



Australian Bay Lobster Aquaculture Facility Modification 4

State Significant Development Modification Assessment
DA282-11-2004-I-Mod-4

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Glossary

Abbreviation	Definition
AEP	Annual Exceedance Probability
AHD	Australian Height Datum
Applicant	Australian Bay Lobster Producers Limited
ARI	Annual Recurrence Interval
ASS	Acid Sulfate Soil
BCA	Building Code of Australia
BDAR	Biodiversity Development Assessment Report
Council	Tweed Shire Council
Department	NSW Department of Planning, Industry and Environment
DPI Agriculture	Department of Primary Industries – Agriculture
DPI Fisheries	Department of Primary Industries – Fisheries
EES	Environment, Energy and Science Group
ENM	Excavated Natural Material
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	Environmental Planning and Assessment Regulation 2000
EPA	Environment Protection Authority
EPL	Environment Protection Licence
ESD	Ecologically Sustainable Development
FERP	Flood Emergency Response Plan
FM Act	<i>Fisheries Management Act 1994</i>
Gales	Gales-Kingscliff Pty Ltd
JEBH	Jack Evans Boat Harbour
Kingscliff STP	Kingscliff Wastewater Treatment Plant
LBSAS	Land Based Sustainable Aquaculture Strategy
LG Act	<i>Local Government Act 1993</i>

Abbreviation	Definition
LGA	Local Government Area
LSPS	Local Strategic Planning Statement
Minister	Minister for Planning and Public Spaces
NCRP	North Coast Regional Plan
PASS	Potential Acid Sulfate Soil
Planning Secretary	Secretary of the Department
PMF	Probable Maximum Flood
RAS	Recirculating Aquaculture System
RTS	Response to Submissions
SES	State Emergency Service
SSD	State Significant Development
TfNSW	Transport for NSW
TIA	Traffic Impact Assessment
TMP	Traffic Management Plan
VENM	Virgin Excavated Natural Material

Executive Summary

Introduction

This report details the NSW Department of Planning, Industry and Environment's (the Department's) assessment of an application made by Australian Bay Lobster Producers Limited (the Applicant) to modify the State significant development (SSD) consent for the Australian Bay Lobster Aquaculture Facility (DA-282-11-2004-i).

The Applicant is a land-based aquaculture producer specialising in the sustainable farming of Australian Bay Lobster (*Thenus* spp) products for the domestic and South East Asian food markets.

The site is located at 9484 Tweed Valley Way, Chinderah in the Tweed local government area (LGA). It is located on the floodplain of the Tweed River and has direct access to the Pacific Highway to the west. The site is surrounded by RU1 Primary Production zoned lands, primarily for the cultivation of sugar cane, and neighbours a sand mine, a service centre and the Melaleuca Station Memorial Gardens. The nearest residential receiver is located approximately 400 metres (m) to the north-east of the site.

Approval history

On 21 December 2005, the then Minister for Planning gave development consent for the Australian Bay Lobster Aquaculture Facility (DA-282-11-2004-i). The development consent has been modified on two previous occasions and permits the following works:

- three farms to be constructed and operated over three independent Stages, each on around 15 ha
- hatchery and grow-out facilities at each farm, as well as car parking, and seawater and freshwater storage tanks
- ancillary facilities such as processing building, workshop facilities, administration building and site access upgrade at the main development site
- an underground pumping station at Kingscliff Beach and sub-sand seawater intake pipeline from the pumping station to the main site
- a wastewater pipeline from the main development site to the Kingscliff Wastewater Treatment Plant (Kingscliff STP).

Existing on-site accommodation units

In 2017, the Applicant made the decision to install three former mining dongas at the main aquaculture site. The dongas were intended to provide accommodation for critical staff during flood events.

In March 2018, the Department was alerted to the presence of the three dongas at the site. The Department's Compliance team subsequently issued the Applicant with a Development Control Order to remove the three structures from the site, unless planning approval was granted for the use of these structures.

Proposed modification

The modification application was lodged on 24 July 2019, pursuant to section 4.55(2) of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The modification application originally sought consent for the treatment and use of potential acid sulfate soil (PASS) and acid sulfate soil (ASS) as fill across the site, and the extraction of seawater from Jack Evans Boat Harbour (JEBH) at Tweed Heads. Following substantial concerns raised by the Department, the Environment Protection Authority (EPA) and Tweed Shire Council (Council) in relation to these matters, the Applicant made the decision to withdraw these aspects from the subject modification application.

Consequently, the Department's assessment has been based on the modification as described in the Applicant's Response to Submissions (RTS) report, and includes the following:

- continued filling of the farm site to a maximum height of 4.0 metres (m) Australian Height Datum (AHD)
- the use of three existing on-site accommodation units (also known as dongas) as temporary staff accommodation
- the installation and use of six additional accommodation units as temporary staff accommodation
- the cultivation of additional fish and marine vegetation species at the site, subject to the issuing of further aquaculture permit/s in accordance with the relevant requirements of the *Fisheries Management Act 1994* (FM Act)
- regular deliveries of seawater from the Gold Coast Desalination Plant during maintenance of the seawater supply pipeline
- minor amendments to the approved hours of construction and operation to align with the Gold Coast Desalination Plant's pumping schedule and to expedite the construction of the seawater supply pipeline
- amendment of condition 4.4, allowing Tweed Shire Council (Council) to approve further increases in the site's daily wastewater discharge limit beyond 1,800 kilolitres (kL) per day
- amendment of condition 4.66, allowing electrical equipment associated with the pumping station at Kingscliff Beach to be located above-ground.

The Applicant has advised the proposed modification would support the continued operation of the main aquaculture development site during a flood event, the ongoing research and commercial cultivation of Australian Bay Lobsters and support the development of the site into a thriving aquaculture precinct.

Engagement

The Department exhibited the modification application and accompanying Statement of Environmental Effects (SEE) from 7 August 2019 until 21 August 2019 (15 days). During the exhibition period, advice was received from seven government authorities, including Tweed Shire Council (Council) and six State government authorities. No submissions were received from the general public.

Key concerns raised related to the treatment and use of PASS and ASS as fill at the site, the extraction of seawater from JEBH, the proposed on-site accommodation units and traffic impacts associated with the additional bulk earthworks.

Following conclusion of the exhibition period, the Applicant undertook extensive consultation with the Department, Council and the relevant State government authorities in relation to the concerns raised, which delayed the submission of any further supporting information until early 2021.

The Applicant submitted a Response to Submissions (RTS) on 8 March 2021 to address and clarify matters raised during the exhibition period.

Following their review of the RTS, both Council and TfNSW reiterated their concerns in relation to the on-site accommodation units and traffic impacts. Gales-Kingscliff Pty Ltd (Gales), a nearby landowner, also provided a response to the RTS and raised concerns in relation to the volume of fill proposed to be brought to the site and the associated number of heavy vehicles using the site access road.

On 20 July 2021, the Applicant provided a further response to the outstanding issues raised by Council, TfNSW and Gales. The response was supported by a revised Traffic Impact Assessment and an updated Traffic Management Plan for the main aquaculture development site.

Following receipt of this response, the Department met separately with the Applicant and Council on several occasions to discuss the outstanding concerns raised in relation to the on-site accommodation units. During this time, Council reiterated that it could not support the accommodation units unless a Probable Maximum Flood (PMF) refuge was provided at the site.

Assessment

This Department has reviewed the SEE, RTS and all submissions, taking into consideration the relevant matters under section 4.15 of the EP&A Act and the objects of the EP&A Act.

The Department's assessment considered the installation and use of the on-site accommodation units to be the key matter for consideration. While the Department recognises the concerns raised by Council regarding risk to on-site workers during flood events greater than the 100-year ARI flood level, it also accepts that the accommodation units would help support the health and wellbeing of those staff who are required to maintain critical operations during certain flood events, undertake overnight monitoring of sick animals and participate in multi-day research activities.

Allowing the accommodation units to be used during flood events up to the 20-year ARI flood level will strike an appropriate balance between Council's concerns and the Applicant's operational requirements, and acknowledges the current development consent does not restrict the use of the development during a flood event.

Subject to the recommended conditions of consent, the Department is satisfied that both the existing and future accommodation units can be appropriately managed to minimise any potential risk to staff staying in the units during a flood event. The Department has also recommended a range of detailed conditions to address any residual traffic, dust and visual impacts associated with the other elements of the modification application.

The Department's assessment concludes the modification is appropriate on the basis that it would:

- provide on-site emergency accommodation for when staff need to monitor adverse health symptoms in an animal population, maintain site operations during minor flood events or undertake multi-day research trials
- support the continued research and commercial cultivation of Australian Bay Lobsters while also allowing for the development of the main aquaculture site into a thriving aquaculture precinct
- not significantly increase the environmental impacts of the development beyond those assessed under the original development application.

Consequently, the Department is satisfied that the modification should be approved, subject to the recommended modifying conditions of consent.

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1 Introduction

This report provides the NSW Department of Planning, Industry and Environment's (the Department's) assessment of an application to modify the State significant development (SSD) consent for the Australian Bay Lobster Aquaculture Facility (DA-282-11-2004-i).

The modification application seeks to amend the development consent to permit additional bulk earthworks across the site, the use of three existing on-site staff accommodation units, the installation and use of six additional staff accommodation units, the cultivation of additional aquaculture species and to make several minor administrative amendments.

The application was lodged on 24 July 2019 by Australian Bay Lobster Producers Limited (the Applicant) pursuant to section 4.55(2) of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.1 Background

The Applicant operates an aquaculture facility for the commercial production of Australian Bay Lobster (*Thenus* spp) at 9484 Tweed Valley Way, Chinderah in the Tweed local government area (LGA).

Once fully developed, the facility would occupy an area of around 45 hectares (ha) of a 150 ha rural property (see **Figure 1**).

The subject site is located on the floodplain of the Tweed River and has direct access to the Pacific Highway to the west. The site is surrounded by RU1 Primary Production zoned lands, primarily for the cultivation of sugar cane, and neighbours a sand mine, a service centre and the Melaleuca Station Memorial Gardens.

The nearest residential receiver is located approximately 400 metres (m) to the north-east of the site.

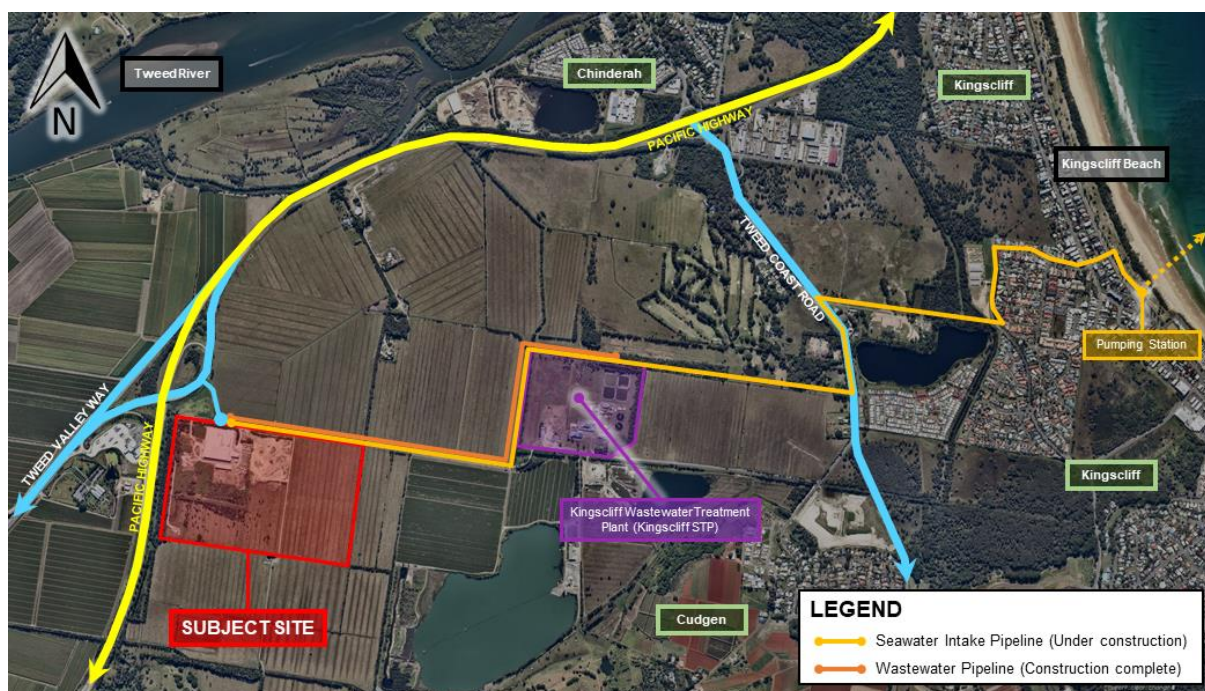


Figure 1 | Location of development site and associated pipeline routes, as modified



Figure 2 | Main aquaculture development site and surrounding land uses

The Applicant is a land-based aquaculture producer specialising in the sustainable farming of Australian Bay Lobster products for the domestic and South East Asian food markets. The business was originally established to globally commercialise the breeding and cultivation of lobsters using a climate-controlled recirculating aquaculture system (RAS) and employs up to 60 operational staff.

1.2 Existing on-site accommodation units

During Tropical Cyclone Debbie in March 2017, the Tweed region experienced a 100 year ARI flood event and the Applicant was forced to evacuate the site for several days. This resulted in significant losses of Australian Bay Lobster stock at the facility.

In order to prevent such losses in the future, the Applicant made the decision to install three former mining dongas at the main aquaculture site.

In March 2018, the Department was notified of an application lodged with Council for the provision of water and sewer connections to the three dongas. The Department's Compliance team subsequently issued the Applicant with a Development Control Order to remove the three structures from the site, unless planning approval was granted for the use of these structures.

1.3 Approval history

On 21 December 2005, the then Minister for Planning gave development consent for the Australian Bay Lobster Aquaculture Facility (DA-282-11-2004-i). The development consent permits the following works:

- three farms to be constructed and operated over three independent stages, each on around 15 ha
- hatchery and grow-out facilities at each farm, as well as car parking, and seawater and freshwater storage tanks

- ancillary facilities such as processing building, workshop facilities, administration building and site access upgrade at the main development site
- an underground pumping station at Kingscliff Beach and a sub-sand seawater intake pipeline from the pumping station to the main site
- a wastewater pipeline from the main development site to the Kingscliff Wastewater Treatment Plant (Kingscliff STP).

An overview of all modifications relating to DA-282-11-2004-i is provided in **Table 1** below.

Table 1 | Summary of previous modifications

Mod No.	Summary of Modifications	Approval Authority	Type	Approval Date
MOD 1	Changes to site levels and extension of borrow pit	Minister	s.96(2)	Not lodged*
MOD 2	Temporary seawater supply and wastewater discharge	Department	s.75W	23 September 2013
MOD 3	Importation of Excavated Natural Material (ENM) and Potential Acid Sulfate Soil (PASS)	Department	s.75W	Withdrawn
MOD 5	Importation of ENM and minor alterations to the alignment of the seawater intake pipeline route.	Department	s.4.55(2)	23 June 2021

*While the Department issued environmental assessment requirements, the Applicant did not proceed with the modification.

The subject modification application had originally included the use of Excavated Natural Material (ENM) as fill at the site and a minor alteration to the approved alignment of the seawater intake pipeline. These elements were subsequently considered and assessed under MOD 5, so that the Applicant could receive ENM from nearby infrastructure projects and proceed with the detailed design and delivery of the seawater intake pipeline while the subject modification application was being finalised.

As mentioned previously, the development consent (as modified) includes the construction of both a seawater intake pipeline and a wastewater pipeline to service the main aquaculture development site. Following approval of the original development application, the Applicant sought to relocate a 2 kilometre (km) portion of the seawater intake and wastewater pipeline route, largely to minimise the disruption to local roads during construction and to facilitate an expansion of the Cudgen Sand Quarry under a separate Part 3A project approval (05_0103).

At the time, it was unclear whether the change could be dealt with as a modification to the development consent. Accordingly, the Applicant obtained a separate project approval (08_0083) granted under the now repealed Part 3A of the EP&A Act which permitted the relocation works.

At the time of writing this report, the seawater intake pipeline is currently under construction, while construction of the wastewater pipeline was completed in 2014.

1.4 Nearby development applications

On 13 April 2021, Hanson Construction Materials Pty Ltd lodged an SSD application (SSD-10398) for the expansion of its existing sand plant at Cudgen (Hanson application). At the time of writing this report, the Hanson application is being assessed by the Department.

The Hanson application seeks approval for the extraction and processing of up to 950,000 tonnes of sand per annum for a period of up to 30 years, on land located to the immediate north, east and south of the aquaculture facility (see **Figure 3**). The Hanson application proposes to upgrade the lobster facility's existing site access road, including construction of a roundabout at the Tweed Valley Way interchange, to provide a new primary access point for the sand plant.

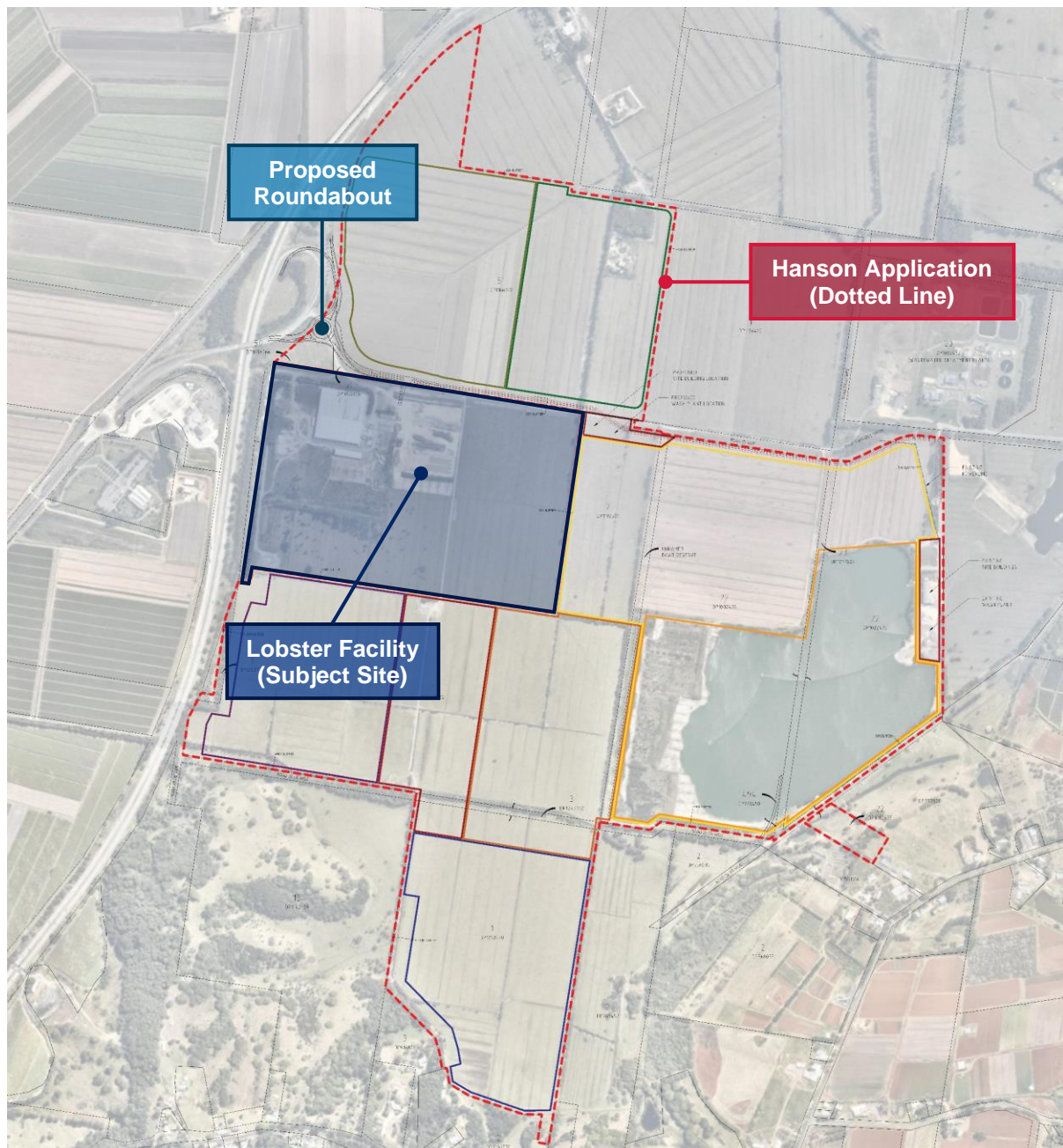


Figure 3 | Overview of the Hanson application and its relationship to the lobster facility

2 Proposed modification

The Applicant has lodged a modification application under section 4.55(2) of the EP&A Act to modify DA-282-11-2004-i. The modification is described in full in the Statement of Environmental Effects (SEE), the Response to Submissions (RTS) and the additional information provided by the Applicant (see **Appendix A**). The modification is illustrated in **Figure 4** and **Figure 5** below.

2.1 Original modification

The modification application originally sought consent for the treatment and use of potential acid sulfate soil (PASS) and acid sulfate soil (ASS) as fill across the site, and the extraction of seawater from Jack Evans Boat Harbour (JEBH) at Tweed Heads.

During the exhibition period (see **Section 5**), a number of concerns were raised by Tweed Shire Council (Council), the Environment Protection Authority (EPA) and the Department (including its Environment, Energy and Science Group) in relation to the proposed treatment process and compliance with the *NSW Acid Sulfate Soil Manual* (ASSMAC, 1998) and the *Waste Classification Guidelines Part 4: Acid sulfate soils* (EPA, 2014). Council also objected to the extraction of seawater from JEBH.

Following further consultation with the EPA and Council, the Applicant made the decision to withdraw these elements from the subject modification application.

The subject modification application had also included the use of ENM as fill at the site and a minor alteration to the approved alignment of the seawater intake pipeline. These elements were subsequently considered and assessed under MOD 5 (see **Section 1.2**).

2.2 Proposed modification

The assessment undertaken herein is based on the modification as described in the RTS, which seeks approval for additional bulk earthworks across the site, the installation and use of on-site emergency accommodation, the cultivation of additional aquaculture species and several administrative amendments to the development consent.

The modification application proposes the following:

- continued filling of the main aquaculture development site to a maximum height of 4.0 m Australian Height Datum (AHD)
- the use of three existing accommodation units (also known as dongas) as temporary staff accommodation
- the installation and use of six additional accommodation units as temporary staff accommodation
- the cultivation of additional fish and marine vegetation species at the site, subject to the issuing of further aquaculture permit/s in accordance with the relevant requirements of the *Fisheries Management Act 1994* (FM Act)
- regular deliveries of seawater from the Gold Coast Desalination Plant during maintenance of the seawater supply pipeline

- minor amendments to the approved hours of construction and operation to align with the Gold Coast Desalination Plant's pumping schedule and to expedite the construction of the seawater supply pipeline
- amendment of condition 4.4, allowing Council to approve further increases in the site's daily wastewater discharge limit beyond 1,800 kilolitres (kL) per day
- amendment of condition 4.66, allowing electrical equipment associated with the pumping station at Kingscliff Beach to be located above-ground.

The changes proposed under the subject modification are described in further detail below.

Additional bulk earthworks

Under the development consent (as modified), the Applicant was required to construct a bund wall around the main aquaculture development site to a height of 4.0 m AHD, which is above the 100 year Annual Recurrence Interval (ARI) flood level. Fill for the bund wall was to have been sourced from an on-site borrow pit, and the wall itself would have been landscaped to prevent erosion.

Since construction of the development commenced in 2008, the Applicant has been able to source affordable fill material from the surrounding region, which has been used to raise the building pad for Stage 1 to a height of 4.0 m AHD. As part of the subject modification application, the Applicant is seeking to continue this arrangement and raise the building pads for stages 2 and 3 to the same level. A two-metre high landscaping bund would also be constructed around the perimeter of the main aquaculture development site to help screen the farm buildings from nearby sensitive receivers.

Approximately 1,875,000 m³ of fill would be required to fill the remainder of the site, equating to 375,000 m³ per annum over a 5-year period. This would generate up to 43 heavy vehicle trips (comprising one movement to/from the site) per day, or approximately 7.8 heavy vehicle movements per hour. Fill would primarily be sourced from major infrastructure projects in northern New South Wales and south-east Queensland and would comprise of Virgin Excavated Natural Material (VENM) and ENM.

On-site staff accommodation

Under the development consent (as modified), the Applicant is permitted to operate the main aquaculture development site 24 hours a day, seven days a week. During Tropical Cyclone Debbie in March 2017, the Tweed region experienced a 100 year ARI flood event. While the main aquaculture site has been raised above the 100 year ARI flood level, the surrounding road network was cut and the Applicant was forced to evacuate the site for several days. This resulted in significant losses of Australian Bay Lobster stock at the facility.

In order to prevent such losses in the future, the Applicant made the decision to install three former mining dongas at the main aquaculture site. Each accommodation unit is split into four separate rooms which each contain a single bed, basic kitchenette and bathroom (see **Figure 4**).

In March 2018, the Department was notified of an application lodged with Council for the provision of water and sewer connections to the three accommodation units. The Department's Compliance team subsequently issued the Applicant with a Development Control Order to remove the three structures from the site, unless planning approval was granted for the use of these structures.

Consequently, the Applicant is seeking approval for the use of the three existing accommodation units by Farm 1 staff and the installation and use of six additional units by staff associated with Farms 2 and 3

(see **Figure 5**). Both the existing and proposed accommodation units would provide overnight facilities for up to 36 staff.

The Applicant has advised that the accommodation units would only be used by individuals employed by the Applicant and/or associated with the operation of the development, and would be used for the following purposes:

- to maintain critical operations during all flood events up to and including the 100-year ARI flood level (on an 'as-needed' basis)
- to undertake 24-hour monitoring of the on-site animal population in the event that adverse health symptoms (signs of illness, etc) are identified (up to 10 days per annum)
- to facilitate multi-day research activities that may be undertaken by internal staff or researchers from nearby educational institutions (up to 30 days per annum).

In the event that the modification is approved, the Applicant would obtain section 68 approvals from Council under the *Local Government Act 1993* for the installation of the future accommodation units, and the installation of water and sewer connections to all existing and proposed structures.



Figure 4 | Photomontage of the existing on-site accommodation units (dongas)

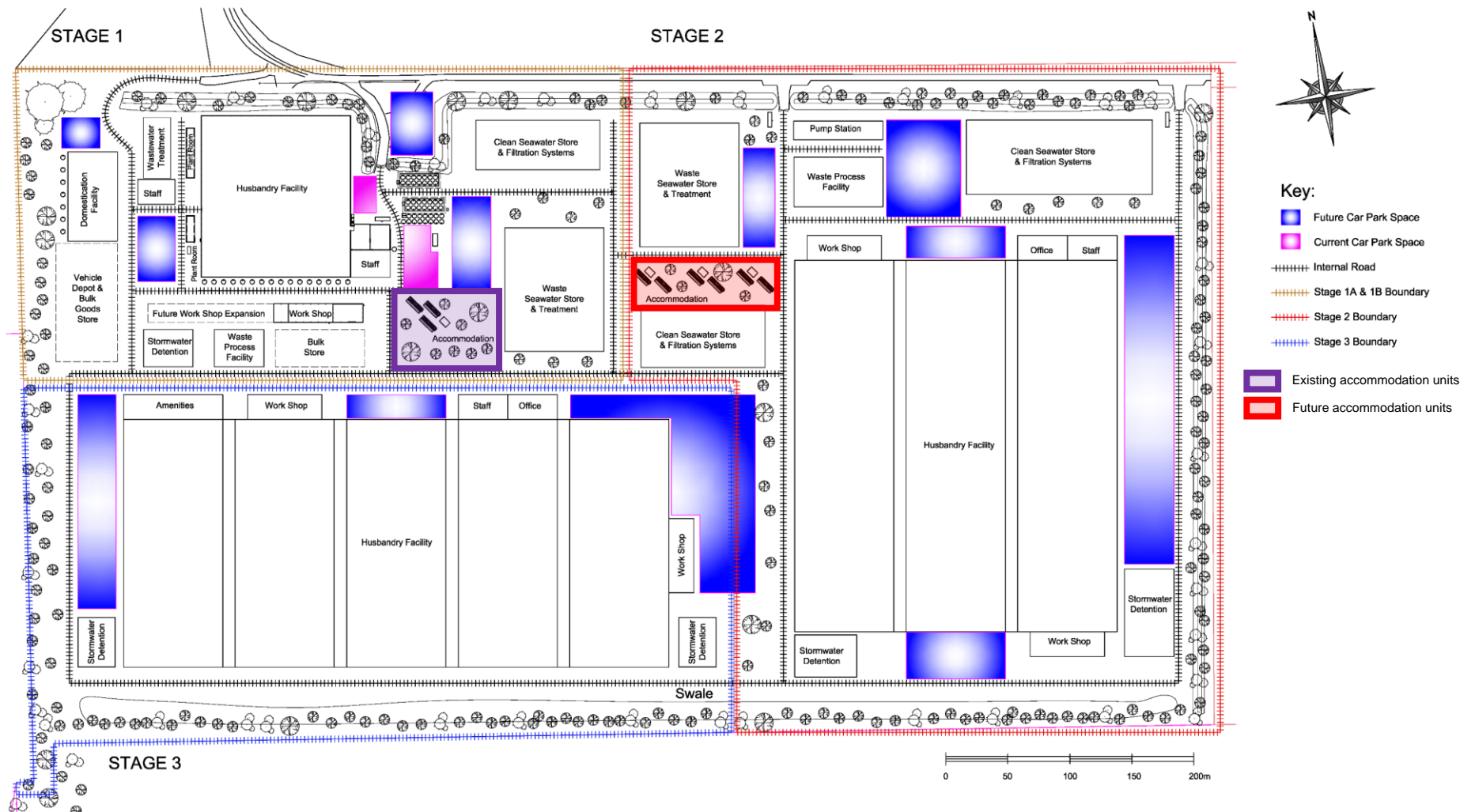


Figure 5 | Overview of the site masterplan, including the location of the existing and future on-site accommodation units

Additional aquaculture species

The Applicant is seeking to amend the development consent to permit the research and commercial cultivation of additional aquaculture species at the site. Currently, condition 1.3 of the development consent (as modified) limits the site to the research and commercial cultivation of Australian Bay Lobsters.

At the time of writing this report, the Applicant has completed construction of Farm 1 but has not yet commenced full operations at this facility. As the site has approval for the construction and operation of up to three aquaculture farms, the proposed modification would provide the Applicant and/or separate aquaculture operators with the ability to cultivate fish and marine vegetation species which are complementary to Australian Bay Lobsters. This could include other fish species with similar feed and water supply requirements, or the use of tank-based seaweed and algae species to help treat wastewater generated by the overall development.

Presently, the cultivation of Australian Bay Lobsters at the site is regulated by an aquaculture permit issued in accordance with the FM Act. The permit includes specific requirements around biosecurity, the importation of live feed and the disposal of dead or diseased fish.

The Applicant has noted that the cultivation of any further aquaculture species at the site would be subject to the issuing of further aquaculture permit/s in accordance with the relevant requirements of the FM Act.

Temporary seawater supply

Under the development consent (as modified), the Applicant is able to source seawater from the Gold Coast Desalination Plant to supply Stage 1 of the development. The desalination plant is located approximately 11 km to the north-west of the site, adjacent to the Gold Coast airport.

As part of the subject modification application, the Applicant is seeking to continue this arrangement until construction of the development's seawater intake pipeline has been completed. In addition, the Applicant is also seeking approval to source seawater from the desalination plant in the event of an emergency or as a result of unplanned maintenance works on the seawater intake pipeline.

The Applicant commenced construction of the first stage of the seawater intake pipeline in October 2021 and, subject to obtaining all relevant approvals, aims to complete construction of the pipeline by mid-2022. Presently, the Applicant uses two seawater haulage vehicles to supply the development with seawater from the desalination plant. Supplying Stage 1 generates up to 9 heavy vehicle trips per day, or approximately 1.6 heavy vehicle movements per hour.

Construction and operational hours

The Applicant is seeking to amend the approved hours of construction and operation to align with the Gold Coast Desalination Plant's pumping schedule and to allow for certain works to occur outside of standard construction hours. The proposed amendments include:

- permitting seawater truck deliveries from 6am – 7pm on weekdays (deliveries are currently restricted to 7am – 6pm on weekdays)
- providing the ability for the Planning Secretary to approve 'out of hours' construction works on a case-by-case basis.

The Applicant has advised that the changes to the permitted hours for seawater truck deliveries will allow it to make full use of the Desalination Plant's pumping schedule using its two seawater haulage vehicles. In addition, providing a pathway for 'out of hours' requests will provide the Applicant with the ability to reduce the overall construction timeline for the seawater intake pipeline and subsequently reduce the overall level of disruption to residents in Kingscliff until construction of the pipeline is completed in late 2022.

Wastewater discharge limit

Under the development consent (as modified), the Applicant must ensure the volume of wastewater discharged from the site does not exceed a total of 600 kL per day for each stage of the development, for a combined total of 1,800 kL per day from the site.

In conjunction with the cultivation of additional fish and marine vegetation species at the site, the Applicant is seeking to amend condition 4.4 of the development consent to remove the staging limit and to provide Council with the ability to approve further increases in the site's daily discharge limit beyond 1,800 kL per day.

At the time of writing this report, the Applicant has completed construction of Farm 1 (Stage 1) but has not yet commenced full operations at this facility. The partial operation of this facility currently generates approximately 250 kL of wastewater per day.

As Farm 1 is currently operating below capacity, the Applicant has advised that the removal of the staged wastewater discharge limit would simplify its operations and provide the opportunity for Farms 2 and 3 to accommodate fish or marine vegetation species with differing wastewater generation rates.

In addition, the proposed changes would also provide Council with the ability to approve further increases to the site's daily wastewater discharge limit, provided they can be accommodated by Council's existing and/or future wastewater infrastructure.

Pumping infrastructure

Under the development consent (as modified), the Applicant is required to ensure both the seawater intake pipeline and the associated pumping station at Kingscliff Beach is located underground.

The Applicant has worked closely with Council to develop the detailed design of the pumping station at Kingscliff Beach. While the majority of the pumping station would remain below ground level (e.g. the pump well, the valve and meter pits, etc), the pump controller and its associated switchboard would be located in an existing amenities block in Jack Bayliss Park, adjacent to Kingscliff Beach.

Consequently, the Applicant is seeking to amend condition 4.66 to reflect this arrangement. The electrical equipment would be installed within an unused section of the existing amenities block and secured behind a new access door. This arrangement would make it easy for the Applicant to maintain the pumping station's electrical equipment while also ensuring the equipment is suitably screened from nearby sensitive receivers.

3 Strategic context

3.1 North Coast Regional Plan 2036

The North Coast Regional Plan (NCRP) sets out the NSW Government's vision for the Tweed, Kyogle, Richmond Valley, Lismore, Byron and Ballina LGAs until 2036. The NCRP anticipates the population of the North Coast region will grow by 30% between 2016 and 2036, resulting in an increased demand for dwellings and jobs.

The key priorities of the NCRP are to strengthen the region's economy and tourism opportunities, manage and protect natural resources, provide greater housing choices and employment and deliver infrastructure to support growth and communities. The modification application will support the directions and objectives of the NCRP by:

- further reducing the impact of flood events upon the main aquaculture site (Action 3.1)
- continuing to deliver an innovative land-based aquaculture precinct which complements the North Coast region's reputation as a hub for high-quality, boutique food production throughout the South East Asian market (Action 12.2)
- ensuring the main aquaculture development site is not compromised by encroachment from sensitive land uses (Action 12.4).

3.2 Local Strategic Planning Statement

Council's *Local Strategic Planning Statement – 2020* (LSPS) establishes the land-use planning framework for the Tweed LGA and provides a direct link between the NCRP and the priorities outlined in Council's Community Strategic Plan.

The LSPS identifies the challenges and opportunities for communities across the LGA, in the context of a changing climate, a growing population and changing demographics over the next 20 years. The document sets out planning priorities, objectives and actions to provide opportunities for social, economic and environmental benefits, while supporting Tweed's vibrant urban, coastal and rural communities.

Planning Priority 3 of the LSPS seeks to increase resilience and minimise the impacts of natural hazards and climate change on the Tweed LGA. The modification application would align with this planning priority, as it would continue to ensure the entirety of the main aquaculture development site is located above Council's Climate Change 2100 1% Annual Exceedance Probability (AEP) flood level.

Planning Priority 6 of the LSPS seeks to promote a strong, sustainable and diverse economy across the Tweed LGA, and to facilitate new investment and local employment opportunities. The modification application would align with this planning priority, as it would support the continued research and commercial cultivation of Australian Bay Lobsters while also allowing for the development of the main aquaculture site into a thriving aquaculture precinct.

3.3 National Aquaculture Strategy

The former Commonwealth Department of Agriculture and Water Resources developed the *National Aquaculture Strategy* (CDAWR, 2017) to support the sustainable growth of the industry. The Strategy recognises aquaculture is an important component of the Australian seafood industry, is necessary for long term food security and requires ongoing innovation and research to evolve and succeed. The Strategy sets out how Australia will achieve its goal to double the current value of the aquaculture industry to \$2 billion a year by 2027. This is consistent with the *National Marine Science Plan 2015-2025*, driving the development of Australia's blue economy (National Marine Science Committee, 2015). The target will be achieved by encouraging development of new industry projects and growth of existing businesses.

The modification application is considered to be consistent with the *National Aquaculture Strategy* as it would help the facility develop into a thriving aquaculture precinct, while also continuing to contribute toward the growth of the Australian aquaculture industry.

3.4 NSW Land Based Sustainable Aquaculture Strategy

The *NSW Land Based Sustainable Aquaculture Strategy* (LBSAS) was developed to provide a focus for facilitating economic development and attracting new aquaculture development to the State. The LBSAS sets out best practice guidelines to promote ecologically sustainable development (ESD) of the land based aquaculture industry in NSW, and aims to simplify the approval process to give greater certainty to investors and the community.

The modification application will continue to support the directions and objectives of the LBSAS by:

- providing on-site emergency accommodation for when staff need to monitor adverse health symptoms in an animal population, maintain site operations during flood events or undertake multi-day research trials
- providing the ability for additional aquaculture species to be grown at the site, subject to the issuing of further aquaculture permit/s in accordance with the relevant requirements of the FM Act
- ensuring the site has ready access to an abundant, permanent and affordable supply of good quality saltwater at all times, via both the approved seawater intake pipeline and the Gold Coast Desalination Plant.

4 Statutory context

4.1 Scope of modifications

The Department has reviewed the scope of the modification application and considers the application can be characterised as a modification as it:

- would not significantly increase the environmental impacts of the development as approved
- is substantially the same development as originally approved
- is of a scale that warrants the use of section 4.55(2) of the EP&A Act.

The Department has considered the scale of the proposed changes, including the installation and use of the on-site accommodation units, and is satisfied the proposed modification is within the scope of section 4.55(2) of the EP&A Act and does not constitute a new development application.

Accordingly, the Department considers that the application should be assessed and determined under section 4.55(2) of the EP&A Act rather than requiring a new development application to be lodged.

4.2 Consent authority

The Minister for Planning and Public Spaces (the Minister) is the consent authority for the application under section 4.5(a) of the EP&A Act. Under the Minister's delegation of 26 April 2021, the Executive Director, Energy, Resources and Industry Assessments, may determine the application under delegation as:

- the application has not been made by a person who has disclosed a reportable political donation under section 10.4 of the EP&A Act
- there are no public submissions in the nature of objections, and
- Council has made a submission by way of objection under the mandatory requirements for community participation listed under Schedule 1 of the EP&A Act.

4.3 Mandatory matters for consideration

The Department undertook a comprehensive assessment of the application against the mandatory matters for consideration as part of the original assessment of DA-282-11-2004-i (under section 79C of the EP&A Act, as in force at the time). This modification application does not result in significant changes that would alter the Department's consideration of the mandatory matters for consideration under section 4.15(1) of the EP&A Act and conclusions made as part of the original assessment.

4.4 Biodiversity Conservation Act 2016

Clause 30A(2)(c) of the Biodiversity Conservation (Savings and Transitional) Regulation 2017 specifies that if the determining authority is satisfied a modification will not increase the impact on biodiversity values, a biodiversity development assessment report (BDAR) is not required.

Under the development consent (as modified), the site was to have been levelled and surrounded by a bund wall to a height of 4.0 m AHD. The additional earthworks proposed under the current modification

application would occur within the existing site footprint and would not result in any biodiversity impacts beyond those considered as part of the original assessment of DA-282-11-2004-i.

In addition, the plant room for the approved seawater pump at Kingscliff Beach would be located within the footprint of an existing amenities structure and would not require the removal of any vegetation within the foreshore area.

For the reasons discussed above, the Department's assessment concludes a BDAR is not necessary for the subject modification application.

5 Engagement

5.1 Department's engagement

In accordance with clause 10 of Schedule 1 to the EP&A Act and clause 118 of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation), as in force at the time the application was lodged, the Department exhibited the application for 15 days from 7 August 2019 until 21 August 2019. Notice of the application was published:

- on the Department's Major Projects website
- at all Service NSW centres
- at Tweed Shire Council's (Council's) Tweed Heads Administration Office
- in the Tweed Daily News – Community Edition.

Previous submitters were notified of the modification application and invited to make a submission. The modification application was also referred to Council and relevant State government authorities for comment.

During the exhibition period, no submissions were received from the general public.

5.2 Government advice

During the exhibition period, advice was received from seven State government authorities, including Council and six State government authorities. A summary of this advice is provided below.

Council objected to the importation and treatment of PASS and ASS at the site and questioned whether this element would satisfy the 'substantially the same' development test outlined under section 4.55(2) of the EP&A Act. Council also objected to the extraction of seawater from JEBH in Tweed Heads, and advised that unless a Probable Maximum Flood (PMF) refuge is provided at the site, it would not support the use of the on-site accommodation units during a flood event.

With regard to the site's wastewater discharge limit, Council noted that effluent from the main aquaculture development site currently discharges via the effluent main located at the Kingscliff STP. As the effluent main was primarily designed to accommodate discharges from the treatment plant, Council advised it does not support any further increase in the site's daily discharge limit beyond 1,800 kL per day.

Finally, Council's submission noted that from a flooding perspective, the additional bulk earthworks across the site are likely to have a negligible effect upon flood levels in the surrounding area. Council also advised it had no concerns in relation to the cultivation of additional aquaculture species at the site.

The **Environment Protection Authority** (EPA) objected to the modification on the basis that PASS and ASS are considered a hazardous waste under the *Waste Classification Guidelines* (EPA, 2014), and questioned whether the importation and treatment of PASS and ASS at the site could be considered 'substantially the same' development under section 4.55(2) of the EP&A Act. The EPA also requested further information in relation to the proposed treatment method, the Applicant's storage and handling procedures and any associated dust, water and odour impacts. The EPA advised it had no specific concerns in relation to the amendment of the development's wastewater discharge limit, but noted the

Applicant must demonstrate that any recognised or potential environmental consequences from the proposed increase will be sustainably managed.

Transport for NSW (TfNSW) requested further information regarding the number, type and frequency of heavy vehicles delivering fill and seawater to the site, and requested a swept path analysis to demonstrate that the proposed vehicles can safely enter and leave the site in all directions of travel. TfNSW also noted the current site access arrangements were the subject of a *Deed of Licence for Site Access* between itself and the Applicant, which expired in September 2016. TfNSW consequently recommended the Applicant liaise with the authority as a matter of urgency to ensure its employees can lawfully access the site.

The **Department of Primary Industries – Fisheries** (DPI Fisheries) indicated it had no objections in relation to the cultivation of additional fish species at the site, and suggested minor updates to the wording of condition 1.3 to reference the FM Act. The authority also noted the sewage system for the on-site accommodation units would need to meet the requirements of State Environmental Planning Policy (Primary Production and Rural Development) 2019 and any future aquaculture infrastructure at the site would need to be considered in accordance with the provisions of the *NSW Land Based Sustainable Aquaculture Strategy* (I&I, 2009).

The Department's **Environment, Energy and Science Group** (EES) noted it had no comments in relation to biodiversity and flooding but requested the Applicant revise its Acid Sulfate Soil Management Plan to ensure the proposed soil evaluation, on-site treatment and laboratory testing methods align with the *Acid Sulfate Soil Manual* (ASSMAC, 1998) and the *National Acid Sulfate Soils Identification and Laboratory Methods Manual* (WQA, 2018). At the time of the exhibition, Aboriginal cultural heritage fell under the remit of EES, and the authority indicated it had no comments in relation to this matter.

The **Department of Primary Industries – Agriculture** (DPI Agriculture) noted any PASS encountered at the site should be properly tested and, if necessary, adequately treated in accordance with the *Acid Sulfate Soil Manual* (ASSMAC, 1998).

The Department's **Water Group** noted the development's groundwater monitoring plan would need to be updated in consultation with the authority, to ensure that any long-term impacts associated with the importation, treatment and use of ASS are appropriately managed.

Following conclusion of the exhibition period, the Applicant undertook extensive consultation with the Department, Council and the relevant State government authorities in relation to the concerns raised. The Applicant found it difficult to source suitably qualified and experienced consultants at this time, which delayed the submission of any further supporting information until early 2021.

5.3 Response to submissions

On 8 March 2021, the Applicant provided a Response to Submissions (RTS) on the issues raised during the exhibition period (see **Appendix A**). As part of the RTS, the Applicant formally withdrew the importation and treatment of PASS and ASS and the extraction of seawater from JEBH from the subject modification application.

The Applicant also suggested wording for condition 4.4 of the development consent to allow Council to approve further increases in the site's daily effluent discharge limit and sought further minor

amendments to the approved hours for construction of the seawater intake pipeline and seawater truck deliveries from the Gold Coast Desalination Plant.

Additional documentation was also provided to address the concerns raised by Council and the relevant government authorities, including:

- a Building Code of Australia (BCA) compliance report for the existing on-site accommodation structures, which notes the existing structures would comply with all relevant requirements under the BCA, with the exception of access for people with disabilities
- a flood response assessment plan, outlining the evacuation procedures which would be followed at the site for flood levels above and below 4.0 m AHD
- a revised traffic impact assessment (TIA), which provides an assessment of heavy vehicle movements associated with the continued filling of the site and daily seawater deliveries
- an updated list of condition amendments proposed by the Applicant.

The RTS was made publicly available on the Department's Major Projects website and provided to Council and the relevant government authorities to consider whether it adequately addressed the key issues raised during the exhibition period. A summary of their responses is provided below:

Council reiterated that, in the absence of a PMF refuge, it does not support the installation and use of on-site accommodation units for emergency/research purposes. This is because the site will become an isolated island during a 100-year ARI flood event, and evacuation by land will not be possible if flood levels were to increase further. In the event that this issue could be resolved by the Applicant, Council recommended several conditions to govern certification of the accommodation units which have already been installed at the site. Council also sought further information from the Applicant in relation to the potential dust impacts associated with the additional bulk earthworks and requested an updated version of the site's conceptual masterplan with all structures/uses clearly labelled.

In addition, Council indicated it had no concerns in relation to the cultivation of additional aquaculture species, the amended seawater supply arrangements and the extended hours of construction for the seawater intake pipeline. Council also provided suggested wording in relation to condition 4.4 of the development consent, which would allow it to approve an increase in the site's daily wastewater discharge limit subject to the Applicant entering into a cost sharing arrangement to upgrade the effluent outfall main.

The **EPA** noted that condition L3.1 of the site's Environment Protection Licence (EPL) currently limits the site's wastewater discharge rate to a maximum of 1,800 kL per day. Consequently, if any further increase beyond this limit is required, the Applicant would need to apply separately to vary its EPL. The EPA also recommended the Applicant be required to prepare a Soil and Water Management Plan and an Air Quality Management Plan to manage erosion, stormwater and dust impacts associated with the additional bulk earthworks.

TfNSW noted several discrepancies within the Applicant's updated TIA, and subsequently requested further information in relation to the annual volume of fill to be brought to the site, the total filling period and the heavy vehicle generation figures for the proposed modification. Further justification was also sought from the Applicant as to why an 'Auxiliary Left Turn' (AUL) intersection treatment is not required at the Tweed Valley Way / site access road intersection. TfNSW also noted that the Traffic Management Plan (TMP) required by condition 4.34 of the development consent would likely need to be updated as a result of the proposed modification, and requested the Department undertake a compliance review to confirm whether the requirement for a TMP had previously been satisfied.

DPI Fisheries advised it did not support the Applicant's request to replace the term 'fish' in the development consent with 'marine life' or 'marine species', as these terms would include species which do not fall under the remit of the FM Act. Consequently, the authority suggested several edits to the development consent to ensure the introduction of additional aquaculture species would continue to align with the aquaculture permit process and the requirements of the FM Act.

EES noted the importation and treatment of PASS and ASS was no longer being proposed by the Applicant, and subsequently indicated it had no further comments in relation to the modification.

After the RTS was made publicly available on the Major Projects website, the Department also received a response from Gales-Kingscliff Pty Ltd (Gales), who hold over 200 ha of agricultural land in the vicinity of the main aquaculture site. In its letter, Gales highlighted the strategic importance of the Tweed Valley Way / site access road intersection, and the potential benefits available if through access was provided to eastern landholders (Gales, Hanson Australia, Council, etc). Gales also raised concerns in relation to the volume of fill proposed to be brought to the site and the associated number of heavy vehicles using the aforementioned intersection.

5.4 Additional information

On 20 July 2021, the Applicant provided a further response to the outstanding issues raised by Council and TfNSW. The response was supported by an updated version of the site's conceptual masterplan (with all structures labelled), a further revised TIA and an updated TMP for the main aquaculture development site, which outlined new measures which would be employed to minimise congestion on the site access road and at the Tweed Valley Way interchange.

The response was made publicly available on the Department's Major Projects website and provided to TfNSW to consider whether it adequately addressed its outstanding issues.

TfNSW advised it had no further concerns to the proposed modification and reiterated that the final approved TMP must detail the measures which would be implemented to protect decelerating vehicles turning left off Tweed Valley Way onto the site access road. TfNSW also recommended the Department ensure the assumptions made in the TIA appropriately reflect existing and future traffic movements to/from the site.

Following receipt of this response, the Department met with the Applicant on several occasions to discuss the outstanding concerns raised in relation to the proposed modification. In August 2021, the Department also met with Council to discuss its ongoing concerns in relation to the proposed modification. During this meeting, Council reiterated that it did not support the use of the on-site accommodation units during a flood event without a suitable PMF refuge being provided at the site.

6 Assessment

The Department has assessed the merits of the proposed modification. During this assessment, the Department has considered the:

- SEE, RTS and additional information provided in support of the proposed modification
- advice received from the State government authorities and Council
- letter received from Gales
- the original development application and subsequent modification applications, their accompanying documents and the corresponding assessment reports
- relevant environmental planning instruments, policies and guidelines
- requirements of the EP&A Act, including the objects of the EP&A Act.

The Department considers the key assessment issue to be the installation and use of staff accommodation units at the main aquaculture development site. The Department's assessment of other issues is provided in **Table 2** below.

6.1 On-site accommodation units

As part of the proposed modification, the Applicant is seeking approval for the use of three existing on-site accommodation units by Farm 1 staff, and the installation and use of six additional accommodation units by staff associated with Farms 2 and 3.

The accommodation units would be used to help maintain critical operations during flood events, to undertake 24-hour monitoring of sick animals and to facilitate multi-day research activities by on-site staff or external researchers.

In its assessment of the modification, the Applicant emphasised that the proposed accommodation units will play a crucial role in ensuring the health and safety of its staff and the prevention of further mass-mortality events within the on-site animal population.

In its submission on the SEE, Council requested the Applicant prepare a Flood Response Assessment Plan (FRAP) for the on-site accommodation units, in accordance with the relevant requirements of the *Tweed Development Control Plan 2008*. The Applicant's RTS included a FRAP for the main aquaculture development site, which outlines the evacuation procedures which would be implemented for varying flood events up to and including the PMF level. In the event that flood waters are predicted to exceed the level of the main aquaculture development site (4.0 m AHD), all staff would be directed to evacuate the site.

Both the Department and Council also requested the Applicant confirm whether the existing on-site accommodation units would comply with the relevant requirements of the BCA. The Applicant subsequently prepared a BCA compliance report for these units, which notes the structures would comply with all relevant requirements under the BCA, excluding access for people with disabilities. The Applicant has argued these non-compliances are acceptable due to the physical requirements of those staff who are directly involved in the care or research of animals at the site.

Council has advised the Department that, unless an adequate PMF refuge is provided at the site, it does not support the installation and use of any accommodation units for emergency/research purposes. Given the site's access road has been built below the 100-year ARI flood level, Council is concerned

that workers' lives may be placed at risk if predicted flood levels are revised after the site access road has been inundated.

In response, the Applicant reiterated that the on-site accommodation units would not be used in circumstances where floodwaters are expected to exceed 4.0 m AHD and, consequently, a PMF refuge would be of no utility. As the PMF level in the vicinity of the site is 8.3 m AHD, the Applicant contends it would not be feasible to provide a PMF refuge at the site, given it would require the construction of a reinforced structure that is taller than the existing farm buildings. In addition, the Applicant has advised that a high level evacuation route from the site is possible up to and including the 20-year ARI flood level (2.3 m AHD).

The Department notes the development consent (as modified) permits 24-hour operations at the site, with no restriction on use during a flood event. Given the above, the Department accepts the accommodation units would help support the health and wellbeing of those staff who are required to maintain critical operations during a flood event, undertake overnight monitoring of sick animals and participate in multi-day research activities.

However, the Department also acknowledges the concerns raised by Council and the potential risk to worker safety, particularly in the event predicted flood levels increase after the site access road has been inundated and evacuation by land is no longer possible.

In order to strike a balance between Council's concerns and the potential benefits offered by the on-site accommodation units, the Department has recommended the following conditions of consent:

- the accommodation units are not to be used if floodwaters in the vicinity of the main aquaculture development site are expected to exceed the 20-year ARI flood level (2.3 m AHD)
- the Applicant must prepare a Flood Emergency Response Plan (FERP) for the on-site accommodation units, outlining the flood notification and evacuation protocols which would be implemented in the event floodwaters are predicted to exceed the 20-year ARI flood level.

By restricting the use of the on-site accommodation units to flood events below the 20-year ARI flood level, any staff staying in these units would be required to vacate these buildings and either evacuate the site by land (should predicted flood levels be revised/increase as the flood event unfolds) or commence their next shift (in line with the hours of operation permitted under the consent). The Applicant's FERP would include details of flood warning procedures, on-site assembly points and evacuation routes, evacuation protocols and awareness training for both employees and contractors. The Applicant would be able to draw upon the comprehensive flood notification systems provided by the Bureau of Meteorology and the State Emergency Service (SES) for areas in the vicinity of the Tweed River. The FERP would also be reviewed on an annual basis and after a significant flood event (greater than the 20-year ARI flood level) to ensure it remains contemporary to on-site operations.

The Department has also recommended the following modifications to the conditions of consent to manage both the day-to-day usage of the on-site accommodation units and the certification of the three units which have already been installed at the site:

- the accommodation units are only to be occupied by persons employed by the Applicant and/or directly associated with the operation of the development
- the maximum length of stay for any individual within the accommodation units is limited to 28 consecutive days
- the accommodation units are only used for the purposes described in the Applicant's SEE and RTS

- the Applicant must keep accurate records of each time the accommodation units are used, and must make these records available to the Planning Secretary or Council upon their request
- prior to their use, the Applicant must obtain all necessary building information certificate(s) from Council for the three accommodation units which have already been installed at the site.

While Council had also recommended conditions of consent requiring the Applicant to obtain an approval under section 68 of the *Local Government Act 1993* (LG Act) for the accommodation units' water and sewer connections, these requirements have not been directly referenced in the recommended instrument of modification. This is because condition 1.7 of the development consent (as modified) requires the Applicant to ensure that all licences, permits and approvals required for the development, including approvals under section 68 of the LG Act, are obtained and kept up to date as required.

The Department is satisfied the above conditions will ensure that a balanced outcome is delivered for the main aquaculture development site, while also recognising the development consent (as modified) already permits operational activities during flood events up to and including the 100-year ARI flood level. With these conditions in place, the Department is satisfied that both the existing and future accommodation units can be appropriately managed to minimise any potential risk to staff staying in the units during a flood event.

The Department's assessment concludes the installation and use of the on-site accommodation units is acceptable in the context of the overall development, and that their day-to-day use can be appropriately managed through the recommended modifying conditions of consent.

6.2 Other issues

The Department's assessment of other issues is provided in **Table 2** below.

Table 2 | Assessment of other issues

Assessment	Recommendation
Traffic impacts	
<ul style="list-style-type: none"> • The bulk earthworks would generate additional heavy vehicle movements, which has the potential to impact on the safety and operational performance of the surrounding road network. • In its submission on the RTS, TfNSW noted several discrepancies in the Applicant's updated TIA, and sought further information regarding the TIA's assumptions and whether an AUL intersection treatment is required at the Tweed Valley Way/ site access road intersection. • Gales also raised concerns in relation to the volume of fill proposed to be brought to the site and the associated number of heavy vehicles using the site access road. • The Applicant provided a further revised TIA, which clarified that approximately 1,875,000 m³ of fill would be required to fill the 	<p>Require the Applicant:</p> <ul style="list-style-type: none"> • update the TMP for the main aquaculture development site within three months of the approval of MOD 4 • complete the guardrail relocation works shown in Figure 6.2 of the updated TIA within

Assessment	Recommendation
<p>remainder of the site, equating to 375,000 m³ per annum over a 5-year period. This would generate up to 43 heavy vehicle trips (comprising one movement to/from the site) per day, or approximately 7.8 heavy vehicle movements per hour. These figures were based on previous filling activities at the site.</p> <ul style="list-style-type: none"> • The Applicant's SIDRA modelling found heavy vehicle movements associated with the site would have a negligible impact on the Level of Service (LoS) for vehicle travelling along Tweed Valley Way under year 2025 traffic conditions (minimum LoS B). The revised TIA also noted that conditions would improve further once regular seawater truck deliveries cease in late 2022. • With regard to the need for an AUL intersection treatment, the revised TIA advised that given the curvature and speed limit of the highway off-ramp, heavy vehicles are likely to turn from the through lane regardless of whether a left-hand turn lane is provided. To accommodate these movements, the updated TIA recommended the existing guardrail be relocated to increase the radii of the left-hand turn movement. • The Applicant also provided an updated TMP for the main aquaculture development site, to help minimise the risk of collisions occurring between heavy vehicles accessing the site and other vehicles on the public road network. The updated TMP includes a radio arrival/ departure notification procedure to ensure only one heavy vehicle uses the site access road at any one time. • TfNSW subsequently advised it had no further concerns to the proposed modification and reiterated that the final approved TMP must detail the measures which would be implemented to protect decelerating vehicles turning left off Tweed Valley Way onto the site access road. TfNSW also noted the Hanson DA proposes the construction of a new roundabout on Tweed Valley Way which, if approved, would significantly improve the access arrangements for the subject site (see Figure 3). • The Department has considered the information submitted by the Applicant, the advice provided by TfNSW and the comments made by Gales. The Department is satisfied the heavy vehicle movements associated with the additional bulk earthworks would be adequately accommodated on the existing road network, particularly given: <ul style="list-style-type: none"> – the site maintains direct access to Tweed Valley Way and the Pacific Motorway – the site would generate a maximum of 7 inbound and 6 outbound heavy vehicle movements per hour during the 	<p>24 months of the approval of MOD 4.</p>

Assessment	Recommendation
<p>morning and afternoon peak periods (one heavy vehicle every 4.6 minutes).</p> <ul style="list-style-type: none"> – the development consent already includes a requirement for a site-specific TMP, which includes measures to protect decelerating vehicles turning left into the site from collisions with southbound through traffic. • The Department has recommended a new condition to ensure the submitted TMP is updated to include additional measures for protecting decelerating vehicles turning left into the site access road and to ensure operational staff are informed of peak fill haulage periods. • The Department has also recommended a new condition requiring the Applicant complete the guardrail relocation works shown in the updated TIA to the satisfaction of TfNSW. This condition would provide flexibility for the upgrade works to be waived in the future, should the Hanson DA be approved and a roundabout is constructed at the Tweed Valley Way / site access road intersection. • The Department's assessment concludes the traffic impacts associated with the proposed modification would be acceptable and can be appropriately managed through the implementation of the development's TMP and minor upgrade works to the Tweed Valley Way / site access road intersection. 	
Daily discharge rate	
<ul style="list-style-type: none"> • As part of the proposed modification, the Applicant is seeking to amend condition 4.4 of the development consent to permit a daily effluent discharge rate of 1,800 kL per day (currently limited to 600 kL per stage) and to provide Council with the ability to approve further increases in the site's daily discharge limit beyond this limit. • The Applicant has requested the proposed amendments to help simplify its operations and provide the flexibility for Stages 2 and 3 to accommodate fish or marine vegetation species with differing wastewater generation rates. • In its submission on the RTS, Council provided recommended wording for condition 4.4 which would allow it to approve further increases in the site's daily wastewater discharge limit, subject to the Applicant entering into a cost sharing arrangement to upgrade the effluent outfall main. • The EPA noted that condition L3.1 of the site's EPL currently limits the site's wastewater discharge rate to a maximum of 1,800 kL 	<p>Require the Applicant:</p> <ul style="list-style-type: none"> • ensure the volume of effluent discharged from the site does not exceed a total of 1,800 kL per day.

Assessment	Recommendation
<p>per day. Consequently, the EPA advised any further increase beyond this limit would require a separate variation to the site's EPL and sufficient evidence to support an increase in the daily discharge limit.</p> <ul style="list-style-type: none"> • The Department notes that the impact of the development on the Tweed River's water quality formed a key issue during the original development application and was the primary reason condition 4.4 was imposed. • The Department has reviewed the information provided by the Applicant in the context of the original development application and is satisfied the removal of the 600 kL staging limit from condition 4.4 would provide greater flexibility while still ensuring the environmental impacts of the overall development can be appropriately managed. The Department has subsequently recommended this amendment be incorporated into the development consent. • However, in the absence of further assessment of any associated water quality impacts, the Department does not support providing Council with the ability to approve further increases in the site's daily discharge limit beyond 1,800 kL per day. • Should the Applicant wish to increase the site's daily discharge limit further, it would need to apply for a further modification to the development consent and the existing EPL. Any such modification application would need to include a detailed assessment of any associated water quality impacts. • The Department's assessment concludes the recommended amendments would provide greater flexibility to the Applicant while also ensuring the development does not negatively impact upon the Tweed River's water quality. 	
Additional aquaculture species	
<ul style="list-style-type: none"> • As part of the proposed modification, the Applicant is seeking to amend the development consent to permit the research and commercial cultivation of additional aquaculture species at the site. • In its SEE and RTS, the Applicant noted the proposed modification would provide it with the ability to cultivate fish and marine vegetation species which are complementary to Australian Bay Lobsters, and further support the site's development as a thriving aquaculture precinct. • Both Council and the EPA did not raise any concerns in relation to the cultivation of additional aquaculture species. 	<p>Require the Applicant:</p> <ul style="list-style-type: none"> • obtain further aquaculture permits under the FM Act prior to the cultivation of any additional aquaculture species • continue to manage cultivation activities in accordance with the development's

Assessment	Recommendation
<ul style="list-style-type: none"> DPI Fisheries indicated it had no objections in relation to the proposed modification and provided suggested wording for condition 1.3 to highlight that any future species cultivated at the site will need to be authorised under an aquaculture permit issued in accordance with the FM Act. The Department considers the cultivation of additional aquaculture species at the site would not result in any additional environmental impacts beyond those previously assessed as part of original development application. The Applicant would be required to obtain further aquaculture permit/s prior to the cultivation of any additional species, and on-site operations would continue to be managed in accordance with the development's OEMP, the disease management requirements outlined under conditions 4.61 to 4.63 (see below), the daily effluent discharge limit outlined under condition 4.4 and the development's EPL. The Department's assessment concludes any potential impacts associated with the proposed modification are acceptable and can continue to be managed in a sustainable manner. The Department has subsequently recommended minor updates to condition 1.3 of the development consent to reflect the wording recommended by DPI Fisheries. 	<p>OEMP, disease management requirements and daily effluent discharge limit, as required by the existing conditions of consent.</p>
Dust impacts	
<ul style="list-style-type: none"> The proposed modification involves additional bulk earthworks across the site, which may generate dust and particulate emissions. In its submission on the SEE, Council requested further information from the Applicant in relation to the dust control measures which would be employed during construction. In its RTS, the Applicant noted that the existing fill at the site was managed in accordance with the dust control measures outlined in the development's approved Construction Environmental Management Plan (CEMP), and that these measures would continue to be implemented for the additional bulk earthworks. These measures include, but are not limited to, regular water spraying, compaction of fill material, and landscaping stabilisation works. While the additional bulk earthworks would occur over a 5-year period, the Applicant would stage the works to minimise the extent of exposed topsoil at any one time. 	<p>Require the Applicant:</p> <ul style="list-style-type: none"> review and, if necessary, update the development's CEMP implement the development's CEMP for the duration of the additional bulk earthworks, as required by the existing conditions of consent.

Assessment	Recommendation
<ul style="list-style-type: none"> • In its submission on the RTS, Council reiterated its comments in relation to dust impacts. The EPA also recommended the Applicant be required to prepare a Soil and Water Management Plan and an Air Quality Management Plan to help manage these impacts. • The Department has reviewed the material provided by the Applicant and notes that air and dust emissions associated with the construction of an on-site borrow pit and bund walls were assessed as part of the original development application. This assessment concluded such impacts could be appropriately managed through the implementation of well-known and commonly applied mitigation measures and the implementation of a CEMP. • The Department is satisfied the existing conditions requiring the Applicant to implement dust mitigation measures and a site-specific CEMP are sufficient in addressing the concerns raised by Council and the EPA in relation to air and dust emissions. • To ensure the development's CEMP remains relevant, the Department has recommended a new condition to ensure that all existing management plans are reviewed and, if necessary, updated following the determination of MOD 4. • The Department's assessment concludes the air and dust emissions associated with the proposed modification would be minimal and will be appropriately managed through the development's CEMP and the Applicant's existing dust mitigation measures. 	
<p>Visual impacts</p> <ul style="list-style-type: none"> • The proposed bulk earthworks and the installation of the pumping station's electrical equipment has the potential to result in additional visual impacts for surrounding sensitive receivers. • In its SEE, the Applicant noted the main aquaculture development site is largely screened from residential viewpoints due to the local topography and existing vegetation areas. • In order to minimise any visual impacts associated with the additional bulk earthworks, the Applicant would construct a two-metre high landscaping bund around the site's perimeter to soften the appearance of the farm buildings, and would continue to ensure external lighting is screened and directed in such a manner so as not to cause a nuisance to surrounding properties and the Pacific Motorway. 	<p>Require the Applicant:</p> <ul style="list-style-type: none"> • landscape the perimeter bund wall and/or perimeter batters, in accordance with the approved landscape management plan • install the pumping station's electrical equipment in accordance with the submitted plans.

Assessment	Recommendation
<ul style="list-style-type: none"> • The Applicant's RTS also noted the pumping station's electrical equipment at Kingscliff Beach would be fully contained within an existing amenities block and would not be visible from any public or private viewpoints. • In its submission, Council did not raise any concerns in relation to visual impacts. • The Department has reviewed the Applicant's assessment and is satisfied the visual impacts associated with the proposed modification would be minor, given the main aquaculture site would be largely shielded from surrounding sensitive receivers by on-site landscaping and the pumping station's electrical equipment would be fully contained within an existing structure. • The Department has recommended minor updates to conditions 4.15 and 4.66 of the development consent to ensure the additional bulk earthworks are suitably landscaped and the pumping station is installed in accordance with the submitted plans. • The Department's assessment concludes the visual impacts of the proposed modification are acceptable and would be appropriately managed through the recommended conditions of consent. 	
Flooding impacts	
<ul style="list-style-type: none"> • The proposed bulk earthworks have the potential to impact on flood levels in the surrounding area. • In its SEE, the Applicant noted the development consent (as modified) permits the construction of a bund wall and associated flood protection measures (i.e. floodgates) to protect the main aquaculture development site during a 100-year ARI flood event. • The Applicant's assessment concluded the additional bulk earthworks proposed under the modification application would not result in further impacts to floodplain storage and flood flow beyond what was considered under the original development application, as the additional fill would be fully contained within the extent of the approved bund wall. • In its submission on the SEE, Council concurred with the Applicant's assessment and noted the Tweed Valley Floodplain Risk Management Study concluded the original bund wall design would have had a negligible effect on flooding in the surrounding area. • The Department agrees with the Applicant's assessment and the advice provided by Council and is consequently satisfied that any 	<p>Require the Applicant:</p> <ul style="list-style-type: none"> • ensure either an impervious perimeter bund is constructed around the main aquaculture development site, or the entire site is filled to a height of 4.0 m AHD.

Assessment	Recommendation
<p>potential flood impacts associated with the additional bulk earthworks would be negligible.</p> <ul style="list-style-type: none"> The Department has recommended conditions 4.13 and 4.15 of the development consent be updated to provide the Applicant with the ability to either construct a perimeter bund and associated flood protection measures or raise the entire site to a height of 4.0 m AHD. The Department's assessment concludes the additional bulk earthworks would not adversely affect flood behaviour in the vicinity of the site, subject to the recommended conditions of consent. 	
Biosecurity	
<ul style="list-style-type: none"> The development consent (as modified) includes several conditions to manage and control any diseases discovered at the site which have been identified as a 'declared disease' under Division 4 or Part 6 of the FM Act. Since the development consent was originally approved, Division 4 and Part 6 of the FM Act has been repealed, and biosecurity/disease management now falls under the remit of the <i>Biosecurity Act 2015</i> (Biosecurity Act) and its associated regulations. In consultation with DPI Fisheries, the Department has prepared updated wording for conditions 4.61 to 4.64 to ensure that these conditions align with the updated legislative framework. The proposed amendments will also ensure that any diseases found to be affecting other aquaculture species that would be permitted to be cultivated at the site as a result of this modification, are appropriately managed and controlled by the Applicant, in accordance with the requirements of DPI Fisheries. 	<p>Require the Applicant:</p> <ul style="list-style-type: none"> notify DPI Fisheries within 24 hours of the discovery of any disease or other notifiable matter listed under the Biosecurity Act and its associated regulations carry out any direction given by DPI Fisheries for the treatment or destruction of fish and marine vegetation species.
Administrative amendments	
<p><u>Seawater truck deliveries</u></p> <ul style="list-style-type: none"> The Applicant has requested the development consent be updated to permit seawater truck deliveries from 6am – 7pm on weekdays (deliveries are currently restricted to 7am – 6pm on weekdays). This arrangement would allow the Applicant to align its delivery schedule with the Gold Coast Desalination Plant's pumping schedule. 	<p>Require the Applicant:</p> <ul style="list-style-type: none"> ensure seawater truck deliveries only occur between 6am – 7pm on weekdays and 8am – 1pm on Saturdays ensure it obtains the approval of the

Assessment	Recommendation
<ul style="list-style-type: none"> • In its submission, Council did not raise any concerns in relation to the proposed amendment. • The Department is satisfied the amendment is minor in nature and would not result in any adverse impacts, particularly given the Applicant's seawater haulage vehicles would use the Pacific Motorway to travel to/from the desalination plant. • Accordingly, the Department has recommended condition 4.53 be amended to reflect the updated delivery hours. <p><u>'Out of hours' requests</u></p> <ul style="list-style-type: none"> • The Applicant has requested the development consent be updated to provide the Planning Secretary with the ability to approve 'out of hours' construction works on a case-by-case basis. The Applicant has advised the proposed amendment would help it reduce the overall construction timeline for the seawater intake pipeline, particularly when drilling through unfavourable soil conditions. • In its submission, Council did not raise any concerns in relation to the proposed amendment. • The Department is satisfied the amendment is acceptable, particularly as it would help reduce the overall construction timeline for the seawater intake pipeline and subsequently reduce the level of disruption to residents in Kingscliff and Chinderah. • Accordingly, the Department has recommended a new condition (condition 4.51a) be added to the development consent allowing the Planning Secretary to approve 'out of hours' requests. • Condition 4.51a utilises the Department's standard wording for such conditions and allows for other construction activities to be undertaken outside of the approved hours, where directed by NSW Police or required in an emergency to avoid the loss of lives, property or to prevent environmental harm. <p><u>Other administrative amendments</u></p> <ul style="list-style-type: none"> • The Applicant has requested a number of other amendments to the development consent, which primarily seek to delete 'completed' conditions (i.e. those which have already been satisfied by the Applicant) or update terms related to the aquaculture facility (i.e. changing 'seawater intake pipeline' to 'seawater supply pipeline'). • The Applicant has requested these amendments in order to streamline its compliance reporting requirements and to ensure the development consent remains contemporary to current on-site activities. 	<p>Planning Secretary prior to undertaking 'out of hours' works.</p>

Assessment	Recommendation
<ul style="list-style-type: none"> • The Department is supportive of updating the term 'Dreamtime Beach' to 'Kingscliff Beach', as this term more accurately reflects the section of the beach where the seawater intake pipeline and its associated pumping station will be located. • However, the Department notes most of the other term changes proposed by the Applicant would contradict the language used in the original development application and subsequent modifications (including the documentation submitted in support of the subject modification application). Accordingly, the Department does not support the other term changes proposed by the Applicant. • In addition, the Department notes that in <i>Ku-ring-gai Council v Buyozo Pty Ltd</i> [2021] NSWCA 177, the Court of Appeal found that modifying conditions of consent can only be prospective, and that after a condition has been satisfied it can no longer be modified. Accordingly, the Department does not support the deletion of conditions which have been satisfied by the Applicant. • The Department's assessment concludes that while the proposed amendment to the term 'Dreamtime Beach' is minor and can be supported, the other amendments proposed by the Applicant would be unnecessarily contradictory or would fall outside the scope of section 4.55(2) of the EP&A Act. 	

7 Evaluation

This Department has reviewed the SEE, RTS and all submissions, taking into consideration the relevant matters under section 4.15 of the EP&A Act and the objects of the EP&A Act.

The Applicant is proposing to modify the consent to permit additional bulk earthworks across the site, the installation and use of short-term staff accommodation units, the cultivation of additional aquaculture species and to make several administrative amendments.

The Department exhibited the modification and received advice was received from seven government authorities, including Council and six State government authorities. A letter was also received from Gales in response to the Applicant's RTS. The correspondence received primarily raised matters relating to the proposed on-site accommodation units, the need for a PMF refuge at the site, additional traffic impacts and air emissions associated with the additional bulk earthworks.

The Department's assessment considered the installation and use of the on-site accommodation units to be the key matter for consideration. While the Department recognises the concerns raised by Council regarding risk to on-site workers during flood events greater than the 100-year ARI flood level, it also accepts that the accommodation units would help support the health and wellbeing of those staff who are required to maintain critical operations during certain flood events, undertake overnight monitoring of sick animals and participate in multi-day research activities. The on-site accommodation would subsequently help to improve the operational efficiency of the development and reduce the potential for future mass mortality events to occur at the facility.

Allowing the accommodation units to be used during flood events up to the 20-year ARI flood level will strike an appropriate balance between Council's concerns and the Applicant's operational requirements, and acknowledges the development consent (as modified) does not restrict the use of the development during a flood event. Subject to the recommended conditions of consent, the Department is satisfied that both the existing and future accommodation units can be appropriately managed to minimise any potential risk to staff staying in the units during a flood event.

The Department has also recommended a range of detailed conditions to address any residual traffic, dust and visual impacts associated with the other elements of the modification application.

The Department's assessment concludes the modification is appropriate on the basis that it would:

- provide on-site emergency accommodation for when staff need to monitor adverse health symptoms in an animal population, maintain site operations during minor flood events or undertake multi-day research trials
- support the continued research and commercial cultivation of Australian Bay Lobsters while also allowing for the development of the main aquaculture site into a thriving aquaculture precinct
- not significantly increase the environmental impacts of the development beyond those assessed under the original development application.

Consequently, the Department is satisfied that the modification should be approved, subject to the recommended modifying conditions of consent.

8 Recommendation

It is recommended that the Executive Director, Energy, Resources and Industry Assessments, as delegate of the Minister for Planning and Public Spaces:

- **considers** the findings and recommendations of this report
- **determines** that the application DA282-11-2004-I-Mod-4 falls within the scope of section 4.55(2) of the EP&A Act
- **forms the opinion** under clause 30A(2)(c) of the Biodiversity Conservation (Savings and Transitional) Regulation 2017 that a BDAR is not required to be submitted with this application as the application will not increase the impact on biodiversity values on the site
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to approve the modification
- **agrees** with the key reasons for approval listed in the draft notice of decision
- **modify** the consent DA-282-11-2004-i
- **signs** the attached approval of the modification (**Appendix B**).

Recommended by:



14 December 2021

Joanna Bakopanos

Team Leader

Industry Assessments

Recommended by:



16 December 2021

Chris Ritchie

Director

Industry Assessments

9 Determination

The recommendation is **Adopted** by:

Clay Preshaw

Executive Director

Energy, Resources and Industry Assessments

as delegate of the Minister for Planning and Public Spaces

Appendices

Appendix A – List of documents

The Department has relied upon the following key documents during its assessment of the proposed development:

Modification application

- the document titled 'SSD Modification Application to DA 282-11-2004-i MOD 4' prepared by North Point Advisory, dated June 2019 and all attachments

Response to submissions

- the document titled 'Response to Submissions – Australian Bay Lobster Producers Limited Facility – Modification 4 to DA 282-11-2004-i' prepared by Australian Bay Lobster Producers Limited, dated 15 February 2021 and all attachments

Additional information

- the letter titled 'Response to Further Submissions' prepared by Australian Bay Lobster Producers Limited, dated 9 July 2021 and all attachments
- the email titled 'RE: Modification 4' prepared by Australian Bay Lobster Producers Limited, dated 21 July 2021 and all attachments.

Submissions and advice

- all advice received from the relevant government authorities and Council
- the letter received from Gales-Kingscliff Pty Ltd.

All documents relating to DA-282-11-2004-I-MOD-4 may be viewed on the Department's website at: <https://www.planningportal.nsw.gov.au/major-projects/project/16656>.

Other documents

- DA-282-11-2004-i and all documentation submitted in support of that application and the Department's assessment report.

All documents relating to DA-282-11-2004-i may be viewed on the Department's website at: <https://www.planningportal.nsw.gov.au/major-projects/project/13411>.

Appendix B – Notice of modification

The modifying instrument for DA282-11-2004-I-Mod-4 may be found on the Department's website at:
<https://www.planningportal.nsw.gov.au/major-projects/project/16656>.

Appendix C – Consolidated consent

The consolidated consent for DA-282-11-2004-i (as modified) may be found on the Department's website at: <https://www.planningportal.nsw.gov.au/major-projects/project/16656>.