



Report and recommendations of the Environmental Protection Authority



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

Grange Resources Limited

Report 1600

June 2017

ENVIRONMENTAL PROTECTION AUTHORITY
REPORT AND RECOMMENDATIONS TO THE MINISTER FOR
ENVIRONMENT

**CAPE RICHE SEAWATER DESALINATION PLANT PROPOSAL - INQUIRY
UNDER SECTION 46 OF THE *ENVIRONMENTAL PROTECTION ACT 1986*
TO AMEND MINISTERIAL STATEMENT 904 (ASSESSMENT NO. 2112)**

The Minister for Environment has requested that the Environmental Protection Authority (EPA) inquire into and report on the matter of changing the implementation conditions relating to the Cape Riche Seawater Desalination Plant (the proposal), in order to extend the 'Time Limit of Authorisation' (condition 3).

The following is the EPA's Report and Recommendations (No. 1600) to the Minister pursuant to section 46(6) of the *Environmental Protection Act 1986* (the EP Act).

Background

The proposal is to construct and operate a 12 gigalitre per annum seawater desalination plant at Cape Riche in order to supply water to Grange Resource's Southdown Magnetite operations (operated under a separate Ministerial Statement 816, as amended by Ministerial Statement 987). The proposal includes:

- a desalination plant at Cape Riche and a pipeline and infrastructure corridor between the desalination plant and mine area; and
- outlet and inlet pipelines between the coast and the desalination plant at Cape Riche.

The EPA assessed the proposal at the level of Public Environmental Review and released its assessment report (Report 1431) in February 2012. The EPA identified the following key environmental factors relevant to the proposal:

- Marine Fauna;
- Benthic Primary Producer Habitat;
- Marine Water Quality;
- Terrestrial Flora and Fauna;
- Social Surroundings; and
- Closure and Decommissioning.

In applying the Environmental Protection Authority, *Statement of Environmental Principles, Factors and Objectives*, December 2016 (SEPFO) these factors are now represented by:

- Marine Fauna;
- Benthic Communities and Habitats;
- Marine Environmental Quality;
- Flora and Vegetation;
- Terrestrial Fauna; and
- Social Surroundings.

Closure and decommissioning are considered under the factors Benthic Communities and Habitats, and Flora and Vegetation.

The EPA concluded in EPA Report 1431 (February 2012) that “it is likely that the EPA’s objectives would be achieved provided there is satisfactory implementation by the proponent of the recommended conditions”.

The Minister for Environment approved the proposal for implementation, subject to the implementation conditions of Ministerial Statement 904 (19 July 2012).

Requested changes to conditions

Condition 3-1 of Ministerial Statement 904 requires the proponent to substantially commence the proposal within five years of the date of issue of the Statement (that is, before 19 July 2017).

The proposal has not yet substantially commenced. The proponent for the proposal, Grange Resources Limited, has requested an extension of the Time Limit of Authorisation (now referred to as “Time Limit for Proposal Implementation”) for substantial commencement to be extended by five years, to 19 July 2022.

The proponent has not proposed any additional changes to the proposal as part of its application to extend the Time Limit for Proposal Implementation.

Application of relevant EPA Policies and Guidelines

In inquiring into the change to conditions, the EPA has given due consideration to relevant published EPA policies and guidelines, noting that a number of published policies and guidelines pertaining to this proposal were considered but not determined to be relevant.

On 13 December 2016, the EPA released a new suite of environmental impact assessment policy and guidance documents.

The Minister requested the section 46 (s46) inquiry on 22 November 2016, prior to the release of the new *Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2016* and environmental impact assessment policy and guidance documents.

In its assessment, the EPA has considered and given due regard to, where relevant, its current environmental impact assessment policy and guidance documents (Table 1).

Inquiry into the requested change to conditions

The EPA recommends imposing a substantial commencement timeframe implementation condition so that the conditions relating to a proposal can be reviewed within a reasonable timeframe to ensure:

- consideration is given to changes in the environment, scientific or technology knowledge arising since the initial assessment; and
- proposals are being implemented using best practice and contemporary methods so that the EPA objectives for the key environmental factors are met.

The EPA has a discretion as to how it conducts this inquiry. The currency of the initial assessment and issue of the Ministerial Statement (that is, when it was published) is also instructive in determining the extent and nature of the inquiry under s46. Ministerial Statement 904 was published on 19 July 2012.

Inquiry Findings

In conducting this inquiry, the EPA reviewed the information provided by the proponent.

In considering whether it should recommend an extension of the Time Limit for Proposal Implementation for substantial commencement of the proposal, the EPA also considered whether there is any new relevant information in relation to the assessment of the potential impacts of the proposal.

Marine Fauna

The EPA's objective for *Marine Fauna* is "*To protect marine fauna so that biological diversity and ecological integrity are maintained*".

The Cape Riche area is known to have a high marine fauna species diversity. EPA Report 1431 considered the following potential construction and operational impacts that could impact marine fauna:

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

EPA Report 1431 considered that given the proponent's proposed exclusion zones and blasting restrictions, that the construction of the seawater intake channel could be managed to meet the EPA's objective for this factor. 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 of 0.15 metres per second for the operation of the seawater intake was within the natural variation of current speeds at the intake locations; and
- Little Penguins, most fish species, and larger marine species are able to comfortably swim against currents of this intake velocity.

In October 2016, a desktop review of the current existing marine fauna of the proposal area was undertaken by 360 Environmental Pty Ltd (360 Environmental). 360 Environmental concluded that there have been no significant changes to the existing environment since approval of the proposal.

360 Environmental notes that since 2011 the conservation status of the Humpback Whale has decreased from 'Vulnerable' to 'Conservation Dependent' and the Australian Sea Lion's conservation status has now increased from 'Other Specially Protected Fauna' to 'Vulnerable' under the *Wildlife Conservation Act 1950*. 360 Environmental also notes that there have been no reported changes to the habitation or usage of the areas by marine fauna species since approval of the proposal and no newly reported occurrences of marine fauna species in the proposal area.

The EPA notes that in accordance with the existing condition 8 (Marine Fauna), the proponent is required to implement management actions to ensure that marine fauna are protected from blasting activities. In addition existing implementation condition 7 (Benthic Primary Producer Habitat) requires the implementation of a Construction Environmental Management Plan, where the proponent has committed to reporting any fauna injuries resulting from blasting events.

The EPA considers, having regard to the environmental objective for the Marine Fauna factor and relevant policies and guidelines, that the impacts to this factor are manageable and would not be significant provided that existing implementation conditions 8 (Marine Fauna) and condition 7 (Benthic Primary Producer Habitat) are implemented.

Benthic Communities and Habitats

The EPA's objective for *Benthic Communities and Habitat* is "To protect benthic communities and habitats so that biological diversity and ecological integrity are maintained".

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

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

EPA report 1431 concluded that the construction of the seawater intake could be managed to meet the EPA's objectives for this factor as the predicted direct loss (both temporary and permanent) of benthic communities and habitat associated with construction of the intake channel occurs within the boulder-reef macroalgae habitat and represented only 1.43% of the habitat within the smaller assessment unit agreed for this proposal.

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

In relation to brine discharge, the proponent established a low Ecological Protection Area (LEPA) extending out to a 100 m radius of the brine discharge location. The EPA noted that given the location of the brine discharge, the level of dilution expected within the LEPA boundary, and the expected quality of brine

discharge, impacts on benthic communities and habitat outside the LEPA boundary were highly unlikely.

In October 2016, 360 Environmental completed a desktop review of the benthic communities and habitats of the proposal area and concluded that it is unlikely that there has been a significant change in the types or distribution of benthic habitats in the proposal area since the mapping was completed in 2011. In relation to direct impacts to benthic habitats, the seawater intake channel is proposed to be located immediately adjacent to the rocky shoreline, and due to the particular physical environment immediately adjacent to the rocky shoreline, 360 Environmental considered it unlikely that any changes in the benthic communities and habitats in this zone would have occurred since the approval of this proposal.

The EPA also notes that existing implementation condition 7 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. Existing implementation condition 7 (Benthic Primary Producer Habitat) also requires the implementation of a Construction Environmental Management Plan (CEMP), that requires the proponent to undertake additional benthic habitat modelling before and during the implementation of the proposal and includes the requirement to complete the coral spawn entrainment assessment.

The concrete seawater intake channel and the brine discharge pipeline would be removed when the desalination plant is decommissioned. Existing implementation condition 12 (Decommissioning) addresses the removal of plant and infrastructure and the rehabilitation of disturbed areas.

The EPA considers, having regard to the environmental objective for the Benthic Communities and Habitats factor and relevant policies and guidelines, that the impacts to this factor are manageable and would not be significant provided that existing implementation condition 7 (Benthic Primary Producer Habitat) and existing implementation condition 12 (Decommissioning) are implemented.

Marine Environmental Quality

The EPA's objective for *Marine Environmental Quality* is "To maintain the quality of water, sediment and biota so that environmental values are protected".

EPA Report 1431 considered the following potential construction and operational impacts associated with:

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

The EPA noted that as the proponent committed to ensuring that no chemicals are released to Cheyne Bay, therefore, cleaning and backwashing of chemicals from the seawater intake structure would be unlikely to have impacts to marine water quality.

In relation to the brine discharge from the outfall location, EPA Report 1431 noted that the proponent nominated a LEPA that extended out to a 100 m radius

of the outfall location to ensure that the discharge will meet ANZECC/ARMCANZ water quality standards at the LEPA boundary. In addition, the EPA developed a more detailed set of Environmental Quality Objectives (EQOs) to apply to the proposal. Consequently, the EPA was satisfied that due to the results of the proponent's simulated brine testing, the expected level of dilution at the LEPA boundary and proposed management actions, the EPA's objectives for this factor could be met.

360 Environmental's review of the marine environment of the proposal area in October 2016 concluded that there have been no significant changes to the existing environment since approval of the proposal.

The EPA notes that the existing implementation condition 6 (Water Quality) and the associated Schedule 2 Environmental Values and EQOs require that the proponent implements appropriate monitoring and management actions that ensure that the proponent minimises impacts to water quality as a result of the proposal.

The EPA considers, having regard to the environmental objective for the Marine Environmental Quality factor and relevant policies and guidelines, that the impacts to this factor are manageable and would not be significant provided that existing implementation condition 6 (Water Quality) and the associated Schedule 2 Environmental Values and EQOs are implemented.

Flora and Vegetation

The EPA's objective for the Flora and Vegetation factor is "*To protect flora and vegetation so that biological diversity and ecological integrity are maintained*".

EPA Report 1431 noted that the proposed locations of the desalination plant and 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 however only 15.9 ha of native vegetation would be cleared for this proposal. Four Priority flora species (*Monotoca aristata* (Priority 2), *Chordifex leucoblepharis* (P2), *Goodenia Filiformis* (P3) and *Kunzea pauciflora* (P4)) were identified within the areas to be cleared for this proposal. No Declared Rare Flora were identified within the areas to be cleared for this proposal. It is noted in EPA Report 1431 that the proponent would avoid Priority flora during construction as far as practicable. The EPA did not consider Priority flora to be a key issue in the assessment.

One hectare of the Priority 3 Swamp Yate Priority Ecological Community (PEC) would be impacted and the EPA concluded that as this would impact only 2% of the PEC's distribution in the sub-catchment. Clearing associated with the proposal was considered unlikely to significantly impact the PEC. The EPA was also satisfied that the proponent commitment to prepare and implement a CEMP and Operational Environmental Management Plan would manage the risk of leaks or spills from the brine discharge pipeline and manage the potential impacts of the proposal on flora and vegetation.

Maia Environmental Consultancy (2016) completed 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's 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; and
- *Leucopogon elegans* subsp. *psorophyllus* (P3) (identified in a follow up survey) - 10.1% of known plants and 8% of known populations impacted.

Maia 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.

In the original Public Environmental Review report (Grange Resources, 2011), it was noted that *Leucopogon elegans* subsp. *psorophyllus* (P3) was likely to occur, however no individuals were located in the associated surveys. In 2016, Maia noted that approximately 7.6% of the currently known plants of *Leucopogon elegans* subsp. *psorophyllus* (P3) and 4% of the currently known populations, occur in protected lands. The EPA considers that impacts to *Leucopogon elegans* subsp. *psorophyllus* (P3) can be further mitigated by the proponent's commitment to avoid Priority flora in construction where practicable.

In relation to impacts to PECs from vegetation clearing for this proposal, Maia noted the following:

- The potential impacts to Swamp Yate (*Eucalyptus occidentalis*) woodlands in seasonally inundated clay basins (South Coast) (South Coast PEC 33) (P3) have decreased slightly due to more accurate digitising of vegetation boundaries since the original assessment. Impacts are estimated at 1.98% (0.87 ha), a slight decrease from the 2% estimated in the original assessment.
- The potential impacts to Albany Blackbutt (*Eucalyptus staeri*) mallee-heath on deep sand (South Coast PEC 30) (P2) have increased as this PEC was not considered in the initial assessment. Impact is estimated to be 0.37% (1.22 ha) which is considered unlikely to be significant.
- The potential impacts to *Taxandria spathulata* Heath (South Coast PEC 39) (P3) have increased as this PEC has been listed since the project was initially assessed. Impact is estimated to be 0.63% (0.38 ha) which is considered unlikely to be significant.

In its original assessment, the EPA considered the significant risk of increase or spread of weeds and pathogens including dieback in the construction of linear infrastructure and recommended implementation condition 9 (Dieback) and condition 10 (Weeds) which require monitoring and management of weeds and dieback. The EPA also recommended implementation 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.

The EPA considers, having regard to the environmental objective for the Flora and Vegetation factor and relevant policies and guidelines, that the impacts to this factor are manageable and would not be significant provided that existing implementation condition 9 (Dieback), condition 10 (Weeds) and condition 12 (Decommissioning) are implemented.

Terrestrial Fauna

The EPA's objective for the Terrestrial Fauna factor is "*To protect terrestrial fauna so that biological diversity and ecological integrity is maintained*"

EPA Report 1431 concluded that the implementation of the proposal would result in the loss of 15.9 ha of fauna habitats that were well represented within the local area. The EPA also 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 and unlikely to cause significant impacts to fauna.

In October 2016, Bamford Consulting Ecologists (Bamford) completed a review of species listings and additional fauna surveys conducted since the approval of the proposal and confirmed that they have been no changes to the existing environment. The review concluded that the proposal is unlikely to have significant or additional impacts upon terrestrial fauna other than those assessed under the original assessment.

The EPA notes that existing implementation condition 11 (Trapped Fauna) requires that management actions are undertaken to minimise the risk of fauna entrapment associated with trenching for pipeline construction.

The EPA considers, having regard to the environmental objective for Terrestrial Fauna factor and relevant policies and guidelines, that the impacts to this factor are manageable and would not be significant provided that existing implementation condition 11 (Trapped Fauna) is implemented.

Social Surroundings

The EPA's objective for this factor is "*To protect social surroundings from significant harm*". The objective recognises the importance of ensuring that social surroundings are not significantly affected as a result of implementation of a proposal or scheme.

EPA Report 1431 notes that Cape Riche is an area that is highly valued by the local and wider community, for recreational use, personal history and cultural heritage. 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. EPA Report 1431 included consideration of impacts relating to: noise, light, odour, visual amenity, indigenous heritage and recreational values. An assessment has been undertaken against each of these impacts below.

- Noise: EPA Report 1431 concluded that although noise associated with the proposal during construction has the potential to impact amenity in Cape Riche area, this is expected to be temporary and restricted to daytime hours and could be managed in accordance with the Environmental Protection (Noise) Regulations 1997. As the proponent has confirmed that there are no changes to the proposal, the EPA considers that noise can still be managed under the requirements of the Environmental (Noise) Regulations 1997.
- Light: EPA Report 1431 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 also requires local government approval that is expected to have regard to ensuring that the proponent commitments in relation to lighting are implemented. The EPA considers that as the proponent has not proposed any changes to the proposal, the potential impacts related to lighting are unchanged from those discussed in EPA Report 1431.

- **Odour:** In its original assessment, the EPA considered that matters concerning odour related to removing bio-matter from the screens of the sea water intake and the storage and treatment of waste water 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 a complaints register and a 24 hour phone number for complaints. The EPA considers that as the proponent has not proposed any changes to the proposal, the potential impacts related to odour are unchanged from those discussed in EPA Report 1431 and can still be managed through Part V of the EP Act.
- **Visual amenity:** In the original assessment, visual impacts were considered to be more evident during the construction phase, as during operations, the pipelines would be buried and the desalination plant would be consistent 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. The EPA notes that as the proponent has not proposed any changes to the proposal, the potential visual impacts remain unchanged from those discussed in EPA Report 1431.
- **Indigenous heritage:** In its original assessment, the EPA 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*. As the proponent has indicated that there has been no significant environmental change to this factor since the original assessment, potential impacts related to indigenous heritage can continue to be managed under the *Aboriginal Heritage Act 1972*.
- **Recreation:** EPA Report 1431 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. The EPA considers that as the proponent has not proposed any

changes to the proposal, the potential impacts related to recreation are unchanged from those discussed in EPA Report 1431.

The EPA considers, having regard to the environmental objective for the Social Surroundings factor and relevant policies and guidelines, that the impacts to this factor are manageable and would not be significant.

EPA conclusions and recommendations

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

- there are no changes to the proposal;
- there is no significant new or additional information that justifies the reassessment of the issues raised by the proposal;
- the environmental factors of the proposal have not changed significantly from those originally assessed in EPA Report 1431 (2012); and
- no new significant key environmental factors have arisen since the EPA's assessment of the proposal.

Having inquired into this matter, the EPA submits the following recommendations to the Minister for Environment:

1. That condition 3 of Ministerial Statement 904 be amended to allow for the timeframe for substantial commencement of the Cape Riche Seawater Desalination Plant proposal to be extended to 19 July 2022; and
2. That, after complying with section 46(8) of the *Environmental Protection Act 1986*, the Minister issues a statement of decision to change condition 3 of Statement 904 in the manner provided for in the attached recommended Statement.

Table 1 – Relevant EPA Policies and Guidelines

Process/ Factor/s	Policies and guidelines considered relevant	Applied Yes/No	Comments
Change to conditions	<i>Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2016</i>	Yes	<p>The Administrative Procedures provide the principles and practices around the environmental impact assessment process undertaken by the Office of the Environmental Protection Authority under Part IV of the EP Act.</p> <p>Relevantly, section 5.4 of the Administrative Procedures provide guidance on the process for changing conditions under section 46 of the EP Act.</p>
Change to conditions	<i>Environmental Impact Assessment (Part IV Divisions 1 and 2) Procedures Manual, December 2016</i>	Yes	<p>The Procedures Manual supports the Administrative Procedures and contains more detailed information on each step of the EIA process, including section 46 changes to conditions, under stage 5.4.</p> <p>More relevantly, stage 5.4 details the process for changing implementation conditions.</p>
Change to conditions	<i>Statement of Environmental Principles, Factors and Objectives (December 2016) (SEPFO).</i>	Yes	<p>Relevantly, the SEPFO:</p> <ul style="list-style-type: none"> • considers the object and principles of the <i>Environmental Protection Act 1986</i>; • uses environmental factors and objectives to organise and systemise environmental impact assessment and reporting; • takes a holistic view of the environment and a proposal or scheme's potential impact on the environment; and • considers significance when determining whether or not to assess a proposal or scheme and recommend whether or not an assessed proposal or scheme may be implemented. <p>In this case the SEPFO was applied in:</p> <ul style="list-style-type: none"> • confirming the key environmental factors identified in EPA Report 1431 in the current policy context; • determining whether the identified environmental factors are still relevant and if any new factors should be considered; and

Process/ Factor/s	Policies and guidelines considered relevant	Applied Yes/No	Comments
			<ul style="list-style-type: none"> preparing advice on whether the EPA's environmental objectives can be met.
Marine Fauna	Environmental Factor Guideline – Marine Fauna (December 2016).	Yes	<p>The purpose of this guideline is to communicate how the factor Marine Fauna is considered by the EPA in the environmental impact assessment process. Relevantly for this proposal, the guideline was applied when defining and identifying the environmental values for the factor Marine Fauna as the proposal could potentially impact marine fauna including the New Zealand Fur Seal, Little Penguins and other whale and dolphin species likely to occur in the area.</p> <p>The request for change to conditions is to extend the Time Limit for Proposal Implementation. The proponent has advised that there is no change to the authorised extent of the proposal and therefore no additional direct or indirect impacts to marine fauna. This has been confirmed by the desktop assessment undertaken by 360 Environmental on behalf of the proponent.</p>
Benthic Communities and Habitats	Environmental Factor Guideline – Benthic Communities and Habitats (December 2016).	Yes	<p>The purpose of this guidelines is to communicate how the factor Benthic Communities and Habitats is considered by the EPA in the environmental impact assessment process.</p> <p>For the purpose of EIA, benthic communities are biological communities that live on or in the seabed.</p> <p>This guideline was applied when defining and identifying the environmental values for the factor Benthic Communities and Habitats related to the proposal.</p> <p>The request for change is to extend the Time Limit for Proposal Implementation. The proponent has advised there is no change to the authorised extent of the proposal and therefore no additional direct or indirect loss of benthic communities and habitats. This has been confirmed</p>

Process/ Factor/s	Policies and guidelines considered relevant	Applied Yes/No	Comments
			by the desktop assessment undertaken by 360 Environmental on behalf of the proponent.
Marine Environmental Quality	Environmental Factor Guideline – Marine Environmental Quality (December 2016).	Yes	<p>The purpose of this guideline is to communicate how the factor Marine Environmental Quality is considered by the EPA in the environmental impact assessment process, with the intent to prevent or minimise pollution and protect the environmental values associated with the marine environment.</p> <p>This guideline applies to State’s coastal waters and estuaries, including boat harbours and canals that are contiguous with the marine environment.</p> <p>This guideline was applied when defining and identifying the environmental values for the factor Marine Environmental Quality. For this proposal the environmental values are included in Schedule 2 of Ministerial Statement 904.</p> <p>The request for change to conditions is to extend the Time Limit for Proposal Implementation. The proponent has advised that there is no change to the design or operation of the desalination plant, and therefore no changes to the potential impacts to marine environmental quality.</p>
	Technical Guidance – Protecting the Quality of Western Australia’s Marine Environment (December 2016).	Yes	<p>The purpose of this technical guidance is to:</p> <ul style="list-style-type: none"> • assist proponents to design fit-for-purpose modelling and monitoring programs to spatially define, assess and manage potential impacts of their proposal on marine environmental quality; and • ensure proposals that have the potential to significantly affect marine environmental quality are described and assessed in a sound and consistent manner that demonstrates how the EPA’s objective for the Factor ‘marine environmental quality’ will be met. <p>This technical guidance was considered in this EPA Report, and it is concluded that locally specific Environmental Quality Objectives (EQOs)</p>

Process/ Factor/s	Policies and guidelines considered relevant	Applied Yes/No	Comments
			developed for this proposal as part of the original assessment are still appropriate to manage the potential impacts to Marine Environmental Quality. The EQOs are included in condition 6 and in Schedule 2 of Ministerial Statement 904.
Flora and Vegetation	Environmental Factor Guideline – Flora and Vegetation (December 2016).	Yes	<p>The purpose of this guideline is to outline how the factor Flora and Vegetation is considered by the EPA in the environmental impact assessment process.</p> <p>In considering the change to conditions, this Guideline was applied when defining and identifying the environmental values for the factor Flora and Vegetation.</p> <p>Relevantly this guideline was applied with regard to:</p> <ul style="list-style-type: none"> • application of the mitigation hierarchy to avoid or minimise impacts on flora and vegetation, where possible; • the potential impacts as a result of the proposed change, including direct and indirect impacts; • the significance of the flora and vegetation, and the risk to the flora and vegetation; • whether proposed management and mitigation approaches are technically and practically feasible; and • whether post-decommissioning of the proposal will be revegetated in a manner that promotes biological diversity and ecological integrity. <p>The proponent has advised that there are no changes to the approved area of native vegetation disturbance and therefore no additional direct or indirect impacts to flora and vegetation. This was confirmed by the desktop assessment of the existing environment for Flora and Vegetation undertaken by Maia Environmental Consultancy, October 2016 on behalf of the proponent.</p>

Process/ Factor/s	Policies and guidelines considered relevant	Applied Yes/No	Comments
Terrestrial Fauna	Environmental Factor Guideline – Terrestrial Fauna (December 2016)	Yes	<p>The purpose of this guideline is to outline how the factor Terrestrial Fauna is considered by the EPA in the environmental impact assessment process.</p> <p>In considering the change to conditions, this Guideline was applied when considering the EPA’s original assessment of the proposal in EPA Report 1431 with regard to:</p> <ul style="list-style-type: none"> • application of the mitigation hierarchy to avoid or minimise impacts on terrestrial fauna where possible; • the terrestrial fauna affected by the proposal; • the potential impacts and the activities that will cause them, including direct and indirect impacts; • the significance of the terrestrial fauna and the risk to those fauna; • the current state of knowledge of the affected species/assemblages and the level of confidence underpinning the predicted residual impacts; and • whether the proposed management approaches are technically and practically feasible. <p>This guideline was applied when defining and identifying the environmental values for the factor Terrestrial Fauna.</p> <p>The proponent has advised that there is no increase in the disturbance of potential fauna habitat from that approved in the original proposal and therefore no additional direct or indirect impacts to terrestrial fauna. This has been confirmed by the desktop assessment undertaken by Bamford Consulting Ecologists on behalf of the proponent.</p>
Social Surroundings	<i>Environmental Factor Guideline – Social Surroundings, December 2016.</i>	Yes	<p>The purpose of this guideline is to communicate how the factor Social Surroundings is considered by the EPA in the EIA process.</p> <p>Relevant to the proposed change to conditions, the guideline was applied to ensure that for social surroundings to be considered in EIA, there must be a clear link between a proposal’s impact on the physical and biological</p>

Process/ Factor/s	Policies and guidelines considered relevant	Applied Yes/No	Comments
			<p>surroundings and the subsequent impact on a person's aesthetic, cultural, economic or social surroundings.</p> <p>In EPA Report 1431 the proposal was considered to have impacts on the physical and biological surroundings and that these impacts could potentially impact on a person's social surroundings, particularly as the Cape Riche area is highly valued by the local and wider community. EPA Report 1431 included consideration of impacts relating to: noise, light, odour, visual amenity, Indigenous heritage and recreational values.</p> <p>The proponent has confirmed that there are no changes to the proposal, therefore the potential impacts related to Social Surroundings are considered to be unchanged from those discussed in EPA Report 1431.</p>

RECOMMENDED ENVIRONMENTAL CONDITIONS

**STATEMENT TO CHANGE 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: Level 11, 200 St George's Terrace
PERTH WA 6000

Assessment Number: 2112

Report of the Environmental Protection Authority: 1600

Previous Assessment Number: 1864

Previous Report Number: 1431

Preceding Statement Relating to this Proposal: 904

Pursuant to section 45 of the *Environmental Protection Act 1986*, as applied by s46(8), it has been agreed that the implementation conditions set out in Ministerial Statement No. 904, be changed as specified in this Statement.

Condition 3 changed

Condition 3 of Ministerial Statement 904 is deleted and replaced with:

3 Time Limit for Proposal Implementation

3-1 The proponent shall not commence implementation of the proposal after 19 July 2022, and any commencement, prior to this date, must be substantial.

3-2 Any commencement of implementation of the proposal, on or before 19 July 2022, must be demonstrated as substantial by providing the CEO with written evidence, on or before 19 July 2022.

*“CEO” means the Chief Executive Officer of the Department of the Public Service which is responsible for the administration of section 48 of the Environmental Protection Act 1986, or his delegate.

Hon Stephen Dawson MLC

MINISTER FOR ENVIRONMENT; DISABILITY SERVICES