

BHP

Macedon Gas Project Compliance Assessment Report

25 January 2021



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BHP Disclaimer

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Cover

Photograph on cover of report shows the Macedon Gas Plant.

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Introduction

The Macedon gas project develops natural gas from the Macedon field in production lease WA-42-L for Western Australia's domestic gas market.

The project comprises a pipeline from subsea production wells to an onshore gas processing facility, located in the Ashburton North Strategic Industrial Area (ANSIA), approximately 17 kilometres southwest of Onslow. After the gas is processed, it is transferred via a sales gas pipeline to the Dampier to Bunbury Natural Gas Pipeline (DBNGP, Figure 1).

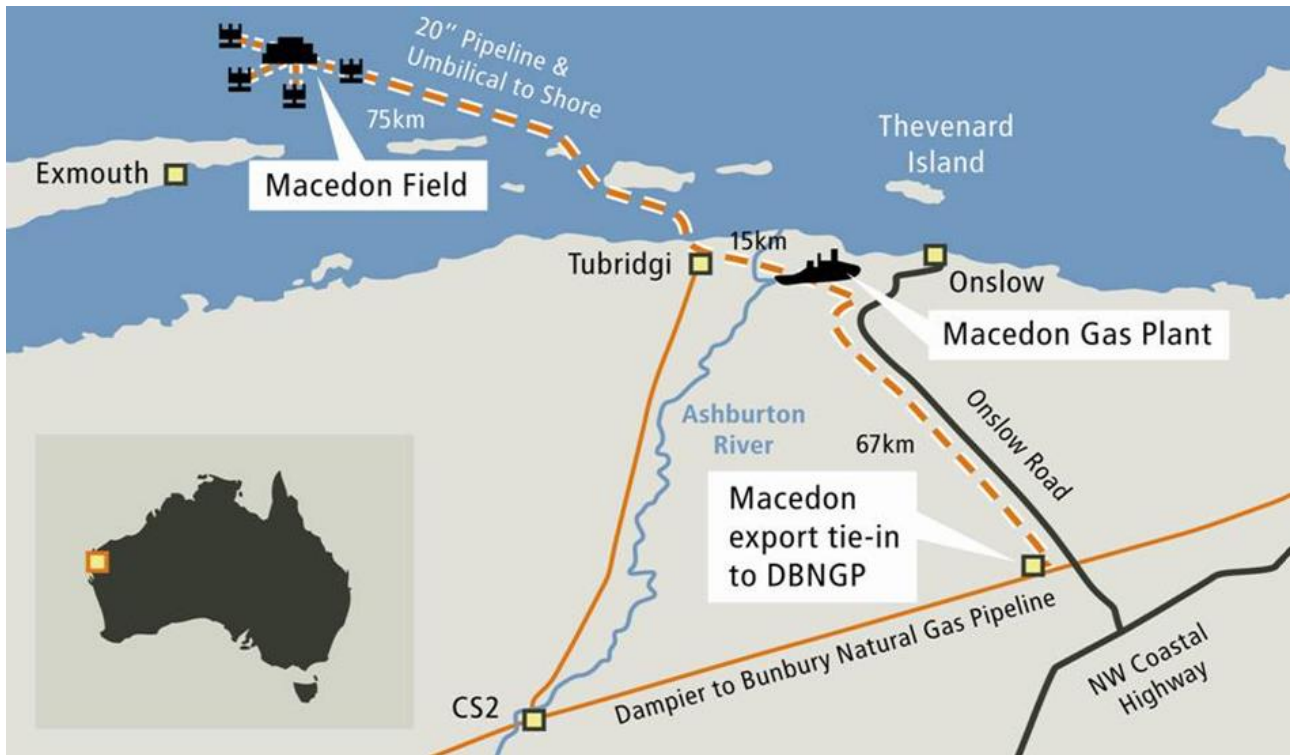


Figure 1: Macedon Gas Project Location

The Macedon Gas Plant lease area for the gas processing facility and associated infrastructure, including the ground flares and evaporation pond areas are shown in Figure 2.



Figure 2: Macedon Gas Plant Lease (red line) and Layout

Purpose of the Compliance Assessment Report

The purpose of this Compliance Assessment Report (CAR) is to assess compliance at the Macedon Gas Plant with the Environment Protection Authority (EPA) Statement 844 dated 28 October 2010 in accordance with the Compliance Assessment Plan, approved on 18 March 2011.

The CAR 2020 covers activities undertaken during the period 1 January 2020 to 31 December 2020.

Compliance Assessment Reporting Requirements

This report meets the intent of the compliance reporting requirements as defined in the Macedon Gas Project Compliance Assessment Plan (PMA-BHP-EN-EIA-0002).

Endorsement of CAR

This Compliance Assessment Report has been endorsed by Graham Salmond, General Manager Australia, BHP Petroleum.

Project Status

Current Status of Project

The project is currently in the operational phase.

Project Activities covered by CAR

This CAR covers the following project activities undertaken in the period 1 January 2020 to 31 December 2020:

- 1) Operations, 1 January 2020 to 31 December 2020.

Compliance with Ministerial Statement 844

Compliance with Conditions

Operation of the Macedon Gas Project is compliant with Ministerial Statement No. 844 as reported in Table 1.

Rehabilitation Monitoring

In March 2012, BHP Petroleum commenced rehabilitation of 285 hectares of an area approved for clearing for gas pipelines. Monitoring of the rehabilitation was required to demonstrate that, within three years of commencement of rehabilitation, the reinstated vegetation had at least 60 per cent of pre-clearing species diversity and weed coverage of no more than the pre-clearing levels (Condition 8 of Ministerial Statement 844).

Monitoring of transects along the Macedon Gas Pipeline was completed by Astron in 2010 (the baseline survey prior to clearing) and then post-rehabilitation in 2013, 2014 and 2015. Although results from the 2015 survey indicated that the two criteria above had been met, Condition 8 required “appropriately timed surveys after rain” and this survey was conducted during a dry time of year. Comment and requests for further information were subsequently received from the Department of Biodiversity, Conservation and Attractions (DBCA - formerly the Department of Parks and Wildlife), particularly regarding the section of the Sales Gas Pipeline traversing the Mt Minnie Conservation Area, which is proposed to be added to the Cane River Conservation Park. In response, BHP Petroleum commissioned Biota to complete a further phase of monitoring in 2017 to conclusively demonstrate that Condition 8 of MS844 had been met.

The survey was completed between 13 – 17 March 2017 and followed significant rainfall. A total of 21 rehabilitation sites were assessed in historically disturbed areas, with 15 of these also having an associated analogue site located in a nearby undisturbed area.

With regards to the criteria for the rehabilitation areas listed for Condition 8 of MS844:

(1) Species diversity is not less than 60 per cent of the known original species diversity.

This criterion has been met for species richness in the monitored transects, however some of the transects do not yet have a similar species composition to either their pre-clearing floristic community or their paired analogue. In the absence of threatening factors such as weed invasion, these communities would be expected to continue to develop towards a more natural (i.e. pre-clearing) floristic community in the short to medium term.

(2) Weed coverage is equal to or less than that of pre-cleared levels.

This criterion has been met with regards to two of the four weed species recorded; the shrubs **Prosopis* sp. (Mesquite) and **Vachellia farnesiana* (Mimosa Bush). Based on the monitoring data recorded to date, these two species do not appear to have increased in distribution or abundance within the study area.

However, the introduced tussock grasses **Cenchrus ciliaris* (Buffel Grass) and **C. setiger* (Birdwood Grass) have increased in both distribution across the monitored transects, as well as their abundance at some sites (as measured by their percent cover along the line transect). This includes three sites at the southern end of the Mt Minnie conservation area.

The Department of Biodiversity, Conservation and Attractions (DBCA) provided a set of review comments to the Macedon Gas Development Pipeline Rehabilitation Survey November 2017, in June 2018.

A rehabilitation monitoring survey was conducted by Biota Environmental Sciences between the 30th April and the 2nd of May 2019. Ten rehabilitated sites were assessed in historically disturbed areas, with seven of these also having an associated analogue site located in nearby undisturbed areas. The methodology used was that established by Astron Environmental services in 2010.

With regards to the criteria for the rehabilitation areas listed for Condition 8 of MS844:

1. Species diversity is not less than 60 per cent of the known original species diversity. This criterion has been met for species richness in the monitored transects, with the exception of rehabilitation transect BHPPD-29. However, it is likely that some of the transects situated towards the southern end of the Mt Minnie conservation area (e.g. BHPPD-29, BHPPD-30, BHPPD-31), did not receive adequate rainfall compared to transects situated closer to the Macedon gas plant where rainfall measurements are taken. In the absence of threatening factors such as weed invasion, the vegetation in these areas would be expected to continue to develop towards a more natural (i.e. pre-clearing) floristic community in the longer term.
2. Weed coverage is equal to or less than that of pre-cleared levels. The criterion for Condition 8 in MS844 has not been met for rehabilitation transects BHPPD-29 and BHPPD-30 in 2019 with regards to the introduced tussock grasses *Cenchrus ciliaris* (Buffel Grass) and *C. setiger* (Birdwood Grass).

However, when comparing the results for the entire study area from 2019 to those of 2017, *Cenchrus ciliaris* and *C. setiger* have decreased in both distribution and abundance (as measured by their percent cover along the line transect) across the monitored rehabilitation transects within the Mt Minnie conservation area. Provided that continued spraying of these species within the rehabilitated areas is undertaken over the course of the next few years, it would be expected that the cover of *Cenchrus* spp. will tend towards pre-clearing levels.

Due to the impact of COVID-19 resulting in restrictions on borders and personnel movements to site, and the requirement to undertake vegetation surveys after adequate rainfall, the 2020 Rehabilitation Survey was not conducted. Although personnel movements to site were relaxed in the latter part of 2020, the optimal timing for the survey had passed, as required appropriate rainfall conditions. However, weed spraying was able to take place and was conducted in October 2020. BHP is continuing to liaise with the DBCA (formerly DEC) regarding rehabilitation and weed monitoring. BHP will plan to conduct a rehabilitation survey in Q2 of 2021 after adequate rainfall.

Greenhouse Gas

Greenhouse Gas (GHG) Emissions and Intensity

Macedon Gas Project GHG emissions for the period 1 January 2020 to 31 December 2020 are illustrated in Figure 3 and detailed in Table 1.

Annual GHG emissions for the period 1 January 2020 to 31 December 2020 were 79,219 tonne equivalent of carbon dioxide (t CO₂-e); carbon emissions intensity for the period was 6.90 t CO₂-e per 1,000 barrels of oil equivalent production. Recorded emissions were similar to those recorded previously and lower than those provided in the Final Environmental Performance Standard (EPS) (85,000 t CO₂-e); variance between predicted and actual emissions is due to higher production rates used to estimate carbon emissions in the EPS when compared to current operations.

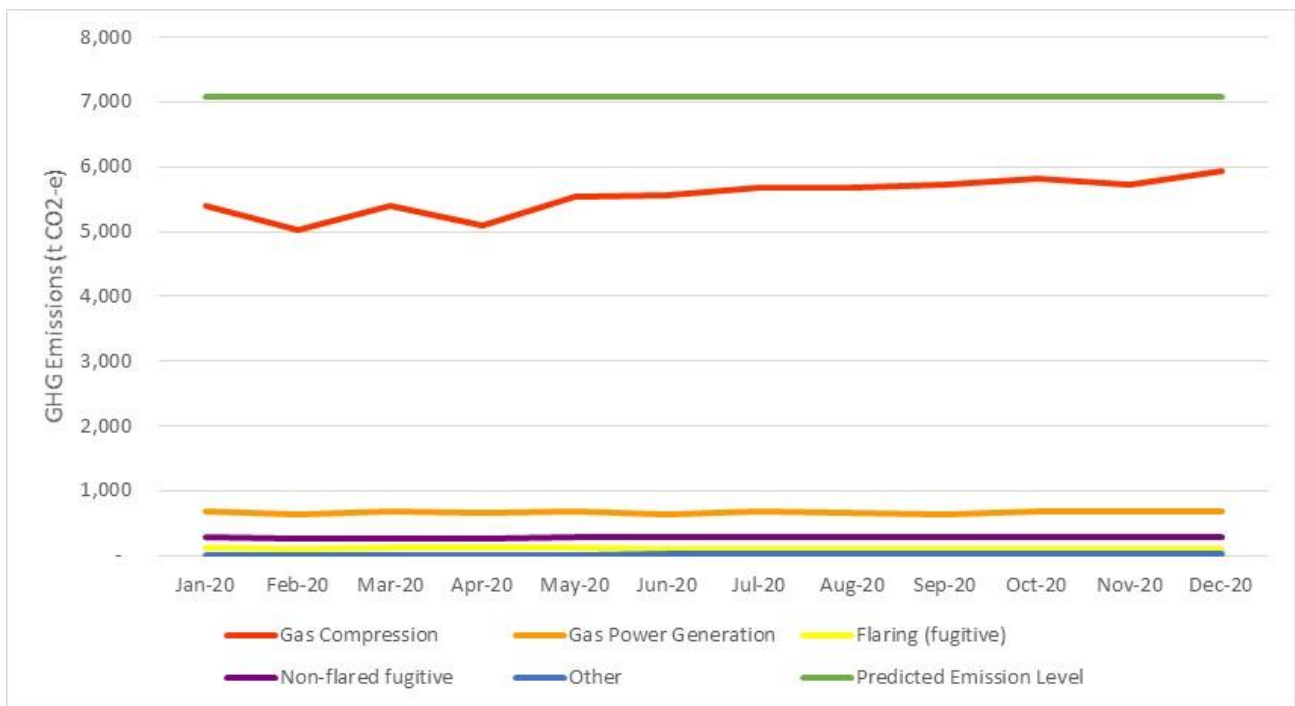


Figure 3: Macedon Gas Project GHG Emissions (1 January 2020 - 31 December 2020)

Table 1: Macedon Gas Project GHG Emissions (1 January 2020 - 31 December 2020)

Emission Source	Greenhouse Gas Emissions (t CO ₂ -e)												Total
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Gas Compression	5,386	5,027	5,395	5,100	5,540	5,552	5,666	5,670	5,725	5,818	5,719	5,925	66,524
Gas Power Generation	678	638	672	660	669	638	670	660	639	689	670	683	7,966
Flaring (fugitive)	107	101	108	110	114	98	99	99	98	99	95	98	1,227
Non-flared fugitive	272	260	268	259	281	283	286	284	281	283	279	286	3,322
Other	13	12	13	12	12	14	16	17	19	17	17	17	179
Total	6,456	6,038	6,457	6,141	6,617	6,585	6,737	6,730	6,762	6,907	6,781	7,010	79,219

GHG Reduction Measures Investigated

Details of improvements in equipment, technology or procedures were investigated prior to development of the Macedon Project in 2010 through an energy optimisation study. The aim of the study was to identify cost effective projects, which would reduce energy and greenhouse gas emission across all operations of the Macedon Gas Project and incorporate these into the design of the Macedon Gas Project.

BHP Petroleum continues to identify and evaluate GHG reduction opportunities through internal processes designed to implement greenhouse gas abatement opportunities.

GHG Reduction Measures Implemented

Several improvements in equipment, technology and procedures identified in the Macedon Gas Project energy optimisation study were implemented in design including:

- Low resistance internal pipeline coating;
- Waste heat recovery; and
- Equipment selection designed to minimise facility pressure drop.

Audit Table

Table 2: Audit Table

Audit Code	Subject	Action (from Ministerial Statement 844)	How	Evidence	Satisfy	Advice	Phase	When	Status	Further Information
844:M1.1	Implementation	The proponent shall implement the proposal as documented and described in schedule 1 of this statement subject to the conditions and procedures of this statement.	Project implemented in accordance with these criteria	Compliance Assessment Report (CAR)	Min for Env		Overall		C	2020 CAR (this document)
844:M2.1	Proponent Nomination and Contact Details	The proponent for the time being nominated by the Minister under sections 38(6) or 38(7) of the Act is responsible for the implementation of the proposal.			Min for Env		Overall		C	Proponent remains BHP Petroleum Pty Ltd
844:M2.2	Proponent Nomination and Contact Details	The proponent shall notify the CEO of any change of the name and address of the proponent for the serving of notices or other correspondence within 30 days of such change.	Letter notifying CEO of any change in proponent details	Letter notifying CEO of any change in proponent details	CEO		Overall	Within 30 days of such change	C	Updated January 2013 (letter dated 14.01.2013) No change since last notification
844:M3.1	Time Limit of Authorisation	The authorisation to implement the proposal provided for in this statement shall lapse and be void five years after the date of this statement if the proposal to which this statement relates is not substantially commenced.	Implement project		Min for Env		Overall	Commence implementation by 27 October 2015	CLD	Implementation commenced in 2011 OEPA Desktop Audit report 31.08.2012
844:M3.2	Time Limit of Authorisation	The proponent shall provide the CEO with written evidence which demonstrates that the proposal has substantially commenced on or before the expiration of five years from the date of this statement.	Letter notifying CEO that proposal has substantially commenced	Letter to the CEO demonstrating that the proposal has substantially commenced	CEO		Overall	Within one month of commencement	CLD	Letter sent to CEO dated 16.01.2012 OEPA Desktop Audit report 31.08.2012
844:M4.1	Compliance Reporting	The proponent shall prepare and maintain a compliance assessment plan (CAP) to the satisfaction of the CEO.	CAP will be developed prior to implementation and maintained	CAP	CEO		Overall	Prior to implementation and ongoing	C	OEPA accepted 18.03.2011 (CAP latest version dated 25.01.2021)
844:M4.2	Compliance Reporting	The proponent shall submit to the CEO the CAP required by condition 4-1 at least six months prior to the first compliance report required by condition 4-6, or prior to implementation, whichever is sooner. The CAP shall indicate: <ul style="list-style-type: none"> the frequency of compliance reporting; the approach and timing of compliance assessments; the retention of compliance assessments; the method of reporting of potential non-compliances and corrective actions taken; the table of contents of compliance assessment reports; and 	CAP will be developed prior to implementation and submitted to CEO	CAP	CEO		Pre-construction	CLD	At least six months prior to the first CAR required by Condition 4-6, or prior to implementation, whichever is sooner	OEPA accepted 18.03.2011

Audit Code	Subject	Action (from Ministerial Statement 844)	How	Evidence	Satisfy	Advice	Phase	When	Status	Further Information
		<ul style="list-style-type: none"> public availability of compliance assessment reports. 								
844:M4.3	Compliance Reporting	The proponent shall assess compliance with conditions in accordance with the CAP required by condition 4-1.	Prepare Compliance Assessment Report (CAR)	CAR	Min for Env		Overall	When requested by the CEO	C	2011 CAR, 2012 CAR, 2013 CAR, 2014 CAR, 2015 CAR, 2016 CAR, 2017 CAR; 2018 CAR, 2019 CAR, 2020 CAR (this document)
844:M4.4	Compliance Reporting	The proponent shall retain reports of all compliance assessments described in the CAP required by condition 4-1 and shall make those reports available when requested by the CEO.	CAR to include compliance assessments (audit table), retain CAR for the life of the project in electronic and hard copy format	CAR	CEO		Overall	Annual	C	2011 CAR, 2012 CAR, 2013 CAR, 2014 CAR, 2015 CAR, 2016 CAR, 2017 CAR; 2018 CAR, 2019 CAR; 2020 CAR (this document)
844:M4.5	Compliance Reporting	The proponent shall advise the CEO of any potential non-compliance within seven days of that non-compliance being known.	Advise CEO of potential non-compliance in writing	Log of phone call, email or letter	CEO		Overall	Within seven days of that non-compliance being known	C	No non-compliances
844:M4.6	Compliance Reporting	<p>The proponent shall submit to the CEO the first CAR fifteen months from the date of issue of this Statement addressing the twelve month period from the date of issue of this Statement and then annually from the date of submission of the first CAR.</p> <p>The CAR shall:</p> <ul style="list-style-type: none"> be endorsed by the proponent's Managing Director or a person delegated to sign on the Managing Director's behalf; include a statement as to whether the proponent has complied with the conditions; identify all potential non-compliances and describe corrective and preventative actions taken; be made publicly available in accordance with the approved CAP; and indicate any proposed changes to the CAP required by condition 4-1. 	<p>CAR will be issued</p> <p>Make CAR publicly available in accordance with 'Proposal Implementation Monitoring Branch – Draft Fact Sheet 1 – Making Documents Publicly Available – April 2010'</p>	CAR	CEO		Overall	Annually by 28 January each year with the first CAR due 28 January 2012	C	2011 CAR, 2012 CAR, 2013 CAR, 2014 CAR, 2015 CAR, 2016 CAR, 2017 CAR; 2018 CAR, 2019 CAR; 2020 CAR (this document)
844:M5.1	Non-Indigenous Marine Species	Prior to mobilisation of vessels and submersible equipment for the construction of the Macedon Gas Project marine pipeline and umbilical, the proponent shall update the Introduced Marine Pest Management Procedure contained in Appendix Q of the Final EPS to be consistent with the Commonwealth and State guidelines approved and published at that time, to the satisfaction of the CEO on advice from the Department of Fisheries.	Revise and obtain approval of Introduced Marine Pest Management Procedure (IMP MP)	IMP MP	CEO	DPIRD	Pre-construction	Prior to mobilisation of vessels and submersible equipment for the construction of the Macedon Gas Project marine pipeline and umbilical	CLD	Letter of Approval from CEO of EPA received 28.11.2011

Audit Code	Subject	Action (from Ministerial Statement 844)	How	Evidence	Satisfy	Advice	Phase	When	Status	Further Information
844:M5.2	Non-Indigenous Marine Species	The proponent shall implement the updated Introduced Marine Pest Management Procedure for the construction and maintenance of the Macedon Gas Project marine pipeline and umbilical.	Offshore pipelay and maintenance implemented in compliance with IMP MP	Inspection of IMP MP vessel risk assessments, certificates of vessel cleanliness	Min for Env		Overall	For the construction and maintenance of the Macedon Gas Project marine pipeline and umbilical	C	IMP MP implemented during construction phase Pipeline maintenance survey completed in accordance with IMP MP
844:M6.1	Marine Fauna	The proponent shall not cause physical damage to turtles, disrupt turtle nesting behaviour or cause a change to hatchling orientation in waters and/or beaches adjacent to the pipeline shore crossing during construction.	Implement Marine Turtle Impacts Management Protocol (MTI MP)	Implementation of MTI MP, Marine Fauna Observer logs	Min for Env		Construction	During construction	C	Shore crossing complete, no impacts to marine turtles recorded
844:M6.2	Marine Fauna	If the pipeline shore crossing is to take place between 1 November and 30 April the proponent shall prepare a MTI MP to the satisfaction of the CEO on advice from the DEC prior to undertaking the shore crossing. The protocol shall include: 1. employment of a suitably qualified marine fauna observer; 2. indicators for determining if and when there is potential for impacts on turtle nesting or hatchling emergence; 3. management responses to evidence of turtle activity; and 4. triggers for stopping construction activities pending further consultation with the DEC; and 5. when resumption of activities can take place, on advice of the DEC.	Prepare MTI MP	Approval of MTI MP	CEO	DBCA	Construction	Prior to undertaking the shore crossing, if the pipeline shore crossing is to take place between 1 November and 30 April	CLD	Letter of Approval from CEO of EPA received 31.10.2011
844:M6.3	Marine Fauna	The proponent shall implement the MTI MP if undertaking the pipeline shore crossing between 1 November and 30 April.	Implement MTI MP	Marine Fauna Observer logs	Min for Env		Construction	If undertaking the pipeline shore crossing location between 1 November and 30 April	CLD	Pipeline shore crossing complete. MTI MP implemented for shore crossing
844:M6.1 A	Pipeline Route – State waters	Subject to complying with the separation distances in condition 7-1, the pipeline within State waters shall be laid/constructed within the corridor delineated by the coordinates specified in Schedule 2.	Install pipeline in corridor delineated in Schedule 2	Pipelay vessel logs, as-built survey of route	Min for Env		Construction	During offshore pipeline construction	CLD	Pipeline installed within corridor
844:M7.1	Benthic Primary Producer Habitat	The proponent shall undertake all works in a manner that ensures that the loss of Benthic Primary Producer Habitat (BPPH) within the Local Assessment Area, as defined in Figure 3, does not exceed 1% for any habitat type and is minimised by maintaining the following separation distances during construction of the marine pipeline and umbilical :	Maintain separation distance during offshore pipelay as per Condition 7-1	Pipelay vessel logs, as-built survey of route, BPPH survey and loss calculations	Min for Env		Construction	During offshore pipeline construction	CLD	Letter of Approval from CEO of EPA received 23.09.2013

Audit Code	Subject	Action (from Ministerial Statement 844)	How	Evidence	Satisfy	Advice	Phase	When	Status	Further Information
		(1) pipeline to primary feature – 700 metres; (2) pipeline to secondary feature – 600 metres; (3) vessel movement/anchor to primary feature – 200 metres; and (4) vessel movement/anchor to secondary feature – 100 metres. Note: “loss” is loss that does not recover within 5 years, “primary feature” and “secondary feature” are as defined in Figure 18 of the Final EPS and not a feature for which proposed impacts are described in section 8.4.4.5 of the Final EPS.								
844:M7.2	Benthic Primary Producer Habitat	The proponent shall survey the direct loss of BPPH against the criteria in condition 7-1 starting within one month of completion of the marine pipeline and umbilical.	Survey and calculate loss of BPPH	Post construction as built survey of route, BPPH survey and loss calculations	Min for Env		Overall	Commencing within one month of completion of the marine pipeline and umbilical	CLD	Letter of Approval from CEO of EPA received 23.09.2013
844:M7.3	Benthic Primary Producer Habitat	Notwithstanding condition 7-1, if monitoring detects that construction activities have contributed to a loss of greater than 1% in any habitat type within the management unit, as defined in Figure 3, the proponent shall notify the CEO of the strategies to be implemented to enhance recovery and rehabilitate the impacted BPPH.	Develop strategies for recovery and rehabilitation of BPPH	Post construction as-built survey, strategies	CEO		Overall	If monitoring detects that construction activities have contributed to a loss greater than 1% in any habitat type within the management unit, as defined in Figure 3	C	No exceedance of loss >1% in any habitat type
844:M8.1	Terrestrial Vegetation	Within two months following completion of construction of the gas plant and associated pipelines, the proponent shall commence rehabilitation of the temporarily cleared areas of the site that are no longer being utilised to achieve re-establishment of vegetation, such that the following criteria are met across the distribution of the disturbance footprint within three years of commencement of rehabilitation: (1) Species diversity is not less than 60 percent of the known original species diversity; (2) Weed coverage is equal to or less than that of pre-cleared levels. Note: The original species diversity and weed coverage must be determined prior to clearing or from analogue sites approved by the CEO on advice from the DEC.	Undertake rehabilitation of temporarily cleared areas (gas plant and pipelines) as per Condition 8-1	Rehabilitation monitoring reports, rehabilitation completion criteria: - Species diversity greater than 60% of pre-disturbance - Weed coverage less than pre-disturbance levels	CEO	DBCA	Overall	Commence rehabilitation within two months following completion of construction of the gas plant and associated pipelines and meet criteria within three years of commencement of rehabilitation	C	Rehabilitation has been completed of temporary disturbed areas 2017 Rehabilitation Report concludes that rehabilitation criteria of Condition 8-1 have been achieved for species diversity. Criterion has been met with regards to two of the four weed species recorded 2019 Rehabilitation Report concludes that rehabilitation criteria of Condition 8-1 has been met with the exception of one transect. Refer to Rehabilitation

Audit Code	Subject	Action (from Ministerial Statement 844)	How	Evidence	Satisfy	Advice	Phase	When	Status	Further Information
										Monitoring section above.
844:M8.2	Terrestrial Vegetation	In liaison with the DEC, the proponent shall monitor progressively the performance of rehabilitation for a range of sites against the criteria in condition 8-1 based on appropriately timed surveys after rain, until the completion criteria are met. The surveys shall be conducted annually unless otherwise agreed by the CEO.	Monitor rehabilitation success against rehabilitation completion criteria, conduct surveys in accordance with Condition 8-2	Rehabilitation monitoring report, rehabilitation completion criteria: <ul style="list-style-type: none"> - Species diversity greater than 60% of pre-disturbance - Weed coverage equal to or less than pre-disturbance levels Correspondence with DPAW	CEO	DBCA	Overall	Appropriately timed after rain on an annual basis unless otherwise agreed by the CEO until the completion criteria are met	NC	<p>A 2020 rehabilitation survey was not able to be conducted due to the impact of COVID-19 resulting in restrictions on borders and personnel movements to site, and the requirement to undertake vegetation surveys after adequate rainfall. Although personnel movements to site were relaxed in the latter part of 2020, the optimal timing of the survey had passed (i.e. after adequate rainfall). However, annual weed spraying was able to be undertaken and was conducted in October 2020.</p> <p>BHP is continuing to liaise with the DBCA (formerly DEC) regarding rehabilitation and weed monitoring. BHP will plan to conduct a rehabilitation survey in Q2 of 2021 after adequate rainfall.</p>
844:M8.3	Terrestrial Vegetation	The proponent shall include a rehabilitation monitoring report in the CAR referred to in condition 4-6 commencing from the date rehabilitation was commenced. The report shall address in the report the following: 1. The progress made towards meeting the criteria required by condition 8-1; and 2. Contingency management measures in the event that the criteria required by condition 8-1 are unlikely to be met.	Submit rehabilitation monitoring report	Rehabilitation monitoring report, rehabilitation completion criteria: <ul style="list-style-type: none"> - Species diversity greater than 60% of pre-disturbance - Weed coverage equal to or less than pre-disturbance levels 	Min for Env		Overall	Commencing from the date rehabilitation was commenced and on an annual basis	NC	<p>A 2020 rehabilitation survey was not able to be conducted due to the impact of COVID-19 resulting in restrictions on borders and personnel movements to site, and the requirement to undertake vegetation surveys after adequate rainfall. Although personnel movements</p>

Audit Code	Subject	Action (from Ministerial Statement 844)	How	Evidence	Satisfy	Advice	Phase	When	Status	Further Information
										<p>to site were relaxed in the latter part of 2020, the optimal timing of the survey had passed (i.e. after adequate rainfall). However, annual weed spraying was able to be undertaken and was conducted in October 2020.</p> <p>BHP is continuing to liaise with the DBCA (formerly DEC) regarding rehabilitation and weed monitoring. BHP will plan to conduct a rehabilitation survey in Q2 of 2021 after adequate rainfall.</p>
844:M9.1	Terrestrial Fauna	The proponent shall prevent the death of fauna that becomes entrapped in the onshore pipeline trenches by employing a fauna clearing person or persons to remove trapped fauna from any open pipeline trench.	Fauna clearing person(s) to remove fauna from open pipeline trench	Employment of fauna clearing person(s), daily logs	Min for Env		Construction	Until all trenching is completed and no open pipeline trenches remain	CLD	Trenching complete
844:M9.2	Terrestrial Fauna	The length of open trenches shall not exceed a length capable of being inspected and cleared by a fauna clearing person within the time frame specified in condition 9-4.	Clear open trench within identified timeframes specified in Condition 9-4	Employment of fauna clearing person(s), daily logs	Min for Env		Construction	Until all trenching is completed and no open pipeline trenches remain	CLD	Trenching complete
844:M9.3	Terrestrial Fauna	Fauna refuges providing suitable shelter from the sun and predators for trapped fauna shall be placed in the trench at intervals not exceeding 50 metres.	Fauna refuges installed in open trench at intervals < 50m	Daily logs	Min for Env		Construction	Until all trenching is completed and no open pipeline trenches remain	CLD	Trenching complete
844:M9.4	Terrestrial Fauna	Inspection and clearing of fauna from trenches by a fauna clearing person shall occur twice daily and not more than half an hour prior to the backfilling of trenches, with the first daily inspection and clearing to be undertaken no later than 3.5 hours after sunrise, and the second inspection and clearing to be undertaken daily between the hours of 3:00 pm and 6:00 pm.	Clear open trench within identified timeframes	Employment of fauna clearing person(s), daily logs	Min for Env		Construction	Twice daily and not more than half an hour prior to the backfilling of trenches, with the first daily inspection and clearing to be undertaken no later than 3.5 hours after sunrise, and the second inspection and clearing to be undertaken daily between the hours of	CLD	Trenching complete

Audit Code	Subject	Action (from Ministerial Statement 844)	How	Evidence	Satisfy	Advice	Phase	When	Status	Further Information
								3:00 pm and 6:00 pm		
844:M9.5	Terrestrial Fauna	In the event of rainfall, the proponent shall, following the clearing of fauna from the trench, pump out significant pooled water in the open trench (with the exception of groundwater) and discharge it to adjacent vegetated areas in a manner that does not cause erosion.	Pump out significant pooled water in open trench	Daily logs	Min for Env		Construction	In the event of rainfall, following the clearing of fauna from the trench	CLD	Trenching complete. No loss of fauna during pipeline construction. Small losses due to groundwater flooding in trenches.
844:M10.1	Emissions to Air	The proponent shall install equipment and manage ongoing operations such that best practice for a petroleum gas/condensate facility in respect to volatile organic compounds and oxides of nitrogen emissions is achieved.	Install equipment as detailed in Air Emissions Best Practice Report (AEBPR) and manage ongoing operations	Approved AEBPR, CAR	Min for Env		Overall	Construction and ongoing operations	C	Equipment identified in AEBPR installed and operated. Emission testing demonstrates effective management of VOC and NOx
844:M10.2	Emissions to Air	The proponent shall provide reports showing the basis on which 'best practice' was determined, to the satisfaction of the CEO, as follows: 1. for plant and equipment – prior to applying for a Works Approval under Part V of the Act; and 2. for ongoing management of operations – prior to applying for a Licence under Part V of the Act.	Prepare AEBPR for selection of equipment and ongoing management of operations	Approved AEBPR, CAR	CEO		Overall	Prior to applying for a Works Approval (for plant and equipment) and prior to applying for a Part V licence (for ongoing management of operations)	CLD	Approval of AEBPR received from CEO of EPA in letter dated 07.07.2011
844:M11.1	Greenhouse Gas Abatement	For the life of the project, the proponent shall include in the CARs referred to in Condition 4-6 the following: 1. annual greenhouse gas (GHG) emissions and intensity resulting from the operation of the project in comparison to the annual emissions predicted in the Final EPS and reasons for any variance; 2. details of improvements in equipment, technology or procedures investigated by the proponent that would reduce greenhouse gas emissions; and 3. details of improvements in equipment, technology or procedures implemented by the proponent that will reduce greenhouse gas emissions.	CAR to include GHG emissions and intensity (including comparison to annual emissions predicted in the Final EPS and reasons for any variance) and proposed and implemented GHG reduction methods	CAR	Min for Env		Operation	For the life of the project	C	2018 CAR; 2019 CAR; 2020 CAR (this document, see Section above on GHG)
844:M12.1	Decommissioning	At least six months prior to the anticipated date of closure, the proponent shall submit a Final Decommissioning Plan designed to ensure that the site is suitable for future land uses, for approval of the CEO. The Final Decommissioning Plan shall set out procedures and measures for:	Submit Final Decommissioning Plan	Approval of Final Decommissioning Plan	CEO		Operation	At least six months prior to the anticipated date of closure	NR	

Audit Code	Subject	Action (from Ministerial Statement 844)	How	Evidence	Satisfy	Advice	Phase	When	Status	Further Information
		1. removal or, if appropriate, retention of plant and infrastructure; and 2. remediation or rehabilitation of all disturbed areas to a standard suitable for the agreed new land use(s).								
844:M12.2	Decommissioning	The proponent shall implement the Final Decommissioning Plan required by condition 12-1 from the date of closure until such time as the Minister determines, on advice of the CEO, that the proponent's decommissioning responsibilities have been fulfilled.	Implement Final Decommissioning Plan	Decommissioning and rehabilitation monitoring reports	Min for Env	CEO	Decommissioning	From the date of closure until such time as the Minister determines, on advice of the CEO, the proponent's decommissioning responsibilities have been fulfilled	NR	
844:M12.3	Decommissioning	The proponent shall make the Final Decommissioning Plan required by condition 12-1 publicly available in a manner approved by the CEO.	Make Final Decommissioning Plan publicly available	Final Decommissioning Plan available as directed by CEO	CEO		Overall	Within two weeks of receiving approval for the final Decommissioning Plan	NR	

Note:

- Phases that apply in this table = Pre-construction, Construction, Operation, Decommissioning, Overall (several phases)
- This audit table is a summary and timetable of conditions and commitments applying to this project. Refer to the Minister's Statement for full detail/precise wording of individual elements
- Code prefixes: M = Minister's condition; P = Proponent's commitment; A = Audit specification; N = Procedure
- Any elements with status = "Audited by proponent only" are legally binding but are not required to be addressed specifically in compliance reports, if complied with
- Acronyms list: - Min for Env = Minister for the Environment; CEO = Chief Executive Officer of OEPA; OEPA = Office of the Environmental Protection Authority; EPA = Environmental Protection Authority; DBCA = Department of Biodiversity, Conservation and Attractions (formerly Department of Environment and Conservation DEC); DMIRS = Department of Mines, Industry Regulation and Safety (formerly Department of Mines and Petroleum (DMP)); DoH = Department of Health; DPIRD = Department of Primary Industries and Regional Development (formerly Department of Fisheries (DoF))
- Status: C – Compliant (implementation of the proposal has been carried out in accordance with the requirements of the audit element); CLD – completed (A requirement with a finite period of application has been satisfactorily completed); NR – Not required at this stage.
- Abbreviations: MTIMP - Marine Turtle Impact Management Plan; IMP MP - Introduced Marine Pest Management Plan; AEBPR - Air Emissions Best Practice Report; GHG - Greenhouse Gas.

Non-compliance and Corrective/Preventative Actions

Non-Compliance

During the period covered by this CAR (1 January 2020 to 31 December 2020), there were non-compliances with conditions 8.2 and 8.3 with regard to failing to undertake an annual (2020) rehabilitation and weed survey monitoring event.

As presented in above Section '*Rehabilitation Monitoring*', due to the impact of COVID-19 resulting in restrictions on borders and personnel movements to site, and the requirement to undertake vegetation surveys after adequate rainfall, the 2020 Rehabilitation Survey was not conducted. Although personnel movements to site were relaxed in the latter part of 2020, the optimal timing for the survey had passed, as required appropriate rainfall conditions. Weed spraying was able to take place and was conducted in October 2020.

Corrective/Preventative Actions

The impact of COVID-19 and the resulting restrictions enforced by State and Federal Government could not have been predicted and as such, no preventative actions have been identified.

BHP is continuing to liaise with the DBCA (formerly DEC) regarding rehabilitation and weed monitoring. BHP will plan to conduct a rehabilitation survey in Q2 of 2021 after adequate rainfall, and will continue to undertake surveys annually until criteria of ministerial conditions have been met.

Changes to the Compliance Assessment Plan

The following changes have been incorporated into the Compliance Assessment Plan:

1. Change key contacts to: Barry Vardy – Field Manager; and
Dr Samantha Vize – Principal Environment.

References

BHP Billiton Petroleum 2010, Macedon Gas Project Environmental Protection Statement, July 2010 – Final. BHP Billiton Petroleum, Perth.

BHP Billiton Petroleum Macedon Gas Project – Compliance Assessment Plan, (PMA-BHP-EN-EIA-0002).

Department of Parks and Wildlife 2013, *Weed Prioritisation Process for DPaW (formerly DEC) – “An Integrated Approach to Weed Management on DPaW-Managed Lands in WA”*, Government of Western Australia, Perth.

Australian Weeds Committee 2012, *Weeds of National Significance 2012*, Department of Agriculture, Fisheries and Forestry, Canberra.