INSERT COMPANY LOGO

Construction and Deployment Plan

&

Traffic Management Plan

Prepared By: *Insert Author*

Insert Month Year

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1 Introduction

The Construction and Deployment Plan along with the Traffic Management Plan have been prepared as a combined document as the two matters are interrelated.

The plans have been developed to identify and mitigate potential impacts associated with the construction, deployment and operational stages of the INSERT LEASE NAME and the use of vehicles and vessels during these stages. The Traffic Management Plan component also includes the daily operational traffic activities.

In accordance with consent condition INSERT DETAILS (e.g. C2 of the State Significant Infrastructure Approval SS1-5118), the Construction and Deployment Plan component of this document details the following:

- LIST DOT POINTS OF CONSENT CONDITIONS
- E.g. Details of the location of the land based site(s);
- E.g. Indicative time frames for construction and deployment activities;
- E.g. Details of traffic, noise and waste management;
- E.g. Procedures and mechanisms used to inform the community and stakeholders of the development activities;
- E.g. Processes to receive and manage feedback and complaints; and
- E.g. Details regarding the decommissioning of the land based construction site(s).

In accordance with consent condition INSERT DETAILS (e.g. C5A of the State Significant Infrastructure Approval SS1-5118), the Traffic Management Plan component of this document details the following:

- LIST DOT POINTS OF CONSENT CONDITIONS
- E.g. Details of the specifications of the navigation aids;
- E.g. Details of towage plan for deployment of sea pens;
- E.g. Procedures in the event of a break-away;
- E.g. Processes to receive and manage feedback and complaints; and
- E.g. Procedures and mechanisms used to inform the community and stakeholders of the deployment activities and marine safety issues.

INSERT PROPONENT undertook consultation with NSW Roads and Maritime Services regarding its requirements for the establishment and operation of the INSERT LEASE NAME.

CONSULT WITH NSW RMS

2 Land Based Sites

The land based sites currently identified for the construction, deployment, storage of equipment and feed, operational base, research facilities and staff office facilities are:

- INSERT
- INSERT
- INSERT

If any additional land based sites are needed, INSERT PROPONENT will progress these under a separate Part 4 application under the *Environmental Planning and Assessment Act 1979*.

2.1 INSERT LAND BASE SITE 1

The INSERT LAND BASE SITE is located at XXXXXX (Figure 1) approximately XX km from XXXXXX in the XXXX Council area. The SITE 1 is approximately XX km from INSERT RELEVANT LAND MARK and is a INSERT DESCRIPTION OF SITE (e.g. multi-disciplinary centre with staff from several units within the Company).

The site is subject to regular light and heavy vehicle traffic including over XX staff cars along with vessel movements from its shallow/deep water wharf.

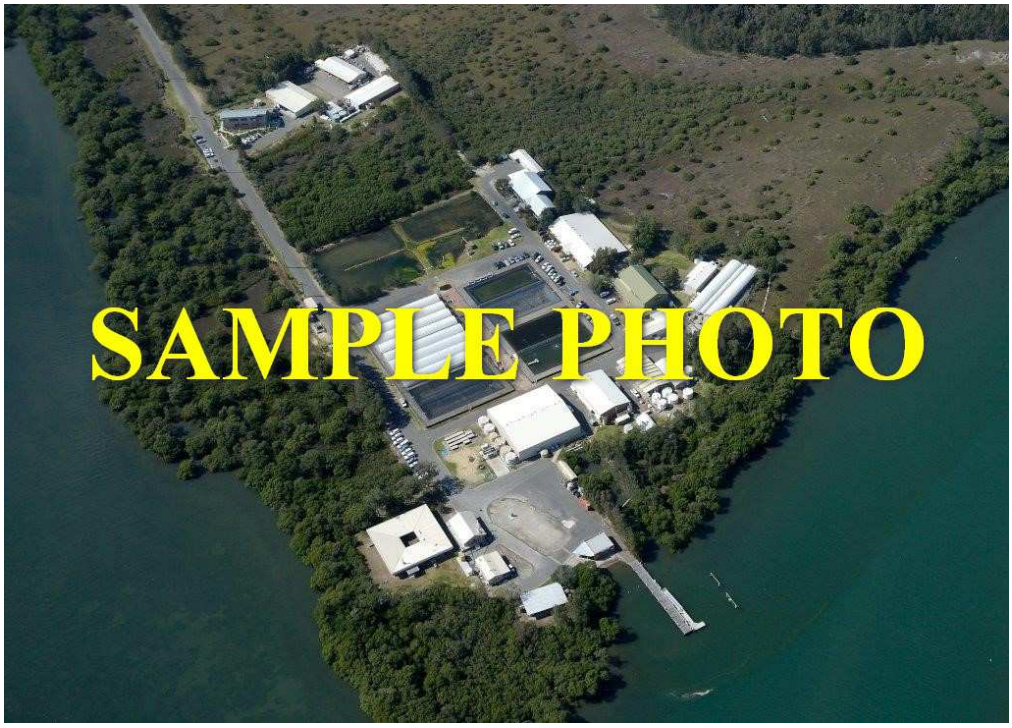

Figure 1: INSERT PHOTO OF LAND BASE SITE 1 (Source: XXXX, XXXX).

2.2 INSERT LAND BASE SITE 2

The land based site at the INSERT LAND BASE SITE (operated by XXXXX) is located XXXXXX (Figure 2). The leased site is currently approved for XXXXX (e.g. industrial activities, particularly those associated with marine activities). This area is dominated by XXXXX (e.g. industrial berths where vessels such as coal tankers, load and unload large amounts of goods on a daily basis. The locality is subject to numerous heavy vehicle traffic and large vessel movements each day).

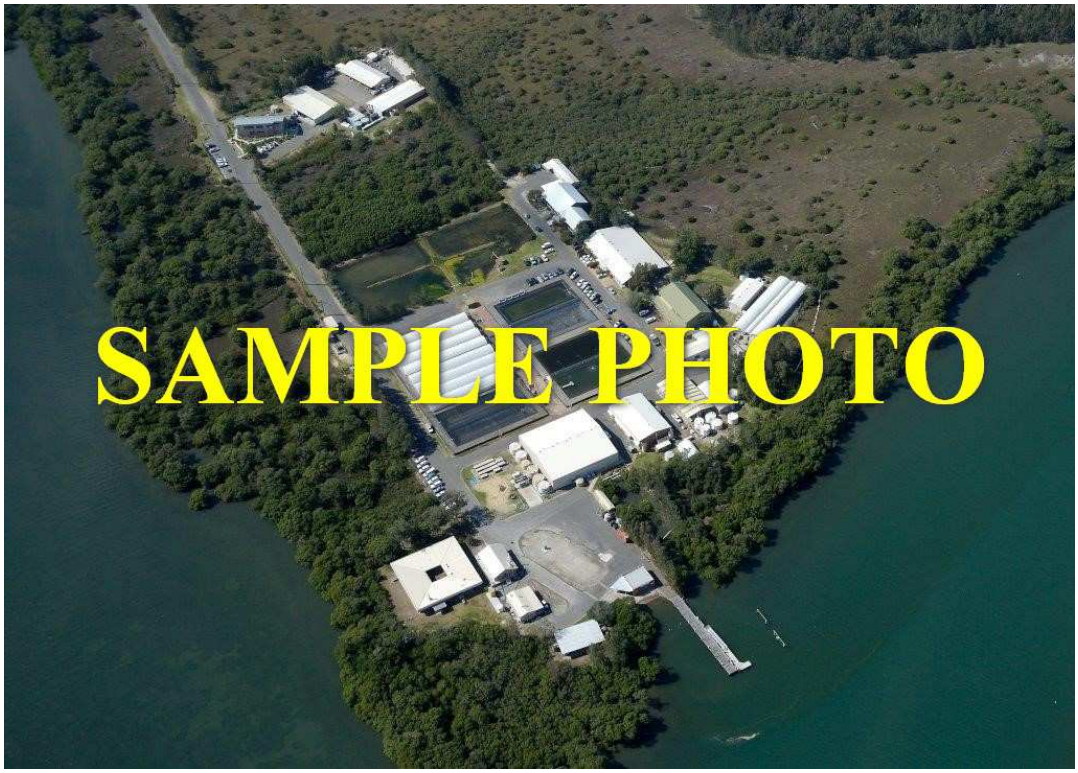

Figure 2: INSERT PHOTO OF LAND BASE SITE 2 (Source: XXXX, XXXX).

This site will be used for the XXXXX (e.g. large scale construction of the longlines/sea pens and the storage of materials (e.g. feed, nets, rope, mooring equipment, fuel and other consumables)).

The required materials and services will be provided by established companies in XXXX. The longline/sea pen construction will be undertaken in accordance with approvals for the selected land based site.

2.3 INSERT LAND BASE SITE 3

The INSERT LAND BASE SITE 3 is located XXXXX (Figure 3). This area is dominated by XXXXXX (e.g. commercial (fishing and tourism) and recreational vessel activities and associated land based service industries).

This site will be used to XXXXX (e.g. transfer materials, staff and provide services but these will be predominantly limited to small scale operations).

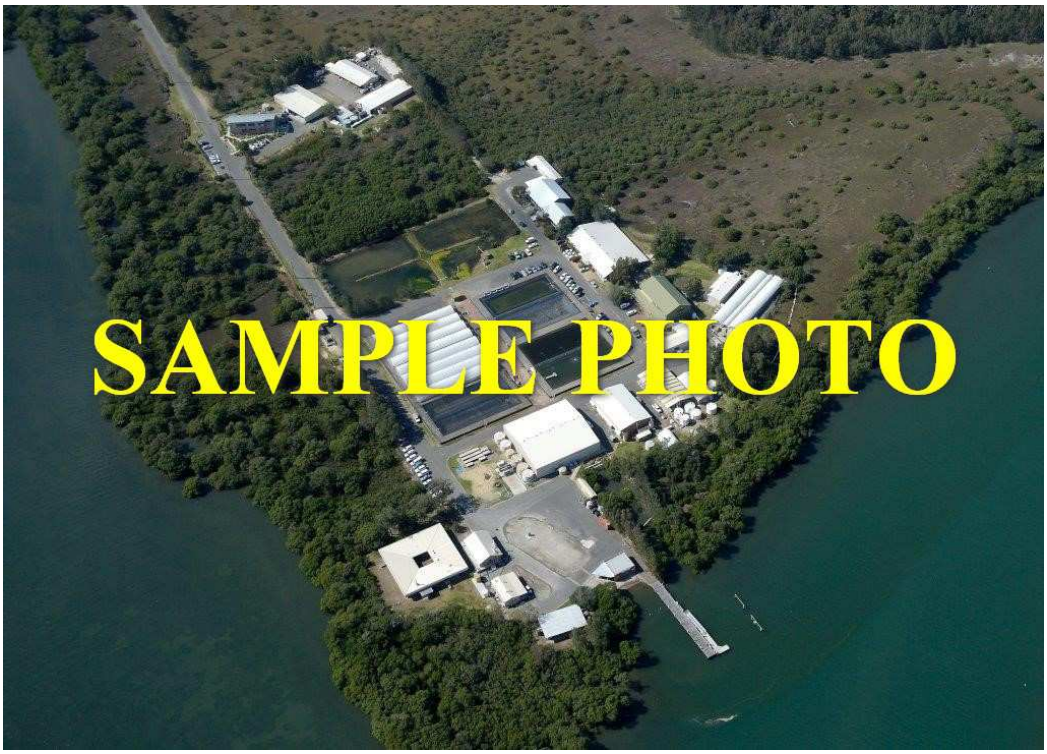

Figure 3: INSERT PHOTO OF LAND BASE SITE 2 (Source: XXXX, XXXX).

2.4 Timeframe for Construction and Deployment

The expected timeframes for construction and deployment activities of the XXXXXX lease/s have been listed in Table 1.

Table 1: Expected timeframes for construction and deployment activities.

Task	Expected Duration	Expected Timeframe
Construction of longlines/sea pens components	XX days	XX/XX/XXXX
Assemblage of anchor and chain materials*	XX days	XX/XX/XXXX
Assemblage of navigation buoys and mooring materials	XX days	XX/XX/XXXX
Installation of anchors and moorings	XX days	XX/XX/XXXX
Installation of longlines/sea pens on lease	XX days	XX/XX/XXXX

Transfer of stock and commencement of operations	XX day	XX/XX/XXXX
	XX days	XX/XX/XXXX
	XX days	XX/XX/XXXX
	XX days	XX/XX/XXXX
	XX days	XX/XX/XXXX

2.5 Traffic, Noise and Waste Management

The land based sites for the INSERT NAME OF LEASE are predominantly within commercial or industrial precincts and will not result in significant increases in levels of traffic, noise or waste pollution.

Traffic

Vehicular movements to provide goods and services to the land based sites and vessels are expected to be the highest during the construction and deployment stage. Trucks will predominately be used to supply required components for construction and deployment of the longlines, where the number of heavy vehicle movements is likely to be in the range of XX to XX movements per day to the Land Base Site 1 and to a lesser extent to Land Base Site 2/3 (if applicable).

If a risk is identified regarding the heavy vehicular movements, traffic management procedures will be undertaken in accordance with NSW RMS requirements.

Once the longlines/sea pens have been installed the number of heavy vehicular movements between these localities is expected to be reduced. Staff vehicular movements to the Fishermen's Co-operative and associated marina precinct will be maintained to a minimum by staff carpooling arrangements from the land base site.

During the construction stage the movement of vessels between INSERT LEASE NAME and the land based facilities is estimated to be XX return trips per day to install the longlines/sea pens infrastructure. These movements will be spread between the LAND BASE SITE and LAND BASE SITE and associated marina precinct site with large vessel movements being predominantly from the LAND BASE SITE site. All vessel movements will be in accordance

with NSW RMS marine safety legislative requirements and/or any PORT (if applicable) vessel movement requirements.

Noise

As outlined above the land based sites are located predominantly within commercial or industrial precincts. Noise impacts associated with the land based construction, deployment and management of the INSERT LEASE NAME are unlikely to be significantly different to the existing commercial or industrial environment.

During the construction stage, the proposed hours of operation on the INSERT LEASE NAME will be between dawn and dusk. The NSW DECC (2009) *Interim Construction Noise Guideline* check that it is the most recent guideline will be referred to during the construction and deployment stage of the project to ensure compliance with all relevant provisions (Web Reference 1).

In addition, the *Protection of the Environment Operations Act 1997* (POEO Act) will be consulted during the construction and deployment stage which sets certain limits on noise emissions from vessels, motor vehicles and domestic use of certain types of equipment (Web Reference 1). Environment Protection Authority (EPA) is responsible for the regulation of noise from activities scheduled under the *POEO (Noise Control) Regulation 2008*. check that it is the most recent regulation

Industry best practices for noise management will be employed during the construction, deployment and operation of the longlines to minimise the impacts of noise. Some examples of industry best practices include:

- Use of well-maintained sound suppression devices (e.g. barriers, baffles and mufflers) when operating equipment;
- Ensure machinery and vehicles are regularly maintained;
- Acknowledging concerns and complaints and aiming to resolve them cooperatively;
- Use courteous language in the vicinity of other waterway users;
- Ensure truck drivers are informed of designated vehicle routes, parking locations, acceptable delivery hours and other relevant practices e.g. no extended periods of engine idling and minimising the use of engine brakes;
- Maintaining good communication between the community and project staff; and
- Minimise the operation of site machinery, vehicles and vessels during early morning and early evening where practicable.

Wastes

During the construction and deployment stage, the following industry best practice guidelines will be implemented:

- Waste will be classified according to *OEH Waste Classification Guidelines* and sorted into waste streams where possible;
- Waste materials will be reduced, reused and recycled where possible;
- A skip bin will be provided for general waste, cardboard and paper;
- All skips and containers will be well maintained to ensure they do not leak, will be labelled with their content and will be emptied on a regular basis to avoid overflow (PON, 2015);
- No open or ground rubbish will be permitted (PON, 2015);
- All domestic and industrial waste that cannot be reused or recycled will be disposed of into proper industrial bins for collection and disposal at a licensed offsite facility (PON, 2015);
- All waste contractors and receiving waste facilities will be appropriately licensed (and/or Department of Agriculture approved) (PON, 2015);
- There will be appropriate signage, awareness and encouragement of staff and contractors to minimise waste generation and promote use of recycling practices (PON, 2015);
- There will be compliance with all relevant Council guidelines and requirements; and
- There will be compliance with all relevant environment protection legislation.

3 Navigation Aids and Anchoring Systems

The layout illustrated in Figure XX for navigation aids for the INSERT LEASE NAME have been approved by NSW Roads and Maritime (NEED TO CONTACT RMS + CONFIRM LAYOUT). In accordance with the statutory requirements of the consent conditions, the anchoring system will also require a permit issued in accordance with the *Marine Estate Management (Management Rules) Regulation 1999* check that it is the most recent regulation from NSW DPI marine parks.

UPDATE BUOY DETAILS E.g. The cardinal buoys marked A, B, C and D will be IALA compliant and be Spar Buoys. They will be anchored by a single three-tonne concrete block and chain shackled to a spliced eye with rope to the surface. The flash pattern will comply with the following:

- Continuous flashes = north;

- Three flashes = east;
- Six flashes and one long flash = south; and
- Nine flashes = west.

Buoys P to W will be the corners of the mooring grids and will be black non-IALA unlit buoys. The mid-point buoys on the long axis of the lease boundary are included just to give a point of reference between the cardinals. These will be IALA-compliant “special” buoys (yellow with an X top mark) (Figure 4).

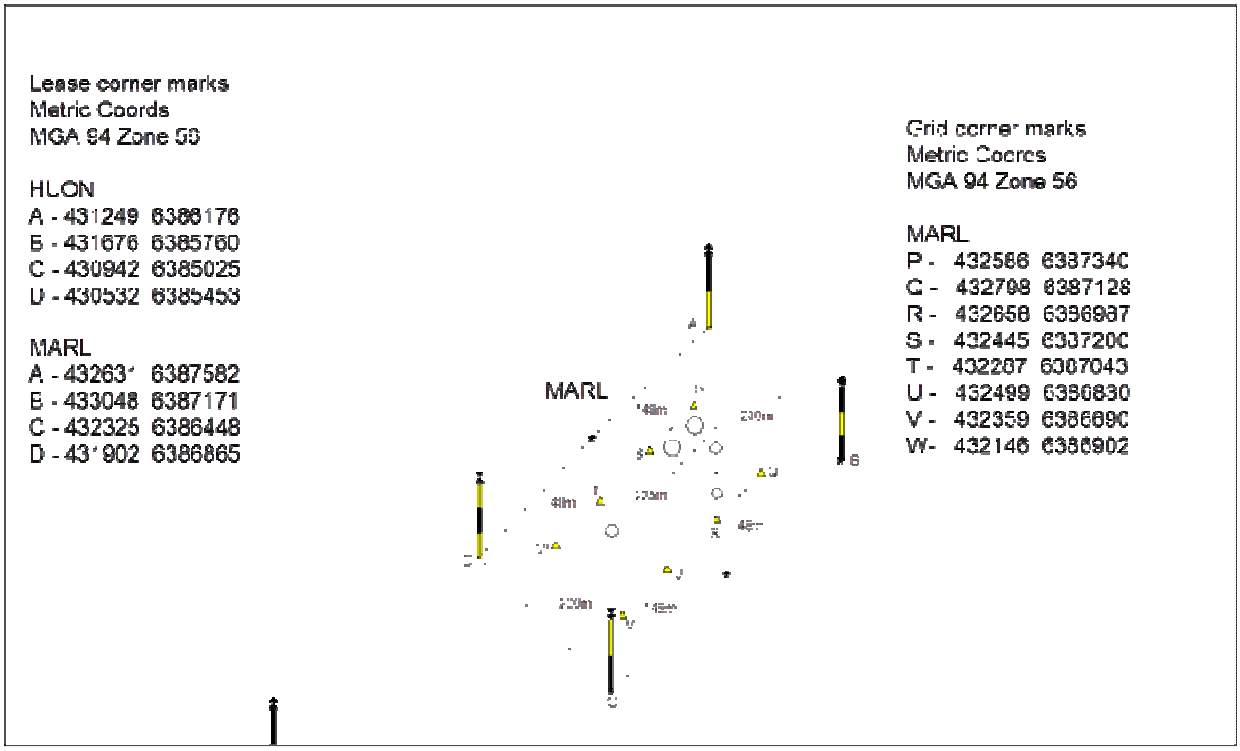

Figure 4: Layout of the navigation aids and anchoring system (Source: XXXX, XXXX).

3.1 Deployment of infrastructure

The initial deployment activities are undertaken on land at the LAND BASE SITE as it provides a suitable quayside location.

The lengths of rope and chain that make up each anchor line are measured under tension and cut to length. The longest components are around XX m metres which require the use of a large flat area on which a plastic liner can be laid down to prevent the ropes from chafing.

To make up the anchor line an anchor is attached to a length of chain and this is then attached to a length of rope.

<u>Deployment</u>

On completion of the rope work this infrastructure is then loaded onto a vessel for deployment onto the lease site. The anchors that will be deployed in positions X, X and X (see Figure 5) are loaded onto the deck of a large (XX m long) landing craft work vessel.

INSERT DEPLOYMENT DETAILS

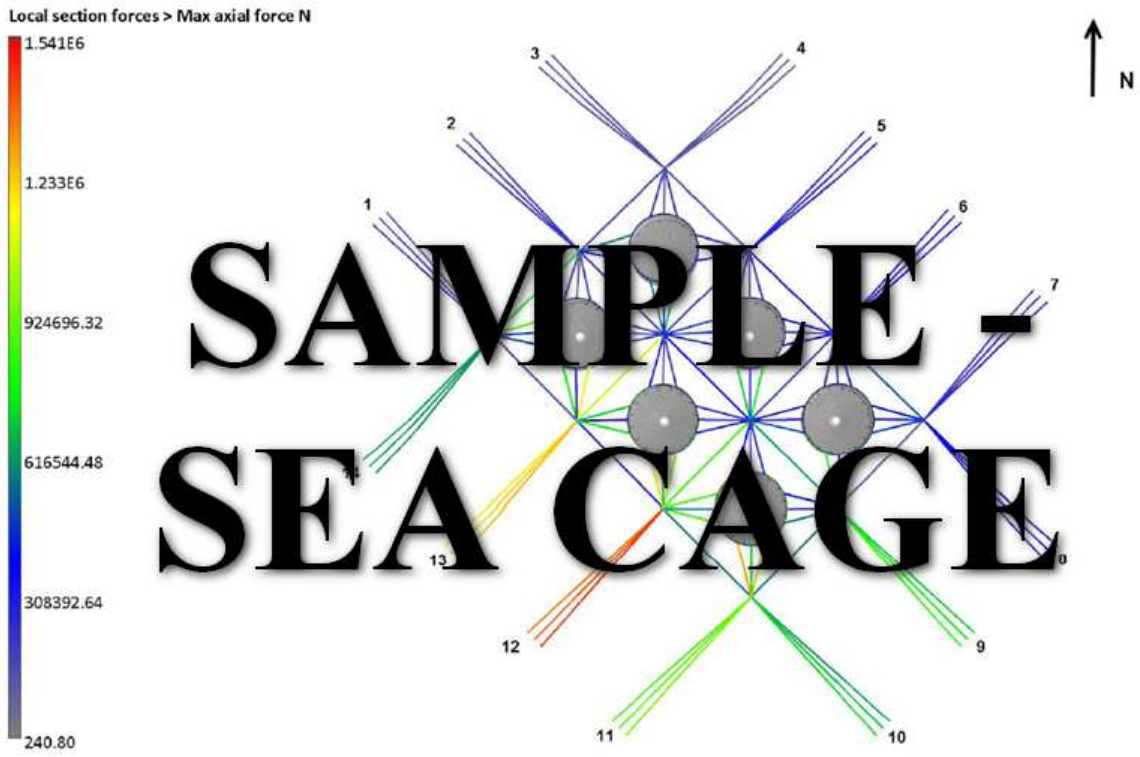

Figure 5: Layout of the lease infrastructure (Source: XXXX, XXXX).

INSERT DEPLOMENT DETAILS E.g. The vessel will travel to the lease and drop the 1, 2 and 3 area anchors on precise GPS co-ordinates. It will reverse down the lease allowing the holding power of the anchors and the opposite motion of the vessel drag the grid off the deck, keeping it under tension. The vessel continues down the lease finally dropping the anchors for 8, 9 and 10. Figure 6 outlines how this will look.

Figure 6: Layout of the first stage in deploying anchoring and mooring system (Source: XXXX, XXXX).

INSERT DEPLOYMENT DETAILS E.g. At this point the grid is completely stable and all lines have remained under tension.

The next operation involves lifting the rope rings down the western longitudinal side, attaching the relevant anchor lines and moving the vessel backwards away from the grid to deploy the anchor line, chain and anchor at the remaining numbered positions. This again is repeated on the remaining side of the grid to complete the installation as shown in Figure 7.

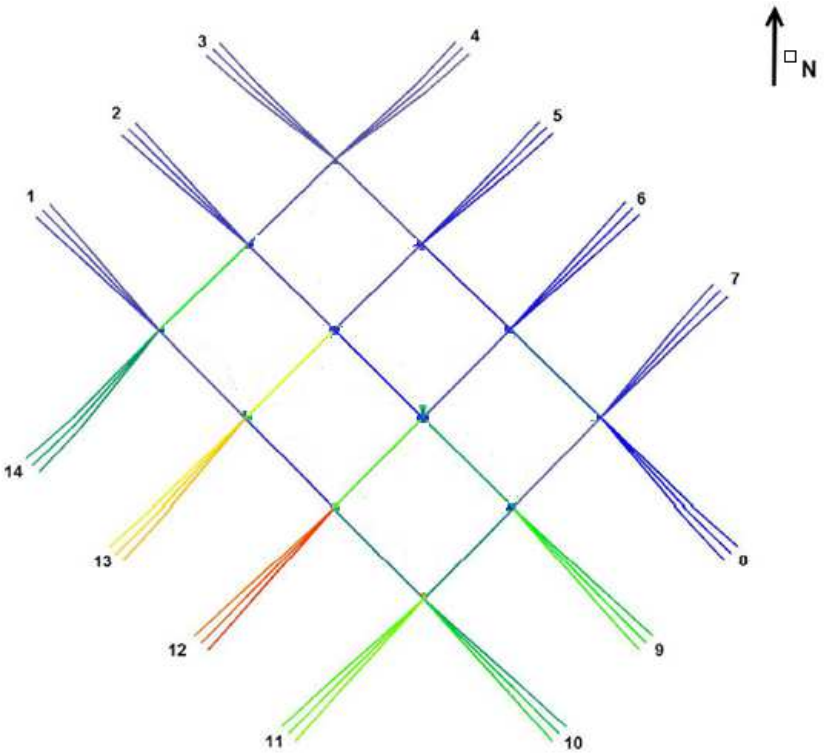

Figure 7: Layout of the completely deployed anchoring and mooring system (Source: XXXX, XXXX).

INSERT DEPLOYMENT DETAILS E.g. The grid has now been deployed as planned, sitting 15 metres below the water surface, with the correct tension and capability to support the modelled loads on the pens when they are in position.

The first two pens will then be towed out to the lease and positioned in the centre of two of the spaces on the grid. Their bridles will be attached to the rope rings that delineate the corners of the individual spaces. The bridles provide the means by which the surge and drag forces on the pens are transferred to the grid and thereby to the anchor lines and anchors.

4 Break Away Response Plan

The response plan to the breakaway of aquaculture equipment has been summarised in Table 2. Moored equipment (e.g. buoys and ropes) will be equipped with GPS/GSM transponders that will alert local management staff to movement outside of the control zone within the lease.

Table 2: Emergency Protocol for equipment breakaway (Source: AMSA & NSW DPI, 2016).

EMERGENCY PROTOCOL		
BUOY / NAVIGATION AID/ MOORING BREAKAWAY		
Marine Operations Manager	**Farm Technician (master/coxswain)**	**All crew**

▪ Assess situation ▪ Notify appropriate authorities (i.e. NSW Roads and Maritime) o What equipment o Likely position o If it is a perceived hazard o Recovery plan ▪ Coordinate recovery operations ▪ Recover equipment and move to lease or safe location ▪ Record the incident as soon as practicable ***Immediate assistance:*** Local VTS (VHF 16) Emergency Services (000)	▪ In charge of recovery activities ▪ Assess damage ▪ Inform Marine Operations Manager of situation ▪ Record and prepare incident report	▪ Inform Farm Technician of any identified issues ▪ Assist in recovery activities

If this was to occur the following actions would be undertaken:

- NSW RMS will be immediately notified of the breakaway by the responsible person (Marine Operations Manager or their delegate);
  - This information must include details of the equipment, likely position, perceived hazard and plan to recover;
- The Marine Operations Manager or delegate will take action to safely and expeditiously recover the equipment either to lease or a safe location;
- Any breakaway will be investigated and a formal report will be prepared. This will include but not be limited to the following:
  - The assessed cause(s) of the breakaway;
  - Corrective actions to manage future risk; and
  - Timeline for the implementation of corrective actions.

5 Informing the Community

A Community Stakeholder Communications Plan (See Appendix 2) has been prepared to provide the mechanisms for disseminating information regarding the INSERT LEASE NAME during its operation. The following information relates to the communication of information regarding construction and deployment activities.

5.1 Deployment

The key communication tool to allow the community access to information about the construction and deployment stage of the INSERT LEASE NAME will be via the following web link:

- INSERT PROPONENT: INSERT WEBLINK.

Regular updates will be posted on this website. Additional communication strategies for the INSERT LEASE NAME will include:

- Social and traditional media news updates;
- Development of an email distribution list;
- Participation at relevant stakeholder meetings, in particular INSERT STAKEHOLDER GROUPS E.g. Port Stephens – Great Lakes Marine Park Advisory Committee, Port Stephens/Myall Lakes Estuary Management Committee, Port Stephens Tourism and the RMS Waterways Users Group;
- Contributing to local tourism events to provide advisory information; and
- Linking with local businesses to support economic opportunity either through provision of services or as outlets for product produced at the INSERT LEASE NAME.

5.2 Maritime Safety Issues

It is a NSW Roads and Maritime Services (NSW RMS) requirement that the extremities of aquaculture leases are marked with appropriate navigational marks as outlined above. In the marine environment these marks are required to be lit and the leases must be marked on navigational charts to aid safe navigation.

To ensure that official navigation charts and other relevant publications and maps will be amended to include the location of the INSERT LEASE NAME, the Australian Hydrographic Office and NSW RMS will be notified of the coordinates of the lease area. In addition, a 'Notice to Mariners' will be issued and INSERT PROPONENT will provide locational details to Jervis Bay waterways user including tourist operators, recreational boating groups and Marine Rescue Jervis Bay.

Navigation safety in the area of the INSERT LEASE NAME will also be maintained by ensuring that all staff partaking in marine vessel transport obtain relevant licences and qualifications, undergo regular training and abide by NSW RMS regulations and the *Australian Aquaculture Code of Conduct*. The Code of Conduct specifies that aquaculturists can respect the safety and rights of other waterway users by recognising their needs, promoting methods to minimise user conflicts, encouraging consultation with all waterway users to enable concerns to be identified and resolved, promoting goodwill in the community and providing opportunities for education.

5.3 Complaints Handling Protocols

The INSERT LEASE NAME is required to establish complaint handling protocols under its conditions of consent. Local Councils will be informed of the procedures so that on receipt of any complaints they are able to redirect issues to the appropriate regulatory departments. The Complaints Handling Protocols will include:

- A contact number and a site contact person who manages complaints;
- A complaints register (See Section 6.3.1);
- Proposed mitigation measures and follow up with the complainant;
- Contingency measures when repeated complaints are received including provisions for additional monitoring and amelioration measures;
- Compliance performance agreements with residents; and
- Reporting procedures to relevant government agencies or Council.

Complaints about the construction site of the INSERT LEASE NAME can be registered via the following options:

- INSERT PROPONENT
    - *Mail:* XXXXX
    - *Email:* XXXXX
    - *Phone:* XXXXX
    - *Hotline:*
        - A hotline (XXXXXXXXX) for the INSERT LEASE NAME, which will be listed in local papers and on the INSERT PROPONENT website prior to the construction and deployment stage.

5.3.1 Complaints Register

The complaints register for the construction and deployment stage will be maintained by INSERT PROPONENT (See Attachment 1). The register will list information such as the following for feedback and complaints:

- Date;
- Person/s receiving the complaint;
- Name, address and contact phone number of person(s) making the complaint;
- Specific details of the nature of the complaint; and
- Action undertaken in response to the complaint.

A record will also be made about whether the complaint originated from normal operational procedures, an 'incident' or occasional procedure:

- If from occasional procedures, discussions should be held with complainants regarding whether it was the timing or nature of the impact and how the impacts can be better managed. In many cases an agreement can be reached between parties regarding procedures, timetables, duration and intensity;
- If it resulted from normal operation procedures, these procedures should be reviewed in discussion with the relevant approval authorities.

A summary of the complaints register (construction and deployment stage) will be included in the Annual Report that will be submitted to the Director-General.

6 Decommissioning of the Construction Site

Decommissioning of the INSERT LEASE NAME construction site/s will involve cessation of operations and the controlled process of safely retiring the site from that specific use. Specific decommissioning activities will be employed to ensure the safety and reduction of health risks to the general public and the environment (Web Reference 2).

6.1 The Process

A few actions will be required before the decommissioning of the INSERT LEASE NAME construction site can take place. The decommissioning process as described by AMMA (2016), may include the following:

- *Decontamination* – All hazardous objects, containers, structures and equipment will be removed from the site. Fuels will be stored in containers and removed. Portable spill containments will be established onsite for emergencies. The contaminated areas may be sealed or enclosed;

- *Safety guidelines*: Employees will be informed about all occupational health and safety guidelines, wear the correct protective clothing and accessories. Precautions will be taken to prevent inhalation of particles and for the prevention of falls if climbing is involved;
- *Noise reduction*: equipment, machinery and crane use can become noisy so decommissioning activities will be planned for when it will offer the least amount of disturbance to the area;
- *Traffic safety:* Temporary roads, footpaths or road diversions will be put in place to direct traffic away from the site if needed;
- *Soil erosion prevention (if applicable):* To prevent soil erosion, activities will be avoided if heavy rainfall is expected. Steep slopes will be lined and ditches built to reduce soil particles from contaminating water ways;
- *Water system management (if applicable)*: Settlement ponds may be created to both catch soil particles or to catch clear uncontaminated water. Silt fences and diversion pipes may be used to minimise the volume of water to be treated;
- *Air quality:* Exhaust fumes from vehicles, dust particles and burning of solid waste can contaminate the air. Covers and enclosures can be erected and moisture content can be increased to prevent particles from becoming airborne; and
- *Dismantling:* Some building materials can be dismantled for reuse or even sold off as scrap for profit (Web Reference 2).

7 Consultation

In the preparation of the Construction Deployment and Traffic Management Plan the following personnel were consulted.

- CONTACT RELEVANT PERSON + INSERT E.g. NAME (*POSITION),* ORGANISATION/DEPARTMENT;
- CONTACT RELEVANT PERSON + INSERT E.g. Brett Boehm (Senior Boating Safety officer), NSW Maritime Division, NSW Roads & Maritime Services; and
- CONTACT RELEVANT PERSON + INSERT E.g. NAME (*Manager, Jervis Bay Marine Park*), NSW Department of Primary Industries.

8 References

NSW Department of Environment and Climate Change (2009) *Interim Construction Noise Guideline*. NSW DECC, Sydney South.

Port of Newcastle (2015) *Operational Environmental Management Plan Mayfield No. 4 Berth*. Port of Newcastle, Newcastle.

Web References

Web Reference 1 CHECK REFERENCE AND UPDATE DATES

NSW Office of Environment and Heritage (2016) "Noise" Retrieved 06/06/16 from http://www.environment.nsw.gov.au/noise/index.htm

Web Reference 1 CHECK REFERENCE AND UPDATE DATES

The Australian Mines and Metals Association (2016) "Decommissioning in Construction" Retrieved 06/06/16 from http://www.miningoilgasjobs.com.au/construction/construction-sectors/decommissioning.aspx

Web Reference 3 CHECK REFERENCE AND UPDATE DATES

Australian Maritime Safety Authority (2016) "National Standard for Commercial Vessels" Retrieved 06/06/16 from https://www.amsa.gov.au/domestic/standards/national-standards/

9 Attachments

Attachment 1 – Complaints Register

Attachment 1

Complaints Register

No.	Date	Name	Contact details	Nature of feedback/complaint	Action taken