot (*Pezoporus occidentalis*), and Mulgara (*Dasycercus cristicaudata*), at a ratio of 7 hectares for every 1 hectare impacted by the exceedance. The approved offset must be implemented. The operation of the action cannot continue

beyond 4 months of an exceedance being identified, unless the offset has been approved.

The Vegetation Health Monitoring and Management Plan must be submitted to the Minister for approval prior to commencing operation of the action. The baseline data must be submitted to the Minister prior to commencing operation of the action. The approved Vegetation Health Monitoring and Management Plan must be implemented.

Fauna Management Plan

14. The person taking the action must prepare a Fauna Management Plan, for the approval of the Minister, that maximises the ongoing protection and long term conservation of EPBC Act listed threatened fauna species. The Fauna Management Plan must be developed by an appropriately qualified expert who is approved by the Minister and in consultation with the WA DEC. The Plan must address, but is not limited to, the following information:
- a. Measures to minimise mortality of EPBC Act listed threatened fauna species during construction;
 - b. Measures to protect EPBC Act listed threatened fauna habitat located adjacent to cleared areas;
 - c. Implementation of measures to rehabilitate areas disturbed during construction;
 - d. Design details of trenches that will allow fauna to escape;
 - e. A fauna monitoring program to be undertaken to:
 - i. collate baseline population data prior to the commencement of construction, and followed with ongoing annual monitoring (to be undertaken during the same period each year) of EPBC Act listed threatened fauna species for the life of the project to measure the impacts of the action over time; and
 - ii. measure the success of management measures to inform an adaptive management approach.
 - f. Reporting on milestones and compliance with this plan to be provided to the department by 30 June of each year; and
 - g. The results of the monitoring program and compliance with the plan must be published on the proponent's website by 30 June each year.

The Fauna Management Plan must be submitted to the Minister for approval within 3 months of the date of this approval. The approved Fauna Management Plan must be implemented. The operation of the action must not continue beyond 30 November 2011 unless the Fauna Management Plan has been approved by the Minister.

Threatened Fauna Offset Plan

15. To ensure the better protection and long term conservation of EPBC Act listed threatened fauna species in the Pilbara bioregion of Western Australia, the person taking the action must engage a suitably qualified expert, approved by the Minister, to prepare a Threatened Fauna Offset Plan. The Threatened Fauna Offset Plan must be developed in consultation with the WA DEC. The Threatened Fauna Offset Plan must contain, but is not limited to, the following criterion:
- a. Selection of a location and measures to establish a conservation area of a minimum size of 720 hectares that maximises the potential for the long term conservation of EPBC Act listed threatened fauna species including the Greater Bilby (*Macrotis lagotis*), Night Parrot (*Pezoporus occidentalis*), and Mulgara (*Dasyercus cristicaudata*);
 - b. The location of the conservation area must not be subject to alternative landuses which are not compatible with the long-term protection and management of the site for conservation, such as landuses that require the clearing of native vegetation or lead to the degradation of native vegetation;
 - c. Evidence that the conservation area will contribute to the proponent's strategic approach to the conservation of viable populations for EPBC Act listed threatened species within the Pilbara region;

- d. Evidence that the conservation area will contribute to the protected area network in the Pilbara bioregion;
- e. Empirical scientific evidence that the size of the conservation area supports viable populations of EPBC Act listed threatened species;
- f. Objectives and targets for the conservation, protection, management, enhancement and monitoring of the biodiversity values of the site and for EPBC Act listed threatened fauna species;
- g. Ongoing management actions that will be undertaken to minimise the impact of threatening processes within the conservation area and areas immediately adjacent to the conservation area;
- h. Details of steps to be taken to secure the conservation area in perpetuity;
- i. Undertakings to ensure that in the event that an approved conservation area is subsequently subject to alternative land uses, other than the conservation of biodiversity, the person taking the action must submit a revised Threatened Fauna Offset Plan with an alternative conservation area to the Minister for approval;
- j. Key milestones, performance indicators, corrective actions and timeframes for the completion of the actions outlined in the plan; and
- k. The results of compliance with the plan must be published on the proponent's website by 30 June each year.

The Threatened Fauna Offset Plan must be submitted to the Minister for approval within 12 months of the date of this approval condition. The approved Fauna Management Plan must be implemented. The operation of the action cannot continue beyond 30 September 2012, unless the Fauna Management Plan has been approved.

Fortescue Marsh Baiting Plan

16. For the better protection and long term conservation of EPBC Act listed threatened fauna species at the Fortescue Marsh, in the Pilbara bioregion of Western Australia, the person taking the action must engage a suitably qualified expert, approved by the Minister, to prepare a Fortescue Marsh Baiting Plan. The suitably qualified expert must have a demonstrated capacity to undertake feral baiting programmes and native wildlife management at the regional scale. The Fortescue Marsh Baiting Plan must be developed in consultation with the WA DEC. The Fortescue Marsh Baiting Plan must include:

- a. Details of a comprehensive landscape-scale feral cat baiting program on the proposed conservation estate for the Fortescue Marsh (pastoral lease 2015 relinquishment area) across a minimum area of 150,000 hectares, for the life of the action;
- b. A baiting program developed with expert advice, defining intensity and frequency of baiting, that maximises the benefits of the removal of feral species and minimises any threats to EPBC Act listed threatened species and migratory species;
- c. Funding commitments to cover the cost of the implementation and management of the baiting program, monitoring of feral populations and EPBC Act listed threatened and migratory species, and analysis of the effectiveness of the baiting program;
- d. Reporting of the results of the plan and evidence of funding payments provided to the department by 30 June each year; and
- e. The Fortescue Marsh Baiting plan and annual monitoring results must be published on the proponent's website by 30 June each year.

The Fortescue Marsh Baiting Plan must be submitted to the Minister for approval within 3 months of the commencement of the action. The person taking the action must implement the approved Fortescue Marsh Baiting Plan. The operation of the action cannot continue beyond 30 November 2011, unless the Fortescue Marsh Baiting Plan has been approved.

Upon the direction of the Minister the person taking the action must cease the Fortescue Marsh Baiting program if the Minister determines that the program is not beneficial to EPBC Act listed threatened and migratory species. If the Fortescue Marsh Baiting program ceases, then the person taking the action must provide an alternate land management plan of equal or greater value to the Minister for approval within 4 months of ceasing the program. The approved alternate land management plan must be implemented. The operation of the action cannot continue beyond 6 months of ceasing the Fortescue Marsh Baiting program, unless the alternate land management plan has been approved.

Definitions:

1. The **EPBC Act** is the *Environment Protection and Biodiversity Conservation Act 1999*.
2. The **Minister** means the Minister responsible for the administration of the EPBC Act.
3. The **department** means the Commonwealth department responsible for administering the EPBC Act.
4. **WA DEC** means the Western Australian Department of Environment and Conservation or its successor organisation.
5. **WA EPA** means the Western Australian Environment Protection Authority or its successor organisation.
6. **WA Department of Water** means the Western Australian Department of Water or its successor organisation.
7. **Commence construction** means any construction in relation to this action including, but not limited to, any preparatory works such as clearing vegetation, the erection of any on-site temporary structures and the use of heavy duty equipment for the purpose of breaking the ground for buildings or infrastructure commences.
8. **Commence operation** of this action occurs at such time when the dewatering¹ and injection begins. ¹ The action is the increase of dewatering limits from 11 gigalitres per annum, up to 50 gigalitres per annum.
9. The **impact zone** referred to in Condition 11 has the same definition as described in Schedule 2 and Schedule 3 of the WA EPA Assessment Report 1402.
10. The **exclusion area** referred to in Condition 11 has the same definition as described in Schedule 3 of the WA EPA Assessment Report 1402.
11. The locations **MB1, MB2, MB3 and MB4** have the same definition as defined in Table 1 of Schedule 4 of the WA EPA Assessment Report 1402 and as depicted in Figure 1 (attached).

Figure 1

