Question	Response
What is involved in the pipeline installation and how long will it take to complete?	The pipeline will be constructed from carbon steel and have an external anti-corrosion coating, concrete weight coating and anodes to maintain integrity. It will be laid using a continuous assembly pipe-welding installation method with sections of pipe gradually lowered to the seabed behind the pipelay vessel using an S-lay method. This method is commonly used in offshore pipeline installation in comparable water depths. The use of dynamically positioned pipelay and support vessels will eliminate the need for anchoring during routine installation operations. The primary method of maintaining pipeline stability on the seabed, where required, will be through the concrete weight-coating. Several seabed intervention methods could be used to manage spans and stability where concrete weight-coating alone is not sufficient. These methods could include concrete mattresses, sand/grout bags, local modification to the seabed, steel structures, rock bolting and gravity anchors. Activities associated with the installation of the pipeline are expected to commence as early as Q1 2021 and finish as late as Q1 2024. It is anticipated that the pre-lay survey could commence up to nine months earlier than pipeline installation, and pre-lay span rectification may occur up to 30 days prior to pipeline installation. The total infield duration of the offshore installation activities is expected to be approximately nine months. The schedule is indicative only; exact timing and duration of the installation activities is subject to pipelay vessel availability, sea state, weather conditions and operational efficiencies. (i.e. the pipelay vessel will be present for approximately three months). Installation activities will occur within a 2km corridor either side of the gas export pipeline (3km around the pipeline end termination points at both ends of the pipeline). During installation activities, a 500m safety exclusion zone will be established around the pipelay vessel. There will be no ongoing exclusion zones established around the pipeline during operations.
What environmental impacts are possible and how will these be managed?	It is highly unlikely that the presence of the project will result in significant changes in habitat usage by marine species or to the physical environment. Within the pipeline corridor, potential impacts associated with the installation are expected to be short term and localised (within hundreds of metres) with impacts to the wider marine environment considered highly unlikely. Over the longer term, impacts over the operating life of the pipeline are expected to be minimal. The pipeline route has been refined to avoid areas of significant seabed features as much as practicable, and avoid uneven seabed features wherever possible. The benthic habitat in the vicinity of the pipeline route is widely represented in the region and predominantly supports burrowers/crinoids, filter feeders and macroalgae. **The following potential environmental impacts were assessed in the Barossa Offshore Project Proposal (OPP) and are being further examined during the development of the Gas Export Pipeline Installation Environment Plan (EP).**

	Fauna Impacts to fauna such as marine turtles, cetaceans and fishes are expected to primarily be short-term displacement from the immediate vicinity of the pipeline during installation. Baseline environmental assessment has confirmed that marine mammals (cetaceans) are generally widely distributed and highly mobile in the region. Both sei and fin whales have a wide distribution throughout offshore waters and therefore may pass through the project area in low numbers. No aggregation areas or migration pathways for cetaceans occur within or in the vicinity of the proposed pipeline route. The crested tern is widespread and numerous along the NT coastline, with 20 breeding colonies reported. The colony on Seagull Island, 4km north-west of Melville Island, supports over 50,000 birds and is considered globally significant. Significant numbers of olive ridley and flatback turtles are also known to nest on the beaches of Seagull Island and on the west coast of Melville Island. A 'biologically important area' (BIA) for olive ridley turtles has been defined adjacent to this area, and the pipeline installation activities will not encroach this area. A larger area has been defined as a BIA for flatback turtles as well as 'habitat critical to the survival of flatback and olive ridley turtles'. Whilst pipeline installation activities will traverse a small part of these areas, installation activities are considered highly unlikely to impact the species use of the area as low numbers of turtles are expected in the vicinity of the pipeline due to the water depths. During the installation period, the pipelay vessel will continuously traverse along the pipeline alignment (i.e. not a stationary vessel), therefore the small area of light spill will not impact any one location for an extended duration and is not expected to have any impacts additional to existing vessel traffic traversing the area. Therefore, light emissions from the pipelay installation vessels are not anticipated to impact the breeding population of crested terns or turtles. Underwater sound generated by installation activities may affect individuals passing through the area, however impacts at a population level are considered unlikely given the area affected is highly localised. The key noise sources associated with installation activities along the pipeline will also be relatively slow moving (approximately 3 km–5 km of the pipeline will be laid per day), thereby allowing individuals to move away from the area, and reasonably short in duration. The risk of vessel strike to marine fauna is inherent to movements of all vessel types, including recreational vessels, fishing vessels, passenger ships, whale-watching boats, container ships and naval ships. Impacts from the presence of offshore infrastructure and related vessels interacting with marine fauna are not considered to present a significant risk at a population level.

	Key controls to minimise impacts from the physical presence of offshore infrastructure and project related vessels interacting with marine fauna include: • Placement of pipeline infrastructure in areas where there are no regionally significant feeding, breeding or aggregation areas for marine mammals • Limiting the physical footprint of the pipeline area such that displacement of individual mammals is unlikely, and the likelihood of a collision is remote • Vessels travelling at relatively low speeds within operational areas • Project vessels proactively responding to potential fauna interactions in line with the requirements of the EPBC Regulation s2000 – Part 8 Division 8.1 **Water Quality** During the installation campaign project vessels will routinely discharge small volumes of treated sewage, cooling water, putrescible waste, reverse osmosis brine, bilge and deck water. Any potential impacts are expected to be highly localised and temporary and is not expected to impact environmental values/sensitivities. Given the typically small volumes and temporary (i.e. instantaneous) duration of accidental discharge events, impacts to water quality would be temporary and highly localised. Subsequently, there would be limited potential for toxicity to marine fauna due to temporary exposure and low toxicity as a result of rapid dilution. Therefore, any potential impacts to marine fauna would be limited to any individuals that may be transiting within the immediate area of the discharge (within tens to several hundred metres). After completion of installation, the pipeline will be flooded, cleaned and gauged tested (FCGT) with chemically-treated seawater (typically a mixture of biocides to prevent biofouling on the internal surfaces, an oxygen scavenger to control corrosion of the pipeline and a dye to allow for leaks to be detected during visual inspections). Approximately 16,000 m^3 of treated seawater will be discharged over a 1-2-day period during cleaning, with discharges occurring at either end of the pipeline and at the seabed or the surface. The pipeline will then be left filled with treated seawater before being dewatered and conditioned with mono ethylene glycol (MEG) (to prevent hydrate or moisture formation) and nitrogen purged (to displace moisture and oxygen within the pipeline). Approximately 85,000 m^3 of treated seawater will be discharged over 3-7 days during dewatering, with approximately 1,000 m^3 MEG being discharged over a period of less than one day. Discharge of the dewatering fluid will only occur at the seabed through a vertically orientated diffuser at the northern end of the pipeline located in the Barossa field, which is approximately 150 km from the Tiwi Islands in ~250 m water depth. This area is also distant from known fishing activities.

	Following cleaning, the pipeline will be pressure tested (hydrotested) to confirm pipeline integrity. Approximately 2,000 m^3 of treated seawater will be discharged over a half day period during hydrotesting, with discharges occurring at the seabed or the surface at either end of the pipeline. Impacts from treated seawater arise mainly from the addition of biocides, corrosion inhibitors, scale inhibitors and oxygen scavengers. Given the short duration of discharges and low volumes/toxicities of chemicals used for FCGT and hydrotesting, and that biocides are readily biodegradable and do not bioaccumulate, impacts from these activities are expected to be restricted to localised short-term reductions in water quality with no significant impacts to protected or commercially important marine fauna. Controls to manage this risk include: • A chemical selection procedure will be applied to ensure selection preference of lowest toxicity chemicals to minimise the potential impacts of planned discharges. • Bulk dewatering will occur at the offshore endpoint of the pipeline to maximise dilution and avoid sensitive habitats and areas of higher densities of marine fauna. • Chemical injection volumes will be metered during flooding and hydrotest operations to identify leakage and trigger activity to stop, as well as to mitigate the risk of under/over-dosage of chemical. • Contracted vessel will have dedicated flood, clean, gauge, and pressure test (FCGT) procedures. • A vertically orientated diffuser will be used during dewatering to re-oxygenate treated seawater at the northern discharge point in the Barossa Field **Introduced marine species** There may be an increased risk of introduced marine species (IMS) colonising areas of the pipeline corridor in the shallower water depths where there is suitable light and habitat available (particularly in the vicinity of the shoals/banks). However, the risk of this occurring is considered low given the key management controls that will be implemented throughout the life of the project including a project Quarantine Management Plan, and compliance with contemporary ballast water and biofouling requirements *(see separate issue/response for further detail).* Controls to manage this risk include: • Project vessels will be equipped and crewed in accordance with the *Navigation Act 2012* (as applicable for vessel size, type and class), including Marine Orders 91 (Marine Pollution Prevention – Oil), 95 (Marine Pollution Prevention – Garbage) and 96 (Marine Pollution Prevention – Sewage). • A chemical selection procedure will be applied to ensure selection preference of lowest toxicity chemicals to minimise the area influenced by planned discharges and significance of any impacts. • Offshore Vessel Inspection Database (OVID) inspections will be conducted to ensure all contracted vessels have International Maritime Organisation (IMO) approved treatment systems.

What impacts will there be on fishing activities and how will they be managed?	Impacts of pipeline installation activities on fishing activities near the proposed route are expected to be localised and short-term. Activities associated with installation of the pipeline will occur within a 2 km buffer around the pipeline route, and 3 km radius around each endpoint of the pipeline. However, support vessels may transit to and from port as required (note: vessel movements to and from the operational area are outside the scope of the EP). Peak vessel activity is expected to occur during installation of the pipeline, when the pipelay vessel and a dedicated support vessel will be present in the operational area, whilst supply vessels will transit to and from the pipelay vessel regularly (expected to be daily). During the campaign, vessels will operate 24 hours a day, 7 days a week. The pipeline will overlap approximately 0.18 km^2 of the area actively fished in the Northern Prawn Fishery at low intensity. The pipeline corridor does not intersect any areas trawled by the NT Demersal Fishery. Once the pipeline is operational, trawl fisheries such as the Northern Prawn Fishery (NPF) and NT Demersal Fishery may be affected on an ongoing basis due to the long-term presence of the pipeline and infrastructure. Recent effort for both these fisheries is concentrated outside the Operational Area and therefore impacts are expected to be minimal. Only limited recreational fishing activity occurs in or near the operational area due to the distance from the NT mainland. Considering the relatively short duration of the pipeline installation in which higher numbers of vessels will be present), and minimal number of project related vessel movements within the pipeline corridor during operations (i.e. limited to periodic maintenance and inspection activities), the impact to commercial fishing activities from vessels movements are considered to be minor. Controls to manage this risk include: • Project vessels will be equipped and crewed in accordance with the *Navigation Act 2012* (as applicable for vessel size, type and class), including Marine Orders 21 (Safety of Navigation and Emergency Procedures), 27 (Radio Equipment), 30 (Prevention of Collisions) and 71 (Masters and Deck Officers). • Consultation with relevant and interested stakeholders will be undertaken in accordance with stakeholder consultation plan. • Australian Hydrographic Service (AHS) Notice to Mariners and AMSA Maritime Safety Information (MSI) will be notified prior to relevant pipeline installation activities. • Subsea infrastructure and pipeline will be clearly marked on Australian nautical charts published by the Australian Hydrographic Office (AHO). • The pipeline end termination (PLET) at the southern end of the Barossa pipeline where it is proposed to join the existing Bayu-Undan pipeline has been designed with anti-snag protection. • A support vessel will be present in the Operational Area at all times while the pipelay vessel is installing the pipeline to minimise the potential adverse interactions with commercial fishing activities. • An ongoing communications plan will be implemented for engagement with potentially affected fishers.

	The temporary presence of the pipelay vessels in the operational area will not significantly increase the volume of existing vessel traffic in the area. The area west and south-west of the Tiwi Islands is subject to regular vessel traffic. Data from the Australian Maritime Safety Authority's (AMSA's) craft tracking system indicates vessel traffic routinely moving from the port of Darwin, with vessels moving north routinely navigating around the western tip of Bathurst Island at distances from shore consistent with the closest point of the pipeline corridor. Darwin will continue to be the main supply and maintenance hub for all ConocoPhillips' Australian regional offshore exploration and production operations, including the Barossa Project. ConocoPhillips Barossa will continue to engage with vessel contractors regarding future port and transit plans.
What exclusion zones will be in place during pipeline construction/installation?	During pipeline installation activities, a 500m safety exclusion zone will be established around the pipelay vessel. There will be no ongoing exclusion zones established around the pipeline during operations. Controls to manage this risk include: • The project will comply with the OPGGS Act 2006 – Section 616 (2) Petroleum safety zones, which includes establishment and maintenance of a petroleum safety zone offshore structure or equipment which prohibits vessels entering or being present within the specified area without written consent. • Accepted procedures will be implemented to meet the requirements of ConocoPhillips' Marine Operations Manual (IOSC/OPS/HBK/0003), which includes details of: o roles, responsibilities and competency requirements o requirements (e.g. storage, transfer) for bulk cargo and bulk liquids (including bunker fuel) operations o general requirements for entering/departure and movement within the designated exclusion or petroleum safety zones o checklist required to be completed for vessels entering the exclusion zones in the development area o safe and sustainable dynamic positioning operations. o a Stakeholder Engagement Plan will include consultation with commercial fisheries, shipping, AHO and other relevant stakeholders operating in the vicinity of the development area to inform them of the proposed project. o subsea infrastructure and pipelines will be clearly marked on nautical charts published by the AHO. ConocoPhillips Barossa will continue to undertake consultation with all relevant commercial fishing stakeholders in more detail during preparation of activity-specific EPs and on an ongoing basis in the lead-up to the pipeline installation activities.
What arrangements will be in place for biosecurity protection?	Vessels mobilising from outside Australia or from nearshore waters within Australia will be subject to an Introduced Marine Species (IMS) risk assessment, the findings of which will determine if additional management measures are required prior to mobilisation, such as a hull inspection and cleaning as required. Current controls proposed to manage ballast water management and biofouling include:

	• Ballast water discharges will comply with the requirements of the Australian Ballast Water Management Requirements, which implements the requirements of the Biosecurity Act 2015 and the International Convention for the Control and Management of Ships' Ballast Water and Sediments (as appropriate for vessel class) • Vessels will have a suitable anti-fouling coating in accordance with the Protection of the Sea (Harmful Anti-fouling Systems) Act 2006 (as applicable for vessel size, type and class), including Marine Order 98. • Vessels will comply with the International Convention on the Control of Harmful Anti-fouling Systems on Ships (as appropriate to class) including vessels having a valid IAFS Certificate. Contracted pipelay vessels will have a marine growth prevention system in place. • Vessels mobilising from outside Australia or from nearshore waters within Australia will be subject to an IMS risk assessment, the findings of which will determine if additional management measures are required prior to mobilisation, such as a hull inspection and cleaning as required. • The pipelay vessel stinger (equipment on the pipelay vessel that is used to lower the pipeline to the seafloor) will be raised above water level during vessel transit to the Operational Area so any potential IMS attached to the stinger will perish.
How will noise and vessel movement impact on the movement of fish?	The area of the marine environment influenced by underwater noise associated with the installation of the gas export pipeline represents a very small proportion of the area available to be fished. No significant impacts to the catchability of fish species targeted by commercial fishers are expected given the short duration and localised nature of any potential impacts (within hundreds of metres). While underwater noise generated by installation activities may affect individuals passing through the area, impacts at a population level are considered unlikely given the area affected is localised. The key noise sources associated with installation activities along the pipeline will also be relatively slow moving (approximately 3 km–5 km of the pipeline will be laid per day), thereby allowing individuals to move away from the area, and reasonably short in duration as installation of the entire pipeline will take in the order of nine months. Underwater noise from rock dumping and the placement of sand/grout bags is expected to be negligible. Surveys of the seabed using multibeam echo sounder (MBES) and side scan sonar (SSS) will occur during the pipeline installation campaign. Underwater noise will be generated by vessels and seabed intervention activities during the installation of the proposed pipeline and IMR activities during operation of the pipeline. While several support vessels will be present, the pipelay vessel will be the largest source of noise due to it being the largest vessel. The smaller support vessels will result in a negligible increase in overall noise emissions. The temporary presence of the pipelay vessels in the area will not significantly increase the volume of existing vessel traffic in the area. The area west and south-west of the Tiwi Islands is subject to considerable vessel traffic. Data from the Australian Maritime Safety Authority's (AMSA's) craft tracking system indicates considerable vessel traffic routinely moving from the port of Darwin, with vessels moving north routinely navigating around the western tip of

	Bathurst Island at distances from shore consistent with the closest point of the pipeline corridor. These are typically commercial vessels (e.g. container vessels, tankers etc. moving to and from ports throughout southeast Asia). Vessel traffic of this nature has been operating in the region for decades.
What are the potential impacts of an oil spill from a vessel and how will these be managed?	ConocoPhillips Barossa has conducted a detailed examination of the potential impacts from an accidental fuel spill from pipeline installation vessels, including: • Reductions in water quality. • Direct toxic or physiological effects on marine fauna, including corals, mammals, reptiles, birds and fish. • Hydrocarbon contact with shoals/banks, reefs and islands at concentrations that will result in adverse impacts. • Changes in biological communities because of the effects on key marine fauna. Although the magnitude of the potential impacts is significant, given the remote likelihood of a vessel collision occurring, the collision resulting in a fuel tank rupture and a complete release of this tank while it is at full capacity, and the management controls which will be implemented, the risk is considered medium. ConocoPhillips Barossa will continue to investigate additional controls and mitigations during the development of the EP to manage this risk. Controls to manage risks include: • Project vessels will be equipped and crewed in accordance with the *Navigation Act 2012* (as applicable for vessel size, type and class), including Marine Orders 21 (Safety of navigation and emergency procedures), 27 (Radio Equipment), 30 (Prevention of Collisions) and 71 (Masters and Deck Officers). • A dedicated Oil Pollution Emergency Plan (OPEP) will be prepared and implemented throughout the GEP installation campaign. • All vessels will have a dedicated Ship Oil Pollution Prevention Plan (SOPEP). • A support vessel will be present within the Operational Area at all times while the pipelay vessel is installing the pipeline to minimise the potential for vessel collision. • The pipelay vessel will be double-hulled and with internal fuel tanks protected from a potential vessel collision.

Why is the pipeline being routed through part of the Habitat Protection Zone within the Oceanic Shoals marine park and how will the impacts be managed?	ConocoPhillips Barossa identified several preliminary pipeline routes following a review of available information on the bathymetry, seabed topography and underlying geology relevant to each route. This was done during the early design phases of the Barossa Project and included a range of contingencies to account for uncertainty around the requirements of the Project. Given several pipeline routes were under consideration, the Barossa OPP that was published for public comment allowed for a number of potential route alignments within a pipeline corridor, both within and outside the Oceanic Shoals marine park. These potential pipeline routes were subject to further survey and engineering studies to determine their technical feasibility. Based on the additional work, the previously considered routes to the alternative western tie-in point on the Bayu-Undan pipeline (the western route alignment within the marine park) were ruled out as not being technically feasible due to the presence of significant seabed features and highly irregular seabed topography along the southern section of that alignment that could not be avoided. Dropping this western route alignment also had the advantage of minimising the length of pipeline route that overlaps the Oceanic Shoals marine park and allowed for a much narrower pipeline corridor to be defined in the Barossa OPP. As a result, three candidate pipeline routes were the subject of a feasibility and practicability assessment. Within the Oceanic Shoals marine park: • Two central route alignments (excluding the original preliminary pipeline route) within the Oceanic Shoals marine park that intersect the multiple use zone and HPZ of the Oceanic Shoals marine park, tying into the existing Bayu-Undan to Darwin pipeline at the preferred eastern tie-in location. Outside the Oceanic Shoals marine park HPZ: • An eastern route alignment, i.e. crossing the shallow water area located between the marine park and the Tiwi Islands. This route would require secondary stabilisation of the pipeline due to the relatively shallow and rugose seabed. Secondary stabilisation methods could include rock dumping, pre-lay and post-lay trenching or dredging, resulting in greater environmental impact. Engineering and design activities have focused on the two central route alignments within the Oceanic Shoals marine park HPZ (the proposed route and the discounted central route alignment). Seabed conditions and expected span rectifications were considered to be similar for both of the routes, with the proposed route being selected as it achieves the following benefits: • minimises the area that the pipeline route needs to overlap the Oceanic Shoals marine park HPZ

	• minimises the amount of seabed installation required and eliminates secondary stabilisation requirements for pipeline installation (which would be required to install the pipeline along the eastern route alignment located in the shallow water area outside the marine park HPZ) • minimises, as much as practicable, the installation of the pipeline over areas of seabed that are associated with the seafloor features/values of the shelf break and slope of the Arafura Shelf and carbonate bank and terrace system of the Van Diemen Rise KEFs • reduces inspection, maintenance and repair (IMR) requirements during operations, compared to all other alternative route alignments considered. The reduced route length and smoother seabed profile (less spans) represents the shortest length of pipeline required and minimises the amount of seabed installation and stabilisation required, requiring the shortest installation campaign, thereby minimising the time installation activities will overlap with inter-nesting habitat critical to the survival for marine turtles. Installation and operation of a pipeline with the HPZ of the marine park is allowable with authorisation from the Director of National Parks, and ConocoPhillips Barossa has been working closely with Parks Australia regarding this authorisation. The pipeline activities are considered to be consistent with the management objective of the HPZ within the Oceanic Shoals marine park. Although the presence of the pipeline will result in a small direct loss of benthic habitat, there will be no impact on the habitat representativeness or habitat diversity of the marine park. Where the pipeline traverses the HPZ, it is distant from seafloor features associated with the key ecological features (KEFs) considered values of the marine park. Therefore, no impacts to KEFs and values of the marine park are expected from pipeline activities within the HPZ.

What are the risks/impacts from pipeline installation to turtles during inter-nesting periods and how will these be managed?	Independent scientific assessment (Appendix Q of the accepted OPP) has concluded that the installation of the pipeline is not expected to form a significant risk to flatback and olive ridley turtles at a population level, as per the Commonwealth Department of Environment and Energy's Significant Impact Guidelines 1.1 – Matters of National Environmental Significance based on the following points: • There is a spatial separation (greater than 7 km) between the favoured coastal Inter-nesting habitat for flatback and olive ridley turtles, and the pipeline route. • The relatively short time frame of the pipeline installation is insignificant within the context of the long breeding period of marine turtles and so the time frame the breeding females are potentially exposed to the project is low. • Pipelay vessels are mobile and will not be on any one location for extended periods of time. Any exposure of inter-nesting females or dispersing hatchlings to project related risk will be temporary. • The seasonally dispersed nesting behaviour reduces the risk of exposure to the entire breeding population. • While migrating offshore, hatchlings will be dispersed by currents across large areas of ocean, under the influence of tides and currents which will reduce the opportunity for individuals to intercept or pool around a vessel. • Hatchlings are unable to swim against fast moving tides and currents and a few individuals might be trapped by light spill from a vessel if they are carried directly to the vessel location by tides or currents. • Hatchlings will only be able to engage in directional swimming (i.e. to actively swim directly towards a vessel light) during the few hours a day when water speeds are very slow or at slack water and will be swept away as the tide gains strength. The number of individuals potentially impacted are expected to be low. • The current large (60 – 80 km) Biologically Important Area boundary to the north and west of Tiwi Islands can be reassessed based on recent publications that indicate inter-nesting habitat for flatback and olive ridley turtles is in shallow water closer to shore and can be comfortably encompassed by the Contiguous Zone Boundary (24 nm, 44.5 km). Taking into account the outcomes of a professional review (Appendix Q of the OPP), as well as a number of other studies investigating inter-nesting behaviours of flatback and olive ridley turtles (*Whittock et al. 2016, Hamel et al. 2008*), the 30 m depth contour is considered to encompass the vast majority of the area within which flatback and olive ridley turtles would undertake inter-nesting activities (i.e. resting on the seabed), with the existing 24 nm (44.5 km) Contiguous Zone Boundary encompassing the extent (waters up to 55 m deep) that inter-nesting turtles are likely to extend to. These studies have demonstrated that while turtles may be present in offshore waters with water depths of up to 55 m during the inter-nesting period, they are typically freely moving through these areas before they return to shallow waters (less than 30 m deep and typically shallower than 10 m) to rest in the days leading up to re-nesting activity.

	The pipeline route and operational area are located in waters greater than 30 m deep and therefore, flatback and olive ridley turtles within the vicinity are typically freely moving through these areas within the water column rather than requiring benthic habitat for inter-nesting activities. Significant numbers of olive ridley turtles are known to nest on the beaches of Seagull Island and the north-west coast of Melville Island. As the physical presence of the gas export pipeline within inter-nesting habitat critical to the survival of marine turtles has been minimised, i.e. approximately 0.0001% and 0.0015% of the inter-nesting habitat critical to the survival of flatback and olive ridley turtles respectively, the physical presence of the gas export pipeline during is considered highly unlikely to impact the species use of the area.. During the installation period, the pipelay vessel will continuously traverse along the pipeline alignment (i.e. not a stationary vessel), therefore the small area of light spill will not impact any one location for an extended duration and is not expected to have any impacts additional to existing vessel traffic traversing the area. Therefore, light emissions from the pipelay installation vessels are not anticipated to impact the breeding population of crested terns or olive ridley turtles located on the shoreline of Seagull Island. Underwater sound generated by installation activities may affect individuals passing through the area, however impacts at a population level are considered unlikely given the area affected is highly localised. The key noise sources associated with installation activities along the gas export pipeline will also be relatively slow moving (approximately 3 km–5 km of the gas export pipeline will be laid per day), thereby allowing individuals to move away from the area, and reasonably short in duration (see separate issue/response for further detail). The risk of vessel strike to marine fauna is inherent to movements of all vessel types, including recreational vessels, fishing vessels, passenger ships, whale-watching boats, container ships and naval ships. Impacts from the presence of offshore infrastructure and related vessels interacting with marine fauna are not considered to present a significant risk at a population level. Key controls to minimise impacts from the physical presence of offshore infrastructure and project related vessels interacting with marine fauna include: • Placement of pipeline infrastructure in areas where there are no regionally significant feeding, breeding or aggregation areas for marine mammals • Limiting the physical footprint of the pipeline area such that displacement of individual mammals is unlikely, and the likelihood of a collision is remote • Vessels travelling at relatively low speeds within operational areas • Project vessels proactively responding to potential fauna interactions in line with the requirements of the EPBC Regulation s2000 – Part 8 Division 8.1.