

From: s. 22(1)(a)(ii)
Sent: Wednesday, 23 December 2020 1:01 PM
To: s. 47F(1)
Cc: s. 22(1)(a)(ii) ; s. 22(1)(a)(ii)
Subject: For Consideration: Response to Technical Review (EPBC 2018/8319)
[SEC=OFFICIAL:Sensitive, ACCESS=Legal-Privilege]
Attachments: Browse to NWS EIS Technical Review Rev3 provided by
CCWA_Redacted.pdf

Hi s. 47F(1),

We have been advised by the Conservation Council of Western Australia (CCWA) that it has engaged consultant Oceanwise Australia Pty Ltd to complete an independent technical review of the draft EIS/ERD released as part of the Browse to NWS project (2018/8319), a copy of which has been provided to us.

As this information was provided to the Department and is of relevance to the impacts of the action, it will be information the Decision Maker will consider when making their final decision under the Environment Protection and Biodiversity Conservation Act. For procedural fairness, we have provided this report (attached) for Woodside's consideration and opportunity to respond to the information contained in the report. The names of individual authors have been redacted for privacy purposes.

Please note, your response (if you should chose to provide one) will also be provided to the Decision Maker when making their final decision and, as this report was received outside of the public comment period (which closed in February 2020), there is no statutory requirement for Woodside to address this report in the Response to Submissions document.

If, upon considering the information in the attached document, you would like to provide a response to the Department please provide that response by **1 February 2021**.

If Woodside requires further time to consider their response, or have any other questions, please feel free to contact myself, s. 22(1)(a)(ii) or s. 22(1)(a)(ii)

Thanks,

s. 22(1)(a)(ii)

s. 22(1)(a)(ii)

A/g Director – Major Projects West Section

Department of Agriculture, Water and the Environment

s. 22(1)(a)(ii) @awe.gov.au | GPO BOX 787 Canberra ACT 2600 | Phone 02 6274 s. 22(1)(a)(ii) or s. 22(1)(a)(ii)

The Department acknowledges the traditional owners of Country throughout Australia and their continuing connection to land, sea and community. We pay our respects to them and their cultures and to their elders both past and present.

From: s. 47F(1) @woodside.com.au>
Sent: Friday, 12 February 2021 11:04 AM
To: s. 22(1)(a)(ii)
Cc: s. 22(1)(a)(ii) ; s. 22(1)(a)(ii)
Subject: RE: For Consideration: Response to Technical Review (EPBC 2018/8319) [SEC=OFFICIAL:Sensitive, ACCESS=Legal-Privilege]
Attachments: Browse to NWS - Woodside Technical response to CCWA Report - DAWE Submission - 12-02-2021.pdf

Hi s. 22(1)(a)(ii)

Further to the below, please find attached Woodside's response.

Thanks

s. 47F(1)

Senior Adviser - Government Relations and Policy



Woodside Energy Ltd.
 Suite 12.3
 15 London Circuit
 Canberra ACT 2601
 Australia

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From: s. 22(1)(a)(ii) @awe.gov.au>
Sent: Thursday, 28 January 2021 11:51 AM
To: s. 47F(1) @woodside.com.au>; s. 22(1)(a)(ii) s. 22(1)(a)(ii) @awe.gov.au>
Cc: s. 22(1)(a)(ii) @environment.gov.au>; s. 22(1)(a)(ii) s. 22(1)(a)(ii) @environment.gov.au>
Subject: RE: For Consideration: Response to Technical Review (EPBC 2018/8319) [SEC=OFFICIAL:Sensitive, ACCESS=Legal-Privilege]

Hi s. 47F(1)

We accept your extension request to provide a response by COB 12 February.

Thanks

s. 22(1)(a)(ii)

s. 22(1)(a)(ii)

A/g Assistant Secretary – Environment Assessments West Branch (WA, SA & NT)

Department of Agriculture, Water and the Environment

s. 22(1)(a)(ii) @awe.gov.au | GPO BOX 787 Canberra ACT 2600 | Phone 02 6274 s. 22(1)(a)(ii) or s. 22(1)(a)(ii)

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From: s. 47F(1) <[@woodside.com.au](mailto:)>
Sent: Thursday, 28 January 2021 11:30 AM
To: s. 22(1)(a)(ii) <[@awe.gov.au](mailto:)>
Cc: s. 22(1)(a)(ii) <[@environment.gov.au](mailto:)>; s. 22(1)(a)(ii) <[s. 22\(1\)\(a\)\(ii\) @environment.gov.au](mailto:)>
Subject: RE: For Consideration: Response to Technical Review (EPBC 2018/8319)
[SEC=OFFICIAL:Sensitive, ACCESS=Legal-Privilege]

Hi s. 22(1)(a)(ii)

Woodside has been considering the below advice and report and is intending on providing a response.

Thank you for the opportunity to seek further time to consider that response. We would like to request an extension to respond until COB Friday 12th February 2021.

If you could please confirm your support for this that would be appreciated.

Regards

s. 47F(1)

Senior Adviser - Government Relations and Policy



Woodside Energy Ltd.

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From: s. 22(1)(a)(ii) <[@awe.gov.au](mailto:)>
Sent: Wednesday, 23 December 2020 1:01 PM
To: s. 47F(1) <[@woodside.com.au](mailto:)>
Cc: s. 22(1)(a)(ii) <[@environment.gov.au](mailto:)>; s. 22(1)(a)(ii) <[s. 22\(1\)\(a\)\(ii\) @environment.gov.au](mailto:)>
Subject: For Consideration: Response to Technical Review (EPBC 2018/8319) [SEC=OFFICIAL:Sensitive, ACCESS=Legal-Privilege]

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As this information was provided to the Department and is of relevance to the impacts of the action, it will be information the Decision Maker will consider when making their final decision under the Environment Protection and Biodiversity Conservation Act. For procedural fairness, we have provided this report (attached) for Woodside's consideration and opportunity to respond to the information contained in the report. The names of individual authors have been redacted for privacy purposes.

Please note, your response (if you should chose to provide one) will also be provided to the Decision Maker when making their final decision and, as this report was received outside of the public comment period (which closed in February 2020), there is no statutory requirement for Woodside to address this report in the Response to Submissions document.

If, upon considering the information in the attached document, you would like to provide a response to the Department please provide that response by **1 February 2021**.

If Woodside requires further time to consider their response, or have any other questions, please feel free to contact myself, [s. 22\(1\)\(a\)\(ii\)](#) or [s. 22\(1\)\(a\)\(ii\)](#)

Thanks,

[s. 22\(1\)\(a\)\(ii\)](#)

[s. 22\(1\)\(a\)\(ii\)](#)

A/g Director – Major Projects West Section

Department of Agriculture, Water and the Environment

[s. 22\(1\)\(a\)\(ii\)](#) @awe.gov.au | GPO BOX 787 Canberra ACT 2600 | Phone 02 6274 [s. 22\(1\)\(a\)\(ii\)](#) or [s. 22\(1\)\(a\)\(ii\)](#)

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CONFIDENTIAL

Please direct all responses/queries to:

s. 47F(1)

T: +61 8 9348 s. 47F(1)

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**Woodside Energy Ltd.**

ACN 005 482 986

Mia Yellagonga

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www.woodside.com.au12th February 2021

Attn: s. 22(1)(a)(ii)

Major Projects West Section – Environmental Approvals Division

Department of Agriculture, Water and the Environment

s. 22(1)(a)(ii) @awe.gov.au

Dear s. 22(1)(a)(ii),

CONFIDENTIAL: WOODSIDE RESPONSE TO TECHNICAL REVIEW (EPBC 2018/8319)

Woodside Energy Ltd (Woodside), as operator for and on behalf of the Browse Joint Venture, refers to correspondence received from the Department of Agriculture, Water and the Environment (DAWE) on 23 December 2020. DAWE provided a report prepared by Oceanwise Australia Pty Ltd on behalf of the Conservation Council of Western Australia (CCWA) Inc. entitled *Technical Critical Review of Proposed Browse to North West Shelf Project Environmental Impact Statement/Environmental Review Document, Revision 3* (CCWA Submission). DAWE indicated that the CCWA Submission related to the Draft Environmental Impact Statement (EIS) / Environment Review Document (ERD) released as part of the proposed Browse to NWS Project assessment (2018/8319) and would be provided to the Decision Maker when making their final decision. Woodside has also been advised the CCWA submission has also been received by the Western Australian Environmental Protection Agency.

Woodside understands that the Department has provided the CCWA Submission to Woodside in the interests of procedural fairness and has requested Woodside consider the information and respond to DAWE by 1 February 2021 should it choose to do so. On 28 January, Woodside advised it would be preparing a response, but requested an additional two weeks in which to reply. DAWE responded the same day and extended the time for responding to 12 February 2021. Woodside has prepared a response to the matters raised in the CCWA Submission, which is included within Appendix A. Woodside is also preparing a separate response to the matters raised in the CCWA Submission that will shortly be issued to the EPA.

Woodside notes that, as outlined in Appendix A, the majority of the matters raised within the CCWA Submission have been either addressed in the Draft EIS or EIS Supplement or pertain to the manner in which the impact assessment has been conducted having regard to the EIS Guidelines. The EIS Supplement has not been published as at the date of this letter, but cross-references in Appendix A to the EIS Supplement, which has been provided in draft to DAWE, is unlikely to change prior to publication.

Woodside maintains that a comprehensive and fit-for-purpose assessment of the Project has been undertaken and documented in the Draft EIS and EIS Supplement. Environmental data referenced within Woodside's assessment documents has been underpinned by internationally recognised scientific research that has been conducted across the region by credible institutions such as the Australian Institute of Marine Science (AIMS), Western Australian Marine Science Institution, Western Australian Museum, University of Western Australia, Curtin University and the Centre for Whale Research Western Australia. This research has been supported by long-term monitoring with AIMS, which has been conducted over 27 years at Scott Reef.

If you have any questions regarding the proposed Browse to NWS Project, please do not hesitate to contact me or s. 47F(1), Environment Manager.

Regards,

s. 47F(1)Vice President Browse
Woodside Energy

Attached:

**Appendix A: Response to Technical Critical Review of Proposed Browse to North West Shelf Project
Environmental Impact Statement/ Environmental Review Document Revision 3: 18th November 2020**

Copy:

s. 22(1)(a)(ii)

Major Projects West Section – Environmental Approvals Division
Department of Agriculture, Water and the Environment

s. 22(1)(a)(ii) [@environment.gov.au](mailto:environment.gov.au)

s. 22(1)(a)(ii)

Major Projects West Section – Environmental Approvals Division
Department of Agriculture, Water and the Environment

s. 22(1)(a)(ii) [@environment.gov.au](mailto:environment.gov.au)

Woodside Response to “*Technical Critical Review of Proposed Browse to North West Shelf Project Environmental Impact Statement/ Environmental Review Document Revision 3: 18th November 2020*”

Comment No.	Section	CCWA Comment	Woodside response
1	Geological evolution and reef subsidence	The Proponent concludes that geological subsidence as a result of the development, combined with sea level rise and coral reef impacts from climate change are of no consequence to the shallow water benthic communities and habitats. However, we have identified numerous limitations and inconsistencies in the modelling that has had a significant influence on these conclusions. Particularly, there is a clear lack of transparency around the methodologies used and the reservoir samples are limited.	<p>Woodside notes that the work undertaken within the draft EIS/ERD in relation to seabed subsidence is consistent with the workplan described in the EIS Guidelines which were approved on 5 July 2019.</p> <p>Following publication of the draft EIS/ERD, Woodside has undertaken additional analysis and investigation into the potential seabed subsidence and potential associated impacts (particularly in relation to turtle nesting habitat at Sandy Islet) that is documented within the Supplement Report to the Draft EIS/ERD (the ‘Supplement’). Woodside notes that at the time of receipt of the CCWA submission, the Supplement had not yet been made publicly available.</p> <p>Additional information regarding subsidence within the Supplement includes analysis of the potential impacts of reservoir-related seabed subsidence on the fate and dynamics of Sandy Islet (and as such the turtle nesting habitat) against a backdrop of long-term global sea level rise and increasing cyclone intensity. This analysis is presented in Section 5.27 of the Supplement.</p> <p>The modelling undertaken in relation seabed subsidence has been peer reviewed by Baker Hughes GMI Geomechanics Services (Hughes, 2012) who concluded that the method and supplied data was appropriate. The Department sought further independent review by CO2 Geological Storage Solutions Pty Ltd (CGSS) (CGSS, 2012) who also found that the report conclusions were reasonable. Woodside therefore has a high level of confidence in the assessment that has been undertaken and that any production related subsidence at Scott Reef will be less than 10 cm over field life (and less than 2.6 cm at Sandy Islet).</p> <p>Woodside also notes that verification monitoring for seabed subsidence will be undertaken (with methods to be outlined within the relevant Environment Plan (EP)) and the Scott Reef long term monitoring program will continue to monitor the status of the reef system, throughout the full lifecycle of the proposed Browse Project.</p>
2	Bathymetry, oceanographic and geomorphic environment	While the Proponent concedes that unique bathymetric features such as deep-sea sediment mounds are present in the area, the impact of subsea infrastructure on these and other habitats are not adequately considered. These unique geomorphic features are likely to be negatively influenced by altered hydrology and sedimentation processes.	<p>Woodside notes that the work undertaken within the draft EIS/ERD in relation to seabed infrastructure is consistent with the workplan described in the EIS Guidelines which were approved on 5 July 2019.</p> <p>Potential impacts to deep water benthic habitats from the installation of infrastructure are assessed within Section 6.3.1 of the draft EIS/ERD.</p> <p>Geophysical surveys conducted in and around Scott Reef have revealed evidence of large coral chunks (blocks) that have been dislodged from the reef and are located at the bottom of the outer reef slope with some having dispersed further out from the slope. Seabed infrastructure is not planned to disturb these features, with the closest subsea infrastructure estimated to be approximately 5 km away. Infrastructure at this distance does not present a credible risk to these features. With reference to the mounds described in the draft EIS/ERD, these are actually located on the north-east side of North Scott Reef, 8 km north of the entrance of the inter-reef channel. Given the distance of these features to the proposed infrastructure, there is no credible risk of impact occurring</p>
3	Bathymetry, oceanographic and geomorphic environment	The subsea infrastructure, namely the trunkline extending from the reservoir to the connection point north of Dampier, encompasses the continental slope, a depth profile of 500m to less than 100m containing fossil coral reef and other high value geological features. This is not adequately represented by the Proponent, who has drawn conclusions from limited ground truthing along the trunkline, namely 200 minutes of footage across 20 sites, to account for 900km of trunkline. This coverage is considered inadequate to identify spatially restricted areas of high value.	<p>As detailed in Section 5.32 of the Supplement, a review of a representative portion of high-quality seabed imagery of the Browse Trunkline (BTL) route acquired by an AUV survey (which has become available after the draft EIS/ERD was published) has been undertaken. The review of imagery found that the seabed along the Ancient coastline at 125 m depth contour Key Ecological Feature (KEF) (that is, the location where the proposed BTL would intersect the continental slope), is predominately unconsolidated soft sand, with only occasional solitary non-coral benthic invertebrates and demersal fish observed. Quality assurance checks have been undertaken to confirm that the reviewed portion is representative of the habitat along the BTL route.</p> <p>Woodside notes the revised environmental objective presented in Section 6 of the Supplement that commits Woodside to “Undertake the Browse Project infrastructure installation within the Ancient coastline at 125 m depth contour KEF in a manner that limits seabed disturbance to less than 0.03% of the total KEF area”.</p>
4	Climate and atmospheric conditions	Greenhouse Gas (GHG) Emissions Note – The respondent did not include this topic within their summary of limitations. Within the main body of their response, the respondent raised a number of concerns with respect to the GHG emissions associated with the proposed Browse Project.	Within the Supplement, Woodside has provided responses to the general themes relating to GHG emissions raised within the public submissions. The respondent’s concerns are each addressed within these responses which are provided in Sections 5.2 to 5.11 of the Supplement.

5	Climate and atmospheric conditions	The Proponent presents an outdated baseline of climate and atmospheric conditions with temperature data that has no temporal replication and other climate characteristics recorded from over 250km away.	The proposed Browse Project will have no direct impact on regional climate and atmospheric conditions. Given this lack of credible impact, further or more comprehensive data would not have any bearing on the outcome of the environmental impact assessment, it is considered that the information relating to climate and atmospheric conditions presented in the draft EIS/ERD is satisfactory for the purpose of the impact assessment.
6	Climate and atmosphere	The Proponent has not adequately considered the impacts that increasingly intense cyclones will have, becoming more likely to cause damage and thus increasing the risk of hydrocarbon spills towards the end of the project lifetime.	As detailed in Section 6.3.21, project design accounts for extreme weather events including in cyclonic metocean conditions up to and including a 1 in 10,000 year sea state. This design conservatism anticipates uncertainty in future climatic conditions accounting for possible increased intensity or frequency of cyclones.
7	Air quality	The consideration given to air quality impacts is not adequate, given that no current baseline data has been collected, they do not quantify their predicted emissions and provide no discussion as to where the emissions will go.	As detailed in the draft EIS/ERD, the project area is remote from urban and/or industrial air pollutants and as such the air quality is expected to be high. An overview of the expected air emissions is provided in Section 6.3.5 of the draft EIS/ERD. Given that atmospheric emissions will be typical of other operating facilities and equipment (an example of which is provided in the draft EIS/ERD for comparison), and the distance of the facilities from sensitive receptors, the nature and magnitude of the expected emissions will not significantly impact the air quality of the project area. Woodside considered the information presented in relation to air quality to be sufficient for the purpose of the impact assessment.
8	Ambient light	The light modelling conducted is limited by lack of cumulative impact scenarios considered where all light sources contribute. Further, light pollution is based on an FLNG vessel, not those that will be used in this project.	A desktop lighting assessment, taking into account the final National Light Pollution Guidelines for Wildlife (Commonwealth of Australia, 2020) has been undertaken and is provided in Appendix A.1 of the Supplement. It is noted that the final National Light Pollution Guidelines for Wildlife were released in January 2020 and were not available when the draft EIS/ERD was prepared and available for public comment. This includes a further literature review describing potential impacts of offshore sources of artificial light on seabirds and migratory shorebirds, a gap analysis of the light modelling studies and assessment done to date (against the National Light Pollution Guidelines for Wildlife), and an updated impact assessment. This updated impact assessment included a cumulative impact assessment, within Section 4.3 of the Supplement.
9	Underwater sound	Consideration given to the sensitivity of the environment to marine noise pollution is understated, whereby the environment is easily altered. The modelling of acoustic pollution is limited by not having modelled the sound generated at the well in the centre of the Scott Reef channel during various operations, and the lack of cumulative sound analysis from multiple activities at once, e.g. FPSO's, support vessels in DP, MODU's and construction, which have potential to all be operating simultaneously for the establishment of future wells.	Modelling of the wellhead noise was undertaken as part of a previous development concept (Browse FLNG) and outcomes are considered in Section 6.3.8 of the draft EIS/ERD. There is no material difference between the wells proposed for Browse FLNG than that proposed for the Browse to NWS Project. As such the modelling undertaken for Browse FLNG is representative of the proposed well heads within the Scott Reef channel. Further, it is noted that underwater noise monitoring of an operational well will be undertaken to inform an adaptive management approach for noise management for the wells within the Scott Reef channel. Woodside notes that an assessment of cumulative noise emissions was undertaken within the draft EIS/ERD. Further assessment of underwater noise emissions has been provided in Section 4.2.3 of the Supplement including an assessment relating to the governing cumulative noise emissions scenario.
10	Water quality	Given the changing climate and its increasing impact on the oceanographic environment, the Proponent does not have up to date information on sea surface temperature or pH in the BDA, the latter of which was already showing signs of ocean acidification in 2009, these knowledge gaps contribute to the misidentification of cumulative impacts.	Woodside notes that the work undertaken within the draft EIS/ERD in relation to water quality is consistent with the workplan described in the EIS Guidelines which were approved on 5 July 2019. CCWA raises other development in the general area as potentially altering the water quality at Scott Reef since the last water quality surveys were completed. Given the significant distant to the facilities identified by CCWA (over 100 km), and the relatively recent commencement of operations of those facilities under environmental approvals conditioned to limit their impacts to their immediate vicinity, cumulative impacts to water quality were not considered credible. Further, modelling has shown that that changes to water quality will be confined to a mixing zone, with no detectable changes to water quality beyond natural variation at Scott Reef shallow water benthic habitat and communities (<75m bathymetry). During steady state FPSO operations, cooling water modelling and infield verification will be completed to verify the modelling predictions. It is also noted that discharges from the facility will not be acidic and the thermal contribution (e.g. cooling water) will be negligible other than small changes around discharge point. The global trends of increasing ocean temperature and resultant acidification is driven by global CO2 loading rather than the operations of specific facilities. As such the development will have no direct impact on pH or temperature beyond the relevant mixing zones for each of the discharges. For these reasons, Woodside does not consider that the assessment contains knowledge gaps and that the potential impacts to water quality have been appropriately assessed.
11	Water quality	The reporting of nutrient and dissolved metal values is vague and misrepresentative, with many tabulated results higher than LOR and 99% trigger values, without displaying the actual values, rather that they are just greater than the trigger. This	The baseline water and sediment quality data presented in the draft EIS/ERD provides a sound understanding as to the existing presence of nutrient and metal concentrations in and around the project area. It is not unusual for a reported result, even in a pristine environment to exceed ANZECC 'default guideline values' for 99% species protection, as it is well known that natural concentrations of chemical parameters of a region vary due to local

		information is also over 10 years out of date.	geological conditions. It is also expected some values would be above a limit of reporting, given this is simply a quantification of a laboratories ability to identify presence of a substance at a particular concentration and is unrelated to environment effects. Given the available information in with respect to both regional and local water quality, and the absence of significant anthropogenic sources that may change baseline nutrient and dissolved metal concentrations, The information available on sediment and water quality in the Project Area is suitable for the purpose of the impact assessment.
12	Water quality	The Proponent incorrectly concludes that the BDA is nutrient poor with low levels of primary productivity, where in actuality there are more complex processes, especially in the deeper >75m waters which fuels productivity. While this system suggests that there is high productivity due to the presence of megafauna and deep-water coral communities, the processes are not well understood and require more research.	Woodside's statement that the waters within the Browse Development Area (BDA) are nutrient poor is supported by a number of studies and is consistent with observations of the broader region. Woodside has discussed nutrient upwelling in Section 5.2.5.8 of the draft EIS/ERD which acknowledges that nutrient upwelling (driven primarily by internal wave and the tidal regime) occurs within the BDA leading to a general increase in primary productivity and increased plankton growth in the surface waters and locally enhanced productivity near the seabed of Scott Reef lagoon. Given the proposed Browse Project will not impact this upwelling process or result in any significant impacts to deeper water quality, significant impacts to productivity in the Browse Development Area for the proposed Browse to NWS Project are not anticipated.
13	Water quality	The modelling of marine discharges, turbidity generated and pollution is inadequate to predict impacts, with insufficient modelling scenarios and factors considered. Many of the effluents are not well explained by the Proponent or understood at this stage, thus further environmental impact assessment needs to occur when this information is generated.	Modelling is a predictive tool for the purposes of impact and risk assessment. Modelling involves making considered assumptions and will involve inherent uncertainties, these are addressed through the application of conservatism and sensitivity testing. The marine discharge modelling presented in the draft EIS/ERD is conservative given the selection of inputs and the overall modelling approach. Model inputs are based on the current basis of design, and typically represent the maximum design specifications (e.g. discharge rates, discharge orientation) providing the worst-case scenario. For example, for produced water (PW) the maximum design discharge rate (i.e. worst case) was modeled, however discharge rates will typically be much less than this over the life of the Proposal. While refinements to the design may occur as part of the front end engineering design process, Management of Change process will be applied to ensure impacts remain within the defined impact envelope described in the draft EIS/ERD and to ensure that predicted impacts are not greater than ultimately approved. Environment Plans will also be in place to govern all discharges into the marine environment with a greater level of granularity, which will be developed once primary environmental approvals have been obtained and full details of discharges is known. Further, the modelling of marine discharges and drilling cuttings discharge was undertaken by RPS Group Plc (RPS), an internationally respected provider of high-quality marine environmental modelling services, data forecasting and real-time operational systems to offshore industry. RPS's modelling reports were analysed by subject matter experts both internally at Woodside and via external consultants. Woodside has a high level of confidence in the modelling provider and each of the models used. The respondent makes a statement that <i>"The modelling for the production water released presented in the EIS from the FPSO (Part 2, page 479) is based upon data from one discharge only (Oct 9th, 2007). The Proponent has drawn the conclusion that the operational discharge will have no impact on shallow water quality based on measurements taken at one single point in time over thirteen years ago"</i> . This statement is not correct. While the draft does show an example time series snapshot (Based on 12 th December 2007), it also shows the annualized results reflecting both the continuous PW discharge representing the maximum PW processing capacity on the FPSO facilities and the expected rate of the PW discharge during start-up on the FPSO facilities. The modelling undertaken is sufficient in scope and rigor to objectively support the conclusion that no impacts from operational discharges on shallow water benthic habitats will occur. Further, it is noted that during steady state operations, PW modelling and infield verification will be completed to verify the modelling predictions.
14	Sediment quality	Similarly, with water quality, there is no up to date sediment quality information, and despite its remoteness, up to date information is still required to account for unanticipated environmental change.	Woodside notes that the work undertaken within the draft EIS/ERD in relation to sediment quality is consistent with the workplan described in the EIS Guidelines which were approved on 5 July 2019. Given the remoteness from anthropogenic sources, it is highly unlikely that sediment quality will have changed significantly since the existing data was collected. Information available on sediment quality in the project area was considered suitable for the purpose of the impact assessment.
15	Plankton communities	While zooplankton sampling has occurred, these are highly spatially and temporally restricted, with no dedicated surveys. Given that this is a known pygmy blue whale waypoint along their migration, a species known for feeding all the way through their migration, it is likely that krill is seasonally abundant as a food resource here. Dedicated zooplankton surveys are	Woodside notes that the work undertaken within the draft EIS/ERD in relation to plankton is consistent with the workplan described in the EIS Guidelines which were approved on 5 July 2019. The draft EIS/ERD recognises that zooplankton (including krill) occurs at Scott Reef and that pygmy blue whales have been observed at Scott Reef at times of elevated biomass. It is also recognised within the draft EIS/ERD and Supplement that a potential foraging area for pygmy blue whale exists at Scott Reef. Given this, and that the impact assessment undertaken

		required to understand the importance of Scott Reef ecologically.	predicts only slight temporary impacts to plankton, Woodside considers the information available in respect to zooplankton is sufficient for the purpose of the impact assessment.
16	Plankton communities	The Proponent uses phytoplankton samples 50km south west of Scott Reef to represent oceanic waters and thus the entire development envelope, this is not representative of the complex ecosystem of Scott Reef, site specific surveys are required across the variability of the entire project area.	The respondent's statement is incorrect. As described in Section 5.3.1.1 of the draft EIS/ERD, estimates of the phytoplankton biomass (measured as chlorophyll a) close to Scott Reef are approximately twice that of open waters (sampled at distances greater than 50 km to the south-west of South Scott Reef). Given this, and that the impact assessment undertaken predicts only slight temporary impacts to plankton, the information available in respect to phytoplankton is considered sufficient for the purpose of the impact assessment.
17	Plankton communities	The Proponent discounts current peer reviewed science that has found acoustic pollution can have a far greater impact to plankton than previously recognised, with seismic activity causing mortality up to 1.2km from the source. Given the known presence of, but unknown abundance of a critical ecosystem component in zooplankton, at Scott Reef, these works need to be verified along with more baseline surveys to ensure unanticipated adverse impacts cannot occur.	Woodside notes that with the exception of vertical seismic profiling (VSP), there are no seismic surveys proposed as part of the proposed Browse Project. VSP or other well-based acoustic imaging techniques may be conducted to generate a high-resolution seismic image of the geology in the well's immediate vicinity. This method uses a small airgun array, typically comprising a system of airguns with a total volume of 750 inch ³ of compressed nitrogen. Woodside has modelled the noise emissions from this activity and applied established and accepted thresholds in relation to impacts to plankton. Impacts to plankton were modelled to be restricted to within 40 m of the sound source. Given the infrequent nature of this activity, the small area of affect and that plankton are known to have a high natural mortality and replacement rate, impacts to plankton are not likely to be significant. Given this, it is considered that the information available in respect to plankton is sufficient for the purpose of the impact assessment.
18	Plankton communities	There will be continuous noise pollution, there is currently no information on impacts of these nature to zooplankton, which presents a risk to the zooplankton communities of Scott Reef, especially if any operations are to occur in the channel.	The respondent states that there will be " <i>repeated and sustained seismic surveys</i> ". Woodside notes that with the exception of vertical seismic profiling (VSP), there are no seismic surveys proposed as part of the proposed Browse Project. VSP surveys are infrequent in nature and will only take approximately 10 hours per well. The respondent states that " <i>Furthermore, there are several continuous noise pollutants including vessel DP and choke valve noise at lower sound intensities that are likely to impact plankton over the life of the project (44 years). Long term impact of sound pollution on plankton communities has not been studied. Given that there are future wells located in the channel, this could present risk to the zooplankton communities of Scott Reef.</i> " Woodside notes that the drilling MODU on DP and choke valve noise in the channel have been modeled using established and accepted thresholds in relation to impacts to plankton. This modelling predicts that sound levels above accepted threshold levels are not predicted to reach the reef edge of Scott Reef. It is further noted that the choke valve noise will occur at a depth of >350 m and a significant distance (when put in the context of the modelling results) from Scott Reef. Further, it is noted that underwater noise monitoring of an operational well will be undertaken to inform an adaptive management approach for noise management for the wells within the Scott Reef channel. Given this, the information available in respect to plankton is considered sufficient for the purpose of the impact assessment.
19	Plankton communities	The Proponent has not considered the implications of light impacts to diurnal migrations of plankton, and what effect this will have on higher order predators.	This statement is not correct. Woodside has addressed potential impacts to the diurnal migration of plankton and potential indirect impacts to species that feed on plankton in Section 6.3.3.4 of the draft EIS/ERD. Based on light emissions modeling, highly localised effects of light emissions are predicted and proportion of the plankton populated affected. The respondent notes that a significant impact will occur for " <i>particularly for the well and any operations occurring in the Scott Reef channel (TRE)</i> ". Woodside notes that these operations will be limited to the installation of any wells in the area (i.e. no ongoing light source).
20	Plankton communities	Given the limitations of the marine discharge fate modelling, cumulative impacts on plankton communities which may cause biomagnification and bioaccumulation in higher order predators may not reflect that predicted by the Proponent.	Please also refer to response 13. The respondent states that " <i>Given the limitations of the discharge fate modelling, it is entirely likely that substantial pollutants will end up in the Scott Reef complex. These pollutants will be readily taken into plankton, which will be bio accumulated by higher trophic order organisms</i> " Woodside notes that the discharge modelling undertaken, when applied with established thresholds predicts the 99% species protection thresholds will be reached well before Scott Reef. The modelling undertaken is sufficient in scope and rigor to objectively support the conclusion that no significant impacts from operational discharges on plankton will occur. Further, it is noted that during steady state operations, PW and cooling water modelling and infield verification will be completed to verify the modelling predictions. Bioaccumulation has been addressed in Section 5.18 of the Supplement.
21	Shallow water benthic communities	There is no consideration for the cumulative impacts of reef subsidence, sea level rise, ocean acidification and a warming	Woodside does not agree with this statement. The assessment presented in the draft EIS/ERD (and Supplement) takes into consideration the AIMS (2012) report "AIMS Expert Opinion: Subsidence of Scott Reef". This report is referenced in the draft

	and habitats	ocean. These cumulative impacts will stunt growth and impede the ability of the coral reef formation to counteract predicted subsidence and sea level rise.	EIS/ERD with a link provided to where the report can be viewed (https://www.woodside.com.au/our-business/burrup-hub/index-of-previous-browse-studies). AIMS (2012) assessed the impact of net sea level rise (from subsidence and climate change induced sea level rise) and its predicted impacts on reef flat habitat (0 to 5 m depth), shallow water coral habitats (5 to 30 m), deepwater coral habitat (30 to 70 m) and Sandy Islet, for three scenarios (worse case, intermediate case and best case). In these scenarios, climate change impacts were included through reductions to the maximum rates of vertical reef growth (coral mortality due to cyclones and coral bleaching; reduced growth due to ocean acidification and temperatures exceeding those for optimum growth) and sea level rise. A detailed discussion on the predicted impacts on Sandy Islet of reef subsidence, sea level rise and increased cyclone intensity is provided in Section 5.27 of the Supplement.
22	Shallow water benthic communities and habitats	The Proponent has not considered that marine noise pollution may impact the functionality of the marine soundscape, particularly larvae using reef noise for recruitment.	Woodside does not agree with the statement. The environmental impact of underwater noise is described in Section 6.3.8 of the draft EIS/ERD. The assessment considered impacts from noise on a range of receptors, including plankton.
23	Shallow water benthic communities and habitats	Water and sediment quality impacts to benthic communities. Note – The respondent did not include this topic within their summary of limitations. Within the main body of their response, the respondent raised a number of concerns with respect to the impacts to benthic habitat from a reduction in water quality emissions associated with the proposed Browse Project.	The respondent states that limitations in the modelling mean that impacts have been underestimated. Please refer to Woodside's response to item 13 of this Appendix for further information 'in relation to limitations in the modelling.' The respondent raises concerns with respect to impacts from drilling and dredging activities. Woodside confirms that there is no dredging associated with the proposed Browse Project. Woodside notes that an Environmental Quality Management Plan (EQMP) has been developed for the proposed Browse Project and attached to the Supplement. Within the EQMP a Management Approach for Torosa wells in State Proposal Area is presented. The specific objective of the management approach is to manage drilling discharges (in particular, bottom-hole section discharges) at drill centres in the State Proposal Area (i.e. TRA, TRD, TRE and TRF) using industry proven techniques to meet the maximum Level of Ecological Protection at Scott Reef shallow water benthic communities and habitats (<75 m bathymetry).
23	Shallow water benthic communities and habitats	The proposed impacts have not been discussed in the context of a changing climate, whereby current predictions of climate trajectory have coral reef growth almost halted by 2030.	The project is proposed to be undertaken in a way that minimises impacts to Scott Reef irrespective of future changes. Specifically, Woodside commits in the draft EIS/ERD to: Woodside have committed to: <i>“Undertake the Browse Project in a manner that prevents changes beyond natural variation in ecosystem processes, biodiversity, abundance and biomass of marine life or in the quality of water, sediment and biota that form part of the Scott Reef shallow water benthic communities and habitats (<75 m bathymetry).”</i> Comprehensive surveys, modelling and impact assessment presented in the draft EIS/ERD and Supplement (including in the context of climate change) have shown that with the implementation of the proposed mitigation measures and monitoring, this environmental objective is achievable. Given that no impact to Scott Reef shallow water benthic communities and habitats (<75 m bathymetry) is predicted (and Woodside have committed to ensuring this outcome), there is not cumulative impacts of the Proposal and climate change predicted in relation to Scott Reef.
25	Deep water benthic communities and habitats	There is no recognition of the deep-water benthic habitats as significant, whereas it is referenced as a biodiversity hotspot for deep water corals, sponges and filter feeding communities.	Woodside recognises the importance of deep-water benthic habitats in the draft EIS/ERD and has undertaken a comprehensive impact assessment in relation to these habitats. Impacts to deepwater benthic habitats and communities within the Project Area as a result of the installation of the subsea infrastructure and drilling discharges are not expected to be significant as they will be restricted to areas largely composed of soft sediment habitat and sparse benthic biota (as shown via multiple benthic habitat surveys) and the physical footprint represents a small fraction of the widespread and representative deepwater benthic habitat type within the region.
26	Deep water benthic communities and habitats	The surveys of the deep-water benthic communities conducted by the Proponent are inadequate to represent the greater biodiversity and variability within the development footprint and impacted area.	Woodside notes that the work undertaken within the draft EIS/ERD in relation to benthic habitats is consistent with the workplan described in the EIS Guidelines which were approved on 5 July 2019. Multiple surveys of the deepwater benthic habitats of the Project Area have been undertaken as presented in Section 5.3.1.2 of the draft EIS/ERD. The results of these surveys show a deepwater habitat that is consistent with the broader region. Further, as detailed in the Supplement, subsequent to the release of the draft EIS/ERD for public comment, high-quality seabed imagery of the BTL route acquired by an autonomous underwater vehicle (AUV) has become available. A review of a representative portion of the AUV imagery demonstrated that the seabed along the BTL route is characterised by unconsolidated soft sand forming shallow sand waves, largely devoid of epibenthic communities, with occasional solitary non-coral benthic invertebrates (e.g. crinoids, seapens, starfish and anemones), crustacea and demersal fish observed. Quality assurance checks have been undertaken to confirm that the reviewed portion is representative of the habitat along the BTL route.

			Given the above, the information available in respect to deepwater benthic habitats is sufficient for the purpose of the impact assessment.
27		Seabed disturbance impacts to benthic communities. Note – The respondent did not include this topic within their summary of limitations. Within the main body of their response, the respondent raised a number of concerns with respect to the impacts to benthic habitat from seabed disturbance associated with the proposed Browse Project.	As described above and in the draft EIS/ERD (e.g. Section 6.3), the deepwater sediment habitat composition and sparse benthic biota that will be disturbed is widespread and representative of the region. As described in the draft EIS/ERD, studies indicate that benthic infauna and epifauna recover relatively quickly, with substantial recovery in deep water benthic communities within three to ten years (Jones et al., 2012). Given the small area of permanent disturbance relative to the total area of similar habitat available regionally and expected recolonisation of the seabed with similar benthic biota after the removal of temporary infrastructure, seabed disturbance within the deep waters of the Project Area is not predicted to result in significant impact.
28	Marine Fauna - Seabirds and migratory shorebirds	The baseline information for birdlife is outdated, with vulnerable and endangered species not included in the assessment, and the importance of Sandy Cay as a resting stop for migratory shorebirds not adequately recognised.	Woodside notes that the work undertaken within the draft EIS/ERD in relation to seabirds and migratory shorebirds is consistent with the workplan described in the EIS Guidelines which were approved on 5 July 2019. Hutton’s Shearwaters – Woodside notes that while Hutton’s Shearwaters are listed as endangered by the ICUN red list, this is due to breeding being restricted to just two colonies located within New Zealand. They are listed as marine and not listed as threatened under the EPBC Act. Hutton’s Shearwaters were not identified in the EPBC Protected Matters search as potentially occurring in the Project Area. According to the Draft Wildlife Conservation Plan for Seabirds, in the non-breeding season, these birds migrate to waters off Australia, particularly southern, western and north-western Australia. Given this, Hutton’s Shearwaters are not expected to occur in significant numbers with the Browse Development Area. Matsudaira’s Storm-petrel is listed as migratory and marine under the EPBC Act. Matsudaira’s Storm-petrel were not identified in the EPBC Protected Matters search as potentially occurring in the Project Area. According to Draft Wildlife Conservation Plan for Seabirds, after the breeding season, these birds move south from their breeding grounds in Japan to the Timor Sea, north-west Australia and into the northern Indian Ocean. During the non-breeding season Matsudaira’s Storm-petrel remains in oceanic waters far from the coast. Given this, Matsudaira’s Storm-petrel are not expected to occur in significant numbers with the Browse Development Area. Woodside has undertaken a comprehensive impact assessment (See Section 6.3.3 of the draft EIS/ERD) including in relation to potential impacts to seabirds and migratory shorebirds including light and seabed subsidence related impacts. No significant impacts to seabirds or migratory shorebirds are predicted and as such the information available in respect to seabirds and migratory shorebirds is sufficient for the purpose of the impact assessment.
29	Marine Fauna - Seabirds and migratory shorebirds	Light and noise impacts are underestimated, as the Proponents rationale is that migratory shorebirds aren’t likely to come within the modelled impact footprints due to the lack of roosting habitat, this does not account for birds flying along their migratory pathways, which this development is central to for the declining EAAF flyway species.	<u>Noise</u> The respondent states that atmospheric noise associated with increased vessels, piling and helicopter activity may result in birds avoiding the roosting and foraging habitat provided by Scott Reef, or cause startle responses that consume energy rapidly. Woodside notes that helicopter activity will be restricted to 1-2 movements per day (and much less in the event fast crew transfer vessels are used) and primarily only to the FPSOs, over 20 km from Sandy Islet. Vessels will typically also remain a significant distance from Sandy Islet and are highly unlikely to disturb birds resting or roosting there. Pile driving for the MODU and FPSOs (if required) will create atmospheric noise, but again this will be a significant distance from Sandy Islet and will only occur during construction. <u>Light</u> The respondent states that <i>“every one of the shorebirds using the EAAF will fly from areas such as Ashmore Reef to areas such as eighty mile beach, Scott Reef being more or less directly in between them, thus there is a substantial probability of them flying within sight and impact range of the facilities. Given the extreme vulnerability and decline of the EAAF shorebird populations, the impact of light and other development operations should be considered more thoroughly”.</i> Woodside note that a desktop lighting assessment, taking into account the final National Light Pollution Guidelines for Wildlife (Commonwealth of Australia, 2020) has been undertaken and is provided in Appendix A.1 of the Supplement. The key findings of this assessment in relation to seabirds and migratory shorebirds are presented in Section 5.31 of the Supplement. The assessment concluded that: Light sources associated with the Browse Project may negatively impact migration and nocturnal nest site selection of migratory shorebirds flying over Scott Reef or using Sandy Islet as a staging ground. Based on the information available, Scott Reef has not been identified as important habitat for migratory shorebirds, as defined by the EPBC Act Policy Statement 3.21 - Industry guidelines for avoiding, assessing and mitigating impacts on EPBC Act listed migratory shorebird species (Commonwealth of Australia, 2017c). Therefore, any impacts from light emission to migratory shorebirds are likely to be limited to effects at an individual level rather than at a population level.

30	Marine Fauna - Seabirds and migratory shorebirds	Contrary to the Proponents assessment, impacts to roosting and nesting habitat on Sandy Islet is likely to occur if this project is permitted, through the cumulative impacts of reef subsidence and sea level rise.	As discussed in response 1, Woodside has undertaken additional analysis and investigation into the potential seabed subsidence and potential associated impacts (particularly in relation to turtle nesting habitat at Sandy Islet but also applicable to seabird and migratory seabird habitat) as part of the preparation of the Supplement Report to the Draft EIS/ERD (the 'Supplement'). This included analysis of the potential impacts of reservoir-related seabed subsidence on the fate and dynamics of Sandy Islet (and as such the seabird and migratory shorebird habitat) against a backdrop of long-term global sea level rise and increasing cyclone intensity. This analysis is presented in Section 5.27 of the Supplement.
31	Marine Fauna - Seabirds and migratory shorebirds	Atmospheric air emissions impacts to seabird and migratory shorebirds Note – The respondent did not include this topic within their summary of limitations. Within the main body of their response, the respondent raised concerns with respect to the impacts to seabirds and migratory shorebirds from atmospheric air emissions associated with the proposed Browse Project.	While a small number of individual birds may be exposed to atmospheric emissions from the FPSO facilities, as detailed in the draft EIS/ERD, given that atmospheric emissions will be typical of other operating facilities and equipment, and that seabird and migratory shorebird numbers will be low at the point of discharge, no lasting impact to seabirds and migratory shorebirds as a result of atmospheric emissions is expected.
32	Marine Fauna - Seabirds and migratory shorebirds	Water quality impacts to seabird and migratory shorebirds Note – The respondent did not include this topic within their summary of limitations. Within the main body of their response, the respondent raised concerns with respect to the impacts to seabirds and migratory shorebirds from reduced water quality associated with the proposed Browse Project.	The respondents note that many bird species that occur at Scott Reef rely on the shallow water lagoons at Scott Reef. Woodside reiterates the commitment: <i>“Undertake the Browse Project in a manner that prevents changes beyond natural variation in ecosystem processes, biodiversity, abundance and biomass of marine life or in the quality of water, sediment and biota that form part of the Scott Reef shallow water benthic communities and habitats (<75 m bathymetry).”</i> Comprehensive surveys, modelling and impact assessment presented in the draft EIS/ERD and Supplement have shown that with the implementation of the proposed mitigation measures and monitoring, this environmental objective is achievable. As such no impact to birds utilizing the shallow water lagoons is predicted. The respondent also raises concerns that <i>“Factors affecting water quality such as contamination and pollution from discharges have the potential to emit odorants, which can reduce foraging efficiency of seabird and migratory shorebird species that rely on receptors such as olfaction (Silva et al., 2020). Additionally, other impacts causing increased suspended sediment concentration and increased turbidity have the potential to reduce the foraging efficiency of seabirds and migratory shorebirds that rely on visual acuity to capture prey from the water column, by reducing available light (Henkel, 2006).”</i> As described in the draft EIS/ERD these areas of reduced water quality will occur a significant distance from Scott Reef. Any exposure of seabirds and shorebirds to these areas of reduced water quality will be temporary and occasional. No significant impact is predicted from this exposure. The respondent also states that the risk of potential impacts on seabird and migratory shorebird populations from a hydrocarbon spill have not been adequately addressed. Woodside disagrees with this statement. Extensive modelling of unplanned hydrocarbon releases and risk assessment has been presented in Section 6.3.21 of the draft EIS/ERD.
33	Marine Fauna - Fish	There is high genetic distinctiveness, endemism and species diversity of 898+ fish fauna at Scott Reef, an area that is poorly researched from a taxonomy standpoint, yet the Proponent claims that they are widely represented throughout the broader region. This ignores the importance of this genetically distinct area and conservation of genetic diversity in general.	Woodside acknowledges the high genetic distinctiveness, endemism and species diversity of fish at Scott Reef within the draft EIS/ERD. As per previous responses, Woodside have committed to <i>“Undertake the Browse Project in a manner that prevents changes beyond natural variation in ecosystem processes, biodiversity, abundance and biomass of marine life or in the quality of water, sediment and biota that form part of the Scott Reef shallow water benthic communities and habitats (<75 m bathymetry).”</i> Comprehensive surveys, modelling and impact assessment presented in the draft EIS/ERD and Supplement have shown that with the implementation of the proposed mitigation measures and monitoring, this environmental objective is achievable. As such no significant impact to fish at Scott Reef is predicted.
34	Marine Fauna - Fish	The Proponent has neglected to include in their assessment EPBC listed shark and ray species that are known to occur, as well as several IUCN red list species.	Woodside disagrees with this statement. All EPBC listed species identified in the protected matters search were considered during the assessment. The species that respondent raises were either not identified as occurring in the areas during the protected matters search or were not considered likely to occur within the Project Area and/or be impacted by Project Activities. Justification with respect to this assessment is provided in Appendix C7 of the draft EIS/ERD.
35	Marine Fauna – surface megafauna	Proponent commissioned aerial surveys conducted over Scott Reef were inadequate to assess with high resolution the species diversity and presence of surface megafauna, as the flights were too high in altitude, transects spaced too far apart with little coverage of the entire area, and transect speeds too fast.	Woodside notes that the work undertaken within the draft EIS/ERD in relation to marine fauna is consistent with the workplan described in the EIS Guidelines which were approved 5 July 2019. The information available in respect to marine megafauna is sufficient for the purpose of the impact assessment.

36	Marine Fauna - Fish	The Proponent has not considered the long term impact of moderately intense but continuous sound exposure on sensitive coral reef fish, such as choke noise from the well heads proximal to Scott Reef and in the centre of the channel, which have been found to have a greater impact on fish populations and as a result the entire ecosystem (Miller & Cripps, 2013).	<p>The respondent states that</p> <p><i>“The well heads in the centre of the Scott Reef channel will emit continuous and prolonged choke noise for long periods of time during the operational life. While the high intensity sounds have been dismissed as temporary and for the most part spatially removed from coral reef fish, the long term impact of less intense but continuous sounds have not been accounted for, and have been reported to have ecosystem wide impacts (Miller & Cripps, 2013).</i></p> <p>Woodside notes that the modelling of the subsea wells indicated that noise levels will fall below 120 dB re 1 µPa (SPL) within approximately 500 m of the wellheads and are not expected to propagate more than 1 km under optimal conditions. Given the impact threshold for temporary threshold shift is 186 dB SEL24h (adapted from Popper et al. (2014)), sound levels are expected reduce to below threshold levels for fish in close proximity to the well heads. Given the proposed location of the well heads (over 1 km from Scott Reef with most wells significantly more, in water depths >350m), long term impacts to fish populations from wellhead noise is not predicted.</p> <p>The respondent also states that</p> <p><i>The Proponent has admitted that the subsea valves are likely to have significantly higher sound pollution than predicted. This may not have considerable impact at wells farther from Scott Reef, however there is a planned well head in the centre of the Scott Reef channel, which is likely to be detrimental to the environment within the channel”</i></p> <p>The statement “that the Proponent has admitted that the subsea valves are likely to have significantly higher sound pollution than predicted” is false. Within the EIS/ERD Woodside has assessed the potential impacts from choke noise based on current available information AND the risk that could be posed if choke noise is higher than predicted. At no point does Woodside suggest that choke noise is <i>likely</i> to be higher than predicted. Given that underwater noise monitoring of an operational well will be undertaken to inform an adaptive management approach for noise management for the wells within the Scott Reef channel, it is considered highly unlikely that choke noise from wells within the channel will be higher than predicted.</p>
37	Marine Fauna - Fish	The Proponent has not made available the report on the site-specific sound impact studies associated with the Maxima seismic activities, a study done in the project area.	Multiple peer reviewed studies relying on results of scientific research conducted in association with the Maxima survey have been published and subsequently utilised in preparing the Browse to NWS draft EIS/ERD. These are referenced in the draft EIS/ERD and publicly available through a range of journal portals. Woodside notes that with the exception of vertical seismic profiling (VSP), there are no seismic surveys proposed as part of the proposed Browse Project.
38	Marine Fauna - Fish	There is high risk of bioaccumulation of heavy metals and other pollutants in long lived resident higher order predators such as sharks at Scott Reef, as a result of toxic pollutants and heavy metals, particularly mercury. The proponent states that these will be emitted but does not clarify to what magnitude.	The respondent's statement that <i>“There is high risk of bioaccumulation of heavy metals and other pollutants in long lived resident higher order predators such as sharks at Scott Reef, as a result of toxic pollutants and heavy metals, particularly mercury”</i> as a concept, is generally correct. However, the specific risks of bioaccumulation to Scott Reef in relation to the Proposal are considered within the draft EIS/ERD. Further information regarding produced water discharge constituents and the fate of mercury in produced water (including the potential for bioaccumulation) has been addressed in Section 5.18 of the Supplement.
39	Marine Fauna - Fish	As the Proponent underestimates impacts to the habitat, they also underestimate impacts to the fish populations that rely on healthy coral reefs and other benthic communities.	As per responses 10, 13 and 23, Woodside disagrees with the assertion that impacts to fish habitat have been underestimated. As such Woodside also disagree that impacts to fish populations have been underestimated.
40	Marine Fauna – Marine Mammals	Many species of marine mammal were determined to be transient visitors despite there not being any recent and comprehensive surveys in the region for abundance of many of the species, particularly toothed whales that are less visible to acoustic surveys.	<p>Woodside notes that the work undertaken within the draft EIS/ERD in relation to marine mammals is consistent with the workplan described in the EIS Guidelines which were approved on 5 July 2019.</p> <p>Conclusions on the likelihood and frequency of visitation to Scott Reef by marine mammals have been drawn from multiple surveys and detailed literature reviews including the SPRAT database.</p> <p>The information available in respect to marine mammals is sufficient for the purpose of the impact assessment.</p>
41	Marine Fauna – Marine Mammals	The estimates used to calculate the number of pygmy blue whales that may be impacted by noise have numerous potential sources of error and no quantification of this error calling into question conclusions made.	<p>Pygmy blue whale population estimates are further addressed in Section 4.2.2 of the Supplement which notes that Woodside has collected multiple datasets over multiple years to understand pygmy blue whale dynamics (abundance, seasonality, migration) in the Browse Development Area (as presented in the draft EIS/ERD). The Supplement acknowledges that knowledge on the potential importance of the foraging areas, residence times and actual seasonal numbers is limited. In order to address this, in the underwater noise impact assessment for pygmy blue whales, a conservative approach to density estimates was used.</p> <p>Given this conservatism, information available on pygmy blue whales in the project area suitable for the purpose of the impact assessment.</p> <p>Further, Woodside notes that as detailed in the Supplement, a monitoring program will be conducted post-FID to verify and supplement existing baseline data through on-going data acquisition at relevant times throughout the proposed Browse Project</p>

			<p>on the distribution, abundance, seasonality and behaviour of pygmy blue whales within the possible foraging area at Scott Reef. The key objectives of the pygmy blue whale monitoring program are as follows:</p> <ul style="list-style-type: none"> - To verify and further understand the seasonality, residency time, behaviours and percentage of the East Indian pygmy blue whale population utilising the possible foraging area at Scott Reef. - To confirm source levels of underwater noise emissions for relevant identified project activities to verify impact predictions.
42	Marine Fauna – Marine Mammals	Proposed exclusion zones for pygmy blue whales are inappropriate, due to the difficulty to detect pygmy blue whales at the surface.	<p>Modelling undertaken considered impacts both with the exclusion zone in place and without the exclusions in place. The worst case scenario (IHC-S-200 hammer – no exclusion zone) when scaled to the real world density, equates to 0.06 individuals exposed per pile, accordingly when incorporating a 2000 m shutdown zone, the potential for injury to pygmy blue whales is not considered credible.</p> <p>Woodside notes that there are further proposed mitigation measures in addition to the proposed exclusion zones during impact driving. Impact driving activities will have trained vessel crew as a marine fauna observer and will be subject to pre-start up visual observations, soft start, operational, and shut-down procedures.</p>
43	Marine Fauna – Marine Mammals	According to the Proponents pygmy blue whale estimates of density, and number of animals impacted by pile driving, a predicted 5.6% of the population will suffer permanent or temporary threshold shifts, a significant proportion of an endangered species.	<p>Within the Supplement, Woodside has undertaken further evaluation in the form of additional analysis on the key impacts and risks specific to the pygmy blue whale species, as presented in the draft EIS/ERD. This includes an evaluation of the proposed Browse Project against the Conservation Management Plan for the Blue Whale - A Recovery Plan under the Environment Protection and Biodiversity Conservation Act 1999 Commonwealth of Australia 2015-2025. This evaluation is presented in Section 4.5.2 of the Supplement and considered the key noise sources including a worst-case cumulative scenario (the governing scenario).</p> <p>It is noted that the “1 animal impacted per pile” utilised by the respondent to calculate the total percentage of the pygmy blue whale population impacted is not consistent with the result of the modeling undertaken by Woodside. As detailed in the Supplement, the worst case scenario (IHC-S-1200 hammer – no exclusion zone) when scaled to the real world density, equates to 0.06 individuals exposed per pile. When incorporating a 2000 m shutdown zone, the potential for injury to pygmy blue whales is not considered credible. It is further noted, that as detailed in the Supplement, noise levels above threshold levels are only predicted to occur in a small portion (<2% of the pygmy blue whale possible foraging area BIA).</p> <p>Within the Supplement, Woodside as proposed additional controls to reduce potential impact from noise emission to pygmy blue whales including:</p> <ul style="list-style-type: none"> • Pile driving of MODU piles (if required) at TRD and TRE will occur outside peak pygmy blue whale migratory periods (May, June and November). • VSP/DAS will not occur on TRD or TRE wells during peak pygmy blue whale migratory periods (May, June and November). • Drilling and completions activities (including XT installation from the MODU) at TRE will occur outside of the peak pygmy blue whale migratory periods (May, June and November). • Pile driving of FPSO piles (if required) will occur outside the peak pygmy blue whale migratory periods (May, June and November). <p>The proposed controls, and in particular the elimination of key noise producing activities during peak pygmy blue migration periods, adequately mitigate and reduce the potential impacts from noise emission to pygmy blue whales.</p>
44	Marine Fauna – Marine Mammals	The sound created by the operations may prevent marine mammals from accessing the eastern entrance of Scott Reef, potentially encountering an acoustic roadblock, cutting off access to food resources.	<p>Woodside notes the additional controls adopted within the Supplement with respect to mitigating underwater noise impacts to pygmy blue whales within the Scott Reef channel. These additional controls (listed in the above response) effectively mean that piling driving and VSP/DAS will not occur at sites TRD or TRE (i.e. the channel wells) during peak pygmy blue whale migratory periods, drilling and completions activities will not occur at TRE during peak pygmy blue whale migratory periods, and pile driving of MODU piles will not occur at TRD or TRE during peak pygmy blue whale migratory periods. These controls will ensure that pygmy blue whales are not prevented from accessing food resources within the Scott Reef channel at times that they are most likely to be foraging in the area.</p> <p>The respondent states that “while during more routine operations throughout the life of the operations, this entrance is covered by the behavioural response threshold. This sound impact would prevent southward and northward migrating whales from conducting exploratory dives and feeding within the channel, as they would be deterred from travelling through it due to the sound”.</p> <p>Woodside notes that according to the modelling, the behavioural response threshold only reaches the Scott Reef channel entrance during offtake operations which would occur every 2-4 weeks for approximately 24 hours (plus mooring and</p>

			unmooring operations). Further, at these times it is estimated that only ~1.4% of the possible foraging area will exceed the marine mammal behavioural response threshold.
45	Marine Fauna – Marine Mammals	Masking of the pygmy blue whales vocalisations and other cetaceans heavily reliant on acoustic communication for various purposes, at a potentially significant navigational waypoint of their migration presents a considerable risk not adequately addressed by the proponent.	<p>As documented within the EIS Supplement, Woodside has proposed a number of additional controls to reduce potential impact from noise emission to pygmy blue whales during migration periods including:</p> <ul style="list-style-type: none"> • Pile driving of MODU piles (if required) at TRD and TRE will occur outside peak pygmy blue whale migratory periods (May, June and November). • VSP/DAS will not occur on TRD or TRE wells during peak pygmy blue whale migratory periods (May, June and November). • Drilling and completions activities (including XT installation from the MODU) at TRE will occur outside of the peak pygmy blue whale migratory periods (May, June and November). • Pile driving of FPSO piles (if required) will occur outside the peak pygmy blue whale migratory periods (May, June and November). <p>The proposed controls, and in particular the elimination of key noise producing activities during peak pygmy blue migration periods, adequately mitigate and reduce the potential impacts from noise emission to pygmy blue whales.</p>
46	Marine Fauna – Marine Mammals	The cumulative noise impacts to cetaceans migrating along the shipping and development saturated northwest shelf are not considered.	An assessment of cumulative impacts is included in Section 6.3.8.5 of the draft EIS/ERD.
47	Marine Fauna – Marine Mammals	The impact of light on vertical squid migrations is not considered, thus altering the characteristics of a significant food resource for many understudied cetaceans such as beaked and sperm whales.	<p>The respondent states:</p> <p><i>“As squid undergo vertical migrations during the diurnal cycle, coming closer to the surface at night, and staying deeper during the day, anthropogenic light has the potential to reduce this vertical migration. The impact this will have, is that the cetaceans using this as a food source will have to travel deeper in order to find their food, requiring more energy for the same volume of food. This is likely to have an unanticipated impact on these cetaceans, as squid even reduce their vertical migration when the moon is full and approaching full”</i></p> <p>Woodside notes that based on the light modelling presented in the draft EIS/ERD, the light level suggested by the respondent as altering squid vertical migrations (“equivalent to between moon is full and approaching full”) will occur 1.5-3 km around the operating facilities. However, this was based on the previously proposed FLNG facilities. Light emissions from the proposed Browse Project FPSO facilities are expected to be less than those predicted for FLNG facilities (due to the significantly smaller size of the facilities). Given this small area of effect, the potential minor use of additional energy by cetaceans when foraging in the affected area is not considered to be significant.</p>
48	Marine Fauna – Marine Mammals	The risk of vessel strike to cetaceans is underestimated, considering fast transfer vessels are likely to travel at a minimum of 30 knots through sensitive areas, and faster through understudied ocean.	<p>Woodside notes the additional control that has been adopted within the Supplement that “All vessels (including the Fast Crew Transfer Vessel (FCTV)) will not travel at speeds greater than 12 knots within the pygmy blue whale possible foraging area that overlaps Scott Reef in peak migration periods (May, June and November), unless required for Safety of Life at Sea.</p> <p>As noted in the draft EIS/ERD, FCTV will operate under a FCTV management strategy, which will describe the appropriate additional control measures to manage vessel strike risk for the FCTV. The management plan is adaptive and can be modified in response to any new information.</p>
49	Marine Fauna – Marine Reptiles	Aerial survey turtle data of Scott Reef has not been made available publicly, and data of the migration corridor is poorly conceived.	<p>The respondent questions the referencing sequence (in relation to RPS, 2011a, b, and c) and alludes to turtle survey data being intentionally withheld from public view. Woodside notes that the referencing (as seen by the respondent on the Woodside website) is based on the Browse FLNG EIS. In this case RPS 2011b referred to “RPS Environment and Planning Pty Ltd 2011b, Humpback Whale Survey Report 2010, Report produced for Woodside Energy Limited, pp. 89.</p> <p>The respondent states <i>“The Proponent’s indication of low turtle densities in the Scott Reef migration corridor correspond to surveys undertaken during July and October (2009) which are off- season months for turtle nesting. Fast travelling aerial surveys may also be unsuitable to accurately detect the number of migrating marine turtles, as during migration turtles tend to spend minimal time at the surface, instead spending more time at a depth suitable to minimum drag, as surface tension adds to drag.”</i></p> <p>Woodside notes that while the respondent alludes to one aerial survey informing existing turtle information, multiple turtle surveys have been undertaken at Scott Reef and the Browse Development Area. This includes seven surveys conducted during 2006, 2008 and 2009. A total of 435 nesting green turtles were flipper tagged during these surveys. A further study in 2010 (January/February) of nesting green turtles at Sandy Islet utilised onshore monitoring (i.e. flipper tagging, track census, nest success), manta tows (to survey nesting/interneeting habitat) and satellite tagging (12 nesting females) survey techniques. This study (Guinea, 2011) was used to assess the migratory routes and behaviour of green turtles leaving Scott Reef. This</p>

			<p>information was utilised to inform the Browse FLNG Project Assessment and subsequently relied upon for the Browse to NWS Project Proposal.</p> <p>Further details regarding turtle behaviour and population estimates are provided in Section 5.3.2.6.1 of the draft EIS/ERD.</p> <p>A comprehensive set of baseline data is available in respect to marine turtles that is sufficient for the purpose of the impact assessment. Woodside notes that a monitoring program will be conducted post-FID to verify and update baseline data through on-going data acquisition at relevant times throughout the proposed Browse Project on the distribution, abundance, seasonality and behaviour of green turtles at Scott Reef and within habitat critical to survival for the G-ScBr stock. The key objectives of the green turtle monitoring program are as follows:</p> <ul style="list-style-type: none"> - To understand the key breeding parameters (e.g. nester abundance, incubation success, hatchling sea finding behaviour, post hatching dispersal) for the G-ScBr stock utilising the habitat critical to survival at Scott Reef. - To understand the relative importance of Sandy Islet as a nesting site for the G-ScBr stock. - To confirm levels of light emissions (both direct light and sky glow) for the relevant identified proposed project activities to verify impact predictions.
50	Marine Fauna – Marine Turtles	The Proponent has not provided any recent green turtle nesting baseline data, the last being collected in 2010. Baseline datasets need to be collected over a minimum period of 10 years to accurately estimate population sizes and understand trends.	<p>As noted in the draft EIS/ERD, the available green turtle data, 2002 to 2010, is appropriate for the purposes of impact assessment and management planning purposes based on the lack of significantly altered regional cumulative impacts since collection, ability to extrapolate population trends using existing literature, and conservative interpretation of available data.</p> <p>As described in Section 4.4.3 of the Supplement, a monitoring program will be conducted post-FID to verify and update baseline data through on-going data acquisition at relevant times throughout the proposed Browse Project on the distribution, abundance, seasonality and behaviour of green turtles at Scott Reef and within habitat critical to survival for the G-ScBr stock.</p>
51	Marine Fauna – Marine Snakes	Marine reptile populations have not been surveyed in the past 10 years; thus baselines are outdated.	<p>Woodside notes that the work undertaken within the draft EIS/ERD in relation to sea snakes is consistent with the workplan described in the EIS Guidelines which were approved on 5 July 2019.</p> <p>The respondent states “<i>Current status surveys are required to determine the status of these species, especially as Scott Reef is potentially one of the remaining strongholds for sea snake diversity in the Sahul Shelf.</i>”</p> <p>The draft EIS/ERD acknowledges that a number of sea snake species occur at Scott Reef including threatened species. Woodside has considered these in undertaking the impact assessment and sufficient baseline data set is available in respect to marine mammals that is sufficient for the purpose of the impact assessment.</p>
52	Marine Fauna – Marine Reptiles	The Proponent incorrectly uses the acoustic threshold levels of marine turtles for marine snakes, where snakes are likely to be far more sensitive due to an air-filled lung that extends the length of their body.	<p>The respondent’s statement is not correct. The draft EIS/ERD states “<i>the acoustic impact criterion thresholds for marine turtle behavioural response to anthropogenic sounds are considered a reasonable proxy for sea snakes. However, as quantifiable distances for assessing impacts from continuous sounds only exist for fish, fish have been used as a surrogate for this assessment.</i>”</p> <p>Justification of thresholds used for sea snakes is provided in Section 6.3.8.2.2 of the draft EIS/ERD.</p>
53	Marine Fauna – Marine Reptiles	The predicted impact of light on marine turtle hatchlings is based on the fact that these turtles will remain at Sandy Islet, however they will swim in one direction or another, with a reasonable chance of them swimming into light impact zones and following these to the FPSO’s which support artificial habitat for predators.	<p>Woodside note that a desktop lighting assessment, taking into account the final National Light Pollution Guidelines for Wildlife (Commonwealth of Australia, 2020) has been undertaken and is provided in Appendix A.1 of the Supplement. The key findings of this assessment in relation to marine turtles are presented in Section 4.3.3.4 of the Supplement. This includes an assessment of potential impacts of offshore sources of artificial light on all life stages of marine turtles including hatchling dispersal.</p>
54	Marine Fauna – Marine Reptiles	The risk of vessel strikes, particularly from the fast transfer vessels is greater than conceded by the Proponent, as they travel through sensitive areas, have not listed periods of sensitivity for turtles, overestimate the protection afforded by the shell and don’t consider the difficulty to detect small fauna while travelling at high speed.	<p>The respondent states that “Fast transfer vessels at 50 knots travel through a known green turtle foraging area”. This is not correct. The FCTV will not travel at speeds greater than 30 knots in sensitive areas at sensitive times.</p> <p>Woodside notes the additional control that has been adopted within the Supplement that “All vessels (including the Fast Crew Transfer Vessel (FCTV)) will not travel at speeds greater than 12 knots within the pygmy blue whale possible foraging area that overlaps Scott Reef in peak migration periods (May, June and November), unless required for Safety of Life at Sea”.</p> <p>As noted in the draft EIS/ERD, FCTV will operate under a FCTV management strategy, which will describe the appropriate additional control measures to manage vessel strike risk for the FCTV. The management plan is adaptive and can be modified in response to any new information.</p> <p>Woodside acknowledge the proposed FCTV route traverses the existing foraging BIA for green turtles. Woodside also note the recently published peer-reviewed scientific paper titled ‘Multiple satellite tracking datasets inform green turtle conservation at regional scale’ (Ferreira et al 2020). The main conclusion includes identification of existing foraging BIAs as largely underestimated and needing to be re-defined. Understanding of the foraging areas was identified using 75% turtle distribution is predominately coastal, in water depths of <9 m and included Shark Bay, a near continuous polygon from Ningaloo to</p>

			<p>Roebuck Bay, the southern (Buccaneer Archipelago and Adele Island) and northern Kimberley. While there was overlap with the Roebuck Bay foraging BIA the identified foraging distribution was inshore and primarily coastal. Such new knowledge will be considered in the final route of the FCTV to minimise encounters and the risk of vessel strike through sensitive areas and timing of use by marine turtles.</p> <p>Reference: Ferreira, L.C., M. Thums, S. Fossette, P. Wilson, T. Shimada, A.D. Tucker, K. Pendoley, D. Waayers, M.L. Guinea, G. Loewenthal, J. King, M. Speirs, D. Rob and S.D. Whiting (2020). Multiple satellite tracking datasets inform green turtle conservation at a regional scale. <i>Diversity and Distributions</i> 00: 1-18.</p> <p>Given the above, Woodside does not agree that the risk of vessel strikes is greater than presented in the draft EIS/ERD.</p>
55	Marine Fauna – Marine Reptiles	Cumulative impacts of subsidence, sea level rise and rising global temperatures are likely to severely impact the green turtle rookery at Sandy Islet, which the Proponent has not adequately identified as a risk of the project.	A detailed discussion on the predicted impacts on Sandy Islet turtle nesting habitat of reef subsidence, sea level rise and increased cyclone intensity is provided in Section 5.27 of the Supplement.
56	Hydrocarbon Spill	The Proponent stresses that the risk of an oil spill is low however there has been no consideration for the fallout of an unplanned event. This is important as a major oil spill would risk impacting beyond Scott Reef to biodiversity hotspots in the region such as reefs of the Sahul Shelf, the Rowley Shoals, the Kimberley region, Camden Sound, the Pilbara and beyond.	<p>It is acknowledged within the draft EIS/ERD that the project area and environment that may be affected (EMBA) by a major unplanned hydrocarbon release (i.e. Scenario 1 - well blow out) overlaps a number of sensitive environmental, social and economic receptors, including protected and culturally significant areas.</p> <p>Further discussion on this matter is provided in Section 5.16 of the Supplement.</p> <p>The respondent states that “... <i>has not addressed any indication of proposed management objectives in the instance that an unplanned spill event</i>”. Woodside notes that information on hydrocarbon spill prevention, management and monitoring is presented in the draft EIS/ERD. The information presented is considered sufficient for the purpose of the impact assessment. As the respondent notes (and in line with current regulations), prior to any activity taking place, Woodside will develop activity-specific Environment Plans and associated Oil Pollution Emergency Plans, pursuant to regulatory processes that will occur after primary environmental approvals, to respond in the event of an oil spill which are to be approved by NOPSEMA prior to activities occurring.</p>

s. 22(1)(a)(ii), s. 42(1)

s. 22(1)(a)(ii), s. 42(1)

From: Assessments West <Assessments.West@environment.gov.au>
Sent: Tuesday, 1 December 2020 12:22 PM
To: s. 22(1)(a)(ii) @environment.gov.au>
Cc: s. 22(1)(a)(ii) @environment.gov.au>
Subject: FW: Urgent - CCWA to DAWE re Browse ERD Technical Review 26.11.20 [SEC=OFFICIAL]

Hi ^{s. 22(1)(a)(ii)},

Please find below an email to the Assessments West inbox from CCWA regarding a technical review they have completed in response to the Browse project.

We will need to think through whether this information can be incorporated into the assessment of Browse and if so how. We can add it to the agenda of things to discuss on Friday.

I have saved these documents and the email to spire in the correspondence tab and will provide an acknowledgement of receipt to CCWA.

Thanks,

^{s. 22(1)(a)(ii)}

s. 22(1)(a)(ii)

Senior Environment Assessment Officer | Major Projects West Section
Environment Assessments West (WA, SA, NT) Branch | Environment Approvals Division

s. 22(1)(a)(ii)

Please note that I am continuing to work from home. Feel free to give me a call via TEAMS.

From: Piers Verstegen <piers.verstegen@ccwa.org.au>
Sent: Thursday, 26 November 2020 9:19 PM
To: assessments.west@awe.gov.au
Subject: Urgent - CCWA to DAWE re Browse ERD Technical Review 26.11.20

Dear ^{s. 22(1)(a)(ii)}

Please find attached a letter and technical review document in relation to the Woodside Browse to North West Shelf EIS/ERD 2018/8319

I would appreciate if you could acknowledge receipt of these documents and pass them on to Andrew Metcalfe as we were not able to find a suitable email address for him.

Thanks for your attention to this matter and best regards,

Piers Verstegen

Director

Conservation Council of Western Australia

(08) 9420 7266

0411 557 892

Piers.verstegen@ccwa.org.au

City West Lotteries House, 2 Delhi St, West Perth, WA 6005

ccwa.org.au cleanstate.org.au



I respectfully acknowledge that I live and work on the land of the Nyoongar people and that their sovereignty was never ceded.

s. 22(1)(a)(ii), s. 42(1)

s. 22(1)(a)(ii), s. 42(1)

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s. 22(1)(a)(ii), s. 42(1)

From: s. 22(1)(a)(ii)
To: s. 22(1)(a)(ii)
Subject: FW: Urgent - CCWA to DAWE re Browse ERD Technical Review 26.11.20 [SEC=OFFICIAL]
Date: Tuesday, 1 December 2020 11:35:00 AM

FYI

s. 22(1)(a)(ii)

Senior Environment Assessment Officer | Major Projects West Section
Environment Assessments West (WA, SA, NT) Branch | Environment Approvals Division

s. 22(1)(a)(ii)

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To: Piers Verstegen <piers.verstegen@ccwa.org.au>
Subject: RE: Urgent - CCWA to DAWE re Browse ERD Technical Review 26.11.20 [SEC=OFFICIAL]

Good morning Piers,

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From: [Assessments West](#)
To: s. 22(1)(a)(ii); s. 22(1)(a)(ii)
Subject: FW: Urgent - CCWA to DAWE re Browse ERD Technical Review 26.11.20 [SEC=OFFICIAL]
Date: Tuesday, 1 December 2020 11:28:00 AM

Just forwarding the response to CCWA from the Assessments West inbox for filing

Thanks!

s. 22(1)(a)(ii)

Senior Environment Assessment Officer | Major Projects West Section
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s. 22(1)(a)(ii), s. 42(1)

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Cc: s. 22(1)(a)(ii) <[s.22\(1\)\(a\)\(ii\)@environment.gov.au](mailto:s.22(1)(a)(ii)@environment.gov.au)>
Subject: FW: Urgent - CCWA to DAWE re Browse ERD Technical Review 26.11.20 [SEC=OFFICIAL]

Hi [s. 22\(1\)\(a\)\(ii\)](#),

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Senior Environment Assessment Officer | Major Projects West Section
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If you have received this transmission in error please notify us immediately by return e-mail and delete all copies. If this e-mail or any attachments have been sent to you in error, that error does not constitute

waiver of any confidentiality, privilege or copyright in respect of information in the e-mail or attachments.

s. 22(1)(a)(ii), s. 42(1)

s. 22(1)(a)(ii), s. 42(1)

From: s. 22(1)(a)(ii)
To: s. 22(1)(a)(ii)
Cc: s. 22(1)(a)(ii)
Subject: RE: FOR ACTION Email to Woodside providing CCWA technical report (LEXD 21371)
[SEC=OFFICIAL:Sensitive, ACCESS=Legal-Privilege]
Date: Wednesday, 23 December 2020 11:48:00 AM
Attachments: [Browse to NWS EIS Technical Review Rev3 provided by CCWA Redacted.pdf](#)

Hi s. 22(1)(a)(ii),

Please find below a revised email to provide to s. 47F(1) on the CCWA technical review. Attached is the redacted technical report and as per s. 22(1)(a)(ii)'s comments yesterday, the covering letter is not attached.

Let me know if you need anything further.

Thanks,
s. 22(1)(a)(ii)

Hi s. 47F(1),

We have been advised by the Conservation Council of Western Australia (CCWA) that it has engaged consultant Oceanwise Australia Pty Ltd to complete an independent technical review of the draft EIS/ERD released as part of the Browse to NWS project (2018/8319), a copy of which has been provided to us.

As this information was provided to the Department and is of relevance to the impacts of the action, it will be information the Decision Maker will consider when making their final decision under the Environment Protection and Biodiversity Conservation Act. For procedural fairness, we have provided this report for Woodside's consideration. The names of individual authors have been redacted for privacy purposes.

If, upon considering the information in the attached document, you would like to provide a response to the Department, please let us know. Your response will also be provided to the Decision Maker when making their final decision.

Please note as this report was received outside of the public comment period (which closed in February 2020) there is no statutory requirement for Woodside to address this report in the Response to Submissions document.

If you or the wider project team would like to discuss us further, please let myself or s. 22(1)(a)(ii) know.

Thanks,
s. 22(1)(a)(ii)

s. 22(1)(a)(ii)

Senior Environment Assessment Officer | Major Projects West Section
Environment Assessments West (WA, SA, NT) Branch | Environment Approvals Division

s. 22(1)(a)(ii)

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s. 22(1)(a)(ii), s. 42(1)

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s. 22(1)(a)(ii), s. 42(1)

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Senior Environment Assessment Officer | Major Projects West Section
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To: s. 22(1)(a)(ii)
Subject: RE: Urgent - CCWA to DAWE re Browse ERD Technical Review 26.11.20 [SEC=OFFICIAL]
Date: Tuesday, 1 December 2020 11:34:00 AM

Just fyi, I responded to CCWA and said thanks we received the documents – I'll forward to you.

s. 22(1)(a)(ii)

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Subject: RE: Urgent - CCWA to DAWE re Browse ERD Technical Review 26.11.20 [SEC=OFFICIAL]

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Cheers

s. 22(1)(a)(ii)

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A/g Director – Major Projects West Section

Department of Agriculture, Water and the Environment

s. 22(1)(a)(ii) @awe.gov.au | GPO BOX 787 Canberra ACT 2600 | Phone 02 6274 s. 22(1)(a)(ii)

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Subject: RE: Urgent - CCWA to DAWE re Browse ERD Technical Review 26.11.20 [SEC=OFFICIAL]
Date: Tuesday, 1 December 2020 11:33:24 AM

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s. 22(1)(a)(ii), s. 42(1)

s. 22(1)(a)(ii), s. 42(1)

From: s. 22(1)(a)(ii)
Sent: Thursday, 14 January 2021 10:35 AM
To: Andrew McNee
Cc: s. 22(1)(a)(ii)
Subject: FYI - Woodside, Oceanwise query [SEC=OFFICIAL]

Hi Andrew

In regards to the request regarding Oceanwise from the MO. Oceanwise prepared a report on behalf on Conservation Council of WA who provided it to us on 26 November 2020. It was outside the public submission process.

We understand that Woodside was asking whether Simon was aware of the report and seeking further information on how it would be considered by the Minister.

We provided the Oceanwise report to Woodside in November 2020 and asked for their considerations by early February 2021 if they wish to comment. The report will be provided as part of the briefing package for the Minister. We have also informed Woodside that the report and any response prepared by Woodside would be considered in the context of impacts to protected matters where relevant and will be provided to the Minister as part of the final decision briefing for the Minister.

After we received the query from Simon Fontana we have had a quick discussion with s. 47F(1) from Woodside to take him through the process. s. 47F(1) indicated that Woodside are likely to provide a response in early Feb.

Let me know if you'd like any further information.

Thanks
Kylie

From: s. 22(1)(a)(ii)
Sent: Wednesday, 13 January 2021 12:36 PM
To: Kylie Calhoun
Cc: s. 22(1)(a)(ii)
Subject: Woodside, Oceanwise query [SEC=OFFICIAL]

Hi s. 22(1)(a)(ii),

Following on from our conversation this morning, I spoke to s. 47F(1). The query that was raised with Simon related to the report prepared by Oceanwise and presented to the Department by CCWA. I understand that s. 47F(1) was asking whether Simon was aware of the report and seeking further information on how it would be considered by the Minister.

I reiterated to s. 47F(1) that the report will be provided as part of the briefing package for the Minister and that it is open to Woodside to provide a response to the report if they wish. I noted that the report and any response prepared by Woodside would be considered in the context of impacts to protected matters where relevant. s. 47F(1) indicated that Woodside are likely to provide a response in early Feb.

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s. 22(1)(a)(ii)

Major Projects West Section

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Department of Agriculture, Water and the Environment | GPO Box 858 Canberra ACT 2601 |

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Be Green...Read from the Screen

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