

BMG Closure Project Annual Progress Report 2022

BMG Closure | Projects & Operations | Regulatory Report

Purpose and Scope

The purpose of this report is to provide an update on the Basker Manta Gummy (BMG) Closure (Decommissioning) Project, including planning and progress towards meeting the actions required by General Direction 824.

Related Content

BMG Closure Project (Phase 1) EP	https://info.nopsema.gov.au/environment_plans/569/show_public
BMG Closure Project (Phase 2) EP*	https://info.nopsema.gov.au/environment_plans/593/show_public
BMG Petroleum Safety Zone	https://www.nopsema.gov.au/sites/default/files/2021-03/A443819.pdf
Gippsland Operations EP	https://info.nopsema.gov.au/offshore_projects/10/show_public
General Direction 824	https://www.nopsema.gov.au/sites/default/files/2021-09/A800345.pdf

*Under Assessment

Titleholder Contact Details

Details of Titleholder and Liaison Person

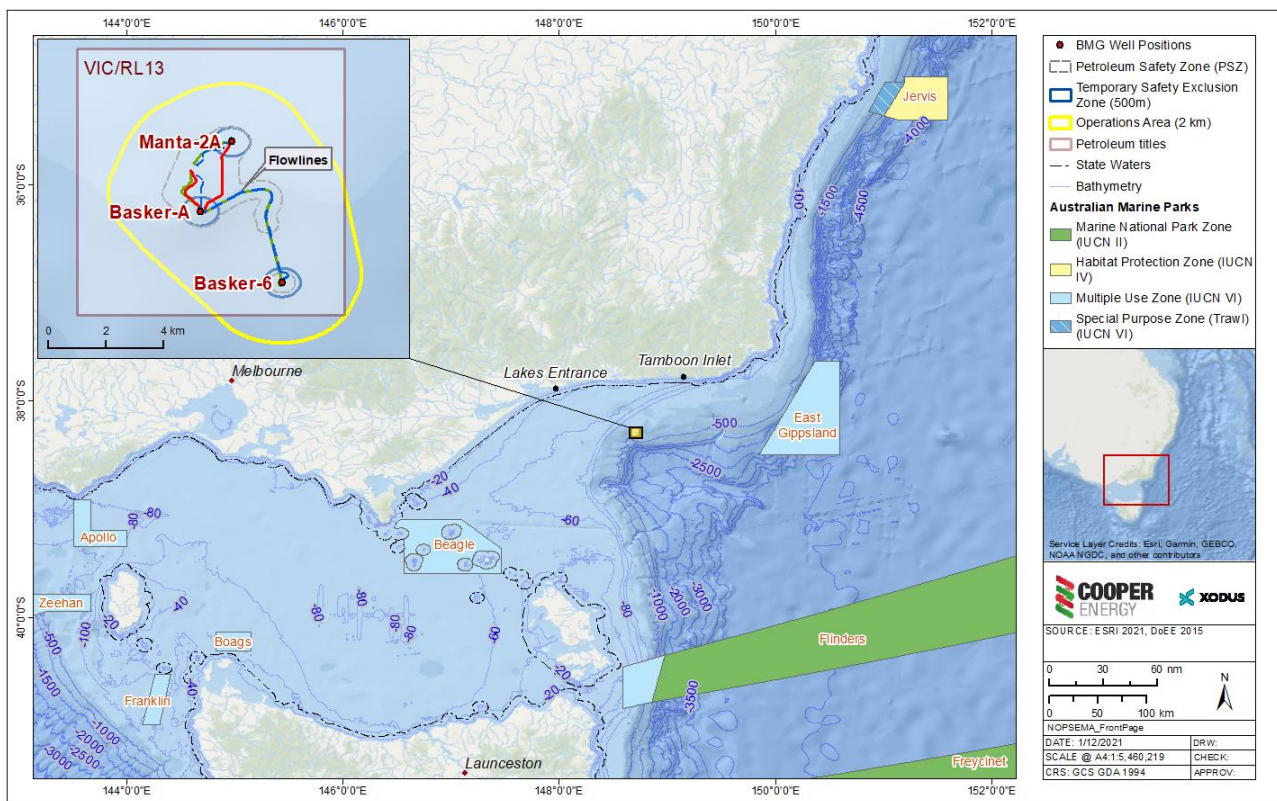
Titleholder	Titleholder Details	Liaison Person
Name: Cooper Energy Limited ABN: 93 096 170 295 Lease: VIC/RL13	Address: Level 8, 70 Franklin Street, Adelaide, 5000 Telephone Number: (08) 8100 4900	Mike Jacobsen General Manager Projects and Operations Cooper Energy Limited Level 15, 123 St Georges Tce, Brookfield Place Tower 2, Perth, WA, 6000 Phone: (08) 8100 4900 Email: mike.jacobsen@cooperenergy.com.au and Stakeholder@cooperenergy.com.au

BMG Development Description

Cooper Energy Limited (Cooper Energy) is the titleholder (100%) of Petroleum Retention Lease VIC/RL13 in the Gippsland Basin. The BMG facilities are entirely within VIC/RL13 in Commonwealth waters, approximately 50 km from Cape Conran off the Victorian coast (Figure 1). The BMG facilities lie in water depths of circa 135 m – 270 m and comprise:

- 5 subsea wells and Basker-A Manifold (BAM) at the Basker-A Drill Centre
- 2 satellite wells; Manta 2A and Basker-6
- interconnecting flowlines and umbilicals
- ancillary structures including pipeline end manifold and umbilical termination units
- stabilisation materials including concrete mattresses and grout bags

Figure 1 – BMG Facility Location



BMG Development History

VIC/RL13 and the BMG subsea facilities were acquired by Cooper Energy from the previous Joint Venture Partner (JVP) in 2014. The BMG facilities were then in the non-production phase and had been partially deconstructed. A summary of the BMG development history is provided in Table 1.

Table 1 - BMG Field Development Phases

Development Phase		Timing	Activities
Production Phase	Extended Production Test	2005–2006	Basker-2 oil production well with associated gas flared.
	Full Field Development	2006–2008	Basker-2, 3, 4, 5 and Manta-2A oil production wells with gas-lift and gas re-injection. Production via the Crystal Ocean Floating Storage Production Offloading Vessel (FPSO) and the Basker Spirit oftake Tanker.

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Development Phase		Timing	Activities
	Oil Development Phase 2	2008–2010	Basker-6 (ST1) oil production well and tie back to the Basker Manifold (BAM). Work-over of Basker-3 and Basker-5. Drilling and completion of Basker-7 well and tie back to the BAM at the Basker-A Drill Centre.
	Flare Gas Compressor Project	2010	Re-injection of flare gas: installation of one, two stage screw compressor to the FPSO process module, starboard side.
Cessation Phase and partial deconstruction		2011-2012	Production stopped. Facilities are shut in. Vessels are removed. Moorings and midwater equipment are decommissioned and removed.
Non-Production Phase (NPP)		2012–present	Cooper Energy took ownership in 2014. Routine offshore inspections.
Well decommissioning planned		2017/18	Well decommissioning planned and rig mobilised for the scope. Project recycled following regulator assessment (and non-acceptance) of well operations management plan (WOMP).
Decommissioning		Circa 2023 to 2026	Per Section 572 of the <i>OPGGs Act</i> , the base case for decommissioning the BMG facilities is to remove all infrastructure *, in phases: <ul style="list-style-type: none"> • Phase 1: permanently seal (plug and abandon (P&A)) the wells and remove well equipment. • Phase 2: remove remaining equipment. Project milestones and progress is described below. <i>*The sub-seabed components of the wells and Basker-A Manifold Pile will remain in place, as described in project Environment Plans (see related content).</i>
Future appraisal and development Phase		From 2023	Appraisal and development of Manta gas reserves in accordance with title activity plans and conditions.

BMG Closure Project Planning and Progress

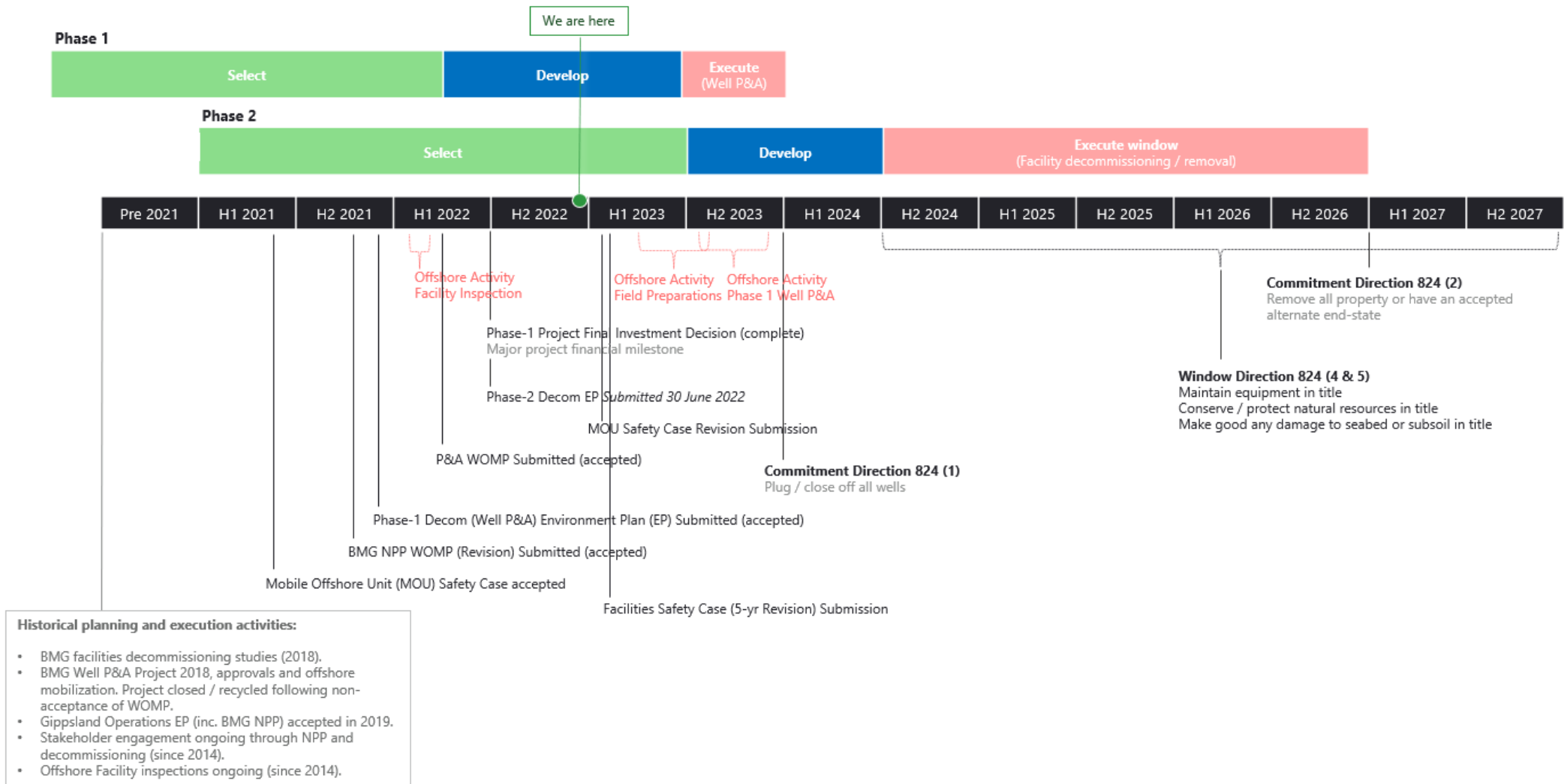
Figure 2 shows the indicative timeline of milestones and directions for the BMG Closure Project. The schedule shows current and future phases: Select, Develop and Execute. This phased approach ensures activities are planned and conducted in a consistent and repeatable manner with appropriate controls in place to manage all aspects of design, operations and closeout including safety, environment, risk, and change.

Table 2 identifies key work plan items as they align to the requirements of under General Direction 824. For each work plan item there is a summary of progress during the previous 12-months. A look-ahead for the next 12-months is also provided.

Cooper Energy in on track to meet the timeframes specified in General Direction 824.

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Figure 2 - Indicative Timeline: BMG Closure Project Milestones and Directions



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Table 2 - Project Progress and Look-ahead

Direction	Schedule 1 – Directions	Key Work Plan Items	Lookback on Actions for previous 12-months	Progress	Lookahead next 12-months
1	Plug or close off, to the satisfaction of NOPSEMA, all wells made in the title area by any person engaged or concerned in operations authorised by the title as soon as practicable and no later than 31 December 2023.	Well Operations Management Plan for Well Abandonment	<ul style="list-style-type: none"> Continue technology studies including BMG barrier and technology methods for P&A and integrate findings into well abandonment program including technology trials / system integrity testing. Continue engineering studies including Global Riser Analysis. Submit WOMP for Acceptance / approval. 	<ul style="list-style-type: none"> Studies have progressed enabling preparation of the well operations management plan (WOMP) for well abandonment. WOMP submitted / accepted during 2022. This WOMP covers the period the Non-Production Phase (NPP), the Well Abandonment Planning and Well Plug and Abandonment Operations (P&A) Phase. 	<ul style="list-style-type: none"> Complete writing Task Based Procedures. Complete reviews of methodologies to reduce project risk, improve safety.
		Safety Cases	<ul style="list-style-type: none"> Revise BMG Facility Safety Case to provide for decommissioning operations. Prepare MOU Safety Case Revision. <p><i>Note: In 2020/2021 Cooper Energy funded and supported the development of the preferred mobile offshore unit (MOU) Safety Case for Australian waters. The Safety case was accepted in 2021.</i></p>	<ul style="list-style-type: none"> Cooper Energy has commenced drafting the five-yearly revision to the BMG Facility Safety Case. Note – the current safety case provides for decommissioning of the facility. Cooper Energy and Helix (MOU operator) have commenced drafting the MOU Safety Case Revision document for the planned BMG work scope. 	<ul style="list-style-type: none"> Finalise five-yearly revision to the BMG Facility Safety Case for submission Q1 2023. Finalise BMG MOU Safety Case Revision for submission Q1 2023. Safety Case acceptance is required prior to well P&A.
		Major Contracts	<ul style="list-style-type: none"> The Develop phase triggers financial commitments and procurement of long lead items, downhole consumables and equipment, and award of major contracts. 	<ul style="list-style-type: none"> Financial commitment made to MOU. Industry service partners engaged. Multiple Major Service Agreements in place with all primary and 	<ul style="list-style-type: none"> Monitor long lead equipment orders and services to ensure deliveries remain on schedule. Execute remaining services contracts. Campaign contract management.

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Direction	Schedule 1 – Directions	Key Work Plan Items	Lookback on Actions for previous 12-months	Progress	Lookahead next 12-months
				secondaryservice providers. <ul style="list-style-type: none"> Long lead equipment orders and services secured. 	
		Phase 1 Environment Plan (EP)	<ul style="list-style-type: none"> Progress EP and associated plans through assessment with NOPSEMA. Continue engagement with project stakeholders including updates on activity timing. 	<ul style="list-style-type: none"> Phase 1 EP and OPEP accepted by NOPSEMA in April 2022. Continued engagement with project stakeholders. 	<ul style="list-style-type: none"> Implement Phase 1 EP and ensure preparedness in line with OPEP. Continue engagement with stakeholders including updates on activity timing.
		Execute offshore well P&A program	N/a – execution planned for 2023	N/a – execution planned for 2023	<ul style="list-style-type: none"> P&A wells by 31 December 2023. A schedule of the works is provided at the end of this report.
2	Remove, or cause to be removed, to the satisfaction of NOPSEMA, from the title area all property brought into that area by any person engaged or concerned in the operations authorised by the title as soon as practicable and no later than 31 December 2026.	Phase 2	<ul style="list-style-type: none"> Finalise comparative assessment studies. Continue stakeholder engagement. Preparation and submission of the Phase 2 EP during 2022 for assessment to provide for the decommissioning of remaining property referred to under Direction 2. Submission of Phase 2 EP by 30 June 2022. 	<ul style="list-style-type: none"> Completed studies and comparative assessment to support decommissioning planning and to assess and compare base case removal with alternate options.* Developed and submitted Phase 2 EP. The EP provides for full removal of facilities, and describes the activities associated with the leaving in situ sub-seabed section of the Basker Manifold Pile. Commenced preparation of Sea Dumping permit for the sub-seabed section of the Basker Manifold Pile. 	<ul style="list-style-type: none"> Progress Phase 2 EP through assessment phase. Progress sea dumping permit application for the Basker Manifold Pile. Continue stakeholder engagement.
3	Until such time as direction 1 and 2 are complete, maintain all property on the title to 'NOPSEMA's satisfaction, to	Implement the BMG Offshore Facilities Integrity	<ul style="list-style-type: none"> Continue facility integrity reviews and upkeep of KPI's in accordance with IMP. 	<ul style="list-style-type: none"> Ongoing through NPP. Works completed include facility integrity reviews and 	<ul style="list-style-type: none"> Continue facility integrity reviews and upkeep of KPI records in accordance with IMP.

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Direction	Schedule 1 – Directions	Key Work Plan Items	Lookback on Actions for previous 12-months	Progress	Lookahead next 12-months
	ensure removal of property is not precluded.	Management Plan (IMP)	<ul style="list-style-type: none"> Next facility inspection planned for H1 2022. 	<p>maintenance of KPI records.</p> <ul style="list-style-type: none"> Completed external visual inspection at wells H1 2022. No additional well integrity anomalies recorded. Previously recorded B2 bubble not observed during inspection. 	
		Implement the BMG Well Operations Management Plan	<ul style="list-style-type: none"> Continue annual risk assessments and management of wells in line with the WOMP. 	<ul style="list-style-type: none"> Ongoing. Works complete include well integrity reviews. The non-production phase WOMP was resubmitted to NOPSEMA and accepted covering a 5-year term. 	<ul style="list-style-type: none"> Continue annual risk assessments and management of wells in line with the WOMP.
		Implement the Gippsland Operations EP	<ul style="list-style-type: none"> Management of offshore inspection in line with regulatory plans. Continued stakeholder engagement in line with the Gippsland Operations EP. 	<ul style="list-style-type: none"> Ongoing through NPP. Works complete include stakeholder engagement on activities described under that plan. 	<ul style="list-style-type: none"> Management of offshore inspection in line with regulatory plans. Continued stakeholder engagement.
		Implement the BMG Offshore Facility Safety Case	<ul style="list-style-type: none"> Prepare and resubmit facility safety case for the next activity term (5-years). Continued works in line with the safety case. 	<ul style="list-style-type: none"> Cooper Energy has commenced drafting the five-yearly revision to the BMG Facility Safety Case Ongoing through NPP. Works complete include regular facility risk register reviews, stakeholder engagement and facility inspections. 	<ul style="list-style-type: none"> Finalise five-yearly revision to the BMG Facility Safety Case for submission Q1 2023. Continued works in line with the safety case.
4	Provide, to the satisfaction of NOPSEMA, for the conservation and protection of the natural resources in the title area within 12 months after	Phase 2 EP preparation and associated studies	<ul style="list-style-type: none"> Preparation of Phase 2 EP in 2022 with provision for the protection of 	<ul style="list-style-type: none"> Completed studies and comparative assessment to support decommissioning planning and to assess and 	<ul style="list-style-type: none"> Progress Phase 2 EP through assessment phase.

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Direction	Schedule 1 – Directions	Key Work Plan Items	Lookback on Actions for previous 12-months	Progress	Lookahead next 12-months
	property referred to in direction 2 is removed.		natural resources in the title area post decommissioning.	compare base case removal with alternate options.*	<ul style="list-style-type: none"> Progress sea dumping permit application for the Basker Manifold Pile.
5	Make good, to the satisfaction of NOPSEMA, any damage to the seabed or subsoil in the title area caused by any person engaged or concerned in those operations within 12 months after property referred to in direction 2 is removed.		<ul style="list-style-type: none"> Submission of Phase 2 EP by 30 June 2022. Note, Cooper Energy plans to retain VIC/RL13 to appraise the Manta gas field. 	<ul style="list-style-type: none"> Completed development and submission of Phase 2 EP. The EP provides for full removal of facilities, and describes the activities associated with the leaving in situ sub-seabed section of the Basker Manifold Pile. Commenced preparation of Sea Dumping permit for the sub-seabed section of the Basker Manifold Pile. 	<ul style="list-style-type: none"> Continue stakeholder engagement. <p>Note, Cooper Energy plans to retain VIC/RL13 to appraise the Manta gas field.</p>
6	Annual progress reporting until all directions have been met.	Annual Progress Report	<ul style="list-style-type: none"> Prepare and submit 2022 Annual Report by 31 December 2022. 	<ul style="list-style-type: none"> Annual Report prepared and submitted to NOPSEMA in December 2022 	<ul style="list-style-type: none"> Prepare and submit 2023 Annual Report by 31 December 2023.

*A UKCS style comparative assessment was used to evaluate and compare the predicted HSEC outcomes of the base case (full removal) of the BMG flowlines and umbilicals with various leave in situ cases. This was undertaken to understand if leave in situ cases may provide equal or better HSEC outcomes for this particular site and facility. The assessment recommended full removal of flowlines and umbilicals from BMG; this recommendation is reflected within the BMG closure project environment plans. Multiple studies informed the comparative assessment result. These studies have also been utilised to inform the BMG closure project environment plans and include:

- BMG habitat study with the Australian Institute of Marine Science and Deakin University
- Fisheries study with the South East Trawl Fishery Industry Association and Fishwell Consulting
- Materials degradation studies (consultancy)
- Flowline and umbilical decommissioning options environmental outcomes assessment (consultancy)
- Flowline and umbilical decommissioning (alternate) options screening study (consultancy)

The BMG habitat study has also been integrated into the National Decommissioning Research Initiative Project #1 Habitat value of oil and gas infrastructure for fishery target species; the results of this project are available at: <https://ndriaustralia.org/research/research-project-1>.

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Figure 3 - Project Schedule (Offshore Works)

