



Environmental
Protection
Authority

Cape Riche Seawater Desalination Plant – inquiry under section
46
of the *Environmental Protection Act 1986*
to amend Ministerial Statement 904

Grange Resources Limited

Report 1764
April 2024

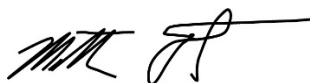
Inquiry under section 46 of the *Environmental Protection Act 1986*

The Minister for Environment has requested that the Environmental Protection Authority (EPA) inquire into and report on the matter of amending the implementation Condition 3 (Time Limit of Proposal Implementation) in Ministerial Statement 904 relating to the Cape Riche Seawater Desalination Plant.

Section 46(6) of the *Environmental Protection Act 1986* requires the EPA to prepare a report that includes:

- (a) a recommendation on whether or not the implementation conditions to which the inquiry relates, or any of them, should be amended
- (b) any other recommendations that it thinks appropriate.

The following is the EPA's report to the Minister pursuant to s. 46(6) of the *Environmental Protection Act 1986*.



Prof. Matthew Tonts
Chair

12 April 2024

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1 Proposal

The proposal is to construct and operate a 12 GL/annum seawater desalination plant in order to supply water to Grange Resource's Southdown Magnetite operations. The proponent for the proposal is Grange Resources Limited.

The Environmental Protection Authority (EPA) assessed the proposal at the level of Public Environmental Review and published its report in February 2012 (Report 1431). In this report, the EPA decided that the following key environmental factors relevant to the proposal required detailed evaluation:

- marine fauna
- benthic primary producer habitat
- marine water quality
- terrestrial flora and fauna
- social surroundings
- closure and decommissioning.

In applying the *Statement of environmental principles, factors, objectives and aims of EIA* (EPA 2023) these factors are now represented by:

- marine fauna
- benthic communities and habitats
- marine environmental quality
- flora and vegetation
- terrestrial fauna
- social surroundings.

Closure and decommissioning are considered under the factors benthic communities and habitats and flora and vegetation.

The EPA concluded in Report 1431, that it was likely the EPA objectives would be achieved, provided there was satisfactory implementation of the recommended conditions by the proponent.

The then Minister for Environment approved the proposal for implementation, subject to the implementation conditions of Ministerial Statement (MS) 904 on 14 July 2017.

Previously approved amendments to the conditions

On 28 September 2016, the then Minister for Environment approved a s.46 application for time limit extension. This is reflected in MS 1061 which extended the time limit for proposal implementation to 19 July 2022.

2 Requested amendment to the conditions

Condition 3-1 of MS 904 (as replaced by MS 1061) states that the proponent shall not commence implementation of the proposal after 19 July 2022, and any commencement, prior to this date, must be substantial.

The proponent has not yet substantially commenced implementation of the proposal. In June 2023, the proponent requested an amendment to Condition 3 of MS 904 (as replaced by MS 1061) to extend the authorised time limit for substantial commencement of the proposal by 5 years. The proponent has not proposed any amendments to the proposal or to any other conditions of MS 904.

In response to the proponent's request, in October 2023 the Minister for Environment requested that the EPA inquire into and report on the question of whether the implementation conditions, relating to the Cape Riche Seawater Desalination Plant, should be changed. This report satisfies the requirements of the EPA's inquiry.

3 Inquiry into amending conditions

The EPA typically recommends the Minister for Environment sets conditions on significant proposals that require them to be substantially commenced within a specified timeframe. Extending this timeframe requires the Minister to amend the relevant conditions under s. 46 of the *Environmental Protection Act 1986* and provides for the EPA to review and consider the appropriateness of the implementation conditions relating to the proposal.

The EPA has discretion as to how it conducts this inquiry. In determining the extent and nature of this inquiry, the EPA had regard to information such as:

- the currency of its original assessment of the proposal (Report 1431)
- previous s. 46 inquiry (Report 1600)
- Ministerial Statements 904 and 1061
- information provided by the proponent (Grange Resources Limited, 2023).

In conducting its inquiry, the EPA reviewed the information provided by the proponent and considered the original assessment of the proposal detailed in Report 1431. In considering whether it was appropriate to recommend an extension of the authorised timeframe for substantial commencement of the proposal, the EPA considered whether there was any change, or new information relating to, the key environmental factors relevant to the proposal since the publications of Reports 1431 and 1600. The EPA also considered whether any new key environmental factors had arisen since its original assessment of the proposal.

EPA procedures

In conducting this inquiry, the EPA followed the procedures in the *Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2021* (State of Western Australia 2021) and the *Environmental Impact Assessment (Part IV Divisions 1 and 2) Procedures Manual* (EPA 2021).

4 Inquiry findings

The EPA considers that the following are the key environmental factors relevant to the amendment of the conditions:

- marine fauna
- benthic communities and habitats
- marine environmental quality
- flora and vegetation
- terrestrial fauna
- social surroundings.

4.1 Marine Fauna

The EPA environmental objective for marine fauna is *to protect marine fauna so that biological diversity and ecological integrity are maintained.*

Conclusions from EPA Reports 1431 and 1600

The Cape Riche area is known to have a high marine fauna species diversity. Report 1431 considered the following potential impacts to marine fauna from the construction and operation of the proposal:

- injury or mortality as a result of blasting activities to construct the seawater intake channel
- entrainment in the seawater intake structures.

Report 1431 considered that the construction of the seawater intake channel could be managed to meet the EPA's objective for this factor given the proponent's proposed exclusion zones and blasting restrictions.

The EPA considered that entrainment in the seawater intake structures was unlikely to significantly impact the abundance or diversity of marine fauna in the proposal area as:

- the expected intake velocity (0.15 m/s) for the operation of the seawater intake was within the natural variation of current speeds at the intake locations
- little penguins, most fish species, and larger marine species are able to comfortably swim against currents of this intake velocity.

To manage potential impacts, the EPA recommended the following conditions:

- Condition 8 (Marine Fauna) requiring the proponent to implement management actions to ensure that marine fauna are protected from blasting activities
- Condition 7 (Benthic Primary Producer Habitat) implementation of a Construction Environmental Management Plan (CEMP), requiring the proponent report any fauna injuries resulting from blasting events.

In 2016, the proponent undertook a desktop review of the existing marine fauna of the proposal area. The review concluded that there have been no significant changes to the existing environment since approval of the proposal. It was also noted that there had been no reported changes to the habitation or usage of the areas by marine fauna species and no newly reported occurrences of marine fauna species in the proposal area.

The EPA considered the additional and updated information and came to the conclusion that the impacts to marine fauna were manageable and would not be significant provided the existing conditions were implemented (Report 1600).

Assessment of the requested amendment to conditions

The EPA considers that the following current environmental policy and guidance is relevant to its assessment of the proposal for this factor:

- *Environmental factor guideline – Marine fauna* (EPA 2016a).

The EPA notes that there have been no newly reported occurrences of marine fauna species in the proposal area.

Summary

In considering the information provided by the proponent and relevant EPA policies and guidelines, the EPA considers that there is no new significant or additional information that justifies the reassessment of marine fauna for this proposal.

The EPA is therefore satisfied that the following existing conditions and the revised Condition 3 for the extension of Time Limit for Proposal Implementation for an additional five years would, when implemented, ensure that the outcome of the proposal would be consistent with the EPA objective for marine fauna:

- Condition 8, MS 904: Marine Fauna Protocols

4.2 Benthic Communities and Habitats

The EPA environmental objective for benthic communities and habitats is *to protect benthic communities and habitats so that biological diversity and ecological integrity are maintained*.

Conclusions from EPA Reports 1431 and 1600

Report 1431 considered the potential impacts to benthic communities and habitats in relation to the:

- construction and operation of the seawater intake on the north side of Cape Riche
- discharge of brine at the brine discharge location to the south of the Cape.

Report 1431 concluded that within the smaller assessment unit agreed for the proposal, the predicted direct loss (both temporary and permanent) of 1.43% of the

boulder reef macroalgae habitat as a result of the construction of the seawater intake could be managed to meet the EPA's objectives for this environmental factor.

The EPA noted that the seawater intake is located approximately 500 metres (m) west of coral habitat in an area where prevailing currents are considered unlikely to carry coral larvae towards the seawater intake. Report 1431 concluded that there was a low likelihood that entrainment of coral spawn would impact the abundance or distribution of coral in the proposal area.

With respect to the location of the brine discharge, the EPA noted that given the establishment of a low ecological protection area (LEPA) which extends to a 100 m radius of the discharge point, the level of dilution expected within the LEPA boundary, and the expected quality of the brine discharge, impacts to benthic communities and habitats outside the LEPA boundary were highly unlikely.

To manage potential impacts to benthic communities and habitats, the EPA recommended the following conditions:

- Condition 7 (Benthic Primary Producer Habitat) which requires that the disturbance to benthic habitats during construction of the seawater intake channel is restricted to 0.14 hectares (ha) of temporary disturbance and 0.003 ha of permanent disturbance and implementation of a CEMP, requiring the proponent to undertake additional benthic habitat modelling before and during the implementation of the proposal, including the requirement to complete the coral spawn entrainment assessment.
- Condition 12 (Decommissioning) which requires the removal of plant and infrastructure, including the concrete seawater intake channel and the brine discharge pipeline, and the rehabilitation of disturbed areas following closure of the plant.

In October 2016, the proponent completed a desktop review of the benthic communities and habitats of the proposal area and concluded that it is unlikely that there had been a change in the types or distribution of those mapped in the proposal area since 2011. Similarly, it was considered unlikely that there would have been changes in the benthic communities and habitats in this zone since the approval of this proposal.

Report 1600 considered the additional and updated information and concluded that the impacts to benthic communities and habitats were manageable and would not be significant provided the existing conditions are implemented.

Assessment of the requested amendment to conditions

The EPA considers that the following current environmental policy and guidance is relevant to its assessment of the proposal for this factor:

- *Environmental factor guideline – Benthic communities and habitats* (EPA 2016b).

The EPA considered the potential impacts of the proposal and the extension of time for proposal implementation and notes that the design, location, construction, and

operation of the desalination plant have not changed since the EPA assessed the proposal. The EPA considers that the potential impacts to benthic communities and habitats are not expected to change as a result of the proposed time limit extension for implementation.

Summary

In considering the information provided by the proponent and relevant EPA policies and guidelines, the EPA considers that there is no new significant or additional information that justifies the reassessment of benthic communities and habitats for this proposal.

The EPA is therefore satisfied that the following existing conditions and the revised Condition 3 for the extension of Time Limit for Proposal Implementation for an additional five years would, when implemented, ensure that the outcome of the proposal would be consistent with the EPA objective for benthic primary producer and habitat:

- Condition 7, MS 904: Benthic Primary Producer and Habitat

4.3 Marine Environmental Quality

The EPA environmental objective for marine environmental quality is *to maintain the quality of water, sediment and biota so that environmental values are maintained.*

Conclusions from EPA Reports 1431 and 1600

In assessing the potential impacts of the proposal, the EPA (Report 1431) considered potential construction and operational impacts associated with:

- cleaning and backwashing of chemical from the seawater intake structure
- brine discharge from the outfall location on the south side of Cape Riche.

The EPA came to the view that cleaning and backwashing of chemicals from the seawater intake structure was unlikely to have impacts on marine water quality given the proponent's commitment to ensure that no chemicals are released into Cheyne Bay. The EPA noted that the proponent nominated a LEPA that extended out to a 100 m radius of the outfall location with the aim being to ensure that the discharge will meet ANZECC/ARMCANZ water quality standards at the LEPA boundary (Report 1431).

Additionally, the EPA developed a more detailed set of environmental quality objectives (EQOs) that were to be applied to the proposal. The EPA was consequently satisfied that given the results of the proponents simulated brine testing, the expected level of dilution at the LEPA boundary, and proposed management actions, the EPA's objectives for marine environmental quality were likely to be met.

To manage these impacts, the EPA recommended Condition 6 (Water Quality) and Schedule 2 environmental values and EQOs requiring that the proponent implement

appropriate monitoring and management actions to ensure impacts to water quality as a result of the proposal are minimised.

In October 2016, the proponent undertook a review of the marine environment, to support the (previous) s.46 application. The review concluded that there had been no significant changes to the existing environment since the proposal was approved for implementation.

The EPA considered the additional and updated information and concluded that the impacts to the marine environmental quality environmental factor remained manageable and would not be significant provided the existing conditions were implemented (Report 1600).

Assessment of the requested amendment to conditions

The EPA considers that the following current environmental policy and guidance is relevant to its assessment of the proposal for this factor:

- *Environmental factor guideline – Marine environmental quality* (EPA 2016c).

The EPA notes that any potential significant impacts to water quality associated with brine discharge will be limited to the LEPA. The LEPA extends to a 100 m radius from the entrance to the rock fissure, in a high energy wave environment. This habitat is unlikely to support any matters of national environmental significance or “other matters”. The EPA also notes that a Marine Water Quality Monitoring Program has been outlined within the OEMP to monitor the water quality of the receiving environment.

Summary

In considering the information provided by the proponent and relevant EPA policies and guidelines, the EPA considers that there is no new significant or additional information that justifies the reassessment of marine environmental quality for this proposal.

The EPA is therefore satisfied that the following existing conditions and the revised Condition 3 for the extension of Time Limit for Proposal Implementation for an additional five years would, when implemented, ensure that the outcome of the proposal would be consistent with the EPA objective for marine environmental quality:

- Condition 6: Water Quality monitoring and management and designation of Environmental Values and environmental quality standards

4.4 Flora and Vegetation

The EPA environmental objective for flora and vegetation is *to protect flora and vegetation so that biological diversity and ecological integrity are maintained.*

Conclusions from EPA Reports 1431 and 1600

In Report 1431, the EPA noted that the proposed locations of the desalination plant and associated infrastructure, including the pipeline alignments, are primarily within previously disturbed or cleared areas, including road reserves and agricultural areas. Less than 65 ha would be directly disturbed, of which 15.9 ha of native vegetation would be cleared for the proposal.

Four Priority (P) flora species (*Monotoca aristata* (P2), *Chordifex leucoblepharis* (P2), *Goodenia Filiformis* (P3) and *Kunzea pauciflora* (P4)) were identified as occurring within the areas to be cleared. No Declared Rare Flora were identified. The EPA noted that the proponent would avoid Priority flora during construction as far as practicable (Report 1431) and did not consider Priority flora to be a key issue in the assessment.

One hectare of the Swamp Yate Priority Ecological Community (PEC) would be impacted by the proposal. The EPA concluded that as this represented approximately 2% of the community's extent in the sub-catchment, clearing associated with the proposal was unlikely to represent a significant impact to the PEC.

The EPA was satisfied that the proponent's commitment to prepare and implement a CEMP and OEMP was appropriate to manage the risk of leaks or spills from the brine discharge pipeline and to manage the potential impacts of the proposal on flora and vegetation.

The EPA, in its original assessment, considered the significant risk of increase or spread of weeds and pathogens, including dieback, during the construction of linear infrastructure and recommended implementation conditions accordingly.

To manage these impacts, the EPA recommended the following conditions:

- Condition 9 (Dieback) and condition 10 (Weeds) which require the monitoring and management of weCds and dieback.
- Condition 12 (Decommissioning) to ensure that post-decommissioning, the proposal area is rehabilitated to a standard suitable for the new land use(s) as agreed in consultation with relevant stakeholders.

In Report 1600, the EPA considered additional information provided by the proponent. This included a review based on the collation of data from previous field surveys, additional flora and vegetation surveys since 2011, and a review of current conservation significant flora and ecological community lists. Three Priority flora were found within the proposed clearing area:

- *Monotoca aristata* (P2) (identified in the original assessment) – 7.7% of known plants and 4.4% of known populations impacted.
- *Kunzea pauciflora* (P4) (identified in the original assessment) – 0.1% of known plants and 9.1% of known populations impacted.
- *Leucopogon elegans* subsp. *psorophyllus* (P3) (identified in a follow up survey) – 10.1% of known plants and 8% of known populations impacted.

The proponent noted that *Chordifex leucoblepharus* (P2) is no longer likely to be impacted by the proposal as the single record of this plant is located outside of the construction corridor and *Goodenia filiformis* (P3) is no longer on the priority flora list.

The EPA also noted that the proponent, in its original Public Environmental Review document, noted that *L. elegans* subsp. *psorophyllus* (P3) was likely to occur, however no individuals were identified in the associated surveys. In 2016, the proponent noted that approximately 7.6% of the currently known plants of *L. elegans* subsp. *psorophyllus* (P3) and 4% of the currently known populations, occur in protected lands.

The EPA considered that impacts to *L. elegans* subsp. *psorophyllus* (P3) can be further mitigated by the proponent's commitment to avoid Priority flora during construction where practicable (Report 1600). The EPA concluded that having regard to the objective for the flora and vegetation environmental factor and relevant policies and guidelines, that the impacts to this factor were manageable and would not be significant provided that Condition 9 (Dieback), Condition 10 (Weeds) and Condition 12 (Decommissioning) of MS 904 were implemented.

Assessment of the requested amendment to conditions

The EPA considers that the following current environmental policy and guidance is relevant to its assessment of the proposal for this factor:

- *Environmental factor guideline – Flora and vegetation* (EPA 2016d).

The EPA notes that in May 2022 the proponent undertook a review of past and current studies and records in order to identify any potential new environmental considerations that may have arisen since the original EPA assessment (Report 1431) and subsequent inquiry (Report 1600).

Conservation Significant Flora

The EPA notes that while the review did not identify any newly listed threatened flora species located in or within 50 m of the development envelope, two new priority species have been identified as occurring within the impact footprint since EPA Report 1600 was published. Priority flora species relevant to the proposal are now considered to be: *Trymalium litorale* (P1), *Monotoca aristata* (P2), *Hibbertia argentea* (P3), *Leucopogon elegans* subsp. *psorophyllus* (P3) and *Kunzea pauciflora* (P4).

Conservation Significant Ecological Communities

The EPA notes that two threatened ecological communities (TECs) listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) have been identified as occurring within the development envelope:

- Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia TEC (listed August 2013)
- Subtropical and Temperate Coastal Saltmarsh TEC (listed February 2014).

The TECs were listed after EPA Report 1431 was published. The EPA notes that EPBC Act approval (EPBC 2011/6053) has been issued, with a requirement for the proponent to provide biodiversity offsets totalling 1,600 ha.

No TECs listed under the *Biodiversity Conservation Act 2016* (BC Act) are known to occur within the development envelope. Five PECs (or their buffers) occur in or intersect with the development envelope. None of these are newly identified occurrences since EPA Report 1600.

The EPA notes that no new threatened flora species and no new (BC Act) TECs have been located in the project area. The EPA recognises that additional surveys carried out in the development area since EPA Report 1600 was published have contributed to the knowledge on the flora and vegetation of the project area and surrounds, and have resulted in more conservation significant flora species being identified and additional weed mapping being undertaken.

Summary

In considering the information provided by the proponent and relevant EPA policies and guidelines, the EPA considers that there is no new significant or additional information that justifies the reassessment of flora and vegetation for this proposal.

The EPA is therefore satisfied that the following existing conditions and the revised Condition 3 for the extension of Time Limit for Proposal Implementation for an additional five years would, when implemented, ensure that the outcome of the proposal would be consistent with the EPA objective for flora and vegetation:

- Condition 9: Dieback management
- Condition 10: Weeds
- Condition 12: Decommissioning
- Condition 1 and schedule 1: Limits on clearing

4.5 Terrestrial Fauna

The EPA environmental objective for terrestrial fauna is *to protect terrestrial fauna so that biological diversity and ecological integrity are maintained*.

Conclusions from EPA Reports 1431 and 1600

In Report 1431, the EPA noted that the 15.9 ha of fauna habitat types to be cleared were well represented within the local area. The EPA further noted that impacts to fauna associated with noise, vibration and light would primarily occur during the construction phase of the proposal and would therefore be localised and temporary. The EPA considered that these impacts were unlikely to be significant.

The EPA had consideration for the proponent's CEMP and OEMP which detailed management actions that were expected to minimise potential impacts to fauna associated with clearing, vehicle strike, trenching and power line collisions by avifauna.

To manage impacts associated with trenching specifically, the EPA recommended Condition 11 (Trapped fauna) requiring that management actions are undertaken to minimise the risk of fauna entrapment associated with trenching for pipeline construction.

The EPA, in Report 1600, concluded that the review undertaken by the proponent in October 2016 confirmed that there had been no changes to the existing environment in the proposal area, and as such considered that the proposal was unlikely to have significant or additional impacts upon terrestrial fauna other than those assessed during the original assessment.

Assessment of the requested amendment to conditions

The EPA considers that the following current environmental policy and guidance is relevant to its assessment of the proposal for this factor:

- *Environmental factor guideline – Terrestrial fauna* (EPA 2016e).

In January 2022, the proponent undertook a review of fauna listings under the EPBC Act and BC Act, and a database search for all fauna (including significant species) in an area extending 20 km east and over 100 km west of the desalination plant.

The EPA notes that the review identified one listed vertebrate fauna species whose likelihood of occurrence has changed. While the conservation status of the Western Whipbird (heath sub-species) has not changed, it is now considered 'likely to occur nearby', although it was most likely to occur in intact heathland vegetation outside the development envelope.

The EPA notes that the review identified several conservation status changes to listed fauna since the original assessment. The EPA considered that whilst there has been changes to the conservation status, the environmental factors and considerations for fauna remain unchanged for this project.

Summary

In considering the information provided by the proponent and relevant EPA policies and guidelines, the EPA considers that there is no new significant or additional information that justifies the reassessment of terrestrial fauna for this proposal.

The EPA is therefore satisfied that the following existing conditions and the revised Condition 3 for the extension of Time Limit for Proposal Implementation for an additional five years would, when implemented, ensure that the outcome of the proposal would be consistent with the EPA objective for terrestrial fauna:

- Condition 11: Trapped fauna

4.6 Social Surroundings

The EPA environmental objective for social surroundings is *to protect social surroundings from significant harm*.

Conclusions from EPA Reports 1431 and 1600

The EPA noted in Report 1431 that Cape Riche is an area that is highly valued by the local and wider community, for recreational use, personal history, and cultural heritage.

Reports 1431 and 1600 included consideration of impacts relating to: noise, light, odour, visual amenity, Indigenous heritage, and recreational values. An assessment was undertaken against each of these impacts. The conclusions from Report 1431 and Report 1600 are summarised below.

Noise: The EPA concluded that the potential impacts to amenity during construction are expected to be temporary and restricted to daytime hours and could be managed in accordance with the *Environmental Protection (Noise) Regulations 1997*.

Light: Reports 1431 and 1600 indicated that lighting associated with the proposal could be managed to meet the EPA's objectives for amenity, as the level of lighting at the desalination plant was expected to be a similar level to street lighting and the lighting at the pump station would be low level lighting, primarily required for safety reasons. The EPA further noted that the proposal requires local government approval that is expected to have regard to ensuring that the proponent commitments in relation to lighting are implemented.

Odour: Reports 1431 and 1600 considered that matters concerning odour related to removing bio-matter from the screens of the sea water intake and the storage and treatment of wastewater could be addressed through the works approval and licence required under Part V of the EP Act. In addition, the proponent committed to minimising the risk of odour through management actions including regular clearing of screens and removal of bio-matter and sludge, maintaining complaints registers and a 24-hour phone number for complaints.

Visual amenity: Reports 1431 and 1600, considered visual impacts to be more evident during the construction phase, as during operations, the pipelines would be buried, and the desalination plant would be blending with the existing landscape. Given the scale of the proposal and the proponent's proposed management actions, including progressive rehabilitation, targeted vegetation planning and colouring of buildings to blend with the existing landscape, the EPA concluded that visual impacts associated with the proposal could be managed to meet its objectives for this factor.

Aboriginal heritage: Reports 1431 and 1600, noted that the proponent conducted ethnographic surveys of the majority of the proposal area and did not identify any ethnographic sites within the proposed disturbance sites. The EPA further noted that additional surveys would be undertaken prior to ground disturbing activities to ensure that all proposed disturbance areas are examined. The EPA considered that any

impacts to Indigenous heritage sites associated with the proposal could be managed under the *Aboriginal Heritage Act 1972*.

Recreation: Reports 1431 and 1600 noted the proponent's commitment to minimise impacts to recreational activities in the Cape Riche area, and that walking trails along the coast are not expected to be completely blocked off at any time. Given the proponent's proposed management actions, the scale of the proposal and the location of the proposal primarily on agricultural and privately owned land, the EPA considered that impacts to recreational activities could be managed to meet the EPA's objectives for this factor.

Assessment of the requested amendment to conditions

The EPA considers that the following current environmental policy and guidance is relevant to its assessment of the proposal for this factor:

- *Environmental factor guideline – Social Surroundings* (EPA 2023).
- *Technical Guidance – Environmental impact assessment of Social Surroundings – Aboriginal Cultural Heritage* (EPA 2023)

The potential impacts to social surroundings in the context of the proposal refers to those aspects of the proposal which have the potential to impact on public amenity and recreational values.

No new recreational, noise, light or odour sensitive receptors have been identified further to those identified in the original EPA assessment. The EPA considers that as the proponent has not proposed any changes to the proposal, the potential impacts related to noise, light, odour, visual amenity, and recreation are unchanged from those discussed in EPA Report 1431 and EPA Report 1600 and can be managed to meet the EPA's objectives.

With regard to Aboriginal heritage, the EPA notes that whilst the EPA's Technical Guidance – *Environmental impact assessment of Social Surroundings – Aboriginal Cultural Heritage* (EPA, 2023) was released after the proponent submitted the s46 application for time limit extension and therefore was not specifically addressed in the s46 application. It is noted, the Deep Woods (2022) report and a report by Waru Consulting (2023) confirmed that no ethnographic or other cultural sites would be impacted by the proposal. The EPA notes that the proponent's reports mentioned above document consultations and surveys conducted with representatives of the Albany Heritage Reference Group Corporation (AHRGAC).

The EPA notes that Deep Woods (2022) additional Aboriginal heritage survey report was completed and included a site visit to the desalination plant and previously unsurveyed sections of the pipeline. The report identified isolated stone artefacts and concluded that they do not represent heritage sites or require a s.18 approval. The EPA notes that the two sites that were identified (Skippy Rock and the Cape Riche Campsite) will not be directly or indirectly impacted by the project and that no concerns were raised by the relevant Aboriginal spokespeople regarding the proposal being implemented in relation to the matters covered in the Interim Technical Guidance regarding impacts other than from direct disturbance.

Waru Consulting (2023) also investigated potential sites in relation to the Southdown Magnetite mine and areas that intersect with the desalination pipeline corridor. This investigation, included relevant elders, as selected by the AHRGAC. The EPA notes, that following these additional surveys, consultations, and a site visit, a s18 clearance was granted for mining and mine development on Lot 6833 in August 2023. The Ministerial consent has conditions that include a requirement to notify the Minister for Aboriginal Affairs if any new information about Aboriginal cultural heritage in that area is discovered.

The EPA considers that no further assessment is required other than the original assessment for this factor, and the proposal can continue to be managed under the *Aboriginal Heritage Act 1972*, the EPA considers the likely outcome of this proposal is consistent with the EPA objective for social surroundings.

4.7 Other factors

Given the time since the original assessment and the previous s. 46 inquiry, the proponent is required to consider the relevancy of any new or additional environmental factors in its request for a change to conditions. The assessment of other factors is outlined below.

Greenhouse gas emissions

In April 2020, greenhouse gas emissions was added as an environmental factor for consideration by the EPA in the environmental impact assessment process. The EPA's environmental objective for greenhouse gas emissions is to *minimise the risk of environmental harm associated with climate change by reducing greenhouse gas emissions as far as practicable*.

The EPA's revised *Environmental factor guideline – Greenhouse gas emissions* (EPA 2023) sets out that, generally, emissions from a proposal will be considered where they are reasonably likely to exceed 100,000 tonnes of scope 1 or scope 2 emissions each year measured in CO₂ equivalent. The EPA will have regard to this guideline when assessing new proposals and changes to proposals or conditions (s.46 inquiries) resulting in an increase in greenhouse gas emissions, which may involve the EPA recommending inclusion of additional conditions.

Assessment of the requested change to conditions

The proponent engaged a consultant to estimate the greenhouse gas emissions during construction and operation of the proposal.

The proponent identified fuel consumption from transport and stationary use and electricity generation as a source of greenhouse gas emissions. The proponent identified that during a 14-month construction period, scope 1 greenhouse gas emissions estimated by the proponent to be 9,613 tCO₂-e. The proponent estimated that during the 14-year operational life of the proposal, scope 1 emissions will be minimal. It was estimated that indirect scope 2 (electricity consumption) and scope 3 emissions will be approximately 533,872 tCO₂-e (equivalent to an average annual emission of 38,134 tCO₂-e) and 7,968 tCO₂-e respectively.

The EPA notes that during operations, the annual estimates of scope 1 and scope 2 emissions are approximately 38,134 tCO₂-e, which are well below the guideline of 100,000 tonnes CO₂-e/annum outlined in the EPA's *Environmental factor guideline – Greenhouse gas emissions*.

Summary

In considering the information provided by the proponent and relevant EPA policies and guidelines, the EPA considers that there is no new significant or additional information that justifies the assessment of greenhouse gas emissions for this proposal.

The EPA is therefore satisfied that the revised Condition 3 for the extension of Time Limit for Proposal Implementation for an additional five years would, when implemented, ensure that the outcome of the proposal would not be inconsistent with the EPA objective for GHG emissions.

Conclusions and recommendations

Amendment to Condition 3

The proponent has requested an amendment to Condition 3 to extend the time limit for proposal implementation. The EPA considers it is appropriate to amend Condition 3 of MS 904 (as replaced by MS 1061) and extend the time limit for proposal implementation by 5 years from the date of the Statement authorising the extension of the time limit for proposal implementation.

Conclusions

In relation to the environmental factors, and considering the information provided by the proponent and relevant EPA policies and guidelines, the EPA concludes that:

- there are no amendments to the proposal associated with the request to amend the conditions
- there is no significant new or additional information that changes the conclusions reached by the EPA under any of the relevant environmental factors since the proposal was assessed by the EPA in Report 1431 (February 2012)
- no new significant environmental factors have arisen since the EPA's original assessment of the proposal
- impacts to the key environmental factors are considered manageable, based on the requirements of the original conditions retained in MS 904
- the authorised timeframe for substantial commencement of the proposal may be extended by 5 years from the date of the Statement authorising the extension of the time limit for proposal implementation as requested.

Recommendations

Having inquired into this matter, the EPA submits the following recommendations to the Minister for Environment under s. 46 of the *Environmental Protection Act 1986*:

1. While retaining the environmental requirements of the original conditions of MS 904, it is appropriate to delete Condition 3 and replace it with a new implementation condition extending the authorised timeframe for substantial commencement of the proposal by 5 years from the date of the Statement
2. After complying with s. 46(8) of the *Environmental Protection Act 1986*, the Minister may issue a statement of decision to amend Condition 3 of MS 904 (as replaced by MS 1061) in the manner provided for in the attached recommended statement (Appendix A).

Appendix A: Recommended conditions

STATEMENT TO AMEND THE IMPLEMENTATION CONDITIONS APPLYING TO A PROPOSAL

(Section 46 of the *Environmental Protection Act 1986*)

CAPE RICHE SEAWATER DESALINATION PLANT

Proposal: The proposal is to construct and operate a 12 GL/annum seawater desalination plant in order to supply water to Grange Resource's Southdown Magnetite operations.

Proponent: Grange Resources Limited
Australian Company Number 009 132 405

Proponent address: 34a Alexander Street
BURNIE TASMANIA 7320

Report of the Environmental Protection Authority: 1764

Preceding Statement/s relating to this proposal: 904 and 1061

Pursuant to section 45 of the *Environmental Protection Act 1986*, as applied by section 46(8), it has been agreed that the implementation conditions set out in Ministerial Statement No. 904 (as amended by Ministerial Statement No. 1061), be amended as specified in this Statement.

Condition 3 of Ministerial Statement 904 (as replaced by Ministerial Statement 1061) is deleted and replaced with:

3 Time Limit for Proposal Implementation

- 3-1 The proponent shall not commence implementation of the proposal after the expiration of five (5) years from the date of this Statement, and any commencement, within this five (5) year period, must be substantial.
- 3-2 Any commencement of implementation of the proposal, within five (5) years from the date of this Statement, must be demonstrated as substantial by providing the **CEO** with written evidence, on or before the expiration of five (5) years from the date of this Statement.

Table 1: Abbreviations and definitions

Acronym	Definition
CEO	The Chief Executive Officer of the Department of the Public Service of the State responsible for the administration of section 48 of the <i>Environmental Protection Act 1986</i> , or his/her delegate.

Hon. Reece Whitby MLA
MINISTER FOR ENVIRONMENT

Appendix B: Decision-making authorities

The decision-making authorities in the table below have been identified for the purposes of s. 45 as applied by s. 46(8) of the *Environmental Protection Act 1986*.

Decision-making authority	Legislation (and approval)
1. Minister for Aboriginal Affairs	<i>Aboriginal Heritage Act 1972</i> (Section 18 consent)
2. Minister for Lands	<i>Land Administration Act 1997</i>
3. Chief Executive Officer, Department of Water and Environmental Regulation	<i>Environmental Protection Act 1986</i> (Works approval and licence) <i>Environmental Protection (Noise) Regulations 1997</i>
4. City of Albany	<i>Local Government Act 1995</i> (and relevant local By Law)

Note: In this instance, agreement is only required with DMAs 1 and 2, since these DMAs are Ministers.

References

EPA 2016b, *Environmental factor guideline – Benthic communities and habitats*, Environmental Protection Authority, Perth, WA.

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EPA 2016c, *Environmental factor guideline – Marine environmental quality*, Environmental Protection Authority, Perth, WA.

EPA 2016a, *Environmental factor guideline – Marine fauna*, Environmental Protection Authority, Perth, WA.

EPA 2016f, *Environmental factor guideline – Social surroundings*, Environmental Protection Authority, Perth, WA.

EPA 2016e, *Environmental factor guideline – Terrestrial fauna*, Environmental Protection Authority, Perth, WA.

EPA 2021, *Environmental impact assessment (Part IV Divisions 1 and 2) procedures manual*, Environmental Protection Authority, Perth, WA.

EPA 2023, *Statement of environmental principles, factors, objectives and aims of EIA*, Environmental Protection Authority, Perth, WA.

EPA 2023, *Technical Guidance – Environmental Impact Assessment of Social Surroundings – Aboriginal Cultural Heritage*, Environmental Protection Authority, Perth, WA.

Grange Resources Pty Ltd, 2011, *Southdown Magnetite Project Cape Riche Seawater Desalination Plant, Public Environmental Review*, Grange Resources Pty Ltd.

Grange Resources Pty Ltd, 2023, *Request to amend implementation conditions under s.46 of the EP Act*, Grange Resources Pty Ltd.

State of Western Australia 2021, *Western Australia Government Gazette, No. 180, Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2021*, 22 October 2021.