

## Appendix A DAWE RFI



## **Additional information required for assessment by preliminary documentation**

### **Fairview Water Release Scheme, 50 km east of Injune, Queensland (EPBC 2021/8914)**

On 7 July 2021, the delegate of the Minister for the Environment determined the Fairview Water Release Scheme, 50 kilometres (km) east of Injune, Queensland (Qld) is likely to have a significant impact on the following matters protected under Part 3 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act):

- listed threatened species and communities (sections 18 and 18A); and
- a water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E).

It has also been determined that the proposed action will be assessed by preliminary documentation. Information about the proposed action and its relevant impacts, as outlined in the referral documentation and provided in response to the below, is to be provided in the preliminary documentation.

#### **1. GENERAL CONTENT, FORMAT AND STYLE**

The preliminary documentation, which includes the referral information and the additional information, must be a stand-alone document that contains sufficient information to avoid the need to search out previous or supplementary reports. The preliminary documentation must take into consideration the *EPBC Act Significant Impact Guidelines 1.1* and *Significant Impact Guidelines 1.3*, available at: [www.environment.gov.au/epbc/guidelines-policies.html](http://www.environment.gov.au/epbc/guidelines-policies.html).

The document must enable interested stakeholders and the Minister to easily understand the consequences of the proposed action on relevant matters of national environmental significance (MNES). Information provided in the document must be objective, clear, succinct, avoid technical jargon and, where appropriate, be supported by maps, plans, diagrams, data or other descriptive detail.

Detailed technical information, studies or investigations necessary to support the information in the stand-alone document must be included as appendices. It is recommended that any additional supporting documentation and studies, reports or literature not normally available to the public, from which information has been extracted, be made available at appropriate locations during the period of public display of the preliminary documentation. The proponent must also make sure the preliminary documentation is made available on the Internet.

If it is necessary to make use of material that is considered to be of a confidential nature, the proponent should consult with the Department of Agriculture, Water and the Environment (the department) on the preferred presentation of that material before submitting it to the Minister for approval for publication for public comment.

The document must be written so that any conclusions reached can be independently assessed. To this end, all sources must be appropriately referenced using the Harvard standard of referencing. The reference list should include the address of any Internet webpages used as data sources.

Maps, diagrams, and other illustrative material must be included in the preliminary documentation. The document should be produced on A4 size paper capable of being photocopied, with maps and diagrams on A4 or A3 size and in colour. The proponent should consider the format and style of the document appropriate for publication on the Internet. The

capacity of a website to store data and display the material may have some bearing on how the document is constructed.

The stand-alone document must include a copy of this request for information and a cross-reference table as an appendix indicating where the information fulfilling this request is included in the preliminary documentation.

### Ecological data provision

The preliminary documentation must include an appendix of occurrence records (both sightings and evidence of presence) for all listed threatened and migratory species identified during field surveys for the proposed action. This data may be used by the department to update the relevant species distribution models that underpin the Protected Matters Search Tool (PMST).

The species occurrence records must be provided in accordance with the department's [Guidelines for biological survey and mapped data \(2018\)](#) using the species observation data template provided with this request for further information. Sensitive ecological data must be identified and treated in accordance with the department's [Sensitive Ecological Data – Access and Management Policy V1.0 \(2016\)](#) or subsequent revision. Where any sensitive ecological data is excluded or redacted from the dataset appended to the preliminary documentation, the full dataset must be submitted to the department separately when submitting the preliminary documentation.

## **Specific Content of the Additional Information**

### **2. DESCRIPTION OF THE ACTION**

In addition to the description of the proposed action provided in the referral documentation, the preliminary documentation must include additional information on the following:

- a) detail on the proposed timing, duration and frequency of the proposed water releases; and
- b) detail of the infrastructure required to undertake the proposed water releases, including features and details of any construction works.

### **3. HABITAT ASSESSMENT – LISTED THREATENED SPECIES AND COMMUNITIES**

From the information available to date, the department considers the proposed action is likely to have a significant impact on the following listed threatened species and their habitat:

- White-throated Snapping Turtle (*Eseya albagula*) – Critically endangered; and
- Fitzroy River Turtle (*Rheodytes leukops*) – Vulnerable.

In order to undertake a robust assessment of the nature and scale of the likely impacts of the proposed action, include a detailed habitat assessment of suitable habitat for the species listed above within the project area.

The habitat assessments must be informed by desktop assessment and field surveys (in accordance with departmental survey guidelines or as defined by best practice surveys in Qld), and with reference to relevant departmental documents (e.g. approved Conservation Advices, Recovery Plans, draft referral guidelines and Listing Advices), including the Species Profile and Threats (SPRAT) Database, published research, and other relevant sources. Attach all relevant ecological surveys referenced in the referral and preliminary documentation as supporting documents to the preliminary documentation.

Further, the preliminary documentation must identify and describe known historical records of the White-throated Snapping Turtle and Fitzroy River Turtle in the broader region. All known records must be supported by an appropriate source (i.e. Commonwealth and State databases, published research, publicly available survey reports, etc.), the year of the record and a description of the habitat in which the record was identified.

The department notes that the referral documentation provides a general description of the environment and a risk assessment for the species listed above in accordance with the *EPBC Act Significant Impact Guidelines 1.1*. However, further information is required in relation to the presence of suitable habitat, including breeding and foraging habitat, and site utilisation by the species.

The habitat assessment for the species listed above must include, at a minimum:

- a) discussion of aquatic and terrestrial environment composition and structure suitable to support habitat requirements (i.e. specific features such as permanent water bodies or watercourses with bank overhangs and rocky riffle areas);
- b) discussion of water quality suitable to support habitat requirements (i.e. dissolved oxygen concentration, turbidity, contaminant concentrations, etc.);
- c) discussion of habitat use requirements (e.g. requirements for shelter/refuge, breeding, foraging, dispersal, etc.);
- d) details of site utilisation by the species, including mapped locations of all known and suitable habitat within the project area;
- e) details and mapped locations of species records; and
- f) the total area (in hectares) of each identified habitat type (e.g. shelter/refuge, breeding, foraging, etc.) within the project site.

#### **4. IMPACT ASSESSMENT**

##### **4.1 Listed threatened species and ecological communities (s18 & s18A)**

All impacts, including direct, indirect and consequential, on the listed threatened species identified in Section 3 above and their habitat must be assessed in accordance with relevant departmental policies and guidelines, and the SPRAT Database. For relevant listed threatened species, the preliminary documentation must demonstrate, with supporting evidence, how the proposed action will not be inconsistent with:

- Australia's obligations under the Biodiversity Convention, the Convention on Conservation of Nature in the South Pacific (Apia Convention), and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); and
- a recovery plan or threat abatement plan.

The impact assessment for the listed threatened species below must include a discussion of the impacts in the context of the:

*White-throated Snapping Turtle:*

- [National Recovery Plan for the White-throated Snapping Turtle \(\*Elseya albagula\*\) \(2020\).](#)
- [Approved Conservation Advice for \*Elseya albagula\* \(White-throated Snapping Turtle\) \(2014\).](#)

*Fitzroy River Turtle:*

- [Approved Conservation Advice for \*Rheodytes leukops\* \(Fitzroy River Turtle\) \(2008\).](#)
- [Threat Abatement Plan for predation, habitat degradation, competition and disease transmission by feral pigs \(\*Sus scrofa\*\) \(2017\).](#)
- [Threat Abatement Plan for predation by the European Red Fox \(2008\).](#)

The impact assessment must be supported by the habitat assessment and site utilisation information as requested in Section 2 above, and include, but not be limited to:

- a) detail on how the proposed action will influence flow rate, water level, riverbank stability, erosion and concentrations of fine sediment and contaminants in the Dawson River and tributary watercourses;
- b) a detailed assessment of the potential impact on each listed threatened species and their habitat as a result of the proposed action, including but not limited to:
  - i. erosion and/or inundation of nesting habitat;
  - ii. sedimentation impeding cloacal respiration and foraging behaviour; and
  - iii. physiological impacts of geogenic and anthropogenic chemicals in the co-produced water, including detail of ecotoxicology assessments.

The preliminary documentation must include relevant diagrams, maps and hydrographs to support the impact discussion. All data used to inform the impact assessment must be included in the preliminary documentation in an easy-to-read format (i.e. in an Excel spreadsheet, tabulated or graphically presented).

4.2 A water resource, in relation to coal seam gas development and large coal mining development water resources (sections 24D and 24E)

From the information available to date, the department considers the proposed action is likely to have a significant impact on a water resource. The department notes that the referral documentation provides a risk assessment for water resources. However, further information is required on the following to ensure a robust assessment of the potential impacts of the proposed action to the Dawson River and tributary watercourses.

Please note that the section below is only considered in reference to the potential impacts from the release of water as described in the referral. References to groundwater impacts in particular should be noted in terms of potential connectivity between impacted reaches of the Dawson River and any changes to surface water and groundwater interactions.

The impact assessment must consider all potential ecological, hydrological and water quality impacts within the project area and to downstream users. It must be supported by hydrological modelling, monitoring and chemical risk assessments and include, but not be limited to:

- a) baseline information of the current seasonal and monthly flow regime in the Dawson River and tributary watercourses, with consideration of existing water releases, and rates of precipitation and evapotranspiration;
- b) detail of the predicted volume, timing, frequency and duration of the proposed action in relation to the operational life of the GLNG GFD (EPBC 2012/6615), including the provision of expected water release curves;
- c) a discussion of the potential future seasonal and monthly flow regime in the Dawson River and tributary watercourses, with consideration of approved and proposed water

releases, climate variability and change (e.g. reduction in localised rainfall events affecting the event-based release);

- d) detail on existing and potential future water quality in the Dawson River and tributary watercourses in consideration of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality, including detail on how evapotranspiration rates may influence contaminant concentrations; and
- e) detail of chemical risk assessments undertaken for all anthropogenic and geogenic chemicals in the co-produced water, in relation to the properties and exposure pathways of each contaminant, including but not limited to ecotoxicology and water quality assessments.

#### *4.2.1 Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development*

The project will require submission to the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC). The IESC [Information Guidelines for proponents preparing coal seam gas and large coal mining development proposals](#) (Guidelines) outline the information requirements for submission to the IESC.

As the proposed action only includes the assessment of water releases, the department notes that there will be information requested in the Guidelines which is not relevant to your project. When completing the Guidelines, please compare the requirements in the checklist and identify where they are relevant to the project and have been addressed. For example, an assessment of subsidence would not be relevant to the assessment of this project.

The preliminary documentation and additional information will form part of the IESC submission. The checklist in the Guidelines must be completed to ensure that the information requirements for the IESC review have been addressed in the preliminary documentation. The IESC will provide advice to the department, which will be provided to the designated proponent. A copy of this advice and responses to the issues raised by the IESC must be included in the preliminary documentation that will be published for public comment.

#### *4.2.2 Modelling*

Modelling of water quality and hydrological regimes (including conceptual modelling) must be undertaken to provide an understanding of the potential impacts to water resources, including changes to flow regimes, surface and groundwater connectivity and predicted release curves for the proposed water releases. Models should be developed at an appropriate spatial (local vs regional) and temporal (life-of-project or longer if impacts are predicted) scale to fulfil a specific purpose. This purpose should inform the model design and assumptions which should be clearly described and justified in the preliminary documentation. Any model should be constructed in accordance with the conceptual model, and calibrated and verified with appropriate baseline data. It is also important for modelling to clearly distinguish between impacts from the proposed project, existing operations and other factors such as climate variability and existing agricultural use.

#### *4.2.3 Surface Water/Groundwater assessment*

The preliminary documentation must include an assessment of the direct, indirect and consequential impacts to surface water resources. This assessment must take into account all impacts to downstream environmental values (encompasses all values and uses that are important for a healthy ecosystem or for public benefit) of the Dawson River, as a result of the

proposed action, including how the Water Quality Objectives of the Dawson River Sub-Basin will be achieved.

Further, the preliminary documentation must also include an assessment of the direct, indirect and consequential impacts to groundwater resources as a result of surface-groundwater connectivity, as informed by local-scale modelling.

The department notes that in the proponent's conceptual model, the local geology of the project area is comprised of low permeability Evergreen Formation overlying the Precipice Sandstone aquifer and therefore, assumes that the Dawson River and associated alluvial aquifer are geologically isolated. Further information is required to support the statement that the Evergreen formation is of a low permeability to allow a more robust assessment of the potential for surface and groundwater interactions in the project area.

#### *4.2.4 Water Dependent Ecosystems*

The department notes that the Australian Bureau of Meteorology's [Groundwater Dependent Ecosystem Atlas](#) indicates that the project area has a high potential for terrestrial and aquatic GDEs. Further information is required to understand the potential for surface and groundwater interactions in the project area and the potential impacts to GDEs.

You must consider both surface water and groundwater impacts to GDEs and aquatic ecosystems within the proposed action area and beyond the project boundary, such as aquatic ecosystems that may be downstream of the proposed action but impacted by the action regardless of proximity to it.

#### *4.2.5 Cumulative impacts*

The preliminary documentation must identify and address potential cumulative impacts resulting from the proposed action. Cumulative impacts include the impacts of the proposed action, where these are in addition to existing impacts of other activities in the Bowen Basin (including known potential future expansions or developments by the proponent and other proponents in the vicinity). Where relevant, a comprehensive risk assessment must be conducted and documented for all proposed and known potential future expansions or developments in the vicinity of the proposed action.

## **5. PROPOSED AVOIDANCE, MITIGATION AND MANAGEMENT MEASURES**

Avoidance and mitigation measures are the primary methods of eliminating and reducing significant impacts on MNES. Where possible and practicable it is best to avoid impacts. If impacts cannot be avoided, then they should be minimised or mitigated as much as possible. Avoidance and mitigation measures must be investigated thoroughly as a part of the assessment and be supported by evidence to demonstrate likely success.

The department notes the referral documentation includes a description of the proposed avoidance, mitigation and management measures to be implemented, including those required by Queensland Environmental Authority (EA) EPPG00928713.

The proposed measures must be based on best available practices, appropriate standards, evidence of success for other similar actions and supported by published scientific evidence.

The preliminary documentation must include, at a minimum:

- a) detail of proposed measures to be undertaken to avoid, mitigate and manage impacts of the proposed action on listed threatened species and communities and water resources,



including those required through other Commonwealth, State and local government approvals;

- b) the statutory or policy basis for the proposed measures, including reference to the SPRAT Database and relevant approved conservation advices, and a discussion on how the proposed measures are not inconsistent with relevant recovery plans and threat abatement plans;
- c) information on the location, timing, frequency and duration of the proposed avoidance, mitigation and management and monitoring measures to be undertaken;
- d) an assessment of the expected or predicted effectiveness of the proposed measures, including detail of existing monitoring programs to validate the effectiveness of the proposed measures and demonstrate that the environmental outcomes will be achieved;
- e) details of tangible, on-ground corrective actions that will be implemented in the event the monitoring programs indicate that the environmental outcomes have not or will not be achieved; and
- f) detail on how the White-throated Snapping Turtle and Fitzroy River Turtle will be incorporated into an Environmental Management Plan or the Receiving Environment Monitoring Program (REMP). Although the REMP is a state requirement, it may also address the requirements of a Commonwealth assessment, including addressing relevant conservation advices, recovery plans and threat abatement plans.

Avoidance and mitigation measures may be provided in an Environmental Management Plan (EMP). If you provide this information in an EMP then the plan must set out the framework for management, mitigation and monitoring of relevant impacts, including any provisions for independent environmental auditing. The plan must be prepared in accordance with the department's Environmental Management Plan Guidelines (2014) available at:

<http://www.environment.gov.au/epbc/publications/environmental-management-plan-guidelines>.

The SPRAT Database, and associated statutory documents, may provide relevant mitigation measures for listed threatened species and ecological communities.

All proposed measures for MNES must consider the 'S.M.A.R.T' principle:

- S – Specific (what and how)
- M – Measurable (baseline information, number/value, auditable)
- A – Achievable (timeframe, money, personnel)
- R – Relevant (conservation advices, recovery plans, threat abatement plans)
- T – Time-bound (specific timeframe to complete)

## **6. ENVIRONMENTAL OFFSETS – RESIDUAL SIGNIFICANT IMPACTS**

Environmental offsets are measures that compensate for the residual significant impacts of an action on the environment. Offsets provide environmental benefits to counterbalance the impacts that remain after avoidance and mitigation measures. It is important to consider environmental offsets early in the assessment process and correspondence with the department regarding offsetting is highly encouraged.

The preliminary documentation must include an assessment of the likelihood of residual significant impacts occurring on relevant MNES, after avoidance, mitigation and management measures have been applied. If it is determined that a residual significant impact is likely,



include a summary of the proposed environmental offset and key commitments in the preliminary documentation that align with requirements of the department's *EPBC Act Environmental Offsets Policy* (2012) (Offsets Policy), available at:

[www.environment.gov.au/epbc/publications/epbc-act-environmental-offsets-policy](http://www.environment.gov.au/epbc/publications/epbc-act-environmental-offsets-policy).

It is the department's standard practice that a draft Offset Management Strategy (OMS) or a draft Offset Area Management Plan (OAMP) are included as appendices in the preliminary documentation for assessment and approval. If an offset area has been nominated, then provide an OAMP. If not, provide an OMS. Further, the department is likely to recommend to the Minister (or delegate) that the conditions of approval require the environmental offset/s or the OAMP be approved and implemented prior to the commencement of the proposed action.

If it is determined that a residual significant impact is likely to occur on relevant MNES, the proponent should consult with the department on the information requirements of an OMS or OAMP to ensure a robust assessment of the proposed environmental offset can be undertaken.

## **7. ECOLOGICALLY SUSTAINABLE DEVELOPMENT (ESD)**

The preliminary documentation must include a discussion of how the proposed action will conform to the principles of ESD, as defined in section 3A of the EPBC Act. To assist, the *National Strategy for Ecologically Sustainable Development* (1992) is available at:

[www.environment.gov.au/about-us/esd/publications/national-esd-strategy](http://www.environment.gov.au/about-us/esd/publications/national-esd-strategy).

## **8. ECONOMIC AND SOCIAL MATTERS**

The preliminary documentation must include a discussion and analysis of the social and economic impacts of the proposed action, both positive and negative. Economic and social impacts should be considered at the local, regional and national levels. Matters of interest may include:

- a) details of any public consultation activities undertaken, including any consultation with Indigenous stakeholders with reference to the department's [Guidance for proponents on best practice Indigenous engagement for environmental assessments under the EPBC Act](#) (2016), and their outcomes;
- b) projected economic costs and benefits of the project (in dollars), including the basis for their estimation through cost/benefit analysis or similar studies; and
- c) employment opportunities expected to be generated by the project (including construction and operational phases).

## **9. ENVIRONMENTAL RECORD OF PERSON(S) PROPOSING TO TAKE THE ACTION**

The preliminary documentation must include details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against:

- a) the person proposing to take the action; and
- b) for an action for which a person has applied for a permit, the person making the application.

If the person proposing to take the action is a corporation, details of the corporation's environmental policy and planning framework must also be included.